Ekistics
and the New Habitat
The problems and science of human settlements

SPECIAL ISSUE

Saudi Vision 2030 - Habitats for Sustainable Development

Guest Editor: Dr. Yenny Rahmayati
Prince Sultan University, Saudi Arabia

2021, Volume 81, Issue No. 2
ISSN 2653-1313 (Online) | **Journal DOI:** https://doi.org/10.53910/26531313 (CrossRef)
Editor-in-Chief: Kurt Seemann | editor@ekisticsjournal.org
Publisher: Oceanic Group – World Society for Ekistics in affiliation with Federation University and Swinburne University of Technology, Australia | **WEB:** https://www.ekisticsjournal.org/ | **Cover Design:** Chyntia

Ekistics and the new habitat: the problems and science of human settlements

The International Journal of *Ekistics and the New Habitat* is an online double-blind, internationally peer reviewed research journal. The journal publishes scholarly insights and reflective practice of studies and critical writing concerning the problems and science of human settlements. The field of Ekistics is mapped against a classification of settlement scale, from the remote village and rural township to global systems of dense smart cities, and increasingly the challenges of on-and-off world sustainable habitats.

In broad terms, papers in *Ekistics and the New Habitat* contribute to the scholarly discourse about the systemic nature of how humans design, build, link-up and transform their world. Articles examine empirical and non-empirical research and ideas that critique the necessary relationship between people, our human settlement designs and technological systems, and our natural and designed habitat. Models, case studies, rigorous conceptual work, design critique, smart-citizen education for smart cities, resource flows, network behaviour, and reflective practice are published in order to continually improve and advance the application of integrated knowledge that defines the epistemic telos of Ekistics.

History and back issue archives

Ekistics and the New Habitat: the problems and science of human settlements is the 2020+ online and revised continuation of the ground-breaking and influential ideas published throughout the preceding print version of the journal in *Ekistics: the problems and science of human settlements* 1957-2006.

- Back issues are lodged with our archive partners at JSTOR: https://www.jstor.org/journal/ekistics

Standard Call for Papers.

There are few scholarly journals whose papers archive the evolution of development and thought tracing back to 1957: *EKISTICS* is a rare exception. This background makes for an extraordinary historical collection of research and practices documenting how humans have colonised the planet and transformed our built habitats. The journal seeks papers from students, post-graduate candidates, academics and practitioners. We seek papers, typically of a cross-disciplinary nature that:

- Target any aspect of the *United Nations New Urban Agenda, in Habitat III*, including reference to the *Sustainable Development Goals* .
- Critiques *local, regional and global policy* of human settlement development, design and planning, and urban transformation
- Offers a critical description of the *core elements that define the liveability of human settlements* such as:

  NATURE: Habitat foundations. How settlements rely upon, interact with, alter, or produce living ecologies, biodiversity, and climate.

  PEOPLE: Physiological/biological and social-psychological needs and constraints. How settlements rely upon, interact with, or affect people's livelihood, safety, embodied and shared knowledge and skills, security and well-being – whether they are transiting visitors, settlers (citizens), or neighbours of settlements.

  SOCIETY: Social, economic, educational systems, fiscal and political organisation. How settlements rely upon, interact with, or are affected by governance and leadership, vicarious or present communities, groups, markets, cultures, beliefs and values.

  SHELLS: The envelopes that contain settlement functions. How the design, technologies and places created, altered or removed in settlements affect the functions and amenity of the settlement from the scale of personal shelter to the home, to urban business districts and precincts, to towns, cities or regions.

  NETWORKS: Node-to-node systems and flows of resources, waste, data, people and information and communication systems. How the design, technologies and transport of goods, waste, energy, resources, water, food, people and information affect a settlement's functionality, amenity and viability.

  SYNTHESIS: Combined, coherent design and knowledge. Physical design and planning; Ekistics theory expressed through evolving models and principles of habitat. How systems of systems may differ from small and remote, to large and urban-dense settlements and linked-up settlements in regions.

This journal invites and accepts three types of submissions, all double-blind and internationally peer-reviewed for their type:

*IMAGES: Must be in *. jpeg or *.png file format and upload as separate files with their submission and an optimised resolution clarity for web viewing and download. Authors assume responsibility for assuring they have copyright permissions and may be required to show proof.*

1. **Scholarly articles/reviews (full papers, double-blind review):** typically, with title, authors, institutional affiliations, abstract, keywords, body text (5000-7000 words), and APA 7th References at the end of the article. Body text typically includes:
   a. an introduction to a problem or topic outlining the need for or goals of the research,
   b. the key prior papers in Ekistics archives and other sources that best relate to the topic,
   c. the methodological or conceptual framework and methods used,
   d. a summary of key results or findings,
   e. a critical concluding discussion
   f. the Editor assigns papers to their best-fit classifications in the Ekistics grid index.

2. **Scholarly essays/extended abstracts (double-blind review):** typically, with title, authors, institutional affiliations, keywords, body text (1000-2500 words), and APA 7th References at the end of the article. These shorter submissions are well placed for academics and practitioners seeking to share a critical reflection of an issue, or for first-time students seeking to publish an academic submission (often co-authored with a mentor/supervisor). They may focus on a think piece style of critique, or a project in process, or a topic of interest for a geo-location or generic issue. Short ***Essays/Extended-Abstracts may be tested in Ekistics*** before a full paper version is submitted elsewhere.

3. **Practitioner, industry or citizen think-piece (short article only, peer review):** typically, with title, authors, regional/organisational affiliations, keywords, body text (500-1000 words). *A Citizen Think-piece* may be up to 3000 words. Where appropriate, APA 7th References at the end of the article may be included. These shorter submissions are well placed for practitioners, industry or citizens to raise provocative ideas to which we invite the research community to respond in subsequent issues.

We welcome book reviews. Submissions are copy-edited, normally 300-500 words, designed to share with the readership community interesting or provocative volumes, monographs, or edited books that may be of interest to scholars, practitioners and students of human settlements, Habitat III New Urban Agenda, and the Sustainable Development Goals of the United Nations.

Publisher: World Society for Ekistics – Oceanic Group | C/o Prof. Kurt Seemann (Editor-in-Chief) | PO Box 2065, Belgrave Vic. 3160. Australia. URL: https://ekisticsjournal.org/

ISSN 2653-1313 (Online) - Australia - 2021+
Journal DOI: https://doi.org/10.53910/26531313 (CrossRef)

EDITOR'S DESK

ENVISIONING ENTOPIA!

2021, Vol. 81, Issue 2

Welcome to the special issue: *Saudi Vision 2030 - Habitats for Sustainable Development.* Led by Dr Yenny Rahmayati of Prince Sultan University, Saudi Arabia, this issue presents a range of responses to the ambitious project inspired by Crown Prince Mohammad Bin Salman: 'Saudi Vision 2030'. As a guide to diversifying the oil-based economy of the Kingdom of Saudi Arabia, Vision 2030 encompasses a range of initiatives in all areas of development. These can be understood through three key themes relating to society, the economy, and the nation. In short, Vision 2030 aims to facilitate the creation of a vibrant, thriving, and ambitious kingdom.

Dr Rahmayati focused the special issue on the intersection of the theme of 'A Vibrant Society' and the desire to maintain a thriving economy. The contributors to this issue have thus explored the impacts of urban renewal and (re)development, and their effects in terms of sustainability and other measures related to Vision 2030. Adaptive reuse and renewal of Saudi heritage buildings takes pride of place in this initiative, as does the question of how to create a vital and happy society through the transformation and branding of urban spaces. Three key questions recur in the issue: What role do Saudi heritage and national identity have to play in the tourist industry and the fostering of liveable cities? How can the diverse needs and ambitions of Saudi communities be brought into harmony with one another? How can the ideals articulated in Vision 2030 be effectively realised through global and local initiatives?

Saudi Arabia does not present a utopia that can be funded through oil reserves, and the salient need to diversify and invigorate the economy has been recognised. Vision 2030 is not an idealist dream, but a more pragmatic approach to transforming the Kingdom with an eye firmly on the future.

In 1975, C.A. Doxiadis, founder of Ekistics, addressed a similar project in his work *Building Entopia.* While anticipating the course of global urban development, 'entopia' was identified as a worthy goal. That is, in contradistinction to 'utopia', Ekistics aims to facilitate the deliberate creation of a realisable urban environment to primarily benefit Anthropos (Man). Although this narrowly human-centred project could be debated (especially in light of the Anthropocene and our understanding of ecology), the fundamental question remains: How do we collectively envision the cities of the future and how can they be realised? Dr Yenny Ramayati's special issue provides a starting point for responding to these questions. Finally, I would like to thank all the contributors and members of the editorial team, including Dr Ricardo Arribas, for their support in creating this, the fifth special issue of *Ekistics and the New Habitat.*

Dr Ian Fookes
Deputy Editor | *Ekistics and the New Habitat.*

Ekistics and the New Habitat

The problems and science of human

2021, Vol. 81, Issue 2

Special Issue: Saudi Vision 2030 - Habitats for Sustainable Development

Guest Editor: Dr. Yenny Rahmayati
Prince Sultan University, Saudi Arabia

Contents

Guest Editorial: Saudi Vision 2030

Dr. Yenny Rahmayati

Assistant Professor, Prince Sultan University, Saudi Arabia

Email: yrahmayati@psu.edu.sa

Situated in the heart of the Middle East, Saudi Arabia or the Kingdom of Saudi Arabia (KSA) has played a significant role in the Arab region since the pre-historic and pre-Islamic periods. The discovery of oil in 1938 brought a major transformation to the country, which has since become one of the world's largest oil producers and exporters. The oil industry boom occurred during the 1970s and 1980s and resulted in the rapid development of the economy. This in turn transformed the country into a modern state; a change that touched all sectors, including the built environment.

In 2018, eight decades after the first discovery of oil, Crown Prince Mohammad Bin Salman launched 'Saudi Vision 2030', a blueprint that provides general guidance for the future of the Kingdom's development. Built on three main themes: 'A Vibrant Society', 'A Thriving Economy', and 'An Ambitious Nation', Saudi Vision 2030 is calling for action in many areas, not least of which are urban development and environmental sustainability. This vision aims to free the Kingdom from its dependency on oil and build a prosperous and sustainable economy that can serve as a model of excellence worldwide. This can be achieved by capitalising on existing opportunities while developing the country's unique strengths and diverse capabilities.

This special issue, Saudi Vision 2030 - Habitats for Sustainable Development presents key issues from a range of perspectives in architecture, urban design and planning. By focusing on the challenges and opportunities arising within the frame of Saudi Vision 2030, it tries to capture the specific problems faced by cities and the new habitats in Saudi Arabia, and propose solutions and approaches for dealing with them. It thus presents a diverse range of discourses and case studies that reflect the Vision. Special attention is paid to the Vision's first pillar, 'A Vibrant Society' and its connection to economic development. We present views on policy, heritage, urban design, and the environment, while exploring new perspectives that are can lead to more sustainable, more resilient, and ultimately more liveable cities. Specifically, the six articles in this special issue explore new paradigms in urban planning, the potentials of cultural heritage, creating sustainable vernacular architecture, managing public spaces, the branding of Saudi Arabia's capital and the concept of a 'happy city'.

The first article in the special issue is by Amira Abdelrazik Elbortokaly and Noorhan Mustafa Hanafi who adopt an urban planning perspective. Entitled "Saudi Vision 2030: A New Mind-set of City Future: Moving from Strategic Planning to Sustainable Development Based Vision: The Case of Ar-Riyadh, KSA", the article discusses the transformation of the city vision by investigating the urban vision history of the Kingdom's capital and its development to accommodate the visioning process. Using Ar-Riyadh as a case study, this article examines two main documents: the strategic planning process of MEDSTAR 2003 (The Metropolitan Development Strategy for Ar-Riyadh Region) and Saudi Vision 2030. It also assesses how both documents can be integrated to achieve sustainable development.

The second article examines the influence of Saudi Vision 2030 from the standpoint of cultural heritage. In this article, "Adaptive Reuse Strategy for Abandoned Historic Villages in Asir (Saudi Arabia): A Participatory Approach", Dr. Anna Klingman argues that reviving and promoting abandoned historic villages can provide a boost to the tourism economy and positively develop national identity. In this way, heritage reuse can be understood to contribute to the Vision by helping to achieve the goal of strengthening national identity. Significantly, the author uses architectural approaches to answer two key questions. Firstly, to what extent does the adaptive reuse of abandoned villages make a positive contribution to the circular economy? And secondly, how does adaptive reuse solidify a dynamic understanding of heritage as an ongoing social and cultural process? The article concludes with thought provoking results - especially for the younger generation: Who would have imagined that the fundamental aspects for economic growth can be found in their social and cultural identity as embodied in heritage villages such as Asir?

Extending this discussion concerning the value of heritage, Dr. Silvia Mazetto argues that rapid urban development using innovative materials and new technology should be aligned with the preservation of national identity, heritage, local history and culture. The synergy created by such development can be achieved, the article suggests, by adopting the goal of environmental sustainability as unifying principle. The author employs a comparative approach to several examples of

successful adaptive-reuse projects in the wider Middle East to better evaluate the merits of the various urban regeneration projects. The analysis has a particular focus on socio-economic and socio-cultural aspects; identifying examples of 'best practice' that integrate the environmental principles of sustainability. The result is a collection of examples of innovative practices derived from real world projects.

The focus of the issue then shifts to the urban context with three contributors addressing this theme. In their article, "Improving the Quality of Life in Saudi Cities through Active Public Residential Spaces: The Case of Central Dammam City", authors Sulaiman M. Almazroua and Dr. K.M. Maniruzzaman posit the idea that a strong relation exists between public spaces and quality of life, especially in residential areas. To validate this claim, selected residents in the Damman city centre took part in a case study of their neighbourhood. A key finding was that some the public spaces involved would require significant improvements to improve the residents' quality of life. The authors therefore conclude their article by providing specific recommendations for the relevant authority to enable such improvements.

Dr. Anna Klingmann's second contribution to this special issue, "Branding Saudi Arabia's capital: How Riyadh uses urban place marketing, mega-events, and urban destinations as tools to brand the city in line with Vision 2030" examines the mega-events and urban mega-destinations of Saudi Arabia, with a particular emphasis on the capital, Riyadh. The author focuses on how this city is promoting the image of the country within a framework of urban and architectural branding strategies. The article suggests that the long-term credibility and identification of the capital would be enhanced through a more participatory and inclusive approach to achieving this objective. This article thus proposes an approach for contributing to the sustainable vision of 2030.

The last article in the issue address the Vision 2030 theme of 'A Vibrant City' directly. Entitled "Saudi Vision for a Happy City: Analyzing architecture students' perspective for Riyadh, Saudi Arabia", the article explores how administrators have sought to design an urban landscape that is capable of creating a 'Vibrant Society', one comprising residents who lead happy and fulfilling lives. The authors, Arshi Parashar and Dr. Harshit SosanLakra, chose Riyadh as the study's location. In order to gain a fresh perspective on the city's development, the authors compared alternative designs as evidenced by the work of undergraduate students of Architure and Urban Design. The resulting comparison, identifies similarities and differences between students' design projects which had been developed in response to the 'Quality of Life Program' under the 'Vibrant Society' theme, and those developed by city administrators as part of their realization of the goals of Vision 2030. The findings reveal that the students' ideas for a happy city is largely in alignment with the city's, and the objectives of Saudi Vision 2030. Key differences were identified, however, and the authors present an interesting discussion concerning the role that academics can play in harmonizing the perspectives of young students and the city's administrators.

Saudi Vision 2030 - Habitats for Sustainable Development is a special issue of *Ekistics and the New Habitat*, a journal focused on the problems and solutions of human settlements. This issue presents six perspectives on Saudi Vision 2030 which provide insight into the ways that this vision is being realised. Dr Anna Klingmann's study of the branding strategy of Riyadh contains a key message that is echoed in the final article of this issue, and which recalls a principle of *Ekistics.* Centralised planning and intelligent urban design need to incorporate participatory frameworks and processes that will enable administrators, architects, designers and decision makers to harmonise their perspectives and agree upon workable solutions. As we pursue the goals set out by Saudi Vision 2030, it is essential that collaborative and participatory approaches are fostered within our projects, and that we recognize the strength and economic potential of embracing our Saudi heritage, values, and identity.

Saudi Vision 2030: A New Mind-Set of City Future Moving from Strategic Planning to Sustainable Development Based Vision: The Case of Ar-Riyadh, KSA

Amira Abdelrazik Elbortokaly and Noorhan Hanafi

Cairo University, Egypt

Abstract

City urban visions are an increasing concern all over the world and exceptionally for Saudi cities. Saudi Arabia leaders have just launched the Saudi Vision 2030, which is a bold vision for an ambitious country in 2016. At the same time, planners in major cities tend to diversify their economies, improving quality of life, and repositioning their cities in the global context. Notably, Riyadh city, the capital of KSA expected to be not only a great city for its citizens but also a city that symbolizes Saudi urban aspirations. The research aims at investigating Riyadh's urban vision history since the urban city development accumulates different approaches according to the nature of the visioning process. It has changed from urban development decisions made on a case-by-case principle, with no vision, to decisions derived from a vision based on the strategic planning process of MEDSTAR 2003 (The Metropolitan Development Strategy for Ar-Riyadh Region) to more integrated vision based on the sustainable development process of Saudi Vision 2030.

The main research argument is that urban planning paradigms affect intense approaches that cities experience when formulating their urban visions. Using an analytical framework, the paper analyses Saudi Vision 2030 and MEDSTAR vision 2003. The aim is not to compare but to investigate Riyadh's vision history that diversifies from strategic planning-based vision to sustainable development tending to achieve the Sustainable Development Goals. The framework includes qualitative variables focusing on the process of city vision formulating as the nature of the process, time horizon, and scope of visioning, etc. The research concludes that the nature of the visioning process plays a great role in the vision-formulating process. Especially when it comes to Riyadh city's case since adopting the sustainable development process of Saudi Vision 2030 helps integrating multiple comprehensive development aspects such as (urban, economic, social, etc.) and forms a new mindset of the city's future.

Introduction

Constructing a vision for a city is a complicated endeavour, especially when it comes to the point of strongly maintaining a city's cultural heritage and traditions in light of globalization. Cities in the Middle Eastern Region struggle every day with the global trends that grow rapidly in parallel with their daily challenges. They try so hard to cope with the modernized world besides managing to preserve the richness and authenticity that they already have (Fuccaro, 2001). Moreover, the rise of the Arab Spring has increased the burden to achieve people's demand for new rights, freedom, and better quality of life. Besides, the commitment of the international governments, especially the Arab ones, for achieving sustainability through adopting the Sustainable Development Goals (SDGs) and commit to facing global challenges for a better future (Kingdom of Saudi Arabia, 2018; UN-Habitat, 2012).

In doing so, this research traces the evolution of the vision of cities, especially the ones located in the Middle Eastern Region. It aims to focus on showing the mechanism of how it can be a tool for selecting a suitable vision for a complicated urban context. For example, Riyadh the capital city of Saudi Arabia, can change the pull of a city from not only attracting people for worship and cultural acts of religion, but also open for creating a solid ground for business, investments, employment opportunities, as well as, achieving a good quality of life for its residents, all this to function like any other city located in a globalized world. Moreover, the city shows a wider range of approaches according to the nature of the visioning process. It represents an emerging global city that gives balance regarding regional diversity, economic importance, and size of the population, in addition to being a useful example to learn from regarding how city visions can merge.

Consequently, this paper aims to show the different approaches adopted in each vision by implementing an analytical framework approach developed for tracing the development and process of making a vision for a city. The framework will help us to outline not only differences and similarities in visions formulating approaches but also to discover the future of the vision formulating process. Besides, it helps to find reflections of urban planning paradigms on these approaches.

City Background

Ar-Riyadh is not only the capital of Saudi Arabia but also one of the major cities in the Gulf Region. With the envisioning of the future of the City, the small town has grown up from being less than half a million to more than 7 million inhabitants in the year 2020. Since then, it has

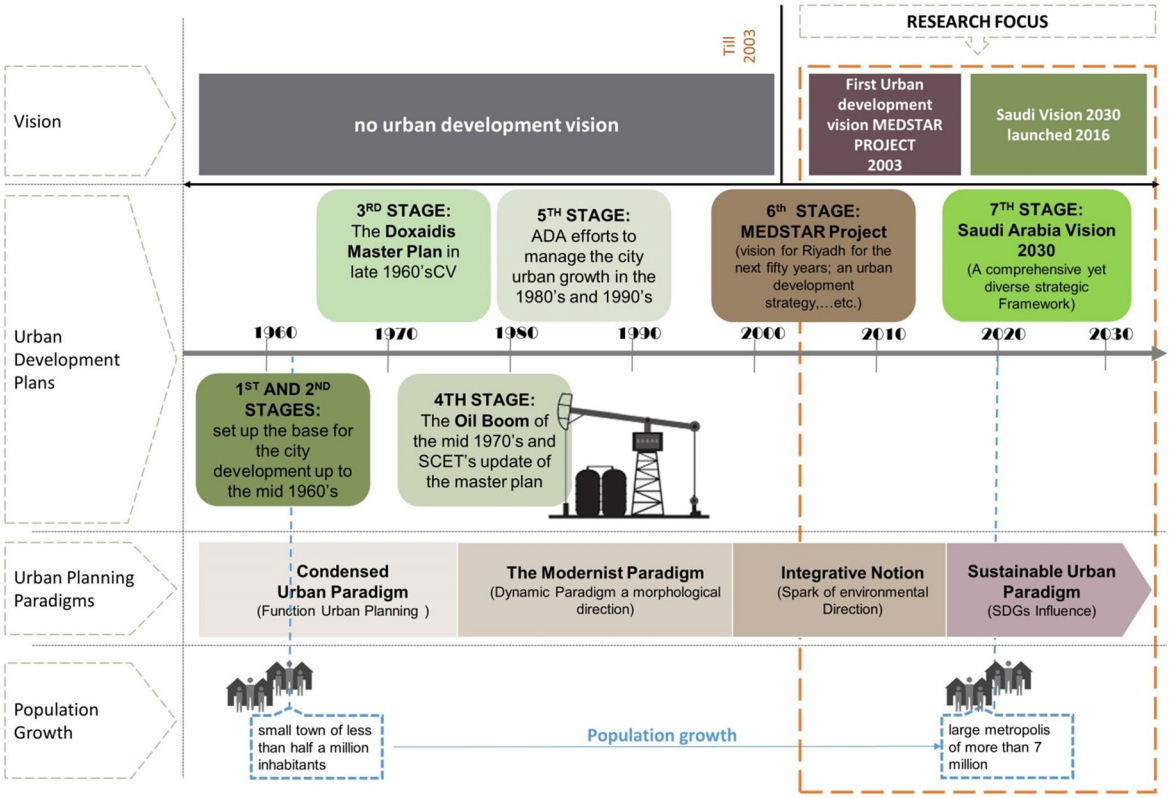


Fig. 1: Historical overview of Ar-Riyadh city development plans and visions for the Past 70 Years
Source: Author based on (Al-Hathloul, 2017)

taken several new tracks of urban development. Its political, economic, and administrative role led it to strive to become one of 'the most livable cities in the world,' says Muhammad Al-Tuwaijri, Minister of the Economy and Planning. Besides, the city fought desperately to cope with the surrounding global trends of urbanization; this can be observed by the following timeline, which shows the city urban development Figure (1). The timeline tracks the evolution of the city for the past 70 years, focusing on four main roles: first, the vision pole, second the urban development plans, third the urban planning paradigm, and fourth the extensive population growth in the city.

Since the 1960s, the City has managed to follow six different stages of urban development (S. Al-Hathloul, 2017), followed by a seventh stage inline. The first and second stages were mainly focused on managing to grow the city in a sort of day to day needs, urban development paradigm used to be executed in terms of decisions coming directly from decision-makers (S. A. Al-Hathloul & Anis-ur-Rahmaan, 1985). Consequently, the process did not last long. Planning authorities recognized the importance and the need to establish some sort of control on the urban development process. They started to prepare land subdivision plans for the city, the most outstanding of which was the Al Malaz plan, during the fifties of the 20th century (S. Al-Hathloul, 2017; S. A. Al-Hathloul & Anis-ur-Rahmaan, 1985; Middleton, 2009). It was the first attempt of the city to have a real strategic plan. The fourth stage came out in line with the discovery of the Oil industry in the region, or as Fuccaro, 2001 calls it 'Oil urbanization' that has changed the course of urban development to achieving the modernist paradigm. This type of change has emphasized the shape of the city to be more dynamic and spreading instead of condensing all activities in one place, shifting the city from a condensed urban paradigm to a dynamic one (Middleton, 2009). The city has started to expand in different branches from economy to population rate; even spatially its urban fabric has taken new form and shape, competing with the high international standards of urban development back then.
With the rapid increase in the urban development sector comes the challenge of the rise in the population growth rate. Thus, the kingdom found it was essential to establish a governmental authority called the Ar-Riyadh Development Authority (ADA), whose primary role is to take actions differently. It started to adopt long term strategic urban plans that are much more comprehensive and development-oriented to manage the urban city development (S. Al-Hathloul, 2017; S. A. Al-Hathloul & Anis-ur-Rahmaan, 1985). This plan can be categorized as the fifth stage of Strategic Urban development.

Since then, the city started to move forward, taking steps to realize how essential to coping with their needs and urban growth rate of population is building for the future generation. Doing so, in the sixth stage of development of the city, the ADA had her first vision outlined to cover the prospected projects and plans for fifty years ahead. It was developed specifically for the development of the City Ar-Riyadh. The main objective of the plan was as follows:

- Preparing a long-term plan to guide the city future development in all sectors,

- Creating an urban identity for the different parts of the city,
- Helping the government and private sectors to plan for their future development
- Providing a sustainable urban environment for the current and future generations.

From that moment and accordingly, the country has not stopped adopting a framework vision that integrates the modernized notions of global trends in its strategic plans. The framework appeared in both the Metropolitan Development Strategy for Ar-Riyadh (MEDSTAR 2003) and the country vision that was launched in 2016. The Saudi Vision 2030 appeared as a seventh stage. This research focuses on both of these visions to highlight the development phase of the city under each state.

Methodology

As previously mentioned, for a city to develop wisely in its socio-economic, environmental, spatial, and governmental aspects, it is essential to have its vision. Therefore, the development of a framework was discussed as the focus on this research. The framework that was acted as a tool to trace the formulation of a vision. On another side, the deduced framework is not intended to be the assessing tool but as an analytical tool that helps to read city vision components, understand the formulating process, nature of the visioning approach adopted, and other variables that make every vision unique. But before going through it, it is mandatory to understand the nature of a vision, why it is essential for the development of a city, and how it can be formulated, highlighting its main elements and process of development.

Some references related to the city's vision have been published. Some of them focus on defining its main components and how to make a good vision (El-Namaki, 1992). Other references tried to link its process by adopting the Michelangelo paintings and numbering approach (Collins, J.C. & Porras, J.I., 1994). However, visioning is a dimension that allows classical planning to develop a natural foresight for the expected scenarios (Van Cutsem, 2010). This includes the engagement of several stakeholders such as inhabitants, organizations, administrations, and other local resources under the authority of the government, all working to formulate a normative vision that is based on four main elements:

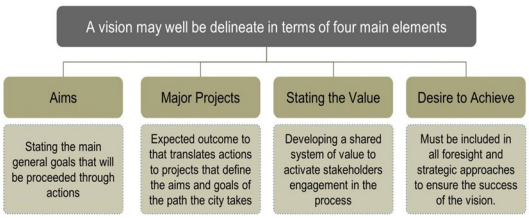


Fig. 2: Normative City Vision Elements
Source: Elbortokaly. Based on (Van Cutsem, 2010)

On the other hand, there are interesting norms that classify vision according to the nature of the process dividing them into four categories (Van Cutsem, 2010):

- First: Strategic Planning Approach; this category can be classified as a transitional practice twinned with the concept of strategic planning. It includes classical types of urban exercise, which mainly try to widen classical urban planning top-down reflection to a more transversal and integrated process.
- Second: Sustainable Development Approach; this category is an emerging one, growing together with Agendas 21 implementation. These exercises are more embedded in the long term. In practice, they are mainly concerned with environmental challenges, integrating different dimensions to achieve sustainable development.
- Third: Competitive Strategy Approach; this category comprises a set of cities and urban regions that positioned themselves as competitors in a globalized, economic, and technological environment. They implement strategy and management methods inspired by the private sector and tend to set relatively short-term timeframes: ten years most of the time. These frameworks are modest in size; their focus is narrow and rather elitist.
- Finally, the Territorial Project; was presented under the heading " territorial projects" and seen as more ambitious, systemic, and more involving projects, notably in terms of actors mobilized by the process. The territorial scale is variable and goes most of the time beyond the city level (Parrad, F., Goux-Baudiment, F, 2000).

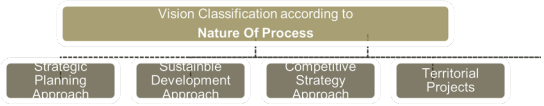


Fig.3: Vision Classification according to Nature of Process.

Accordingly, the previous analysis helped us to deduce the following analytical framework (Figure 4); this framework recommends a system approach that understands the nature of a vision and how it can be developed. Thus, it consists of three main dimensions and a total of twelve sub-dimensions, which are all based on the views of Frédérique Parrad, Fabienne Goux-Baudiment, and Van Cutsem in their studies of vision formulation. Each one is selected to help decision-makers, researchers, and urban planners develop one at ease.

- First, Component Parts of a city Vision; we need to understand the situation or the place we are developing the vision for its environment and issues, the expected future results all this to develop a normative city vision.

- Second, Process of City Vision; the formulation

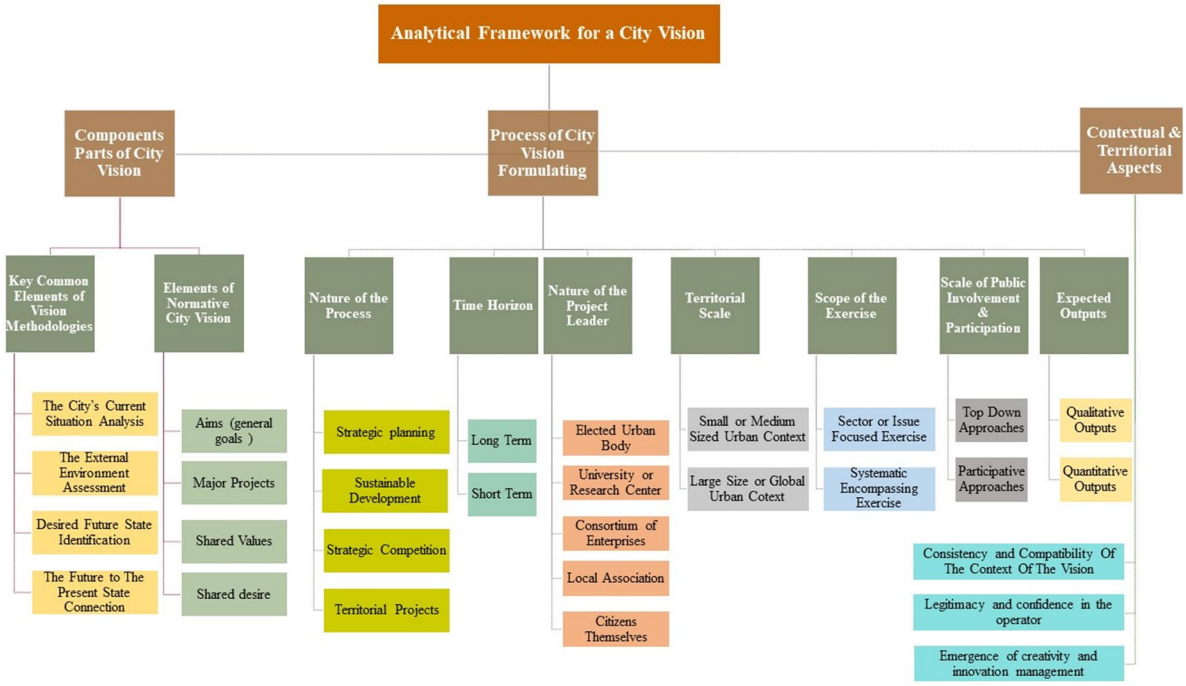


Fig. 4: Analytical Framework for a city's future vision.
Source: Elbortokaly.

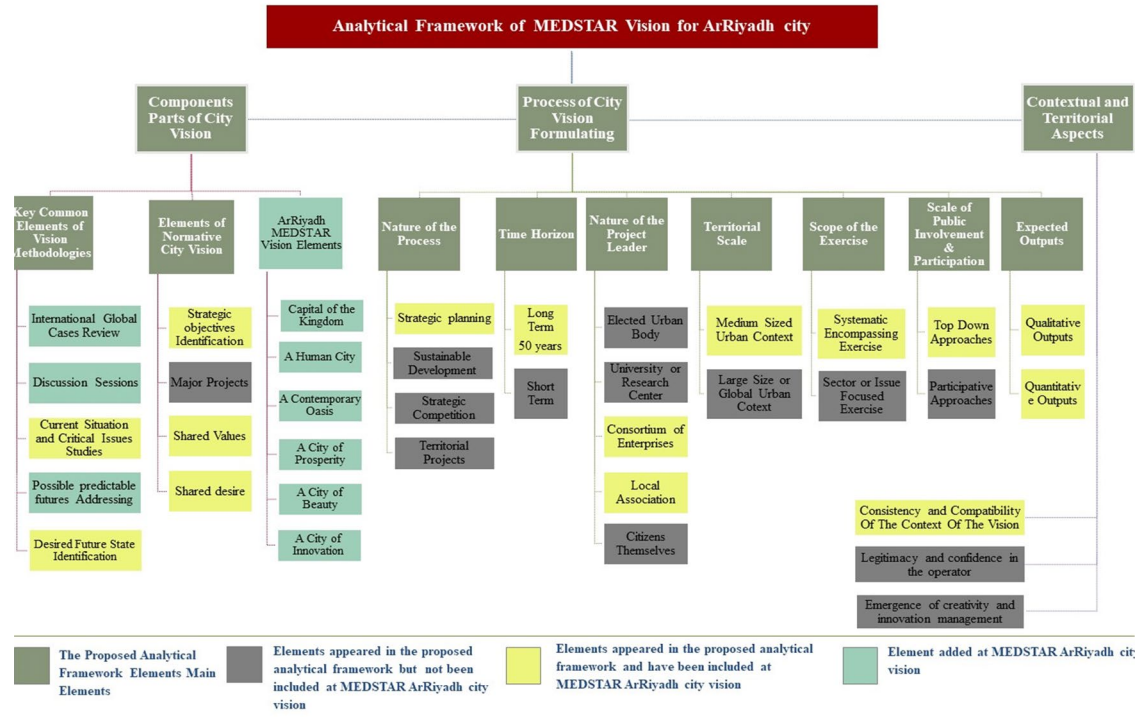


Fig. 5: Analytical Framework of MEDSTAR Vision on City Ar-Riyadh, Source: Author based on ADA, Ar-Riyadh Development Authority (2010).

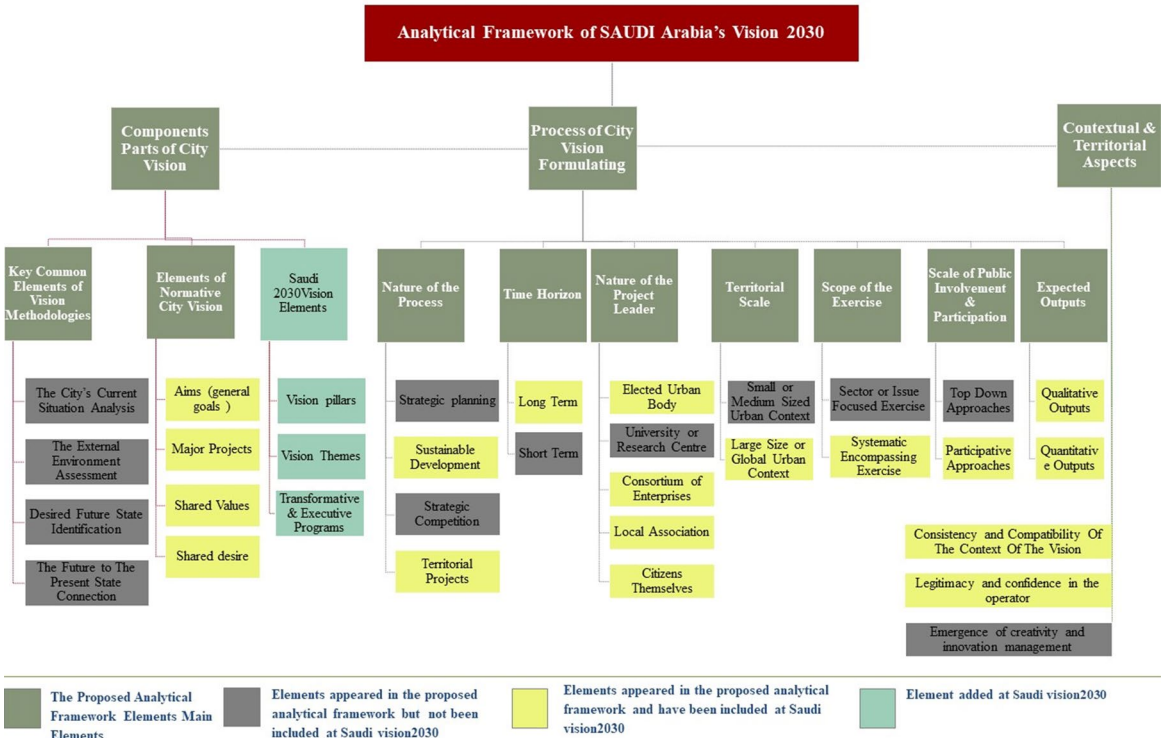


Fig. 6: Analytical Framework of Saudi Vision 2030 on City Ar-Riyadh.
Source: Author based on (Government of Saudi Arabia, 2016; Kingdom of Saudi Arabia, 2018)

stage, it is the part that focuses on the nature of the vision, the time it targets, the type of suggested projects, the territory working on, the scale of stakeholder's participation, and expected outputs.

- The third and final stage, Contextual and Territorial Aspects, this part is about Consistency, Compatibility, Legitimacy, and Creativity.

Results

It is interesting to apply it as an analytical framework method on different city visions around the world after deducing an analytical framework that concludes and elaborates theoretical concepts and analytical findings of the literature on what's visioning and how it could be created. This will help to understand what they have processed through to create their visions addressing different priorities areas and following unique aspirations for the future. For the present research, we tend to apply it to the MEDSTAR vision 2003 and Saudi Vision 2030; despite both belong to the same country, they differ in territorial scale, nature of the visioning process, and their approach to the future.

Discussion

Regarding the newly proposed analytical framework, a new concept added to the research development to analyze, highlight, and investigate the significant approaches found in each vision. This part focuses on discussing city vision findings in aspects of the key vision method, time horizon, the normative city vision elements, as well as the nature of vision process classification.

Key Common Elements of Vision Methodologies

MEDSTAR Vision, the methodological process of formulating vision stated clearly includes International Global Cases Review, Discussion Sessions, Current Situation and Critical Issues Studies, Possible predictable futures addressing, and finally, Desired Future State Identification. As for the Saudi Vision 2030, the methodological process of formulating vision has not been mentioned clearly according to the government's official published document Vision 2030 Kingdom of Saudi Arabia (Government of Saudi Arabia, 2016).

Elements of Normative City Vision:

In the MEDSTAR Vision, for being the first attempt from the Saudi governorate in developing a vision, all elements were included in the vision document except for the major projects which have been conducted but not mentioned as a prior planned step included in the vision. These projects reflect the aims of the vision, helping for a plan for the future, creating an identity for different parts of the city, building a strong new economic base, encouraging pedestrian mobility in some areas, and provision of adequate services in some areas. Some of these projects

have shown quite a progress; others were hindered (UNHabitat, 2017).

a. Projects that show signs of progress are projects related to infrastructure, building networks, and environmental open parklands. For example, the development of a central business district, the objective is to build a local business area that is pedestrian-friendly and includes open spaces and manage access through public transport. Planning for comprehensive light rail and bus system to enhance the use of public transport and decrease carbon emissions.

b. Projects that have been hindered were due to various issues caused by the unexpectedly low rate of population growth. First, projects are new cities or subdivisions built integrated with the main city to fulfill the population growth demands. The project was not finished according to the planned period; this led to leaving vacant housing projects. Second, the metropolitan sub-centers, which focused on expanding local businesses in residential communities that had a high urban growth rate. This project also did not meet its target due to lack of land for development.

On the other hand, the Saudi Vision 2030 played by the roles it included all four standard elements that can be found in a normative city vision. It had quite clear four main projects that reflected the purpose of the vision.

Classifications to Nature of Visioning Process:

The study findings in this aspect were clear as the MEDSTAR vision approach has shown actions and interventions that can be classified in terms of strategic development approach and serves as a transitional stage. At the same time, sustainable development and territorial projects intertwined at the Saudi Vision 2030, trying to achieve the global trend notion of the SDG goals. This can be observed in Ar-Riyadh city by adopting four major projects that plot the vision into reality aim to achieve the country's global and comprehensive visions on the ground. These projects have endorsed the SDG goals in many ways, all about enhancing 'Quality of Life' for local inhabitants and creating a sustainable developed community. These major projects are King Salman Park, Riyadh Green, Sports Boulevard, and Riyadh Art. As noted, all proposed projects attempt to move on with a much more robust economy, from depending on one economic source (oil) to other diversified resources that serves the program of Quality of Life (Kingdom of Saudi Arabia, 2018).

According to the time horizon:

MEDSTAR is a long-term vision, while Saudi Vision 2030 was planned as a short-term plan, despite the sustainable development approaches requiring long term vision. Saudi Vision 2030 is a mix of sustainable development and territorial project approaches in a way to process and formulate a future vision for a city of tomorrow.

Hence, from all the above, we found that MEDSTAR Vision 2003 can be considered as a transitional phase. Being the first-ever vision for a city like Ar-Riyadh has paved the way to a more integrated and comprehensive vision of Saudi Vision 2030 to reveal. That is why the MEDSTAR vision is more of what we can call as an incomplete vision that is based on a top-down approach compared to the Saudi Vision 2030. While Saudi Vision 2030 is more comprehensive in terms of its vision, starting from providing a big umbrella for the future of all Saudi cities to the nature of the sustainable development process applied. The process includes different sustainable dimensions in addition to supporting the public involvement and participation by adopting the participatory approach in the process of formulating a vision.

Conclusion

Our final views of the research can be concluded as follow. First, by looking at urban planning paradigms that moved from physical condensed, modernized structure, and environmental planning to sustainable integrated planning. It is interesting to discover that it intensely affects the approaches the city can experience when formulating their urban visions as for the case of Ar-Riyadh. The urban city development accumulates different approaches according to the nature of the visioning process. It was moving from urban development decisions made on a case-by-case principle where no vision to decisions derived from a vision based on the strategic planning process of MEDSTAR 2003, to a more integrated vision based on the sustainable development process of Saudi Vision 2030. Yet, Ar-Riyadh city is well on its way concerning creating some of the record notable urban development in the Middle East.

The developed analytical framework has proved a success by examining it on the basis of two different visions for the same city. It helped us analyze the city vision process and outlined its significance and missing points. Moreover, it has proven flexibility by accepting changes that can be adapted and mitigated easily within the nature of a visioning process. It may be considered as an initial trial to understand cities 'visions in more depth and empirical approach. It helps to analyze city visions' starting blocks and components, find similarities and differences between different approaches that are used to formulate visions.

On the other hand, the future of the city in its desired state is one of the noted definitions of the city vision. Likewise, missing the link between the present and the future is one of the pit bulls that cities face when formulating their visions. That is why Saudi Vision 2030 appeared to be bold; its track to the future is clear whence identifying how to implement the vision. The 2030 vision translates the future they desired into pillars, themes, and finally, the most important part, a portfolio of transformative and executive programs which, in turn, translated to projects that can be seen on the ground. Moreover, its link to the global SDGs has strengthened the vision structure, whether by influencing its main themes; vibrant society, thriving economy, and ambitious nation or by the constructive programs that roots and promotes sustainable development (Government of Saudi Arabia, 2016;

Kingdom of Saudi Arabia, 2018). All this has thrived in the mindset of city development and futuristic vision for Ar-Riyadh.

Finally, it is mandatory to mention that a limitation in the study is noted in the number of pertained documents that are subjected to Ar-Riyadh City and its relation to the Saudi Vision 2030 since the city's strategic development plans have not yet concluded.

References

ADA, Arriyadh Development Authority (2010). Arriyadh Geospatial Urban Information System. Arriyadh: The High Commission for the Development of Arriyadh

Al-Hathloul, S. (2017). Riyadh Development Plans in the Past Fifty Years (1967-2016). *Current Urban Studies, 05*(01), 97–120. JSTOR.

https://doi.org/10.4236/cus.2017.51007

Al-Hathloul, S. A., & Anis-ur-Rahmaan, S. (1985). The evolution of urban and regional planning in Saudi Arabia. *Ekistics, 52*(312), 206–212. http://www.jstor.org/stable/43620712

Fuccaro, N. (2001). Visions of the City: Urban Studies on the Gulf. *Middle East Studies Association Bulletin, 35*(2), 175–187. JSTOR.

http://www.jstor.org/stable/23063464

Government of Saudi Arabia. (2016). *Vison 2030 Kingdom of Saudi Arabia*. [Report], 1–85. Vision 2030.

https://vision2030.gov.sa/download/file/fid/417

Kingdom of Saudi Arabia. (2018). Towards Saudi Arabia's Sustainable Tomorrow, First Voluntary National Review 2018 - 1439. UN High-Level Political, 187. United Nations. https://sustainabledevelopment.un.org/content/documents/20230SDGs_English_Report972018_FINAL.pdf

Middleton, D. A. (2009). Growth and expansion in post-war urban design strategies: C. A. Doxiadis and the first strategic plan for Riyadh Saudi Arabia (1968-1972). (December).

Parrad, F., Goux-Baudiment, F. (2000). (Eds), *Quand les villes pensent leurs futurs. Une enquête sur les démarches prospectives dans 18 villes européennes* : Plus Press.

UN Habitat. (2012). The State of Arab Cities 2012, Challenges of Urban Transition. UN Habitat.

https://unhabitat.org/sites/default/files/download-manager-files/The State of Arab Cities 2012 %2C Challenges of Urban Transition.pdf

----------. (2017). Riyadh city review report. UN Habitat.

https://www.futuresaudicities.org/wp-content/uploads/2017/07/Riyadh-Review.pdf

Van Cutsem, M. (2010). Cities of Tomorrow: Challenges, visions, dys-visions as seen by cities. Cities of Tomorrow, (December). European Commission.

Keywords

Saudi Vision 2030, MEDSTAR Vision 2003, Ar-Riyadh urban development, sustainable development, strategic planning, urban planning paradigms, SDGs.

Adaptive Reuse Strategy for Abandoned Historic Villages in Asir (Saudi Arabia): A Participatory Approach

Anna Klingmann

Founder of Klingmann. Architects & Placemakers

Abstract

How can we reinvent abandoned villages of cultural and historical value that seem of no practical use? How can we sustain unique vernacular cultures in an age of progressive globalization? These are the questions social scientists, urban planners, architects, and archaeologists grapple with around the world in the light of rising urbanization and progressive depopulation of rural communities. This paper describes the traditional architecture of abandoned rural settlements in the southwestern region of Asir in Saudi Arabia and examines the present situation from the residents' viewpoints. Departing from a framework of a dynamic understanding of heritage, the author proposes a process of adaptive reuse and revitalization. The research starts by posing several questions. What future do we imagine for abandoned villages that historically have played a significant role in the civic structure of a community and contribute to forming a society's memory and identity? Can we suppose that the adaptive reuse of abandoned villages makes a positive contribution to the circular economy while solidifying a dynamic understanding of heritage as an ongoing social and cultural process? To this effect, the author conducted a phased research project focused on the adaptive reuse of one abandoned village near the region's capital of Abha. The architectural research entailed architectural surveys and documentation as well as qualitative inquiries. The author hopes that this project and its results will be a further stepping-stone in motivating people to find cultural, social, and economic value in their heritage and to make their properties a vital component of the circular economy by passing on traditional knowledge of vernacular building techniques to younger generations.

Introduction

Vernacular cultures globally are in transition. Historic villages that need protection from a cultural perspective disappear due to migration, neglect, and abandonment. Challenges for rural communities in the Middle East, Europe, Asia, the Americas, and beyond include declining and aging populations, problems with youth retention, limited economic and social opportunities for residents, depleting natural resources, loss of local services, and often higher costs of living. Due to better job opportunities in metropolitan areas, villagers leave behind the land of their ancestors and their heritage in all its forms in search of a higher standard of living. The result is a persistent abandonment of villages that may be appreciated for their historical and cultural value but are perceived to be of little economic worth. The agricultural futures of rural communities are also in question: Policy and industry changes in agriculture have added uncertainty, with added stressors from environmental damage often linked to water pollution and climate change. The question is how rural villages can reposition themselves, diversify their economic base, enhance their quality of life, and attract economic value? Along with this question comes how we can bring abandoned villages back into use to benefit the concerned communities and future generations.

These issues call for the investigation of sustainable adaptive reuse measures as a way to preserve local traditions while, at the same time, lending them new interpretations and significance in such a way that new generations may discover fresh ideas about their inherited traditions through the transformation of historical buildings according to a contemporary understanding. The research discussed in the present paper proposes a model for the adaptive reuse of heritage buildings in Asir, in terms of creating an interactive process of cultural heritage, protecting the intrinsic values of the built fabric, and enhancing, at the same time, the development dynamics of the rural context of the villages.

Two previous studies (Hussein et al., 2018; Klingmann et al., 2019) have identified indicators that describe the cultural value and utilitarian economic potentialities of abandoned villages in the region of Asir and their responsive environmental performance concerning the local climate and geography. Based on this data and a qualitative survey, new research was conducted that verifies the compatibility of the settlement's potential reuse for cultural, touristic, and residential uses while preserving its morphology, its traditional building methods, local materials, and above all, the relationship between the buildings and the social, cultural, and geographic environment. To facilitate this research, the author chose a specific case study that allowed for many of the variables involved in adaptive reuse projects, such as awareness-raising measures, the urban context, the design approach, and the site's programming for reuse. The results highlight that the choice of new functions for the abandoned buildings should be based on the suitability of the new uses to their owners so that they see a long-term cultural and economic value in the undertaking, while at the same time supporting the circular economy and cultural heritage for future generations.

Historic Villages in Asir

Fig. 1: Small traditional hamlet comprised of traditional mud houses, Sarat Abidah area. Photograph by the author.

Fig. 2: Narrow passages divide residential clusters. Al Jahama village (Sarat Abidah area). Photograph by the author.

The highlands of Asir

Asir is a mountainous region in the Kingdom of Saudi Arabia, which has more than 700 abandoned traditional mud and stone villages. Stretching from the south of Taif to the frontier of North Yemen, Asir is one of Saudi Arabia's most rugged and remote cultural landscapes. The region of Asir is renowned for its rich tradition of agriculture, temperate climate, high mountains, and green valleys, which are in stark contrast to the flat and arid desert landscapes that characterize most of the Arabian Peninsula. Asir is also known for its long-standing tradition in the arts and crafts and its exceptional mountain communities, demonstrating a resilient bond to its harsh yet fertile territory. Asir means "difficult" in Arabic, alluding to traversing the steep terrain by camel or foot. This remoteness has also helped preserve the distinctive cultural heritage of the Asir region. In the highlands, in the innumerable stone and mud villages, hidden away and hard to access, there are still many tribal traditions that bear little reference to the modern Saudi Arabia of today. Although the formal power of the tribes has been diminished in recent history by the hegemony of the Saudi government, many kinship customs and allegiances are still very much alive in the day-to-day life of the people, particularly in the more remote areas of the region. Even today, many communities do not welcome intrusion, and the region is still almost as unfamiliar to many Saudis from other regions in the Kingdom as it is to people in the Western world.

Urban organization of villages

Asir is home to distinctive stone and mud-brick architecture that bears a morphological and material resemblance to the earthen skyscrapers of Sanaa or Shibam in Yemen. Its traditional villages, whether situated on a hilltop or in a wadi, resemble citadel-like strongholds of vertical buildings rising from the land. At a superficial glance, the urban structure of the Asiri settlements seems unsystematic, but as Saleh (1999) argues, soon reveals a series of rigorous meanings and a meticulous spatial organization, especially when taking into consideration the body of tribal customs, conventions, and religious practices that inform and address the kinship system (p.51). Based on a hierarchy of family relations, compact residential clusters (*harah*) of adjacent and often interlinked houses, grouped around semi-private courtyards, subdivide each village. Each house cluster was shared by one kin group for work and social activities and formed an independent and self-contained unit, which in the past provided shelter for people and animals alike. Protected by massive walls, each *harah* forms a self-sufficient cluster punctured only by a single entrance, which is safeguarded by a sturdy wooden plank door, which in turn is secured by multiple locks. This gate was traditionally opened at dawn and bolted at dusk to ensure the residents' safety against outside enemies. Circulation space was often a residual of the *harahs* and other built spaces, including defense towers, a mosque, a souk, a treasury, a cemetery, and a public building for assembly purposes. Narrow passageways scaled proportionately to allow for pedestrian flow provided access to the individual *harahs* and served as sheltered social spaces for the residents. Their tight organization helped protect against cold winds in the winter while providing ample shading during the summer months. Frequently, the convoluted arrangement of the exterior spaces was also intentionally modified to trick and eventually catch enemies in case of an attack with labyrinthine alleyways, unexpected dead-ends, and make-believe entry places (Saleh, 1999, p.54). Some of the passages were also bridged (*Saddih*) with connecting overhead spaces, which served as strategic surveillance points.

Architectural Morphology

Since historically, a concern for safeguarding meager resources against potential raids placed a premium on optimal security measures, the houses took the form of tower-like structures enhanced by thick walls that provided structural strength and resistance. Furthermore, as Saleh (1998) comments, the religious doctrine of Islam, with its emphasis on gender segregation and domestic privacy, contributed to the evolution of an introverted architecture with a marginal outlook to the public realm (p.178). However, as opposed to the typology of the courtyard house, which is predominant in many Arab regions and enclosed by a high exterior wall, the tower house is directed outwardly towards the distance. The building's height and elevated position enabled its inhabitants to survey and control the surrounding

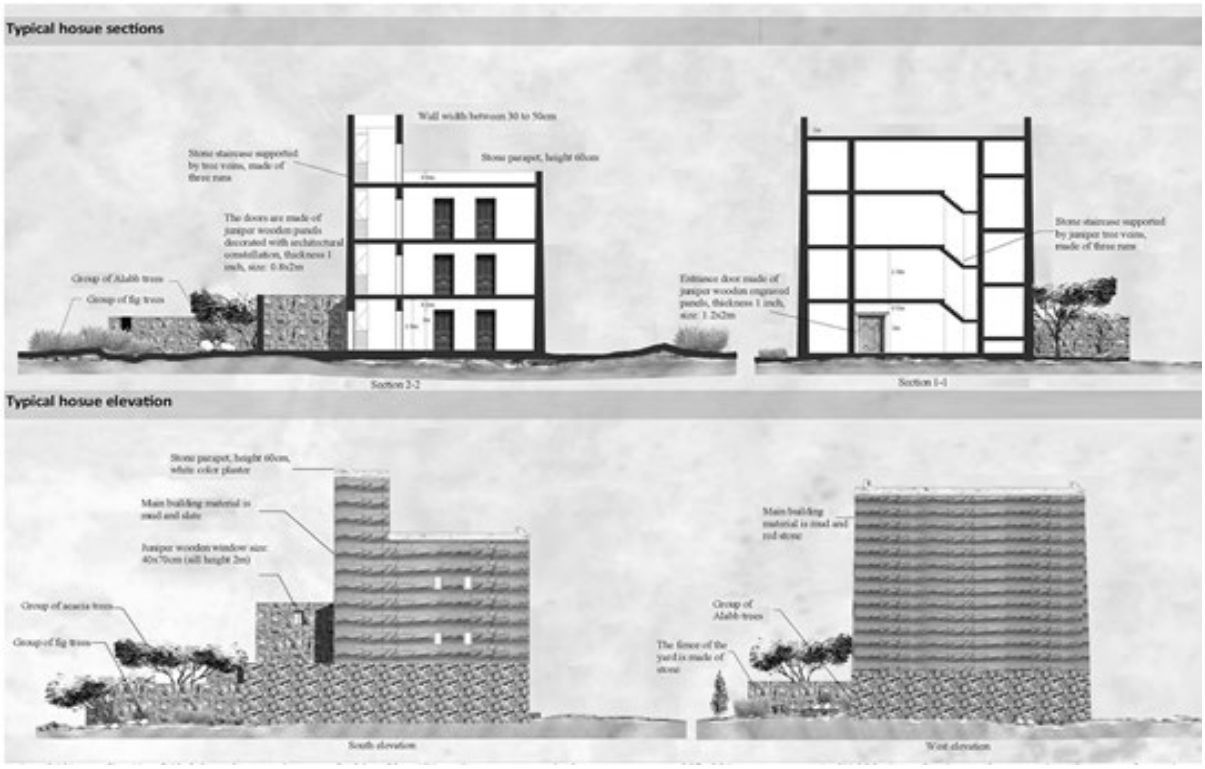


Fig. 3: Wall sections and elevations of a typical Asiri house showing vertical organization, stone base, and mud walls with inserted slates. Work by author with students.

territory— hence its name "HuSn" derived from the verb *HaSana* (to fortify). In the Abha region, domestic buildings typically range from slender three to four-story mud-built tower houses in the south to more quadrangular houses of local stone adorned with quarts in the north.

Massive external walls that are on average one meter in-depth provide each building with a high thermal mass, which absorbs the hot summer air during the day and releases it during the night, and in the winter, helps to insulate against the cold. The conical shape of the building provides structural strength and efficient resistance to winds. As Asir is known for its abundant rainfall and cold winters, resilient foundation walls overlap with the external mud walls to protect them from heavy rain and snow. Horizontal bands of intersecting slates cascade the rain away from the vulnerable clay and guard against erosion. Since the staircase occupies a large part of the building, most rooms are small, connected by a series of wooden doorways. While the livestock used to occupy the ground floor, the main gathering spaces for the family and their guests, the majlis, were located on the first floor, followed by the more private family rooms on the second and third floors. The kitchen generally occupies the topmost level and opens to a large roof terrace, which the inhabitants also used for washing. Windows are tiny and square and enhance the fortress-like appearance of the house. Arranged linearly, the openings, protected by sturdy wooden shutters, are located in the inner portion of the exterior wall and provide enough sunlight and cross ventilation for cooling in the summer but are also able to prevent the entry of cold winds and rain during the winter. All windows are carefully positioned at seating height and deliver a perfectly framed view into the wide-open landscape, contrasting the intimate atmosphere of the interior with expansive vistas that overlook the surrounding territory.

Abandonment of Historic Villages

Over the last four decades, the impact of modernization, a national economy, centralized planning policies, and an extensive road-building program throughout Saudi Arabia have drawn Asir steadily into the Kingdom's mainstream. Today, the vernacular expression of the settlements has been extensively degraded—mainly through the effects of modernization and associated repercussions of emigration and abandonment. Presently, Asir boasts hundreds of ghost villages, as local villagers progressively moved to the metropolitan areas in pursuit of a more comfortable lifestyle, which was facilitated by a surge in government jobs and other forms of assistance by the state. As Saleh (2002) mentions, even where traditional villages are still standing, their original owners no longer occupy them, if they are inhabited at all (p.55). While rapid real estate development and speculation impacted the larger metropolitan areas of Abha, Khamis Mushait, and Najran, fostering the growth of suburban sprawl, the more remote settlements are lying barren, falling into steep decay. What was once a flourishing landscape of self-sufficient agricultural communities has given way to a trail of suburban modernist villas that pay little tribute to the regional culture and land. The historic mountain villages sit empty, their doors bolted, their houses partially destroyed.

Over the past 15 years, awareness in the Kingdom has emerged that heritage buildings constitute an essential element of Saudi Arabia's social and cultural capital and that heritage conservation can potentially also provide

Fig. 4: Example of a 4-story mud-built tower house (Sarat Abidah). Photograph by author.

Fig 5: Example of a contemporary concrete-block villa with postmodern elements. (Sarat Abidah). Photograph by author.

many economic benefits to urban and rural communities. Architects and government officials in Saudi Arabia also increasingly recognize the social problems created by imported planning models and building regulations. A new discourse has developed to reestablish a closer relationship between cultural values and building practices that are more responsive to the regional context. The need for alternative planning models that correspond more closely to vernacular morphologies is now an accepted direction in urban planning and architecture. The incorporation of preservation has also become a growing area of interest, mainly as it concerns the cultivation of tourism. In 2001, the Saudi government established the Saudi Commission for Tourism and Antiquities (SCTA), recently renamed the 'Saudi Commission for Tourism and National Heritage' (SCTH). While the SCTA has played an essential role in advancing the discourse on built-heritage conservation in Saudi Arabia, its focus is not on conservation per se but rather on promoting tourism in association with cultural sites that show high potential as touristic heritage destinations.

Conversely, the majority of the Asiri people are not in favor of conventional tourism, nor do they fully trust the government's initiatives. Also, most houses are still privately owned, frequently shared by many heirs, making restoration efforts from the government's perspective a complicated endeavor. Moreover, most owners are sentimentally attached to their inheritance and regard their traditional dwellings as a tribute to their ancestors; hence, they rarely consider selling them. However, while many owners seem emotionally devoted to their family assets, they see no monetary incentive to upkeep, renovate, or reuse their properties.

According to a study conducted by Bagader (2014), most Saudis greatly value their heritage, but at the same time, they prefer to live a contemporary and comfortable lifestyle. Many experts believe that the dependence on government initiatives and a general lack of awareness of the importance of conserving the built-heritage sites for cultural benefits have been significant factors in the progressive decay and destruction of traditional settlements in the southwest (p.31).

A Survey amongst Owners of Traditional Houses

In order to analyze how people with different backgrounds and ages view their vernacular heritage, how they value their traditional houses, and how they view the prospect of reusing them for contemporary and future needs, the author conducted a survey using a self-directed questionnaire that she distributed to residents of the area. All of the interviewees were owners of abandoned mud houses and had either constructed them or inherited them from their families. Being raised in Asir seemed to be a privilege for all the participants that the author interviewed. 85% of the respondents expressed a desire to safeguard their traditional houses because they feel that these structures are an integral part of their cultural identity, which they would like to pass on to the younger generation. Most of the respondents also expressed a consensus about the cultural significance of the Asiri villages as physical evidence for the interaction between the Asiri community and its unique environment. While all owners claimed that they are sentimentally attached to their houses, which they view as heritage, 70% believe there is no monetary return on upgrading the properties. 60% of the owners think that it is the government's responsibility to preserve and rehabilitate the abandoned sites even though they own them. Only 10% of proprietors attempted to restore and upgrade their properties. 60% of the respondents said they had no idea how they might creatively reuse and profit from their houses. When the author proposed new potential uses to them, 57% of the participants said they could imagine converting their house for touristic use to preserve their culture and educate people about it. When asked, however, what tourism meant to them, 37% of the respondents said that they would prefer to adapt their house as a meeting space for friends and family, 25% said that they would consider using it as a restaurant, 25% responded that they would reuse it as a second home for rent and 13% said that they would like to use it as a secondary home for family gatherings. 75% of the participants would prefer to keep their property as a more private space, and 25% would consider opening it to the public for educational purposes. All respondents expressed a desire to preserve their mud house as a document of their culture that they could share with future generations. When asked if they would consider moving back to their traditional houses if upgraded to today's standard, 64% responded positively.

Towards a Participatory Concept of Heritage: A Review of Relevant Literature

Since the early 2000s, many scholars have critically investigated the concept of heritage and concluded that monuments or sites alone do not per se classify as 'heritage.' According to Smith (2006), while physical constructs and surroundings are relevant as settings, they cannot categorize by themselves as heritage. Instead, Smith describes heritage as a complex process that passes on established values and meanings through reiterative interpretations that create new significances and associations. Notably, the main innovation in heritage definition no longer depends only on the tangibility or intangibility of heritage but lies in the progressive shift from considering cultural expressions as objects to defining them as cultural processes. Consequently, we perceive today's heritage no longer as a 'consecrated relic of the past' (Bortolotto, 2006), but as a living and progressive entity to be interpreted, appropriated, and transformed by local communities. Kenny (2009), in turn, defines heritage as a process that takes place in the present by allowing for a dynamic understanding of cultural production. He also argues that the continuous process of heritage construction is a product of the cultural process that the heritage practices seek to develop and maintain. As Kalaf (2017) summarizes, heritage can no longer be regarded as a static entity but rather as a dynamic construct subject to transformation with changing values, perceptions, needs, circumstances, and generations.

However, despite the formulation of a dynamic interpretation of heritage, most of the physical remains that exist today are still treated as 'antiquities,' which are preserved and protected from people either partially, by keeping them in open or closed museums, or by altogether banning them from public access (Kamel, 2015). Either way, as Kamel concludes, little interaction is allowed between people and historical remains, which, over time, has resulted in a gap between societies, their history, and their heritage practices. According to Kamel, a more dynamic understanding of heritage would imply that historic buildings can qualify as heritage only when appropriated by people, which lends new meanings and interpretations that become an integral part of their societies' lives. As heritage and culture increasingly qualify as evolutionary constructs, we should also regard the approach to 'heritage' itself, and the modes of re-imagining, redefining, and, ultimately, fabricating as evolutionary. This concept defines heritage as a discursive activity in the present, which might be separate from the remains yet, at the same time, connected and linked to them. This attitude establishes the continuity of vernacular practices by widening the concept of heritage to the reproduction, reinterpretation, and transmission of vernacular building practices. Therefore, if we take the paradigm of heritage as a social practice and activity seriously, a connection should be fostered between the physical remains of a particular culture and new interpretations of their meanings. In the case of abandoned historical structures, this would require the community's proactive engagement in the reinterpretation, re-appropriation, and transformation of such properties according to contemporary needs.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Council on Monuments and Sites (ICOMOS) underline the importance of cultural heritage in the achievement of sustainable development (UNESCO 2011, pp.5–7). UNESCO's Historic Urban Landscape (HUL) Recommendations also provide a significant resource to the international debate about a more dynamic and interactive understanding of heritage. While the guidelines recognize the necessity of supporting the protection, safeguard, conservation, and valorization of the Historic Urban Landscape, they also emphasize the intangible dimension of heritage and the related economic processes. (p.5, art. 8) The focus shifts from the preservation of the artifact to acknowledging the role of changing social, cultural, and economic processes in the definition of heritage (p.5, art. 4). Similarly, the European Commission (EC) has recognized cultural heritage as a common good representing a strategic resource for sustainable development. In Section 2, the EC identifies it as a critical element in the global competition using, for the first time in an institutional context, the notion of "intrinsic and social value of heritage" (2011, p.8).

A more anthropological understanding of heritage and a growing understanding of historic structures as vital resources for sustainable development brings us to the role that adaptive reuse can play in the circular economy. This interdisciplinary understanding also mandates a more participatory construct of heritage described by Kamel (2015) as "a practice of meaning and identity-making tool that uses memories from the past and provides routes for new generations to discover fresh ideas about their inherited traditions and values through interacting with physical remains from the past" (p.67-76).

Heritage buildings are crucial in transferring cultural knowledge to future generations (Misirlisoy et al., 2015). Where heritage buildings can no longer be used with their original use, proposing new uses is inevitable to preserve a buildings' significance (Misirlisoy & Guence, 2016). Adaptive reuse, as defined by Douglas (2002), is any construction work aimed at changing a building's capacity, performance, or program to adjust, reuse or upgrade a structure in order to accommodate new conditions or needs, which would also allow for the conservation of the different values of cultural heritage. Adaptive reuse also enables an extension of a building's life cycle, in line with circular economy principles that aim to prolong the lifetime of resources for as long as possible (European Commission, 2015). Moreover, building reuse can be considered a medium to reveal the legacy of a particular culture, consisting of heritage buildings as physical artifacts and the wealth of information provided by each item (De Medici et al., 2020). The consideration of the built environment as a resource consequently not only implies the acknowledgment of its value as a built object; instead, as De Medici et al. indicate, the built heritage also acquires value for its ability to trigger memories, acquire knowledge, and tell stories; put differently, it constitutes a vital source of cultural heritage (2020)

According to Stahel (2009), adaptive reuse is also a crucial means to ensure sustainable management of built resources, contributing to a circular economy that advocates converting products that are deemed useless by

some into resources for others, closing loops in industrial ecosystems, and minimizing waste. In today's discourse on climate justice and the living planet, Stahel argues that it is unacceptable to render anything useless and make no contribution to the improvement of our environment. The simple mandate of "Reduce, Reuse, Recycle" is a testament to contemporary life's essential prerequisite. Indeed, everything has to be useful, and existing buildings cannot escape from this agency of usefulness (Plevoets & Van Cleempoel, 2019), while Hosagrahar et al. (2019) contend that there is an urgent need to translate these principles into concrete actions. To this end, we need to develop new creative approaches and tools.

Case study: The abandoned village of Al-Jahamah

The case study described below is an applied and interactive research project divided into several phases to determine potential and compatible uses of abandoned historical buildings. This project aspired to research suitable models of adaptive reuse that might attract owners to reinvest in their neglected properties while also strengthening the region's identity as a whole. The process enacts its regenerative action by considering how the recovery of historic abandoned buildings and new uses might contribute to the region's cultural heritage and encourage a renewed sense of belonging, identity, and well-being through new forms of interpretation and participatory processes.

The author selected Al Jahamah village in the Sarat Abidah area of Asir as a case study because of its exceptional setting and remote location. Since the main characteristics of the village's urban morphology are intact, the case study could also serve as a reference for other villages in the region. Al Jahamah village contains nearly fifty buildings constructed from red rubble stone, which the builders extracted from the site. The settlement overlooks an expansive valley with a series of agricultural terraces, some of which are still used for pasture by the neighboring communities, while others lie barren.

Investigating Opportunities: a research methodology divided into five sequential phases

The investigation is divided into successive phases, starting from a preliminary in-depth social and historical analysis and an awareness-raising initiative, passing through an evaluation of new uses that are compatible with what already exists, and concluding with a presentation of new scenarios oriented to revitalize the abandoned fabric.

The first phase dealt with surveying the present status of the village and understanding the existing fabric. An analysis of historical documents, interpretation of the fabric's current status, and extensive field analysis have been critical steps for assessing the village's present state and attributing appropriate values to the different parts.

The second phase consisted of a comprehensive survey of the buildings' current status to evaluate the historical and typological elements by comparing the original village to its present decayed condition. Only with an accurate knowledge of what presently exists on the site, it became possible to identify appropriate interventions, which entailed the restoration of existing parts and the design of (new) suitable connectors and additions.

Fig. 6: Al Jahama Village (Sarat Abidah area). Photograph by author.

In parallel, the author launched an awareness-raising initiative with several community members to boost interest among families, the community, and local authorities, draw attention to the village's cultural value,

exchange knowledge about its history and develop ideas about potential future uses. A series of workshops, lectures, and discussions that included community members and a group of local experts were part of this endeavour.

The third phase involved the documentation and the reprogramming of the urban fabric, according to public, semi-private, and private uses. In this phase, the team identified building clusters suitable for residential, commercial, touristic, and cultural functions.

The fourth phase focused on the research of appropriate active sustainable technologies such as solar power, water wells, and sustainable waste management that would protect the area's resources from potential pollution while at the same time enabling a modern lifestyle. Since the construction of the traditional Asiri house employs indigenous building materials and passive environmental systems, the research focused on how the passive techniques of traditional construction could be effectively combined with 'active' sustainable technologies to enable the village to operate in a self-sustained manner off the grid.

The fifth phase of the process pertained to possible adaptive reuse patterns that would be culturally appropriate and economically viable. During this phase, the team analyzed the constituent parts of selected building groups while identifying opportunities related to the intrinsic qualities of the built fabric: natural light, ventilation, exposure, architectural quality, flexibility, suitability to modify or expand volumes, and potential connections with the surrounding settlements.

Based on the survey data and subsequent workshops with community members, the team identified several guiding criteria.

- Tourism and recreation
- Creative, cultural and educational activities
- Inter-generational knowledge transfer
- Typical local productions
- Environment and natural capital
- Community and social cohesion
- Privacy and shared uses
- Financial viability and income generation
- Well-being and liveability
- Cultural value of properties and landscape
- Regeneration of natural surroundings
- Activation of connections within the village environment
- Compatibility with the architectonic quality of existing historical elements
- Compatibility with the size and shape of the available space
- Activation of linkages within the community

All proposals placed a strong emphasis on building an environmental and cultural awareness to provide an enriching positive experience for community members and visitors as well as generate a direct financial benefit for reusing and conserving the village.

Adaptive Reuse Scenarios

Residential reuse

Since many Asiris have migrated to the major cities for work opportunities, but still return to the region regularly to visit family members and enjoy its cold climate, a feasible form of adaptive reuse that seemed logical to the team and community members was the conversion of existing structures into a second-home community. To address both - the need for conserving the heritage and the necessities of a contemporary lifestyle, the team, together with the community, worked on several restoration proposals that respect the morphological structure of the existing building clusters yet offer a more modern and more comfortable setting. By adding, combining, and eliminating walls, the team's goal was to create more spacious units that occasionally also offer private outdoor spaces. The team also explored a horizontal separation of uses where some parts of the village were designed for more public and touristic uses while other areas were designated for the private use of residents and their families. In the more public areas, a vertical separation of functions, where the lower parts of the houses, formerly reserved for stables, would be opened for small businesses and guest rooms while the upper parts of the houses would remain residential was integrated.

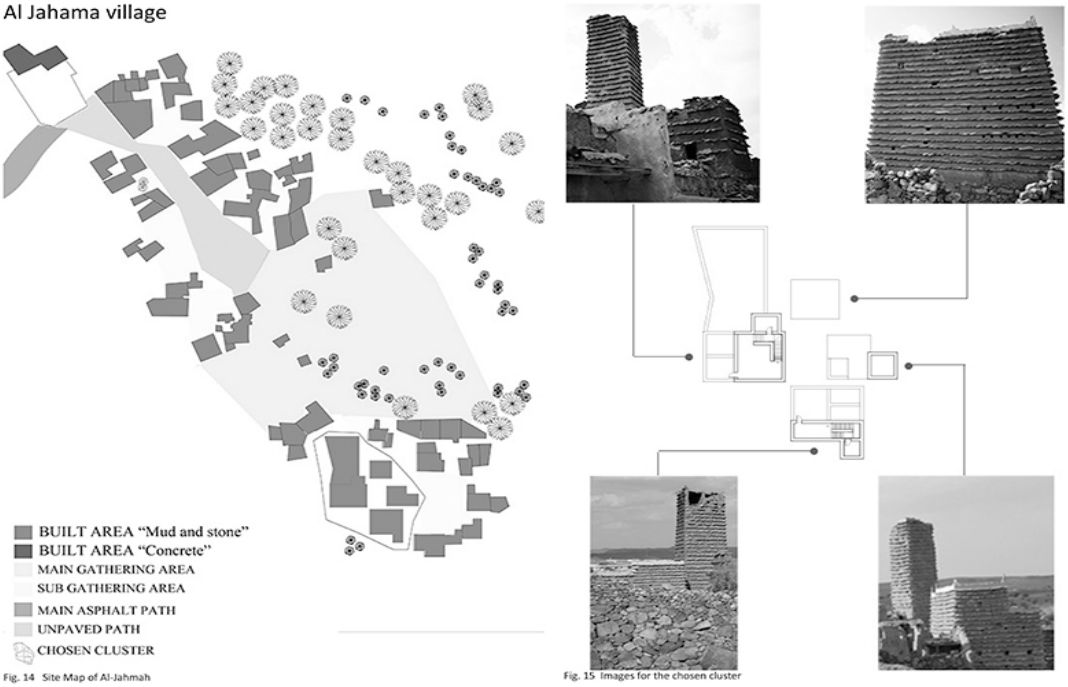


Fig. 7: Al Jahama Village, urban organization, and cluster example. Photographs and works by author with students.

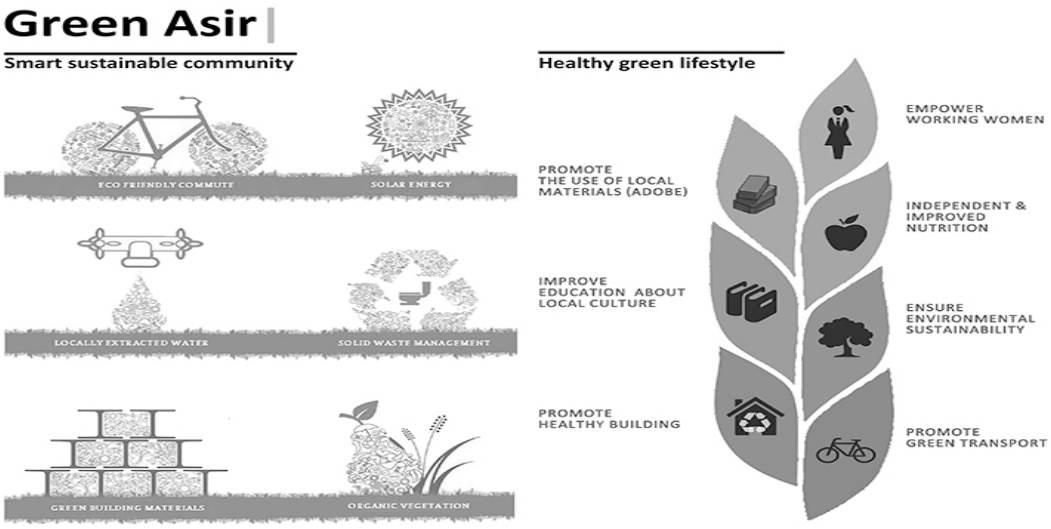


Fig. 8: Vision of Al Jahama as a self-sufficient green village: lifestyle criteria. Works by author with students.

Fig. 9: Vision of Al Jahama as a self-sufficient green village: materials, components & systems criteria. Works by author with students.

Agricultural reuse

As the harvesting of fresh produce used to play a significant role in the self-sustained lifestyle of the Asiris but with progressive modernization has since fallen to the wayside with the arrival of mass-produced food, commercial reuse included the reactivation of the existing orchards for organic farming, along with a farm-to-fork restaurant and farmers' market. The focus on agricultural produce seemed a logical proposal as the provision of regional produce with its emphasis on freshness, local availability, and simple preparations could bring the agricultural heritage of farming back to Asir by responding to a growing demand for regionally grown fresh organic food in the Asiri highlands.

Cultural reuse

Guided by the aim to strengthen the cultural heritage and transmit the knowledge of ancient building and painting techniques to future generations, the team proposed to convert some of the more significant buildings into an intergenerational cultural art and research foundation with an ancillary learning center. The youth and students from the region and other parts of Saudi Arabia would have the opportunity to study traditional Asiri building methods while learning how to combine ancient crafts with modern sustainable technologies. The foundation would foster a creative intersection of traditional building practices, innovative technologies, and the arts to reinvent vernacular cultural practices and bring them into a viable future. A women's education centre would serve as a place of

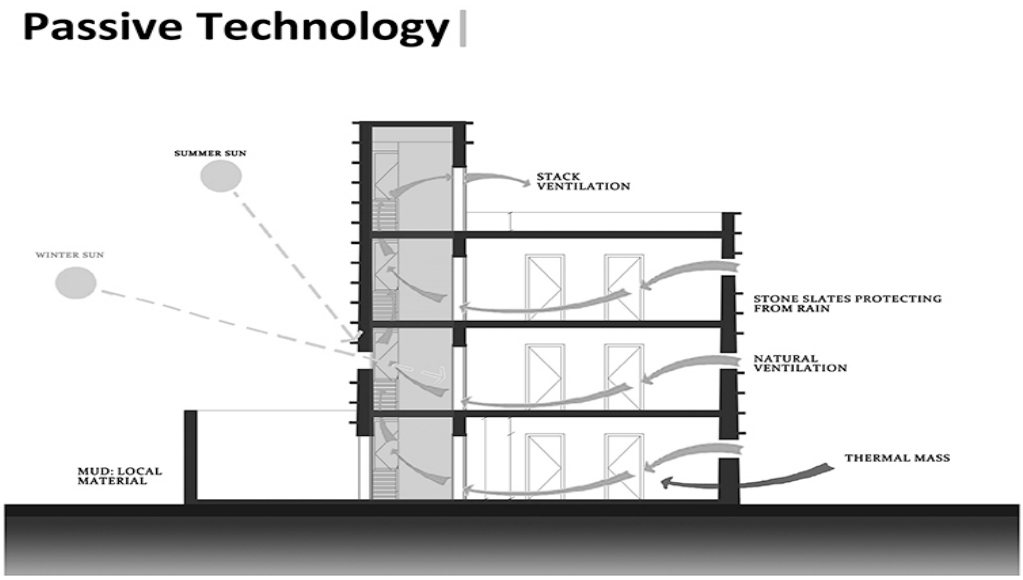


Fig. 10: This diagram shows passive techniques inherent in the Asiri House such as efficient cross-ventilation combined with a high thermal mass. Works by author with students.

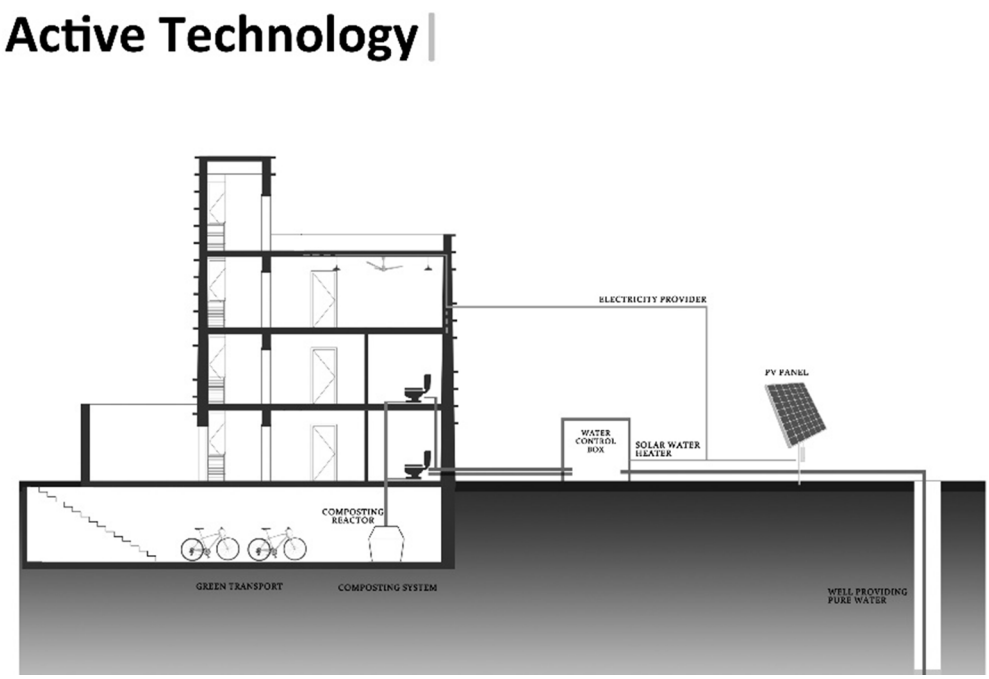


Fig. 11: To complement these benefits, a freshwater well is suggested that combined with solar panels that will provide hot water and electricity. A sustainable wastewater treatment system will convert the wastewater into grey water to be used for watering the orchards. Works by author with students.

knowledge exchange and specialize in the teachings of the nagash art, which is an application of colourful mural artwork unique to the region's cultural heritage, traditionally practiced by women. This platform would give older women in the community who are experts in this craft the opportunity to practice this unique style of painting again while sharing their expertise with young female students in the region. In this way, the cultural foundation could serve as a vital platform for the preservation and reinvention of vernacular practices while inspiring new generations to transform their cultural heritage. All educational elements combined will benefit the community by fostering interdisciplinary and intergenerational initiatives that might include vernacular

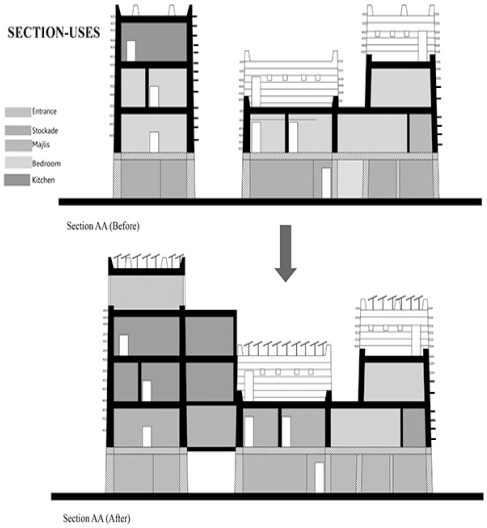


Fig. 12: Conversion of one housing cluster into a single-family dwelling. The section shows vertical and horizontal additions. Works by author with students.

Fig. 13: A reactivation of organic farming is proposed along with the introduction of active green technologies that would enable remote villages to stay off the grid while benefiting from modern conveniences. Works by author with students.

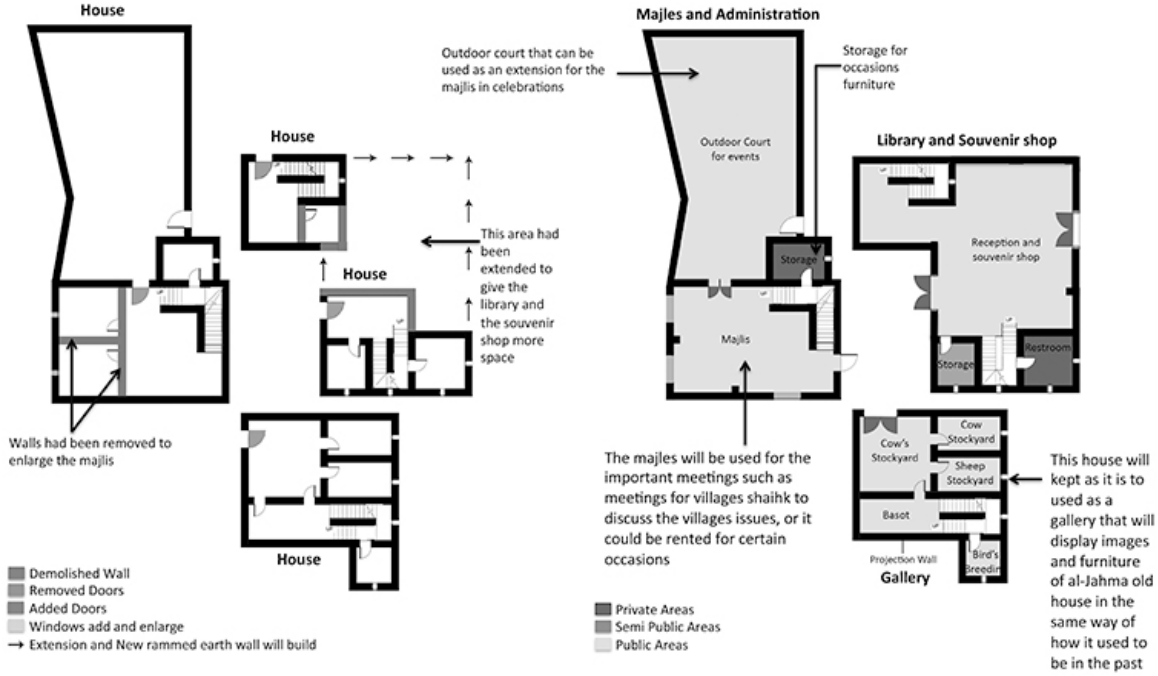


Fig. 14: Reprogramming of housing cluster a cultural foundation with a series of exhibition-, workshop- and meeting spaces. Works by author with students.

and contemporary practices and help integrate the village as people will be able to learn about sustainable building construction, organic farming, art, and culture.

An essential aspect of the project is also its accessibility. The ground floor spaces have been re-imagined as seamless extensions of the public space of the village where workshop-, meeting- and exhibition spaces for culture, art, and education interspersed by exterior courtyards, which become magnets that can reconnect the community with the historic structures, enhancing the presence and role of the new space for the care of the citizens. The design process emphasizes the existing historic character while also creating a contemporary image so that visitors and residents will be encouraged to enter and feel at home in a relaxed, hospitable environment. A café, farm-to-fork restaurant, and retail shops are also a part of the program, offering healthy food in a strategic position near the central gathering space, which links the village with the natural surroundings and

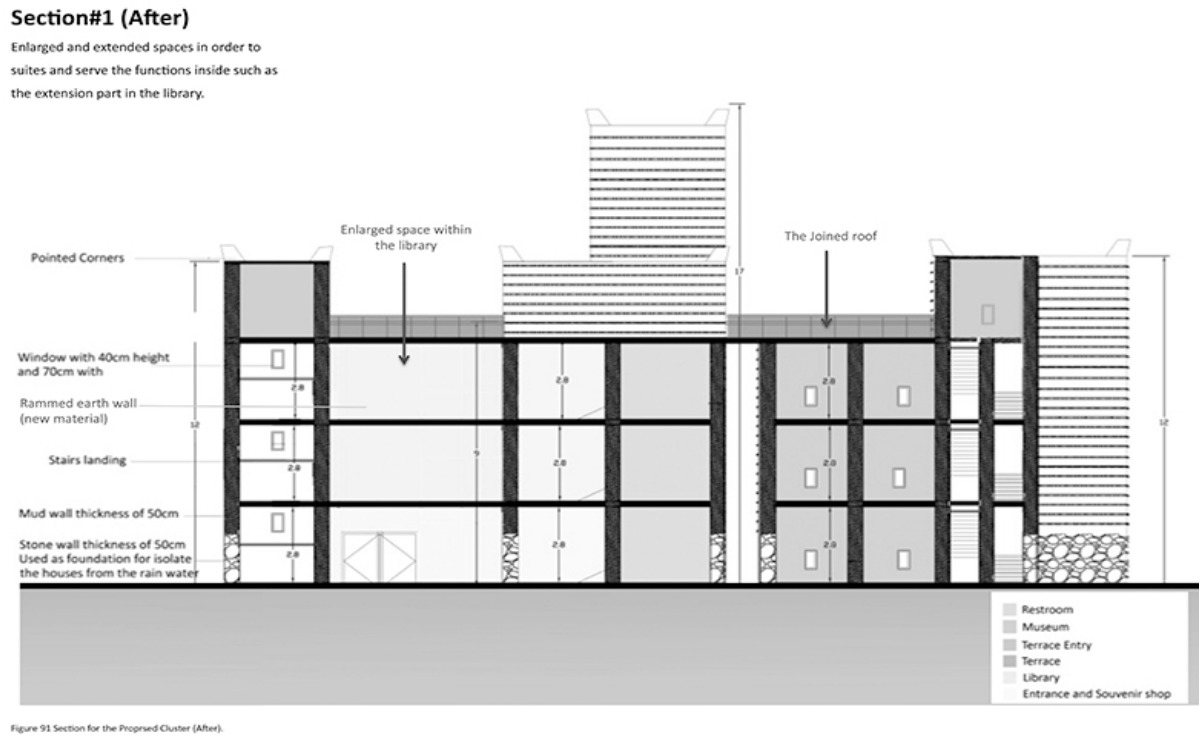


Fig. 15: The section shows new connections, partially enlarged spaces and, a new addition built with rammed earth. Works by author with students.

helps create a friendly, inviting environment. In this way, the research foundation would serve as a central gathering space for the village and as a destination point for visitors and tourists, where people would be able to learn more about the area.

Conclusion: A Holistic Process of Re-appropriation

Many issues at the heart of a global debate concerning a sustainable future intersect with the theme of building reuse, ranging from the research of sustainable development models to the protection of cultural roots. Abandoned historical buildings continue to be one of the most untapped potential resources of the circular economy while presenting an integral aspect of vernacular communities' cultural heritage. Where vernacular buildings are no longer able to accommodate their first use, proposing new uses is inevitable in order to preserve the buildings' significance. The barriers and the constraints to accessing this untapped resource for adaptive reuse are numerous and convoluted, but they can be overcome by raising awareness and encouraging a proactive engagement of the community. If we interpret cultural heritage as an ongoing process, we should foster a connection between the physical remains of a specific culture and possible interpretations of their meanings and contemporary social, cultural, and economic relevance. In the case of abandoned historical structures, this process requires close collaboration between architects, builders, sustainability experts, and community members to create a holistic process of re-appropriation and transformation of such properties according to the needs of the present. This research shows one example of how the reuse of historic buildings might constitute a significant opportunity for revitalizing an abandoned village. The design solutions adopted attempted to harness the potential of reuse, both in renewing buildings' functions according to current social and economic needs and their sustainable performance. The user contribution in the decision-making process and detailed analysis provided valuable information to find the most appropriate use for a synergistic revitalization of the village. However, as each vernacular culture and region is unique by definition, this process must be carefully customized to each community, culture, and region. The author is convinced that with relevant research, innovative ideas, a participatory approach to design and construction along with more flexible regulatory policies, the adaptive reuse of abandoned villages could play an essential role as a creative and sustainable process to pass on the cultural heritage of a region to future generations.

Acknowledgment

The author wants to thank Dar Al Hekma University for enabling this research project with financial support and Prince Sultan University for encouraging the research. The author also wants to express gratitude to Faris Thagfan, whose support was invaluable in guiding and coordinating this project during all its phases. Also, the author wants to thank Lubna Yasin for her invaluable support, Sima Refae for her committed assistance, and all Dar Al Hekma students who assisted in field research and design work.

References

Bagader, M. (2014). The evolution of the built-heritage conservation concept in Saudi Arabia since the 1970s until 2014. In *Research & Heritage, 4* (p.31). The Saudi Commission for Tourism and Antiquities.

Bortolotto, C. (2006). From the monumental to the living heritage: a shift in perspective. Universitá IULM Milan; LAHIC (EHESS).

De Medici, S., De Toro, P. & Nocca, F. C (2020). Cultural heritage and sustainable development: impact assessment of two adaptive reuse projects in Siracusa, Sicily. Sustainability 2020, *12*(1), 311. doi:10.3390/su12010311

Douglas, J. (2002). *Building Adaptation*. Butterworth-Heinemann Publishing.

European Commission (2015). Communication from the commission to the European parliament, the council, the European economic and social committee, and the region's committee. Closing the Loop—An EU Action Plan for the Circular Economy. European Commission.

Hosagrahar, J., Soule, J.; Fusco Girard, L.; Potts, A. (Eds) (2016). Agenda for sustainable development art; New Urban Agenda points. In *Cultural Heritage, the UN Sustainable Development Goals, and the New Urban Agenda* (pp.39–46, 126-160). ICOMOS.

Hussein, H., Klingmann, A., Mohammed, M. (2018). Examining the potential values of vernacular houses in the Asir region of Saudi Arabia, *WIT Transactions on the built environment, Semantic Scholar.* doi: 10.2495/IHA180031, ISBN: 9781784662516

Khalaf, R. (2017). A viewpoint on the reconstruction of destroyed UNESCO cultural world heritage sites. *International Journal of Heritage Studies, 23*(3), 261-274, doi: 10.1080/13527258.2016.1269239

Kamel, E. (2015, March). What to conserve? Heritage, memory, and management of meanings. International *Journal of Architectural Research. Archnet-IJAR, 9*(1), 67-76.

Kenny, M. L. (2009). Deeply rooted in the present: making heritage in Brazilian quilombos. In: L. Smith, & N. Akagawa (Eds.), *Intangible Heritage* (pp. 151-168). Routledge.

Klingmann, A., Hussein, H., Mohammed, Mady (2019): Examining the Thermal Performance of Vernacular Houses in the Asir Region of Saudi Arabia. *Alexandria Engineering Journal, 58*(2), 419-428. doi: 10.1016/j.aej.2019.03.004

Hussein, H., Klingmann, A., Mohammed, M. (2018). Examining the potential values of vernacular houses in the Asir Region of Saudi Arabia, *WIT Transactions on The Built Environment*. Semantic Scholar. doi: 10.2495/IHA180031, ISBN: 9781784662516

Misirlisoy, D. & Guence, K. (2016, October). Adaptive reuse strategies for heritage buildings: A holistic approach. *Sustainable Cities and Society, 26*, 91-98.

Mohammed, M., Klingmann, A., Hussein, H., (2019). Examining the thermal performance of vernacular houses in the Asir region of Saudi Arabia. *Alexandria Engineering Journal*. doi: 10.1016/j.aej.2019.03.004

Plevoets, B., Van Cleempoel, K. (2019). Adaptive reuse of the built heritage: concepts and cases of an emerging discipline. Routledge.

Potts, A. (2016). The Position of Cultural Heritage in the New Urban Agenda: A Preliminary Analysis Prepared for ICOMOS. ICOMOS.

Saleh, M. (1998). Life and death of traditional settlements in Saudi Arabia, *Journal of Architectural Education, 51*(3), 177-191.

Saleh, M. (1999). Reviving traditional design in modern Saudi Arabia for social cohesion and crime prevention purposes. *Landscape and Urban Planning 44*, 51-54.

Saleh, M. (2002). A vision for directing future planning efforts: the case of villages of southwestern Saudi Arabia. *Habitat International 26*, 51-72.

Stahel, W.R. (2016, March 23). The circular economy. Nature. https://www.nature.com/news/the-circular-economy-1.19594.

Smith, L. (2006). *Uses of Heritage*. Routledge; Taylor & Francis Group.

UNESCO (2011). *Recommendation on the Historic Urban Landscape*. UNESCO World Heritage Centre.

Keywords

adaptive reuse, circular economy, cultural heritage, built-heritage conservation, sustainable architecture.

.

Comparing the Sustainable Reuse of Historical Buildings

Silvia Mazzetto

Prince Sultan University, College of Architecture and Design, Saudi Arabia

Abstract

The oil industry in Saudi Arabia and the wider Middle East has generated rapid urban growth and sparked a lively debate over the direction that such growth should take. While the construction of contemporary cities using innovative materials and technologies has been pursued, the need to preserve and maintain the nation's identity, rehabilitate national heritage, and establish new relationships with the local history and culture has also been recognised. This paper examines recently completed adaptive reuse projects and argues for the need to increasingly value local traditions and architecture. Based on data collected using mixed methods, and employing terms derived from reuse proposals, our analysis addresses each project's environmental, socio-economic, and socio-cultural aspects. Sustainability was identified as one of projects' common concerns. Broadly considered in terms of unity and harmony, the sustainability of the projects was further analysed in terms of the materials used, respect for the ecosystem, social aspects, and the required investments and costs related to the scale of interventions (urban-architectural). By presenting this assessment of the projects' innovative practices and overall sustainability, this study aims to promote new solutions for the restoration of architectural heritage in Saudi Arabia and the wider Middle East.

Introduction

The Arabian Peninsula is particularly inhospitable due to its environmental conditions. The relatively recent discovery of oil, however, has enhanced the economy and transformed local traditions; local settlements have grown from small tribal agglomerations into more advanced regional and international economic centres. This development has brought with it a range of common challenges for the cities of the region, one of which is the pressure that urban transformation places on historic city centres. Issues relating to the restoration and reuse of historic buildings have thus become a central focus for local decision-makers.

Oil production began in 1938 following the first discovery of oil fields in the Eastern province of Saudi Arabia and Bahrain (Salama, 2012). The discovery immediately generated a boom, transforming the Gulf and the traditional economy of the regions of the Middle East. Cooperation between the Gulf countries and Emirates began in 1981 with the founding of the Gulf Cooperation Council (GCC), which was established to defend local common interests (Salama, 2012).

In the 1970s, oil production and its export produced an industrial revolution that radically altered the structure and urban fabric of the regions of the Middle East. Rapid growth in the 1950's had involved mainly six cities whose populations grew and infrastructures developed: Kuwait City in the northern Gulf became a significant centre for more than two million inhabitants; Dubai and Abu Dhabi, on the southern side of the Gulf, became cosmopolitan, international and regional hubs in the United Arab Emirates; while in Oman, in the south-eastern area, Muscat developed enormously in and around what is known as the "capital area". Such growth has generated intense competition between these Middle Eastern cities which are facing the challenges related to their development.

Since the 1950's, and in the old city centres in particular, the construction of modern buildings using cement-and-steel has impacted traditional development and its forms (Asfour, 2007). In response, many recent projects have attempted to promote the integration of traditional architecture into contemporary designs to preserve the roots of regional architecture. Similarly, numerous historic buildings have also been restored and reused by adapting their traditional functions to contemporary needs. Not surprisingly, then, in the last decade, safeguarding heritage and reusing historical forms has become a topic of renewed interest in the literature. One widely held view is that heritage protection and reuse are as an effective means of reaffirming cultural values and preventing the deterioration of heritage sites. Accordingly, much of the literature focuses on rediscovering and then promoting local traditions, so that they may be passed down to future generations.

Historical monuments and heritage buildings are necessary for understanding the past and preserving the knowledge of ancient times; they are the remaining testimonies of centuries past (Feilden, 2015). Indeed, each architectural period holds its own significance with specific implications for the creation of space, the building of forms, and the realization of beauty. National heritage embodies the culture and civilization of Arabian cities, displaying the creativity and perfection achieved by local artists who often sought to express their distinctive local identity. Further, given that architectural heritage exists as part of complex processes, it reflects the society in which it was produced. The city – including all its buildings and monuments – is therefore an indispensable resource for the understanding and preservation of local culture (Kropf, 1996).

The current 'modern' approach to restoration and reuse of heritage buildings (Carbonara, 2012; Brandi, 2005) aims to preserve local traditions and the values they embody, by extending a building's life as both a monument with historical value and as an object of culture which embodies the aesthetics and meaning of its setting (Mazzetto, 2006; Jokilehto, 1999;Guerrato et al., 1998; ICOMOS, 2008). These assumptions are reflected in a common approach to the

preservation of heritage buildings that aims to ensure people respect authenticity and appreciate the value of maintaining local history (Marconi, 1999). This approach often draws people's attention to the fact that heritage restoration and reuse projects attempt to combat the ravages of time, limiting a structure's material decay, which preserves its value for future use (Racheli, 2007).The long term value of restoration is thus accentuated and serves to reinforce the importance of authenticity and local history.

This study examines several ongoing or recently completed adaptive reuse projects in the wider Middle East. Its primary goal is to demonstrate how the rehabilitation of historic architecture and the awareness of the local heritage values can enhance the promotion of local and national identity. Through an assessment of the principles adopted for each project's adaptive reuse interventions, our study will identify the economic, environmental, and social benefits of such projects. Specifically, from an economic perspective, heritage reuse can reduce the cost of materials involved in new construction, while water and energy consumption can be lowered. In terms of the environment, heritage reuse reduces both carbon emissions and other forms of pollution. Culturally, the preservation and integration of heritage into new developments allows local culture to retain its presence in the urban landscape, affirming its value and enabling the community to recognize local traditions embodied in the built environment.

Overall, this study argues that the adaptive reuse of heritage has permitted the preservation of local traditions (including their historical materials and techniques), and that such an approach results in a synergy between the modern city, traditional life, and the environment.

Methodology

For the past 30 years, the United Nations Educational, Scientific, and Cultural Organization (UNESCO-ICOMOS, 2010) has been promoting the principles of 'safeguarding heritage', 'sustainability', and 'enhancement of cultural identity' (Miccoli et. al., 2014). In that time, disagreements relating to the protection and safeguarding of heritage buildings have arisen due to conflicting approaches to achieving sustainability, economic growth, and social and cultural goals. These problems often relate to the laws protecting heritage buildings. In some cases, for example, the reuse of historic buildings for new purposes is not legal or its reuse requires alterations that would be incompatible with the specific - often sustainable - elements used in its protection. Such issues have led to much controversy.

The definition of heritage reuse is currently widely debated. Whereas sustainability refers to the ability to meet local needs and requirements by adapting to the environment and using readily available resources. Heritage reuse principally aims to extend the life cycle of a historic building in such a way that it leads to socio-cultural and economic development (UNESCO, 2002), whilst respecting the environment and its biodiversity (Landorf, 2009). The dissonance between the demands of sustainability on one hand, and the limits of adaptive heritage reuse on the other, becomes manifest when the goals are pursued at different levels of governance. UNESCO's designated heritage buildings are protected nationally, for instance, but this may conflict with the host country's sustainable development policies. Moreover, legislation at municipal, federal, and state levels often overlap or conflict; creating legal ambiguity and confusion. On one level, laws may promote sustainability, whilst on another, they may hinder the restoration and reuse of a country's heritage. Effectively, specific heritage projects are caught in the conflicting claims of different levels of governance acting in the pursuit of their respective sustainability and heritage goals.

To effectively assess the relative impact of adaptive heritage reuse projects operating in this context, our study selected prominent examples from the literature. The following projects were chosen on the basis that they are distinctive and interesting examples of best practice from throughout the regions of the Middle East:

(i) Al Jahili Fort and Al Bastakiya Quarter in the United Arab Emirates

(ii) Al Zubarak Fort, Old Amiri Palace, Al Wakrah Souq, Souq Waqif and the Heritage House complex in Qatar

(iii) Old Sana'a district in Yemen.

The above projects were either under construction or had been recently completed, and were assessed according to their scale as either architectural projects or urban developments.

Primary data collection used a mixed method approach. The qualitative approach included interviews, discourse analysis, and recording of oral histories. The data were collected through semi-structured interviews conducted in English that lasted from ten minutes to half an hour. Interviews were partially recorded and transcribed in preparation for analysis. Data was collected to address how each adaptive heritage reuse project promoted local values and national identity in their respective settings, and how they produced environmental, economic, and social benefits. The specific categories for this analysis adapted those typically used for architectural restoration projects and urban regeneration projects. In terms of the quantitative dimension of the study, a small area survey was conducted, involving various stakeholders ranging from local people, tourists, governmental officers, clients, and professionals such as architects and heritage experts.

The primary data for both dimensions of the study is presented schematically in Table 1. It should be noted, however, that although field observations were recorded at selected sites in Arab countries, not all sites in the study could be visited. For this reason, the sets of on-site photographs, sketches, and drawings were used to contextualize our analyses and interpretation of the findings from the primary methods of collection, but not included in the primary sets of data themselves.

These primary sets of data (Table 1) were compared in terms of sustainability. That is, the environmental, socio-economic, and socio-cultural principles of each project were identified using the terms present in the literature and the categories used by the respective projects in their proposals. The secondary analysis, comparing the restoration projects in terms of sustainability, is presented on a schematic matrix (Table 2) that includes a brief legend and annotated description of the scores.

Diagrams illustrating comparisons and emerging results were used to identify recurring, similar, and different results, while remaining open to alternative interpretations of the findings. Additional values determined from the survey and those related to the different dimensions of sustainability are also provided (Table 2). Finally, the transversal comparison of the selected projects identified several approaches to integrating technological needs into the sustainable adaptive reuse of historic buildings. Three areas of comparison were used for assessing adaptive reuse interventions: socio-cultural, socio-economic, and environmental.

Heritage Reuse Intervention Criteria

The reuse of heritage buildings and the preservation of original structures usually provides a range of social, economic, and cultural values, as well as resource enhancement. Many of these values, together with the projects' overall sustainability, have recently been promoted by the UN General Assembly as a means of enhancing the value of heritage restoration; which is usually linked with a country's development (UN General Assembly, 2015). However, it should be noted that the reuse of historic buildings is not only involved in the preservation of old materials and neglected structures, but also takes into consideration the spread of local history and culture, including the preservation of knowledge and traditions for their transfer to future generations.

Accordingly, there has been growing interest in the rediscovery of the traditional construction techniques adopted by ancient civilizations, as it is increasingly recognized that they represent an extraordinary collection of technological, cultural, and environmentally friendly methods that have often been ignored by the instigators of modern development. While it must be admitted that in the past, a lack of national built heritage protection laws contributed to the loss of many historic structures - the contemporary towers in many city centers of the regions of the Middle East were only possible following the widespread demolition of historic buildings, - it can now be acknowledged that local governments have recently started imposing rigid restrictions on development to avoid the further demolition of old buildings and to safeguard many run-down urban areas abandoned since the oil boom.

These measures, taken as part of urban renewal schemes, promote the restoration and reuse of historic buildings with a view to enhancing tourism and developing the entertainment industry. They often tap into local cultures and a sense of national identity. The study thus involved three specific categories of historic building reuse which are particularly significant for the rediscovery of the local identity and culture:

(i) Reuse interventions involving defensive structures to enhance the value of local history

(ii) Restoration of residential buildings and historical quarters to promote local culture

(iii) Redevelopment interventions involving urban areas to promote tourism (Mazzetto and Petruccioli, 2018; Mazzetto, 2018 a; Mazzetto, 2018 b).

The comparison between these adaptive reuse interventions enabled our research to identify similar strategies and approaches in similar environmental contexts, within recurring social or cultural interactions, and in relation to the preservation of local culture (Price et al., 1996), as well as in terms of the functional, social, and environmental adequacy of the projects.

Sustainability Comparison Criteria

The selected cases of adaptive reuse interventions in the regions of the wider Middle East were divided according to three main criteria:

A) Socio-cultural

1. To enhance the social inclusion
2. To promote cultural diversity
3. To discover personal and community belonging
4. To enhance social attachment
5. To improve appreciation of cultural values
6. To improve the quality of labours' working conditions

B) Socio-economic

7. To improve the highest social values
8. To enhance economic growth
9. To support the local economy

C) Environmental

10. To respect the environmental context
11. For the benefit of natural and climatic resources
12. To reduce pollution and materials' waste
13. To minimize the climatic changes
14. To reduce the natural hazard effects

The study also assessed three typologies of adaptive reuse interventions, revealing the different aspects of sustainability requalification:

i) Adaptive reuse on an architectural scale of historic defensive buildings to enhance and protect the local building traditions

ii) Adaptive reuse on an urban scale of historic residential quarters located in the urban city centres to strengthen the local culture

iii) Adaptive reuse on an urban scale of commercial areas such as ancient *souqs* (markets) to enhance the national identity and local tourism.

The following sections of this paper discuss the findings of our comparative analysis.

Adaptive Reuse on an Architectural Scale: The Rediscovery of the Defensive Structures

In recent decades, the governmental institutions responsible for safeguarding the heritage in the regions of the wider Middle East tended to favor (and have financed) the completion of many adaptive reuse projects on an architectural scale to save many historic buildings that were severely damaged after

Fig. 1: Al Zubarah fort after the completed works and the structure reuse as a museum of the fort (Source: Mazzetto).

many years of abandonment. Among these, our study compares the adaptive reuse interventions of two ancient historical defensive structures: the Al Zubarah Fort located in Qatar (Fig. 1) and Al Jahili Fort located in Al Ain, in the United Arab Emirates.

The primary function of this kind of heritage structure was to defend the land from foreign invasions and to protect the rare wells of drinking water in the desert. Around the beginning of the nineteenth century, Al Zubarah was a fortified commercial city located in the northern side of Qatar. Abandoned in the late 20th century, there are still visible ruins of the ancient urban fabric: courtyard houses, mosques, streets, fishermen's huts, and the palace with the double defensive walls, essential evidence of a vibrant society in the Middle East.

Al Zubarah Fort is located close to archeological remains. A typical Arab fort built to protect the land from foreign invasion (Walmsley et al. 2009),it is squared with four defensive towers on the corners, made with local limestone blocks. The fort was entirely restored in 2015 by the Qatar Museums Authority (QMA); all the historical materials were strengthened and reinstated in their original locations. Today, the fort is part of Qatar's national tourist heritage sites and is used as a museum that exhibits the archeological finds from the Al Zubarah site. It also presents examples of the local traditions of housing culture, and the drinking water supply techniques adopted in the past.
Importantly, the adaptive reuse intervention has enhanced the socio-cultural value of the site and the rediscovery of Qatari defensive traditions, whilst strengthening the socio-economic aspects of the area. The touristic function is an example of how the site has been adapted over the centuries in response to an environment dominated by extreme climatic conditions and shifting political fortunes.

Similarly, Al Jahili Fort in Al Ain in the United Arab Emirates (Fig. 2) isa traditional fort constructed in the 19th century (1891) by Sheikh Zayed. First used to defend the palm groves, it was subsequently converted into a private residence. In 2007, the fort was entirely strengthened and restored by the Abu Dhabi Tourism and Culture Authority (Abu Dhabi Department of Culture and Tourism, 2017), and is now an exhibition centre for Sir Wilfred Thesiger's collection of explorative works.

The round defensive towers at the corners of the squared fort were strengthened to ensure the fort's overall structural integrity. The defensive walls are constructed of local materials such as coral and limestone, masonry blocks, and mud. The adaptive reuse intervention has resulted in a restored fort that is currently in good condition and attracts many visitors who are encouraged to explore the landscaped gardens and the exhibition centre.

Fig. 2: The main entrance of Al Jahili Fort located in the United Arab Emirates, in Al Ain.
Source : https://www.marcopolo.tv/al-ain-alla-scoperta-di-abu-dhabi.

Residential Buildings: Enhancement of Local Culture

The recent interest in the rehabilitation and reuse of architectural heritage has also involved many examples of the residential heritage buildings. The old Amiri Palace in Qatarwas constructed under Ottoman authority by Sheikh Abdullah bin Jassim Al Thani. Itis mainly constituted by the three courtyard houses of the Sheikh and his sons, Hamad and Ali (Wright, 1975). It also includes a vast *majlis* (living room) that still dominates the compound. In 1923, the building was abandoned, and by the 1960s the complex was in disrepair. It was partially restored with the reconstruction of some buildings in the 1970s. That is, in 1972 Sheikh Khalifa Al Thani decided to establish for Qatar a new national museum in the Old Palace complex. It was restored with the addition of few new buildings by Msheireb Property, a subsidiary of the government's Qatar Foundation. The wall structures are made of coralline settlement and are set in mud mortar, they are then plastered with mud to protect the buildings from the sea air. During the 1970s restoration project, the basic structures for the new additions were added with concrete slabs and beams.

Currently, the residential quarter rooms are being reused as museums, exhibition spaces, and cultural centres to exhibit local memories and traditions. The project's aim was the full rehabilitation and restoration of the historic residential buildings, bringing cultural values to life while emphasizing the local, sustainable credentials.

Another complex restoration project was completed at the end of the 1980s in Yemen (Fig. 3). The Old Sana'a, the residential settlement, was consolidated and reconstructed using a historical typological approach under the direction of the General Organization for the Preservation of Historic Cities of Yemen (GOPHCY). The architecture of houses located in the old city center ("Conservation of Old Sana'a, Yemen", 1995) reflects the Ottoman style that dates to the beginning of the 16th century. The external walls are thick to allow protection from attacks and enemies and simultaneously provide comfortable residential spaces for the inhabitants inside the city walls. The defensive structures were built using local materials combined layers of mud, bricks, and stone blocks. The reconstruction works took into consideration the use of the same traditional materials respecting the history of the place and reaching a comparable level of integration between the old

Fig. 3: The Old Sana'a residential settlement in Yemen. Source : www.akdn.org/architecture/project/conservation-old-sanaa

The old buildings and structures provide an authentic impression of the traditional residential structures (Bulosan, 2016), together with the recently completed (2015) restoration projects of the Heritage House Quarter in Doha, which was supervised by Msheireb Properties. The "Heritage Houses" quarter was constructed in the early twentieth century and is composed of four Qatari houses: Company House, Bin Jelmood House, Mohammed Bin Jassim House, and Radwani House, where we can find the traditional method for the construction of residential buildings following the local typology of the country.

and the new houses by recognizing the traditional Islamic settlement characteristics of the early years of Islam. The complex is currently used as a residential area with palaces and historic buildings reused as museums and exhibition places (Lewcock,1996).

The Al Bastakiya Quarter in Dubai (Fig. 4) (Salama and Wiedman, 2013) is another interesting restoration project completed in the United Arab Emirates in 2003 under the supervision of the Dubai Municipality. The residential area, built in the late 19th century by Persian merchants,

Fig. 4: Bastakiya Quarter, United Arab Emirates, Dubai Source:www.flickr.com/photos/bhaktiamsterdam/2192557163.

Fig. 5: Al Wakrah fishermen village restored in 2015 and currently used as the new Souq
Source: Mazzetto

was recently classified as of having heritage value and completely restored after many years of abandonment. As the structures of the houses before the restoration presented severe traces of deterioration, an extensive large-scale consolidation of the structural materials was applied to avoid any structural collapse. Consequently, the intervention partially transformed the original urban fabric of the place. The wooden floors, staircases, and windows were replaced entirely using similar materials, respecting the local style. After the intervention, the Al Bastakiya quarter is in a good state of conservation and is used as a cultural museum open to the public and tourists' visits.

The two examples of adaptive reuse of historical centres reveal how heritage preservation helps to enhance the traditional

Fig. 6: Souq Waqif restored in 2006, today one of the most pleasant social places in Doha
Source: Mazzetto

culture embodied in their settings. After the interventions, both the sites are reused as cultural centres, which has improved the value of local tradition by enhancing the transmission of cultural traditions linked to the performance of residential spaces and their functions. One of the most important approaches adopted for the restoration interventions was to emphasize and improve the transmission of socio-cultural elements. Although such aspects are not normally taken into consideration, they remain crucial to achieving the right level of heritage revitalization. Indeed, the city centre's new function has highlighted the capability of the old buildings to be adapted to the population's needs, and thanks to the recognition of social cohesion in the territory, it has become an example of social values strengthening.

Commercial Reuse of Old Spaces on an Urban Scale: Enhancement of Local Tradition And Tourism

In the category of the completed urban rehabilitation projects, two interventions located in Qatar were analyzed: the Al Wakrah fishermen village (Fig. 5) that was transformed and reused as a new *souq* and the restoration of Souq Waqif in Doha.

Name	Date / Place	Institution	Original use	Project categories	Project description	Type of materials used	Adaptive Reuse	Comparison principles
Al Jahili Fort	2007 Al-Ain UAE	Abu Dhabi Tourism & Culture Authority	Defensive structure	Architectural restoration	Restoration, consolidation	Natural materials and cement mortar	Fort Museum	Socio-cultural Environmental
Al Zubarah Fort	2014 Doha Qatar	Qatar Museum Authority	Defensive structure	Architectural restoration	Restoration	Natural materials, limestone rocks, gypsum mortar, wooden poles	Fort and Cultural Museum	Socio-cultural and socio-economic
Old Amiri Palace	1981 Doha Qatar	Msheireb Property	Residential Palace	Architectural restoration	Restoration, Structural consolidation	Natural materials and cement mortar	Museum of the palace	Socio-cultural
Heritage Houses	2015 Doha Qatar	Msheireb Property	Residential quarter	Architectural restoration,	Restoration, Structural consolidation	Natural materials, limestone rocks, gypsum mortar, wooden pole	Museums of the culture	Socio-cultural
Old Sana'a	1995 Yemen	General Organization for the Preservation of Historic Cities of Yemen	Residential Settlement	Urban regeneration	Restoration, consolidation	Natural materials, cement mortar.	Residential, museums, exhibitions	Socio-cultural socio-economic environmental
Al Bastakiya Quarter	2003 Dubai UAE	Dubai Municipality	Residential Quarte	Architectural restoration	Restoration, consolidation	Natural materials, mud, cement mortar.	Religious and Cultural Center	Socio-cultural and socio-economic
Al Wakrah Souq	2015 Doha Qatar	Private Engineering Office PEO	Fishermen Village	Urban regeneration	Restoration, typological reconstruction	Natural materials, cement mortar, concrete blocks, and reinforced concrete	Commercial - Entertainment	Socio-cultural socio-economic environmental
Souq Waqif	2006 Doha Qatar	Private Engineering Office PEO	Old Souq	Urban regeneration	Conservation and restoration, typological reconstruction	Natural materials, cement mortar, concrete blocks, and reinforced concrete	Commercial - Entertainment	Socio-cultural socio-economic environmental

Table 1: Schematic Comparison of the Adaptive Reuse Projects

Al Wakrah's intervention was completed in 2015 under the supervision of the Private Engineering Office (PEO). The project has enhanced the link between the integration of contemporary architecture with traditional structures. The urban regeneration of the old fishermen village near the old Al Wakrah Port has permitted the reuse of the old areas as the new *souq*. Many new buildings were reconstructed using a typological approach. Other old and run down structures have been integrated with the new ones through a meaningful functional adaptation, which has enhanced the promotion of old and new commercial activities, as well as restaurants and cafeterias in front of the sea. The location has preserved its original identity as a social and commercial area, including many traditional activities that recall the local culture. The social values connected with the environmental values of the area are still clearly perceptible, and there is a strong sense of appreciation and transmission of the local commercial culture.

Another project is the rehabilitation of Souq Waqif in Doha (Fig. 6). The project was completed in July 2006 by PEO and is an excellent example of a contemporary approach integrated with tradition that promotes cultural values. Souq Waqif is an extensive urban development; hosting a wide variety of traditional commercial activities, together with a rich combination of restaurants, and local shops close to the Doha's city center.

The restoration project has been based on a detailed and meticulous study of the history of the original *souq* and its urban fabric, with the intention of restoring the existing historic buildings which remain, despite having been

LEGEND A it refers to the maximum level of the score (8-10 points) B= it refers to the average level of the score (4-7points) C= it refers to the low level of the score (0-4 points)		Urban regeneration			Architectural restoration				
Areas of sustainability	Principles of sustainability	Souq Waqif	Souq Al Wakrah	Old Sana' a	Heritage Houses	Amiri Paalaca	Al Zubarah Fort	Al Bastakiya quarter	Al Jahili Fort
SOCIO-CULTURAL SUSTAINABILITY	1. To enhance the social inclusion	A	A	A	B	B	C	A	A
	2. To promote cultural diversity	A	B	A	A	B	C	A	B
	3. To discover personal and community belonging	A	A	A	A	A	A	B	A
	4. To enhance social attachment	A	A	A	A	A	A	A	A
	5. To improve appreciation of cultural values	B	B	B	A	A	B	A	A
	6. To improve the quality of labours' working conditions	C	C	B	C	C	C	C	C
SOCIO-ECONOMIC SUSTAINABILITY	7. To improve the highest social values	A	A	B	B	A	A	B	B
	8. To enhance economic growth	A	B	A	B	B	C	B	B
	9. To support the local economy	B	B	B	B	A	B	B	B
ENVIRONMENTAL SUSTAINABILITY	10. To respect the environmental context	C	C	C	B	B	A	A	B
	11. For the benefit of natural and climatic resources	B	C	B	B	C	A	C	B
	12. To reduce pollution and materials' waste	C	B	C	B	B	A	C	B
	13. To minimize the climatic changes	B	B	B	B	B	A	B	B
	14. To reduce the natural hazard effects	C	B	B	C	C	A	B	C

Table 2. Schematic Comparison of Areas and Principles of Sustainability Used for Assessing the Restoration Projects. (The legend shows the scores achieved from each project during the assessment phase).

severely damaged after many years of neglect and abandonment. The reconstruction works included the detailed restoration of all of the oldest structures and the recovering of the local building typology following the traditional methodology for construction (Mazzetto and Petruccioli, 2018).

The restored Souq Waqif is currently the most vital commercial area in the city centre. It offers an architectural integrative solution to the competing demands of preserving traditional spaces and contemporary populations. The human scale of the structures and the open spaces provide a comfortable and pleasing atmosphere, which attracts locals and tourists alike in any season. It is therefore a highly frequented and much appreciated destination.

All of the adaptive reuse interventions of commercial *souqs* assessed here highlight the valorization of thesocio-cultural and socio-economic conditionsof these places. Regarding the socio-cultural values, both interventions have strengthened thesense of attachmentto the local traditions of heritage places felt by local inhabitants and visitors alike. This was achieved bycreating new entertainment and commercial areas (*souqs*) and by strengthening the values embodied by local historical forms within re-qualified urban areas. From a socio-economic point of view, both reuse projects have contributed to reestablishing the importance of these urban areas that were once abandoned for many long years (Hakim, 2007).

Comparing Adaptive Reuse Interventions – A New Approach?

Table 1 shows a comparison of the analyzed adaptive reuse interventions and proposes a framework for representing accepted study methods. Evaluations have, in fact, only taken into consideration some typologies of intervention (defensive buildings, residential buildings, commercial space), the scale of the projects (architectural and urban scale), and the comparison between the interventions, that were based on some socio-cultural, socio-economic, environmental and sustainable values.

Analysis of the compared adaptive reuse projects shows that all the projects followed the restoration approach imposed by the government authorities responsible for the interventions. The comparison principles have also considered the scale of the intervention, the environmental aspects, the surroundings, and the context of the historic building, its links with tradition, the transmission of cultural and social values, the new buildings' functions, as well as the results of the reused places. Table 1 summarizes the comparison of the adaptive reuse interventions by showing the differences and similarities between the projects.

Table 2 presents the case study, the status, and the assessment systems adopted for the research, showing the features and performance used for environmental, socio-cultural, and socio-economic sustainability.

Regarding the sustainable approach adopted, the results show that the categories of urban and architectural interventions have mainly addressed the principles of sustainability about the socio-cultural and socio-economic areas. In contrast, archaeological interventions have focused primarily on the principles and areas of environmental sustainability. As part of the socio-cultural principles of sustainability adopted for the assessment, the quality of the labourer's conditions during the interventions reveal the need to improve the general living conditions and safety standards during the restoration projects.

Discussion

The research presented has highlighted the need to preserve local traditions in the wider Middle East. This should be guided by a new approach that highlights our responsibility to restore historic buildings and preserve local culture. This approach is sensitive to the environmental characteristics of the locations and aims at developing sustainability. Nowadays, , there is a clear and deliberate attempt in many regions of the Arab Peninsula to link the cultural aspirations of growing countries with the preservation of their local histories and traditions. This has been illustrated by the cases presented in this study.
While Dubai, Abu Dhabi and Doha are currently the main centres of contemporary post-oil urbanism, other cities in the UAE, Qatar, Oman, Kuwait, and Saudi Arabia have also begun a rapid urban transformation process. Traditionally, historical architecture and heritage are the direct expressions of local ideas and values, embodying the beliefs of Arabian culture. However, due to the rapid spread of modernization, a disconnect in our relationship between the past and the future has generated many doubts concerning the direction of growth being taken by many new cities. In the Arabian Peninsula, architectural restoration and reuse must therefore be further analyzed and developed so that it can contribute to a healthier relationship between tradition and modernity.

Another important principle that should be applied to any intervention is that of sustainability. The sustainable approach to the restoration of ancient buildings has been linked to many cultural, social, environmental, and energy-saving values. Further, one result of the current study, as shown in the schematic diagrams, is that there are many common points shared by the adaptive reuse of local heritage, the restoration and reuse of traditional techniques and natural materials, the enhancement of local values, the synergy with the location and various therapeutic strategies; all of which should be sustainable and compatible with heritage buildings.

Conclusion

This research presents an assessment of significant restoration projects completed in the wider Middle East by considering some fundamental values linked with sustainable heritage reuses. These are: (i) Socio-cultural values that enhance social inclusion, and foster a sense of community belonging and the cultural diversity; (ii) Environmental values that enhance the environment and minimize the negative impacts; and (iii) Socio-economic values that improve the economic future of the country. The cases analysed show that the principles of sustainability are usually addressed through their cultivation of unity and harmony understood in a broad sense; through respect of local sites and their ecosystems; through restoration using old materials; through the enhancement of the social elements of places; through the cultivation of local investment and the reduction of the costs of the reuse interventions.

Our study has aimed to promote strategies, solutions, and examples of good practice. It could also be considered as innovative through our use of a schematic analysis to compare current techniques for restoring national architectural heritage, promoting Arab culture in the field of restoration, whilst respecting the environmental principles of sustainability. By developing such a comparative overview, we hope to facilitate further preservation and reuse of heritage sites throughout the wider Middle East. Indeed, much historical architecture and many of the neglected monuments are waiting to be safeguarded. Our study has aimed to demonstrate that such initiatives are preserving the historical value of places, and contributing to the local identity of the many growing countries in our region.

Acknowledgements
The author would like to acknowledge the support of Prince Sultan University for providing an environment that promotes collaboration and research.

References

Abu Dhabi Department of Culture and Tourism. (2017) "Al Jahili Fort."

http://tcaabudhabi.ae/en/what.we.do/culture/museums/al.jahili.fort.aspx (accessed September 8).

Asfour, K. (2007) "Polemics in Arab Architecture: Theory Vs. Practice." *Archnet—IJAR International Journal of Architectural Research, 1*(1): 53-69.

Brandi, C. (2005) Il restauro:Teoria e pratica, 1939-1986. Editori Riuniti.

Bulosan, M. (2016). *Conservation Phase of Old Amiri Palace, Doha, 2013-2016: Project Documentation*. Np: Restoration& Reconstruction.
https://www.academia.edu/31061475/_RR-07_Main_Conservation_Phase_of_Old_Amiri_Palace_Doha_2013-2016 (accessedSeptember 8, 2017).

Carbonara, G. (2012). An Italian Contribution to Architectural Restoration. *Frontiers of Architectural Research, 1*(1), 2-9.

---. (2008).Trattato di restauroarchitettonico. 4 vols. UTET.

"Conservation of Old Sana'a, Yemen." In *Architecture Beyond Architecture: Creativity and Social Transformations in Islamic Cultures: The 1995 Aga Khan Award for Architecture*, C. Davidson & with I. Serageldin (pp.40-47). Academy Editions.

Feilden, B. M. (2015). *Conservation of Historic Buildings.* Routledge.

Frampton, K. (1983). Prospects for a Critical Regionalism. *Perspecta: The Yale Architectural Journal, 20*, 147-162.

Guerrato, M., Mazzetto, S., Verzolla, M. & Zuin D. (1998). Relazionemetodologica, analisi del paramentomurario [Methodological Report, Analysis of the Wall Surface and Color Classification of the North Wall Tiles]. In S.P. Maffei (Ed.), *Tradidattica e professione: il progetto di conservazionedella Chiesa di San Giovanni Evangelista a Venezia* [Between Didactic and Profession: The Conservation Project of the Church of San Giovanni Evangelista in Venice], (pp.95-102). IUAV.

Hakim, B. S. (2007). Revitalizing Traditional Towns and Heritage Districts. *Archnet-IJAR: International Journal of Architectural Research, 1*(3), 153-166.

ICOMOS. (2008). *ICOMOS-ISCS: Illustrated Glossary on Stone Deterioration Patterns*. ICOMOS International Scientific Committee for Stone.

Jokilehto, J. (1999) *A History of Architectural Conservation.* Butterworth-Heinemann.

Kropf, K. (1996). Urban Tissue and the Character of Towns. *Urban Design International, 1*(3), 247-63.

Landorf, C. (2009), Framework for Sustainable Heritage Management: A Study of UK Industrial Heritage Sites. *International Journal of Heritage Studies, 15*(6), 494-510.doi/abs/10.1080/13527250903210795

Lewcock, R. (1986) *The Old Walled City of Sana'a*. UNESCO.

Marconi, P. (1999). *Materia e significato: La questione del restauroarchitettonico*. Laterza & Figli.

Mazzetto, S. (2006) Beni militari come attori protagonisti [Military Heritage as Leading Players]. In P. Grandinetti, S. Mazzetto, and V. Skabar (Eds.), *Cavallino-Treporti: Progetti per un'idea di parco* [Cavallino-Treporti: Projects for an Idea for a Park], (pp. 50-51). Il Poligrafo.

Mazzetto, S. (2018a). Heritage restoration as a tool to promote the cultural identity in the Gulf Regions. *Preservation, Digital Technology & Culture, 47*(1), 3-11. doi.org/10.1515/pdtc-2017-0015

Mazzetto (2018b). Evaluation of the Impact of Sustainability Principles on Adaptive Reuse Interventions: The Case of Qatari Heritage Experience. *Architecture Research, 8*(4), 129-137.

Mazzetto, S. & Petruccioli, A. (2018). Methods and Techniques Used in Significant Restoration Projects in Qatar. *Studies in Conservation, 63*(5), 303-314. doi/abs/10.1080/00393630.

Mohga E. E, (2014, April). Sustainable Urban Rehabilitation of Historic Markets "Comparative Analysis," *International Journal of Engineering Research & Technology (IJERT) 3*(4).

Miccoli, S., Finucci, F. and Murro, R. (2014). *Social Evaluation Approaches in Landscape Projects. Sustainability, 6*(11), 7906-7920.

Price, N. S., M. Talley, T, Jr., & Vaccaro, A.M. (Eds.) (1996). *Historical and Philosophical Issues in the Conservation of Cultural Heritage*. Getty Publications.

Racheli, A. M.,(2007). *Restauro e architettura: Teoria e critica del restauroarchitettonico e urbano dal XVIII al XXI secolo*. Gangemi.

Salama, A. (2012). Architectural Identity Demystified: Visual Voice from the Arab World." In P.Emmons, J. Lomholt, & J. S. Hendrix (Eds.), *The Cultural Role of Architecture: Contemporary and Historical Perspectives* (pp. 175-85). Routledge.

Salama, A., & Wiedman F. (2013). *Demystifying Doha: On Architecture and Urbanism in an Emerging City.* Ashgate.

UNESCO, (2002) *Partnerships for World Heritage Cities, Culture as a Vector for Sustainable Urban Development World Heritage 2002, Shared Legacy, Common Responsibility* [Associated Workshops], 11-12 November 2002 Urbino, Pesaro, Italy. UNESCO. https://whc.unesco.org/en/series/9/

UNESCO-ICOMOS, (2010). *Management Plans and the World Heritage Convention – A Bibliography*. ICOMOS. www.icomos.org/centre_documentation/bib/Management_plans_bibliography.pdf

UN General Assembly (2015), *The 2030 Agenda for Sustainable Development*. The United Nations.

www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf

Walmsley, A., Barnes, H., & Macumber, P. (2010). Al-Zubārah and its Hinterland, North Qatar: Excavations and Survey, Spring 2009." In J. Starkey (ed.), *Proceedings of the Seminar for Arabian Studies, 40*, (pp.55-68). Archaeopress.

Wright, G.R.H. (1975) *The Old Amiri Palace: Doha, Qatar.* Qatar National Museum.

Keywords
Heritage reuse, adaptive reuse, heritage safeguard, cultural values, national identity

.

Improving the Quality of Life in Saudi Cities Through Active Public Residential Spaces: The Case of Central Dammam City

Sulaiman M. Almazroua and K.M. Maniruzzaman

Imam Abdulrahman Bin Faisal University, Saudi Arabia

Abstract
There is a strong connection between public spaces and the quality of residential areas. Public spaces are essential elements for enhancing the livability of a city. However, not all public spaces are successfully playing its role in this case. Using Dammam city, Saudi Arabia as a case study, this paper examines how public spaces can impact the quality of life of its residents. A survey on a sample of residents of eight central districts of the city was conducted to explore their satisfaction with public residential spaces and its impact on their lives. Most respondents are reportedly considering changing residences due to the problems with current neighborhood public spaces. The result of this survey revealed that public residential spaces in central districts of Dammam need improvement to provide a better living environment to its residents. This study proposes some suggestions and recommendations for the relevant authority.

Introduction

There is a strong connection between the quality of residential districts and public spaces which are basic components of a livable city. Open spaces provide a framework which links the physical space of the metropolitan region with its social milieu (UCLG, 2016). The municipalities in Saudi Arabia have made attempts to provide public spaces in residential areas in each district to fulfill the expectations of residents. However, the residents' needs and preferences have not been adequately taken into consideration through their limited involvement in the process of planning residential public spaces. It is, therefore, possible that such spaces fail to meet the expectations of the residents, which will ultimately hinder the realisation of Saudi Vision 2030. This is the context of the study described in this paper which is based on a preliminary survey conducted with the residents in central districts of Dammam city. The objective is to understand how public open spaces in urban residential districts can improve the quality of life for the residents of Dammam city; how they improve the material conditions of the city as well the quality of life, thereby creating greater opportunities for its inhabitants, all of which is in line with the deliverables of Saudi Vision 2030.

Residential Public Spaces in Central Dammam City
While there are other open spaces which are used by the public, most city authorities specify the requirements for local parks in neighbourhoods as they are the major form of public open spaces in residential areas. In the last decade, studies on the role of public spaces in sustainable development have been recognized by both local and international research communities (Okorie, Dabara, Adenipekun, Prince, & Ajiboye, 2019). The importance of public spaces can be gauged from the fact that residents experience a city as a cohesive organization only because of public spaces (Frick, 2006). Indeed, public spaces allow residents to interact more intimately with the city and form greater bonds with it.

Fig. 1: Location of Dammam in Saudi Arabia,
Source https://www.ahqsons.com/about.htm

Fig. 2: Dammam city area,
Source: Google Map on 20/1/2020.

Fig. 3: Central districts of Dammam city, Source: Google Map on 20/1/2020.

It is imperative that public open space is an element of sustainable housing design. In sustainable housing design, the process of planning is viewed as a means of fulfilling the actual needs of the inhabitants (Yilmaz & Keles, 2004). A key demand of local residents is transportation. Public spaces can accommodate different types of vehicles in a deliberate and comfortable manner. In this way, uncluttered and secure public spaces function as a glue among buildings. Thus, not only do they reinforce localities, but also develop social connections among residents (Yilmaz & Keles, 2004).

A great example of how the use of residential public spaces can enhance residents' quality of life can be found in Canada (Chisholm, 2004). Throughout Canada, various community institutions are attempting to rehabilitate degenerated public spaces and convert them into lively natural regions. To that end, they involve the communities in the process to obtain the common objective of enhancing the living standards and the livability of their localities. People are involved in planting trees and wildflowers, as well as being assigned responsibilities for the permanent care and supervision of the plantations (Chisholm, 2004). This approach has proven to be advantageous not only for the localities, but also for the residents themselves, since it strengthens their social ties and offers opportunities to all levels of the community.

In the United Nations 2030 Sustainable Development Agenda, target seven of Sustainable Development Goal (SDG) eleven incorporates a vision to provide universal access to safe, inclusive and accessible green and public spaces, especially for women, children, the aged and persons with various disabilities (Abubakar & Aina, 2019). Public spaces in the city are a fundamental element of achieving this and other goals including Goal three: good health and wellbeing, Goal five: gender equity, Goal six: clean water and sanitation, and Goal thirteen: climate action. The localization and the implementation of the SDGs, with special focus on SDG eleven: sustainable cities and communities very much depends, however, on local and national governments and their policies, as well as their support programs, such as the renovation of the Dammam Center to improve the quality of life of residents (World Health Organization, 2016).

One of the programs of Saudi Vision 2030 is related to quality of life. It has two main concepts—lifestyle and livability—which help to enhance different aspects of people's quality of life. The environment, urban design, and housing are the areas under the livability concept that are related to this study. Currently, Saudi Arabia is improving its performance in achieving the target of providing a high-quality environment, urban design, affordable housing, and protected nature in general (KSA-Government, 2017).

Many cities around the world are grappling with poor quality of life (Kumar & Khandelwal, 2018; Muhammad & Abubakar, 2020). The city of Dammam, in particular, has been facing this challenge and trying to address it specifically for some time (Alqahtany & Abubakar, 2020). Located in the Eastern Province of Saudi Arabia beside the Arabian Gulf (Figure 1), the city of Dramman is a constituent of the Dammam Metropolitan Area, which is considered to be the centre of Saudi Arabia's oil-driven economy (UN-Habitat, 2016). The city's eight central districts, namely, Alkhaleej, Albdeea, Aldawaser, Alsouq, Alnakheel, Gazaaz, Aladamah, and Albadiyah, were included in this study since they were the oldest districts of Dammam city where public open spaces were likely to be fewer in number and smaller in size.

Method

This study collected data on the residents' perceptions about the public spaces in their locality through structured interviews using a questionnaire. The qualitative data was gathered through close-ended questions. In total, 50 respondents across the eight central districts participated in the study. Six respondents were selected through convenience sampling from each district, except for the Aldawaser and Alsouq, the oldest districts in the city, in each of which seven interviews were conducted. The interview method was convenient and quick, as the interviewer (one of the authors) asked the questions, read out the possible answers, and recorded the respondent's answers directly. The aim of the interview was to assess the situation and the level of satisfaction of the people with their current residential public spaces, as well as to understand what their inclinations, level of satisfaction and preferences were. The survey results are explained below.

Results

The first set of questions in the interviews relate to the profile of the respondents. A little more than half (62%) of the respondents were male. Around 60% were aged between 18 and 35, 28% were aged between 36 and 50, 8% were between 51 and 65 and only 4% were aged above 65. A majority of them (56%) were Saudis and the rest were non-Saudis. There were also variations in terms of accommodation types. The majority of the respondents (59%) live in rented houses, 27% live in their own homes, and 14% live in houses provided by their employers. Among the respondents, only 8% had postgraduate level education.

Table 1: Level of Satisfaction

Q.1 How satisfied are you with the neighbourhood public space?

Very satisfied	3
Satisfied	9
Not satisfied	21
Very unsatisfied	17

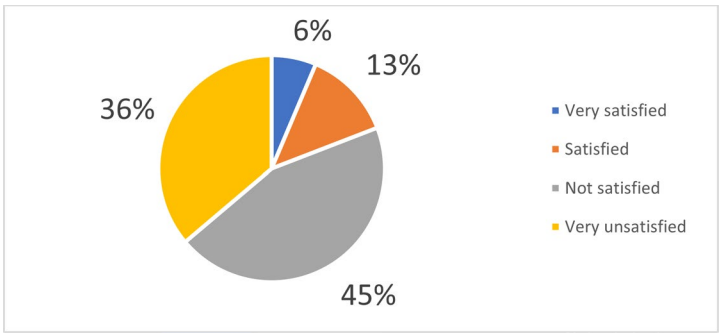


Table 2: Identified Problems

Q.2 Do you think there are problems related to the design and implementation of the residential public space?

Yes	35
No	9
No opinion	6

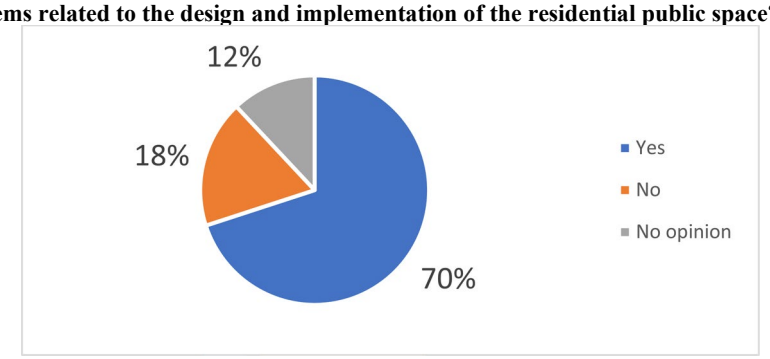


Table 3: Residential Spaces and Environmental Problems

Q.3 Do you think there are environmental problems in the residential public space?

Yes	28
No	14
No opinion	8

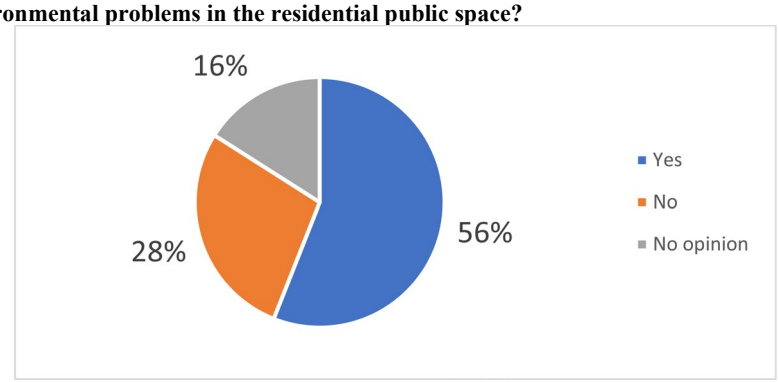


Table 4: Quality of life

Q.4 Do you feel these problems are affecting your quality of life?

Yes	34
No	9
No opinion	7

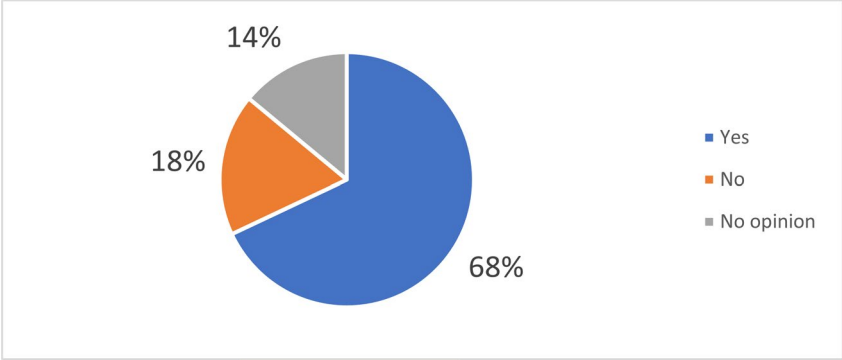
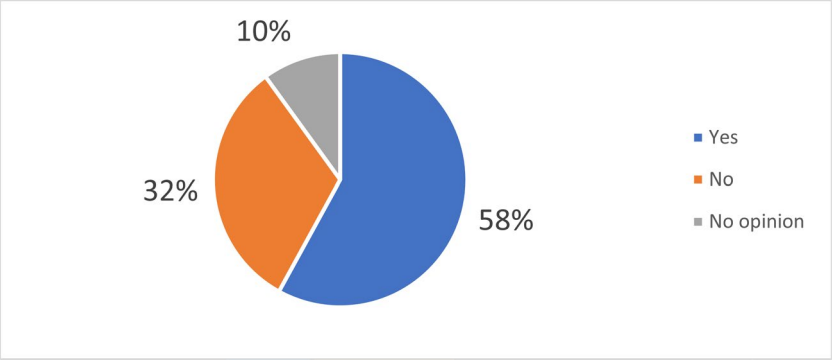


Table 5: Choice of Housing Unit

Q.5 Have these problems affected your choice of housing unit?

Yes	34
No	9
No opinion	7



The respondents were asked about their level of satisfaction with the public spaces in their neighbourhood. As shown in Table 1, 81% of the respondents were not satisfied or very unsatisfied. Most of them (70%) thought that the problems with those spaces were related to the spaces' design and implementation, as shown in Table 2. The respondents were asked if there were environmental problems in the public space. The majority (56%) responded in the affirmative (Table 3). The respondents overwhelmingly (68%) thought that the problems of the public spaces were adversely affecting their quality of life, as shown in Figure 4. In the next question, most of the respondents (68%) said that the design and implementation problems of open spaces were adversely affecting the quality of their lives. The data from the survey confirms the conjecture that the residents of the city, especially those in the older central districts, are not happy with the public spaces in their neighbourhoods due to design and maintenance issues.

Around three-fifths of the respondents reported that the problems with the public spaces influenced their choice of housing units (Table 5). Around half of the respondents (52%) reported that they were considering changing residences because of the problems associated with the neighbourhood public space, as shown in Table 6. Exactly three-fifths of the respondents were of the opinion that the quality of the public space influences housing prices (Table 7). The magnitude of dissatisfaction of the with public spaces is evident in the high percentage of residents who are considering relocating.

The level of satisfaction with public spaces may not be consistent across the districts however. A district-wide comparison of the share of respondents who are satisfied and dissatisfied with their neighbourhood public spaces, based on the response to the first question, is depicted in Table 8. It shows that in Alnakheel district, an equal number of respondents are satisfied and dissatisfied with public spaces. In all other districts, the share of dissatisfied residents was higher, while the highest rates (more than 80%) were in Alsouq, Alkhaleej, Gazaz, and Albadiyah.

Table 6: Moving Out from Your Home

Q.6 Are you currently considering changing your home due to the problems in your surrounding immediate public space?

Yes	26
No	19
No opinion	5

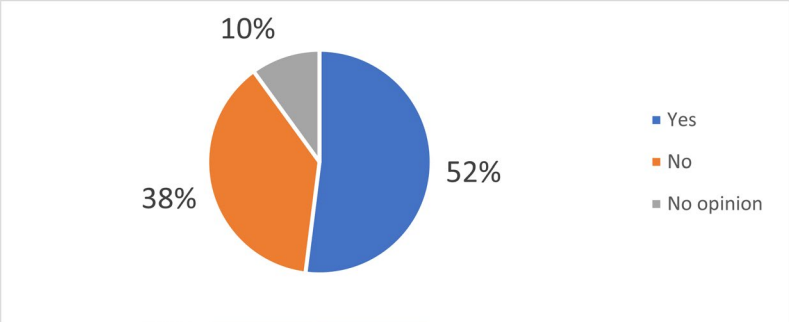


Table 7: Spaces Problem and Housing Unit Price

Q.7 Have these problems affected the price of the housing unit?

Yes	30
No	18
No opinion	2

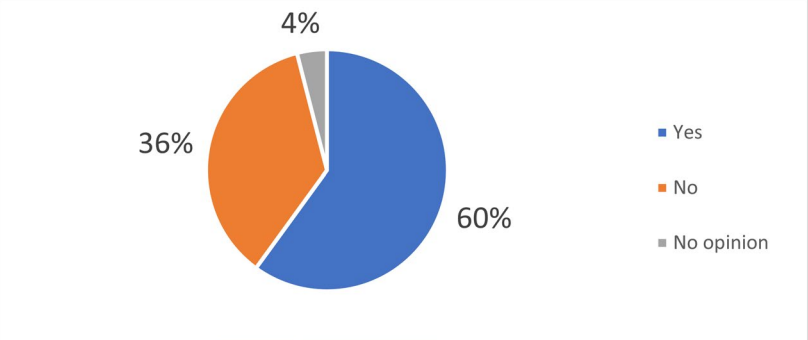
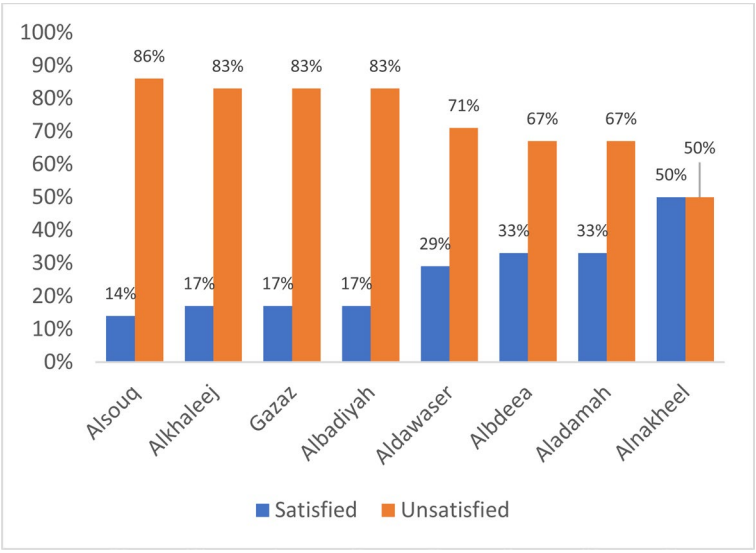


Table 8: Comparison of Level of Satisfaction among Districts

District	Number Satisfied	Number Unsatisfied
Alkhaleej	1	5
Albdeea	2	4
Aldawaser	2	5
Alsouq	1	6
Alnakheel	3	3
Gazaz	1	5
Aladamah	2	4
Albadiyah	1	5



Conclusion

The findings from this study reveal that the residents of the central districts of Dammam are generally not satisfied with the condition of their public spaces. They also confirm that the problems with such spaces tend to affect the people's quality of life and housing choices. Therefore, there is an urgent need for action to improve the public spaces in central districts of Dammam city. Taking care of these zones and developing a plan for urban improvement will lead to increased satisfaction and better quality of life for those in these areas. This will directly contribute to achieving the Saudi Vision 2030 goals.

One potential way to have an impact in the improvement of public places in Dammam city is to introduce planning tools for land readjustment/pooling in the real estate sector. Another approach is to publish a set of manuals consisting of recommendations for upgrading urban areas and districts, highlighting different elements that could be incorporated into the city's urban planning agenda. The lessons learnt from Canada can also be adopted by the Dammam city authority to revive the public spaces in its central districts. For example, engaging residents in the improvement process can facilitate the development of common goals and approaches to improving the livability of the communities and their overall quality of life. Finally, it is important to remember that ongoing coordination between municipalities and communities is needed for better planning and the implementation of the resulting action plans.

References

Abubakar, I. R., & Aina, Y. A. (2019). The prospects and challenges of developing more inclusive, safe, resilient and sustainable cities in Nigeria. *Land Use Policy, 87*(C). IDEAS. doi:10.1016/j.landusepol.2019.104105

Al Qahtany, A. M., & Abubakar, I. R. (2020). Public perception and attitudes to disaster risks in a coastal metropolis of Saudi Arabia. *International Journal of Disaster Risk Reduction, 44*(101422) doi:10.1016/j.ijdrr.2019.101422.

Chisholm, S. (2004). The growing role of citizen engagement in urban naturalization: *The case of Canada. Ekistics, 71*(424/425/426): 35-44.

Frick, D. (2006). Public space as an element of local identity: On the notion of quality in urban design. *Ekistics, 73*(436-441).

KSA-Government. (2017, December 7). Sustainable Development Goals. Sustainable Development Goals. https://www.sdg.sa/wps/portal/sdg/home/2goals-content1?current=true

KSA-QoLProgram. (2020). Qulity of Life Program. Kingdom of Saudi Arabia. Vision 2030. https://vision2030.gov.sa/sites/default/files/attachments/QoL%20English_0.pdf

Kumar, Y., & Khandelwal, U. (2018). Factors Affecting Buying Behaviour in the Purchase of Residential Property: A Factor Analysis Approach. *SSRN Electronic Journal.* doi: 10.2139/ssrn.3481597

Muhammad, Z. & Abubakar, I.R. (2020). Improving the Quality of Life of Urban Communities in Developing Countries. In W. L. Filho, A. M. Azul, L. Brandli, P Gökçin özuyar, & T. Wall (Eds.), *Responsible Consumption and Production.* Spirnger. doi:10.1007/978-3-3

Okorie, A., Dabara, D. I., Adenipekun, T. M., Prince, E. M., & Ajiboye, B. O. (2019). Tenant's Demand for Structural Attributes in Residential Properties: The Case of Ede, Nigeria. [Paper] West Africa Built Environment Research (WABER) Conference, Ghana Academy of Arts and Sciences Accra, Ghana. Doi: 10.33796/waberconference2019.76

UCLG. (2016). Public Space Policy Framework: by and for local governments. UCLG. https://www.uclg.org/en/media/news/uclg-public-space-policy-framework-and-local-governments-bogota-and-quito

UN-Habitat. (2016). Dammam CPI Profile: Future Saudi Cities Program. Saudi Arabia: UN-Habitat. Future Saudi Cities. https://www.futuresaudicities.org/wp-content/uploads/2017/08/Damman.pdf

UN-Habitat. (N.D). Sustainable development goals. Sustainable Development Goals https://sustainabledevelopment.un.org/sdgs

Yilmaz, M. & Keles, R. (2004). Sustainable housing design and the natural environment. *Ekistics, 71*(427/428/429).

Keywords

Residential public spaces, quality of life, Dammam city.

Branding Saudi Arabia's Capital: How Riyadh Uses Urban Place Marketing, Mega-Events, and Urban Destinations as Tools to Brand the City in Line with Vision 2030

Anna Klingmann

Founder of Klingmann. Architects & Placemakers

Abstract

This paper explores the employment of urban and architectural branding strategies within Riyadh's plan to become a globally recognized city. Within this framework, the text examines Saudi Arabia's Vision 2030 and its spatial impact on the city's urban environment. The paper discusses how mega-events and urban mega-destinations function as branding, place marketing, and placemaking tools to showcase this vision and promote a "new" Saudi Arabia image. The paper also examines in how far globally established values of culture, leisure, greening, wellbeing, connectivity, and quality-of-life are leveraged in the branding process of Riyadh's mega-destinations to communicate a positive image to a transnational class of metropolitan business travelers and tourists, and an affluent, cosmopolitan Saudi middle class. Deliberating this market-oriented methodology's various implications, the paper concludes with a call for a more participatory and inclusive approach to Saudi Arabia's urban branding process to enhance long-term credibility and identification. To achieve the outlined objectives of this paper, the author employed a combination of qualitative methods that included on-site field research, literature reviews, and conversational interviews with various stakeholders that include representatives of involved architectural and urban planning offices, members of the academic community, and citizens of various professions and age groups.

Introduction

The focus of this article is the employment of urban and architectural branding strategies within Riyadh's plan to become a globally recognized city. Within this framework, we examine Saudi Arabia's Vision 2030 and its spatial impact on the city's urban environment. The role mega-events and urban mega-destinations play in branding and place marketing is explored, as well as the ways in which placemaking tools are used to showcase this vision and promote a "new" image of Saudi Arabia. Finally, we identify the extent to which globally established values of culture, leisure, greening, wellbeing, connectivity, and quality-of-life are leveraged by mega-cities to communicate a positive image of both a transnational class of metropolitan business travelers and tourists, and an affluent, cosmopolitan Saudi middle-class. The article concludes with a call for a more participatory and inclusive approach to Saudi Arabia's urban branding process to enhance long-term credibility and identification.

Literature Review

In the last two decades, many urban researchers from different parts of the world, including Dormans and Lagendijk (2004), Jensen (2005), Kavaratzis (2004, 2009), and, more recently, Rory (2016), Mishra (2016), Dupe (2018), and Alraouf (2019), have commented on the importance of city marketing and placemaking as potent tools to position cities on the global map. The branding of cities becomes even more critical in transforming an industry-based service economy to a knowledge-based experience economy. A knowledge-based economy rests on the synergy of knowledge production, dissemination, and use where human capital is the driver of creativity, innovation, and generation of new ideas, with reliance on information and communication technology as an enabler. In contrast, the experience economy emphasizes the central role of experiences as an economic catalyst for cities to differentiate themselves globally. Joseph Pine II and James Gilmore (1998) originally coined this term in their seminal work "The Experience Economy." Already in the 1990s, they argued that the offer of goods and services is no longer enough for companies to compete in the global marketplace. Instead, corporations must offer unique and memorable experiences to engage customers and consequently inspire sales. According to Pine et al. (1998), experiences have emerged as new economic offerings, "as distinct from services as services are from goods." Following this paradigm shift in the consumer industry, many researchers in the field of architecture and urban planning, including Klingmann (2010), Muratovski (2012), Gravari-Barbas (2013) and Helmy (2008, 2020) have explored how architecture is employed as a strategic medium to stage unique experiences that help places get noticed on the global map and attract potential customers. In the case of cities striving to shift from an industrial-based service economy into a knowledge-based experience economy, the desired customer base comprises tourists and highly educated and productive knowledge workers that can produce and disseminate knowledge-based services to drive future economic growth and urban development. According to Yigitcanlar (2007), the experience of future knowledge cities must be crafted and staged in such a way

to attract and retain the right mix of entrepreneurs, knowledge workers, investors, and tourists.

To launch the transition from a product- and service-oriented economy to an experience-focused knowledge economy, cities also need to establish a strategic vision and communicate their competitive advantages with a distinctive image to make potential investors and other target groups aware of their inherent attributes, incentives, and features. Adopting a marketing philosophy to meet places' operational and strategic goals has been globally established both in practice and theory (Kotler, Haider. & Rein, 1993). When cities strive to gain the attention of multinational corporations and well-qualified human capital, they need to establish a market-oriented planning process to diversify their economic base and develop mechanisms for flexibly adapting to changing conditions.

In the GCC, several vision documents adopt a market-oriented planning process to facilitate the transition from an industrial economy to a more knowledge-based experience economy. Crafted by international management consulting firms, they include the UAE Vision 2021, the Abu Dhabi Economic Vision 2030, the Qatar National Vision 2030, and the Saudi Vision 2030. Based on established global formulas and amended with a series of implementation plans, these "visions" are guided by the aim to facilitate a phased transition from a petroleum-based economy towards a more diversified knowledge-based economy by combining social and economic reforms with urban planning objectives (see also Alraouf, 2017).

This paper aims to demonstrate the significant role of place branding as a means to implement some of the social and economic goals of Saudi Arabia's Vision 2030 within the urban fabric of Riyadh to make it more attractive to a young Saudi middle-class, visitors, and tourists. While the paper focuses on four mega destinations that are planned in the capital, the paper also highlights how place-branding with its combination of large-scale public events, mega-projects, creation of landmarks, and involvement of 'starchitects' is elevated to a strategic national planning program that - as part of the country's Vision 2030 -seeks to create a marketing personality for each of its regions. Specifically, the paper seeks to demonstrate how mega-events and integrated urban destinations function as place marketing and placemaking tools to implement a new national lifestyle that rests on the creation of public cultural, sports, and leisure experiences, which are mandated by the Vision 2030's Quality of Life Program (Vision 2030, 2017), and which in turn seeks to promote the image of a "new" cosmopolitan Saudi Arabia.

Place Branding

According to Habibah et al. (2013), Gravari-Barbas, (2013), and Dupre (2018), place branding, place marketing, and place-making play a crucial role in the overall process of implementing a strategic vision and reforming the experience and image of a place both in terms of streamlining its inherent attributes to the desired target market as well as curating new interventions to suit the expectations of an affluent highly mobile and cosmopolitan clientele. As it has been argued by Richard Florida (2019), the author of "The Rise of the Creative Class," "the gathering of people, companies and resources into particular places with particular specialties and capabilities generates efficiencies that power economic growth." Thus, the object of place marketing is not the marketing of the place itself with its mundane day-to-day realities, but rather a highly designed representation of the same, which entails crafting a specific image, which appeals to an external targeted audience (the desired customers). As Bailly (1994) observes, "urban marketing is based on representations; this enables us to tackle not the city itself but its meaning in a symbolic and ideological context." It is this line of thinking that makes Hubbard and Hall (1998) come to the conclusion that "it is perhaps best to consider the entrepreneurial city as an imaginary city, constituted by a plethora of images, marketing messages and staged representations." According to Pike et al. (2004), a place's image is a critical determinant of how citizens and businesses respond to it because "images represent a simplification of a large number of associations and pieces of information" identified with a particular region. As such, a city's image similar to the idea of a corporate brand and can inspire trust or distrust. A city's image can also stimulate economic growth patterns over an extended period (Klingmann, 2010). Along with constructing a distinct place identity that appeals to a suitable target market, public relations also play a significant role as an integral part of urban marketing. City marketing typically employs a mix of social media campaigns, press releases, and event calendars that include the hosting of mega-events such as marathons, expos, and high-profile cultural happenings to enhance awareness and appeal of places as vistitable and exciting destinations. According to Oliveira (2012), the number of sports and cultural events designed to attract visitors, tourists, and investors to places has multiplied many times over during the last twenty years. As Krupar and Al (2012) argue, "other common marketing strategies involve attracting feature films and television series to shoot episodes in the city. Cities go out of their way to accommodate film crews and companies, hoping that such depictions will attract mass media audiences' attention."

In addition to marketing events and advertising campaigns, cities also strategically transform the urban fabric to suit international investors' expectations and an affluent transnational middle-class lifestyle. As has been demonstrated by numerous examples, architecture and urban planning—when strategically used—play a vital role in the marketing of regions to attract residents, businesses, and tourists. In the last two decades, cities in the West, the Middle East, and the Far East have attracted much attention by constructing iconic developments, such as sports stadiums, convention centers, prestigious museums, art districts, commercial destinations, and polished heritage sites. Abu Dhabi, for example, gained much notoriety by constructing the Saadiyat Cultural District, which comprises five museums, including among other cultural facilities the Louvre Abu Dhabi, designed by star architect Jean Nouvel, the Guggenheim Abu Dhabi, designed by Frank Gehry, and the Sheikh Zayed National Museum by Foster + Partners. Dubai made headlines by building "Downtown Dubai," a mega-destination, which includes an array of superlatives such as the Burj Khalifa (the tallest tower in the world), adjacent to 'Dubai Mall' (the largest mall in the world) and the 'Dubai Fountains'

(the highest fountains in the world) - all constructed by prestigious international firms. Doha soon followed suit by reconstructing its entire downtown as an integrated walkable heritage district (Souq Waqif) while also building an array of spectacular cultural and leisure destinations, which include the National Museum, designed by Jean Nouvel, an OMA-designed library, and the Al Wakrah Stadium, designed by Zaha Hadid.

Urban branding and marketing campaigns then promote these urban interventions by using compelling images, catchphrases, and social media promotions that capture a particular place's highlights. Examples might include slogans such as "museum quarter," "cultural city," "creative city," "festival city," "waterfront city," each of which encapsulates a particular vision of a place. However, most frequently, place marketing entails a curated combination of multiple approaches, which might involve signature design, star architecture, heritage districts, and event hallmarking to substantiate and reinforce a city's image as "the" place to" live, work and play." Both architecture and urban planning constitute essential ingredients of city branding to craft the "right" image in the eyes of prospective visitors, tourists, and investors (external dimension). Perhaps, even more important, they are also necessary to create a meaningful and sustainable identity for current and prospective residents (internal dimension).

Saudi Arabia's Vision 2030 and Quality of Life Program

As part of its Vision 2030, Saudi Arabia has developed a long-term plan to reduce the economy's dependence on petroleum by boosting investment in the private sector. The plan includes opening up new industries, most notably in the tourism sector, by capitalizing on its long-ignored historical and cultural treasures to create jobs for Saudi Arabia's booming population. Vision 2030 is prominently affiliated with King Salman's son Mohammed bin Salman – or 'MBS' –promoted to crown prince in 2017 and has branded him as a powerful forward-thinking ruler both within Saudi Arabia and internationally. As Kinninmont (2017) comments in her paper "Vision 2030 and Saudi Arabia's Social Contract", Vision 2030 is not limited to economic issues. It includes many social and cultural aspects as well that are related to shaping a new image and perception of Saudi Arabia. Furthermore, the author notes that Vision 2030 "contains aspects that refer to relations between citizens and the state, which include promises of transparency, communications, and consultation with the public; more social freedoms, from entertainment to exercise; a narrative about an authentic society rooted in local traditions; a narrative about a "vibrant society," including a very cautious opening of space for civil society."

As the innovative application of knowledge and advanced technologies has become a central economic driver for shifting resources from an industry-based economy to a knowledge-based economy, education, diversification of the economy, and national prosperity become critical concerns within Saudi Arabia's vision document. Consequently, Vision 2030 promotes extensive reforms to the education system to come closer to creating a knowledge society, which is ready and able to compete on the global map. Targeting a relatively young population where more than 30% are under the age of twenty-five, the strategy also implies a degree of social liberalization with its embedded "Quality of Life Program." The envisioned improvements include "developing an ecosystem to support citizens and residents' participation in cultural, leisure, and sports activities," along with implementing a

Fig. 1: Balloon rides at Tantora Festival (part of Saudi Seasons), Al Ula, Saudi Arabia.
Source: SCTH.

Fig. 2: As part of the country's plan to become a hotbed for tourism by 2030, Saudi Arabia's Amaala Resort is an ultra-luxury destination, located on the Red Sea's northwestern coast, hosting galleries, artist studios, and sculpture gardens.
Source: Public Investment Fund.

cultural infrastructure. The intention is to construct a comprehensive lifestyle set-up that appeals to various social segments in different regions and a young urban aspiring Saudi middle class. By promoting active participation in leisure, cultural, and entertainment activities and by encouraging a culture of public life in general, the government seeks to foster an entrepreneurial spirit, particularly among young Saudis (currently mainly employed in governmental sectors) to open creative ventures and to improve the image of Saudi cities nationally and abroad. As Kinnimont (2017) remarks, "To boost the country's image, a large volume of interviews and articles, across Arab and Western media, with and about Mohammed bin Salman and Vision 2030 have focused substantial international attention on Saudi Arabia's ambitions to open up, develop and modernize" and "international public relations efforts are important as vehicles to attract international investment, especially at a

time when Saudi officials perceive their international image as having hit a low point while smaller Gulf states, notably the United Arab Emirates (UAE), have benefited from more successful international marketing and branding efforts."

Tourism and Place Marketing

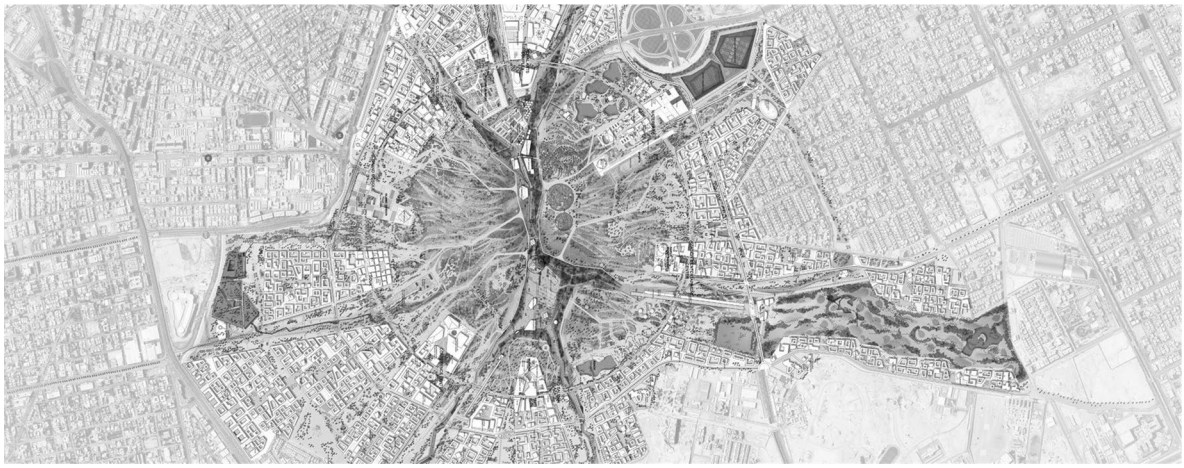


Fig. 3: Covering 13.3 square kilometers, King Salman Park is conceived as a mega-destination, comprising various ecological, cultural, recreational, and sports attractions, integrating with several mixed-use and residential districts. Source: Omrania.

A related target of Vision 2030 is to position one or more Saudi cities within the world's best 100 cities. To meet this goal entails a substantial makeover of most Saudi cities to become more open in terms of their cultural offerings by building parks, museums, art galleries, and entertainment venues and by significantly upgrading public transport and urban infrastructures in general. In parallel, it calls for effective place marketing strategies to promote this endeavor on a national and international scale to convince skeptics within the country and worldwide.

In the past three decades, the Saudi government has undertaken numerous regional planning tasks to develop its thirteen regions. Guided by the aim to reduce disparities between cities and rural areas and distribute resources for a more balanced development, regional planning has again become a big concern under Vision 2030 (Almughairy 2019). New strategies have been set in place that aim to create a national and international tourist industry to generate jobs, keep more of the money spent on tourism within the country's borders, and promote Saudi Arabia as a new frontier for world-class tourism. With these goals at the forefront, Saudi Arabia currently works on several regional plans that incorporate the creation of large-scale entertainment, mostly in the form of theme parks, resort areas, the preparation of various notable heritage sites, and an extensive program of cultural institutions such as libraries, art institutions, and museums. These planning initiatives are coupled effectively with place marketing and public relations. With media campaigns aimed at an international audience, Saudi Arabia brands each of its regions "as a destination like no other." Through curated mega-events and sophisticated social media promotions, a new national image portrays a mix of stylish Arabian hospitality, ancient heritage sites, and upscale entertainment. To disseminate the message of a "new Saudi Arabia" strategically across the web, the Kingdom's tourism board and a program called "Gateway" organized supervised trips for famous travel bloggers and influencers who started posting pictures from various Saudi regions, praising the country's beauty. The influencer Lana Rose who lives in Dubai, told her 1.6 million followers that "visiting Saudi Arabia felt like Disney's Aladdin come to life" (Lorenz, 2019). According to the Saudi Commission for Tourism and National Heritage, British and Chinese tourists were the top international visitors, with approximately 140,000 people requesting tourist visas. This number is quite significant as Saudi Arabia had been one of the world's most challenging countries to visit, issuing visas only for business trips and religious pilgrimage for a very long time (Nereim, 2019).

Along with the newly developed national tourism campaign, the government launched a place marketing initiative called the "Saudi Seasons" in 2019. This event program consists of a sequenced annual event program that showcases and promotes each region with a series of government-sponsored themed entertainment, cultural, art, and sports events. The program also highlights each region's heritage sites and natural features by spotlighting designated places through various art, music, and cultural events. Each of the Saudi Seasons lasts for approximately one to two months. The selected locations transform into grand spectacles with concerts, fireworks, light shows, and other forms of large-scale entertainment. Meanwhile, the Saudi Seasons are also backed by a significant P.R. engine that promotes Saudi Arabia on an international scale within the Middle East and especially to Western countries guided by the aspiration to reform the country's image while inspiring tourism within the various regions. A digital App facilitates bookings and informs prospective visitors about events and accommodations while also providing a link to tourist visas' seamless issuance.

The Saudi Commission for Tourism and National Heritage highlighted the centrality of the "Saudi Seasons 2019" in the country's tourism sector's activation while also boosting related service sectors and providing temporary and permanent jobs. One representative noted that the

"Saudi Seasons 2019 aimed to raise citizens' living conditions and build a vital society," which is a key value of the Quality of Life Program. The program also drew attention to Saudi Arabia's tourist attractions, including "fascinating scenery, the long-standing Arab culture, ancient historical sites, and advanced infrastructures," to raise the domestic expenditure, while boosting economic activity" ("Launching the Saudi Seasons," 2019). By raising international awareness of the country's heritage through a curated mix of large-scale festivals and cultural events, one of the Saudi Seasons' long-term goal is to promote the restoration of the country's numerous historical and heritage sites, many of which are not commonly known internationally. A related goal is to register them with UNESCO if they are not registered already. For example, a crucial effort has been expended to publicize the historic city of Al Ula, which is situated next to the Nabatean site of Madinah-Saleh (already registered with UNESCO). The "Winter at Tantora Festival" linked to the Saudi Seasons, promoted this ancient site through spectacular balloon rides and unique outdoor experiences ranging from large scale art installations, music performances to fine dining experiences in nature ("X marks the spot," 2019).

Mega Destinations as Catalysts

In parallel to this extensive event program, government officials launched a Saudi Cities Program to create a framework for a sustainable urban future in Saudi Arabia following international standards (Saudi Future Cities Program, 2020). According to Short (2013), place marketing, when viewed in a global context, entails urban spatial change that is signposted by cultural ensembles that are designed by signature architects and "enacted in global spectaculars" (Short, 2013). Consequently, as part of its 2030 Vision, the Kingdom has expended large sums of money in crafting iconic urban destinations that prepare Riyadh and other Saudi cities for the post-carbon era and reposition their image as the next big destination for tourism. The framework's main pillars suggest a new form of urbanism following globally established standards for sustainable growth, compacted settlements, transit-oriented urban development, walkability, and mixed-use urban centers. Guided by the aim to transform Saudi cities and municipalities into people-friendly places, streamlined urban environments are being designed to attract high-profile national and international human capital with the prospect of considering Riyadh and other Saudi cities as quality places to "visit, live, and work." In this regard, many government-sponsored megaprojects have been announced in the last two years since MBS rose to power, motivated by the goal to change the face of the Kingdom and provide jobs. These projects nationwide include Neom, a future cross-border mega-city in the Tabuk Province of northwestern Saudi Arabia, which plans to incorporate smart city technologies into a futuristic live/work and tourism destination. Other grand touristic developments include the Red Sea Project. This large-scale uber-luxury resort area seeks to leverage the Red Sea's natural beauty and mountainous backcountry for high-end tourism. Jean Nouvel's Sharaan resort in Al-Ula and Amaala are other large-scale high-end resort areas near the Red Sea's northwestern coast. Qiddiya, comprised of large-scale theme parks on Riyadh's outskirts, is designed as a family entertainment city that primarily targets local and regional visitors.

Fig. 4: *A calendar of nightly events spotlights various underexposed sites of the city. Photograph by author, 2020.*

Fig. 5: *Riyadh Season. Light projection and music transform the squares around the Masmak castle into nightly event spaces. Photograph by author, 2020.*

Fig. 6: *Pop-up restaurants, market stalls, and cafes transform Riyadh's historic downtown into a hip social gathering space. Photograph by author, 2020.*

Composing the New Riyadh Brand

Fig. 7: At-Turaif, a UNESCO World Heritage Site, bordering Riyadh, transformed into a nightly event site during the Diriyah Season. Photograph by author, 2020.

Fig. 8: An example of Najd mudbrick architecture in At Turaif opened to the public after an extensive restoration in December of 2019. Photograph by author, 2020.

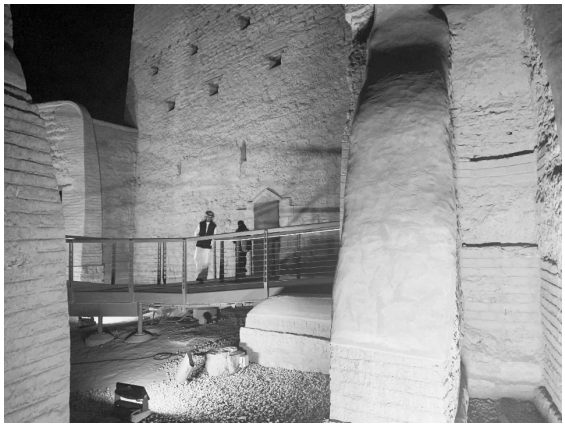


Fig. 9: Salwa Palace, restored as an extensive outdoor museum with a series of indoor galleries, sprawls across 10,000 sq/m. The walls of Salwa Palace were animated by artistic projections during the Diriyah Season. Photograph by author, 2020.

The coupling of place marketing with large-scale planning initiatives also applies in Riyadh, the country's capital city, which is also the government's seat. Until recently, Riyadh has held a somewhat jaundiced image as a rather conservative and close-minded city for work with not much public space to play and socialize. To revise this image according to the government's mandate, Riyadh launched the biggest entertainment event of the Saudi Seasons: the "Riyadh Season." The Riyadh Season encompassed many events, including an array of concerts with international stars, cultural events, dining experiences, and theatrical happenings, many of which took place at underexposed inner-city sites of historical significance that are rarely visited by the Saudi middle class. Through curated nightly experiences, many Saudis rediscovered these locales that were reinvented and transformed into a casual, colorful public realm. Cultural and artistic activities, along with musical performances and light shows, suggested a new type of social lifestyle, which manifested many of the Quality of Life program's principles as a direct extension of the Vision 2030.

To amplify its impact further, the Riyadh Season combined with yet another separate "Season" for the Kingdom's ancient capital Diriyah, which lies just on the outskirts of proper Riyadh city and is home of At-Turaif, a UNESCO World Heritage Site. While news channels did not publish visitor numbers on the Diriyah Season, Riyadh's multi-location festival hosted over 5 million visitors in its first three weeks alone. People from the surrounding districts and the region flooded the various event sites in part to enjoy the official entertainment, but more often also just to see and be seen, meet, and simply to enjoy a social atmosphere in a public space. Above anything else, this two-month event transformed a quiet and restrained urban fabric into a place of active social exchange and entrepreneurship. Besides attending different cultural and entertainment events, people had a reason to have informal gatherings by walking through impromptu markets, cafes, and outdoor lounges dotted with unique food stands and exhibits. The General Entertainment Authority - the government body in charge of such festivals in the Kingdom - revealed that Riyadh Season generated $270 million in revenues, attracting 10.3 million visitors and providing over 34,700 jobs. These factors, combined with longer-term strategies to rebuild the urban realm, are expected to build a positive contemporary image of the capital among young Saudis and raise its international profile and status among foreigners overseas (Nabbout, 2019).

On the planning side, the ambition of the Riyadh program is to transform the city from a composition of isolated car-driven neighborhoods into a network of connected walkable districts, which would enhance social integration, walkability, and public life in general (all Quality-of--Life criteria) in the longer term. The new metro system, which is currently under construction, will undoubtedly play a big role in this endeavor as a significant connector with five lines that reach most of the city's extent. In addition to the renovation and urban renewal of several inner-city sites, a further extension of Wadi Hanifa, the city's valley, is also planned, which has been redesigned as a large-scale public recreational park zone over the past ten years.

Fig. 10: Riyadh Green – Vision of Downtown Cultural District, featuring cultural facilities built in the traditional style surrounded by extensive parkscapes. Courtesy of Riyadh Green.

Fig. 11: Sports Boulevard conceived as a public spine for pedestrians and cyclists cutting across the city with spanning 30 km from Al Olab Dam in Historical Diyriah (north) to Al Madina Al Monawara Road (south). Courtesy of Riyadh Almasar.

Fig. 12: Example of a large-scale public sculpture, which is part of an extensive cultural program covering Riyadh's entire urban area with more than 1000 interactive installation artworks and landmarks. Courtesy of HWKN.

Heritagescapes and brandscapes: the case of Diriyah

Another on-going urban destination in the making is presented by the renovation and expansion of Diriyah - the Kingdom's ancient capital - into a comprehensive touristic mixed-use destination. Located on Riyadh's outskirts, Diriyah was founded in 1446 on the banks of the Wadi Hanifah. As communities grew around this valley, Diriyah developed into a central gathering point in the Najd Region because of the unifying efforts led by Mohammad bin Saud and Sheikh Mohammad bin Abdul Wahab. Diriyah comprises Al Bujairi and At-Turaif districts, both significant landmarks in establishing the first Saudi state in 1744. At-Turaif was designated as a UNESCO World Heritage Site in 2010 and is recognized as one of the world's largest mudbrick cities. For many decades this historical city was sealed off to the general public and lay in ruins until 2010 when the government decided to renovate the area and preserve it according to UNESCO standards. Since then, many of the mudbrick ruins have been stabilized and rebuilt with traditional techniques. Various historical courtyard homes were restored and repurposed as a souk for demonstration, traditional crafts, and foods. In 2018, as part of the Vision 2030, the aim expanded to transform this site into a world-class destination with the Diriyah Gate Authority's formation. Spearheaded by Jerry Inzerillo, a celebrated New York visionary recognized for his innovation in high-end hospitality, tourism, and entertainment, the Diriyah Gate Authority has been working on escalating Diriyah into a "Cultural and Lifestyle Tourism Destination." Guided by the mission to "celebrate Saudi history, culture, and traditions through art, music, fashion, and entertainment for guests of all ages" (DGDA, 2020), the seven sq. km mixed-use project will comprise a collection of museums and galleries in addition to a range of luxury and lifestyle retail brands, large-scale sports and entertainment facilities as well cafes and restaurants. Leading luxury hospitality brands, including Aman Resorts, will be located near the already established Formula-E racetrack and a 15,000-seat arena for international sporting events (Diriyah Gate Project, 2020). The 2019 Diriyah Season, in many ways, branded the site with temporary themes that anticipated what is now in the process of being developed as a permanent tourist destination. The mega-event introduced different themes for different user groups, which are included as permanent programs in the urban masterplan of the Diriyah destination. These included "Diriyah Oasis", a large amusement park with family attractions. "Discover Diriyah" featured large sports events from a boxing championship to Formula E-racing, a tennis cup, and an equestrian festival. The "Bujairi Experience" comprised fashion events by local and international designers at the "Diriyah Design area", and a "fine dining experience" featuring an array of high-end pop-up restaurants (Diriyah Season, 2020). All event sites were animated by atmospherics that included choreographed lighting and sound effects, music, and projections transforming the various locations into nuanced sensory environments.

This branding strategy, which uses temporary events to build excitement before a completed destination opens to the public, is commonly used in high-end real-estate ventures worldwide, as illustrated, for example, by Smith (2014) and Grodach and Ehrenfeucht (2015). One example is the conversion and expansion of the iconic Battersea power station in London into a large-scale thriving mixed-use district. This mega-destination completed the construction of its first phase in 2020 with three more construction phases to complete (Battersea Power Station, 2020). During these construction phases, the marketing team keeps the public engaged by hosting pop-up shows, light spectacles, outdoor events, and exhibitions, which also include a self-guided heritage trail that visitors can tour. By having regular events at phased large-scale construction sites, the intent is not to make people wait for the final completed project but rather to include them as actors in an on-going process. This process-oriented technique of staging unique events and experiences forms an integral part of place marketing to build-up a cumulative hype for potential investors, visitors, and residents. Following this strategy, the Saudi government, in parallel to hosting temporary events, builds excitement by announcing architectural signature projects in successive intervals that include the Urban Heritage Museum Administration Center, an iconic structure designed by Zaha Hadid Architects, and the Addiriyah Contemporary Art Center, which was recently won by the Italian firm Schiattarella Associati Associates.

As Sklair and Gherardi (2012) argue in their paper "iconic architecture as a hegemonic project of the transnational capitalist class," the conservation of the historic urban landscape and the construction of iconic architectures are synergetic expressions of a demand for the same "global urban product," aiming at creating a cosmopolitan image. By merging the historic structures' conservation with the construction of new iconic institutions designed by international star-architects, the Diriyah Gate Authority seeks to maximize the brand appeal of what is already a UNESCO certified heritage site. Through a combination of staged heritagescapes (Di Giovine, 2009) and brandscapes (Klingmann, 2010) into a complex and hyper-sophisticated urban product, heritage and iconic modern buildings become reciprocally supportive in promoting the expansion of Diriyah as a world-class destination.

Quality-of-Life and well-being destinations

More recently, government officials announced four ambitious giga-projects within central Riyadh, which are known as "King Salman Park," "Sports Boulevard," "Green Riyadh," and "Riyadh Art." The four projects' concept is to showcase and implement the Saudi Vision 2030's "Quality of Life" Program in the urban realm on a grand scale to solidify the colloid between physical creation and social behaviour patterns, initiated through the Saudi Seasons. According to the government, this four-tiered initiative aims to "significantly improve the lives of its citizens, transform the city into an attractive destination, and make it one of the world's most liveable cities." Simultaneously, it aligns with the U.N. Sustainable Development Goals, "to create sustainable cities and communities, driving urgent action against climate change" ("Riyadh's ambitious $23bn program," 2019). All four "Wellbeing Projects" are targeted at "improving Saudis' way of life" by providing various new leisure opportunities in a city that currently lacks such amenities. They are also regarded as urban catalysts to open up Saudis' reclusive lifestyles by encouraging more physical activity, leisure, and out-of-home entertainment in the conservative capital. All four grand projects together seek to embrace globally established formulas of sustainability by promoting a greener, healthier environment, presenting envisioned milestones in making Riyadh a recognized sustainable city – "one that will enhance the lives of its citizens while finding solutions to the difficult challenges facing all cities across the world today" (Saudi Future Cities Program (2020).

Green Riyadh

The Riyadh Green project is arguably one of the most ambitious urban forestation projects in the world. The intention is to plant 7500,000 trees in a city of seven million people, which would equate to growing more than one tree for every person in the capital, increasing vegetation coverage in Riyadh from the current 1.5% to 9.1% in 2030. ("First phase of Riyadh Green," 2019). The program aims to strategically grow the quality and quantity of all vegetation in urban and suburban settings and develop an interconnected network of green areas, seeking to enhance the urban ecosystem. Using a diversity of local tree species, which can survive in the Riyadh environment, the forestation initiative plans to cover car-parking sites, healthcare facilities, government facilities, schools, university campuses, mosques, and 16,400 km of road and street spaces. (Egis Group, 2020). The vegetation, which creates over 1000 km of green belts along utility lines, will be watered by recycled water from an irrigation network with the expectation to improve air quality and lower air temperatures in Riyadh. The Riyadh Green Program also includes establishing 48 parks in the capital and over 3000 parks within residential neighbourhoods in the effort of promoting Riyadh as a sustainable world-class "garden city."(Riyadh Green, 2019)

Sports Boulevard: Health & Walkability

Sports Boulevard encompasses a 135km long axis that bisects the city from east to west, connecting the Hanifah Valley in the west of the town with the Al Sai Valley in the east. The project seeks to encourage Riyadh's citizens to follow a healthy lifestyle by exercising and participating in different sports, mainly by walking, cycling, and horse riding. (Riyadh Adhalmasar (2019) The project intends to create a rich cultural, environmental, and recreational ambiance by introducing various events and activities aligned with the goals of Vision 2030 and the Quality-of-Life Program to increase regular participation in athletic activities. Conceived as an urban green corridor that runs alongside underutilized urban spaces, the Sports Boulevard flows under raised inner-city highways and next to the metro line's elevated part. The intention is to create a vast pedestrianized spine through the city that connects various neighbourhoods and links with numerous attractions that include art districts, sculpture gardens, an open waterway filled with treated greywater, public plazas, green gathering spaces, outdoor cinemas, and designated areas for live music. At the Western end of the city, this public corridor terminates at an iconic sports

tower, which is designed as a high-rise building with areas for different indoor sports that stack on top of each other. ("Sports Boulevard," 2019). This extensive urban intervention showcases the Kingdom's Quality-of-Life mandate in the form of a public destination that seeks to increase the public participation in sports activities while at the same time offering opportunities to walk and socialize in a pedestrian-oriented atmosphere, which to this day are rare in the car-oriented urban fabric of Riyadh.

Riyadh Art

Meanwhile, the 'Riyadh Art' project envisions to transform the capital into a global cultural hub. Based on Vision 2030, the program seeks to grow Saudi Arabia's contribution to arts and culture by employing an extensive masterplan that covers the entire urban area of Riyadh with more than 1000 interactive art installations and landmarks. These will be created by local and international artists, architects, and landscape architects and distributed at vital urban nodes. Commissioned by the Royal Commission of Riyadh (RDA), this project emphasizes the city's position as a global art destination by "combining modernity and authenticity to meet the Kingdom's Vision 2030" ("1,000 artworks installation," 2019). New York firm HWKN worked in a consortium with UAP and London-based Futurecity to design this extensive masterplan with ten programs covering residential neighbourhoods, gardens, parks, public squares, and transit stations. The project also envisions the building of galleries for well-known artists in designated city squares, unusual playgrounds in neighbourhood gardens designed by famous artists, the installation of upscale artworks across the city, cultural tourist destinations, and creative city gateways, located at the entrances of Riyadh. An installation of sculptures at significant traffic intersections and bus stations together with unique pedestrian bridges will strengthen the city's connectivity and encourage citizens to walk. Through Riyadh Arts, the Kingdom expects to gain much publicity in the art world, which might help attract creative talent and market Riyadh as a cultural destination internationally and nationally.

King Salman Park: Recreation

Conceived as a new green heart for Riyadh (Omrania, 2019), the King Salman Park master plan is perhaps the most significant of the four projects. Utilizing Riyadh's former military airport base to build a large-scale lifestyle destination, the development will showcase an extensive ecological park loaded with activities as its centre node to boost local and foreign tourism and enhance Riyadh's visibility on the regional and international map. Designed by the Riyadh firm Omrania in collaboration with Henning Larsen, a Danish firm, the park's masterplan comprises a mix of residential compounds, hospitality, and retail around a large public park, including several educational, cultural, and entertainment facilities. Several metro stations and bus rapid transit stations will serve this destination. Its internal "urban loop," or circular promenade, will connect seven museums, including an aviation museum, an astronomy- and space museum, a science museum, a horticultural museum, a virtual reality museum, and an architecture museum. The park itself consists of a circular arrangement with a series of branching valleys, water features, and gardens that emanate from the site's center. Green areas and open spaces will encourage walking, cycling, and rest, while several plazas will host outdoor cultural and entertainment events (see also Alsammarae, 2019).

The park will also provide an arts and entertainment section that will include a national theatre, an open-air theatre, and several cinemas. Among its sports facilities will be a massive golf course, a sports complex, a games area, and a water sports section. Through a combination of impressive ecological features, entertainment facilities, shopping, and cultural offerings, King Salman Park seeks to promote a large-scale, leisure- and health-oriented "lifestyle community" that implements many of the Quality of Life programme's top-down objectives that include the provision of high-quality entertainment, culture, and sports. Above all, King Salman presents one of the world's largest parks in the heart of the city that is expected to draw people from the greater Riyadh Area as well as visitors, ex-pats, and international tourists.

The question with the above megaprojects is, of course, if, when, and to what extent they will be realized. While the plans succeeded in impressing the media nationally and abroad, the main concern is how much of Vision 2030 and its associated economic action plans will actually be implemented. The collapse in global economic activity caused by the Covid-19 crisis, the subsequent crash in oil prices, and higher deficits have raised questions about the prospects for Vision 2030 and the Saudi projects sector, making it less likely that authorities can increase spending on infrastructure. Policymakers and economists alike are already trying to manage expectations by saying in interviews and conversations that if Saudi Arabia meets 70 percent, or even 50 percent, of Vision 2030's goals, this will be excellent progress. Meanwhile, most of the Kingdom's megaprojects have their timelines already extended due to the austerity measures the government recently instituted in the aftermath of the Covid-19 crisis (see Tricaud, 2020).

Another potential challenge could be that Saudi Arabia might be faced with internal questions in how far Vision 2030 is actually a national project aimed at a Saudi constituency and how far it is to impress an international audience. Kinnimont (2017) comments that Gulf economists have, for some time, expressed skepticism about strategic 'Vision' documents written with massive input from the major international management consultancies, without public consultation and debate on these issues." This also holds for the planning services of the urban infrastructure and planning projects. While Jerry Inzerillo, the CEO of the Diriyah Gate authority, emphasizes that almost all of their staff is Saudi, the consultants they hire are international to an overwhelming degree. Nearly all commissions for the grand projects have been awarded to multinational, mostly Anglo-Saxon planning and construction companies. Consequently, local Saudi mid to small-size planning firms to-date are given little stake in shaping Riyadh and other Saudi cities' future environments.

Fig. 13: Covering 13.3 square kilometers, King Salman Park is designed to be the largest urban park in the world, comprising a variety of ecological, cultural, recreational, and sports amenities. The park landscape's circular form branches out into a series of valleys (inspired by Saudi Arabia's seasonally dry wadi river beds) that infiltrate the surrounding urban fabric. Courtesy Omrania.

Riyadh – towards a Global City?

Short (2013) argues that while the globalizing project of cities might vary in detail according to their respective context, it is also characterized by many similarities. Shaped by new nationalisms, a neoliberal agenda, and a self-conscious global look and feel, the globalizing project, according to Short, includes a reimagining of the city, which in turn commands a rewriting of the city for external and internal audiences, whereby the hosting of events helps to institute its program. Furthermore, several researchers including Sassen (2001), Helmy (2008), Sklair and Gherardi (2012), and Gravari-Barbas (2016) demonstrated that globality is followed by its symbols, among which large-scale events and iconic architecture are commonly used. As this paper has demonstrated, Riyadh is implementing these principles by rewriting the city's cultural, economic, and social context through the Vision 2030's Quality of Life Program, the launch of mega-events, and the building of emblematic spectaculars.

Any city that aspires to become part of the "world cities" (Sassen 2001; Short 2004) is furthermore expected to construct internationally recognized buildings by "starchitects." And as Gravari-Barbas (2016) argues, "contemporary cities are characterized by policies expressing a simultaneous attachment for urban heritage and a fascination for iconic architectural projects." This reciprocal relationship, as illustrated by the case studies, is expressed in Riyadh's urban planning strategies, where heritage sites and new iconic developments are expanded and - in the case of Diriyah - merged to become emblematic mega-destinations. Abiding by globally established marketing formulas to maximize brand appeal, these destinations' core aim is to attract international attention, tourism, and human capital, particularly in the high-tech and producer service sectors. In addition, all of the proposed Saudi mixed-use destinations are marketed as one-of-a-kind experiences that speak to the envisioned lifestyle for a young, educated, and progressive Saudi middle class. Architecture and planning become vital tools of a cultural and economic transformation that implements the Vision 2030 documents' objectives by setting the stage for an urban ecosystem that boosts citizens' and residents' participation in cultural and sports activities. A mix of large-scale cultural attractions, boutique districts, bicycle- and jogging trails, and branded retail that synergize the four 'C's' of culture, consumption, cool, and cosmopolitan, seek to promote a contemporary urban lifestyle. As emblematic megaprojects are employed as urban catalysts that are strategically positioned to put Riyadh and - by extension Saudi Arabia - on the international map, they follow the prescriptive formula of a transnational, cosmopolitan class, eager to integrate its activities, both regular (work or housing) and periodic (tourism), into places that bring symbolic added-value to their lifestyles. By producing exclusive urban landscapes characterized both by "world-status heritage" and "world-status star-architecture," government officials create a new interpretation of the local while mobilizing the global by integrating their efforts into the worldwide network of the international firms and star architects who build these projects. In parallel, social media and marketing campaigns target local and international tourism and suitable professional classes, which are envisioned to consume the new "global" Riyadh brand.

Conclusion

While Saudi Arabia's mega-events along with the announcement of spectacular mega-destinations have undoubtedly spurred much curiosity in the global media, much of their long-term credibility will rest on the successful integration of place branding 'from above' and branding 'from below' to be able to sustain interest from a broad mix of internal and external audiences. This means that urban branding and planning must go beyond the notion of spectacle and publicity campaigns connecting to the locally existing place-based identity (Savage et al. (2005). In terms of branding, this would mean that top-down market-driven initiatives must be successfully combined with the community's own social, economic, and cultural aspirations. Consequently, according to Jensen (2005), there is a need to take urban branding out of governmental offices and corporate quarters and into the local and regional public. This means that the Vision 2030's Quality of Life program as the guiding document for the country's envisioned image ought to emphasize and encourage bottom-up strategies that include public participation, voice, tolerance of difference, and the protection of minorities as the new rationale and value base for place marketing as a regional growth agenda (see also Biancini and Ghilardi, 2007). As researchers, including Dyer and Certomà (2017), Liu, Dupre, Jin and Weaver (2019), and Li, Zhang, Hui, and Lang (2020) have emphasized, we need to build socially inclusive processes of reimagining the city to avoid the risk of brand alienation. Not just to invoke social and spatial justice in the city, but as Jensen (2005) has pointed out, also because all evidence seems to suggest that a 'city of difference' has the potential of real innovation and news contributions to the economy. Inclusive branding and planning strategies result from public dialogues based not on the strictly top-down pursuit of the "public interest" but on the politics of inclusion and mandatory negotiation. As Dormans and Lagendijk (2004) have commented more than a decade ago, "genuine inclusion can only be reached when, after a period of intense and open dialogue, coalitions are formed that bring together the various voices present in a city." It is in this field of tension between the 'official culture' and

the 'other' urban cultures that there is scope for more inclusive types of interventions (Thomsen (1996) that address the broader urban context and account for different voices to be heard. According to Kern and Bolay (2014) and Liu et al. (2019, 2020), this links to the issues of the complex dialectics of material space and discursive representation of different social and economic classes. By creating a more participatory and inclusive dynamic in its urban planning and branding processes through consultation and negotiation between the government, private developers, and the public, Riyadh (and by extension Saudi Arabia) may be able to strike the right balance between, on the one hand, the need to develop proactive and focused strategies of global positioning and, on the other, the sustaining of inclusive dialogue with its urban and regional communities. A representation of pluralistic interests by means of consultation and active participation would not only lead to a greater sense of pride and legitimacy of these urban mega-destinations on behalf of Saudi Arabia's citizens but could also serve as an inspiration to other centralized systems of government in the GCC on how to fully involve inhabitants in the decision-making process of urban development projects to set a precedent for a more sustainable and inclusive environment.

References

1,000 artworks installation and landmarks in the Riyadh Art project. (2019, March 20) *Saudi Gazette Saudi Arabia.* https://saudigazette.com.sa/article/561557

Almughairy, A. (2019). Rethinking regional development strategies in Saudi Arabia: Planning processes, governance, and implementation. *Journal of Sustainable Development, 12*(3), 131.

Alraouf, A. (2017). Interrogating Qatar's Urbanity as a Catalyst for Building Knowledge-Based Societies and Economies. In R.G. Bertelsen, N. Noori, J.M. Rickli (Eds.), *Strategies of knowledge transfer for economic diversification in the Arab states of the gulf* (pp. 53-66). Gerlach Press. https://doi.org/10.2307/j.ctt1wrpwp3

Alraouf, A. (2019). Towards a New Paradigm in City Branding and Marketing: The Case of Doha, Qatar. Proceedings of 55th International Society of City and Regional Planners (ISOCARP) World Planning Congress Jakarta-Bogor, Indonesia, 1920-1936.

Alsammarae, R. (2019, June 26). Inside look at Henning Larsen and Omrania-designed King Salman Park in Riyadh, KSA. Middle East Architect. https://www.middleeastarchitect.com/43819-inside-look-at-henning-larsen-and-omrania-designed-king-salman-park-in-riyadh-ksa

Ash, A. (2002). Spatialities of globalization. *Environment and Planning A: Economies and Space, 34,* 385-399.

Bailly, A. S. (1994). Urban representations: The imaginary in the service of the economy. In Ave, G., and Corsico, F. (Eds.), Marketing Urbano International Conference. Turin, Italy: Edizioni Torino Incontra.

Battersea Power Station, (2020, November 12). Battersea Power Station https://batterseapowerstation.co.uk

Biancini, F. & Ghilardi, L. (2007) Thinking culturally about a place. *Place Branding and Public Diplomacy, 3, (4).* Palgrave Journals.

Di Giovine, M. (2009). *The Heritage-scape: UNESCO, world heritage, and tourism.* Lexington Books; Rowman & Littlefield Publishing Group.

Dormans, S. & Lagendijk, A. (2004). Urban Identity: The city as 'product' and 'home.' Nijmegen: Paper presented at the "Mind the Gap" Conference.

Dupre, K. (2018). Trends and gaps in place-making in the context of urban development and tourism: 25 years of literature review. *Journal of Place Management and Development.* https://doi.org/10.1108/JPMD-07-2017-0072

DGDA (2020). Diriyah Gate Development Authority

https://dgda.gov.sa/Home.aspx?lang=en-us

Diriyah Gate Project. (2020, November 12), Foundation stone laid for Saudi Arabia's $17bn Diriyah Gate Project. Construction Week Online. https://www.constructionweekonline.com/projects-and-tenders/260713-foundation-stone-laid-for-saudi-arabias-17bn-diriyah-gate-project

Diriyah Season (2020, November 12). Diriyah Season https://www.diriyahseason.sa/en/discover-diriyah.html

Dyer, M. & Certomà, C. (2017). Making urban design a public participatory goal. Explorations toward evidence-based urbanism. Urban Design and Planning, 170(4). https://doi.org/10.1680/jurdp.16.00038

Egis Group (2020). Green Riyadh: a green horizon for 2030. EGIS Group.

https://www.egis-group.com/perspectives/city-life/green-riyadh-green-horizon-2030#:~:text=Aiming%20to%20plant%20more%20than,terms%20of%20its%20sheer%20size.&text=The%20programme%20combining%20smart%20technology,10%20million%20trees%20by%202030.

First phase of Riyadh Green Program launched. Arab News (2019, November 12). Arab News. https://www.arabnews.com/node/1632666/saudi-arabia

Florida, R. (2019). *The rise of the creative class*. Updated edition. Basic Books.

Gravari-Barbas, M. (2013). Aménager la ville par la culture et Le Tourisme. *Le Moniteur*.

Gravari-Barbas, M. (2016). Iconic Buildings and the historic urban landscape. A joint analysis of urban globalization. Sorbonne Working paper. Budapest UNESCO UNITWIN Network "Culture, Tourism, Development": Tourism and Cultural Landscapes International Conference.

Habibah, A., Mushrifah, I., Hamzah, J., Er, A.C., Buang, A., Toriman, M.E., Sevadurai, S.V. & Zaimah, R. (2013). Place-making of ecotourism in Tasik Chini: From exploratory to the contemporary biosphere reserve. *Asian Social Science, 9*(14), 8495.

Helmy, M. (2008). Urban branding strategies and the emerging Arab cityscape: The image of the Gulf city. Ph.D. Thesis, University of Stuttgart.

Helmy, M. (2020). Placemaking in Arab Cities: Realities, Challenges, and Prospects. *The Journal of Public Space, 5*(1), 1-4. https://doi.org/10.32891/jps.v5i1.1247

Hubbard, P. &Hall, T. (1998). The entrepreneurial city and the new urban politics. In T. Hall, & P. Hubbard (Eds.), *The Entrepreneurial City: Geographies of politics, regime, and representation*. John Wiley & Sons.

Jensen, O. (2005). Branding the Contemporary City - Urban branding as Regional Growth Agenda? Aalborg: Plenary paper for Regional Studies Association Conference' Regional Growth Agendas', 28-31 July 2005.

Grodach, C., Ehrenfeucht, R. (2016). Urban revitalization: Remaking cities in a changing world. Routledge.

Kavaratzis, M. (2004). From city marketing to city branding: Towards a theoretical framework for developing city brands. *Palgrave: Place Branding and Public Diplomacy 1*, 58-73. https://doi.org/10.1057/palgrave.pb.5990005

Kavaratzis, M. (2009). Cities and their brands: Lessons from corporate branding. *Place branding and public diplomacy 5*(1): 26 - 37. https://doi.org/10.1057/pb.2008.3

Kern, A. & Bolay, J. (2014). Participatory processes in urban planning projects in China: The example of Caoyang Village, Shanghai. *Technologies for Sustainable Development*, 209-223. https://doi.org/10.1007/978-3-319-00639-0_18

Kinninmont, J. (2017). *Vision 2030 and Saudi Arabia's social contract: austerity and transformation*. Chatham House for the Royal Institute of International Affairs.

Klingmann, A. (2010). Brandscapes: Architecture in the experience economy. MIT Press.

Kotler, P., Haider, D. & Rein, I. (1993). Marketing places: Attracting Investment, Industry, and Tourism to Cities, States, and Nations. The Free Press.

Krupar, S. & Al, S. (2012). Notes on the society of the spectacle brand. In C. Greig,Crysler (Ed.), *The SAGE handbook of architectural theory* (pp. 247–63). Sage. Law.

Launching the Saudi Seasons 2019 program. Ministry of Tourism of Saudi Arabia.

https://mt.gov.sa/en/mediaCenter/News/MainNews/Pages/a-m-1-27-2-19.aspx

Li, X., Zhang, F., Hui, E., & Lang, W. (2020). Collaborative workshop and community participation: A new approach to urban regeneration in China. *Cities, 102*. Elsevier. https://doi.org/10.1016/j.cities.2020.102743

Liu, Y., Dupre, K., Jin, X. & Weaver, D. (2019). Dalian's unique planning history and its contested heritage in urban regeneration. *Planning Perspectives*. https://doi.org/10.1080/02665433.2019.1634638

Liu, Y., Dupre, K. & Jin, X. (2020). A Systematic Review of Literature on Contested Heritage. Current Issues in Tourism. https://doi.org/10.1080/13683500.2020.1774516.

Lorenz, T. (2019, October 3). Influencers face criticism for Saudi Arabia travel #ads, The New York Times. https://www.nytimes.com/2019/10/03/style/saudi-arabia-travel-influencers.html

Miller, R. (2016). Desert kingdoms to global powers: The rise of the Arab Gulf. Yale University Press.

Mishra, A. (2016). Places in The Making: Abu Dhabi's evolving public realm in the context of place-branding. Gulf Research Meeting GRM 2016. University of Cambridge.

Muratovski, G., 2012. The role of architecture and integrated design in city branding. *Place Branding and Public Diplomacy 8*(3), 195 - 207. https://doi.org/10.1057/PB.2012.12

Nabbout, M. (2019). Saudi Arabia generated $270 million from its successful Riyadh Season. Step Feed.

https://stepfeed.com/saudi-arabia-generated-usd270-million-from-its-successful-riyadh-season-8161

Nereim, V. (2019, November 23). U.K. Chinese visitors' top list as 50,000 have a Saudi holiday. Bloomberg. https://www.bloomberg.com/news/articles/2019-11-23/u-k-chinese-visitors-top-list-as-50-000-have-a-saudi-holiday

Oliveira, E. (2012). Instruments of place branding and regional dynamics: Guimaraes as the European capital of culture. Personal RePEc Archive.

Omrania (2019). King Salman Park - Designing a world-class park and green district for Riyadh. Omrania. https://omrania.com/project/king-salman-park/

Pike, S., Ryan, C. (2004). Destination positioning analysis through a comparison of cognitive, affective, and conative perceptions. *Journal of Travel Research, 42*, 333–342.

Pine, J., Gilmore, J. (1998). *The experience economy.* Ingram Publisher Services Book.

Riyadh's ambitious $23bn program to transform the capital. (2019, February 20). Saudi Gazette. https://saudigazette.com.sa/article/578203

Riyadh Green (2020). Riyadh's four well-being projects…enhancing life. Riyadh Green. https://www.riyadhgreen.sa/en/

Riyadh Adhhalmasar (2019). Riyadh Sports Boulevard – This is the road to a healthy and energetic lifestyle. Riyadhalmasar. https://www.riyadhalmasar.sa/en/

Sassen, S. (2001). *The global city: New York, London. Tokyo.* Princeton University Press.

Savage, M., G. Bagnall & B. Longhurst (2005). *Globalization and belonging*. Sage.

Sklair L., Gherardi L. (2012). Iconic architecture as a hegemonic project of the transnational capitalist class. *City: analysis of urban trends, culture, theory, policy, action, 16*(1-2), 57-73.

Saudi Future Cities Program (2020). SAUNDP. https://www.sa.undp.org/content/saudi_arabia/en/home/projects/supporting-saudi-future-cities-programme-.html

Short, J. R. (2004). Global Metropolitan: Globalising cities in a capitalist world. Routledge.

Smith, A. (2012). Using temporary venues to stage the games: Lessons from London 2012. Conference: International Symposium for Olympic Research. Canada: Western University.

Saudi Future Cities Program (2020). SAUNDP https://www.sa.undp.org/content/saudi_arabia/en/home/projects/supporting-saudi-future-cities-programme-.html

Sports Boulevard to encourage healthy lifestyle. (2019, October 20). *Saudi Gazette*. http://saudigazette.com.sa/article/561556

Thomsen, L. (1996) *Kulturbyen I storbyens kultur.* Kunstakademiets Arkitektskole.

Tricaud, V. (2020, September 28). Saudi Arabia will push ahead with economic diversification despite COVID-19. Control Risks. https://www.controlrisks.com/ourthinking/insights/saudi-arabia-will-push-ahead-with-economic-diversification-despite-covid-19

X marks the spot as art and history merge at Saudi Arabia's Al Ula. (2020, March 14). Arab News. https://www.arabnews.com/node/1641146/saudi-arabia.

Yigitcanlar, T. A. (2007). The making of urban spaces for the knowledge economy: Global practices. In *Proceedings The 2nd International Symposium on Knowledge Cities: Future of Cities in the Knowledge Economy*, (pp. 73-97).

Keywords

city branding, placemaking, urban renewal, urban destinations, place marketing, urban planning, heritage, tourism, signature architecture

Saudi Vision for a Happy City: Analyzing architecture students' perspective for Riyadh, Saudi Arabia

Arshi Parashar[1] and Harshit Sosan Lakra[2]

[1]*Indian Institute of Technology Roorkee, India and Maulana Azad National Institute of Technology, India*
[2]*Indian Institute of Technology Roorkee, India*

Abstract
Launched in 2016 to bring wellbeing to its citizens through the diversification of its economy, Saudi Arabia has gained much appreciation with its Saudi Vision 2030. Among its themes, the vision includes the 'A Vibrant Society' which aims to facilitate happy and fulfilling lives through the development of livable cities. The goal is to have three cities among the top 100 livable cities in the world. Riyadh is the nation's capital and biggest city. It represents Saudi Arabia as a whole and as such, is a promising candidate to be one of Saudi's most livable cities. This article argues that the vision for Riyadh should facilitate a 'vibrant society' comprised of happy citizens. To further our understanding of 'happiness', we focused on the 'Vision for Riyadh city' in the 'Quality of Life Program', which was developed as part of the 'Vibrant Society Theme' under the Saudi Vision 2030. It was compared with design proposals by architecture students from Prince Sultan University for urban spaces in Riyadh made between 2016-2019. Our analysis clarifies the extent to which the students' vision for the city resonated with the administrative plans for Riyadh. Similarities between the visions reveal that the Saudi Vision 2030 is aligned with the students' preferences and the views of citizens, while differences indicate the need for a more collaborative approach to developing Riyadh's city vision; one in which students can play a vital role along with their professors and city administrators to ensure the development of a harmonious and 'happy' city.

Introduction

The creation of a 'City Vision' and its realisation are usually assumed to be in the hands of city administrators who tend to be beyond the reach of the general public. Including the wider public in the process of vision building has been shown, however, to yield holistic results affecting the population as a whole (Sanchez & Tyler, 2016).

The present article presents a comparative study that examines the city administration's vision for Riyadh city and the visions of a selection of architecture students from the urban design studio course, studying at Prince Sultan University between 2016 and 2018, whose projects are informed by consultation with a sub-section of the general public. Our research used the directives laid out in Saudi Vision 2030 to indicate the city administration's vision, while the architecture students' proposals, which had been developed after thorough public consultation in Riyadh, served to indicate the students' views and citizens perspectives more broadly. By comparing these two perspectives on the City Vision, the present study brings to light the shared preferences and divergent opinions of the city's administrators and the students and citizens. In addition, our research provides a basis for understanding the motivations and values that inform those views. These findings can potentially be used to facilitate better collaboration between the city administrators, architecture students and citizens throughout the visioning process for Riyadh.

Saudi Vision 2030 envisions the country's future through a collection of targets and aspirations enacted in economic, social, and physical planning policies (Arabia, 2016). These initiatives aim to shift the kingdom's focus from oil exports to areas of hidden potential such as health, education, infrastructure, recreation, and tourism. Saudi Vision 2030 is built around three clear themes: 'A Vibrant Society', 'A Thriving Economy', and 'An Ambitious Nation' (The Embassy of The Kingdom of Saudi Arabia 2022).

The present research focused on the theme of 'A Vibrant Society' which seeks to foster the happiness of the city's inhabitants. Vision 2030 officially promotes the creation of "a vibrant society where everyone enjoys a rich, happy and fulfilling life as a strong foundation for economic prosperity" (Arabia, 2016). The theme is also characterized by traditional values that stress the importance of maintaining a happy life. Though innovative, this approach is not unique as Cloutier, Jambeck, & Scott (2014) point out - happy residents are the top priority for any city.

Our study assessed the extent to which Saudi Vision's approach to designing happier cities for its citizens could be considered empathetic. City administrators' proposals made under the Quality of Life Programme (QoL) were compared with the design proposals made by the architecture students studying at Prince Sultan University. The QoL programme develops proposals that aim to enhance Saudi Arabia's appeal as a residential destination for both Saudi citizens and foreign residents, by improving the quality of life and promoting attractive new lifestyles in urban areas. The QoL programme document demonstrated how Vision 2030 was contributing to the urban design and planning of the country's major cities. The programme itself works by detailing cities' aspirations, establishing benchmarks, setting targets, and promoting lifestyle offerings in Saudi cities. Analysing this application of Vision 2030 enabled us to better understand how citizens could be made happier in tangible ways.

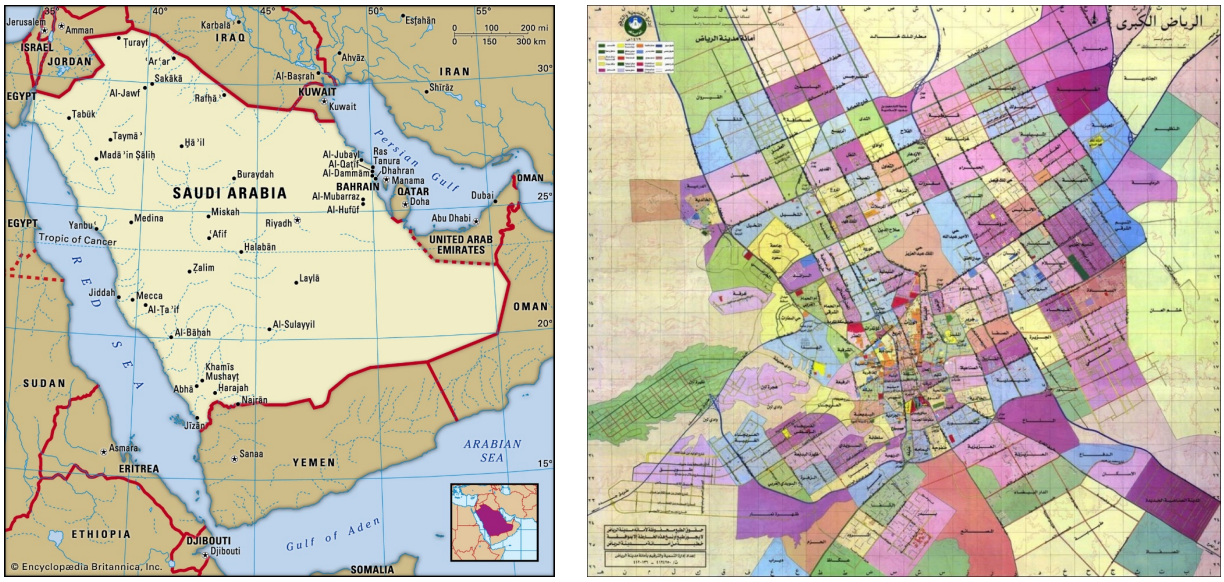


Fig. 1: Location of Riyadh City (left) and City map (right) Source: https://www.britannica.com and www.mappery.com

The vision for Riyadh city was selected as the focus of our study because Riyadh is the nation's capital, its biggest city, and an iconic place which represents Saudi Arabia as a whole. With its central location and proud history, the capital of Saudi Arabia (Fig. 1) is set to be transformed by Vision 2030, the application of which will encompass all spheres of development. Significantly, Vision 2030 aspires to have three of the country's cities placed among the top 100 livable cities in the world (Arabia, 2016). In this context, Riyadh has become a promising candidate to become one, despite its relatively poor standings in measures related to wellbeing, livability, quality of life, and happiness (Table 1 and Fig. 2). Nevertheless, although Riyadh does not feature highly in terms of quality of life, safety or livability (Fig. 2), it has been targeted for improvement. For this reason, the present study makes the argument that the vision for Riyadh should aim to make it a happier city, capable of achieving better rankings in the global measures of livability and quality of life.

Happiness and Cities

The significance of happiness for cities can be gauged from Aristotle's long-standing theory which states that the city plays a crucial role in satisfying its residents' need for security and happiness (Mahsud, 2006). To create a successful city, civilizations should strive for happiness and satisfaction (Fookes, 2002). Ideally, having met the basic needs of food, shelter, and security, a city should work towards increasing the happiness of its citizens while decreasing the amount of hardship (Montgomery, 2013). As habitats undergo change, people adjust to their surroundings, while altering their habitat to broadly suit their needs; failing to do so leads to unhappiness (Doxiadis, 2005). This need to both adapt to one environment and to adapt it to one's needs, also reflects that fact that people have a tendency to derive happiness from the things that provide satisfaction in their immediate surroundings (Ferreira & Moro, 2010). Cities, therefore, greatly affect people's wellbeing and quality of life; which is compounded by the cohabitation of diverse populations and the interwoven nature of people and their surroundings (Durand, 2018). In addition, other factors within this interwoven context, such as income, health, and access to recreational activities have been shown to affect people's wellbeing (Dolan, Peasgood, & White, 2008).

Urbanisation has been linked to social progress. That is, as a city urbanizes and levels of comfort increase, the health of citizens also improves and the level of education is raised. Not surprisingly, then, these improvements translate into happier citizens (Gottmann, 2003). Assuming that cities are an expression of the society which inhabits them, public happiness can be assumed to be the result of appropriate urban living conditions (Bravo, 2012). Over time, happiness has come to be understood not simply as an individual private concern, but as a collective public good linked to the urban environment and the living conditions that it supports (Morrison, 2007). Happiness, therefore, has played an increasingly vital role in society and policy-making in urban planning (Thin, 2012).

Happiness has multiple definitions however. As a term, 'happiness' variously stands for satisfaction, pleasure, cheerfulness, joy or all positive emotions for which we all strive (Alharbi, Alotebii & AlMansour, 2018). It can refer to the feeling that everything is exactly as it should be (Radwan, 2014), or more conservatively, as a state in which positive emotions outweigh negative ones (Cloutier, Larson & Jambeck, 2013). It is noteworthy that 'the pursuit of happiness' is one of the inalienable rights endowed by the Creator in the United States' Declaration of Independence (Stefanovic, 2002), and that the terms 'wellbeing' and 'happiness' are often used interchangeably; indicating that citizens' sense of wellbeing cannot be separated from their 'happiness' defined as the enjoyment of their lives and the attainment of their priorities (Diener & Biswas-Diener, 2008).

Various models for measuring happiness have been proposed (Ballas, 2013). Whereas some research has studied happiness by measuring quality of life (Marans and Stimson, 2011), other studies measured a particular definition of happiness (Diener & Seligman, 2002); still others measured wellbeing (Dolan, Peasgood, & White, 2008) (Welsch, 2009), or alternatively, satisfaction (Mackerron and Mourato, 2009), or pleasure (Maddison and Rehdanz, 2010). Notwithstanding the particular definition of 'happiness' used, the close association between cities and 'happiness' is clearly evident from the literature. Moreover, as Ballas & Dorling (2013) note; urban environments are key factors that promote 'happiness' whilst providing a range of ways to measure it, according to their own definition of course.

Happy City Indicators

To study the indicators of a happy city, the world's major wellbeing indices were analyzed through a matrix of eleven indices (Table 2). Six indices were taken directly from the QoL Programme Report, namely: Economist Intelligence Unit's (EIU) Global Livability Ranking, Mercer Quality of Living, Monocle Magazine's Annual Lifestyle List, World Happiness Index, OECD (Organization for Economic Co-operation and Development) Better Life Index and AARP (which earlier stood for American Association of Retired Persons) Livability Index. Five additional indices related to happy (2), thriving (1), safe (1) and prosperous (1) cities were analysed: Happy City Index, Happy Planet Index, Thriving Place Index, Safe Cities Index and City Prosperity Index. These last five were added to the list to create a holistic list of eleven indices.

The (EIU) Global Livability Ranking measures cities both in terms of their livability and the quality of life they provide. More narrowly, the Mercer Quality of Living Survey focuses only on quality of life, while the Monocle Magazine's Annual Lifestyle List of the 25 most livable cities focuses on lifestyle. At this scale, the AARP Livability Index ranks the quality of life in American urban communities; and Happy City Index presents comparative analysis of cities' levels of happiness. Safe Cities Index evaluates cities worldwide in terms of safety. (Kiestra, Kondo, & Clague, 2019) City Prosperity Index allows the comparison among cities with similar levels of

Table 1: Riyadh City's 2019 Rankings in Wellbeing Indices

S.No	*Indices*	*Riyadh Ranking 2019*	*Total cities studied*
1.	EIU Liveability Ranking	*107*	*140 cities*
2.	Mercer Quality of Living Index	*164*	*200 cities*
3.	Monocle Quality of Life	*0*	*25 cities*
4.	World Happiness Report	*28*	*156 cities*
5.	OECD Better Life Index	*Saudi Arabia not included*	*36 countries*
6.	AARP Livability Index	*Saudi Arabia not included*	*10 cities (Only US)*
7.	*Happy City Index*	*Saudi Arabia not included*	*9 cities (Only UK)*
8.	*Happy Planet Index*	*Saudi Arabia not included*	*140 countries*
9.	*Thriving Place Index*	*Saudi Arabia not included*	150 local authorities *(Only UK)*
10.	*Safe Cities Index*	*39*	*60 cities*
11.	*City Prosperity Index*	*0*	*40 cities*

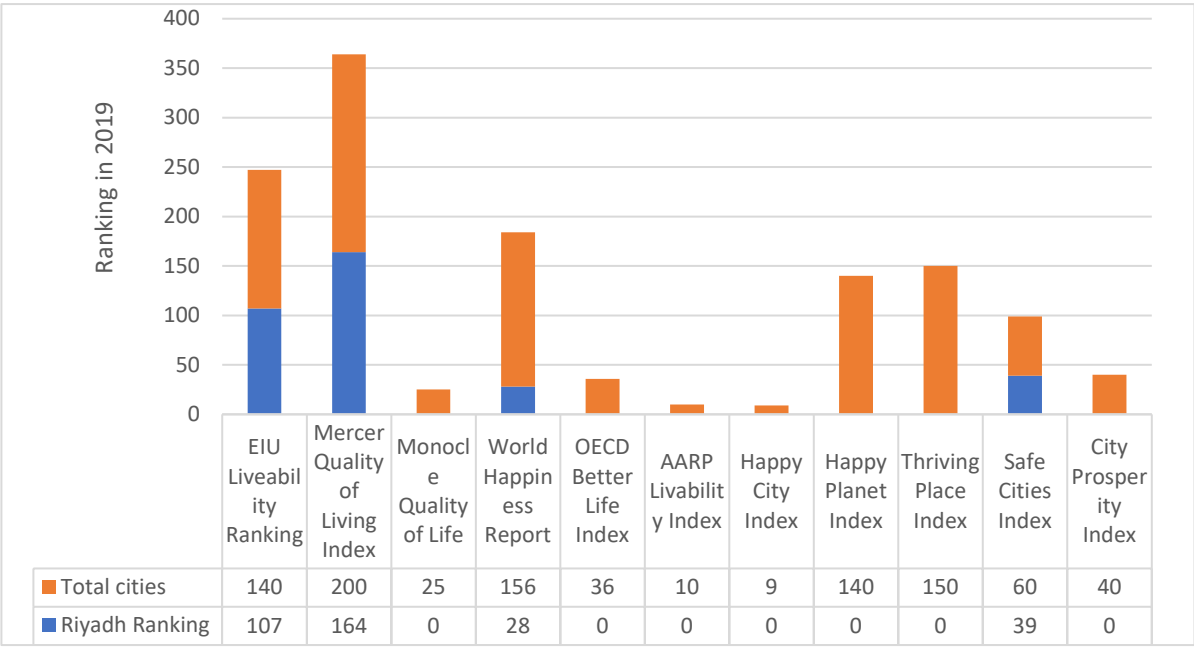


Fig. 2: Ranking of Riyadh in Wellbeing Indices 2019, Source: Compiled by Author

economic wellbeing (Abilla, 2018). Alternatively, the annual UN World Happiness Index, which is issued on World Happiness Day (March 20) and is based on happiness, ranks by country. As does the OECD Better Life Index, which compares wellness across different nations, and Happy Planet Index provides comparative data on each country's ability to provide their citizens with happy lives.

A total of eleven indices were used for the matrix in which indices were matched against the factors contributing to that particular index. The contributing factors were distributed across twelve categories, ten of which were adopted from the QoL Programme. Slight modifications were needed to settle on the following twelve categories: (i) Infrastructure and Transit, (ii) Housing, (iii) Urban Design and (iv) Environment, (v) Healthcare, (vi) Economic opportunities, (vii) Educational Opportunities, (viii) Security and Socio-environment, (ix) Entertainment, (x) Heritage, Culture and Arts, Sports, (xi) Recreation and Social Engagement. Two indicators, i.e. 'Housing, Environment and Urban Design', and 'Education and Economic' which had been grouped together in the QoL programme were separated for this paper (Table 5).

The indices are related to key factors in the following ways: Infrastructure facilitates the completion of people's daily activities with improved efficiency and productivity (Winata & Rarasati, 2017). It is used to specify a country's economic ranking (Popova, 2016). Also contributing economically is transportation, which can lead to an overall increase in the national economy by facilitating the movement of goods and labor, as well as the provision of services (Barro, 1990). Home ownership, on the other hand, impacts security (Sgoutas, 2002), neighborliness and a sense of community belonging (Chambers, Cantrell, Preston, & Peasgood, 2018). In terms of health and wellbeing, urban design can have either a negative or positive influence (Kleiner & Horton, 2016), and it has been shown that being mindful of one's health increases happiness and strengthens morale. Another factor for health and wellbeing that contributes specifically to happiness is living in close proximity to nature (Habtour, 2016). Not only do urban green spaces have social, health, and economic benefits (Chisholm, 2004), but better socio-economic development of the city also uplifts the wellbeing of its people (Dixon, 2004). Moreover, focusing on happiness seems to ensure economic, environmental and social sustainability (Paralkar, Cloutier, Nautiyal, & Mitra, 2017).

Another factor is providing opportunities for gaining knowledge and skills through education, as this enhances a citizen's quality of life. A safe city with adequate security and with a rich social environment has a positive impact for citizens who can enjoy unhindered social interaction (Goldberg, Leyden & Scotto, 2012). In the same vein, having access to the necessary leisure amenities allows citizens to participate in entertainment, and recreational activities that add life to a city (Bernini & Tampieri, 2019). Equally essential are vivid forms of art and culture that add to the vivacity and vitality of society. (Exton & Smith, 2015), as well as contributing to a city's local identity, which is also important for citizens' sense of belonging and overall wellbeing (Frick, 2006; Kent, Ma, & Mulley, 2017). Holistic participation in sports activities by citizens and residents directly impacts on their health and wellbeing (Huang & Humphreys, 2012), while developing strong bonds with people and places in a city has been shown to make its residents happier (Musa, Yacob, Abdullah, & Ishak, 2016).

The Architecture Programme's Urban Design Studio

The Urban Design Studio at PSU (Prince Sultan University), Riyadh, Saudi Arabia prepared students in their senior year (4th) to design or redesign parts of the city to improve citizens' living experience. Every semester, students were grouped together to work on a part of Riyadh city to recreate lost spaces or design new urban ones. The overall design process consisted of the following steps: Site selection, site analysis, identification of site problems and potential, concept derivation, program decision, zoning, master plan, sections, 3D visualization, details and schedules. The student proposals for this study have been derived from their submitted overall final proposal.

Methodology

The intention of this research was to analyze the similarities and differences between city administrators' and the architecture students' visions for Riyadh which would broadly represent the citizen's views. It should be noted, however, that since the study targets students and not citizens in general, the present analysis is limited in its implications. Future research targeting a broader range of citizens could provide data that would differentiate more comprehensively the city administrators' and the citizens' visions.

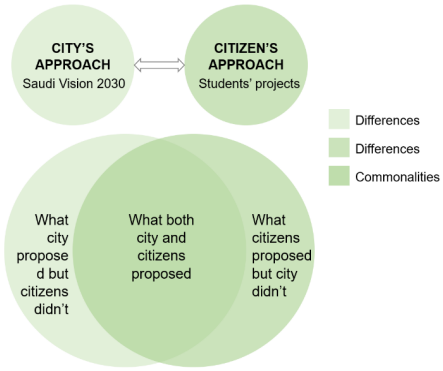


Fig. 3: Conceptual Approach

When comparing the approaches of the city (administration) and the citizens (architecture students), both commonalities and differences were identified. Commonalities were identified through examples of the Vision 2030 and students' proposals matching. Since the Vision represent the city's approach and the student's proposals represent the citizen's, the commonality in their approaches would highlight the spheres where citizens and the city share views. The differences between the two would highlight spheres in which the city envisions something beyond the scope of citizens' views, and vice versa. The Venn diagram above (Fig. 3) illustrates the concept depicting the city's and citizens' approaches, their commonalities and their differences.

The study compared Saudi Vision's documented QoL Programme (representing the city's approach) and the urban design students' proposals (representing the citizen's approach). To understand the city's and the citizens'

approaches, answers to the following three questions were elicited:

1. What urban spaces will be designed (Offerings)?
2. Where will it be designed (Potential Sites)? And
3. How it will be designed (Aspirations)?

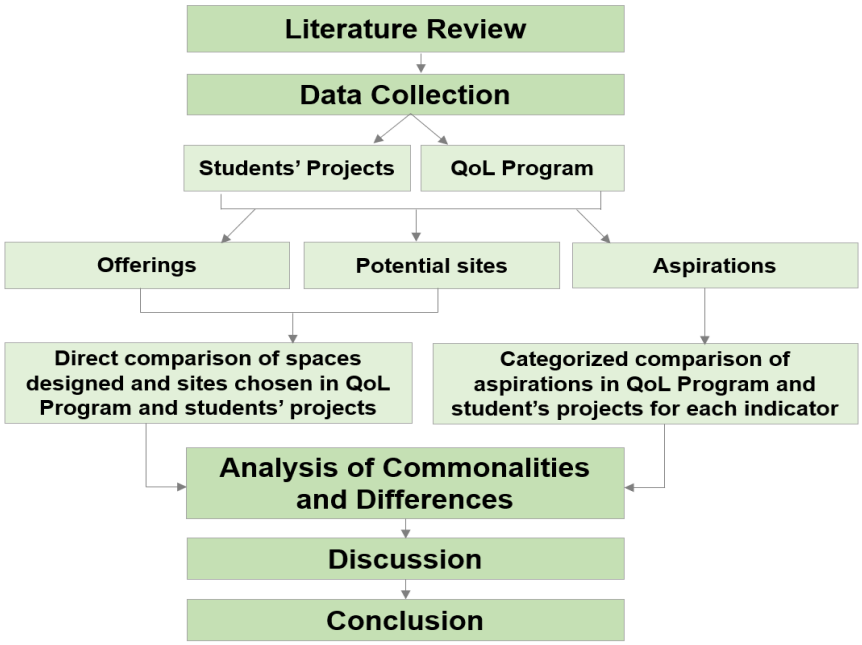


Fig. 4: Methodology

To answer the above questions, three focal areas were selected:

a) Offerings in Riyadh
b) Potential sites for Riyadh
c) Future aspirations for Riyadh.

Offerings (as quoted in the QoL programme) stand for actual spaces or designated 'activity areas' like cinemas, museums, parks, stadiums and the like. Next, 'potential sites' refer to strategic sites in Riyadh where urban intervention is encouraged. Finally, 'aspirations' refer to the policies or ambitions to be fulfilled. The flow chart above (Fig.4) depicts the methodology followed in this research.

Firstly, purposive sampling was used to select the student projects. Twelve projects were selected from six semesters between 2016 and 2019. Secondly, the offerings in the QoL Programme were mapped against the spaces designed by students in their proposals in a matrix (Table 4). To do so, direct comparison mapping was employed. The offerings were categorized under the seven categories adopted from QoL Programme: (i) Themed Attractions, (ii) Performance arts, (iii) Culture & Arts, (iv) Nature, (v) Sightseeing, (vi) Digital Entertainment and (vii) Sports. The student projects were then mapped against these offering categories in a matrix by color coding the cells where the offering from the QoL matched the student design proposal and where the non-matching cells were left blank (Table 4). Thirdly, the potential sites quoted in the QoL Programme were also mapped against the sites chosen by students in their design proposals in a matrix (Table 5). For this direct comparison mapping was employed. Vision 2030 has highlighted the top fourteen landmarks of Riyadh city as potential sites for guided tours. These fourteen sites were matched against the sites chosen by students in their proposals in a matrix. The cells where the site of student projects matched with the quoted landmarks from QoL Program were coded with a color and non-matching ones were left blank (Table 5). Fourthly, the aspirations outlined in the QoL Programme were compared with the design intentions of the students by analysing their proposals. To do so, a categorized comparison was conducted. For each of the categories of indicators generated in the matrix (Table 2), the QoL Programme mentions aspirations for Riyadh city (Table 6). In categorized comparison, students' proposals were studied in-depth, the components which resonated with the QoL Programme aspirations and those that did not were analysed. Here, QoL Programme aspirations were directly adopted from the document whereas the students' aspirations could be gauged from their design intentions and design choices. Finally, all the offerings, sites, and aspirations were qualitatively analysed to find the commonalities and differences between the two approaches (See Discussion). The gap between the two approaches was then examined to establish what the differences were, why they occurred, and how they could be reduced or negated. (See Conclusion)

Table 2 Wellbeing Indices Matrix for Happy City Indicators, Source: QoL Programme and

S. #	*Name of the Indices*	*Infrastructure & Transit*	*Housing*	*Urban Design & Environment*	*Healthcare*	*Economic*	*Education*	*Security & Socio-environment*	*Sports*	*Heritage, Culture and Arts*	*Entertainment*	*Recreation*	*Social Engagement*
1	**EIU Liveability Ranking**	Infrastructure, *Transport*		Environment	*Healthcare*		*Education*	*Stability*	*Sporting Availability*	*Culture availability*		F&B and Consumer goods	
2	**Mercer Quality of Living Index**	Transport	Housing	Natural Environment	Health		Schools & Education	Public Service, Security &Socio environment	Sports		Media AvailabilityTheaters& Cinemas	Consumer Goods, Restaurants & Leisure	
3	**Monocle Quality of Life**	Public Transport, International Connectivity		Design quality Environment & Nature	Medical Care	Business Conditions		Safety/ Crime		Culture	Restaurants		Tolerance, Pro- active Policy
4	**World Happiness Report**				Life expectancy	GDP per capita		Corruption, Freedom of Choice					Social Support, Generosity
5	**OECD Better Life Index**		Housing	Environment	Health	income, jobs & a-life balance	Education	Safety					Life Satisfaction, community
6	**AARP Livability Index**	Transport	Housing	Neighbourhood , Environment	Health			Opportunity					Social/Civic Engagement
7	***Happy City Index***			*Place*	*Health*	*Work*	*Education*						*Community*
8	***Happy Planet Index***			*Ecological Footprint*	*Life Expectancy*			*Inequality of outcomes*					*Wellbeing*
9	***Thriving Place Index***			*Place and Environment*	*Mental and Physical Health*	*Work and Local Economy*	*Education and Learning*	*Equality Sustainability*					*People and Community*
10	***Safe Cities Index***	*Infrastructure Security*			*Health Security*			*Digital &Personal Security*					
11	***City Prosperity Index***	*Infrastructure*		*Environmental Sustainability*		*Productivity*		*Equity and social inclusion*					*Quality of life Governance Legislation*

Table 3 Typology of student projects

S. #	Name of Project	Type
1.	Heritage Walk Boulevard	Pedestrian Boulevard
2.	Wadi Namr Extension	Waterfront
3.	Al Batha Boulevard	Commercial Boulevard
4.	Muthmera	Pedestrian Boulevard
5.	Al Daho	Heritage Quarter Revival
6.	Taiba Owais Markets	Commercial District
7.	Al Olaya Loop	Commercial Pedestrian Loop
8.	Reviving Zoo	Eco-reserve
9.	Albujairi	Historical District
10.	Faisaliya Centre	Central Business District
11.	Kingdom Tower Area	Central Business District
12.	King Fahad Library	Public Plaza

Table 4: Spaces Designed by Students Mapped Against Saudi Vison's Offerings, Source: QoL Program and Author

Offerings in QoL →			**Themed attractions**				**Shows/ Performance arts**		**Culture and arts**		**Nature**		**Sightseeing**		**Digital Entertainment**		**Sports**	
S. No	**Name of Projects ↓**		**Theme Parks**	**Water Parks**	**Family Entertainment**	**Cinema**	**Theatres / (Outdoor theatre)**	**Live Events**	**Museums**	**Exhibitions/ (bazaar)**	**Nature Reserves**	**Zoos Aqua and**	**Urban Parks & Play grounds**	**Guided Tours**	**e-Sports**	**Competitive Sports**	**Recrteational Sports**	**Adventure Sports**
1.	**Heritage Walk Boulevard**				x		x	x	x	x			x	x			x	
2	**Wadi Namr Extension**			x	x						x	x	x				x	x
3	**Al Batha Boulevard**								x	x							x	
4	**Muthmera**				x		x	x		x		x	x	x			x	
5	**Al Daho**				x		x	x	x	x			x	x			x	
6	**Al-Uwais &Taibah Markets**				x		x	x		x			x				x	
7	**Al Olaya Loop**				x							x	x				x	
8	**Reviving Zoo**		x		x				x	x	x	x	x	x				
9	**Al-Bujairi**				x			x	x	x	x		x	x				x
10	**Faisaliya Tower**				x			x		x			x				x	
11	**Kingdom Tower**							x					x					
12.	**King Fahad Library**				x		x	x		x			x				x	

Table 5: **Student project sites mapped against Saudi Vison's Sites, Source: QoL Programme and Author**

Potential Sites in QoL → / Student Project Name ↓	Kingdom Centre Tower	Masmak Citadel	Al Faisaliyah Center	Al Rajhi Grand Mosque	Old Dir'aiyah	King Khalid Grand Mosque	Imam Turki Bin Abdullah Grand Mosque	WadiNamr	Othman IbnAffan Mosque	Heet Cave	Princess LatifaBint Sultan Bin	World Sights Park	Underground Gallery	King Fahad Cultural Centre
Heritage Walk Boulevard		x					x							
WadiNamr Extension								x						
Al Batha Boulevard														
Muthmera														
Al Daho		x					x							
TaibaOwais Markets														
Al Olaya Loop	x													
Reviving Zoo														
Albujairi					x									
Faisaliya			x											
Kingdom	x													
King Fahad Library														

Table 6 Aspirations owned by the QoL Program 2020,
Source: Directly adopted from QoL Programme Saudi Vision 2030, (Arabia, 2016)

Indicator	Aspirations by QoL Program
Sports	Increase participation in sports by mobilizing KSA population to exercise on a weekly basis
	Become regional leaders in Summer Olympic participation
	Reach accessible sports infrastructure offering levels of most liveable countries
Heritage, Culture and Arts	Match international engagement levels for culture and arts
	Aspire for city cultural and artistic activities to compare to the top 10 worldwide culture hubs
	Make the Kingdom a regional hub for culture and arts through infrastructure development
Entertainment	Reach levels of population engagement in entertainment of most liveable countries
	Provide entertainment offering comparable to most liveable countries
	Make the Kingdom a global hub for entertainment by building pioneering venues
Recreation	Maintain expenditure levels on food and beverages
	Become a global reference point for food and beverage with leading, high-quality offerings
Infrastructure and Transportation	Drive public transport use to reach most the top 5 most liveable countries
	Reduce traffic deaths to reach the top 5 most liveable countries
	Follow the evolution of connectivity to reach double the average global per capita share of connected devices
Housing, Urban Design & Environment	Achieve home ownership equal to top 5 of most liveable countries
	Achieve WHO minimum for suggested available green space
	Enhance people's walking habits to reach the top 5 most liveable countries
Healthcare	Accomplish equivalent life expectancy to the top among top 5 most liveable countries
	Reduce diabetes prevalence at par with the average of the top 5 most liveable countries
	Install enough hospital beds reach top 5 most liveable countries
Economic and Education Opportunities	Reduce unemployment to reach top 5 most liveable countries
	Encourage female employment to close the gap with most liveable countries
	Achieve Program for International Student Assessment (PISA) reading scores to reach top 5 most liveable countries
Security and Socio-Environment	Increase offering of e-government to reach top 3 of most liveable nations
	Increase gender equality to become top performer among countries in subsequent liveable bracket
Social Engagement	Mobilize volunteers to drastically increase KSA volunteer base
	Increase number of NGOs to surpass countries in subsequent liveable bracket (i.e. with cities that fall) in the EIU Liveability ranking 100-between 80
	Achieve a 20x increase in interaction with the community and neighbourhood clubs

Fig. 5: Masmak Citadel site chosen in a students' proposal, Source: Student Project

Data Collection

Twelve student samples were selected using purposive sampling and listed according to type. Every semester, students were given a different urban category to design, such as boulevards, pedestrian loops, public squares or a neighborhood. However, the choice of site and their design were entirely the students'. Table 3 shows the types of project chosen for this research. They ranged from pedestrian or commercial loops to commercial districts, from public squares to waterfronts, from historical districts to business ones and from heritage quarters to regional eco reserves.

The projects chosen were intended to be different in terms of site type and design brief, giving the students a well-rounded approach experience that required an holistic outlook. Similar projects were avoided and efforts were made to select at least one project from each semester. Students were advised to refer to Vision 2030 for their overall design approach at the beginning of the semester informally (verbal) for the first four semesters and formally (written) in the last two semesters. In the next step, the offerings, sites and aspirations of the QoL Programme would be compared with the students' projects.

Analysis

As seen in Table 4, mapping the offerings from the QoL Programme against the spaces designed by the students in their projects highlighted that most of the offerings matched with the students' projects. It shows that eleven out of twelve student projects incorporated 'Urban parks & playgrounds', closely followed by 'Family entertainment centres' which was incorporated in ten projects. Next were 'Exhibitions/ bazaars and 'Recreational sports' which were included by nine out of twelve projects. Finally, 'Live events' were included by eight out of twelve projects. Museums, guided tours', 'Zoos/aqua/flora' and 'Nature reserves' were included by five, five, four and three student projects respectively. The mapping highlighted that none of the student teams thought to incorporate 'E-sports', 'Competitive sports' and 'Cinemas' in their designs. The next to follow (which were also rare) were 'Adventure sports', 'Theme parks' and 'Water parks.'

The clear preference of students for designing family areas like parks, playgrounds, and family entertainment centres is likely due to a strong family system tradition in the Arab region (Young & Shami, 1997). The inclusion of exhibitions, recreational sports, and live events can be in a way credited to its increasing trend in the Kingdom (Desk, 2019). The evident hesitation from the students' end in proposing cinemas in the selected projects could be from short sightedness in reimagining Riyadh, due to its existing image as a conservative societal set-up being firmly established in the public imagination (Alghenaim, 2014). Students and the citizens they interviewed were probably not ready for a major cultural shift and hence were unable to think in broader terms. (Dege, 2018). Novel sport options such as E-sports could not find a place in students' projects either. This was probably because of the newness of its nature as the term 'e-sports' was little known in the Kingdom prior to 2017 (Atallah, 2019). It could also be due to the general indifference of Saudis towards sports as a recreation option (Alghenaim, 2014). Lastly, there is a general tendency to avoid physical activity among Saudi males (Al-Refaee & Al-Hazzaa, 2001) and Saudi females (Albawardi, Jradi & Al-Hazzaa, 2016) that could have contributed to this result.

Mapping potential sites from the QoL Programme against the sites chosen by students in their project in Table 5 shows six out of fourteen sites used by students as a site for their projects. The chosen sites were of Kingdom Tower, Masmak citadel, Al Faisaliyah Center, Old Diriyah, Imam Turki Bin Abdullah Grand Mosque and Wadi Nmar. The inclination towards these sites could be attributable to their prominence as an iconic part of Riyadh's skyline. While Kingdom and Faisaliyah Tower are the architectural symbols of the city, Masmak, Diriyah and

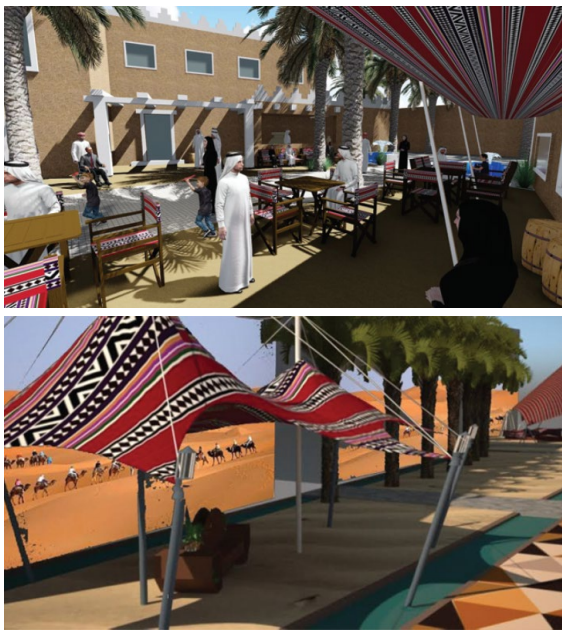


Fig. 6: Student Proposals showing traditional tents using tribal fabric, Source: Student Project

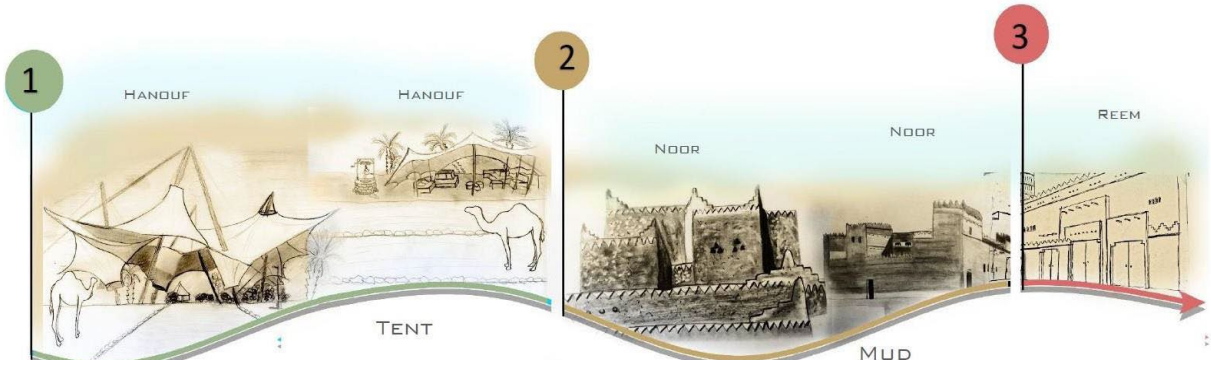


Fig. 7: Student proposal showing heritage walk from Arab past to present, Source: Students' Project

Grand Mosque constitute the heritage icons of Riyadh's glorious past (Fig. 5). Wadi Namr, which has the potential to offer a waterfront to the dry Riyadh landscape, also became a promising site for student projects.

The eight untapped sites included mosques such as Al Rajhi Grand Mosque, Othman Ibn Affan Mosque and Princess Latifa Bint Sultan Bin Abdulaziz Mosque, hidden treasures like Heet Cave and Underground Gallery, and tourist spots like King Fahad Cultural Centre and World Sights Park. A likely assumption of students not choosing mosques, parks or cultural centres could possibly be because of the decent quality of their existing design. The possible reason behind not choosing rare cave and underground gallery sites could be the ignorance of such spaces or fear of dealing with an unusual site. It should be noted here that the reasons for students choosing some sites over others is only assumed in this research, while the actual reasons still need to be investigated. The design decisions of students remain a topic for future research.

Next, the comparison was made between aspirations in QoL Programme and the students' design intentions in their projects. The QoL Programme lists aspirations for Riyadh city for each category of factors affecting happiness in cities (Table 6). The ten categories adopted from the QoL Programme were the following: (i) Sports, (ii) Heritage, Culture and Arts, (iii) Entertainment, (iv) Recreation, (v) Infrastructure and Transportation, (vi) Housing, (vii) Urban Design & Environment, (viii) Healthcare, (ix) Economic and Education Opportunities, (x) Security, Socio-Environment and Social Engagement. For each of the above-mentioned categories, the students' design intentions were analysed, producing descriptions that highlight where the students' proposal supported the QoL Programme aspirations and where it did not. A detailed analysis was done for each category and is supported by illustrations from student proposals wherever necessary.

(i) Sports

In Riyadh, 'Sports' was not a famous recreation option until recently. Analysing students' projects revealed, however, that student proposals intended to encourage people to exercise within their community by proposing an outdoor gym in their neighborhood, district, and in regional parks / plazas. Also, attractive bicycle lanes designed using a tactical urbanism approach were proposed to encourage citizens to bike to their favourite neighborhood amenities such as parks, banks, or grocery stores, encouraging the KSA population to exercise on a daily basis. Students were creative, offering out-of-the-box sports infrastructure like a dedicated skating park for men and women, unusual terrace courts in residential areas. In commercial areas, in addition to the all too familiar basketball courts, a sports facility for office workers provided football grounds and badminton courts. However, student projects did not focus on competitive sports which could help citizens in Olympics.

(ii) Heritage, Culture and Arts

Despite having a rich heritage, Saudi Arabia's past remains largely unexplored in major city design. After thorough analysis of student projects, it was clear that students aspired to boost cultural and artistic activities in the city, by introducing cultural centres, heritage museums, bazaars, art galleries, and interactive urban art installations. Students intended to match international engagement levels for culture and arts by designing living heritage workshops and kiosks where endangered culture could be relived and kept alive. Students envisioned Kingdom as a regional hub for culture and arts through the design of spaces for traditional games, areas dedicated for auctions like in olden times, the recreation of camel ride zones, and the use of tribal tents and traditional majlis for seating (Fig. 6). In addition, heritage walks were proposed to take citizens through a path depicting the cultural heritage from the past to the present (Fig. 7). Students used traditional building styles from prominent regions such as Najd, Hijaz and Asir and incorporated traditional triangular-cut windows and geometrical patterns in the building façades and street furniture.

(iii) Entertainment

To reduce oil dependence, the Saudi economy is shifting to entertainment. Evaluation of the students' projects revealed that the students intended to provide entertainment options by proposing infrastructure for shows and events. Students aimed to make the Kingdom a global hub for entertainment by building various entertainment facilities like open air theatres, outdoor performance stages, multi-purpose atriums and plazas. However, students did not incorporate broader entertainment options such as opera houses, music concert halls, theme parks, and cinemas as mentioned in Vision 2030 Programmes.

(iv) Recreation

Recreation is usually a family affair in Saudi Arabia and picnics are one of the most widely practiced pass times. It was

Fig. 8: Student proposals showing outdoor dining, (Source: Students' Project)

Fig. 9: Student proposals showing pedestrian and bicycle lanes, (Source: Students' Project)

found that in their projects, students emphasised designing a great variety of dining options, including outdoor cafes, open air food courts, food bazaars and food truck dedicated areas to encourage the trend of eating out with friends or family. Also, students contributed to the creation of active and passive recreation by designing interesting spaces such as waterfront promenades, historical gardens, plazas, bird watching parks, pedestrian boulevards, green corridors, resident gardens, and floral gardens to name but a few (Fig. 8). Overall, students focused predominantly on urban spaces, with eating being one of the featured activities. In contrast, the Vision 2030 focuses its recreation on increasing expenditure on food and beverages.

(v) Infrastructure and Transportation

Though quite advanced in transportation and infrastructure, non-motorised transport (and especially walking options) are largely underdeveloped in Riyadh (Ledraa, 2015). Public transport is highly anticipated as the Metro project is all set to be used by the public. It was found that the students encouraged the use of public transport by encouraging transit-oriented development around proposed metro and bus lanes. Metro stations were given priority when choosing strategic urban design interventions. Bus stop location was carefully studied from the proposed bus route plans for Riyadh to design user-friendly bus stops and connect them to nearby amenities. In addition to developing public spaces around bus stops to create a happy waiting atmosphere, students also tried to reduce traffic deaths through the creation of extensive bicycle and pedestrian lanes connecting residential areas to all district amenities.

Students also suggested buffer zones between vehicular and pedestrian zones to create safety for pedestrians. Bicycle lanes or on-street parking were also used to create a buffer within the street system (Fig. 9). While students encouraged public

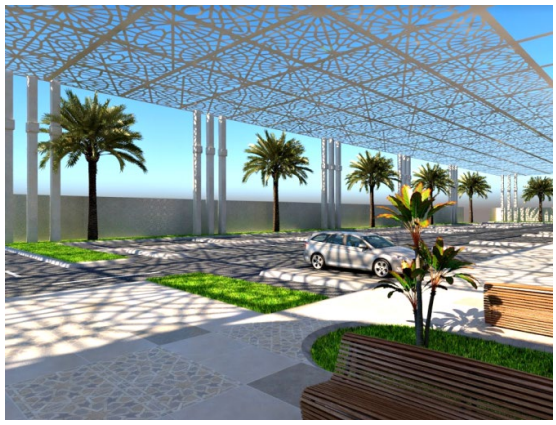


Fig. 10: Student Proposal showing shaded Parking inspired from arabesque lattice, (Source: Students'

transport and a reduction in traffic deaths, there were little contributions made to enhancing connectivity of devices. Shaded parking was also designed incorporating Saudi tradition patterns on horizontal shading. (Fig. 10)

(vi) Housing

Riyadh usually accommodates high-end housing and affordable housing is both rare and needed. Students incorporated social housing into their projects by using principles of affordable housing. Student projects dealt with designing urban space, hence there were no major housing schemes proposed by students.

(vii) Urban Design and Environment

There is a growing concern for city and environment in Saudi government and amongst the public. Students' projects showed that there was enough sensitivity towards the need to increase the number and size of green spaces in their designs. A variety of green spaces were designed such as parks, playgrounds, buffer strips, floral gardens, tree lined avenues, and protected green reserves (Fig. 11).

Students advocated strongly for walkability in their design (Fig. 12). The public spaces were designed to enhance people's activity by creating meaningful pathways and active destinations. Such pathways are needed as the trend of walking is increasingly popular in the Kingdom (Parashar & Bnayan, 2020). Additionally, activities inside public squares or plazas were designed for all ages and both genders, while pedestrian paths were designed from residential areas to all nearby amenities, including transit stops. The pathways themselves were often installed with pedestrian lights, trash bins, planters, and seating. Street furniture and accessories were well designed to suit the climatic and cultural conditions of Riyadh. Also provided were intermittent praying and ablution areas, public toilets, drinking water stations and innovative ideas like kinetic pavements lighting up floors at night or using swings for waiting to light up areas at night.

(viii) Healthcare

In mapping related world indices, health was found to be the most rated indicator of a happy and liveable city. Riyadh has a superior health infrastructure but lacks health initiatives in city design. Students were keen to contribute to a healthier lifestyle for citizens, so they proposed citizen-friendly pedestrian and bicycle lanes, interactive path designs and walkable neighbourhoods to achieve a healthier lifestyle. They also proposed hospitals, clinics or first aid centres according to the needs of the design. Students considered mental health and were sensitive to the capacity for urban design features such as proportion, layout, and colour scheme to boost citizens' mental health. However, not many efforts were put into proposing hospitals, increasing life expectancy, or reducing diabetes. Although such aims were proposed in the Vision 2030, such issues were beyond the scope of the urban design studio course.

(ix) Economic Opportunities

With diversification of the Saudi economy into various fields other than oil, many other industries were targeted. Students' projects aimed to enhance economic activities through the promotion of bazaars or markets, proposing dedicated areas for selling home-made items, designing prototypes of kiosks or pop-up shops, as well as designing exhibition areas that could be used for different handicrafts. Amenities, such as toilets, food courts, prayer areas, first aid arrangement, play area for kids were provided for, along with ample seating for customers in the commercial areas, keeping the public happy and allowing them to stay longer (Fig. 13). Nevertheless, student projects did not feature unemployment among their primary concerns.

Fig. 11: Student proposals showing green infrastructure in parks, pathways and plazas, (Source: Students' Project)

(x) Educational opportunities

Fig. 12: Student proposal showing walkability study for an urban area from two metro stations, (Source: Students' Project)

Fig. 13: Students' proposal showing a bazaar having heritage elements in facade and pavement, (Source: Students' Project)

Although education infrastructure is well woven into the city, students aspired to reducing unemployment through the revival of cultural training centres to teach living heritage skills. Apart from this initiative, no other educational program was introduced. As in the previous section, it should be noted that this issue was not a part of the urban design course.

(xi) Security and Socio-Environment

Saudi cities are usually considered to be segregated and unsafe, especially for women. The students' projects demonstrated that they felt the need to design more women-friendly urban spaces to increase women's engagement in cities. They proposed amenities with features for women, including 'natural surveillance' and 'eyes on the street' in their designs. There were, however, no efforts made to encourage e-government apart from proposing smart helpdesk kiosks.

(xii) Social Engagement

Arab social structure is tightly knit. Students were encouraged to do exhaustive research on their site, extensive analysis, and to prepare detailed proposals by consulting with the various users of their context. This enhanced citizens' engagement in the design process. In their projects, students placed much emphasis on proposing community centres, neighbourhood parks, shared gardens and societal clubs that would encourage community interaction. Even so, schemes for encouraging volunteers or increasing NGOs did not feature in the students' projects.

Findings

When comparing the Offerings, Sites and Aspirations, it was found that most of the Saudi Visions resonated with the students' proposals. Among the deliverables which were found to be strikingly similar, were those related to the introduction of green open spaces, spaces featuring water, plazas, open air theatres, markets, exhibitions, playgrounds, and dedicated tours. Both the city administrators and citizens proposed the creation of parks and green spaces, as well as encouraging environment-friendly urban landscaping. Both envisioned increasing walkability and introducing active routines into the lives of citizens. Both encouraged dependence on public transport, a decrease in private car usage, and a reduction in traffic deaths through bus and metro use (Arabia, 2016).

However, there were many examples where student proposals did not match with the city's approach. While Saudi Vision envisions high-end entertainment options for their citizens, proposing 'Opera Houses and Cinemas' (Arabia, 2016), none of the students' projects included it in their proposals. Also, Saudi Vision is looking ahead to digital, competitive, and professional sports. It aims to develop them in the city, however, apart from a few adventure sports students only suggested designs in the sphere of recreational sports or playgrounds. Though the Vision 2030 document stresses that investment in 'theme parks' can be beneficial (Arabia, 2016), very few student projects included 'theme parks' in their proposals. In contrast, the students' projects proposed 'open air theatres' for live shows with regular visitors as spectators and did not exclusively feature designs for musical concerts or live shows as envisioned by Saudi Vision.

There were other spheres where the students' intentions did not correspond to those detailed in the QoL Programme. The first example is cycling infrastructure. Virtually all students in their projects introduced cycle lanes, stands, and stops at some scale or other. They connected residential areas to nearby amenities using bright coloured cycling tracks and often separated them from the main traffic with a buffer strip or bollard lights. Cycling encourages exercise, provides greater access than walking, and reduces road accidents. However, in the Vision 2030 targeting healthier lifestyles and reducing traffic deaths, there was no mention of cycling infrastructure or bicycle lanes. The second example is the reduction of private car usage. The Vision 2030 strongly advocates promoting public transport and have designed an excellent metro and integrated bus system to achieve this. And yet, there is no mention of para-transit options to stimulate public transit usage. Students, by contrast, proposed para-transit options connecting metro stations and bus stops to residential areas. Their options included non-motorized transport (NMT) options like pedestrian paths and cycle lanes, as well as strategies such as carpooling and using shuttles.

Discussion

The comparative study of the Vision 2030 and the student proposals suggests that the government's initiatives are well ahead of their time and resonating with the urban design students' aspirations. The overlap between the two demonstrates that the commonalities between them outnumber their differences, reflecting a type of harmony between the processes of student design and the government's policy making.

A small disparity between the two approaches, however, indicates spheres where harmony could be improved. According to our analysis, the key players capable of shaping the vision of a city are not only students and city administrators, but also educators. Each of these three can play a role in the realisation of the city's vision. This paper thus highlights a new approach to studying a city's vision; one that recognises the role educators can play in shaping the future urban landscape.

Due to their ability to influence the viewpoint of budding urban designers, the educator's role is the most important. The contribution an educator can make is therefore capable of effectively bridging the gap between the vision of the citizens and students, and that of the city's administrators. As a mentor, an educator should try to reduce the students' hesitation when designing, encouraging them to trust their judgement and imagine all possible alternatives. Accordingly, the desk appraisals should be intentionally varied and include influences from other cultural geographies. The fear of experimentation must also be overcome. By appreciating students who try thinking outside of the box, mentors can encourage innovation and foster a learning environment that supports risk-taking and experimentation.

In the university setting, and focusing on the context of this research, the design studio instructors can embed Vision 2030 into the design briefs as a mandatory or optional component. Instructors should also ensure that they have a thorough understanding of the various documents under Vision 2030 as they are responsible for introducing students to the database best suited to their project. Lastly, instructors should encourage student interest in the inclusion of Saudi Vision 2030 in their designs by adding related criteria to the grading rubric.

On the flipside, the students can improve their contribution to realising Vision 2030's goals by doing holistic research. Globally, urban design students are conducting extensive surveys and citizen observation to arrive at their proposals. While conducting research on people's thoughts about the city, they can increase their sample size to accommodate people of all cultures, genders, classes, religions, nationalities, and age groups. Diverse case studies from different parts of the world can be created to understand how international urban designers bring out city-scale solutions. Having a wider vision for their design would broaden their horizons, reduce their hesitation, and alleviate fears of experimentation. Assimilating other cultures would reduce the major cultural shift they experienced in their design, while working in teams can encourage participatory design processes which often produce harmonising results. Students can thus play a crucial role in connecting citizens, city administrators and other cultures. This approach, it should be noted, can be facilitated by Ekistics, the study of human settlements and their problems, which has developed a comprehensive grid that can be used to compare and classify case studies across similar scales of development and theme.

Finally, city administrators have a role to play in bridging the gap between the two approaches by actively involving students and educators in participatory planning processes; for example, a city's urban projects can be trialed among architecture students as design briefs and competitions,

students can be regularly guided by educators and city administrators to achieve desired outcomes, while the winning projects can be adapted to the city's realization plans and published. Through such activities, students can develop hands-on experience in the city administration, and administrators can involve citizens in regular meetups for friendly participatory design events.

Conclusion

This study identified a new perspective in city vision building by studying students' work and comparing it with city vision documents. This approach, which compares students' work in a particular field with city policy documents relating to the same field proposes a means for the similarities between city visions to be identified and their differences to be bridged. The related visions of students and city administrators brought into view both the role of citizens in informing the students' proposals, and the role that educators play as mentors in the university context. It is therefore recommended that a conscious effort from each of the contributors (citizens, students, educators, and adminstrators) should be made to better achieve Vision 2030. That is, educators, students, city administrators and citizens can collaborate to make a city embodying their dreams, what Ekistics describes as 'entopia', an ideal yet buildable city (Doxiadis, 1975). Within this collaborative process, our study has advocated for the role of the educator in fulfilling a city's vision, maintaining that their small contribution can play a bigger role in building a city's vision. Indeed, educators and city administrators should act as catalysts, encouraging students to embrace their role as a key player in vision realisation. Significantly, this collaborative approach can be studied, experimented with, and shaped to suit different streams of education. In this study, we have dealt with architecture students, however the same approach could be used for students of law, science, design, technology or indeed, any field.

In terms of future research, if students can adopt a systematic approach to data collection, canvassing public views and the reasons for their daily lifestyle choices, research could more holistically and accurately represent the general population. This role aligns the approach that practitioners of Ekistics has developed since the 1950's. Moreover, such an approach highlights the role educators can play as role-models, conducting systematic research, presenting their rationale for their designs, and providing reasons to help make research more intriguing and far-reaching. On the whole, it is clear that Vision 2030 represents a step forward towards diversifying the Saudi economy and introducing facilities which were beyond the students' city visions. While sometimes limited by the brief, students nevertheless presented sensitive and vital ideas that would not have been out of place within the city administrator's proposals developed under Vision 2030. Therefore, we may conclude that a unique collaboration between the two will definitely help Riyadh achieve its position in the top livable and happy cities of the world.

Acknowledgement

The authors would like to thank the Department of Architecture, College of Architecture and Design at Prince Sultan University (PSU), Riyadh, Saudi Arabia where the first author taught Urban Design Studio from 2014 to 2019 and is currently pursuing her doctoral studies in India. The authors would also like to sincerely acknowledge the work and efforts of students of Urban Design Studio course at PSU which were studied in this paper.

References

Abdulmuin Alharbi, A., Abdullah Alotebii, H., & Abdullah AlMansour, A. (2018). Towards Measuring Happiness in Saudi Arabia based on Tweets: A research proposal. 1st International Conference on Computer Applications & Information Security (ICCAIS) (pp. 1-4). IEEE.

Abilla, A. (2018). City Prosperity Initiative – Conceptualization and Application. United Nations Habitat.

Albawardi, N. M., Jradi, H., & Al-Hazzaa, H. M. (2016). Levels and correlates of physical activity, inactivity and body mass index among Saudi women working in office jobs in Riyadh city. *BMC Women's Health, 16*(1).

Alghenaim, K. F. (2014). Recreating urban space in Saudi Arabia: Private sector participation in leisure, sports, and recreation. Dissertation *Abstracts International Section A: Humanities and Social Sciences*. ProQuest Information & Learning.

Al-Refaee, S. A., & Al-Hazzaa, H. M. (2001). Physical activity profile of adult males in Riyadh City. *Saudi Medical Journal, 22*(9), 784–789.

Arabia, K. o. (2016). Vision 2030 - Riyadh: Saudi Arabia.

Atallah, N. (2019, August 7). Game on: The rise of eSports in the Middle East. Arab News. https://www.arabnews.com/node/1536316/lifestyle

Ballas, D. (2013). What makes a "happy city"? *Cities, 32*, 39-50.

Ballas, D., & Dorling, D. (2013). The Geography of Happiness. In S. David, I. Boniwell, & A. C. Ayers, *The Oxford Handbook of Happiness* (pp. 465–481). Oxford University Press.

Barro, R. J. (1990). Government Spending in a Simple Model of Endogenous Growth. *Journal of Political Economy, 98*(5), 103-125.

Bernini, C., & Tampieri, A. (2019). *Happiness in Italian cities.* Regional Studies.

Bravo, L. (2012). Public spaces and urban beauty: The pursuit of happiness in the contemporary European city. Conference Proceedings. European Symposium on Research in Architecture and Urban Design (pp. 1-7). Faculdade de Arquitectura da Universidade do Porto.

Chambers, D., Cantrell, A., Preston, L., & Peasgood, T. Paisley, S., Clowes, M. (2018). Systematic review of the evidence on housing interventions for 'housing-vulnerable' adults and its relationship to wellbeing. White Rose Research Online. http://eprints.whiterose.ac.uk/131241/

Chisholm, S. (2004). The growing role of citizen engagement in urban naturalization: The case of Canada. *Ekistics- The Natural City, 71*, 35-44.

Cloutier, S., Jambeck, J., & Scott, N. (2014). The sustainable neighbourhoods for happiness index: a metric for assessing a Community's potential influence on residential happines. *Ecological Indicators, 40*, 147-152.

Cloutier, S., Larson, L., & Jambeck, J. (2013). Are sustainable cities "happy" cities? Associations between sustainable development and human well-being in urban areas of the United States. *Environment, Development and Sustainability*, 1-15.

Dege, S. (2018, February 28). Saudi Arabia's cultural change: Civil society meets 'top-down' reform. Made for minds: https://www.dw.com/en/saudi-arabias-cultural-change-civil-society-meets-top-down-reform/a-42760360

Desk, E. N. (2019, September 16). Saudi Arabia to become one stop destination for events in the Middle East by 2020.Everything Experiential. http://everythingexperiential.businessworld.in/article/Saudi-Arabia-to-become-one-stop-destination-for-events-in-the-Middle-East-by-2020/16-09-2019-176141/

Diener, E., & Biswas-Diener, R. (2008). *Happiness: Unlocking the Mysteries of Psychological Wealth*. Wiley-Blackwell.

Diener, E., & Seligman, M. (2002). Very happy people. *Psychological Science, 13*(1), 81–84.

Dixon, F. (2004). Gross National Happiness: Measuring What Matters. *Reflections, 7*(3), 15-24.

Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective wellbeing. *Journal of Economic Psychology, 29*, 94–122.

Doxiadis, C. A. (1975). Building Entopia. Athens Publishing Center.

----------. (2005). Towards an ekistic theory. Ekistics - A reader on ekistics, thirty years after C.A. Doxiadis, 72(430/435), 39-66.

Durand, M. (2018). Countries' Experiences with Well-being and Happiness Metrics. Global Happiness Policy Report. Happiness Report. https://www.happinesscouncil.org/report/2018/global-happiness-policy-report

Exton, C., & Smith, C. (2015). Comparing Happiness across the World: Does Culture Matter? OECD Statistics Working Papers. OECD iLibrary. https://www.oecd-ilibrary.org/economics/comparing-happiness-across-the-world_5jrqppzd9bs2-en

Ferreira, S., & Moro, M. (2010). On the Use of Subjective Well-Being Data for Environmental Valuation. *Environmental and Resource Economics, 46*, 249–273.

Fookes, T. W. (2002). Success of the City in the 21st Century: Some thoughts arising from presentations. *Ekistics- Defining Success of the City in the 21st Century, 69*(415-417), 348.

Frick, D. (2006). Public space as an element of local identity: On the notion of quality in urban design. *Ekistics - Globalization and Local identity, 73*(436/441), 84-92.

Goldberg, A., Leyden, K. M., & Scotto, T. J. (2012). Untangling what makes cities liveable: Happiness in five cities. Proceedings of the Institution of Civil Engineers. *Urban Design and Planning, 165*(3), 127–136.

Gottmann, J. (2003). Economics, Esthetics and Ethics in Modern Urbanization. *Ekistics and The New Habitat, 70*(418/419), 123. https://doi.org/10.53910/26531313-E200370418/419322

Habtour, R. (2016). Designing happiness: Architecture and urban design for joy and well-being. ProQuest Dissertations and Theses. Doi: 10.13016/M2BF88

Huang, H., & Humphreys, B. R. (2012). Sports participation and happiness: Evidence from US microdata. *Journal of Economic Psychology, 33*(4), 776–793.

Kent, J., Ma, L., & Mulley, C. (2017). The objective and perceived built environment: *What matters for happiness? Cities & Health, 1*(1), 59-71. https://doi.org/10.1080/23748834.2017.1371456

Kiestra, P., Kondo, N., & Clague, C. (2019). Safe Cities Index 2019. *The Economist*. https://safecities.economist.com/safe-cities-index-2019/

Kleiner, S., & Horton, R. (2016). Urban design: an important future force for health and wellbeing. *The Lancet, 388*(10062), 2848–2850.

Ledraa, T. A. (2015). Evaluating Walkability at the Neighbourhood and Street Levels in Riyadh Using Gis and Environment Audit Tools. *Emirates Journal for Engineering Research, 20*(2), 1–13.

MacKerron, G. & Mourato, S. (2009). Life satisfaction and air quality in London. *Ecological Economics, 68*(5), 1441–1453.

Maddison, D., & Rehdanz, K. (2011). The impact of climate on life satisfaction. *Ecological Economics, 70*(12), 2437–2445.

Mahsud, A.-Z. K. (2006). Doxiadis' legacy of urban design: Adjusting and amending the modern. *Ekistics and The New Habitat, 73*(436-441), 241-263. https://doi.org/10.53910/26531313-E200673436-441122

Marans, R.W. & Stimson, R.J. (Eds.). 2011. *Investigating quality of urban life*. Springer.

Montgomery, C. (2013). Happy City: Transforming Our Lives Through Urban Design. Penguin.

Morrison, P. S. (2007). Subjective Well-Being and the City. *Social Policy Journal of New Zealand, 31*, 74-103.

Musa, H., Yacob, M., Abdullah, A., & Ishak, M. (2016). Sustainable City: Assessing the Community Happiness of Residents in Putrajaya Municipality Malaysia. *Review of European Studies 9*(1), 31.

Paralkar, S., Cloutier, S., Nautiyal, S., & Mitra, R. (2017). The sustainable neighborhoods for happiness (SNfH) decision tool: Assessing neighborhood level sustainability and happiness. *Ecological Indicators, 74*, 10-18.

Parashar, A., & Bnayan, H. (2020). Studying walkability preferences using urban design qualities: A Case of Riyadh, Saudi Arabia. In IOP Conference Series: Earth and Environmental Science 452. Institute of Physics Publishing.

Popova, Y. (2016). Relations between Wellbeing and Transport Infrastructure of the Country. 16th Conference on Reliability and Statistics in Transportation and Communication, RelStat' 2016 (pp. 579-588). Elsevier.

Radwan, M. F. (2014). The Psychology of Attraction Explained: Understand what attracts people to each other. CreateSpace Independent Publishing Platform.

Sanchez, A. O., & Tyler, N. (2016). Constructing a Vision for an 'Ideal' Future City: a conceptual model for Transformative Urban Planning. *Transportation Research Procedia, 13*, 6-7.

Sgoutas, V. (2002). What could be considered a successful city of tomorrow. *Ekistics- Defining Success of the City in the 21st Century, 69*, 345-346.

Stefanovic, I. L. (2002). Negotiating an ethic of place in a globalizing society. *Ekistics- Globalization and Local identity, 73*(436-441), 57-61.

The Embassy of The Kingdom of Saudi Arabia. (2022). Vision 2030. Saudiembasssy https://www.saudiembassy.net/vision-2030#:~:text=Vision%202030%20is%20built%20around,Crown%20Prince%20Mohammed%20bin%20Salman.

Thin, N. (2012). Social happiness: Theory into policy and practice. The Policy Press.

Welsch, H., & Kühling, J. (2009). Using happiness data for environmental valuation: Issues and applications. *Journal of Economic Surveys, 23*(2), 385–406.

Winata, D., & Rarasati, A. (2017). Sustainable infrastructure transportation to improve society wellbeing in Karawang (pp. 1-8). 2nd international Tropical Renewable Energy Conference (i-TREC) IOP Conference Series: Earth and Environmental Science.

Young, W., & Shami, S. (1997). Journal of Comparative Family Studies, 28, 1-13.

Keywords

Urban Design, Happiness, Saudi Vision 2030, Quality of Life, Wellbeing

EKISTICS GRID

Created by Doxiadis as a Thinking Tool for Constructive Action, for Focusing Discussion, Classifying, Cataloguing, inspired by Geddes *Notation of Life* and *CIAM Grid*, with the added dimension of Ekistics Population Scale

Kinds of Human Settlements:			Temporary		Villages		Polises		Metropolises		Megalopolises		National Systems	International Systems	
Community Class				**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X**	**XI**	**XII**
Ekistic Unit	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Kinetic Field	**a**	**b**	**c**	**d**	**e**	**f**	**g**	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Name of Unit	**anthropos** (human being)	**room**	**house**	**house group** (dwelling group)	**small neighbourhood**	**neighbourhood** or village	**small polis** (town or urban ecovillage**)**	**polis** (town or suburb)	**small metropolis** (large city)	**metropolis**	**small megalopolis** (conurbation)	**megalopolis**	**small eperopolis** (urbanized region)	**eperopolis**	**ecumenopolis**
NATURE - Habitat Foundations															
ANTHROPOS - Physiological/biological and social-psychological needs and constraints															
SOCIETY - Social, economic, governance and political organization															
SHELLS - the envelopes that contain settlement functions															
NETWORKS - Node-to-node systems and flows of resources, waste, data, people and information															
SYNTHESIS - Human Settlements Combined, applied, coherent design and knowledge															
EPS (Ekistics Population Scale) Doxiadis rounded figures	**1**	**2**	**5**	**40**	**250**	**1.5 T**	**10 T**	**75 T**	**500 T**	**4 M**	**25 M**	**150 M**	**1,000M**	**7,500 M**	**50.000 M**
Core Population calculated at log 7	**1**	**2**	**5**	**35**	**245**	**1.7 T**	**12 T**	**84 T**	**558 T**	**4 M**	**29 M**	**202 M**	**1,412M**	**9,886 M**	**69 B**
Population Range			3-15	16-100	101-750	751-5000	5-30 T	30-200 T	200-1,500 T	1.5 -10 M	10 - 75 M	75 - 500 M	500 - 3000 M	3 - 20 B	> 20 B
	T = Thousand; M = Million; B = Billion (thousand million). Each unit has 7 times the population of the previous unit, based on Christaller's hexagon theory.														
	Kinetic Fields a-g are the distances anthropos can walk for a given period: **A-H** are when using draft animals or vehicles.														
	Adapted by Catharine Nagashima for Ekistics and the New Habitat 2020/05/07														


Ekistics