

## Article

# Evaluating the Cultural Sustainability of the Adaptive Reuse of Al-Nabulsi Traditional House into a Cultural Center in Irbid, Jordan

Dana Khalid Amro <sup>1,\*</sup> , Ahmad Sukkar <sup>2</sup> , Moohammed Wasim Yahia <sup>2</sup>  and Mohammad Khaleel Abukeshek <sup>1</sup> 

<sup>1</sup> Department of Interior Design, Faculty of Architecture and Design, Al-Ahliyya Amman University, Amman P.O. Box 19111, Jordan; m.abukeshek@ammanu.edu.jo

<sup>2</sup> Department of Architectural Engineering, College of Engineering, University of Sharjah, Sharjah P.O. Box 27272, United Arab Emirates; a.sukkar@sharjah.ac.ae (A.S.); myahia@sharjah.ac.ae (M.W.Y.)

\* Correspondence: d.amro@ammanu.edu.jo or dana.amro79@gmail.com

**Abstract:** Adaptive reuse maintains cultural sustainability by adapting heritage buildings for new functions while retaining their original structure. The al-Nabulsi's traditional courtyard house in Irbid, northern Jordan, represents the city's dominant residential heritage building typology from the 1920s. It has been adapted and reused to preserve cultural sustainability by providing a visitor experience pertinent to the local tangible and intangible cultural heritage. This article evaluates the effect of the house's adaptive reuse into a cultural visitor center on the local community's cultural sustainability between 2018 and 2023 through the user experience. Through a review of the literature on cultural sustainability and adaptive reuse and deploying mixed qualitative and quantitative methodology of field observation, statistical analysis, and critical reflections on interviews and Google Travel's reviews of the building, the research presents the project phases, resolutions, and challenges, contextualizing them in the modern debate on tangible and intangible heritage. The article used the Quintuple Helix Model as an analytical framework to explain the interactions between societal systems that directly and indirectly affect the Sustainable Development Goals (SDGs). The findings revealed that in 2018, the center's conservation and adaptation relatively enhanced the local community's cultural sustainability and feeling of its identity. However, in 2023, further actions are needed to enhance the visitor experience and spread awareness of its significance. Enrichments in government, education, and civil society systems have been moderate, and further improvements in economic and environmental systems are essential to meet the potential goals of the SDGs. No research to date has evaluated the cultural sustainability of the adaptive reuse of this significant house/center, providing insights into a notable example of the conditions surrounding adaptive reuse in Jordan and Arab Middle Eastern countries.

**Keywords:** restoration; transformation; preservation; conservation; interior space; heritage buildings; visitor experience; COVID-19 pandemic; sustainable development goals (SDGs)



**Citation:** Amro, D.K.; Sukkar, A.; Yahia, M.W.; Abukeshek, M.K. Evaluating the Cultural Sustainability of the Adaptive Reuse of Al-Nabulsi Traditional House into a Cultural Center in Irbid, Jordan. *Sustainability* **2023**, *15*, 13198. <https://doi.org/10.3390/su151713198>

Academic Editor: Asterios Bakolas

Received: 19 July 2023

Revised: 20 August 2023

Accepted: 23 August 2023

Published: 2 September 2023



**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

Heritage buildings are structures that reflect the cultural heritage of a region [1]. They are often constructed with local materials and techniques passed down for generations [2]. These buildings can provide valuable insights into a place's social and cultural context [3] and aesthetic value [4]. However, they are vulnerable to various threats, such as random urbanization, unmindful modernization, natural disasters, and abandonment [5–8]. Therefore, to preserve such culturally value buildings, Adaptive Reuse (AR) is an effective method [3,9] that could protect them from abandonment, dilapidation, and further deterioration [10]. In recent years, the AR concept has been gaining attention to repurposing existing buildings and sites for new purposes [11]. For example, reusing heritage houses helps reveal the community's cultural identity, manifesting a community's culture,

beliefs, lifestyle, and values that can thus contribute to maintaining cultural sustainability [12]. Despite these potential benefits, AR poses many challenges, such as finding suitable new functions, respecting the historical integrity and authenticity of the buildings, deficiency in financial resources, and ensuring the participation and satisfaction of various stakeholders [9].

In the case of Jordan, particularly Irbid city, the al-Nabulsi traditional courtyard house is one of the oldest heritage houses, which was particularly important due to its unique architectural design. It was built by a family member of the al-Nabulsi family when they settled in Irbid city in the early nineties. Therefore, the house represents the city's residential heritage building style from that era (Transjordan).

Since the Ministry of Tourism and Antiquities (MoTA) had the approach of adopting traditional houses into museums and cultural fora, al-Nabulsi House was adopted, reused, and named the Irbid Visitor Center, providing visitors with a touristic experience pertinent to the local tangible and intangible cultural heritage. The adoption of the design decision strategy and restoration process was supervised by Greater Irbid Municipality (GIM) and MoTA.

Given the original importance of this house and the benefits and challenges associated with implementing its AR, the main aim of this article is to explore the effect of AR on the local site and the community's cultural sustainability through users' experience. To this end, this article attempts to answer two questions. The first question, "to what extent has the AR of the al-Nabulsi House enhanced the tangible cultural heritage (TCH) aspects, i.e., "physical artifacts", and intangible cultural heritage (ICH) aspects, i.e., "non-physical inheritance", of the local cultural heritage sustainability during the pre-restoration and post-restoration?" The second question is, "to what extent has the AR of the al-Nabulsi House deepened the connection between the systems of government, education, and economy to strengthen the system of civil society and protect the system environment in conjunction with the SDGs?" Specifically, the research studies the exterior and interior conditions of the pre-and post-restoration of the house, analyzing the actors' choices and stakeholders' interests. This article uses an after-years-of-occupancy evaluation to identify successes and failures of the adapted building and provide recommendations to improve the long-term quality of the AR. Furthermore, it evaluates the sustainability of the adapted function of the building during the post-COVID-19 period. The significance of this article lies in its contribution to filling a gap in research about cultural sustainability in this region. It does so by evaluating the cultural adaptation process and providing valuable insights into the reuse of heritage buildings in Irbid, namely the al-Nabulsi house, a notable example of AR in Jordan, an Arab Middle Eastern country.

## 2. Literature Review

### 2.1. Cultural Sustainability

Cultural sustainability has gained extra attention in the last two decades, for it is essential to preserving cultural heritage and developing a sustainable future. Many scholars consider cultural sustainability embedded within the social pillar, one of the three key pillars of sustainability (the other two being environmental and economic) [3,13–16]. However, other studies, such as Hawkes [17], refer to cultural sustainability as a separate fourth pillar [18]. Cultural sustainability, as González et al. define it, is the ability of a culture to maintain its identity and values over time while adapting to changing circumstances [19]. In other words, cultural sustainability aims to preserve cultural heritage and traditions to ensure their continued existence and relevance in the future [20]. UNESCO declared that the holistic approach to cultural sustainability takes into account both the tangible heritage, such as artifacts, monuments, buildings, and tools, and intangible aspects of culture, such as learned traditions, lifestyles, ways of living together, language, customs, beliefs, and symbols that are important to a particular community [21]. Cultural sustainability also involves the protection of cultural sites and monuments, as well as the promotion of cultural activities and events [9].

Cultural sustainability's significance comes from promoting social cohesion and identity within a community [22]. Preserving cultural heritage helps to ensure that communities remain connected to their past and continue to pass on their traditions to future generations [20]. Additionally, it helps foster a sense of pride and belonging among community members, which can lead to increased social cohesion [17]. Furthermore, it promotes economic development by providing a source of income for local communities through tourism and other activities related to cultural heritage [9].

Several strategies can be used to promote cultural sustainability. These include promoting public awareness and education about traditional knowledge and practices, encouraging collaboration between different cultures, and providing access to resources and markets [16]. Other strategies that UNESCO stressed include that governments should provide financial support for preserving and protecting cultural heritage projects promoting cultural sustainability. UNESCO also encourages communities to work together to develop policies that protect traditional knowledge and practices [23].

The implications of cultural sustainability for AR heritage buildings are significant. Preserving these buildings helps to ensure that their unique history and architecture are not lost, where AR can help create jobs and stimulate economic growth in local communities by providing new uses for existing buildings [9,24].

In September 2015, the United Nations adopted the 17 SDGs with a target for a world transformation by 2030 [25]. Prior to this, in 2013, UNESCO emphasized culture's role in sustainable development policies [26] and incorporated cultural heritage into the Sustainable Development Agenda. A Policy on integrating sustainable development into the World Heritage Convention processes was later adopted in November 2015 by the 20th General Assembly of the States Parties to the World Heritage [27]. After that, UNESCO launched the Culture for Sustainable Urban Development program [28], highlighting the role of culture in sustainable development and elucidating the link between the application of UNESCO Culture Conventions and achieving the SDGs goals. Therefore, this link between the application makes cultural heritage a vital contributor to sustainable development, which is reflected in the SDGs, whether directly or indirectly [29].

Most importantly, it invites us to create a more sustainable, secure, and prosperous planet for humanity. Hence, collaborative efforts involving individuals, businesses, governments, and NGOs are crucial for achieving the SDGs [30]. Therefore, this commitment among actors and stakeholders is critical in generating lasting value for business and society. Thus, the Quintuple Helix Model is an analytical framework illustrating interactions among societal actors in pursuit of progress. Accordingly, comprising government, education, economic, civil society, and environmental systems, which are the components of the Quintuple Helix Model, the helices with its knowledge subsystem interconnect at national, regional, and global levels [31]. Additionally, scientific studies support the Quintuple Helix Model's role in integrating these systems for sustainable development of the SDGs, which extends its application to addressing social issues [32].

## 2.2. Adaptive Reuse

Conducting a comprehensive literature review of AR articles published between 2010 and 2023, Miran and Husein found that AR is defined as the process of adding new features to existing heritage buildings to meet the expectations of contemporary living and to accommodate new activities within the old structures [33]. The AR concept has been applied to a variety of contexts, including residential buildings [2], industrial sites [34], and historic buildings [35]. The value of AR in heritage buildings is acknowledged in several international heritage charters. The ICOMOS Burra Charter, for instance, states that "AR is a strategy towards the conservation of heritage buildings, which sustains its heritage values while enhancing its functionality and usefulness for the future" [36]. Similarly, UNESCO emphasizes the importance of "conservation through transformation" to manage changes in the historic urban area [37].

AR offers potential benefits, some of which include sustainability, preservation of urban fabric and identity, stimulation of creative and innovative potential, and provision of new opportunities for cultural, social, and economic activities. Specifically, AR is a sustainable development strategy that reduces the environmental impact of demolition and construction [10]. It also enhances the urban fabric and identity by preserving historic facades and landmarks [24]. Moreover, it encourages architects and designers to find new ways of recycling and repurposing existing structures [38]. Furthermore, it provides new opportunities for cultural, social, and economic activities by creating mixed-use spaces that cater to diverse needs and functions [39–41].

Despite the potential advantages of AR, several challenges must be addressed to ensure its successful implementation. These challenges include legal and regulatory issues, financial constraints, and technical difficulties. Legal and regulatory issues may arise due to outdated zoning regulations or other restrictions that impede the repurposing of certain buildings or structures [9]. Financial constraints may be due to the exorbitant costs associated with renovating existing buildings or sites [6]. Technical difficulties may include extensive renovations needed for existing buildings or sites to be suitable for their new use [4].

In order to ensure the success of AR projects, it is essential to understand the physical condition of the existing building, assess its environmental impact, and evaluate its economic feasibility. Funding sources, stakeholder involvement, and a comprehensive plan must be considered. Moreover, an AR project's potential social and cultural impacts should also be considered [9]. Going beyond the common four pillars of sustainability, Alhojaly et al. [9] created a model for AR assessment based on classifications of seven elements (Figure 1). This model categorizes detailed elements of the success or failure of the reuse schemes of heritage buildings.

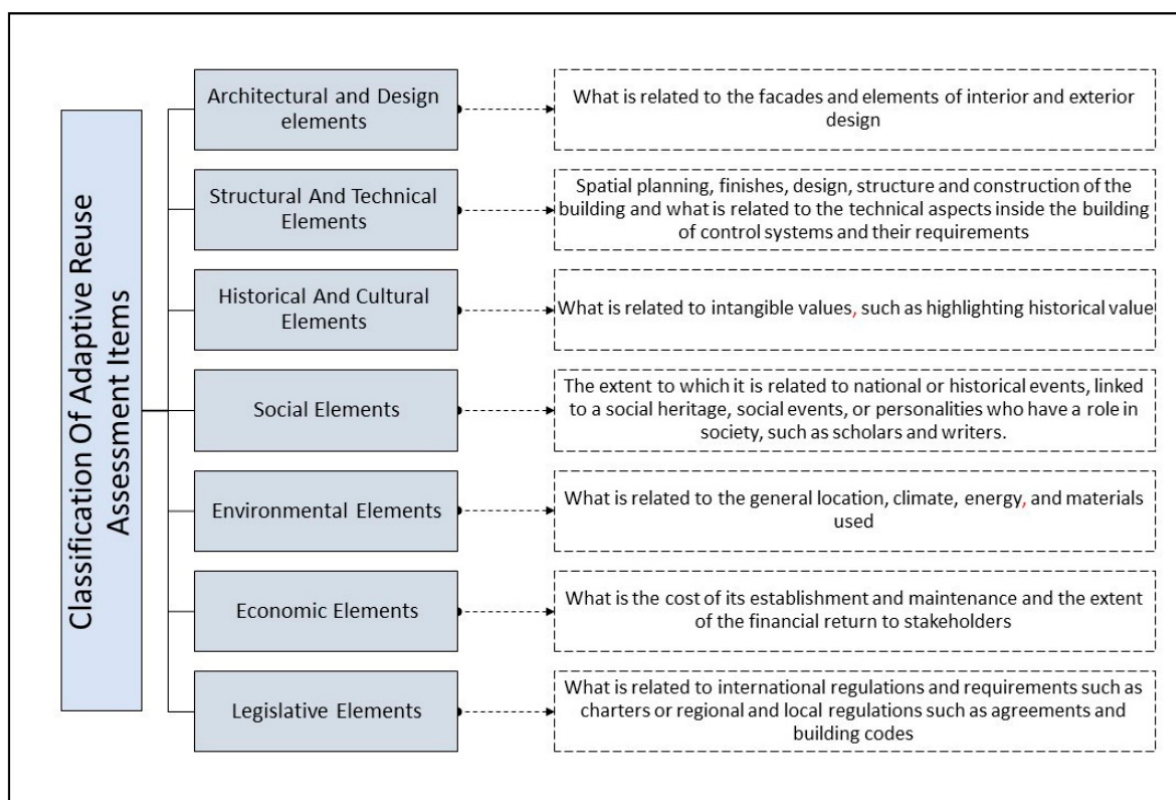


Figure 1. Classification of AR assessment items [9].

According to Bullen and Love [39], the restoration process of a building may require either major or minor works. Major works involve significant internal space reorganization and service upgrades or replacements. Minor works require only a few changes

to the building's functional use. These changes may include building layout alterations, fixtures, and fittings [32]. Similarly, Tam and Hao demonstrated four main AR restoration methods [3]:

- (1) New exterior—old interior: It provides a new exterior while preserving the old interior design, as long as the interior structure is in good condition,
- (2) New interior—old exterior: It provides new interior design elements while preserving the old exterior.
- (3) Additions/incisions: The additions are added to the existing structures (exterior and interior) to fulfill the users' growth.
- (4) Integrated infill: It applies minor changes to the interior design and keeps the original building's skins and structures unaltered, which leads to a more integrated appearance. It is considered the most commonly used method.

The process of AR of heritage buildings requires a careful analysis of the existing structure, its values, potential, and constraints. Examining the pattern of 88 publications from 2003 to 2021 on the AR process of heritage buildings, Arfa et al. identified four main phases in the AR process of heritage buildings [4] (Figure 2).

#### 1. Pre-project Phase

This initial phase focuses on the decision to preserve, reuse, or demolish a building. In this phase, initiative and preliminary discussions between the actors and stakeholders about the design brief, user requirements, client expectations, costs, and the project's completion date are essential [4]. Engaging the local communities (stakeholders) in this process is necessary [4].

However, according to Alhojaly et al., choosing a new function for a heritage building is challenging as it requires an investigative approach to avoid any random decision that could harm the building's originality and sustainability [9]. Ideally, the success of the new function depends on the acceptance from the surrounding community before the restoration process [12].

#### 2. Preparation Phase

In this phase, analysis, value assessment, AR potential, the design strategy's definition, mapping the significance level, and final decision-making are the appropriate steps [4].

The data about the building, its materials, the nature of construction, its physical characteristics, and its surroundings must be gathered. This data should be analyzed and categorized as historiographical, architectonic, urban, spatial, and technical information, such as maps, drawings, photographs, publications, and visual observations of the heritage building [40,42–44]. The building re-designing stage must not violate the restoration code and regulations [29,38,45]. For example, integrating recent technologies and solutions in the interior, such as lighting fixtures, audio systems, and paintings, must consider the restoration rules without affecting the building structure [8].

#### 3. Implementation Phase

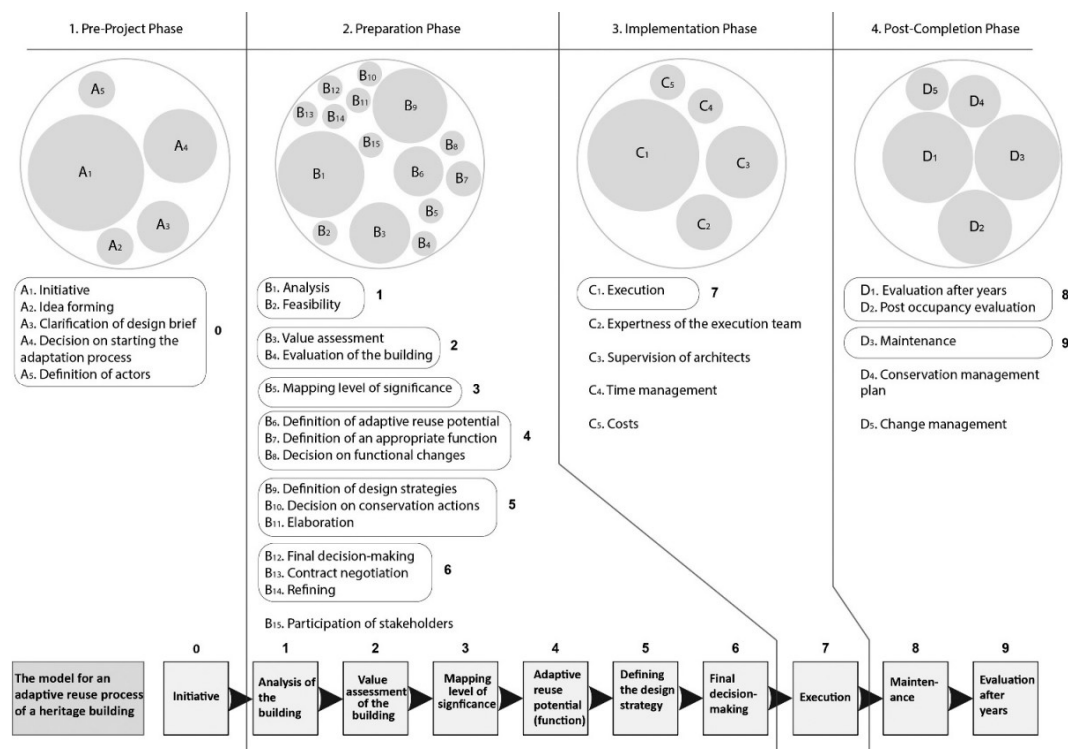
This phase involves implementing the agreed design strategies, which may require removing, preserving, or adding a particular section or part to an existing building. Several factors are considered in this phase, such as time management, costs, expert workers, and the expertise of the management project team [4].

#### 4. Post-completion Phase

Arfa et al.'s study identified two steps in the post-completion phase of an AR project: "maintenance" and "evaluation after years". They emphasized the importance of the maintenance of the physical building. They considered evaluating an AR project years after occupancy essential to ensure its long-term quality [4]. They highly recommended it, observing that practice-based literature has not highlighted it enough [4]. They have also observed that some researchers have referred to this step of the process as post-occupancy evaluation (POE).

They gave examples of studies that analyzed sociocultural sustainability through questionnaires [4,46]. Likewise, Rezaei et al. analyzed sociocultural sustainability through interviews [47]. The evaluation in the final step of an AR project seeks to identify the project's successes or failures, which provides effective feedback for future AR projects [4]. Furthermore, recent studies recommended evaluating adapted buildings post-COVID-19 to promote sustainability [16].

In conclusion, Arfa et al. summarized the 10 steps within the previous four main phases in this conceptual model on the AR process of heritage buildings, which are: “initiative”, “analysis of heritage buildings”, “value assessment”, “mapping level of significance”, “definition of AR potential”, “definition of design strategy”, “final decision-making”, “execution”, “maintenance”, and “evaluation after year”. This model provides a valuable tool for practitioners and researchers in the AR of heritage buildings [4].

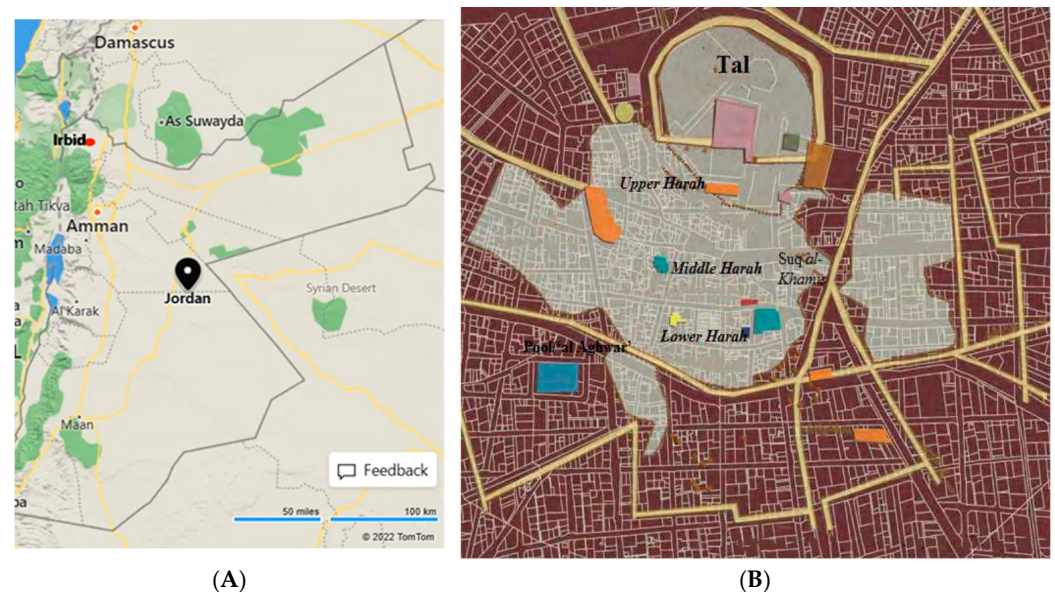


**Figure 2.** The conceptual 10-step model (0–9): procedures toward defining the sub-phases of the AR process of heritage buildings. The most common phases are encompassed within the upper rounded squares and summarized in the lower squares [4].

### 2.3. Irbid City and Al-Nabulsi House

Irbid in northern Jordan has boundaries that extend to the Jordanian-Syrian borders. Irbid Governorate has an area of approximately 1.5 km<sup>2</sup>, with approximately two million inhabitants (Figure 3A). The city is known for its historical and archaeological importance. It is considered a transit station to neighboring regions, which makes it a strategic location. Irbid Governorate is considered an agricultural region distinctively characterized by a Bedouin, rural, and urban cultural mix. Due to its strategic geographic location, Irbid has become an important commercial and administrative center, especially in the past few decades. Irbid city fabric was formed at the end of the 19th century and the beginning of the 20th century around the Tal (the hill) (Figure 3B) [8]. The city center of Irbid contains buildings of the 1920s and 1930s styles close to an archaeological site at the nearby al-Tal area. These buildings, especially the houses of the wealthy migrants from Damascus, were unique. The city constantly developed after 1930. The old city center currently contains poor immigrant families and a non-local working labor force. The middle-class families

moved to the southern part of the city, making the old neighborhoods a transitional point for new inhabitants with different origins [8].



**Figure 3.** (A) Location of the Irbid City (Google Maps—Jordan). (B) The three neighborhoods of Irbid (Harat al Qasbah) concerning the Tal in 1876 [7].

Sadly, the building owners abandoned or demolished several old buildings for three main reasons. The first reason was that, at that time, Jordanian architectural heritage was undocumented and was not officially registered [48]. The second reason was that the unmindful new urban planning imposed modernity without considering the nature or dynamics of the historic city core, which is considered obsolete and insignificant [5,7,8]. The third reason is the lack of local people's awareness and activities of the significance of these heritage buildings. They demolish these houses to expand the space for vertical commercial buildings [7,8].

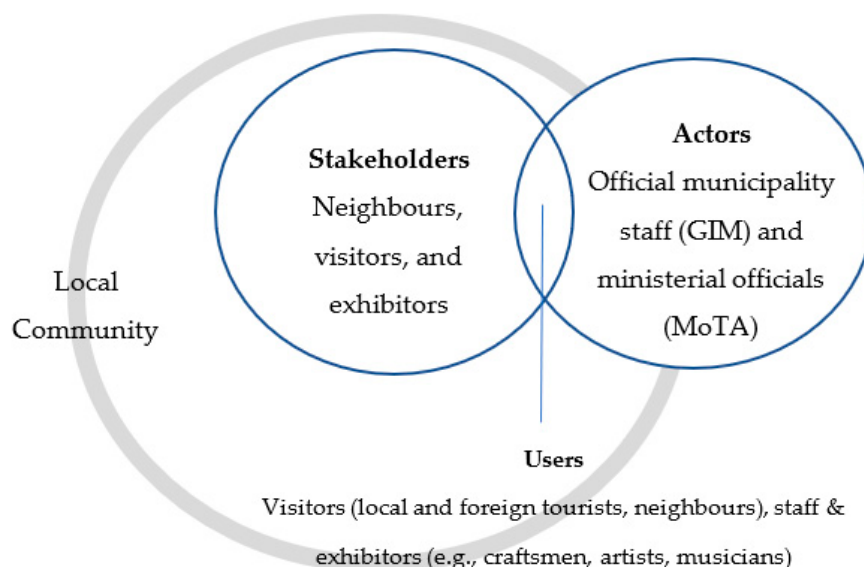
Therefore, MoTA and the GIM decided to conserve and protect these heritage houses to benefit the public and tourism sector [8]. In the Tal's south area, three significant heritage buildings were expropriated by GIM for restoration and reuse, and MoTA financed them as pilot projects in the heritage tourism industry [42]. One of them was the al-Nabulsi House, which represented the dominant residential heritage Damascene courtyard house and was selected for its location significance, aesthetics, and building typology [49]. The al-Nabulsi House is located at the historic core of the southwestern corner of the old Irbid Tal, in the old al-Harat (alleys) of Irbid city (Figure 3), west of the Fo'ara bus station [43]. MoTA proposed a sustainable tourism action plan and programs for the historic buildings in Irbid's city core, mainly constructed during the city's golden age (the 1920s and 1930s). This conservation action plan included a set of principles that involved introducing pedestrian routes and improving pedestrian infrastructure within green urban landscapes and public open spaces. It also suggested a visitor route experience that meets the needs of both tourists and the local community, enhancing pedestrian connectivity [7]. The plan used the proximity of some museums to offer a unique tourism experience along the tourist's spine from Old Saraya to al-Nabulsi House. Each museum showcases a different theme: the Old Saraya for archaeology, Arar for poetry and local culture, al-Sharairi for political history, and al-Nabulsi for residential heritage and traditions [49] (Figure 4). The route extends on the side of the Old Saraya with several important traditional souks with plazas, such as Souq El-Sagha Plaza.



**Figure 4.** The old Irbid Tal (hill) in the old Harat (alleys) of Irbid City showing Fo'ara square and al-Nabulsi house in the red circle. Adapted from [7].

Al-Nabulsi House was built in 1922 by Mahmoud al-Nabulsi from the al-Nabulsi family when he settled with his family in Irbid. It is a two-storey building with a size of 228 m<sup>2</sup> [7,42]. It remained in use as a house until 1965, when it was used as a school for girls for a short period. It was abandoned until 2007 when the GIM expropriated it for JOD 70 K (approximately \$100 K). The MoTA funded the restoration of the al-Nabulsi traditional house for JOD 200K (approximately \$280 K). The house and Fo'ara Square restoration cost JOD 450K (approximately \$435 K) [50]. In 2008, the house was restored and transformed into the Irbid Visitor Center.

Ultimately, two main groups of people related to this building are from the local community and the government. These groups include actors and stockholders. The project's actors included official municipality staff GIM, ministerial officials MoTA, and the center staff. The stakeholders included neighbors, visitors, and exhibitors. These visitors include local and foreign tourists and neighbors. Finally, the center users include visitors, staff, neighbors, and exhibitors, e.g., craftsmen, artists, and musicians (Figure 5).



**Figure 5.** The center's stakeholders and actors (by authors).

### 3. Materials and Methods

#### 3.1. Research Method and Data Collection

In order to reach the aim and answer the research questions, a mixed research approach, which includes qualitative and quantitative methods [51], was adopted for this study. Data for this article were derived from primary and secondary sources. Qualitative primary data were obtained through field observations, semi-structured interviews, and critical examination of online Google Travel reviews, while quantitative primary data were obtained through statistical analysis of Google Travel's reviews. The secondary data were derived from various sources, such as published materials in books, journals, websites, and online newspapers (Table 1).

**Table 1.** Summary of the mixed qualitative and quantitative research methods.

|                     | Research Methods                                                                               | Pre-Restoration Evaluation                                                                           | Post-Restoration Evaluation                                                                                                                                  |                                                                                                                                                                   |
|---------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |                                                                                                |                                                                                                      | 2018                                                                                                                                                         | 2023                                                                                                                                                              |
| Qualitative Method  | Observations                                                                                   | indirect field observations (through photographs, plans, and interviews with the project supervisor) | <ul style="list-style-type: none"> <li>First direct field observations (through field visits to carry out the POE, June (3 visits, total of 12 h)</li> </ul> | <ul style="list-style-type: none"> <li>Second direct field observations (through field visits to complete the POE in February (2 visits, total of 3 h)</li> </ul> |
|                     | Photographic documentation (exterior, interior)                                                | GIM (digital architectural archive)                                                                  | Authors <ul style="list-style-type: none"> <li>First visit in June</li> </ul>                                                                                | Authors <ul style="list-style-type: none"> <li>Second visit, February</li> </ul>                                                                                  |
|                     | 2D Modeling-Plans (Ground and First floor)                                                     | GIM (digital architectural archive)                                                                  | GIM (slightly edited by authors)                                                                                                                             | GIM (analyzed by authors)                                                                                                                                         |
|                     | Interviews (32, semi-structured, face-to-face) by the first author and two research assistants | Actor: 1 project supervisor from GIM (3 h), May                                                      |                                                                                                                                                              | Actor: 1 center director from GIM (40 min), February                                                                                                              |
|                     |                                                                                                |                                                                                                      | 1. First visit:<br>Actors: 3 staff members (total of 2 h), June<br>Stakeholders: 18 visitors (total of 6 h), June                                            | 2. Second visit:<br>Actor: 1 staff member (40 min), February.<br>Stakeholders: 6 visitors (total 1:30 h), February.<br>Neighbors: 2 (2 h), February.              |
|                     | Google Travel's reviews (191 reviews)                                                          |                                                                                                      | Stakeholders: 191 reviews from 2016–2023 through Google Travel (webpage: An Nabulsi House)                                                                   |                                                                                                                                                                   |
|                     | Media (newspapers (2) and websites (2))                                                        |                                                                                                      |                                                                                                                                                              | Local newspapers (news articles), including interviews with local people, governmental and non-governmental websites                                              |
| Quantitative Method | Statistical analysis of Google Travel's reviews (191 reviews)                                  | -                                                                                                    | From 2016–2017 until 2023                                                                                                                                    |                                                                                                                                                                   |

### 3.1.1. Al-Nabulsi House Case Selection

Remarkably, the MoTA and GIM have been preserving Irbid's buildings with styles of the 1920s and 1930s. The GIM expropriated the three selected heritage buildings as pilot projects for restoration and reuse for the heritage tourism industry [52]. Two buildings of them have been reused. The first is al-Nabulsi House, which was built in the 1920s. The second is the al-Sharairi house, which was built in 1908 and turned into a museum of local political history in 2014. The third house, the Juma'a building, was built in the 1930s. It is a three-floor mixed-use commercial-residential townhouse. The GIM has been planning to reuse it as an inn [7]. GIM selected al-Nabulsi House for its significance as a dominant 1920s residential heritage building, given its typology, location, and aesthetics in the historic area. Moreover, al-Nabulsi House constantly receives critical reviews in the local media. Given the significance of this house, this study selected it to evaluate its AR according to the previous research questions.

### 3.1.2. Observation

The observation was conducted in al-Nabulsi House in two main phases: pre-restoration and post-restoration. The former was conducted by means of analyzing the available photographs and floor plans of the original building presented by the project supervisor to understand the building's pre-restoration condition. The latter was conducted by means of analyzing the current adapted building to obtain data regarding the TCH and ICH aspects of the buildings, such as its exterior shape and interior structure, layout, finishes, and users' experience, which is part of the POE. The observation was conducted between 2018 and 2023. In June 2018, three field visits were conducted for 12 h, and in February 2023, three were conducted for four hours.

### 3.1.3. Interviews

Semi-structured face-to-face interviews were conducted with 32 participants to obtain in-depth information. The interviews took place in two periods: first, between May and June 2018, and second, in February 2023. Four interview forms were designed, where the interview questions were developed and adapted based on Kuipers and de Jonge and Rezaei et al. [42,47]. All interview forms were piloted with colleagues in advance. The interview questions are designed to evaluate cultural sustainability, which involves two themes: TCH and ICH. The interview forms are targeted at four different entities:

- *Project supervisor* (municipality official): The project supervisor represented a team of decision-makers on the restoration process of the adaptation of the al-Nabulsi building, including design and finance. The questions aimed at understanding the original pre-restoration phases, assessments, and the later AR of the post-restoration treatments. The interview was conducted at his office at GIM in May 2018.
- *Staff*: In June 2018, three staff members of the al-Nabulsi Center, including the center director and two assistants, were interviewed. In February 2023, the center director and one assistant were interviewed to evaluate the new developments over the last five years. The questions in the two periods aimed at assessing the effectiveness of the house AR in achieving cultural sustainability, which helped identify barriers and opportunities that impact the cultural and social sustainability of the surrounding community.
- *Visitors*: In June 2018, 18 visitors were interviewed from nearby neighborhoods and cities. In February 2023, another six interviews were conducted with the center visitor (Table 2). The interview questions aimed at analysing visitors' perceptions, experiences, and feelings.
- *Neighbours*: In February 2023, two interviews were conducted with senior neighbors (a lady aged 85 and a man aged 65) from the surrounding community. The questions evaluated the house changes between the past and the present. The interviewees were familiar with the house before the restoration and after the adaptation.

The project supervisor, the house director, and the staff interviewees were chosen for their ability to contribute to this study based on their extensive experience with the site. Likewise, the two senior neighbors were selected according to their knowledge of the al-Nabulsi House. The interviewed visitors were chosen randomly. All the interviews were conducted in Arabic, the local language, and then translated into English. All interviews were conducted in the courtyard of al-Nabulsi House. The interviews were conducted at the end of the house visit, each taking approximately 12 min. All the interviewees' names are kept anonymous to protect their privacy.

**Table 2.** Summary of interviewed visitors' general questions.

| Visitors        | Percentage                                                                        |
|-----------------|-----------------------------------------------------------------------------------|
| Number          | 18 in 2018 and 6 in 2023. Total of 24 visitors                                    |
| Gender          | 45% Males, 55% Females                                                            |
| Origins         | 85% of surrounding cities, 15% of local Jordanians<br>0% other Arab nationalities |
| Reason of visit | 90% to explore the house, 10% to participate in activities                        |

#### 3.1.4. Google Travel's Review

On the date of submitting this paper on 12 July 2023, 191 online Google reviews completed voluntarily were available on a Google Travel webpage entitled An Nabulsi House. Each review is dated (one day/month/year ago, two years ago, etc.), whereas the oldest is dated six years ago. Each review includes a score on a scale of 1–5 stars, with sometimes a comment ranging from one word to a lengthy paragraph, a photo, or both uploaded by the reviewer. Most of the reviewers used their real names. Automated English translations by Google appear under the reviews that were written in the Arabic language. Google Review Summary appears above them, showing the total number of reviews, the number of reviews in each category (1–5 stars) in the shape of a horizontal bar chart, and the average score. Google enables the reviews to be classified into four categories: most helpful, most recent, highest score, and lowest score. The scale of usefulness is based on the number of likes a review received from other users signed up with Google. Red stars distinguish some reviewers on their profiles to indicate their contribution to Google reviews, ratings, photos, videos, and answers. However, these were not considered in this paper as they do not affect the values of the reviews. The authors did not ask visitors to complete any Google Travel reviews.

Many of these reviews expressed the perception of the center visitors in terms of their experience in the place, whereas most were helpful because they provided indications of the experience in the center and suggestions to develop it. The authors filtered and critically examined the most helpful reviews as an additional data source. The extracted data were arranged into a table and a chart demonstrating the change in public interest and evaluation of the building over the years in the discussion part.

#### 3.1.5. Local Media (Newspaper and Websites)

The authors assessed local online newspaper articles and websites about the center as a secondary source of data, which provides extra information during this study between 2018–2023.

### 3.2. Data Analysis

The authors used narrative analyses for the qualitative data to deeply understand the interviews and observation notes. For the former, all interviews were transcribed and then translated into English. Microsoft Office Word 365 was used for formatting purposes before the data were imported to NVivo 12 software for coding. For the latter, all the observed data were critically reviewed. Finally, to capture all the relevant information, a combination of deductive and inductive approaches was adopted to analyze the obtained data.

The authors considered that the process of al-Nabulsi House's restoration followed the fourth method of restoration explained by Tam and Hao, which is integrated infill with minor works [3]. In addition, to identify the AR process of heritage buildings, the authors applied the four main phases from the framework model developed by Arfa et al. on the al-Nabulsi's house (pre-project, preparation, implementation, and post-completion phase) [4]. Moreover, the authors used the assessment model developed by Alhojaly et al. to assess the research findings and deepen the discussion. However, the environmental and legislative assessments were briefly mentioned [9]. Furthermore, recent cultural heritage studies used the Triple and Quintuple Helix Models in their study assessment for cultural heritage sites and buildings [53,54]. Therefore, this article used the Quintuple Helix Model to provide an analytical framework to explain the interactions between five systems that directly and indirectly affect the targets of the SDGs in al-Nabulsi House [31]. Similar to Zhou and Etzkowitz's research, this article defines five systems relating to government, education, economics, civil society, and the environment [55].

#### 4. Findings and Discussion

##### 4.1. Pre-Restoration Evaluation of the Al-Nabulsi House—2008

Since the authors did not participate in the house's restoration, the al-Nabulsi house pre-restoration evaluation was carried out based on the photographs and the notes from the interview conducted with the project supervisor from GIM, which was done in 2008.

According to the project supervisor, the adaptation of the al-Nabulsi house went through three phases:

- First, the pre-project phase includes a discussion between the actors, MoTA and GIM, for the potential selection of the abandoned al-Nabulsi House for AR. The discussion included the identification of the project's significance, needs, requirements, and project costs. However, the local community was not involved in the decision-making at this phase. The project supervisor in GIM clarified that the house is an essential component in the development plan of downtown Irbid to sustain the cultural heritage. He explained:

*The al-Nabulsi House was considered a landmark in the city given its distinctive features and history. It speaks about the historical events in the surrounding area (Interview 1)*

He added that the house conservation plan was launched due to local people's lack of awareness of the significance of heritage buildings, specifically when these locals started destroying and demolishing heritage houses to build modern ones.

- Second, the preparation phase, where the actors evaluated, analyzed, and assessed the project value to create a design strategy. The recommended new function was a museum of local residential heritage items and traditional costumes. The designated design team evaluated the original condition by analyzing maps, drawings, plans, photographs, and observations notes of the original building pre-restoration.
- Third, the implementing phase, where the project was conducted according to previous assessments of damage, utilized the proposed new design requirements and codes of restoration. The new design will be shown clearly in the post-restoration phase.

##### 4.1.1. Tangible Pre-Restoration Evaluation of the Al-Nabulsi House 2008

For the pre-restoration evaluation, the data were extracted from photographs and information presented by the project supervisor and summarized as follows:

1. Exterior area: Fo'ara Square is immediately in front of Nabulsi House and was used as a car parking area and bus station. However, the bus station was moved to a nearby location [49] (Figure 6A,C).

2. Exterior building facades: The exterior facades are made of white stone and a few black basalts. Moderate damage appeared on the facade. This damage included multiple cracks in some parts of the building, such as the balconies, windows, doors, and walls (Figure 6B).
3. The spatial layouts: At that stage, the house had four entrances: three on the eastern side, which was already closed, and an entry on the south side, which was the main entrance to the building. The house had a large central courtyard surrounded by rooms with two stories. The ground floor constituted the living area, including living rooms, a guest room, a kitchen, and a courtyard. The first floor constituted the sleeping area, including the family bedrooms (Figure 7).
4. Courtyard: The facades showed moderate damage, including multiple cracks in some interior building walls and stones. The courtyard flooring tiling was substantially damaged (Figure 8).
5. Rooms: The walls and ceilings were damaged by dampness. Steel section beams appear roofing. Concrete roofs, which were popular in the construction industry for such houses, were slightly damaged.
6. Doors and windows: The wooden doors and the wooden window panels and glass were broken.
7. Tiling: The room's flooring had several cracks.



(A)

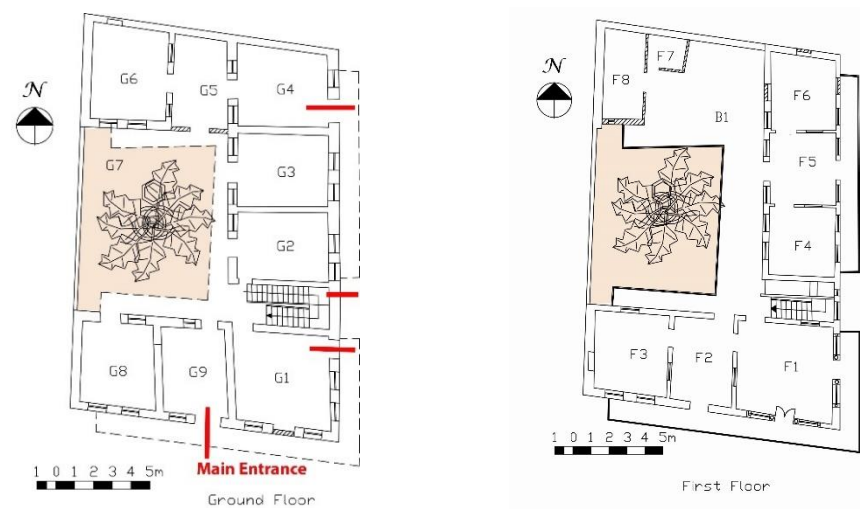


(B)



(C)

**Figure 6.** (A) Fo'ara streets around the house before restoration. (B) The house's front façade (GIM). (C) Fo'ara Square was used for car parking and as a bus station, with the al-Nabulsi House in front of it [7].



G1–4: Qa'ah (living rooms)  
 G5: Closed Iwan used as a service room  
 G6: Kitchen  
 G7: Courtyard  
 G8: Guest room  
 G9: Entrance room for guests

F1–6: Bedrooms  
 F7: Restroom  
 F8: Storage  
 B1: Open Balcony

G: Ground Floor, F: First Floor, B: Balcony

Figure 7. Pre-restoration evaluation of the interior space layouts (Adapted from GIM).

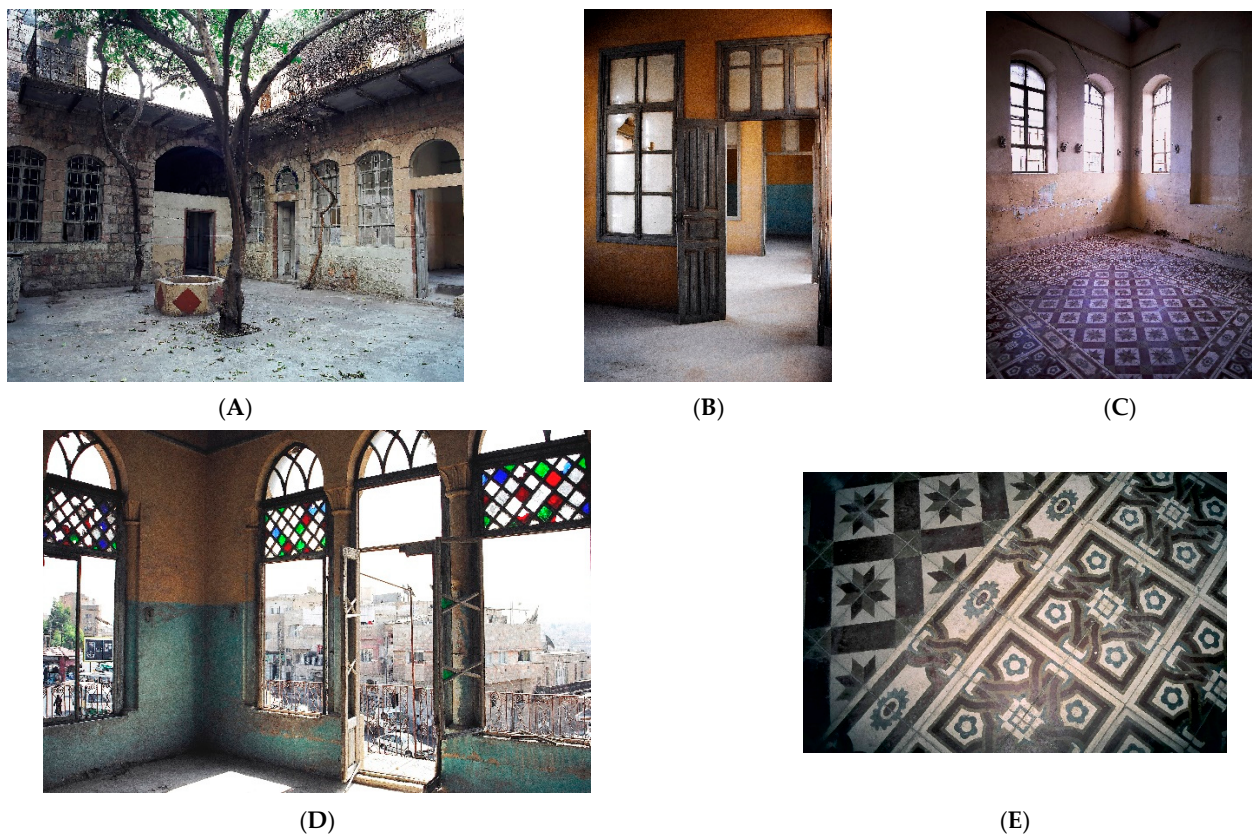


Figure 8. Photographic documentation of pre-restoration evaluation: (A) courtyard and interior walls, (B) doors, (C) windows and walls, (D) interior rooms, (E) tiling, (GIM).

#### 4.1.2. Intangible Pre-Restoration Evaluation of the Al-Nabulsi House 2008

The intangible heritage value of the al-Nabulsi House derives from the memories of the lifestyle of the Shami family who built the house. Since the house was used as a girls' school for years, its intangible heritage value also emanates from local students' memories. During the period when the house was abandoned, the intangible cultural heritage value was not well-defined for the community except for remaining in the collective memory as a Shami house. At this stage, there was no public square in front of the house but rather a street with no identity relevant to the house's history.

#### 4.2. Post-Restoration Evaluation of the Al-Nabulsi House AR-2018

In this phase, the post-restoration evaluation of the AR of the al-Nabulsi House 2018 was done by employing non-participant field observation and interviews with various groups (project supervisor, staff, visitors, and neighbors). The tangible and intangible cultural heritage was as follows:

##### 4.2.1. Tangible Post-Restoration Evaluation of the Al-Nabulsi House 2018

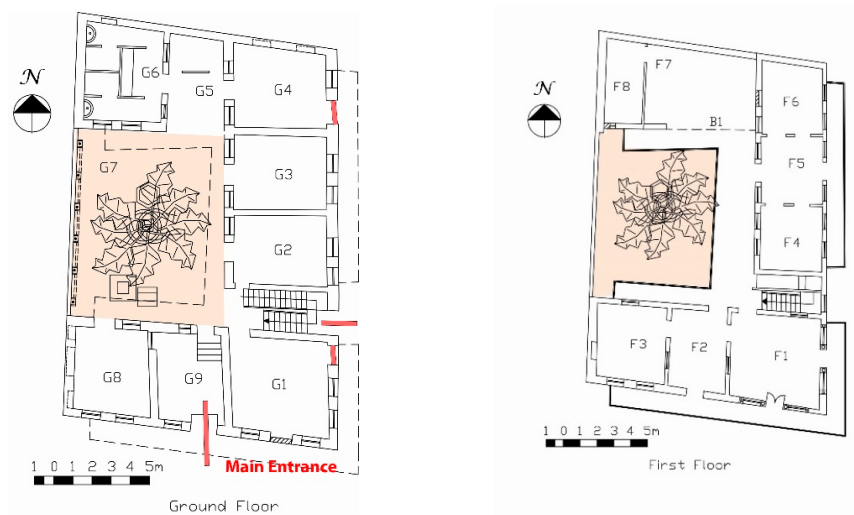
1. Exterior area: The project supervisor confirmed that in 2008, the GIM finished restoring the house and the outdoor area of Fo'ara Square to host public meetings and outdoor activities (Figure 9A). The house was named the Irbid Visitor Center (Figure 9B). The outdoor area, Fo'ara Square, was restored along with the al-Nabulsi House. The bus station was moved to a nearby square across the street. The square was planted with palm trees.
2. Exterior building façades: The cracks in the façades were fixed, and the white stones of the façade were cleaned. Grout similar to the color of the white stone was used to fill in the joints. The balconies were repaired with concrete and supportive metal beams. The metal fence on the balconies was replaced by a new one of the same style (Figure 9C).
3. The spatial layouts: The house had two entrances: the main entrance on the south side and the side entrance on the east side. The other two entrances remained closed. The interior rooms on the ground floor were reused as a museum for exhibiting local traditional residential elements, which included local Arabic Majles seating room, local residential heritage artifacts, and local traditional costumes. Part of the lower floor includes the management offices. The rooms on the first floor hosted community development projects and staff offices (Figure 10). However, some of the interviewed visitors had a positive experience with the physical house but were dissatisfied with the quality of the display room displays.
4. Courtyard: The stone courtyard façades were cleaned, and the cracks were fixed with similar grouting. The courtyard floor was repaired and paved with similar stone tiling matching the old ones (Figure 11). Therefore, according to the majority of visitors, the courtyard is an integral part of the house as it includes essential physical heritage elements, which were noticeable as one of the visitors revealed:

*The interior rooms have beautiful features, such as high doors with an upper window. The three arched windows with stained glass are unique (Interview 2)*

5. Rooms: Metal beams were added to support the ceiling. Plastering and painting were performed.
6. Doors and windows: The doors and the window's wooden panels were repaired and painted. The stained glass was repaired using a color similar to the original.
7. Tiling: The interior terrazzo tiling was polished to return to its original color.
8. Electricity and sanitation work: Electrical installations were incorporated within the stone walls, and plastering was applied.
9. Plumbing was done to add restrooms on the lower floor. The well in the courtyard was used to collect rainwater and is closed with glass.



**Figure 9.** Photographic documentation of exterior post-restoration evaluation in 2018: (A) Fo'ara Square after the intervention, (B) the sign of Irbid Visitor Center, (C) the house exterior front façade, (Authors).



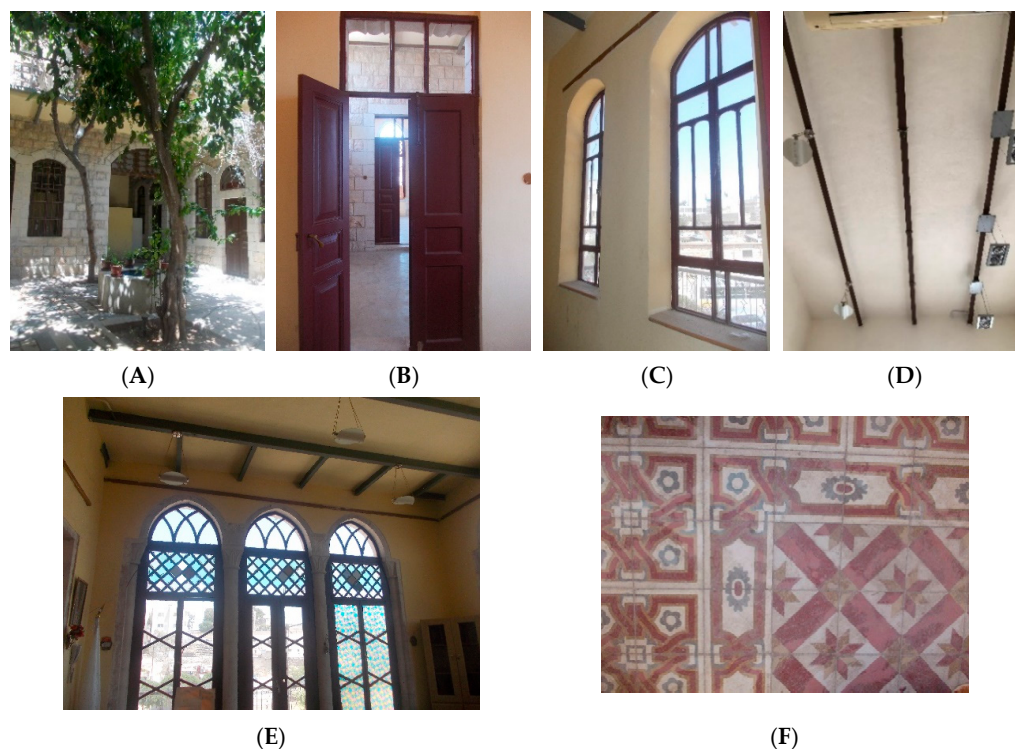
**G1–2:** Empty rooms  
**G3:** Majles  
**G4:** Exhibition rooms for heritage items and costumes  
**G5:** Open Iwan (Demolished walls)

**G6:** Restrooms  
**G7:** Courtyard with water wall  
**G8:** Management office  
**G9:** Entrance with added stairs

**F1–3:** Staff offices  
**F4–6:** Empty rooms for activities  
**F7:** Demolished  
**F8:** Restroom  
**B1:** Roofed balcony used as a multi-purpose area

**G:** Ground Floor, **F:** First Floor, **B:** Balcony

**Figure 10.** Post-restoration evaluation of interior space layouts on the first visit 2018 (Adapted from GIM).



**Figure 11.** Photographic documentation of the interior post-restoration evaluation in 2018: (A) courtyard, (B) doors, (C) windows, (D) ceiling and electricity, (E) interior rooms, (F) tiling, (Authors).

#### 4.2.2. Intangible Post-Restoration Evaluation of the Al-Nabulsi House 2018

Concerning project value, the center's director asserted that the project is significant in the Tal area, as it is considered a national, historical, and cultural reminiscence of ancient Irbid. Visiting this house provides opportunities for tourists and visitors to understand the traditional lifestyle in the area (Figure 12A–C). The center's director noted that traditional buildings make the local community proud of their cultural identity, where he stated:

*Cultural sustainability is vital for the new generation to remember the community's history. Therefore, the al-Nabulsi House is targeted to serve the local community by hosting cultural events (Interview 3)*

It was also mentioned that several cultural events and activities were held in the house, such as local food bazaars, musical events, poetry evenings, art exhibitions, and Ramadan dinners that attempted to embody the intangible cultural heritage of the house. Some activities were held in collaboration with the European Union. Furthermore, several charity bazaars support local women selling their production of traditional embroidered accessories and local fashion products to tourists (Figure 12D,E), where staff member said:

*The courtyard area hosts outdoor cultural activities, such as a summer local food bazaar and cultural evenings. For example, a musical event hosted approximately 150 visitors (Figure 12F) (Interview 4)*

In addition, another staff member mentioned that the al-Nabulsi cultural center regularly hosts educational field trips for local school students:

*The al-Nabulsi cultural center welcomes local school students as visitors, allowing them to learn about their local heritage and culture (Interview 5)*

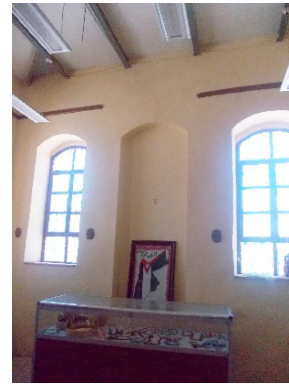
Most visitors mentioned that the house is attractive with its Damasceen exterior and interior elements, especially the courtyard. They expressed their feelings and emotions by remembering the old days with joy, linking it to the drama series of old Damascus, and reflecting their cultural identity. One local visitor said:

*The house is remarkable. I enjoyed the courtyard with the lemon tree and the water fountain. The house ambiance is so calm. It recalls happy memories and makes me proud of my identity (Interview 6)*

Most visitors mentioned that the courtyard's serenity and birds tweeting were enjoyable, especially during the sunset. Moreover, they mentioned that the scent of the lemon tree and the pleasant air breeze were remarkable.



(A)



(B)



(C)



(D)



(E)



(F)

**Figure 12.** (A) Traditional seating area (Majlis), (B) heritage items room, (C) traditional costumes room, (D) courtyard for outdoor activities (Authors), (E) musical event in the courtyard (Facebook, photograph on Tajalla Facebook page, 21 June 2018), (F) night events in Fo'ara Square (Facebook, photograph on Jordan Facebook page, 30 May 2021).

#### 4.2.3. Recorded Challenges after the Post-Restoration Evaluation of the Al-Nabulsi House 2018

The local media appreciated the al-Nabulsi House's regaining of its TCH elements through restoration and the intangible assets through the AR [56]. The public square Fo'ara hosted public gatherings and outdoor activities that invited further engagement with the pedestrians, ultimately promoting the ICH of the house towards increasing the heritage tourism industry. However, local visitors involved in one of the activities mentioned that they prefer more activities to support the local people. However, half of the visitors stressed their dissatisfaction regarding the service the house and museum offered. The place was spectacular for them so that it could serve the community better. One of the visitors mentioned:

*The house has unique features, and the courtyard and interior spaces are amazing. Nevertheless, the display rooms need more items and a better display, and the house does not reflect the old Damascene lifestyle (Interview 7)*

In addition, although some visitors had positive experiences with activities in the center, many expressed that the exhibited heritage items in the display rooms on the lower floor did not reflect the original residential lifestyle of the al-Nabulsi family. Moreover, some complained that the empty rooms on the upper floor did not represent cultural heritage activities.

#### 4.3. Post-Restoration Evaluation of the Al-Nabulsi House AR—2023

In this phase, the authors revisited the al-Nabulsi House in 2023 to reevaluate the AR of the House five years after the first evaluation. The evaluation explored the house condition, changes, and challenges considering the implications of the COVID-19 lockdown. Therefore, the post-restoration evaluation of the AR of the al-Nabulsi House 2023 was done by employing another round of non-participant field observation. Moreover, more interviews were conducted with similar groups of participants (center director, staff, visitors, and neighbors). In addition, due to a lack of visitors, a critical review of Google Travel reviews between 2018 and 2023 was considered, which did not perform during the first evaluation. The Tangible and Intangible Cultural Heritage was evaluated as follows:

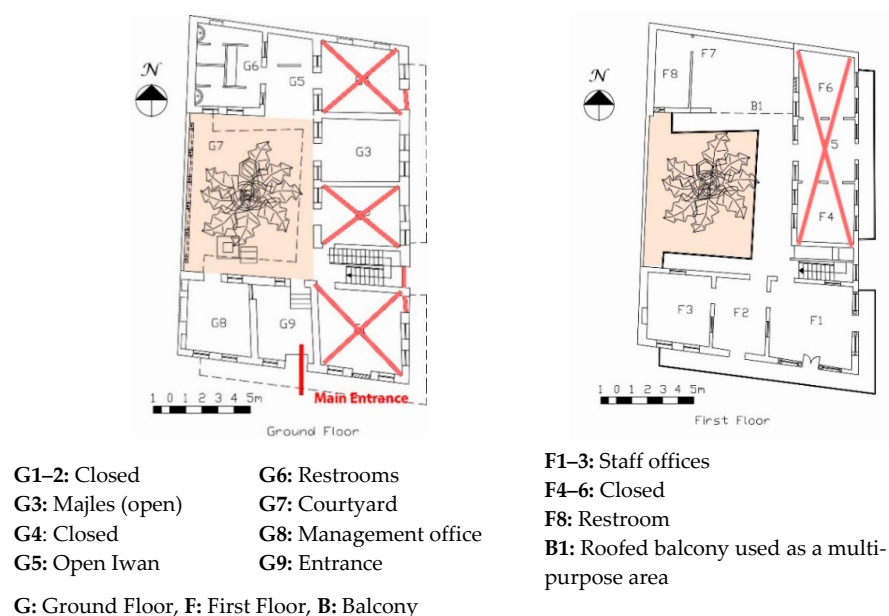
##### 4.3.1. Tangible and Intangible Post-Restoration Evaluation of the Al-Nabulsi House 2023 (Observation and Interviews)

The following points can summarize the tangible and intangible post-restoration evaluation of the al-Nabulsi House 2023:

1. Exterior area: In Fo'ara Square, some locals neglected the outdoor area and filled it with trash (Figure 13A,B). Part of the area was taken back for the bus stop (Figure 13D).
2. Exterior building facades: Some local people abused the facades by writing, scribbling, and spraying illicitly. Secondary metal doors for security were installed due to occasions of steeling (Figure 13C).
3. The spatial layout: The house had the same two entrances. However, on the lower floor, only the local Arabic Majles display room was open to the public. The remaining rooms, including residential heritage and traditional costume display rooms, were closed (Figure 14). The empty spaces on the first floor that had served the community development projects program were also closed. However, some of the interviewed visitors were still satisfied with the courtyard as the main feature, with the inner windows opened internally for privacy.



**Figure 13.** Photographs of the exterior post-restoration evaluation in 2023: (A) Trash outside the house, (B) trash in Fo'ara Square (Authors), (C) scribble and trash (Google Travel, An Nabulsi House, photographs posted by Ir Jord on May 2022), (D) part of Fo'ara Square was taken back for the bus stop (Facebook, photos posted by Naser Tbayshat on 22 November 2020).



**Figure 14.** Post-restoration evaluation of the interior space layouts in 2023 (from GIM, edited by authors).

For an ICH, one middle-aged lady visitor mentioned that the place, especially the courtyard, gives her nostalgia for the lifestyles of her grandparents and parents (Figure 15E).

4. Rooms: All the rooms had secondary metal doors for security. However, most displaying rooms were closed to the public and filled with old furniture items (Figure 15A). Therefore, most visitors were dissatisfied with the house because of the closed display rooms (Figure 15B). One of the visitors said:

*I appreciate the house features, but unfortunately, all the rooms are closed except one, which is the local Majles (Figure 15D). However, it does not reflect the Damascene lifestyle (Interview 8)*

Senior neighbors who lived near the house and were familiar with it before and after it was restored were interviewed. A female neighbor whose family had a Damascene house near the al-Nabulsi House, which was demolished, was happy about the restoration of the al-Nabulsi House as a valuable cultural Heritage site. However, she was dissatisfied with what MoTA did in the interior rooms, which did not reflect the original resident's lifestyle. She said:

*I am sad that we have lost our house, which was more beautiful than the al-Nabulsi House. Nevertheless, I am happy about the restoration of the al-Nabulsi House, as the restoration saved these houses that reflect our heritage. However, the interior rooms did not reflect the Damascene lifestyle (Interview 9)*

5. Displays labeling: Most visitors felt that the displays should reflect the cultural identity of the local area, combining Damascene and the local lifestyles. Unfortunately, the local lifestyle was displayed in poorly hanging framed pictures that could have been displayed better without any description (Figure 15C,D). One of the visitors said:

*The local culture in Irbid, in particular, is a mixture of civilizations in this region, but the Irbidi local house generally differs from the Damascouse house. The display could be better if more written information was added (Interview 10)*

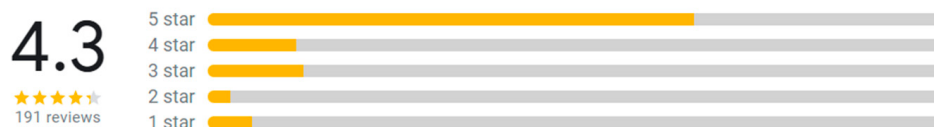


**Figure 15.** Photographic documentation of the interior post-restoration evaluation in 2023: (A) Room F5 on the first floor was closed and used as storage, (B) exhibition room G2, an empty room on the ground floor, was closed, (C) picture of Irbidi traditional lifestyle represented poorly, (D) photos in the Majles displaying Irbidi tourist sites, (E) the courtyard view from the first floor, (Authors).

#### 4.3.2. Tangible and Intangible Post-Restoration Evaluation of the Al-Nabulsi House 2023 (Google Reviews)

After critically analyzing Google reviews dated between 2018 and 2023, most of the reviews expressed admiration of the place, which is reflected in the 4.3 score out of 5 on Google Travel's review scale (Figure 16).

##### Google review summary ⓘ

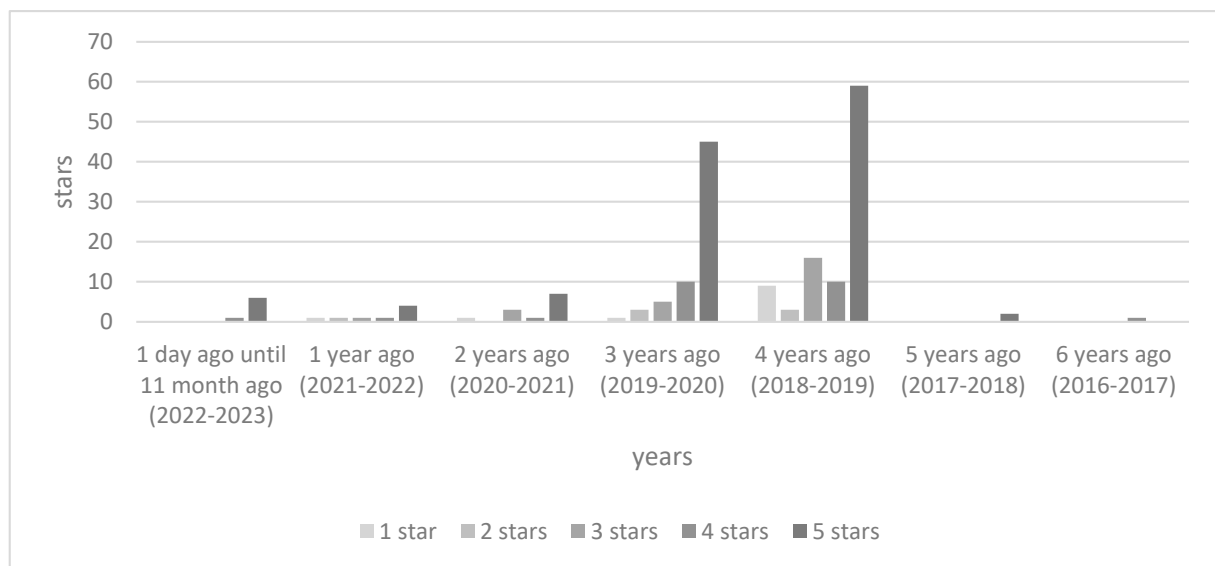


**Figure 16.** Google Review Summary on Google Travel webpage: An Nabulsi House (HR5W + 42H, Irbid, Jordan): <https://shorturl.at/dtzCO> (accessed on 12 July 2023).

The statistics of Google Travel's reviews show a sudden dramatic increase four years ago, demonstrating the public's interest in the center. The statistics also show a dramatic drop in the total number of reviews in the past three years, demonstrating a lack of public interest in the center. Furthermore, the statistics show a large number of 5-star reviews three and four years ago (2018–2020) in comparison with other reviews during these years, which illustrates the general satisfaction of the public with the center and its activities in the period before the pandemic (Table 3 and Figure 17).

**Table 3.** Summary of numbers of Google Reviews per year on Google Travel webpage: An Nabulsi House on 12 July 2023 (Authors).

| Date of Review          | 1 Star    | 2 Stars  | 3 Stars   | 4 Stars   | 5 Stars    | Number of Reviews |
|-------------------------|-----------|----------|-----------|-----------|------------|-------------------|
| 1 day ago (2023)        | 0         | 0        | 0         | 1         | 0          | 1                 |
| 1 month ago (2023)      | 0         | 0        | 0         | 1         | 0          | 1                 |
| 2 months ago (2023)     | 0         | 0        | 0         | 0         | 1          | 1                 |
| 4 months ago (2023)     | 0         | 0        | 0         | 0         | 1          | 1                 |
| 7 months ago (2022/23)  | 0         | 0        | 0         | 0         | 1          | 1                 |
| 8 months ago (2022)     | 0         | 0        | 0         | 0         | 1          | 1                 |
| 11 months ago (2022)    | 0         | 0        | 0         | 0         | 1          | 1                 |
| 1 year ago (2021–2022)  | 1         | 1        | 1         | 1         | 4          | 8                 |
| 2 years ago (2020–2021) | 1         | 0        | 3         | 1         | 7          | 12                |
| 3 years ago (2019–2020) | 1         | 3        | 5         | 10        | 45         | 64                |
| 4 years ago (2018–2019) | 9         | 3        | 16        | 10        | 59         | 97                |
| 5 years ago (2017–2018) | 0         | 0        | 0         | 0         | 2          | 2                 |
| 6 years ago (2016–2017) | 0         | 0        | 0         | 1         | 0          | 1                 |
| <b>TOTAL</b>            | <b>12</b> | <b>7</b> | <b>25</b> | <b>24</b> | <b>123</b> | <b>191</b>        |



**Figure 17.** A chart demonstrating the change of Google Travel's reviews' scores over the years on 12 July 2023 (Authors).

Many reviewers used simple words and expressions to express their admiration, such as fantastic, good old days, significant history, our culture, old Irbid, our identity, and Damascene heritage. However, many reviews suggested improving the house, especially in the last two years. The authors categorized the suggestions into four requirements (Table 4).

**Table 4.** The frequent reviews of the center's improvements (Authors).

| Frequent Requirements                                                                  | Percentage |
|----------------------------------------------------------------------------------------|------------|
| Need to improve the spatial planning and interior display and keep regular maintenance | 33%        |
| More consideration from the MoTA and GIM                                               | 26%        |
| Need frequent activities for local people, visitors, and tourist                       | 24%        |
| Include the outdoor area with the center activities for tourist                        | 17%        |
| Sum                                                                                    | 100%       |

Most visitors had a positive experience with the physical features of the house but a high dissatisfaction with the closed display rooms. Most visitors, neighbors, and Google reviewers had negative experiences with the lack of activities in the center. These negative experiences decreased their feeling of belonging to the house and, by extension, the robustness of collective local identity and cultural sustainability. The extreme comments include one posted one year ago describing the building as a useless ruin with no care from the MoTA, and another posted four years ago describing it as potentially good to be a restaurant or a traditional coffee shop. Although these comments are minor in quantities on Google Travel's Review, they warrant extra efforts in the media and education system to clarify the house-center's important role in the city's cultural sustainability.

#### 4.3.3. Recorded Challenges after the Post-Restoration Evaluation of the Al-Nabulsi House 2023

Based on the interviews with officials of the municipality's Department of Public Relations and MoTA who work at the house, in addition to the field observations, the house was not given attention as it used to be in 2018, which was observed. Therefore, some factors were recorded to negatively affect the experience of visitors and tourists when visiting the al-Nabulsi House.

For example, the announced opening hours on the center's website are much shorter than the actual opening hours. In addition, the house is closed on Saturdays, which is a weekend day. Moreover, the number of activities has decreased dramatically since 2019, when the number of activities and visitors reached a peak. For example, a male neighbor mentioned that there had been no activities in the center for a long time due to apparent neglect, which is the responsibility of the municipality and the new center management. He said:

*The apparent neglect in the center is the responsibility of the municipality and the new center management. In addition, the house must have security guards for safety during outdoor events and activities that symbolize heritage and tourist attractions (Interview 11)*

Moreover, the center director said that the number of activities has also decreased due to the coronavirus pandemic. For example, the city was about to be considered the Capital of Arab Culture. However, this plan was canceled due to the COVID-19 lockdown, which has negatively affected the cultural plans, including the center. However, even after the pandemic, the number of organized activities that were supposed to engage the local community to promote cultural sustainability kept on declining, which was mentioned by some of the interviewed staff members is also due to the lack of GIM's support. Nevertheless, it is worth mentioning that the officials also mentioned that the other two museums, Sharairi House and Saraya, especially the latter, have more visitors after the pandemic than al-Nabulsi's house, as they offer more regular and organized activities. Furthermore, some staff also mentioned that people's awareness of such culturally important heritage is challenging. For example, some people in the nearby neighborhoods have harmful behaviors, such as spraying illicitly, throwing waste in the outdoor area, and stealing elements during activities.

Therefore, the COVID-19 pandemic, the opening hours, people's disruptive behaviors in some surrounding neighborhoods, and the new management negligence that tends to reduce activities resulted in a drastic reduction in the number of events and visitors. These changes indicated a weakness in cultural awareness, which meant that the center had been losing the key role of its original purpose of sustaining the tangible and intangible cultural identity of the local community.

Finally, the center director suggested launching awareness campaigns to spread awareness of the importance of heritage and culture. He proposed a new function for the house, such as a youth business incubator with booths for startup projects connecting charitable organizations. Finally, he demanded more studies and guidance on the city's conservation management of cultural heritage.

#### 4.4. Level of Success

The following list demonstrates the level of success and challenges in the five societal systems of the Quintuple Helix Model in the case of al-Nabulsi House in connection with SDGs directly and indirectly:

**Government System:** First, on the actor's level, top-down decisions about the AR of the building limited the local community participation in defining the identity of their renewed cultural sustainability, which was absent although considered essential in any AR project. Second, the subjective selection of the house's new function negatively affected the building's originality and sustainability. Third, the lack of financial support for maintenance, limited funding for activities, and lack of supervision and control from MoTA and GIM weakened the center's cultural sustainability at the governing level. Forth, on the center management level, the insufficient proper supervision from the center's management, shortage of center maintenance, defects in display room interior design strategies, and limitations in organizing creative and innovative cultural activities from the center management dimmed the cultural sustainability of the center. However, these demands need to be considered more to comply directly with SDGs 9 (Industry, Innovation, and Infrastructure) and 12 (Responsible Consumption and Production).

**Education System:** The administrative management behind the center did not involve universities and academics. However, the center has been more actively involved in educational field trips for school students. The al-Nabulsi Center needs to play a significant role in promoting sustainable development and encouraging research on heritage preservation, which is indirectly connected with SDG 4 (Quality Education) and directly with SDG 17 (Partnerships for The Goals).

**Economics System:** In general, the cultural tourism industry has a positive economic impact on communities by creating new jobs, businesses, events, and attractions. This positive impact helps to diversify the local economy and promote growth. In the case of the al-Nabulsi cultural center, it has made some attempts to promote cultural tourism among local and international tourists. Unfortunately, the center's efforts have primarily attracted local visitors only, which needs improvement to attract more local and international tourists. Therefore, MoTA must collaborate with the center and GIM to promote sustainable tourism by developing tourism business plans involving various parties. This effort directly aligns with SDGs 8 (Decent Work and Economic Growth), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 16 (Peace, Justice, and Strong Institutions), and 17 (Partnerships for the Goals).

**Civil Society System:** The limited awareness of the importance of AR in cultural heritage buildings, the lack of community support for protecting cultural heritage buildings, and the little community engagement with the center's activities diminished the sustainable culture of the center at the community level. On the other hand, the center has hosted several community events and activities, such as charity bazaars, which have supported local women by allowing them to sell their traditional products and providing financial assistance and empowerment. The center's support demonstrates its significant role in engaging with local communities beyond tourism. However, there is still a need for more planned strategies to engage the center with surrounding communities. These actions are aligned indirectly with SDGs 1 (No Poverty) and directly with goals 5 (Gender Equality) and 8 (Decent Work and Economic Growth).

**Environment System:** Heritage building conservation like that of the al-Nabulsi Center can positively impact the environment by reducing pollution and conserving local materials and resources. Furthermore, the center must reconsider the environmental system in the process of conservation and maintenance, such as saving water. For example, if possible, the well in the courtyard used in the past to collect runoff water needs to be reused. The al-Nabulsi cultural center needs to develop an environmentally positive administration, which would indirectly fulfill SDGs 6 (Clean Water and Sanitation) and 13 (Climate Action).

To determine the achievement of the SDGs in communities, the UN introduced targets for each goal [57]. In the case of the al-Nabulsi Center, it is connected directly and indirectly to 11 SDGs. Table 5 demonstrates the relevant targets to achieve these goals in the case of the al-Nabulsi Center.

**Table 5.** Summary of the SDGs and their targets in the case of al-Nabulsi Center (Authors).

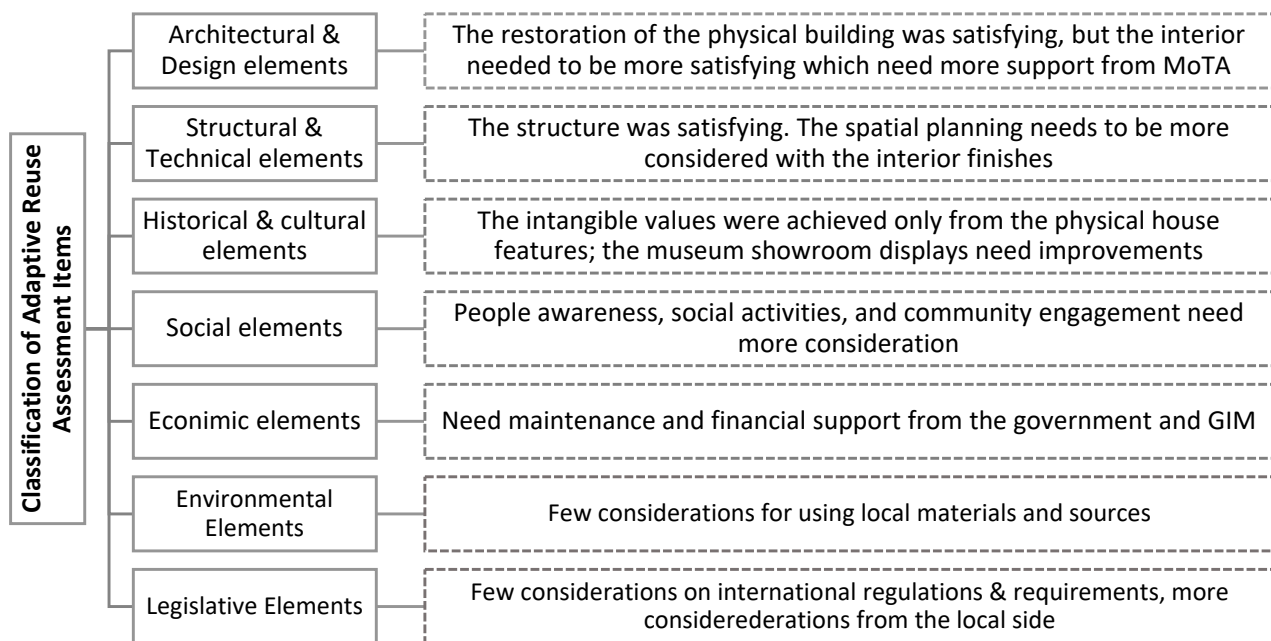
| Link to SDGs | SDGs Goal Number | SDGs Target                                                                                                                                                          |
|--------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Direct       | 5                | 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life. |
|              | 8                | 8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products                                  |
|              | 11               | 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage.                                                                          |

Table 5. Cont.

| Link to<br>SDGs | SDGs Goal<br>Number | SDGs Target                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Direct          | 12                  | 12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products                                                                                                                                                                                                                                                         |
|                 | 16                  | 16.7 Ensure responsive, inclusive, participatory, and representative decision-making at all levels.                                                                                                                                                                                                                                                                                                                   |
|                 | 17                  | 17.17 Encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships.<br>17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement the gross domestic product and support statistical capacity-building in developing countries.                      |
| Indirect        | 1                   | 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services, including microfinance.                                                                         |
|                 | 4                   | 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and culture's contribution to sustainable development |
|                 | 6                   | 6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies                                                                                                                                      |
|                 | 9                   | 9.1 Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all                                                                                                                                                                            |
|                 | 13                  | 13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing states, including focusing on women, youth and local, and marginalized communities                                                                                                                                                                 |

## 5. Conclusions and Recommendations

This article explored the restoration and rehabilitation of the al-Nabulsi House's traditional building, which was adapted and used as a Visitor Center for being a culturally valuable building. The house was used to reflect the local culture by showing the Irbidi traditional residential lifestyle, which was essential to sustain the cultural identity in the area. The article focused on evaluating the house's AR through users' experience and whether the building restoration process fulfilled the requirements of the AR steps. Therefore, it investigates the house AR's influence on local cultural heritage sustainability by evaluating the TCH and ICH of pre- and post-restoration conditions according to the Alhojaly et al. assessment model [9] (Figure 18).



**Figure 18.** Al-Nabulsi House AR assessment classification items.

### 5.1. TCH: The Physical Building

Al-Nabulsi House in Fo'ara Square was remarkably restored regarding the physical structure, preparing the area for visitors and tourists. The exterior house's features (facades including white stones, windows, and doors) reflect the traditional house of that time. The core of cultural heritage building elements are the interior features (courtyard, water fountain, inner garden, inner windows, inner doors, and high ceilings). However, the restoration could have been more appropriate in terms of having a better quality of the doors and the windows' finishes. The most noticeable weaknesses of the adaptation lie in the museum's display rooms, which have limited exhibits with poor labels for tourists and visitors. The displayed pictures are poorly framed. Even worse, the display and activity rooms are closed to the local community and tourists.

### 5.2. ICH: Non-Physical Inheritance

The Irbid city has a mix of various cultures, whereas Damascene could be the dominant one. The al-Nabulsi House's selection by the GIM aims to reflect the local community's mixed culture to empower their cultural identity. However, the findings revealed that displayed objects did not reflect the Damascene traditional residential lifestyle. The exhibited pictures and items, such as the Majlis, represented the Irbidi rather than the Damascene lifestyle. On the other hand, most of the interviewed visitors, neighbors, and Google reviewers nostalgically experienced the original sense of privacy and ambient calmness in the traditional Damascene courtyard, including the greenery, the scent of lemon, and the cool breeze. However, they were frustrated with the incompatibility between the rich intangible lifestyle of the original Damascene habitant and the tangible decent rural Irbidi way of living in the rooms' interior design when they were open to the public in 2018. This incompatibility misled and confused many of them, giving them conflicting information. In 2023, the center's program lacked heritage activities like storytelling, musical evenings, and food bazaars. Most display rooms were closed, eliminating any possibility of revealing ICH elements through exhibitions.

### 5.3. Possible Improvement

The article showed that the AR of the al-Nabulsi House has a moderate impact on cultural sustainability in the surrounding communities, which is declining over time and requires additional support to improve. Thus, the Quintuple Helix Model indicates that

the al-Nabulsi Center has moderate connections within government, education, and civil society systems. However, further improvements are needed to enrich connections within these systems, especially economic and environmental ones. Meeting the targets of the 11 potential goals of the SDGs will create possibilities for improvements.

The authors recommend immediate concrete actions by the government, especially MoTA and GIM, to provide long-term financial support, increase people's awareness of the role and the significance of traditional buildings, enhance the social impact, engage with the educational and academic sector, and promote sustainable cultural tourism locally and internationally. The GIM must update the currently adapted function and interiors of the al-Nabulsi house by engaging the community in making decisions at all levels according to their new needs. The MoTA and GIM should promote effective public-private partnerships to fund cultural activities to support local communities and attract tourists. Eventually, these recommendations will help restore the center's traditional values by integrating them into a comprehensively and sustainably developed program to enhance the community's sense of their collective identity. These actions will help strengthen the community's connection to its cultural heritage and promote a greater sense of unity and belonging.

#### 5.4. Limitations and Further Research

The research has natural limitations that create opportunities for further research. First, it focused on analyzing one building with a limited comparison with other similar cases, locally and globally. Second, the research, which focused on cultural sustainability, did not examine environmental sustainability, and it briefly explored financial and economic aspects with limited data collection and analysis of the needed and actual budgets and expenses in connection with the local and regional economy. Third, an officially accurate statistical analysis of the annual average number of visitors and events in the al-Nabulsi House is unavailable because attending the events is free, and they do not use a registration system nor entry tickets to record the number of visitors. However, some officials provided general indications of the yearly decrease and increase in visitors. However, none of these limitations affects the accuracy of the final finding and conclusion in the particular domain of this research. Based on this extensive article, further research can examine these topics and similar buildings mentioned briefly in this article, such as the al-Sharairi House and the Juma'a building, employing the five systems of the Quintuple Helix Model in connection with the SDGs.

**Author Contributions:** Resources, M.K.A.; writing—original draft, D.K.A.; writing—review & editing, A.S. and M.W.Y. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** All data mentioned in the paper are available through the corresponding author.

**Acknowledgments:** The authors are grateful to the Greater Irbid Municipality (GIM) for sharing archived architectural documents and site photographs. Thanks to the interior designer Dania Hazzam for the data collection. Special thanks to Monther Jamhawi and Reyhan Sabri for their helpful comments.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. Najd, M.D.; Ismail, N.A.; Maulan, S.; Yunus, M.Y.M.; Niya, M.D. Visual Preference Dimensions of Historic Urban Areas: The Determinants for Urban Heritage Conservation. *Habitat Int.* **2015**, *49*, 115–125. [\[CrossRef\]](#)
2. Oikonomou, A.; Bougiatioti, F. Architectural Structure and Environmental Performance of the Traditional Buildings in Florina, NW Greece. *Build. Environ.* **2011**, *46*, 669–689. [\[CrossRef\]](#)
3. Tam, V.W.Y.; Hao, J.J.L. Adaptive Reuse in Sustainable Development. *Int. J. Constr. Manag.* **2019**, *19*, 509–521. [\[CrossRef\]](#)

4. Arfa, F.H.; Zijlstra, H.; Lubelli, B.; Quist, W. Adaptive Reuse of Heritage Buildings: From a Literature Review to a Model of Practice. *Hist. Environ. Policy Pract.* **2022**, *13*, 148–170. [CrossRef]
5. Daher, R.F. Urban Regeneration/Heritage Tourism Endeavours: The Case of Salt, Jordan ‘Local Actors, International Donors, and the State’. *Int. J. Herit. Stud.* **2005**, *11*, 289–308. [CrossRef]
6. Elsorady, D.A. Assessment of the Compatibility of New Uses for Heritage Buildings: The Example of Alexandria National Museum, Alexandria, Egypt. *J. Cult. Herit.* **2014**, *15*, 511–521. [CrossRef]
7. Haddad, N.A.; Fakhoury, L.A. Towards Developing a Sustainable Heritage Tourism and Conservation Action Plan for Irbid’s Historic Core. *Archnet-IJAR* **2016**, *10*, 36–59. [CrossRef]
8. Fakhoury, L.; Haddad, N. Aspects of the Architectural and Urban Heritage, From Documentation and Registers to Conservation for Adaptive and Modern Use at The Historic Cores of Salt and Irbid/Jordan. *Archnet-IJAR* **2017**, *11*, 190–218. [CrossRef]
9. Alhojaly, R.A.; Alawad, A.A.; Ghabra, N.A. A Proposed Model of Assessing the Adaptive Reuse of Heritage Buildings in Historic Jeddah. *Buildings* **2022**, *12*, 406. [CrossRef]
10. Rani, P.; Putri, C.; Devina, A. Transforming Heritage Building for Commercialisation. *Plan. Malays.* **2017**, *15*, 135–146. [CrossRef]
11. Philokyprou, M.; Michael, A. Environmental Sustainability in the Conservation of Vernacular Architecture. The Case of Rural and Urban Traditional Settlements in Cyprus. *Int. J. Archit. Herit.* **2021**, *15*, 1741–1763. [CrossRef]
12. Joglekar, S.; Achliya, N. Adaptive Reuse an Emergent Trend for Conservation of Structures. *Int. J. Eng. Res.* **2018**, *7*, 118–120. [CrossRef]
13. Hegazy, S.M. Cultural Sustainability between Traditional and Contemporary Omani Residences—a Comparative Case Study. *Eur. J. Sustain. Dev.* **2015**, *4*, 185–194. [CrossRef]
14. Alves, S. The Sustainable Heritage of Vernacular Architecture: The Historic Center of Oporto. *Procedia Environ. Sci.* **2017**, *38*, 187–195. [CrossRef]
15. Plevioets, B.; Sowińska-Heim, J. Community Initiatives as a Catalyst for Regeneration of Heritage Sites: Vernacular Transformation and Its Influence on the Formal Adaptive Reuse Practice. *Cities* **2018**, *78*, 128–139. [CrossRef]
16. Naheed, S.; Shooshtarian, S. The Role of Cultural Heritage in Promoting Urban Sustainability. *Land* **2022**, *11*, 1508. [CrossRef]
17. Hawkes, J. *The Fourth Pillar of Sustainability: Culture’s Essential Role in Public Planning*; Common Ground Publishing Pty Ltd.: Sydney, Australia, 2001.
18. Soini, K.; Birkeland, I. Exploring the Scientific Discourse on Cultural Sustainability. *Geoforum* **2014**, *51*, 213–223. [CrossRef]
19. González, A.L.; Martín, J.Á.C.; Vaca-Tapia, A.C.; Rivas, F. How Sustainability is Defined: An Analysis of 100 Theoretical Approximations. *Mathematics* **2021**, *9*, 1308. [CrossRef]
20. Fakhruddin, H.S.; Al-Alwan, H.A.S.; Fadhil, A. Towards Cultural Sustainability: The Potency of ‘The Thousand and One Nights’ in Reviving the Imageability of Baghdad City. *Ain Shams Eng. J.* **2023**, *14*, 101807. [CrossRef]
21. UNESCO Institute for Statistics. UNESCO Framework for Cultural Statistics. 2009. Available online: [http://uis.unesco.org/sites/default/files/documents/unesco-framework-for-cultural-statistics-2009-en\\_0.pdf](http://uis.unesco.org/sites/default/files/documents/unesco-framework-for-cultural-statistics-2009-en_0.pdf) (accessed on 23 March 2023).
22. Salameh, M.M.; Touqan, B.A.; Awad, J.; Salameh, M.M. Heritage Conservation as a Bridge to Sustainability Assessing Thermal Performance and the Preservation of Identity through Heritage Conservation in the Mediterranean City of Nablus. *Ain Shams Eng. J.* **2022**, *13*, 101553. [CrossRef]
23. UNESCO. Convention for the Safeguarding of the Intangible Cultural Heritage. 2003. Available online: [https://ich.unesco.org/doc/src/2003\\_Convention\\_Basic\\_Texts\\_2016\\_version-EN.pdf](https://ich.unesco.org/doc/src/2003_Convention_Basic_Texts_2016_version-EN.pdf) (accessed on 7 February 2023).
24. Cheung, E.; Chan, A.P. Revitalising Historic Buildings through Partnership Scheme: A Case Study of the Mei Ho House in Hong Kong. *Prop. Manag.* **2012**, *30*, 176–189. [CrossRef]
25. United Nations. *Transforming Our World: The 2030 Agenda for Sustainable Development*; United Nations, Department of Economic and Social Affairs: New York, NY, USA, 2015; Available online: <https://sdgs.un.org/2030agenda> (accessed on 18 July 2023).
26. UNESCO. *The Hangzhou Declaration: Placing Culture at the Heart of Sustainable Development Policies*; UNESCO: Hangzhou, China, 2013; pp. 1–6. Available online: <https://unesdoc.unesco.org/ark:/48223/pf0000221238> (accessed on 18 July 2023).
27. UNESCO. Policy Document for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention. In Proceedings of the Paris: General Assembly of States Parties to the World Heritage Convention at Its 20th Session, Paris, France, 7 February 2015; pp. 1–18.
28. UNESCO. Strengthening the Role of Local Communities in the Management and Conservation of World Heritage Sites. 2016. Available online: <http://whc.unesco.org/en/news/1477> (accessed on 18 July 2023).
29. Xiao, W.; Mills, J.; Guidi, G.; Rodríguez-Gonzálvez, P.; Barsanti, S.G.; González-Aguilera, D. Geoinformatics for the Conservation and Promotion of Cultural Heritage in Support of the UN Sustainable Development Goals. *ISPRS J. Photogramm. Remote Sens.* **2018**, *142*, 389–406. [CrossRef]
30. Ghosh, S.; Rajan, J. The Business Case for SDGs: An Analysis of Inclusive Business Models in Emerging Economies. *Int. J. Sustain. Dev. World Ecol.* **2019**, *26*, 344–353. [CrossRef]
31. Barcellos-Paula, L.; De la Vega, I.; Gil-Lafuente, A.M. The Quintuple Helix of Innovation Model and the SDGs: Latin-American Countries’ Case and its Forgotten Effects. *Mathematics* **2021**, *9*, 416. [CrossRef]
32. Carayannis, E.G.; Campbell, D.F. *Smart Quintuple Helix Innovation Systems: How Social Ecology and Environmental Protection are Driving Innovation, Sustainable Development and Economic Growth*; Springer International Publishing: Cham, Switzerland, 2018.

33. Miran, F.D.; Husein, H.A. Introducing a Conceptual Model for Assessing the Present State of Preservation in Heritage Buildings: Utilizing Building Adaptation as an Approach. *Buildings* **2023**, *13*, 859. [\[CrossRef\]](#)
34. Samadzadehyazdi, S.; Ansari, M.; Mahdaveinejad, M.; Bemaninan, M. Significance of Authenticity: Learning from Best Practice of Adaptive Reuse in the Industrial Heritage of Iran. *Int. J. Archit. Herit.* **2020**, *14*, 329–344. [\[CrossRef\]](#)
35. Bertagni, S.; Boarin, P.; Zuppiroli, M. The Dialogue Between Structural Interventions and Sustainability Criteria in Rating Systems for Cultural Heritage: The Experience of GBC Historic Building. *Int. J. Archit. Herit.* **2018**, *14*, 139–161. [\[CrossRef\]](#)
36. ICOMOS. ICOMOS Charter Principles for the Analysis, Conservation and Structural Restoration of Architectural Heritage. Victoria Falls, Zimbabwe, October 2003. Available online: <https://www.icomos.org/en/about-the-centre/179-articles-en-francais/ressources/charters-and-standards/165-icomos-charter-principles-for-the-analysis-conservation-and-structural-restoration-of-architectural-heritage> (accessed on 18 July 2023).
37. UNESCO. Recommendation on the Historic Urban Landscape. 2011. Available online: <https://whc.unesco.org/uploads/activities/documents/activity-638-98.pdf> (accessed on 18 July 2023).
38. De Paris, S.; Lopes, C.N.L.; Junior, A.N. The Use of an Analytic Hierarchy Process to Evaluate the Flexibility and Adaptability in Architecture. *Archnet-IJAR* **2021**, *16*, 26–45. [\[CrossRef\]](#)
39. Bullen, P.; Love, P. Adaptive Reuse of Heritage Buildings: Sustaining an Icon or Eyesore. In Proceedings of the COBRA 2011 Proceedings of RICS Construction and Property Conference, Manchester, UK, 12–13 September 2011; Royal Institution of Chartered Surveyors: London, UK, 2011; pp. 1652–1662.
40. Bullen, P.; Love, P. A New Future for the Past: A Model for Adaptive Reuse Decision-Making. *Built Environ. Proj. Asset Manag.* **2011**, *1*, 32–44. [\[CrossRef\]](#)
41. Bullen, P.A.; Love, P.E. Adaptive Reuse of Heritage Buildings. *Struct. Surv.* **2011**, *29*, 411–421. [\[CrossRef\]](#)
42. Kuipers, M.; De Jonge, W. *Designing from Heritage: Strategies for Conservation and Conversion*; Delft University of Technology: Amsterdam, The Netherlands, 2017.
43. Daher, R.F. The Fragmentary Production of Knowledge on Cultural Heritage on the Arab World: From an Orientalist Vision to a Scarce Engagement with Epistemological and Theoretical Spheres. *Archnet-IJAR* **2021**, *15*, 839–853. [\[CrossRef\]](#)
44. Hogan, S. Photography in Research (Summary of Photographic Research Methods: Photo-documentation, Photo-elicitation, Semiotic Analysis and Content Analysis). In *Photography*; Emerald Publishing Limited: Bingley, UK, 2022; pp. 111–133.
45. UNESCO. Law No. 422 of the July 18th 2001 on the Protection of Historical Monuments. 2011. Available online: [https://en.unesco.org/sites/default/files/rom\\_law\\_422\\_engtof.pdf](https://en.unesco.org/sites/default/files/rom_law_422_engtof.pdf) (accessed on 18 July 2023).
46. Aydın, D.; Yaldız, E.; Srarmkaya, S.B. Evaluation of Domestic Architecture via the Context of Sustainability: Cases from Konya City Center. *ArchNet-IJAR* **2015**, *9*, 305–317. Available online: <https://www.archnet.org/publications/10083> (accessed on 18 July 2023). [\[CrossRef\]](#)
47. Rezaei, N.; Rasouli, M.; Azhdari, B. The Attitude of the Local Community to the Impact of Building Reuse: Three Cases in an Old Neighborhood of Tehran. *Herit. Soc.* **2018**, *11*, 105–125. [\[CrossRef\]](#)
48. Abu Al Haija, A.H. Jordan: Guidelines for Urban and Architectural Heritage Conservation: Umm Qais Case Study. *Int. J. Archit. Herit.* **2012**, *6*, 62–85. [\[CrossRef\]](#)
49. Abujaber, F. Towards a Walkable Heritage Landscape, Dalhousie University, School of Planning (PLAN 6000: Independent Project). 2009. Available online: [https://cdn.dal.ca/content/dam/dalhousie/pdf/faculty/architecture-planning/school-of-planning/pdfs/Abujaber%2C%20Fahed-Independent\\_Project.pdf](https://cdn.dal.ca/content/dam/dalhousie/pdf/faculty/architecture-planning/school-of-planning/pdfs/Abujaber%2C%20Fahed-Independent_Project.pdf) (accessed on 18 July 2023).
50. Al-Sayyahun, H. Bayt al-Nabulsi fi Irbid: Irth Hadari T'mal al-Baladia 'ala l'adit T'hilih wa-Tarmimih. Addustour 24 December 2007. Available online: <https://www.addustour.com/articles/842418> (accessed on 23 March 2023).
51. Creswell, J.W.; Creswell, J.D. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*; SAGE Publications Ltd.: New York, NY, USA, 2017.
52. Al-kheder, S.; Haddad, N.; Fakhoury, L.; Baqaen, S. A GIS Analysis of the Impact of Modern Practices and Policies on the Urban Heritage of Irbid, Jordan. *Cities* **2009**, *26*, 81–92. [\[CrossRef\]](#)
53. Sloup, R.; Riedl, M.; Machoň, M. Comprehensive Evaluation of the Design of a New National Park Using the Quintuple Helix Model. *Forests* **2023**, *14*, 1494. [\[CrossRef\]](#)
54. Setyagung, E.; Hani, U.; Azzadina, I.; Sianipar, C.; Ishii, T. Preserving Cultural Heritage: The Harmony Between Art Idealism, Commercialization, and Triple-Helix Collaboration. *Am. J. Tour. Manag.* **2013**, *2*, 22–28.
55. Zhou, C.; Etzkowitz, H. Triple Helix Twins: A Framework for Achieving Innovation and UN Sustainable Development Goals. *Sustainability* **2021**, *13*, 6535. [\[CrossRef\]](#)
56. Darawsha, J. Bayt al-Nabulsi Shahid 'la Nash't Irbid. Alrai 14 October. 2019. Available online: <https://alrai.com/article/10505834/> (accessed on 23 March 2023).
57. United Nations. Department of Economic and Social Affairs, Sustainable Development. The 17 Goals. Available online: <https://sdgs.un.org/goals> (accessed on 18 July 2023).

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.