

Article

Sustainable Heritage Preservation to Improve the Tourism Offer in Saudi Arabia

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Abstract

In recent years Saudi Arabia has launched many campaigns to promote a model of global excellence to be a pioneer in future growth. As part of the Kingdom of Saudi Arabia's National Vision 2030, the country encourages the improvement of national quality services based on the commitment of the government to build up a prosperous country, starting with the valorisation of local traditions. In particular, the Saudi, Arab, and Islamic heritage, built by an ancient civilisation and deeply rooted in the country's history, is currently valorised to strengthen the national identity of local Arab values. The country aspires to preserve heritage sites and the local environment by promoting hospitality services for tourism. In the last years, Muslim pilgrims and all visitors to heritage sites entering the country from abroad have reached eight million people, tripling the numbers in the last decade. The government has started many initiatives and promoted many urban planning processes, programmes, and projects to enhance the touristic offer. The intent is to reach a sustainable approach to target the healthy growth of the country and the Saudi Arabian cities. The article presents some interventions that are currently under development to pursue the Saudi Vision 2030 and its goals. The recent third expansion of the Two Holy Mosques, the modernization of national airports, and the Mecca Metro project to complement the railroad and train public transportation offer will be presented and discussed as part of the national strategy to achieve a sustainable economy and tourism.

Keywords

healthy cities; public health; Saudi Arabia; sustainable economy; urban planning; walkability

Issue

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1. Introduction: Saudi Arabian Global Excellence, a Pioneer in Urban Growth, Targeting Healthy Cities, and Promoting Heritage Conservation

In recent years, Saudi Arabia has opened its doors to new growth, embracing the opportunity of adopting new strategies as a pioneer for a sustainable approach in the post-oil era. The country faces a new economic boom that involves many aspects of society, including promoting new businesses and local and international investments in tourism. The government has recently invested many efforts in conserving the country's national heritage to enhance the local values and strengthen tourism promotion and business. The national target is to adopt differentiated strategies of sustainability to afford the

post-oil era and build a future based on new resources through a multisectoral change targeting the healthy growth of the country and the well-being of communities. The change has strategically been linked with the growth of many sectors, including public transportation and healthy lifestyle considerations in constructing new Arabian globalised cities.

The health condition of a population is based on a complex interaction of factors that affect the whole life of the community. As stated by the National Health Center and the World Health Organization (World Health Organization & UN-Habitat, 2016), some conditions of life affect the health status of a population, such as education, transportation, housing, public spaces, employment, and industry. They must be considered in

establishing political practices for planning the healthy growth of any country. Based on the evidence, the approach I will be following in this article to study how urban planning policy impact health and how to improve synergies and positive effects is the health impact assessment (HIA; Douglas et al., 2001). The HIA provides a combination of instruments, procedures, and methods adopted for having potential effects on the healthy condition of the population.

Saudi Arabia's growth targets global excellence and follows the World Health Organization Healthy Cities programme and HIA, aiming at reaching the goal of health as a priority through health considerations in urban planning processes and strategies. The communities' well-being, especially in fast-growing countries such as Saudi Arabia and the Middle East, has raised the importance of implementing sustainable healthy growth by developing urban heritage preservation programmes to enhance local traditions and embed the communities with a sense of social belonging. The preservation programme will mainly impact the effect of tourism on urban development through national heritage promotion. The appropriate urban planning and landscape design combined with heritage conservation can promote and encourage interactions and social connections of the population and the general healthy conditions of a nation (Barton & Tsourou, 2000).

This article presents some examples of how the rise of heritage values can enhance the valorisation of the health of communities' lives by improving national public transportation, urban heritage branding strategies, promoting social life, and the quality of life in public spaces.

2. Literature Review: The Governing Policies in Creating Liveable Communities and Healthy Cities

The liveability indicators and health impact factors are fundamental for the economy, social inclusion, and public health of all populations. All levels of government internationally recognise the importance of the liveability factors for safe, habitable, and healthy communities that are responsible for building up an environmentally sustainable future for the cities. Public transport, walking and cycling infrastructures, open public places, social and recreational opportunities, cultural spaces, and education are fundamental indicators that usually help implement the governing policies of cities and help create liveable, healthy communities. Such national health and liveability indicators are adopted to compare cities and help urban design strategies, infrastructures, and services needed to achieve healthy growth.

Many authors (Campbell, 1996; Davern et al., 2016; Giles-Corti et al., 2015; Lowe et al., 2015; Samet, 2011) debate the importance of urban planners in making fundamental decisions. They must promote sustainable development, enhance the use of green strategies, and advocate for healthy societies, especially for the post-oil growth of Arabian cities. The conflicts between ecolog-

ical, economic, and political processes are not purely abstract but are essential for the environment, health, and economy of the entire world. The term "healthy" is strictly connected with the term "liveable," which is widely adopted and debated in urban policies worldwide. Although the definitions are not yet clearly stated in urban policies or literature, "liveable" and "healthy" communities are both linked to many similar indicators such as socially inclusive, safe, attractive, environmentally sustainable, affordable, accessible, easily connected with public economic transportation, walkable and cyclable, provided with public open spaces, health infrastructure for community services, educational and cultural leisure, and entertainment opportunities (Lowe et al., 2015). Liveable cities improve the health of communities and the sustainable economic growth of every country (World Health Organization & UN-Habitat, 2016). The achievements of the United Nations Sustainable Development Goals (United Nations, 2015) and New Urban Agenda (United Nations, 2016) are encouraged by promoting and adopting healthy strategies to design liveable communities by adopting urban design and planning that create walkable and pedestrian-friendly neighbourhoods. Walkable residential areas have higher residential densities and provide well-established benefits and a healthy lifestyle by reducing the risk of major chronic diseases and reducing obesity (Giles-Corti et al., 2015). Public transportation services and facilities minimise traffic congestion, air, and noise pollution and are also associated with the quality of mental health (Kjellstrom & Hinde, 2006). Public transport facilities are linked to transport-related walking, reducing the risk of obesity, which is estimated to increase by 6% for each hour spent driving a car (Frank et al., 2004). Cars and motorbikes are associated with traffic injury risks that are a significant cause of death and global disability (Giles-Corti et al., 2016). Easy accessibility and reachability of public open spaces are fundamental to increasing the community's urban life quality and creating attractive, convivial environments (Villanueva et al., 2015) that improve people's health, life, and well-being. High-quality public open spaces improve mental health by promoting open-air physical activities and a recreational, social environment (Giles-Corti et al., 2016; Sallis et al., 2011).

The current trend in the growth of globalised cities in Middle East Countries, subjected to increased densification, is the decline of public and semi-public open spaces due to ongoing privatisation. Such fundamental topics of research and discussion are critical for the world population's health and well-being (Davern et al., 2016), and should be connected with the public spaces' accessibility. The improvement of the population health conditions in the Middle East in the post-oil era is currently based on adopting unique urban settings and planning strategies that support delivering healthy and sustainable communities by following the latest international development strategies and the use of HIA in urban planning. Governmental institutions and practitioners face

fundamental challenges in providing alternatives and solutions that enhance health and well-being in urban settings worldwide (Vohra, 2007). Political institutions, planners, and health professionals will be requested to ensure the effectiveness of the HIA impact assessment targeting well-being achievement through diverse strategies of urban proposals and policies adopting adequate scales of development (Thompson, 2007). With the predicted increases in urban population and the growing spread of cities, the urban environmental strategies will impact the population's physical and mental health.

Many results have been achieved in the profession of town planning for the people's well-being and health, especially with the heritage conservation and the replacement of old city centre slums, crowded and neglected, transformed into a new urban environment to promote social cohesion and a sense of community belonging through the preservation of traditional values. Worldwide, the health system has recognised the importance of culture and history, improving individual and community well-being with many examples of urban planning and conservative development that restore heritage and reuse ancient architecture by enhancing the residents' life quality. The article presents the selected case studies of urban heritage preservation projects that have involved ancient residential areas and promoted the healthy lifestyle condition of inhabitants. The research explains how sustainable heritage conservation and cultural values' enhancement, combined with strategic interventions for implementing public transportation and promoting open spaces and services for communities, are combined in designing healthy cities in Saudi Arabia.

3. Heritage Preservation

3.1. *Promotion of Tourism Offer, Transportation Development, and Healthy Growth of Cities*

Many new opportunities have recently been launched in the Kingdom of Saudi Arabia to promote diversification for economic growth by improving the quality of the services through the privatisation of some activities and the enhancement of the business sector with many connections, both locally and internationally.

The aim is to build a healthy, sustainable future based on the commitment of the government and private services to meet the needs of the citizens and to build up a prosperous country starting from the heritage values of its origins (Mazzetto & Petruccioli, 2018). The requalification of the Saudi Islamic heritage, deeply rooted in the past of ancient societies and commercial trades, is currently an important part of the Saudi Vision 2030 (GOV.SA, 2016) to promote the Arab cultures and Islamic values and enhance national identity (Mazzetto, 2018). Many national interventions have been recently launched to restore heritage and requalify the ancient local culture and improve public accessibility by promoting cultural events and festivals to attract

visitors, improve the tourism offer and enhance social cohesion (Bonita, 2006). The country has always been devoted to hospitality and tourism offered to Muslim pilgrims coming from all over the world. Saudi Arabia has a relevant role in the Islamic religion and has been consistently associated with hospitality to all Muslims and visitors to the two Holy Mosques and the Islamic holy sites. The number of visitors entering the country for tourism (heritage and religious) has tripled in the last decade, reaching eight million people. However, the Covid-19 pandemic has restricted the accessibility to all sites and reduced the number of visit visas. The religious tourism offer and Saudi Arabia's hospitality to pilgrims have always been part of the national programme for religious heritage promotion with the recent third expansion to the two Holy Mosques in Mecca and Medina. To improve the tourism offers, the country has also launched the Mecca Metro project to increase the railroad and train service capability to serve the visitors of the Holy Mosques. Recently, strategic modernisation has also been announced to increase the capacities of the Kingdom's airports, together with the national transportation programme, including the Saudi cities' metro projects. The transportation system is crucial for the urban development of cities in Saudi Arabia by providing mobility for people. It can influence the growth pattern (Priemus et al., 2001) and many economic levels through land accessibility (Meyer & Miller, 2001), including the reachability of many neglected Saudi heritage sites. Transportation is considered one of the main reasons for urban growth (Bhatta, 2010), being a complex network that can shape many social, geographical, environmental, and economic factors for the healthy life of communities (Wang et al., 2008).

Since transportation plays a vital role in every country's economic growth, in Saudi Arabia, transportation is strongly associated with environmental sustainability and the improvement of the population's health conditions. Many Saudi governmental institutions cooperate among sectors and high-level political management to enhance the transportation offer and promote a healthy life with the valorisation of culture through the heritage restoration of old urban settlements (Figure 7).

In 2000, the Saudi Commission for Tourism and National Heritage was established by the Saudi Council of Ministers as the first government institution to promote heritage preservation and the tourism sector in the Kingdom. In 2020, the Saudi Heritage Commission was established under the Ministry of Culture, and, in 2021, the National Antiquities register was founded with the intent to record and preserve the historic, cultural, and archaeological sites in the Kingdom. The commission is responsible for the development, preservation, and maintenance of the national Saudi heritage and for boosting the cultural economy in the country and internationally by respecting principles of sustainability.

The Saudi Heritage Preservation Society (SHPS) was also established in 2010 as a charitable society to

preserve the national heritage. It is currently one of the most important international nongovernmental organisations involved in safeguarding heritage.

This article presents the selected heritage conservation projects completed or under completion in the main cities of Saudi Arabia. It discusses how the interventions have been combined with transportation services' improvements to promote the touristic offer by generating beneficial effects on the living conditions of the cities inhabitants.

The criteria for selection of the case studies and the analyses have been based on the literature review and bibliographic research. The approach has selected the most important cities starting from the capital and moving to the most known for heritage and tourism. Additionally, the criteria of the most advanced and well-served areas for transportation and communication have been considered. The methods to classify all the governmental institutions involved not only with heritage rehabilitation but also with the national transportation strategy and the urban planning approaches for the healthy growth of cities (Figure 7) have been based on holistic criteria for understanding the ongoing current collaborations between institutions and possible future connections to improve the interaction and sharing of information.

The national urban planning strategy has involved many ministries and governmental institutions, as listed and compared in Figure 7, to promote collaboration by adopting the online unified national platform Saudi National Portal for Government Services (GOV.SA, 2021). The discussed projects are selected in the most important cities of Saudi Arabia, characterised by recent interventions developed to improve the tourism offer and heritage restoration:

- Mecca and Medina: Two Holy Mosques, expansion projects;
- Old Jeddah: Al-Balad historical city centre, urban preservation;
- Riyadh: At-Turaif District in Al Diriyah and Al Janadriyah cultural and urban heritage preservations (Figure 1).

The research methodology has analysed and compared the selected case study in terms of the governmental institutions involved in supervising the heritage interventions, classifying the categories of the projects, analysing the implementation of the transportation projects for each case study, and the tourism sector (cultural, social, religious) that is targeted to enhance the heritage reuses.

3.2. Mecca and Medina: The Two Holy Cities' Growth

Saudi Arabia has an ancient religious and architectural history with a rich number of ancient mosques from the origin of the Islamic era. The country is the home of the Two Holy Mosques. Since 2018, many projects have been launched by Crown Prince Mohammed Bin Salman to restore more than 130 historic religious buildings. The National Religious Heritage counts about 1,300 historical mosques in various regions of the Kingdom under the Saudi Heritage Commission's supervision. Each mosque dates back to different periods of Islamic architecture. About 30 historic mosques have already been completely restored, including the Al-Duwaihra Mosque in Diriyah and the Al-Hanafi Mosque in Al-Balad, Jeddah.

One of the most recognised responsibilities of the Kingdom is the valorisation of the religious site of the Two Holy Mosques, and the governmental authorities have recently resumed the third expansion phase of the project at Mecca's Grand Holy Mosque after the



Figure 1. At-Turaif District in Al Diriyah, Riyadh: Physical model of the urban regeneration project and the new phases of development in the Diriyah Gate Development Authority main office.

corona-virus interruption. The Custodian of the Two Holy Mosques Programme provides pilgrims and visitors of the Grand Mosque in Mecca and the Prophet’s Mosque in Medina with the highest services. The programme received the award for best government initiative in the Kingdom by increasing the buildings’ capacity to accommodate pilgrims and enhancing the main gates, entrances, and minarets in coordination with the infrastructure projects supervised by the Construction Management Office of the Ministry of Finance.

In this region, the transportation system was quickly developed due to the large number of pilgrims and visitors who annually visited the two holy cities of Mecca and Medina. In the past, the expansion of the asphalted roads started in 1970 (Aldagheiri, 2009) during the pre-oil period to facilitate the pilgrims’ movements through the territory. Some years later, in 1979, the Saudi Public Transport Company was established as the governmental institution responsible for national transportation. Nowadays, it operates about eight million people’s monthly transportation among the Kingdom’s cities. It also operates special bus services during the Hajj pilgrimage, carrying approximately 15,000 pilgrims between the two holy sites. In Medina, there is a sophisticated bus service with 10 lines that connect the different regions and serve the holy sites in combination with the Mecca Metro (Figure 2), a rapid system for connection, including the line Al Mashaaer–Al Muqadassh in Mecca city known also has Hajj Metro Train. Completed in 2011 and claimed to have the highest capacity in the world, it has drastically reduced traffic congestion to a minimum due to busses, cars, and

motor vehicles in transit in the holy city of Mecca during the Hajj period. Another important metro is the three-line extension of the public transportation master plan in Medina, announced recently by the Al Medina Region Development Authority. The Kingdom metro public transportation also includes the Riyadh Metro project (Figure 3) in the capital city, which is almost completed with the Jeddah Metro project, still under completion and expected to be open in 2025. In the Kingdom, the Haramain high-speed railway line was completed in 2017. It consists of 453 km of railways to connect the two holy cities of Mecca and Medina with the King Abdulaziz International Airport and the economic city centre in Jeddah.

Additionally, a new expansion phase for King Abdulaziz International Airport in Jeddah has been announced. The airport is the busiest in Saudi Arabia, known especially for its Hajj terminal dedicated to pilgrims annually directed to visit Mecca and Medina. The airport has a passenger capacity of 80,000, and it accommodates the highest number of aircraft in the world. The airport has undergone extensive expansion phases in the past years. The first expansion was completed in 2017 and has expanded its capacity to 30 million passengers annually. The second phase will be completed by 2025 by expanding the capacity to 43 million. The last announced phase to be completed in 2035 is planned to expand the airport capacity to 80 million passengers annually, becoming the largest airport in the world.

The high level of complexity in Jeddah’s transportation system and the entire Kingdom will create urban

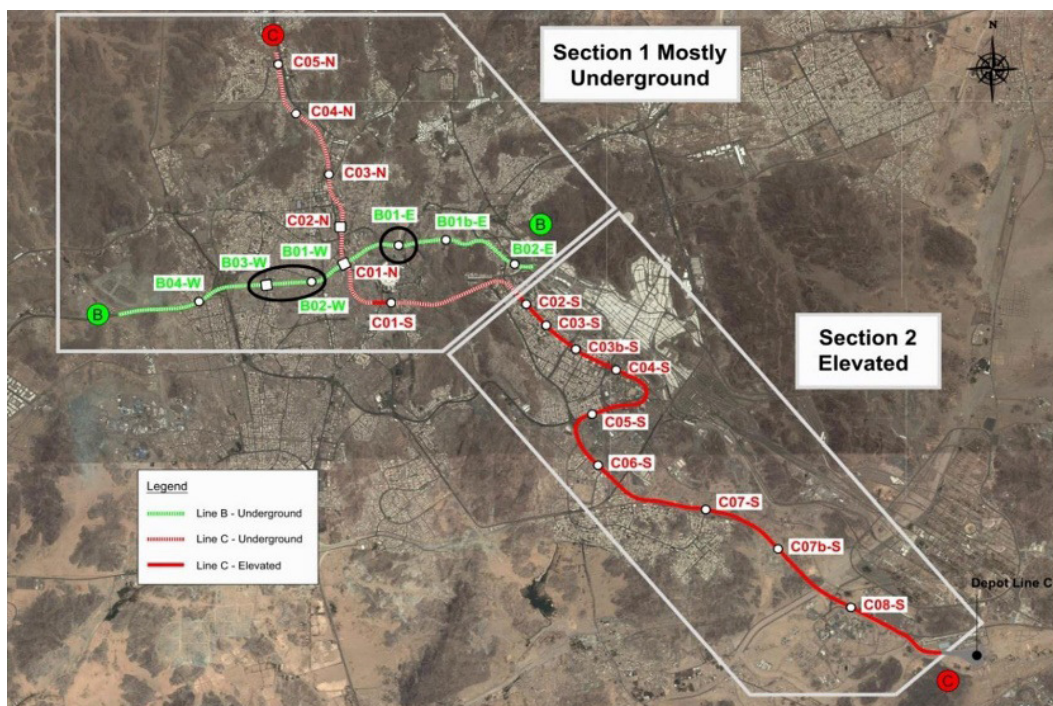


Figure 2. The Mecca Metro map consists of four lines and the public transport is operated by Mecca Mass Rail Transit Company. Source: 3TI Progetti (n.d.).

growth and healthier living conditions by improving the tourist offer and reducing the risk of diseases and injuries due to traffic congestion and the high risk of accidents.

3.3. Old Jeddah City Centre Al-Balad

As part of the country's growth (GOV.SA, 2016), to create an attractive investment environment for local and international investors and promote tourism offer combined with sustainable heritage restoration and healthy city growth, the Saudi governmental institutions have completed many extensive urban heritage preservation projects linked with enhanced public transportation and connections between the Kingdom's cities. The interventions involved not only religious sites but many heritage urban settlements.

The Historical Old Jeddah dates back to the seventh century and has many examples of the traditional Hijaz architecture typical of the Western Arabian Peninsula. The district is also called Al-Balad and has been inscribed on the UNESCO world heritage list since 2014 (UNESCO, 2014).

To strengthen the value of international recognition, the site has been preserved by the intervention of public authorities and the owners of some historical buildings. The interventions were partially financed by public funds and partially by private funds, under the Saudi Authorities' supervision of the Al-Balad Historical Area Preservation Department, established in 1990, to promote cultural tourism in the area. In 1991, the municipality founded the Jeddah Historical Preservation Society to preserve the historical architecture and culture of Al-Balad and strengthen its cultural identity.

The authorities have also financed the improvement of the public infrastructure in the area by promoting the healthy condition of the neighbourhood and the tourism offer of the site with high levels of comfort and safety, enhancement of cultural values, and pleasing entertainment experiences. The area has become a well-recognised tourism destination where tourists appreciate heritage values and culture (Alawi et al., 2017).

The Old Jeddah is located in the centre of contemporary Jeddah city. It has always been recognised as the commercial area and the main gate for pilgrims to Mecca. It includes many heritage residential buildings, the Old Jeddah defensive walls, six defensive towers, and the fort. There are many mosques, such as Al Pasha Mosque, Al Shafi'i Mosque, Uthman Ibn Affan Mosque, Al Hanafi Mosque, Al Memar Mosque, and Akash Mosque.

During the early 20th century, the defensive walls were replaced for urban growth and the modern expansion of the city. The area is currently subdivided into many neighbourhoods with specific names due to the local cultural heritage buildings or traditions that attract many tourists every year and are essential elements for enhancing the local tourism industry (Alzua et al., 1998).

About a thousand heritage buildings in Old Jeddah have survived after many years of being neglected. Half

of them have been classified as "buildings of architectural and historical significance" and subject to preservation and protection. Many abandoned houses in old Jeddah have been restored and reused to revitalise the site. In addition, many festivals (Helmy, 2008) are arranged every year to create new links with the cultural traditions and merge the old and new generations.

In Old Jeddah, the massive national investment in urban heritage preservation has promoted tourism offers by linking the site with public transportation and promoting the healthy development of the city through the improvement of living conditions and health protection due to the risk reduction of traffic accidents. The Saudi government has launched many mega infrastructure projects in the city of Jeddah (Figure 3) linking the Corniche Tram, the Old Jeddah city centre, and the Jeddah international airport (King Abdulaziz International Airport). The transportation projects are not only targeted to improve the public services for the Mecca and Jeddah region but also for pilgrims and visitors. Particularly, public intervention in Jeddah will be supported by new services of light rail, train, and bus networks under development, in an integrated public transportation system.



Figure 3. The Jeddah Metro map consists of four lines. Source: HiJazzezy (2016).

3.4. Riyadh: At-Turaif Urban Preservation and Al Janaderiah Heritage Festival

In the capital city of the Kingdom, Riyadh, many other urban heritage preservation projects have been completed to enhance cultural values and promote touristic offers. At-Turaif Quarter in Al Diriyah, which has been listed in UNESCO World Heritage since 2010 (UNESCO, 2010), is located on the west side of Riyadh in the valley of Wadi Hanifa. The area is an important historical settlement for the unification of the political powers in Saudi Arabia and was recently converted and reused as a sustainable open-air museum where one can observe the traditional Najdi heritage and architectural style. The site dates back to 1744 and lasted till 1818 after being occupied during the Ottoman-Saudi war. It was the ancient capital city of the Saudi royal family, founded in the 15th century and later expanded during the 16th century. The site grew at the beginning of the 19th century, becoming the new Saudi capital under the government of the Saud family. The fortified royal palace resisted many invaders' attacks and was the most secure centre of At-Turaif, with the Salwa palaces located in the citadel. The site is a valuable example of Najdi town planning from the mid-18th century until the 19th century. Buildings are constructed with adobe materials adopting special construction techniques to resist extreme weather conditions. The urban preservation started in 2009 and has brought a new life to the old urban settlement. The urban preservation programme was carried out under the supervision of the Diriyah Gate Development Authority, a governmental institution established in 2017 to preserve the UNESCO site. In the Al Bujairi pedestrian area, there are many cafes and craft shops, close to the Diriyah Museum, where one can learn about the local Saudi history and visit the restored Al-Zawihra Mosque. The At-Turaif Bath House has been entirely restored to demonstrate the use of space in ancient times. The sustainable reuse of the At-Turaif heritage site has brought new life to the ancient socio-cultural characteristics of the place. The requalification of the urban area has promoted tourism and offers visitors a sense of attachment to the local tradition. New touristic entertainment and the enhancement of public open spaces have strengthened local historical values. From a socio-economic point of view, the conservation project has improved the importance of old areas after being abandoned for many years in alignment with the Saudi Vision 2030 (GOV.SA, 2016) of sustainable economic growth.

Urban preservation includes a temporary transformation of the public domain of the urban space. By adopting a "branding urban heritage" approach (Helmy, 2008), the old site of Al Janaderiah in Riyadh has been preserved and valorised by promoting its annual cultural and heritage festival. Sponsored in 1985 by the Saudi Arabian National Guard, the festival revitalises traditional activities and sports, including camel races, falconry, arts, his-

tory, classic art, and craft. Public life is enhanced by the space utilisation of particular cultural events.

Every year, during the annual festival, the new dimension of the public spaces in the city improves the cultural and historical perception of the heritage site and is strongly focused on cultural tourism. Every year, the cultural event attracts many local and international investments and encourages tourism offer.

The urban revitalisation is an example of the Saudi Vision 2030 promotion of urban growth through the valorisation of cultural tradition and areas financed by the governmental authorities to stimulate local and international investment in tourism and promote sustainable and economic development. The urban heritage festivals have the advantage of strengthening the identity of the place and improving its economic value.

The heritage intervention has enhanced the quality of local inhabitants' lives, provided better conditions in the public realm, and improved the sense of belonging to the heritage sites by preserving the local identity and urban life. The restoration has promoted the accessibility to historical areas within the cities and increased the overall health of the urban public spaces.

Riyadh is a fast-growing city with many ongoing projects and business opportunities. The heritage interventions have been linked to the last changes in public transportation. In the previous 25 years, Riyadh has relied only on the capacity of the road infrastructure, basing the capital population's main transportation on cars. Riyadh's inhabitants (around seven million) in early 2000 had no public transportation. However, recently, the government authorities Riyadh Public Transport Project have approved a complex strategy to realise a public transportation system consisting of six world-class metro lines (Figure 4) and a comprehensive bus network to link the city centre and the metropolitan areas together, and with international connections (King Khalid International Airport). The intent is to promote the sustainable and healthy growth of the capital, reduce the use of individual cars and traffic congestion, and improve inhabitants' safety, life condition, and comfort, as promoted by the Royal Commission for Riyadh City (Figure 5).

The capital's inhabitants are expected to reach 15 million by 2030, following the Saudi Vision 2030 (GOV.SA, 2016). The intent is to deliver sustainable public transportation that will link the heritage sites with the local and international tourism offer through sustainable public connection and transport.

The ambitious programme of the Royal Commission for Riyadh City targets the sustainable and healthy growth of the capital to reform its economy and society and to address the challenges of its sustainable environmental development appropriately.

The accessibility of public networks is expected to increase the city's public transport from 2% to around 20%, satisfying the growing population's demand while reducing traffic jams and improving air quality and healthy living conditions (Figure 6).

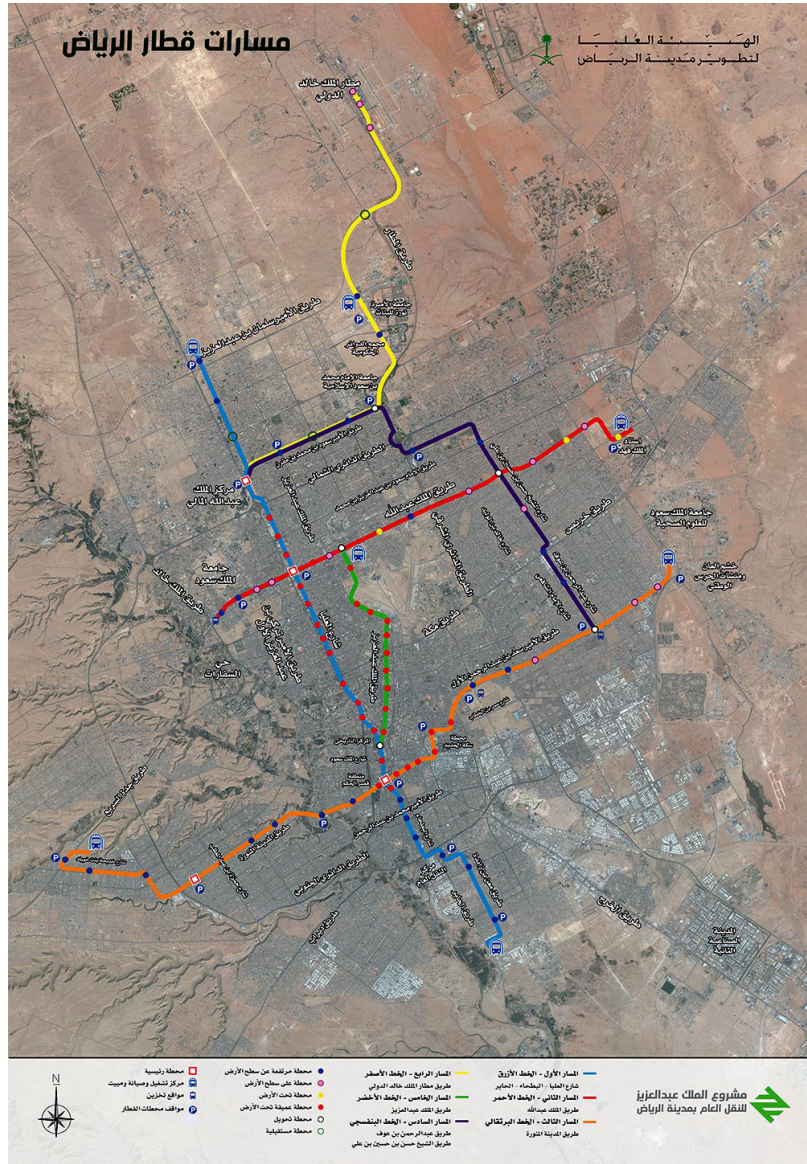


Figure 4. The Riyadh Metro map consists of six main lines with 176 km in length and 85 stations in total. Source: Royal Commission for Riyadh City (n.d.).

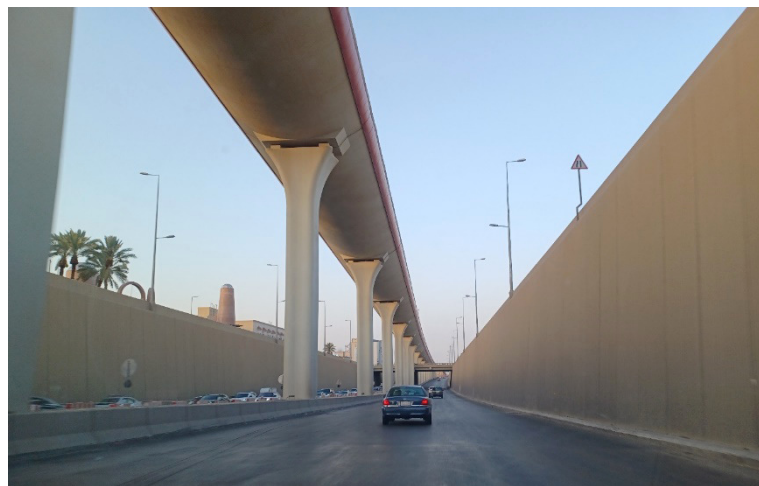


Figure 5. The Riyadh Metro: Work in progress for the metro line.



Figure 6. The Riyadh Metro project: Work in progress, pedestrian bridge for the metro station.

Saudi Arabia has recently started to put its hands on the planned airport expansion, which is part of its programme to diversify the economy, create jobs, and reduce dependence on oil revenues. To support the rapidly expanding population and post-oil economy, the Kingdom authorities have announced the expansion of the three major airports in Damman, Jeddah, and Riyadh. The Riyadh King Khaled International Airport has seen a rapid increase in passengers over the last two decades by almost duplicating the demand. The primary intent is to satisfy the estimated future capacity of 140 million passengers each year, support the country's fast growth and improve the tourism offers together with international business.

4. Conclusions

In conclusion, Saudi Arab and Islamic heritage is based on ancient civilisation and commercial international trade routes. The national heritage is deeply rooted in the country's history. Saudi National Vision 2030 (GOV.SA, 2016) promotes its preservation to strengthen national unity and identity. The aim is to transfer the heritage values to Saudi future generations and also to promote Islamic and Arab history with heritage tourism. The Kingdom has recently started many initiatives and many urban planning processes. Programmes and projects target healthy growth of the country and its cities. The presented heritage conservation projects completed or under completion in Mecca and Medina (Two Holy Mosques expansion projects), Old Jeddah (Al-Balad urban preservation), and Riyadh (Al-Turaif and Al Janadriyah cultural and urban heritage preservation) have promoted the local cultures and improved the tourism offers of the Kingdom as part of the national strategy to achieve a sustainable economy and healthy growth in the post-oil era. The aim is to provide tourists with high services and excellent public transportation hubs to promote sustainable and healthy cities. The Kingdom's multi-sectoral development has affected many ministries and governmental institutions that are strictly connected to the national growth strategy. It is

recommended to promote collaboration between institutions through the unified national platform Saudi National Portal for Government Services (GOV.SA, 2021) to coordinate the urban planning strategies and provide collaborative responses on how land-use, transport, infrastructure, and heritage requalification can be properly planned and strategically linked to health considerations in the urban planning process for the growth of Saudi cities (Figure 7).

The research has compared the selected case studies in the main capital and cities of the Kingdom that are currently under development for improving the tourism offer and the health conditions of inhabitants as targeted in the Saudi Vision 2030 (GOV.SA, 2016; Table 1).

The case studies selected for the main cities of the Kingdom present diverse interventions on heritage rehabilitation both at architectural and urban scales. Each intervention has been supervised by different governmental institutions showing the complexity of interactions and collaboration between diverse departments and various ministries and the specificity of each case study. All the heritage interventions have been implemented with the improvement of transportation systems linking the international connection of the main cities' airports with the local transportation hubs of metros, trains, and buses. The intervention aims to provide a better service to the users of heritage sites by implementing various sectors of targeted tourism, subdivided into three main categories: religious pilgrims, cultural tourists, and social tourists. Table 1 shows the framework to link urban conservation initiatives with changes and improvements in public transportation as central concepts of the research and presented the main following liveability indicators and improvement of health conditions:

- Walkable and pedestrian-friendly heritage site;
- Easy accessibility and reachability of public open spaces;
- Promoting open-air physical activities, recreational and social environments;
- Reduction of obesity risks;

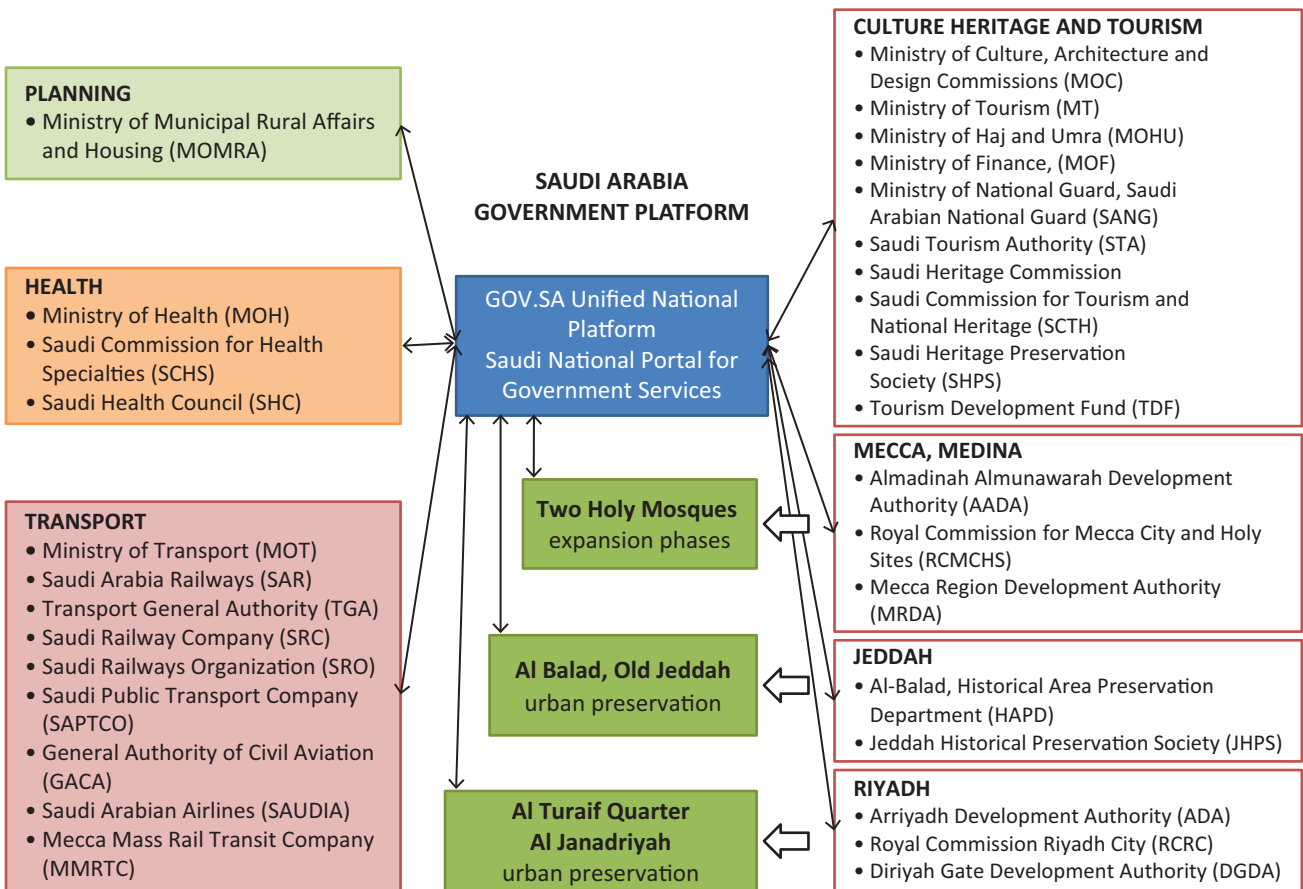


Figure 7. The unified national platform Saudi National Portal for Government Services: Proposed framework for collaboration between ministries and governmental institutions.

Table 1. Comparisons between the analysed heritage rehabilitation projects, showing the improvement of the transportation systems of the selected case studies and the enhancement of tourism sectors.

City	Heritage Project	Government Institution	Project Categories	Transportation Interventions	Tourism Sector	Healthy and Liveable Cities
Mecca	Grand Holy Mosque	Royal Commission for Mecca City and Holy Sites	Architectural preservation, expansion projects	<ul style="list-style-type: none"> • King Abdulaziz International Airport • Mecca Metro project • Hajj Metro • Haramain high-speed railway 	Religious tourism	<ul style="list-style-type: none"> • Traffic congestion reduction • Accidents reduction • Minimised air and noise pollution • Improved health conditions • Promotion of cultural/religious values
Medina	Prophet's Mosque	Almadinah Almunawarah Development Authority	Architectural preservation, expansion projects	<ul style="list-style-type: none"> • King Abdulaziz International Airport • Mecca Metro project • Hajj Metro • Haramain high-speed railway 	Religious tourism	<ul style="list-style-type: none"> • Traffic congestion reduction • Accidents reduction • Minimised air and noise pollution • Improved health conditions • Promotion of cultural/religious values
Old Jeddah	Al-Balad	Al-Balad Historical Area Preservation Department	Urban preservation	<ul style="list-style-type: none"> • King Abdulaziz International Airport • Jeddah Metro project • Tram, train, light rail, and bus networks 	Cultural and social tourism	<ul style="list-style-type: none"> • Walkable and pedestrian-friendly heritage site • Easy accessibility and reachability of public open spaces • Reduction of obesity risks • Promotion of cultural and social values
Riyadh	At-Turaif District in Al Diriyah	Diriyah Gate Development Authority	Urban preservations	<ul style="list-style-type: none"> • King Khalid International Airport • Riyadh Metro project • Bus network 	Cultural tourism	<ul style="list-style-type: none"> • Walkable and pedestrian-friendly heritage site • Easy accessibility and reachability of public open spaces • Reduction of obesity risks • Promoting open-air physical activities and recreational, social environments • Promotion of cultural values
Riyadh	Al Janadriyah	Saudi Arabian National Guard	Cultural and urban preservations	<ul style="list-style-type: none"> • King Khalid International Airport • Riyadh Metro project • Bus network 	Cultural and social tourism	<ul style="list-style-type: none"> • Walkable and pedestrian-friendly heritage site • Promotion of open-air recreational and social environment • Promotion of cultural and social values • Promotion of social cohesion and community sense of belonging

- Promotion of cultural and social values;
- Promoting social cohesion and community sense of belonging;
- High-quality public open spaces improve mental health by promoting open-air physical activities and a recreational, social environment.

In the post-oil era, the population health conditions and quality improvements in Middle East lives are fundamental for urban settings and planning strategies to deliver healthy and sustainable communities.

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Conflict of Interests

The author declares no conflict of interests.

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