

# Inclusivity in Jordan's Cultural Historic Sites: Examining Policy and Practices

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**Abstract**— This study investigates policymakers' and practitioners' perspectives on inclusive design in Jordan's cultural Historic Sites, a critical component of the country's cultural tourism. Specifically, it examines the government's "Accessible Tourism" initiative, which aims to promote inclusive design in historical and cultural heritage sites such as Amman Citadel and Jordan Museum. The study explores the relationship between policy creation and implementation and identifies the factors and challenges affecting the adoption of inclusive design and project delivery. The research methodology involved conducting in-person semi-structured interviews with Twenty-three professionals working on the "Accessible Tourism" project, including individuals involved in legal affairs, technical development, accessibility, and inclusive design. The interview data was analyzed using NVIVO software. The findings indicate that there is an intricate and ongoing planning process that involves ongoing multi-layered meetings followed by ongoing monitoring and evaluation of procedures after each design phase. However, several factors, including natural geographic, social, and cultural contexts, inflexible conservation regulations, limited public knowledge and awareness of accessibility issues, and a lack of resources and funding, all hinder inclusive accessibility application in policy and practice in historical sites. Despite the government's interest in promoting inclusivity in historical sites, the current development approach still requires a more integrated vision grounded in equity and inclusion and incorporating participatory decision-making processes. This research underscores the need for more comprehensive design tools and frameworks and suggests digital recommendations that allocation to advance inclusive design and accessibility in Jordan's cultural tourism.

**Keywords**— Accessibility, Cultural Tourism, Historic Sites, Inclusive Design, Policy and Practice, Digital Recommendation

## I. INTRODUCTION

Cultural tourism is a form of movement that satisfies cultural needs by engaging in activities like attending performing arts and cultural events and exploring archaeological and cultural heritage sites away from one's usual residence [1]. Introducing accessibility in cultural tourism can promote understanding among diverse groups and reinforce social and cultural harmony, particularly for individuals with disabilities, including access to archaeological and cultural heritage [2]. Jordan boasts many archaeological sites, with over 20,000 documented sites

scattered across the country [3], including six on the World Heritage List [4].

An estimated one billion individuals worldwide, or 15% of the global population, have some impairment. This figure is projected to rise due to the aging population and increasing long-term diseases [5]. In Jordan, one million people have permanent disabilities, and 13.2% of the population has severe disabilities [6], indicating the need for architects and planners to develop spaces that consider the life span of individuals with disabilities, elderly tourists, people with temporary restrictions, and those traveling with children [7], [8], [9].

Architectural inclusive design approaches play a crucial role in ensuring that the built environment caters to the needs of all users, including those with different needs. Achieving this objective is particularly challenging for architects and planners when it comes to historical tourism sites that require a high level of planning, procedures, interventions, and large-scale inspection to guarantee long-term performance and aesthetic permanence [10], [11]. Architectural inclusive design approaches aim to shape visitors' needs by considering various factors, including fit, function, safety, physical-behavioural mechanisms, and community needs [12]. To meet the demands of prospective visitors, the High Council of Rights of Persons with Disabilities introduced the Persons with Disabilities Law number 20 in a new format, which the Jordanian government approved in 2017. Article 37 of the recent Jordanians with Disabilities Law requires the Ministry of Tourism and Antiquities to provide accessibility to tourist and archaeological sites while ensuring that the site's topographical and archaeological nature is not compromised [13].

The Ministry of Tourism and Antiquities has initiated the "Accessible Tourism" project to comply with the law and promote community and tourist inclusion. However, inclusion in tourism design requires more than merely catering to the needs of disabled individuals. It involves understanding their lifestyle, the dynamics of their social environment, and their behaviour in different settings. Inclusive design is an approach that defines accessibility, which aims to broadly design a product or environment so that as many people as possible can use it [14]. The inclusive design also includes integrating social justice and diversity criteria progressively. The scope of inclusive design has expanded to include not only physical, sensory, and cognitive needs but also sociological and

behavioural aspects [14]. Architects and designers need to consider large social movements that affect inclusion and create structural frameworks that prioritize inclusion in their designs.

This research examined the relationship between policy development and implementation; the wide insights, challenges, and factors faced by experts and professionals when planning accessible inclusive tourism; how stakeholders are involved; how they bring accessibility and inclusivity to historic sites; and these professionals' knowledge and perceptions about inclusive design in their current work practice.

Qualitative research and semi-structured interviews with preservation and inclusive design experts, including legal affairs specialists, technical development architects, and access advisors from the national project "Accessible Tourism," were conducted.

## II. ACCESSIBILITY DESIGN AND INCLUSIVE DESIGN IN HISTORICAL SITES

Accessibility design refers to the process of creating spaces, products, services, or environments that can be accessed and used by people with disabilities or impairments. Inclusive design surpasses accessibility design because it takes into consideration functional interactions and factors such as age, culture, and socioeconomic status. It seeks to enhance solution generation for all individuals, regardless of their abilities [14], [15]. Inclusive design improves the static, aesthetics, and environmental quality of public spaces for international and local tourism [16], [17].

In recent times, the importance of inclusive design has been recognized by architects, planners, design experts, and stakeholders who have begun implementing inclusive design criteria and regulations in their projects to encourage the concept of 'towards more inclusive design environments' and raise awareness [18]. However, archaeological and cultural heritage sites hold universal value in terms of human history, and their preservation for future generations is crucial [19]. The best way to protect such historic buildings and sites is to keep them in active use, which may require modifications and changes. These interventions must be undertaken with special efforts to ensure that the building's properties are not lost. Planning should include all the work needed to preserve the place's original quality while allowing change. The new elements should not damage the historical pattern, and the old and new should be clearly distinguished [20].

Ensuring that historic cultural sites are available to everyone is a priority as they represent the common heritage of all people. Various international conservation organizations have recognized the importance of inclusive access to historical heritage sites and promote it as a fundamental aspect of heritage conservation. The ICOMOS Charter on the Interpretation and Presentation of Cultural Heritage Sites and the SPI Sustainable Preservation Initiative advocates for the physical openness of cultural heritage sites to the public. Inclusive design is an essential approach in historic cultural areas, and these approaches highlight the importance of making such sites accessible and inclusive to all individuals regardless of their abilities [21], [22].

The implementation of these strategies requires the provision of interpretive and pre-visit information in an accessible form, staff trained in disability types and equality awareness, well-designed and located signage, clear wayfinding and orientation, accessible horizontal and vertical circulation to facilities, and clear access to emergency escape. [22], [23].

Some structures may be more amenable to inclusive design strategies than others, as some may require significant skill, creativity, and financing to achieve them. Thus, there may be challenges between architectural conservation and implementing inclusive design principles. This challenge is not limited to Jordan, as it is a common issue faced by architectural design professionals worldwide. Therefore, further research is necessary to understand the barriers to inclusive design adoption and identify potential solutions to overcome these challenges.

## III. METHODOLOGY

Interviews were selected to gather rich and detailed data, which can help to develop a deeper understanding of people's experiences and perspectives [24]. The interview questions were developed based on the current understanding of design and development processes, perception, and motivations for adopting inclusive design in historical architectural design practice [25],[26]. It is also developed based on experiential user data, which provides insights into what information qualities and types of professionals use while designing or developing a project, such as legal knowledge and facts about the building's actual circumstance and between mandatory and inspirational sources [27]. This will guarantee that the interview questions are appropriately set up.

The interview's primary goal is to discover the current design and development processes that experts use to make historic sites accessible and identify the challenges in those processes and perceptions of inclusivity, going beyond accessibility and providing services in the context of historical sites.

The main data collection method is to continue interviewing until the participants' answers reach theoretical saturation, a tipping point beyond which no further patterns would be extracted from the data. Theoretical saturation helps find multiple emergent theory patterns from the data rather than starting with a preconceived theory to test [28]. Consequently, following each interview, synthesis sessions are required using qualitative data analysis software such as NVivo, ATLAS, and MAXQDA. These programs provide a variety of functionalities for qualitative data analysis, such as coding, classifying, and visualizing tools. Based on the researcher's demands, NVivo software was used due to its high-tech coding features, robust search options [29], and availability.

NVivo helps track the number of new codes that emerged from each interview with emphasized sample variety mapped content and insights [29]. These codes accommodate user perspectives to determine saturation, thus refining the understanding of the data and identifying any gaps in the analysis. Significant discoveries guided theoretical saturation as ideas were chosen. The technique and comparison with other research [30] showed that participants' diversity and appropriate expertise provide a unique vantage point for exhaustive analysis,



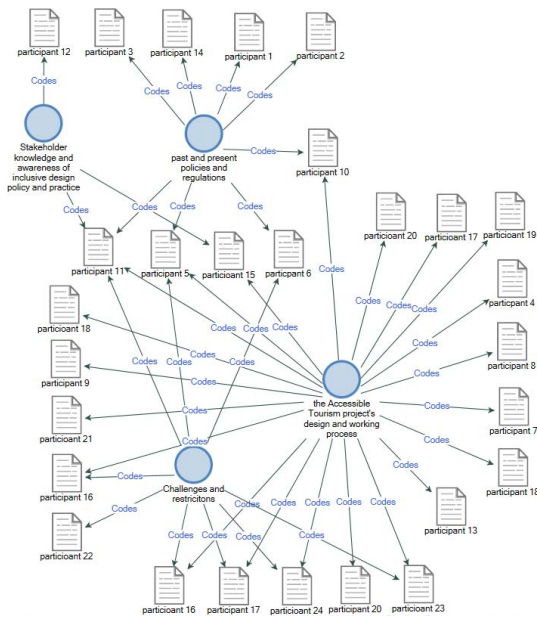


Fig.2 Visualization of Data Coding in Project Map NVivo Analysis results.

#### IV. FINDINGS:

The finding of the interview has been combined through participants' responses with literature reviews, where literature reviews include current research that adds to the field.

##### A. Past and Present Policies and Regulations

The Disability Rights Act promotes, protects, and guarantees all human rights and basic liberties for all [31]. The new Jordanian disability rights law differs greatly from the old law.

Participants from the legal affairs actors stated that from 2007 to 2017, the old law mission was to provide services to people with disabilities, such as dispensing headphones for people with hearing disabilities, etc. In 2017, the council switched from providing services to setting public policies for government ministries and private institutions. These policies required accessibility and inclusivity in building design, inclusive education, and more (P01, P02, and P03).

Jordan's disabled could benefit greatly from the new disability rights law. Despite the new update to the Law on the Rights of Persons with Disabilities, each article still lacks practical solutions, efficient monitoring, and evaluation practices.

P11: "Sometimes we suffer from the lack of synchronisation and correlation between the articles of the law."

P05, P06, P10, P11, and P14 have all argued that Article 37 of the Jordanian law requires the Ministry of Tourism and Antiquities to prepare accessibility in archaeological sites. Still, as historical sites can differ significantly in functionality and form, the article does not provide explicit details about the preparation process or its limitations. Moreover, P06 stated, "...the airport is the starting point for international tourists' journeys. Simultaneously, local visitors ride the bus to the historical site and depart". Therefore, the Ministry of Transport

must prepare transportation in general, but it is not linked to tourist needs. The Ministry of Tourism's presence in airports is not mentioned or linked in law". P11 noted, "..., *transportation is integral to the travel experience*" "Thus, these correlation articles had to be revised or incorporated into separate guidelines and instructions for use during the planning and implementation phases of accessibility and inclusiveness for Jordanian historical sites.

##### B. Designing Process and Working Practice in the 'Accessible Tourism' Project

Most respondents from the technical and development department and design management actors said this was their first large-scale accessibility project. They often worked on archaeological site restoration and the development of cultural leisure facilities like visitor centres.

Accessibility and inclusive design advisors only commissioned projects for public and private sector development and improvement, such as small museums like Wasfi Altal and AlTafila in other words, small entities. Recently, accessibility checks seem to have become a requirement for public and private clients to meet recent physical accessibility codes.

Respondents from the Ministry of Tourism, Department of Antiquities, and Higher Council of Human with Disabilities stated that accessibility features are typically incorporated in projects developed with public authorities or funded internally or externally as a response to fulfil the demands of the law.

P07, P16, p18, P19, and P15, P13 stated, "After the 2017 Persons with Disabilities Law and its building code, each institution has a responsibility to prepare accessibility in its existing buildings that it supervises."

Public funding schemes have supported some inclusive design projects, which have improved in recent years, benefiting large projects like the rehabilitation of Jabal al Hussain district and smaller projects like cultural centres, mosques, and museum renovations. However, despite the economic, social, and political advantages of making tourist sites accessible, investors have tended to overlook funding access projects for historical sites due to concerns about increased design costs. Thus, there is a need to raise awareness among investors about the importance and benefits of inclusive design in historical sites.

On the other hand, Architects, construction companies, and private clients have not entirely acknowledged the significance of inclusive design. "It has been noted that some stakeholders hold the view that inclusive design primarily pertains to only physical accessibility, such as the provision of ramps for wheelchair users" (P15 and P13). Despite that, much recent research has highlighted the need for architects and planners to adopt various design techniques and procedures informed by personal experience, team composition, and user requirements. This approach is aimed at improving design and planning processes and adopt a more integrative and inclusive approach [18].

The Ministry of Tourism, Department of Antiquities, and Supreme Council for Persons with Disabilities formed a committee to plan and design the "Accessible Tourism" project in Jordan. Meetings discussed how to comply with the 2017 disability law while going beyond physical accessibility. The committee then visited key paths and archaeological sites. They examined conservation plans, archaeological assets, and site interventions to determine the most important.

In the case of Amman Citadel (Jabal al-Qalaa), interventions were based on the 2018 National Building Council/Ministry of Public Works and Housing code of special building requirements for people with disabilities and included the following:

- Allocating 5% more parking spaces near the entrance and installing longitudinal and point tactile tiles along the path.
- Providing the site with a disabled-accessible electric car.
- Gypsum models or 3D-printed of museum exhibit and antiquity models.

A company was awarded the contract for designing and implementing these interventions, and the committee was tasked with monitoring their implementation. These steps will be repeated at every site. Participants in group 2 mentioned that *"This process will be implemented at all sites"*. However, the committee's approach lacked inclusivity as only one person with a physical disability, and one person with a visual impairment were consulted during the field visit. People with hearing or cognitive disabilities were not consulted, and there was no mention of conducting follow-up visits with people with disabilities to evaluate the efficacy of the interventions implemented.

The majority of participants emphasised the importance of developing standardised design procedures that are compatible with the geographical context of Jordan's existing archaeological and cultural heritage sites. Furthermore, they suggested utilizing supplementary approaches and tools to aid in developing and implementing processes and practices. The reflections of P04, P05, P11, P13, P17, P18, P20, P21, and P23 on the final query explicated the requirement for a guiding tool to facilitate a more comprehensive design process and augment comprehension of the user's journey, abilities, and desires. Notably, the importance of a relevant approach, often combined with grounded practices, is rooted in ethnographic research.

Ethnographic research requires relevance and grounded practices. This research strategy entails infiltrating a user's culture and customs [32], employing both qualitative and quantitative methods such as face-to-face interviews, field trip observations, site environment analysis, and brainstorming sessions to promote continuous engagement with participants. In the context of inclusive design, the process itself is considered more important than the final result [33], as the successful design requires empathy and understanding of users. However, P04, P08, P09, and P10 indicate that connecting with end-users can be difficult, especially when time constraints, insufficient preliminary user research, or a stakeholder focus on requirements fulfilment are present.

### C. Knowledge and Awareness Regarding Inclusive Design Policy and Practice

In the context of historical sites, stakeholders, policymakers, architects, and planners must understand inclusive design and its requirements. Inclusive design entails understanding user needs, spreading compassion, gaining knowledge and education, creating more practical design solutions, and understanding inclusive design terminology. Access advisors for inclusive design suggest that workshops and training courses are necessary to raise awareness of inclusive design among both stakeholders and employees. P11, P12, and P15 noted, *"...They have observed that even newly graduated engineers lack awareness of the requirements of people with disabilities and inclusive design"*. Training technical support staff through experience in various agencies or educational materials in engineering faculties is essential to increasing awareness of accessibility and inclusiveness. In projects involving multiple professionals from diverse fields, it is critical for stakeholders to be aware of emerging topics and technical-instructed documentation to access other technical documentation and scientific research sources.

### D. Challenges and Restrictions

During the discussion, participants highlighted several challenges that hindered the planning and implementation of inclusiveness and access to historical sites in Jordan. These challenges included natural geography terrains, such as locations with rocky terrain, steep slopes, or cliffs that were difficult for disabled individuals to navigate. As P06 noted, *"Our tourist sites are beautiful but bumpy for people with and without disabilities."* Additionally, security conflicts with archaeology settings, lack of permanent funding for public government projects, frequent government transfers, and changes in committee members were identified as obstacles. Furthermore, participants also highlighted that public and private workers lacked inclusive design experience, with P16, P17, P22, and P23 stating, *"Most of our problems in implementation are due to the lack of awareness of the implementation engineer or the implementing agency and the lack of efficiency of the worker."*

Tourist guides' disability-related incompetence is a significant issue. P05 and P11 stated, *"Although they are proficient in multiple languages, they do not know sign language"*, thus making it difficult for deaf tourists to communicate effectively. Additionally, the incompetence of workers or contractors during implementation further exacerbates the problem.

Moreover, investors and financiers may not understand the importance of facilitating access to historical sites for people with disabilities. The failure to bring together decision-makers, such as site managers and tourist guides, with other stakeholders who will interact with people with disabilities at the site further compounds the issue.

Inclusive design advisers have found that sites' inclusive management procedures are still in their infancy and only apply to strategy. Therefore, it is essential to guarantee design



inclusivity throughout a building's lifecycle to promote inclusivity in tourism.

Figure 3 below illustrates a project map of the NVivo analysis result that shows the challenges and restrictions.

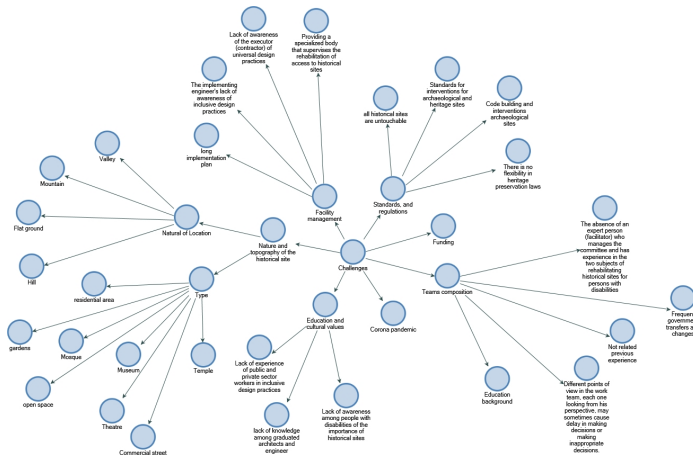


Fig.3 the key challenges and relates their sub-challenges and underlying reasons within several areas using Project Map NVivo Analysis results.

## V. RECOMMENDATIONS

The following recommendations reflect the entirety of the discussions held between the researcher and the participants at the end of the interviews. The participants, specifically inclusive design advisers, technical and development professionals, and design practice and project design management actors, exhibited strong enthusiasm and expressed their unanimous support for the proposed suggestions, viewing them as a valuable opportunity to enhance the design and development process and positively impact their future work.

The recommendations highlight the vital importance of developing design tools that can aid in the conservation processes and foster inclusivity in a manner that is beneficial to all individuals beyond those directly involved in the project.

The suggestions underscore the potential benefits of incorporating digital technology and design tools that prioritize user needs and the visiting experience for visitors while also preserving and promoting the cultural heritage where:

Sites management teams can use sensors and other monitoring tools to collect data on how people move through a site and interact with its features, helping identify potential barriers to accessibility and inclusion.

Accessibility services such as closed captioning, sign language interpretation, and screen readers may be provided via virtual meeting platforms, helping engage people in the decisions process.

Using digital tools can help identify areas that need improvement and develop solutions. For example, 3D scanning and modelling technology can be used to create detailed digital replicas of historical buildings, which can be used to identify

potential accessibility issues before any physical changes are made.

Digital technologies can collect valuable data on visitor preferences, needs, and behaviours through AI and machine learning applications to inform future design and management decisions for historical buildings and ensure that digital solutions are accessible and inclusive for all users.

On the other hand, Interactive displays, virtual reality, and augmented reality provide immersive and interactive experiences that allow visitors to interact with the historical building in new and exciting ways. Digital design tools can also let visitors customize their experience to their liking, improving the overall visitor experience.

Augmented Reality (AR) applications can enhance historical site visits by overlaying digital information. One inclusive design strategy is creating augmented reality content for people of different linguistic and physical abilities.

## VI. CONCLUSION

In conclusion, this article sheds light on the factors and challenges that impact the design, development, and implementation of Jordan's Accessibility Tourism project. The paper proposes various digital opportunities that can facilitate the creation of accessibility-friendly design and management processes. The findings of the study offer valuable insights that can enhance stakeholders' understanding of inclusive design and emphasize the importance of inclusive maintenance and management policies which can help ensure that the project's benefits are sustained over time. As well as this study serves as a valuable resource for those interested in advancing inclusive design and human-centered approaches to tourism development. Overall, this research contributes to the promotion of accessible tourism and underscores its potential for economic growth and social inclusion in Jordan and beyond.

This study is part of a broader PhD research project that aims to investigate the causes, obstacles, and possibilities of applying inclusive design principles in historically constructed environments. In the subsequent phases of the project, site surveys and observations will be conducted to complement the existing data. This will contribute to a more comprehensive understanding of the complex issues involved in promoting accessibility in cultural heritage sites. The results of these activities will be used to develop digital, conceptual tools that consider the accessibility of cultural heritage sites from the perspective of an integrated human and social development model.

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