Harvesting a New Synergy: Exploring ‘Smart and Green’ Hotels within the Context of the Irish Hospitality Industry

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Harvesting a New Synergy: Exploring ‘Smart and Green’ Hotels within the Context of the Irish Hospitality Industry

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Module Title: MBA Research Thesis
Programme: Master’s in Business Administration
Author’s Declaration

The author hereby declares that this research thesis is solely my own work. Where work is not my own, it is referenced accordingly. This work has not been submitted, in whole or part, by me or any other person, for the purpose of obtaining any other qualification at this or any other institutions.

Signed: Yi Sheng Tan

Date: 04 Aug 2021
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Dedication

This thesis is dedicated to:

My parents, who showered me with love and endless emotional support

My partner, who never stopped helping me in every possible way
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Abstract
Hospitality emphasizes the ability for exchange of friendly and generous reception between businesses, guests and strangers. The complex nature of future travel and tourism industry directs the converging forces towards the hospitality industry to develop progressive strategies in response to increasing economic turbulence. Within the hotel sector, particular emphasis on emerging opportunities like sustainability and digitization are quickly shaping the strategic agenda in this competitive sector. It is envisaged that the hospitality industry will differ completely from today, owing to developments in artificial intelligence and smart technology.

This research has explored the key components of the overall ‘smart and green’ agenda among Irish hotels. It began with a comprehensive review of literatures on the subject of interest. It is found that while the multifaceted hybrid model of ‘smart and green’ hotels is rapidly emerging as the new theme in the sustainable tourism industry, previous literatures have failed to address the issue in relation to the lack of uptake from Irish hoteliers. To answer the main research question on ‘smart and green’ hotels concept for the future of Irish hospitality industry, a qualitative methodology, guided by a post-positivistic paradigm of ontology was adopted. Ten semi-structured interviews were conducted via Zoom, Microsoft Teams and phone, with key stakeholders across a range of hotels, both rural and urban, in Ireland to obtain insightful data.

An important theme that emerged from this study is that the Covid-19 pandemic has severely decimated the Irish hospitality industry. Interestingly, this study reveals that despite rapid advancement in the space of artificial intelligence technology, 100% of participants cited that most visitors to Ireland seek the famed ‘Irish hospitality’, which is built upon human interaction. This exhaustive study is central to offering a conceptualization of this hybrid model in the Irish hospitality industry and its primary dimensions. This research will be of benefit to policy makers, central government, governmental organizations (e.g., Fáilte Ireland), tourism organizations (e.g., Irish Hotel Federations), hotel practitioners, hotel managers and multinational hotel management companies. The findings gathered from this study, coupled with desk-based secondary research, offer a far-reaching review on the exploration of ‘smart and green’ hotels concept in Ireland, while providing further insights to academics for future longitudinal study.
1 Introduction

1.0 Introduction
This study explores the ‘smart and green’ hotels concept for the future of the hospitality industry in Ireland. This concept proves to be varied and requires interdisciplinary expertise. Researchers have been challenged to interrogate data by identifying a multitude of variables such as demand, best practices and challenges of this concept.

As a developed industrialized country, Ireland’s demand for energy consumption is very high. It does not help that Ireland has relatively unsophisticated commercial buildings and relatively basic upgrades to many of these buildings could lead to substantial energy savings, (Scheer, 2015). As a point of reference, in the year 2015, the energy consumption from buildings categorized as hotels is comparable to the consumption from buildings categorized as offices, while the number of office buildings is ten times of the hotel buildings, (Scheer, 2015). This is a staggering amount of energy used in the hotel sector when it consists of only 10% of the commercial office buildings. In order to limit energy consumptions in buildings, it is important to reduce the energy use without compromising the objectives of organizations. Focusing on improved energy efficiencies not only reduces costs but the resulting efficiencies can also improve product quality, reduce risks to the business and enhance resilience. As such, over the years, efforts have been taken by the government to effectively reduce energy consumption through the introduction of the green building concept in parallel with the worldwide trend of being sustainable, (Fauzi et al., 2018). In line with this trend, it is noted that consumer demand for more eco-friendly hotels has grown in the past decade, (Merli et al., 2019). As energy generation comes mainly from natural gas and fuel oil, reducing the energy requirements for buildings will directly reduce the level of pollution, thus slowing down global warming.

Additionally, Artificial Intelligence (AI) technology has penetrated into many fields in recent years, including the hospitality and hotel industries, (Ananeva, 2019). It is a movement which is directly responsible for introducing data mining, advanced algorithms, AI automation and Internet of Things (IoT) which hospitality businesses are strategically employing to help manage daily challenges. Besides this, hotels have also started using AI to modernize processes and accelerate simple tasks such as check-in and check-out, concierge enquiries and room service. It should not be the case that AI will replace workers, but it should be viewed as AI working in parallel with humans. New technologies often disrupt old ways of doing things,
therefore, it is crucial to find a balance of relationships between employees, guests, and AI technology to improve people’s experience. Within the space of AI, the popularity surge of virtual reality (VR) application in the tourism industry is hard to ignore. The relevance of VR to the hotel sector is particularly apparent as virtual tourism or as a marketing tool, (DURMAZ et al., 2018; Israel et al., 2019). The emergence of this type of advanced technology in a constantly changing environment will enable hoteliers to use AI solutions to create a more personalized and memorable experience for guests more effectively. The researcher views that as the AI space continue to advance, the technology will eventually become more affordable and more accessible to most businesses.

In Ireland, while hotels are more conscious about the environment now, there appears to be a high degree of variability in green practices between hotels. Understandably, the increasing penetration rate of AI in hospitality has also led to some concerns among hoteliers. Additionally, only a minority of hotels has adopted the ‘smart and green’ concept despite the known benefits. As such, understanding the present circumstances is critical as it will enable policy makers and government to obtain more profound understanding of the challenges faced by hoteliers in Ireland. In addition, the contextual advantages and disadvantages of social media marketing and international hotel chain strategy to the Irish hotel sector are similarly being explored as part of this research. The impact of social media, marketing and international hotel chain business strategy is being examined to explore their relevance to the ‘smart and green’ hotels concept. This study will serve as a foundation to developing an evidence-based set of recommendations in relation to ‘smart and green’ hotels. Achieving a balanced view between ‘smart’ and ‘green’ concepts is an immense challenge for many hotels. Thus, the researcher intends to offer a study which could present a multidimensional perspective to the topic.

This research presents a qualitative approach to an assessment of the ‘smart and green’ concept from the opinions of the key stakeholders such as policy makers, central government, governmental organizations, tourism-related organizations, hotel practitioners, hotel managers and multinational hotel management companies. The researcher prognosticates that the research would be multifaceted as the subject area is contentious. In an effort to provide a structure to the multifaceted topic, the research is framed around 3 significant areas, ‘smart and green’ concept, social media and international hotel chain. The researcher intends to discover the degree of impetus in which social media and international hotel chains play towards the
central theme of this research, the hybrid model of ‘smart and green’ hotels concept. Ultimately, the researcher seeks to evaluate the synergies between these key areas and their relevance to the Irish hospitality industry. A grounded theory approach was taken to analyse and present the findings of this study.

1.1 Background to Tourism Industry
The last six decades proved to be beneficial for global tourism as it resulted in 1.5 billion international arrivals in 2019 worldwide, which represents an approximate 3.8% year-on-year increase, (Nisar et al., 2021). The spending on global tourism increased from 495 billion USD to 1.5 trillion USD, (unwto.org, 2019). Tourism and hospitality industries have great impact on the world’s economy, (Manomaivibool, 2015). Tourism accounts for up to 7% of global trade and 9.8% of the entire global gross domestic product in 2016 has been associated to tourism-related businesses, (Yadegaridehkordi et al., 2021). The tourism industry contributes to about 11% of global employment in 2017, (Assembly, 2017). As a result, room occupancy in hotels globally has increased due to growth of international tourism, (Nisar et al., 2021).

In Ireland, tourism represents one of the most important services sectors in the Irish economy as it employs approximately 260,000 people, (Nolan et al., 2020). Out of this, 60,000 employments are in the hotel sector alone, (Nolan et al., 2020). In the year 2018, more than €9.4 billion total revenue was generated from tourism related economic activities (gov.ie, 2019). As a consequence of rapid increase in tourism activities, the connection between tourism, sustainability and planning has never been closer and continues to garner increased attention within academic circles, (McLoughlin et al., 2020). It is becoming more apparent that an informed approach to tourism planning is urgently required, otherwise, policymakers would be unable to anticipate future planning needs, thus potentially damage the future long-term sustainability of the tourism product, (McLoughlin, 2017). Therefore, sustainable tourism is deemed to be the long term solution to prevent environmental concerns caused by over-tourism, (McLoughlin et al., 2020). Sustainable tourism should take full accountability of its current and future economic, social and environmental impacts while fulfilling the needs of visitors, the industry, the environment and host communities, (McLoughlin et al., 2020).

1.2 Background to Green Hotels
Hotels are known to be the most important component in the hospitality industry, but they are also one of the highest energy consumers in their operations, (Han et al., 2018). Thus,
researchers have started to give substantial attention to the issue of sustainable development in the hotel sector within the hospitality industry, (Yadegaridehkordi et al., 2021). While the growth of hotels is phenomenal over the years, hotels are also facing pressure to improve on their environmental performance by adopting eco-friendly activities that are not harmful to the environment, (Nisar et al., 2021). Fortunately, consumers have steadily been made aware of the seriousness of environmental degradation and so, they are more likely to visit hotels that have ecologically friendly practices, (Thao, 2017; Wang et al., 2018). According to a survey conducted by Booking.com in 2018, more than two-thirds (68%) of travellers intended to stay in eco-accommodation in 2018, up from 65% in 2017 and 62% in 2016, [in (Rahman et al., 2020)]. The percentage of hotel owners reporting that more than half of their facilities were green, rose from 28% in 2011 to 48% in 2013, and is expected to reach 64% in 2015, (Rahman et al., 2020).

Green hotels refers to “hotels that tend to be more eco-friendly oriented through more efficient use of energy, raw materials and water while satisfying customers and providing quality services”, (Wang et al., 2018). Green hotels can also be described as “a natural tourist lodging developed and managed in environmentally sensitive ways to maintain its business environment and provide guests with green products, green services, and healthy, refreshing, and comfortable accommodations that reflect the features of natural ecologies”, (Yadegaridehkordi et al., 2021). Green hotels not only attain the social benefits of educating consumers about the environment, but also enhancing the reputation of hotels, decreasing the operational costs and generating more economic benefits, (Wang et al., 2018).

Gupta et al. (2019) postulates that Green Service Encounter (GSE) illustrated in Figure 1, are critical elements in green hotels and outlines the most noticeable green features such as linen/towel reuse option, low-flow water fixtures, big glass windows for using natural light, green landscapes, use of plants for decoration, eco-label certification and green engagement programme. Other vital components in GSE includes natural fragrance, use of natural oils for generating fragrance, no use of plastic, fresh air, sound of running water, use of recycled papers and stationery materials, usage of recycling bins, occupancy sensors, organic soaps and dedicated green teams, (Gupta et al., 2019).
Green hotels are now given various seals of sustainable approval such as Green Key Global and Green Globe, (Agag and Colmekcioglu, 2020). Each of these certifications has its procedures, standards, objectives, and rating framework and hotels are more likely to uphold the standards of sustainable hospitality if they are eco-certified, (Agag and Colmekcioglu, 2020). While nearly more than 92% of users have positive feelings towards the businesses that follow environmental protection practices, gaining a complete understanding of what potential customers desire in green consumption is still a serious challenge for hotel marketers, (Yadegaridehkordi et al., 2021).
1.3 Background to Smart Hotels and Artificial Intelligence
Technologies have become ingrained into our society and hotels are utilizing modern technologies now more than ever, (Kim et al., 2021a). Furthermore, this phenomenon is likely to be accelerated due to the rising requirements for contactless service delivery in the wake of a new coronavirus disease (Covid-19), (Kim et al., 2021a). The oversupply of tourism suppliers, especially in the hotel sector, forces hoteliers to be innovative and creative and to find ways to differentiate and give prominence to their hotel, (Buhalis and Leung, 2018). Some hotels are on the technology frontier, as they adopt and upgrade to the latest IT infrastructure and application systems, while some may still use older technologies, (Buhalis and Leung, 2018).

Olsen and Connolly (2000) envisaged that successful hospitality of the future will be the one that can use technology to continually meet the customer's changing needs and desires. As such, the term smart hotels is born and it refers to an “integrated concept which includes an automation control system, based on modern information technology, a sophisticated set of sensors and actuators, optical or any other source of speedy communication facilities and protocols, wireless technology, integrated renewable energy sources, modern waste treatment technology and constant education and training of all hotel staff employees to achieve its successful implementation”, (Petrevska et al., 2016). Alternatively, a smart hotel could be described as a hotel that applies innovative technologies with minimal intervention from human employees in order to offer a superior customer experience, (Kim et al., 2021a).

Smart hotels could entail implementation of a range of technologies, including artificial intelligence (AI), robotics, cashless payments, Augmented Reality (AR) and Virtual Reality (VR) to varying degrees, propelling a range of disruptive changes, (Buhalis, 2020). Christou et al. (2020) examined the roles of the robots in the hospitality and tourism industry and discovered that AI robots improve customers’ experiential value. Invariably, smart hotels are decidedly distinguished from regular hotels due to the high utilization of innovative technologies in the hotels’ operation, (Kim et al., 2021a). Kabadayi et al. (2019) indicates that advanced smart technologies have enhanced guests’ hotel stay experience. Inevitably, smart operating environments transform industry structures, processes and practices by introducing disruptive impressions for service innovation, strategy, management, marketing and competitiveness in the hotel sector, (Buhalis, 2020).
1.4 Background to Social Media

Social media refers to the “activities of different customers in the society, gathering and sharing online information and knowledge”, (Jashi, 2013). Social media includes a wide range of internet applications, including online review sites (e.g., TripAdvisor), social networking sites (e.g., Twitter) and content sharing platforms (e.g., YouTube), (Kim and Chae, 2018).

Internet, social media, mobile apps, and other digital communications technologies have almost been integrated into everyday life for billions of people around the world, (Dwivedi et al., 2020). According to recent statistics for October 2020, 4.66 billion people are active internet users, encompassing 59% of the global population, (statista.com). A majority of the global population is now connected to online social media in some form, where they share experiences and stories which subsequently influence other's perceptions and purchasing behaviour, (Lund et al., 2018). With the popularity of internet, mobile technologies and the widespread reliance on online social media brand preferences, the sharing of consumer experiences and brand information has emerged as a new arena of brand marketing, (Chen and Lin, 2019). Social media usage has been designated as one of the most effective and powerful implications that have been extensively engaged with our social, commercial, business, and educational life, (Abed et al., 2015; Alalwan et al., 2016; Algharabat et al., 2017; Rathore Ashish et al., 2016).

Jashi (2013) states that social media marketing is one of the most effective means for companies to get close to consumers; the key step to successful marketing starts with attracting users, engaging with users, building loyalty, learning users’ preference, and feeding relevant contents to users as depicted in Figure 2.
1.4.1 Social Media and Tourism

Since the arrival of social media, tourism and hospitality have been the ground-breaking industries for the utilization of online reviews as a method to gather customers’ feedback, (Moro and Rita, 2018). In fact, some of the most popular online review sites are directly related to tourism and hospitality; most notably, TripAdvisor, (Moro and Rita, 2018). Travel knowledge sharing has important implications for advertisers as it may affect travellers’ destination decisions and trip-planning processes as well as the ultimate financial outcome of tourism destinations and corporations, (Chu et al., 2020). Consequently, some hotel marketers have become more proactive in engaging with customers via social media, rather than passively responding to questions from customers, (Kim and Chae, 2018). In essence, social media could be a potential tool to engage with consumers to generate demand in a particular type of product, (Kim and Chae, 2018).
1.5 Background to International Hotel Chains

Hotel chain means a network of multiple units that share a common feature operating in the hotel industry, (Ivanova et al., 2016). A global or international hotel chain refers to a hotel firm that either has an equity stake in a foreign property or operates the hotel under a management service agreement, (Ivanova et al., 2016). Globally, hotel chains are emerging as major players in the hotel industry, and their expansion policy includes along with the construction of new hotels, acquisitions, mergers, also business models based on management and franchise contracts, (POPŞA, 2021). Hotel chain industry leaders include Wyndham Worldwide, Marriott International, Choice Hotels International, InterContinental Hotels Group, Hyatt Hotels Corporation and Hilton Worldwide, (POPŞA, 2021).

The overall hotel chain model is beneficial to both hotel owners and management companies because this agreement gives the hotel the ability to join the brand’s global distribution system (GDS) and markets the hotel to brand members, (Huan, 2017). Member hotels gain brand standards and access to service procedures that aid the hotel to deliver exceptional level of service and amenities, for instance, new technology is constantly being rolled out to member hotels as brand standards to consistently improve guests’ experience, (Huan, 2017). The complexity of the hotel industry makes affiliation with a hotel chain an attractive strategy for hotel owners, (POPŞA, 2021).

These international chains also typically operate their own loyalty programmes, therefore, they are seen as an important means to attract customers, increase purchase intention and cultivate loyalty, (Baker and Legendre, 2021). Chain hotels get continuous business through repeat customers which helps them to survive in the global competition, (Gumaste, 2017). Loyalty programmes are defined as any institutionalized incentive system that attempts to enhance consumers’ consumption behaviour over time, (Baker and Legendre, 2021). Ultimately, loyalty programmes are designed to foster greater customer acquisition and retention, higher purchase frequency and lower customer price sensitivity, (Baker and Legendre, 2021). As perceived by the hoteliers, the number of members enrolling for the loyalty program every year is increasing, hence, it is important to continuously improve loyalty programmes to attract more customers, (Gumaste, 2017).
1.6 Research Context

The tourism industry is known to be one of the industries with the most aggressive growth. As a consequence, it exerts significant negative impact on natural resources, environment and socio-economic systems. Thus, sustainable tourism ideology is created; it is a form of tourism which exerts a minimal impact on the environment and local culture, whilst contributing to the overall development by generating employment opportunities for locals and bringing a positive experience for tourism companies and tourists, (Sloan et al., 2013). The importance of sustainable tourism is further supported by The World Tourism Organization, which states that tourism should be sustainable, otherwise, it smears negative impacts in the long-term on the environment, such as pollution, destination degradation, damages on biodiversity as well as impacting on the resident communities, (Niñerola et al., 2019). The hotel industry is one of the major components in tourism because it is the major energy consumer as more hotels are built in response to growing tourism. Sustainable Energy Ireland was instituted by the government in 2002 as Ireland’s national energy agency to provide advice, guidance and support on energy efficient measures for homes and businesses, (Crawford, 2019). This clearly shows that Ireland is gearing towards sustainable development with greener buildings.

As hotels adopt green practices, it is correspondingly important to include the smart concept to future-proof the Irish hospitality industry and stay in the forefront of technological innovations. Tuominen and Ascenção (2016) emphasize that considering the current and unforeseen developments in technology, consumption, management and operations, the hotel of tomorrow will be radically different from today. The new travel design science will help to create a highly personalized in-stay experiences with use of artificial intelligence. According to hospitalitynet.org (2019) which conducted the ‘Hotels of the Future’ study, it is expected that by the year 2060, international travellers will be able to expect augmented reality, artificial intelligence, robotics, hyper-connectivity and touchscreen technology on basically everything in a hotel. The hotels that most people have become used to today will cease to exist and they will be replaced by smart hotels, (hospitalitynet.org, 2019).

There have been numerous studies on green hospitality in Scandinavian countries; for example, The Crowne Plaza close to the Oresund Strait that separates Denmark and Sweden has a 86-meter concrete and steel tower covered in around 1,500 solar panels, that are able to produce 170,000 kilowatt-hours of electricity annually, enough to power at least 55 households, (Destors, 2014, pp. 10-12). Studies around smart hospitality in other countries such as Taiwan,
Finland, Poland, Hong Kong, Germany and Denmark have been undertaken, (Neuhofer et al., 2015; Jaremen et al., 2016; Koo et al., 2017; Buhalis and Leung, 2018; Leung, 2019). However, both of these areas are under researched in the context of Ireland. As such, the proposed hybrid model consisting of ‘smart and green’ elements is an emerging concept as the construction of future buildings will be expected to be based upon the ‘smart and green’ concept, (Wang et al., 2011). This is reinforced by Biresselioglu et al. (2018), that developing smart and green technologies are essential to overcoming the challenges to achieving future goals of sustainability.

Integration between multidimensional approaches of ‘smart and green’ as an emerging concept from numerous industries including hospitality plays a vital role in urban sustainability, (Kremer et al., 2019). As such, a gap exists in relation to the hybrid model where both ‘smart’ and ‘green’ concepts are amalgamated in the hotel sector in Ireland. Currently, while few hotels in Ireland have adopted this hybrid model, there appears to be insufficient efforts taken by the majority of the hotels. This could be due to a multitude of factors and potentially the lack of information available on the ‘smart and green’ hotels concept in Ireland. As such, the researcher seeks to address this gap in this research study by assessing the relevance of the ‘smart and green’ hotels concept in Ireland.

On a personal note, the researcher has significant interest in the tourism and hotel sector. The researcher has lived in Singapore for more than 10 years before moving to Ireland, the researcher has witnessed a stark difference between the two countries in terms of ‘smart and green’ technologies implemented in hotels. Hotels in Singapore place high emphasis on the theme of green and sustainability as well as smart technology in comparison to hotels in Ireland. Both countries, Ireland and Singapore, share many similarities; they are both are an island, highly industrialized and have a similar population size. Additionally, as the researcher is an avid traveller, from the travel experience, the researcher observed a large proportion of hotels, particularly from branded chains, have also incorporated many high-tech systems into their hotel operations and have subsequently managed to improve guests’ experience. This has sparked the researcher’s curiosity to investigate why the lack of ‘smart and green’ hotels in Ireland. This study will serve to contextualize its findings within a larger body of research. This research will act to inform policy makers, the government and hotel operators with regards to the existing situations, challenges and future efforts needed to adapt the hotel sector within the Irish hospitality industry towards a smarter and greener model of operation.
1.7 The Research Question
The main focus of this study is to explore the concept of ‘smart and green’ hotels and its impact on the future of the hospitality industry in Ireland. After some consideration and reviews of existing relevant literature, the following topic and research question emerged as a suitable and relevant topic of interest at this time:

An exploration of ‘smart and green’ hotels concept for the future of hospitality industry in Ireland.

1.8 Research Aim and Objectives
1.8.1 Research Aim
The overarching aim of this research is to explore in detail the ‘smart and green’ hotels concept for the future of the hospitality industry in Ireland, in line with expeditious technological advancement, while addressing the increasing environmental concerns associated with tourism. It is intended that the research findings will make a contribution to the knowledge for Irish hoteliers, policy makers and governmental organizations, with respect to economic and social viability of the proposed concept.

1.8.2 Research Objectives
The main objectives of this study are:

- To approach the concepts of green and sustainability in the hospitality setting and review in detail from existing literatures.
- To approach the topic of smart hospitality with emphasis on artificial intelligence and review in detail from existing literatures.
- To explore the impact of green credentials, social media, and international chains to the hotel sector from existing literatures.
- To examine, analyze and critique existing literatures in relation to green and sustainability, smart hospitality, artificial intelligence, green credentials, social media marketing and international chains, applicable to the hotel sector.
- To engage with experts to gather relevant and meaningful views on the ‘smart and green’ hotels concept in Ireland.
- To compare the new findings against existing literatures.
- To outline recommendations for practice based on the empirical findings.
1.9 Research Focus

Chapter 1 presents the introduction to the area of study. The background information and definitions on the subjects of interest are discussed. This chapter also describes the research context to justify the research topic. Subsequently, research question, aim and objectives are outlined to provide further clarity on what this study intends to achieve. This chapter concludes with the structure of the research thesis.

Chapter 2 offers a comprehensive review of all the relevant literatures pertaining to the field of the study. It covers the subject area of green and sustainability, artificial intelligence, social media, and international hotel chains. The issues examined in this chapter, provide a context for the development of the ‘smart and green’ hotels concept in Ireland. This chapter concludes with an interesting idea on exploring the relationship between financial institutions and hotels’ revenue.

Chapter 3 outlines in detail the research methodology that guided the research approach. The justification of the research philosophy the researcher adopted is outlined here. The research design illustrates the steps taken including desk research, collecting primary data and data analysis are being described in this chapter. A framework is developed detailing the several approaches employed and how they have contributed to the research objectives. This chapter concludes with the limitations of this research.

Chapter 4 presents the main research findings presented in a range of themes. This chapter offers supporting and opposing views in relation to the respective themes from all the research participants. This chapter also includes appropriate circumstantial analysis based on participants’ responses.

Chapter 5 presents analysis of the main findings from Chapter 4 and how the new findings compare to the existing literature from Chapter 2. This chapter highlights the importance of the new findings which provide the basis of recommendations emerging from this research. In light of the existing literature and the new findings presented in this chapter, the main recommendations for practice and the recommendations for future research are established. The chapter concludes with a decision that pertinent issues relating to the concept of ‘smart and green’ hotels are addressed.
2 Literature Review

2.0 Introduction
This chapter will review the literature in relation to the hybrid concept of ‘smart and green’ hotels in the hospitality sector. Green refers to environmental sustainability while smart refers to the use of modern technology with emphasis on artificial intelligence. The supporting pillars to the main theme of this research are the impact of social media and international hotel chains strategy to the hybrid model. To compile this review, relevant journals and publications were examined that relate directly to the area under research. The researcher has reviewed multiple academic journals relating to these topics. The main purpose of this literature review chapter is to identify pertinent gaps in the literature that will dictate the direction of this research, with the overarching aim of this research; to explore the concept of ‘smart and green’ hotels in line with expeditious technological advancement, while addressing the increasing environmental concerns associated with tourism.

2.1 Green and Sustainable Buildings

2.1.1 Definition
The Environmental Protection Agency (EPA) defines green building as, “the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle from design to construction, operation, maintenance, renovation, and deconstruction”, (EPA.gov). Kubba (2010) states that green buildings may also be known as sustainable or high-performance buildings as they mainly relate to land-use, building design, construction, and operation that in aggregate help to minimize or mitigate the buildings’ overall impact on the environment. The primary objective of green buildings is therefore to improve the efficiency with which buildings use available natural resources such as energy, water, and materials, while simultaneously minimizing a building’s adverse impact on human health and the environment, (Kubba, 2010). Subsequently, Martty (2015) states that sustainable buildings are green buildings which include the future element consideration, which in turns set a higher standard than those used to define green building. While a building is green when it helps reducing the footprint it leaves on the natural environment and the health of its inhabitants, a sustainable building creates and maintains the conditions under which humans and nature can co-exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations, (EPA.gov). Correspondingly, sustainable buildings are designed to reduce the impact on the environment
by using responsibly-sourced materials that are either renewable or sustainably harvested and the source materials should be gathered in an environmentally friendly way that does not pollute the surrounding area or permanently reduce the supply, (Martty, 2015). Sitting on top of sustainable building is the Net Zero Energy Building (NZEB); it is a complex concept combining the existing green and sustainable approaches, energy balance calculation of a building and on-site or off-site renewable energy generation systems interacting with the utility grid to strive for a ‘zero’ output goal, (Marszal et al., 2011).

Logically, research on green buildings, their drivers and barriers have received momentous attention, however, little has been done to develop a cohesive strategy that will spur the development of green buildings, (Sharma, 2018). The global concern for climate change, global warming and increasing pollution has invoked the policy makers around the world to devise green strategies for a sustainable future, (Sharma, 2018). Unsurprisingly, the hotel industry is beginning to devise green design within construction practices and introducing energy saving measures in an effort to preserve the environment, (Ahn and Pearce, 2013). In addition, green building practices in hotels can provide healthy and comfortable environments to their guests and employees, (Ahn and Pearce, 2013).

2.1.2 Green Hotels

*Beyond 15 years, hotel styles will begin to change drastically in terms of design and materials used – that will mark a period of true differentiation.*

[John Koldowski Director of Strategic Intelligence, PATA in Destors (2014, p. 22)]

Hotels, motels and all the various forms of accommodation, comprise the largest segment within the tourism industry with the highest negative influence on the environment of all commercial buildings, (Sloan et al., 2013). Alexander et al. (2002) mention that many in the hotel industry have recognised the negative impact their business activities have on the environment. Therefore, any reductions in energy consumption will improve competitiveness and reduce emission of greenhouse gases, which are responsible for climate change, (Hogan, 2013). Subsequently, Han et al. (2018) states that hotels are the primary form of accommodation and one of the most important sectors of the travel and tourism industry, but noted that they are also a major energy and water-intensive sector in their day to day operations. Merli et al. (2019) support Han et al. (2018) that increased pressure on the environment comes
from the accommodation sector, which is responsible for roughly 20% of the tourism carbon footprint emissions. The reason that hotels consume a lot of natural resources such as energy and water are because they provide comfort, service and care to customers, (Subbiah and Kannan, 2011).

In order to alleviate the impact to the environment, some hotels attempted to be eco-friendly, and thus the term ‘green hotel’ was introduced, (Alexander et al., 2002). However, green hotels, also known as eco-friendly hotels, eco-lodges, or environmentally friendly hotels, are defined by very different sets of criteria, (Verma and Chandra, 2016). Green hotels describe hotels that strive to be more environmentally friendly through the efficient use of energy, water, and materials while providing quality services, (Alexander et al., 2002). In a different viewpoint, according to Verma and Chandra (2016), green hotels can be defined as the hotels that operate in a responsible way towards society, community, the local culture, and the surrounding environment. It follows that green hotels typically benefit from reduced costs and liabilities, high return and low-risk investments, increased profits and reduced waste while saving money, (Alexander et al., 2002; Subbiah and Kannan, 2011; Verma and Chandra, 2016). Green and sustainable initiatives are of critical importance to the hotel industry as a whole, (Rajagopal, 2019).

Green practices can help hotel marketers to develop specific marketing campaigns to attract consumers; hoteliers, marketers and designers, who will then be able to tap into the niche market such as the younger consumers and environmentally-conscious consumers, (Verma and Chandra, 2016). Shedd (2020) opines that sustainability is more than just a travel industry buzzword or term travellers drop to sound hip. As a matter of fact, a linen and towel reuse programme, and water savings programme are almost universally practiced across a majority of hotels across all segments, (Rajagopal, 2019). Similarly, Shedd (2020) further mentions that 87% of travellers would be more loyal to a company that helps them contribute to social and environmental causes and more than 90% would switch brands to the one associated with a good cause. Thus, hotels need to constantly innovate, striving towards green hospitality, otherwise, those who do not adapt to these emerging concepts will risk being left behind, (Rajagopal, 2019).

Choi et al. (2015) notes that while ‘green hotels’ definition is common in the literature and widely accepted, there has been no universally defined rules, regulations or standards to classify a green hotel. Subbiah and Kannan (2011) relate one aspect of green hotel practices as
conservation of energy, which could be achieved significantly by installing energy efficient equipment in all departments of the hotels and changing hotel operations and maintenance practices. As a result, there are a growing number of hotels investing substantial resources in environmentally-friendly practices such as reducing waste, minimizing energy consumption, generating renewable energy, low-flow faucets and shower heads, choosing green suppliers, and adopting recycling practices, (Yadav et al., 2019). In the same way, it is estimated that 75% of energy could be saved if hotels install energy efficient light emitting diode (LED) lamps in the place of incandescent and dichroic lamps, (Subbiah and Kannan, 2011). Dual flush toilets also help to minimize the water consumption by up to 70%, (Subbiah and Kannan, 2011).

Gupta et al. (2019) find that there is a strong effect of Green Service Encounter (GSE) on hotel guests’ satisfaction. GSE is defined as hotel's green attributes that create customer trust in green services that results in re-patronage intention, (Gupta et al., 2019). Three dimensions of a green hotel service, namely ambience, design and social are offered as components of GSE, (Gupta et al., 2019). For this reason, the concept of green and sustainable practices is gaining more importance now because consumers no longer accept just linen and towel reuse programs as being green enough in hotels, (Ogbeide, 2012). This statement is supported by Yu et al. (2017), stating that advanced green practices will lead to greater customer satisfaction when compared to rudimentary green practices. Indeed, consumers have higher expectations of green hotels and thus, their practices need to be more socio-environmentally accountable (Ogbeide, 2012). Hence, in order to retain competitiveness, hotels should work towards enhancing consumer perceived green efforts and reducing perceived risk with respect to consumers’ environmental concern, (Chen, 2010). Chen and Chang (2013b) warn that hotels need to be transparent about their claimed green efforts, otherwise, it is difficult for green hotel marketers to convince their customers about their green products excellence. As such, a green trust programme is important to gain customers’ trust and reduce perceived mistrust risk, (Chen and Chang, 2013b).

2.1.3 Green Trust

The increasing prominence of the public's environmental awareness has become an integral component of the corporate mainstream and general global awareness of the human impact on the environment, (Kubba, 2010). In fact, the increased consumer demand for sustainable goods and services are creating new challenges and opportunities for businesses in all aspects of construction-related industries, (Kubba, 2010). This suggests that green or eco-friendly products/services have gained great relevance in response to increased consumer sensitivity to
concerns for a continuously deteriorating environment, (Gupta et al., 2019). Moreover, travellers are starting to consider cautiously about their ecological footprint arising from concerns over environmental impacts of tourism and greenhouse gas emissions, (Brochado et al., 2016). Millar et al. (2012) opine that although many green hotels have formulated environmentally friendly practices, they have not been strictly followed because there are no laws or regulations that define green hotels and how they should be executed, therefore, the ‘green hotels’ concept suffers from a lack of well-targeted goals and objectives.

While consumers’ awareness could be elevated via effective green marketing campaigns, some hotels simply use the term ‘green’ as their marketing trick, (Gupta et al., 2019; Pizam, 2009). Likewise, risks exist when some hotels claim to be green when they are actually not as noted by Goh and Balaji (2016). Accordingly, the inappropriate utilization of these so-called environmental claims is known as ‘green washing’, which means unsubstantiated claims about good environmental policies, (Pizam, 2009). Goh and Balaji (2016) argue that some hotels exaggerate their green claims to promote their environmental value. In such instances of greenwashing, customers might feel sceptical towards the environmental claims, (Goh and Balaji, 2016). Therefore, in order to improve the credibility of their green offerings, green hotels can develop a customer-centric approach in its communication strategy, by explicitly assuring consumers about their green practices, how they do it, and how it benefits the environment, hotel, and customers, (Yadav et al., 2019). Alternatively, consumers can be assured that the hotels’ green practices are reliable from a label known as Green Trust, (Yu-Shan Chen, 2013). Yu-Shan Chen (2013) states that Green Trust is defined as “a willingness to depend on a product or service based on the beliefs or expectations resulting from its credibility, benevolence and ability about environmental performance”.

The degree of trust consumers have in a green hotel could have an influence on their intention to book a particular green hotel, (Chen and Chang, 2013a). Chen et al. (2019) agree with Chen and Chang (2013a) earlier work, that greenwashing has a significant negative influence on green trust, which in turn negatively affects the revisit intention associated. For instance, consumers who choose a green hotel over a conventional hotel, have a genuine belief in the hotel’s active engagement in the preservation of the environment, (Chen and Chang, 2013a). Even so, there have been cases in which there is a discrepancy between consumers’ expectations of green attributes and what the hotel actually implements because the programmes are often implemented without knowing what the consumer wants, (Berezan et
Moreover, many hotel consumers understand that some hotels only implement practices that are green superficially but in reality they are merely cost-saving tactics, (Chen et al., 2019). Thus, due to increasing concern for the environment and the demand for green products in the hospitality industry, understanding consumers’ decision-making processes with respect to their intentions to visit green hotels is vital to the field of hospitality service, (Choi et al., 2015).

Establishing trust is crucial for customers with no previous green hotel experience, through explicit communication and use of educational infographics posters, at various strategic locations around the hotel, (Chen et al., 2019). In addition, it is found that there is a positive relationship between guests’ overall satisfaction level and hotels’ genuine green practices and the guests’ return intention to the particular hotel, (Berezan et al., 2013). As of 2018, 25% of the U.S. hotel properties have received a Green Certification, the gold standard of sustainability, (Rajagopal, 2019). Credible green hotel certifications from renowned agencies like Green Seal, LEED, Green Globe, and Energy Star is also an ideal way to avoid the image of greenwashing and increase green trust in consumers, (Chen et al., 2019). Choi et al. (2015) find that consumers’ behavioural intentions were influenced positively by green trust, which is consistent with previous studies conducted by Chen and Chang (2013a). In a separate research in 2019, Chen et al. (2019) underscore the overwhelming importance of trust for a hotel's green initiatives, as green trust strongly influences consumers' revisit intention and their intention to willingly participate in green behaviours such as towel reuse and energy saving practices. Additionally, communication strategies that enhance green trustworthiness and make an emotional connection with the customers could potentially lead to greater willingness to pay a premium for green hotels, (Kuminoff et al., 2010; Yadav et al., 2019).

Choi et al. (2015) outline that hotels should develop their service offerings based on the consumers’ values, beliefs, and personal norms to increase consumers’ behavioural intentions to purchase their green products. Yadav et al. (2019) supports Choi et al. (2015) by stating that the higher the trust in green hotels, the higher a traveller’s willingness to pay a premium for green hotels. Considering that, hotels should invest in green practices while keeping in mind the associated costs and consumers’ interest, (Yadav et al., 2019). On the other hand, whilst guests may be willing to engage in green practices and price premium, they do not want to experience low product quality, inconvenience or discomfort, (Yu et al., 2017). Yu et al. (2017) further states that guests prefer green in a luxury format.
Besides green hotels, Bowen and Morosan (2018) view that the adoption of artificial intelligence technology in the hospitality industry will be a disruptive game changer, particularly in the hotel sector. It is predicted that by 2030, artificial intelligence robots will consist of approximately 25% of the workforce in the hospitality industry, (Bowen and Morosan, 2018).

2.2 Artificial Intelligence (AI)

2.2.1 Definition

Artificial intelligence (AI) refers to any type of automation that carries out tasks which would otherwise traditionally be performed by humans, (Revenue-hub.com). Its name ‘artificial intelligence’ is derived from the fact that these technologies are becoming as intelligent as humans, (Revenue-hub.com). Artificial intelligence, particularly machine learning (ML), is able to keep refining its performance without human intervention on how to accomplish and perform all the tasks it is given, (Brynjolfsson and Mcafee, 2017).

AI is poised to have a transformational impact, particularly in the coming decade, as manufacturing, retail, transportation, finance, health care, tourism, advertising, insurance, entertainment, education, and virtually every other industry transform their core processes and business models to take advantage of machine learning, (Brynjolfsson and Mcafee, 2017). Indeed, the biggest advances have been made in two broad areas: perception and cognition, e.g., speech and image recognition have improved significantly, (Brynjolfsson and Mcafee, 2017).

Destors (2014) finds that by 2020, many hotels will increasingly look to new technologies to drastically increase productivity, reduce costs and improve services. However, Brynjolfsson and Mcafee (2017) contradict Destors (2014), they believe that challenges exist for hotels to stay abreast of the developments in the AI field, changing customer expectations, security implications and strategy for managing the introduction and exploitation of new technologies. Brynjolfsson and Mcafee (2017) further suggest that the bottleneck lies in management, implementation, and business imagination of AI.

2.2.2 AI in the Tourism Industry

Travel, tourism and hospitality companies have started to adopt robots, artificial intelligence and service automation (RAISA) in multiple formats, such as chatbots, delivery robots, robot-concierge, conveyor restaurants and self-service information/check-in/check-out kiosks, (Ivanov and Webster, 2017). The most obvious advantage ensuing from the adoption of RAISA
(Robots, Artificial Intelligence and Service Automation) is labour cost savings, (Ivanov and Webster, 2017). Further to that, service robots, chatbots and self-service kiosks can operate round the clock, much more than the usual working hours of human employees, (Ivanov and Webster, 2017). Likewise, chatbot also has many advantages for both hotel and mobile users to improve convenience and reduce service, sales and support costs, (Van den Broeck et al., 2019). In addition, customers' demands can be attended to 24 hours a day using chatbots with artificial intelligence, (Ivanov, 2019). As a result of that, customers using smartphones can reach a hotel anytime and anywhere via chatbots with personalized services related to their needs, (Putri et al., 2019). In the same fashion, guests can find out availability of rooms, prices, conduct bookings and have a personal front office that provide the real-time and context-relevant information about the hotel services, (Putri et al., 2019). In a study conducted by Buhaldis and Yen (2020), hotel practitioners support the use of chatbots because the benefits of chatbots outweigh the challenges. Digitalization and advances in areas such as automation, location-based contextual services, and artificial intelligence are disrupting industries and current models of operation; the hospitality industry needs to keep up with the pace of endeavours to improve efficiency, by leveraging new technologies and automation, (Kostiainen et al., 2018). Makridakis (2019) agrees with Kostiainen et al. (2018) that the industry-wide movement towards increased data volumes and advanced algorithms, has now introduced AI, automation, and robotics technologies in many hospitality businesses by strategically solving multiple daily challenges. Besides, Tailleferd (2018) recognizes that AI should improve marketing campaigns as well because it can be optimized using artificial intelligence to help identify consumers most likely to respond to different types of offers, so more targeted, relevant and personalized offers are pushed out leading to more bookings and revenue. AI is the driving force that will redesign marketing for the future, as travel service providers seek for continued loyalty from customers, recognizing that every advertisement material sent to an individual needs to be intelligently targeted, (Tailleferd, 2018).

2.2.3 Smart Hotels
Smart hotels have integrated robots into their business processes to leverage on artificial intelligence technology in order to attract customers and find solutions to customers’ problems, (Ercan, 2019). Stankov et al. (2019) provide an example that Wynn (Las Vegas, USA) was among the first hotels in the world to commercially introduce the Amazon Echo smart speakers
as room equipment where guests can verbally control many aspects of lighting, temperature and the audio-visual components of a hotel room using commands via a voice-activated assistant Alexa service. In another example, Tung Vincent Wing and Law (2017) elaborate on the use of robotics in day-to-day operations of hospitality settings such as robotic butlers (e.g., Boltr in Aloft Hotels), robotic arms as bartenders (Bionic Bar on Royal Caribbean’s Quantum of the Seas) and virtual robotic agents in Singapore’s tourist information centre. This suggests that robots have gradually started to gain momentum in performing the tasks that human beings would ordinarily do and they are capable of being deployed as a receptionist, concierge, bellboy and housekeeper, (Ivanov, 2019). In fact, one of the most advanced applications of AI is illustrated by the introduction of a human-like social robot developed by Singapore’s Nanyang Technological University (NTU) in 2018, (Drexler and Beckman Lapré, 2019). The robot acts as a receptionist in NTU Institute of Media Innovation, (Drexler and Beckman Lapré, 2019). With manpower issues and economising efforts in mind, recent technological breakthroughs in service automation, artificial intelligence, and robotics has created boundless possibilities to boost organisational performance and productivity as well as quality consistency, (Drexler and Beckman Lapré, 2019).

Smart Room or intelligent room technology is an example of artificial intelligence widely used in hotels, (Neuhofer et al., 2015). Consequently, smart hotels have started rolling out room controls within their smartphone platform that enable guests to change the room temperature, lighting mood, TV, music, blinds and more, (Shedd, 2020). Shedd (2020) emphasizes that this level of personalization has never been possible previously and will change both the guest experience and optimize energy consumption.

As can be seen, artificial intelligence now occupies a major role in enhancing guest experience and the trends now include use of virtual and augmented reality, predictive analysis, personalization technology and robotics in the hotel, (Seal, 2019). AI applications could enhance perceived service quality over novel and interactive approaches for service delivery and guest engagement, thus, an increasing number of hotels are adopting AI into their service operations to provide what they envision as vitally necessary technology, (Li et al., 2019). To clarify, robots, artificial intelligence, virtual reality and self-service technologies used in smart hotels could help to reduce operating costs, portray a positive brand image, provide targeted marketing opportunities, and generate competitive advantage against other players in the market, (Ercan, 2019).
2.2.4 Virtual Reality

Afsarmanesh and Camarinha-Matos (2000) envisioned that there is now a need for an infrastructure that supports the creation of Virtual Tourism Organizations, and the proper support for management of their cooperation. Fast forward to the modern world, Beck et al. (2019) agree that Virtual Reality (VR) is rapidly becoming a creator of new tourism experiences, aiming as a source of information, entertainment, education, accessibility and heritage preservation. Technological developments and demographic changes have started to encourage the hotel businesses to use automation systems and adapt the concept of smart hotel, (Ercan, 2019). All existing VR devices have similar features, which incorporate a screen, headphones and sensors to detect the movement of the head to create a realistic image, (MW17.org). Correspondingly, smart hotels use sophisticated technology to provide customers with different and more engaging experiences, (Ercan, 2019). Typically, Virtual Reality (VR) is a set of technologies that allow a user to wholly immerse in an artificial environment, such that sensory perceptions (somatosensory, vision, sound and touch), are manipulated by the experience arising from screen-based technologies, haptic devices and exoskeletons, (Buhalis et al., 2019). Technologies such as virtual reality headsets are already commonplace and impending developments such as gesture interfaces and 3D mobile phone displays would be a norm beyond 2020, (Destors, 2014). Ercan (2019) insists that virtual reality applications used in the marketing of smart hotels, made it possible for guests to take a virtual tour; for example, a virtual tour of cultural heritage sites around the world. Buhalis et al. (2019) agree that VR is indeed disrupting micro-level administration and marketing practices in the hospitality and service industry.

2.2.4.1 Virtual Reality Offerings in Hotels

Leung et al. (2020) notes that as the use of virtual reality in the travel sector has exploded, hotels are constantly searching for new uses of VR to attract guests. The hospitality industry 3.0 refers to the need for the industry to progress to better adapt to the current operating climate, as Weisskopf and Masset (2021) believe that hotels as we know them today will soon be obsolete. Weisskopf and Masset (2021) cite that low access threshold is the key to reach as broad an audience as possible with virtual reality technology; making the content accessible on a variety of devices and eventually without the need for a VR headset. Buhalis et al. (2019) believe that tourism and hospitality organizations should use VR to permit clients to experience tourist sites through virtual tour and pre-arrival experience of hotel facilities. In addition,
advancement in virtual reality devices made the recreation of ancient worlds, towns, and other touristic sites possible, (MW17.org). As a result, some hotels have started to use virtual reality applications within the hotels; guests are given the opportunity to travel around the hotel and tourist sites with virtual reality applications without leaving the hotels, (Ercan, 2019). Additionally, individuals with mobility impairments can also benefit from the use of VR to pre-test the accessibility of the destination and travelling process from the comfort of a hotel room, (Weissenberg, 2017). Likewise, VR could support people with autism spectrum disorders (ASD) to prepare for the trip by familiarizing themselves with the destinations first, (Buhalis et al., 2019).

Israel et al. (2019) infer that the immersive feeling of telepresence increases the perceived enjoyment of the potential customer, significantly increasing the perceived enjoyment by virtual hotel experience. This state of affairs in turn increases the probability that the customer will book the travel accommodation, (Beck et al., 2019; Israel et al., 2019). Equally, videos providing 360-degree views of restaurant ambiance, terraces enclosed in greenery or hotel beachfront locations, for instance, might be the features that make the establishments special, (Weisskopf and Masset, 2021). For this reason, VR is considered a useful promotional tool to provide potential travellers with a sensory simulation of a travel experience beforehand, (O’Rawe and Gibson, 2017; Voronkova, 2018). It is estimated that almost half of millennials would like to use VR to preview a destination they are planning to travel to, (prnewswire.com).

2.2.4.2 Virtual Reality Marketing Potential

VR's tourism marketing potential primary attraction derives from its ability to provide all-embracing sensory perspective to prospective tourists, (Guttentag, 2010). It follows that the new visualisation possibilities of VRs will allow hotel managers and travel agencies to offer a virtual trial hotel experience enabling the customers to obtain a realistic expectation of their chosen hotel, (Israel et al., 2019).

Leung et al. (2020) believes that VR commercials produced better instantaneous effects than the traditional commercials in terms of advertisement recognition, brand attitude, and purchase intention. In addition to serving as a tourism marketing tool, VR systems also can act as marketable, entertaining tourist attractions by itself, (Guttentag, 2010; Griffin et al., 2017). Subsequently, Moorhouse et al. (2018) concur that tourism marketers’ perspectives of VRs potential as an effective marketing tool lies in its capability to positively alter travellers’ behavioural intentions and perceptions. Specifically, VR can be strategically used in the
development and marketing of new tourism brands, to help tourists visualize the brand tangibles such as the accommodations environment, (Bogicevic et al., 2019).

Griffin et al. (2017) believe that VR led to potential tourists generating more positive emotions towards the destination of visit. Likewise, Tussyadiah et al. (2018) hypothesize that the sense of reality during a VR presentation, including enjoyment from VR, will encourage positive consequences such as increased level of preference, liking, and interest in the tourism destination and ultimately leading to strong visit intention. Tussyadiah et al. (2018) reinforce Griffin et al. (2017) hypothesis that VR does indeed appear to have a positive impact on affective and cognitive elements of destination image in comparison with other forms of visual promotion. Beck et al. (2019) conclude that VR, regardless of whether it is non-, semi- or fully immersive, is capable of positively influencing the individual motivation to actually visit a place.

International tourism is poised to make use of the virtual reality technology to promote an attractive and positive image of a destination that increases the number of tourists, encourages economic development and makes consumers' decisions more crucial in the ever more complex and competitive global market, (Likholetov et al., 2016). Griffin et al. (2017) contradict Likholetov et al. (2016) by stating that some respondents in the VR condition study were not necessarily more probable to visit in the next five years, nevertheless, they would still share information about the VR experience with friends and family. Despite that, Yu-chih (2011) outlines that a major benefit of virtual tourism is to enable access to elderly and disabled people to show them the opportunities offered by the internet, to make them more interested in the history of their native land, and to introduce them to the culture of other cities and countries. Voronkova (2018) agrees with Yu-chih (2011) and further adds that virtual tourism could be used as a substitute for visiting specifically protected areas or tourist destinations which are closed to the public, for a variety of reasons e.g., tourists' safety. Voronkova (2018) cites an example of Kapova Cave in Bashkiria, which was closed in 2019 and consequently, a relevant virtual tour was presented to the nature reserve's visitors. Admittedly in the year 2020, the Covid-19 pandemic has led to catastrophic impacts on the world’s economy especially the hospitality industry, which includes the tourism industry, (Chirisa et al., 2020). Accordingly, the number of countries implementing additional health measures to stop the arrival of international visitors and limit the spread of Covid-19 within their borders significantly interfere with tourist arrivals since the declaration of Covid-19 as a global public health
emergency, (Chirisa et al., 2020). In this new era of the Covid-19 pandemic, virtual reality can nonetheless be seen as a way to sustain tourism and maintain income inflows in the industry, as people limit travelling but focus on VR tours of destinations of interest in the comfort of their own homes to fulfill their visual desires, (Chirisa et al., 2020).

On the other hand, Guttentag (2010) cautions that VR in tourism would lead an individual to believe that he or she has seen enough of a tourist site by ‘visiting’ it virtually. Even though a VR substitute clearly would not be authentic in the strictest sense, it could be argued that some users would nonetheless perceive it as authentic, (Guttentag, 2010). Another challenge highlighted by Yung and Khoo-Lattimore (2017) is that some tourist sites operators are unwilling to embrace VR with concerns about weakening authenticity of the sites. Since VR environments and experiences are computer-generated visuals, some sites operators felt that these visual copies contributed to weakening the philosophy of some tourist sites, particularly historical sites, (Yung and Khoo-Lattimore, 2017). Although the novelty of VR experiences is exciting, it is also possible that the initial admiration of this new technology will wane upon widespread acceptance, (Griffin et al., 2017). Equally, many travel service providers are also met with challenges to undertake strategic investment decisions to leverage VR technology in order to influence consumers’ travel decisions, (Tussyadiah et al., 2018). Apart from the barrier of cost, the general consensus is that usability could remain a challenge to mainstream market penetration and thus, there is a need for greater adaptation of the technology for the optimal application of VR as a tourism marketing tool, (Yung and Khoo-Lattimore, 2017). Not only does Guttentag (2010) outlines the opportunity for the public to re-create tourism sites in VR and potentially profit from these raises intellectual property issues, such issues can prove quite complex particularly in the digital realm which raises fundamental questions such as what is real, and what is not. Instead, Yung and Khoo-Lattimore (2017) highlight that due to the diverse nature in how VR is being used as a marketing tool, the need to understand and adapt the technology to each different industry is vital. VR used in tourism, however beneficial, should not be done at the expense of the local businesses and population who also make a living from tourism, (Chirisa et al., 2020). Voronkova (2018) contradicts Griffin et al. (2017) and Tussyadiah et al. (2018) by stating that VR in its present form, is just an electronic marketing instrument that will not be able to substitute for real tourism. Therefore, many aspects of a tourist experience may never be fully replicable in VR, for example, VR is unable to accurately
simulate the smell of the ocean, the local connection and the taste of local food in a virtual visit, (Guttentag, 2010).

In order to convince consumers regarding the benefits of ‘smart and green’ hotels, social media marketing plays an increasingly important role in hotels’ marketing strategy, (Minazzi and Lagrosen, 2013). In fact, Leung et al. (2015) agrees by stating that user-generated content in social media could influence the decision-making process of customers who intend to book a hotel, illustrating the importance of social media marketing in the hospitality industry.

2.3 The Influence of Social Media

2.3.1 Social Media Marketing

It is now possible for marketers to communicate to masses of consumers worldwide about their products through the emergence of social media, subsequently, the impact of peer-to-peer communication among consumers is significantly magnified, (De Las Heras-Pedrosa et al., 2020; Duffett Rodney, 2017). A new pattern of multidimensional communications emerged in recent times where consumers find more integrity through peer opinions instead of getting them from traditional marketing advertisements, (Algharabat et al., 2018; Aswani et al., 2018; Hayes and King, 2014). Shareef et al. (2015) opine that consumers have more trust in information that is passed on to them if it was generated by other consumers and not by professional marketers. Informal communication seems to possess strong persuasive power for social network members, (King and Lee, 2016). As such, social networks have essentially created a means of brainstorming discussions from different sources, such as different kinds of opinion leaders, including peers, celebrities, and marketers, (Shareef et al., 2015; Shareef et al., 2019).

Social network members have higher confidence on information originated by their peers of the network because they feel more emotional adherence, whereby organised formal information produces less emotional connection, (Ha and Lee, 2018). As the internet has developed different forms of media and applications over time, it has effectively transformed the traditional human interactions of the past by forming new links for communication, (King and Lee, 2016). Although each person can experience the same service activities, they will likely have different feelings and ideas about a given event, so the experiences of consumers and users are different, (Agapito et al., 2013). Shareef et al. (2019) claim that multi-interaction is the new movement for creating convincing opinion about a specific product because the traditional one-way and two-way communications are now no longer effective in social media.
marketing. For instance, in a social media context, firms and consumers are continuously interacting with each other, which positively influences a firm’s performance and enhances consumers’ satisfaction when the expected benefits of community contribution are attained, (González-Rodríguez et al., 2018). Tafesse and Wien (2018) further affirm that social media performance is positively related to marketing performance.

2.3.2 Application of Social Media in Tourism and Hospitality Industry

The use of social media has become a popular medium for information search in the tourism and hotel industry, (Kang, 2018). For example, Tourism Ireland is actively using its social media strategy to extend their consumer engagement in a connected way across social network platforms, in order to drive differentiation, reach, word of mouth and specific customer relevance for the island of Ireland as a holiday destination, (Tourismireland.com). Facebook, Twitter, YouTube, Podcasts and Travelshake are some of the most popular social media networks for marketing in the tourism and hospitality industry, (Jashi, 2013). Jashi (2013) demonstrates that social media integrated into the marketing mix could lead customers to the precise direction. Consequently, Ong and Ito (2019) suggest that social media marketing has sufficient power to change attitudes among consumers which would consequently affect the consumers’ travel intention and their inclination to spread positive word-of-mouth travel experiences. For illustration, when consumers have positive impressions toward a hotel’s tweets, they will develop positive attitudes toward the hotel’s Twitter account, which in turn, leads to hotel brand loyalty, intention to book and spread the positive news, (Alansari Mansour et al., 2018; De Las Heras-Pedrosa et al., 2020).

The tourism and hospitality industry is undoubtedly a place with a high visibility of consumption, which make the tourism-related products more vulnerable to social media conversations and stories (Thinkdigital.travel). This poses a distinct challenge for many organisations, which must cope with a new reality where destination brands have gradually became the creation of people's shared tourism experiences and storytelling in social networks, rather than originating from their own marketing strategies (Lund et al., 2018). Considering that today's experienced tourists are savvier, they prefer real people's opinions over sales pitches, and that decision-making is increasingly crowd-sourced and peer-validated, these findings are often critical for tourism marketing and strategic planning (Seeler et al., 2019). Therefore, social media has now became the most tactical stage for enhancing brand image and accomplishing tourist engagement, (De Las Heras-Pedrosa et al., 2020).
In a study conducted by Jashi (2013), 87% of participants said online reviews impacted their hotel choice, 70% of participants trusted online recommendations while only 14% of participants trusted advertisements. Besides that, the impact of user-generated content is growing rapidly and its role has become progressively more essential; these include blogs, social media, and video sharing sites that allow the users themselves to become influencers, (De Las Heras-Pedrosa et al., 2020). De Las Heras-Pedrosa et al. (2020) believe that user-generated content is one of the vital elements to improving underlying business activity. Yet, tourism-related products and services are well differentiated and purchasing tourism products requires higher levels of customer involvement, most travellers will utilize social media to hunt for numerous types of information before the decisions are made to lessen their perceived risks and to evade overpaying for a service fiasco, (Kim Woo and Park Seo, 2017). According to Lund, et al., (2018), since tourism products are sold in advance of consumption, therefore decision-making in consumptions relies significantly on encouraging stories and electronic word-of-mouth (eWOM) via sites such as TripAdvisor and Facebook. While Seeler et al. (2019) confirm the important role of social media and social media influencers in tourists' decision-making processes, they also postulate that social influence goes beyond these initial stages of inspiration and travel planning. Lund et al. (2018) emphasizes that if a story has sufficient appeal and interest, it could spread beyond people's own networks in social media and potentially be shared around the world. Hence, if people have the right influential skills and competencies, the potential dissemination and reach of stories can result in them influencing millions of people, (Lund et al., 2018). Thus, it is vital for tourism companies to realize the important role of social media, so they can be agile in responding to consumers’ preferences, (Kim Woo and Park Seo, 2017; Vipin et al., 2015).

Conversely, while some hoteliers and tourism service operators may not see the full potential of the additional profits generated by social media, they still agree that social media is an effective way of marketing, mainly because it offers a minimal-cost platform for advertisement and PR opportunities with the widest audience reach, (Michopoulou and Moisa, 2019; Wozniak et al., 2016). Despite that, Zeng (2013) argues that one major roadblock to hoteliers’ attitudes towards extensive social media marketing and implementation are the extra costs associated with implementing social media analytics and they are reluctant to invest in such technologies. Subsequently, Michopoulou and Moisa (2019) report that high staff turnover in the hotel sector leads to the lack of a full-time designated person taking full responsibility for the hotel’s social
media account; which may remain inactive until someone else takes the responsibility, contributing directly to another challenge, which is a lack of consistency in terms of content posted, tone of voice and the style of posts. Moreover, Aswani et al. (2018) highlight that digital marketing on social media can have an undesirable effect if it is executed by untrained service providers. Correspondingly, Aswani et al. (2018) further warn that if social media marketing is not being managed properly, the negative impact in the long-term is magnified due to the speed of spread, e.g., a viral post.

2.3.3 Application of Social Media in Smart and Green Hotel

Han et al. (2010) purport that managers in green hotels should be cautious with the fact that environmentally favourable practices will not necessarily lead to an increase in environmentally conscious guest’s intention to book their hotels, if the hotel’s intention is not explicitly known. In light of this, social media technology forms a set of communication and organizational tools that are increasingly gaining attention in this situation primarily due to their potential to facilitate rapid and effective communication to the public, (Gil-Soto et al., 2019). Instead of the promotion of environmentally friendly practices, it is the effectiveness of communication of such actions that elevate the attraction for the environmentally committed guests, (Gil-Soto et al., 2019). Gil-Soto et al. (2019) clarifies that when guests are more informed about green hotel practices as they search for a hotel’s information on social media sites, more guests began to acknowledge the hotels’ green practices and leave more positive comments about the practices. Thus, social media is an effective instrument for hotels to communicate their environmentally friendly practices to customers and to inspire them to be greener, (Gil-Soto et al., 2019; Kang et al., 2012).

On a separate note, Michopoulou and Moisa (2019) make references to the use of artificial intelligence in social media platforms such as chatbot and Facebook messaging to take in reservations. For instance, International Hotel Group (IHG) and Hyatt Group have tried using Facebook Messenger chatbot to communicate with guests, while Best Western International, Accor and Marriott International have implemented the TripAdvisor Instant Booking system, (Michopoulou and Moisa, 2019). Likewise, Loews Hotels & Resorts in the United States have been using Twitter to accept reservations, and since 2015, the Conrad Hotels & Resorts by Hilton started offering bookings via an Instagram platform, (Michopoulou and Moisa, 2019).
Besides social media marketing, in an effort to increase awareness of ‘smart and green’ hotels particularly in the international market, global hotel alliances or international chains strategy could be an attractive business plan option for hotel operators, (Alon et al., 2012).

2.4 International Hotel Chains

The term international chains or ‘global hotel alliances’ refers to a “series or of a group of hotels operated by the same company or owner with a global footprint”, (Landman, 2020). It is the opposite of independent hotels where independent hotels are operated and managed on their own, typically limited in a local area, (Landman, 2020). Yet, a hotel entering franchise agreement with a major brand often contract for operating services with a hotel management company or chain, (Bourke et al., 2020). Management contract agreements give hotel management companies a significant element of control over hotel operations without the cyclical risk exposures entailed in ownership or leasing of hotel properties, (Bourke et al., 2020). For clarification, once a member hotel enters into a corporation with a hotel management company, it is required to begin the process of realigning its marketing policies with those of the hotel chain, (Richard, 2017). Typically, member hotels are instructed to improve their properties to match the brand’s market segmentation, standards, service, quality, pricing structure, distribution channels, human resources policies and training, (Richard, 2017).

The key advantage for a hotel to be affiliated with a global hotel chain is that the chain provides a variety of opportunities for advancement and growth in hotel sales with an access to key global corporate clients (Krengel, 2016). According to Krengel (2016), western business travellers will use more of a hotel’s extra facilities and they are usually frequent travellers, which means they will likely return to the same hotel. Surprisingly, research shows that the ranking of perceived advantages of chain affiliation clearly indicates that hotel managers see the chain affiliation as a tool for greater market visibility which would drive demand to the hotel, rather than as a panacea for improved revenues, (Ivanov and Ivanova, 2015). For this reason, some Irish independent hotels have started to either join multinational chains or form alliances themselves in order to raise their competitiveness, (Bobek and Wickham, 2015).

One of the most evident benefits of chain hotels is derived from the brand, which instantly provides member hotels with the direct image and reputation of the brand, greater market visibility and will subsequently solidify a hotel’s position in the market niche overtaking other competitors, (Ge et al., 2018). In fact, with management contract agreements, local hotels will benefit by learning the brand’s marketing strategies and can establish networks with global
partners, thus enhancing the brand name and reputation which favours most investors, (Ge et al., 2018). Byers et al. (2013) argue that unlike independent hotels, chain hotels apportion large marketing budgets to advertising, brand building, guest loyalty programmes, and other strategies which made them more resilient to competition while at the same time providing a more predictable standard of service.

Arguably, there is an increasing need for hotels to improve their ability to access international alliances while maintaining good performance for sustainable development, (Ge et al., 2018). Ribaudo et al. (2020) conclude that global chain-affiliated hotels perform typically better than independent hotels in foreign markets due to affiliation to a more well-known brand resulting in more international demand when compared to their independent counterparts. This suggests that this arrangement is ideal for hotels to gain higher exposure to international customers, (Ribaudo et al., 2020). Carvell et al. (2016) reason that this is primarily due to international hotel chains that are able to offer a more consistent value proposition with guaranteed quality and access to different amenities, plus uniform services to satisfy customers from different cultural backgrounds anywhere around the world. O’Neill and Carlbäck (2011) established that chain hotels operated with significantly higher occupancy rates than independent hotels during all years of their research, 2002 through 2008. Accordingly, O’Neill and Carlbäck (2011) highlight that guests place the value of the international hotel chain branding highly due to its predictability and consistency in quality.

Independent hotels, typically dominated by family businesses, inherently suffer from internal weakness as they are limited in growth, economic motives, marketing, quality assurance, pricing policies and the lack of financial resources of global hotel chains, (Connell et al., 2015). In addition, they are more susceptible to seasonal occupancy fluctuations than large hotel chains, (Connell et al., 2015). It follows that the challenges of adapting to cyclical occupancy rates are especially onerous for independent hotels due to their limited resources, (Camisón et al., 2020). O’Neill and Carlbäck (2011) similarly state that members of global hotel chains cope better during both economic expansion and crisis than independent hotels. Further to that, Camisón et al. (2020) explain that from the economic perspective, hotel chains have competitive cost advantages over individual hotels as the magnitude of chains and economies of scale afford the hotels greater bargaining power in their negotiations with suppliers and customers notwithstanding higher efficiency and resource optimization. In an example of green
hotel market penetration, Ge et al. (2018) cite that green hotels venturing into international alliances may see increased reception from the public.

Hotel chains have established centralized systems for marketing, reservations, accounting and human resources, which provide operational efficiency, (Zhang et al., 2019). Apart from that, Leung et al. (2016) state that hotel chains have access to big data to increase their differentiation and therefore, improving strategic planning to ensure maximum occupancy with satisfactory returns. Kourtesopoulou et al. (2018) cite that chain hotels appeared to provide better e-marketing and customer relations strategies, greater levels of technology and innovation applications, and higher levels of trust in their websites. Thus, hotel chains can charge higher prices than independent hotels due to the security offered by their reputation, (Zhang et al., 2019). Unsurprisingly, Gao et al. (2018) find that the likelihood for negative hotel reviews is lower for chained hotels than that of independent hotels due to associated known brand security.

On the flipside, Camisón et al. (2020) argue that some independent hotels might have concerns about exploitation and loss of control over the hotel operations after entering into management contract agreements with global hotel chains. Instead, Richard (2017) acknowledges that the opportunity to enter into new markets and function on a truly global scale will come with challenges. This is because international hotel chains have the onus to ensure brand integrity by providing a consistent standard of service across countries, while simultaneously adapting services, experiences and amenities to accommodate distinct cultures, (Richard, 2017).

The guest loyalty associated with global hotel brands, including the brand loyalty programmes, could be a game changer regarding how the global brands create value proposition for their member properties, (O’Neill and Carlbäck, 2011). For this reason, most international hotel chains operate multi-brand loyalty programmes and use a common technology platform to drive incremental revenues and increase bookings, (Eisen, 2016).

2.4.1 Hotel Loyalty Programmes

Loyalty programmes seek to enhance customer commitment to the loyalty programme and to related brands, (Pesonen et al., 2019). Commitment is the key to customer loyalty and loyalty programmes have significant effect on consumers’ behaviour, (Pesonen et al., 2019). Koo et al. (2020) explains that affective commitment, also known as emotional commitment, has a robust relationship with customer loyalty, thus, hotels can achieve a higher market share and profitability by steadily developing certain emotions created from guest experiences. Hotel
firms also benefit from the loyalty programme by reduction in marketing expenses, (Koo et al., 2020; Lam and Wong, 2020).

Koo et al. (2020) argues that the hotel loyalty programme has a positive influence on the formation of guests’ loyalty. According to the J.D. Power 2017 Hotel Loyalty Programme Satisfaction survey, Marriott International’s loyalty programme, Marriott Rewards, ranked highest in overall customer satisfaction, and Marriott international achieved a total of 22.89 billion USD in revenue in 2017, which is the highest revenue among major hotel groups, [in (Mesa, 2017)]. Mesa (2017) illustrates that hotels can be led to success in their business by attracting customers and increasing revenues through global hotel loyalty programmes. Marshall and Southeastern (2010) conclude that loyalty programme members’ behavioural loyalty evolves positively over time and proves to be an increasing trend over time for both booking frequency and booking volume by members.

Koo et al. (2020) demonstrates that the perceived value of a loyalty programme is essential in the formation of customers’ brand loyalty. The number of members enrolling for global hotel loyalty programmes every year is increasing and therefore, there is a great market potential in that space, (Gumaste, 2017). A hotel loyalty programme is usually aimed at enticing business travellers and other frequent hotel guests to prefer a particular brand or group of hotels over others, and the programme will generally have multiple levels, (Zuo et al., 2018). Therefore, hierarchical structure in global hotel loyalty programmes leads to higher perceived affinity between a programme and a brand, which in turn has a positive effect on brand loyalty, (Mimouni Chaabane and Pez, 2017). As illustration, higher levels in the scheme will typically offer multiple benefits including free room upgrades, bonus points, early check-in, late check-out, complimentary buffet breakfasts, access to executive lounges, spa, and other facilities in the hotels, (Zuo et al., 2018). Thus, owing to these benefits, ‘mattress run’ activity is frequently done by many loyalty programme members, (Gumaste, 2017). A mattress run is a notion similar to a mileage run for an airline loyalty scheme where customers book the hotel stay without an intention to stay in the hotel to meet different hierarchy level requirements in the global hotel loyalty programmes, (Gumaste, 2017). Consequently, in the long run, customers will generate repeat business when they perceive all values of the loyalty programme, recognize the attractiveness of their loyalty programme, and finally realize the cost would be high to move to a different loyalty programme, (Koo et al., 2020). In tandem with the large market share of chain hotels, large volumes of information can help to reduce marketing costs
by raising switching costs and customer loyalty, thus, increasing the effectiveness of the loyalty programmes’ marketing strategies, (Camisón et al., 2020; Piccoli, 2008).

It is a common practice for international hotel chains and their loyalty programmes to capitalize on their brand names by implementing a variety of brand bundling and brand extension strategies in various forms, including co-branding, co-marketing, brand extension, brand building, joint branding, marketing partnership, strategic alliance, dual branding and affinity partnering, particularly with financial institutions, (Chiambaretto and Gurau, 2016; Ronzoni et al., 2018).

2.4.2 Financial Institution Partnerships
In the U.S, one of the most common ways the financial institution partnership for the hospitality and travel industry is via credit card partnerships, (Kotler et al., 2019). Surprisingly, co-branded credit cards remain an integral revenue stream to financial institutions and retail partners alike because according to Wood (2019), co-branded credit cards generated $990 billion in purchase value in 2018. Tingchi Liu (2012) states that more than 50% of American credit cards are co-branded credit cards. Travel and hospitality segments continue to dominate spending share due to their high-spending affluent users, (Wood, 2019). However, Gravier (2020) shows that there is an increasing number of hotel chain brands, retailers and airlines teaming up with financial institutions to create credit cards that reward loyal customers.

Wang Stephen and Farquhar (2018) state that perceived benefits of co-branded credit cards proved to be popular among users particularly due to preferential treatments on core and peripheral services of tourism. As a result of the perceived benefits of the co-branded credits card (e.g., Hilton Surpass Credit Card), consumers are significantly positively inclined to spend on that particular brand (Hilton hotels), to access the preferential treatment and earn reward points, (Wang Stephen and Farquhar, 2018). Most international hotel chains such as Hilton, Marriott, Hyatt and IHG have collaborations with major financial institutions in the U.S and selected markets overseas, which allow their guests to earn loyalty points and cashbacks for the hotel stay, (Gumaste, 2017). However, Huan (2017) finds that hotel co-branded credit card users prefer earning loyalty points over cashback rewards because loyalty points hold more value and provide a special benefit to the users. As such, the financial institutions are typically looking to expand the number of credit card users who travel often and are willing to spend lavishly such as frequent flyers and business travellers, (Huan, 2017). Hotel loyalty programmes partnership strategy with financial institutions are very well received in the U.S.
because aside from the ability to earn free loyalty points, some credit cards also offer an automatic upgrade to a higher level of the co-branded hotel loyalty programme scheme, (Gumaste, 2017). Thus, co-branded credit cards provide hotel operators the unique opportunity to upsurge customer acquisition and therefore the ability to increase their spending, (Huan, 2017).

Interestingly, Doggrell (2020) states that in 2019, Marriott co-branded cardholders booked approximately three times more room nights at Marriott International than non-cardholders; this could be due to the fact that card holders are more engaged and more loyal. Kim et al. (2021b) support Doggrell (2020) that there is an increased consumer buying behaviour due to the effect of loyalty programmes. In addition, Tingchi Liu (2012) illustrates that long-term credit card co-branding partnerships are very successful with participating hotels managed to build a strong affective loyal customer base who spend more at the hotel properties.

Gandhi (2018) argues that co-branded credit cards could lead to increased average spends per card due to heightened awareness of specific benefits of co-branded cards. Furthermore, Gandhi (2018) opines that specific co-branded credit cards in the wallet steers consumer’s preference to the co-brand partner over other brands in the same category. Gravier (2020) agrees with Gandhi (2018) that the increased brand visibility from visual exposure every time card holders reach for their co-branded credit card, not only ensures their loyalty, but also strengthens it. Thus, co-branding marketing partnerships are often profitable for global hotel chains due to incremental sales contributed by elevated brand loyalty, (Agustin and Singh, 2005; Geng and Kauffman, 2017).

It should be acknowledged that a rapidly changing payments landscape is heading in the direction of a cashless society, (Horgan, 2018). Cash is rapidly being made obsolete and being replaced by cards and other payment methods, thus, businesses must learn how to cope with this accelerating shift, (Horgan, 2018). Cashless payment systems in a hospitality setting log every transaction that is made, providing essential data such as the purchaser’s name, purchase date and purchase value; therefore, this provides hotels the opportunity to better understand their customers and cross sell other services they offer, (Travel-News.uk). Therefore, the time is apt for the hospitality industry to progress towards an entirely cashless ecosystem to further increase the adoption of co-branded credit cards, (Loh et al., 2019).
2.5 Chapter Summary

This chapter has provided a comprehensive review of the literature on the application of green and sustainability concept and artificial intelligence in the hotel industry. This chapter further delves into possible supporting mechanisms in order to increase adoptability of the concept of a ‘smart and green’ hotel. As the scope of tourism and hospitality is quite large, the researcher aimed to limit the review directly relevant to the research topic within the hotel sector. Therefore, the emphasis of the literature is geared towards ‘smart and green’ hotels.

Based on reviewing the literature, numerous insightful information emerged regarding the use of artificial intelligence and green technology in the hospitality industry. Various studies have illustrated that they bring in tremendous benefits to both hotel practitioners and guests. The literatures also highlighted the possible challenges to these technologies. While the green hotels concept has taken off more successfully, the smart hotels concept is still limited due to its relatively new realm of artificial intelligence technology. Literatures have shown that going forward, hotels who are reluctant to adopt new technologies will be left behind.

Studies have also shown that social media has taken over the world by storm in the recent decade and it has now almost become the default marketing channel for most businesses. Most millennials have indicated that they have greater trust in social media than the traditional marketing channel due to its multi-dimensional peer validated reviews. Additionally, the researcher learns from existing literatures that international chain hotels typically perform better than independent hotels owing to the fact that they have more streamlined booking processes, more funding, better staff training, and well-established loyalty programmes. These prompted the researcher to review the impact and its possible application for the ‘smart and green’ hotels concept.

Based on the review of literature, the researcher has identified a gap and that the area of the ‘smart and green’ hotels concept in Ireland is under researched. At present, in the context of the Irish market, there is insufficient effort taken by hotel operators to go ‘smart and green’, as there is a paucity of research pertaining to this concept in Ireland. As such, in this research, the researcher intends to analyse a hybrid model combining the green and sustainability elements with smart technology such as artificial intelligence, to explore its practicality in the Irish hospitality industry.
3. Methodology

3.0. Introduction
The main purpose of this chapter is to allow the researcher to outline the research journey starting from the overview of the research process. The overview provides the snapshot of the researcher’s thought process while planning for the research. The research philosophy examines the viewpoint taken by the researcher for the proposed research. The research design explains the steps in designing the research methodology leading to the empirical findings of data. This chapter similarly describes the reliability and credibility of the research, limitations and ethical considerations faced during the entire research process.

3.1. Overview of Research Process
The term ‘research’ entails asking and seeking to answer questions, in quest of knowledge and understanding of the world and its processes, testing assumptions and beliefs, (Wisker, 2018). The basic process of research is based on inquisitiveness and usually starts with a problem, theory, hypothesis or a question, (Wisker, 2018). Leedy (2001) claims that research is sometimes being mistaken for assembling information, documenting facts and hunting for information. Research originates with at least one question about a subject of interest, and in the case of this research, it starts from the researcher’s observation of a problem, (Williams, 2011). The researcher has completed the following research process shown in Figure 1, according to the fundamental research methodology as outlined by Walia and Randhawa (2020). As part of the methodology, the researcher has also developed a reflective journal to aid learning as attached in Appendix 3.
3.2. Research Philosophy
Research philosophy classifications such as ontology, epistemology, axiology and their conflicting applications to the ‘quantitative-qualitative’ debates, are a point of argument to the researcher in trying to establish the research disciple, (Mkansi and Acheampong, 2012). A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analysed and used, (Saunders et al., 2009). Epistemology (what is known to be true) as opposed to ontology (what is believed to be true) encompasses the many philosophies of research approach, and thus, the purpose of science, then, is the process of converting things believed into things known: doxa to episteme, (Žukauskas et al., 2018). Sometimes without knowledge, at every stage of the research, the researcher is constantly making a number of assumptions, which include human knowledge (epistemological assumptions), the realities
encountered in research (ontological assumptions) and the extent of the researcher’s own values to influence the research process (axiological assumptions), (Saunders et al., 2009). Žukauskas et al. (2018) states that scientific research philosophy is a method which allows the scientists to generate ideas into knowledge in the context of research using 4 main research philosophies that are distinguished and discussed, namely the positivist research philosophy, interpretivist research philosophy, pragmatist research philosophy and realistic research philosophy. The research philosophy chosen reflects the researcher’s important assumptions and these assumptions will serve as the base for the research methodology and strategy, (Dudovskiy, 2016).

3.2.1. Research Paradigms
Kivunja and Kuyini (2017) explain that methodology is the term used when research design, methods, approaches and procedures are referenced in an investigation in order to find out an answer. Methodology articulates the logic and flow of the systematic processes followed in conducting a research project, so as to gain knowledge about a research problem, (Kivunja and Kuyini, 2017). Žukauskas et al., (2018) argue that the scientific research paradigm assists to define scientific research philosophy. The researcher should have a strong vision of paradigms or worldview which affords the researcher with philosophical, theoretical, instrumental and methodological foundations, (Žukauskas et al., 2018). Wisker (2018) stresses that the continuum of belief that underpin and inform the chosen methodologies, consequently, methods and interpretation of data including perceiving the world to be fixed and knowable, known as positivism or constructed known as constructivism. Interpretivism is the complete opposite of positivism as interpretivist individuals are intricate, complex and different people experience the same ‘objective reality’ in very different ways and have their own, often very different reasons for acting in the world, (Thompson, 2015). The researcher is made aware that it is critical to invoke relevant questions to gain helpful insights in answering the research question. Therefore, the researcher’s ontological approach would be more towards post-positivism.

3.2.2. Post-Positivism
Positivism is a state in the philosophy of science that emphasises the significance of observation for the development of knowledge, and therefore contemplates the measurement of phenomena as central to the advance of understanding, (Given, 2008). Popper (2005) argues that positivism theories must be tested against data with the intention of their fabrication and
subsequent replacement with improved theoretical models. Evidently, positivism has been extensively applied in the natural sciences, where empirical observation is used to generate theories and models that can be generalised, (Given, 2008). Positivism depends on the hypothetic-deductive means to confirm a priori hypotheses that are usually specified quantitatively, where functional relationships can be derived between causal and explanatory factors (independent variables) and outcomes (dependent variables), (Park et al., 2020). Ponterotto (2005) also describes that positivism paradigm pursues to discover laws of nature, articulating them through descriptions of theories, focusing on explanation and prediction based on the hypothetic-deductive model. The downside of positivism as explained by Given (2008), is that positivism paradigm is committed to removing subjectivity from knowledge growth, and thus denies any role for reflexivity among researchers. As such, positivism has been commonly criticised since the commencement of social science, and largely been replaced with post-positivist epistemologies (theories of knowledge) and ontologies (theories of the nature of reality) particularly in qualitative research, (Given, 2008).

Physicists Werner Heisenberg and Niels Bohr chipped away at the dogmatic view of positivism, turning the emphasis from absolute certainty to probability; they portrayed the scientist as one who constructs knowledge, instead of just passively noting the laws of nature. Their argument is that no matter how faithfully the scientist adheres to scientific method research, research outcomes are neither totally objective, nor unquestionably certain. (Crotty, 1998, p. 40)

Many educational researchers found that positivism is not able to fulfil the requirements for social sciences' research as the positivism position itself on observable and empirical analytic facts, (Bisel and Adame, 2017). Bisel and Adame (2017) view that post-positivism is regarded as a step forward from positivism, as a reaction of educational researchers to the limitations of positivism as a paradigm. In fact, post-positivism is pluralist in its function which balances both positivist and interpretivist approaches, (Barbara, 1993). Gagnon and Barber (2018) believe that the post-positivist theoretical perspective is a more flexible research perspective permitting the researcher to use multiple methods to perform the research in accordance with the nature of the research questions.

Panhwar et al. (2017) also opine that post-positivism paradigm tends to reduce personal biases and prejudices of the researcher because it offers the use of more than one research method
and technique in a research study to make sure that the subject is studied from more than one angle. This perspective offers the basis for both an interpretive social science that recognises the necessity to understand and construe the meanings of subjects in order to make logical sense of the social order, and a constructivist (or constructionist) approach in which social reality is perceived not as objective and independent of actors, but as emergent from individual or collaborative constructions of concepts, values, beliefs, ethics and norms of actors within a social field, (Given, 2008). Barbara (1993) observes that the disadvantage of post-positivism is that reality usually could not be known with certainty, e.g., observations could be influenced by the researcher’s subconscious biases, own experiences and beliefs. Nevertheless, impartiality can still be reached by means of measures and observations and triangulating the data to gain a richer understanding of what is happening in reality, (Barbara, 1993).

Methodologically, post-positivism paradigm will require a degree of empathy from the researcher and the element of reflexivity is highly appreciated by the researcher. The researcher in this respect, fits into the post-positivist paradigm category.

3.2.3. Inductive / Deductive Reasoning

Trochim (2007) refers to two broad methods of reasoning as the inductive and deductive approaches. Induction as moving from a specific observation to a general explanation, while deduction begins with a general explanation and ends with a specific argument. Lee (2019) concludes that a deductive researcher works from the ‘top down’ approach, from a theory to hypotheses, to data and to add to or contradict a theory. For instance, a researcher might begin with a theory about his or her topic of interest, then narrow that down into more specific hypotheses that can be tested, (Lee, 2019). Deductive logic has been linked with the hypothetic-deductive approach concerning formulating specific hypotheses about phenomena generally on the basis of existing practical and theoretical knowledge, (Hammond, 2016). While powerful, deductive logic is often criticised as misrepresenting the methods of natural science and makes an assumption that all disciplines in natural science work in a similar way when they do not, (Hammond, 2016).

Conversely, an inductive researcher is someone who works from the ‘bottom-up’ approach, using the researcher’s views to build broader themes and generate a theory interconnecting the themes, (Cohen, 2008). Inductive reasoning involves a process by which a general conclusion is constructed from individual instances or observations, (Hammond, 2016). The benefits of an inductive approach are such that it allows flexibility, attends closely to context and supports
the generation of new theory, (Hammond, 2016). However, inductive research painstakingly works from first principles when most of the time there is no overriding need to do so given there is already existing literature, (Hammond, 2016).

Both methods of reasoning have a very different approach to research, the researcher feels that inductive reasoning is the most appropriate approach in this research due to its very nature of being more open-ended and exploratory. Deductive reasoning is narrower in nature and is concerned with testing or validating hypotheses.

### 3.3. Research Design and Strategy

Section 3.4 describes the design and strategy of this exploratory research. Before primary research, which is collecting raw data can be conducted, a comprehensive literature search and review are needed.

#### 3.3.1. Secondary Research

A literature review can generally be defined as an orderly or systematic way of collecting and synthesizing previous research findings, (Baumeister and Leary, 1997). Webster and Watson (2002) establish that an effective and well-conducted review as a research method creates a firm foundation for advancing knowledge and facilitating theory development.

By integrating findings and perspectives from many empirical findings, literature review can address research questions with a power of multi-dimensional viewpoints of multiple authors, (Snyder, 2019). While completing literature review, the researcher begins to assess the research area to motivate the aim of the study and justify the research question and hypotheses, and this is generally referred to as the literature review, theoretical framework, or research background, (Snyder, 2019). Moreover, a literature review is an excellent way of synthesizing research findings to show evidence and uncover areas in which further research is required, known as gap assessment, which is a critical component of creating theoretical frameworks and building conceptual models, (Snyder, 2019). Gale and Lingard (2010) argue that a literature review plays a role in defining research problems, seeking new findings, preventing research deviations, gaining methodological insights, identifying recommendations for future practice and research and seeking support for grounded theory. Furthermore, formulating a strong literature review will provides a framework for connecting new findings to previous findings in the discussion section of a dissertation (Chapter 5 of this thesis); because without
establishing the state of the previous research, it is difficult to establish how the new research advances from the previous research, (Randolph, 2009).

The researcher adopted thorough systemic review of the literature by being resourceful. Systematic review is a specific methodology that pinpoints existing studies, selects and evaluates contributions, analyses and synthesizes data, and reports the evidence in a presentable way that allows rationally clear conclusions to be achieved about what is known or otherwise, (Denyer and Tranfield, 2009). Denyer and Tranfield (2009) mention that a systematic review should not be viewed as a literature review in the traditional sense, but as a self-contained research mission that explores a clearly specified question, typically derived from a policy or practice problem using existing research. The search for literature started using the keyword strategy. The table below illustrates the keywords used during literature search. These were very powerful keywords which generated a lot of informative data online.

<table>
<thead>
<tr>
<th>Main Themes</th>
<th>Supporting Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Green Hotel</strong></td>
<td><strong>Smart Hotel</strong></td>
</tr>
<tr>
<td>Consumer Awareness</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>Environmental-Friendly</td>
<td>Chatbots</td>
</tr>
<tr>
<td>Green Trust</td>
<td>Hospitality</td>
</tr>
<tr>
<td>Greenwashing</td>
<td>Robotics</td>
</tr>
<tr>
<td>Hospitality</td>
<td>Smart Room</td>
</tr>
<tr>
<td>Net Zero Energy Building</td>
<td>Virtual Marketing</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Virtual Reality</td>
</tr>
<tr>
<td>Green Technology</td>
<td>Virtual Tourism</td>
</tr>
</tbody>
</table>

Table 1: Themes and Keywords

Key areas of literature to review are as shown in Table 1. A very disciplined attitude was adopted while the researcher embarked on the review to ensure that the researcher did not stray from the topics. The fundamental strategies taken were as follows:

- Literature sources were searched from mainly online search engines such as Google Scholar and MTU e-library. The journal database consisted of IEEE Xplore digital library, NSAI, Emerald Insight, JSTOR, PubMed, SAGE Business Cases, SAGE Research Methods and Science Direct.
Chapter 2 sources were mainly from sources after 2017, in some cases, older sources from year 2000 were also used if the more recent ones were not available.

The geographical location contained within the literature review focused on western and developed countries, in Europe and the U.S. Some references were also made to developed nations in Asia.

Endnote X9 desktop referencing software (which cost the researcher €133), with slightly modified ‘Cite Them Right- Harvard’ referencing style was used in accordance with MTU School of Business policy. Additionally, Endnote click, cite while you write, and Endnote capture were used as supplementary tools to assist in referencing.

The researcher checked the online databases periodically using Endnote X9 to ensure all the referenced literature were up to date.

It should be noted that literature review was continuously performed, adapted, and edited throughout the thesis as more information emerged from the primary research. Higher emphasis was placed on peer-reviewed academic journals, reports, and published books from reputable publishers. However, due to limited information on some topics, sources from websites and non-peered review articles were also sparingly used in addition to peer-reviewed academic journals.

3.3.2. Research Methodology
Buckley and Chiang (1976) define research methodology as a “strategy or architectural design by which a researcher designs an approach to problem-finding or problem-solving”. According to Crotty (1998), research methodology is a comprehensive strategy which will outline the researcher’s choice of use of specific methods in expectation of the anticipated research outcomes, however, Noor (2008) contradicts that the exact methodology selection decision is dependent on the type and features of the research problem.

Abawi (2008) cites that quantitative research methodology involves a process inquiry based on testing a theory composed of variables, measured with numbers, and analysed using statistical techniques. Research is based primarily on deductive forms of logic, and theories and hypotheses are tested in a cause-effect order, (Abawi, 2008). Choy (2014) explains that quantitative methods characteristically refer to identical questionnaires that are administered to individuals or households, which are identified through various forms of sampling usually random sampling which often lead to large amount of data to be analysed.
On the other hand, qualitative research methodology is deemed as the preferred option if a researcher intends to explore a new field or intends to construct a new theory, (Corbin and Strauss, 2014). Creswell and Poth (2016) state that there are many qualitative methods which are used to invoke in-depth and extensive knowledge on the research issues by means of their contextual interpretation and the most common types are observation and interviewing research participants. It is universally known that qualitative researchers often rely on interpretive or critical social science, apply ‘logic in practice’ and follow a nonlinear research path, (Choy, 2014). The emphasis on conducting detailed examinations of cases that arise in the natural flow of social life is aligned with the post-positivism research paradigm, (Choy, 2014). The use of rigorous qualitative research method can enhance the quality of the research report as it is multi-faceted approach, (Sofaer, 2002).

As the purpose of this research is to explore the potential of ‘smart and green’ hotels concept for the future of Irish hospitality industry, it is very context-laden and largely based on inductive forms of logic, thus, a qualitative approach is chosen as the most appropriate methodology of choice. Qualitative research is an useful tool to uncover patterns of theories that help explain a phenomenon of interest in a deeper level compared to quantitative research, (Abawi, 2008).

3.3.3. Interview Type Selection
An interview generally refers to a qualitative research technique which involves inquiring open-ended questions to converse with respondents and elicit valuable responses about a subject, (Questionpro.com). The interviewer typically intends to comprehend participants’ opinions in a well-planned and executed series of questions and answers, (Questionpro.com). A qualitative interview is one of the most important data gathering tools in qualitative research, (Myers and Newman, 2007). Interviews offer comprehensive information relating to participants’ experiences and viewpoints of a particular subject, (Turner, 2010). Data from interviews, coupled with other forms of data collection such as literature review or quantitative survey, will provide the researcher with a well-rounded collection of information for analysis, (Turner, 2010). There are multiple forms of interview design that can be developed to obtain thick, rich data utilizing a qualitative investigational perspective, in the context of interview, there are generally three formats: structured interview, semi-structured interview and open-ended interview, (Gall et al., 1996).
Structured interview is a type of interview where questionnaires are structured with all subjects asked the same questions, in the same order with subjects responding from a forced choice by selecting one option from an assigned set of choices, (Gubrium et al., 2012). If a participant is unable to choose from the set choices or decide not to answer, it will be treated as blank response, (Gubrium et al., 2012). Unstructured interview refers to a type of interview in which the researcher asks minimal questions, often just a few key words, without leading the participants, to elicit an open ended response, (Gubrium et al., 2012).

Semi-structured interviews on the other hand is a type of interview in which the researcher sets up a general structure by deciding in advance the topics to be covered and the main questions to be asked, and then leaving the detailed structure is left to be worked out during the interview, (Drever, 1995). The participant has a fair degree of freedom in what to talk about, how much to say, and how to express it, (Drever, 1995). Due to the fact that the participants have freedom to respond in any way they want, but still allow the researcher to limit the response to cover the main topics and themes of the interview, the researcher believes that semi-structured interview is the best approach to conduct this exploratory research. Additionally, in semi-structured interviews, all participants are still being asked the same questions in the same order, therefore, the data collected is still comparable, and may be numerically quantified, (Mcintosh and Morse, 2015). The researcher felt that this type of interview was best suited for the nature of the research, allowing some flexibility to elicit more novel information while keeping within the theme of the research.

A common dilemma for research when doing qualitative research will be the ideal number of interviews conducted to obtain sufficient research data. Bloor and Wood (2006) state that one approach that can be taken is that of reaching a point, where saturation is the point at which, after a number of interviews has been performed, it is unlikely that performing further interviews will reveal new information that hasn’t already emerged in a previous interview. The saturation point depends on a lot of factors such as breadth of research area and sample size, but studies conducted by Hennink et al. (2017) found that that thematic saturation was reached at nine interviews, whereby the true meaning of saturation was reached at 16 to 24 interviews to obtain a richly textured understanding of issues. Guest et al. (2006) offers a differing opinion citing that saturation could be achieved by 12 interviews, but since interviews were reviewed in batches of six, a more accurate number could actually occur somewhere between 7 and 12 interviews.
Due to the geographical and time limitations on top of mobility restrictions arising from Covid-19 pandemic, the researcher chose to conduct 10 interviews in total. All interviews conducted were with prior verbal consent from the participants. The interview questions have been vetted and approved by Dr. Angela Wright before the researcher started the interview process. The interview questions were devised based on gap identification from literature review and the researcher’s observation of problems. The questions were then further refined from the pilot interview. All interviews were recorded on a mobile device and then transcribed electronically to facilitate data analysis.

3.3.4. Research Sample
A procedure of selecting subjects to take part in a research investigation on the basis that they provide information considered relevant to the research problem is known as sampling process, (Oppong, 2013). The complete set of cases from which a researcher’s sample is drawn is known as the population, (Taherdoost, 2016). Since researchers neither have the time nor the resources to analysis the entire population, an effective sampling technique is required to reduce the number of cases, (Taherdoost, 2016). Moreover, it is either impossible or cost prohibitive to study all instances of a phenomenon depending on the research conducted, (Oppong, 2013). In many qualitative investigations, the main issue for sampling is the sample selection process for the research group in order to ensure the credibility of research findings and undertakings, (Rowan and Huston, 1997). It is vital to ensure that the sample size for a given research is adequate as well as representative of the research study in order for a meaningful conclusion to be drawn, (Oppong, 2013).

Taherdoost (2016) states that the sampling process starts from defining a target population followed by sampling frame selection and sampling technique selection. The sampling technique chosen for this research will be non-probability sampling. This is due to the nature of this research, which is to examine a real life phenomenon and not to make statistical inferences in relation to the wider population, (Yin, 2003). The researcher applied ‘purposive or judgmental sampling’ sub-technique, whereby a particular group of people were selected deliberately in order to provide important information that could not be obtained from other choices, (Maxwell, 2012).

The significant stakeholders for this research would include persons such as hotel managers and representatives from government tourism agencies and the hospitality board because they are able to provide in-depth knowledge on the research topic and explain the phenomenon
observed by the researcher. The representatives from non-chain hotels should be at least 4 stars and above because the researcher acknowledged that the concept of ‘smart and green’ hotels requires significant financial investment. Chain hotels, especially international ones do not have such restrictions, as global hotel chains do not usually have budget constrains to the same extent as the independent hotels. They are purposefully selected as they have significant knowledge and experience in the hotel and hospitality sector. This selection process is aligned with Yin (2003), who states that in the case of non-probability sampling, a sample of participants does not need to be random, but a clear rationale is needed for the inclusion of some individuals and not the others. The full sampling selection criteria are illustrated in Table 2.

Research Participants Selection Criteria

- Hotel managers from chain hotels
- Hotel managers from non-chain hotels classified as 4 stars and above
- Representatives from governmental tourism board (e.g., Tourism Ireland, Fáilte Ireland)
- Representatives from hospitality organisations (e.g., Irish Hotels Federation)

Table 2: Research Participants Sampling Criteria

Research participants were recruited from the researcher’s network via word-of-mouth, referrals from MTU Hospitality Management lecturer, Gail Cotter and Dr. Angela Wright. The researcher also sought further contacts from the participants within their network who were also working in the same industry and fit the selection criteria. The researcher managed to recruit a significant number of participants using this method, known as snowballing. Snowball sampling is applied when samples with the target characteristics are not easily accessible, (Naderifar et al., 2017). In this method, the existing study subjects recruit future subjects among their acquaintances with similar views or situations to take part in the research, also known as the ‘chain method’, (Naderifar et al., 2017). This is an efficient and cost-effective way to access people who would otherwise be very difficult to find, (Naderifar et al., 2017). The snowballing method not only saved the researcher’s time but also provided the researcher
an opportunity to connect better with the research participants, as they were acquaintances of the referrers.

3.3.5. Pilot Interview

Piloting for interview is a fundamental and useful tool in the process of conducting qualitative research as it highlights the improvisation to the main study, (Abdul Majid et al., 2017). A pilot interview is an initial interview process to identify ambiguities, clarify the wording of questions and allow preliminary detection of necessary alterations to the interview guide, (Noor, 2008). A pilot interview can deliver exceptional opportunities to improve skills of a qualitative researcher in conducting semi-structured interviews which includes managing participants, selecting an appropriate venue for interview, conducting an in-depth interview and seizing prospects for further probing on certain topics during the interview process, (Janghorban et al., 2014). In addition to providing a ground for self-assessment to the researcher’s preparation and capacity, conducting a pilot interview could modify the proposed research methodology in order to achieve its objectives prior to conducting the main research, (Janghorban et al., 2014). The researcher conducted a pilot interview via phone due to the Covid-19 pandemic restrictions. The researcher informed the participant that it was a pilot interview and requested suggestions on how to improve the interview questions and processes. The data collected was included in the findings because the interview offered very valuable insights to the theme of the research.

One significant finding that arose from the pilot interview was that the pilot participant found that the interview was too lengthy, and this might leave research participants in a fatigue state, leading to inaccurate data collection. Therefore, the researcher took the lesson learnt and made the interview questions more concise. The researcher also informed future research participants about the potential duration of the interview. Indeed, as described by Janghorban et al. (2014), a pilot interview could be used to test participants’ engagement while assessing their acceptability of the interview protocol.

From the pilot interview, the researcher realized that it is critical to build a rapport with research participants and ensure they are in a relaxed state before starting an interview. If a research participant is in a comfortable state, the researcher will be able to elicit better responses, (Prior, 2017). However, the researcher was limited in what the researcher could do because building a rapport through a phone or zoom interview proved to be more difficult than face to face...
interviews due to the absence of ‘in-person’ connection. Due to Covid-19 pandemic restrictions, face to face interviews were strictly impossible.

3.3.6. Primary Research / Data Collection

Participant 1 (Pilot Interview): Barry O’ Flynn

A pilot interview was conducted on the 24th of February 2021. The interview was conducted on the phone as the participant was having difficulty in accessing Microsoft Teams. The researcher attempted to put Barry at ease by making small talk about Cork City as the researcher was based in the same city as Barry. The data collected in the pilot interview was very insightful, thus, it was included in the research findings.

Participant 2: Patrick Shields

The interview was conducted on the 26th of February 2021 via a Zoom meeting. Patrick was a first-year student in MTU MBA programme. As such, the researcher managed to build a rapport with him quickly. The interview went smoother than the pilot interview as the researcher had established learnings from the pilot interview.

Participant 3: John Burchill

The interview was conducted on the 5th of March 2021 via Microsoft Teams. John had extensive experience in the hospitality sector for more than a decade.

Participant 4: Finbarr Collins

The interview was conducted on the 5th of March 2021 via Microsoft Teams. Finbarr was an alumnus of MTU, and the researcher managed to ease him into the interview seamlessly.

Participant 5: Seamus Crotty

The interview was conducted on the 8th of March 2021 via Microsoft Teams. Seamus had extensive experience in the hospitality industry and the researcher could easily prompt for more information from Seamus.

Participant 6: Adele Walsh

The interview was conducted on the 10th of March 2021 via Microsoft Teams. Adele was very helpful during the interview.
Participant 7: John Whelan

The interview was conducted on the 12<sup>th</sup> of March 2021 via Microsoft Teams. The researcher had to reschedule this interview as the original interview date fell on the eve of St. Patrick’s Day, a bank holiday in Ireland.

Participant 8: Aaron Mansworth

The interview was conducted on the 15<sup>th</sup> of March 2021 via Microsoft Teams. Aaron was very knowledgeable, and he is a well-known figure in the hospitality industry.

Participant 9: Shane Dineen

The interview was conducted on the 16<sup>th</sup> of March 2021 via Microsoft Teams. Shane was exceptionally helpful and knowledgeable in the area of environment and hotels’ green strategies.

Participant 10: Weldon Mather

The interview was conducted on the 19<sup>th</sup> of March 2021 via Microsoft Teams. The researcher was lucky to get an interview slot with Weldon as he had a busy schedule. The researcher felt grateful for the additional assistance rendered by Weldon.
3.3.7. Grounded Theory

Grounded theory is a well-known methodology employed in many studies using both qualitative and quantitative data, (Chun Tie et al., 2019). The founders of grounded theory, Barney G. Glaser and Anselm L. Strauss, offered the “first explicit, codified statement on how to analyze qualitative data”, (Charmaz, 2001). Grounded theory is an extremely useful analytical method for constructing theories from inductive qualitative data, (Charmaz and Bryant, 2010). Chun Tie et al. (2019) agrees with Charmaz and Bryant (2010) that grounded theory aims to discover or construct theories via systematically obtained and comparatively analysed data. Charmaz (2001) further elaborates that grounded theory is presented as “an inductive, comparative methodology that aims to provide methodical guidelines for gathering, synthesizing, analyzing, and conceptualizing qualitative data for the purpose of theory construction”. For instance, the researcher begins with a broad query in a particular topic area and then gathers applicable information about the topic, (DePoy and Gitlin, 2016). As the action processes of data collection continue, each piece of information is reviewed, compared and contrasted with other information carefully and consequently, from this continuous comparison process, commonalities and dissimilarities among categories of information become evident which eventually leads to a theory being inductively developed to explain the observations, (DePoy and Gitlin, 2016).

Charmaz and Bryant (2010) argue that grounded theory can make the researcher more analytic, interview research more in-depth and content analysis more focused. Furthermore, grounded theory can also be used to modify an existing theory or to expand on or uncover differences from what is already known, (DePoy and Gitlin, 2016). The first data analysis phase of grounded theory begins with the coding of the data, which has three phases: open coding, axial coding, and selective coding.

In open coding, the researcher transcribes all the data by looking at each line. This strategy of concentrating on small pockets of data and their interpretation, advocates the development of a theoretical sensitivity to original ideas with regard to the data, and helps prevent the misclassifying of data into incorrect categories, (Haig, 2010). When a full array of categories has been identified, the researcher proceeds to undertake axial coding, whereby the researcher repositions the data back together again in innovative ways by making connections between the numerous categories. Following that, a selective coding step is implemented in which the researcher investigates systematically to identify peripherals categories that relate closely to
the core category. The core category lies at the heart of the emerging theory and is central to its integration, (Haig, 2010).

As such, the researcher has successfully applied the grounded theory approach during data analysis to assist the researcher to develop a new theory.

3.3.8. Primary Research Data Analysis

In line with post-positivism and grounded theory approach, the researcher aimed to use the qualitative data to construct new knowledge. The researcher combined data analysis with data collection by simultaneously attending to the questions asked and the answers the researcher received. This technique is commonly adopted by grounded theorists, because in this way, the researcher is able to adapt the data collection technique to the nuances of the emerging observation, (Charmaz and Belgrave, 2007).

After the data collection from primary research, the researcher started to analyze the data according to the 3 phases of coding in grounded theory approach. The researcher started with initial coding or open coding. This line-by-line coding is able to prompt the researcher to make a comparison between data, (Charmaz and Belgrave, 2007). Indeed, by transcribing and categorizing each line at the same time, the researcher was able to identify the contextual meaning of the data collected. The researcher started open coding in batches of 2 interviews to avoid accumulation of large unprocessed data at the end of the research. Subsequently, the researcher performed axial coding, in which the researcher did constant comparison between categories of data to try to identify linkages, relationships and the possibility of subcategories between data, (Noble and Mitchell, 2016). This was very helpful for the research because axial coding made the data more concise and easier to interpret.

Finally, selective coding was implemented by the researcher. The researcher was aware of the core category and methodically tried relating the identified categories to the core category via relationships. This led the researcher to interpret and present newfound data more effectively which is discussed in Chapter 4 and 5. The ground theory coding has allowed the researcher to appreciate the holistic view from a combination of multiple research participants’ perception. The entire process of trying to find the ‘best fit’ category from a plethora of data, constant comparison and analysis was instrumental in assisting the researcher to discover new knowledge. Thus, by exploiting grounded theory as a research method, a new theory was produced that is grounded by the researcher’s data, (Noble and Mitchell, 2016). The researcher adhered to the strict procedures for data analysis which has enabled the researcher to
conceptualise the hidden social and collective patterns in the research topic, (Noble and Mitchell, 2016).

3.4. Reliability and Validity

Reliability and validity are tools of an essentially positivist epistemology.

(Winter, 2000, p. 7)

Without rigor, any research is essentially worthless, becomes fiction, and loses its utility.

(Morse et al., 2002, p. 14)

In qualitative research however, the lack of certainty of hard numbers and p values expressed a crisis of confidence from both inside and outside the research field, (Morse et al., 2002). In a quantitative study, reliability is the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable, (Joppe, 2006). Wainer and Braun (2013) describe the validity in quantitative research as ‘construct validity’. The construct is the initial concept, notion, question or hypothesis that determines which and how data is to be assembled, (Wainer and Braun, 2013). Traditionally, validity governs whether the research truthfully measures that which it was intended to measure or how truthful the research outcomes are, (Joppe, 2006). In other words, does the research instrument allow the researcher to hit the research objective, (Joppe, 2006).

While reliability and validity are more applicable for quantitative research, Guba (1981) states that all research must have ‘truth value’, ‘applicability’, ‘consistency’ and ‘neutrality’ in order to be considered worthwhile for both rationalistic (quantitative) paradigm and naturalistic (qualitative) paradigm. Consequently, each paradigm requires paradigm-specific criteria for addressing ‘rigor’ (the term most often used in the rationalistic paradigm) or ‘trustworthiness’, (Guba, 1981). As a result, Lincoln and Guba (1985) substituted reliability and validity with the parallel concept of ‘trustworthiness’, containing four aspects: credibility, transferability, dependability and confirmability in qualitative research within the post-positivism paradigm. Lincoln and Guba (1985, p. 300) use the term ‘dependability’, in qualitative research which closely corresponds to the notion of ‘reliability’ in quantitative research. Reliability refers to the consistency of data to be achieved when the steps of the research are verified through
examination of such items as raw data, data reduction products and process notes, (Campbell, 1997). In the dependability context, the researcher applied grounded theory open coding to code each line from the interview script to ensure that no data was lost. This process was assisted by transcribing software to further enhance the accuracy. The interview questions were also carefully worded to ensure they were easily understood by all research participants.

Validity in qualitative research means the extent to which the data is plausible, credible and trustworthy and thus can be defended when challenged, (Bashir et al., 2008). This is closely linked to credibility, transferability, and confirmability as confirmed by Lincoln and Guba (1985). Credibility refers to confidence in the 'truth' of the findings, (Guba, 1981). Lincoln and Guba (1985) argue that credibility is the most important factor in establishing trustworthiness which is the ‘truth’ of the findings. The researcher applied 3 techniques in improving the credibility of this research as endorsed by Erlandson et al. (1993), which was via triangulation using extensive literature research, prolonged engagement with research participants and persistent observation on the research topic. The researcher constantly observed characteristics of the research topic and pursued them in detail via interviews and desk research. During the interview, the researcher tried to have a sufficiently long session to establish trust between the researcher and the research participants to obtain rich data. The researcher also applied strict selection criteria during participants selection to ensure they were the most suitable candidates to partake in the research.

Transferability is the extent to which the outcomes of qualitative research can be transferred to other contexts or settings with other respondents, (Korstjens and Moser, 2018). Due to the fact that this research is context specific to hotel industry, transferability in not applicable for this research.

Confirmability is the extent to which the findings of the research study could be confirmed by other researchers and establishing the fact that the interpretations of the new findings are not figments of the researcher’s imagination, but must be evidently derived from the real data, (Korstjens and Moser, 2018). The main method used by the researcher to ensure confirmability is transparency. The researcher transparently described the research steps taken from the start of this research thesis to the development and reporting of the findings. Additionally, the records of the research path were kept throughout the study to ensure an audit trail was in place.
The research could also be further validated by data triangulation using quantitative method to produce mixed-method findings. The method of triangulation will provide the researcher with a more comprehensive picture of the research variables and enhance the study’s rigor through a collection of data from multiple sources, (Flick et al., 2004). Mixed-method combine both quantitative and qualitative approaches, thus, it is a powerful tool to enhance the rigour of a research study, (Flick et al., 2004). However, due to time constraint, mixed-method approach was not carried out.

3.5. Limitations of Research
Limitations are “matters and occurrences that arise in a study which are out of the researcher’s control” and they may potentially influence the findings of the research, (Simon and Goes, 2013). As this was a qualitative research, the main disadvantage was that the findings could not be extended to the wider populations to the same degree of certainty that quantitative analyses could, (Ochieng, 2009). As such, the findings of the research could not be tested to discover whether they were statistically significant or due to chance, (Ochieng, 2009). Limitations are possible and unique to the particular research and while some limitations cannot be controlled by the researcher, they can be minimized when the researcher tries to balance scientific rigor with realism, (Connelly, 2013, p. 325).

The main limitation for the researcher was the time constraint. The researcher had only effectively 6 months’ time to conduct and complete the research thesis as part of the researcher’s MBA programme at Munster Technological University. As the researcher is a full-time employee, time constraints became the fundamental limitation as the researcher juggled between a busy working life and research thesis. The research was also self-funded and did not receive any form of financial grants to conduct the research. If there were more time and funding, the research could include quantitative approach to the research to triangulate the findings.

The researcher acknowledged that the research was geographically limited to the Republic of Ireland due to time, funding and Covid-19 pandemic mobility restrictions. Northern Ireland was excluded from the study as Northern Ireland is part of the United Kingdom. The research was conducted during one of the biggest global public health emergencies which posed huge challenges for the researcher. The entire hotel and hospitality sector was in a ‘depressed’ state due to the enormous impact caused by the pandemic. Most hotels suffered major financial impact as there were virtually no international tourists and limited number of domestic tourists.
As such, the hotel managers’ views on ‘smart and green’ hotels concept may be influenced by the current climate. Furthermore, the way the Irish government imposed multiple severe restrictions on personal freedom, including 5km radius mobility restriction and banning in-person meet up for non-essential reasons, further complicated this research. This research was considered as non-essential as it was non-life critical. Thus, the researcher faced challenges associated with the restrictions. In-person interview was impossible and recruiting research participants proved to be exceptionally problematic as people attempted to manage between working from home and manoeuvring the ever-changing government restrictions.

Additionally, the research participants were predominantly male due to the nature of the occupational position in the hospitality industry as outlined in the selection criteria contained within Chapter 3.4.4. The researcher made attempts to search for female research participants but was unsuccessful due to time constraints. The sample size could likewise be larger in this research to gather additional empirical data if more time were available. However, as the research was severely limited by time, the researcher had to be realistic about the number of research participants recruited. As the researcher was a novice researcher with no prior social sciences background, it was recognized that this qualitative research was a big challenge to the researcher. Despite that, best efforts were made to obtain meaningful, credible, dependable and valid results using stringent grounded theory approach.

3.6. Ethical Considerations

Ethical consideration in research refers to the golden rule of ‘to do no harm to the community or its members’ while conducting the research study, (Wilson, 2005). It is the researcher’s responsibility to consider whether any type of harm could occur when conducting the research and to ensure that mechanisms are instituted to remove it, (Polonsky, 1998). Therefore, it is essential to carefully evaluate the potential for harm to arise and ensure that the researcher behave according to appropriate ethical standards, consider how the research might negatively affect participants in order to protect the researcher, researcher’s supervisor and educational institution from being placed in legal circumstances, (Polonsky, 1998).

Bell et al. (2018) clarifies that participation in any research should be voluntary and there should be no coercion or deception. The researcher was constantly reminded that participants were doing a favour for the researcher, with a clear understanding that they were absolutely under no obligation to do so and that there would be no negative consequences for them if they withdrew their participation during research, (Bell et al., 2018).
The researcher ensured that potential research participants entirely understood what they were being asked to do and that they were informed if there were any potential negative consequences of such participation, (Miller et al., 2012). The researcher believes that the most effective way to address that was through the use of an information sheet known as the informed consent form, which was provided to all invited participants. Polonsky (1998) states that, if possible, the informed consent form should be on official university letterhead, as this not only has been shown to increase the response rate but also informs the participants that it is an official university activity. All research participants were given an informed consent form endorsed by MTU. All research participants have verbally agreed to the contents contained within the form before the researcher started the interview process.

Miller et al. (2012) state that all recording activity must be made known to the participants before any recording can take place. The researcher has included this clause in the informed consent form and reminded the participant again during the interview to ensure they were comfortable to proceed. In addition, Bell et al. (2018) mention that anonymity of individuals and organisations participating in the research has to be ensured, unless permission is explicitly obtained. The researcher made sure to have this clause explained to the participant and gave them a choice if they would be comfortable being identified or prefer to be anonymous. All of the participants agreed to be identified and their responses were recorded on the informed consent form.

Since all participants agreed to be identified, the researcher has published their names in this research thesis. All recorded materials will be deleted two years from the date of thesis results release due to GDPR regulations to eliminate future legal risks.

3.7. Chapter Summary
This chapter has covered the research methodology in detail to allow the researcher to seek for answers to the research questions. The next chapter will present the findings of the research, utilizing the methodology detailed in Chapter 3.
4. Main Findings

4.0. Introduction

This chapter presents the main empirical data gathered from the qualitative interviews conducted as part of the research process. An interesting finding emerging from this study is that some hotels have started to acknowledge the importance of ‘smart and green’ hotels but outline the various challenges faced within the hotel sector in Ireland.

4.1. Green & Sustainability in the Hotel Sector

This study has found that in terms of green and sustainability in the hotel sector, there were mixed opinions with regards to greening efforts in Ireland. Nevertheless, there was a consensus amongst the participants that greening Irish hotels is critical to care for the environment, as well as helping the hoteliers to save on operational costs. 100% of participants have vast experience in the hotel sector and hold important positions in their respective organizations. 30% of participants acknowledged that the greening agenda is a relatively new phenomenon in Ireland compared to other western countries. However, 100% of the participants agreed that green and sustainability are gaining more importance, particularly for the future:

*I do think it’s very important. I view it as being the future of hospitality. I view green hospitality becoming a natural part of our day-to-day functioning in hotels. All our lightings are LED throughout the hotel. Solar panel and other technologies may be something we look at long-term or maybe over the next couple of years. We need to consider the capital investments required for them, but we haven’t yet properly examined it in greater detail. Reusable glass water bottles were offered in the guest room and single use toiletries were replaced with reusable dispenser bottles. We see that there is more we could do, we are still not doing enough in terms of green efforts. It is a journey for us. We see it as more of a long-term journey that we evolve as a hotel. We strive to develop our service and products to being more environmentally friendly. That is our strategy, and we see it as becoming a part of us rather than something we need do. It is something we want to do, so any decisions we make going forward, we will ask ourselves - Is this environmentally friendly? Is this good for the community? Is this good for the team and is this good for the guests?*

(Seamus Crotty, General Manager of Sheen Falls Lodge).

The next participant supports this view and describes the constraints of older hotel properties:

*I think it is very important. I think if it is done well, it will help the future generations and it will save on running costs. The hotel that I am working in is about 250 years old, so we are quite limited in what we can do. Since we are also a city centre hotel, we have limited space to work with. When we receive deliveries, we ask the suppliers to remove and take away the boxes to limit our waste. We have a Building Management System (BMS). We have timers for the boiler. We are currently looking at options to get all the bulbs changed in the building to LEDs. We have water bottles in the rooms, and we also use single-use plastics for the shampoos, conditioners, body lotions and shower gels. We have no plan to change to soap dispensers, but*
we are considering biodegradable bottle toiletries. We also had looked at changing from bottled water in the room to a communal refillable station in the hallway. Due to Covid-19, all investment is frozen for now. The soap bars used in the hotel are too big, they could easily last a month. The average stay in our hotel is between 1 – 2 nights. Thus, 99.99% of the time, the soap bars just go in the bin. These bars also come with plastic wrappers; this compounds the problem of plastic waste. We have an area for guests and staff to recycle their used batteries and books. We are considered as a luxury townhouse, so having soap dispensers wouldn’t be an option for our guest rooms

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

Interestingly, the following contributor agrees with his view, but provides further elaboration with regards to leftover soap bars and shower gels:

Adare Manor Hotel is very good in terms of the green hospitality. For example, in our food and beverage department, we have designated bins for food waste and recycling waste. Our director of culinary and back of house manager will look at the food wastage on a weekly basis to see if we are disposing of too much food. We are very much on top of recycling. We always monitor to ensure our staff adopt the recycling culture. When we accept deliveries into the hotel in the receiving area, we decant all the plastics and cardboards before coming into the hotel. We are all about reducing waste as much as possible. We have installed water aerators in our hotel which helps to conserve water. This also helps to prevent drips and leaks. All our lights have sensors installed at the back of the house, so the fights stay off when nobody is around. We have turned certain departments paperless, for example, our engineering and security department are 100% paperless. We have introduced a mobile application to replace a printed staff schedule. As such, we reduce paper usage as much as possible.

As a luxury hotel, we must offer daily towel change or bedsheets change. I believe in luxury hotels when guests are paying 700 euros a night, they will want their towels and bedsheets changed daily. However, I would like to see something along this line, if guests choose not to have their towels or bedsheets changed, they will receive a voucher, maybe like a 15 euros food voucher. This is not commonly done in Ireland yet, but I think it’s a good idea. Perhaps, when environmental issues become more pressing, the guests will be more willing to do it. I think it will take at least 5-6 other hotels to start doing it before more hotels will follow suit. I would love to see it personally. I think it would work very well in city centre and corporate hotels, but not so much in the luxury hotels at the moment.

There are certain things for green hospitality that we are not able to do due to the fact that we are a luxury hotel. For example, soap or shower gel dispensers will not work for us because they look cheap. However, what we have done with the leftovers from those single-use soap bars and shower gels is we send them to a recycling company in the Netherlands. This company will make new recyclable soap bars from these remnants that we send them

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

The next advisor believes that green agenda is a relatively new phenomenon in Ireland and outlines an interesting discussion on food sustainability:

Green space is exceptionally important now, not just because of social responsibility, but because it has a deep impact on the bottom line of the business. The recession in Ireland lasted from 2007 until about 2014. During this time, Irish hotels had no choice but to look at every aspect of their business to cut costs because it was so difficult to make a profit. I think that the recession has prompted hotels in Ireland to become conscious on the concept of green and
sustainability. In the late 1990s and 2000s, Irish hoteliers started doing hotel management courses and worked abroad. We then started to introduce the green policies here that we were seeing around the world. Being green and sustainable, not only serves as a great cost saving measure but websites like Expedia, have green hotel filters – if you reach a certain greening standard, your hotel will present in a certain search of hotels which increases your hotel visibility. It is very much in the consumers’ mindset now. I think more people are booking hotels now because they have certain green and sustainability policies.

We have a Michelin star chef in our hotel who is huge on the concept of sustainability. For instance, he only uses sustainably farmed fish in his dishes. He is incredibly interested in food sustainability, composting, sourcing local ingredients from within the island of Ireland where possible, e.g., 90% of his ingredients are locally sourced. All his cutleries are sourced and made in Ireland, whether from seaweed or tree bark. The concept of green and sustainability only started in hotels in Ireland about 20 years ago. We had a reasonable start, but we have a long way to go on green and sustainability.

There are a lot of initiatives we have been doing. We have a health and safety committee that is now going to become the green team. There is a representative from every department on the green team promoting green in every single department such as recycling, energy and water conservation. We have done a full leak survey of the whole property to make sure that we are not wasting water. We have reduced our water consumption hugely by just doing a leak survey. We use only paper straws to replace plastics. We are in a difficult position with regards to soap dispensers in our rooms because we are a five-star luxury hotel, we feel that the wall-mounted soap dispensers do not meet the level of luxury. However, we are aware that usage of single-use toiletries is not a solution because a lot of waste is generated if all the contents were not used, and we need to prepare a new set for every single guest. We do not have a solution to that problem as of yet. We have a lot of little initiatives happening and I am really looking forward to bringing the Green Team and the Green Hospitality Award under one umbrella. There is much more to do in terms of green efforts. We are very conscious of it and we are very eager to go further. 60% of the hotel roof is purposefully covered with moss so that it fits in with the cliff and is compatible with the natural environment. I think joining the Green Hospitality Award will be a big part of our green efforts. This is where we see the business going and we expect that is what our clients will be looking for.

(Patrick Shields, General Manager of Cliff House Hotel).

The next participant shares a similar view with regards to growing consumer demand for greener hotels but simultaneously experiences the same challenge of eliminating single use plastics in a luxury property:

As a manager in a business, we have a certain responsibility to be green and sustainable. I would class it as part of our corporate social responsibility. There are aspects of our business that we would have to keep an eye on and we are trying to improve how we're doing it and this all stems back to our carbon footprint. A very simple example would be two years ago, we decided to cut down the volume of paper usage in the hotel, but we couldn't completely go paperless because we are a five-star hotel, we still have to keep a level of service. As much as we would like to cut down on the usage of paper, we can't. We need to provide paper and stationeries in all our guest bedrooms. However, within our office, say if I need to write reports for my manager, I wouldn't print them. I can send them to him via email. Previously, we would always print out a piece of paper for every department for daily activities in our daily team meeting. We stopped doing that. We verbally communicate the information and then there's an email sent to every department as to what is going on the hotel. By doing something that simple,
we were eliminating 10 pieces of paper every day, 365 days of the year. That’s three and a half thousand pieces of paper that we save. Single use plastics elimination project is something that I have been involved in heavily. We offer single-use plastics in the form of small toiletries, so each room has a small bottle of shampoo, shower gel, hand wash and hand lotion. Each room would also have an individual soap and plastic bottles of water. That is quite a lot of plastics in a room. We see that as a huge no-no. However, we also have to consider that we are a five-star hotel. There is a certain standard we have to reach. So, we came up with a solution, we are reducing single-use plastic water bottles within our guest bedrooms and in our restaurants. We invested in a water filtration system where we will fill up our own bottles. We put them behind the restaurant and in the storerooms. The housekeeping will just go in to fill the water bottles, bring them to the room and the bottles are reused on a daily basis. That was one of our big projects this year.

I think there are still a certain number of guests who are old world, they do not care about the environment, and I think that will not change for a very long time. They are paying quite high to stay here, for example, they want to use the towel once and not use it again and they want everything fresh. Certainly, for our younger guests, they would be more conscious about the environment. We also got a little bit of pressure from our corporate clients, we have a lot of multinational companies such as Apple, Boston Scientific, Pfizer and so forth in Cork. When we sign a contract with them for their corporate guests to stay with us, they would have certain requirements that we are seen to be a green hotel and that we are continuously investing within the whole green hotel concept. Apple for example, as they are such a big global company, have the power to push us to do something, they would really want us to reduce harm to the environment as much as possible

(John Burchill, Operations Manager of Hayfield Manor Hotel).

The next expert supports this view and expresses similar concerns as John Burchill with regards to capital expenditure required to green a hotel:

The main focus from the green side of things is what we do for the good of the community and society in general. In terms of energy savings, we have implemented simple things like light sensors and energy efficient LED light bulbs. We set a timed schedule for the heating to come on at a certain time in the morning, evening and then late at night based on things like the weather, season, and the occupancy of the hotel. On a day-to-day basis, each manager or supervisor would have to fill a check sheet on handling of the air conditioning, heating and water systems. There is a mountain load of energy being consumed in relation to keeping the pool warm. Obviously, we cannot just switch the pool heating off at night and turn it back on in the morning. Pool maintenance is the main issue there. Even though we are closed at the moment, the heating for the pool is constantly maintained.

We installed pressure taps in all areas, we do not have any twisting taps anymore to save water. When we did our renovation two years ago, we changed all our shower heads to aerated shower heads for all the guest rooms and the leisure centre. We also got rid of single use plastics in the bathrooms since the start of last year. We installed soap dispensers in all the guest bathrooms. What we did may look like a cost-cutting measure, but we have cards in the room to inform the guests. Communication is key. Once we inform the guests, they understand us, they understand why we are doing this. We have little cards to constantly remind them on our green measures. Obviously, we don’t tell them upon check in, but when they go into the bathroom, there are little notes here and there to tell them why we are doing this.

There are more ways to greening the hotel I would like to go down but obviously we are under financial strain at the moment. I think eventually we will be looking at solar panels If a housing estate can do it, why can’t we?

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).
Unsurprisingly, the next contributor supports Patrick Shield’s and John Burchill’s opinion about increasing consumers’ consciousness on the environment:

*I think green and sustainability is something for which we are all striving to. I think green hospitality was not something the industry looked into very much into 5 years ago, but I think now they are very much aware of it. In hotels, it is probably more about saving money, but I think from our clients’ point of view, we need to be seen to be green and that is what our clients are now looking for. The view they look for nowadays is - are the hotels they are staying in green? At the moment, our hotel does not necessarily have much going on in terms of green initiatives. We have literally just started a sustainability group 4 weeks ago, there is a group of five managers, and it is something we are looking at strongly. We have a meeting every week and that is how important the general manager views it. We are certainly engaging with our waste management company in helping us to find the best way that we can manage our waste more cost-effectively and better for the environment. We have not got to LED, energy efficient boiler and water saving features just yet, but we are looking at waste management. We are looking at installing a food digester. It is a piece of equipment whereby it converts food waste into compost. We try to make ourselves a zero-carbon footprint hotel, by reusing everything because we have our own gardens here, we can put the compost back into the garden. We can grow our own vegetables to cook them in the kitchens. We have replaced plastic bottles with two cans of water. They are all recyclable aluminium cans. I don't think we would ever be good enough on green efforts, but we are striving for it and hopefully with the sustainability group, we will be aiming to be as green and efficient as possible. We are striving to get rid of plastics and start using reusable items. We have not touched on electricity and water conservation yet, but they will be part of our project.*

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

Intriguingly, even though all participants emphasize the importance of green hotels, the following expert mentions that Ireland does not have a formal green certification scheme:

*We do not really have a formal accreditation or certification scheme for green hotels in Ireland. We are aware that there are obviously certain independent hotels and hotel groups that would have their own kind of sustainability or green credentials and they would either be accredited by GSTC standards or other accreditation bodies. They vary widely across the sector; different businesses will take different approaches. We will encourage the hotels to have green credentials, for example by being energy efficient, reducing waste, food, water consumption and usage of single-use plastics. In my opinion, in our industry, it is hard to get an exact green credential for our hotels. The Sandymount Hotel in Dublin was commended for its green policies and won the Green Hotel award in Europe. There is also a group of hotels in Killarney who came together to promote the concept of green and sustainability in their hotels. Green and sustainability is definitely happening in the hotel sector here in Ireland but in a more ad-hoc way rather than an official arrangement.*

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

The next interviewee believes that Ireland is moving towards green hospitality, albeit at a slower pace:

*Green and sustainability in Irish hotels move at a very different pace in Ireland compared to New York where I was based until 2004. The greening and sustainability message has probably*
been going on here for at least 20 years, we have organizations like green hospitality to help the sector. I think some places do it really well and I think some places could do with improvement. I think the constant challenge is the process; in terms of having something very structured to follow because hotels are always very busy. When there is a structure, it is easier for hotels to follow. We’ve signed up for Green Hospitality and achieved multiple awards. We are always looking at all the energy bills, just to make sure we are at the correct level of usage. Years ago, we changed all lightings in our hotels to LED lightings. We look at how to reduce food wastage, how to compost food waste and how to reuse items in the hotel. We look at shower heads, how to reduce the water usage. One of our hotels had the shower aerators installed. We look at biodegradable containers for our toiletries. We also look at installing new energy efficient boilers. We are trying to move to paperless operation, we use DocuSign system throughout our network of hotels, but there are challenges to this, for example an outdated accounting system which doesn’t support e-signature. We also have the containers around the hotels so people can recycle their used items. We have the heating on timer to save energy as well. We intelligently place things in the room to reduce waste without sacrificing the comfort of our guest. For example, we can place the extra towels at the corner of the room or in the wardrobe, if the guest needs them, they are available, but they are not at the most visible of locations. It’s the management that is important because if we cut corners in the name of green, the brand can cheapen very quickly

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

Interestingly, the following expert views that Ireland is making very good progress in the space of green and sustainability in the hotel sector:

There was a lot of good progress being made in terms of green and sustainability prior to Covid-19, not just reduction in plastics, but also in terms of mechanical and electrical engineering, for example, heating and power systems for gas. The Sandymount Hotel in Dublin won the Europe Green Award 3 years in a row. I think they have some interesting things like aerated showerheads to reduce water waste. A lot of luxury hotels would see single use toiletries as cheap. Soap dispensers are more environmentally friendly. It is a balance between giving customers the luxuries and being green. Single use plastics is a no-no unless they are biodegradable. From 2005-2006 onwards, hotels are starting to make great progress in the green space. Westport Wood Hotel for example, they have done a huge amount of work on wood pellets and converting their systems and operations to be greener and more efficient. Hotels by their nature, are huge consumers of energy as you can imagine. For existing hotels to be green, they have to be retrofitted. Fáilte Ireland is working on a programme with the European Investment Bank to introduce a scheme to help hotels to retrofit their properties. For example, the hotels will come to us and propose that they need 500,000 euros for the greening project, we will discuss how Failte Ireland can help them.

It is better to build new hotels which are energy efficient than to retrofit older hotels. Newer builds now have to meet LEED and BREEAM certification standard. The Shard in London which holds Shangri-La hotel have all the green initiative incorporated in the building like an integrated Air Handling Unit to recycle hot air within the building. The Conscious hotel in Holland has very interesting sustainability schemes. So, there are some innovators in this space happening around the world. At the moment, there are no incentives for hotels to go green except apart from their corporate social responsibility point of view. It's important for any organization to have good credentials. Irish hotel companies like Dalata must make sure their shareholders are happy with their green credentials

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).
4.1.1. Impact of Covid-19 Pandemic on Green and Sustainability Efforts

In terms of the impact of Covid-19 to green hospitality, 60% of the interviewees mentioned about the detrimental impact of Covid-19 on green and sustainability in the hotel sector. This is supported by the following 6 quotes:

*Before the Covid-19 pandemic struck, all single use plastics were all eliminated from the hotel, but with Covid-19, some of them came back. All single use plastics were gone except cling film in the kitchen*

(Seamus Crotty, General Manager of Sheen Falls Lodge).

*Before Covid-19, we have discussed with a supplier about the options for biodegradable containers*

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

*Unfortunately, we are probably back to basics now because we are closed for the last year due to Covid-19, green and sustainability projects have been on a standstill*

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

*With regards to single use plastics, before the Covid-19 pandemic struck, it was the main agenda for green and sustainability in the hotel sector. However, because of the pandemic, hotels have to use more single use plastics. For higher end properties, they could look for combustible materials or recyclable containers instead of soap dispensers. I am highly supportive of banning single use plastics, but it will be challenging due to the pandemic*

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

*We had a plan to install solar panels on the roof of the hotel with ESB, but unfortunately the Covid-19 pandemic has paused the project. With regards to single use plastics, with Covid-19, soap dispensers will be frowned upon. We still offer single use plastics toiletries, but we are thinking to convert them into biodegradable containers. We are not able to go with dispensers because they look cheap, but we may be able to go down the biodegradable containers route, which is more eco-friendly*

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

*Covid-19 has changed a lot of things, but I can see the green efforts coming back. The awareness is there for the hotels, but it is not on the agenda now because of Covid-19*

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).
4.1.2. Cost Considerations from Green Policies Implementation

6 out of 10 participants highlighted the capital expenditure challenges and potential cost saving from implementation of green technologies. This is supported by the following quotes:

*We are looking at different companies that can offer LED retrofitting for us. This will help to save our cost in the long term. In terms of labour point of view, these LEDs require less maintenance, and they last longer without the need for our technicians to change them often. We are constantly looking at these things but the main factor for us is the cost*  

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

*It is expensive to install the light sensors initially, but over a period of time, it helps us to save a lot on cost because people tend to forget to switch the lights off*  

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

*Installation of lights with sensors cost a good bit more but at the end of the day, there will be savings. Maintenance of the sensors and lights is important. We have installed new energy efficient gas systems. When we installed the new gas system and new electrical board, we had to close certain parts of the hotel for three days for the men to work, leading to lost revenue. It will make no difference in the quality of service we provide to the guests, but it is of financial benefit to us in the long term. The company which did the retrofit, showed us how much we could be saving in the long term by retrofitting the new gas system*  

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).

*The Green Hospitality Award is a programme that hotels can sign up to in which it will provide hotels with a framework on how to implement green policies and the potential cost savings that can be made. We saw that recycling our waste presented huge savings. We no longer throw everything into the waste bin because this is charged based on weight and it is very expensive*  

(Patrick Shields, General Manager of Cliff House Hotel).

*Implementation of green technologies are done on an incremental basis; it is not something that we can stop what we are doing to take on everything. All these things require capital expenditure and at some point, perhaps that is not available. So, we had to choose what we do. What we had done previously was a lighting audit. We were able to acquire a grant to change all the light bulbs in the hotel to LEDs. So straight away there are massive cuts in our energy costs due to this change. For example, we have two restaurants and there are 49 spotlights in each restaurant. Each of them now has a 4.3W bulb, but previously it was 20W. There are 4 Chandeliers in that restaurant, each of them has 19 lamps. Some lamps have two light bulbs within the lamp so straight away there are massive savings. In each one of our standard guest bedrooms, there are seven spotlights and 4 additional lamps. So, we have a lot of lights in the hotel. Lighting was one of our biggest areas of focus, we wanted to reduce the volume of light bulbs by using energy efficient bulbs. In terms of heating, previously we would have the heating on for 6 – 24 hours a day. We try to reduce that in the summer to two hours a day*  

(John Burchill, Operations Manager of Hayfield Manor Hotel).
I think in the current climate, we can always do more on green and sustainability. I would love to put a communal tap into our meeting rooms to save on single use plastic water bottles. As our leisure centres are quite old, I would like to improve the energy efficiency in them. However, large capital expenditure is our main concern. I would love to do more but cost is the main concern

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

4.2. Motivation for Investment in Green Technology

100% of the participants spoke about the cost challenges in relation to green technology, and the potential savings in the long term as the major driver for greater investment in green technology. A prominent opinion that surfaced pertained to the lack of financial incentives for the hotels to be green. It was felt that it was challenging to get funding from the authority. Many of the participants also highlighted that the sense of corporate social responsibility (CSR) is key to advocate for the green space in Ireland. Interestingly, 30% of the participants outlined the growing consumer demand for greener hotels as one of the motivational factors, owing to the fact that consumers are becoming increasingly conscious about environment:

Cost is obviously a major factor. Being able to see savings is always a great selling point to get investment in green technology. One of the biggest costs that we are looking at now is a food digestor. It will convert all of our food waste into compost. It could cost us 30,000 euros for this, but we believe it is a good investment because we will not have to pay for food waste to be sent off elsewhere. Food waste management is a huge cost for us, so we would be hoping that the food digestor will pay for itself in three to five years. There are grants available, but I think the government could be doing more. There are companies out there like Green Hospitality, they help a lot on the government grant applications. We managed to get some grants back when we were installing new boilers and fixing water leakage in the hotel.

I do see by going green, such as recycling and reusing, are part of our CSR programme. In my opinion, it is also about the customers and what the customers are seeing and wanting. A greener hotel is what the customers expect these days. It is a good tool for us to advertise this and to show them what we are doing. Our hotel views this as a CSR effort, so we are trying to become as green as we possibly can. We engage with our suppliers on how they deliver goods into our hotel by requesting them to remove the packaging. We always ask ourselves what we can do better

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

The next expert supports this view and emphasizes that CSR and growing consumer demand are the main motivators for hotels to go green:

I think it is inevitable that CSR is an important factor. Consumers will demand to see how green the hotels are. There is an awareness from the consumers in this green space. Society is becoming more demanding, it will ask - what are you doing to save the planet for my kids? How can you show me your green credentials?

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).
Similarly, the following participant cites the importance of consumer demand:

_I think consumer demand is important, growing consumer demand will motivate the hotels to do more. The Irish hospitality industry has been decimated at the moment. The priority now would be survival. One major motivational factor for hotels would be from the cost savings benefit initially, but it may ultimately give them a competitive edge from the marketing point of view going forward. It may start off as cost savings or something that was imposed on them because the hotels must meet certain criteria according to the government guidelines, but I hope they will eventually see that being green is the right thing to do_

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

The next participant expresses frustration with regards to the severe lack of investment in green technology in Ireland:

_We are not a green country. If you look at Scandinavian countries, they are miles ahead of us in green technology. I think that there is not enough investment in Ireland on green technology in hotels. If there are grants and if the government get onboard with us, for example Tourism Ireland or Failte Ireland, it would be of great help. The government should have a system in place to encourage everyone to get onboard and use it as a selling point. I think CSR will play a part to encourage us to go greener. CSR is a yearly programme that we are looking at. We do have a health and safety management team that are constantly on the lookout for green energy, and how we can spin it in a way that it is beneficial to us and for the environment_

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).

The following participant likewise believes that government grants towards manpower cost would motivate his hotel to be green:

_Government funded grants would be of great assistance. Grants towards having a staff member or a project manager to help to move to a more sustainable operating environment will be needed. I think having approved and tested suppliers or partners for green technology, that we can work with would be the main motivation factor for me. I am not sure of the long-term savings of introducing green technologies because we have not looked at it in detail, but this comes down to having someone to do research and look at a big capital project like green technologies. I have seen information that there will be long term savings, but I have not seen enough case studies to support those claims. CSR recognition would play a small role, however, we are not doing it because of how it looks, we are doing it because it is the right thing to do_

(Seamus Crotty, General Manager of Sheen Falls Lodge).

The next interviewee shares his view on the tight profit margins in Irish hotels and the impact on investment decisions in green technology:

_In the US and Canada, the manpower cost in those properties was about 15 – 20 % as a percentage of their revenue. In Ireland, it is between 35 – 60% of the revenue. We are relying on a very fine profit margin in Ireland. Therefore, any green efforts should not come as a huge cost to us. We cannot implement green initiatives in our bedrooms as much as we would like to, because that is going to cost us more than what we are already paying, otherwise that will mean that we are not sustainable as a business_

(Patrick Shields, General Manager of Cliff House Hotel).
The following participant shares an interesting knowledge on the idea of hotel green assessment:

*I think regular inspection would be a good motivation for me, for example, every hotel should be inspected regularly by authorities to assess their green standards. This is something the government should look into, similar to a routine fire inspection. Subsequently, we would definitely like to showcase our green efforts as part of our CSR programme. Cheaper options will also motivate us to invest more in green technology. Cost is a major factor*

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

The next expert shares a similar view with other respondents with regards to cost and funding for green technology:

*A lot of times, if you go green, it means to reduce cost. However, there will be capital investment required initially. If we could get more funding or grants, it becomes a lot easier to introduce green technology*

(John Burchill, Operations Manager of Hayfield Manor Hotel).

The following contributor suggests that corporate clients could be one of the major motivators for hotels to be greener:

*Return of investment and the potential to drive business are important motivators. I see a lot of American or multinational corporate companies starting to look for the hotel green policy. Since a lot of companies started to look for that policy, for me, this is a motivation factor for me to start implementing green initiatives. In this case, if I know that there is a return on the money I am going to spend, it is going to help me to make that decision quicker. We have a procedure called request for business, where we seek out for corporate customers. Some companies will ask for the hotel green policies, as they would for the fire policy. CSR is an absolutely critical tool particularly when we run for multiple awards. If we can show that we have good green policies and a good action plan, being seen as green absolutely helps the business from CSR point of view*

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

Similar to most participants, the following advisor believes that more government assistance is the key to motivate more green investment in Irish hotels:

*Government will have to provide more grants because there are substantial costs involved in retrofitting a hotel. For example, the sensor lighting, the initial set up cost is very high. The hospitality industry has been very badly affected due to the Covid-19 pandemic, a lot of hotels will not have the initial capital to put straight into green initiatives, I think if green hotels are to work in Ireland, the government will have to start giving a lot more incentives to get hotels to adapt to it. I think the hotels want to do more, but we are not incentivised to do it. Being green is viewed as part of our hotel’s CSR. I do think that if green initiatives are viewed as corporate social responsibility in other hotels, they may be more motivated to get onboard. We need to get onboard with green hotels now, because if we keep going the way we are, Ireland as a whole, in 15-20 years’ time, will be in a very difficult situation*

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).
4.3. Green Credentials in Hotels

70% of the interviewees agreed that green credentials or certifications are crucial to gain consumers’ trust in the hotels’ green practices. It is interesting to note that 60% of the participants cite that consumers have trust in their green initiatives even without green credentials. 40% of the participants spoke about how the Green Hospitality Award has influenced their hotel operations to be greener. A further 30% of the participants mentioned the importance of validation by a recognized institution to prevent hotels to be seen as ‘greenwashing’ the consumers. There was a consensus among the interviewees that they would be interested in obtaining some kind of green credentials to communicate to the consumers that their hotels are genuinely green in their operations:

Green certification is key. At a 5-star hotel, customers are paying high prices, so they might not necessarily be looking for the hotel’s overall green strategy. As such, hoteliers might get away with just ticking a couple of boxes and the customers will be happy. It’s like an easing of their conscience. Hoteliers know this and that’s why some hotels are not as motivated to roll out huge green strategies. Green certification is vital. I think you need to be able to display genuine green programs that you’re involved in, otherwise, it can very easily lead to complaints. It can be a tricky one for the luxury hotels because guests pay a premium for a luxury experience, they don’t want to read in your guest’s directory that you’ve turned down the water pressure for greening purpose. They may not find that credible.

There are awards like the Green Hospitality award, which we can sign up to and they will give us a framework on how to implement green policies. We’ve signed up to the Green Hospitality award because I think it’s an excellent framework to work from. If we achieve one of the targets of the Green Hospitality award criteria, we might advertise that we have the eco label, be it bronze, silver or gold. The Cliff House hotel has already signed up this award many years ago, but I am going to reemphasize the Green Hospitality award again because I think that will make a huge difference to us. The Marriott group, for example, was one of the first organizations, to introduce signage in rooms to eliminate daily bedsheet and towel change, it was a huge success. The customers were happy because they felt that they were making a contribution by not leaving a large footprint environmentally. This is where I hope the Green Hospitality award programme will line up all of those endeavours under one clear strategy

(Patrick Shields, General Manager of Cliff House Hotel).
Interestingly, the next participant has opposing views and mentions that the Green Hospitality award is important only to a certain extent:

> The Green Hospitality award is a great award to have because most of the consumers are now conscious about the environment, and hotels need to be a step ahead. They need to be recognized by the Green Hospitality award. Our hotel guests trust our hotel’s green initiatives because we never lie about them to our guests as we know that green hospitality is very important. Adare Manor has not achieved full Green Hospitality award criteria yet because we are only three years old, but we’ve been working on making everything as green as possible. Green certification is probably important to display on a hotel website for marketing purposes. However, the last thing the guests want to hear when they’re checking in is that our hotel is a green certified hotel. I think there's no need to be saying it to the guests constantly because they can see it for themselves. For example, front desk staff will email the receipts to guests instead of issuing paper receipts. You don’t need an award or certificate to tell people you’re green. It's a fine line in the luxury market, for example, if we use soap dispensers, they look similar to what you see in Tesco's toilets, they look cheap. It doesn’t justify the high price our guests are paying even if we have green certificates. Luxury hotels focus on guests’ experience, and we can’t do things in the name of green to start taking the experience away. Otherwise, the guests won’t come back again.

(Justin Collins, Food and Beverage Manager of Adare Manor Hotel).

The following expert supports Finbarr Collin’s point that the green credential has limited importance to the luxury hotel segment:

> I think the green certifications are important to gain consumers’ trust. We can go green as much as we possibly can, however, at the end of the day, we are offering a premium product with a premium service. Therefore, there are certain things that we can’t touch. If I were to reduce the pressure in the showers, to ask our guests to reuse the towels, or reuse the bed sheets, I would have a lot of unhappy guests. It just would not work in a 5-star hotel. I can see it working for a four star or corporate hotel. In the luxury market, people won’t appreciate it. They want to enjoy their stay and at the end of the day, they are paying a lot of money. Conversely, in my opinion, corporate guests care more about green and sustainability. Corporate guests stay in hotels three to four nights a week all around the world, so they are more conscious of their carbon footprint. In a way, we need to impress those guests as well.

(John Burchill, Operations Manager of Hayfield Manor Hotel).

The next advisor shares a similar view with Finbarr Collin’s that green awards and certifications are only useful for marketing purposes:

> I think our guests have trust in our hotel’s green initiatives, but I don’t see a need for green certifications. I also don’t think green certifications will genuinely show that hotels are green. I have worked in the industry long enough; I find it hard to believe. In an industry with such high turnover of staff, it is very difficult to implement procedures to do things correctly. However, I find that awards and certifications are important only for social media, as a promotional tool.

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).
The following interviewee believes that green credentials are very important but only when they are issued by accredited institutions or a reputable accreditation body. This is supported by the following 3 quotes:

_I think green credentials are absolutely important but there are different kind of schemes, bodies and accreditations out there and consumers might not be aware which is more stringent or genuine. Some would be more stringent than the others. Some hotels might obtain an award or certification from less well-known bodies, so they might be not very green after all. In this case, greenwashing is an issue and consumers would not be able to tell the certifications apart. It boils down to the credibility of the awarding bodies who issue the awards and certifications to the hotels. It also depends on what degree of scrutiny from the consumers and the consumers’ knowledge on these certifications. I think consumers are becoming more and more knowledgeable in this area, so they might do their own fact checking. Cost could also be a factor that consumers will consider, for example, does the hotel which has green credentials make it more expensive than the other? Some consumers might not be willing to pay for green certified hotels. They might like the idea of green certified hotels, but they might not be willing to pay more for green hotels._

_Failte Ireland has no plan to set up our own accreditation scheme, but we would provide guidance to hotels to go down the route of certification such as the Green Hospitality and Sustainable Travel Ireland. We would advise hotels with very low baseline on green and sustainability to target for incremental changes and quick wins first rather than jumping straight into green certifications. Some of the hotels may have more work to do than others due to the age of their properties._

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

_I guess to date, our guests would recognize our green initiatives and trust us. We are not claiming that we are totally green, we’re saying that we’re making efforts to improve our environmentally friendly policy and we’re on a journey to improve our sustainability efforts. However, by having a reputable body giving accreditation to the industry, it is certainly positive and holds us all to account. The guests would be more convinced if we have a reputable body to back us up._

(Seamus Crotty, General Manager of Sheen Falls Lodge).

_I think certification is important. I think we can all say that we are making green efforts, but we need to be seen to be making them in practice too, whether it's recycling bins or saving water. I think people need to see the award or certification. One thing I like about the award is that it keeps us on our toes because we know that we have certain criteria to meet, and it makes sure that we do them. Sometimes we can all go back into our old habits. We have made little frame signage’s which are funny and quirky. These little signs remind the guests to treat this hotel like they would at home, turning off the TV and turning off the lights when they leave the room and recycle items as much as possible. It is trying to put a funny spin on it so they can engage with us a little bit more. If the awards or certifications are well recognized, then our customers would buy-in more easily._

(Adele Walsh, Accommodation Manager of Cliff at Lyons).
The following advisor believes that hotels need some form of recognition to communicate to their guests on their green intention:

*I think our customers trust our green initiatives because it comes down to the brand value. One of our main values is that we care about our customers and we want to make sure that our customers have good experiences. However, we need some form of validation. It's just human nature. We can say we're the best hotel in Cork City, but how do we know this? People need to see validation of some kind. I think green certifications and awards are important, but only if the hotel can back themselves up with genuine actions*

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

The next 2 contributors support Aaron Mansworth’s view in relation to the positive influence of green credentials to consumers:

*In a private hotel like ours, I think people would trust our green efforts. Circumstance might be different for chain or group hotels as they tend to focus more on the financial side of things, for example, cost cutting being disguised as green efforts. I want to go down the path of getting some sort of green certifications. I think having the green certification is key to us. By having the credentials, for instance a grading system, we can display them in our lobby. We can also display things like green awards on our wall or next to the lift to show our guests that we are serious in our green efforts. I am in favour of the idea*

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).

*I think green certifications or credentials are important., I mean this was happening all the way back, even before the Covid-19 pandemic. So absolutely, I think many hotels are going for it now, but some may be further ahead than the others*

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

**4.3.1 Consumers’ Knowledge on Green Credentials**

It is worth noting that 30% of the experts contributing to this study believe that while having green credentials is good for the hotels, many consumers will have limited knowledge on them. This is supported in the next 3 quotes:

*I would say that a lot of the demographics wouldn't know what green credentials are about. They wouldn't understand what is required to become a green hotel. A lot of the time, I don't think they know what green credentials are and, in many instances, they actually don't care*

(John Burchill, Operations Manager of Hayfield Manor Hotel).

*I think green credentials are absolutely important but there are different kind of schemes, bodies and accreditations out there and consumers might not be aware which is more stringent or genuine*

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).
I think green certifications are important but I'm not sure how understood those awards are by the general consumer

(Seamus Crotty, General Manager of Sheen Falls Lodge).

4.4. Smart Hotels - Artificial Intelligence (AI) in the Hotel Sector

There were clearly mixed opinions with regards to the use of artificial intelligence in the hotel sector. All participants agreed that there is limited use of AI in the Irish hospitality industry at present. 100% of the participants outlined that many visitors either, local guests or overseas guests, would like to experience the personal human touch. Despite that, 60% of the respondents acknowledged the inevitable advent of artificial intelligence technology in the hotel sector and hotels need to adopt the technology to stay up to date. 50% of the interviewees highlighted the importance of ‘Irish hospitality’ and would like to see that being preserved in line with the advancement of artificial intelligence technology. Additionally, 40% of the interviewees postulated that smart hotels may work better in city centres or corporate hotels, but not in the luxury hotels due to lack of human interaction:

Artificial intelligence is essential, and we will have to move with the times. Hopefully, the large multinational hotels will lead the way because they will have the ability to invest in the technology. I would look at artificial intelligence less from the perspective of robots, but more on how active artificial intelligence can massively benefit hotels in offering a personalized experience to the guests. It is also how artificial intelligence can be used to battle the Online Travel Agents (OTAs) who take a huge commission from us. Artificial intelligence can be utilized to learn the guests’ behaviour, and this will help us to personalize their booking process. I think data mining and machine learning is the way forward for hotels to capture their clients. We can get to know our guests better through the aid of data mining. Smart technology can be a challenge in the luxury market as well, because in Ireland, 90% of hotel bookings happen over the phone. Irish people will go on the website, they will check all the rates, but they will still call the hotel to speak to a person. Maybe they feel that they might get a better deal, an upgrade or are simply wanting to talk to somebody. I think people in Ireland are not totally comfortable in making secure payments online by credit card and I think they would like to talk to people. I think it's cultural. Similar to the banking sector, I think there is a huge resistance to automated banking without personal interaction. Whatever robotic automation we include, we can reduce our manpower cost. However, we will always need to have a person available to answer phone. I think especially at the 5-star hotel level, we have clients who ring up and they want to speak to somebody, they want to be recognized. Our regular guests always look to speak to someone in the hotel they know before booking with us. It is a culture in Ireland for them to speak to a person and I don't know if we can break that culture

(Patrick Shields, General Manager of Cliff House Hotel).
The next participant supports Patrick Shield’s opinion but cautions the use of AI robots to replace genuine hospitality:

*We need to move with the times, but I would hate to see AI replacing genuine hospitality. Robots are never going to be able to replace people. However, there are aspects of AI where it can help us, for example, in the areas of yield management and reservation systems. AI can improve what we do. Currently, we use a system called IDeaS, it’s an AI-based system which forecast the booking demand. This will help the revenue manager to determine the room rates in our hotel, but this system will not replace the person’s job. I can see using AI to improve overall guest experience and hotels’ operation, but I would not like to see AI replaces human interaction. Irish hospitality is about the personal interaction. However, there might be times we may need robots if we can't fill the positions. For me, the most important thing is that robots should not replace people in their jobs. I think there are so many forms of artificial intelligence, it isn't just about robots taking over the world, but it is about how we intelligently use AI to our advantage. I think the use of AI is very healthy to the hotel sector here*

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

The following expert believes that hotels need to embrace change but outlines a few challenges some properties may face:

*I certainly think there is a need to constantly embrace change to be successful. When you embrace change, you need to get more modern items. I am constantly looking at things to make the hotel run in a more efficient way. However, for AI robots may work only in certain types of hotels. 60% of our guests come from North America, they want to experience the Irish hospitality. They don't want to use tablets, kiosks, or robots to check in. By saying that, I'm intrigued by how the Moxy hotel operates, which is a very modern hotel in Dublin with AI technologies. Nevertheless, I think if hotels do not embrace change and modernize themselves, they will fall to the bottom. Artificial intelligence technology is definitely up and coming in Ireland, it can’t go any other way. I presume in 10 years; you’ll probably be looking at an automatic hoover*

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).
The next advisor agrees with John Whelan’s view that AI is starting to creep into the Irish hotel sector and will certainly be more common in the future:

*At present, I think the use of AI technology is very limited in Irish hotels. I would absolutely see AI becoming a part of the hotel sector in Ireland. As of now, I can see the booking engines on some hotels’ websites have started to use some element of artificial intelligence. I think things like robotic concierge or automatic check in/out will work for a certain type of hotel, maybe 2 to 4-star with high guest volume hotels but will not necessarily work in 5-star hotel. I think this technology must be significantly fine-tuned over time, because the difference between 4 star and 5-star hotels comes down to service. I think AI robots could certainly be an additional tool to enhance our service, to make it more efficient but not to replace humans. I would say that AI is still in its infancy stage now. It will get going, but it will take a couple of hotels to start adopting it before a lot more hotels will follow suit. The hospitality industry in Ireland is quite traditional. It is usually small and family run. There might be a high level of investment required initially which might slow down the roll out plan, but I think eventually AI will become more a part of our service. I think AI could be used as an enhancement to serve us better, rather than the reduction of labour costs. Technology moves so fast. Keyless entry is already in place in a lot of properties. I think maybe in five years, AI technology will certainly be more common.*

(Seamus Crotty, General Manager of Sheen Falls Lodge).

The next contributor supports Aaron Mansworth’s and John Whelan’s opinion that Irish hospitality is built on human interaction:

*I think we are probably going to see more smart technologies emerging particularly in accommodation services across the board. I think embracing AI is a positive move. The Covid-19 pandemic has probably hastened the adoption of AI and smart technology as well, such as self-check-in and keyless entry. In terms of AI robots, I think they have their place but tourism in Ireland is built on authenticity of people. I think there is still going to be strong demand for human interaction. However, there is a place for robots in terms of improving the efficiency of certain aspects of the hotel, but they should not replace workers. I would like to see where AI can be put in place so that AI will help to free up some valuable resources which could be redeployed to other more meaningful areas rather than making them redundant. I like the idea of increased productivity because of AI, but not the idea of having less human interaction. The use of AI going forward, will depend largely on what the consumers want, if there is strong consumer demand, it will speed up the adoption rate. I think there will be different rates of uptake in the Irish hotel scene, maybe the bigger chains and new built hotels will be leading the way in term of AI, while the smaller and more traditional hotels will be slower to change.*

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).
Interestingly, the following advisor thinks that a lot of smart technologies are just a gimmick and he believes that the Irish hotel experience should remain traditional:

There are a lot of good examples around the world that robots will provide room service or checking guests in. There is a hotel in Japan that is doing this. Robots have their place, but they can never replace the human. There are innovations like NFC to unlock the room door, etc. There is so much digitization and technology, sometimes these technologies drive people crazy if they can’t find out how to turn on the lights. A lot of the smart technologies are gimmicks because you’ll never replace humans, because you can’t. Citizen M and Qbic hotels in London and Amsterdam for example, they are using automated check-in. It depends on the market and guest demographic. For leisure guests, when they come for a holiday, they want to talk to a human not a robot. For corporate travellers on the other hand, AI robots are great because they don’t want to talk to anybody. During Covid-19 times, I can understand that some people might want to reduce human interaction. However, I think we can never get rid of the demand for full-service hotels.

Traditional mom-and-pop hotels are famous in Ireland. What it boils down to is the capitalization of the balance sheet. There are opportunities for tech-savvy hotel operators, but I think international travellers come to Ireland for the traditional Irish hotel experience and they would be turned off if our hotels were too techie

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

The following participant echoes Weldon Mather’s view in relation to the risk associated with the use of AI robots on degrading the human interaction in the Irish hospitality scene:

I think AI robots would not be a good thing for us. The hospitality sector here is about the people and personalities. If we start putting in robots to bring up room service for example, it removes the personal element of what we’re about and certainly the Irish Hospitality. I think it could be a long way down the road before Irish hotels are moving that way. Robots are against what the Irish Hospitality is about, we are about human contact and meeting people, we need to be able to read the guests’ expressions, are they happy or how can we do more for them. Robots aren’t trained to do that. The use of AI robots may help to save cost, but our industry is also about keeping people in the job

(Adele Walsh, Accommodation Manager of Cliff at Lyons).
The next expert supports Weldon Mather’s and Adele Walsh’s opinion that artificial intelligence may have limited use in the Irish hotel sector:

I think artificial intelligence robots, will work in some city centre hotels. They will not work in a 5-star luxury hotel, because you’re losing the human touch. That is what makes us a luxury five-star hotel. I think there is a market for those AI technologies. Hilton has implemented some degree of smart technologies such as digital check in. We do have a certain degree of smartness in our hotel, for example, we have a touch screen control to open and close the blind. We have also started introducing QR codes instead of printed menus in our rooms. When I was in Dubai, every hotel had QR codes, there were no menus. So, we are embracing some change and we are also helping the environment because we’re not using printed menus as much. Voice command would be very hard to implement in our hotel. I know Alexa can work perfectly on one or two things, but not if you have 20 - 30 things in a room to control. I think it might take a couple of years to advance Alexa. In 5 – 10 years, technology is going to explode. I do see wider voice command implementation once the technology progresses more in the future. We need to look at cost for artificial intelligence technology. These things don’t come cheap. These robots still work to a certain degree, but you won’t want a robot serving your food. With regards to robotic bartenders, you’re missing the human interaction. It may work in some hotels, but it won’t take over from humans. What’s next, a robotic chef?

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

The following advisor agrees with John Whelan’s, Seamus Crotty’s, Weldon Mather’s and Finbarr Collins’ opinion that smart hotels may work better in business hotels, but he also acknowledges that hotels need to react to stay up to date:

I think smart hotels with artificial intelligence technology will work better in corporate hotels such as airport hotels. For example, in an airport hotel, they don’t want the whole hospitality experience, they are staying there because they must catch a flight the next morning. I don’t like AI robots at all. Irish hospitality is world renowned for its Irish welcome. We rely heavily on that brand to attract our guests because they want to experience the warmth that the Irish hospitality can offer. People come to us for that warmth, they want to feel like they’re being looked after. If we start going down the route of AI robots, it affects the whole brand of Irish hospitality. I can’t predict how it’s going to be in 15-20 years’ time, but I believe we must react to certain things within the industry. For example, we have installed charging ports for electric cars in our hotel recently, but 10 years ago, there was no need to invest in that. We are a family-run hotel, and we are all about core values. We are not into following big modern trends because we are not a modern hotel

(John Burchill, Operations Manager of Hayfield Manor Hotel).
The next contributor supports all other participants’ views that human interaction is critical but outlines that there will be a role for artificial intelligence in Irish hotels:

*I think human interaction is key. Our guests want to see a human face. I can understand some hotels would find smart technologies and AI robots useful, for example automated check-in where guests could walk straight into the hotel room without meeting a receptionist. In Japan for example, guests will meet a robot upon check-in. I know they probably have the facial recognition and safety features built into those robots. It could be a bit quirky; I understand. I can see that would be financially beneficial to the hotel by not having a staff member at the check-in desk. However, I think for what the Irish Market offers, it just wouldn’t work. I can say that AI technology may come in further in the future. We’re a little step behind a lot of countries in the western world, but I think for such a small country, we pride ourselves on human interaction. The selling point of any hotel in Ireland is about the staff. If the staff aren’t friendly, we are in trouble.

On the other hand, I like the idea of a robotic bar assistant. I can understand that because the whole nature of a bar is about having fun. Other than that, I think AI will have limited application to hotels in Ireland.*

(Barry O’Flynn, Deputy General Manager of Carrigaline Court Hotel).

4.4.1 Smart Technologies and Chatbots

There is a consensus among participants that Irish hotels are receptive towards chatbots because they help to alleviate constraints on manpower dedicated to answering phone calls and to enable guests to have instant access to information. The participants also highlighted that they would like to see smarter in-room technologies being implemented in hotels here. This is supported in the next 7 quotes:

*Chatbots are essential because people nowadays are used to immediate communication. The hotel that I work in, it is an old-fashioned, small Irish Hotel. We don’t feel that we will have to move too quickly with a lot of technology because it’s probably not what people are looking for when they come to our hotel. Despite that, the guests like instant communication. If a guest is either in the reservation stage or if they’re staying at the hotel, there’ll be times where guests will have questions and they’ll need instant answers. This is where I think the chatbots can be very useful because chatbots can be programmed to any unlimited amounts of questions. Automated check-in, keyless entry, intelligent guest room and voice command are definitely the up-and-coming technologies in Ireland, we have to get onboard with it. Particularly during the Covid-19 pandemic, we cannot afford to have guests queuing in the lobby. I would be very happy if the guests book the hotel, download the Cliff House hotel app and they can fully check-in on that app and get access to their room via a bar code. I understand some older clients may still want to go to the reception, but I think with smartphone integration, we can reduce the manpower at the reception desk. In terms of intelligent guest rooms, I think we’re starting to see that already whether it’s Alexa or otherwise. Guests expect that hotel rooms should be as smart as their own home, if not smarter. It has got to be voice control such as Hey Alexa, play the song, turn on the TV, drop temperature by two degrees, etc. This is especially true for a luxury hotel where guests are paying over 500 euros a night. If we don’t offer these services, that is going to become a problem. So, we have to get on board with artificial intelligence and smart hotels.*

(Patrick Shields, General Manager of Cliff House Hotel).
Chatbot is absolutely a good idea. We have them in a trial stage now. Keyless entry, online check-in, intelligent guest room and voice command are the way the world is moving now. Anything that AI can help with to improve the guests experience is important. The biggest challenge is the cost. I think in an ideal world you would love to be able to move that way, but cost is a factor. Hotels like the Citizen M London have started to implement smart technologies in some ways

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

I see that chatbot is a good idea, it is a positive idea. I would not see that having a chatbot would reduce manpower, but I would see it as maybe a more efficient use of manpower. Guests who got their initial information through a chatbot and subsequently contact a staff member, there’s a higher chance of converting that into a sale. I think intelligent guest room features such as voice command and keyless entry will become a part of the hotel experience in time. It’s not something we’re looking at now, but I believe that this will be a part of the hotel experience in the future

(Seamus Crotty, General Manager of Sheen Falls Lodge).

I've seen chatbots been used in some hotels. These hotels save a fortune on labour. Often, the guests would not know that they are talking with a chatbot, unless they deliberately asking silly questions. However, I think when it comes to a hotel experience, you need human beings to answer the phone. Some guests just want to talk to somebody

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

I think intelligent guest rooms such as voice command and keyless entry is a brilliant move. In terms of chatbots, I think there must be a balance. I think if somebody wants to have human contact, I think there’s a need for somebody to be at the end of the phone. People are using online websites more, but there are still a lot of people who want to make that phone call and have that personal touch. Chatbot may be a convenient option for some people if they have quick questions

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

Unfortunately, people want everything to be instant, people don’t want to wait an extra second. This is where I see chatbot technology to be a good idea. This technology will come eventually to our hotel. We have an ageing population here as well; these people want to go to a traditional hotel. They don’t want to go to a completely tech-savvy hotel, because some people won’t know how to use it. I think a small minority of hotels won’t adopt artificial intelligence technology. I think most hotels will adopt it to a certain extent, but not every hotel will jump straight on it

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

I like the idea of chatbots because the amount of calls the hotel take is extreme. It takes up valuable manpower resources. We haven’t got a chatbot now, but I can see that coming at some stage. However, in Ireland, people will prefer to ring the hotel. People need to be reassured that they are doing the right thing. If I am booking something online, I will probably ring as well because I get limited information on the website and there’s always something extra, I would like to know. Smart hotel features like voice command, smartphone integration and keyless room entry are brilliant. I think these technologies will come in force in the hotel sector. I think they can make our guests’ more comfortable and give them more control. I love the idea of the technology inside the room be it voice control or mood lighting, I appreciate that, that’ll be perfect

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).
However, 20% of the participants were somewhat resistant to chatbots and other smart hotel features. This is supported in the next 2 quotes:

Chatbot has its benefits, but I think it would not work for us because we want the personal touch with our guests. It drives me mad when people contact us through Facebook. We like people to ring us. I think there is a market for intelligent rooms, especially for new hotels. If new hotels were built from scratch, it is easy to incorporate them, but to retrofit our hotel, it is challenging even though I love the intelligent technologies. I think using mobile phone to enter the room is fantastic, but the older generation would be resistant to that change.

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

In relation to chatbots, we would prefer people to pick up the phone and speak to a representative from the hotel directly because we feel that starts to build a relationship. We can be there to answer any questions, so I don’t think the chatbots are suitable in the Irish market. We don’t even have a key card system in Hayfield Manor, we still use traditional keys, we're not into the new technology. When we present a traditional key to our guests, they appreciate that it is a key as opposed to a card.

(John Burchill, Operations Manager of Hayfield Manor Hotel).

4.5. Smart Hotels – Virtual Reality in the Hotel Sector

There were clearly mixed opinions about the use of Virtual Reality (VR) technology in the hotel sector. 90% of the interviewees agreed that VR could be utilized as a good marketing tool for the hotels, however, only 20% of the respondents supported the use of VR technology for virtual tourism. Even so, one expert expressed concern regarding the cost of implementation of VR technology in Irish hotels. Unsurprisingly, 40% of the participants highlighted that the Covid-19 pandemic had made VR technology more important to the hotels sector than before:

We’ve done a couple of VR projects in our hotel. This helps massively during the Covid-19 pandemic. This is because people couldn't come to the hotel, but they are trying to plan things like weddings or birthdays. I think it's a very good idea and I think it's obviously something we can put on our website. People are progressing and they are more technologically minded now. They want to see things like VR so gone are the days of posting printed brochures to customers when we can send them a link and they can go explore it themselves. I think the VR goggles idea is great for advertising. At present, tourism companies advertise their tours and activities through brochures sitting on the desks, it's very dated now. In our hotels, we have very good integrated TV system where we can put up video clips for those tourism companies to promote their activities. However, I like the idea of the VR goggles because it creates novelty. It will create a talking point. There may be a need for insurance consideration in this, for example, if guests fall or hurt themselves while wearing VR goggles, whose fault should it be? In general, I like the idea because it's improving the guests’ experience. It's getting them to see what's in the area. Ultimately, if guests have a good time or experience in a hotel, they will likely return. Embracing VR technology shows that you're moving with the times and could link well with the sales and marketing efforts. I’ll be all for it.

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).
The next interviewee supports this view and believes that VR technology will replace physical brochures in time:

*From the sales point of view, I think it's great that someone can view the product through virtual reality before they get there. Offering VR goggles in the hotel room is a good idea. It is definitely an advertising revenue for the hotels for good tourism products, such as the Cliffs of Moher. However, if it is a bus tour, maybe not, because we want to offer high quality tourism products. VR technology is a good replacement for physical brochures because it is only a matter of time before physical brochures are gone. I think that if we don’t get onboard with technology, Irish hotels could risk being left behind.*

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

The following expert believes that using VR is a great marketing tool to attract overseas guests:

*I think VR is good for hotels in certain locations that may not have the best environment so they can create virtual reality experiences for the guests. We’re the only five-star hotel in the Ireland situated on the stunning coast at the seaside, so I don’t think VR tourism is applicable in my hotel. However, I think VR could be very beneficial to large conference hotels. I think using VR technology to sell our hotel is a very good point. We would like to see our hotel do better with the US market as 80% of our business comes from within Ireland. I think the virtual reality space could be a huge help in attracting the American market who are very technology conscious. They like to know what they're getting into. The benefit to us is that American guests are happy to pay very high premiums, so I think virtual reality could really boost our international market presence. When I was in Australia, there were wine and tour companies who used to pay a commission to the hotel for the advertisement at the hotel. So, I see VR advertisement as a huge opportunity in my hotel, it will be a huge bottom-line profit, especially for hotels in Ireland where profit margins are slim. If we have something like VR advertisements in hotels, that goes straight to our bottom-line profit, that is gold.*

(Patrick Shields, General Manager of Cliff House Hotel).

Conversely, the following contributor is quite sceptical about the VR technology and outlines some potential challenges with this technology in the hotel sector:

*I’ve seen some places doing it, I think Wicklow Gaol is doing it. However, they actually found out that the VR headsets were cannibalizing their business. They found that people weren't doing the proper tour because they would be just quite happy to do the virtual tour. The whole VR, AR (Augmented Reality) and Google glass concept, did not really take off, so I am not sure on VR technology in tourism. I think people will still want to go out. I don’t see that offering VR headsets in hotels as being a very sustainable business move due to the high initial set up cost. People want experiential tourism; they want to physically go out to do things. I am not convinced of this technology. Offering a virtual tour of a hotel to overseas guests may be a good marketing idea, but there is a challenge to this. For example, the virtual tour recordings could be done 2 -3 years ago, but when the guests arrive, the reality may look different to the virtual tour due to more wear and tear etc. The danger with this technology is that the hotels have to keep updating the virtual tour to reflect the present reality. Some guests may complain because the reality does not match the virtual tour.*

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

The next expert supports Weldon Mather’s view but believes that some cohorts of discerning guests may still find VR technology interesting:
I am sceptical on virtual reality technology. I personally don’t think it is going to gain momentum in the way that the guests will stay in a hotel and virtually visit an attraction when people can physically go do it themselves. I think people want tangible experiences, a connection with people and the place, I think virtual reality can’t offer that. In the time of the Covid-19 pandemic, I certainly think VR has a role because people can plan for a trip somewhere from the comfort of their own home. They could immerse themselves before visiting the attraction. However, I don’t see VR as an alternative to actually visiting an attraction site in person. I think VR goggles in the hotel rooms might add value to a certain cohort of guests, who may be interested in having a sneak preview of tourist sites before they visit, I would imagine this cohort to be the younger generations. I see this as an incentive for the guests to visit the sites in person rather than replacing the real experience. I think visitors and tourists are becoming more discerning and they’re doing more research before they book a hotel, particularly in the higher end properties. They expect a certain level of information from the hotels, so I think VR could be a good idea to allow them to see the hotels themselves before making the booking

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

The next contributor echoes Weldon Mather’s and Shane Dineen’s opinion that travel and tourism should be experiential:

It is not something for me that I would view as important. I think travel and tourism is a very experiential part of one’s life and it is certainly a luxury. I’m not sure whether you would get that fulfillment by sitting in a hotel room or in a lobby or whatever the case may be with a virtual experience. I think if people are going to spend money, no matter where they go, experiencing a destination, a resort, or an area is what travel is about. I don’t see it as being part of the travel industry. I don’t see the benefits. I don’t think that a VR facility would be a revenue stream for us. The consumer would probably say, why don’t I stay home, and I can get the same experience.

However, I would see that maybe VR can be used as a sales tool, to map our hotel into a virtual tour to market to our overseas guests. It depends on the cost of the implementation of VR, whether it is worthwhile to invest in it. In the luxury market targeting the U.S guests, most of the bookings come from travel agents. The travel agent would generally book hotels based on their relationship with the property, based on them having been there themselves, so they are confident in making that recommendation to their clients. So, I would see it as a tool, but I wouldn’t see it as a majorly important one. I would see it as an element of the sales pitch rather than just being the only sales pitch

(Seamus Crotty, General Manager of Sheen Falls Lodge).

Interestingly, the next advisor supports Seamus Crotty’s view on experiential tourism but contradicts his view on the use of VR technology as potential revenue stream for hotels:
I don’t see offering VR technology in the room for the purpose of virtual tourism, because the guests should get out of their room to experience the property and its surrounding. For the purpose of sightseeing, I think people need to go out and experience it themselves. I could see it being more useful before the guests come into the hotel to experience a virtual tour around the hotel or the potential activities, we may offer them. On the other hand, I think a virtual tour of our hotel is very good, especially during the Covid-19 pandemic, people can’t visit our hotel. For example, there are guests still wanting to book for a wedding, it would be great if we had a virtual tour to show them. A virtual tour is definitely a good marketing tool for overseas guests, but it would not be the same as in person because you need the warmth of our staff.

Another area I could see VR being beneficial in is the advertising space. I think it could be a good advertising revenue stream for us as well, if tourism companies stream their advertising contents to the VR goggles in our hotel. We have those on the TV at the moment, but it would not be as good as VR technology. Some people like to do their own things in their own time and make their own decisions, rather than visiting the concierge at the lobby to arrange tours. So, I think it’s definitely a good idea. I think this idea may work better in corporate hotels, where the guests are not looking for any extra human contact, they just want to get a good night’s sleep and work the next day. These guests will tend to spend more time in their room.

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

The following interviewee agrees that VR technology has its role in the Irish hospitality business:

Our hotel discussed this two years ago and we had an idea that we would like to aim towards virtual wedding tours. We planned to do the virtual tour of the whole wedding process, from the guests arriving at the hotels, to the band, DJ and so on. So, we did look at that, but we never followed through on it. What I find is that nowadays, couples don’t have the time or patience to come in, sit down and have a conversation with someone. They tend to do it over email or phone calls without visiting the hotel. Therefore, the idea is that we send out the link for the virtual tour for them to look at in their own time. Also, if they come into the hotel and the ballroom isn’t set up for a wedding, they can sit in lobby and go through the virtual tour with our sales assistant. So, we thought that would work. We had a guy from Samsung in, he showcased the virtual reality goggles he prepared for another hotel. I love the idea because it’s fantastic. It’s just something we haven’t pushed forward on, I don’t know why, it’s like beating a dead horse. I agree it is a good idea. I’d say once we’re back up in full operation, I think I will follow up on that.

I can understand the idea of offering guests VR goggles to allow them to visit certain tourist sites. However, I can't see it happening any time soon because basically we don't want people to stay in their rooms being comfortable for too long. We want people to come out to use the facilities in the hotel, around the village itself and the local attractions. I can see some relevance as kids’ entertainment, if their parents were to be out late at night, in this case, I can see VR goggles would be an option to consider. I think VR goggles can offer guests a taste of what lies ahead outside the door of the room. For example, instead of a brochure stand at the lobby, we can use VR goggles to replace them, e.g., where’s a good place to drink, to eat and have a look? It's like a catalogue of what you can do. I like the idea. I think you're looking at maybe five years for the first hotel like us to embark on this, maybe 10 to 12 years for the majority of the larger hotel groups to follow suit. Generally, if it starts in the U.S or other parts in Europe, it might gain traction eventually. I don't think the Irish market will be the lead on this. We're followers unfortunately.

(Barry O’Flynn, Deputy General Manager of Carrigaline Court Hotel).
The following participant supports Aaron Mansworth’s, Adele Wash’s and Barry O’Flynn’s view that VR technology has great potential for attracting the wedding banquet business in Irish hotels:

*We have some VR technology in place already. Guests can virtually tour our ballroom or banquet area to see what’s it like when fully set up, how it looks like for the wedding or meeting. I think the VR technology is very good, in particular to our American guests, because they can see our hotel better. For example, if guests from the U.S want to have a wedding in our hotel, they can have a virtual tour of our hotel remotely. However, what I don’t see is that people have virtual tours to tourist sites like the Cliffs of Moher, because technically you haven’t been there. You can’t say you’ve been there after you’ve done a virtual tour. I am also not sure about the possibility of utilizing VR as a marketing avenue for the tourism companies. This is because the tourist sites might lose revenue if some guests decide not to visit there after the virtual tour. Some guests may feel that the virtual tour is enough. I will be a little hesitant with this.*

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

The following participant feels that VR technology is not something his hotel would like to take part in:

*I don’t know how I feel about that, to a small extent, we have some VR done in our website already. We would have a virtual 360 tour of our rooms, restaurants, and ballrooms. In terms of anything more than that, I don’t foresee that being something that we would invest in. I personally don’t see the use of VR goggles as a marketing avenue, we are a traditional hotel and not a modern hotel.*

(John Burchill, Operations Manager of Hayfield Manor Hotel).

4.6. ‘Smart and Green’ Hotels – A Hybrid Concept

The general consensus on the hybrid ‘smart and green’ hotels concept is positive, this study found that this concept may be more suitable for a certain type of hotel such as city-centre or corporate hotels. It is found that many Irish hotels are quite reluctant to embrace changes because the guests themselves do not want the change. However, 60% of the participants agreed that it is inevitable that ‘smart and green’ hotels will become more common in the future. It is interesting to note that 50% of the participants believed that the adoption of ‘smart and green’ hotels concept will not lead to price increases even with additional investment required to achieve that status. The first participant believes that the ‘smart and green’ hotels concept is impressive:
I think the ‘smart and green’ hotels concept is brilliant. Many places have started doing it. For instance, digital check-in, it’s smart and green because it eliminates the use of key cards. I think many aspects of green go hand-in-hand with smart. I don’t think adoption of ‘smart and green’ concept will affect the room rates. Having an Alexa in the room is not going to affect the room rates. For instance, most hotels now have Netflix, 10 years ago, no one had Netflix, but introducing Netflix doesn’t increase the price of the room. This is what the customers need. Similarly, 10 years ago, there was no need for Wi-Fi in every room, probably only at the common areas was sufficient. Wi-Fi is probably more important than water now, so we introduced Wi-Fi in every room and that did not affect the room rates. I can’t see how the hotels can justify increasing their rates. I think there’s going to be a lot of financial incentives in the next five years if there’s a push for hotels to go smart and green, so hotels can recoup some of the costs back through these incentives and long-term savings from these technologies

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

The following expert shares the similar view with Finbarr Collins that ‘smart’ and ‘green’ concepts go well together:

I think ‘smart and green’ hotels are very complementary in nature in a way. If hotels are running a very green and sustainable model, they probably are in the cutting edge and technology-oriented space already. They would be constantly looking at the latest trends in the hotel sector. I think smart and green hotels are mutually exclusive, for example, by being green hotels does not mean they have to go down the route of AI and virtual reality. However, guests who like to stay in a green hotel might be inclined to also like the concept of a smart hotel. So, I see smart and green hotels to be very complementary to each other. I think this model would be more suitable to larger footprint hotels and in larger cities rather than smaller family run hotels. It is also the economies of scale, whereby the larger chain hotels may be able to easily roll out the concept to their entire network rather than one independent hotel.

The pricing will largely be based on supply and demand. If there is a demand in the market, the hotel will increase the room rates due to the level of investment required. A market research will be required to determine exactly the level of demand

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).
The next expert opines that the ‘smart and green’ hotels will be more common in the future mainly driven by necessity:

I see that ‘smart and green’ hotels, as a sector, will develop going forward. I see it more as a necessity rather than anything else. I see a certain market where AI would be important. For example, maybe airport hotels or transient business hotels. I would see it as a very interesting space and one that would attract people because of its innovation and positive impact to the environment. I would see that particularly important for business travellers. For the 5-star hospitality market like us, I would say that they will become a part of our model, but they won't be our only model. I think hotels that do not adopt the ‘smart and green’ concept will risk being left behind.

I would not say that being marketed as a smart and green hotel will increase the room rates. While there might be capital investment initially in these projects, I think in the long-term, the business will become more cost-effective and would lead to better returns. I don’t see that the consumers should be penalised for hotels going green or starting to use smart technologies. I think it really depends on your starting point and the level of investment required, but I think general investment and evolving of a property is part of the annual capital investment budget. I don't see that driving up room rates

(Seamus Crotty, General Manager of Sheen Falls Lodge).

The following advisor supports Seamus Crotty’s view that it is necessary for hotels to move with the times or risk being left behind:

The ‘Smart and green’ hotels concept is the way forward and it’s happening. I don’t think we have a choice in that matter. I think we need to get onboard quickly in a very organized and structured way. I don't think it's enough anymore to do little bits and pieces or you’re going to be left behind badly. You're going to be considered outdated if hotels don’t adopt ‘smart and green’ concept. Clients who have a lot of these smart features at home will not feel that you can command the room rate that you desire if you don’t have this type of smart or green technologies.

We're constantly growing our room rate and I think if we want to be consistent and continue that rate of growth without a major backlash, we have to invest in these technologies. If we don't, I think our prices will stagnate and stay stable. I don’t think introduction of a ‘smart and green’ hotel concept will change the rate dramatically because we're on an upward curve already. I would just think it would make our already consistently growing rate more justifiable. I just think it would be difficult to justify continued price increases if we don't stay up to date with these technologies

(Patrick Shields, General Manager of Cliff House Hotel).
The next contributor believes that the market for ‘smart and green’ hotels is growing in Ireland but may not be big enough for mass adoption of the hybrid concept:

There is a market for these types of hotels, especially in New York, Miami, and London. I am not sure if we have the market in Ireland yet, but I know it is definitely changing, with Google, Amazon and Apple leading the way here. The ‘smart and green’ hotel concept has recently started to come to Ireland with the likes of The Dean hotel and Marlin hotel, they try to be smart and green at the same time. I am just not sure if we have enough market demand that will drive a lot of other hotels to follow suit because there's still a need for the traditional type hotel, but it's definitely moving that way.

I think adoption of a ‘smart and green’ concept might have impact on the room rates, but it depends to what level of ‘smart and green’ a hotel chooses to go. Some hotels are basic smart, while some are extremely smart. It depends on the market to which the hotel is pitching. For ‘smart and green’ hotels’ consumers, I don’t think they are too price conscious. I think guests won’t mind paying a little bit more because for a lot of people who like ‘smart and green’ hotels, it’s not always about the price. It’s about ticking all the boxes they need, like multiple USB ports, universal remote control and environmentally friendly

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

On the other hand, the next participant is not particularly optimistic on the concept of ‘smart and green’ hotels in Ireland:

I don't see that every hotel in Ireland would adopt ‘smart and green’ concept to a high level. I just don't foresee that. Irish hospitality is a brand, and the brand is the actual communication with people, for example, when our American guests are here, they want to talk to me. They are technology conscious, but I would say that they want a different experience when they come to Ireland. Being a ‘smart and green’ hotel should not affect pricing. For example, our kitchen renovation was done recently, it was about 50 thousand euros, we can’t pass that onto the guests. I think the Irish market would be very price sensitive, they wouldn’t be happy to pay more. The American market, however, would be happy to pay anything. We never had issues with our American guests, whereby the Irish guests would contend on our pricing

(John Burchill, Operations Manager of Hayfield Manor Hotel).

The following participant supports Patrick Shield’s opinion in relation to the future of ‘smart and green’ hotels, but is hesitant to jump on the bandwagon too quickly:

I think artificial intelligence does make things easier, I can see that’s the way going forward whether we like it or not, but it's probably not something I am in favour of. I think hotels are smart enough to know what they need to do to keep up the trend. There is no point for all hotels to jump straight into the intelligent technologies too quickly. I do agree that Irish hotels may be a little slow to adapt to change but we will catch up.

I think we might have to increase the room rates to account for smart and green technologies, but I don’t think the consumers will reject the price increase. If smarter and greener properties are what they are looking for, I think they are willing to pay

(Adele Walsh, Accommodation Manager of Cliff at Lyons).
The next advisor acknowledges that older hotel properties might be more resistant to adopt the hybrid concept unless more intervention is initiated from the government:

I’d like to find a happy medium for the ‘smart and green’ concept. A lot of this is driven by cost. I think the newer hotels will take the concept of ‘smart and green’ more seriously, for the older hotels, unless it is easy, I think they might be more resistant to change. If the government were to go about this concept more seriously, I think more hotels will jump on the bandwagon. I think every investment cost is passed on to the consumers, but I am not sure how much to increase on the room rates with the introduction of these technologies. I find that consumers will not be willing to pay for the investment, consumers are generally price driven. They will search for the cheapest price

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

The following contributor reasons that smart hotels are more relevant in larger countries, while green hotels are more relevant in Ireland:

I think you’re in the wrong country for mass digitization, that’s not what the Irish tourism is about. If you go to big cities like London or New York for example, the smart hotels will work better there. I don’t see the Irish tourism landscape radically changing in the next 20 to 50 years. As for green hotels, if the hotels are not doing something green already, they must start to do something about it. However, it can be very challenging for them because a lot of these hotels are way past their primetime.
I don’t think the hotels will pass on the cost of the retrofitting to the consumers, they need to stay competitive in the market

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

The next interviewee states that the ‘smart and green’ hotels concept is a unique selling point, but the Irish hotel sector will be slow to respond to changes:

The concept of ‘smart and green’ hotels is nice. This concept can be used as a selling point massively. Some guests tend to look at quirky or unique hotels rather than the normal hotels. When I travelled over to Liverpool, I didn't want to stay in a conventional hotel, so I booked a hotel called The Cube. The building was all glass, I thought it was unique, green and energy efficient. Thus, I can see that the hybrid concept will definitely be a big selling point in the future. However, a lot of hotels here are set in their ways and reluctant to change. Some haven’t been renovated for a long time. Some hotels prefer to retain their charm because a lot of returning guests don't want to see a change.
I think the adoption of ‘smart and green’ concept will increase the room rates. For example, when we did a refurbishment to the hotel a few years ago, there was huge costs involved, so we increased our prices. A lot of returning guests did comment on it. I think we need to increase the prices gradually instead of just a big jump straight away. Robots, AI and green technologies are expensive. I personally think you’d have to increase the rate by 33%. The maintenance cost of these technologies is important as well, so I’d say 33% cost increase is justifiable

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).
4.7. ‘Smart and Green’ Hotels – Challenges in Implementation

In terms of challenges in the implementation of the ‘smart and green’ hotels concept in Ireland, there was a consistent opinion that there is a lack of government support in relation to cost as well as policy initiatives. It is interesting to note that there is a split view with regards to consumer demand for ‘smart and green’ hotels. 60% of the interviewees mentioned that the high cost of investment is a major challenge for hotels to adopt greener and smarter technologies given the lack of government support. It is also evident that the Covid-19 pandemic has caused substantial cash flow issues for further investment into smart and green technologies:

At the moment, the main challenge is the Covid-19 pandemic. The key consideration now is probably just to get businesses and hotels back open again. The occupancy rate is quite low now. It will take time for the sector to recover. Cash flow will be a major challenge. The hotel sector is about surviving now and in the near future, because we don’t know whether we will get back to the same level of travel and tourism that we had before the pandemic. It is about a wait and see approach for now. As for green hotels, I know there are certain government funded grants the hotel can apply for. The government has their own climate action plan, so I think the government should incentivise more businesses and hotels to go green. I think more support will be needed from the government

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

The next contributor echoes Shane Dineen’s views with relation to the devastating impact of the Covid-19 pandemic to the hospitality industry:

The Covid-19 pandemic is a major challenge. For the hospitality industry, I would see that the ability to invest in anything beyond surviving is very limited. The impact of Covid-19 on the financial position of properties could potentially stagnate the evolution into greener and smarter hotels in Ireland.

I would say our guest demographic will want to be greener. In terms of smart technologies, I would say they would embrace it provided it is practical and sensible. I don’t see that as an obstacle to prevent us from implementing smart and green concepts. I think capital costs is the major challenge. The lack of expertise is another challenge. Hiring someone with knowledge on green and smart technologies into the team to dedicate his or her time into studying and researching larger improvement projects would be a challenge as well. I think the lack of expertise could probably be a bigger challenge than cost

(Seamus Crotty, General Manager of Sheen Falls Lodge).
The following expert believes that hotels need to constantly evolve but the lack of support from the government is a challenge for the industry:

*Investment should be seen as progression. People like to see that a hotel isn't just staying the same. They want a continuously improved experience. I think if people see a hotel is evolving with the times, they'll appreciate that a lot more than just letting the hotel take the profits and walk away. However, I don’t think the government is providing enough support in this space*

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).

The next expert supports Barry O’Flynn’s views that it is essential for the hotel sector to adopt the ‘smart and green’ hotels concept but outlines the challenge with regards to the public’s perception on artificial intelligence:

*I think the challenge is how the Irish people view artificial intelligence against what it actually is. A lot of people will say they don’t like the idea of artificial intelligence, but they did not realize that they are very used to AI related gadgets like smart TV and smartphones. They want instant communication. Day-by-day, week-by-week, year by year, artificial intelligence is coming into our lives and it has been for the last 20 years. It’s growing all the time and I think those who say AI is not for them are going to see their lives becoming very limited. I think there is lack of government support in this space. In Ireland, we’re in the infancy stage with the ‘smart and green’ hotels concept. Unfortunately, as a country we tend to be reactive rather than proactive. We will eventually move with the times but mainly because we're forced into a corner. I think if I get ahead of the curve on this hybrid concept, I think it could be a unique selling point because Ireland will be slow to adapt to changes*

(Patrick Shields, General Manager of Cliff House Hotel).

The following advisor shares similar views with Patrick Shield that the Irish hospitality industry in general will be slow to adopt new technologies compared to other countries:

*The high cost of investment required for ‘smart and green’ hotels concept is definitely a big challenge for us. The demand for this type of hotel is also a challenge, for example, if I go all bells and whistles and have everything green and everything smart, is there enough clientele to keep my hotel going? I know in London there is going to be demand. If it’s in Cork, the primary consideration would be the population and the demand here. Sometimes, the technology could be moving faster than the country or the consumer in Ireland. For example, some technologies are not available in Ireland, but available in other countries. Automated kiosks check in for example, at one point there was only one company in Ireland doing it. I do see a market in Dublin. Cork and Limerick maybe in a few years’ time. In Dublin for instance, Moxy Hotel, Marlin Hotel and The Dean Hotel have all started adopting some elements of ‘smart and green’ concept in their operations. I think hotels could utilize the ‘smart and green’ model as their unique selling point*

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).
The next contributor supports the previous contributor’s views in relation to the high capital investment needed:

_I think the cost of retrofitting a hotel to become ‘smart and green’ is huge, unless you're building a new one. The government is doing a lot to help but the challenge is about introducing the right schemes at the right places. Educating the public is very important, for example in relation to cutting carbon emission, Failte Ireland will be involved in advocating the movement as well_

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

The next interviewee highlights that the guests’ attitude and staff training could be a challenge in the roll out of the ‘smart and green’ hotels concept:

_I think the majority of the guests wouldn't care about being green. I also think that implementing any concept could be an issue due to the high turnover of staff levels within the industry. It is down to training of staff, when we take on something new, we need to train them to get them up to speed. That could be a challenge for implementing this hybrid concept. For example, we were looking to introduce Snapfix, a photo-based platform for the inspection, maintenance and management of buildings and equipment. However, we are afraid that the staff members will not use it correctly and that will create more work for the management team_

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

The following advisor states that rapid advancement in technology is a challenge for hotels to stay up to date:

_There was a time whereby all major hotels in Ireland started to put in docking stations during the time when iPhone 4 was released. Then, they couldn’t be used anymore after a few years because the connector port has changed in the later iPhone models. Rapid changing of technology is a major challenge. So, if you invest in the newest and the most high-tech piece of equipment, in 2-3 years, it may well be outdated. It's very hard to continuously stay up to date with all these trends, especially when they're always changing_

(John Burchill, Operations Manager of Hayfield Manor Hotel).
The next interviewee reinforces John Whelan’s view that it is challenging to change guests’ attitude towards green initiatives and outlines that rural hotels would be less receptive towards smart technologies:

Some guests could be more resistant to green initiatives. I've seen guests when they go to hotels, they don't care about green initiatives. They might be very good at home with recycling and saving energy, but when they’re in a hotel, they don’t care because they are paying for it. So, it is a major challenge to change that mindset. Staff could be a challenge as well, sometimes it’s the cultural change and making them aware, especially to encourage them to go greener. The government should have more grants to help the industry to go green if they are committed to their green pledge to the EU to reduce carbon emissions. For our guest’s demographic, I'm not sure if they are keen on smart technologies, but certainly they would be more interested in the green part of it. We are quite a rural property, so people have huge interest in what we're doing for the environment. I would expect hotels in Dublin would be more receptive to smart technologies

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

The next participant supports Aaron Mansworth’s view that the demand for ‘smart and green’ hotels may not be high in Ireland:

In Ireland, people are very fixed in their ways of doing things and this is a challenge. For example, when we introduced QR codes to replace printed menus, a lot of people still preferred printed menus. I think the hotel sector can lean towards ‘smart and green’ hotels, but we also need to cater to all clientele. The guests are paying high prices at the hotel, so we have to please them. Some guests still want to experience a hotel in the traditional way. W hotels for example, where their guest’s demographic is mainly young, then they can definitely go all the way in terms of ‘smart and green’ hotels concept. If the hotel has mainly guests over 60, why bother installing all these new technologies when the guests might not appreciate them? It comes down to yield management, you need to sell the right room, to the right person, at the right time. We need to move cautiously while considering the niche market that still wants the traditional stuff in a hotel, which could be up to 30% of our guests

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

4.8. The Role of Social Media in the Hotel Sector

It appears that 100% of the participants agreed that social media is very important to the hotel sector. However, it is interesting to note that only 10% of the participants believe that although social media is an influencing factor in consumers’ decision to book a hotel, it is not the only factor as other aspects like brand value, location and reputation are equally important. There was a consensus among interviewees that while social media is a great marketing tool, social media can also hurt businesses if it is not managed well. It is found that social media is useful to send a message to the public with regards to ‘smart and green’ hotels concept:
I think hotels that are ‘smart and green’ can put up the facts on social media to their advantage in comparison to other hotels that are not smart or green. Our marketing team, including social media team is outsourced. I think social media is extremely important to promote our hotel. I am constantly thinking of fresh ideas, different ways of putting up posts on social media. I think it is at a level now that you can’t just take a picture and put it up on social media. You need a specialist or trained person to do it.

I do find that bigger hotels will have more reviews than smaller hotels, both good and bad. In that case, they might have a higher ranking than smaller hotels, because the smaller hotels just don’t have enough reviews to go higher. It’s very easy for customers who can just slate a business on social media and sometimes it doesn’t reflect the reality because someone can just post anything so easily on Trip Advisor for example. Another challenge is that I think there are too many platforms for reviews, you have Google reviews, Trip Advisor, Booking.com, etc. If they are all brought under one platform, it will be easier for us to manage. Negative reviews will negatively affect a business

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

The next participant shares similar views with John Whelan that social media can be used to create awareness and demand among the public:

If you have the green credentials, CSR and ESG, you can utilize social media to promote all your good efforts. People will value that. Social media marketing is huge. Apart from creating awareness, it’s about creating demand for your product as well. It will also help to generate loyalty from guests, for example, people might start to like or follow hotels’ social media page. It’s a fantastic tool. Digital marketing is very important for this sector

The major problem is if hotels make a mistake, people can call them out very quickly. Hotels will need to have somebody to respond to social media pages 24/7. It is amazing how the reputation of a hotel can be burned in no time. Another challenge with social media platforms is that they appear and disappear quickly. A platform that is popular now, might be obsolete in the near future

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

The following participant supports this and reveals that social media is a great tool to showcase smart and green technologies:

I think social media is big on everything. A lot of people are getting their information from social media. It’s definitely a good platform to showcase the green efforts and the artificial intelligence technologies to let people be aware of them. I think people will be very interested in it. We use the usual social media platforms such as Facebook and Instagram to advertise what we’re doing. This is so that people don’t forget about us. For example, when we opened for takeaway coffee during the Covid-19 pandemic lockdown, we promoted that on social media and it brought us business.

I think stiff competition in this space is a challenge because many other hotels are using social media marketing too. We must come up with something different or catchy to stand out from the rest. We have a group marketing manager who manages social media. The effect of negative reviews impacts our hotel quite badly. I think potential guests do read these reviews and take them onboard. We try to reverse them by responding to them and hopefully that works in our favour. We are not perfect, we can’t get everything right all the time

(Adele Walsh, Accommodation Manager of Cliff at Lyons).
The next expert believes that social media marketing is very beneficial to the hotel sector because most people are using social media now:

Social media has a huge impact because anyone aged 18 to 70 would be involved in social media in some way. We have a social media marketing team to manage that. I think if you’re ignoring social media, you’re losing its massive benefits. There’s an algorithm within our digital marketing team that gives us information back from social media sites, booking.com for example, and this algorithm is very good. The technology involved in booking.com gives you the impressions, hits, chains, and links involved in a particular booking and how it came about. It gives an idea why they chose the hotel and what was their searching pattern. It is very informative. It gives a massive idea of your general demographic and any group you may be ignoring. I can see that there’s massive benefits to the digital marketing side of things as well adding a bit personality to the hotel as a business. Staying up with the trends is key.

A challenge to this is that we have no control on guests’ reviews on TripAdvisor or booking.com, whether they are factual or non-factual. If the negative reviews have some substance, we can act on it and we try to be open, and our goal is to respond to every single comment, on all platforms. If they are unfounded, we will defend ourselves at times of call. Negativity on social media can destroy businesses.

(Barry O’Flynn, Deputy General Manager of Carrigaline Court Hotel).

The next advisor supports Barry O’Flynn’s opinion that social media plays a huge role in the hotel sector:

Social media marketing is huge. We have our own social media coordinator. We are extremely active on all the platforms. We’ve got a strong followership on all platforms such as Twitter, Instagram, and Facebook. We definitely see it as an essential tool for communicating with our guests. A massive amount of guest communications come from social media platform. Therefore, I think social media would play a huge role in any type of technology rollout.

Expertise could be a challenge. I think it’s still a young game for us. I think people are still becoming more qualified in it. In the past, a lot of hotels thought they could just do it themselves but now, it is becoming more and more developed, so you need qualified people to do it. What you put up on social media define you as a business, so it can’t be inconsistent. The message should be delivered consistently across the board in a professional way. I think there is no one hotel in the world that has perfect TripAdvisor reviews or a perfect social media platform. I would think that reviews can cause damage to a business. Reviews on social media are sometimes too unregulated. I wish they could be slightly more vetted because there are a lot of instances of fake and malicious reviews, or positive reviews given by people working for the organization. It can give a distorted picture. I replied to every single review on TripAdvisor, and I think by doing that, people may be less likely to write too negatively about the hotel. However, I think reviews may not have as much power as they had before because I think the online world has a problem with the culture of trolling. It has become a significant problem and people are lashing out unreasonably

(Patrick Shields, General Manager of Cliff House Hotel).
The following contributor supports Adele Walsh’s opinion that the use of social media has an impact of the hotels’ revenue:

*Social media is a huge part of our business and we have a full-time person employed to manage our social media platforms. They are so many channels such as Facebook, Instagram, LinkedIn, Twitter and recently Tik-Tok, which is something we haven’t even considered before this, but we must adopt now because it has become very popular. For example, if I want to visit London and stay in a hotel in London, the first thing I will do is I will try to find the hotel’s Instagram page. It’s important how you’re perceived on your social media channels. Social media absolutely increases our sales and bookings. For example, we put up a post on Instagram and Facebook that we’re selling our vouchers for Mother’s Day, we received a lot of sales from that post. People are reactive to posts on social media. It’s a huge part of our business now. It’s a lucrative market.

However, you must be very careful what you post. You don’t want to offend anybody. You must be very careful with your social media channels when representing your brand. So, if you do something that is risky, it can backfire on you and will ultimately affect sales.*

(John Burchill, Operations Manager of Hayfield Manor Hotel).

The next interviewee believes that social media is an important tool of communication for the hotels because it has a wide outreach to the public:

*I think social media is brilliant because it's free. Everyone is living on social media nowadays. They are living on their phones. So, having a good social media marketing team is key. We post 3-4 pictures a day on Instagram. It’s very important to always stay in touch with your followers. For example, if we have a new dish, or a new cocktail, we take pictures and post them up on social media platforms. Social media has wide audience outreach.

There’s also a downside of social media. Some people may try to sabotage you sometimes especially on TripAdvisor. I think social media needs more protection, because people can set up fake profiles and defame others. They can do that for hotels, restaurants, or bars. I do think some form of identity verification would be a good idea. Negative comments on social media can ruin you. Thus, social media can be brilliant, and it can also be very bad.*

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

The following expert opines that while social media marketing is important to hotels, it is not the only factor that influences consumers’ decision to book a hotel:

*I think social media marketing is important. We have a person who does social media for us. We refer to it more as an online reputational management. It’s up to the property to use social media to actively engage guests as a business. It is up to the property what they want to achieve from the online platform. I think social media plays a vital role, but it's not the only determining factor whether someone stays in your property. I think someone doesn't stay in a hotel just because the hotel has good social media presence. I think there are many more aspects as to why someone would stay in a hotel. Social media is a part of it. It can be deciding factor and it's an important one, but it's not the only one. Brand, values, reputation, product quality, location and service are equally important too.

Negative reviews left by travellers have an impact on a hotel. Guest reviews are definitely a challenge. Different individuals may have different perspectives on things, and we have no control over it. There is no verification process involved in social media. Someone can publicly name an individual who is employed in the hotel without verification or repercussion. This*
could potentially cause damage to not only to the business but also to the individuals within the business. We deal with negative reviews directly. We reply to them immediately. We have quite a straightforward policy review that is reflected throughout the organization

(Seamus Crotty, General Manager of Sheen Falls Lodge).

The following participant suggests that hotels should correctly use social media to their benefits:

We will be extremely active on social media and this is critical. However, you need to know the market and make sure you put up information on the right social media channel. You have to know which social media platform is going to provide revenue return versus which ones that are just going to create brand awareness

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

The next advisor believes that social media plays an important part in consumers’ decision-making process:

I agree that social media could influence the decision-making process of customers who intend to book a hotel. When people book a hotel, they will always refer to social media for reviews, for example, on sites like TripAdvisor and Google Review. Social media plays a huge part in hotel marketing strategy.
A business reputation is important, and it could be a major challenge for hotels to manage them online. It is important for hotels to have a good social media reputation because in the majority of the cases, the first interaction between hotels and consumers is on social media

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

4.9. The Role of International Hotel Chains

There were clearly mixed opinions with regards to the impact of international hotel chains to the hotel sector in Ireland. There was a consistent view that international hotel chains are more suitable for bigger cities such as Dublin. 50% of the interviewees made reference to the cost associated with joining international chains as being relatively high, and thus, hotels should do their own cost benefit analysis. It is also worth noting that 60% of the participants cited that the risk of losing individuality and character may be a deterring factor that many Irish hotels choose to stay independent. The first 4 contributors believed that joining an international hotel chain will increase a hotel’s revenue:
There is no question that associating with big alliances will increase hotels’ revenue, but there is a cost attached to that. You need to do cost-benefit analysis. I have seen some hotels change from one alliance to another, the room rates go up. However, the profitability doesn't go up as quickly because they have to pay a higher commission or royalty fee to the management company. This is dependent on the hotels’ business strategy and how they position themselves. The location and market for this type of branded hotels are very important.

With a big alliance, they have mandated that hotels need to improve their quality to match the brand’s standard, it is called Property Improvement Program (PIP). I agree that overall quality of hotels will increase by associating with international hotel alliances. There were more international hotel chains in Ireland in the past, but many have left because the market in Ireland is small. There are a lot of moms and pops hotels here

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

Without a doubt, I think association with big brands will affect the sales and revenue of a hotel. It all depends on the brands, brands like the Marriott and Radisson are fantastic. I am sure a lot of people will only stay in a Marriott or a Radisson hotel. However, if everything begins to become the same in the individual hotels within that group, I think that they may lose their individual character, because a hotel in Berlin would look the same as in Milan. I don’t like it as a leisure traveller, but for business travellers, I think it is fantastic

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

I don't think joining a global chain will bring down any sales, ultimately it would only increase revenue. However, we are resistant to join these global alliances, because we're a small hotel in a small island. A lot of the bigger brands would have no interest in us as a collection hotel because we are too small to fit their bill. I find with these bigger chains like Marriott, are very regimented. For example, the Doubletree by Hilton in Dublin looks very boring. They're all the same in every country in the world. There's no sense of individuality in any of those rooms. However, they do fit a certain market. In relation to Hayfield Manor and a lot of hotels in Ireland, most of them are independently owned and they are their family run. As such, they are much smaller than a lot of hotels in the world. It's not something that they can partake in. We do have soft marketing partnership with Small Luxury Hotels in the past and now we have switched to Preferred Hotel and Resorts

(John Burchill, Operations Manager of Hayfield Manor Hotel).

I would assume that association with international chains would increase the revenue. For instance, if Americans are traveling abroad, they're probably going to stay in hotels that are familiar to them. I think association with international chains like the Marriott could act as an insurance for some hotels. I can see the benefits might outweigh the negatives in this situation. I can see that if the trend is moving towards smart and green hotels, I think association with international chains will definitely help because it's nearly impossible to keep up with technologies, unless you are part of a chain. I can see how international travellers would like that.

However, I think the hotels would lose their uniqueness. Chain hotels look the same wherever you go. It's like your favourite local pub suddenly becomes a part of a franchise. Your friendly local pub is no longer your local pub anymore, it becomes too commercial. It is not something I want to see happening to my hotel. I think the bigger hotel chains can dominate the market and ultimately destroy smaller businesses. I have seen that in certain places in Dublin

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).
The next contributor thinks that associating with international hotel chains may increase sales, but she could not be certain on that:

There are many people I know who will only stay with a brand whenever they travel around the world. For example, people will always book Relais & Châteaux hotels when they travel. I think association with an international chain may increase bookings, but I am not 100% certain. There are still a lot of people who like the smaller hotels because they prefer the more personal touch to their stay

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

The following interviewee shares a similar view to Adele Walsh, while he is certain that association with big hotel chains will increase a hotel’s visibility, he could not be certain if the revenue will increase in tandem:

Association with large chains may or may not increase my hotel bookings. We did an experiment 2 years ago; we joined a large marketing chain called Relais & Châteaux. They are a luxury brand, we wanted to know if this is giving us business because we paid 55,000 euros per year to be a part of this group. We wanted to see what would be the impact on our business. We left because we found that outside of the pandemic, there was no impact on our business. We're quite small and unique, so we don't tend to need these organizations. However, I agree 100% that association with big chains will increase our visibility, particularly in the U.S. I think visibility may be more important for larger hotels where they have more occupancy to fill. The increased visibility may help us to get longer stay clients

(Patrick Shields, General Manager of Cliff House Hotel).

The next contributor shares contradicting views on the topic of international chain hotels:

I don’t think associating with an international chain will affect our sales. We are part of an association called Relais & Châteaux, which has a very strong international brand reputation. I see that type of association as being very important to us. They encourage local sourcing of food, being respectful to your environment and they stand for good quality food ingredients and good customer service. That association would attract an international audience to us. I do see many international guests who referred to the association when they were booking the hotel through our CRM system and booking engine. So, we do see it as being a driver of our business in the international market for sure. However, Relais & Châteaux does not increase domestic sales for us.

Whether or not joining a group increases the sales and visibility, it depends on the group you join, if it is aligned with your hotel’s values. Hilton and Marriott are corporate entities. Relais & Châteaux, Small Luxury Hotels, Leading Hotels of the World, Preferred Hotels are very different to Hilton or Marriott or any of these large corporate entities that are shareholder led. So, I would say it may be beneficial if you join the right association and it may be detrimental if you join the wrong association

(Seamus Crotty, General Manager of Sheen Falls Lodge).
Interestingly, the following expert does not believe that associating with international hotel chains is an important factor to drive up revenue in Irish hotels:

> I think both the Hilton and Marriott are very far ahead in terms of smart and green concepts. I do think that global alliance is the key in the international market, outside of Covid-19 times. However, I don’t think associating my hotel to a chain will affect the sales. Those international chains are very good at building up guest databases, and they have very loyal guests who only stay with them. However, in Ireland, we’ve always survived without them. These chains, like Hilton, Hyatt and Marriott are becoming bigger in Dublin now, but I think Ireland is very famous for having standalone hotels. We have enough guests, and we have a brand image already. If we join one of these groups, being a franchise, we will have to pay these management companies and we lose our freedom. There will be a requirement for staff uniform, SOPs, and LQA standards. Being part of a franchise isn’t all it is made out to be. You may get the international exposure and recognition, but you lose your freedom and identity.

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

The following interviewee supports Weldon Mather’s, Patrick Shield’s and Finbarr Collins’s view in relation to the high management fee of international hotel chains:

> A lot of hotels just would not be able to generate the revenue to be associating themselves to these brands, especially outside of Dublin. The management fees for these companies are typically very expensive. The main question for the hotels would be, does the incremental bed nights sold enough to offset the management fee. I don’t think so.

I think in Ireland it’s a challenge because I think we have certain groups like small country houses and original Irish hotels, I think those groups work well. In terms of the larger brands, you don’t see many of them outside Dublin, mainly because of cost. There are not too many clienteles that these brands can attract outside of Dublin.

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

The next participant supports Adele Walsh’s that associating with an international hotel chain may increase revenue but there is also a large market for visitors seeking standalone unique hotels:

> I wouldn’t associate one particular chain as being the ‘smart’ or the ‘green’ chain at the moment. If a particular chain is known as a ‘smart and green’ chain in their own country, I think the guest could make the connection when they travel to Ireland. I’d imagine that association with big chains will increase hotels’ revenue, especially for the American market, because American guests might be loyal to a certain chain. However, I do not have any data to back that claim.

There are also a lot of people who come to Ireland for unique standalone hotels that would not necessarily belong to a particular chain. I think international hotel chains would be more important to corporate travellers in bigger cities and less important in the leisure market.

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).
4.10. The Role of Hotel Loyalty Programmes

90% of the interviewees agree that hotel loyalty programmes are beneficial to stay engaged with the customers and eventually increase sales. Most of the independent Irish hotels do not operate a loyalty programme because they cited that there are no economies of scale due to them being a standalone property. There appears to be a consensus that, for a loyalty programme to be feasible, it would require scale, and this can be achieved by partnering with overseas properties. It is worth noting that 50% of the participants cited ‘good service’ as an informal way of creating loyalty with their guests. The first interviewee believes that loyalty programmes are important to frequent travellers:

*I think a loyalty programme is important for frequent world travellers. If someone's job requires frequent travel, they will be rewarded financially. I can understand the huge benefit of that, it's like collecting frequent flyer miles on certain airlines. I can see that with large international chains, and it is definitely beneficial, but I don’t see my hotel joining any large hotel chains at the moment.*

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).

The next 4 advisors support Barry O’Flynn’s view that loyalty programmes are beneficial to larger group hotels or chain hotels rather than independent hotels:

*I think loyalty programmes are beneficial. I think you must have them now. We don't have them because we only have three hotels in our group, and we are opening 2 more. So, we're a very small group, but otherwise, I think for any other larger hotel groups or branded chains, they must have loyalty programmes. It's little cost for a huge benefit. We have our own hotel mobile application to engage with our customers. The key to ensure returning guests is our team members and our high level of service. When they thoroughly enjoy our hotel experience, they stay loyal.*

(Patrick Shields, General Manager of Cliff House Hotel).

*I think loyalty programmes will work for chain hotels. For independent hotels, I think guests would be consistently looking for the cheapest rates. I don’t think loyalty programmes will have a boomerang effect to bring the guest back for smaller independent hotels.*

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

*Loyalty programmes work very well for the large chains. They give people the opportunity to use their points in other cities and other countries around the world. I am not sure if they drive up sales or guest satisfaction, but I might be inclined for the latter. I think they are very good, but you need to have options in other cities or countries, hence it will work better for larger chains. It would be an idea if a loyalty programme could partner up with hotels around the world in which independent hotels can join into their network. In this case, the members will be able to utilize the benefits across different hotels in other countries as well. Loyalty programmes will not work if there are no partner properties.*

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).
We ensure guests’ loyalty by creating a good environment for them and ensuring that our guests have a memorable stay. It’s also about staff retention. Guests return to us because they like to see the same faces when they come back, it’s a huge thing. That’s how we work. It’s a very personal experience.

I think for global brands, since they are present in every country in the world, I can understand why they have their loyalty programmes to the extent that they do. We don’t have a loyalty programme at the moment but potentially, there is room for a loyalty programme in the future. Currently, we have 3 hotels, and we are building a 5-star hotel in Dublin. So, I would say that when our new hotel come onboard, we will consider creating a loyalty programme. It would be along the line of discounted room rates, spa products, afternoon tea, dinner or a free bottle of wine

(John Burchill, Operations Manager of Hayfield Manor Hotel).

The following participant believes that introduction of loyalty programmes can be a positive development for independent hotels:

I think for Marriott, a loyalty program would be a major part of their business. I think as a standalone property, a loyalty program would be a positive tool to attract clients. However, I think you’d have to find a balance. It is a very competitive space because everyone has a loyalty programme of some sort, so I think you must be quite clever and make sure that they’re cost effective for the hotels to offer it. We don’t have a loyalty programme, but we send out targeted offers to previous guests who stayed with us.

For us, having good service is a priority, so when the guests leave, they’d want to return. They will also tell others that they should come visit us. Get the basics right and make sure you’re giving a good service and a good product. Secondly, we use emails and social media as our main direct marketing tools

(Seamus Crotty, General Manager of Sheen Falls Lodge).

The next contributor echoes Aaron Mansworth’s opinion in relation to having overseas hotel partners for a loyalty programme to be feasible:

Having a loyalty programme probably would drive up sales for a certain cohort of visitors, probably the international and corporate guests more than the domestic guests and the leisure market. Loyalty programmes are popular in the U.S. and other countries but less so in Ireland. However, if the loyalty scheme in Ireland could be more international, maybe by having partner hotels in the U.S. or Germany, I think it would make more sense due to a bigger market size. This would encourage more travellers to join the loyalty programme as well if the footprint is bigger

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

The next expert opines that having a loyalty programme is an excellent idea:

Loyalty programmes are brilliant. Especially in the U.S, they do it very well. People are very loyal and it’s not just in hospitality. For instance, people are loyal to Nike or Adidas but not both. It’s great because you build a customer relationship. We don’t have a loyalty programme, but we have many repeat guests in the last three years. We have a director of guest experience who looks after that loyalty department. We keep very good communication with our guests. We want to create everlasting memories so that when they leave the hotel, they want to come back

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).
The following interviewee shares a similar view with Finbarr Collins that having a loyalty programme is a brilliant idea and further outlines that everyone likes to feel appreciated:

In my opinion, I think a loyalty programme is a good idea, I think everyone likes to get something back. For example, you get a free cup of coffee with every 10 cups of coffee purchased. Guests might also feel that the hotel have a loyalty to them as well, because we are giving them something back for what they have spent. Apart from that, creating loyalty is also about having a good service and good quality product. People return for the nice and clean rooms or friendly staff. It’s about reading the guest and what they look for.

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

The next participant supports Aaron Mansworth’s and Shane Dineen’s opinion that economies of scale is key to having a successful loyalty programme:

A loyalty programme is absolutely a good tool to engage guests’ loyalty. It is a valuable marketing tool, no question about it. However, it is expensive to maintain a loyalty programme and you need scale. Some companies have tried third party loyalty programs here. A lot of third parties have tried to get independent hotels to join up by demonstrating to them the return of investment but in the end, they haven't really gained much traction.

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

4.11. The Role of Financial Institution Partnership in the Hotel Sector
There was a consistent view that financial institutions partnership with hotels in Ireland is not feasible due to the small size of the population. 20% of the participants mentioned that Ireland is culturally different than the U.S in relation to consumers’ spending behaviour on a credit basis. 100% of the participants implied that the partnership would be more effective in larger cities with larger market size, higher population density, and in chain hotels rather than independent hotels. This is supported in the following quotes:

I personally think Ireland is not there yet, the U.S is so far ahead of us in relation to accruing hotel loyalty points from the banks. I think there is need for a shift in consumers’ behaviour first before potentially looking into that further. I see the potential with our American guests, but I don't think the Irish market is quite there yet. The Irish don’t like to embrace change. I just don’t think our culture is there right now for the financial institution partnership to work.

(John Burchill, Operations Manager of Hayfield Manor Hotel).

I think it can be done but I just don't think we're there yet culturally. We have a different relationship with finance in Ireland compared to the U.S. In the U.S, everybody has a credit card, even 16-year-olds. How they spend money is very different to how the Irish spend money. How they view debt is very different to how we view debt. I know a lot of people here don't have credit cards because it's in our mindset that we don't like debt. I think our hotel is too small for a bank to be interested. However, I think it's a great idea for a group like Dalata, or one of the bigger chains. I don't see any reason why a larger group wouldn't do it. I think it's a good opportunity to be the first mover’s advantage in Ireland.

(Patrick Shields, General Manager of Cliff House Hotel).
It will be beneficial. I’m not sure if it's feasible given the small market size in Ireland. Ireland has too small a population to attract credit card companies to partner up with a property. We would not have the spending power to attract big corporate credit card brands, but the idea is very interesting

(Seamus Crotty, General Manager of Sheen Falls Lodge).

The challenge for Ireland with this partnership is the scale. We don't have enough numbers to drive this partnership. It might not drive the volume of sales that was intended due to our small population size

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

The profit margins of hoteliers are very tight in Ireland. I can't really see AIB bank partnering with hotels here. It is very difficult to make profits here due to our small market size

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

I don't think we have guests inquiring about that. I think it'd be something that would fall flat on its face. It is probably due to the location, we are not in a big city location, so I don't think we can have that. It is probably more relevant to cities like Dublin, where there are more franchise hotels. I can’t see this partnership happening in Cork

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).

I suppose this would work better with larger group hotels but there are many individual privately owned hotels in Ireland

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

I think it is feasible for one of the bigger chains like the Dalata Group, but as smaller individual hotels, I don’t think it is feasible

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).

If you look at the market size in Ireland, I think it will be difficult to gain traction. This will probably work better for bigger chains and there are not many big Irish hotel chains here

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

Ireland is too small. We only have a population of 5 million, in the U.S, they have a much bigger population size. It wouldn’t be possible here

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).
4.12. ‘Smart and Green’ Hotels: The future of Irish Hospitality

80% of the participants agree that the ‘smart and green’ hotels concept will become increasingly common in Ireland. However, there was a consensus that Irish hospitality will be slow to adapt, and it will take time, probably in excess of 10 years before many hotels here will follow suit. 20% of the interviewees were hesitant on the smart component of the hybrid concept due to the more traditional culture in Ireland. Nevertheless, there was a consistent view that the hybrid concept will inevitably become a part of the Irish hospitality industry due to growing consumer demand for this concept:

I think the ‘smart and green’ hotels concept is very important. It’s what the customers are looking for. I think even if we do not have an interest in this concept, we’ll be forced to do it because it’s what the customers want and it is what they are looking for nowadays. It could take 15 – 20 years, but if some things are easier to do, it could be implemented earlier. For many hotels to be completely green and intelligent, I think it would take another 15 -20 years

(Adele Walsh, Accommodation Manager of Cliff at Lyons).

The next participant supports Adele Walsh’s view and outlines that it is inevitable there will be growing number of ‘smart and green’ hotels in the future and hotels should get onboard now:

I think it's inevitable. I think it's just up to us to get on board. I think a lot of businesses will be slow to do it, but I think they will adopt these ‘smart and green’ initiatives eventually because they will have no choice. The market is going to move that way. I think it's already starting. I think the pace is just dependent on how quick we're willing to move with it. I know we're willing to move with it in my hotel down the line. The hybrid concept will be like hot water and Wi-Fi, you must have it

(Patrick Shields, General Manager of Cliff House Hotel).

The following participant outlines that the concept is up and coming but would like to see more incentives provided to the hotels:

I agree 100%, I think this concept is up and coming. I think it’s going to be exciting. I do have concerns for certain hotels, but I think the majority of them will embrace it. I think there is a need to have more incentives set up. I think as long as it's not a robot cooking my food, I'm okay with that

(Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel).

The next contributor supports Patrick Shield’s and Finbarr Collin’s opinion and outlines that the Covid-19 pandemic might have sped up the acceptance of digital technology:
I think there has been a digital revolution especially in the past year due to Covid-19 pandemic. The rate of acceptance of digital technology is so rapid that it would probably take 10 years without the pandemic. It is hard to predict what the future holds. However, I do think that the world is moving towards being more digitally enabled rather than otherwise. I would say, maybe in 10 years, the concept of ‘smart and green’ hotels would be more common in Ireland

(Shane Dineen, Planning and Environment Manager at Fáilte Ireland).

The next advisor supports Adele Walsh’s view that while many hotels might be slow to adopt ‘smart and green’ hotels concept, it is already happening in some hotels Ireland:

I think that this concept is already happening in Ireland, I think it's going to happen hand-in-hand with other industries. However, Ireland is very well-known for its traditional hospitality, the true old fashion Irish hospitality. I think it will take some time. Will the smart and green hotels take over the market? Maybe not at present

(Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation).

The next expert believes that there will be financial benefits to the hotels by adopting the ‘smart and green’ concept:

I think the green side of things was only started about 20 years ago in Ireland, it was more of a fad at that time and people thought it was just quirky and gimmicky. Then, they saw the financial gain of it. Opening and running a hotel is not cheap, so if there's anything that can done to be either financially beneficial or to raise the profile of the hotel, people would be stupid not to do so.
I personally think there is a niche in the market for this concept. I think there are areas where a hotel can massively benefit from this hybrid concept. I can see that the movement towards smarter and greener hotels is happening here. I think if the chains start doing it in Asia or America, it will sweep across Europe and I think that would eventually become the norm. Obviously, there will be hotels in Ireland that don’t follow suit, like I said before, they're the ones being left behind. It will be progressive and you're talking about 10 - 15 years

(Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel).

The following interviewee believes that hotels must embrace the ‘smart and green’ concept to stay competitive in the marketplace:

I think the government should put more pressure on hotels to go greener. I think it is going that way across the board, but it is not strict enough. For example, it is only in the last few weeks I've seen we've got more bicycle lanes and recycling bins beside the general wastebins. In my opinion, the government is not extreme enough. With regards to smart technologies, I think purely from the point of staying competitive, you must go with the times to embrace change and technologies

(John Whelan, Deputy General Manager of Stauntons on the Green Dublin).
The next contributor opines that ‘smart and green’ hotels concept will be a part of Irish hospitality but believes that the ‘green’ component might be more prominent than the ‘smart’ component in many hotels:

_I would think that it will become a part of our hospitality offering in Ireland over the coming years. I would say to what level they will be smart will depend on the property, the ownership and the investment needed. I think we will be more green than smart. I think social media marketing, international chains and loyalty programmes are critical tools to increase the visibility of the ‘smart and green’ hotels concept to a wider audience_

(Seamus Crotty, General Manager of Sheen Falls Lodge).

The next participant supports Seamus Crotty’s view that Irish hotels may be greener rather than smarter in the near future:

_I think it will be asset and location dependent. There is more pressure from consumers for hotels to be greener and those that are not green will probably get called out and start losing business. However, I don’t see high-tech hotels or Japanese robots appearing in Irish hotels anytime soon_

(Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland).

The following advisor shares similar opinions to Weldon Mather and further emphasizes the traditional culture of Irish hospitality:

_I would be hesitant to an extent on this concept, we have a brand, and we need to protect that brand. If everybody is doing the same thing in relation to ‘smart and green’ hotels, they're not special anymore. Hayfield Manor is a traditional hotel, we are not a corporate hotel. Some hotels like the River Lee or Clayton hotels would be seen as corporate hotels where they would be more modern. I am open for some aspects of ‘smart and green’ hotels, but I do not foresee that as our defining culture. I still want the defining culture to be the Irish hospitality, the warm welcome, the fond farewell and the feeling that they walk into someone’s house. That's why people come to our hotels in Ireland. I don’t want robots checking people in and I don’t want self-service check in. If it’s an airport hotel, I would be more inclined to recommend these AI technologies_

(John Burchill, Operations Manager of Hayfield Manor Hotel).

4.13. **Chapter Summary**

This chapter outlines the main empirical data gathered as part of the research process. The next chapter will detail the main findings, recommendations, and conclusions for this research study.
5. Main Findings, Conclusions and Recommendations

5.0. Introduction
This thesis has explored the concept of ‘smart and green’ hotels for the future of hospitality in Ireland with specific focus on the scope of green and sustainability in combination with smart technology such as artificial intelligence in the hotel sector. The primary research data has suggested a few interesting opposing views, which painted a more accurate representation of the hotel sector in Ireland, when compared to the literature. The researcher has identified several emerging themes which aim to provide new contribution to knowledge. Surprisingly, while the green hotels concept proved to be exceptionally receptive to Irish hoteliers, it is found that Irish hoteliers have mixed opinions in relation to smart hotels concepts. It is important to note that each of the themes was prominent and saturation points have occurred. This in-depth study has additionally revealed the potential impact of the use of social media marketing and international hotel chain strategy to the hotel sector in Ireland. Interestingly, while Irish hoteliers acknowledge the benefits of joining an international hotel chain, there appears to be ongoing concerns with regards to that strategy. The holistic and comprehensive conclusions will be discussed with a focus on the recommendations for future practice within the hospitality industry as well as additional areas for future research. This study has presented the existing situation, challenges and proposed framework to advocate the Irish hotel sector towards a more sustainable and digitally enabled model of business going forward.

5.1. Review of the Main Findings
5.1.1  Green & Sustainability in the Hotel Sector
This study is consistent with the literature in relation to high energy consumption in hotels and its impact on hotel competitiveness, (Hogan, 2013; Han et al., 2018). One interviewee mentioned that “hotels by their nature, are huge consumers of energy as you can imagine” (Chapter 4:65). Another participant highlights that “…there is a mountain load of energy being consumed in relation to keeping the pool warm … we cannot just switch the pool heating off at night …” (Chapter 4:63). Interestingly, lighting is the major source of energy consumption in hotels. “We were able to … change all the light bulbs in the hotel to LEDs … there’s massive cuts in our energy cost due to this change …” (Chapter 4:67). This finding reinforces the previous study undertaken on LED lighting by Subbiah and Kannan (2011).
There is no dispute that hotels benefit from green initiatives, (Alexander et al., 2002; Subbiah and Kannan, 2011; Verma and Chandra, 2016). One participant commented on the long-term savings by adopting green approaches; “installation of lights with sensors cost a good bit more but … there will be savings … we have installed new energy efficient gas systems … we could be saving in the long term …” (Chapter 4:67). Another relevant point is in relation to the reduction of water consumption, “… we have reduced our water consumption hugely by just doing a leak survey …” (Chapter 4:62). An important insight emerged from this study is that waste management presented huge savings to hotels, “… we saw that recycling our waste presented huge savings … waste bin … is charged based on weight and it is very expensive …” (Chapter 4:67). As more hoteliers attempt to be greener, this study is consistent with the literature stating the growing awareness on the environment, (Yadav et al., 2019).

In previous literature, it was found that consumer demand for green hotels is increasing, (Kubba, 2010; Ogbeide, 2012; Gupta et al., 2019). This study supports the previous study, “… it is very much in the consumers’ mindset now. I think more people are booking hotels now because they have certain green and sustainability policies …” (Chapter 4:62). Interestingly, a vital finding from this study is that there is an increasing number of corporate clients who specifically look for green hotels. “… We have a lot of multinational companies … when we sign a contract with them … they would have certain requirements that we are seen to be a green hotel …” (Chapter 4:63). This supports the previous study which discussed about niche marketing, (Verma and Chandra, 2016). An alternate and contradicting finding from this study suggests that some guests could not care less about the environment, “… I think there are still a certain number of guests who are old world, they do not care about the environment, and I think that will not change for a very long time …” (Chapter 4:63).

5.1.2 Motivation for Investment in Green Technology

Corporate social responsibility (CSR) is the ongoing commitment by corporations to act ethically and give back to the economic development while improving the quality of life of the workforce and the local community and society at large, (Muralikrishna and Manickam, 2017). CSR ‘sustainability’ activities are being given increasing importance as they are seen to be beneficial to the society and environment, (Sardana et al., 2020). CSR is often seen as a strategic instrument to gain reputational legitimacy and increase the market potential of the corporation, (Sardana et al., 2020). This study supports the previous literatures in relation to
CSR visibility, “… CSR is an absolutely critical tool … being seen as green absolutely helps the business …” (Chapter 4:7068). An important finding from this study reveals that CSR plays a major role to encourage hotels to be green, “… I do see by going green… are part of our CSR programme… so we are trying to become as green as we possibly can …” (Chapter 4:68). Surprisingly, one interviewee refutes the role of CSR, “… CSR recognition would play a small role, however, we are not doing it because of how it looks, we are doing it because it is the right thing to do” (Chapter 4:69).

Previous studies on consumers’ preference found that consumers prefer to be associated with socially responsible companies, (Yu et al., 2017; Shedd, 2020). This study confirms that consumers are more discerning now with regards to environmental awareness. 30% of the participants described the importance of consumer demand as being a major driver in the green space; “… society is becoming more demanding, they will ask - what are you doing to save the planet for my kids? …” (Chapter 4:68). This is elaborated further by another participant “… I think consumer demand is important, as growing consumer demand will motivate the hotels to do more …” (Chapter 4:69). This is consistent with previous literature on the topic of travellers’ consciousness on their ecological footprint, (Brochado et al., 2016).

This study is consistent with previous studies where adopting green approaches will improve profit margin of businesses, (Alexander et al., 2002; Subbiah and Kannan, 2011; Hogan, 2013; Verma and Chandra, 2016). “A lot of times, if you go green, it means to reduce cost …” (Chapter 4:70). 40% of the interviewee mentioned the potential cost savings as a result of being green, “… being able to see savings is always a great selling point to get investment in green technology …” (Chapter 4:68). However, in order to be green, an initial capital investment is needed to retrofit a hotel. An alarming 80% of the participants cited that the major obstacle for them to get onboard the green hotels concept is the large initial cost. “… We cannot implement green initiatives … as much as we would like to, because that is going to cost us more than what we are already paying …” (Chapter 4:69). Unsurprisingly, 80% of the participants highlighted the lack of government support and believed that financial assistance from the government would be a motivator for hotels to go green. “Government will have to provide more grants ... hospitality industry has been very badly affected due to Covid-19 pandemic, a lot of hotels will not have the initial capital … hotels want to do more, but we are not incentivised to do it …” (Chapter 4:70). Interestingly, one participant outlined a slightly
different use of the government grants if they were made available. “Government funded grants will be of a great assistance … towards having a staff member or a project manager to help to move to a more sustainable operating environment …” (Chapter 4:69). Another relevant point in relation to government policy is in relation to regular green assessment of hotel properties. “… I think … every hotel should be inspected regularly by authorities to assess their green standards … similar to a routine fire inspection …” (Chapter 4:70).

5.1.3 Green Credentials in Hotels

In line with the previous study which discussed that there were no regulations on green hotels (Millar et al., 2012), this study suggests that there is no formal accreditation programme in Ireland for hotels to be green. One expert from this study states that “… Fáilte Ireland has no plan to set up our own accreditation scheme …” (Chapter 4:73). This resulted in lack of green credential awareness within Irish community, “I think green certifications are important but I'm not sure how understood those awards are by the general consumer” (Chapter 4:75).

This study validates previous literatures on the topic of green trust, (Pizam, 2009; Yu-Shan Chen, 2013; Goh and Balaji, 2016; Gupta et al., 2019). Green certification is important to prevent the greenwashing phenomenon and improve the hotels’ credibility because consumers would reject an inferior green product, “green certification is vital. I think you need to be able to display genuine green programs …” (Chapter 4:71). Surprisingly, 30% of the interviewees contradict the previous literatures and believed that a green certification programme is merely for marketing purposes without genuine green intention, “… green certification is probably important to display on a hotel website for marketing purpose… I think there's no need to be saying it to the guests constantly …” (Chapter 4:72). Another participant makes a compelling statement, “… I don’t see a need for green certifications. I also don’t think green certifications will genuinely show that hotels are green…” (Chapter 4:72).

An interesting finding that emerged from this study that contradicts the previous literature, (Chen and Chang, 2013a), is that consumers might not be willing to pay for green certified hotels, “… they might like the idea of green certified hotels, but they might not be willing to pay more for green hotels …” (Chapter 4:73).

Previous studies undertaken have found that communication is important to build trust between hotels and their guests, (Chen et al., 2019; Yadav et al., 2019). This study validates the claim,
“… we can say we're the best hotel in Cork city, but how do we know this? People need to see validation…” (Chapter 4:74). An interesting and alternate finding is that consumers would not be interested in green credentials despite clear communication “… I don't think they know what green credentials are … they actually don't care” (Chapter 4:74).

This study authenticates a previous study on the significance of green credential credibility (Chen et al., 2019), with 70% of the participants agreed that green credential credibility is crucial, “I think green credentials are absolutely important but there are different kind of schemes, bodies and accreditations out there … greenwashing is an issue and consumers would not be able to tell the certifications apart ...” (Chapter 4:73).

5.1.4 Smart Hotels – Artificial Intelligence (AI) in the Hotel Sector

In line with Destors (2014), the findings of this study prove that hotels are constantly looking for ways to increase efficiency, “… there is a need to constantly embrace change … I am constantly looking at things to make the hotel run in a more efficient way…” (Chapter 4:76). 50% of the participants contended that there are aspects of artificial intelligence which will certainly improve manpower efficiency “… in the areas of yield management and reservation systems … AI … will help the revenue manager…not replace the person’s job …” (Chapter 4:76).

Previous studies undertaken on the topic of artificial intelligence robots found that these robots are very applicable in hotels due to obvious financial benefits such as reduction in manpower costs, (Ivanov and Webster, 2017; Tung Vincent Wing and Law, 2017). Interestingly, this study contradicts previous literatures as 90% of the participants either opposed the use of artificial intelligence robots or stated that robots have limited application in the wider hotel sector. An important point of contention that emerged from this study is that in the context of Ireland, hospitality is built upon human interaction and it is coined as the Irish Hospitality, “I think human interaction is key … I can see that would be financially beneficial to the hotel … However, I think for what the Irish Market offers, it just wouldn't work…” (Chapter 4:80). The importance of Irish hospitality is being highlighted by another interviewee, “… Irish hospitality is world renowned for its Irish welcome … If we start going down the route of AI robots, it affects the whole brand of Irish hospitality …” (Chapter 4:79). This study reveals a relevant vital point which contradicts the previous literature by Ivanov (2019), that workers could be upskilled rather than being made redundant with the adoption of AI robots, “… I would like to
see … AI will help to free up some valuable resources which could be redeployed to other more meaningful areas rather than making them redundant …”(Chapter 4:77).

The finding from this study is consistent with previous studies undertaken by Kostiainen et al. (2018), Tailleferd (2018) and Makridakis (2019) that AI could improve strategic marketing “… I would look at … how active artificial intelligence can massively benefit hotels in offering a personalized experience ... artificial intelligence can be utilized to learn the guests’ behaviour … I think data mining … is the way forward …” (Chapter 4:75).

In line with previous studies on chatbots by Ivanov (2019), Putri et al. (2019), Van den Broeck et al. (2019) and Buhalis and Yen (2020), 70% of the interviewees spoke about the benefits of artificial intelligence chatbot technology, “I like the idea of chatbots because the amount of calls the hotel take is extreme …” (Chapter 4:81). However, a surprising finding from this study is that 20% of the interviewees contemplated otherwise, “… I think it would not work for us because we want the personal touch with our guests … we like people to ring us …” (Chapter 4:82).

This study validates previous literatures that smart in-room technologies are becoming increasingly common, (Neuhofer et al., 2015; Stankov et al., 2019; Shedd, 2020). A surprising 70% of the participants responded positively about the development in this space despite their hesitancy towards artificial intelligence robots, “… guests expect that hotel rooms should be as smart as their own home, if not smarter … this is especially true for a luxury hotel ... if we don't offer these services, that is going to become a problem …” (Chapter 4:80).
5.1.5 Virtual Reality in the Hotel Sector

Previous studies undertaken which examined the use of Virtual Reality (VR) technology state that the hospitality industry is evolving to adapt to the new technology, (Leung et al., 2020; Weisskopf and Masset, 2021). This study confirms that hotels have started to embark on VR projects, “... people … are more technological-minded now. Embracing VR technology shows that you're moving with the times …” (Chapter 5: 82).

Previous literatures discussed that VR could be used as a tool for virtual tourism, (Buhalis et al., 2019; Ercan, 2019). Surprisingly, only 20% of the participants supported the previous literatures, “… I think it's great that someone can view the product through virtual reality ... for good tourism products, such as the Cliffs of Moher …” (Chapter 4: 83). Another interviewee added an interesting example that VR can be viewed as a virtual catalogue of activities, “… we can use VR goggles … like a catalogue of what you can do. I like the idea …” (Chapter 4: 85). 80% of the interviewees offered alternate views. One participant outlined that travellers would want tangible experiences when they travel, “… I personally don’t think it is going to gain momentum … I think people want tangible experience … virtual reality can’t offer that” (Chapter 4:84).

This study reinforces previous studies that VR commercials of the hotels themselves has great marketing potential, (Griffin et al., 2017; Beck et al., 2019; Israel et al., 2019; Leung et al., 2020). One of the participants mentioned the importance of VR in attracting overseas guests, “I think virtual reality could really boost our international market presence ... VR advertisement is a huge opportunity …” (Chapter 4:83). One notable point, however, is that there is a danger that VR contents do not reflect actual conditions of the hotel, “... for example, the virtual tour recordings could be done 2 -3 years ago … the reality may look different to the virtual tour …” (Chapter 4:83). Interestingly, a relevant point that emerged from this study is that bookings in Irish luxury hotels from American guests typically originate from travel agents, thus, VR may not be an important influential factor to them, “... in the luxury market targeting the U.S guests ... the travel agent would generally book hotels based on their relationship with the property ... I would see VR as a tool, but I wouldn't see it as a majorly important one” (Chapter 4:84).

In line with previous literature regarding the risk of virtual tourism (Guttentag, 2010), this study confirms that some travellers might not visit a tourist site after visiting it virtually, “...
tourist sites might lose revenue if some guests decide not to visit there after the virtual tour …” (Chapter 4:86).

5.1.6 ‘Smart and Green’ Hotels – A Hybrid Concept

This study is consistent with previous studies in relation to increasing adoption of smart and green technologies in the hotel sector, and it is predicted that hotels will be drastically different than what they are now, (Destors, 2014; Erkan, 2019). “I see that ‘smart and green’ hotels … will develop going forward … hotels that do not adopt the ‘smart and green’ concept will risk being left behind …” (Chapter 4:88). ‘Smart and green’ hotels concept is complimentary in nature, “… if hotels are running a very green and sustainable model, they probably are in the cutting edge and technology-oriented space …” (Chapter 4:87). One participant highlighted that, “… I think we need to get onboard quickly … clients … will not feel that you can command the room rate … if you don't have this type of smart or green technology …” (Chapter 4:88). This finding is in line with previous literature by Brynjolfsson and McAfee (2017), that the addition of smart technologies to green hotels is poised to have a transformational impact to the hotel business model. Another participant mentioned that “… hybrid concept will definitely be a big selling point in the future …” (Chapter 4:90). However, an important point from this study is that the small market size in Ireland may undermine the success of ‘smart and green’ hotels concept, “there is a market for these types of hotels, especially in New York, Miami and London … I am just not sure if we have enough market demand that …” (Chapter 4:89). Another interviewee also contradicts the previous literature by Erkan (2019) on the topic of embracing new technology, “I think you're in the wrong country for mass digitization … I don’t see the Irish tourism landscape radically changing in the next 20 to 50 years …” (Chapter 4:90).

Previous literatures suggest that ‘smart and green’ hotels would charge consumers more due to the high level of investment required, (Choi et al., 2015; Yadav et al., 2019). Surprisingly, 50% of the interviewees believed that by being ‘smart and green’ does not necessarily equate to increased room rates, “… I don’t see that the consumers should be penalised for hotels going green or starting to use smart technologies …” (Chapter 4:88). It is imperative for hotels to continuously evolve and upgrade to stay competitive, “… we have to invest in these technologies … I don’t think the introduction of smart and green hotels concept will change the rate dramatically …” (Chapter 4:88). Another interviewee supported that statement, “… I
don’t think the hotels will pass on the cost of the retrofitting to the consumers, they need to stay competitive in the market…” (Chapter 4:90). Nevertheless, a niche segment of consumers would not mind paying more for ‘smart and green’ hotels, “… I don’t think they are too price conscious. I think guests won't mind paying a little bit more …” (Chapter 4:89). Interestingly, this niche segment of consumers who would be willing to pay more tend to be overseas travellers, “I think the Irish market would be very price sensitive … the American market, however, would be happy to pay anything…” (chapter 4:89).

5.1.7 ‘Smart and Green’ Hotels – Challenges in Implementation

In line with previous literature, in order for hotels to achieve ‘smart and green’ status, hotels need to be retrofitted and new equipment needs to be installed, (Subbiah and Kannan, 2011). Undoubtedly, the cost of installing energy efficient systems and smart features is astronomical, (Yung and Khoo-Lattimore, 2017; Yadav et al., 2019). Without financial assistance, many smaller independent hotels would find it challenging to adopt these technologies, “… the high cost of investment required … is definitely a big challenge for us …” (Chapter 4:92). 60% of the participants stated that there is a severe lack of government support for hoteliers to go ‘smart and green’, “… I think there is a lack of government support in this space. In Ireland, we’re in the infancy stage here …” (Chapter 4:92).

A significant finding from this study suggests that on top of the cost challenge, the lack of expertise in the field of ‘smart and green’ technologies is a major obstacle for hoteliers, “… hiring someone with knowledge on green and smart technologies … would be a challenge …” (Chapter 4:91). Interestingly, this phenomenon could be a result of the high turnover of staff in the hospitality industry as suggested by another interviewee, “… implementing any concept could be an issue due to the high turnover of staff … it is down to training … when we take on something new, we need to train them …” (Chapter 4:93).

A noteworthy finding from this study is that the Covid-19 pandemic has worsened the cashflow challenge to the hospitality industry. A new coronavirus, SARS-CoV-2, caused a series of severe atypical respiratory diseases and the disease caused by this virus was called Covid-19, (Yuki et al., 2020). The virus is transmissible between humans and has caused a pandemic worldwide which led to lockdown in a large number of countries, (Yuki et al., 2020). As Covid-19 spreads around the globe, it has become evident that this disease has the potential to upset the world’s economy, (McKibbin and Fernando, 2020). This study authenticates the previous
literatures on the profound impact of the Covid-19 pandemic on the economy and subsequently affects the green and sustainability efforts in the hotel sector. 60% of the interviewees described how the Covid-19 pandemic has placed their green and sustainability agenda on hold, “unfortunately, we are probably back to basics now … due to Covid-19, green and sustainability projects have been on a standstill” (Chapter 4:66). Another participant highlighted the challenge to reduce single use plastics amid Covid-19 pandemic “… I am highly supportive of banning single use plastics, but it will be challenging due to the pandemic” (Chapter 4:66). Most hotels in Ireland will find it hard to invest in anything other than the bare minimum to sustain the business, “… for the hospitality industry, I would see that the ability to invest in anything beyond surviving is very limited …” (Chapter 4:91).

This study reinforces the previous studies that hotels located in big urban cities are easier to adapt to ‘smart and green’ hotels concept, (Destors, 2014, pp. 10-12; Tung Vincent Wing and Law, 2017; Stankov et al., 2019). In the smaller Irish market however, hotels are slow to move in this direction because it is harder for hoteliers to reap profits from this hybrid concept, “… if I go all bells and whistles … is there enough clientele to keep my hotel going? … the primary consideration would be the population …” (Chapter 4:92). Hotels located in rural locations are also more reluctant to adopt new technologies, “… we are quite a rural property … I would expect hotels in Dublin would be more receptive to smart technologies” (chapter 4:94). The resistance towards ‘smart and green’ hotels is felt across both the hoteliers and consumers, “… unfortunately, as a country we tend to be reactive rather than proactive …” (Chapter 4:92). “… In Ireland, people are very fixed in their ways … why bother installing all these new technologies when the guests might not appreciate them …” (Chapter 4:94).

Previous studies on artificial intelligence have found that challenges exist for hotels to stay abreast of the developments, (Brynjolfsson and Mcafee, 2017). This study has found that it is indeed true, “… if you invest in the newest … piece of equipment, in 2-3 years, it may well be outdated. It's very hard to continuously stay up to date …” (Chapter 4:93).
5.1.8 The Role of Social Media in the Hotel Sector

Previous studies have shown that social media has permeated much of the world’s population as it is now dubbed as one of the most efficient and influential branches of online marketing, (Chen and Lin, 2019; Dwivedi et al., 2020). It is undisputed that the impact of social media is huge to our social and business lives (Abed et al., 2015; Alalwan et al., 2016; Algharabat et al., 2017; Rathore Ashish et al., 2016), “social media has a huge impact … if you’re ignoring social media, you're losing its massive benefits …” (Chapter 4: 96). Unsurprisingly, one interviewee said “… everyone is living on social media nowadays. They are living on their phones …” (Chapter 4: 97).

In line with previous studies, social media marketing emerges to be the most strategic platform for effective multi-dimensional communication between people (King and Lee, 2016; De Las Heras-Pedrosa et al., 2020), “social media marketing is huge … a massive amount of guest communications come from a social media platform …” (Chapter 4: 96). An interviewee spoke about how hotels could utilize the power of social media to their advantage, “I think hotels that are ‘smart and green’ can put up the facts on social media to their advantage …” (Chapter 4:95).

This study is consistent with previous studies (Vipin et al., 2015; Kim Woo and Park Seo, 2017; Lund et al., 2018) that postulate the potential outreach of social media marketing to millions of consumers worldwide about a specific product. “… It’s definitely a good platform to showcase the green efforts and the artificial intelligence technologies …” (Chapter 4:95). “… Apart from creating awareness, it’s about creating demand for your product … digital marketing is very important for this sector …” (Chapter 4:95).

While it is evident that social media has wide audience outreach, previous studies also suggested that social media marketing has sufficient power to influence decision making amongst consumers, (Shareef et al., 2015; Alansari Mansour et al., 2018; Ong and Ito, 2019; De Las Heras-Pedrosa et al., 2020). The findings of this study validate the previous studies, “I agree that social media could influence the decision-making … when people book a hotel, they will always refer to social media for reviews …” (Chapter 4:98). Additionally, this study supports the previous literature that social media marketing is one of the most cost effective ways to market a product (Wozniak et al., 2016; Michopoulou and Moisa, 2019), “… I think social media is brilliant because it's free …” (Chapter 4:97).
Previous literature shows that despite the popularity of social media marketing in the hotel sector, it appears there is a lack of trained personnel to manage social media marketing due to high staff turnover within the sector, (Michopoulou and Moisa, 2019). One participant contended that social media marketing has progressed to a more sophisticated level than before, “… I think it is at a level now that you can’t just take a picture and put it up on social media. You need a specialist … to do it …” (Chapter 4:95). As social media marketing gains traction in Ireland, “… expertise could be a challenge … I think people are still becoming more qualified in it …” (Chapter 4:96).

Interestingly, an important point from this study highlights the potential high-stake risk of social media marketing, “… if hotels made a mistake, people could call them out very quickly … it is amazing how the reputation of a hotel can be burned in no time.” (Chapter 4:95). “Negativity on social media can destroy businesses …” (Chapter 4:96). An interviewee cautioned that “you must be very careful what you post … social media channels represent your brand” (Chapter 4:97). These findings support previous literature on the risk of digital marketing by unskilled service providers, (Aswani et al., 2018).

5.1.9 The Role of International Hotel Chains

The participants in this study reinforced the position within the literature that participating in an international hotel chain strategy entails rigidity and loss of freedom as hotels are required to hand over significant control of their operation to the management companies, (Richard, 2017; Bourke et al., 2020; Camisón et al., 2020). “… I find with these bigger chains like Marriott, they're very regimented …” (Chapter 4:99). Members of a chain are mandated to align their procedures to the corporate policies, “… if we join one of these groups … we lose our freedom. There will be a requirement for staff uniform, SOPs and LQA standards … you lose your freedom and identity” (Chapter 4:101). LQA is the global market leader in quality assurance assessments and benchmarking analysis for the luxury hospitality industry, (Hospitalitynet.org, 2021). LQA provides insights, strategies and actionable intelligence to hotel clients to assist them in monitoring their service delivery, elevating their guest’s experience and improving operating performance, (Hospitalitynet.org, 2021). Additionally, member hotels are required to be aligned in terms of product standards, looks and service quality, leading to loss of individuality among hotels, (Richard, 2017). “… I think the hotels
would lose their uniqueness. Chain hotels look the same wherever you go … it becomes too commercial …” (Chapter 4:99).

Surprisingly, only 40% of the participants supported the view of previous studies (Ivanov and Ivanova, 2015; Krengel, 2016; Ge et al., 2018; Ribaudo et al., 2020) that association with international hotel chains will improve profitability. “Without a doubt, I think association with big brands will affect the sales and revenue of a hotel …” (Chapter 4:99). However, “… you need to do cost-benefit analysis … profitability doesn't go up as quickly because they have to pay … royalty fee to the management company …” (Chapter 4:99). One participant highlighted that, “… we’ve always survived without them … I think Ireland is very famous for having standalone hotels …” (Chapter 4:101).

It is evident from previous studies that international chain hotels have a more consistent standard and quality, (O’Neill and Carlbäck, 2011). In line with previous literature, this study supports that “… overall quality of hotels will increase by associating with international hotel alliances …” (Chapter 4:99). Previous literatures also suggest that international chains have larger budgets for investment in equipment, property improvement and marketing, (Byers et al., 2013; Connell et al., 2015; Kourtesopoulou et al., 2018). This study reveals that it is in line with the previous literature, “… association with international chains like Marriott could act as an insurance for some hotels … it's nearly impossible to keep up with technologies, unless you are part of a chain …” (Chapter 4:99).

Interestingly, this study finds that “there were more international hotel chains in Ireland in the past, but many have left because the market in Ireland is small …” (Chapter 4:99). “… we’re a small hotel in a small island. A lot of the bigger brands would have no interest in us …” (Chapter 4:99). As the market size is small in Ireland, “a lot of hotels just would not be able to generate the revenues … the management fees for these companies are typically very expensive …” (Chapter 4:101).

5.1.10 The Role of Hotel Loyalty Programmes

Previous studies demonstrated that loyalty programmes play an important role in engaging guests’ loyalty and ultimately leads to increased sales, (Marshall and Southeastern, 2010; Pesonen et al., 2019; Koo et al., 2020). Interestingly, 90% of the participants supported the previous literature, “loyalty programme is absolutely a good tool to engage guests’ loyalty …
no question about it …” (Chapter 4:104). “Loyalty programmes are brilliant … it’s great because you build a customer relationship …” (Chapter 4:103). A participant noted that loyalty programmes may be more relevant to overseas and corporate guests, “… having a loyalty programme probably would drive up sales … probably the international and corporate guests more than the domestic guests and the leisure market …” (Chapter 4:103). Nevertheless, “… a loyalty programme would be a positive tool to attract clients …” (Chapter 4:103).

From the previous literatures, it is noted that hotel loyalty programmes worked exceptionally well for international chain hotels, (Gumaste, 2017; Mimouni Chaabane and Pez, 2017; Zuo et al., 2018). The findings of this study support the literatures, “… you need to have options in other cities or countries; hence it will work better for larger chains …” (Chapter 4:102). “… I think for … larger hotel groups or branded chains, they must have loyalty programmes. It’s little cost for a huge benefit …” (Chapter 4:102). A significant point to note is that the market size in Ireland is too small without overseas hotels partnerships, “… by having partner hotels in the U.S. or Germany, I think it would make more sense due to bigger market size …” (Chapter 4:103). Therefore, “… loyalty programmes are popular in the U.S. and other countries but less so in Ireland …” (Chapter 4:103). In line with a previous study by Zuo et al. (2018), the results of this study prove that loyalty programmes are important to frequent travellers, “I think loyalty programmes are important for frequent world travellers … it’s like collecting frequent flyer miles on certain airlines …” (Chapter 4:102).

Surprisingly, in contrast with previous literatures (Koo et al., 2020; Lam and Wong, 2020), 20% of the participants cautioned the high cost of maintaining a loyalty programme in Ireland, “… it is expensive to maintain a loyalty programme … some companies have tried third party loyalty programmes here … they haven't really gained much traction …” (Chapter 4:104). “… It is a very competitive space because everyone has a loyalty programme of some sort … you must … make sure that they're cost effective for the hotels …” (Chapter 4:103).

5.1.11 The Role of Financial Institution Partnership in the Hotel Sector

Interestingly, there is a stark difference from the findings in this study when compared to previous literatures. This is mainly due to circumstances specific to Ireland. From previous studies, it is established that financial institution partnership with accommodation service providers in the form of co-branded credit cards is extremely popular especially for affluent consumers, (Wang Stephen and Farquhar, 2018; Gravier, 2020; Kotler et al., 2019; Wood,
This study contradicts the previous studies because Irish consumers have different views in relation to spending on a credit basis, “… in the U.S, everybody has a credit card … I know a lot of people here don't have credit cards because it's in our mindset that we don't like debt …” (Chapter 4:104). This study also shows that Irish consumers are culturally hesitant to embrace change, “… the Irish don’t like to embrace change. I just don’t think our culture is there right now for the financial institution partnership to work” (Chapter 4:104). Previous literatures suggested that this partnership strategy has worked well in bigger countries like the U.S, (Gumaste, 2017; Huan, 2017). However, this study reveals that it may not work as well in smaller countries like Ireland, “… I think it'd be something that would fall flat on its face … we are not in a big city location …” (Chapter 4:105).

This study contradicts previous literatures that hotel co-branded credit cards will result in increased consumer spending within the hotel brand, (Tingchi Liu, 2012; Huan, 2017; Wang Stephen and Farquhar, 2018; Doggrell, 2020). The researcher believes that this phenomenon is country specific, and the findings of this study reflects the situation specific to Ireland. Alarmingly, 100% of the participants were sceptical that this partnership would lead to any increase in sales due to small market size in Ireland, “… we don't have enough numbers to drive … the volume of sales that was intended due to our small population size” (Chapter 4:105).

In contrast to previous studies which found that this partnership arrangement generated excellent profitability for banks and hoteliers (Agustin and Singh, 2005; Geng and Kauffman, 2017; Gandhi, 2018), this study reveals that turning a profit from this type of partnership in Ireland is challenging. Again, the small population and market size in Ireland is highlighted by 100% of the participants. Unsurprisingly, one interviewee specifically mentioned that “the profit margins of hoteliers are very tight in Ireland … it is very difficult to make profits here due to our small market size” (Chapter 4:105). In comparison to the U.S for example, “Ireland is too small … in the U.S, they have a much bigger population … it wouldn’t be possible here” (Chapter 4:105).

5.1.12 ‘Smart and Green’ Hotels: The Future of Irish Hospitality

Previous studies undertaken outlined the concerns for sustainable tourism that resulted in the hospitality industry having to relook at its environmental sustainability policies, (Bader, 2005; Ahn and Pearce, 2013; Sharma, 2018). It is also established from previous literature that
environmental consciousness has become the integral component of the mainstream global awareness in the last decade, (Kubba, 2010). Additionally, previous literatures demonstrated the increasing role of artificial intelligence to revolutionize the hotel business model which encompasses improved guest comfort to elevated opportunistic marketing strategy, (Ercan, 2019; Li et al., 2019; Seal, 2019). Despite the ongoing challenges and slow pace of rollout, 80% of the participants supported the previous studies and foresee that ‘smart and green’ hotels concept will be commonplace in Ireland in future. One participant made a bold and compelling statement comparing the hybrid concept with Wi-Fi and hot water, “I think it's inevitable … a lot of businesses … will adopt these ‘smart and green’ initiatives eventually … the hybrid concept will be like hot water and Wi-Fi, you have to have it” (Chapter 4:106). “I think even if we do not have an interest in this concept, we'll be forced to do it ...” (Chapter 4:106). “… Purely from the point of staying competitive, you have to go with the times to embrace change …” (Chapter 4:107). “I agree 100% … I think it’s going to be exciting” (Chapter 4:106).

Alternatively, only 20% of the participants disagreed and believed that the Irish hospitality industry should remain traditional, “I would be hesitant … on this concept ... I do not foresee that as our defining culture …” (Chapter 4:108). “… I don’t see high-tech hotels … appearing … anytime soon” (Chapter 4:108).
### 5.2. Summary of the Main Empirical Findings

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<th>Theme / Topic</th>
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<td>Green &amp; Sustainability</td>
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<td>Great potential for cost savings</td>
<td>Increasing consumer demand for green products</td>
<td>High capital expenditure required</td>
<td>Difficult for luxury hotels to find a balance</td>
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<tr>
<td>Motivation for Investment in Green Technology</td>
<td>Cost savings in the long term</td>
<td>Corporate social responsibility (CSR) image</td>
<td>Growing demand especially from corporate clients</td>
<td>More financial incentives</td>
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<td>Green Credentials</td>
<td>Reputable accreditation body is critical</td>
<td>Lack of formal green credential programme</td>
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<td>Increases consumers’ trust in hotels’ green efforts</td>
<td>Limited knowledge on green credentials by consumers</td>
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<tr>
<td>Smart Hotel – AI Technology</td>
<td>Data mining to learn consumers’ behaviour</td>
<td>Culture in Ireland – preference for human interaction over automation</td>
<td>‘Irish hospitality’ to be preserved but hotels need to adapt to changes in AI technology</td>
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<td>AI robots should not replace workers, rather to encourage upskilling</td>
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<td>Smart Hotel – VR Technology</td>
<td>A good marketing tool for hotels to attract potential guests</td>
<td>Limited use for virtual tourism due to lack of tangible experience</td>
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<tr>
<td>‘Smart and Green’ Hotels – A Hybrid Concept</td>
<td>An excellent and complementary concept</td>
<td>More suitable for hotel in larger cities</td>
<td>Will increasingly become a norm driven by necessity</td>
<td>Slow pace of roll out and adoption in Ireland</td>
<td>May potentially have an impact on prices</td>
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<tr>
<td>Challenges in ‘Smart and Green’ Hotels Concept</td>
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<td>High cost of initial investment and lack of financial incentives</td>
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<tr>
<td>Social Media in the Hotel Sector</td>
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<td>Lack of qualified people to manage social media</td>
<td>Huge impact on hotels’ revenue</td>
</tr>
<tr>
<td>Theme / Topic</td>
<td>Finding 1</td>
<td>Finding 2</td>
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<tr>
<td><strong>International Hotel Chains</strong></td>
<td>Expensive to participate in an international hotel chain</td>
<td>Loss of freedom and individuality</td>
<td>Increase in hotels’ revenue but cost analysis against the management fee needed</td>
<td>Hotels’ quality will increase due to bigger investments in latest equipment and technologies</td>
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<td><strong>Hotel Loyalty Programme</strong></td>
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<td>Lack of large Irish hotel chains</td>
<td>More suitable for chain hotels than independent hotels</td>
<td>Requires partnership with overseas hotels</td>
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<tr>
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<td>Lack of government support</td>
<td>Hotels will risk being left behind if they do not adopt this concept</td>
<td>Green hotels may be more prominent than smart hotels</td>
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5.3. Recommendations for Future Practice

This section presents the key recommendations for future practices originating from the empirical research data. The recommendations within this study are aimed at governmental organizations, policymakers, hotel operators and other significant stakeholders in the hospitality industry in Ireland.

5.3.1 Adoption of Hybrid Model - ‘Smart and Green’ Hotels Concept

This study highlights the increasingly important role of the ‘smart and green’ hotels concept in the Irish hospitality industry. Concepts of ‘smart’ and ‘green’ are now essential elements, and as one participant outlines are as essential as ‘Wi-Fi and hot water’.

In terms of the green component of the hybrid model, 100% of the participants acknowledged its importance and have introduced initiatives such as biodegradable plastics, reusable glass water bottles, food composters and paperless operation. An interesting recommendation emerging from this study is that hotels should introduce a reward system for guests who opt to refuse bedsheet changes and towel changes. This should lead to reduced laundry costs as well as reduced chemical usage from cleansing agents. It is estimated the laundry service would cost approximately EUR 0.5/kg; a hotel room with a hypothetical 75% annual occupancy and an average of 4kg per night will cost EUR 479, (greentourism.eu, 2015). For illustration, a 100-room hotel will potentially incur more than EUR 47,000 in laundry costs per year. The cost saving is substantial, even if the reuse rate is 10%, the hotel could potentially save up to EUR4,700 per year. The proposed reward could potentially be a fixed value food and beverage voucher to be redeemed within the hotel property. Another relevant recommendation is that hotels could intelligently place items in the guest room, for example, extra towels, in a less obvious location. This should allow guests to access them if needed but they will not necessarily use them. In this way, guest comfort will not be compromised since the guests voluntarily opt out of the service. This is a simple and effective method to reduce energy consumption.

Soap bars are often too big in most hotels and what makes the matter worse is the single-use plastic wrapper found on these bars. The findings of this study indicate that the majority of hotel guests stay 1 or 2 nights only. Therefore, hotels should introduce smaller soap bars with biodegradable wrappers instead, designed for short stay guests.
Hotels that have yet to adopt more advanced green practices should pressingly begin to consider introducing a variety of existing green technologies available in the market. An effective way to energy management in a hotel is to install a Building Management System (BMS). It is an intelligent automation system which centrally manages the buildings mechanical, electrical, ventilation, lighting, power systems, fire systems and security systems, (sirusinternational.com, n.d.). It has the ability to automatically increase or decrease energy output based on demand, (Conedison, 2018). In a study conducted by Kamali et al. (2014), it is shown that the energy consumption in a building reduced by 50% since the implementation of BMS. In addition to BMS, other peripheral systems such as light sensors, water aerators and food composters are practical recommendations that could be integrated as part of a hotel greening project. This study suggests that implementing green initiatives not only reduce hotels’ operating costs but also results in them being viewed as a corporate social responsibility effort. As such, hotels that are deemed sufficiently green, should strive for green rating from Online Travel Agencies (OTA). This green rating appears in the search filter of many established OTAs, thus, consumers who are specifically looking out for green hotels will be able to find them easily. An important point that emerged from this study is that most multinational corporate clients are increasingly on the lookout for green policies before contracts are awarded. Hotels may risk losing corporate clients if they do not have green policies. Considering these findings, for hotels that have not adopted any green measure, they should consider incorporating green and sustainability efforts as part of their business model. As consumers become more discerning and corporate clients are increasingly looking for green hotels, this recommendation is apt.

In terms of the smart component of the hybrid model, despite mixed opinions, this study has found that AI will invariably be part of the Irish hotel sector in the future. The use of AI robots and data mining technology should be used as supplementary tools to improve operational efficiency. It should be noted that AI should not be used to displace workers, but rather to encourage workers to upskill and reskill themselves. These workers could subsequently be deployed to perform other more value-added tasks and leave the laborious tasks to AI robots or AI-powered software.

The research recommends the use of AI chatbots in all hotels if possible as the empirical findings demonstrates that chatbots are useful in reducing the amount of calls a hotel takes
which leads to better utilization of manpower. It is acknowledged that society is more demanding now due to a hyperconnectivity phenomenon and consumers expect instantaneous answers around the clock. As such, AI can accommodate most preliminary questions, therefore, the chances are higher that phone or in-person enquiries convert into actual sales.

This study further identified that AI potential also lies in the area of data mining which is beneficial to the hotel practitioners. Hotels should actively utilize AI technology to learn consumers’ preferences and booking behaviour in order to provide more personalized and targeted recommendations, offers and experience. Advanced AI algorithm should be applied to predict supply and demand of hotel rooms in order to dynamically manage room rates effectively. For instance, AI-powered hotel revenue management such as Aiosell has been proven to increase net revenue for hotels worldwide, (Iyer, 2021).

Besides that, 90% of the participants would like to see smarter in-room technology being implemented. Thus, hotels should start implementing smart technologies to avoid being left behind. This includes automatic check-in/check-out kiosks, mobile key technology and mobile check-in and check-out system. These systems would save on manpower resources and greatly reduce printed paperwork requirements, thus reducing the paper usage. Mobile key technology eliminates the need for a physical key card or key as guests could unlock their room door using their smartphone. Another relevant point is the use of in-room QR codes to allow guests to access information such as room service menus and hotel facilities and eliminates the need for a traditional printed guest directory. These are contributory steps towards reducing waste and being environmentally friendly.

Empirical findings from this study similarly shows that 90% of the participants agree that virtual reality can be utilized as a useful marketing tool for hotels, particularly for overseas guests. For example, guests could be given access to virtually view the hotel facilities and surroundings. VR technology is also exceptionally useful for hotels to showcase their setup for major events like weddings, conferences, or musical events in a more realistic manner than just regular pictures and videos. However, hotels should take precautions to ensure that the VR contents are continuously kept up to date to prevent mismatch with the reality.

Moreover, in-room virtual reality technology should be introduced as an effective advertising tool to replace printed brochures for tourist sites and activities. This arrangement is similar to
a virtual catalogue for activities, attractions sites, restaurants and bars. This proposal is both technologically innovative and environmentally friendly. The researcher proposed that the in-room VR contents should be more like a ‘sneak preview’ rather than full contents to avoid unintended consequences. Unintended consequences occur when guests decide not to visit the sites or do the activities after the virtual experience. Fundamentally, guests should not be discouraged to travel out of the room to engage in services and businesses around the vicinity of the hotels.

The research data indicates that hotels should not increase room rates dramatically after the adoption of ‘smart and green’ hybrid model because Irish consumers are price sensitive while overseas consumers may be more receptive to higher prices. In the event that room rates adjustment is inevitable, it is proposed to increase them gradually to prevent backlash from consumers.

Therefore, in line with the findings of this study, hotels should adopt the ‘smart and green’ concept in light of the multiple benefits derived from this hybrid model. Given the intricacy surrounding the ‘smart and green’ hotels concept, it is proposed that hotels should set up a core team to constantly research and stay afloat with the latest trend and movement which could be made into actionable projects as part of the annual property improvement programme.

The researcher strongly recommends that airport hotels, business hotels, conference hotels and larger sized hotels should lead the way in the ‘smart and green’ hotel movement. Selected hotels in focus cities of Ireland such as Dublin, Cork, Limerick, and Galway should be earmarked for pilot trial of this concept. As this measure requires substantial changes to most of the Irish hotels’ business models and involves multiple stakeholders, it is classed as a long-term recommendation and should be implemented in less than 10 years.

5.3.2 Official Certification Programme

Government and policy makers should consider introducing an official certification programme for green hotels and smart hotels as the hospitality industry marches towards a greener and more digitally enabled future. At present, there are no formal certification programmes for either of them. This study indicates that a green certification programme will increase consumers’ trust in the hotels’ green initiatives, which should similarly apply to smart hotels certification. Early findings indicate that there is lack of consumer knowledge in relation
to green hotels. There are a variety of green programmes currently and consumers would not be aware of the differences between them. The researcher infers that this is due to the lack of an official certification programme to inform consumers. Thus, certification programmes for ‘smart and green’ hotels will also serve to confer better communication to the general consumers. It is important that these certification programmes should be easy to understand and are managed by accredited or reputable government-linked organizations. Otherwise, it will lead to mass confusion as to which programmes are genuine or otherwise.

A pragmatic approach to the implementation of the proposed ‘smart’ and ‘green’ certifications should be spearheaded by the government. Two possible departments within the government are ideal candidates to manage this certification programmes, namely the Department of the Environment, Climate and Communications and Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media. This study also recommends that suppliers and vendors involved in carrying out any retrofitting works should be approved by the government so that the hotels would have easy access to trusted suppliers and vendors.

The certification programmes should outline clear and easy to follow frameworks for hotels to adopt. This will allow hotels in Ireland to have a structured approach to evolve their properties. The government should consider introducing regular assessment on all hotel properties, similar to annual fire inspections, to upkeep the standard once the certifications are obtained by the hotels. Additionally, certifications could be used as additional marketing material which would ultimately influence other non-smart and non-green hotels to follow suit. As this measure does not involve high cost and it is relatively easy to implement, it is classed as short-term recommendation and should be implemented in less than 3 years.

5.3.3 Loyalty Programmes and International Chains

The research data reveals that no loyalty programmes exist in many of the independent hotels in Ireland. It is evident that loyalty programmes are beneficial as supported by 90% of the participants from this study. The researcher recommends that bigger hotels should investigate the feasibility of joining one of the international hotel chains such as the Marriott, Hilton, or Hyatt. Findings from this study indicate that international chain hotels have higher consistency in terms of quality, and they enjoy increased visibility and revenue. Hotels are committed to their overall quality upon joining a global hotel chain. These member hotels also benefit from the large pool of loyalty programme members globally. Besides, international chains have
bigger investment and marketing budgets, which are critical in the success of the ‘smart and green’ hotels concept in Ireland. This study found that it is difficult for independent hotels to keep up with the rapid development of ‘smart and green’ technologies if they are not part of any global hotel chain as it is too costly for them. Considering these findings, individual hotels should perform a cost-benefit analysis to compare the projected increased sales versus the management fees.

For the smaller sized hotels, hotels located in rural or regional locations and hotels that would like to retain their unique identify, an alternative approach should be considered. In order for this group of hotels to invest in ‘smart and green’ technologies, it is important that the demand is sufficient to ensure business sustainability. As such, this group of hotels should consider participating in existing third-party loyalty programmes available in other countries. Additionally, Irish hotels could partner up amongst themselves to set-up third party loyalty programmes, initially with a small number of hotels and subsequently evolve to a larger footprint. From the results of this study, it is reasonable to assert that loyalty programmes, when there is sufficient scale, are useful in generating demand for ‘smart and green’ hotels in Ireland. The proposed loyalty programme could potentially include benefits such as complimentary breakfasts, room upgrades and free stays. This study found that guests like to feel appreciated and loyalty programmes have the potential to achieve that by rewarding regular guests.

The empirical data suggests that social media plays a significant role in generating demand for a product. As such, hotels in Ireland should increase the utilization of social media to generate demand and loyalty in relation to the ‘smart and green’ hotels concept. This involves active management of social media accounts, for example, posting the benefits of ‘smart and green’ technologies and how they could improve guests’ experience. Intelligent in-room technology such as voice command and mood lighting for instance, could be communicated via social media to the wider public. This should be tasked to a dedicated trained online marketing team in a hotel or outsourced to one of the specialist social media marketing service providers in the market. This is because social media has become a highly sophisticated and complex space, thus, any mistakes may invariably lead to an immense impact on a hotel’s business.

As this proposal involves due diligence, a complex business strategy and overseas partner collaboration, it is classed as a medium-term recommendation and should be implemented in
less than 5 years. This study shows that financial institutions and hotel partnerships, similar to the U.S, are not feasible due to small market size in Ireland. Therefore, it should not be pursued.

5.3.4 Increase Financial Incentives

This research highlights the lack of financial support from the government in the space of ‘smart and green’ hotels. 60% of the participants felt that the cost of retrofitting a hotel is exceptionally high and most Irish hotels will not be able to aggressively adopt on the ‘smart and green’ hotels concept without financial assistance. The researcher believes that as ‘smart and green’ technologies become increasingly common in Ireland, the cost will be lowered as supply increases. Considering these findings, the Irish government should take a holistic approach towards introducing financial support packages such as increased grants and business loans. The government could seek additional funding from the European Investment Bank amid the low-interest rate environment caused by the Covid-19 pandemic. Interestingly, this study reveals that it is important that any new schemes introduced should be suitable and easily accessible. As shown in this study, some hotel owners are not fully aware of how they can apply for existing grants. This is a prevailing gap that should be addressed. Therefore, the requirements for the new proposed schemes should be sufficiently simple to follow. The proposed scheme should cover up to 75% of the equipment, retrofitting and installation cost. This quantum of 75% is proposed because the grant should be substantial to encourage hotels to get onboard. This recommendation will ensure that the government is exerting adequate pressure on the hotel sector to adopt the hybrid concept of ‘smart and green’ hotels. As this measure involves capital expenditure from the government, it is classed as a medium-term recommendation and should be implemented in less than 5 years.

5.3.5 Education and Training

This research has found that the main challenge that hoteliers face is the lack of expertise in the field of the ‘smart and green’ concept, to perform due diligence and initiate improvement projects of such nature. Thus, the hospitality industry should upskill their talents by advocating a lifelong learning ideology. Government and policy makers should ensure that upskilling courses are made available in the space of ‘smart and green’ technologies, and they should be affordable. As such, the hoteliers will be sufficiently trained to understand this hybrid model and how this hybrid concept can benefit them. This study shows that it is critical for the hotel sector to have proficiency in relation to planning, construction, engineering and social media
management, to spur the momentum of the ‘smart and green’ hotels concept in Ireland. This study indicates that the incidence of high staff turnover in the hospitality industry is proving difficult for hotels to introduce new ‘smart and green’ technologies because of the need to continuously train new staff members. The research recommends that hotels should streamline the training process into concise job cards, containing easy to follow steps to simplify the training chores.

Social media is an effective platform for communicating the benefits of ‘smart and green’ hotels to general consumers. Based on the current study, it is evident that there is a lack of awareness in the ‘smart and green’ hotels concept. A simple but effective recommendation is through education. Education should be spearheaded by governmental organizations. This study has found that hotel guests tend to have more wasteful behaviour than they would at home. In particular, guests who stay in luxury hotels felt that since they paid expensive prices, they would not need to be mindful about green practices. Additionally, this study highlighted that luxury hotels in Ireland are facing a moral quandary between offering single use toiletries and wall mounted dispensers in guest rooms. Irish consumers would perceive that wall mounted dispensers look inexpensive and deem them not suitable for use in luxury hotels despite being more environmentally friendly. Single use toiletries on the other hand are perceived to be more befitting to luxury hotels although they create tremendous environmental concern. Education is urgently needed to address the above concerns and change consumers’ mindsets that green hospitality does not equate to inferior experience, but it is about sustainability to ensure a better living condition for the future generations.

This study suggests that some hotels are hesitant to introduce smart features for the fear that the older age group of guests may not be technologically savvy to appreciate them. In this case, awareness campaigns, training videos and ample educational materials should be published online and easily accessible to the public. Hotel staff should also be appropriately trained to impart the knowledge to them. If most hotels started to implement newer and smarter features, the public including the older age group will be obliged to accept them. This circumstance is similar to the smartphone situation where almost everyone including older people, have been using smartphones because the regular non-smartphones have become obsolete. This initiative should be implemented on a widespread basis and hotel practitioners should not view the reluctance from older guests as the barrier to progress forward.
The impact from this increased education in the medium to long term is that hoteliers will be more enthusiastic to embrace greener and smarter technologies due to greater consumer demand. Undoubtedly, the consumer demand for this hybrid concept will grow as a direct result of heightened awareness. This study suggests that this hybrid concept should gain traction when more hotels are signed up to it. It is important to send a clear message that a change is needed now for the Irish hospitality industry to be greener and smarter in line with other advanced economies of the world. One of the most exciting findings from empirical data in this research is that Ireland, as a country tends to be a follower rather than a leader when it comes to embracing new technologies. In light of this, the researcher postulates that with sufficient education and expertise, Ireland could potentially emerge as the leader in the hospitality industry in terms of the ‘smart and green’ hotels concept. As this measure is relatively simple to implement, it is classed as a short-term recommendation and should be implemented in less than 3 years.

5.4. Recommendations for Future Research

As outlined in this thesis, much research has been undertaken in the area of green and sustainability in the hospitality industry. This research has explored the concept of ‘smart and green’ hotels as the future of the hospitality industry in Ireland. Findings in this study have highlighted other areas that warrant future research.

An interesting area of research would be to perform a quantitative research survey to examine the consumer demand and the price premium consumers would be willing to pay for ‘smart and green’ hotels over regular hotels. The proposed quantitative research should also include the scope of what are some of the most important features of ‘smart and green’ hotels that would influence them to book these hotels. This is important to measure consumer demand towards specific products. The purpose of this research is to allow potential ‘smart and green’ hotel practitioners to make an informed decision on their business strategy. The proposed research can be conducted by surveys sent electronically via emails. The sample size should be sufficiently large, at least 300 responses is suggested. This is to increase the validity and repeatability of the research findings. The proposed duration of study is 1 year. It is expected that some ‘smart and green’ features will stand out compared to the others, and the consumers will be willing to pay a premium for those features.
As this research was conducted in a time limited fashion, the number of research participants was limited to 10. The researcher proposes a longitudinal study of at least 4 years on the same topic but with a slightly wider scope and to include more research participants, ideally over 50 participants so that the saturation point could be reached several times. The research participants’ demographic could be more varied such as managers from multiple classes of hotels, accommodation providers and policy makers from relevant governmental organizations. The proposed qualitative study should also include the entire island of Ireland, which encompasses Northern Ireland because of the extremely close cultural links between the 2 countries. The research participants in this study are male dominant, thus, it is proposed that given more research time, the male to female participants ratio should be more balanced. It is expected that more insights and recommendations for future practice will emerge from the proposed study.

Findings from this study reveal that many hoteliers are unsure about the exact potential cost savings that could be achieved if they implement ‘smart and green’ technologies. Therefore, future research could be undertaken to quantify the possible potential cost savings for a hotel as a result of adopting the ‘smart and green’ concept. The proposed future research aims to quantify the exact savings from the introduction of the new hybrid concept. It is proposed that the research should be a mixed-method research. The qualitative aspect would be to conduct in-depth interviews with Irish hoteliers who have implemented some elements of the ‘smart and green’ concept. It is suggested that at least 10 participants should be recruited. The quantitative aspect would be through surveys to garner more data numerically to triangulate the information obtained qualitatively. The surveys should aim to obtain at least 500 responses from experts in the hotel sector. In the event of there being insufficient participants found in the Republic of Ireland, there is a possibility to expand geographical scope to include Northern Ireland and the United Kingdom as these countries are similar to Ireland in many aspects. The proposed duration of the study is 3 years. It is expected that the results from the proposed study will indicate good potential cost savings. Therefore, the proposed study is imperative to spur the adoption of the ‘smart and green’ hotels concept in Ireland once the hotel practitioners know the certainty on the potential cost savings.

This study reveals that there is some hesitancy from the hoteliers to adopt AI technology at present. Additionally, it is also suggested that consumers may be reluctant to accept AI
technology in Irish hotels. Thus, another topic that would merit some further research is the acceptance of AI technology within the Irish hospitality industry. The researcher recommends a quantitative research, via surveys, to be conducted with the aim of eliciting at least 500 high-quality responses from the consumers. The proposed research should aim to delve deep into their concerns and investigate the factors that would encourage them to embrace AI technology in the Irish hospitality industry. The expected duration of the study is about 2 years. It is expected that the proposed research will highlight pressing concerns regarding AI technology. It is inevitable that AI technology will increasingly penetrate all sectors across all industries, therefore, it is crucial to understand and address the concerns the public may have. Thus, the proposed study is important to communicate the concerns to policy makers, government and hotel practitioners so that viable solutions can be established.

5.5. Final Conclusions
This study has addressed the pertinent issues relating to the concept of ‘smart and green’ hotels in Ireland. This study is directed at the hospitality industry and the government who have been looking into a more sustainable and digitally enabled tourism industry. This exploratory study has outlined the views and challenges of the ‘smart and green’ hotels concept from the perspective of Irish hoteliers, which is beneficial for the policy makers and government to work on publishing a sustainable holistic action plan for the industry.

As the world is moving towards being more interconnected, the advancement of technology, particularly in the field of artificial intelligence becomes increasingly prominent. However, at the same time, the pressure for green, sustainability and environmental preservation are mounting on a national front as well as on an international level. In examining the hotel sector within the Irish hospitality industry, it is exceptionally relevant to investigate the proposed hybrid model of the ‘smart and green’ concept, to achieve synergies between the two technologies. This study, in comparison with other previous studies, has demonstrated that the Irish hospitality industry is different to other countries in terms of embracing new technologies. There have been previous studies on ‘green hotels’ and ‘smart hotels’ as separate entities in other countries. This study, however, presents a novel concept by combining both concepts into a hybrid model. Most importantly, this research is contextually relevant to Ireland, therefore, the contents and recommendations from this study are pitched towards the Irish market.
This study has proven the importance for the hotel sector in Ireland to embrace changes to stay updated to the current trends, nevertheless, a more proactive rather than a reactive approach is urgently needed from the hoteliers. The study highlights that more intervention is needed from the central government in this space as many independent, family-run hotels do not possess the financial capacity to go greener or smarter. It is interesting to also note that while the importance of AI is being acknowledged across the board, concerns do remain on the potential negative impacts of AI to job security and reduced human interaction.

The importance of ‘smart and green’ hotels concept can no longer be underestimated because the proposed hybrid model is required now to future-proof the Irish hospitality industry. This study illustrates that, as important as green and sustainability is to the industry, artificial intelligence and smart technologies are being earmarked as the up-and-coming agenda. Thus, a new theory has emerged from this study, supported by grounded theory methodology, the concept of ‘smart and green’ hotels is relevant, feasible and sustainable for the future of Irish hospitality industry.

All the recommendations outlined in this study necessitate collaborative efforts and immediate attention from the government, policy makers and hotel practitioners alike. This study has adopted a radical approach to revolutionize the traditional and slow-moving setting within the Irish hospitality industry in addition to demonstrating the true potential of the ‘smart and green’ hotels concept by public engagement via social media marketing and certification programmes. By successfully attracting more consumers into the appeal of the ‘smart and green’ concept, hotel practitioners can increase occupancy rates, driving up revenue and profits. In essence, this empowering approach should be fostered by the central government and embraced by the Irish consumers to ensure that the future of Irish hospitality stays relevant in today’s competitive market.

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Appendix 1: Interview Guide

Introduction:

Thank you for taking time out for this interview. As you are already aware, the purpose of the interview is to gather your opinions on the research topic, ‘smart and green’ hotels in the context of Irish hospitality industry. The data collected will be used for research purposes only in the fulfilment of my MBA studies in MTU and maybe for a conference publication if successful. I will go through the consent form with you now to ensure you are happy to proceed with the interview.

Green Hotels

Green hotels describe hotels that strive to be more environmentally friendly through the efficient use of energy, water and materials while providing quality services. Green hotels operate in a responsible way towards society, community, the local culture and the surrounding environment.

1. How do you view green and sustainability in the context of the hotel sector? Are there any elements of green and sustainability which have been implemented at your hotel?  
   For researcher prompt: LED lightings, renewable energy (solar panels, heat recovery system), efficient heating, water saving features, single-use plastics (toiletries), etc  
   ➢ Follow up question: Do you think they are sufficient in terms of green efforts?

2. In your opinion, what would motivate you for greater investment in green technology at your hotel?  
   For researcher prompt: CSR recognition, business case profitability?

3. In your opinion, do you reckon that guests have trust in your hotel’s green initiatives?  
   ➢ Follow up question: How do you ensure that they trust your hotel’s green initiatives?

Smart Hotels

It is crucial to note that rapid advancement in technology has resulted in artificial intelligence starting to creep into the hospitality industry especially in the hotel sector. It is predicted that by 2030, artificial intelligence robots will make up about 25 percent of the workforce in the hospitality industry.

4. Research shows that the adoption of artificial intelligence technology in the hospitality industry will be a disruptive game changer particularly in the hotel sector. In your opinion, what is your view on the use of artificial intelligence in the hotel sector in Ireland?  
   For researcher prompt: Chatbots in websites, robotic concierge for check in/out, delivery robots, intelligent guest room (e.g., voice command, smartphone integration), etc  
   ➢ Follow up question: What is your view on the use of artificial intelligence in the hotel sector here (including at your hotel) in the future?  
   For researcher prompt: Widespread use, still in infancy stage, might be obsolete?
5. Research shows that virtual reality in the travel sector has exploded, in particular, smart hotels are constantly searching for new uses of virtual reality to attract guests. Some smart hotels have started to use virtual reality applications within the hotels, for example, guests could travel around the hotel and its surroundings with a virtual reality application/device without leaving the hotel room. Additionally, virtual reality could be used to allow guests to virtually visit tourist sites / destinations around the world (known as virtual tourism). What is your view on incorporating virtual reality technology into your hotel as an initiative to become a smart hotel?

For researcher prompt: In terms of marketing strategy to attract guests, advertising revenue from tourism companies/overseas, any particular importance in Covid-19 times?

‘Smart and Green’ Hotels - A Hybrid Concept

6. Now that we have discussed both ‘smart’ and ‘green’ hotels, how do you view the hybrid concept of ‘smart and green’ hotels from an Irish hospitality industry perspective?

➢ Follow up question: In your opinion, assuming your hotel is marketed as ‘smart and green hotel’ in the future, how will it affect your pricing strategy and how will the consumers respond?

For researcher prompt: Will you be charging more, less or no change? What amount of premium will consumers be willing to pay?

7. In your view, what are some of the challenges in the implementation of ‘smart and green’ hotel concept in Ireland?

For researcher prompt: Your guest intention, demographic, cost of investment involved, location suitability, government support?

Social Media Marketing

In order to convince consumers regarding benefits of ‘smart and green’ hotels, social media marketing plays an increasingly important role in hotels’ marketing strategy. Research has shown that social media could influence the decision-making process of customers who intend to book a hotel.

8. What is your view on the statement? How does your hotel engage in social media marketing?

➢ Follow up question: In your opinion, what are some of the challenges in social media marketing in the Irish hotel sector?

For researcher prompt: Negativity, speed of spread?
International Chains and Loyalty Programmes

Besides social media marketing, to increase awareness of ‘smart and green’ hotels particularly in the international market, ‘international chain’ strategy could be considered by hotel operators.

9. In your opinion, what is your view in relation to global hotel alliances / international hotel chains in terms of revenue and visibility?
   For researcher prompt: In your view, how does association to an international chain e.g., Marriott/Hilton/Hyatt affect sales/bookings, domestically and internationally?
   For researcher prompt: Not only will association with an international chain increase a hotel’s spending budget to introduce ‘smart and green’ technologies, revenue and sales should also improve owing to more bookings by international guests.

10. In your opinion, what tools do you find useful to engage with your customer base to ensure guest loyalty?
   For researcher prompt: A loyalty programme could also act as an additional tool to attract frequent travellers to choose ‘smart and green’ hotels. It has been shown that Marriott loyalty programme members are more inclined to book with Marriott when booking hotels.

11. Most big hotel loyalty programmes in the U.S have partnership with financial institutions in the form of co-branded credit cards. It is shown that co-branded card users are significantly inclined to spend on that particular brand. In your opinion, do you think a similar partnership is feasible in Ireland?
   For example, a partnership between your hotel and a local bank? Partnership between Marriott/Hilton/Hyatt and a local bank?

Closing Questions

12. In conclusion, how do you view the concept of smart and green hotels as the future of Irish hospitality industry?
   For researcher prompt: in the context of 5, 10, 15 or 20 years?

13. Do you have further thoughts / recommendations / proposals that would be beneficial to the research based on our discussions today?
This research aims to explore:

1. The feasibility of ‘smart and green’ hotels concept in the context of Irish hospitality industry.
2. The utilization of social media, global hotel alliances and its associated loyalty programmes to increase the appeal of ‘smart and green’ hotels concept in Ireland.

You have been chosen to participate in this research due to your substantial knowledge and experience in the hotel sector.

Title of Course: Master of Business Administration (MBA)
Title of Research: Harvesting a New Synergy: Exploring ‘Smart and Green’ Hotels within the Context of the Irish Hospitality Industry
University: Munster Technological University, MTU
Name of Student: Yi Sheng Tan
Name of Supervisor: Dr. Angela Wright

- I consent to be interviewed for the purpose of the research named above.
- I have had all the details of the research explained to me.
- I am happy that my quotes can be used for the purpose of the research.
- I can ask for clarification about the research at any stage.
- I understand that I can withdraw (opt out) from the process at any stage.
- I understand that my data will be stored in line with MTU GDPR regulations and policy.
- I understand that my data may be used for a conference publication if successful.

Are you agreeable that your name, title and name of your organization be identified in the research thesis?    Yes    No

Do you give consent for the interview to be recorded?    Yes    No

Name/Title:
Organization:

Verbally agreed to the above on Zoom/Phone/Teams Interview

Date:
Appendix 3: Reflective Journal
The researcher decided to pursue an MBA course 2 years ago. The MBA course can often be daunting, but it can also be fulfilling. It was in a blink of an eye that the researcher was at the end of the lengthy but challenging journey. As part of the programme, it was a requirement to complete a research thesis, which was an exceptionally demanding piece of work within a short timeframe of 6 months, because a comprehensive research would usually take a few years to complete. The researcher came from a technical background and did not possess any business research experience, thus, the researcher thought it was quite exciting to embark on this new journey.

When the researcher was made aware of the academic process of the research journey, the researcher was immediately worried because it would involve gathering secondary research data, conducting interviews with various stakeholders to obtain primary research data, and subsequently performing intensive data analyses work. The researcher was contemplating how that would be achieved as the researcher was working full time. The researcher started to speak to family members to seek mental support. They were very supportive throughout the journey of the research, the researcher felt relieved and had renewed energy to carry on the research. As the research went further, the researcher felt overwhelmed by the amount of work required for the interview. The researcher felt stressed and wanted to give up because the researcher was worried that the thesis would not be completed in time for submission. The researcher was concerned about a multitude of things such as the marks and the level of English required because English was not the researcher’s first language. The researcher took a step back and reflected on the stressful situation and considered whether or not to give up the research thesis. The researcher reflected on this using the Gibbs’ Reflective Cycle to investigate what were the alternatives to reduce the stress level. Gibbs (1988) emphasized the structure of learning from experiences. The relevant element of Gibb’s model was that it offered a framework for examining experiences, and given its cyclical nature, this model lends itself particularly well to repeated experiences. While the researcher was in deep reflection mode, the researcher recalled a similar experience a few years ago when the researcher was doing the final year project for the fulfilment of a Bachelor of Engineering degree. From that experience, the researcher learned that it was important to envision the final result and what its potential benefits would be. The researcher realized that the impact of not completing the research thesis was huge not only to the career but also to the researcher’s financial health. Thus, the researcher
immediately came up with a definitive plan and adhered to it strictly. The researcher also requested a week’s time off work to speed up the work. The researcher later realised that it was a great idea because had the researcher not asked for days off, the interview guide would not have been completed on time before the pilot interview.

During the pilot interview, the researcher was nervous because it was a new endeavour for the researcher. As the researcher conducted more interviews, the researcher experienced a dramatic shift in feelings, from being nervous to being excited to discover novel insights from the panel of experienced interviewees. The researcher discovered that after each interview, the researcher would gain new knowledge and it quickly became an active learning journey. After conducting a few interviews with the hotel managers, it swiftly became evident to the researcher that all the interviewees possess strong leadership qualities. However, what struck the researcher most was the contingency leadership model developed by Hersey and Blanchard (1982) shown by one of the managers. The researcher could relate that to a prior module the researcher had taken during the MBA course. It was suggested that there is no single leadership style that fits all. This has sparked the curiosity of the researcher and subsequently, the researcher did further reading on contingency leadership. As a result, the researcher was enlightened because the researcher could now see that managers need to adapt their leadership style to suit the maturity of the followers. The researcher found out that if the maturity of the followers was low, then a leader should guide them more and vice versa. The most significant takeaway was the researcher became increasingly confident and the researcher could adjust the style of speech to suit different interviewees.

During the research journey, the researcher was questioned by a few participants including the research supervisor, Dr. Angela Wright, on why the researcher chose the topic of ‘smart and green’ hotels which was not related to the researcher’s line of work. The researcher pondered and answered that tourism and hospitality industry had always been the researcher’s area of interest. If given a choice again, would the researcher change the topic to something that was more related to the researcher’s expertise? Upon deeper reflection, the researcher did not regret choosing this topic because the researcher would like to venture into the hospitality industry in the future, therefore, the researcher would not have changed the research thesis topic. The Covid-19 pandemic had caused an additional layer of complexity to this study because the hospitality industry was decimated, and the researcher had a hard time trying to recruit research participants. The researcher, research supervisor and research participants had to adapt to the
new norm which was to conduct all activities virtually via Zoom and Microsoft Teams due to various mobility and social restrictions imposed by the Irish government. Initially the researcher felt disadvantaged by the pandemic. However, in hindsight, the researcher realised that continuous adaptation to the current working climate was an extremely important skill. The researcher had learnt that it was imperative to always adapt and change as and when needed. Otherwise, the researcher could miss a lot of opportunities due to the lack of flexibility. The systematic approach adopted for this research thesis has trained the researcher to be very structured in many ways. The whole journey of the research from desk research to collecting primary data and subsequently validating it, had allowed the researcher to gain valuable insights on how an academic research was performed. The researcher had a better understanding after this research journey on how to analyse the validity and reliability of any research studies and not to trust any unvalidated studies, especially the non-peer reviewed ones. The researcher managed to develop critical thinking skills from this research because in many instances during the research journey, the researcher needed to think outside the box to find solutions and recommendations. Having experienced this, the researcher would encourage others to embark on a research journey because the learnings gained were very impactful to the researcher’s life.

In conclusion, the researcher learned that writing a thesis was time-consuming but very fulfilling once completed. The researcher found the process was enjoyable but extremely tedious. It became increasingly obvious that there were many areas of improvement to this research journey. The researcher would like to improve on time management skill as it would assist the researcher to better utilize unproductive time. The researcher could also have started to prepare for the thesis report earlier to account for unexpected delays in collecting primary data. Essentially, the most crucial lesson learnt in this process was the structured approach and how the researcher has adopted the systematic way of doing things going forward. On reflection, the researcher believed that this research thesis was generally successful largely due to the researcher’s ability to gain nuanced insights from the primary and secondary research done throughout the journey. Besides the significant impact from the Covid-19 pandemic, the major pitfall would have mainly pertained to the lack of time. If the researcher had more time, the researcher would like to spend it reading up additional literatures with regards to ‘smart and green’ hotels.
Appendix 4: Participant Demographics

Participant 1 (Pilot Interview): Barry O’ Flynn, Deputy General Manager of Carrigaline Court Hotel

Participant 2: Patrick Shields, General Manager of Cliff House Hotel

Participant 3: John Burchill, Operations Manager of Hayfield Manor Hotel

Participant 4: Finbarr Collins, Food and Beverage Manager of Adare Manor Hotel

Participant 5: Seamus Crotty, General Manager of Sheen Falls Lodge

Participant 6: Adele Walsh, Accommodation Manager of Cliff at Lyons

Participant 7: John Whelan, Deputy General Manager of Stauntons on the Green Dublin

Participant 8: Aaron Mansworth, Managing Director of Trigon Hotels & Management Committee of Irish Hotel Federation (IHF)

Participant 9: Shane Dineen, Planning and Environment Manager at Fáilte Ireland

Participant 10: Weldon Mather, Head of Accommodation & Operations Development at Fáilte Ireland
## Appendix 5: Glossary of Terms

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<td>AI</td>
<td>Artificial Intelligence</td>
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<td>AR</td>
<td>Augmented Reality</td>
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<td>BMS</td>
<td>Building Management System</td>
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<td>BREEAM</td>
<td>Building Research Establishment Environmental Assessment Method&lt;br&gt;BREEAM is the world's leading sustainability assessment method for planning projects, infrastructure and buildings</td>
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<tr>
<td>CRM</td>
<td>Customer Relationship Management</td>
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<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<tr>
<td>Energy Star</td>
<td>U.S. Government-backed programme for energy efficiency</td>
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<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>ESG</td>
<td>Environmental, Social, and Corporate Governance</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>EUR</td>
<td>Euro Currency</td>
</tr>
<tr>
<td>GDS</td>
<td>Global Distribution System</td>
</tr>
<tr>
<td>Green Globe</td>
<td>A certification of structured assessment of the sustainability performance of travel and tourism businesses and the respective suppliers</td>
</tr>
<tr>
<td>Green Seal</td>
<td>Global non-profit organization that pioneered the ecolabeling movement</td>
</tr>
<tr>
<td>GSE</td>
<td>Green Service Encounter</td>
</tr>
<tr>
<td>GSTC</td>
<td>Global Sustainable Tourism Council</td>
</tr>
<tr>
<td>IDeaS</td>
<td>Integrated Decisions and Systems</td>
</tr>
<tr>
<td>IoT</td>
<td>Internet of Things</td>
</tr>
<tr>
<td>LED</td>
<td>Light Emitting Diode</td>
</tr>
<tr>
<td>LEED</td>
<td>Leadership in Energy and Environmental Design</td>
</tr>
<tr>
<td>LQA</td>
<td>Leading Quality Assurance</td>
</tr>
<tr>
<td>NFC</td>
<td>Near-Field Communication</td>
</tr>
<tr>
<td>OTA</td>
<td>Online Travel Agency</td>
</tr>
<tr>
<td>PIP</td>
<td>Property Improvement Programme</td>
</tr>
<tr>
<td>QR</td>
<td>Quick Response</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
</tr>
<tr>
<td>U.S.</td>
<td>The United State of America</td>
</tr>
<tr>
<td>VR</td>
<td>Virtual Reality</td>
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