

## ATTEMPT TO ASSESS THE ARCHITECTURAL QUALITY OF THE COMMON AREAS OF THE AZ ZEPHYR HOTEL IN MOSTAGANEM, VIA THE PERCEPTUAL APPROACH OF USERS

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**Abstract:** The present study evaluates the architectural quality of one of the most significant hotel infrastructures in the city of Mostaganem. It focuses, more specifically, on assessing the AZ Zephyr building, taken as an architectural built object, in order to understand the users' perception of the hotel's common areas, including reception, dining, and recreational spaces. In order to understand the users' perception of the hotel's common areas, including reception, catering and leisure areas. Both subjective and objective aspects of architectural quality will be discussed, emphasizing the emotions evoked by the architectural object, particularly its technical aspects. To analyse the various aspects that will enable an evaluation of the building by its users, namely, location, morphology, aesthetics, and functionality, we used the questionnaire technique in order to be able to apply, thereafter, the MATEA model (models for architectural analysis, theory and experimentation) developed by Hanrot (2009) which will enhance the reliability of the obtained results.

**Key words:** architectural quality, assessment, hotel infrastructure, MATEA, AZ Zephyr

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## **INTRODUCTION**

Mediterranean countries are often presented as the world's leading tourist region, receiving over 300 million international tourist arrivals in 2011, accounting for one-third of global tourism activity (UNWTO Tourism Highlights, 2012). Despite Algeria's affiliation with this region, tourism there is relatively undeveloped, and the number of foreign tourists visiting the country is relatively low. Several studies, belonging to various disciplines: sociology, economics, marketing, communication, have demonstrated the reasons for the low number of foreign tourists visiting the country, and attribute this shortfall to several multifactorial reasons (Haim, 2013; Kouri, 2015; Benhaddou, 2017; Chiha, 2017). These can be classified into five main categories: political, security-related, socio-cultural, managerial and logistical, in addition to the health aspect, which has become a significant criterion since the Covid-19 pandemic. The logistics aspect encompasses several elements, ranging from the country's accessibility to international tourists and the visa acquisition process to the architectural aspect of constructions dedicated to tourism, such as tourist facilities and hotels.

Our study is part of this broad issue that addresses the factors related to the underdevelopment of tourism in Algeria and its various causes. As an architect, the goal of our research is to establish the link between hotel architecture, tourist accommodation structures, and the development of tourism in Algeria by studying the architectural quality of these facilities. Indeed, architectural quality is one of the most important factors that can enhance the overall quality of establishments and increase the country's tourist attractiveness. This research focused on a case study on which we will apply the MATEA analysis method which will subsequently be generalized to other touristic infrastructures in future research work.

In this article, we focused on the architectural quality of one of the hotels in the city of Mostaganem: the "AZ Zephyr", which we used as a case study. To carry out this evaluation, we chose to apply the MATEA model designed by the architect Stephan Hanrot (Hanrot, 2009). The method consists, of first developing questionnaires to be handed out to the users of the space, who are none other than the hotel's clients. A database was subsequently established with all the collected viewpoints, which we schematized for better analysis and interpretation. In order to demonstrate the significance of this study, a historical overview of tourism and hotel infrastructures in Algeria was presented, from the colonial era to the present day, with a focus on those located in the wilaya Mostaganem. The approach methodology and its application to our case study will then be discussed. The research will end with the interpretation of the results we obtained.

## **LITERATURE REVIEW**

Although architectural quality has been, since Vitruvius, the main requirement for an architectural masterpiece, this concept remains relatively recent. It emerged in Western countries during the 1990s, gaining significant importance in the academic field. The first contributions mainly concerned the collection: "Architectural Quality and Innovation" published in two volumes, the first was written by Dehan (1999), while the second was a collective work dedicated to case studies (Debarre, 1999).

Much later, during the 2000s, efforts were made to integrate the concept into practical application, by applying the theoretical knowledge acquired earlier. One of the pioneering works in the French-language literature is undoubtedly the collective work titled "Architectural Quality: Actors and Challenges", which emerged following the study days titled "Quality and Process Control in Building Projects", held in 2005 and which brought together around a hundred

researchers, practitioners and administrators (Biau, 2009). Other works have also addressed the issue of architectural quality in France, including the works of Hanrot (2009) and Dehan (2017).

Elsewhere, researchers have also shown interest in this concept, we mention numerous studies (Rönn, 2011; Rönn, 2012) on architectural quality as a concept, its historical evolution, and its role as a criterion in architectural competitions in the Nordic countries. Many of these essays on the analysis of architectural quality have been dedicated to housing from various perspectives. For instance, works by Jourdeuil (2020) can be mentioned in this context.

In Algeria, the scientific contribution to architectural quality remains modest. One of the most important works in this regard is that of Hendel (2011), where he exposed the theoretical aspect of architectural quality in Algeria and compared it with the real practical aspect of architectural projects. Other researchers have been interested in the architectural question of housing in Algeria (Haraoubia, 2011; Merad, 2013; Merad, 2017) who studied the architectural quality of the exterior spaces of collective housing estates. As for Laroui (2017), he focused his research on the architectural quality of public buildings, with the initial case study being those of the Office de Promotion Immobilière (OPGI).

Other researchers have chosen to associate, in their work, architectural quality with other concepts and have studied the connections and relationships that quality maintains with aspects of ambiance or comfort. Examples include Assassi (2006), who established the relationship between thermal comfort and architectural quality, and Boudoukha (2015) who analysed the effects of brightness, lighting, and visual comfort on quality.

Regarding the architectural quality of tourist and hotel infrastructures, research by Naceur (2009) addressed the subject and focused on the hotel sector in the city of Algiers. This study conducted an inventory, in terms of quantity and quality, of tourist infrastructure in the Algerian capital and analysed its connection with the country's tourism policies. However, this research area remains relatively unexplored, highlighting the significance of the current study, which focuses on one of the most important tourist facilities in the west of Algeria.

## **HISTORICAL OVERVIEW OF TOURISM AND HOTEL INFRASTRUCTURE IN ALGERIA**

The construction and consideration given to tourism and hotel infrastructure in Algeria have followed the pace and evolution of tourism in this country, the construction and consideration given to tourism and hotel infrastructure in Algeria have followed the pace and evolution of tourism in the country, which is primarily closely linked to state policies and the circumstances of each historical period. It is evident that the Algerian government has never made tourism a priority in itself (Chaoui, 2017; Diaf, 2019).

According to others (Chaoui, 2017), the evolution of tourism in Algeria has gone through four main stages: French colonization, independence, a period of decline, and a period of revival. Given the heavy consequences of the Covid-19 pandemic on the tourism sector, we deemed it wise and essential to add this period as the fifth stage in the current analysis.

During French colonization, from the late 19th century to the early 20th century, France invested significant resources to make Algeria a tourist destination for Europeans by undertaking several projects aimed at developing tourism (Zytnicki, 2013). By the dawn of the Second World War, Algeria had received nearly 100,000 tourists (Berthonnet, 2006) and, at the time of independence, had inherited a touristic lodging capacity of 5,922 beds (Kouache, 2010). During this period, the policy of the colonial administration focused on seaside and urban tourism leading to the concentration of the hotel heritage inherited from France in major Algerian cities (Widmann, 1976).

At the dawn of the country's independence, just after the end of the liberation war, Algerian hotel and tourist infrastructures, like other types of infrastructure, were in a very degraded state. Tourism was lacking, and the post-war atmosphere was not favorable for welcoming tourists (Widmann, 1976).

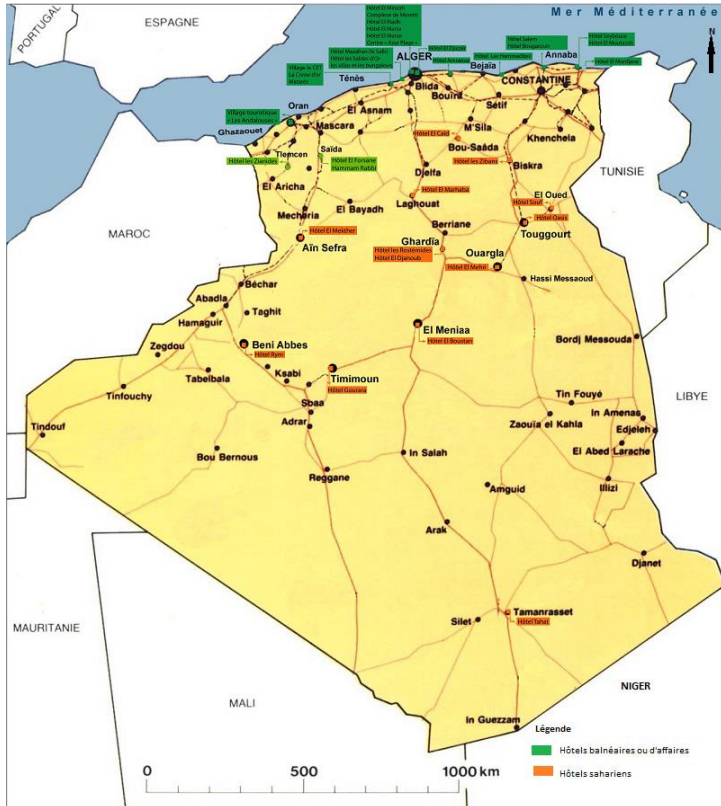
The priority of the Algerian state was rather given to the economic and social development of the country (Boutabba, 2013; Ammi, 2019). During the early years of independence, the country's geographical proximity to Europe attracted a significant influx of foreign tourists, predominantly of European origin, with a majority hailing from France. This distinctive form of tourism is often characterized as "roots tourism" by several authors, acknowledging the profound connection that the French settlers had with Algeria, which, for some, evoked a sense of homeland) given the country's geographical proximity to Europe, the foreign tourists who flocked in were mainly Europeans, most of whom were French. This was a unique type of tourism that many authors refer to as " roots tourism" considering the connection the French settlers had with Algeria, which, for some, represented their native country (Fourcade, 2010).

The Algerian tourism industry was at its peak. Many ZET (tourist expansion areas) were planned and developed, and colossal amounts of money were invested in tourism projects throughout the national territory. However, the big part of these investments was primarily allocated to beach and urban tourism. This led to a rapid expansion of Algerian tourism, propelling the country to the status of an international tourist destination. This period marked the prodigious rise of tourism in Algeria (Mefatif, 2012; Boukhelifa, 2014).

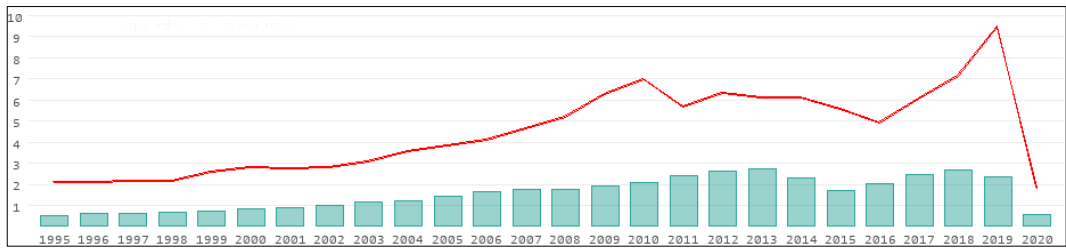
Indeed, many tourist complexes, such as hotels, holiday villages, marinas, and thermal resorts, have emerged thanks to the political will of the Algerian president at the time, who commissioned several architectural projects to the French architect Fernand Pouillon. As shown in Figure 1, we can cite, among others, the seaside resorts of Moretti, Sidi Fredj, Zeralda, Tipasa Club Med, and Matares, as well as Les Andalouses in Oran, which are bordering the Mediterranean. Other masterpieces by the same architect, distinguished by their innovative and visionary architectural character, has been constructed in southern Algeria, promoting Saharan tourism in the country. For example, the Gourara in Timimoune, the M'zab in Ghardaia, the Zibans in Biskra, and the Rym in Bechar are noteworthy. These projects were developed with the focus on cultural tourism (Merzelkad-Hallal, 2018).

Between 1990 and 2000 In the 90s, Algeria experienced a period of political instability that led to a civil war, a bloody episode in its history commonly referred to as the "black decade." The Algerian economy was stagnating, and the majority of state construction projects, including those related to tourism and culture, were on hold. Algerian tourism experienced a significant decline mainly due to the insecurity prevailing in the country (Figure 2). The economic crisis was at its height, and the state resorted to operating through borrowing. operated through borrowing. Tourism was relegated to the lowest of priorities, and the existing tourist infrastructures were dilapidated due to their abandonment, with no programs planned for the construction of new structures. The Algerian government neglected the tourism sector in favor of an economy based essentially on oil resources. This marked a period of decline. Indeed, the investments allocated to the tourism sector during this period were minimal, not exceeding 0.9% of the total general investments of the state (Figure 3) (Boukhelifa, 2014).

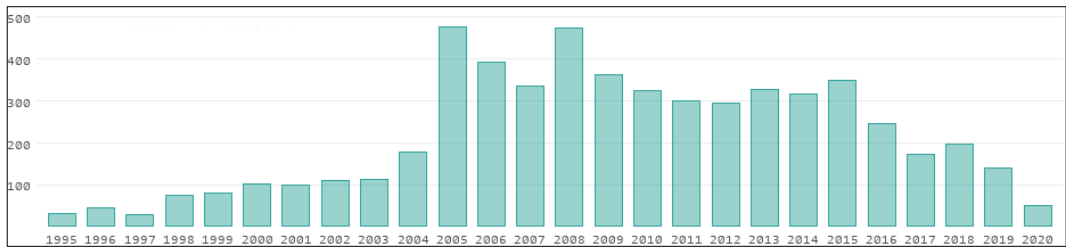
Since 2005, the Algerian government showed a real desire to diversify its income, by choosing to promote the tourist industry. This marked a period of revival for the sector, which was evident through the new tourism policy in Algeria by 2025. The policy was adopted by the Algerian government in 2008 through the SDAT 2008 (Sectoral Development Plan for Tourism), as a component of the National Territorial Development Plan SNAT 2030.



**Figure 1.** Tourist and hotel infrastructure designed by Fernand Pouillon in Algeria  
(Source: Maachi Maïza, 2021)



**Figure 2.** Number of foreign tourists (in millions) registered each year in Algeria from 1995 to 2020  
(Source: <https://www.donneesmondiales.com/afrique/algerie/tourisme.php>)



**Figure 3.** Evolution of tourist receipts in Algeria from 1995 to 2020  
(Source : <https://www.donneesmondiales.com/afrique/algerie/tourisme.php>)

Despite the government's efforts, the results have been modest, with only a gradual materialization of the intended goals. As Fig. 04 clearly shows, in recent years, there has been a relatively insignificant increase in international tourist arrivals, rising from 1.44 million tourists in 2005 to 2.73 million in 2013 (according to the World Tourism Organization).

At the end of 2019, China was struck by the Covid-19 pandemic, which continued to spread to all countries worldwide, causing enormous human and material damage. The tourism sector is one of the sectors most heavily affected by this health crisis, particularly due to the severe protective measures implemented. According to the World Tourism Organization (2020), the Covid-19 pandemic led to a 20% to 30% decline in the tourism sector of 20% to 30% during the year 2020 mainly attributed to an 80% decrease in air traffic since January of the same year. This situation has led to a drop in international tourism receipts of between 300 and 450 billion dollars (Ramdane, 2020; Cousin, 2021; Ramdane, 2021; Mesbahi, 2022). Algeria was not immune to the health crisis and its economy, particularly the tourism sector, suffered significant repercussions. In March the Algerian government took measures to combat the pandemic, including the closure of borders and the shutdown of gathering places such as hotels, restaurants, and leisure facilities (Oukaci, 2020). As a consequence, the tourism sector experienced a severe blow, leading to a substantial decline in revenue generated by tourists. In 2020, the revenue plummeted from 125.06 million euros, recorded in 2019, to a mere 43.78 million euros (see Figure 3), representing a staggering 65% decline (OMT). However, as the end of 2020 and the beginning of 2021 saw the resumption of domestic flights, domestic tourism gradually started to recover, particularly Saharan tourism during the winter and seaside tourism during the summer (Oukaci, 2020).

### OVERVIEW OF HOTEL INFRASTRUCTURES IN MOSTAGANEM

Mostaganem is a coastal city in Algeria that has followed the same pattern of evolution in its tourism policy as other Algerian cities but from the point of view of tourism development, there is still a certain gap between the tourist potential and its capitalisation (Tătar, 2023). Indeed, over the past ten years, tourism has emerged in the wilaya, making it one of the most touristic cities in Algeria and the most visited city during the summer period. The newspaper "Reporters" records 10 million tourists in 2019 (Guerroudj, 2019).

This city has several assets, a 124-meter long coastline that embraces a large number of picturesque beaches (there are 42 beaches open for swimming during the summer season in 2022, according to the DTA), dense forests and architectural monuments classified as national heritage by the Algerian Ministry of Culture (such as Bordj turk and Dar el Kaid) as well as archaeological sites (the site of Quiza). Moreover, there have been numerous investments in favour of tourism development, such as Mosta Land (Algeria's largest amusement park), Aqua Parc located adjacent to it, and the renovated 20 Août Park (Al Arsa). Additionally, forests like Bourahma in Ouilis have been developed and arranged to cater to visitors. As a result, the city has become a hub for family tourism from various parts of the country. Investments have also impacted the tourist accommodation sector where we notice an expansion of tourist infrastructure in the city, table 1 lists the hotels, tourist complexes and tourist residences in the city of Mostaganem.

**Table 1.** The tourist and hotel infrastructures of the wilaya of Mostaganem

(Source: compiled by the author from data collected from the DTA of the wilaya of Mostaganem)

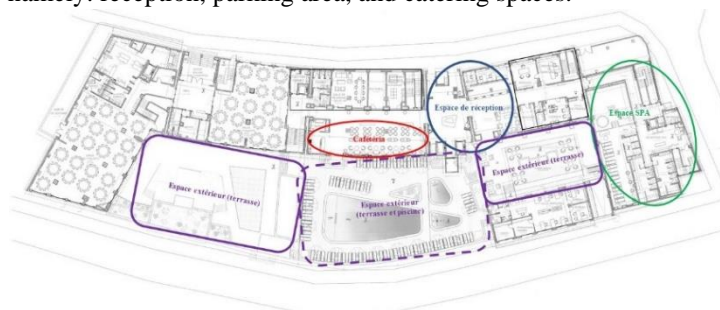
| Location      | Type of infrastructure | Name     | Capacity | Ranking | Exploitation date |
|---------------|------------------------|----------|----------|---------|-------------------|
| Excluding ZET | Urban hotel            | Sahel    | 30 Rooms | 1 star  | Before 1996       |
|               |                        | Palacio  | 18 Rooms | 1 star  | August 2008       |
|               |                        | Palmiers | 54 Rooms |         |                   |

|                          |   |                             |                            |               |                |               |
|--------------------------|---|-----------------------------|----------------------------|---------------|----------------|---------------|
| (tourist expansion zone) |   | Abdallah/ Hadj Abdallah     | 60 Rooms                   | In progress   | March 2018     |               |
|                          |   | AZ Montana                  | 219 Rooms<br>13 Apartments | 5 stars       | June 2018      |               |
|                          |   | Bordj Al moulouk            | 25 Rooms                   | In progress   | July 2017      |               |
|                          |   | Senoucia                    | 54 Rooms                   |               | June 1996      |               |
|                          | Other structures Intended for the hotel industry. | Royal                       | 28 Rooms                   | /             | Before 1996    |               |
|                          |   | Dar El Moualem (Ex Munatec) | 36 Rooms                   | /             |                |               |
|                          |   | El Djazair                  | 14 Rooms                   | /             | Before 1996    |               |
|                          |   | El Riadh                    | 24 Rooms                   | /             | Before 1996    |               |
|                          |   | El Badr                     | 17 Rooms                   | /             | Before 1996    |               |
|                          | Motel   | El Bahia                    | 19 Rooms                   | 1 star        | August 2000    |               |
|                          |   | Dauphin                     | 12 Rooms                   | /             |                |               |
| ZET Oureah Sablettes     | Seaside hotel                                     | AZ Le Zephir                | 289 Rooms                  | 4 stars       | April 2018     |               |
|                          |   | Kasr al Mansour             | 150 Rooms                  | 4 stars       | January 2017   |               |
|                          |   | Murustaga                   | 26 Rooms                   | 2 stars       | March 2009     |               |
|                          |   | El-Feth                     | 14 Rooms                   |               |                |               |
|                          |   | Cote Ouest                  | 24 Rooms                   | 1 star        | March 2011     |               |
|                          |   | Ennakhil                    | 47 Rooms                   | 2 stars       | October 2013   |               |
|                          |   | Quiza                       | 14 Rooms                   | /             | February 2005  |               |
|                          |   | Phenicia                    | 24 Rooms                   | 2 stars       | October 2013   |               |
|                          |   | L'etape                     | 24 Rooms                   | /             | April 2017     |               |
|                          |   | Abada                       |                            | In progress   | July 2018      |               |
|                          |   | Sable d'or                  |                            | /             | July 2018      |               |
|                          | Seaside hotel + Touristic Residences              | El-Mountazah                | 25 Rooms<br>78 Bungalows   |               |                |               |
|                          |   | El Zouhour (Ex Bouzour)     | 51 Rooms<br>66 Bungalows   | 3 stars       | April 2017     |               |
|                          |   | CAP Hyproc                  | 99 Rooms<br>56 Bungalows   |               |                |               |
|                          |   | Costa Mimosa                |                            |               |                |               |
|                          | Touristic Residences                              | El Oumara                   | 44 Bungalows               | 1 star        | May 2011       |               |
|                          |   | Ouled Ben Zine              | 10 Bungalows               | /             | September 2009 |               |
|                          |   | Sninat                      | 10 Bungalows               |               |                |               |
|                          |   | Rahil                       | 31 Bungalows               | 1 star        | October 2013   |               |
|                          |   | Z'kera                      | 31 Bungalows               | In progress   | May 2017       |               |
|                          |   | Sablettes (Sonatrach)       | 42 Bungalows               |               |                |               |
|                          |   | El Ouaha                    | 20 Bungalows               | In progress   | July 2013      |               |
|                          |   | Diar El Bahr                | 14 Bungalows               | In progress   | August 2011    |               |
|                          |   | Les Maldives                |                            | In progress   | June 2017      |               |
|                          |   | La Baie d'Or                |                            | In progress   | August 2014    |               |
|                          | El Manar  |                             | In progress                | November 2020 |                |               |
|                          | ZET Ben Abd El Malek Ramdane                      | Touristic Residences        | Zina Beach                 | Apartments    |                |               |
|                          |   |                             | Soleil                     | 19 Rooms      | 1 star         | December 2002 |
|                          |   |                             | Essafir                    | 70 Bungalows  | /              | January 2002  |

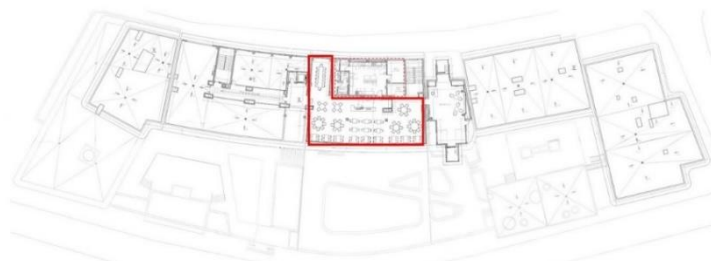
### PRESENTATION OF THE CASE STUDY: AZ ZEPHYR HOTEL

The AZ Zephyr is a 4-star hotel establishment; it is located in the ZET of Sablettes known for its concentration in hotel infrastructures. It is situated 8 kilometers away from the city center of Mostaganem. The choice was made to focus on this hotel for two main reasons; firstly, we wanted to work on the ZET of Sablettes, where there is a concentration of tourist infrastructures dedicated to the accommodation of tourists: hotels, complexes, and tourist residences.

The second reason for this choice relates to the hotel's significance, as it has the largest accommodation capacity. Additionally, this hotel offers common areas (terraces), relaxation and leisure spaces (outdoor swimming pool, Spa area) as evident in the Ground Floor Plan of the establishment (Figure 4 and Figure 5). In this article, we will specifically focus on the hotel's common areas, namely: reception, parking area, and catering spaces.



**Figure 4.** Plan of the ground floor of the AZ Zephyr hotel in Mostaganem  
(Source: DTA Direction of tourism and handicrafts of the wilaya of Mostaganem)



**Figure 5.** Plan of the top floor (7th) of the AZ Zephyr hotel in Mostaganem  
(Source: DTA Direction of tourism and handicrafts of the wilaya of Mostaganem)

### PRESENTATION AND OBJECTIVE OF THE STUDY

The definition of architectural quality remains ambiguous (Biau, 2009; Merad, 2017; Arab, 2022) as it depends on various factors such as the production process (programming, design, construction, and use), the actors involved (designer, builder, client, and users), and architectural values (solidity, usefulness, and beauty).

In the case of the AZ Zephyr hotel, our focus will be on assessing architectural quality in post-occupancy, meaning during the use phase, because the subject of study is already completed, received, and functional, but as the different phases of the process are closely interconnected, we will refer to each phase whenever necessary. Consequently, the actor being questioned in this work is the space user, namely the hotel's clients. It is important to note the diversity of profiles. Indeed, the individuals being questioned are mostly not experts in the field of construction.

Questioning the user about the quality of the built object, especially when its construction is completed, will not only allow us to assess this quality but also to confirm the positive aspects and identify the weaknesses of the built object in order to learn for future projects. Studies and scientific



works are now focusing on this new equation, which involves the end user throughout the entire production process (Mezrag, 2018; Mezrag, 2022).

Architectural quality also possesses two paradoxical aspects which are complementary: the objective aspect and the subjective aspect. Lecourtois' definition (2009) reflects this idea: "it is a complexity shared between an intrinsic property and a sensitive and subjective value (Lecourtois, 2009). It is a notion that encompasses both the subjective aspect represented by the emotions produced by the built object and the objective aspect represented by the technical side of the building (acoustics, thermal, etc.)." For this reason, we attempted to question both aspects in this study (see Table 02). The objective aspect will examine the situation, programming, and technical aspects, while the subjective aspect will explore comfort with its various dimensions.

### **METHODOLOGY OF WORK: MATEA MODEL**

The MATEA model (model for architectural analysis, theory and experimentation) that we apply to our study was designed by Stephan Hanrot (2009) who explored it in his article: an evaluation of architectural quality relating to points view of the actors (Hanrot, 2009). As the title suggests, the evaluation of architectural quality will be based on the viewpoints of the actors. Hanrot applied the model to assess the quality of a house by questioning two actors: the designer (architect) who conceived the house and the client (owner).

It is important to emphasize that this model has been used in several other academic works and scientific research at both national and international levels. Some of the references include (Sellami Kallel, 2003; Khemila, 2004; Turqui, 2005; Henidi, 2007; Merad, 2013; Merad, 2017). It is important to specify that while the original model's designer developed it to evaluate an individual house, other researchers have been able to adapt and apply it to various cases, such as social housing (Haraoubia, 2011), malls (Sellami Kallel, 2003), outdoor spaces in collective housing (Merad, 2013) and offices in an administrative headquarters (Laroui, 2017).

The MATEA model consists of two parts: the first, is a chronogram, to understand the production process of the built object and to identify the phase in which the points of view of the actors will be collected. The second part consists of the creation of databases after the collection and constitution of the different points of view. Hanrot (2009) insists on the fact that an analysis grid is important to serve as a common reference for establishing all the points in the corpus of comparison (Table 02).

To collect the data, Hanrot recommends the interview technique if the actor is available. If not, other techniques can be used as alternatives. The viewpoints are then converted into numbers (ranging from 0 to 6), representing a scale of values from bad (0) to excellent (6). The use of a qualitative scale is easier in a research interview, but later calculations of the mean and standard deviation will require a numerical transcription. The final step in applying the MATEA model is interpreting the results, which is done through radar diagrams created from the viewpoints. Additionally, the average values assigned and the interpretation of standard deviations are taken into consideration.

### **RESULTS AND DISCUSSION**

In order to assess the architectural quality of the public spaces in the AZ Zephyr Hotel, we collected viewpoints from various hotel users. The initial objective was to question as many users as possible, considering that the chosen users are people passing through who use the built object briefly in most cases.

The questionnaires are divided into 4 main sections for analysis: the situation and the location of the hotel, the programming of various common spaces (parking, reception and lobby, catering

areas, and leisure spaces), the comfort these spaces provide to the user, and the technical aspects and finishing of the spaces being studied and analysed (Table 02).

With this approach, we chose to use written questionnaires to be given to the users, where each mentioned aspect, considered as a separate studied dimension, can be measured and evaluated through specific properties, which are considered evaluation indicators later converted into numerical values (ranging from 0 to 4). The respondents have the freedom to add comments or additional details for each point addressed.

**Table 2.** Architectural quality through some dimensions  
(Source: Author)

|  | <b>Aspects<br/>(Studied dimensions)</b>   | <b>Properties<br/>(Indicators)</b>  |
|--|---|-------------------------------------|
| <b>Architectural<br/>Quality of AZ<br/>Zephyr Hotel.</b> | Hotel's location  | Compared to the city-center         |
|  |   | In relation to road networks        |
|  |   | Compared to tourist sites           |
|  | Programming of spaces (parking, reception and lobby, catering areas, leisure areas) | Accessibility                       |
|  |   | Location of spaces                  |
|  |   | Quantity of places and availability |
|  | Comfort   | Psychologic                         |
|  |   | Thermic                             |
|  |   | Visual                              |
|  |   | Sound comfort                       |
|  | Technicality and finishing.   | Construction/Execution              |
|  |   | Cleanliness of the finished product |
|  |   | Used techniques                     |
| Details' Mastery   |   |                                     |

After obtaining the hotel management's approval to distribute questionnaires to guests within a specific time frame, we were informed that our approach might disturb the clientele. Therefore, we were compelled to proceed differently and seek the help those around us to in order administer the questionnaires to acquaintances.

We also used social media networks, specifically groups dedicated to tourism and hotels in Algeria. This way, we were able to collect viewpoints from different users who stayed at the hotel during different periods, ranging from January 2020 to June 2022. The profiles of the users are diverse, and they may or may not be sensitive to architecture. Therefore, we deemed it necessary to inquire about the users' profiles and their professions. According to (Hanrot, 2009): "Not all actors will produce viewpoints with the same depth. Indeed, the viewpoint of an architect or an engineer does not have the same depth as that of a simple passer-by." To apply the MATEA model, the first part involves creating a chronogram that includes the production process and the actors involved to place the viewpoints in time, in other words, the life of the built object.

The second part of the application of the model consists of the creation of databases by noting the different aspects chosen to be analysed and evaluated. In the case of this study, we have selected the hotel's location, the programming of various common spaces in the hotel, the comfort in these spaces, and the technical aspects and finishing of the construction. It is important to note that several of these aspects refer to earlier phases of the production process, such as those related to the location and the programming. These aspects refer, respectively, to the programming and design phases, which further emphasize the idea of complexity.

**Table 3.** Chronogram to situate the collected points of view  
(Source: Author)

|   | Programming | Design | Realization<br>(Construction) | Use |
|---|-------------|--------|-------------------------------|-----|
| Owner of the hotel                        | X           |        |                               |     |
| Designers<br>(Architects)                 | X           | X      | X                             |     |
| Public authorities<br>(Tourism Direction) | X           |        |                               |     |
| Construction company                      |             |        | X                             |     |
| Users (Hotel employees)                   |             |        |                               | X   |
| Users (Hotel guests)                      |             |        |                               | X   |

### CONTRIBUTION OF THE STUDY TO RESEARCH

The evaluation of the architectural quality of the 'AZ Zéphyr' hotel, the subject of this contribution, has shed light on a rarely analyzed topic in the Algerian academic sphere, which is the understanding of the history of tourism and tourist infrastructure in the country, especially the causes of its decline. Furthermore, it has allowed the application of a new analysis method, namely MATEA, to tourist infrastructures and the assessment of its scientific success, mainly based on the perspective of users.

Indeed, the use of this MATEA evaluation method in this context of a structure dedicated to tourism presented a challenge in itself, since the people interviewed were transient guests at the hotel and their use of the spaces was for specific durations, they determined and relied on their first impressions and perceptions to answer the questionnaire. The significance of this research, therefore, lies in expanding the field of application of the method to other types of facilities other than housing, particularly tourist infrastructure.

Our ambition is to extend this analysis to other hotels in the city of Mostaganem to confirm or refute these results, while including other actors such as the hotels owners or designers of the spaces. This study can serve as a foundation for future research in the field of tourism architecture. Understanding the expectations and aspirations of tourists and comparing them with the offerings and requirements of investors and architects will assist the responsible for construction in Algeria in better conceptualizing projects dedicated to tourist accommodation and enhancing their architectural quality.

### RESULTS INTERPRETATION

After collecting the answers from all the users surveyed, we created a synoptic table with all their viewpoints converted into numbers. Indeed, to facilitate reading and comparison, we chose to include all the responses on the same table (Table 04). For this study, we obtained 13 responses. They were collected through an online questionnaire posted from June 10th to June 30th, 2022. The respondents have no connection to the building and construction sector, except for user 05, who is an architect and represents 7.7% of the surveyed sample. The presence of this architect implies a different and more informed perception of the studied subject compared to others.

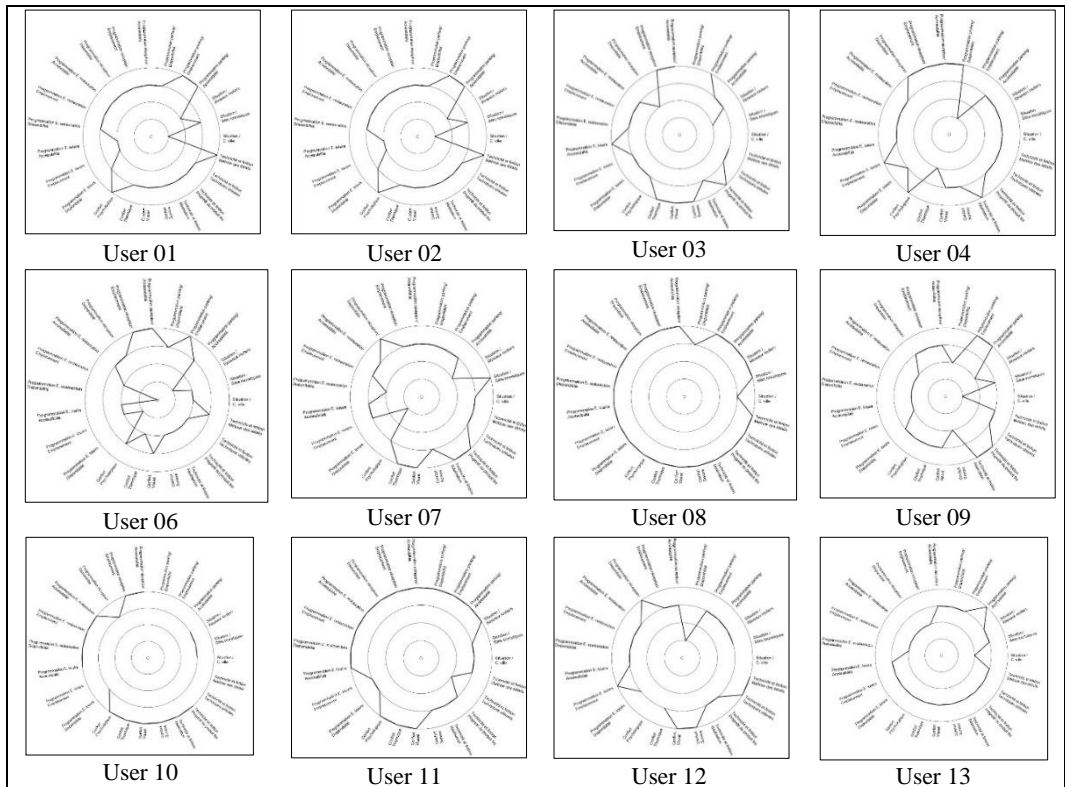
We also notice a significant presence of 50%, which is 5 out of 10 users, who are residents of the city of Mostaganem and have stayed at this hotel. This detail is important to note as it can be useful in interpreting the results. However, these statistics are not representative of the hotel's occupancy rate by the city's residents, given the limited number of our respondents.

**Table 4:** Creation of a database from the points of view of the users questioned

(Source: author)

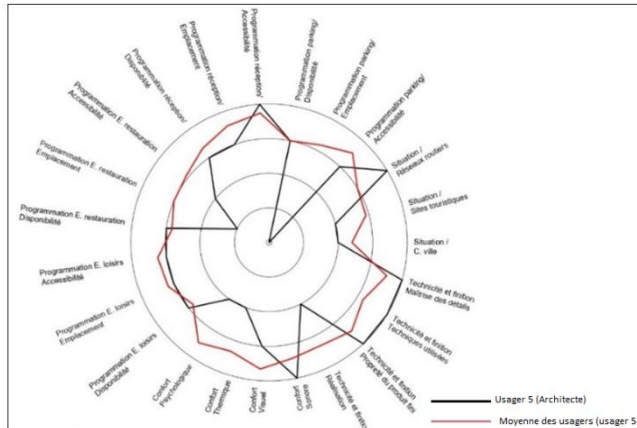
| Aspects<br>(Studied Dimensions)        | Properties                             | User 1    | User 2       | User 3     | User 4       | User 5        | User 6       | User 7    | User 8       | User 9    | User 10      | User 11      | User 12    | User 13       |
|--|--|-----------|--------------|------------|--------------|---------------|--------------|-----------|--------------|-----------|--------------|--------------|------------|---------------|
|  | (Indicators)                           |           |              |            |              |               |              |           |              |           |              |              |            |               |
| Main Data                              | Work-related to the construction field | -         | -            | -          | -            | Arch.         | -            | -         | -            | -         | -            | -            | -          | -             |
|  | Date of stay                           | Oct 2021  | Oct 2021     | Apr 2021   | Mar 2020     | Mar 2020      | Feb 2020     | Feb 2020  | Sept 2021    | June 2021 | Jan 2020     | Sept 2021    | June 2022  | 2020          |
|  | Place of residence                     | Oran      | Mosta        | Oran       | Mosta        | Mosta         | Mosta        | Algiers   | BBA          | Algiers   | Mosta        | Algiers      | Tebessa    | Algiers       |
| Hotel's location                       | From city-center                       | 1         | 3            | -          | 3            | 2             | 2            | 3         | 3            | 1         | 3            | 3            | -          | 2             |
|  | From tourist sites                     | Kharrouba | -            | -          | -            | Fort de l'est | -            | Sablettes | -            | -         | Borj Tork    | City center  | Salamandre | -             |
|  | From road networks                     | 2         | 4            | 3          | 3            | 4             | 1            | 2         | 4            | 2         | 3            | 4            | 3          | 3             |
| Programming spaces (parking)           | Accessibility                          | 4         | 3            | 3          | 3            | 3             | 3            | 3         | 4            | 4         | -            | 4            | 3          | 4             |
|  | Location of spaces                     | 4         | 3            | 4          | 1            | 0             | 4            | 3         | 4            | 4         | -            | 4            | 3          | 3             |
|  | N° of places/availability              | 3         | 3            | -          | 4            | 3             | 3            | 3         | 3            | 2         | -            | 4            | 1          | 3             |
| Programming spaces (reception & lobby) | Accessibility                          | 3         | 4            | 4          | 4            | 4             | 4            | 3         | 4            | 3         | 4            | 4            | 3          | 3             |
|  | From where did you access ?            | Parking   | Main entranc | Parking    | Main entranc | Main entranc  | Main entranc | Parking   | Main entranc | Parking   | Main entranc | Main entranc | Parking    | Parking       |
|  | Location of spaces                     | 3         | 4            | 4          | 4            | 3             | 4            | 3         | 4            | 3         | 4            | 4            | 3          | 2             |
|  | N° de places/availability              | 3         | 3            | 2          | 4            | 3             | 3            | 4         | 4            | 3         | 3            | 4            | 4          | 2             |
|  | With whom you travel?                  | In group  | w/family     | w/family   | In group     | In group      | In group     | Alone     | In group     | In group  | w/family     | In couple    | w/family   | w/family      |
| Programming spaces (catering areas)    | Accessibility                          | 3         | 3            | 3          | 3            | 2             | 3            | 3         | 4            | 2         | 4            | 4            | 3          | 2             |
|  | Location of spaces                     | 3         | 4            | 3          | 3            | 1             | 2            | 3         | 4            | 2         | 4            | 4            | 3          | 2             |
|  | N° of places/availability              | 3         | 3            | 3          | 3            | 3             | 0            | 2         | 4            | 2         | 4            | 4            | 3          | 2             |
| Programming spaces (leisure areas)     | Used spaces                            | All       | Pool         | Int Pool & | Terrace      | Pool          | Terrace      | Spa       | Pool & Spa   | Pool      | Terrace      | All          | Pool       | Terrace & Spa |
|  | Accessibility                          | 2         | 4            | 4          | 3            | 3             | 2            | 3         | 4            | 2         | 4            | 4            | 3          | 3             |
|  | Location of spaces                     | 2         | 4            | 3          | 4            | 3             | 2            | 3         | 4            | 2         | -            | 3            | 4          | 3             |

|                            |                           |   |                      |                      |    |                  |    |    |               |       |             |    |                      |           |
|----------------------------|---------------------------|---|----------------------|----------------------|----|------------------|----|----|---------------|-------|-------------|----|----------------------|-----------|
|                            | N° of places/availability | 3 | 3                    | 3                    | 3  | 3                | 1  | 1  | 4             | 3     | 3           | 3  | 3                    | 3         |
|                            | What is missing ?         |   | Children's play area | Children's play area | No | Coworkin g space | No | No | Private beach | Hamam | Aqua parc / | No | Children's play area | Game room |
| Comfort                    | Psychologic               | 4 | 4                    | 3                    | 4  | 2                | 3  | 3  | 4             | 3     | 4           | 4  | -                    | 3         |
|                            | Thermic                   | 3 | 4                    | 4                    | 2  | 2                | 2  | 4  | 4             | 3     | 4           | 4  | 3                    | 3         |
|                            | Visual                    | 3 | 4                    | 4                    | 3  | 3                | 3  | 4  | 4             | 3     | 4           | 4  | 4                    | 3         |
|                            | Sound                     | 3 | 4                    | 4                    | 3  | 4                | 2  | 3  | 4             | 2     | 4           | 3  | 4                    | 3         |
| Technicality and finishing | Const. Execution          | 3 | 3                    | 3                    | 4  | 2                | 2  | 4  | 4             | 4     | 4           | 3  | 3                    | 3         |
|                            | Cleanliness               | 3 | 3                    | 4                    | 3  | 4                | 2  | 4  | 4             | 4     | 4           | 3  | 3                    | 3         |
|                            | Used techniques           | 3 | 3                    | 3                    | 3  | 4                | 2  | 3  | 4             | 3     | -           | 2  | 4                    | 3         |
|                            | Details' Mastery          | 4 | 4                    | 3                    | 3  | 4                | 3  | 3  | 4             | 3     | -           | 3  | 4                    | 3         |



**Figure 9.** Representation of the users' points of view  
(Source: Author)

Once the database is established, we can begin the interpretation, which means identifying the differences in viewpoints that can be observed through the creation of graphical diagrams (radar diagram), that will group the viewpoints of a single person (user) into a graphical representation (see Figure 9).



**Figure 10.** Comparison of the average of points of view with the averages of the user's point of view 05 (Source: Author)

We have also drawn a graph with the average of all users' viewpoints (Fig. 10), which provides an average score for each viewpoint. These diagrams will enable an analytical reading for each point of view.

By analysing the red line of the graph which represents the average of the users' points of view, excluding the architect's (user 05), we notice that the average of the users is around 3 or higher and 82% of properties of the building evaluated at 3 or more, where 3 represents a good value (see Table 05). Therefore, we can conclude that the quality of this hotel is considered good by the users. The hotel's location, the number of available spaces, and the availability of certain areas such as restaurants and leisure areas did not reach this average of 3. Therefore, users consider them as less favorable. Their percentage is evaluated at 17%.

**Table 5.** Analysed Properties and Viewpoint Evaluation Criteria (Source: Author)

| Analysed Properties                         | Evaluation et interpretation |             |                        |                      |                 |
|---|------------------------------|-------------|------------------------|----------------------|-----------------|
|   | 0                            | 1           | 2                      | 3                    | 4               |
| <b>Hotel's Location</b>                     | Very close                   | Close       | Not far                | Far                  | Very far        |
| <b>Accessibility</b>                        | Excellent accessibility      | Accessible  | Not very accessible    | Difficult to access  | Inaccessible    |
| <b>Location of spaces</b>                   | Very well placed             | Well placed | Moderately well placed | Not very well placed | Not well placed |
| <b>Quantity of places and availability</b>  | Very sufficient              | Sufficient  | Moderately sufficient  | Not very sufficient  | Not sufficient  |
| <b>Comfort, Technicality and finishing.</b> | Very good                    | Good        | Average                | Bad                  | Very bad.       |

The black line on the graph of Figure 10 represents the viewpoints of one of the users who is an architect. We chose to use these viewpoints as a reference because we believe that this user may have a more objective analysis of the spaces.

The first thing we notice is the significant difference between the architect's viewpoints and those of the other users. The most notable discrepancies concern the points related to the parking location, which the architect (user 05) rates as zero (0/4), and the location of the restaurant space (located on the 7th floor), which the architect rates as bad (1/4). The average of the other users' opinions is 3.3 for the parking location and 3.6 for the restaurant location. To explain this, we can suggest a possible response, which is that the architect evaluated the hotel very rigorously based on ideal standards. This leads us to conclude that the limitations of the questionnaire did not allow us to gather more detailed insights into the viewpoints of the users. Conducting direct interviews could have provided more in-depth information.

By analysing each aspect separately, we can observe some differences between the average viewpoints and the viewpoint of user 05 (the architect). One notable difference is regarding the hotel's location in relation to the city-center. 20% of users judged that the hotel is far, 20% found it not far, while 60% affirmed that it is close to the city-center. However, we notice that the individuals who are not residents of Mostaganem are mainly the ones who find the hotel far from the city center.

Regarding the hotel's location in relation to tourist spots, there is a two-point difference between the two graphs. This difference can be easily justified as we did not specify a particular tourist spot as a reference, and each individual might think of a different place. However, we did ask the users about their reference points for tourist spots, and we received only 5 responses (40%), all of which were completely different from each other. Therefore, these diverse responses explain the observed discrepancy.

The second dimension studied concerns the programming of common spaces in the hotel. This dimension is divided into three indicators (see Table 03): accessibility, location of spaces, and quantity of places and their availability.

For the "accessibility" factor, there is a one-point difference between the two graphs. The answers regarding the accessibility for the parking and reception/lobby areas tend towards values 3 and 4, representing "accessible" and "excellent accessibility" ratings. 46% of users rate the parking location as excellent, and 53% of questioned users evaluated the reception/lobby location as excellent as well. These areas are situated on the ground floor (Fig. 04) with clear indications. As for the accessibility to the restaurant, located on the 7th floor (Fig. 05), and the leisure spaces, there is a 2-point difference in viewpoints concerning them.

The location of spaces was not unanimous either, with a 2-point difference for the reception/lobby area between the two red and black graphs. As for the restaurant and leisure spaces, opinions vary between "moderately well placed" at 23%, "well placed" at 38%, and "very well placed" at 30%. The difference is more significant for the parking, with a 3-point difference, which can be justified by the parking's location on the rear facade of the building, in a less prominent alley compared to the main entrance.

The availability and quantity of seats in the restaurant are highly variable, which explains the significant 4-point difference observed. 46% of respondents judged the availability to be sufficient. This difference can be explained by the limited number of tables, which is less than the number of beds available in the hotel, and also the possibility for non-residents to access the restaurant.

The "comfort" aspect is evaluated by users according to four proposed indicators. Two of them, psychological and visual comfort, are considered subjective and have obtained a difference of just one point, with responses ranging from "good" to "very good". On the other hand, the indicators for thermal and sound comfort, which are more objective, showed a 2-point difference, with responses ranging from "average" to "very good". It is also worth noting that the hotel's 4-star rating may influence users' perception.

The last aspect examined concerns the technical aspects and quality of the hotel's construction. Regarding the execution and cleanliness of the finished product, respondents' opinions varied between "good" and "very good," except for one user who rated the execution as "average." Regarding the techniques used and mastery of details, the results are similar to the last two points, with a 2-point difference for techniques and a 1-point difference for mastery of details. One of the users chose not to answer these questions, explaining that he is not a specialist and did not pay attention to these aspects.

## CONCLUSION

This assessment attempt of the architectural quality of the AZ Zephyr hotel in the city of Mostaganem highlighted the complexity and subjectivity of this notion. Using Stéphane Hanrot's MATEA model, our study relied on a survey of 13 users who stayed at the hotel from January 2020 to June 2022. The presence of an architect among the respondents provided a different, more informed, and objective perception of the subject study.

The obtained results allowed us to identify the viewpoints of users and represent them graphically for better interpretation. We also established an average of all users' viewpoints, represented with the radar diagram, which revealed an overall good quality of the hotel with 82% of suggested properties rated at 3 or higher on a 4-point scale. The analysis of the architect's viewpoint shows a significant difference between their viewpoints and those of other users, particularly regarding the parking location and the space dedicated to the restaurant.

In conclusion, this study shows the importance of considering users' perceptions in evaluating the architectural quality of hotel infrastructures. While the overall quality of the AZ Zephyr hotel is good, there is still room for improvement to meet customer expectations.

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