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Measurements of Sustainability Performance in Hotels

Case Study – InterContinental and the Green Key Certification

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Abstract

This work project's individual parts present an overview of sustainability certifications used by hotels from different brands worldwide, their motivations, and sustainability indicators as well as tools to measure these indicators. Moreover, best practices in hotel operations and their implementation are discussed. Lastly, the influence that green practices have on guests' behavior when choosing a hotel is explored. The case study is based on this research and stresses the importance of sustainability certifications in the hotel industry. It explores the topic of such certifications for a five-star luxury hotel, the InterContinental Lisbon, identifies the most suitable certification for this hotel, and gives recommendations for its achievement.

Keywords: Sustainability, InterContinental, Lisbon, Green Key, Portugal, Certifications, Ecolabels, Best Practices, Hotel Operations, IHG, Bookings, Hotels, Accommodation Providers

### 1. Introduction

Due to the outbreak of COVID-19 in 2020 we have seen a big swift in companie's perception across the industries on the ESG problems (Michelson 2021). Suddenly the businesses had to battle with changing conditions created by not only the governments and their restrictions, but also with customer's behavior, that was adopted to a new limitation caused by pandemic. Another reason for companies to focus on sustainability is the climate change problems. As a planet is becoming warmer every year, it is essential to forestall this threat otherwise the climate might change the living conditions drastically and with that also the business conditions across the globe. This problem is known for a while now, therefore the companies are already incorporating new policies on how to run their operations in compliance with environmental, social and governance problems (ESG). It is also demanded by the governments and institutions already and we can see a big effort from all the stakeholders to participate on this matter and they are committing themselves to achieve a net zero operations (UN 2022).

In the beginning of 2022, the new impulse towards speeding up the process towards the sustainable business operations occurred. The tensions between Ukraine and Russia that started with annexation of Krym in 2014 catapulted into the war on 20.2.2022. It was started by the president Vladimír Putin (Kirby 2022). This disaster caused not only a problem for Ukraine and Russia itself, but also for other countries in this world. It had the greatest impact on the states of the European Union. Specifically, countries that are dependent on commodities from Russia and Ukraine. The main commodities that are essential for every country and are produced in the Russia is gas and oil. Some of the countries are heavily dependent on those two sources of energy and especially on the supply from Russia due to the lack of their own resources and other suppliers (IEA 2022). As a result of this conflict, the prices of gas and oil increased to the inadequate values. Because of that, the inflation has also increased, as these commodities are

essential not only for heating the households and powering the cars, but also for manufacturing (Stevens 2022).

All the events that were mentioned above accelerated the transformation of businesses towards the sustainability. In order to achieve that, it is important to create new technologies and practices, but it is also imperative to learn and take the best practices that are already across the industries to become more sustainable. In this part we are going to focus on the best sustainable ESG practices in the hospitality industry, more precisely on those that are already applied in the hotel industry.

## 2. Literature Review

As sustainability is becoming more important than ever, we can find a lot of research that is up to date. The researchers update their findings every year based on the data consumption of every industry. Therefore, governments are changing their policies based on those findings. Thus, we can assume that even the best practices are adjusting and developing accordingly to the actual policies. One of the best examples is biodegradable single-use cutlery. These were made to replace the plastic single-use cutlery (Reeves 2019). Also, the best practices are enhanced by the creation of new technologies and innovations of the ones that are in use. These facts are taken into account when selecting the resources for the review.

As the master thesis is centered around the hotel industry, the primary source of our information will be the ESG hotel reports. The best example of how the ESG report should be done is by the three biggest hotel companies: Marriott International Inc., Hilton Worldwide Holdings Inc., and InterContinental Hotels Group PLC. It should be reminded that these companies have multiple different brands in their portfolio.

At the end of 2022, the biggest hotel company is Marriott International Inc., with over 8000 properties across 139 countries. With this amount of hotels, the impact of this company on ESG is enormous. Therefore, the company has set sustainable policies to transform its

operations. All the information regarding their ESG progress is displayed in their "SERVE 360"report, which is published annually. In the report, you can find their set goals and policies towards sustainability and their implemented or created practices. Marriott has divided them into four main topics: 1) Nature Our World, 2) Sustain Responsible Operation, 3) Sustain Responsible Operations, and 4) Welcome All and Advance Human Rights. In each one of them, the company describes their efforts toward sustainability. For example, they are helping homeless people by donating food, planting trees across forests in the U.S., implementing solar panels, low-flow toilets, showerheads and etc. As for the overall quality of the report, it can be graded as an excellent example of how it should be done. There is all the relevant information that the ESG should have.

Another detailed report is made by Hilton company. It is called "Travel with Purpose "and it is divided simply into four main chapters: 1) ESG Strategy, 2) Environmental impact, 3) Social Impact, 4) Governance. In those chapters, the company not only presents its strategy and goals to become carbon net zero, but also their best sustainable practices, which were implemented in the hotels around the world (Hilton 2022). In comparison with Marriott's report, the overall quality is on the same level and therefore it can be also used as a good source of information for best sustainable practices.

The third largest hotel company that has a big impact on consumption is Intercontinental. In their "On a journey towards a better future "report can be found the same type of information that appears in the previously mentioned reports, but in comparison with those there are far less information about their best practices, and also the structure of the report is weak. Instead of creating three ESG chapters, the Intercontinental putted it in two chapters: 1) Our approach to responsible business and 2) Journey to Tomorrow. Therefore, it is sometimes difficult to orientate in the report. All the above-mentioned reports are a high-quality source of information in terms of content. In each one, we can not only find the company's

goals and strategy, but also their best sustainable practices. It might seem that companies should keep these practices as a secret, but when we compare the implemented practices from the reports, we can conclude that they are very similar or completely identical. Therefore, the reports are very similar in terms of content. In order not to be only positive, it must be stated that even though the reports are full of enriching information, most of the best practices are not described in detail. Therefore, if someone wants to apply some best practices, they must do additional research on the given practice. An example could be solar panels. Even though they are repeatedly mentioned in the reports, it is not possible to find out who helped the hotels to install them or what brand they use.

### 3.  Methodology

One of the goals of the work project is to be able to provide resourceful information to obtain the Green Key certification. To be able to achieve that, there are a lot of requirements that must be met. These requirements are centred around sustainability, to be precise, on the environmental, social and governance problems (ESG). However, The Green Key organization divided them furthermore into more specific topics, to be exact, 13 of them:

 1) Staff Involvement, 2) Guest Information, 3) Water management, 4) Washing and cleaning management, 5) Waste management, 6) Energy efficiency, 7) Food and beverage, 8) Indoor environment, 9) Green areas, 10) CSR, 11) Administration, 12) Green activities (Green Key 2022).

In each of these areas, there are several requirements that the hotel must fulfil. Criteria marked with (I) are imperative criteria that must be fulfilled to be eligible for Green Key. Other measures are marked with (G); these guideline criteria must be fulfilled gradually (Green Key 2022). Therefore, to find the practices that can fulfil the requirements, the following research question was set: "*What are the best sustainable practices that can be used to obtain the Green*

*Key certification?"*. This question will help when searching for information from ESG reports mentioned in the "Literature review" chapter. It is also necessary to mention that this part of the work focuses only on the most intriguing and essential Green Key certification requirements. Therefore "Key findings" chapter will contain only the best sustainable practices that are already implemented across the hotels from InterContinental, Hilton and Marriott company.

## 4. Key Findings

### 4.1. Staff Involvement

One of the most important things companies must do is to train their staff. Nowadays, in many companies, you can find a training application like Workday to help with that matter (Workday 2022). Therefore, even in hospitality companies, you can find interesting programs. One of the best ones is the IHG Mylearning by InterContinental. It is available to all staff members, and there are many e-learning modules focusing on various topics. The company have developed Hotel Energy Reduction Opportunities (HERO) Toolkit. This toolkit reviews a hotel's existing energy infrastructure and based on that; it recommends measures to drive further efficiencies. Furthermore, it can be used as a learning tool for energy consumption (InterContinental 2022).

Another interesting tool is called Hilton University. Team members of Hilton company have access to over 25,000 courses covering a wide variety of topics. Additionally, they have an opportunity to develop their leadership skills and careers through the Lead@Hilton framework that features internal leaders-teaching leaders videos as well as content from best-in-class partners such as Cornell and Harvard. Also, according to their report, they are the first company in the industry to partner with Guild Education to provide the staff with debt-free continuing education opportunities. That means the employees will be able to get college degrees, professional certifications and more (Hilton 2022).

The Marriott's report shows that the company developed multiple tools and programs such as the Digital Learning Zone, TakeCare Grow, Marriott Development Academy and the Talent Development Inventory to educate and help the employees. You can find resources that include teambuilding activities, tools designed to build an inclusive and inspired community, modules to upskill or reskill, language skills, leadership and much more. The most crucial learning site is the Digital Learning Zone (DLZ); it personalizes and simplifies the identification and assignment of training by region, brand, and associate role. The system is available in 16 languages and provides functional-based training based on the department like sales, front-of-house, engineering, food and beverage etc. Also, you can find there are a lot of modules on ESG (Marriott 2022).

### 4.2.    Environmental Management

Nowadays, most big companies have implemented a sustainability policy in their operations. Plans are laid out in those policies for consumption to reach net zero. This is primarily driven by governments and institutions that are developing consumption goals, which companies are following by developing future strategies. ESG is the main focus of these strategies. Therefore, it involves both reducing consumption and improving the social and corporate governance of the companies.

The Hilton and InterContinental companies have set their first goals to be met in 2030. Both businesses aim to cut their water and waste consumption in half. They also want to move toward a future of net zero emissions and reduce portfolio emissions. Social strategies are the following component. Both companies intend to promote responsible, inclusive behaviour throughout their value chain operations. They also want to create opportunities not only for their employees but also for the communities around them. Finally, they would like to contribute to developing governmental travel policies. To support the travel and tourism sector, they want to establish strategic alliances. Marriott also desires all these goals, but instead of

setting long-term goals, the company has set its sights on 2025. Their current status, including whether they are on track to meet their goals or are behind schedule, is detailed in their report. This tracking system was also implemented in Hilton's reports; however, the InterContinental report lacks this information about their current status (InterContinental 2022; Hilton 2022; Marriott 2022).

### 4.3.    Guest Information

As the companies have a lot of different brands and locations, it is hard to monitor all the practices regarding guest information. Based on the data from the reports, all three companies are trying to educate their guests on sustainability and collect their feedback through surveys. They are also addressing the questions related to their ESG programs. They are all trying to promote sustainability information visibility for their travel managers, business travellers and leisure guests. More specified informations are not included in the reports (InterContinental 2022; Hilton 2022; Marriott 2022).

### 4.4.    Water Management

All the companies set their goals to reduce their water usage. It is essential to value resources and avoid wasting them. All businesses keep track of their use to accomplish that. For a better overview, monthly tracking is required by the Green Key organization (Green Key 2022). They can clearly identify which departments need to reduce their usage in order to meet the goals by tracking consumption.

One of the best practices to reduce water usage is the implementation of WaterSense-certified faucets and shower heads that use at least 20 % less water. This practice is used by InterContinental company in the American region and helps reduce water usage by decreasing water pressure. The Marriott hotel also installed low-flow toilets and showerheads in their properties (InterContinental 2022; Marriott 2022).

In terms of recycling the water, the Marriott is investing in alternative water resources, including using recycled water for landscaping, cooling tower make-up water, first wash laundry and flushing. For example, their hotel, The St. Regis in Mallorca, installed a water system to recycle the water from showers, sinks and bathtubs in the hotel's guest rooms (Marriott 2022).
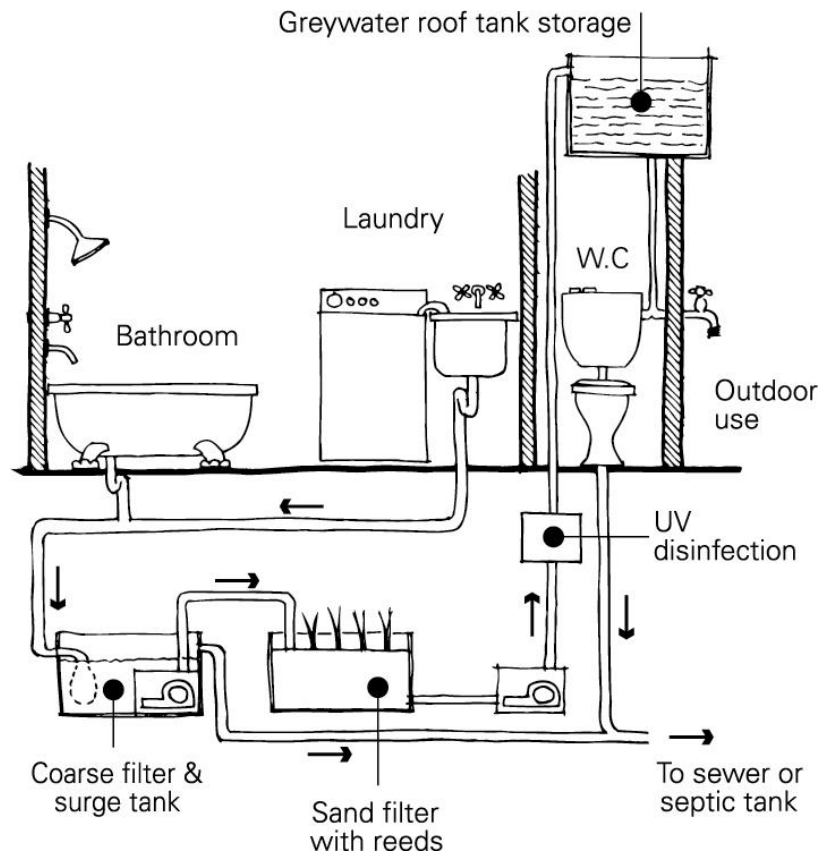


**Figure 1 – Waste water reuse (YourHome 2022)**

### 4.5. Waste

The replacement of single-use plastics represents one of the significant waste management challenges. Even if you claim that there are single-use biodegradable options, you still need to produce them, so the process might not be net zero. The single-use toiletries in the hotel are the main issue and the InterContinental are replacing them by refillable bottles that are attached to the sinks and showers. By that practice they were able to reduce the use of plastic by 850 tonnes in the American region alone. All Marriott and Hilton hotels are gradually adopting this method

too. When fully implemented across all of Marriott, it is anticipated to prevent the annual disposal of 500 million tiny bottles (Marriott 2022).

Another implemented practice is soap recycling, and the Hilton company was the first hotel brand to make it a brand standard. Through this practice, 1.6 million bars were donated to those in need in 2021, which diverted over 175,000 pounds from landfill (Hilton 2022).

### 4.6.    Energy

Energy is the most prominent topic when it comes to sustainability. All the heat and power are still powered by gas and oil, which creates $CO_2$ when burned. It is a big challenge to replace them; not everybody can manage it. In hotel companies, the energy is mainly used to heat or cool the building and its rooms. The primary energy sources in most buildings are still gas and electricity supplied by third-party companies.

To prevent from creation of $CO_2$, the Marriott company aims to source a minimum of 30 % of its overall electricity from renewable energy by 2025. The best example of their doings is their Tribute Portfolio Hotel in Cartagena, which installed solar photovoltaic panels on the hotel's rooftop in 2020. Another example is The Ritz Carlton, Turks & Caicos hotel, which also implemented the solar PV system on their property's rooftop in 2020 (Marriott 2022).

Additionally, Hilton company began project development to install solar panels on the rooftops of their selected American properties. But instead of installing solar panels in all properties, they are buying electricity from renewable sources through their energy procurement services contract in the U.S. Another best practice they are executing is the purchase of carbon credits through their partners. That means they are investing in a sustainability project in exchange for carbon credit. One of them is the wind energy project in the Indian state of Rajasthan. This project will provide a renewable source of electricity to the Indian grid. Moreover, it benefits surrounding local communities by providing employment and

boosting education and clean water. We can assume that it is impossible to install solar panels or buy renewable energy on many buildings. Therefore, the Hilton company is trying to buy these carbon credits to fulfil its sustainability obligation (Hilton 2022).

The InterContinental company, in 2021 switched to buying renewable electricity for its UK offices and managed hotel estate. According to the company, not all the markets they operate in are deregulated, and even in those that are, their ability to access renewable energy at affordable prices varies widely. In 2021, they started a cooperation with global energy specialists to identify vital geographical regions where renewable energy offers the most potential to their hotel. It means that installing renewable energy sources like solar panels heavily depends on many factors. One of them is also the ownership of the buildings, most of them are not owned by the company, and therefore the investment in building new energy source for the building should be thoroughly analysed (InterContinental 2022)



**Figure 2 – Solar panels (Rooftopsolarza 2014)**

### 4.7.    Washing and Cleaning Management

As for the washing and cleaning management, there is no information in the hotel companies' reports. We can assume that this process varies depending on the brand. The Green Key

certification requires the establishment to implement the information in the rooms informing guests about the routine regarding the change of sheets and towels. They want the hotel to clean the rooms upon request only to reduce the environmental footprint. Nowadays, in many hotels, we can find a door card that can be used to stop the cleaning procedure, but if you are not going to hang it, the staff will clean your room. Also, there is a requirement to use at least eco-labelled products (Green Key 2022).

### 4.8.    Food and Beverage

One of the essential services in the hotel is undoubtedly food and beverage. The Green Key organization demands the applicants purchase at least five types of organic, eco-labelled, fair trade or locally produced products. Furthermore, it is required from them to implement a vegetarian/ vegan alternative menu and takes initiatives to reduce the level of food waste.

In terms of best practices, InterContinental company is dealing with food waste by supporting food banks and food provision charities in 44 countries. Some of the examples are No Kid Hungry in the US and Trussell Trust in the UK. In addition, they support the European Food banks Federation and the Global FoodBanking Network. Due to these activities, they could donate more than 2,000 kg of unused food to local communities. Last year they also launched a partnership in the US with the Goodr organization. They provide technology to make it quick and simple to pick up expired food from hotels and restaurants and donate them to local non-profit organizations (InterContinental 2022).

When it comes to sourcing, Hilton and Marriott are pioneers in comparison with InterContinental. The Marriott company set the goal to source 50% locally produce items by 2025. They plan to establish sourcing guidance to fulfil this goal. For example, the JW Marriott Cancun Resort & SPA sources corn from local plants in the Peninsula de Yucatan region. Through this action, the hotel can check the quality of their product and support the local economy (Marriott 2022).

Moreover, Hilton hotels are keen on sourcing. For example, the Conrad Koh Samui hotel launched a farm to provide a wide range of organic herbs and vegetables for their bars and restaurants. Through this practice, they could recycle organic resources and conserve landfill space. In addition, according to them, they were able to learn eco-friendly farming techniques and offer meaningful guest engagement activities for young and seasoned travellers (Hilton 2022).

## 4.9.    CSR

Corporate social responsibility is fundamental in the operations of every company. It is essential to not only provide for the employees and guests of the hotel but also help the other stakeholders, particularly the communities around the company.

Marriott company has multiple programs that help youth, refugees, veterans, people with disabilities and many more. For youth, the company partnered with The Global Travel & Tourism Partnership to help hundreds of thousands of young people in secondary schools and universities around the globe to start a career in travel and tourism. Due to this action, Marriott helped to train more than 1,800 teachers across 15 countries in 4,000 schools. Over 740,000 were granted help.

The Marriott has already helped over 182 refugees and is a top employer due to its partnership with International Rescue Committee (IRC). The IRC helps individuals to survive and recover their lives in the U.S. Also, the company is assisting U.S. military veterans by not only hiring them but also by providing them room nights in cooperation with the Fischer House Foundation's Hotels for Heroes to undergo surgery in the U.S. Lastly; the company also helps people with disabilities in partnership with Bridges from School to Work. Due to this program, for over 30 years, they supported skills development, training and job placement for young people with disabilities (Marriott 2022).

Hilton company also has several initiatives to benefit the community. They call it "Pathway Programs" and they partner with racial and social justice organizations, university scholarship programs, and referral initiatives. They also partnered with Hispanic-serving institutions (HSIs), historically Black colleges and universities (HBCUs) and multicultural, LGTBQ+ and disability-focused organizations.

One example of a partnership is with Morris Brown College (HBCU) in Atlanta, where they developed and flagged Hilton property and training complex to help build a new hospitality management program so the students can gain knowledge and experience in the hospitality industry. For U.S. military veterans, "Operation: Military" was founded in 2013 and helped hire more than 35,000 veteran family members. For people with disability, the company partnered with a U.S. organization to create 'Project Research' to help people earn job skills and find employment. Over 150 program graduates have already completed full-time work at Hilton hotels. Lastly, the company joined the coalition for Afghan refugees to help them build new lives in the U.S (Hilton 2022).

The InterContinental company has also a lot of programs to help communities around them. According to them, their employees are helping with their skills, expertise, and passion to approx. 30 million people. They created a "Giving for Good" month, which is a month where all the employees are encouraged to volunteer. Due to this, last year, there were over 260,000 volunteering hours to communities, causes and charities by more than 40,000 InterContinental employees. For example, they donated food, painted houses for the homeless in Scotland, donated blood in Egypt, cleaned up roadsides in Ecuador etc (InterContinental 2022).

To help build a more equitable future, the company partnered with U.S. non-profit JAG to create an inspiring project called "L.O.V.E." In this project, the organization asked students to identify iniquities in their communities and provide a solution to start a positive change (InterContinental 2022).

For young people in the world, InterContinental made a partnership with global NGO Junior Achievement (JA) Worldwide to help young people to gain skills to kick-start their careers. In 2021 through this program, the company hosted a global competition for high school students to develop sustainable solutions for the hotel (InterContinental 2022).

### 5. Risks and Recommendations for Implementation

When implementing the best sustainable practices into hotel operations, it is imperative to be aware of risks that might occur in the process. These risks might be internal or external, and they can be divided into six areas like in the PESTEL analysis:

1) Political,

2) Economical,

3) Social,

4) Environmental,

5) Technological,

6) Legal (LexisNexis 2022).

To mitigate those risks, it is essential to find them first. Every company might have different risks when implementing the same practice due to the other characteristics of the company or the hotel building. Therefore, it is hard to make generic recommendations, and every establishment should conduct proper due diligence on internal and external factors influencing the desired practice.

### 6. Conclusion and Future Outlook

Since 2020, many companies have become more interested in sustainability than ever before. This phenomenon was caused by events such as the COVID-19 pandemic and the war in Ukraine. Companies suddenly had to change their thinking due to unstable conditions that were caused by changes in people's behavior as well as inflation that was caused by the war. This

does not particularly benefit hotel companies that depend on guests and their behavior. They are also dependent on energy prices, which have been expensive lately, and these two factors weigh heavily on them. So, in order to be able to deal with this, they not only have to predict the behavior of their guests, but also have to predict the development of other factors such as energy prices, laws regarding hotels, war in Ukraine etc. To be able to mitigate these problems, the hotel companies should try to implement the best sustainable practices to become independent from many factors. One of them are definitely the energies. By creating own source of energy, the company can not only be independent, but it can also save money in the long run.

So, based on all the gained information, it can be stated that companies do not intend to become sustainable just because of the regulations made by states and many other organizations. They want to become sustainable also in order to be able to deal with constantly changing conditions. To achieve this, they must implement the best practices that are already in use, but they should also not forget to innovate their own and also to create new practices. So, we can probably expect to see solar panels or heat pumps on many hotels in the future. Furthermore, we will very much expect that the minimum amount of paper will be used in the hotels and that everything will be recycled. This is just a hint of what we can expect in the coming years, not only in the hotel industry, but across sectors.

## 1. Introduction

People's travel habits have changed dramatically over the last decades and especially since the pandemic. Technology has long been revolutionizing industries, customers' expectations are increasing, and climate change as well as resource shortages have led to increasing awareness for the topic of sustainability. More and more businesses are realizing their responsibility to act sustainably and adapted their operations and routines to cause as little harm as possible to their local environment and stakeholders. With legal requirements, pressure from employees and guests' awareness for such efforts growing, a lot of hotels are getting their sustainability work and initiatives validated and made publicly visible through certificates. A project with four master's students was brought into being to assist InterContinental Lisbon (IC Lisbon) before and during the application process for the Green Key, a well-known international hotel sustainability certification (see Executive Summary in the appendices).

The work at hand illustrates the status quo of IC Lisbon's current efforts in the area of sustainability and describes and evaluates the tools and measures in place today (Chapter 2). With the tourism industry still recovering from the pandemic, IC Lisbon tasked itself with an exciting, yet complex challenge as described in Chapter 3. This work was created to support the hotel during its endeavor and explores a number of aspects (Chapter 4): Its aim is to inform about the characteristics of the chosen certification program, the Green Key, so that benefits can be leveraged, and potential disadvantages accounted for. Moreover, through comparison with other hotels and their initiatives as well as elaborate research on guests' perspectives, best sustainable practices were explored, and recommendations built. The overall purpose of this work is to facilitate and expedite the achievement of the Green Key for IC Lisbon. Key findings and recommendations are summarized in Chapter 5.

## 2. About InterContinental Lisbon

### 2.1. The Hotel

InterContinental Lisbon is a five-star hotel that falls under the category of luxury and is located among the most cosmopolitan and busiest European cities in the world, Lisbon. It belongs to the prestigious hotel brand, InterContinental Hotels & Resorts, and is owned by one of the world's largest hospitality companies, InterContinental Hotels Group (IHG). The company originates from the UK and currently owns 17 different hotel brands with over 6,061 hotel properties around the world including 888,000 rooms (Au 2022; InterContinental Hotels Group PLC 2022). As of 2022, InterContinental Hotels & Resorts manages at least 209 hotel properties operated in 67 countries (Au 2022). The majority of these properties belongs to the luxury category and offers excellent customer service along with a wide variety of exquisite, luxurious experiences.

IC Lisbon is the second largest Portuguese hotel under InterContinental Hotels & Resorts and opened its doors to the public in 2014 (InterContinental Lisbon 2022). There are two more properties in Cascais and Oporto, making up a total of three InterContinental hotels operated in mainland Portugal. IC Lisbon is conveniently located in the city center which attracts thousands of tourists from all over the world and has breathtaking views from each guestroom, overlooking Praça do Marquês de Pombal and Parque Eduardo VII. Many fashion stores, restaurants, bars and coffee shops are located within a short walk from the hotel.

The hotel has 331 guestrooms along with 14 rooms for business meetings and group events (Conference Hotel Group 2022). All guestrooms and suites have been fully renovated in 2019. In total, there are 225 single rooms, 106 double rooms, and 17 suites (Cvent Supplier Network 2022; InterContinental Lisbon 2022). The size of all suites ranges from 43 to 157 m$^2$ whereas the size of guestrooms is between 34 and 70 m$^2$ (InterContinental Lisbon 2022). The rates of the guestrooms and suites vary depending on season and demand. IC Lisbon's high

season includes the months of May, June, September and October whereas January to March, July, August and December are off-season months (Conference Hotel Group 2022). The normal rate for a single room with breakfast is between €214 and €504 per night; a double room costs between €226 and €543 per night. The rates for suites range from €486 to €1,098 per night.



**Figure 1. The InterContinental Lisbon (IHG 2022).**     **Figure 2. Hotel Room (Meetings In Portugal 2022).**

The property offers free access to Internet all over the entire building, laundry service, 24-hour room service and reception, babysitting and pet services, transfer shuttles from and to the airport, luggage storage, concierge, valet parking, a parking garage, and gym (InterContinental 2022).

There is a restaurant on-site called Akla where guests can try a wide variety of local and international dishes prepared by Chef Eddy Melo; the normal rate for a single person is €16.50 and €29 for a brunch on Sundays. Uptown Bar is a cosmopolitan bar with live music and a large drinks selection (InterContinental Lisbon 2022). An International Club Lounge is reserved only for exclusive guests that benefit from the services of personalized check-in and check-out times, special delicious breakfast, the business center, a private meeting room for up to ten people and a happy hour with drinks and appetizers (InterContinental Lisbon 2022).

### 2.2.    The Team

Thoughts and actions around the topic of sustainability are present in all departments and areas of the hotels. In fact, at IC Lisbon, management believes it is a team job to create operations as sustainable as possible. Eventually, physical changes around the property as well as changed

routines will affect all employees working there. Therefore, the responsibility is shared between several different department heads, forming IC Lisbon's six-person core team. With decades of combined experience in the industry, all six are well aware of the trends that are currently disrupting hospitality and the expectations they need to meet to keep their hotel competitive.

Vítor is the Human Resources (HR) Manager of both InterContinental Lisbon and Crowne Plaza Porto. He has been working at the hotel for more than seven years and is mainly responsible for making sure that everyone in the workplace maintains a great work-life balance, ensuring that every employee is rewarded for his or her hard work and receives a compensation bonus, as well as recruiting and selecting ideal candidates for specific job roles. José is the hotel's Chief Engineer and has been working there for six years. He ensures that all operations within the hotel property are working properly, holds meetings with the maintenance staff to discuss the status of maintenance issues, conducts inspections around the property to guarantee that the premises are safe for guests, and measures sustainability indicators on the Green Engage Platform. This year, Elisário got promoted to taking over the job of Head of Security, Recruitment & Development (Lopes 2022). His role consists of managing the security around the premises of the hotel property as well as adopting inclusive practices of diversity in the hotel and recruiting the right employees for the training programs (Lopes 2022). Artur has been the Rooms Division Director for eight years. His responsibilities include supervising the front office and reception teams to facilitate the check-in and check-out processes, and checking on whether all rooms of the hotel are not only neat but also clean to be ready for use before a new guest checks in. Pierre is the Food & Beverage (F&B) Manager and mostly in charge of offering high-quality food and drinks to the guests, making sure all employees of the F&B department comply with important safety rules, checking the food inventory on a regular basis, and making menus stand out in order to retain guests. Maarten is the Cluster General Manager of both InterContinental Lisbon and Cascais-Estoril and has been working with the brand for a year.

His main role is to make sure that all services provided at the hotel are up to guests' anticipated needs and to check whether all operations of both hotels run smoothly to guarantee the experience for each guest is pleasant and enjoyable throughout their stay.

## 2.3.    Sustainability Efforts

Around the six-person core team, IC Lisbon currently assembles a Green Engage Team, consisting of 21 staff members from all departments. Together with the hotel manager, this group holds regular meetings to discuss environmental matters, keep the staff informed of new changes and environmental initiatives as well as to hear new suggestions on sustainable practices from the staff. In 2021, IHG introduced its ten-year sustainability action plan called "Journey to Tomorrow" which advises people to travel responsibly and hotels to deliver "True Hospitality for Good" to all guests and employees (InterContinental Hotels Group PLC 2021). This action plan highlights the hotel's long-term sustainability ambitions and actions as well as its commitment to being a responsible business in the long-term. In order to increase awareness on environmental issues and environmental protection initiatives, the hotel encourages relevant stakeholders, namely ANP-WWF and local government authorities, to get involved in promoting the environmentally friendly practices as well as safeguarding important historical sites. The hotel also has a code of conduct where all staff members must abide by its regulations and standards. The following tools are currently in use:

- *"IHGMyLearning"* is an online platform for staff members where they have access to resources and learning tools regarding environmental issues.

- *"Green Engage"* is the main tool that enables the hotel to measure and keep track of sustainability indicators and set target reduction goals for the respective year. As of now, the hotel calculates the amount of carbon emissions, the amounts of energy and water consumption, as well as total waste generated on a monthly and annual basis.

- The corridor of the staff area on the ground floor, internally called *"Heart of House",* displays signage on environmental and sustainability initiatives to remind staff members of the importance of minimizing water and energy usage as well as avoiding the use of paper and plastic water bottles.

- *"Colleague Heartbeat"* is an engagement survey that requires staff members to give feedback on the environmental performance of the hotel.

- The hotel also uses "*Infraspeak",* a platform that manages water maintenance for regular inspections on leaks from the showers and dripping taps.

### 2.3.1. Environmental and Economic Level of Sustainability – Water

To prevent excessive water consumption, all hand showers of each guestroom from the model "Radiance Select S" do not exceed nine liters of water per minute and the taps from the brand "Hansgrohe" do not exceed eight liters of water per minute either. Water sensors are installed in every bathroom of the property and so are the grease traps for the kitchen. The hotel property is connected to a sewage system and does not have any domestic dishwasher or laundry machine on its premises. A water risk assessment was carried out by an external company in 2015. The hotel does not yet have water meters installed in areas with high water consumption, namely the kitchen.

### 2.3.2. Environmental and Economic Level of Sustainability – Waste

The hotel's waste segregation system includes the following categories: paper, cardboard, glass, metal, food waste, and cooking oil. Instructions on how to sort waste correctly are clearly signaled and easy to read for both members of staff and guests. Single-use tableware products are used only for take-aways. Fruits, vegetables, and fish are delivered in reusable plastic boxes. The hotel does not yet have a food composter to convert food waste into soil for gardening purposes, but all eatable leftovers are collected by Refood Association. Moreover, the hotel uses the DOCMX program to reduce the use of paper in all its facilities and operations.

### 2.3.3.  Environmental and Economic Level of Sustainability – Energy

Heating, ventilation and AC (HVAC) systems are controlled by Siemens Desigo CC BMS. More than 90% of light bulbs in every area of the property are LED bulbs. Grease filters are cleaned four times a year whereas HVAC systems are cleaned once a year. The refrigerators and fridge countertops are defrosted only if there are issues occurring. The heating and cooling temperatures in every guestroom and meeting room are controlled by BMS Fidelius. To minimize energy consumption, timers are used for controlling outside lighting. All windows of the property are energy efficient with double gazing and 3M film to minimize heat transfer. The hotel carried out an external energy audit in 2017. This audit helped the hotel identify the specific areas of its property that had substantial increases in energy consumed and actions were suggested to reduce the use of energy in these areas. The hotel should continuously look for ways to save energy and could additionally consider renewable resources, for example, by installing solar panels. This would substantially decrease spending on electricity.

### 2.3.4.  Social Level of Sustainability

Regulations regarding the areas of health, labor, safety and environment are strictly followed by the hotel which must naturally be compliant with local and international legislation. Child labor is strictly forbidden, and the hotel must abide by the IHG standards and local law. All disabled people, guests and staff members, can ask for special requests on-site and have access to all public areas of the building. The hotel ensures that its HR policies are transparent and treats every employee equally with respect and dignity. The hotel fully supports animal welfare guidelines and a social community activity named "Plantar uma Árvore Association" to help and promote nature conservation activities. Activities in other areas such as diversity, wellness, philanthropy or volunteerism, for example, could be considered in the future.

### 3. The Challenge: Certifications

Amid the ongoing pandemic, tourism rebounds tremendously, being the most accelerated sector and the biggest revenue income source for Portugal. As of July 2022, Portugal had recorded nearly 1.8 million tourists in comparison with only 1.78 million in July 2019, representing a +1.1% growth since the pandemic (Y-Axis 2022). Despite the Portuguese tourism sector having a strong total GDP of 15% prior to the pandemic, Portugal experienced the highest projected GDP growth at 6.5% for the summer of 2022 being the only European country to ever achieve this rate (ECO News 2022; Y-Axis 2022). According to the World Travel & Tourism Council (2022), the tourism sector in Portugal is anticipated to grow at an average rate of 3.4% annually and will contribute to a total GDP of 16.2% by the end of 2022. These figures demonstrate that the country and its tourism sector are experiencing a strong recovery from the pandemic and support the idea of investing in marketing and sustainability, for example in the form of a certification pursuit.

With the tourism sector booming for years, concerns about the environmental impacts of the hotel business have surged. These impacts include the consumption of enormous amounts of water and energy, production of ever more waste and the dramatic increase of carbon emissions every year. Therefore, hotels all over the world increasingly started to take action and effectively developed sustainable practices to significantly decrease their detrimental environmental impact. To acknowledge their sustainability efforts and especially their desire to do no harm to our species and planet, an increasing number of hotels have applied for and been awarded a sustainability certification.

A few of the most renowned sustainability certifications used by hotels all over the world are Green Key, Green Globe, BREEAM, EarthCheck and Travelife. Around 3,700 hotel properties from 60 countries have been awarded the Green Key Certification (Green Key 2022). More than 500 hotel properties across 80 countries have become members of Green Globe,

1,500 hotel properties in 50 countries are recognized by Travelife, and EarthCheck awarded over 1,300 hotel properties from more than 60 countries (Bensaude Hotels Collection 2022; Green Globe 2022; Memmo Baleeira Hotel 2022). According to BREEAM (2022) and the statistical data collected from its online platform, 85 hotel properties across 13 countries have achieved the BREEAM Certification. In comparison to other countries around the world, Portugal has a rather low rate of awarded hotel properties with the above-mentioned sustainability certifications. As can be seen in Table 1, only 3.9% of all Portuguese hotels hold a Green Key Certification, 0.2% of hotels are Green Globe members, 3.6% of hotels are certified by Travelife and 4.7% of hotels have the BREEAM Certification.

| Certifications | No. of Hotels Worldwide | No. of Hotels in Portugal | Percentage |
|---|---|---|---|
| Green Key | 3,700 | 145 | *3.9%* |
| Green Globe | 500 | 1 | *0.2%* |
| Travelife | 1,500 | 54 | *3.6%* |
| BREEAM | 85 | 4 | *4.7%* |

**Table 1. Portuguese Certified Hotels Compared to Certified Hotels Worldwide (Own Work)**

The city of Lisbon always had and still has a strong vision for sustainability long-term and is determined to better position itself as a green city among European cities. Even though Lisbon is not the greenest in comparison to other cities within Europe, it has been awarded "European Green Capital 2020", proving its commitment, significant progress, and future promise (European Commission 2020). Lisbon's sustainability journey began a long time ago during the financial crisis and the city has since invested in numerous green projects and policies which motivated countless European cities to follow its leadership and share its sustainable practices. Amongst its most prominent achievements are the following: it achieved a 42% of carbon emissions reduction in 2014 and additional 28% of energy conservation in 2017; it managed to effectively reduce water consumed by 50% in 2018 and increased the use of public transportation by 20% in 2019 (European Commission 2020). Following these achievements, Lisbon has set new targets to further improve its sustainable image such as reducing carbon

emissions by 60% by 2030; reusing 20% of water for irrigation purposes by 2030; and reducing

water consumption by 20% by 2025 (European Commission 2020).

With tourism contributing immensely to the Portuguese economy, especially in Lisbon, accommodation providers are asked to support these governmental efforts. Interestingly, despite Lisbon having a global reputation for being a sustainable city, only 6.9% of hotels based in Lisbon hold a Green Key Certification (Green Key 2022). In comparison, 34.5% of the hotels located on Madeira, for example, are Green Key holders (see Table 2). However, of all certified hotels in the Lisbon Metropolitan Area, most chose the Green Key (55.6%) as can be seen in Table 3 (Green Key 2022). The Green Key seems to be the preferred certificate for local hotels.

| Region | Green Key | Pct. |
|---|---|---|
| Azores | 5 | 3.4% |
| Madeira | 50 | 34.5% |
| North | 22 | 15.2% |
| Central | 19 | 13.1% |
| Lisbon City Center | 10 | 6.9% |
| Outside Lisbon | 15 | 10.3% |
| Alentejo | 5 | 3.4% |
| Algarve | 19 | 13.1% |
| Total | 145 | |

| Certifications | Lisbon City Center | Pct. |
|---|---|---|
| Green Key | 10 | 55.6% |
| Green Globe | 1 | 5.6% |
| EarthCheck | 2 | 11.1% |
| Travelife | 1 | 5.6% |
| BREEAM | 4 | 22.2% |
| Total | 18 | |

**Table 2. Total Number of Green Key Hotels in Portugal (Green Key 2022)**       **Table 3. Total Certified Hotels in Lisbon (Own Work)**

Six four-star luxury hotels and three five-star upscale hotels are located within a short distance of IC Lisbon. Among those hotels, several are Green Key certified, namely Lisboa Marriott Hotel, Sheraton Lisboa Hotel Spa and DoubleTree by Hilton Lisbon Fontana Park, all represented by the world's largest international hotel chains, thus having a great global reputation in the hospitality industry. Hotel Tivoli Avenida Liberdade Lisboa and Pestana Lisboa Vintage are certified by both BREEAM and Green Key. Competing with these well-known and perfectly located sustainable hotel brands may be challenging for IC Lisbon – especially considering guests' perception of price as well as their personal awareness of their own responsibility regarding sustainable travel.

Consumers' travel habits have changed drastically since the beginning of the pandemic and their awareness for and incorporation of sustainable practices into their daily lives is ever increasing. People are becoming more conscious of responsible travel and choose more green options than ever when it comes to travelling and accommodation. Booking.com conducted an extensive online survey on sustainability travel in February 2022 for which data had been gathered from 30,314 global travelers from over 30 countries (Booking.com 2022). Among the most important findings were the following: 81% of respondents believe that traveling more sustainably is important for them, 53% of them would rather choose a sustainable hotel property with a mission centered on respecting the environment and adding value to local communities, 38% of them search for sustainability efforts of a hotel before making a reservation, 57% of them would be content if they stayed at a hotel property recognized with a sustainable certification, and 54% of them would even filter for hotel properties with a sustainable certification on Booking.com (Booking.com 2022). Based on these findings, too, it seems most advantageous for a hotel to be certified as a sustainable property nowadays.

The pressure to operate in a sustainable way and to make one's efforts visible by getting them approved through a certifying organization is clearly increasing. However, at the moment, IC Lisbon does not yet have any sustainability certification to acknowledge its efforts. To stay competitive in a city like Lisbon, surrounded by strong brands with great reputation, this will need to change. Vítor and his team at IC Lisbon are tasked with a challenging mission.

Their main question is "Which certification should IC Lisbon try to achieve and how can they best achieve it?". Based on previous research findings, this case study explores a potential certification of a five-star luxury hotel in Lisbon, the IC Lisbon. The sustainability certifications that are most awarded to hotels around the world were identified and characterized and their relevance for IC Lisbon evaluated (see Certification Overview in the attachments). The following chapter will explore the most suitable certification option for IC Lisbon, identify

the strengths and weaknesses of the indicators and tools IC Lisbon uses to measure its sustainability progress, in particular the Green Engage Platform, describe the process of identifying the current practices that do not fulfill the Green Key requirements and, more importantly, determine how the best practices should be implemented in order for the hotel to become certified. Moreover, this next part's aim is to outline to what extent a sustainability certification may influence guests' buying behavior when choosing a hotel property to stay at. This case study's research sub-questions are as follows:

1. Which certification is most suitable for IC Lisbon and what should the hotel know about it?

2. What are the potential advantages and downsides of the sustainability tool IC Lisbon currently uses?

3. What best practices should be applied to meet the terms to obtain the certifications?

4. How can IC Lisbon expect a certification to influence guests' decision-making process and maximize the positive effect it can have on bookings?

## 4. Teaching Notes

### 4.1. The Green Key – A SWOT Analysis

IC Lisbon would like to receive an internationally recognized certification that satisfies the expectations of its own local management and the corporate offices of IHG. Given there are no well-established national certificates in Portugal while a number of global certifications have become quite popular with hotels, especially in the Lisbon area, the following was concluded: On its mission to meet expectations and keep up with local competitors, the Green Key was found to be the most suitable option for IC Lisbon. Other InterContinental hotels have already had good experiences with the Green Key, it is recommended by several large hotel chains (e.g., Radisson) and, given IC Lisbon is already quite knowledgeable in the field of sustainability, not least because of the Green Engage Platform and other initiatives of its head offices, the brand and the hotel itself, the hotel is considered well prepared to go through Green Key's high-quality, demanding, and complex process.

The Green Key eco-label was established in 1994 by the Association of the Hotel, Restaurant and Tourism Industry in Denmark, the Outdoor Council and Association of Danish Tourism Executives (Green Key 2022). Since 2014, tourism businesses in all countries are eligible to apply and two years later, the certificate became approved by the Global Sustainable Tourism Council (GSTC). The past decades have allowed the organization to gain experience, industry knowledge, and awareness for national conditions as well as a high profile worldwide. The following SWOT analysis will characterize the certification in more detail. Table 1 provides an overview of its key aspects:

| Strengths | Weaknesses |
|---|---|
| • Most geographically widespread tourism ecolabel in the world<br>• Recognition by GSTC, UNWTO, UNEP<br>• Extensive choice of voluntary criteria<br>• High credibility<br>• National operators in 40 countries<br>• Non-profit and non-governmental nature | • Validity of 12 months only<br>• No consideration of business-specific circumstances<br>• No proof of repeated business or attraction of new business<br>• Lack of quality of marketing opportunities |

| | |
|---|---|
| • Comparably low participation costs<br>• Promotional opportunities<br>• Long-lasting experience | • Tedious and inflexible application and renewal processes<br>• Significant presence in Portugal already |
| **Opportunities** | **Threats** |
| • Different levels of certification<br>• Regular updates of criteria catalogue<br>• Candidate for future quality indicator besides hotel star rating | • Strong competition and new entrants<br>• Confusion of applicants and guests<br>• Overcrowding<br>• Low awareness among travelers |

**Table 4. SWOT Analysis of Green Key (Own Work)**

### 4.1.1.  Strengths

The Green Key operates in 65 countries and, thus, is one of the most geographically widespread tourism ecolabels in the world (Green Key 2022; see Figure 3). It has been awarded to around 3,500 sites worldwide (2,700 of them are accommodation providers); the countries holding the highest number of certificates are European: Netherlands (673), France (614), and Greece (512) (Green Key 2022). In Portugal, 225 businesses have been certified to date. One of its main competitors, the Green Globe, currently only has around 500 members (Green Globe 2022).
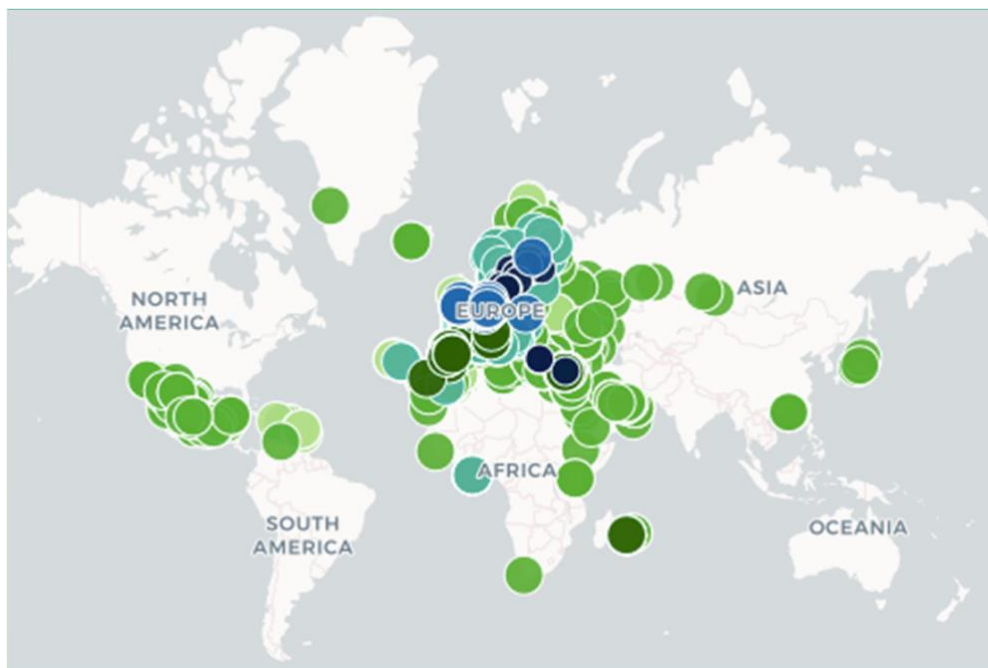


**Figure 3. Distribution of Green Key Certified Tourism Establishments Worldwide (Green Key 2015).**

A survey conducted by the organization a few years ago showed that its international recognition and branding are, in fact, some of the strongest points of the program (Green Key 2015). Over time, the program was recognized by the GSTC, UNWTO and UNEP.

30

The current criteria catalogue includes imperative as well as guideline criteria with compliance for the latter being voluntary to a large extent. Businesses do not immediately have to fulfill all of the requirements, and, in fact, most managers that responded to the survey in 2015, found the criteria of all 13 areas manageable or easy to comply with (Green Key 2015). Nevertheless, the organization is perceived to have high standards and the juries are respected, consisting of representatives from ministries, NGOs, and industry professionals. Compliance is verified by well-trained Green Key auditors and third-party auditors, ensuring high credibility. The Green Key currently has national operators in 40 countries, so many of the businesses going through its process can receive support in their own language and their contacts are familiar with the national legislation, customs, and practices (Green Key 2022). The non-profit and non-governmental nature of the backing organization, the Foundation for Environmental Education, provides for additional credibility and is highly appreciated by many hotels looking to get certified (Jaecker 2022).

Because of the organization's non-profit nature, participation costs are comparably low. For example, while hotels of more than 300 rooms in Portugal only pay €1,000 annually for the Green Key, membership fees of the Green Globe are at €4,500 (Green Globe 2022; Green Key 2022). The Green Key fee includes several different marketing tools and opportunities. A certified business is promoted on social media and its website, through a newsletter, and has the chance to participate in the best practice competition (Green Key 2022). Moreover, awarded establishments are added to a database for different Online Travel Agencies and will receive the eco-labeled symbol from Google when looked up online – again an aspect appreciated by certified hotels (Jaecker 2022). Green Key's long-lasting experience is also among its major strengths and quality features. Its continuously growing knowledge base is shared with applicants and certified businesses on a regular basis. For the above-mentioned reasons and

many more, 97.3% of the surveyed managers stated they will continue with the Green Key scheme (Green Key 2015).

### 4.1.2. Weaknesses

Some certified businesses complain about the certificate being valid for 12 months only. Given the process of achieving all requirements usually takes time, many businesses can only hold the certified status for a few months each year (Jaecker 2022). Moreover, although the organization and national operators try to take into account national circumstances and country-specific realities, they cannot consider every aspect of a business' situation. Businesses that are situated on islands, for example, are still expected to comply with the same criteria as all others, even though some are harder for them to satisfy.

Some managers also shared that the certification was not followed by creation of repeated business, improvement in the relationship with the local community, and attraction of new customers (Green Key 2015). With other programs, hotels may be able to experience these benefits much sooner. In addition, although there are quite a few marketing opportunities, their quality was criticized; 10% of the survey respondents said the visibility of the label (online/media) was very poor (Green Key 2015). In fact, Green Key site managers felt that, in general, marketing and visibility could be improved – "they are missing publicity on a national and international level" one of them claimed (Green Key 2015, 11). A comparably high number of respondents was dissatisfied with the promotional tools such as brochures and flags and the communication tools such as press releases or videos (Green Key 2015). The procedure was also taken issue with. 11.8% of the respondents and some of the hotels interviewed for the individual work project mentioned that the application and renewal process is too long, too complex, too bureaucratic, and not flexible enough (Green Key 2015; Jaecker 2022). However, weaknesses relating to marketing and visibility can be compensated by increased promotional efforts of the awarded hotels.

Although global recognition and Green Key's wealth of experience represent strong benefits, it is a little unfortunate that with the Green Key certification IC Lisbon will not be able to state they are the first or only hotel in Portugal or Lisbon that has been awarded this particular certificate. With other programs and certificates this may be the case and would make for great marketing material.

### 4.1.3. Opportunities

A great opportunity of the Green Key Program is that a business can work its way up different levels, Bronze, Silver, and Gold, and that way, set itself apart from competitors. Its current catalogue includes 13 categories and 130 criteria – compliance will help hotels prepare for the future and regular revision of the catalogue ensures a hotel keeps up with new trends, expectations and standards without having to do extensive research itself. Moreover, the recent release of new criteria and explanatory notes (2021) indicates that the effects of the pandemic were already taken into account. Other organizations have not yet updated their standards.

The research that this work is based on has shown that certificates of global reach and recognition, such as the Green Key, have one major advantage over other, less known certifications. Issuing organizations are hopeful that proof of sustainable business such as certifications will become quality displays to an extent where they may complement hotel star rating, thus enhancing visibility and desirability of such a label. If this were to come true, global standards and certifications are more likely to get chosen for display.

### 4.1.4. Threats

One of the largest threats that the Green Key currently faces is fierce and increasing competition (e.g., Green Globe, Travelife, EarthCheck). It is already difficult for hotels to keep an overview over the different schemes and programs and to select the right one for themselves. Especially the certifications which cover a broad set of areas may be challenged by other general labels

and programs. Just as much as existing competition, new entrants launched on the global market pose a threat to the success of the Green Key and certified hotels.

Overcrowding is another risk that Green Key pursuers will have to consider. With more than 3,500 businesses being certified already, at some point in the future, hotels may be expected to be certified and will not be able to distinguish themselves from others by achieving the Green Key. The fact that the certificate is available everywhere in the world and that holiday parks, restaurants, attractions, and other tourism establishments are also eligible for the Green Key further enhances this risk.

Unfortunately, so far, guests do not seem to be much aware of the Green Key (Green Key 2015). While they may care about the hotel having a label and the measures that they can observe themselves, all non-visible requirements a hotel needs to fulfill in order to get the Green Key, will not positively influence their booking decisions. Although the segment of eco-friendly travelers is growing, it may be a while until it is large enough and there is potential it may grow a hotel's business. Expected financial benefits because of water and energy savings, may also not get achieved as planned. Therefore, return on investment is not yet certain nor foreseeable.

### 4.2.    Green Engage Platform – A SWOT Analysis

To get certified by Green Key, it is crucial to measure environmental indicators and evaluate the hotel's sustainability progress against the annual forecast targets of each indicator. Among these important indicators are reduction of carbon emissions, water consumption, energy consumption, and waste management. IC Lisbon uses Green Engage as its main tool for measuring sustainability indicators. Another tool that is used by the hotel, although not on a daily basis, is HERO which was launched by IHG this year. With this tool the hotel not only collects data of energy consumption, the tool also recommends the most suitable energy efficiency measures and compares the hotel's energy consumption performance with other

hotels of the chain. To evaluate the key strengths and weaknesses of IC Lisbon's main existing

sustainability tool, a SWOT analysis was conducted. An overview is given in Table 5.

| Strengths | Weaknesses |
|---|---|
| <ul><li>Used by over 6,000 hotel properties</li><li>Strong reputation of international scale</li><li>Enables IC Lisbon to manage its impact on the environment and set projected targets for each year</li><li>Access to annual reports</li><li>Data collection on sustainability indicators</li><li>Carbon, energy, waste and water are listed on the platform with available data provided</li></ul> | <ul><li>Exclusive for all global hotels and resorts under the company IHG</li><li>Only four indicators are shown on platform and measured per month and per year</li><li>Lack of data availability on measuring each indicator per guest, per guestroom, per guestroom per day and per conference room area per hour</li><li>Missing data of waste generation for 2019 and carbon consumption for 2022</li><li>Only the projected target of energy for 2022 was displayed on the platform</li><li>Missing information regarding other hotels' statuses on the platform</li></ul> |
| Opportunities | Threats |
| <ul><li>Complete overview of all measurements</li><li>Easy data comparison</li><li>Consumption data inserted by the hotel into the platform</li><li>Comprehensive list of 200 innovative green solutions shown on the platform</li></ul> | <ul><li>Emerging competitive tools</li><li>Unforeseen technological outages</li></ul> |

**Table 5. SWOT Analysis of Green Engage Platform (Own Work)**

### 4.2.1. Strengths

Green Engage is an online environmental management system owned by IHG. Over 6,000 hotel

properties from 100 different countries currently use this tool to measure and manage their

impact on the environment. The tool has gained a strong reputation of international scale that

promises hotels to make their services offer greener, run their daily operations in a more

efficient and eco-friendly way, choose the best sustainability actions for their facilities, and

increase the loyalty of their customer base interested in responsible travel.

Another advantageous strength is that Green Engage enables IC Lisbon to manage its

impact related to environment by giving access to detailed annual reports generated on the

platform and allowing the hotel to see how well it performed with regards to reducing the

consumption for each environmental sustainability indicator. Using this tool, the hotel can

collect data on sustainability indicators and evaluate their performance on a monthly and annual basis. Thus, the hotel can choose any year to generate and analyze the report. The indicators, namely carbon, energy, waste, and water, are listed on the platform with respective data from the current and previous years. The hotel currently measures indicators per month and per year such as the amount of carbon emissions, the amount of energy being consumed, the amount of water being consumed, the total amount of waste produced, and the amount of waste diverted from landfills. All these indicators demonstrated to be objective, measurable and reliable with accessible data.

Besides obtaining a complete report for each year and collecting data from the platform, the hotel can set concrete projected targets, expressed as percentages, aimed at reducing the consumption of each indicator available on that platform for each year and keep track of their performance in order to attain those targets. Given the fact that global hotels contribute significantly to a large amount of waste generated every single year as well as massive amounts of both energy and water being consumed and a tremendous increase in carbon emissions, setting realistic targets would certainly aid the hotel in achieving its sustainability goals in the long-term, adopt more sustainable practices in all its facilities and areas of the hotel, and develop new innovative sustainable solutions to achieve a positive contribution to the people and planet. One competitive tool that does not include the target-setting feature is Hilton's "LightStay", for example. Hilton designed this environmental and social management system so all Hilton hotels can measure and keep track of their sustainability performance regularly, generate reports regarding their performance metrics, measure the social impact based on volunteer work and charities, and compare their performance against other hotels of the same brand (Stories From Hilton 2019; Hilton 2020). However, "LightStay" does not allow hotels to set targets for further improvement.

### 4.2.2. Weaknesses

Green Engage is exclusively for all hotels and resorts across the globe under the company IHG. IC Lisbon uses it as the main and preferred tool for measuring its sustainability indicators and keeping track of its sustainability performance over time. Unfortunately, the four main indicators listed on the platform are measured only per month and per year. Thus, the tool lacks the data to measure each indicator per guest, per guestroom, per guestroom per day and per conference room area per hour. These would have allowed for deeper insights and comparisons, for example, of how much is consumed per guest and per guestroom with the consumption of each indicator per month.

Energy consumption, general waste and waste diverted from landfills, water consumption, and carbon emissions are the most common indicators seen on the platform. But other recommended indicators, such as the amount of renewable energy sources per year, the amount of food waste per month and per year, the amount of food being composted per month and per year, the amount of reused water for other purposes, and the waste recycling rate per year, are not clearly shown nor measured on the platform.

Regarding the waste generation data, the hotel was able to measure the total waste generated as well as the waste diverted from landfills per month and per year. However, the tool did not indicate the composition of waste per category (e.g., food waste, paper, glass, metal, cardboard, and cooking oil) which could be relevant for further analyses. The data of waste generation for 2019 and carbon consumption for 2022 were not available on the platform. As a result, no comparison with the waste performance of 2022 and carbon performance of 2019 was possible. As stated by José during an interview, the annual projected targets to reduce consumption of each indicator should have been displayed on the platform, but only the target of energy reduction for 2022 was shown, -0.3% respectively. The annual forecast targets for carbon emissions, waste and water had not been explicitly displayed on the platform as well.

This led to the hotel being unable to see whether its performance is on the track to a better future or not, in other words, if it is contributing positively to the environment and community.

Another weakness is that some hotels have not yet uploaded their status regarding their sustainability performance for the current year. Some were unable to attain their own targets or are still missing their consumption data for one or more months. Since there is no severe punishment for uploading data at a later stage, the platform will never force those hotels to submit their status information into that platform. With the incomplete information on the platform from the hotels' side, it would be more difficult to compare IC Lisbon's sustainability performance with other hotels from IHG. Moreover, as the tool is IHG specific, comparison with hotels from other brands is also difficult.

### 4.2.3. Opportunities

As previously said, the hotel has access to information on data consumption of each indicator per month and per year. The platform provides a complete overview of the current and forecasted reduction targets of each indicator for each year, the variation change expressed as percentage per month from the previous year to the actual year, and the year-to-date variance percentage that goes from the beginning of the current year to the date at the latest. Moreover, it shows the total usage amount of each indicator per year, the total consumption of each indicator per month for the respective year, the maximum usage amount target of each indicator for the specific year, and the consumption amount target of each indicator per month. When generating a report for each indicator of any particular year, the data provided on the platform are shown as simple bar charts which gives the hotel the opportunity to easily compare the performance of each indicator between the current month with the previous month and the monthly usage target as well as assess the progress made from the previous year to the current year. All indicators are measured in their own metric units. The hotel can insert its current

monthly consumption data of each indicator into that platform which would then be used to analyze and evaluate its progress over time.

Moreover, the platform offers the hotel a comprehensive list of innovative green solutions that summarizes realistic actions the hotel can take to be greener and more eco-friendly as well as to reduce its impact on the environment. To be exact, there are 200 solutions in total suggested; the hotel can pick the ones most effective to implement in all areas and facilities of the hotel (Better Buildings n.d.). At least eight areas of hotel operations are covered in those solutions, namely energy, water, site, building envelope, mechanical, operations and processes, materials and products, and waste (Better Buildings n.d.). Great examples of suggestions are to provide all staff members with regular training programs on environmental issues, encourage staff members and guests to use alternative public transportation modes instead of cars, reduce paper use at the reception, and to install leak-detecting water systems and solar panels for the roof of the hotel building. As a result, the platform and its content serve as a guideline for a hotel's actions. Those managing it are always presented with new ideas on how to further improve the hotels' operations and will be able to evaluate efficiently what action and measure will have the greatest effect at a specific point in time.

### 4.2.4. Threats

One of the threats for Green Engage is emerging well-recognized competitive tools with more technological advances that allow the hotel to discover more indicators in further detail and to analyze them more deeply. "Hotel Carbon Measurement Initiative" and "Hotel Water Measurement Initiative", both abbreviated as HCMI and HWMI, would further enable the hotel to indicate how much carbon emissions and water have been consumed per guest, per guestroom per day and per conference room area per hour. These indicators are recommended for the hotel to measure and evaluate its sustainability progress and help to achieve and maintain the Green Key certification. The hotel can also compare its carbon emissions performance with

the average carbon emissions by region utilizing the HCMI tool. Both these tools are internationally recognized; over 24,000 global hotels use the HCMI tool, whereas the HWMI tool is currently used by more than 18,000 hotels across the globe. These figures are much higher than those of Green Engage which is only used by around 6,000 hotels. Other tools, such as the "Hotel Waste Measurement Methodology" and the "Zerowasteometer", would also allow the hotel to compare its waste performance against its main competitors, determine the total annual amount of food waste, and set realistic projected targets for reducing waste for the respective year.

Another possible threat are unforeseen technological outages. Although the hotel has been using Green Engage for more than seven years without any technological issue, unexpected outages could result in internet issues and platform downtime. Whenever there is an internet issue, it becomes more difficult to sign in on the platform to update the hotel's data and it may take some time to fix that issue. If the platform crashes or its server is unavailable at a time, the hotel may be forced to shut down all programs and restart all computers. This could potentially lead to the loss of important data, namely the consumption data, bar charts, reports, and projected targets. To prevent these unplanned outages, it is recommended for the hotel to have a recovery plan in place and for data to be stored in a safe pen drive or a portable hard drive.

### 4.3.    Best Practice Implementation Process

To select the best sustainable practices for IC Lisbon, it is necessary to find out all the information about the Green Key certification. Most of it is displayed online on their website: www.greenkey.global. There you can find not only the requirements for the certification but also all necessary steps that must be considered to achieve the desired results. For each country, the application process might differ. Therefore, the applicant should focus on the procedure

defined for the country where his or her business is located. The general application process

consists of three parts:

1) Sending the application documents,

2) Receiving on-site audits,

3) A decision by an independent entity (third-party verification) (Green Key 2022).

These teaching notes focus on the best practices that should be applied at the hotel to pass the

on-site audit. To understand which action the hotel needs to take, the Green Key organization

created six different categories of establishments which are displayed below:

1) Hotels and hostels,

2) Campsites and holiday parks,

3) Small accommodations (BBs, eco-lodges, eco-farms, etc.),

4) Conference centres,

5) Restaurants,

6) Attractions (museum, visitor/ interpretation centres and theme parks) (Green Key 2022).

IC Lisbon belongs to the first category, hotels and hostels. For these types of establishments,

there are requirements centered around economic, social and governance problems. They are

divided into 13 areas: (1) Staff involvement, (2) Guest information, (3) Water management, (4)

Washing and cleaning management, (5) Waste management, (6) Energy efficiency, (7) Food

and beverage, (8) Indoor environment, (9) Green areas, (10) CSR, (11) Administration, (12)

Green activities.

In each area, numerous requirements must be fulfilled to obtain the certification. The

requirements are also divided into two types: imperative and guideline. This case study focuses

primarily on imperative criteria (I) because they must be met before getting the certification.

Which guideline requirements (G) need to be completed depends on the number of years that a

business is involved in the Green Key program. Since this is the first time IC Lisbon is going

apply for the Green Key, the hotel does not have to focus on all guideline requirements at once, but it should be ready to comply with them in the near future to not lose the certification.

### 4.3.1. Internal Audit

As it is already predefined what must be achieved or met, the applicant should make an internal audit based on that. This means that IC Lisbon should create a custom framework based on the Green Key requirements for a better overview of its current status, improvements to be made (applications of best practices) and final status. For this process, Excel by Microsoft is recommended for ease of use. The table with all the requirements in the application should be like the table in Appendix 17. Moreover, applicants who are more tech savvy can use applications like Trello or Notion for better project management. The reason why the company should analyze its current practices in this way is to be able to clearly identify areas of improvement and take the correct actions necessary for the certification.

### 4.3.2. Framework for Best Practice Implementation

After completion of the internal audit, the establishment should be able to recognize which requirements are not fulfilled by its current practices. The ones that are not currently accepted as fulfillment should be replaced by the practices that will meet the criteria. For the process of selection and implementation of the practice, a new framework based on the factors of the PESTEL analysis was created. Although it is not applied to a specific product or service, it incorporates the same factors as all these dimensions need to be considered before measures are taken. It is used in this case study for the analysis of the best practices and their limitations in the following areas: political, economic, social, technological, environmental and legal. In each area, the internal and external factors are going to be investigated. An example of how this framework could be applied is displayed in Appendix 18.

### 4.3.3. Analysis of the Best Practice

*Political factors*

The first factor to be aware of is the political one. In hotel companies, one of the internal political factors might be brand standards. These internal policies must be followed by all the hotels within the same company's brand in every country they are operating. One of the best examples is the soap bars in the InterContinental hotels. It is a standard that the company's highest executives only can change; therefore, the managers of the hotels might not be in the position to withdraw them from daily usage. Due to this fact, the managers responsible for the best practice implementation have to bear in mind that their actions are limited by and need to respect all internal policies even though the soap bar may not be very sustainable.

In terms of external political factors, various international political agreements like the Parisian one have the greatest influence when it comes to the implementation of sustainability practices (UN 2022). These agreements have a big influence on the government's view of ESG. Thanks to this, they can subsequently create various policies on restrictions or make an incentive in order to achieve the set ESG goals. The best example is electric automotive company Tesla and their use of regulatory credit in the USA, which they can get by selling only electric vehicles. These credits help them in increasing revenues because they can sell them to automotive companies that are not selling electric vehicles (Kharpal 2021). Another example are incentives in the form of subsidies for the purchase of an electric car in France or Germany (Hurst 2022).

*Economic*

Nowadays, almost every company has set as a goal to not only provide a good product or service but, most notably, to be economically sustainable. That means being able to cover all the costs but to also make a profit. In order to be able to do that, every decision that costs money should be thoroughly analyzed first. An example of an important business decision is the investment

in solar panels or heat pumps. Even though the initial investment might seem overwhelming, the outcome of this decision can be very beneficial in the long run. Energy costs can be reduced significantly, and the hotel can become energy self-sufficient. However, first of all, there must be sufficient capital, so this can be considered an internal factor. In terms of external economic factors, there is the price of solar panels, which can increase based on demand, and the hotel should monitor this.

*Social*

The social factor is another crucial aspect of the custom framework. It is clear that every service and product provided by the establishment should be approved by guests. With that being said, the best example might be modern technologies like tablets in the CitizenM hotels that can control the whole room and also be a source of all essential information. They can replace every button in the room and every information card. Thus, implementing such devices can be a more sustainable and practical practice that a lot of guests might welcome. Still, the establishment should analyze and ask their audience before implementing. IC Lisbon guests might not accept it because they differ from CitizenM guests in characteristics like age, lifestyle, and income level. We can assume that there are, for example, older guests at InterContinental hotels and resorts that are not as tech-savvy. This might represent an external social factor that needs to be considered.

In terms of internal factors, the culture of the organization is very important. Therefore, whenever a new practice is implemented at the hotel, every employee should be made aware of it and this practice should also be in line with their values.

*Technological*

The fourth factor is based on technological incentives and innovations. The establishment should be aware of the fact that there is no end to innovations. This means that every best practice implemented today can be outdated even in the matter of few months. That is why

every company wanting a competitive advantage must be actively researching new technologies or best practices. It is not enough to just implement the best solution that is available at present based on the competitor that you are comparing yourself with; it is more important to be continuously invested in a given problem and to get ahead of the competition. One example is online check-in platforms for guests. There are still a lot of hotels without this technology that can help with long lines at the reception. For this technology, the external factor might be a lack of support from application developers for editing language mutations for a given country. Internal limitations arise, for example, through an outdated personal management system (PMS) that does not support the integration of new technologies.

*Environmental*

The fifth aspect is centered around the environment. Every implemented practice should align with changing climate and, therefore, sustainability. For instance, the establishment cannot implement heat pumps or solar panels in an environment where the outcome of this integration would be ineffective. For better imagination of an external factor, it is not adequate to implement solar panels in an environment with no sun for most of the year. Nor should solar panels be built on a building that is not facing the sun.

*Legal*

Lastly, suppose the establishment is going to do a huge reconstruction to implement solar panels. In that case, it is imperative to comply with local legislation and apply for all necessary permits to prevent fines and new renovation attempts later on. This is especially a problem when it comes to construction work. Sometimes it might seem that if you want to install new technologies in your building, you do not have to ask anyone, but that is not the case in most countries. Even though the building is in the company's freehold, in every developed country, it is necessary to obtain building permits to change the disposition of the building and many

changes need to be inspected afterwards. As for legal internal limitations, it is mainly the consent of all important company bodies such as the board.

### 4.4.    Expected Influence of the Green Key on Guests' Booking Behavior

To understand the influence of a certification on guests' decision-making process, multiple studies were conducted (Peiró-Signes et al. 2014; Font 2002; Lamb et al. 2006; Peiró-Signes et al. 2012; Crespo et al. 2018). For mid-priced and luxury hotel guests, it was found they are more willing to pay a premium for a hotel's green practices than economy hotel guests (Kang et al. 2012). Considering IC Lisbon belongs to the luxury category, these findings are very reassuring. However, to understand what IC Lisbon can expect from the Green Key Certification in terms of guest engagement and possible adherence, specific factors should be taken into account. Firstly, the main factor is the average profile of an IC Lisbon guest. Considering the hotel usually accommodates business and leisure travelers, both within the luxury category, these are the main two segments to be addressed in this study. Especially within the leisure segment, most guests belong to the "Baby Boom" and "X" generations, which is why they will be discussed more deeply. Baby Boomers are those born between 1940 and 1964, while Generation X apprehends those born from 1965 to 1980 (Wan and Abdullah 2015). Moreover, one of the reasons IC Lisbon wishes to obtain the Green Key Certification is so they can more easily establish partnerships with corporate travel departments, particularly with airline companies, which often demand hotels to be certified before they book hotel rooms for their respective crews.

### 4.4.1.  Business Travelers

Most business travelers represent a company when traveling for work. Those companies, in turn, might have Corporate Social Responsibility policies that demand the hotel in which its employees stay to operate within these policies. In that sense, a certification, in this case the Green Key, acts as a stamp on how the hotel's corporate values match the organization's values.

As for the business traveler per se, a study on the outlook of business travelers towards a green hotel found that the majority of guests agreed that hotels should promote and are willing to participate in green practices. However, only one fourth of the respondents would pay a premium for green products and has a strong preference for being accommodated in a green hotel (Gaibee 2014). There seems to be, in this segment and according to that study, a certain resistance: although the respondents agree with hotels going green, they are not willing to renounce comfort and luxury.

Moreover, the fact that a business traveler may represent a sustainable company does not necessarily translate to greener behavior as a hotel guest. It has been shown that context plays an important role in influencing pro-environmental behavior (Dodds et al. 2022), meaning business travelers might not have the same sustainable attitude outside the workplace. However, there is contradicting evidence implying that business travelers travel more sustainably than leisure travelers (Dodds et al. 2022). This could be tied to the employer's sustainability policies. Considering the inconsistent evidence, research on business travelers' sustainable behavior is still too limited to allow for precise conclusions. This means it is equally unclear how this segment would respond to green certifications, apart from the existing demand from companies with certain CSR requirements, as mentioned in the paragraph above.

### 4.4.2. Baby Boomers and Generation X

Despite the general assumption that younger generations are more environmentally conscious, studies have shown that sustainability is becoming a common interest across all generations (Ad Age 2020; Ham et al. 2022). Baby Boomers, because of their overall financial capabilities, were found to be "at the heart of green consumption", while Gen X consider themselves now more environmentally aware than they were at a younger age (Coughlin 2018; Ham et al. 2022). Moreover, according to a study on variables affecting hotel customers' eco-friendly decision-making process, older customers have a stronger willingness to pay more for a green hotel (Han

et al. 2009). Baby Boomers, followed by Gen X, have seemingly greater purchase intentions in green products/services, implying that green purchase intention and age have a positive relationship – the older the consumer, the more likely they are to make an environmentally friendly purchase (Ham et al. 2022).  However, that could be, again, explained by the fact that older generations possess a higher budget and are, therefore, able to weaken their intention-behavioral gap. This theory is supported by a study that states that younger generations are, in fact, more knowledgeable regarding sustainability concerns and present a sympathetic mindset in regard to green products, but it does not induce actual purchases due to insufficient financial abilities (Cheung and To 2019; Ham et al. 2022).

Although some researchers found that age-related differences in purchasing behavior and decision-making are true (Evanschitzy and Wunderlich 2006; Han et al. 2011), others show that age, among other variables such as education and income, do not influence customers' environmentally friendly intentions as much as gender and eco-friendly attitudes, for example. Because of conflicting evidence, a study suggests that, in a green consumption context, segmentation by age or generation is not compelling (Ham et al. 2022). That being said, despite these inconsistent findings and considering marketing segmentation principles, IC Lisbon should focus on studying the age/generation variable and how to better reach each of them.

Baby Boomers particularly, are found to be more interdependent and present greater ethical standards, which implies that they have a higher tendency to prioritize social causes over green product utilitarian value (Ham et al. 2022). These findings suggest that successfully reaching these segments and influencing their green purchasing behavior could depend mostly on communicating the green attributes and their emotional benefits, a concept that will be further developed in the following subchapters. Therefore, what this subchapter suggests is that it would be wise for IC Lisbon to adapt their green positioning to the discussed segments, by not only resorting to their empathetic tendency, but also by simplifying information in order to

avoid feelings of confusion and disorientation caused by the numerous terminologies associated with sustainability.

Generation X, although aware of and concerned with environmental issues, is said to be more skeptical of eco-labeled products, which leads to a less active role in regard to purchasing green products and services (Ballantyne and Packer 2013; Wan and Abdullah 2015). A solution on how to better reach and motivate this segment is to communicate evident proof of the efforts associated with the eco-label, in this case the Green Key, a subject that will, once again, be more deeply explained in the subchapters to follow.

As for maximizing the positive effect a certification can have on bookings, the discussed consumer segments should be at the center of a green marketing campaign. This relates to the communication of the awarded Green Key to new potential customers, as well as loyal guests. Considering the latter usually present a higher probability of not only returning, but also spreading the word, a case study found that the intention of making positive recommendations and revisiting a hotel is more likely to exist if the hotel presents a green image (Lee et al. 2010). However, as the results of a study from the University of New Hampshire (Barber 2014) suggest, "green" behavior patterns differ in intensity from one green guest to another, and so each "shade of green consumer" should be addressed with a segmented strategy in order to increase marketing outcomes. The same study highlights that there is still a need for educating guests in terms of the changes they will face: what is beneficial about new, more environmentally friendly practices as opposed to traditional practices. This happens because intention does not always incur behavior, especially purchasing behavior. For five-star luxury hotels, such as IC Lisbon, this is particularly true, since they are faced with the dilemma of trying to establish more sustainable practices and, at the same time, pampering hotel guests with unlimited and luxurious services (Barber and Deale 2014). The following sub-chapters

discuss the intention-behavior gap and how to overcome it, the relevance of eco-labels and the importance of educating the guest.

### i.   Green Positioning: Translating Intention into Behavior

Existing research explored the relationship between green practices, green image, environmental consciousness, and the behavioral intentions of customers in a certified hotel context. It was found that customer perceptions of green practices have a direct positive effect on a hotel's image, which, in turn, positively affects customers' behavior intentions towards certified hotels (Crespo et al. 2018). Moreover, green perceived value also indicates a positive effect on "green trust" and green purchase intentions (Trang et al. 2019; Chen and Chang 2012). However, due to the significant gap between consumers' environmental intention and actual behavior highlighted by many studies, marketing plays an important role in translating one into the other. Considering marketing strategies are divided in three steps - segmentation, targeting, and positioning - and that the first two steps were examined above, this subchapter will discuss the latter.

Considering the greatest challenge for the hotel industry today is to create tangibility from the intangible hotel experience (Kayaman and Arasli 2007; Barber 2014), marketers should appeal to the functional, environmental, and/or emotional benefits of green positioning into hotel operations to create a green hotel image (Barber 2014). Hu (2012) suggests that to direct consumers toward sustainable products, increased information on the offerings and the perceived benefits of choosing these products is critical.

Moreover, the effectiveness of said positioning depends on both functional attributes and emotional benefits (Hartmann et al. 2005; Lee et al. 2010). Functionality alone will not fully secure the green positioning's success, as it is equally possessed by the competition. An emotional-benefit-based approach will be determinant in a green positioning scenario, meaning advertising should appeal to the emotional benefits a guest feels by choosing a greener hotel,

while also proving to them that their decision makes a positive difference in the environment (Lee et al. 2010).

### ii.      The Importance of Eco-labelling

The communication of green practices can often fail in terms of marketing results due to the lack of credibility. As quoted, consumers will look for tangible demonstrations of the hotel's commitment toward green practices (Barber 2014), and eco-labeling allows customers to identify green products, having, therefore, been used by businesses as a marketing tool (Lamb et al. 2006). Although hotels can appropriately communicate their sustainable practices, there can be a certain skepticism from consumers on whether or not they are truly committed to these promises. In that sense, a certification provides credibility, besides serving as a differentiator that leads to enhanced customer awareness (Schubert et al. 2010; Zhang et al. 2012b; Peiró-Signes et al. 2014). It does not only communicate the implementation of green practices, but also, and more importantly, enables consumers to distinguish actual sustainable efforts from "green-washed" products and services (Crespo et al. 2018).

A study on Spanish hotels shows that one expected benefit from an environmental certification, in that case the ISO 14001, is the improvement of sales by providing a third-party sustainability credential (Peiró-Signes et al. 2014), and another research on the same certification found amplified economic performance in certified hotels when compared to non-certified hotels (Peiró-Signes et al. 2012). Indeed, environmental practices are positively related to performance through the mediating effect of higher customer satisfaction and loyalty (Kassinis and Soteriou 2003; Peiró-Signes et al. 2014). Further developing this concept, a study on the relationship between value and green attributes suggests that customers tend to more positively assess a hotel's value if the hotel presents green attributes, since they are related to a higher quality/benefit perception (Manaktola and Jauhari 2007), which contributes to the findings that perceived green image can enhance perceived brand quality and brand reference

(Liu et al. 2014; Crespo et al. 2018), in turn confirming the mediating effect previously mentioned.

Nonetheless, expressing the existence of a certification is not enough to communicate environmental dispositions. The expressive number of eco-labels and pro-environmental terminology can be confusing, which leads to many consumers preferring to ignore them (Font 2002; Lamb et al. 2006). A case study from green hotels in Vietnam suggests that there are two important factors in the development of pro-environmental intentions, which are customer benefit (e.g., sustainable products) and green characteristics (e.g., green landscape and architectural design), the first being ranked the most determinant factor. Therefore, innovating in these two areas can be an effective measure to communicate visible evidence of environmental practices, enabling guests to clearly identify the benefits (Trang et al. 2019). According to the same study, an eco-label represents and authenticates the level of performance of the hotel's sustainable programs, so hoteliers should aim for a high level of green certification and build their green image by communicating their eco-label. Another study adds that environmental labelling works as a compelling instrument in positioning a green product and creating a competitive advantage (Lamb et al. 2006).

### iii.     Educating the Guest

Literature says that sharing information about environmental issues and consequences is considered valuable in developing the guests' knowledge, awareness, positive attitude, and participation in green practices (Fukey et al. 2014). Moreover, the effectiveness of environmental programs depends on the customers' engagement and commitment, thus educating the guest is also a tactic of encouraging them to play a part in green initiatives. While eco-labels help customers identify green businesses, environmental awareness and knowledge justify to consumers the commitments attached to the eco-labels, thus guiding them on their decision-making process, whether that may be choosing a hotel or choosing to engage in a

hotel's green practices. It was found that the higher the consumer's awareness of a product's environmental performance, the more likely they are to buy eco-friendly products (Testa et al. 2015; Doksaeter et al. 2019). Additionally, besides not being aware of the positive aspects of green practices in the hotel industry, customers are frequently unacquainted with the negative consequences a hotel without eco-friendly policies can have on the environment, hence the need for hotels to promote environmental consciousness (Chen and Peng 2012; Crespo et al. 2018).

The lack of information will keep customers indifferent between certified and non-certified hotels, whereas familiarity with environmental issues will provide a reason for the guest to make a more sustainable choice. In that sense, a study suggests hotels should organize events, such as conferences, seminars or contests to better inform their guests regarding sustainability issues (Crespo et al. 2018). Besides, these events could act as platforms to not only reveal these issues, but also make known how the hotel is responding to them, thus promoting their efforts and the certification. By becoming certified, hotels position themselves to the environmentally conscious guest. However, to promote their green image and boost customer intentions and behavior, certified hotels should educate and actively make positioning efforts to persuade the less environmentally conscious market as well (Crespo et al. 2018).

Moreover, if product attributes and product greenness are seemingly independent from each other, consumers tend to choose based on product attributes (Ginsberg and Bloom 2004; Chen and Chang 2012), as they are improbable to compromise on traditional product value and quality for the sake of greenness (Chen and Chang 2012). To avoid this, it is important to make sure the consumer understands that green attributes - in IC Lisbon's case green practices - go hand in hand with the service quality by focusing on both the green and functional attributes. To reinforce what was mentioned in the previous subchapter, although eco-labels are powerful marketing tools, they need to be strategically communicated and followed by reliable, detailed information that guides the customer's purchasing decision (Testa et al. 2015; Doksaeter et al.

2019). There are studies that claim that insufficient or misleading information regarding eco-labels can have a negative impact on the purchasing decision (Kar Yan and Yazdanifard 2014; Doksaeter et al. 2019), as well as too much, too complicated, or unclear information (Doksaeter et al. 2019).

## 5. Conclusions and Recommendations

One major takeaway of the research conducted for this project is that in order to successfully change routines and processes and to create positive, long-lasting effects, a business needs to involve all its employees and several other stakeholder groups. Given the experience of IC Lisbon's core team and the support provided by the Green Engage team, the hotel was found to be well prepared to take on the challenge of applying for and going through the auditing process of the Green Key certification. The hotel's backing by a strong brand and parent company additionally facilitates the undertaking. Sustainability covers a range of aspects of environmental, economic, and social nature as was touched upon in Chapter 2. So far, IC Lisbon has done a great job attending to them, but will need to further expand its efforts to achieve and maintain the Green Key.

This case study explores several different areas and research questions of interest for IC Lisbon. The Green Key was determined to be the most suitable sustainability certification for this hotel. A SWOT analysis revealed a number of benefits, advantages, and opportunities that IC Lisbon is highly recommended to exploit. Some certified businesses criticize a lack of marketing provided by the organization. However, the hotel can well compensate for this lack by promoting the certification and its effort itself. IC Lisbon is advised to launch a green marketing campaign targeting their main customer segments. Communication of the award of the Green Key to all stakeholders, in particular the hotel's current and potential guests, is essential. As awareness of certifications and labels is still low among guests, educating them about the Green Key and what its pursuit entails is necessary in order to achieve expected

positive impacts. Messages should be kept short and simple to not overwhelm those unfamiliar with the vocabulary around sustainability and should include not just proof of said efforts, but also results that were already achieved. They should address guests' emotions and, at the same time, emphasize that the quality of the service provided remains the same or even improves when adapting procedures and facilities to be more sustainable.

Furthermore, to set itself apart from its competition, IC Lisbon may want to consider applying for other certifications that may complement the Green Key and create additional credibility. Given the Green Key is comparably strict and difficult to achieve, getting certified by other organizations should be easier. Another recommendation is to apply early and to follow defined procedures to reapply for the Green Key every year as well as to nominate someone to oversee the process to avoid the certified status lasting only a few months.

A detailed analysis of the current tools used by IC Lisbon to measure and track its sustainable efforts revealed a few shortcomings that the hotel is advised to address. Missing data for the consumption of carbon emissions of 2022 and the total generation of waste of 2019 should be updated and included in future analyses. To get a full overview of the hotel's sustainability performance and to be able to compare it to previous years, the consumption data of each indicator for the remaining months of 2022 need to be registered. Moreover, realistic targets for carbon, waste, and water for this year need to be set and tracked on the platform. The hotel can thereby evaluate and compare its progress per year regarding each of the indicators. Although the Green Engage Platform already provides great insight, the hotel should consider other measurements, too, i.e., measurement of each indicator per guest, per guestroom and per guestroom per day, to generate a complete report of the respective year and receive deeper insights into how much each indicator has been consumed per guest. In order to get a complete overview of the composition of waste per category, the hotel could calculate how much of its waste is made up of metal, glass, paper, cardboard, cooking oil and food waste.

Lastly, to significantly decrease the prices on electricity, innovative ideas regarding the best energy efficiency measures can be checked on HERO.

To successfully determine and implement the best sustainable practices, IC Lisbon should invest some time in analyzing the Green Key requirements. Once the hotel understands the entire application process and criteria, it can focus on analyzing its status quo and currently used practices to see if all conditions for obtaining the certification are met. If the hotel does not meet certain conditions, it should focus on those and find the most suitable sustainable practices to implement. This does not mean that the hotel should find the best solution currently used in the world. It means finding the best solution that IC Lisbon can implement without any limitations based on the analysis of the factors described in the individual part "Best Sustainable Practices in the Hotel Operations".

In the event that the hotel achieves certification, it must not be satisfied with that and should continue to think about innovation and the implementation of new sustainable technologies in the future. The best sustainable practices can not only help the organization save money spent on efforts and achieving the certification but will also contribute to changing the perspective of people on sustainability matters worldwide.

Through working on this project, we learned a lot about one of the most important and pressing themes of our generation: Sustainability. We were able to further develop our knowledge about the hotel industry and the challenges it is currently facing, from retaining talent, to keeping employees engaged, attracting guests and maintaining loyalty. The InterContinental Lisbon is setting an example for a lot of other hotels in many of these areas. We wish its team all the best as they continue to build and follow their sustainability roadmap.

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**D. Appendices**

**Case Study – Executive Summary**

Through elaborate research on a variety of aspects around sustainability certifications, our team built a case study and provided actionable recommendations on how to achieve and maintain an international sustainability certification at the InterContinental Lisbon hotel. Pressured by our global society, current crises, and the competitive hospitality landscape in Lisbon and abroad, the hotel finds itself in need of a widely recognized eco-label that guides its sustainability efforts and serves as strong external signal and proof of its efforts for all stakeholders. More than 60 certifications were reviewed, the Green Key chosen as most suitable and thoroughly analyzed. Four key environmental sustainability indicators were identified, and two progress tracking methods and tools evaluated. To best inform about the implementation of best practices, a framework was developed that includes both the Six Sigma and PESTEL analysis dimensions. Moreover, more than 120 potential guests were surveyed and their perspective on certifications explored. This work informs InterContinental Lisbon of all benefits and risks that come with pursuing certification, characteristics of the Green Key, and tips on how to best achieve and renew it. In addition, the InterContinental Lisbon hotel receives argumentation support for communication with stakeholders, in particular its employees and guests.

### a. List of Appendices – Duc Minh Hoang

## Requirements Checklist – Appendix 17

| | | Status Quo | Improvements | Final Status |
|---|---|---|---|---|
| | **7. ENERGY** | | | |
| 7,1 | Energy use must be registered at least once a month. (I)<br><br>In order for the establishment to reduce its environmental footprint by decreasing its energy consumption and also cut costs, the establishment records its total energy consumption at least once a month. If available, the sources of the energy consumption are indicated. It is encouraged to record the total energy consumption more frequently than once a month, as it will produce more detailed information. The data should be analysed and used actively with the goal of reducing energy consumption. Should any major changes in energy consumption occur (especially in the form of a greater consumption than expected), the establishment has procedures in place to immediately investigate the reason for this difference and to implement corrective actions. During the audit, the minimum of monthly registration of the total energy consumption is presented, as well as information about the standard operating procedure for investigating and potentially correcting sudden and/or major changes in the total energy consumption. | OK = Ducet tracker (every day basis) | | |
| 7,2 | Heating, ventilation, and air-conditioning control systems must be in place. (I)<br><br>To reduce the environmental footprint by lowering energy use and to cut costs, the establishment must have a system in place to control the heating, ventilation, and air-conditioning (HVAC) in the establishment. It can be a centralised automatic or manual computerised system (building management system) for changing or switching off the HVAC system. It can . The control system considers the changes of season and the use or non-use of the different parts of the establishment (guest rooms, conference facilities, restaurant areas, other public areas, etc.). During the audit, the establishment demonstrates the building management system and/or presents the standard operating procedure showing that the HVAC control system is in place. | OK = All systems are controlled by Siemens Desigo CC BMS | | |

**Custom Framework Based on PESTEL Factors – Appendix 18**

| Best Practice | Political | | Economical | | Social | | Technological | | Environmental | | Legal | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Internal | External | Internal | External | Internal | External | Internal | External | Internal | External | Internal | External |
| Solar Panel | Company's policies | Building Law | Budget | Price of the technology | - | Construction noise - neighbours | Technology integration | Possibly outdated technology due to the innovation of solar panels | No space on the establishment premises for integration | Bad weather condition for their usage | Board permission for integration | Building permits |
| Online check-in app | Brand standards - check in at reception | - | Budget | Price of the technology | - | Non tech-savvy guests | Technology integration - PMS system | Lack of support from the application developer | - | - | Board permission for integration | - |
| Tablets for room control | Brand standards - no modern technologies | - | Budget | Price of the technology | Non tech-savvy employeed | Non tech-savvy guests | Technology intergration | - | - | - | Board permission for integration | - |