

Sustainability certificates of hotel properties

Master Thesis submitted in fulfilment of the Degree

Master of Science in Management

Submitted to Gunther Maier

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Vienna, 2 September 2020

AFFIDAVIT

I hereby affirm that this master's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

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ABSTRACT

Sustainability certificates are currently getting more and more popular in the asset class of hotel properties, a niche of the commercial real estate industry. These certificates evaluate the level of properties in a sustainable matter, but does this documentation really have an influence on the long-term effect on the property in terms of sustainability?

More specifically, does a property with a sustainability certificate consume fewer resources than a property without the certificate? Research has shown that the certificates will influence a property on different levels, influence significant changes to the facilities and construction of the property. Hence, this study aims to determine how the certificate will impact the sustainability of hotel properties and it will be questions, why a stakeholder is commissioning the certificate. Major decision makers were asked to contribute their professional opinions on sustainability certificates and how they impact their decision-making.

The results indicate that the certificate and the correlated adaptations to the property does have a significant impact on the property, its resource consumption, which results in an overall more sustainable property. The effect is not only caused by the certificate itself, but by the adjustments, which are made by the owner and developers in order to achieve a certain level of certification. Hence, the background and reason for the certificate play a large role in this context, which influence the impact on the real estate. Bottomline, this topic of sustainable properties and its certificates will ensure that hotel properties are ready for the future.

ACKNOWLEDGEMENTS

First and foremost, thanks to my supervisor Gunther Maier from the department of sustainability, governance and methods, who guided me through my thesis in the past weeks and made it possible to complete my research successfully on this very interesting topic of sustainability certificates and its influence on hotel properties. Also, his background in real estate, where he was recently elected to the vice-president of the European Real Estate Society (ERES), contributed to the success of this study.

Moreover, I would like to thank Reiner Heilmann, former general manager of Hotel Sacher in Vienna and friend, to introduce me in the field of tourism and hospitality at MODUL University in 2015, which established the foundation for my studies and resulted to continue to my master, but also this period is almost at its end.

I would also like to express my gratitude to my current employer and manager, Lukas Hochedlinger, Managing Director Central and Northern Europe at Christie & Co, since he made it possible to step into the world of commercial real estate and taught me on several aspects in this industry. This sets the base for my interest in this topic. Besides that, I am graceful for giving me the opportunity to complete my studies at MODUL University, while I was working for his team at Christie & Co at the same time.

I would also like to acknowledge all contributions, which were provided by several industry leader in real estate and hotel development in Vienna. Due to data protection the individuals and companies will not be mentioned at this stage, but I am sure that all contributors will feel addressed in this part.

Finally, to my caring, loving and supportive girlfriend and the mother of my son, Jana Sabel my deepest gratitude. Your boost and help during a very exciting phase of my life, when times were challenging is very much respected and treasured. It was a great relief to know that you were always there in case support was needed. My heartfelt thanks!

TABLE OF CONTENTS

Affidavit	I
Abstract.....	III
Acknowledgements.....	V
List of Figures	X
List of Abbreviations.....	XI
1 Introduction.....	1
1.1 Problem definition.....	2
1.2 Objective.....	3
2 Literature review	5
2.1 Hotel properties	5
2.2 Market of hotel real estate	6
2.3 Sustainability in general	7
2.4 Sustainability certificates	10
2.4.1 USGBC - U.S. Green Building Council/LEED.....	11
2.4.2 DGNB - Deutsche Gesellschaft für Nachhaltiges Bauen	14
2.4.3 ÖGNI - Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft.....	21
2.5 World Green Building Councils	23
2.6 Sustainability aspects in the hotel asset.....	24
2.7 What is adapted due to the certificate?	24
3 Methodology.....	27
3.1 Research problem	27
3.2 Research approach	28
3.3 Method of data collection	30
3.4 Method analysis	32
3.5 Evaluation of the methodology	33
3.6 Appraisal of the interviews	33
4 Results from the interview	35
4.1 What are the motivations for the commission of the sustainability certificate?	36
4.2 What are the pros and cons of the certification?	39
4.2.1 Negative influences from the certificate	39

4.2.2	Positive influences from the certificate	41
4.3	What is the experience of the certification processes?	43
4.4	What is the effect of the certificate?	43
4.5	How does the certificate influence the resource consumption?	45
5	Discussion of the findings	46
6	Limitations of the findings and future research	48
7	Conclusion	50
8	Bibliography	52
9	Appendices	56
9.1	Appendix 1: Interview guide/interview protocols	56
9.1.1	Interview Guide	56
9.1.2	Interview 1	56
9.1.3	Interview 2	60
9.1.4	Interview 3	64
9.1.5	Interview 4	68
9.1.6	Interview 5	72

LIST OF TABLES

Table 1 - LEED Certification Credit Categories (Rodriguez, 2019).....13

Table 2 - What Benefits Can You Obtain Through a LEED Certification?
(Rodriguez, 2019)14

Table 3 - OVERVIEW OF ALL CRITERIA OF DGNB (DGNB System, n.d.)18

Table 4 - Structure of the research28

LIST OF FIGURES

Figure 1 - hotel transaction volume, Austria (Christie & Co Austria, 2020)	7
Figure 2 - three pillars of sustainability (Chokshi, 2017).....	9
Figure 3 - The environmental impacts of buildings (Zolfani, Pourhossein, Yazdani, & Zavadskas, 2015).....	10
Figure 4 - Who's using LEED? (Caroline Clevenger, 2008)	12
Figure 5 - DGNB certificate awards (DGNB System, n.d.).....	16
Figure 6 - Certification process (DGNB System, n.d.).....	19
Figure 7 - Four Elements for research process (Crotty, 1998).....	30
Figure 8 – Number of certifications from ÖGNI 2010-2019 (Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft, 2020).....	30

LIST OF ABBREVIATIONS

Sale and Lease Back

“A leaseback is an arrangement in which the company that sells an asset can lease back that same asset from the purchaser. With a leaseback—also called a sale-leaseback—the details of the arrangement, such as the lease payments and lease duration, are made immediately after the sale of the asset. In a sale-leaseback transaction, the seller of the asset becomes the lessee and the purchaser becomes the lessor.” (Tradi, 2020)

1 INTRODUCTION

The hotel industry is a large and growing industry around the world, which “saw a growth of 3.9%, outpacing that of the global economy (3.2%)” (Bianchi, n.d.) in the last years. Even though the phase of COVID-19 caused a significant negative impact on the industry (Krishnan, Mann, Seitzman, & Wittkamp, 2020). In the past years, hotels in general became more and more professional as well as attractive for different groups of stakeholders, as investors and international operators, which may generally be observed by the growing number of international brands in the markets, including Austria (Chappell, 2019). As part of the leisure and tourism industry, hotels are part of one of the largest industries worldwide, with a market share of roughly 10% of the worldwide GDP (Lock, 2020). One major part of the overall hotel operation is the property or real estate which the operation occupies and sets the foundation for the business.

The number of new developments in the market are increasing from year to year and sustainability certificates that prove the sustainable impact of the property are also becoming more relevant. An increasing number of developments is often followed by a high demand for the hotels, which consequently leads to higher prices in the market. Once the selling price for hotel properties increases, more and more projects in the market get certified by sustainability certificates, from developers that plan on selling the property during the construction or after a short holding period. This study will therefore evaluate if the certificate does have an influence on the impact of the property or if the certificates just bring up one more selling point for the project.

Certainly, sustainability certificates add value to a project, but also involve high costs and cause adaptations to the project for the different stakeholders. A sustainability certificate may evaluate the sustainable level of the project and real estate. Those valuations are undertaken by different organisations around the world, which have significant different approaches in their valuation strategy (Zolfani, Pourhossein, Yazdani, & Zavadskas, 2015). The origin of the organisation can play an especially big role when it comes to the weight of different aspects of the property. Those might be of social, environmental or economical nature.

This research seeks to examine the impact of sustainability certificates on hotel properties, their market and how the certificates effects the property during operation. Previous research was concentrating on the certificate itself, but in this

case the focus will go even further. Bottomline, the effects of the certificate and the adaptations, which are made to the property due to the certification will be questions.

Sustainability certificate wants to prove that the property is more sustainable compared to other properties, which consequently means that the property for instance uses less resources and has a lower impact on the environment, but is that really the case? It may be questioned that rather the certificates are used as a tool for the owner and developer who might benefit from an increase in value of the property due to the attractiveness, which is proven by the certificate to the hotel.

In terms of methodology, several players in the Viennese market were interviewed and questioned about these circumstances. The focus will be put on the projects certified by ÖGNI, which stands for "Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft", since the organisation openly published the results of the projects and properties, which are certified by their standards. This association is an Austrian based organisation for sustainable real estate industry. Hence, the focus of the organisation refers to Austria and accordingly the focus of the following thesis will be on projects in Austria.

The following text will be structured in a theoretical literature part, an explanation of the methodology and is followed by an empirical part, which is a detailed explanation and summary of the findings. This finding will afterwards be discussed and evaluated, including a discussion of the interview partners. The thesis will be complete with a conclusion, which will briefly summarise the outcome of the study.

1.1 Problem definition

The topic of sustainability is not only a current issue in the hotels industry, but it is a superior subject, which involves the majority of actions of individuals and companies round the world. This subject puts a lot of companies under pressure, in order to maintain the environment and the society as it is and at the same time balance the economic impact. Sustainability is one of a few current mega trends, which engages pretty much every person worldwide (McDonagh & Prothero, 2014). In the case of a hotel asset, this asset class is even more affected by this trend, since the people who interact with the property are frequently changing on a day-to-day basis. Also, the number of people relating to the hotel is fairly high compared to other properties. Therefore, the perspectives from a larger group of

people may be influenced by the level of sustainability that a hotel offers. Also, its impact on the environment may be very significant, since it houses an operating business. Those generally produce and consume more goods than comparable properties.

Therefore, this study will help to evaluate how a hotel property may be operated over the entire lifecycle of the asset in a more sustainable way, especially in a more environmentally friendly way. A tool, which may contribute to the impact on the environment are sustainability certificates, which are currently increasing in the hotel industry, see Figure 8 – Number of certifications from ÖGNI 2010-2019

This study will illuminate the impact on sustainability certificates, and its correlated activities on the resource consumption of a hotel property.

It is very difficult to measure the impact on resources and consequently the sustainability in a quantitative way. Due to a lack of data, the base for this study will be provided from experts. Their knowledge will be collected in personal interviews, which should provide a logical outcome and help to understand the topic. On this basis a conclusion will be formulated.

1.2 Objective

In order to assess the impact of sustainability certificates on hotel assets, the study will start by evaluating how hotel properties may be differentiated to other asset classes, such as office or residential. This is followed by the challenges and specifics of a hotel real estate. Such will be explained in order to provide a basis for the discussion about hotels.

Also, the topic of sustainability will be introduced in detail in order to provide a foundation for the formulated questions. Afterwards, a detailed outlook in the different sustainability certificates, which are available for hotel properties is provided. In this context, the differences between characteristics and the processes of the certificates will also be accessed in order to understand the backgrounds of the document itself. Additionally, an understanding of the organisation will form a basis for discussion. This includes an analysis of the motives of the organisation, which help to understand the different approaches.

Afterwards the local situation in Austria of the quality and regulations regarding sustainability will be described in order to evaluate how the sustainability certificate and its correlated actions may influence the resource consumption of the property during a lifetime of a hotel property.

The expert interviews, the most essential part of this study, will help to understand how sustainability certificates influence the building process and the lifecycle of a hotel asset. The effect will be subsequently evaluated in order to understand whether a certificate actually has a significant impact on the resource consumption of a hotel real estate and how this influence is generated.

Bottomline, the study will conclude if the presence of a sustainability certificate does influence the resource consumption or not.

2 LITERATURE REVIEW

The following chapter will provide a general overview and knowledge on the topic of hotel properties, sustainability in general, sustainability certificates and its impact in the hotel industry. This foundation will help to guide through the study and its findings, which will subsequently lead to a conclusion.

As a starting point into the topic, the history and arguments for hotels and sustainability, will set help to understand how the recent trend is arisen. In this context the findings of other researchers, which will be mentioned in the upcoming paragraphs, will help to comprehend the topic and the statement of the problem. Also, general research which is related to the topic may be presented. Another concept of the literature review is the relationships of different issues within the topic of sustainability certificates. At the end also outcomes of the research will be evaluated in order to relate the theories to each other and illuminate differences and parallels.

2.1 Hotel properties

A hotel and its related real estate are often a purpose-built building or conversion, which is used for short-term overnight stays in a location abroad from home. Historically, the industry was developed from the Greeks and Roman hundreds of years ago. The “Romans built mansions to provide accommodation for travellers on government business. The Romans were the first to develop thermal baths in England, Switzerland and the Middle East” (Levy-Bonvin, 2003). In the beginning the appearance of thermal baths formed the demand for short-term accommodation for foreign visitors. A common feature of a hotel today is that the ownership and the operation is often uncoupled. In the past, the operation and ownership were often combined in one investor or owner, the hotelier (Schulz, n.d.).

In recent years, hotel became more and more professional and now often involve multiple stakeholders, with a different background and consequently different interests in relation to the decisions about the property. Those are often developers, investors and operators (Niemeyer, 2011). Therefore, the hotel industry and the hotels may be separated in two very different settings. One is the traditional owner-operator hotel, often operated by several generations of a hotelier family. On the other hand, there are hotels, which are operated and owned by two different entities. Those hotels may contain a management, lease and/or franchise agreement with a hotel company or chain. Those hotels are often characterized as an investment product. In this study the main focus will be on the hotels, which

have those agreements and also involve multiple stakeholders rather than one, as mentioned before the objectives of the stakeholders play a large role in their operation and decision-making. In this area, the number of hotels, which are certified are much higher than in owner-operated hotels (Schulz, n.d.).

But what differentiates a hotel from other property types? Mostly, “Hotels have a heavy operational aspect compared to most real estate and are uniquely dynamic” (CADRE, 2019). In the sectors office and retail, the timeframe is often fixed and long-term, for instance 20 years. A hotel in comparison is very much influenced by the short-term decision by the guest. Their decisions might sometimes be on a nightly basis. Therefore, the operational side of the property is very active and also experiences often a lot of changes. A good example for that are the yielded rates, which might differ from day to day. However, hotels are not only an operational business, but they may also be characterized in different types, such as: Budget, Extended Stay, Limited-Service, Select-Service and Full-service, which has a high influence on the actions undertaken in the operation and its impact (CADRE, 2019).

Overall, this means that a hotel included many more stakeholders than comparable properties and the decision makers are required to take even more decision than in other asset classes, which makes them very interesting on the market.

2.2 Market of hotel real estate

Over the past years, hotel real estate became more and more professional and attractive for different kind of investors. Whereas many stakeholders in the real estate industry have seen hotels as a peripheral matter, the record volume has shown that the asset class is established on the market. Overall the demand for hotel real estate was increasing significantly, with its peak in terms of volume in 2019. The traded hotel real estate aggregated to roughly 1.3m EUR, see the chart below (Figure 1).

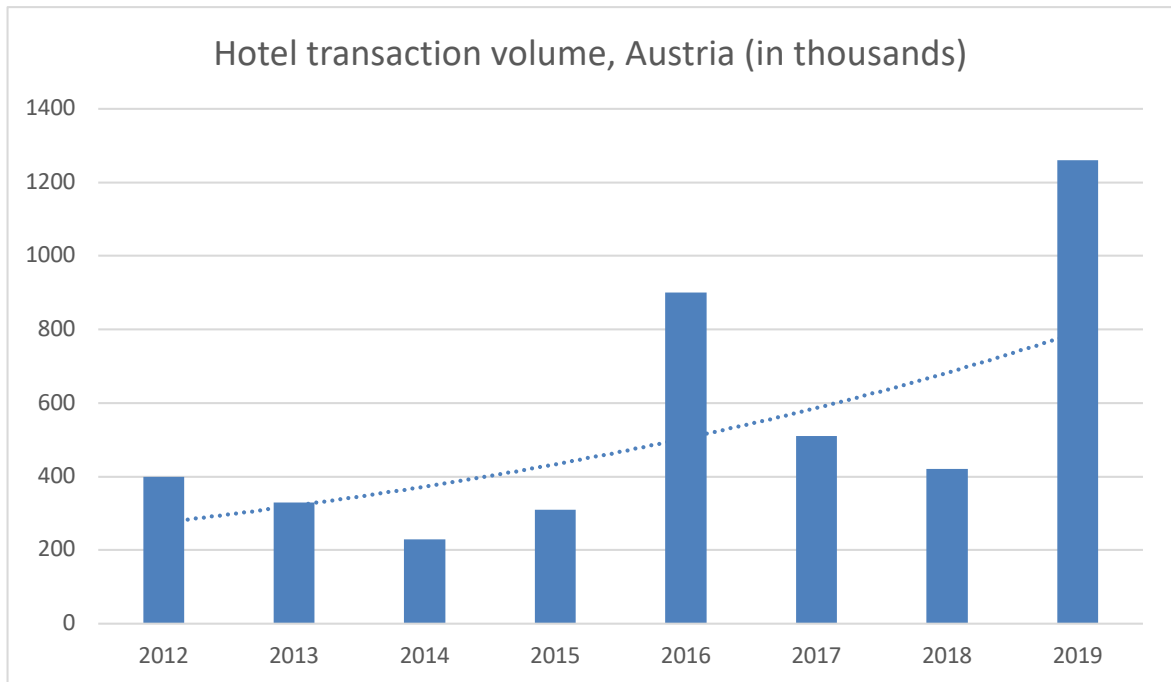


FIGURE 1 - HOTEL TRANSACTION VOLUME, AUSTRIA (CHRISTIE & CO AUSTRIA, 2020)

In 2019 the market reached its all-time high, which was mainly characterized by a very high demand for hotels in Austria, mainly Vienna. Also, the high number of real estate firms and institutional investors, with roughly 21% and 57% respectively, of the traded volume is an increasing feature of the market. This basically, means that the asset class of hotels is getting more and more attractive for professional firms and investors. As a consequence, the developments are also getting more professional in order to cater to this demand from the supply side (Christie & Co Austria, 2020).

As previously mentioned, this study will focus on hotel assets, which involve a certain contracting between the landlord and tenant. It may also be stated that this type of property is of increasing interest, since roughly 85% of the volume contained a certain contract.

It may be concluded that the hotel real estate market is a dynamic market, with a trend towards more professionalism and an increasing interest by local as well as international players (Gallagher & Mansour, 2000) (Christie & Co Austria, 2020).

2.3 Sustainability in general

Sustainability is a topic, which is very present in the society of today and it is often cited as a recent megatrend. Those megatrends “are trends that are likely to have broad, deep, and long-lasting impacts on our lives and institutions, and those of

future generations” (Hale, 2018). Often those trends focus on major social, economic, political, and technological developments (Hale, 2018). The trend of sustainability may appear quite recent from the current perspective, but the development started more than 200 years ago and was developed over a long period of time (Wiersum, 1995). This long-term development took the idea of sustainability to the advance level of today, where companies and individuals “oversee supply chains in a responsible way and operate in areas with scarce natural resources, which must be used responsibly and efficiently” (Hale, 2018).

The start of the most recent movement in sustainability goes back to the 1970s and 1980s, when the basis for the topic of sustainability was established that is known today. In the report of “Limits to Growth” of the club of Rome from 1972 the discussion of sustainability on an international basis was brought forward (Wolny, 2014). “This is confounded by the fact that much of the work whose concepts feed into the narrative predate the language of ‘sustainability’” (Purvis, Mao, & Robinson, 2018). In the upcoming years until the late 20th century the conception of sustainability was formed to the concept that is most common today (Purvis, Mao, & Robinson, 2018). Originally the focus was on the environmental impact rather than the more comprehensive concept, which is present today. During the development phase, impact assessment has recently included in the area of the sustainable agenda. The overall aim of the subject is to “contribute to the shift towards a more sustainable society” (Pope, Annadale, & Morrison-Saunders, 2004).

Under the topic of sustainability, the future generations and their needs play a big role, which makes decisions even more difficult. Real estate is a long-term project, which often outlasts a couple of generations. This fact makes sustainability in the context of real estate even more important.

The aim of a sustainable property is to enhance the quality and reduce the impact of buildings for the future. It is a key concept in city development and the society will benefit long-term from more sustainable buildings. In order to achieve this goal, it is necessary to construct a building that is more sustainable over the lifecycle of the building. This concept is common worldwide as part of the visions for the cities of tomorrow. Also, “the concept of sustainability is a wide-spread global issue as it is comprised of various interrelated studies about people, the environment and society” (Zolfani, Pourhossein, Yazdani, & Zavadskas, 2015). Sustainability in general includes various aspects that target the usage of the building during its entire lifetime. “Hence, this system with its multi-aspect con-

cents can create a greater connection between people's well-being, environmental considerations, technological possibilities and nature itself which is fundamental to a sustainable future" (Zolfani, Pourhossein, Yazdani, & Zavadskas, 2015). General theories of sustainability are based on three pillars: environmental, socio-cultural and economic pillar, which is also seen in Figure 1, below.

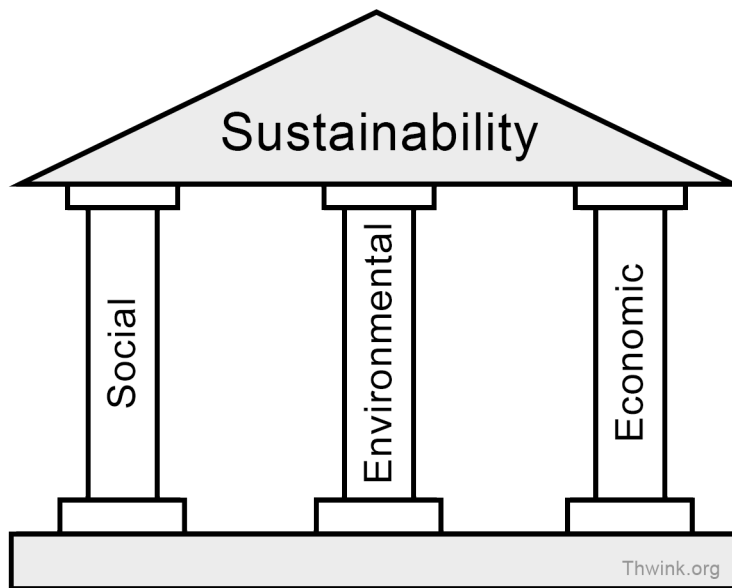


FIGURE 2 - THREE PILLARS OF SUSTAINABILITY (CHOKSHI, 2017)

This consequently means that a sustainable concept must fulfil a sustainable approach for each of the three pillars and should be sustainable in a long-term period. In some publications additional pillars are mentioned (Purvis, Mao, & Robinson, 2018). However, the three pillars set the basis for the idea of a complete sustainable development, which also plays a role in current city development and the buildings of the future. When it comes to the buildings themselves, the resource consumption plays a big role, too. Also, resource consumption and resource efficiency may make a big impact on the environmental pillar, if a property uses a more sustainable approach in resource management. This certainly includes the operational consumption of a building of energy and water, but also the usage raw material during the building process has an impact on the environmental efficiency of the building. In the chart below the environmental impact of building is spilt into different consumptions of resources and its impact. It can be stated that the biggest resources used from a building are energy use, atmospheric emission, raw materials use and water use. By working on a lower consumption or emission of these goods, the environmental impact can be reduced dramatically.

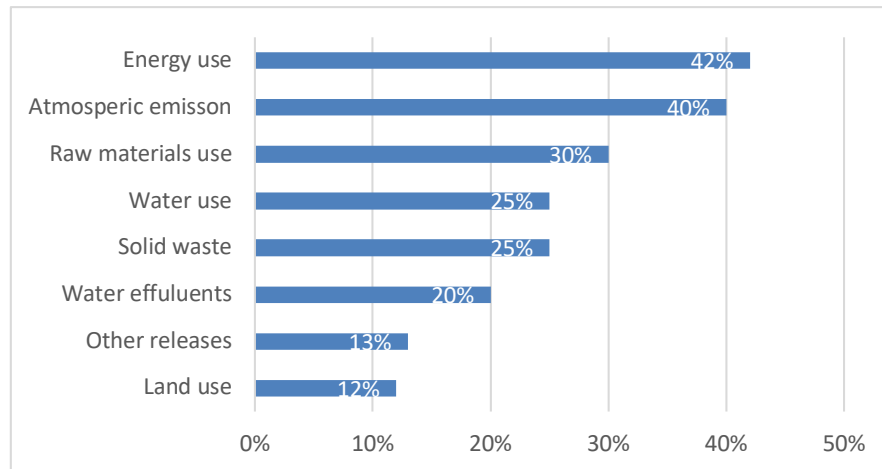


FIGURE 3 - THE ENVIRONMENTAL IMPACTS OF BUILDINGS (ZOLFANI, POURHOSSEIN, YAZDANI, & ZAVADSKAS, 2015)

In term of adaptations on the real estate the developer and owner have plenty possibilities on adapting the property under a sustainable manor. Those adaptations include energy efficiency, resource use and the interior. The features implemented include motion sensors, on-site renewable energy and green cleaning, but also updated waste streams (Runde & Thoyre, 2010).

2.4 Sustainability certificates

From sustainability, the topic of sustainability certificates was developed in order to evaluate the sustainability for certain products. One of them is also real estate. Putting value in sustainability helps to compare different properties and products with each other; therefore, the certificates create a value from provided information and interpret the findings in order to make the level of sustainability visible for the reader or customer. In the case of real estate, the customer is most likely a larger company, but in any case, it will help them to evaluate and compare different properties.

The sustainability certificate in the real estate sector is a topic that has gained substantial visibility since the 1990s. One of the earliest organisations, which started to work on certifications for sustainable building was the U.S. Green Building Council, USGBC (U.S. Green Building Council, n.d.). Their certification standard is called LEED, which stands für Leadership in Energy and Environmental Design. The most recent standard is LEED v4.1. Country specific organisations started to operate after LEED was established and are a common establishment in developed countries, some of them are: German Society for Sustainable Building (Deutsche Gesellschaft für Nachhaltiges Bauen), DGNB (Deutsche

Gesellschaft für Nachhaltiges Bauen – DGNB e.V., n.d.) or the Austrian Society for Sustainable Real Estate Management (Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft), ÖGNI (Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft, 2020).

The organisations often operate under the framework of the World Green Building Councils. Their overall aim is to “contribute positively to the development of a “greener” or “more sustainable” stock of buildings” (Sedlacek & Maier, 2012). The certificate also helps to prove the quality of the buildings for investors and will position themselves between the developer and investors, which sometimes makes their role slightly difficult, but in any case their work may reduce the risk for the investor, by ensuring to have a more high quality building (Sedlacek & Maier, 2012).

In the case of this thesis ÖGNI will be mostly highlighted due to the geographical location of Vienna as the location for the interviews, which were held. For this study it is important to understand how the organisation were developed over time and what are the main characteristics of the different processes. This is especially important since the organisation were built after each other and adapted their operation to some degree. This development also included how the topic of sustainability was interpreted in certificates by international and national organisations.

2.4.1 USGBC - U.S. Green Building Council/LEED

The U.S. Green Building Council, USGBC is an organisation, based in Atlanta, United States of America and was established in 1993 from Rick Fedrizzi, David Gottfried and Mike Italiano. They invited 60 representatives from non-profit-organisations and other firms for the founding meeting and established the organisation back in the days. Their aim was to revolutionise the construction industry, in order to “create better buildings” (U.S. Green Building Council, n.d.). In 1998, the first version of the LEED standards, LEED 1.0 was developed and started with pilot projects at 19 locations in a beta phase. LEED certificates are voluntary building certificates for sustainable buildings, which may be issued by the developers and owners. In the following years the organisation developed several more versions of LEED and improved the strategy, including 2.0, 2.1 and 2.2. In April 2003 they managed to exceed the critical number of 100 certified projects, which was a serious milestone for the company. Moreover, the organisation managed to certify several thousand projects to this day and as of October 2019 the USGBC counted roughly 69,000 certified projects worldwide (Wang, 2019). The

current standard, which is issued is called LEED 4.1. It sets new Living Standards and connects the products that are certified with people that will use the properties. After a USGBC analysis, the certificate in general may help to reduce 30% of energy, 35% of CO₂, 30-50% of water and 50-90% waste cost savings (Caroline Clevenger, 2008). These figures are even more important when taking into consideration that the buildings in the U.S. are the consumers of roughly 65% of energy and the producers of 30% of the greenhouse gas emissions, as well as producing 136 million tons of construction waste (Caroline Clevenger, 2008).

Moreover, the certificate is used by various clients, therefore the figure below – Who’s using LEED? – can give valuable input as to who is currently issuing the certificates. Both corporations’ profit and non-profit, make up roughly 45% of the certified projects, whereas governmental organisations, such as federal, state and local organisations also sum up to roughly 45%. Hence, the certificate is used by public governmental organisations, as well as private corporations in roughly the same proportions. Consequently, the certificate of LEED is used by very different clients, with completely different premises and background, which also influences the purpose of the certificate for the issuer.

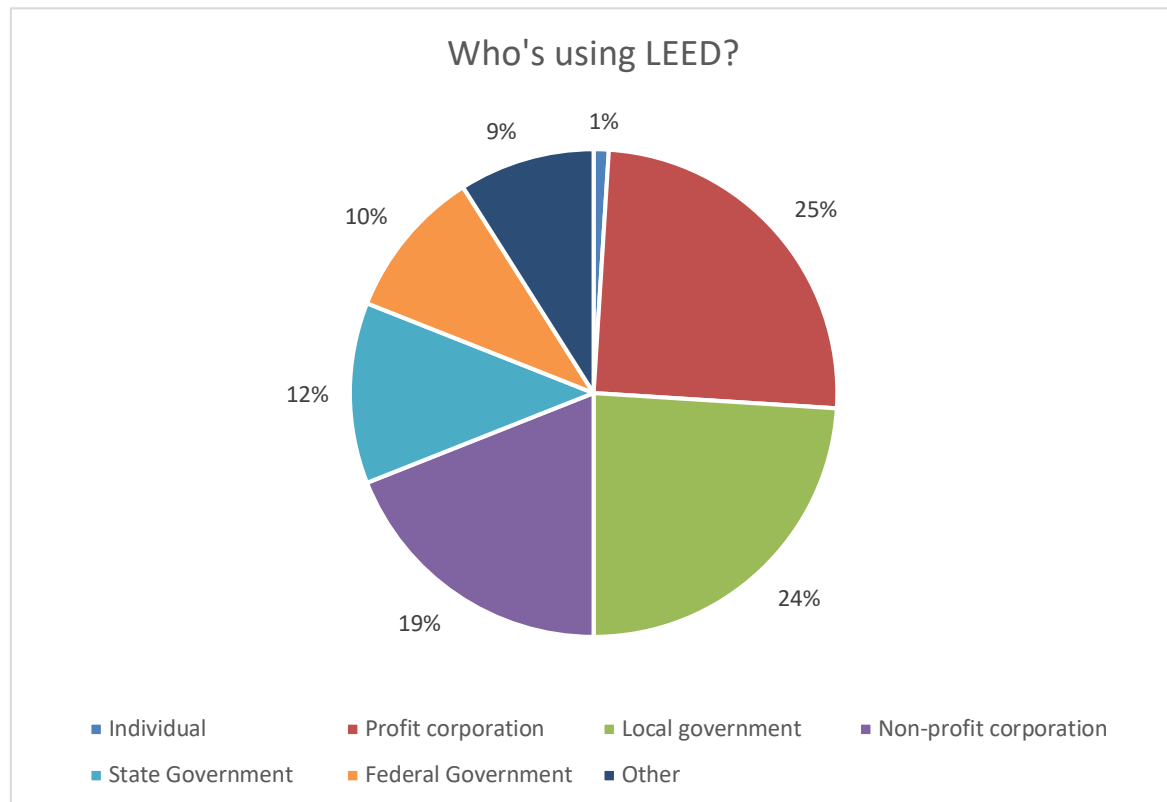


FIGURE 4 - WHO'S USING LEED? (CAROLINE CLEVINGER, 2008)

2.4.1.1 LEED certification in detail

To have a LEED certified project or building the property must be compliant with several points, which then result in credits given by the rating system. The system includes “9 prerequisites and 60 elective credits grouped in 6 categories” (Humbert, Abeck, Bali, & Horvath, 2007). These categories are:

Location and transportation	You should take into consideration the location of your project and how it can be combined with the transportation option within the area, in other words how the users of the facility can get in and out of the facility.
Materials and Resources	Earn credits by using sustainable and earth friendly products, while reducing waste promoting better indoor air quality.
Water efficiency	The building must be designed in such a way that potable water usage is reduced, or resources can be reused, minimizing the needs of water inside the building.
Energy and atmosphere	The building must enhance energy performance and promote great indoor air and environmental quality.
Sustainable sites	Design the project in such a way that the natural resources and ecosystems nearby can naturally take part of the design minimizing environmental pollution.
Indoor environmental quality	Increase daylight usage and promote natural ventilation.
Innovation	Any idea that is not covered under the five LEED main areas.
Regional priority credits	Addressing any particular concern based on the regional or geographical location.

TABLE 1 - LEED CERTIFICATION CREDIT CATEGORIES (RODRIGUEZ, 2019)

The different ratings which may be obtained are: LEED certification (26-32 points), Silver (33-38 points), Gold (39-51 points), and Platinum (52-69 points)” (Humbert, Abeck, Bali, & Horvath, 2007). Hence, the LEED system and its

awards only start at a minimum of 26 points to receive a certificate and reaches up to 69 points for LEED Platinum.

The USGBC - U.S. Green Building Council/LEED, claims that a property under LEED Standards will have a reduced building operation and maintenance costs. They also claim that the building will create a healthier and more productive place for the people (U.S. Green Building Council, n.d.). Some other benefits are, according to Juan Rodrigues (the balance small business, 2019):

- Increased Building Valuation
- Reduces liability
- Promote better employee relationships
- Reduce energy and water usage
- Promote better indoor air quality
- Reduce maintenance and operation costs
- Triggers innovation and processes to optimize building performance
- Reduce construction waste during the process
- Promote and attracts companies with sustainable goals
- Reduce 'sick building' syndrome in the employees
- Increase employee performance
- Promote the usage of recycled material.

TABLE 2 - WHAT BENEFITS CAN YOU OBTAIN THROUGH A LEED CERTIFICATION? (RODRIGUEZ, 2019)

2.4.2 DGNB - Deutsche Gesellschaft für Nachhaltiges Bauen

The Deutsche Gesellschaft für Nachhaltiges Bauen, also called DGNB, is Europe's largest network for sustainable construction. In English the name stands for the German Society for Sustainable Building. The non-profit organisation (NGO) is based in Stuttgart, Germany and was established in 2007. The aim of the organisation is to certify the sustainability of buildings and quarters in order to create a more sustainable future for properties. The foundation operates in Germany and on an international level. Due to it 1.200 cooperating organisation DGNB is the largest network for sustainable construction (Deutsche Gesellschaft für Nachhaltiges Bauen – DGNB e.V., n.d.).

Their aim is to make sustainability more “applicable in a practical manor, measurable and thus comparable” (DGNB System, n.d.). The process was introduced in 2009 for the first time and has been continuously developed over time. Today, it “is now not only considered the most advanced in the world but is also internationally recognized as the Global Benchmark for Sustainability” (DGNB System,





n.d.). The three key components, which makes this system more advanced on the market are:

- Life cycle assessment
- Holistic
- Performance orientation

(DGNB System, n.d.)

A very important point for the DGNB is the life cycle of buildings and its projects, since the “entire life cycle of a project is consistently taken into account and instead of individual measures, the overall performance of a project is evaluated” (DGNB System, n.d.). This approach generally leads to a more sustainable project and may also reduce the risk for the stakeholder that work and invest into the building. This will have an impact on a very long-term base, since the construction will be more advanced from the construction onwards. The property according to DGNB shall be sustainable in a long-term period and should not need any further renovations or investments to be sustainable in the future. Moreover, the process contributes to the quality of the building. “As proof of this quality in construction, a DGNB certificate in platinum, gold or silver can be obtained. A bronze certificate can also be obtained for sustainable building operations or existing buildings” (DGNB System, n.d.). As stated in the Figure 3 - The environmental impacts of buildings , the ratings of DGNB are characterized in 4 classes, those are Platinum, Gold, Silver and Bronze. The certificate depends on the points that are

achieved during the certification process; hence a hotel would receive Silver if the outcome is between 50-65% and Platinum above 80%.

	 Platinum	 Gold	 Silver	 Bronze*
Total performance index	80% and higher	65% and higher	50% and higher	35% and higher
Minimum performance index	65%	50%	35%	-- %

* This award only applies to certification of existing buildings/the Buildings in Use certificate.

FIGURE 5 - DGNB CERTIFICATE AWARDS (DGNB SYSTEM, N.D.)

2.4.2.1 DGNB certification in detail

In terms of criteria, also DGNB has a comprehensive set of points, which are accessed during a certification process. The criteria are ordered under six different categories. In the following table an overview of the criteria is provided:

Environmental quality	Life cycle assessment of the building (ENV1.1) Risks to the local environment (ENV1.2) Responsible resource extraction (ENV1.3) Drinking water and wastewater generation (ENV2.2) Land use (ENV2.3) Biodiversity on site (ENV2.4)
Economical quality	Building-related costs in the life cycle (ECO1.1) Flexibility and Conversion Capability (ECO2.1) Marketability (ECO2.2)
Social-cultural and functional quality	Thermal comfort (SOC1.1) Indoor air quality (SOC1.2) Acoustic comfort (SOC1.3) Visual comfort (SOC1.4) User influence (SOC1.5) Indoor and outdoor environment (SOC1.6)

	Security (SOC1.7) Accessibility (SOC2.1)
Technical quality	Sound insulation (TEC1.2) Quality of the building envelope (TEC1.3) Use and integration of building technology (TEC1.4) Ease of cleaning of the building structure (TEC1.5) Ease of dismantling and recycling (TEC1.6) Emission control (TEC1.7) Mobility infrastructure (TEC3.1)

<p>Process quality</p>	<p>Quality of project preparation (PRO1.1) Ensuring sustainability aspects in tendering and contracting (PRO1.4) Documentation for sustainable management (PRO1.5) Procedures for urban planning and design concepts (PRO1.6) Construction site / construction process (PRO2.1) Quality assurance of construction work (PRO2.2) Orderly commissioning (PRO2.3) User communication (PRO2.4) FM-compatible planning (PRO2.5)</p>
<p>Location quality</p>	<p>Microsite (SITE1.1) Radiation and influence on the neighbourhood (SITE1.2) Transport connection (SITE1.3) Proximity to use-relevant objects and facilities (SITE1.4)</p>

TABLE 3 - OVERVIEW OF ALL CRITERIA OF DGNB (DGNB SYSTEM, N.D.)

2.4.2.2 Process of the certification under DGNB standards

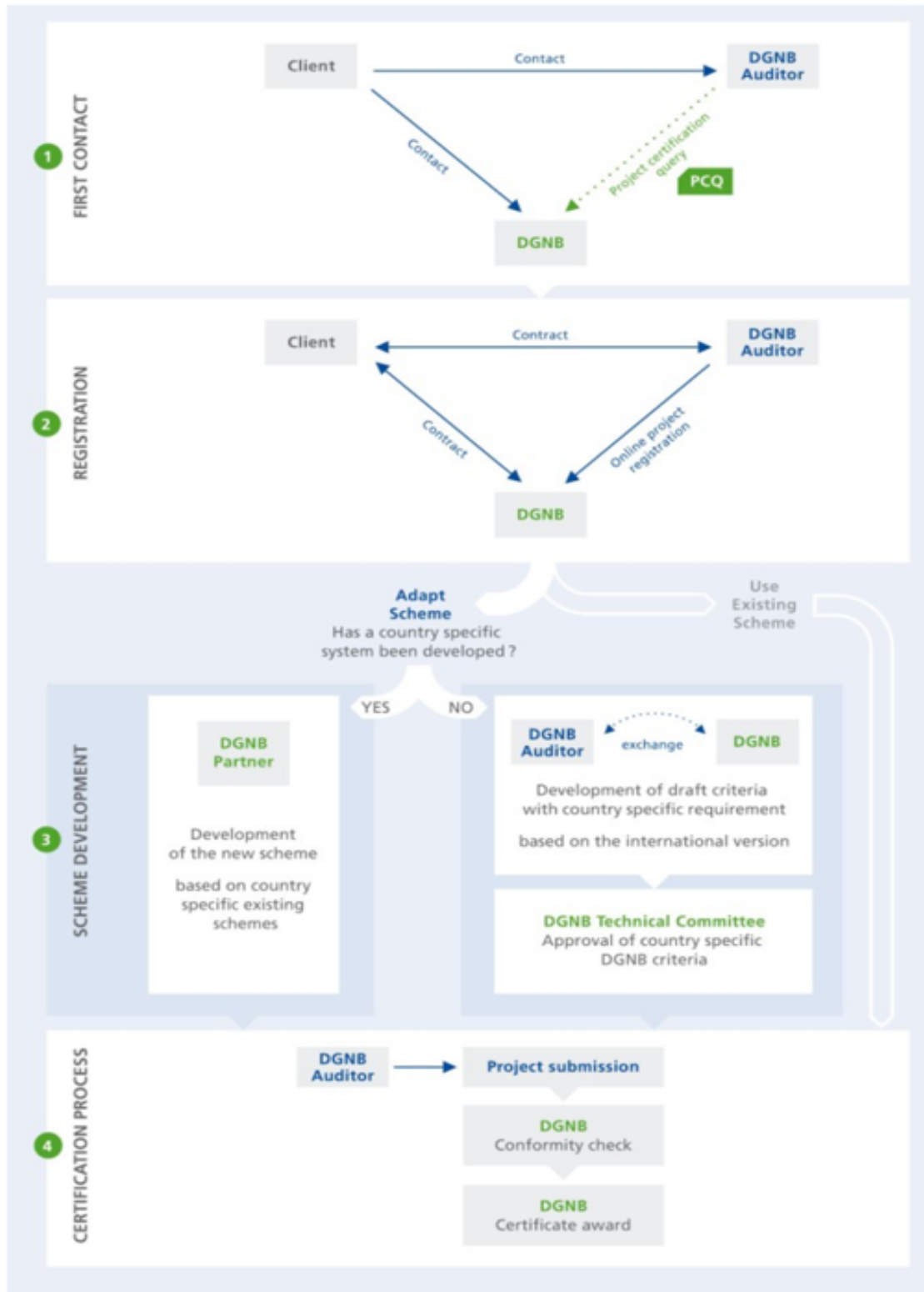


FIGURE 6 - CERTIFICATION PROCESS (DGNB SYSTEM, N.D.)

The start of the certification process is at the initial concept stage and goes until the final completion of the construction. All stages of the project are looked after

by the audit and in regular meetings the audit will provide input for changes on the concept of the project in order to achieve the level of certification, which is initially predefined.

“This highlights’ potential errors and deficiencies at an early stage and makes quality measurable and transparent. The certification process is done by the auditor. The contractor turns to a suitable DGNB auditor that he trusts. The search function on the DGNB Website is a useful tool to find the right person. The auditor supports the contractor and supervises the process from registration via the certification up to the conclusion. The contractor enters into a contract with the auditor and a certification contract with the DGNB. There is no contractual relationship between the DGNB and the auditor in order to guarantee the greatest possible degree of objectivity and independence.” (DGNB System, n.d.)

Consequently, the developer, who starts the project needs to approach a local auditor that works under the standards of DGNB and from the start of the project this person will be involved in the development in order to avoid any hazards during the construction. As mentioned before, the audit guides the team to the approached level of certification and might also change some features on the project. As shown in Figure 6 - Certification process the process may be split into four stages, which are:

1. First contact
2. Registration
3. Scheme development
4. Certification process

In stage one, first contact, the client sets up the connection to the local Auditor and DGNB. Between those two parties a contract is signed and DGNB formally checks this query internally, before the audit may start with the project. After accepted by DGNB, the project will be registered online on the website of DGNB. Now, it is crucial if the country has a specific system. If yes, the DGNB partner, such as ÖGNI, will develop the scheme based on an existing or previous project. If there is nothing developed yet, the auditor needs to develop a project specific scheme based on comparable international versions, following DGNB criteria. This will be set-up with a close communication with DGNB. Finally, the projects get into the fourth step, the certification process, where the auditor submits the project to DGNB directly and the DGNB confirms the project. This step is very much a second check of the work from the audit.

Once the project is approved, the certificate will be awarded out (DGNB System, n.d.). Certainly, it makes the project easier if the project is based in countries which have already worked with the DGNB system. If the project will be rated in regions where DGNB has not worked on projects before the whole process is slightly more complicated and needs more communication between DGNB and the audit.

2.4.3 ÖGNI - Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft

The Organisation for Austrian Society for Sustainable Real Estate Management is shortly called ÖGNI (Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft) due to its origin in German. The Austrian non-governmental organisation was founded in 2009 and aims to establish sustainability in the construction and real estate industry. The certification of buildings helps to build more resource and environmentally friendly buildings in Austria and other surrounding countries, which may also be economically and socially friendly. They are in a close partnership with the German counterpart DGNB from which ÖGNI makes use of their standards. That is why ÖGNI will award developments with the certificate from DGNB. Due to this strong relationship the two organisations have very similar approaches in the certification process after DGNB. It might only be adapted slightly to the local conditions. ÖGNI uses only the certification standards of DGNB and BlueCard.

The core of the operation of ÖGNI is the certification process of sustainable properties, which follow the idea of the three pillars of sustainability, which were mentioned before (Figure 2 - three pillars of sustainability). The organisation tries to respect the three pillars equally in order to prove that the building is sustainable compliant from all perspectives.

In order to respect the core values from DGNB, the certification from ÖGNI audits will also evaluate the lifecycle from properties in order to create long-term sustainable property.

Apart from hotels the certificate may also be applied for several other asset classes, such as:

- Office
- Industrial buildings
- Residential buildings
- Retail

In terms of certifications and classifications, ÖGNI applies the same standards as per DGNB and blueCARD, which are: Bronze, Silver, Gold and Platinum for the certification of DGNB and different levels of certification from 1-7 for the blueCARD. Both systems follow similar standards, however the DGNB award focuses on developments, whereas the blueCARD rates existing buildings.

2.4.3.1 blueCARD

Within the ÖGNI, the organisation has implemented their own certification system, which is called blueCARD (bC). In 2019 the ÖGNI released their version blueCARD 2.0, which was an update to the previous system. The system itself is available for the real-estate industry as a simple way to evaluate the sustainability of the buildings. It is also possible to evaluate the status of a building and may form the basis for the future renovations and adaptations to the buildings.

ÖGNI has realised that the DGNB standards have one major limitation, which is the fact that only new developments may be certified. Therefore, ÖGNI developed the blueCARD, which only certifies existing properties.

In terms of asset classes, the blueCARD covers the following classes:

- Office
- Residential
- Industrial
- Hotel properties

The aims of the blueCARD is to deliver a status of the conditions of the property and its operation to its owners in terms of sustainability (Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft, 2020). This outcome then helps to base future decisions for the building on this background, which might help to renovate or refurbish in a more sustainable manner.

The certificate evaluates the following topics with the following weight:

- sector Ecological quality: 20%
- Economic quality: 20%.
- Socio-cultural and functional quality: 20%.
- Technical quality: 20%.
- Process quality: 20%.
- The location quality is evaluated separately.

The topics contain a total of 22 criteria, which are evaluated for the certificate. Certificates with more than 50% are referred as positive. The certificate is valid for 5 years or until the building was somehow adapted or renovated. After this period, the certificate needs to be renewed (Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft, 2020) in order to be valid.

2.5 World Green Building Councils

The world building councils are “independent, non-profit organisations made up of businesses and organisations working in the building and construction industry” (World Green Building Council, 2016). All organisations, which were mentioned before in this study are part of this affiliation and work under the mindset of world building council.

The work of this consolidation is based on the environmental impact of building on the climate change and they want to set an impact on this development, by offering cost-effective solutions that might lead to “significant environmental, economic and social benefits around the world” (World Green Building Council, 2016). As mentioned in the sustainability section, Sustainability in general, this affiliation is based on the same three pillars, which are environmental, social and economic.

The aim is to provide solutions that achieve the goal of a greener world, by including all aspects and deliver even more benefits to the stakeholders. The reason why this affiliation actively approaches the real estate sector is due to its impact on climate, which has a lot of potential to improve. On the building level the certificates have shown that properties around the world saved up to 62% fewer greenhouse gas emissions, 40-50% of energy saving and 20-30% in water savings. Certainly, the effect of sustainability certificates is not as extreme in Europe. However, these certificates are able to achieve significant benefits to the environment, which in these cases also have an influence on the economic and social situation of the property. Pointing out the economic benefits the international savings in energy efficiency is calculated by the European Commission by roughly 280-410 billion Euro. On a social level certificates, which are run under the world building councils also experienced measurable in air quality, which results in an increase in performance of the workers. The mindset in general of this affiliation is very positive in terms of sustainability and might also have a positive influence in the partner, that cooperate with this consolidation (World Green Building Council, 2016).

2.6 Sustainability aspects in the hotel asset

In order to make a hotel property more sustainable a general strategy is required in order to have a significant impact. As mentioned already a comprehensive approach on all dimensions of the property and also later during operation is necessary to achieve good results. Showpieces around the world have proven that a sustainable approach is not only environmentally friendly, but also impacts the social and economic situation of a hotel property (World Green Building Council, 2016). This coherence certainly makes the decision for a more sustainably property fairly easy for the owner and the people involved.

A strategy from Willard InterContinental on sustainable development, included various aspects and areas in order to reach the goal of having a more sustainable hotel property. These areas were:

- Economic viability
- Governance
- Social responsibility (on community, supplier, customers and employees)
- Environmental impact

Under these headlines the strategy was formed under different objectives. For instance, the environmental areas were focused on minimizing waste and maximizing efficiency. On the economic level, on the other hand, the focus was on reducing operational costs, which may go along pretty easily to due significant savings in water, electricity and heating. It was also pointed out that the effect of a more sustainable supply will have a very high impact on long-term savings (World Green Building Council, 2016).

2.7 What is adapted due to the certificate?

As mentioned in the previous sections, the certificates will be accessed in a certain process and consider different criteria according to their catalogue analogous to the categories of sustainability in general. The criteria of the organisations, which were mentioned before, derive their certification processes according to the general understanding of sustainability. In order to be compliant with the understanding, the certificates and processes list a number of points. These should be considered in a project that is planned to be certified. The majority of the checked points will have an impact on the construction and cause some changes.

These points may be categorized in six categories:

- Environment
- Economic
- Social-cultural
- Technic
- Process
- Location

Especially the categories environment and technic might cause significant changes to a property that is not certified. For instance, the water usage or the insulation are checkpoints, which require more advanced systems or construction work than required from the local government. Considering these changes will have an impact on the level of certification, but also on the operation, by having lower consumption than another property. Another very interesting point is soundproofing. In order to include a high-quality soundproofing, the property must be planned accordingly. By including those changes the quality of the property will be increased. It also will have an impact on the rating by achieving a higher score in the certificate. For the owners this change will also influence the quality of the building in a long-term, since the structure is stronger and better proofed in terms of sound. Other points, which cause changes to the property are listed in

Table 3 - OVERVIEW OF ALL CRITERIA OF DGNB (DGNB System, n.d.).

A lot of other criteria only consider administrative points, such as the project planning process, certainly these points, will not influence the property in terms of construction, but will cause a better prepared construction process, without many hazards (World Green Building Council, 2016) (DGNB System, n.d.) (Tradi, 2020).

3 METHODOLOGY

In this chapter the research design and the methodology will be discussed and illuminated in order to answer the research question of this study. Moreover, the paragraphs will give an in-depth insight into the interpretive paradigm of this study, which was applied during the interviews. Furthermore, the research approach, which was taken during the interviews and the limitations of the research method will be examined. Also, the ethical considerations for the study and the information gathered will also be discussed. In conclusion, the approach research which is taken in this study will hopefully answer the research question and give a valuable insight.

3.1 Research problem

The topic and the research problem of this study deals with sustainability certificates in the real estate industry. More precisely, it focusses on the sector of hotel assets and accordingly the correlated sustainability certificates, which were mentioned in section 2 of this thesis. It deals with the effect of these certificates on the resource consumption of the property over the whole lifecycle of the building. Moreover, additional benefits which come along with the certification will be illuminated. Furthermore, this study will investigate in detail about the benefits for the owners and developers, that are involved with the property and its construction.

This study will question if sustainability certificates only benefit to the stakeholders on a monetary basis or if certificate does influence the environment and society positively by reducing the resource consumption. The research question for this study is the following:

How does sustainability certificates influence the overall resource management of a hotel property?

In order to prove this statement, it is important to understand which effects a sustainability certificate has and the view of the stakeholder that deal with the certification and might benefit from it.

In terms of structure, the research is structured as follows. In the part of the study, the literature review, the background and framework for the study is described. In various subsections the basic information is structured. As shown in the figure

below the topic was derived from the bottom to the top. Basically, from brought topics to more specific topic, which finally results in the formulated question.



TABLE 4 - STRUCTURE OF THE RESEARCH

The first chapter was dealing with the most brought topics in order to form the basis of sustainability and properties. This was followed by the sub-topic of sustainability certificates and hotel properties. Combining those two fields will bring the research to the different organisations dealing with these issues. Based on that, the certificates will be considered in more details, with a focus on the process of the certification itself, including the adaptations, which are caused by the certification process.

3.2 Research approach

The approach used in this study was of qualitative nature, consequently expressed in words, may also be called “basic qualitative or, simply, interpretive” (Kahlke, 2014). Qualitative research, which is by definition “not guided by an explicit or established set of philosophic assumptions in the form of one of the known qualitative methodologies” (Kahlke, 2014). The basis for the topic was formulated in the literature part, which can be seen in the previous chapter, prior to the methodology part of the study. In this part information was gathered in order to set the framework for the topic and form the basis for the interviews in order to evaluate the data, which was collected during the interviews. In order to gain val-

uable data, expert interviews were conducted. Those interviews have the advantage to form the exploratory phase of a project in a “efficient and concentrated” (Bogner, Littig, & Menz, 2009) way. The interviews may also help to find an easy way to get even more information due to the structure behind the interviewees and its corporate structures, since they have the access to valuable information, which would otherwise not be available (Bogner, Littig, & Menz, 2009). Therefore, the author, Yannick Herzberg, conducted a number of interviews with stakeholders and experts in the construction industry of hotel properties. They were mostly based in Vienna. Hence, the data was collected first-hand and were gained from absolute experts in the field and industry, which contributed very valuable insights. The research approach was chosen due to the niche topic - sustainability certificates of hotel properties, since it was not possible to have a significant sample size for qualitative research.

However, only a small number of people are generally involved in this sector, hence expert interviews (qualitative approach) are suitable. However, using a qualitative method is widely used and appropriate to the fact that the topic is a niche market (Kahlke, 2014). Due to this research approach and its topic it was crucial to get valuable insights from experts in the industry, hence the interviews were held with people that are working in this industry for a long period of time and in well-known companies. Moreover, the approach should be seen as an approach only and not fully as a methodology, since the qualitative approach may be interpreted in various ways since the qualitative research is “by definition, not bounded or defined strictly” (Kahlke, 2014). However, the approach is characterized by four key elements: “epistemology, or broad assumptions about the nature of knowledge; theoretical framework, or philosophical stance; methodology, or the broad research strategy; and methods” (Kahlke, 2014), which consequently means that the following research will somehow be based on knowledge that was achieved prior to this study. In the figure below, this structure and the relation will be displayed and it is seen that the information gathered throughout the different levels will lead to the next and help to form the entire study, which will lead to a valuable outcome of the analysis (Crotty, 1998).

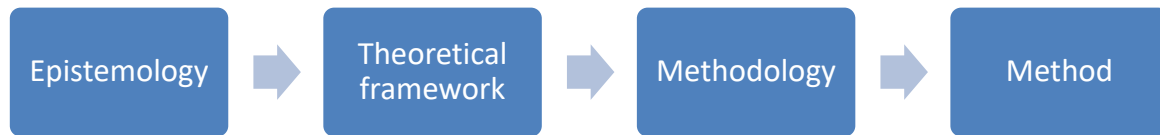


FIGURE 7 - FOUR ELEMENTS FOR RESEARCH PROCESS (CROTTY, 1998)

Therefore, formulating the method for the study will help to guide the way to the conclusion.

3.3 Method of data collection

Since a qualitative method was chosen, it is important to outline the detailed background for the approach and to list the steps taken to approach the goal of this method. First of all, the participants of the interviews were chosen due to their valuable experience in the field of hotel development in the tourism and hotel sector, and each of whom work with larger national or international firms, some also stock listed. Those participants were directly interviewed by the author in personal or digital meetings. Due to the period in year 2020, which was caused by SARS-COV-2 and COVID-19 the majority of the interviews were held via Microsoft Teams, with its video function. However, some interviewees accepted personal meetings, but the travelling time and distance was kept to a minimum in order to maintain distance regulations.

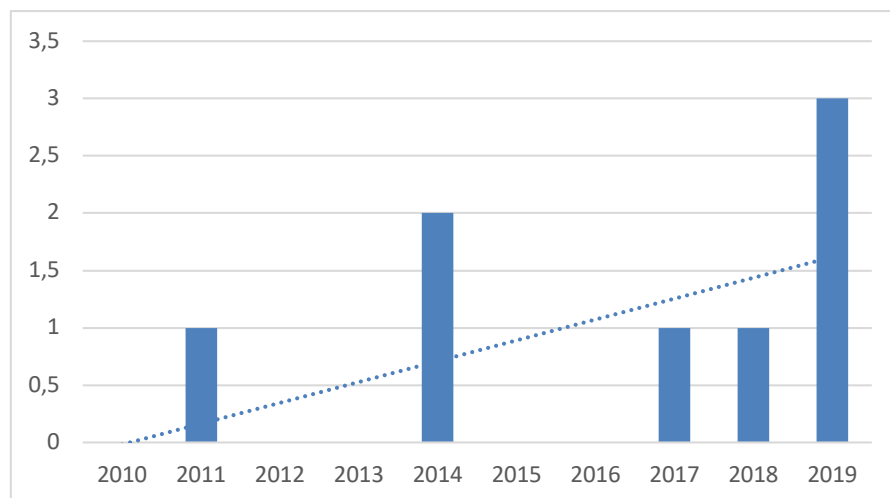


FIGURE 8 – NUMBER OF CERTIFICATIONS FROM ÖGNI 2010-2019 (ÖSTERREICHISCHE GESELLSCHAFT FÜR NACHHALTIGE IMMOBILIENWIRTSCHAFT, 2020)

Furthermore, it was crucial to get interviews with as many people in this sector as possible, since there are not many people dealing with this subject. As seen in the Figure 8 – Number of certifications from ÖGNI 2010-2019, the number of

certification processes increased over the past 10 years but is still relatively small. However, this trend makes the topic very interesting currently. In the case of hotel properties, the topic is especially interesting, since this asset class currently experiences a high demand. As mentioned before, that why it was important to reach a high number of people in the data collection processes from those projects in order to receive a significant feedback.

In order to have a base for the interviewees on a concrete group of people the approach was focussed on local developer, which already built or were currently working on a project that is ÖGNI certified. Since, ÖGNI has listed all the projects that are certified by the sustainability certificates blueCARD and the DGNB certificate, this list was taken to form a basis for the interviewees. From this list, which included a total of 10 projects, the firms were approached by contacts that were already established from the author within these companies. Due to this connection a contact to the person in charge in the companies were established and a meeting for the interview was scheduled. As mentioned not necessarily in person.

Some interviewees were identified during the phase of the interviews and later invited, since their position was interesting to the topic. In total, five interviews, took place with experts from six different companies. Since not all targets which got identified in the first place or during the phase of the interviews were available for a meeting or did not want to participate for this study. The extension of the interview partners was important to get enough knowledge in order to discuss the matter in detail, hence new interviewees were approached during the period of data collection. In the beginning it was expected to be relatively easy to coordinate the meetings, but it was harder than initially expected to finally schedule the meetings. This was probably the case because the companies which were chosen are relatively large for Austrian standards and work on non-disclosed projects and information, which makes it even more challenging to openly discuss the subject of sustainability certificates. The people might have tight schedules and just did not want to take time for this study.

It was crucial to extend this list, which was gathered in the first place on the basis of the website from ÖGNI. Due to flexibility in regard to new interviewees a significant number of meetings was held, which were large enough to reach a level that was satisfying for this study and gather sufficient information. Furthermore, the meetings in general gave similar input to the topic, even though the background of the interviewed companies differed quite a lot. At the time, when the information was repetitive from one to the other interview, it was easy to finally

stop the interviews, since not much more information would be shared which might change the outcome of the study.

In order to gain the best insights of sustainability certificates, the interviews always took place in a semi-structured and inspiring form and as mentioned before were only made with experts with many years of work experience in this field. Hence, the interviewees were all older than 30. As mentioned before, the interview was always held between two people, online as well as in person. Due to the location this study was conducted, all interviewees were based in Vienna, Austria. An interview guide served as the basis for the discussion, with a total of five sections and 12 questions, but this guide gave more a line for the discussion. The candidate still got the chance to widely express himself for the respective questions and got the chance to add valuable information and idea, which might contribute further to this topic. The interviews had a duration of roughly 30 min. to 1 hour and were recorded in writing or notes, which were digitalized after the interview took place. These meetings were scheduled over a time-period of roughly seven weeks, which started beginning in June 2020, but took more time to coordinate than expected. Certainly, the interviewer got the chance to observe the candidate during the time of the interview in detail, which will later help to understand their basis from which they have assessed the topic due to their background. Since the people all worked for companies, they all had a background which might cause a small bias towards this topic, due to a monetary advantage from their position. However, the interviewees were informed that this study was conducted for academic purposes and during the interview they got the chance to express themselves in an objective way.

However, this approach might also include some limitations since the study is mostly Vienna-biased, due to the location of the companies and interviewees. Also, their projects are Austria and Vienna-focussed so the feedback might be true for Vienna, its issues and problems with sustainability, but it is not possible to generalise these findings. Moreover, the number of interviewees is relatively small, since it is hard to get in contact with many of these people and their valuable information.

3.4 Method analysis

Due to the chosen method, the analysis will be based on the information gained from the people interviewed. Therefore, the interviews were stored in a digital form, which are all found in the appendix 9.1. All notes were analysed, and that information was categorized, themed in broad topics and their ethical as well as

social meaning was considered. This was important to structure the information provided by the interviewees and come up with an overall pattern of the interview.

3.5 Evaluation of the methodology

First of all, the methodology itself, it can be stated that the topic of sustainability certificates in the hotel real estate sector is relatively small. Only a limited number of certificates are awarded annually. However, the number of certificates in this asset class is currently rising.

This niche market makes it still quite difficult to get a lot of data in order to access the topic of sustainability certificates from a brought perspective. Also, interview partners are relatively limited, since not a lot of people in the development teams deal with this kind of certificates. In this study it was still possible to reach a number of interviewees and interviewed them accordingly. Since, the companies are mainly located in Vienna and their background brings some ethical issues to the study these will be evaluated in the following part.

The ethical issues are however very small, since I will be dealing with experts in their fields and have an interview guideline for the meeting. Since, the companies, which employed the participants follow certain internal rules, mind-set and guidelines the responses in the interviews might be slightly biased and caused by monetary benefits rather than objective decision-making. In addition, the fact that the interviewed people work in Vienna, might limit the study to this specific location and the findings should not be generalised too much.

3.6 Appraisal of the interviews

In order to analyse the interviews, the study took a qualitative approach. This method will help to evaluate the individual aspects of the discussions in order to solve the issues of the different sections of this study. The following paragraphs will help to get an overview of the approach of the meetings in order to understand the structure.

The feedback from the interviews will mainly be evaluated after the top sections from the interview guideline. Those are:

1. Planning and calculations

2. Guest experience
3. Property itself
4. Conclusion of the certification process

In the appendix the full interview guide may be found (Interview Guide).

First, the material which was gained will be studied and structured into different categories. Also, additional information, which may be found under “general topics discussed” will be considered and put into the results and will later be discussed in the findings section.

However, the interviews were structured from the beginning, since the purpose of the meeting was to provide a straightforward input for this study, which was openly discussed during the meetings. Moreover, the dialogs were held in the same structure in order to receive a comparable input from each participant. Everything, which was mentioned and provided by the interviewees, which does not contribute to the topic of the study will not be considered, however the full dialog is attached in the appendix section (Appendices).

The findings will be elaborated in the following part.

4 RESULTS FROM THE INTERVIEW

In the following section, the findings of the data collection will be presented. The data and input were collected during the conversations with the industry experts in scheduled meetings. It will also be clarified, how the decision on sustainability certificates are influenced and under what circumstances a certificate is commissioned. Those decisions may be very different depending on the backgrounds and motives of the different companies.

In the following section, the main aspects of the interviews will be examined, and the main statements of the interviewees will be considered. On the one hand, this should help to underline the findings in the theoretical chapters. On the other hand, this should help to understand whether the certificate itself a significant effect on the sustainability impact of the property over the entire lifecycle has, which mainly involves the resource consumption and usage of the asset. Also, it is crucial to understand that the property is influenced by many different aspects from the market, operator as well as the developer, which plays a very central role in this situation. However, the interviews must help to structure a reasonable derivation in order to create a larger picture on the effect of sustainability certificates on the hotel real estate industry and its sustainability impact.

The interviews were held with companies in the real estate sector, which were mainly based in Vienna. The types of companies include a developer, an operator, consultants/audits for the certificates, and an organisation, which awards certificates. With this mixture of different stakeholders in the real estate industry, a very good overview of the situation will be gained. Especially interesting is to understand how the stakeholders interact with each other and how the decisions may influence the other party in their operation. In addition, the ambitions are fairly different and may lead to completely different approaches in regard to this topic.

Before starting with the following paragraphs, it is important to point out that the information presented was only gained during the interviews and the interviewees have only provided input, which included their own and the company's ideas and attitudes. However, the approach of this study is to generalize the ideas towards a larger group of people or the entire industry, but there might be an input which was not provided and consequently missing in this study.

4.1 What are the motivations for the commission of the sustainability certificate?

The commission of the certificate for the different interviewees was based on very different approaches for the individual projects. Some interviewees and their companies see the process of a certificate as something that is essential or compulsory in the planning process of a project and other see it completely differently. As T.B. in interview 1 mentioned, it is a general duty of a developer and it does influence the reputation and quality of the company in a long run (T.B., 2020). He also mentioned that the decision is also based around monetary judgements. For instance, he brought up that the level on certification (e.g. Platinum or Gold) involves significant higher costs for in the project and “these costs are calculated into the entire project” (T.B., 2020). Consequently, the price expectations on rent and selling price is slightly higher in relation to the involved cost. However, the companies see the project as a whole and would not put the cost for the certification in the initial price, without a certification.

Another point that was brought up in this coherence is the fact that the project is usually targeted towards a potential buyer. Hence the project developer includes the decision on the certificate at a very early stage of the project, usually in the pre-phase. Depending on the buyer a project would be planned with or without the certificate from the beginning. This was especially pointed out in interview 2, which was held with a trade developer. Their approach is to involve target the entire project from the beginning to the potential buyer and adapt the selling process accordingly (H.P., 2020). To cite H.P. “If the buyer requires a certification, the project will be certified” (H.P., 2020). The same point was also mentioned by T.B., A.K. and M.S (T.B., 2020) (A.K., 2020) (M.S., 2020). That points out that the potential buyer is targeted from the beginning of the planning phase. This approach also makes a lot of sense for the developer, since the entire project may be targeted towards the certificate and all decisions may be evaluated in a sustainable manner that influences the outcome of the certificate (T.B., 2020). The same argument was mentioned by M.S. in interview 4, who said that the projects are certified to be better prepared for international investors, for instance from (North) America. We discussed a specific project in Vienna in more detail, in which the developer put a lot of effort into the certification process in order to achieve a high outcome. The project involved a quarter which was DGNB certified the main reason for the decision was that the project would achieve a higher rating with a DGNB certificate than under the standard of LEED. It was also mentioned by M.S. that the international buyers are getting more familiar with local

certificates in the past years and would also accept these certificates for their purposes. In the past, more internationally known certificates, such as LEED were preferred by international buyers. The advantage is that projects around the world are easier to compare (M.S., 2020).

For A.K. in interview 3, the situation of the decision making is slightly different. In this case, it is important to understand that A.K. works for a Viennese developer and is the president for a local organisation that awards sustainability certificates in Austria. Due to these two positions his background is even more advanced, and he may evaluate the situation even better and from more perspectives. What he mentioned is that the main approach in this decision making is the value retention, substance and profitability for the tenant. The last point is achieved from lower operating cost that should lease the space. Having a tenant that is more profitable may also reduce long-run cost for future investor due to lower fluctuation and continuous operator searches (A.K., 2020). This statement was somehow put into perspective from the operator in interview 5, who mentioned that the maintenance expenses may increase due to the more advanced technology used in the building. It was claimed that the different or additional systems would increase the annual servicing cost significantly. This statement concludes that the savings in costs for resources (e.g. energy, water and heating) may be replaced by higher cost for servicing, which the tenant must pay. At the same time G.G. pointed out that an initial investment in the construction has a significant impact on the overall cost of the building, which does not only include construction and operating cost, but also cost for renovation and maintenance. He stated that the construction cost during the entire lifecycle of a building only sums up to 20% and the other allocated cost for operating the building is roughly 80% (G.G., 2020).

However, for the operating company of interview 5, the fact that a property is certified or not does influence the project to such an extent that a project would not be considered due to lack of certification. Basically, this operating company deals with several older properties, which are not certified and would therefore also sign leases for further projects in projects that are not certified or properties which are awarded with a low certificate (e.g. Bronze or Silver). What was also mentioned is that the certificate as such does not influence the proposed lease for a project and the calculations. Hence, the rent will not be higher due to the certificate. If the certificate on the other hand has a positive impact on operating expenses this would be highly appreciated in operation (G.G., 2020).

Another point frequently discussed, is the quality of the properties. T.B. revealed that the certificate or the presence of the certification process can have a positive

influence on the building quality of sub-contracted companies. Since the involved partners are aware that the property is certified by an external audit, the other companies involved in the construction may put more effort in the construction. This is mainly due to reputation issues (T.B., 2020). This quality may also influence the long-term quality and associated investments in the future, which go into the building. Also, for the buyers this may be a big advantage (T.B., 2020). This was also mentioned by H.P., when he said, “the certification does contribute to the project and its quality, but does not influence the rent or pricing expectations” (H.P., 2020).

Pricing is also a large topic for the developer and in all three interviews the interviewees cited that the pricing is not influenced by the certificate directly. In interview 2 the pricing and the entire calculation is slightly more complicated. Their hotel projects are sold based on a Sale and Leaseback. This situation positions the developer in a position, where both the initial investment and its profits after the sale is important, but at the same time, the long-term profitability is equally important to the company. Therefore, evaluating the certificate is important for the company. This company also claims that quality is central to their decision-making process, since this will influence their operation. That is why the certificate has no significant impact on the pricing of the project to its developer, since the goal is to sell the lease contract, which was signed with the operating department of the developer, but the company will benefit from a more sustainable property once it is in operation due to lower cost. H.P. said during the interview: “However, from an operator’s perspective a reduction in operating expenses will have a long-term effect on the operating expenses and consequently increase the profit” (H.P., 2020).

In interview 3, the developer pointed out that a lack of certification might result in a lower number of operators interested in operating the hotel. Especially international operators have standards to follow and that is in some cases also a level of certification. On the other hand, it was mentioned in the same interview that smaller projects do not necessarily need a certificate if local operators are targeted. Consequently, a property that is not certified might achieve a lower rent than expected due to a smaller market. A lower rent would then result in a lower selling price (A.K., 2020). The same point was brought up from T.B., when he mentioned that some tenants require a certificate to sign a contract. They need that in order to have comparable projects, he claimed. For the developers this may be found out in the development requirements of the operators (T.B., 2020).

4.2 What are the pros and cons of the certification?

4.2.1 Negative influences from the certificate

4.2.1.1 Non-calculated cost and timing

Mentioned by T.B. and A.K. the biggest problem is the timing for the process of certification and the correlated cost that might be affected by the timing. If a project is certified from the beginning, and this process is directly integrated into the planning process, it makes the whole project cheaper than a project which was first planned and later adapted towards a certain certificate. If a project gets certified during the construction or if an existing building will be adapted to certify the property non-calculated cost might be involved to a very high extent (T.B., 2020) (A.K., 2020). A good example was stated by A.K.: the bicycle-friendly environment. Since bicycles are a very sustainable way of transportation, the infrastructure for this transportation is often included in green development. So, if a project would be planned in a less sustainable way, without having bicycles in mind the amendment to a bicycle friendly project would be very significant and involve high cost, especially if the building is already finished, since contractual changes are necessary (A.K., 2020). Similar to that example, all interviewees except the operator mentioned that it is highly important to have a very good initial plan for the project and its purpose. If this is the case, non-calculated cost due to the certificate might be reduced. Therefore, the idea of the sustainability approach and its certificate must be included right from the beginning in order to avoid high additional cost. During interviews some companies claimed to have sustainability included in their core values (A.K., 2020) (H.P., 2020).

4.2.1.2 Existing buildings

For the company of the second interview, working projects that involve existing buildings is a very difficult challenge. Especially in Vienna, many hotels in the city centre are located in older properties. Converting these properties into hotels in a project is very difficult under sustainable guidelines, H.P. claimed. Non-calculated cost is a main issue, which they experienced in a project in the first district. This project involved a 5-star hotel at the ring road, which resulted in significantly higher project cost than initially calculated. Another problem is that many certificates are only awarded to newly constructed developments and the certificates are only targeted towards new construction. Hence, the developer is more limited in the decision of the certificate with an existing building. This often has the outcome that a project is not certified at all (H.P., 2020).

4.2.1.3 Cost and calculating cost

In the interviews with H.P., A.K. and M.S., the cost structure and project calculation was pointed out. The sustainability certificate in general does influence the cost of a project. Many decisions during the project are somehow influenced by the sustainability approach. That is why it is hard to calculate the actual cost, which are involved in achieving a high certificate (H.P., 2020) (A.K., 2020) (M.S., 2020).

Not only is the calculation of the cost quite difficult, but also the costs in general are high. This involves adaptations to the property, but also the process itself. The cost will lead to an overall more expensive project. Independently seen from the utilisation of the certificate and the overall approach (H.P., 2020) (A.K., 2020) (M.S., 2020).

4.2.1.4 Sustainable solutions are not always valued by the certificate

The company of interview 4, which focusses on long-term projects that have a significant impact on the future, is one of the guidelines. However, the certificates do not always value sustainable aspects in projects. In the interview M.S. mentioned that very complex systems (e.g. in the heating) also used in one larger quarter in Vienna, is not considered by all certificates. In that case the system was using the heating system through 6 buildings very efficiently and under LEED standards this technology would not be valued at all. This is a specific issue of the LEED standards, since they do not evaluate such systems which are connected to several interdependent buildings. So, the issue is that the certificates are not as flexible in their valuation, even though more sustainable solutions are available. Consequently, it means that the certificate may not illustrate the full picture of the project (M.S., 2020).

4.2.1.5 Resources

Pointed out by M.S. and G.G. who were involved in several projects that included a certificate is the consumed time and the high involvement of work force for the certification process. Due to several meetings during the project phase and changes, which were made due to the certificate the process until the certificate is awarded is very complex and time consuming (M.S., 2020) (G.G., 2020). What M.S. mentioned in particular was the large team that is required to complete the certificate. He also stated that the size of the team is sometimes over proportional to his subjective benefits from the certificate (M.S., 2020).

4.2.1.6 Unification of different standards

As a last negative point on sustainability certificate, G.G. spoke about the differences between the certificates. Since the organisations and their standards are not following a unified strategy, their approaches are somehow very different, as it was described in the literature review. For buyers and operators that are not familiar with the individual certificates the comparison is often very difficult. A way of unification would significantly help to compare the certificates and the projects, which are certified (G.G., 2020). However, such an approach might influence the innovation and adaptability of standards.

4.2.2 Positive influences from the certificate

4.2.2.1 Quality

The most prominent point in the interviews is the quality of the building, which may be improved due to the certificate. T.B. and H.P. as well as their related companies have a strong focus on sustainable certificates in order to have an objective proof of the quality of the buildings. The certificate makes it easier to justify the prices and quality, since the certificate is awarded from an independent organisation. The quality is not only influenced by the certificates and adaptations, which were made due to the certificate, but also the fact that the certificate improves the awareness in the teams in terms of quality. The certification process involves several tests and these tests can reveal how the technical crews were working in this project. If the quality of their work is not sufficient, the test may uncover these issues. So, it might be the case that the companies work on a higher quality if tests are conducted, T.B. claimed. This quality check is also beneficial for the buyer, since the tests go into the structure of the building and weaknesses would be pointed out. Bottom-line, the project and its quality will benefit from the presence of a certificate (T.B., 2020) (H.P., 2020).

4.2.2.2 Reputation

Since reputation is of importance for all of the companies, the quality of the sold products as well as a company philosophy will also have a positive impact on the reputation. In interview 4, M.S. said that the reputation is positively influenced by certificates, since it does have an impact on the quality and also gives an insight in the strategy of the company behind the project. Putting effort into sustainability will have an impact on the reputation in a positive way (M.S., 2020).

4.2.2.3 Decrease in resource consumption and operating cost

In one point all interviewees gave the very similar answer and had the same understanding of the question. They all agreed that a project that is certified by a sustainability certificate will have a significantly lower resource consumption than a property that is not certified. This may also be seen in the operating cost, since those are also lower for the operators respectively the tenant. For instance, H.P. mentioned that the investments into technology, insulation and better systems, which are often necessary for the certificate, will have a significant impact on the consumed resources of the property. Accordingly, the actions, which are directly correlated with the certificate will have an impact and help to be more sustainable from a resource perspective. The effect of a lower resource consumption results from several adaptations on the property, which are considered in a sustainable approach. Certainly, renewable energy and renewable resources are also considered. That might influence the footprint of the building even more positively.

Another point which influences the resource consumption is more efficient equipment used in the buildings. Often these advanced systems also have the option to work independently from suppliers. A quarter, which was developed by the company of A.K. can produce more than 80% of its energy on site. Only very high peaks during the day must be compensated by local suppliers. These facilities are generally more advanced than traditional equipment, which would otherwise be used, if the project would not be considered in a sustainable manor. In this context. A.K. also stated that “sustainability is not expensive” (A.K., 2020). Therefore, his company would always consider projects in a sustainable way (T.B., 2020) (H.P., 2020) (A.K., 2020) (M.S., 2020) (G.G., 2020).

4.2.2.4 Utilisation from the certificate is quite high

In interview 1, T.B. mentioned that the cost and utilisation of certificates and its process would be very justified due to the high utilisation from the sustainable approach. He said that the certificate as a significant positive effect the developer, buyer and also the overall society in a long-term period. As discussed, the certificate offers different advantages to the three stakeholders (T.B., 2020).

4.2.2.5 Mid-term cost for owner

Another economical point, which was discussed in the two interviews with T.B. and A.K. is the quality and its consequences in a mid-term period. Both have mentioned that the increase in quality of the building will impact the future investment into the property, which would otherwise be the case. Especially T.B.

pointed out that the insulation of the outside walls and the equipment would be better and have a longer lifetime. Consequently, the future owner will have to replace the equipment less frequently and the next major renovation on the construction will be postponed in comparison to a building without these adaptations. Also in this context, the phrase “sustainability is not expensive” was mentioned by A.K. (A.K., 2020) (T.B., 2020).

4.3 What is the experience of the certification processes?

The process itself was often described as involving a lot of internal resources from the companies that start the undertaking of a development. This often involves a lot of time and workforce to provide the required information and work on the administration of the certificate. Hence, the certificate requires some interaction between the developer, the audit and other companies that are involved in the project. Also, this communication is demanding and might lead to red-flag meetings that have consequences in the plan of the project – sometimes that will be adapted towards the required features, which are prewritten from the certification standard in order to achieve a certain level of award. However, the communication between the contractors and the audit is the main aspect in order to achieve a satisfying result, H.P. mentioned (H.P., 2020). These actions certainly require a lot of conviction to sustain those steps in order to achieve a high outcome from the certificate, T.B. said. This mindset is even more important for T.B. in long-term investments than in short-term (T.B., 2020). For A.K., who participated in the third interview, said that his work is mainly influenced by the bottom-line approach of the company. He also thinks that a well-thought project will have a better output in any case (A.K., 2020). Bottom-line, the phase and process of construction and all allocated task, which will result in the certificate make a project of a hotel slightly more complex and demanding. Especially, from an administrative standpoint it will have an impact on the project. However, having the certificate awarded and the building completed the effort of the certificate has a very positive impact on the entire project, which will be discussed in the following paragraphs.

4.4 What is the effect of the certificate?

Since the outcome of the certificate was already discussed in detail in section 4.2, it may be stated that the output of a certificate is overall positive, but also some negative effects on a hotel project in Austria.

Starting from the operator's perspective, G.G. described the outcome as something having a positive impact on the achievable price to the developer, but it will also influence the operation in a direct way. The long-term effect of the certificate will influence the operation by changing the resources consumption of the property. Accordingly, the cost and consumption of resources will be lower than in other properties. At the same time, the operator will have the duty to ensure the maintenance of the facilities during operation. This responsibility will be defined in the lease contract. Bottom-line, for G.G. while the effect of the certificate is hard to measure, he said that fundamental principles from the developer will influence the project to a degree that the project will be more sustainable, certainly the certificate will provide the official prove for this mind-set. The focus of the developer must be concentrated on sustainability in order to have an impact. What he also pointed out is that in Austria the effect of sustainability certificate is not as extreme as in other markets. In regions which do not have as strong regulations in place as in Austria and Europe, independent organisations with their standards would have an even more effective impact. In their literature review, the World Green Building Councils mentions that projects may reduce the "greenhouse gas emissions by 62%, 40-50% of energy saving and 20-30% in water savings" (World Green Building Council, 2016). According to G.G., the projects in Austria do not achieve these differences, since the official regulations from the government are very high and already have a sustainable effect on buildings in this region (G.G., 2020).

For M.S. the effect of sustainability certificates will always be hard to justify, even though the general trend will be positive. From an economical perspective, the certificate will be costly in any case. However, focussing on sustainability certificates in all projects will have an impact on the reputation and may be used as a marketing tool for the developing company, M.S. stated (M.S., 2020).

For the company of interview 3, energy sustainability and efficiency are a core concept in their project, which always influences decisions. They describe themselves as a sustainable developer. Also, the future impact is in the focus of M.S. He has the opinion that a building, that is not certified and not built under a sustainable manor will be hard to hold or sell in 5 to 10 years. Bottom-line, sustainability certificates involve a certain mind-set that a company is following (A.K., 2020).

For H.P., the overall effect of a certificate is the enhancement of the building resulting from the certificate. In general, this is caused by a higher sustainable awareness during the project, that will not only affect the planning process, but

also the quality of the individual steps during construction. That is the case when “everybody in the team takes the certification process seriously” (H.P., 2020). This will also be accomplished by having a well-structured project team that continuously works together (H.P., 2020).

In the interview with T.B., who is an active auditor for DGNB standards, the effect of certificates is very positive. As mentioned before, the utilisation in comparison to the costs is very good, but also the effect for the environment, society and economic situation of a property will be positively affected. Moreover, the general quality of the property will increase due to the certificate, due to several reasons, which were mentioned by H.P. An additional effect from the certificate is the reputation of the developer. By having all projects certified, the overall awareness of the developer will increase, since sustainability is very positively associated by the real estate market.

4.5 How does the certificate influence the resource consumption?

Often mentioned by the interviewees were the contractual changes and adaptations on the property. Those changes are for instance on the insulation or the sound proofing. These changes will influence the resource consumption of the property. Also, water usage, waste production and heating are points which are positively impacted due to the adaptation on the property in order to achieve a certain level of certification (T.B., 2020) (M.S., 2020).

Most important for the resource consumption is that the changes on the property are permanent changes to the project or property, which would not be implemented without the certificate. The interviews provided insightful examples and named certain projects. The field of adaptations and categories, which are valued during the certification process, is also listed in the chapters: LEED certification in detail, DGNB certification in detail and Process of the certification under DGNB standards. The main adaptations and points are listed in these chapters.

In order to achieve a high level of certification, which is often the aim, those changes are necessary to achieve the points. Especially the company of interview 3 pointed out that their aim is always to achieve DGNB Platinum. In order to do so, adaptations according to the certification catalogue are essential to reach this level of certificate.

5 DISCUSSION OF THE FINDINGS

In the upcoming part, the findings will be discussed and the contributions of the participants of the interview will be evaluated. The interviewees gave valuable insights in the motivations, effects and other influences, which are related to sustainability certificates. Also, their background plays a big role in their judgments of the topic and the questions ask. Certainly, the inputs from people from a completely different view, for instance developer vs. operators provided completely different nuances on the topic. However, the contributions may be characterized in three fields. Those are bottom-line of monetary nature, related to the property itself and about the reputation of the firm.

First, the monetary aspects will be evaluated. From the operator view the main focus in the topic of sustainability certificates are the operating costs, which are two-sided. On the one hand, the cost is reduced by having lower resource consumption, but on the other hand these savings are relativized by higher maintenance cost from the operational view. This is due to the more advanced facilities. These facilities have the advantage that they are more efficient but may also require more maintenance. This often results in higher maintenance cost and bottom-line it is more expensive to operate a very efficient facility (G.G., 2020).

From a developer perspective, the arguments are that the overall project will be monetarily more beneficial due to the certification, since the certificate and the correlated benefits will have a positive impact on the project. One of them is that the tenant will be more stable, since the lessee might be in an economically favourable position, since the cost might be lower, according to the developers (H.P., 2020) (A.K., 2020). Those two arguments from the developer and operators are quite controversial. The two views approach this issue on very different levels. The developer sees the direct influence on the tenant, whereas the operator or tenant tries to see the full picture, including the entirety of the costs. This point is therefore difficult to evaluate in this study from an economical perspective. However, for this question the answer is straightforward, since all parties agree that the resource consumption of the property will be reduced. This will have strong influence on the bottom-line outcome on the research question. The certificate definitely causes adaptations to the property, which result in a lower resource consumption for the building.

This point will then lead to the second area, which is related to the property itself. The interviewees all mentioned certain changes, which are made to the property.

The most straightforward one is the savings in resources, due to more efficient and more advanced facilities in the property. It was also often mentioned that the certificate will have a positive influence on the quality. Some, like T.B. said that the quality will be improved by the usage of better materials. For instance, in the insulation, but it was also brought up that only the presence of the certification and the correlated tests will have an impact on the quality. The interviews then refer to the construction companies, which will put more effort into the building process in projects that are certified. The main reason for a better quality is that the certificate requires certain tests in order to obtain a high level in the certificate, in order to achieve this level, the quality of the building must be higher in order to pass the tests. T.B. claims that companies will deliver a higher quality in their work, when they know that the building will be certified. This and other reasons have as a result the building will be of slightly higher quality and have a more advanced substance as a building that is not certified. Therefore, a buyer and a tenant would get a better building when it is certified. This point is quite controversial and has in its essence that construction companies in general try to deliver a quality that is just sufficient for the job. However, it can be assumed that this highly depends in the company. In general, from the interviews the feedback was that the quality of the building will be enhanced, when a property is certified.

The subject of the quality also is closely related to the reputation of the companies that interact and most important develop the project. One important motive for the decision about the certificate is the reputation of the company, since certificates have a positive standing in the real estate sector. Therefore, some of the interviews mentioned that the company is focussed on sustainable properties, which are proven by a certificate and have this in their core values. For them the certificate helps to prove that the projects they undertake are more sustainable than other projects. From an environmental and economical perspective, this is to some degree confirmed by the information, which was collected.

Concluding the discussion, it can be drawn out of the finding is that the companies have and follow different values with regard to sustainability and the correlated certificates. In general, the view on this subject by the companies is that sustainability certificates should be part of the real estate industry in order to be competitive from a long-term perspective. It does not only influence the impact of the property itself, but it also influences the awareness of the developing companies and tenants.

6 LIMITATIONS OF THE FINDINGS AND FUTURE RESEARCH

The outcome of the study contributed in various ways. The theoretical research as well as the practical interviews have backed up the results. However, there are still some limitations, which might be solved and look at in other research in the future.

First, the background of the companies should be highlighted in detail in this section. The interviews were conducted with a developer, an operator and an auditor as well as the president of an organisation, which awards sustainability certificates to existing buildings and projects in the real estate industry.

In the following part the interviews 1 and 3 are looked at first, in order to evaluate their position. Their background and knowledge will have a strong influence on their perception and contribution to this study. Their personal benefit from a positive view on sustainability certificate, might influence their contribution. Also, their feedback on the subject on sustainability certificate should be considered cautiously. Their role in the industry of these valuations will have an impact on the answers they provided in the interview. Those benefits may also be of monetary kind. Therefore, they might have a more positive attitude towards sustainability certificates than other parties. For example, the auditor may conduct the certificate himself, whereas the president might benefit from a high awareness of the organisation. This bias should be considered when analysing their responses to the questions. Both, the auditor and the president have therefore high interest to award more certificates as of today. On the other hand, they have in-depth insights into the topic, which was the reason to invite them to the interviews. This argument should relativize their potential bias on the topic. Bottom-line, they have contributed valuable input to this study.

Another limitation is dealing with the developer. Since developers are the major commissionaires for sustainability certificates in the hotel real estate sector, they also have different reasons to contribute a very positive picture from it. Some have mentioned that the certificate may influence the pricing and rent expectation, which directly leads to an increase in profits for them. This monetary benefit will certainly influence their opinion on sustainability certificates. The doubt was mainly caused, since their responses were also mainly positive about the certificate itself. Having such a positive picture about a product, which is provided by a third party, brings up at least a little bit of disbelief that developers may have a high interest in the certificates and its outcome. In case they often benefit from it

on a monetary basis, the answers should also be evaluated with this information in mind.

Finally, the location of the interviews should be named as a limitation. The participants were mainly based in Vienna and their projects and work was only focussed on Vienna. This study will therefore be focussed on this city. The outcomes may not be valid for other countries. In the last interview with the Austrian operator, it was said that the impact of sustainability certificates may be significantly higher in other markets, for instance in Africa. Having this in mind, it might be very interesting to examine the effect of this in the future, since the official regulations in countries outside Europe might be considerably poorer than in Austria. This opens the opportunity for future research in this topic for other investigators.

7 CONCLUSION

Coming back to the main research question of this study, whether a sustainability certificate has a significant influence on the resource consumption of the hotel property or not: In a quick sentence, yes, the certificate has a significant impact on the overall resource consumption of the property. However, in the following paragraphs the main outcome will be elaborated.

From the research in the beginning and during the interviews, which were conducted in order to answer the research question, the outcome was pretty straightforward. The majority of the findings were generally positive about sustainability certificates. The theoretical framework revealed that the certification process is a comprehensive procedure, which formally verifies that the property is constructed under a sustainable manor. Since the aim of the certificate is defined in the beginning of the process, the certificate and its allocated changes to a hotel property go hand in hand. That means that the certificate and the responsible people work together in order to achieve a certain level of certification together. When the developer predefines or predetermines the approached outcome, the audit will accordingly influence the development in a sustainable way, be it implementing some changes to the property, which are often of physical nature, such as a more advanced heating system, more efficient water management or better insulation, which also influences the efficiency of the heating in the building. All of these changes will have as an end result that the property will be more efficient, resource-conserving and bottom-line more sustainable than a hotel built without having this sustainable approach in mind.

In terms of methods used in the study, it can be noticed that the theoretical part was pretty much verified and confirmed by the interviews, which were conducted after the framework was elaborated. The participants have confirmed the theory with their contributions in all the different categories of the topic of sustainability certificates. Having conducted several interviews gave this study the opportunity to get first-hand information from experienced experts of the local industry, which helped to get a better understanding of the meaning and effect of sustainability certificates.

By reflecting on the research, it is very interesting that the outcome was very straightforward, since the anticipated result was quite different in the beginning. The idea to conduct the study was to question whether or not the certificate is commissioned to add value to the project in terms of higher selling price or if the

certificate really influences the sustainability of the entire project and building on a long-term basis. Since the companies which issue these certificates have a very high interest to gain money out of the project, the background behind the commissioning was very questionable. However, during the interviews the picture changed in a very positive way, whereas the developer argued in a good way how they would like to influence the real estate market. They also said that they want to provide buildings, which are favourable for the future generations. It was unexpected to receive this kind of background information, which changes the picture of the developers deeply.

In this conclusion, also the limitations should be mentioned, since they might have an influence on future research in this field. Keeping in mind that this study is conducted in a relatively small market may have a very significant impact on the outcome. Hence, future and broader investigations may help to get a better picture about the problem and contribute more insights. By putting more effort in the topic of sustainable properties. The outcome will have a strong influence on the future cities and generations, by having a more sustainable approach in the real estate industry. Based on this study, it may be stated that a sustainable approach will lead to a better future for the entire society.

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9 APPENDICES

9.1 Appendix 1: Interview guide/interview protocols

9.1.1 Interview Guide

1. Planning/calculations
 - a. Does the certificate influence your investment decision of buying or selling an asset?
 - b. Does the certificate influence a price and rent of the hotel?
 - c. What was the main reason for you to certify the property?
2. Guest experience
 - a. Does the hotel actively communicate about its dedication to sustainability with the public and its stakeholders?
 - b. How is the certificate perceived by the guest?
3. Property
 - a. Does the hotel use energy from renewable sources?
 - b. Are there on-site facilities or partnerships with local producers for the production of renewable energy?
 - c. Does the hotel have an energy-efficient heating system?
 - d. Does the hotel use energy-saving bulbs?
 - e. Does the property overall have a lower resource consumption?
4. Conclusion
 - a. What was your experience with the certification process?
 - b. What is your overall perception regarding cost and marketing tool, or is it a waste of money?

9.1.2 Interview 1

Company Austrian consultant for environmental and health issues in the real estate industry

Person Interviewed T.B., General Manager

Date 22. June 2020

- 1 1. Planning/calculations

- 2 a. Does the certificate influence your investment decision of buying
3 or selling an asset?
- 4 T. The developer generally adapts the project towards the
5 potential buyer of the asset and will start evaluating the
6 certificate at a very early stage of the project, usually at
7 the pre-phase, so the overall project is influenced by the
8 decision of the certificate.
- 9 T. Also, it is important to consider the quality of an asset. If
10 the standards and consequently the certificate is higher
11 also the renovation-cycle is different. As higher the certifi-
12 cate as longer the property will stay without any renova-
13 tion needed.
- 14 T. Decision of the certificate should be made at the really
15 start of the project, what will be targeted.
- 16 T. Who will be the target for the property (e.g. private inves-
17 tor vs. institutional investor)?
- 18 b. Does the certificate influence a price and rent of the hotel?
- 19 T. Certainly, a higher certificate is in relation to its points
20 reached in the system, which involves some more cost.
21 These costs are calculated into the entire project.
- 22 T. If the costs for the certificate and its adaptations are not cal-
23 culated and e.g. a higher certificate is needed at a late
24 stage of the project, that might influence the costs and af-
25 terwards the price.
- 26 T. The certificate and the approach of the developer may in-
27 fluence the running-costs of the tenant significantly.
- 28 T. Some tenants require a certificate to sign a contract. For
29 them it is easier to compare properties around the world.
30 This may be looked-up in the development brochure of
31 the hotel chains. The reason is often that this was a con-
32 dition from the investors in the background. Generally, it
33 may be stated that a certificate is more important are
34 more the company (tenant) is international.
- 35 c. What is the main reason for you to certify the/a property?

36 T. It is a party of the general duties of a developer

37 T. It also can be a prove for the quality of the property

38 ~~2. Guest experience~~

39 ~~a. Does the hotel actively communicate about its dedication to sus-~~
40 ~~tainability with the public and its stakeholders?~~

41 ~~b. How is the certificate perceived by the guest?~~

42 → no answers in regard to guest in this interview

43 3. Property

44 a. Does the hotel use energy from renewable sources?

45 T. Generally, projects that are certified use energy from re-
46 newable sources.

47 b. Are there on-site facilities or partnerships with local producers for
48 the production of renewable energy?

49 c. Does the hotel have an energy-efficient heating system?

50 d. Does the hotel use energy-saving bulbs?

51 e. Does the property overall have a lower resource consumption?

52 4. Conclusion

53 a. What was your experience with the certification process?

54 T. A certification process needs to be fully integrated in the
55 project itself. So, it is important to include it from the be-
56 ginning in order to reduce the risks of late changes and
57 cost during the process.

58 b. What is your overall perception regarding cost and marketing tool,
59 or is it a waste of money?

60 T. The cost and the utilisation of a certificate is very positive,
61 for the individual developer, the buyer and the society as
62 a long-term investment. Also, it is important to know that
63 the due diligence, which is often required in these pro-
64 jects will be prepared to a high degree and makes it eas-
65 ier for the buyer.

66 T. It is also a very good prove for quality for the buyer.

- 67 T. Will influence the reputation of a developer positively. As
68 the developer and its project get more professional the
69 more important the certificate is.
- 70 T. PR is only a good add-on and no full reason for the certifi-
71 cate.
- 72 5. General notes
- 73 T. Silver is generally included in the national building regula-
74 tions and will not involve changes to the property. For
75 Gold changes to the national building regulations need to
76 be made and for Platinum major changes are necessary
77 to reach this level.
- 78 T. “Silver equally general building regulations”
- 79 T. The percentage of the assessment will estimate the
80 award, which is given out to the property (e.g. Silver, Gold
81 and Platinum). These stages may be look up on the
82 ÖGNI website.
- 83 T. The main parts, which need to be considered, when it
84 comes to certificates are insulations, sun-protection, heat-
85 ing, soundproofing and Sizes of windows, as well as light
86 concepts.
- 87 T. If the stakeholder takes this topic seriously the society will
88 benefit from it long-term. In case the certification process
89 will not be taken seriously the project will be tougher and
90 harder to calculate. Generally, the lifecycle will be posi-
91 tively influenced.
- 92 T. Performance of measurements is a key component of the
93 certification process, so it is important to include the those
94 in the calculations. If the developer tries to reduce cost for
95 the measurements, it might lead to a lower rating. Under
96 this topic soundproofing and the quality of the building it-
97 self is very important, this will influence the result signifi-
98 cantly. Hence, all parties involved in the constructions
99 should be aware that the measurements are made in or-
100 der to have a very high quality and better results. “if the

- 101 prime contractor is involved in the process, he is aware
102 and the property will be of a higher quality, which directly
103 influences the measurements and test conducted by the
104 certificate”
- 105 T. Long-term investment should be certified, since it will re-
106 duce the mid-term investments and might also influence
107 the fluctuation of the tenants, since the property is of a
108 higher quality. Older properties, without certifications of-
109 ten have issues with fluctuation of tenants, since the
110 costs are harder to calculate, also resources are costly,
111 since the property is less efficient and might be of a lower
112 quality.
- 113 T. Over time it can be seen that the cost for a high certifi-
114 cate is generally low, when the project was oriented to the
115 certificate. “Costs in general are very low and may be al-
116 most irrelevant for the project”
- 117 T. Criteria for the certificate:
- 118 1. Who will be the buyer?
 - 119 2. What is the budget?
 - 120 3. What should be the standard for the developer
- 121 T. Key facts to costs:
- 122 T. Costs are proportional to gross floor area (circa 80ct. per
123 sqm)
- 124 T. Different organisation has different prices

9.1.3 Interview 2

Company Large Austrian real estate developer with a diversified port-
folio, including hotels as one of the largest asset classes

Person Interviewed H.P., Authorized representative Head of Project Develop-
ment Vienna

Date 26.06.2020

1 1. Planning/calculations

2 a. Does the certificate influence your investment decision of buying
3 or selling an asset?

4 H. Some of the projects that are certified by ÖGNI or LEEDs
5 from the company were mentioned during the interview
6 (due to the data protection those are not listed here).
7 Hence, the company in general has a lot of experience
8 with certification of their developments.

9 H. The interviewed company is a *Trade Developer* the pro-
10 jects are targeted as a specific product from the begin-
11 ning. Therefore, the plan will always be to sell the asset
12 and the buyers are identified also from the beginning.

13 H. If the buyer required a certification, the project will be cer-
14 tified.

15 H. The sell process does influence the decision if a project
16 gets certified.

17 b. Does the certificate influence a price and rent of the hotel?

18 → NO

19 H. No, it does not, since the company has its own operating
20 company, the XX hotel management GmbH, which will al-
21 ways step into the project as an operator. More specifi-
22 cally the 80 group usually does a *sell and lease back* with
23 their projects. Therefore, the quality of the property is
24 most important. Currently, hotels department has 13 ho-
25 tels under operation.

26 H. The certification does contribute to the project and its
27 quality, but it will not influence the rent or price expecta-
28 tion, since it is included in the project anyway.

29 H. However, from an operator's perspective a reduction in
30 operating expensed will have a long-term effect on the
31 operating expenses and consequently increase the profit.

32 H. But is does influence the group on tenants and buyers,
33 which might be interested in the property.

34 H. Since, the main asset, which is sold in a transaction is the
35 lease contract the buyer focusses more on this contract
36 rather than the certification.

37 c. What was the main reason for you to certify the property?

38 H. Since certificates came to the market, the company
39 started to go with this trend, in order to improve the repu-
40 tation and quality of the projects. Hence, their quality of
41 the assets and the relationship to the clients are the main
42 reason for the certification.

43 H. Hotels in general were certified after we gained experi-
44 ence in the office sector.

45 2. Guest experience

46 a. Does the hotel actively communicate about its dedication to sus-
47 tainability with the public and its stakeholders?

48 → No

49 b. How is the certificate perceived by the guest?

50 H. The certificates are not perceived by the guest, since it
51 targets a different level. Sustainability certificates for hotel
52 operation have a higher reach to the guest and might
53 have a higher influence on their behaviour.

54 3. Property

55 a. Does the hotel use energy from renewable resources?

56 H. Yes, but generally renewable resources are not key in
57 this topic. Even more important is the fact to be independ-
58 ent from traditional energy suppliers, for example with a
59 thermal power station or solar energy, which are located
60 in or on top of the building.

61 b. Are there on-site facilities or partnerships with local producers for
62 the production of renewable energy?

63 H. Yes, as mentioned in 3.a. the projects have energy-pro-
64 ducing facilities build in

65 c. Does the hotel have an energy-efficient heating system?

66 H. Yes

67 d. Does the hotel use energy-saving bulbs?

68 H. Yes, but to achieve a high scoring in the sustainability
69 certificate rating a very good lighting concept is key.

70 e. Does the property overall have a lower resource consumption?

71

72 H. Yes, due to the technology and, which is put into the
73 building. Also, insulation plays a big role in the energy
74 management.

75 4. Conclusion

76 a. What was your experience with the certification process?

77 H. If we certify the asset, only Platinum will be approached,
78 just in some cases Gold will be sufficient, since the aim is
79 to sell high-quality products and the company should be
80 recognized as a high-quality developer.

81 H. The costs for the certification in general are a fixed ex-
82 pense and hard to calculate in the project, since the pro-
83 jects are built and planned with the certification. Since,
84 the company is a listed company they require to write out
85 the certification process to the market and are not allowed
86 to work with the same partner all the time. However, there
87 is a company, called PORR, which does the majority of
88 the certification processes.

89 H. The communication between general contractor and the
90 audit for the certificate is very important and meetings
91 from phase to phase of the projects are necessary. Over-
92 all it can be stated that the project run very smooth be-
93 tween the different parties.

94 H. Existing properties are the biggest issue when it comes to
95 certificates, since it is hard to do it after the construction
96 and a lot of effort need to be put into the asset in order to
97 reach a high level of certification. Investments into the
98 structure is often necessary.

99 H. Very important is that everybody in the project team takes
100 this certification process seriously, this will help to reduce

- 101 the cost allocated to the certificate and improve the qual-
102 ity and lifecycle of the property.
- 103 H. The shareholders are generally working better if the certif-
104 icate and its administration will take place in a project.
- 105 b. What is your overall perception regarding cost and marketing tool,
106 or is it a waste of money?
- 107 5. General notes
- 108 H. Prices of hotel properties are currently traded roughly
109 15% below pre-corona prices.
- 110 H. In Vienna the distance-heating and distance-cooling,
111 which is nowadays available have a very positive impact
112 on the points received by ÖGNI on energy. Hence, many
113 projects are built with this technology.
- 114 H. The architecture of the properties is dedicated by archi-
115 tectural competitions and also have a positive influence
116 on the points of the certificate.
- 117 H. Quality of used products in the building services have not
118 influence on the level of certification, so this is something,
119 which the buyer will check in the due diligence. The certif-
120 icate does not simplify the due diligence a lot but might
121 help.

9.1.4 Interview 3

Company Large Austrian real estate developer and also works for an organisation that awards sustainability certificates for the real estate industry

Person Interviewed A. K., chairman & organisation president

Date 09.07.2020

- 1 1. Planning/calculations
- 2 a. Does the certificate influence your investment decision of buying
- 3 or selling an asset?

4 A. The price is usually calculated before the project is
 5 brought to the market and a missing certificate might lead
 6 to a lower price, but a good certificate usually does not in-
 7 crease the price.

8 A. That consequently means that the certificate is a basic
 9 part of the

10 b. Does the certificate influence a price and rent of the hotel?

11 A. Yes, it does influence the rent and price. The price is in-
 12 fluenced as discussed before and the rent might be influ-
 13 enced due to a leak of operator. Some hotel groups have
 14 a certain certificate as a condition for new projects, so the
 15 market might be smaller if the hotel is not certified.

16 c. What was the main reason for you to certify the property?

17 A. The main reasons are value retention, substance and
 18 profitability for the tenant, due to lower running cost. The
 19 last point will lead to a more solvent tenant, which results
 20 in a longer contract period. If the tenant performs better,
 21 also the cost for the landlord might be influence, by lower
 22 fluctuation (cost for operator search) and takeover from
 23 one operator to another. Moreover, a strong tenant may
 24 put more effort into the building, for example in minor ren-
 25 ovations.

26 ~~2. Guest experience~~

27 ~~a. Does the hotel actively communicate about its dedication to sus-~~
 28 ~~tainability with the public and its stakeholders?~~

29 ~~b. How is the certificate perceived by the guest?~~

30 3. Property

31 a. Does the hotel use energy from renewable sources?

32 A. For us a decentral energy supply is in our focus, which
 33 means the energy will be produced at the facility and is
 34 not purchased from a supplier. A good example is "XX-
 35 Project" a development in the 2nd district of Vienna. This
 36 property is able to produce roughly 80% of its energy con-
 37 sumption, by itself and only very high peaks or unusual

- 38 point in time require energy from outside the property.
39 The development uses solar and geothermal energy,
40 which is included in the construction. Moreover, the quar-
41 ter is able to compensate peak by themselves.
- 42 A. What we can also conclude from our experience is that
43 the property is not more expensive by the feature, which
44 are included, but the quarter will produce significant less
45 CO₂ then comparable developments. Our aim is to create
46 sustainable properties, that have a lower impact on the
47 environment, which is a long-term thinking. Short-term
48 economical shortcomings are less important.
- 49 A. Milestone is able to reduce 20-30% of cost due to the
50 modern heating system, which also includes various sen-
51 sors.
- 52 b. Are there on-site facilities or partnerships with local producers for
53 the production of renewable energy?
- 54 A. Yes, as mentioned before the developments include on-
55 site energy production.
- 56 c. Does the hotel have an energy-efficient heating system?
- 57 A. Yes, the larger developments include cycle systems,
58 which for example use heat waste and are therefore more
59 efficient and economical friendly.
- 60 d. Does the hotel use energy-saving bulbs?
- 61 A. Yes
- 62 e. Does the property overall have a lower resource consumption?
- 63 A. Yes, it does due to the features mentioned before.
- 64 4. Conclusion
- 65 a. What was your experience with the certification process?
- 66 A. Including the certification very early in the project is im-
67 portant in order to reduce non-calculated cost, which
68 might come up later in the development phase. So, if the
69 decision of a sustainability certificate is made later in the
70 project, might influence the cost negatively.

- 71 A. Since the company puts a lot of effort into sustainability
72 the decisions are made due to an impact on the environ-
73 ment. The economic consequences are less important.
- 74 A. Also, the planning of the surrounding of the building and
75 the construction of the main body is important to consider
76 at the beginning. A good concept will lead to higher points
77 in the certification rating.
- 78 A.
- 79 b. What is your overall perception regarding cost and marketing tool,
80 or is it a waste of money?
- 81 A. Energy efficiency and energy sustainability is the key con-
82 cept of the company in terms of sustainability and will
83 lead to many upsides, those are also monetary for exam-
84 ple taxes might be reduced.
- 85 A. Yes, the company is known as a sustainable developer.
- 86 A. If the construction today is planned in a wrong way, might
87 lead to difficulties in the sale process in roughly 5-10
88 years.
- 89 5. General topics discussed
- 90 A. "Sustainability is not expensive"
- 91 A. The operator will not pay more for the more sustainable
92 property but will have lower operational cost and there-
93 fore the business runs healthier.
- 94 A. Having the architects and planner working with a sustain-
95 able mindset, makes it easier to receive a good result in
96 the certificate.
- 97 A. Everything which is included in the project in an early
98 stage will be cheaper than something, which is included
99 at a late stage of the project, which would consequently
100 cost more.
- 101 A. Including a bicycle friendly environment into a quarter will
102 be very difficult to integrate a late stage of the project. For
103 example, parking rooms in the building would change the
104 entire plan for the rooms, especially in the basement, but

105 might also affect the outside, since new doors are re-
106 quired. -> this means knowing what the goal is for the de-
107 velopment will help to reduce cost.

108 A. Bottomline, sustainability and its certificate are mindset
109 topics and should in integrated in the entire operation of a
110 developer.

9.1.5 Interview 4

Company Large Austrian real estate developer

Person Interviewed M.S., Project Development

Date 16.07.2020

- 1 1. Planning/calculations
- 2 a. Does the certificate influence your investment decision of buying
3 or selling an asset?
- 4 M. The decision is mainly characterised by the project
5 itself. Especially the decision of the certificate dispenses
6 on the project only. For example, residential buildings are
7 always certified with "Klima Aktiv".
- 8 M. Overall, the project was slightly more expensive due
9 to the technology and planning, which was made in Pro-
10 ject TWENTY-TWO, but having very expensive central-
11 ized systems are roughly as expensive as independent
12 heat systems and energy connections. Roughly it is the
13 same for the calculations.
- 14 b. Does the certificate influence a price and rent of the hotel?
- 15 M. Yes, in commercial properties the rent may increase
16 due to a high or higher certificate. Especially international
17 tenants are very likely to sign only leases on properties
18 that are certified. Moreover, as more professional the ten-
19 ant is the more important are certificates. For them it is
20 key to compare the properties around the world without
21 going into detail with local differences.

22 c. What was the main reason for you to certify the property?

23 M. In the case of project TWENTY-TWO in Vienna,
24 which is ÖGNI Platinum certified, the chance to certify the
25 entire quarter was most important. Hence, the project was
26 certified as ÖGNI Gold with more than 110.000 sqm usa-
27 ble area.

28 M. Also, the valuation of the buyers where evaluated in
29 detail, due to the available certificate form ÖGNI and the
30 targeted group from local and European investors where
31 the main reason for the decision on the ÖGNI certificate.

32 M. Some of the properties standalone and not as a
33 quarter were also certified but by LEEDS in order to be
34 prepared for more international buyers, such as American
35 investors. However, the hotel is not LEED certified, since
36 the project team has realised that the outcome was not
37 sufficient, and the team decided to not certify the hotel
38 under LEEDS standards.

39 ~~2. Guest experience~~

40 ~~a. Does the hotel actively communicate about its dedication to sus-~~
41 ~~tainability with the public and its stakeholders?~~

42 ~~b. How is the certificate perceived by the guest?~~

43 → Due to the background no answer proper on this question was
44 given. However, the hotels of ARE general do not use the certifi-
45 cates to market their hotels to the guest. It is much more on the in-
46 vestors level.

47 3. Property

48 a. Does the hotel use energy from renewable sources?

49 M. Yes, the energy management is quite advance and
50 uses also renewable sources. The Project TWENTY-
51 TWO for example uses geothermal energy, which is pro-
52 duced on site. This energy plant also uses heat ex-
53 changer, which have pipes on the outside of the cellar to
54 exchange the temperature underground.

- 55 b. Are there on-site facilities or partnerships with local producers for
56 the production of renewable energy?
57 M. No, there are no specific partnerships, but the energy
58 used from suppliers are sustainable.
- 59 c. Does the hotel have an energy-efficient heating system?
60 M. Yes, the entire quarter uses a very intelligent system
61 to use all heat, which comes from various generators in
62 the buildings and leads the temperature to places within
63 the entire quarter where the energy is needed.
- 64 d. Does the hotel use energy-saving bulbs?
65 M. Yes, but also sensors to save energy once the light is
66 not required.
- 67 e. Does the property overall have a lower resource consumption?
68 M. Yes, and our main pros for the usage of these imple-
69 mentations are based on our convictions as well as lower
70 operating costs for the tenants, which will benefit from the
71 use of sustainable products/decisions. Consequently, the
72 partnership and strength of the tenant is key to have a
73 long-term sustainable project.
- 74 4. Conclusion
- 75 a. What was your experience with the certification process?
76 M. Bottomline, the certification is very demanding and
77 time consuming. The additional meetings and problems,
78 which come along will have a significant impact on the
79 entire project.
- 80 M. Some changes are made due to the certification,
81 these are: materials, design, structure of the environment
82 of the quarter.
- 83 M. Bottomline, the goal during the process is to fulfil the
84 catalogue of the certificate and have proper administration
85 protocols as well as proof of evidences for the undertak-
86 ing, which consequently does not have an impact on the
87 overall sustainability of the project.
- 88 M. The process also involves a group of workers

89 M. As mentioned before as more professional a project
90 becomes the more important the certification will be, es-
91 pecially when international parties are involved.

92 b. What is your overall perception regarding cost and marketing tool,
93 or is it a waste of money?

94 M. Overall cost for the certification is hard to justify. Es-
95 pecially when considering if the project will be more sus-
96 tainable. It will have an impact on the quality, but this will
97 be costly.

98 M. For marketing purposes this tool is quite important,
99 generally a project will be calculated with a higher price
100 than a project without certification.

101 5. General topics discussed

102 M. The project has a lot of systems, which are central-
103 ized and share the energy or heat between each other.
104 Also, not every building required resources at the same
105 time, hence the dimensions of the machines are generally
106 slightly smaller due to the central approach. This ap-
107 proach has one big disadvantage in terms of certificates,
108 because the certificate from LEEDS does not consider
109 such advance technologies. ÖGNI has considered the
110 centralised system.

111

9.1.6 Interview 5

Company Large Austrian hotel and tourism company

Person Interviewed G.G., Head of technical services

Date 22.07.2020

1 1. Planning/calculations

2 a. Does the certificate influence your investment decision of buying or selling an
3 asset?

4 G. The company the company Hotels does not really consider sustaina-
5 bility certificates in their project in the detail, but certainly appreciates
6 lower operation expenses, from energy and heating.

7 b. Does the certificate influence a price and rent of the hotel?

8 G. If the property and the certificate have an impact on the operating
9 cost, the calculation might be slightly different, but will not have an
10 impact on the proposed rent. If the hotel has saving on a long-term
11 this will just be the benefit for the company.

12 c. What was the main reason for you to certify the property?

13 G. Since the company mainly deals with existing properties, there is not
14 project, which was actively certified by the company, but they had a
15 lot of contact with this topic due to several lease proposals.

16 G. If a property is not certified this is not an exclusion criterion for the
17 company.

18 2. Guest experience

19 a. Does the hotel actively communicate about its dedication to sustainability with
20 the public and its stakeholders?

21 G. Yes, the hotel chain with its newly established brand has a strong fo-
22 cus on sustainability and this subject is a key component of the
23 brand. The identity is formed around it and it will be communicated
24 with the guest. Bottomline, it is part of the identity.

25 b. How is the certificate perceived by the guest?

26 G. Sustainability in general is a topic, which is perceived very positive by
27 guest. Overall it is a big trend, not only in the hotel industry.

28 G. However, the guest will not see a difference due to energy saving
29 from a certified property. Their length of stay is too short, and prices
30 are not variable in this manner.

31 3. Property

32 a. Does the hotel use energy from renewable sources?

- 33 G. Yes, some of the hotels use solar systems and other are inde-
 34 pendently from general suppliers.
- 35 b. Are there on-site facilities or partnerships with local producers for the produc-
 36 tion of renewable energy?
- 37 G. No, generally due to the lack of awareness of this topic in the mother
 38 company.
- 39 c. Does the hotel have an energy-efficient heating system?
- 40 G. The existing buildings are not using very energy-efficient heating sys-
 41 tems, but the new development of Project TEWNTY TWO will be the
 42 first hotel and a good test on saving due usage to more sustainable
 43 products.
- 44 d. Does the hotel use energy-saving bulbs?
- 45 G. Yes, Bassena does use energy-saving bulbs.
- 46 e. Does the property overall have a lower resource consumption?
- 47 G. Bottomline, yes. Have not such a big impact on the quality and sus-
 48 tainability of the project or building.
- 49 G. If a property is certified the resource consumption is lower.
- 50 4. Conclusion
- 51 a. What was your experience with the certification process?
- 52 G. The developer itself must be focussed on the topic of sustainability.
 53 The certificate alone will.
- 54 G. Generally torn on this topic, since many decisions and changes due
 55 to the certification are nonsense and have not a lot of impact on the
 56 sustainability of the property. It is rather producing additional cost in
 57 the construction.
- 58 G. The sustainability certificate would make a lot of sense, due to its
 59 high impact if the project is calculated and planned in a sustainable
 60 manor. However, if s the tenant may benefit from the due to signifi-
 61 cant lower operation cost, but it might involve higher maintenance
 62 cost and from an economical view the difference is not too significant.
- 63 G. Measures due to the certification are not often practically and have
 64 not a lot of impact on the operation.
- 65 G. If a property is certified the quality of the building is proven and it is
 66 easier to evaluate different projects.
- 67 G. Some investments from certification process are not economically
 68 feasible from an operator view.
- 69 G. If a property is renovated in a sustainable way or certified after it is
 70 built, the cost is much higher than in the development stage. Further-
 71 more, owners are not willing to take these costs, since they do not
 72 benefit from it directly (lower operating expenses), so it is often part

73 of the tenant and for operators these extensive renovations are not
74 profitable.

75 b. What is your overall perception regarding cost and marketing tool, or is it a
76 waste of money?

77 G. A big problem of certificates are the various different organisations
78 with very different criteria. Even from a professional view it is hard to
79 compare the different certificates, which are so different due to their
80 special location and its local issues.

81 G. Generally, the topic of sustainability certificates is heavily used to
82 push prices up. Which is true for leases as well as selling processes.

83 G. However, sustainability in the construction, which has an impact
84 makes a lot of sense on a long-term basis.

85 G. Certificates will not lead to quality by its own, fundamental principals
86 would have an impact. Also benefits such as monetary benefits and
87 image will have an impact on the operation of the company.

88 G. The value of the sustainability certificates is difficult to evaluate and
89 often the value is in the marketing and selling price rather than in a
90 long-term impact on sustainability.

91 5. General topics discussed

92 G. The general building regulations in Austria and Ger-
93 many are so high that the certificate itself has not such a
94 big impact on the construction itself. It might be more use-
95 ful to use those in regions with much lower regulations
96 and the impact of the certification process on the quality
97 and sustainability of the property might be significant
98 higher.

99 G. Key is to focus all decision on sustainability in order
100 to have an impact, otherwise it will be impossible to bene-
101 fit from it.

102 G. Lifecycle-cost-Model might be interesting, since
103 roughly 80% of the cost are operating expenses in a
104 lifecycle of a building and only 20% are construction cost,
105 hence a sustainable approach might positive in an eco-
106 nomical way.

107 b. Examples:

108 G. The fine dust, which is produced by the excavation
109 may be limited by the usage of water at this stage of the

110 construction process. However, it is very questionable if
111 the extensive usage of water is really more sustainable
112 than the increase in fine dust, which is produced during
113 the construction in hot climate.

114 G. A developer in his previous job existed on the use of
115 feng shui, as well as a very sustainable construction,
116 which was more sustainable then everything he has seen
117 before (50cm insulation).