# Contextualizing Urban Liveability indicators to create liveable Neighbourhoods

Eng. Nehal Mahmoud elmahdy<sup>1</sup>, Prof. Dr. Rowaida Reda kamel<sup>2</sup> and Ass. Prof. Dr. Rania Nasreldin<sup>3</sup>

#### **Abstract**

The main goal of community is creating a context for people to engage with each other. A liveable neighbourhood can help to enhance the quality of life of the residents, which is one of the determining factors in creating sustainable and liveable urban environment. As the Neighbourhoods is the smallest planning unit which can achieve the linkage and engagement through liveability policies, which can crucial for boosting and promoting the social life of cities and improving its quality of life. This paper aims to outline liveability indicators for Neighbourhoods as a tool to create a liveable urban environment in a better and sustainable concept. This shall be achieved through studying the indicators affected liveability Based on these studies the paper proposes recommendations that would help the planners to understand the malfunctions of the planned Neighbourhoods from conveying their role as a traditional place to live among residents and so as symbols of better and great social place to live. The study considers The Liveability of Neighbourhoods can depends on two main approaches, firstly: the new urban approaches policies, secondly: the organizations support the liveability policies, and by determining each policy with its parameters, by studying the two main approaches with their aspects and goals, and Overlapping relationships, obtaining a conceptual framework for liveability, and concluding different indicators helping to create great Neighbourhoods to live.

**Keywords**: Liveability, Liveable Neighbourhoods, Indicators, Satisfaction, New urban approaches, Organizations

# I. INTRODUCTION

Creating 'liveable' communities has become a priority for various sectors, including those tasked with improving population health and reducing inequities. 'Liveable' cities depend on new approaches of the urban design, which are sustainability, New Urbanism, Smart Growth, Context Sensitive Solution (CSS) / Context Sensitive Design (CSD), and Resilience and what these approaches achieve for societies' satisfaction. And through these Concepts and their Linkage the term "liveable" emerged as an integral part of the policies of urban design approaches and an integral part of the sustainable system as a whole.

There is a limitation of applying liveability system parallel to the new urban approaches and the sustainable concepts as a mechanism for the development of the urban planning process and the exploitation of urban design elements for new housing projects in some region through the content and idea of "Liveable Neighbourhoods" in a way that suits the physical, social and economic reality of the area needed to apply.

#### I. Liveability:

According to Most researchers' report, liveability as a concept that is difficult to define and measure. The term liveability is an umbrella to a variety of meanings, which depend both on the objects of measurement and on the perspective of those making those measurements. Some of them revealed that there has been no agreement in the literature concerning the dimensions that should be incorporated to capture the concept. Such discrepancy in views is common because researchers differ in their background discipline. Thus, liveability is used in various studies, ranging from different scales of individual, neighbourhood and country to multiple disciplines, such as ecology, geography, sociology and urban planning. [1].

The last few decades have witnessed increasing trends in urbanization as a global phenomenon. In this regard, the concept of liveability has appeared as elementary for evaluating the degree of living standards of cities and Neighbourhoods according to the cultural and social circumstances related to community. [2].

Liveability is a concept and factor related to human wellbeing, used by urban planners and designers to better understand how people perceive and sense the places they live and work in and how it affects their life choices.[3] Therefore, creating liveable places that enhance safety, comfort, and social relations is one of the main goals among all planners and policy makers.

# II. Liveable communities:

Liveable communities are described as safe, attractive, socially cohesive and inclusive communities, with affordable and diverse housing, supporting public transportation, walking, and cycling to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities.[4] It is a term that has many characteristics and meanings and with regard to research, it means the ability to live decently in a community where there are many choices and services that activate social interaction,

<sup>&</sup>lt;sup>1</sup> Assistant Lecturer, Modern Academy for Engineering and Technology and Ph.D., Students, Faculty of Engineering, Cairo University, Egypt.

<sup>&</sup>lt;sup>2</sup> Professor of Architecture and Urban Planning – Department of Architecture, Faculty of Engineering, Cairo University, Egypt.

<sup>3</sup>Associate professor, Architecture Department, of Architecture, Faculty of Engineering, Cairo University, Egypt

achieve satisfaction of people, as well as energizing the movement of trade and economy sectors, and helps to preserve the natural and urban environment. [5]

"A liveable community is one that has affordable and appropriate housing, supportive community features and services, and adequate mobility options, which together facilitate personal independence and the engagement of residents in civic and social life". [6]

Although liveability varies from community to community, a given community's goals can be approached, and community planning for liveability can be achieved, using community-derived indicators. [7]

#### III. Liveable Neighbourhoods:

Liveable Neighbourhoods is the smallest planning unit, with integrated services and facilities represent a new concept for the form of urban development for residential areas achieving high levels of social justice, and to benefit from a healthy environment and a strong economy through investment in the public and private sectors which create job opportunities. As it enjoys a multiplicity of housing choices, Supported community characteristics and services, Figure- 1, and adequate mobility options in addition to the road network and footpaths. Which together facilitate personal independence and the participation of residents in civic and social life. [8]



Fig.1: characteristics of liveable Neighbourhoods [9]

#### III.I Characteristics of Liveable Neighbourhoods

# • Mixed use - High Density - Compact Design

The Neighbourhood is an urban structure that encourages compact urban and design strategies, with high density in order to reduce dependence on the car by reaching commercial services, shops and community activities through walking, and that lead to facilitate urban development that is based on mixed use, which offers a wide variety of living patterns, and entertainment means. [10]

# • Walkability

Considering how pedestrians are defined and the discourses that shape the development of pedestrian space in the Neighbourhoods which allow users to access all services and facilities through walkable passes. [11]

# • Sense of place

Sense of neighbourhood and community by promoting local identity of the place.

#### Accessibility

Access to all areas through an interconnected road network, which encourages a safe movement for those who excited in

walking and cycling, as well as for the movement of cars and buses. In addition to providing and promoting a new development potential based on supporting the use of public transportation.

#### Diversity

Provide Varity of housing types to provide the necessary diversity in housing that is suitable for all, and to achieve the appropriate density in a way that does not compromise services. [12]

#### IV. New Urban Approaches:

After the Second World War the traditional planning theories faced many problems, like the high frequent use of transportation with the low level of services, air pollution, lack of sense of place, separation of land uses and, and many other problems.

And As a result of the previous negatives that affected the residential neighbourhood, new urban design and planning approaches appeared in the last half of the twentieth century as a reaction to what was previously mentioned and aimed to create an integrated residential environment that provides the most important needs of the residence without restrictions, which can deals with the new variables, and these approaches contributed and helped in developing the traditional concept of neighbourhood. [13]

#### • Sustainability:

By reviewing different concepts through literature, an overlapped appeared between the concept of liveability and sustainability, and some research indicated that these two terms were used alternately, and it was necessary to clarify the compatibility and conflict between them. [14]

Some reports mentioned a separate role for each of them, but they supplement each other Figure-2. "Liveability" is a term support sustainability goals. The literature has often described "sustainability" as a strategy for local action that focuses on society. The term "liveability" addresses the economic development at the community level – the public health - that aims to social equity and attempts to reduce pollution. [15]

Liveability" may be less focused on environmental goals, but it offers more specific and detailed strategies to improve economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities. [16]



**Fig.2:** liveable and sustainable cities concept [17]

"Liveability" focuses on the human-community level, the place in which he lives and respect for the surrounding living conditions. AS for "sustainability", focuses on the development that meets the needs of the present without

compromising the ability of future generations. Sustainability focuses on how to preserve human society without harming the natural environment.

#### • Smart Growth

Smart growth is defined as "development that serves the environment, the economy and society, supports economic development and businesses that provide employment opportunities, provide a strong financial base, and provide Neighbourhoods with services, entertainment and economic competition with the establishment of Neighbourhoods with high density, a mix of building types and uses, diverse housing and transportation options, development within existing Neighbourhoods, and community engagement. Provide units for different levels of income, encourage clean transportation and creating a sense of place in addition to establishing healthy communities that provide a clean environment. [18]

# Context Sensitive Solution (CSS) / Context Sensitive Design (CSD)

in 2005 the Federal Highway Administration of the US Department of Transportation (FHWA) defined "Context Sensitive Solutions / Context Sensitive Design",[19]as a policy framework that includes the environmental, physical, historical, and aesthetic characteristics of the surrounding environment, Putting in consideration the decision makers affected by the project during development of roads and transportation facilities, and it is defined as a policy tool used to create "complete streets" policies that meet the needs of users, communities and the environment through successful, accurate planning[20],The goals of Context Sensitive Solution (CSS) / Context Sensitive Design (CSD )include the following:

- Supporting Neighbourhoods, creating the sense of place and local identity
- Support the use of cycling and pedestrian paths
- ❖ The presence of a connected transport network
- ❖ Integrated land uses and the policies that support them

# • New Urbanism:

New urbanism can intended to bring changes in the urban aspect of the Neighbourhood in a way that can replace old structures and facilities that do not fit the requirements of the present at a time when the city as a whole has changed in response to economic pressures and social and urban changes[21]. The characteristics of new urbanism:

- Realism of strategies' for social, economic, political and health structures.
- Classifying the strategies' according to their importance, putting in consideration the role of the residence and the planning costs
- ❖ Set the goals clearly
- Give a systematic and continuous evaluation of all steps

#### • Resilience:

The ability of society to adapt to changes and challenges, building stronger and more connected societies that balance and cope with the needs of current and future generations to maintain continuity through all shocks and stresses, while positively adapting and transforming toward sustainability with an integrated connected new pillars[22], Figure-3.

The Resilient Neighbourhoods possess the necessary resources and capabilities to overcome weaknesses and adapt positively to changeFigure-4, increasing the capacity of residence to respond proactively and enhance well-being even during stress. All The definitions of resilience reported that societies are dynamic in nature, which means they are always on changing [23].

Commence of the second of the

**Fig.3:** the six pillars of resilience [24]

- Urban mobility
- Environment
- Security
- o Risk management
- Economic development
- Social equity



**Fig.4:** The policy of resilience towards Neighbourhoods[25]

- Attitudes and values
- Infrastructure and resources
- Leadership and communitywide planning
- Local economy

# V. Liveability according to international and organizations strategies:

The research mentioned four collaborative strategies according to their aspects that work internationally to evaluate and improve the performance in the field of liveability, as follows:

#### • City Protocol Development:

City Protocol Development is an open and global collaborative framework for cities around the world to evaluate and improve performance in the field of liveability, and it also links the idea of city development and transformation (City Protocol Development Theme of City Transformation) as it works to improve the level of Living

Quality and Quality of Life [26]. It also seeks to strengthen this idea by evaluating the concept of urban life according to the three systems of anatomy of the city, (city structure – interactions - societal issues), that works together with the support of citizens and government in the existence of the main resources (infrastructure-built domain-environment) that encourages sustainable goals to be achieve through environmental benefits, social equity, and economic health, lead to conducted factors, Figure-5 (access infrastructurecircular economy-green spaces biodiversity- transport and morphology-cultural systemaccountability-open information-community buildingaffordable housing- clean environment- social resilience-mix of uses- social empowerment- public spaces- wealth production and distribution- participatory governance.) that all help to enhance and create liveable place to live.



**Fig.5 :** city protocol development Anatomy to enhance liveability [27]

# The United Nations Human Settlements Programme- UN-Habitat

UN-Habitat proposed a new approach to the theories of urban planning and design, trying to build a new, sustainable and liveable relationship between the residence and the place they live in. This approach is based on five elements that support the attributes of compact design and planning, diversity and affordability, table.1, which are key vocabulary of the liveable neighbourhood, Here is a review of the five elements.[28]

**Table 1.** UN-Habitat Elements supporting liveability

| Adequate space for street and efficient network |
|---|
| High density                                    |
| Mixed land use                                  |
| Social mix                                      |
| Limited landuse specialization                  |

# The Western Australian Planning Commission (WAPC)

Liveable Neighbourhoods enhance the urban structure of walkability strategies. All the Community facilities and services have to be accessed by walking, cycling and by using public transportation through an efficient and interconnected traffic network. Employment opportunities and economic sustainability are facilitated through a coherent hierarchy of activity centres. The Western Australian Planning Commission conducted a "Liveable Neighbourhoods Code "to regulate structural plans and subdivisions, as it aims to create new results for the reconstruction of all new urban expansions. Liveable Neighbourhoods are a policy that sets

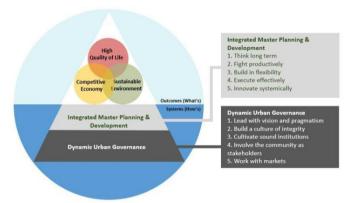
high-level goals and sets principles and requirements to address the strategic and operational aspects [29]. There are six design elements interconnected to create liveable Neighbourhoods according to the Australian Planning Commission, table.2.

**Table 2. (WAPC)** Elements supporting liveability

| Community Design              |
|-------------------------------|
| Movement Network              |
| Lot Layout                    |
| Public open spaces            |
| Activity Centers & Employment |
| Schools                       |

### Centre for liveable cities (CLC) –Singapore:

The Singapore Liveability framework for liveable and sustainable cities has been able to develop its urban planning and design in line with new approaches of urbanism, with positively using its special nature and high density. [30]



**Fig.6:** The Singapore Liveability framework [31]

The Singapore Liveability Framework have key areas for liveability and sustainability, centred on three main outcomes, namely, competitive economy, sustainable environment and high quality of life ,showed in figure-6. The three outcomes form the basis for national policies formulated, with a specific focus on their completion. The success of these outcomes is tied in two systems of planning:(1) integrated master planning and development and (2) dynamic urban governance. [32]

# (1)Integrated Master Planning and Development

- Think Long Term
- ❖ Fight Productively
- Build in Flexibility
- Execute Effectively
- Innovate Systemically

### (2)Dynamic Urban Governance

- Lead with Vision and Pragmatism
- Build a Culture of Integrity
- Cultivate Sound Institutions
- Involve the Community as Stakeholders
- Work with Markets

The Singapore Liveability Framework guides and provides city leaders a lens through which they can analyse their cities and generate strategies for high liveability and sustainability which can be applied at Neighbourhoods scale, as the framework explains that a city can combine multiple nodes of high-density development with a rich mix of housing, jobs,

and amenities at the neighbourhood level, connected via transit lines and surrounded by medium and low-density areas in the rest of the metropolitan area.

#### VI. Cases studies supporting liveability:

These examples try to propose policies through using different elements to a current space to make it more attractive and liveable place. The cases from Neighbourhoods in different region, applied the proposals on streets, public open spaces, parks, surrounding buildings, with the great supporting role of the organization that helps in changing the situation.

 First case related to the: AIA institution (American Institute of Architect) to create more dynamic and active space by the Architect Benjamin B. Lee,table.3 to apply principles of liveability to a street in a residential Neighbourhood. Some adjustments were made in an attempt to apply the principles to make the place more vibrant and liveable.

Table 3. Creating more dynamic and active space [33]



The current situation



Existence of pavements, and crosswalks create an environment in which citizens feel comfortable while walking



(Mixed -of-use policy)

The presence of various uses such as commercial buildings contributes to creating a vibrant street. Taking in consideration parking spaces within the commercial building



Street visibility and using appropriate landscape create vibrant and liveable public urban spaces

2. **Second case** related to the National Association of City Transportation Officials (NACTO), it released a compendium of innovative case studies from more than 70 countries across the globe, addressing everything from bus-rapid transit to bike lanes, parklets to pedestrian plazas,table.4.

Table 4. Create places for people, with safe, sustainable, accessible, and equitable transportation choices that support liveability[34]



The current situation

**Proposed** 

#### Detroit city, U.S. state of Michigan

The division of the street into several lanes by allocating a pedestrian path and a cycle path with the use of water surfaces, and median islands, in one of the residential Neighbourhoods in Detroit





The current situation

Proposed

# Los Angeles, Vermont Avenue, the: Turn busy roadway into a magnet for mass transit

Wider sidewalks areas, encourage walkability and commercial activity, Shading spaces with trees keeps street temperatures Moderate and gives an urban character and creates attractive place - Los Angeles.



# **Curb extensions**

while using curb extensions encourages Higher Visibility, Shorter Crossing Distance, Reduced Vehicle Turn Speeds, Increased Space, Reduced Illegal Parking





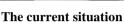
The current situation

Proposed

#### Chicago- Michigan Avenue -Reimagine a retail street as a grand plaza

One of the streets in Chicago, proposes to turn it in one direction, and to convert the street to plaza Providing pedestrian space, increasing the pavement areas to accommodate more cafeterias and cafes, and providing space for seats







**Proposed** 

### New York -Broadway near Union Square West

The street is divided between cyclists and pedestrians by using movable planters and street furniture, providing more space for pedestrians, participating and encouraging outdoor activities and engagement. A safer roadway for biker can lead to a more pleasant and street for everyone.



The current situation



**Proposed** 

# **Atlanta- Peachtree Street**

# Converting a single-use road into a multi-use road

This will lead to have narrow car lanes (studies by the American Planning Association show that narrow lanes help manage speed without reducing the level of safety) with the addition of a railroad lane in the middle of the road. Outer lanes would also get repurposed, with additional pedestrian space, as well as a bike lane with space for buffers and a bike-share dock, creating additional options for mobility

Third Case study related to (Birmingham's vision-England) According to the Planning, Engineering and Permits Department, supports community efforts to improve the built and natural environments and achieve better public health and fitness, through The Complete Streets Policy, table. 5.

### Table 5. create liveable public parks [35]





The current situation



proposed

### Mozley park-Atlanta

public park in one of the Neighbourhoods in Atlanta, it tries to apply complete street policy one of the Context Sensitive Design (CSD) policies, related to the new urban approaches,

"A complete street may include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts,

#### VII. Research framework:

According to the new theories of urban planning and design, the liveability of Neighbourhoods depend on integrated system connected policies and strategies of the new urban approaches and the supportive of the international and local organizations.

The liveability system depends on the inputs, Resources (Land, Water, Energy, Building material and other resources), and the Dynamics of settlements (Transportation priorities, Economic priorities, Cultural priorities)

The strategies of new urban approaches (Sustainability-Smart Growth-Context Sensitive Solutions/Design -New Urbanism-Resilience) have goals, pillars, characteristics, and dimensions which overlapped and complete one another, and work to support and create liveable community.

On the other hand, supporting and constructing framework needs to put the strategies and the role of organizations, which are (City Protocol Development-The United Nations Human Settlements Programme, UN-Habitat- The Western Australian Planning Commission (WAPC)- Centre for Liveable Cities (CLC)-Singapore) in consideration and parallel to the new urban approach

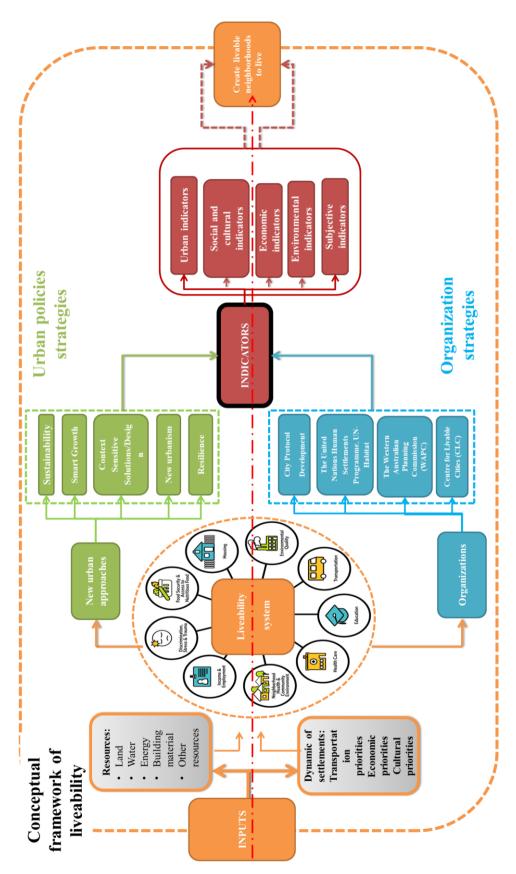


Fig.7: conceptual framework of urban liveability  $(Researcher) \label{eq:Researcher}$ 

# VIII. Liveability Indicators:

By analysing these previous policies, five main indicators were conducted in (table.6) to activate liveability of Neighbourhoods and create great place to live, which are presented as follows:

- Urban indicators (urban growth-urban fabric- Urban Accessibility- Urban Elements)
- **Social and cultural** indicators (Existence of services and its distribution Education quality- and income level-Social participation)
- Economic indicators (Economic development- economic competitiveness- Economic returns)
- Environment indicators (Respect to the natural environment- Recycling- Power of energy system)
- Subjective indicators (Quality of services- Privacy and comfort- satisfaction- Sense of place- Safety)

**Table 6: liveability indicators (Researcher)** 

| Urban indicat          | fors   |
|------------------------|--|
| Urban<br>Growth        | <ul> <li>Long term plans</li> <li>Provide the Possibility for development of planning policies and predicting future and facing challenges</li> <li>The existence of flexible operational plans to address and faces the problems that arise after implementation</li> <li>Activating the role of planners and citizens</li> <li>Providing schools, hospitals, health units, and recreational and cultural centers</li> <li>The balance between the structural elements, the infrastructure, the built and the natural environment</li> <li>Existence of public transportation to the residential, commercial and entertainments areas</li> </ul>  |
| Urban<br>fabric        | <ul> <li>Compact design and planning process</li> <li>Mixed-use</li> <li>High density</li> <li>Housing Affordability</li> </ul>  |
| Urban<br>Accessibility | <ul> <li>Active street network with services</li> <li>Dependence on public transportation</li> <li>Providing different variety of transportation options for all ages</li> <li>Convenient Transportation Options</li> <li>The linkage of the services and the neighborhood centers</li> <li>hierarchy of the streets network</li> <li>Providing a network of interconnected streets based on attractive, safe and appropriate function</li> <li>Low Transportation Costs</li> <li>Existence of sustainable transportation</li> <li>Design paths for pedestrians (The minimum width of the pedestrian path is 3 meters)</li> <li>Cyclist networks</li> <li>Traffic speed control</li> <li>Achieving the balance between the walkable lanes and transit systems</li> <li>Existence of footpaths on both side of main streets</li> <li>Car and cyclist parking areas</li> <li>Leave spacing for future extensions or changes for traffic paths</li> <li>Providing safety for all users</li> <li>safe crosswalks at the intersections of roads</li> <li>Accessibility and safe routes to school</li> <li>Existence of lanes for buses separate from the transit system, multiple safe crosswalks, central islands, and traffic lights.</li> <li>Using the curb extensions in designing streets</li> <li>Exploiting the main streets to have mixed and varied uses</li> <li>Connected the main integrator street to the local streets of the neighborhood</li> <li>Accessibility between the city center and the neighborhood centers</li> <li>Providing services areas within a suitable walking distance for residents</li> </ul> |

#### Using green borders between Neighbourhoods with high density to act as an Urban Elements environmental breathing system Existence of public spaces, squares, parks and gardens Architectural and urban character of buildings, squares and public spaces Urban identity for the neighborhood Integration between buildings and green elements Shaded and sitting places in public spaces streetscaping elements (street lighting elements- signage- Waste bins) landscaping elements (trees for shade- coordination of trees and plants) Achieving a streamlined in public spaces Avoid obstructing view in public spaces (as plants and trees grow over time and turn into an obstacle that hinders clear sight of view). Giving an identity to the spaces: using the different patterns of landscaping existence of water surfaces, gardens and parks control of wind movement: whether by filtering, or changing the direction Using plants as a visual barrier Providing quietness through large water surfaces extending on the ground, or waterfalls and fountains, to provide vitality to the place Using water surfaces to create a visual separation or a functional barrier between two activities Use water as a climatic factor: to moderate the air temperature Development of the main street facades and making them more attractive Providing mobile libraries to encourage relaxation Achieving human scale design Possibility of using public spaces (indoor and outdoor) in multiple ways and for various purposes at different time of the day. Designing the boundaries of public spaces to support privacy, connection, interaction, and to protect from the weather design shared spaces (common space is used for pedestrian movement and transit together, and both movements do not conflict with each other) Social and cultural indicators **Existence of** Existence of basic needs services education and health services and Providing various entertainment services suitable for all ages and genders (children's its games, youth playground, public park, women's entertainment center, public cafes, public distribution library and commercial markets sufficient to provide the basic needs for residents. Distribute services in a way that suits residents Education The quality of the education and cultural level within the neighborhood quality- and providing housing units with various spaces and prices income level • process of Developing the neighborhood within the financial level of the residents Social equity Transferring Knowledge and LIfe Experience between different generations through holding workshops Social Using public open spaces for interaction and social participation participation Activate place-making policy (reviving the spaces within the neighborhood by residentes) Empowering residents and involving them in making decisions related to neighborhood Participation between the public, private sector and community members in decisionmaking Sense of identity and belonging within the neighborhood **Economic indicators Economic** Predicting development decisions in terms of activation and costs, by the authorities development achieving walkability strategies as the most effective and least expensive for children and economic using available resources (cultural, recreational and health) and distributing their use and competitiven function according to residents

| Economic returns                         | <ul> <li>enhance Economic competition - by increasing recreational services and basic needs (health center - schools - markets)</li> <li>Activate complete streets policy (streets designed and operated to enable safe access for all users, including pedestrians, cyclists, motorists, and public transportation, with attractive elements and mixed uses that encourage and stimulate economic movement)</li> <li>Encouraging and motivating commercial sectors to improve their efficiency and open labor markets</li> <li>Improving business opportunities through mixed use and activity centers.</li> <li>economic use of public places, services and building roofs as possible by using them in more than one activity</li> <li>The availability of sitting places at the borders of the public space for greater possibility to open areas of vision and provides the opportunity to use the ground floor of the surrounding buildings for commercial and recreational purposes that have an economic return</li> <li>Providing rental service for bicycles (historical tours can be used as a kind of tourism promotion, as of its economic return)</li> </ul> |  |  |
|--|--|--|--|
| Environment indicators                   |  |  |  |
| Respect to<br>the natural<br>environment | <ul> <li>Provide clean transportation options (do not cause air pollution)</li> <li>Reducing traffic congestion in residential and surrounding areas</li> <li>Increase physical activity through walking</li> <li>Buildings orientation</li> <li>Achieving protection factors from weather conditions at the borders of public spaces</li> <li>Existence of the green and natural areas to residential areas</li> </ul>  |  |  |
| Recycling                                | <ul> <li>Achieving maximum efficiency of urban water management techniques</li> <li>Recombination, purification and reuse of sewage water in the irrigation of green areas in streets</li> <li>Directing rain water using purification, recycling wastewater and using it to irrigate plants</li> <li>Drainage of rain water and reuse it</li> </ul>   |  |  |
| Power of<br>energy<br>system             | <ul> <li>Using environmentally friendly means of transportation and also environmental buildings that depend on using low-energy systems</li> <li>Create sustainable and productive organic gardens</li> <li>depending on technology and modern design elements to rationalize resources and reduce harmful environmental impacts</li> </ul>   |  |  |
| Subjective indicators                    |  |  |  |
| Quality of services                      | <ul> <li>Quality of health services</li> <li>Quality of basic services (clean water - clean air)</li> <li>Quality of low income housing affordability</li> <li>Providing various attractive views, good weather and protection from the bad weather conditions</li> <li>Supporting the organizations to meet the needs for all (elderly - youth - people with special needs)</li> </ul>  |  |  |
| Privacy and comfort                      | <ul> <li>Enjoying good health and well-being in neighborhood</li> <li>Provide comfortable housing</li> <li>Providing home privacy</li> <li>The degree of noise in the built environment (social isolation)</li> <li>The extent of the accommodation's suitability for the requirements of individuals (this is closely related to the interior design of the residential unit)</li> <li>Smooth surfaces comfortable roads for pedestrian</li> <li>Reduced emissions and fuel consumption and harmful gases in automobile engines</li> </ul>  |  |  |
| satisfaction                             | <ul> <li>Feeling safe, intimate, and calm</li> <li>Preserving urban structures, and clean areas</li> </ul>   |  |  |

|                | Feeling of pride in being around   |
|----------------|--|
| Sense of place | <ul> <li>Enjoy the public realm of neighborhood</li> <li>Societies having Strength, vitality and belonging emotions towards their neighborhood</li> <li>The existence of trust, support and mutual respect among residence</li> <li>Volunteering (act of an individual or group freely giving time and labour for neighborhood service)</li> <li>Providing means of comfort through easy movement and access to different centers without wasting residence energy</li> <li>feeling comfortable while walking at the side lanes in the neighborhood</li> <li>Eye contact between neighbors (Eye contact between people encourages the establishment of social relationships called "face to face contact"</li> </ul> |
| Safety         | <ul> <li>Control Traffic management</li> <li>Control vehicle speed</li> <li>Safety for pedestrian movement and road crossing</li> <li>Reducing crime by using open public spaces so that some of the housing overlooks these spaces, can provide comfort, safety and security for all POS users (public open space)</li> <li>POS gives a visual image of the area and a sense of place.</li> <li>Ensuring the existence of a service traffic network that facilitates safe and efficient access to education sites by all users</li> </ul>   |

#### IX. CONCLUSIONS:

- The concept of Liveability should be considered and applied in urban communities, starting from the smallest planning unit at neighborhood scale up to district and then to city, to improve and enhance the well-being of the Residents and to achieve urban development parallel to the new urban approaches processes
- The research conclude a conceptual framework for creating liveable Neighbourhoods in terms of policies and strategies related to urban planning and design approaches.
- Urban planning and design processes should be under control to the responsible organizations for putting and guide the general schemes, detailed executive programs, criteria, guidelines and legislation of Neighbourhoods.
- The residents and their role in social participants should be considered to activate the goals of liveability.

#### I. RECOMMENDATION:

This paper set up the main indicators of activating liveability of Neighbourhoods in urban communities, and its effect on the residents. The same research framework concept can be performed on neighbourhood to reach degree of liveability by measuring and evaluate the indicators according to the social and economic state of the neighbourhood, which may involve enhancing the framework to determine what new concept can be added.

#### REFERENCES

- 1. Leby, J. L., & Hashim, A. H. (2010). Liveability dimensions and attributes: Their relative importance in the eyes of neighbourhood residents. *Journal of construction in developing countries*, 15(1), 67-91.
- **2.** Paul, A., & Sen, J. (2020). A critical review of liveability approaches and their dimensions. *Geoforum*.
- **3.** Namazi-Rad, M., Perez, P., Berryman, M., & Lamy, F. (2012). An experimental determination of perceived liveability in Sydney.
- **4.** Norouzian-Maleki, S., Bell, S., Hosseini, S. B., & Faizi, M. (2015). Developing and testing a framework for the assessment of neighbourhood liveability in two contrasting countries: Iran and Estonia. *Ecological Indicators*, 48, 263-271.
- **5.** Gough, M. Z. (2015). Reconciling Liveability and Sustainability: Conceptual and Practical Implications for Planning. *Journal of Planning Education and Research*, 35(2), 145-160.
- **6.** Beyond 50.05 A Report to the Nation on Livable Communities: Creating Environments for Successful Aging. Washington DC: American Association of RetiredPersons,(2005).http://assets.aarp.org/rgcenter/il/beyond\_50\_communities.pdf. Policy Book 2017—2108, http://www.aarp.org/policybook
- 7. Eldin, R. N., Fattah, D. A., & Aboubakr, D.(2017) Urban Livability Dimensions in the Egyptian New Cities. Case study: Sheikh Zayed city.,international

- Conference for Sustainable Design of the Built Environment (SDBE 2017) At: London
- **8.** Thang, L. L. (2015). Creating an intergenerational contact zone: Encounters in public spaces within Singapore's public housing Neighbourhoods. In *Intergenerational space* (pp. 17-32). Routledge.
- 9. UN Environment (2018). Sustainable Urban Infrastructure Transitions in the ASEAN Region
  Livability to start with the neighborhood –
  Singapore's urban practice (Part 1/2) (worldbank.org)
- 10. Western Australian Planning Commission (2009). Livable Neighbourhoods. Department for Planning and Infrastructure, Western Australian Planning Commission, State of Western Australia. ISBN 0 7309 9619 0
- **11.** Francisco Benita, Garvit Bansal, Darshan Virupaksha, Francesco Scandola, Bige Tunçer. (2020) Body responses towards a morning walk in a tropical city. *Landscape Research* 45:8, pages 966-983.
- **12.** Western Australian Planning Commission (2009). *Livable Neighbourhoods*. Department for Planning and Infrastructure, Western Australian Planning Commission, State of Western Australia. ISBN 0 7309 9619 0
- **13.** The National Association of Regional Councils (NARC) is a 501(c)(3) nonprofit membership organization and public interest group. (Accessed September-2020)
- **14.** Rue, H. B. (2011). The Role of FHWA Programs in Livability: State of the Practice Summary. http://www.fhwa.dot.gov/liveability/state\_of\_the\_practice\_summary/research2011.pdf
- **15.** -Litman, T. (2011). Well measured: Developing indicators for sustainable and liveable transport planning. Retrieved from http://www.vtpi.org/wellmeas.pdf; September 28, 2012.
- **16.** Wahlström, M. (2017). Liveable and Sustainable Cities: Explorations of the City Soul and Energy-Efficient Housing based on Swedish Data on Citizens' Preferences (Doctoral dissertation, KTH Royal Institute of Technology).
- 17. Wahlström, M. (2017). Livable and Sustainable Cities: Explorations of the City Soul and Energy-Efficient Housing based on Swedish Data on Citizens' Preferences (Doctoral dissertation, KTH Royal Institute of Technology).
- **18.** Abbas, S. S., & Abdulmaged, T. M. (2015). The Effect Of Smart Growth Principles on Affordable

- Housing. The iraqi journal of architecture and planning, 11(4), 328-343.
- **19.** United States Department of Transportation, Federal Highway Administration. Context sensitive solutions.(2005).http://contextsensitivesolutions.org/content/topics/misc/about/. (Accessed AUG, 2019)
- **20.** National Complete Streets Coalition. Complete streets.(2011).http://www.completestreets.org/complete-streets-fundamentals/complete-streets-faq/.(Accessed AUG, 2019)
- **21.** Congress for New Urbanism. Who we are.(2011). http://www.cnu.org/who\_we\_are. (Accessed Nov.15, 2020).
- **22.** Leong CH, Teng E, Ko WW (2019), The state of ethnic congregation in Singapore. In: Leong CH, Malone-Lee LC (eds) Building resilient Neighbourhoods: the convergence of policies, research and practice. Springer, Singapore
- **23.** Tapsuwan, S., Mathot, C., Walker, I., & Barnett, G. (2018). Preferences for sustainable, liveable and resilient Neighbourhoods and homes: A case of Canberra, Australia. *Sustainable cities and society*, *37*, 133-145.
- **24.** Gabriela E., C. Robertson, C., Huidobro, A. Chavez Diego, P., Reyes.(2017), HUMAN & RESILIENT SANTIAGO, First edition, Printed by Feyser printers www.feyser.cl. Santiago-Resilience-Strategy-English.pdf (resilientcitiesnetwork.org)
- 25. Rob Wipond, Stacy Barter & Michelle Colussi,(2017)
  THE BUILDING RESILIENT
  NEIGHBOURHOODS PROJECT FOUR YEARS
  OF LEARNINGS. The Building Resilient
  Neighbourhoods Project is a partnership between the
  Community Social Planning Council and Transition
  Victoria.https://link.springer.com/content/pdf/10.100
  7%2F978-981-13-7048-9.pdf
- **26.** CPA-I\_001\_Anatomy City Anatomy: A Framework to support City Governance, Evaluation and Transformation Developed by TAFT ancha ,3 February 2015
- **27.** Martínez Arias, R. (2015). Policy knowledge exchange in a cities' network: An introduction to the City Protocol.
- **28.** A new strategy of sustainable neighbourhood planning: Five Principles, DISCUSSION NOTE 3 A compact city. URBAN PLANNING, PDF, www.unhabitat.org (Accessed December-2020)

- 29. Western Australian Planning Commission. (2000). Liveable Neighbourhoods: street layout, design and traffic management guidelines. https://www.cnu.org/sites/default/files/GreenbergMorris.pdf,accessed (Accessed-Aug- 2019)
- 30. Center of livebale cities (2013). Launch of 10 Principles for Liveable High- Density Cities. Singapore. Centre for Liveable Cities. Retrieved at 2/2019 -https://asia.uli.org/10-principles-for-liveable-high-density-cities-lessons-from-singapore/http://www.clc.gov.sg/others/searchresults.htm?q=Launch%20of%2010%20Principle s%20for%20Liveable%20High-Density%20Cities
- **31.** Developing a Liveable and Sustainable Singapore (csc.gov.sg)© 2021, Government of Singapore. Last updated 03 Sep 2019
- **32.** Allam, Z. (2020). Seeking Liveability Through the Singapore Model. In *Urban Governance and Smart City Planning*. Emerald Publishing Limited.
- **33.** AIA Center for Communities by Design www.aia.org/liveable (Accessed-Jan 2021)
- **34.** National Association of City Transportation Officials |National Association of City Transportation Officials (nacto.org),Reimagining our roads: 5 designs to improve our cities Curbed. (Accessed-Jan 2021)
- **35.** Birmingham City Council passes Complete Streets ordinance | by Birmingham City Council | Medium(Accessed-Jan 2021)