



Leverage Cultural Heritage as a Tool of Urban Agendas. Focus on Greater Cairo, Egypt

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Sara Mamdoh Elrawy¹

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Abstract: Cities around the world strategically employ culture and cultural heritage to achieve a variety of objectives, such as promoting tourism, fostering social cohesion, enhancing quality of life, driving innovation, and strengthening local pride. Cultural heritage plays a critical role in shaping urban identities, preserving historical assets, supporting sustainable development, empowering communities, and enhancing competitiveness. A contemporary perspective highlights the role of cultural heritage in urban regeneration, particularly in preserving the urban fabric, promoting economic competitiveness, and supporting the tourism and creative sectors. These efforts generate employment, attract investment, improve infrastructure, and reinforce social cohesion. Additionally, Cultural Routes serve as an effective tool to engage residents and visitors by showcasing historical landmarks, thereby strengthening local identity. Emerging technologies, such as artificial intelligence (AI), virtual reality (VR), and augmented reality (AR), are also recognized for their potential to enhance the preservation and revitalization of cultural heritage. This research provides a comprehensive analysis of the strategies global cities use to preserve, revitalize, and regenerate cultural heritage, examining the balance between conservation efforts, modern innovation, and the integration of advanced technologies. Drawing on national case studies, the study demonstrates the wide-ranging benefits of culture and heritage for the diverse urban environments of Greater Cairo. It concludes by proposing a conceptual framework specific to Egypt, which identifies key indicators for balancing heritage preservation, community engagement, infrastructure development, economic growth through cultural tourism, creative and knowledge sharing, and identity building, alongside the use of modern technology. The study also calls for further research to explore these dynamics in greater depth.

1. Introduction

Cultural heritage plays a crucial role in shaping the identity and development of cities. Cities often draw on their cultural heritage, both tangible and intangible, which reflects human creativity and is

¹ Architecture, Fine arts, Helwan university, Cairo, Egypt. sara.mamdouh@f-arts.helwan.edu.eg

a resource for building identities and enhancing their contemporary image [1]. By harnessing their heritage and diversity, cities can build their distinctive urban culture, enriching local and global identities [2]. The diversity of neighbourhoods and people remain a vital element that cities can harness to create vibrant, cohesive and culturally rich urban environments [3 & 4 & 5]. The Post-2015 Development Agenda placed culture at the forefront, encouraging people and communities to envision and create the futures they desire [2]. With the adoption of the 2030 Agenda, the global community officially recognized, for the first time, the importance of culture in long-term development. The 2030 Agenda implicitly addresses culture across several of its Goals and Targets [3]. Further, the integration of heritage into sustainable urbanization efforts underscores its contributions to social cohesion, well-being, creativity, and economic vitality, while enhancing community understanding and benefiting future generations [5, 6].

Cultural heritage, broadly defined, serves as a cross-cutting resource that can stimulate territorial development models with sustainability as their core objective. It holds the potential to be an active instrument in revitalizing problematic urban areas by generating new social and economic dynamics that enhance urban spaces. The historical structures of territories are particularly significant for local communities, as they embody collective memory and identity [7]. This extends beyond tangible assets, encompassing the intangible qualities of a place that represent the essence of a community. Policies that promote good practices and creative processes rooted in the evocative power of cultural heritage can facilitate the rediscovery of public spaces and envision new possibilities for urban life and social integration [8]. In this way, cultural heritage is a continuous process of creativity, rather than a static element or barrier to urban transformation.

Cities use culture and cultural heritage to support various economic, social, and political goals, such as boosting tourism, stimulating economic development, enhancing social unity, and encouraging innovation. This research emphasizes the crucial role that culture and cultural heritage plays in shaping both the identity and economy of urban areas. This paper conducts a thorough analysis of cities' efforts to preserve, revitalize, and regenerate their cultural heritage, focusing on the intricate relationship between heritage preservation, contemporary innovation, and the application of virtual technologies. It further investigates how cities can pursue growth while maintaining their unique cultural identity. Through a comprehensive examination of various urban contexts, supported by case studies, the research demonstrates the multifaceted benefits that culture and heritage can provide to urban environments. The study concludes with the proposal of a conceptual framework, underpinned by key actors and a defined set of strategic actions.

1.1. Research questions:

- How does cultural heritage contribute to the identity and economic development of cities?
- What strategies do cities use to preserve, revitalize, and regenerate their cultural heritage, and how do these strategies balance conservation and innovation?
- What role do virtual technologies play in the preservation and revitalization of cultural heritage in urban environments?
- How can cultural heritage be integrated into sustainable city growth efforts to enhance social cohesion, economic vitality and creativity while preserving their unique identities?

1.2. Research Problem

Cultural heritage, both tangible and intangible, is crucial for shaping the identity and development of cities. However, there is a delicate balance between preserving this heritage and allowing for modern innovation, particularly in the context of urban regeneration. Cities face challenges in

integrating heritage into efforts to promote economic growth, social cohesion, and innovation while maintaining their distinct identities. The lack of comprehensive strategies to effectively harness culture and cultural heritage in a way that aligns with contemporary urban development goals, including the use of virtual technologies, necessitates deeper exploration and understanding.

1.3. Research Objectives

- To analyze the role of cultural heritage in shaping the identity and economic development of urban environments.
- To explore how cities can effectively preserve, revitalize, and regenerate their culture and cultural heritage while integrating modern innovations and virtual technologies.
- To investigate the contribution of culture and cultural heritage to urban regeneration and its impact on social cohesion, quality of life and well-being, creativity, and economic vitality.
- To compare different urban strategies for utilizing culture and heritage as a tool for achieving multiple urban goals, such as tourism, economic growth, and innovation.
- To examine the balance between conservation and innovation in urban areas and its potential for creating vibrant, cohesive, and rich environments.

1.4. Research Methodology

The research methodology is based on see figure 1; **First**, review of existing literature on the benefits of culture and cultural heritage for city centers will be reviewed. In parallel, analyzing selecting a few global real-world city centers that have successfully integrated culture and cultural heritage into urban development. **Second**, thematic Analysis, where students were tasked with designing strategies or proposing solutions for a set of real national district centers, focusing on the interaction between culture, heritage and urban development. Where 77 students were divided into working groups to work in 8 urban areas in real cases that include diversity in cultural heritage. Their proposals were collected and analyzed to identify key themes and innovative approaches. The research used a qualitative approach to analyze students' solutions and existing case studies of city centers that integrated culture and heritage. The comparative analysis highlighted similarities between the various global city models and the national students' proposals. **Third**: Based on the findings, conceptual framework is developed that can be applied to city centers in different contexts. This framework will outline the best practices for integrating culture and heritage into city center planning, with reference to the actors involved.

2. Literature Review

2.1 Cultural heritage

Cultural heritage emerged as a recognized term in the mid-20th century, primarily through the efforts of organizations focused on its preservation, notably the United Nations Educational, Scientific, and Cultural Organization (UNESCO). In its 1972 Convention for the Protection of the World Cultural and Natural Heritage [9], held in Paris, UNESCO defined cultural heritage as encompassing both tangible and intangible cultural expressions [10]. Globally, numerous nations have prioritized the safeguarding, dissemination, and transmission of their cultural and intangible heritage to future generations. Cultural heritage includes both concrete outcomes of cultural endeavours, artistic and scientific innovation, and the lifestyles of groups and communities, as well as intangible elements such as language, traditional cultural expressions, folklore, genetic resources, and intellectual property. Cultural heritage refers to the diverse expressions of culture inherited

from ancestors, which are essential to the identity of a nation, tribe, or ethnic group. This encompasses both tangible historical or archaeological sites and artifacts, as well as intangible elements such as folklore, rituals, language, music, and craftsmanship [11; 12].

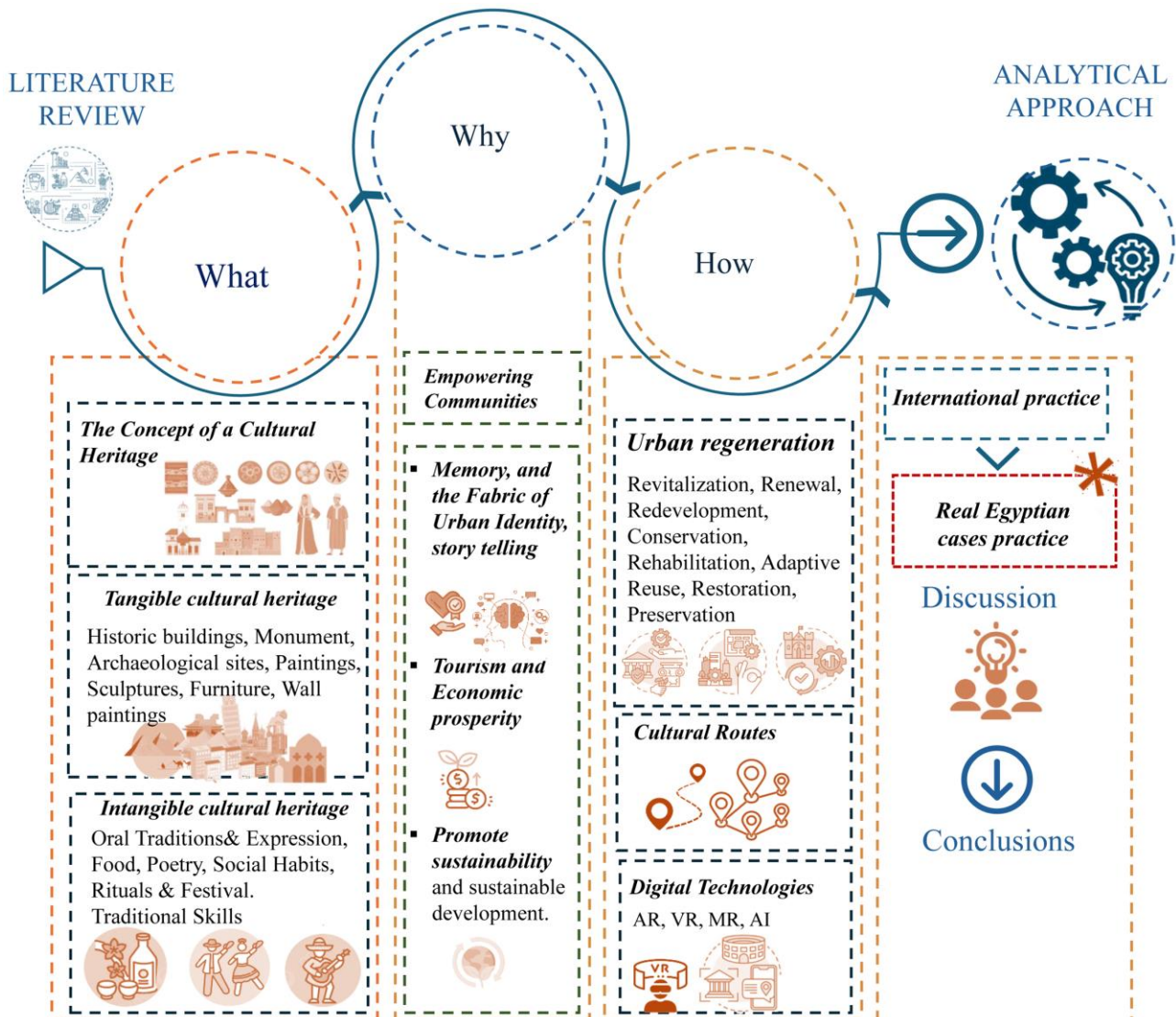


Figure 1 illustrates research methodology by author

Heritage conservation strategies have become a cornerstone of international public policy. Key international frameworks, such as the Venice Charter, the World Heritage Convention, the Nairobi Recommendation, the Charter on Built Heritage, and the Recommendations on Historic Urban Landscapes issued by ICOMOS and UNESCO, have introduced fundamental concepts and methodologies for the conservation of heritage. These frameworks employ terms such as "historic monuments," "architectural ensembles," "historic areas," "built heritage," and "historic urban landscapes" [13]. The concept of heritage [14] has expanded beyond the cultural domain to encompass economic and social value, transforming it into a multifaceted "asset." It is now central to discussions regarding its significance, preservation, and the forces driving its conservation. Heritage conservation is fundamentally an "act of communication" [15], entailing the transmission and development of heritage values. This view broadens the conventional understanding of heritage, positioning it not merely as a cultural resource but as a dynamic and evolving entity.

Cultural heritage is formed through the ways in which people remember, organize, and engage with the past, with material culture serving as a key tool in this process. Conservation occurs when society assigns values to urban structures. In conservation literature, there is frequent reference to the values inherent in or represented by built heritage, and the protection of these values is central to conservation efforts. The primary aim of heritage conservation is not merely the preservation of materials, but rather the preservation and cultivation of the values they embody, with physical interventions or treatments serving as one approach to achieve this goal [16].

Cultural heritage is gaining prominence as societies increasingly acknowledge the diverse traditions and contexts of various cultures. This heightened awareness fosters hope for greater tolerance and respect for ethnic and religious minorities, as well as for local perspectives [17; 18]. Cultural identity serves as a fundamental framework for individuals' lives and activities, a notion supported by UNESCO and the World Bank [19; 20; 21]. Cultural heritage can be a valuable instrument in promoting peace, international stability, communication, shared values, and respect for cultural diversity [22]. Historical buildings provide insights into the political, social, economic, and cultural values of past societies, offering a means to understand their identities and ways of life. As existing structures, their reuse is advocated for both environmental and financial sustainability.

The cultural heritage environment plays a crucial role in defining a sense of place through its unique character and visual aesthetic, acting as an anchor for place identity [23]. The extent and depth of this identification are influenced by one's knowledge and understanding of the place, particularly in relation to its current and past uses, or the significance of events associated with it. Heritage buildings and areas also generate substantial tourist revenue, contributing to local, regional, and national economies, as well as employment [24]. The World Bank recognizes the potential of cultural heritage programs in stabilizing and revitalizing economies damaged by conflict, often through the development of a robust cultural tourism industry [25].

2.2 Empowering Communities through Culture, Cultural Heritage and Development

Cultural heritage and culture are vital for community empowerment, social cohesion, economic advancement, and sustainable development. They connect past, present, and future, strengthening identity, fostering resilience, and providing economic opportunities through tourism and creative sectors. By preserving and revitalizing cultural assets, communities can create a more equitable and sustainable future.

2.2.1 Cultural heritage and quality of life: Memory, the sense of place, identity, Civic engagement and social cohesion, and the Urban Fabric.

The city is the result of an ongoing dynamic process that evolves over time, encompassing physical evidence of its transformations. Its significance lies in its dual role as a vessel of material and immaterial heritage, serving as a repository for the historical, cultural, and social memory of its population [26]. The interrelationship between past, heritage, and memory underscores the deep connection between urban space and its inhabitants, playing a pivotal role in shaping collective identity [27]. The primary value of urban heritage area is found within its urban spaces, which embody both the memory of local neighborhoods and the broader urban memory [28]. These spaces represent not only the tangible aspects of daily life but also the ideological importance of the city's foundational origins. The identity of the heritage and cultural spaces reveals the necessity of viewing the built environment and the spaces between structures as an interconnected system of networks and relationships. Public space must be analyzed in relation to its population, its social functions, and its significance within the collective imagination [29].

However, not all public spaces carry the same symbolic weight in the collective memory of residents. Certain places are assigned greater symbolic importance due to their association with

significant urban events. As a result, public spaces hold an emotional or "affective" value, encouraging users to form personal, often private, relationships with them. This emotional connection can influence how spaces are used, sometimes leading to misuse. Consequently, urban planning projects related to public space must account for the role these spaces play in citizens' imagination and everyday lives [7]. Thus, cultural heritage enhances quality of life by empowering communities. It strengthens community bonds and civic engagement. Cultural heritage districts serve as hubs for social, cultural, and economic activities, promoting pride and well-being [30 & 31].

2.2.2 Cultural heritage and sustainability.

The connection between cultural heritage and sustainable development is fostered through initiatives, programs, and policies created by local and regional governments, civil society organizations, informal groups, heritage professionals, and other stakeholders. The aim is to enhance cultural heritage's contribution to society and the economy, promote sustainable development, and encourage people-centered, inclusive, forward-thinking, integrated, sustainable, and cross-sectoral approaches to managing cultural heritage [32]. Cultural heritage, both tangible and intangible, reflects human creativity and serves as a resource for shaping identities. It is a living, diverse, and ever-evolving element of human dignity that demands rights-based policies. Such policies should acknowledge the relationship between cultural heritage and sustainable development, addressing its social, environmental, and economic dimensions. The Sustainable Development Goals emphasize the importance of protecting and safeguarding cultural and natural heritage. In 2011, intangible traditions and social values were included in the Historic Urban Landscape approach (HUL), and in 2016, the New Urban Agenda "HABITAT III" introduced a link between cultural expressions, arts, and heritage-based activities to sustainable social-economic development [33].

Moreover, several global networks, campaigning under the slogan "The Future We Want Includes Culture," advocated for either a dedicated cultural goal or the integration of cultural elements across the Sustainable Development Goals (SDGs). Between 2013 and 2015, four key documents were produced: a manifesto, a declaration calling for the inclusion of culture in the 2030 Agenda, a set of proposed indicators for measuring cultural aspects within the SDGs, and an assessment of the final 2030 Agenda [34]. The 2030 Agenda highlights the critical role of cultural elements in human and sustainable development. These include active participation in cultural life, the development of individual and collective cultural freedoms, the safeguarding of both tangible and intangible cultural heritage, and the promotion of diverse cultural expressions. These cultural elements can also have a positive impact on other areas of sustainable development. The 2030 Agenda recognizes the natural and cultural diversity of the world and acknowledges that all cultures and civilizations contribute to, and are essential drivers of, sustainable development. Cultural rights, heritage, diversity, and creativity are fundamental components of both human and sustainable development [35].

2.2.3 Cultural heritage, tourism and economic competitiveness.

Cities frequently leverage their cultural heritage to attract tourists and stimulate economic growth. By promoting historical landmarks, museums, festivals, and cultural traditions, they craft a unique destination identity that appeals to both international and domestic visitors. Cultural festivals are an example of inclusive vision of cultural heritage, linking intangible heritage to urban space to promote tourism, create a city image, and achieve sustainable urban development [33]. Cultural heritage is increasingly recognized as a critical driver of local development, bridging the gap between local creativity and global identity. To ensure the sustainability of urban heritage,

responsible tourism practices are crucial in preserving the cultural assets of cities and safeguarding their common human heritage for future generations [36]. Tourists often travel long distances specifically to visit heritage sites, selecting destinations based on their historical and cultural significance [37]. This demand spurs infrastructure development, promotes local economic growth, and generates employment opportunities [38]. Traditional artisans benefit from heightened demand for local crafts and souvenirs, creating income for both individuals and communities [39]. Heritage tourism plays an essential role in preserving cultural identity and strengthening community cohesion, particularly among indigenous groups. It fosters intercultural dialogue and mutual understanding, promoting global harmony and appreciation of diverse cultures [40]. Furthermore, cultural and heritage preservation has been intricately linked with urban regeneration, significantly contributing to the economic and social sustainability of revitalized urban areas.

2.3 Contemporary perspective dealing with culture and cultural heritage

2.3.1 Urban regeneration

Urban regeneration is a comprehensive process aimed at improving urban quality and addressing community needs through both place-focused and people-focused approaches [41]. Also referred to as revitalization, rehabilitation, renewal, or redevelopment, it typically involves upgrading infrastructure, improving amenities, and enhancing streetscapes. This process takes a holistic approach, integrating social, economic, environmental, and cultural dimensions. Urban regeneration efforts prioritize physical improvements, meeting community needs, preserving heritage, and creating unique urban experiences [42]. Key components of urban regeneration include urban policy, legislative initiatives, political discussions, and social efforts that guide the redevelopment of land and resources in cities and towns. However, some projects tend to prioritize attracting wealthier residents and tourists over benefiting local communities [41]. Urban regeneration can be approached through four distinct strategies: redevelopment, conservation, revitalization, and restoration [43]. The United Nations Brundtland Commission's "Our Common Future" report highlights the importance of revitalizing urban spaces to ensure the well-being of both present and future generations [44]. Urban regeneration policies are essential for transforming cities into sustainable, liveable spaces, aligning with broader urban sustainability initiatives.

Contemporary urban regeneration focuses on three main areas: improving physical and environmental conditions (urban renaissance), promoting social inclusion, and enhancing economic competitiveness [45; 46]. These goals are often supported by a place-based approach, which considers the socioeconomic and environmental aspects within a specific geographic area.

Themes such as ***culture and heritage-led regeneration*** have become crucial to area-based regeneration and renewal strategies. Preserving a city's urban fabric facilitates the continuous development of its vibrant cityscape, connecting it to its historical context and distinctive identity. ***Theories of culture-led and heritage-led regeneration*** emphasize the transformative impact of arts, culture, and heritage in regenerating urban areas, extending beyond mere economic competitiveness [47]. Analogous to culture-led regeneration, the contemporary "micro-regeneration" strategy prioritizes small-scale cultural preservation and community involvement [48]. Efforts to preserve historical landmarks, establish cultural districts, and integrate public art contribute to the development of a robust community identity and enhance tourism appeal.

2.3.2 Cultural Routes/ Itineraries

Cultural routes are a concept that has been present in history, literature, and professional practice. They are a result of professional practices and have been heavily inscribed through professional and institutional discourses. The history of the tourism industry is tied to a travel and mobility imaginary, where roads belong to a collective memory or repertoire of knowledge about places and

special destinations. The notion of cultural routes has evolved in the field of tourism through two processes of professionalization and intellectualization that occurred concurrently in the fields of tourism and heritage management. As tourism and heritage management practices emerged and became increasingly institutionalized, new tools and concepts emerged and were formalized by professionals.

The Council of Europe's Cultural Routes Programme, launched in 1987, aims to preserve and enhance Europe's natural and cultural heritage, promoting cultural tourism and sustainable development [49]. With over 30 routes covering various themes such as architecture, landscapes, religious influences, gastronomy, intangible heritage, and notable European figures, the programme encourages European citizens to reconnect with their heritage. Managed by collaborative networks involving national, regional, and local authorities, the routes organize innovative activities under five key priorities: cooperation in research and development, enhancement of memory, history, and heritage, cultural and educational exchanges, and cultural tourism focused on sustainable cultural development [50]. Itineraries and cultural routes are essential for organizing leisure and tourism activities at the local level, promoting appreciation of historic districts, urban history, landmarks, art, and notable individuals' lives. [51; 52]. Urban planners worldwide are embracing trails as a way to "museumize" spaces, promote economic development, and preserve heritage [53]. These trails complement tourism strategies and encourage a more reflexive and participatory engagement with urban spaces [54]. Itineraries guide residents and visitors through heritage landmarks, promoting local history and identity, attracting tourism, and preserving cultural fabric.

2.3.3 Modern Technologies:

Lian and Xie [55] discuss that digital technologies in the field of culture and heritage are categorized into several key clusters, each contributing to the enhancement and preservation of cultural heritage in unique ways. Immersive technology, through augmented reality (AR), virtual reality (VR), and mixed reality (MR), integrates real-world and digital information to provide interactive experiences that deepen audience engagement with art, history, and cultural heritage.

This cluster supports more effective exhibitions and educational activities by creating immersive environments. Interaction design emphasizes inclusive heritage design and participatory methods, encouraging critical engagement and co-creation, which enhances communication and learning experiences. **Similarly, interactive digital storytelling employs linear or interactive narrative structures to craft emotionally resonant, multimedia-rich experiences that contribute to education, entertainment, and cultural preservation.** Digital archaeology blends traditional archaeological methods with digital tools such as drone photography, 3D modelling, and geographic information systems (GIS) to virtually reconstruct and document archaeological sites [56]. Meanwhile, wearable technology introduces multisensory, interactive devices, such as motion capture and feedback technologies, to enhance cultural heritage experiences and assist in digitizing collections. This cluster also explores the use of wearable devices in archaeological research and their potential to improve accessibility in cultural heritage contexts. Together, these digital technologies provide innovative pathways for the preservation, interpretation, and education of cultural heritage.

Urban areas are progressively adopting cutting-edge technologies, including artificial intelligence, 5G networks, and augmented reality, to enhance cultural heritage -led regeneration initiatives, with an emphasis on sustainability, ethical data management, and the delicate balance between preservation and technological advancement. The integration of these technologies seeks to preserve the accessibility and relevance of historical and cultural treasures for contemporary audiences, while sustainability remains a fundamental principle [57]. Critical aspects of this transformation include the ethical use of data, the balance between preservation and innovation, and

a commitment to inclusivity, cultural sensitivity, and environmental responsibility. Collaborative efforts with local communities play a key role in ensuring authenticity in technology-driven experiences and fostering a sustainable and respectful heritage tourism sector [58]. The responsible integration of data and technology is essential for sustainable heritage preservation, with data offering insights into visitor behaviours and preferences. Technologies like augmented reality, virtual reality, mobile applications, and interactive displays bridge the past and present, enhance engagement, and safeguard cultural heritage for future generations [59].

Cultural Heritage tourism is a growing trend that combines tradition and modernity, with technologies like smartphone applications, augmented reality, and virtual reality significantly transforming visitor experiences. Mobile applications offer interactive resources about heritage locations, exhibitions, and objects, serving as navigational aids and allowing visitors to explore without fear of getting lost. Augmented reality technology integrates the physical and digital realms, offering unique perspectives on history. Virtual reality provides cultural tourism experiences that transcend physical limitations, enabling virtual explorations of distant locations. It excels in historical reconstruction, providing realistic perspectives, time-travel experiences, and immersive narratives [57; 60].

The future of cultural heritage-led urban regeneration is set for a transformative shift driven by AI [61], 5G connectivity, and AR, offering sustainable and immersive experiences. These technologies will redefine cultural exploration through AI-driven personalization, which tailors tours based on visitor data, and AR, which brings history to life. 5G connectivity will enable real-time engagement with AR and VR applications [62; 63]. Digital twins, powered by AI, will create detailed replicas for preservation, research, and education, allowing virtual exploration of historical sites [64]. Virtual cultural exchange via VR will foster global connections, while multimedia storytelling, using videos, podcasts, and AR-enhanced exhibits, will provide rich, multisensory experiences at heritage sites. IoT technology will optimize crowd management, safety, and ticketing by offering real-time site availability and nearby attraction recommendations. Collaborative efforts among heritage sites, cultural organizations, universities, and tech companies will advance research and create innovative cultural experiences [65; 66; 67].

3. Integrating Culture and Cultural Heritage into Urban Development: International practice

Cities worldwide are implementing policies and programs to emphasize the cultural dimension of sustainable development. Cultural aspects, including active participation, heritage protection, and diverse cultural expressions, are crucial for human and sustainable development. The interplay between culture and heritage influences urban development strategies, enhancing social cohesion, community identity, economic growth, and tourism. This review examines how urban centers effectively harness cultural resources to create vibrant, sustainable environments and explores the balance cities must strike between sustainable development and the preservation of their unique cultural identities amidst evolving challenge. Cities such as Cēsis north of Latvia, Bilbao, Regensburg in Germany, Kazan in Russia, and Singapore will provide insights into successful models and strategies see table 1.

3.1 Kazan, a cultural hub in Russia

is known for its preservation of classical art and its contribution to contemporary movements. The city's cosmopolitan character, incorporating both Russian and Tatar cultures, is reflected in its numerous international festivals. Kazan's cultural policy focuses on addressing existing issues and

shortcomings, focusing on initiatives, festivals, competitions, and events to safeguard its multicultural landscape, establish Kazan as a global cultural capital, cultivate cultural literacy, ensure access to cultural services, and enhance process management efficiency and investment. The initiative by UCLG Agenda 21 for culture seeks to enhance Kazan's cultural landscape by preserving historical heritage and elevating the quality of life for its residents [68; 69]

3.2 Cēsis, a small town in northern Latvia

is focusing on improving its quality of life by highlighting local cultural assets. The strategy aligns with Agenda 21 for Culture's ideals, aiming to diversify citizen engagement in cultural activities, safeguard cultural history, foster excellence, revitalize historic centers, and develop new cultural infrastructure, aiming to establish Cēsis's prominence nationally and internationally [70; 71].

3.3 Bilbao

an industrial city, underwent a revitalization process, resulting in an "urban revolution" driven by culture. The Guggenheim Museum, emblem of Bilbao's development, gained international recognition. Today, Bilbao functions as a service-oriented city, focusing on culture for innovation and economic advancement. The City Council complied with Agenda 21 for Culture in 2005, and the 2011-2015 Government Plan allocated 10% of the municipal budget for cultural enhancement and creative training. [72].

3.4 Regensburg

Germany's Old Town is a UNESCO World Heritage site with a rich architectural heritage spanning 2000 years. Its core zone offers multifunctionality and is a hub for residences, workplaces, recreation, and gastronomy. The city collaborates with cultural operators, artists, and residents to define the future cultural landscape and develop art and culture. The Cultural Development Plan, "Agenda 2020," aimed to incorporate cultural assets into sustainable development, aligning with Agenda 21 for culture [73; 74].

3.5 Singapore

has made significant progress in supporting culture and the arts since its independence, with the arts being recognized as drivers of innovation and creativity. Urban policies have emphasized heritage and identity in shaping modern cities while preserving Asian identity. Heritage preservation enhances a city's competitive advantage by reinforcing its iconic image and generating new economic opportunities. The Singapore Tourism Task Force report emphasizes the strategic importance of preserving historical sites like Chinatown for tourism, particularly in heritage tourism. As tourism becomes a key pillar of Singapore's economic growth, the connection between heritage preservation and tourism development becomes increasingly evident. [75; 76; 77].

Table 1: demonstrates international practices for leveraging culture and cultural heritage through various strategies that incorporate tangible and intangible cultural assets. Cultural industries, cultural activities, artistic endeavors, heritage structures, land, community, and environment [78; 79; 80; 75; 81; 82; 69; 70; 73; 68; 71; 72; 74; 77; 34].

Table 1 leverage culture and cultural heritage in global practice (by author)

International Cases	
Kazan	
Goals	<ul style="list-style-type: none"> – Modernization of the cultural environment, preservation of historical heritage, and enhancement of people's quality of life are fostering more competitiveness and youth engagement in urban cultural activities.
Key strategies/actions	<ul style="list-style-type: none"> – Numerous events are orchestrated to engage other creative collectives. – The initiative encompasses the establishment of concert organizations, museums, interactive games, and creative collectives. – Open-space literary events have been initiated across the city as a component of the initiative. – Literature parks and alleys have been established under this initiative. – The "Book Fest," "Kazan is Reading" initiative, "Poetic Wednesdays" in museum courtyards, and the Festival of Parks and Alleys have occurred as components of the II City Festival.
Impact	<ul style="list-style-type: none"> – The growth of creative groups, increased tourist attraction, and the development of event-tourism were considered key factors in enhancing cultural resources. – Collaboration with businesses and the expansion of the cultural resources base were regarded as essential. – New creative industries and clusters were developed. – Library funds were increased. – Resource management and service quality in municipal culture organizations were improved. – Youth and independent creative professionals were attracted. – Creative infrastructure was developed, and cultural services were expanded. – Cultural values were introduced, and aesthetic education was promoted.
Cēsis	
Goals	<ul style="list-style-type: none"> – Improving the quality of life for local citizens by promoting cultural practices, protecting cultural heritage, fostering excellence through citizen interaction, renovating historic centers, and planning new cultural infrastructure as part of a broader cultural ecosystem.
Key strategies/actions	<ul style="list-style-type: none"> – Latvian Cultural Infrastructure Development, development of a library, museum, and cultural center in reconstructed/restored monument buildings. – Old town revitalization initiatives and sustainable cultural routes. – Site-sensitive artistic events and annual cultural heritage days. – Interactive activities for young people to explore local history. – Promotional events to safeguard local intangible heritage. – Support for niche cultural events and festivals throughout the season. – Annual Democracy Festival (Festival of Talks) to promote citizens' critical thinking. – Latvian government promoting social and economic innovation through summer schools, artists' residency, "Do in Cēsis!" grant scheme, and experimental creative center.
Impact	<ul style="list-style-type: none"> – Communication and dialogue with local citizens were significantly improved, enhancing the local government's image as open and progressive. – Cultural infrastructure was improved, resulting in better working conditions for culture managers, specialists, and amateur arts participants, and higher quality cultural services. – Cēsis' identity as a creative town and national cultural center was strengthened, fostering local pride and a sense of belonging.

Table 1 leverage culture and cultural heritage in global practice (by author)

International Cases	
	<ul style="list-style-type: none"> – Increased cultural tourism was generated, providing more income for local service companies. – The creative economy was developed, bringing new income to the city and attracting new specialists and families. – Social inclusion was fostered by offering low-cost cultural services for all groups of society, engaging socially disadvantaged audiences. – Active participation of local citizens in cultural life was encouraged through cultural NGOs and voluntary arts movements. – Environmentally, the re-use and exchange of cultural products were promoted, along with shared economic practices, such as creative co-working spaces. – A positive overall impact was made on the local community and the city.
Bilbao	
Goals	<ul style="list-style-type: none"> – Reviving Bilbao's competitiveness through cultural and economic integration, contributing to urban, economic, and social regeneration, and internationalizing its position as a global city. This will improve citizens' quality of life and attract companies, professionals, and researchers.
Key strategies/actions	<ul style="list-style-type: none"> – Bilbao's Cultural Infrastructure Enhancement. Creation of new venues like Alhóndiga Bilbao. – Consolidation of library networks and decentralization of theater, music, and exhibition programming. – Promotion of artistic creation and artist training through institutions like Bilbao Art, Bilbaoeszena, Bilbao Musika, Bilbao Film Commission, and literary competitions. – Support of cultural reference events like Bilbao ZINEB! International Documentary and Short Film Festival, Bilboko Kalealdia Theater and Street Arts Festival, and Musika-Music Festival. – Fostering the creative sector to export culture and establish Bilbao as a cultural hub. – Investment in creative people through initiatives like "Bilbao Txokoak" competition, Bilbao Auzo Factory (BAF), and BiDC Forum and Design Week. – Collaboration with UNESCO Creative Cities Network, Fun&Serious Game Festival, Ho Play, and Bilbao Art District. – Organization of enterprise encounters in design, IT, and textile sectors. – Participation in the Regional Use Plan and training courses in audio-visual, videogames, new technologies, and events production sectors.
Impact	<ul style="list-style-type: none"> – Bilbao has gained a reputation as a cultural city of reference. Key cultural infrastructures include the Guggenheim Museum, Museum of Fine Arts, Euskalduna Conference Center, Alhóndiga Bilbao, Arriaga, and Campos Theaters. – The art and culture sector has grown by 4% annually, accounting for 6% of Bilbao's companies and 5% of its employment. – Tourism contributes 5.5% of Bilbao's GDP, largely driven by cultural tourism. – Collaboration between economic and cultural sectors has been established, integrating culture into economic growth efforts. Cultural institutions generate €3.224 billion GDP, create 4,500 jobs annually, and attract over 15 million visitors [83].
Regensburg	
Goals	<ul style="list-style-type: none"> – The aim is to modernize the management of historic urban areas by integrating the inherited landscape with modern user demands. The Old Town of Regensburg with Stadtamhof, a UNESCO-World Heritage Site, is to be safeguarded and made accessible to all citizens and guests, fostering a multifunctional and vibrant environment.

Table 1 leverage culture and cultural heritage in global practice (by author)

International Cases	
Key strategie s/actions	<p>Eight key areas for action were outlined in the World Heritage Management Plan, including architectural heritage, culture, tourism, economic development, residential affairs, traffic, transport, urban planning, environmental issues, leisure, and raising awareness, here are some of the strategies and actions that have been taken:</p> <ul style="list-style-type: none"> – City of Regensburg's Architectural Heritage Conservation. Actively renewed historical buildings and monuments. – Funded by private and public sources. – Verified restoration by-laws and used urban development funds. – Established support program for private homeowners. – Used customized restoration products for high historical protection value. – Safeguarded urban landscape's visual integrity through urban development analysis and sight axis study. – Developed cultural development plan, museum plan, cultural center, and conference center. – Addressed spatial equalization for cultural and artistic activities, world heritage activities, international requirements, and standardized opening times. Aimed to increase visitor duration and overnight stays. – Improving Tourist Infrastructure and Brand Image. Planned improvements to tourist infrastructure, seasonal imbalance, service quality, and brand image. – Prepared tourist concept and installed public toilets in Old City. – Developed bilingual World Heritage Route and updated information system. – Coordinated historical house signage and combined touch models for visually disabled individuals. – Included workshops on intercultural interaction skills and multilingual capabilities in hotels, gastronomy, retail, and museums. – Divided city into districts, the "Schäffner quarter" focusing on retail and "Obermünster quarter" on identity and image. – Established Old City brand and promoted community among stakeholders. – Prepared a special shopping and restaurant route guide for the Old Town, highlighting buildings and businesses in protected historical buildings.
Impact	<ul style="list-style-type: none"> – The Regensburg Management Plan emphasizes civic participation and involving local stakeholders to raise awareness about Cultural Heritage. A cross-sectoral approach, involving administration branches and civil society, ensures a broad basis of interest and knowledge. Local solutions are sought for global challenges. Government funds are used for designated fields of action, such as the World Heritage Visitor Centre, which presents exhibitions on cultural aspects of a World Heritage city. The World Heritage Dialogue forum has opened doors for civic participation, raising awareness for the preservation and protection of Cultural World Heritage among local populations.
Singapore	
Goals	<ul style="list-style-type: none"> – Singapore aims to become a world-class city, focusing on urban heritage and national identity. The planning process balances modern business development with preservation of built heritage, aiming to create a thriving workplace and home. This includes protecting tangible and archaeological heritage, enhancing museum accessibility, safeguarding intangible cultural heritage, and enhancing engagement through technology and digitalization.
Key	<ul style="list-style-type: none"> – The Singapore Heritage Plan 2.0 aims to enhance Singapore's national character, unite citizens,

Table 1 leverage culture and cultural heritage in global practice (by author)

International Cases	
strategies/actions	<p>capitalize on the museum and heritage industry's economic potential, promote creativity, and strengthen collaborations. The plan includes over 50 museums, 72 national monuments, 17 heritage trails, and 7,000 preserved buildings.</p> <ul style="list-style-type: none"> - Continue launching and improving heritage trails with community contributions, including personal stories, photographs, and social practices. Expand trails such as the Orchard Heritage Trail and refresh older trails like the Balestier Heritage Trail. - Singapore's cultural heritage is being celebrated through various events, including the Singapore Heritage Festival, Singapore Night Festival, The Singapore Food Festival, Celebrating Hawker Culture. Additionally, research and documentation of significant cultural and religious festivals are being conducted to preserve and understand diverse ritual systems. - involve expanding HeritageCares programs to more beneficiaries of Social Security Organizations, involving low-income children in heritage discovery programs like "A Walk to Remember," and developing and expanding heritage programs for senior citizens, such as "Culture, Kopi, and Kueh," piloted with residents from Ling Kwang Home for Senior Citizens. - Enhance museums and heritage institutions in Singapore by revamping National Gallery Singapore, Asian Civilisations Museum, and National Museum of Singapore, offering free entry to citizens and residents, integrating diverse perspectives, and enhancing accessibility through accessibility audits and assistive technologies and sign language tours for the hearing and visually impaired. - Singapore's heritage is being digitally enhanced through Roots.sg, consolidating over 100,000 artifacts and multimedia resources, expanding its digital footprint, and attracting more visitors through online content and collaborations with external organizations. - Promoting traditional arts and trades through exhibitions and festivals, collaborating with agencies to showcase them in historic precincts like Chinatown, Kampong Glam, and Little India, and introducing a new recognition scheme to increase public awareness of these practitioners. Enhance public appreciation through exhibitions, such as Guo Pei: Chinese Art and Couture, and #SGFASHIONNOW. - Implementing initiatives to support heritage businesses like Say Tian Hng Buddha Shop, promote craftsmanship through the Craft x Design Scheme, and develop Armenian Street into a craft hub, aiming to create modern products inspired by Singapore's heritage and foster creativity and cultural events. - Using digital platforms to share heritage content globally, developing digital twins for visitor experiences, leveraging new technologies like smart robotics and AI, and implementing IoT-powered technologies for digital preservation. It also suggests exploring new public engagement strategies like storytelling and quizzes, and personalizing visitor experiences using machine learning, chatbots, and data analytics to create personalized heritage experiences for museum visitors. - The National Heritage Board (NHB) has created an interactive digital replica of the Malay Heritage Centre and Kampong Gelam area, utilizing 3D scans of iconic elements like the Sultan Mosque's golden dome. The platform allows users to explore the site, engage with educational content, participate in games and quizzes, and earn rewards. The NHB also introduced "Heritage Hunter," a treasure hunt that blends virtual and physical elements within the Virtual Kampong Gelam experience, emphasizing that digital experiences should complement physical interactions with heritage sites, requiring participants to visit the actual precinct.
Impact	<ul style="list-style-type: none"> - The Heritage Awareness Survey by NHB reveals an improvement in public perceptions of

Table 1 leverage culture and cultural heritage in global practice (by author)**International Cases**

- heritage in Singapore since 2018, with a greater recognition of heritage's scope. The survey's findings underscore the positive impact of the SG Heritage Plan.
- Total Value-Added (\$mil) in 2022 is 180.4 from Cultural Heritage only.
 - There was strong affirmation of museums' positive contributions, increased recognition of the significance of heritage, and its appreciation on both personal and communal levels. People recognized that a deeper understanding and respect of Singapore's tradition and culture would enhance a sense of belonging to Singapore. In addition to increased enthusiasm and readiness to actively endorse heritage-related initiatives in Singapore.
 - International Engagements, International events reached 110 in 2022
 - Gross Monthly Income from Employment of Full-Time Employed Residents in Arts & Heritage Sector, Median Income (\$) reached 4,095
 - The general population agreed that Singapore's history, traditional food, and cultural districts are key elements of heritage. This includes historical events, stories, myths, food culture, historical/cultural districts, names and stories of old buildings and monuments, performing arts, oral traditions, and expressions, as well as artifacts and historical objects.

The Cultural Heritage Regeneration Agenda in Cēsis City focuses on preserving heritage through citizen engagement, fostering local identity, and boosting cultural tourism. Kazan City's agenda aims to modernize cultural spaces, enhance historical preservation, and improve youth engagement. Regensburg City manages historic urban areas by balancing preservation with modern needs, particularly in UNESCO World Heritage sites. Bilbao's Cultural and Economic Revitalization Agenda aims to enhance competitiveness and drive economic and urban regeneration through cultural initiatives. Singapore's Urban Development and Heritage Preservation Agenda balances modernity with heritage preservation, promoting the city as a global cultural hub. The Singapore Heritage Plan emphasizes museum revitalization, community engagement, and digital preservation technologies. Cēsis and Regensburg emphasize citizen engagement, while Kazan focuses on youth involvement and inclusivity. Bilbao and Kazan prioritize creative industry growth, while Regensburg focuses on global competitiveness. Both cities invest in cultural infrastructure, but Bilbao decentralizes efforts and Singapore emphasizes digital experiences. The approach to preservation varies between cities, with Bilbao decentralizing efforts and Singapore emphasizing digital experiences. The following figure 2 illustrates how each city has leveraged cultural heritage to achieve different urban agendas.

4. Creative Responses: Leveraging Culture and Cultural Heritage in National Practice

Greater Cairo, a significant historic metropolitan center globally, possesses a rich and diversified cultural history. The cultural heritage of Greater Cairo embodies a fusion of tangible and intangible components, illustrating its status as a crossroads of civilizations. This amalgamation renders Greater Cairo a living museum of cultural heritage that perpetually influences the identity of Egypt and the surrounding region. This part examines the empowerment of communities via culture, cultural heritage, and development, focusing on the effective utilization of the cultural and heritage resources of Greater Cairo's districts to enhance tourism, stimulate economic growth, promote social cohesion, and encourage creativity.

Students in the Cultural Heritage and the City course were tasked with designing strategies or proposing solutions for a set of real-life neighborhood centers in the Greater Cairo region, focusing on the interaction between culture, heritage, and urban development. 77 students were divided into working groups to work on 11 real-life urban areas that include diverse cultural heritage. Eight of these areas were selected as case studies: 1) Zamalek, 2) Daher, 3) Al-Qanater Khayreya, 4) Korba, 5) Al-Moez Street, 6) Al- Sayeda Zeinab, 7) Al-Khalifa, and 8) Al-Fustat ; as seen in Figure 3.



Figure 2 leverage Cultural Heritage of International Urban Agendas by Author

4.1 Zamalek

Zamalek, an affluent district in Cairo, Egypt, is known for its cultural, historical, and architectural significance. Located on Zamalek Island, the area was first settled during the Mamluk period and became a social enclave for the elite. It attracted affluent families and gained recognition for its extensive gardens and parks. Zamalek played a pivotal role in Egypt's Golden Age of music and cinema; it attracted residents from artists and actors, with its literary salons and artistic circles serving as vibrant cultural hubs. The district's architectural heritage includes styles such as classicism, revivalism, mannerism, eclecticism, and modernism [84]. Notable architects include Domenico Limongelli and Albert Zananiri. Saray El Gezira, constructed during Khedive Ismail's

reign, is a notable landmark. Today, Zamalek remains a vibrant center for arts and culture [85]. The National Organization of Urban Harmony has initiated a documentation project in Zamalek, installing three types of informational signs featuring QR codes. These signs offer insight into the district's rich heritage. The first group provides information on architectural styles and dates, the second highlights the residences of prominent cultural figures and their biographies, and the third details the historical origins of street names. After studying the area by the students, the development strategy was determined through: Proposing a cultural route (60 mins journey) that passes through the most important intangible and tangible cultural heritage in Zamalek and was named according to the time it will take for the path to connect those landmarks on foot see figure 4.



Figure 3 illustrates selected case studies of eight districts in Greater Cairo.

4.1.1 Proposal for Zamalek District Redevelopment: Strategic Solutions

- Cultural Route Development:** The proposal aims to create a cultural route that highlights both tangible and intangible landmarks, reflecting Zamalek's rich historical and architectural heritage. This route would feature key stops, including Saray El Gezira, Aisha Fahmy Palace, the Zamalek Exhibition, Sakia El Sawy, the Museum of Islamic Ceramics, the Fish Garden, and Safaa Hegazy Metro. The route will be designed with an emphasis on seamless connectivity and modern infrastructure. Essential urban furniture such as signboards, seating areas, trash cans, and other street elements will be integrated to enhance the visitor experience.
- AI-Enhanced QR Codes for Intangible Heritage:** To commemorate Zamalek's cultural icons, statues representing prominent artists such as Umm Kulthum, Abdel Halim, Ismail Yassin, and Roshdy Abaza will be installed throughout the district. Utilizing artificial intelligence (AI) and virtual reality (VR), visitors will be able to engage in an immersive experience. By scanning QR

codes, visitors can interact with AI-generated simulations of these artists, allowing them to explore the artistic history of the district through personalized virtual dialogues.

- **Adaptive Reuse of Historical Buildings:** A historical building within the district will be repurposed as flexible cultural spaces. These spaces will host a variety of cultural events, including art exhibitions, pop-up shows, and heritage discussions, reflecting the diverse cultural history of Zamalek. This adaptive reuse approach will preserve the architectural significance of the buildings while providing modern functionality.
- **VR Techniques for Zamalek Art Gallery:** The proposal envisions the use of virtual reality (VR) technologies to enhance the Zamalek Art Gallery, offering an innovative platform to showcase art inspired by Zamalek's architecture and lifestyle from the early 20th century. The gallery will also serve as a venue for workshops on classical art techniques, maintaining the district's cultural legacy and timeless appeal.

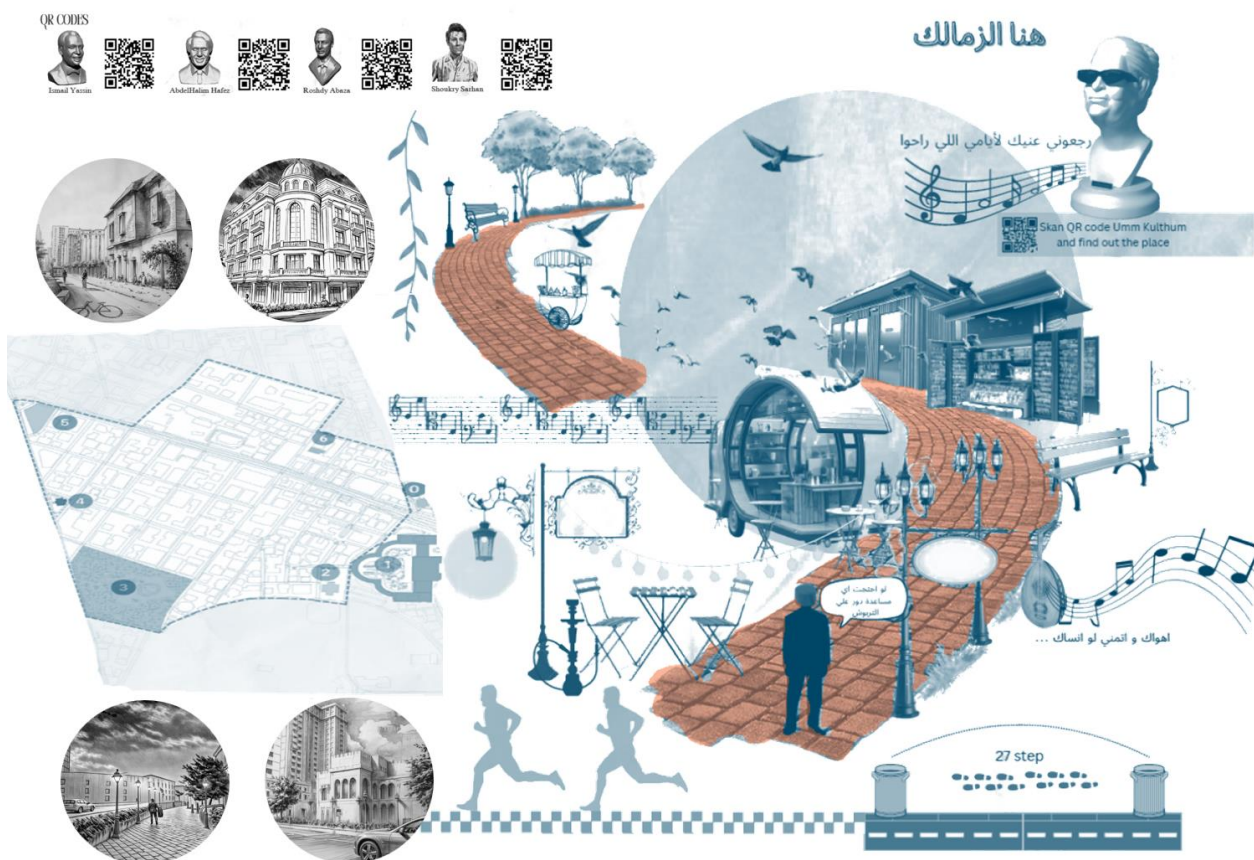


Figure 4 illustrates the proposal of Zamalek district

4.2 AL-Daher:

Al-Daher, a historic district in Cairo, Egypt, is known for its blend of Islamic, Christian, and modern influences. Its name comes from Sultan Baybars, a Mamluk Sultan who ruled Egypt in the 13th century. The district has historical roots dating back to the Mamluk and Ottoman periods, and is home to important mosques, churches, and historic buildings. The Al-Daher Mosque, built by Sultan Baybars in the 13th century, is one of the largest mosques in Cairo and a significant site representing Mamluk architecture. The district also houses St. Mark's Coptic Orthodox Church, reflecting the Christian heritage of the area. The district's architecture is a blend of medieval Islamic, Ottoman, and modern styles, reflecting the district's long history and the various ruling dynasties that influenced it. Despite modern challenges like overcrowding and urbanization, efforts have been made to preserve the district's historical landmarks and cultural heritage [86]. The district

is also known for its artisan workshops and small businesses, contributing to its lively atmosphere. The students proposed Redevelopment Strategy see figure 5.

4.2.1 Strategic Redevelopment Proposals for Al-Daher District

- **Conservation and Preservation Approach:** Based on an in-depth study conducted by the students, the redevelopment strategy for Al-Daher district focuses on conservation and preservation. This approach targets both the deteriorating residential areas and significant historical buildings. Adaptive reuse methods will be applied to key structures to preserve their historical value while assigning them new functions that benefit the community.
- **Facade Renovation:** One of the primary proposals involves renovating the facades of a selected residential area, incorporating traditional Islamic architectural elements such as mashrabiyas. This will not only enhance the aesthetic appeal of the neighborhood but also revive its historical architectural character.
- **Restoration and Adaptive Reuse of Significant Buildings**
 - Al-Sakakini Palace: The proposal suggests restoring Al-Sakakini Palace and repurpose it as a venue for celebrations and community events, thus creating a multifunctional space that serves the social needs of the district.
 - Al-Hosseiny Palace: Restoration is also proposed for Al-Husseini Palace, with plans to transform it into a public library. This adaptive reuse aims to enhance educational and cultural resources within the district.
 - Nasibyan Studio: The redevelopment strategy includes the adaptive reuse of Nasibyan Studio, which will be converted into a cultural center and theater. This new cultural hub will serve the local community, providing a space for artistic performances and cultural activities.

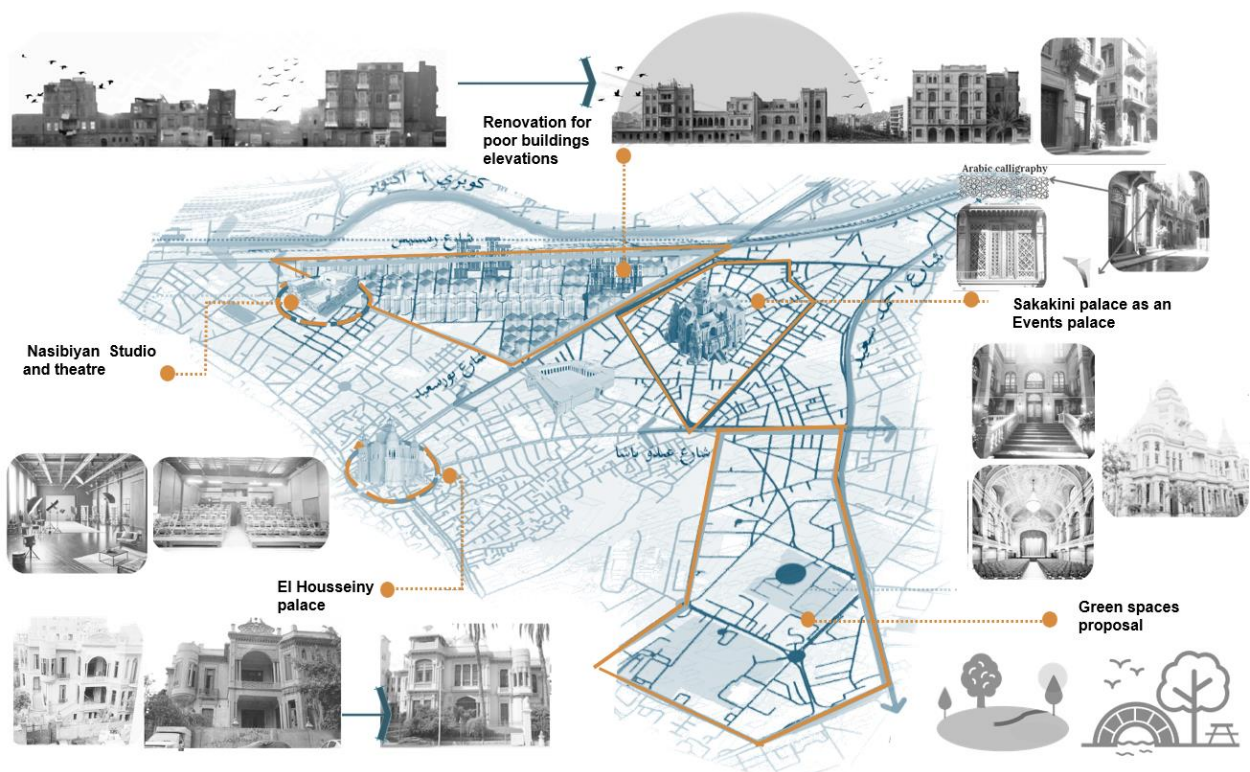


Figure5 illustrates the proposal of Al-Daher district

- **Green Space Development:** To address the lack of greenery, especially in deteriorating areas that are beyond repair, the proposal suggests increasing the percentage of planted

areas. In cases where rehabilitation of these areas is not feasible, removal is proposed as an alternative solution. The creation of green spaces will not only improve the environmental quality of the district but also provide residents with much-needed recreational areas.

4.3 Al-Qanatir Alkhayria

Alqanatir Alkhayria district is a unique blend of tangible and intangible cultural heritage. It reflects Egypt's rich history of hydraulic engineering and agricultural development while offering a scenic and culturally rich environment for recreation and tourism. The combination of historical barrages, verdant gardens, and its role in Egypt's agricultural legacy makes the district a valuable cultural asset. Alqanatir Alkhayria, a district in Egypt, is known for its historical significance, particularly the Alqanatir Barrages, built in the early 19th century. These barrages played a crucial role in regulating the Nile River's flow and distributing water for irrigation, improving agricultural productivity and modernizing Egypt's agricultural sector. The barrages are architecturally significant, representing one of the earliest large-scale hydraulic projects in Egypt. They have become a symbol of national pride and technological progress. The district is also known for its landscaped public gardens and parks, which were developed alongside the barrages to create a recreational area for residents and visitors [87; 88]. The students proposed Redevelopment Strategy see figure 6.

4.3.1 Strategic Redevelopment Proposals for Al-qanatir Alkhayria District

- **Cultural Route** Based on a comprehensive study conducted by the students, the proposed redevelopment strategy for Al-Qanatir Alkhayria emphasizes the creation of a cultural path. This path aims to combine both tangible and intangible heritage to foster cultural sustainability and preservation. The initiative also seeks to enhance tourism and encourage active participation from the local community.
- **Preservation and Restoration of Architectural Heritage** A key component of the strategy involves the preservation and restoration of buildings with distinctive architectural significance, turning them into focal points along the cultural path. Some of the key landmarks proposed for preservation include:
 - The Cotton Gin Building
 - Al-Qanatir Alkhayria Bridge, Damietta Branch
 - Irrigation Museum
 - Revolution Museum
- **Intangible Heritage and Community Activities** The strategy also proposes a branching route dedicated to intangible heritage. This path will include a variety of cultural activities aimed at celebrating the local traditions and historical practices of the region. Proposed activities include:
 - Horse-drawn carriages traversing the gardens or along the banks of the Nile, offering an immersive historical experience.
 - Boating on the Nile, allowing visitors to appreciate the scenic beauty and historical significance of the river.
 - Traditional music, dance performances, and puppet shows in public spaces to showcase Egypt's rich cultural heritage.
 - Sham El Nessim Festival: Celebrating this ancient Egyptian spring festival with vibrant cultural activities that reflect its deep historical roots and significance in Egyptian society.

- **Cotton Gin Building Adaptive Reuse:** Restoration and Adaptive Reuse of Key Buildings
The plan further includes the restoration and adaptive reuse of several historic buildings, particularly the Cotton Gin Building. The proposals include:
 - ☒ Transforming the Cotton Gin Building into a historical museum dedicated to showcasing the history of Egypt's first cotton gin and the original machinery used in cotton production creating a unique cultural and educational space.
 - ☒ Introducing workshops on the factory grounds to add a new layer of engagement, providing interactive learning experiences related to Egypt's industrial heritage.
- **Renovation for the pedestrian walkway along the Nile bank** and providing it with streetscape elements.

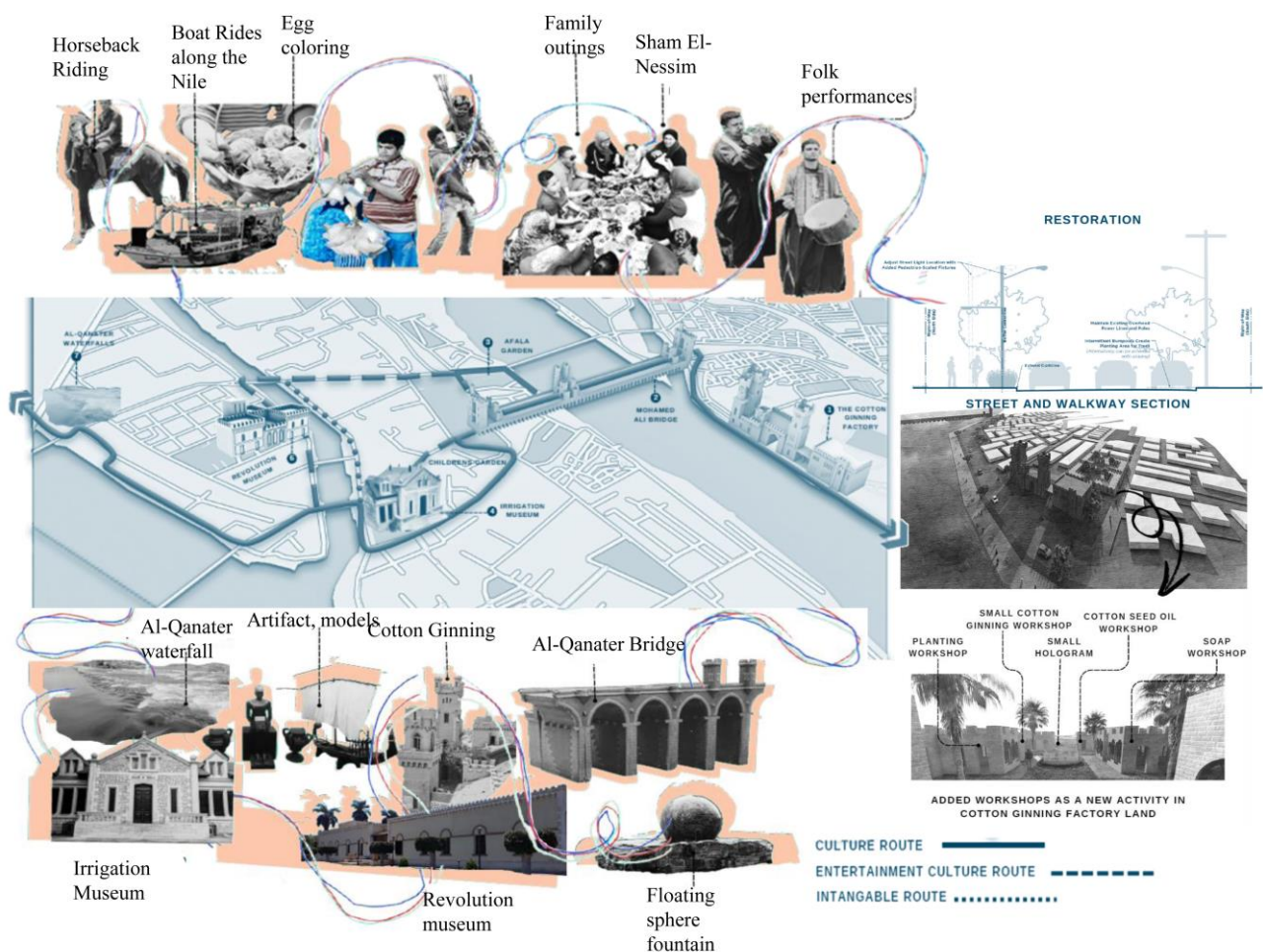


Figure 6 illustrates the proposal of Al-Daher district Al-Qanatir Alkhayria

4.4 Korba

El Korba, a district in Heliopolis, Egypt, is a vibrant testament to the city's cultural and architectural heritage. Established in the early 20th century, it is renowned for its Art Deco and Islamic Revival architecture. Renowned for its stunning blend of Islamic, Christian architectural influences, the area features iconic mosques, churches, and a singular Jewish temple that together narrate its rich, multicultural history. Many buildings feature intricate arabesque designs, arches, and decorative facades, showcasing the eclectic style that characterizes much of Heliopolis. Heliopolis is a vital and important location which attracts many to visit, it was built with wide avenues, and public squares [89]. The students proposed Redevelopment Strategy see figure 7.

4.4.1 Proposed Redevelopment Strategy for Al-Korba District.

Cultural Route: Tangible Cultural Heritage A key element of the proposal is the creation of a loop itinerary cultural path that highlights Al-Korba's architectural landmarks of significant heritage value. This path aims to provide visitors and residents with a comprehensive journey through the district's rich historical and cultural landmarks, showcasing the architectural treasures that define Al-Korba's unique character.

- **Festival Parade:** Intangible Cultural Heritage To celebrate and revive the intangible cultural heritage of Al-Korba, the proposal suggests organizing a series of annual cultural and religious celebrations. These events, such as Christmas, Ramadan, Easter, and the Prophet's birthday, will bring together diverse communities in a vibrant display of shared cultural heritage. The festival should include:
 - Floats: Design colorful and creative floats representing each holiday, incorporating traditional symbols and motifs that capture the essence of each celebration.
 - Costumes: Encourage participants to wear traditional attire associated with each holiday, adding a lively and authentic atmosphere to the parades.
 - Music & Dance: Feature traditional music and dance performances that reflect the cultural spirit and energy of each festival, enhancing the immersive experience.
- **Cultural Booths and Activities** To further enhance community participation and cultural engagement, cultural booths will be set up during the festival, each dedicated to a specific holiday and featuring:
 - Traditional food, crafts, and activities related to each celebration.
 - Local artisans will be invited to display their work and host workshops, allowing visitors to learn about and engage with traditional crafts and skills.

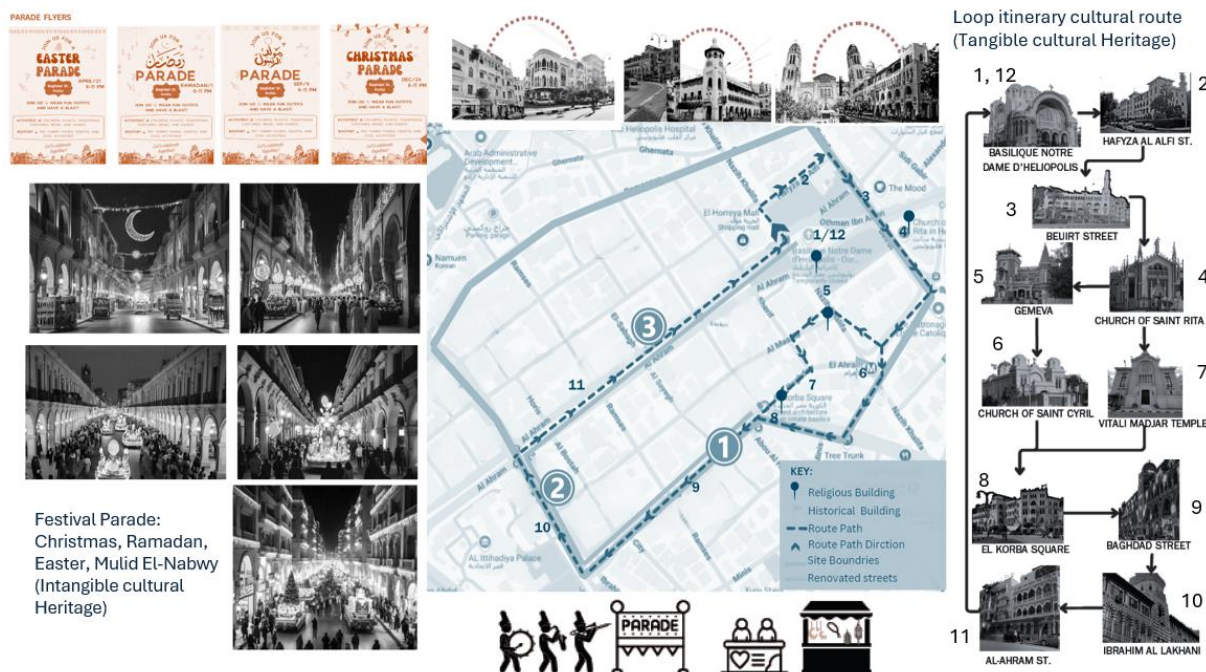


Figure 7 illustrates the proposal of Korba district

4.5 Al-Moez Street

Cairo's street planning, dating back to 969 A.D., is named after Fatimid Caliph Al-Moez Ledinellah and spans 1500m. The street features various monuments, including religious, service, and commercial buildings, showcasing the city's historical significance. In 1979, "Old" Islamic Cairo was added to the World Heritage Properties List. In 1997, the UNDP and Supreme Council of

Antiquities conducted a study to set a preservation strategy. Proposals were introduced to develop tourism at Al-Moez Street, including pedestrian bridge construction and integrating cultural and commercial activities. The Center for Historic Cairo Development Studies established the "National Historic Cairo Project" in 1998, which included Al-Moez Street development, restoring collapsing monuments, urban conservation, and reusing monuments [90]. Muizz Street is often referred to as an open-air museum of Islamic architecture. The street's urban fabric remains a testament to Cairo's rich cultural and architectural legacy, offering insight into the city's historical development. Based on an in-depth study conducted by the students, several problems were identified, including insufficient lighting and seating, poor maintenance of the corridors, accumulation of waste, lack of services, and deterioration of the facades and interiors of the restored sites. The proposed redevelopment strategy aims to enhance the visitor experience, improve interpretation and storytelling, preserve historical and cultural heritage, and support the local economy and crafts see figure 8,9.

4.5.1 Proposed Redevelopment Strategy for Al-Moez Street.

The students proposed a comprehensive development strategy consisting of several key measures, figure 8:

- **Preservation and Restoration of Historic Buildings:** The strategy emphasizes the restoration of building facades to align with the historical and cultural character of Al-Muizz Street, following guidelines set by the United Nations Development Program (UNDP) and the Supreme Council of Antiquities. Improvements to sidewalks are also proposed to facilitate pedestrian movement. Additionally, Commitment putting strict regulations to ensure that modern construction respects the heritage of the area and that architectural elements such as canopies harmonize with the street's historical style.
- **Cultural itinerary Integrating Tangible and Intangible Heritage with Modern Technology:** A cultural route is proposed, blending traditional heritage with modern technology. A 3D virtual tour of Al-Muizz Street is envisioned, providing an immersive educational experience. This tour would use cutting-edge technology to showcase the street's iconic landmarks, preserve its rich heritage, and revive centuries of Islamic architecture and culture, enhancing historical awareness.
- **Storytelling Along the Route:** To enrich the experience of the visitor, an AI-powered character named Younis has been designed to guide visitors on a journey through the street's history. As an interactive storytelling guide, Younis will narrate stories, helping visitors uncover the memories and magic of Al-Muizz Street ("Hello, I am Younis, let's explore the magic of Al-Muizz Street together!").
- **Augmented Reality Applications:** The proposal incorporates the use of augmented reality (AR) technology to enhance the visitor experience. AR would overlay digital content—such as images, sounds, or information—onto real-world surroundings in real-time, enriching the exploration of the street by blending virtual elements with the physical environment.

4.6 Al- Sayeda Zeinab

Al Sayeda Zeinab district in Cairo is a historic area known for its Al Sayeda Zainab Mosque, which is central to its religious and cultural identity. The district's identity is further reinforced by the Sayeda Zainab Moulded celebration, which attracts visitors and promotes community pride. The district has a rich architectural heritage, reflecting Islamic and Ottoman styles, particularly around its historical mosques and public spaces. The Sayyidah Zainab Mosque attracts numerous visitors annually, contributing to its spiritual significance and cultural tourism. The district also features traditional markets and souks, which support local commerce and community gatherings. Intangible

heritage in Al Sayeda Zeinab includes craftsmanship, oral traditions, and religious practices. The district supports local artisans specializing in copperwork, ceramics, and textiles, and the community has a strong tradition of storytelling. Culinary traditions are also essential, with street food and traditional Egyptian dishes being renowned. Religious practices, particularly during festivals like the Sayeda Zainab Mouled, highlight the district's spiritual significance. Local music, featuring traditional instruments like the oud and tabla, brings the district's cultural life to the forefront.

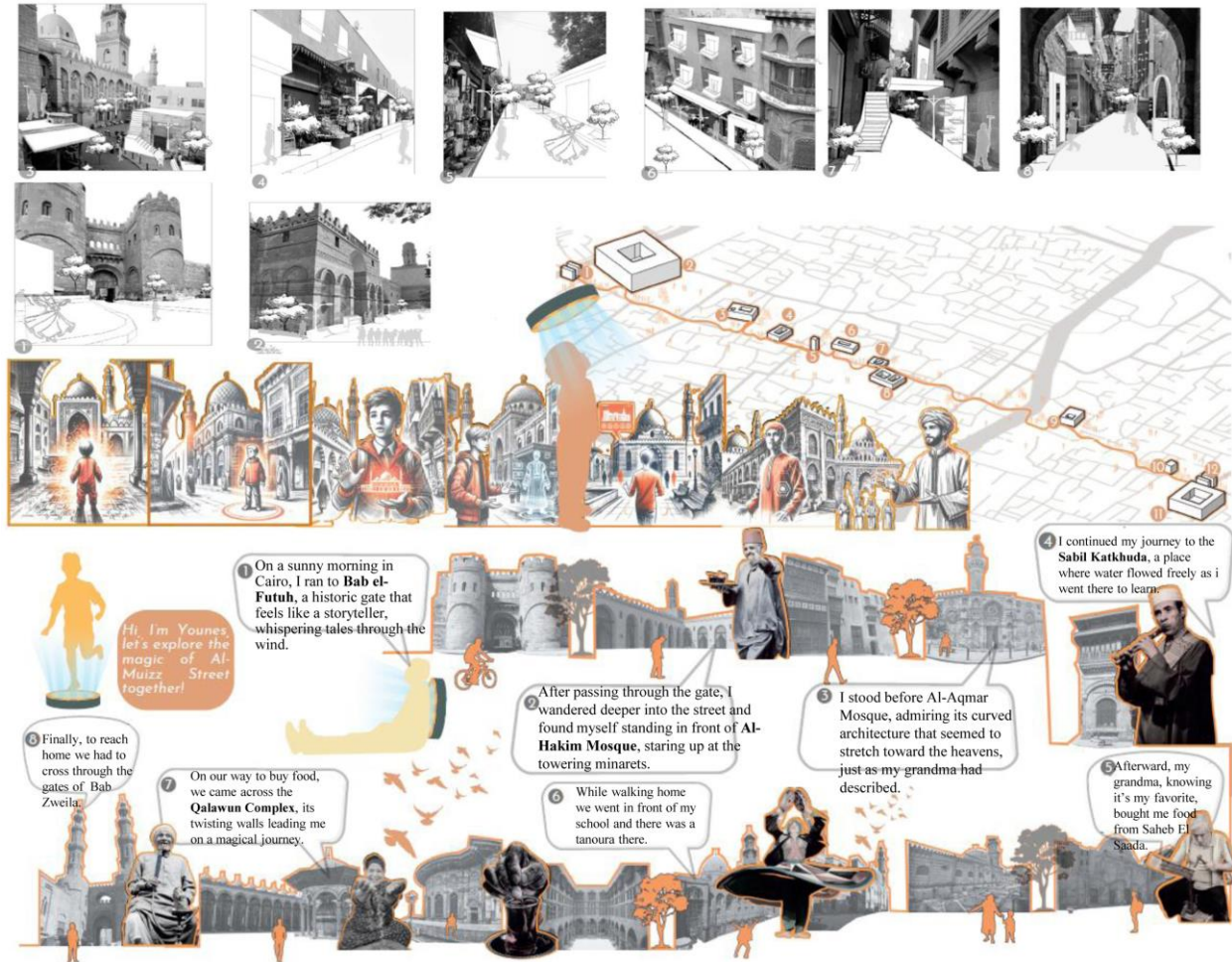


Figure 8 illustrates the proposal of Al-Moez Street

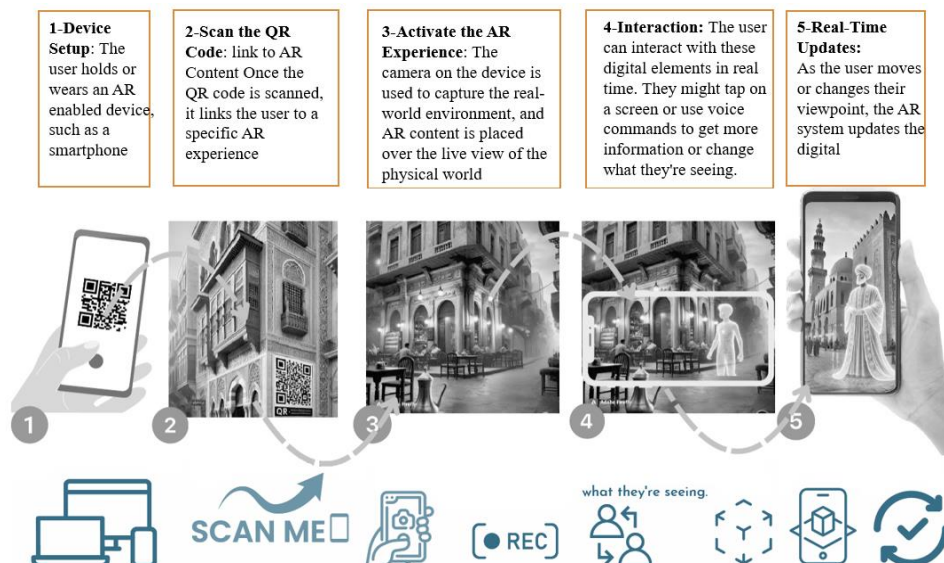


Figure 9 illustrates integrated digital technology in the proposal of Al-Moez Street

4.6 Proposed Redevelopment Strategy for Al- Sayeda Zeinab figure

The students proposed a development strategy focusing on several key measures:

- **It proposes the creation of cultural areas and plaza** in front of these heritage sites (Sayyida Zeinab Mosque) that respect the historical context of the area while promoting cultural participation. The plan also ensures that these areas are accessible and well connected, encouraging interaction between visitors and the local community.
- **Organization and commemoration of the birth of Sayyida Zeinab:** The redevelopment strategy includes the organization and commemoration of the annual birth of Sayyida Zeinab, an important religious festival celebrated on the last Tuesday of the month of Rajab. The celebration features various forms of entertainment, especially for children and families, with games, food tents, and festive activities spread throughout the square. Traditional foods and drinks such as (sherbet, a sweet drink usually served during happy occasions, are shared among locals to celebrate the occasion).
- **Cultural and recreational activities during religious events see figure 10:** By organizing a series of cultural and religious activities such as tahtib (traditional stick dance), singing, dhikr circles, and tawashih. These activities enhance the spiritual and cultural vitality of the festival, provide immersive experience for visitors and enhance the cultural identity of the region.



Figure 10 illustrates cultural and religious activities and traditions of Al- Sayeda Zeinab district

4.7 Al-Khalifa

Al-Khalifa in Cairo developed into a significant religious and residential area, particularly during the expansion initiated by Sultan al-Nasir Bin Qalawun. Religious destinations and annual mūlid celebrations played a crucial role in enhancing the district's cultural and spiritual significance. The district is home to several notable landmarks, including the Mosque of Ibn Tulun—one of Cairo's oldest mosques—and the Gayer-Anderson Museum, both of which attract cultural tourists visiting Historic Cairo. Other important monuments have been included. The area's residential architecture is characterized by high architectural value, contributing to its distinct identity. Al-Khalifa Street, also referred to as al-Ashraf Street, serves as both a local and international destination for religious visitors. It hosts annual religious festivals (mawlid) that draw participants from across Egypt. The neighborhood is a vibrant community with a rich oral history, reflecting deep connections between its residents and their surroundings. Its exceptional heritage value presents opportunities for socio-economic improvement through initiatives that leverage both its tangible and intangible cultural assets in social, cultural, and service-oriented projects [91].

4.7.1 Proposed Redevelopment Strategy for Al-Khalifa figure

Based on an in-depth study conducted by the students through observations and site visits. A study on the tangible and intangible heritage of the Al Khalifa district was conducted see figure 11. Semi-

structured interviews with eight residents and workers in the area, chosen through purposive sampling to ensure diverse representation. The interviews, lasting between 20-50 minutes, were audio recorded with participant consent and analyzed using thematic analysis. Ethical guidelines, including informed consent and confidentiality, were strictly followed. The study offered valuable insights into the participants lived experiences in the Al Khalifa district. This development strategy for Al Khalifa district aims to preserve its historical identity while promoting cultural sustainability, social cohesion, and economic opportunities for its residents, The following was reached:

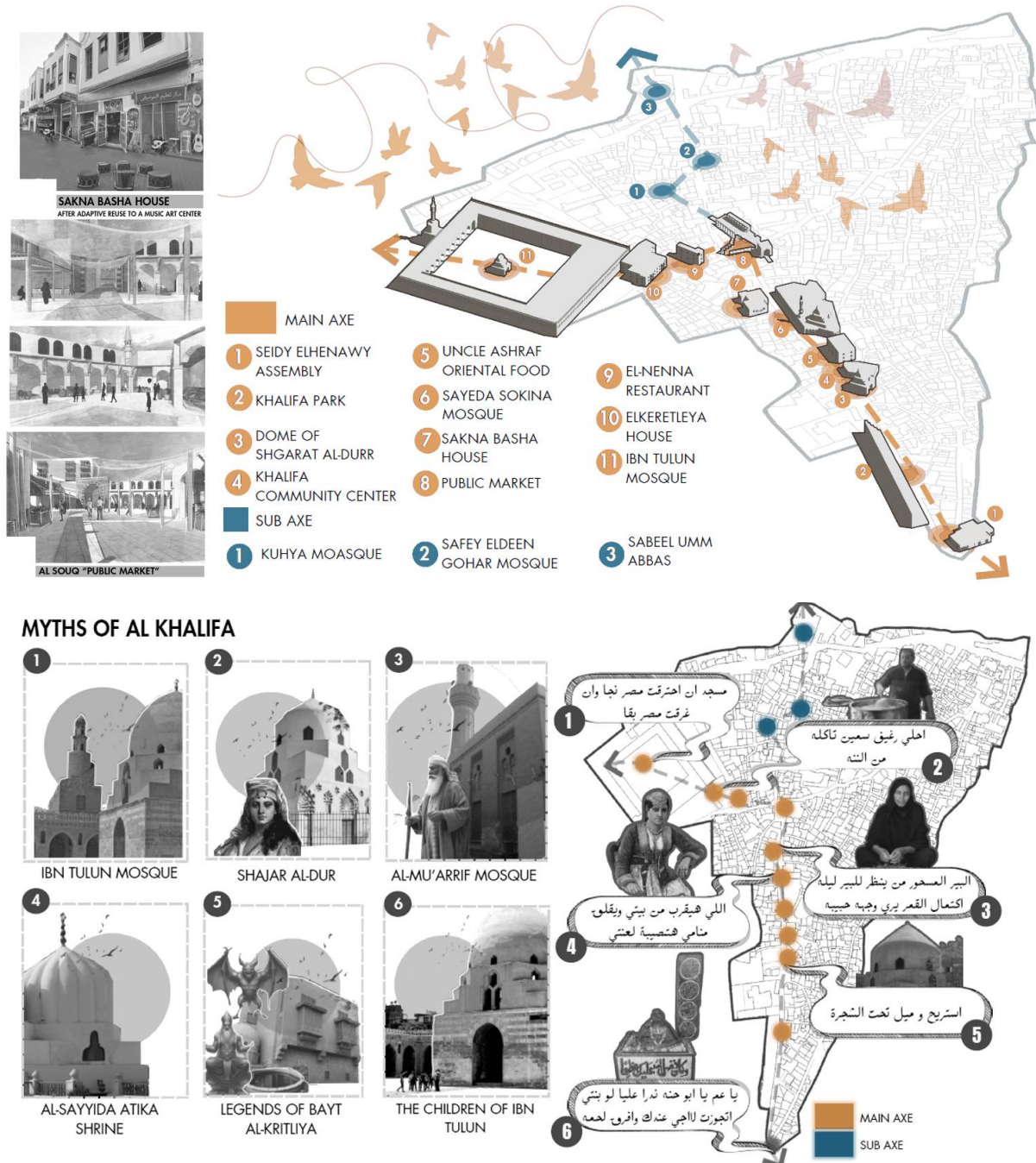


Figure 11 illustrates the proposal of Al Khalifa district

▪ **Adaptive Reuse, Revitalization and Restoration of Historic Buildings:**

- Adaptive Reuse: Sakna Basha House (Historic Building): The strategy proposes preserving and repurposing the historic Sakna Basha House, a dilapidated landmark,

- by converting it into a Music and Art Center. This adaptive-reuse approach preserves and repurposes historic buildings while maintaining architectural integrity.
- Revitalization of the Public Market: This revitalization strategy focuses on enhancing the public market space by incorporating shading elements (replacing the red umbrellas currently visible), arches, and new paving. These improvements aim to elevate the pedestrian experience while maintaining the commercial vitality of the marketplace, preserving its traditional role in the community.
- Restoration of Historic Buildings: The restoration plan involves reconstructing and restoring severely damaged historic buildings in the area. The red overlay identifies the deteriorated sections that require intervention. This process will return the building to its original form using authentic materials, ensuring historical accuracy. In addition, the facade of a new residential building was restored to blend harmoniously with the district's historical fabric.
- **Myths of Al Khalifa**, the proposal envisions transforming the local marketplace into a living museum that narrates the story of the old city. By integrating historical elements with traditional design, the plan seeks to create a space where past and present coexist harmoniously, providing an immersive experience for residents and visitors that celebrates the rich heritage of Al Khalifa.
- **Workshops to foster community engagement through spaces** that encourage social interaction. These community spaces will draw from the local context and landmarks, enhancing social cohesion within the district. Some of the key initiatives include:
 - ☒ Workshops for Children: Under the guidance of women from the Al Khalifa district, workshops will teach children traditional embroidery techniques as an inherited craft.
 - ☒ Community Interaction: Activities will provide opportunities for children to interact with familiar figures in the city, fostering deeper human connections within the community.
 - ☒ Economic and Social Opportunities: The proposal aims to support the local community by offering opportunities for economic and social development, empowering residents to benefit from these activities.
- **Cultural routes**, Suggesting a number of tours (historic - workshops - tales and Myths)

4.8 Al-Fustat

Fustat, one of the oldest Islamic cities in the world and the first Islamic city in Africa, was established by Amr Ibn Al-Aas under the rule of Caliph Omar Ibn AlKhattab in 21 AH / 640 AD. It followed Islamic cities' planning, including streets, lanes, and alleys. However, the role of Fustat as an inhabited city has weakened due to multiple fires [92]. Al- Fustat, the first Islamic capital in Egypt, was a hub for scholars, merchants, and artisans, contributing to the country's prominence in the Islamic world. The city witnessed historical transitions through various dynasties, including the Abbasid and Tulunid. It thrived as a center for trade and commerce, with industries like pottery, textiles, and glasswork. Tangible heritage includes the Amr Ibn al-As Mosque, ruins of Old Fustat, pottery city, and the Museum of Islamic Art. Intangible heritage includes pottery making glass-blown artistic craft.

4.8.1 Proposed Redevelopment Strategy for Al-Fustat:

The objective of the proposal is to provide tourists with a truly authentic experience, allowing them to engage with Fustat beyond its well-known historic landmarks. This includes organizing interactive workshops where visitors can participate in traditional crafts such as pottery-making, copper engraving, and textile dyeing.

- **Economic, Social, and Cultural Revitalization:** The redevelopment plan aims to revitalize the area economically, socially, and culturally by supporting local artisans, shop owners, and restaurateurs. Increased footfall will drive the local economy, while sustainable tourism initiatives will create jobs and promote fair trade, ensuring that the benefits flow directly to the community.
- **Preserving Intangible Heritage:** A key aspect of the proposal is the preservation of intangible cultural heritage. This will be achieved by showcasing traditional crafts, poetry, music, and culinary arts through interactive workshops, performances, and exhibitions. Dedicated spaces will be created for artisans and storytellers to practice their crafts and pass down their skills to future generations.
- **Creating Storytelling Experiences:** To enhance the tourist experience, the strategy includes the use of interactive technologies, such as augmented reality, to narrate the rich history of Fustat at key points along the route. This will bring the district's heritage to life in an engaging and educational manner.
- **Cultural route,** see figure 12: The proposal emphasizes sustainability by designing *the cultural route* to align with both environmental and cultural goals By *THE TUFTUF* as an environmentally friendly means of transportation. Eco-friendly materials and practices will be used to ensure that tourism development in Fustat is environmentally responsible. Moreover, the plan aims to preserve Fustat's unique identity while adapting the area to meet the needs of modern tourism. The students' redevelopment proposal for Fustat envisions a vibrant Cultural Area along cultural route that start from mosque of AMR IBN AL-AS and end to NMEC MUSEUM with six stops adding areas including (cultural, dining, craft, entertainment, retail areas) that hosts festivals, events, and educational activities, offering visitors a chance to engage in cultural and culinary experiences such as sampling local dishes like koshari and ful medames. Community spaces for storytelling sessions and traditional tales will also be integrated. The Dining Area is centered around group meals and hospitality, supported by nearby farms producing essential crops and vegetables used in the kitchen. The Entertainment Area will serve as a lively hub for cultural events, music, dance, and storytelling, with venues for speeches, historical presentations, and community gatherings. A dedicated Crafts Area will provide workshops for traditional pottery-making, papyrus-making, calligraphy, jewelry, weaving, mosaic, and stained glass, offering hands-on experiences that reflect Fustat's heritage. The Retail Area will feature a Traditional Crafts Zone selling handmade products and artifacts, a Heritage Market Zone recreating a traditional marketplace atmosphere with garments, jewelry, and customizable souvenirs, and a Cultural Storytelling Zone offering immersive experiences through multimedia and AR/VR technology. Additionally, a Relaxation and Social Zone will allow visitors to unwind with herbal teas and handmade items in an environment inspired by traditional designs.

Each proposal offers unique solutions based on local heritage and community engagement, blending tangible and intangible elements in different ways. The use of technology (as seen in Zamalek and Al-Moez Street), community-driven events (as highlighted in Al-Khalifa and Al-Sayeda Zeinab), and adaptive reuse (Al-Daher, Al-Qanatir) can all inform districts. By synthesizing these strategies, we can adopt a multidimensional approach that addresses both preservation and economic vitality in future urban redevelopment projects. The following table 2 highlights the core points addressed in the proposed solutions.



Figure 12 illustrates the proposal of Al- Fustat

Table2 Comparison of the Redevelopment Proposals for Various Districts:

District	Core Points	Strengths
Zamalek	<div><ul style="list-style-type: none">– Emphasis on creating a cultural route highlighting both tangible and intangible heritage.– Adaptive reuse of historical buildings for modern cultural spaces.– Incorporating modern technology such as AI, VR, and QR codes to enhance visitor experience.</div>	<div><ul style="list-style-type: none">– Adaptive reuse of historical buildings preserves architectural value while catering to modern cultural needs.– Cultural route enhances tourism, with seamless connectivity improving urban infrastructure.– Innovative use of technology for preserving and promoting intangible heritage.</div>
Al-Daher	<div><ul style="list-style-type: none">– Focus on conservation and preservation of deteriorating areas and significant buildings.– Adaptive reuse strategies for palaces and cultural centers.– Green space development to improve environmental and social quality.</div>	<div><ul style="list-style-type: none">– Addresses both conservation and adaptive reuse, maintaining historical value while meeting community needs.– Green space proposals enhance the environmental quality and provide recreational opportunities.</div>

District	Core Points	Strengths
Al-Qanatir Alkhayria	<ul style="list-style-type: none"> - A comprehensive cultural route blending tangible and intangible heritage to foster sustainability. - Preservation of key buildings like the Cotton Gin and historical bridges. - Incorporation of traditional community activities (e.g., horse carriages, Sham El Nessim festival) to celebrate local heritage. 	<ul style="list-style-type: none"> - Holistic approach connecting both tangible and intangible heritage. - Adaptive reuse of the Cotton Gin offers educational opportunities, combining industrial heritage with interactive workshops.
Al-Korba	<ul style="list-style-type: none"> - Cultural path showcasing architectural landmarks, complemented by festival parades to revive intangible cultural heritage. - Booths and community activities promote cultural engagement during festivals. 	<ul style="list-style-type: none"> - Festival-based engagement fosters community participation and cultural awareness. - Focus on both tangible landmarks and intangible festivals creates a well-rounded cultural experience.
Al-Moez Street	<ul style="list-style-type: none"> - Emphasis on restoring historic buildings and improving pedestrian infrastructure. - Use of technology (3D virtual tours, AI guides, AR) to blend historical education with modern experiences. 	<ul style="list-style-type: none"> - Strong integration of technology to enhance visitor experience and educational engagement. - The storytelling approach personalizes the historical narrative for visitors, adding depth to the experience.
Al-Sayeda Zeinab	<ul style="list-style-type: none"> - Creation of cultural areas around heritage sites, with annual celebrations commemorating Sayyida Zeinab's birth. - Integration of religious and cultural activities to enhance the spiritual and cultural identity of the region. 	<ul style="list-style-type: none"> - Strong community involvement through religious and cultural celebrations. - The focus on local heritage and traditions creates a connection between visitors and the local community.
Al-Khalifa	<ul style="list-style-type: none"> - Focus on adaptive reuse and revitalization of the local marketplace, integrating social and economic opportunities. - Community engagement through workshops and activities rooted in local traditions. 	<ul style="list-style-type: none"> - Promotes economic and social development through adaptive reuse and community-based workshops. - Preserves the architectural and cultural fabric while fostering social cohesion.
Al-Fustat	<ul style="list-style-type: none"> - Focus on creating authentic tourist experiences beyond historical landmarks. - Support for local artisans and sustainable tourism to revitalize the economy. 	<ul style="list-style-type: none"> - Emphasis on immersive tourist experiences through workshops in traditional crafts. - Strengthens the local economy by creating tourism-driven income streams for artisans and small businesses.

5. Discussion

In comparing these agendas, it's clear that each offers unique insights into how cities can leverage cultural heritage for urban regeneration. Some, like Cēsis and Regensburg, focus heavily on heritage and community, whereas Kazan and Bilbao integrate economic competitiveness and creative industries. Singapore, on the other hand, serves as a hybrid model that balances modernity with heritage preservation, with a strong digital focus.

Key Lessons learned from international cases:

- **Community Engagement:** Following the example of Cēsis, ensure that local communities actively participate in heritage and urban renewal efforts.
- **Creative Industries:** Like Kazan and Bilbao, consider integrating modern cultural industries and youth engagement to make urban regeneration more economically sustainable.
- **Heritage and Modernity:** Inspired by Regensburg and Singapore, the aim is to strike a balance between preserving historical authenticity and adapting to modern urban needs. Using digital tools and smart technologies to make heritage more accessible and engaging to the public.
- **Economic Growth and Cultural Integrity:** A key lesson from Kazan, Cēsis, Singapore urban redevelopment is the delicate balance between promoting economic growth and preserving cultural integrity. Successful regeneration efforts should prioritize civic participation, ensuring that the economic benefits of cultural heritage stay within the local community while safeguarding the authenticity of the cultural assets. This highlights the ongoing challenge of aligning external economic interests with local needs, where heritage tourism can boost financial prospects, but measures must be in place to protect the cultural essence.

To link and compare the students' proposals with the international agendas, the following illustrates the common themes, see table 3:

Table 3: Common Themes/ strategies between global and national cases:

Common Themes/ strategies	Kazan	Cēsis	Bilbao	Regensburg	Singapore	Zamalek	Daher	Al-Qanater	Korba	Al-Moez Street	Al- Sayeda	Al-Khalifa	Al-Fustat
Cultural Route Development		√		√	√	√		√	√	√		√	
Conservation of Architectural Heritage		√		√	√		√			√		√	
Integrating Historic Urban Areas with Modern User Demands				√		√	√	√			√	√	
Modern Technology Integration					√	√				√			√
Economic Revitalization and Competitiveness	√		√		√	√							√
Social Cohesion, Improving Quality of Life and Well-being		√			√		√					√	
Festivals and Cultural Events	√	√	√		√				√		√		
Plaza Creation and Public Space Enhancement			√		√						√	√	
Craftsmanship, creative groups and Traditional Arts Promotion	√	√	√										√

- **Cultural Route Development & Heritage Preservation:** Many student proposals (e.g., Zamalek, Al-Qanatir, Al-Korba, Al-Moez Street) focus on creating cultural routes to link historical sites with modern infrastructure. Similarly, agendas like those of Regensburg and Cēsis also emphasize urban pathways and preservation to enhance tourism and community engagement. These cultural paths create more inclusive and interactive ways to experience heritage, fostering tourism and urban vitality. However, the challenge is in maintaining historical authenticity while integrating modern elements (like AI and VR).
- **Conservation of Architectural Heritage:** Across Al-Moez Street buildings restored or conserved. This resonates with Regensburg's focus on the unique UNESCO-World Heritage Site Old Town of Regensburg. Urban Landscape Integrity, Maintenance of visual integrity through urban development analysis and adherence to conservation standards.
- **Integrating Historic Urban Areas with Modern User Demands:** Across districts like Zamalek, Al-Daher, Al-Qanatir, Al-Khalifa, and Al-Sayeda Zeinab, adaptive reuse emerges as a key strategy for transforming historical buildings into modern spaces. This resonates with Regensburg's focus on using adaptive reuse to preserve historical authenticity while promoting modern urban functions. Adaptive reuse allows for the functional modernization of heritage sites, which balances economic needs with preservation. Adaptive reuse strikes a balance between conserving the built environment and meeting economic and community needs.
- **Modern Technology Integration:** Proposals like those in Zamalek, Al-Fustat and Al-Moez Street suggest integrating modern technology such as AR, AI, and VR to enhance cultural experiences. Similarly, Singapore's agenda incorporates digitalization to make heritage accessible, blending modernity with cultural preservation.
- **Economic Revitalization and competitiveness:** In proposals like Al-Fustat and Zamalek, there's a focus on economic revitalization through tourism, creative industries and cultural events. This mirrors Bilbao's agenda, where economic transformation was driven by cultural infrastructure and events.
- **Social Cohesion, Improving Quality of Life and Well-being:** Proposals like those for Al-Daher and Al-Khalifa highlight the importance of community involvement in heritage preservation and cultural participation. These districts focus on revitalizing public markets, organizing workshops for children, and involving local artisans in preserving traditional crafts. This model aligns with Cēsis's agenda, where the emphasis is on engaging local residents in cultural activities to foster social cohesion and strengthen the cultural fabric.
- **Festivals and Cultural Events:** Several proposals, such as those in Al-Korba and Al-Sayeda Zeinab, emphasize festivals and cultural events. This resonates with cities like Cēsis, Kazan and Bilbao's success in hosting high-impact cultural festivals to boost tourism and civic pride. Festivals and cultural parades create both economic opportunities and cultural engagement. However, they require significant investment and planning to ensure they resonate with both local communities and global audiences.
- **Plaza Creation and Public Space Enhancement:** Proposals such as the plaza creation in Al-Sayeda Zeinab and the revitalization of public markets in Al-Khalifa parallel the community-oriented spaces in Cēsis. Both focus on creating public spaces that serve as centers for cultural participation. Public spaces play a crucial role in both social interaction and cultural preservation, as seen in Cēsis. Emphasizing the need for authentic cultural spaces that prioritize local community involvement. These plazas can serve as multifunctional spaces where heritage and modern life intersect.
- **Craftsmanship and Traditional Arts Promotion:** Conversely, proposals Al-Fustat favor a more tourist-driven approach, aiming to capitalize on cultural tourism as a means of economic revitalization, as well as Recognition and promotion of traditional arts and trades, supported by

exhibitions, recognition schemes. By organizing large-scale cultural events and establishing tourism routes, these proposals attract international visitors and investors, much like Bilbao's agenda, where global recognition of its cultural infrastructure contributed to its transformation.

5.1 Conceptual Framework for Leveraging Cultural Heritage in Urban Districts

The following section aims to provide a conceptual framework see table 4 for leveraging cultural heritage in urban districts, focusing on the most important and relevant indicators from the provided list, which are grouped under 8 key dimensions.

Table4: illustrates Framework for leverage culture and cultural heritage in urban regeneration in Egypt.

Key actors: 1 NOAH; 2 Ministry of culture; 3 Ministry of Tourism and Antiquities; 4 Ministry of Higher Education and Scientific Research; 5 Ministry of Finance; 6 Ministry of Communications and Information Technology; 7 NGOs (Non-Governmental Organizations); 8 IGOs (intergovernmental organizations); 9 Private sectors; 10 Community representatives.

Framework for leverage culture and cultural heritage in urban regeneration in Egypt		Key actors									
		1	2	3	4	5	6	7	8	9	10
(1) Cultural Heritage Preservation and Enhancement											
Indicators	Goa 1 Protect cultural heritage (tangible and intangible) and capitalize on it as a core resource for city regeneration.										
	– Number of reconstructed or revitalized cultural buildings (e.g., libraries, museums, cultural centers).										
	– Public engagement in heritage days, artistic events, and preservation efforts for intangible heritage (e.g., local craftsmanship).										
	– Community-based revitalization of old town areas.										
	– Increase in heritage-sensitive cultural events that promote local history and awareness.										
Key strategies/actions	– Heritage District Plan: Develop a comprehensive heritage district plan that includes inventories of tangible and intangible cultural assets and their historical significance.	√	√	√							
	– Community Workshops: Organize community-driven workshops to involve citizens in cultural heritage conservation efforts and promote local craftsmanship.	√	√					√		√	√
	– Site-Sensitive Events: Introduce heritage-themed cultural events (e.g., guided tours, festivals) to increase local and tourist awareness of historic sites.	√	√	√							
	– Collaborations with Universities: Engage local academic institutions to conduct research on cultural preservation methods and implement innovative solutions.				√						
(2) Citizen Engagement and Social Inclusion											
G. Involve local citizens in cultural practices, promote social inclusion, and foster critical thinking through cultural engagement											

Framework for leverage culture and cultural heritage in urban regeneration in Egypt		Key actors									
		1	2	3	4	5	6	7	8	9	10
Indicators	– Participation in cultural programs involving citizens (e.g., amateur arts, voluntary movements).										
	– Public involvement in the planning and revitalization of historic neighborhoods.										
	– Accessibility and availability of low-cost cultural services for all social groups.										
	– Youth engagement and participation in cultural festivals and events										
Key strategies/actions	– Citizen Advisory Boards: Form advisory boards that represent different local communities to ensure their active participation in cultural events and decision-making.	√									√
	– Cultural Participation Programs: Implement cultural participation programs tailored to underrepresented groups (e.g., youth, the elderly) to foster social inclusion.		√					√	√	√	√
	– Artistic Collaborations: Promote public arts programs (murals, street performances) that reflect local heritage and encourage community engagement.		√					√		√	√
	– Public Revitalization Efforts: Involve citizens in planning efforts to revitalize historic neighborhoods, with participatory design processes.	√	√	√							√
(3) Cultural Infrastructure Development											
G. Renovate and expand cultural infrastructure to improve the quality of life and offer better cultural services.											
Indicators	– Number of newly constructed or renovated cultural spaces (e.g., museums, cultural centers, co-working spaces).										
	– Improvement in working conditions for culture managers and specialists.										
	– Growth in cultural services and offerings across diverse community groups.										
Key strategies/actions	– Renovation Projects: Identify and prioritize key cultural infrastructures (e.g., museums, theaters) for renovation and modernization.	√	√	√							
	– Cultural Hubs: Create multipurpose cultural hubs that provide spaces for exhibitions, performances, and education, with an emphasis on community access.	√	√	√	√	√					
	– Public-Private Partnerships: Seek partnerships with private companies to invest in expanding and maintaining cultural infrastructure.	√						√	√	√	
	– Digital Accessibility: Incorporate technology to offer digital tours or virtual experiences of cultural sites, broadening access for all citizens.	√				√					
(4) Economic Development through Cultural Tourism											
G. Utilize cultural heritage and festivals to stimulate local economic growth and tourism.											

Framework for leverage culture and cultural heritage in urban regeneration in Egypt		Key actors									
		1	2	3	4	5	6	7	8	9	10
Indicators	<ul style="list-style-type: none"> – Increase in cultural tourism and visitor numbers during niche events (e.g., festivals, art exhibitions). – Revenue generated from cultural tourism for local businesses. – Job creation and new income streams in the creative economy (e.g., residencies, cultural events). 										
	– Heritage Tourism Marketing: Develop and promote targeted campaigns that highlight the city's cultural heritage and festivals to attract tourists.	√	√	√							
	– Cultural Tourism Routes: Design cultural heritage routes that guide tourists through significant historical sites and districts, supported by local businesses.	√	√	√				√			√
	– Creative Economy Incubators: Establish incubators to support creative entrepreneurs working on cultural projects (e.g., artist residencies, craft markets).			√		√				√	
Key strategies/actions	– Local Business Integration: Create initiatives to link local businesses with cultural events, ensuring that tourism benefits the broader economy.	√	√	√						√	√
	(5) Creative Economy and Knowledge Sharing										
	G. Promote innovation through creative industries, educational programs and knowledge exchange.										
	Indicators										
Key strategies/actions	<ul style="list-style-type: none"> – Number of creative residencies, summer schools, and knowledge-sharing programs. – Collaborations between cultural organizations and creative industries for economic growth. – Development of creative clusters and co-working spaces. 										
	– Artist Residency Programs: Expand artist residency programs, offering opportunities for local and international artists to collaborate and create.	√	√					√	√		
	– Creative Industry Networks: Facilitate networking events between cultural organizations and creative industries to foster collaboration and knowledge-sharing.		√				√				
	– Educational Partnerships: Partner with educational institutions to develop creative summer schools or programs focused on cultural innovation.		√		√						
Key strategies/actions	– Funding Opportunities: Offer grants or incentives to encourage experimental and creative projects that have a cultural heritage focus.					√		√	√	√	
	(6) Identity Building and Community Pride										
	G. Strengthen local identity and foster community pride through culture.										
	Indicators										
Indicators	<ul style="list-style-type: none"> – Growth in local pride and sense of belonging as measured by community surveys. – Participation in local heritage festivals and cultural initiatives that connect local and national identity. 										

Framework for leverage culture and cultural heritage in urban regeneration in Egypt		Key actors									
		1	2	3	4	5	6	7	8	9	10
Key strategies/actions	– Local Heritage Festivals: Organize annual local heritage festivals and events that celebrate regional history, traditions, and culture.	√	√	√							
	– Public Engagement Campaigns: Launch campaigns aimed at increasing public awareness of the cultural significance of local heritage, encouraging community pride.	√	√	√				√	√	√	√
	– Community Awards: Introduce awards that recognize contributions to the preservation of local cultural heritage and identity.		√	√		√		√	√	√	
	– Storytelling Initiatives: Encourage storytelling initiatives where locals share personal and community histories tied to heritage sites.	√	√	√							√
(7) Digital Preservation and Experience											
Indicators	G. Use technology to preserve and enhance access to cultural heritage.										
	– Creation of digital platforms and virtual experiences, including 3D scans of heritage sites.										
	– Integration of AI and IoT technologies for cultural preservation.										
Key strategies/actions	– Foster public engagement: Use AI to personalize virtual experiences for users, offering tailored content based on their interests, location, or previous interactions with the digital platform.						√	√		√	√
	– Provide immersive experiences: Utilize virtual reality (VR) and augmented reality (AR) to offer immersive cultural experiences, allowing users to explore reconstructed heritage sites in their historical context.					√					
	– Collaborate with cultural institutions: Partner with museums, archives, and heritage organizations to digitize collections, artworks, and historical documents.		√	√			√	√	√		
	– Preservation through machine learning: Implement machine learning models to study the cultural significance of artifacts, suggest restoration methods, and even generate possible reconstructions of missing or damaged parts of heritage sites.			√	√		√				
(8) Cultural Environment Modernization and Competitiveness											
Indicators	G. Modernize the cultural environment, preserve historical heritage, and enhance the city's global competitiveness.										
	– Organize large-scale events that highlight the city's cultural heritage and creative industries, attracting global attention and positioning the city as a global cultural hub.										
	– Identify and establish areas where historical preservation coexists with modern cultural industries, integrating heritage with creative activities such as art, design, and digital media.										
	– Facilitate the growth of creative clusters within heritage spaces that provide opportunities for local entrepreneurs, artists, and digital innovators to collaborate and thrive, fostering a dynamic cultural										

Framework for leverage culture and cultural heritage in urban regeneration in Egypt		Key actors									
		1	2	3	4	5	6	7	8	9	10
economy.											
Key strategies/actions	- Cultural Innovation Zones: Designate certain areas as cultural innovation zones where historical preservation and modern cultural industries coexist.	√	√	√							
	- International Events: Host international festivals and conferences that position the city as a global cultural hub, promoting both local heritage and modern creative outputs.	√	√	√			√	√	√	√	
	- Creative Clusters Development: Develop creative industry clusters that support local entrepreneurs, artists, and digital innovators within heritage spaces.	√	√			√	√	√		√	
	- Cultural Modernization Grants: Provide funding for cultural organizations to incorporate modern technology (e.g., interactive exhibits, virtual tours) into their heritage-focused programs.					√		√	√	√	

6. Conclusions

The research underscores the pivotal role of cultural heritage in shaping both the identity and development of cities. It highlights the balance between preserving heritage and embracing modern innovation, particularly within urban regeneration efforts. By analyzing global case studies and student-proposed solutions for real urban areas, the study explores how culture and heritage contribute to creating vibrant, cohesive, and culturally rich urban environments. Examples from cities like Cēsis, Regensburg, Kazan, Bilbao, and Singapore demonstrate diverse approaches to urban regeneration through heritage preservation. Cēsis emphasizes community involvement, while Kazan and Bilbao focus on economic competitiveness and creative industries. Singapore provides a balanced approach between heritage and modernity using digital tools. Key lessons include the importance of community engagement, integrating modern cultural industries, and balancing historic preservation with contemporary urban needs. The research presents solutions for eight urban areas with diverse cultural heritage contexts. These proposals aim to establish frameworks that are adaptable to different urban environments.

The research finds that cultural heritage, when integrated with modern innovations such as virtual technologies, can enhance urban regeneration by boosting economic vitality, social cohesion, and creativity. It presents a conceptual framework based on best practices and strategic actions for stakeholders, emphasizing the need for cities to maintain their unique cultural identities while pursuing sustainable growth. This framework offers guidance on how cities can leverage culture and heritage to achieve broader urban goals like tourism, economic development, and innovation, thus demonstrating the multifaceted benefits of cultural heritage in urban environments.

Ultimately, the study calls for further research to explore these dynamics in greater depth, such as the long-term implications of integrating virtual technologies and cultural industries, as well as the evolving role of community engagement in sustainable urban development.

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الاستفادة من التراث الثقافي كأداة لتحقيق الأجندات الحضرية التركيز على القاهرة الكبرى، مصر

الملخص

توظّف المدن حول العالم الثقافة والتراث الثقافي كأدوات استراتيجية لتحقيق مجموعة من الأهداف التنموية، بما في ذلك تعزيز السياحة، ودعم التماسك الاجتماعي، وتحسين جودة الحياة، وتحفيز الابتكار، وتعزيز الشعور بالفخر والانتماء المحلي. ويُعدّ التراث الثقافي عنصراً محورياً في تشكيل الهوية الحضرية، والحفاظ على الأصول التاريخية، ودعم التنمية المستدامة، وتمكين المجتمعات، وتعزيز القدرة التنافسية على المستويين المحلي والدولي.

ومن منظور حضري معاصر، يتّضح الدور المتنامي للتراث الثقافي في عمليات التجديد الحضري، خاصةً من خلال الحفاظ على النسيج العمراني، وتعزيز الجاذبية الاقتصادية للمدن، ودعم قطاعي السياحة والصناعات الإبداعية. وتسهم هذه المقاربات في خلق فرص عمل، واستقطاب الاستثمارات، وتحسين البنية التحتية، وتعزيز التماسك الاجتماعي. وفي هذا السياق، تُعدّ المسارات الثقافية أدوات فعّالة في إشراك كل من السكان والزوار عبر تسليط الضوء على المعالم التاريخية وتعزيز الهوية المحلية. كما تُبرز الدراسة الإمكانيات الواعدة للتقنيات الناشئة، مثل الذكاء الاصطناعي، والواقع الافتراضي، والواقع المعزز، في دعم جهود الحفاظ على التراث الثقافي وإحيائه بطرق مبتكرة.

يقدم البحث تحليلاً مقارناً للاستراتيجيات التي تتبناها المدن العالمية في الحفاظ على التراث وتجديده، مع التركيز على التوازن بين المحافظة على القيم الأصيلة والانفتاح على الابتكار والتكنولوجيا.

وبالاستناد إلى دراسات حالة محلية، تسلط الدراسة الضوء على المنافع المتعددة للثقافة والتراث في السياقات الحضرية متنوعة لإقليم القاهرة الكبرى. وتُختتم الدراسة باقتراح إطار مفاهيمي مخصّص للسياق المصري، يشتمل على مؤشرات رئيسية لتحقيق التوازن المنشود بين الحفاظ على التراث، وتطوير البنية التحتية، وتبادل المعرفة، والابتكار، وبناء الهوية، وتحفيز النمو الاقتصادي من خلال السياحة الثقافية مع التوظيف الفعّال للتقنيات الحديثة. كما تدعو الدراسة إلى إجراء بحوث مستقبلية معمّقة لاستكشاف هذه الديناميكيات وتقييم أثرها على المدى الطويل.