



A Tool-kit to Measure the Urban Quality of Life for Low-income Residential Areas

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Abstract

This study aims at presenting a Tool-Kit –Proposed Model- to measure the urban quality of life for low-income groups. The aim is achieved through focusing on analysing and discussing three of the major organizations that are concerning liveable communities. Meanwhile, identifying the low-income group's concepts of the urban quality of life. Furthermore, a questionnaire of a Likert-type scale has applied to a sample of 31 specialists who were asked to rank the importance of the sub-dimensions proposed. The questionnaire analysed using descriptive statistics to arrange the urban quality of life dimensions, and sub-dimensions, indicators to give them a relative weight in the Tool-Kit. The Tool-Kit also shows the frequencies of the proposed indicators in the three dimensions, the used tools, and the validation tools for the measurement. The proposed Tool-kit proved that it's important to take into consideration both quantitative and qualitative measurements of the urban quality of life for low-income groups.

Keywords: Urban Tool-Kit, Urban Quality of life, Liveability, Low-income, Residential Areas



1. Introduction

Low-income groups have the right to live a good life. Meanwhile, there is no toolkit (Dimensions, sub-dimensions & indicators) as well as evaluation criteria for measuring the quality of life of low-income groups in our community which may cause neglecting the basic needs of these groups.

The research aims at creating a tool-kit (Dimensions, sub-dimensions & indicators) as well as evaluation criteria for measuring the urban quality of life of low-income groups.

This research will rely on a deductive method by deducing (Dimensions, sub-dimensions & indicators) in literature and discussing their importance for the urban quality of life of low-income groups.

This research will use the analysis and comparison tools depending on the analysis and discussion of the urban quality of life principles of two different organizations, and comparison between different organizations (Dimensions, sub-dimensions & indicators).

A paradigm is an approach involving basic concepts, ways of thinking and methods that are generally accepted by members of the scientific community [1] so, according to that definition the (UQOL) can be tackled by the urban planning theories, approaches, and principles that are dealing with (UQOL). Urban quality of life is a multi-disciplinary and multi-dimensional principle. This vague and complex definition can be represented by a reticular relationship between different dimensions; the urban quality of life is the outcome of the interaction between these dimensions. Such interactions vary and are determined by places and communities [2].

There are several contemporary urban planning theories and approaches (Paradigms) in the late twentieth century, such as New Urbanism, Smart Growth, Urban Village, Principles of Intelligent Urbanism, [3] Sustainable development, Neo-traditional planning, Green infrastructure, Compact cities and livable cities [2]; whereas the objectives of these paradigms are to develop communities that will more successfully serve the needs of those who live and work and to control the urban sprawl while enhancing the urban quality of life.

These characteristics of urban design are implemented in the form of a set of principles of urban planning called the principles of urban quality of life [3]. One of these paradigms is the New Urbanism, also known as Nontraditional Design, an urban design trend that emerged in the late 1980s, influenced its ideas by traditional town and neighborhood design (TND). Its main purpose is to establish buildings,

communities and regions that provide a high (QOL) for all residents while preserving the natural environment.

The New Urbanism organization was established in 1993 by the New Urbanism Congress. The Charter of the New Urbanism is its fundamental text. The New Urbanism presented a set of guidelines which addressed land use, transport, road networks, public spaces, walkability, mixed house types, place identity and ecological concerns [4].

Smart Growth which is a relatively recent theory of urban planning and transportation. It shares principles with contemporaneous movements identified by the terms of new urbanism and sustainable development. According to the EPA (Environmental protection agency), Smart Growth is the development that Enhances three different dimensions (the economy, the community, and the environment). It changes the terms of the development debate away from the traditional growth/no growth question to how and where should new development be accommodated" [4].

Smart growth now stands in syntax of expertise in urban concerns amongst designers and decision-makers. Smart growth aims at achieving a strong sense of community and space; expanding the scope of transport, jobs and housing options; equitable allocation of construction benefits and costs; protecting and maximizing environmental and cultural resources; fostering public health, economic sustainability, and social equity; and improving quality of life [5].

2. Livable communities' approach (the selected paradigm)

This will be the selected paradigm in this study. While many organizations are concerning livable communities. The author analyses the data and information of many organizations that are concerning livable communities such as The Viva Doña Ana[6], Eden area livability[7], The Blueprint for America's 10 Indicators of Livable Communities[8][9][10], Partners for livable communities[11], The American Association of Retired Persons (AARP)[12], United States Environmental Protection Agency (EPA)[13] in order to extract the effective indicators that can be used to measure the urban quality of life in low-income residential areas. The author will discuss three of these organizations thoughts that could be summarized as follows:

2.1 The Viva Doña Ana Livability Dimensions

The Ana considers livability as a measure of the quality of family's life, and there are six livability dimensions -The author renamed and rearranged them to dimensions and sub-dimensions- that help make



healthy communities. By looking at problems and solutions from the viewpoint of these concepts of viability, the area will work to improve people, places, and prosperity, Table 1. [6].

Table 1: The Viva Dona Ana dimensions, sub-dimensions and their impact on the (QOL), by the author

	The Viva Doña Ana dimensions' [6]	The Viva Doña Ana sub-dimensions' [6]	The concluded indicators by the researcher	Discussion		
Livability dimensions & Sub-dimensions	A	Provide More Transportation Choices (TC)	1	Safe, reliable, and affordable (TC)	Decrease household transportation costs Reduce energy consumption, dependence on non-domestic resources Reduce greenhouse gas emissions	The researcher point of view is that these indicators focus on the results of (TC) and they are not the best to measure (TC) as they neglect important indicators like diverse public means
			2	Better transit means	More time for family Cleaner air, and healthier communities	
	B	Promote Equitable, Affordable Housing	3	Provide variety types of housing	Support a more diverse community across the region	The researcher agree that more diverse community is essential to enhance safety More affordable choices closer to work would be important to increase the comfort of the residents
			4	More affordable choices, closer to work	Reduce the amount of paycheck that goes to housing and transportation	
			5	Afford a good place to live	Provide a suitable place for every class	
	C	Enhance Economic Competitiveness	6	Good access to education, jobs, and real wages	Success for the region & live a stable quality of life	The researcher can discuss that there is a mutual relationship between family's economic stability and quality of education in livable communities to promote the family's success
			7	Encouraging job retention, and growth	Economic prosperity & attracting future businesses, industries, and institutions	
			8	Quality education and work options	Success for the family	
	D	Support Existing Communities	9	Concentrate local and federal monies for investment in the urban and rural communities	All areas are subject to growth over time	Development goals should be geared at the existing communities. The researcher explains that if residents believe that their community is neglected, they will move
			10	Making smart decisions	Direct the right kind of growth in	

				the right locations	
				Improve existing buildings	
				Launch types of development which can strengthen the existing communities	
E	Coordinate Policies & Leverage Investment	11	Cooperation among federal, state, and local governments, officials, and planning efforts	Strengthen the region by properly channeling federal funding and coordinating large-scale improvements	The researcher agrees that collaboration between different stakeholders and federal state at socio-economic and cultural level can offer surprising advantages to places
		12	Working together to promote a stronger region	Strengthens pull and secure federal funding and funnel real money to region-wide projects	
F	Value communities & Neighborhood	13	Making places that we enjoy being in	Great walking paths, parks, plazas, markets, and community gardens	places that contribute to a diverse, supportive, efficient, healthy, and livable community is not enough, but a well-maintained, attractive and clean environment must be encouraged as well as mixed uses
				Well-being of residents and visitors of these places	

2.2 Eden area livability Dimensions

In 1991, the Livability Initiative was launched with the establishment of a set of Livability dimensions defining regional and local beliefs that will be used as a framework for the development of an integrated approach to future planning, development, land use and service delivery decisions within the county's unincorporated urban area, based on the two key Community and regional dimensions [14].

Later, the tool is based on the Prevention Institute's Tool for Health and Resilience in Disadvantaged Environments (THRIVE) built to help people recognize and prioritize factors within their own communities in order to improve health and safety. In particular, the tool presented below has been updated to incorporate the livability principles in the Eden Area [7]. Table 2.



Table 2: The Eden area dimensions, sub-dimensions and their impact on the (QOL), by the author

		THRIVE dimensions of livability [7]	THRIVE sub-dimensions of livability [7]	The concluded indicators by the researcher	Discussion	
Livability dimensions & Sub-dimensions	A- Place	What's Sold & How	1	The availability and promotion of good products & services	The availability of Safe, healthy and affordable products & services	Consumer's lifestyle may be also and effective indicator as John Kenneth Galbraith, and his fellows have been associated with the USA consumer's lifestyle criticism. As consumption and its focus on the quantities of products produced and consumed negatively affect (QOL) (Hajduová, Andrejovský and Beslerová, 2014). The researcher agrees that wasted resources may cause a danger to humanity, but they have criticized the orientation of American society towards consumption not the Egyptian one
			2	The limited promotion and availability, or lack, of potentially harmful products and services	Limitation of harmful products Lack of harmful services	
		Look & Feel	3	Enhancement of visual and auditory environment	Well-maintained, appealing, clean, and culturally relevant visual Well-maintained, appealing, clean, and culturally relevant auditory	It is important to promote a well-maintained, attractive and clean environment to reach residents' satisfaction of every class
		Safety	4	Elements that support and enhance a public safety presence through collaborative efforts	Promoting safe routes throughout the neighborhood Blight removal & adequating lighting Quality of life concerns, and overall community well being	One can not feel safe and livable in residential areas with high ways. therefore, the researcher think that decreasing/preventing high-ways or discouraging high speed traffic is a must Safety can not be achieved when ignoring people's role so, promoting Diversity & encouraging people's existance
		Parks & Open Space	5	Safe, clean, accessible parks	Parks that appeal to interests and activities of all	One may assume that low-income groups need spaces suitable for their activities but parks & open spaces

			age groups; green space	existence within their residential areas are optional and may be relevant after meeting the basic needs but the researcher think they are basic needs for entertainment and livability
			Outdoor space that is accessible to the community	
			Natural/open space that is preserved through the planning process	
Getting Around	6	The availability of safe, reliable, accessible, and affordable methods for moving people around	Public transit availability	Avialability of public transit does not mean diversity of it so, Diverse public transit means like Metro, Light rail Tram, bus, minibus, Microbus and vans
			Walking, and biking availability	Availability of walking does not mean taking walking distance into consideration
Housing	7	The availability of safe and affordable housing	Enabling citizens from a wide range of economic levels to live within its boundaries	The researcher believe that availability of more affordable choices and closer to work saves more time for the family. otherwise saves money which is a good option for the low-income groups
			Enabling citizens from a wide range of age groups to live within its boundaries	
Air, Water & Soil	8	Safe and non-toxic water, soil, indoor and outdoor air, and building materials	Conserve resources through community design	Transit of non-domestic resources would result in higher costs
			Minimize waste, and promote a healthy environment	The researcher agreed that Minimizing waste is an important lifestyle but increasing dependence on renewable energy would be better than reducing energy consumption which may be important for essential activities
Arts & Culture	9	Variety of opportunities within the community for cultural and creative expression	Participation through the arts	Residents' should have the opportunity and ability to express themselves through arts & culture to enhance their belonging to their place and feel satisfied with it
Preserve Resources/Natural Terrain	10	The preservation of the image and resources,	Historical character and resources preservation	Preserving historic character & natural terrain will promote the uniqueness of the place and



			natural terrain, drainage, and vegetation of the community	Natural terrain, drainage, and vegetation of the community keeping	make it a better choice for people to live in
	Defined Communities	11	The Public urban image and the manifestation	Signage, public art and agricultural greenbelts Wildlife corridors & community gardens Unique community elements	Landmarks, edges, districts, nodes, and paths is the physical part of space identification [15]. but signage may be necessary in public spaces but the researcher think it's optional within the residential areas
	Public Places	12	A design that encourages attention	presence of all ages and interests.	The existence of people in space with all ages, genders and different intrests will enhance the publicness of the space so that, the researcher think that to protect residents' privacy, there is no need for people of all intrests within the residential areas
	Racial Justice	13	Policies and organizational practices in the community that fosters equitable opportunities and services for all	positive relations between people of different races and ethnic backgrounds	As the egyptian context includes different races so presence and justice between all races is a very critical issue of safety and equity
B- Equitable Opportunity	Jobs & Local Ownership	14	Local ownership of assets, and access to investment & jobs	Local ownership of homes and businesses Access to investment opportunities, job availability, and the ability to make a living wage	The researcher point of view is although family success is more important than ownership of homes and businesses it could be related to that ownership The researcher think that the ability to make a living wage may be more appropriate for low-income groups but at the same time economic prosperity & attracting future businesses will make residential areas more livable
	Education	15	Better education services	Quality and available education Literacy development for all ages	The researcher discusses that it's important too to make affordable learning chances with a high quality level and availability
C- P_a	Social Networks & Trust	16	Strong social ties among all people in the community -	Relationships that are ideally built upon mutual	The researcher discusses that relationships based on mutual intrests are essential in social networks, as they

			regardless of their role	obligations and opportunities to exchange information Relationships built upon the ability to enforce standards and administer sanctions	increase the chances of meetings between residents at their will
	Participation and Acting for the Common Good	17	Local leadership and involvement in community or social organizations	participation in the political process Willingness to intervene on behalf of the common good of the community	The researcher agrees that it's a must for livable communities to make people participate in the political process and act for the common good through different means of contribution like interviews and submitting proposals to the government,...etc
	Norms/Expected Behaviors & Attitudes	18	Community standards of behavior	What the community sees as acceptable and unacceptable behavior	People live within their cultural values, which must be respected to live in a stable community
	Planning Integrated Communities	19	The integration of communities containing all facilities	Integration of communities housing, shops, workplaces, schools, parks, libraries, cultural art venues, and civic facilities essential to the daily lives of residents	Areas can have mixed uses in one or both ways: by having a Mix of single-use buildings or by having buildings that each have a mix of uses. The researcher believes that the latter is usually superior to the enhancement of the livable community
D- Cross-Cutting	Community Focal Points	20	A combination of different uses	Combination of commercial, civic, cultural, and recreational uses	
	Health Care Access and Treatment	21	Health-care services, disease management and emergency services	Preventative services and access, treatment quality Disease management, in-patient services and alternative medicine Cultural competence, and emergency response	The researcher agrees that there would be no sustainable communities if there are no available and affordable health services



2.3 Partners for livable communities Dimensions

Partners for livable communities consider Livability as the sum of the factors that add up to a community’s quality of life including the built and natural environments, economic prosperity, social stability & equity, educational opportunity, and cultural, entertainment & recreation possibilities [11]. Which means that livability is the main target to enhance urban quality of life because it directly affects people's wellbeing through its added-up factors. Table 3.

Table 3: Partners for Livable communities dimensions, sub-dimensions and their impact on the (QOL), by the author

	Dimensions	Sub-dimensions [11]	The concluded indicators by the researcher	Discussion		
Livability dimensions & Sub-dimensions	1. What is Livability?	Local and organic blooms	Livability blooms locally, not centrally. 1. It cannot be planned but must be tended to organically	The fertilizer of local initiatives The cultivation of civic responsibility	Livability flourishes locally rather than centrally. It cannot be expected, yet it's tended to organically	
		Social Contribution	2. Community must define for itself what livability means	How hard people—local people—are willing to work to make their community a better place	What livability is must be defined by the community for itself to act for the common good	
		Equitable, Affordable Housing & Services	3. Equitable distribution of opportunities and respect	Housing and jobs equitable distribution Health care and education equitable distribution	Livability for all is an equitable distribution of opportunities and respect	
		Employment gain quality	4. The importance & ability to earn, and provide dignity	The ability to earn a decent income Providing dignity through gainful employment		
		2. Place Makes	Place triggers action	5. Desire to fight for enhancing the place	people's love of place Sense of place	
				6. The critical impact of the built	The impact on public health	

		environment	Civic pride and responsiveness
			Public economic well-being
	Unique Space	7. every community, large or small, has a distinctive character resulting from its history	Natural and man-made physical elements
			Social makeup
		8. Combinations of public and private institutions	Create opportunity for expanding the quality of life
			Constrain maintaining the quality of life
	Amenity and wellbeing	9. Look at opportunities for working on problems perceived as unsolvable	Amenity strategy as the bridge for crossing chasms
	Life satisfaction	10. Community that satisfies the full range of its residents' needs	Attractive place to live
			Attractive place to work, and do business
			Economically successful community
	Design & Planning matters	11. Design, planning, and architecture are essential tools for achieving a more livable place	Design as a tool to create momentum, bring hope
			Serving as a demonstration of opposition or enthusiasm
			Design as a strategy to show changes coming
		12. Design is profitable, and amenities are investments, and Creativity and originality as a hallmark of what you do	Design, environment, culture, folklore, archaeology, and heritage broadly defined that moving imaginations
			Captivating the spirit with the

3. Quality of Life is a Strategy, Not a Luxury as unsolvable.



			involvement of an artist (who strives for quality, not quantity), then creating new perceptions
			Community action that aims to enhance the place
Arts & Culture	1: Culture as an asset		Cultural, spiritual, and artistic initiatives that can move imagination and bridge the differences among them
	1: Quality as an essential. Do things well		Do something that bespeaks world-class activity Never ignore or forget the past when building the future
4. Seizing the Opportunity	Excitement focusing to grow funding	1: Funding as the least important issue	Funding will grow with the excitement, involvement, and civic desire to have that building, program, or institution that lives up to your dreams
	Seizing opportunities & Making use of disasters	1: Use a disaster. Nothing creates a better opportunity for change than a disaster	Create an opportunity if you don't have a disaster Develop a flagship idea for the future. One that embodies the spirit, hopes, and dreams of what can be
	Social participation and entertainment	1: Involve a fun factor and make participation to brings people	Be entertaining, meet in a nice place, and serve good food

<p>5. People: Your Greatest Resource for Community Change Culture</p>	<p>Individuals role importance and leadership pass</p>	<p>18</p>	<p>together and invests them in the project</p>	<p>Make the participation as one of the most exciting and fun games in town</p> <hr/> <p>Make participation in labor-intensive</p>
		<p>19</p>	<p>Respect the power of the individual. One citizen can trigger significant improvements in a community</p>	<p>Most good ideas for community initiatives still come from a female volunteer</p> <hr/> <p>Learning others by example how dedication to one's position can be channeled into acts that produce real results, leading to a multiplier effect</p> <hr/> <p>Leadership is contagious. Do your best to facilitate it getting passed it along, and don't forget to do so yourself</p>
	<p>Seeking for new civic actors</p>	<p>20</p>	<p>Entrepreneurship, implementation and long-term commitment can come from the business community</p>	<p>The new civic actors come in all shapes and sizes</p> <hr/> <p>Don't look to just the most obvious leaders for creative and positive change in your community. Promote the collaboration of strange bedfellows</p> <hr/> <p>Bring together people who have not previously worked together</p>
	<p>Enhance cooperation</p>	<p>21</p>	<p>Cooperation occurs because people need each other. Collaboration best comes at a time of the</p>	<p>Cooperation comes about when people cannot achieve a goal without</p>



		<p>problem, when people need each other; not at a time of wealth or business as usual</p>	<p>seeking the support of others.</p> <p>This cooperation, or partnership, should be based on a principle of mutual self-interest: do for someone else that which at some point also benefits you.</p> <p>Involve the whole community. First, tackle those issues that unite you and then work together on the issues that divide you</p>	
	<p>Generate inner ideas and involve outsiders participants</p>	<p>2: Get people of energy together to discuss what can be done with a community's natural assets</p>	<p>Intrinsic assets are easily taken for granted, and therefore, an outsider can help realize them</p> <p>"Outsiders," or consultants, are change-agents in disguise. They can break through complacent leaders and jump-start a community</p>	<p>"Outsiders," are on a short assignment. They don't live in your community, and thus, they are not real "players."</p>
<p>6. How Do We Work Together?</p>	<p>Cooperation between the sectors—public, private and civic</p>	<p>2: A public-private partnership must be put in place that will last 10 years to truly accomplish the hard job of civic change</p>	<p>Contentious agendas such as racism and minority unemployment can make initial meetings difficult</p> <p>Using agendas of arts or culture as a neutral meeting ground to get persons in leadership positions to begin working together on something non-threatening</p>	<p>As a principle contentious agendas must be avoided in initial meetings. Then, as they become acquainted and develop personal rapport and ties, leaders can address more serious problems</p>
<p>Building</p>	<p>An optimistic,</p>	<p>Allow goodwill,</p>	<p>Believe the glass is</p>	

	<p>opportunities for participation & cooperation</p>	<p>entrepreneurial approach to problem-solving rather than mere problem-study or moaning is essential</p>	<p>collaboration, and a sense of confidence to enable long-term problems to be addressed</p> <hr/> <p>Build & create new opportunities for participation and cooperation</p> <hr/> <p>It is important to bring together people who have not previously worked together</p> <hr/> <p>There is a need for a neutral community action center. Institutional gossip is very important. It can quickly facilitate the flow of civic information</p>	<p>half-full, not half-empty. This philosophy of looking at opportunities instead of problems is essential for community change.</p> <p>Bringing together people who have not previously worked together is sometimes difficult, but always essential</p>
<p>7. Get to Work!</p>	<p>Make a Framework to plan and decide</p>	<p>Taking the first step in the community change process</p>	<p>Major initiatives begin with small doable projects that build confidence, and illustrate a vision</p> <hr/> <p>Small doable projects that allow a broader constituency to join</p>	<p>Action speaks louder than planning. Talking about doing something in your community will only get you so far. Learn by doing. Plan to plan. Knowing how to manage the process is a prerequisite to your community change process</p>
	<p>Cumulative actions make a difference</p>	<p>Incremental change and small successes are healthy and realistic and will eventually grow into a comprehensive planning process</p>	<p>Mount a 12-month campaign for building momentum, excitement, and participation</p>	<p>Do not underestimate the path or fiscal deficits</p>
	<p>Inspiration and competitiveness</p>	<p>One community can be challenged and inspired by the successes of another. and counties</p>	<p>Learn from others and be competitive</p> <hr/> <p>Thinking regionally</p>	<p>One have to think regionally as Community needs do not fit within political boundaries or the lines of demarcation</p>



	<p style="text-align: center;">Repetitive Feel of achievement</p> <p style="text-align: center;">28</p> <p style="text-align: center;">Declare success frequently. Cities can live up to their press releases!</p>	<p style="text-align: right;">between cities</p> <p>A small victory every six months must be built into a program</p> <p>Nothing has a better chance for success than a situation in which people can participate, contribute, and claim ownership of good civic ideas. As in any long march, there have to be places of rest; places where there is cause for celebration to acknowledge achievement and to renew determination to succeed</p>
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3. Types of Low-income Residential Areas

“Low-income neighborhoods are not all the same. But neither are they so unique that we must shrug our shoulders and abandon any hope of finding patterns”(Hopkins, 2010, p. 14).

Anyone who has ever looked for a new apartment knows that no two areas are alike. Others provide large high rises with basement garages, while others feature rows of ancient homes and bungalows split into affordable rental flats. Some areas are quiet and family-oriented, with adults commuting to work elsewhere and schools and playgrounds serving as the only places to go during the day. Others are more edgy and trendy. Street noise, restaurants, and late-opening stores bring them to life in the evening. Some appear to be happy areas where positive improvements are taking place. Others believe they have been abandoned[16].

When it comes to place-investing, these distinctions are significant. When seeking new shop locations, a major retailer really wouldn't make the mistake of treating all areas the same. In commercial districts, there are areas with high foot activity and rows of small shops clustered together. Others are defined by motor traffic flowing through. Buildings with delayed maintenance and visibly damaged buildings show that some are definitely disinvested. Others show indications of minor repairs and well-kept lawns. Some people are safe. Others, however, do not[16].

When foundations and governments undertake out place-based initiatives aimed at reviving low-income areas, they tend to rely on routine data points such as the poverty rate, rate of unemployment, and prevalence of childhood asthma,

which fail to grasp the diversity of low-income areas in terms of both their difficulties and assets. As a result, those in control of location-based operations are frequently startled. Professionals are always learning new things, such as how a job training program that works effectively in one region may take longer to produce benefits in another. Furthermore, increased investment was driven by a big mixed-use development in one area[16].

For instance, although a large multi-use development prompted further investment in one area, a similar project had no discernible secondary impacts in another. While there is much to be claimed for "learning by doing," many of these "lessons" might have been predicted if there had been a systematic means of arranging what we know about various sorts of low-income areas[16].

Neighborhoods cannot be fully understood by using predictable, scientific models. Their populations are actually shifting, their borders are flexible, and their very existence is speculative. An area does not provide the laboratory conditions required for control groups or double-blind trials. However, there are useful patterns that may be used to categorize regions into an array of types—a typology, if you will. And these categories can be informative, guiding the selection of methods and treatments, the types of results that are actually achievable, and the timescale necessary. But how does one go about creating such a typology? And, within this typology, how do you classify individual neighborhoods?[16].

3.1 Establishing Neighborhood Typologies

The advent of new, accessible data sources, such as the National Neighborhood Indicators Project and GIS mapping projects, has encouraged interest in neighborhood typologies during the last decade. Researchers can filter through raw data by geographic region using a statistical approach known as "cluster analysis," finding and categorizing areas that share the same set of characteristics[16].

Researchers can create typologies using a number of filters based on the data they collect. One of the most popular typology systems classifies areas based on their housing statuses, such as the state of the housing stock and the percentage of homeownership[17]. As policymakers deal with the foreclosure crisis, home typologies have increased. The more policymakers and developers can distinguish communities based on the amount of foreclosure risk and individuals' financial conditions, the easier it will be to devise area responses.

Health is another popular perspective. The environment in which someone lives has both direct and indirect effects on their health. The ability of public health



officials to categorize areas based on the various impact of these factors allows them to make smart judgments about the types of prevention and treatment strategies to pursue, as well as to notify the work of land use and infrastructure planners whose decisions can affect resident behavior patterns[18].

In 2005, the USC School of Policy, Planning, and Development compared twenty residential neighborhood types in terms of the mobility patterns of residents. They separated neighborhoods by their location in the inner city, inner suburbs, outer suburbs, or exurban areas. The types are grouped according to clusters of traits that influence transportation decisions: street configurations, access to freeways or public transit, local land uses, topographies versus level ground and so on (Hopkins, 2010, P. 36).

This mean that areas may also be categorized based on their transportation perspectives and how traffic flows shape them. Places with dead-end streets, difficult topographies, and (cul de sacs) have distinct travel patterns than those with gridded streets, substantial pass-through traffic, or easy access to freeways and public transportation, according to planners. Transportation network decisions have a larger impact on quality of life, impacting energy consumption, air pollution, and access to jobs and community services (Hopkins, 2010, p. 14).

Neighborhoods are frequently researched in terms of family needs and the socio-demographic mix of the area for social service initiatives. Help for foster families, early childhood development programs, organized after-school activities, parenting classes, domestic abuse, and other interventions are all part of a city or county's social service infrastructure. A comprehensive grasp of what the area looks like in terms of family structures and needs is required to deploy the proper combination of programming[19].

Race and class are also important frameworks for categorizing neighborhoods and tracking changes in them. Many urban area changes are basically about one economic class or income group displacing another, as in gentrification, or one ethnic community entering or departing. Taxonomies based on race or class can assist planners and practitioners notice seemingly little changes as a society moves from one type to another[20].

Finally, the Harwood Institute has created a neighborhood typology system that aims to evaluate a community's ability to solve local problems. The "Community Rhythms" concept offers a five-stage process through which communities build social capital over time by collecting leaders, strong organizations, and cooperation ability (Hopkins, 2010, P. 14).

3.2 Market-Oriented Typologies

Neighborhood typologies have increasingly evolved toward an explicit market orientation, particularly when public subsidies must frequently be coupled with private investment. Neighborhoods are classified in these market-oriented typologies based on their ability to participate in regional economies.

The Reinvestment Fund (TRF), for example, created a taxonomy of "market kinds" in 2001, which categorizes the market worth of different areas into categories including Regional Choice, High Value/Appreciating, Steady, Traditional, Distressed, and Reclamation Areas. TRF suggests a distinct set of priorities for public sector actions for each category. TRF influenced the City of Philadelphia's Neighborhood Transformation Initiative in this way, igniting a fresh policy debate on how government might effectively encourage market forces in troubled areas [15].

The John D. and Catherine T. MacArthur Foundation collaborated with D. Garth Taylor, Senior Research Fellow at the Metro Chicago Information Center, to develop neighborhood typologies that may drive philanthropic investments in Chicago communities. Taylor's study was notable for categorizing towns based on their degree of connectivity to regional economic possibilities (as determined, in part, by looking up the zip codes of each resident's place of employment) as well as their resistance to economic depression. The foundation was able to tailor its funding to the needs of each town[16].

The Dynamic Neighborhood Taxonomy was developed by Robert Weissbord and his company, RW Ventures, in collaboration with Living Cities. The goal is to move beyond a predefined set of area classifications in order to understand how areas shift from one kind to another. Their work is based on the assumption that the evolution of a neighborhood's type is controlled not just by the traits inherent in that region, but also by how that area is positioned in relation to wider economic, social, and political forces. The Dynamic Neighborhood Taxonomy includes more than simply a nomenclature for many types of communities (e.g. Bedroom Community, Bohemian, Urban Commercialized, or Starting Families), it tracks changes from one kind to another and measures the degree of deterioration or restoration. The system also characterizes the transition as a gradual or "tipping point" and highlights important shift causes[16]



4. Low-income groups' concepts of quality of life



Figure 1. Sheltainer project, Source: Google.com

Low-income groups have been chosen as life standards in Egypt are inadequate and have gradually declined since 1990 in international standards. Around 20 to 30 percent of the world lives in global poverty, according to United Nations estimates. However, unequal growth has led to the rise of an affluent elite in the midst of mass poverty that dominates a large part of the income of the country and enjoys a high standard of life that includes shopping in centers with the finest manufactured goods. The wealthy send their children, living in places like Garden City, Al-Zamalek, and Nasr New City, to private schools and colleges abroad. And a large majority of deprived Egyptians, not too far from these wealthy neighborhoods, live in squalor, with unhealthy and overcrowded homes, inadequate food sources, and minimal access to clean drinking water, good quality health care, or schooling [21].

Low-income residents do not have the choice of choosing a quality home, nor do they have several choices for renting or purchasing an inexpensive house in the middle of the city due to financial restrictions. These people spend a long time switching from the suburbs to the office in the center of the area. They face a lot of challenges, such as air and noise emissions, and road jams every day [22].

Providing the most basic human needs could be the main concept to solve low-income Housing problems. Meanwhile, maintaining the area's current activities. So, based on a micro-housing solution that focuses on providing the most basic human needs, the 'Sheltainer' project proposed to solve low-income Housing problems in Cairo. Meanwhile, To maintain the area's current activities and the feeling of 'home', the project offers a flexible solution by redesigning the old market and revamping the area with new open spaces and new activities [23].

4.1 Low-income groups concepts of quality of life physiologically

The health of the natural world leads to public health. Air contaminants, for example, can decrease the potential to prevent illness, which can increase the number of hospital stays and emergency room visits, school absences, missed working days and limited working days. Emissions from motor vehicles and other forms of air emissions, such as industry, have been related to premature deaths each year in Egypt. In addition, infected leisure water is also closely linked to human health conditions, such as gastrointestinal and bowel disease, colds and flu and scalp, eye and ear infections [2].

4.2 Low-income groups concepts of quality of life psychologically

Psychology is the investigation of the mechanisms of mind, which happens partly by the observation of behavior. The interior of the human is common to psychologists; they analyze the individual's intentions, desires, attitudes, and personalities. Psychologists are attempting to understand the situational environments under which people behave decently and creatively [2].

It is important to consider how people respond to places and to be mindful of the variables involved in the perception of places, such as the person's instinctive response to a place, the feeling of people towards space, the motivation of space, the familiarity of space and the spaces that can induce happiness, excitement, disappointment or unhappiness to be encountered by the individual. The understanding of space by the individual impacts the quality of life of the individual. Home isn't a place, it's a feeling. People are synonymous with the 'attached location' of their homeland. Growing up with family and peers in an atmosphere fuel the souls of individuals with a bright future. However, being pushed out of homes because of hunger, the environment or even politics causes instability [23]. Which is mean that add a Quality of life for the low-income groups, it requires to consider psychological effects like Place attachment and Security.

Physical development must consider social impact. Every party involves must mutually understand their roles and responsibility towards the community and locate where the real problem area is [24]. Is means that to enhance the quality of life, feel of responsibility and vital contribution from the community should be considered!

Psychological Urban Quality of Life contributes to the quality of life through Community Identity and Pleasing Milieu (social environment) as follows:



4.3 Pleasing (Milieu) moderation atmosphere

A significant aspect of occupant happiness is the overall visual atmosphere of a housing scheme. 'Aesthetic elegance' is one of the markers of the quality of life; it is described as being able to appreciate the beauty of nature and culture [25]. No widely agreed rule can be given as to what constitutes attractiveness. The variations in opinion on aesthetic issues mean that an expert opinion on the aesthetics of a society would almost certainly be consulted by the site designer. The built environment's visual-aesthetic character is extracted not just from its spatial qualities, but also from the color, texture, and detail of its surfaces that characterize it.

4.4 Low-income groups concepts of quality of life culturally

"Houses are not simply structures but are both expressions and molders of culture" [26]. Several agreements on what will constitute the standard of life can generally be achieved within a particular context at a given time, place, and culture, in other words, the desires of people and the fulfillment of their expectations and needs can be described in a reasonably specific manner within a particular cultural context. For the idea of quality of life to be valid, there must be ample aspects of the quality of life shared in general by members of a community [2].

5. Results & Discussion

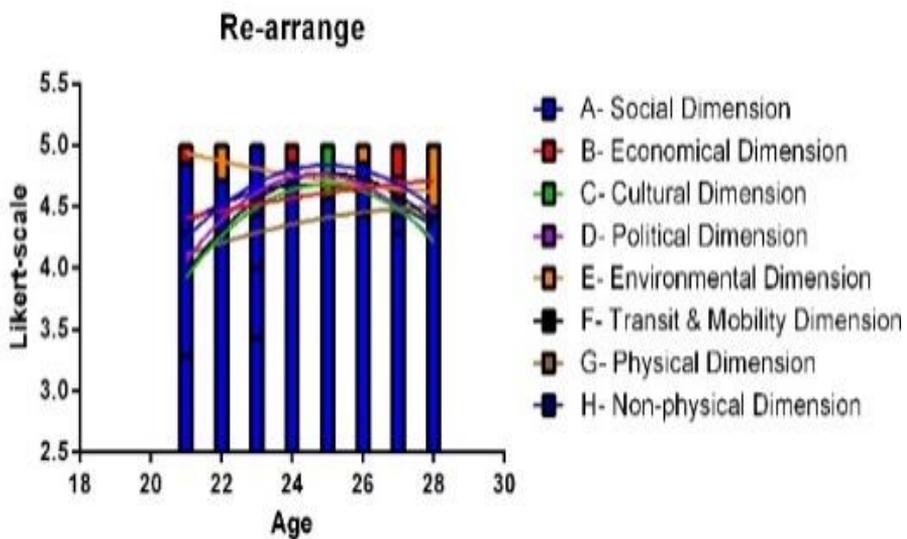
A questionnaire to measure the Urban quality of life (UQOL) using a Likert-type scale using the following power (1=Unimportant, 2=Slightly Important, 3=Moderately Important, 4=Important, 5=Very Important) has been applied to a sample of 31 persons, 14 males and 17 females, the age of the sample are between 21-28 years old. This questionnaire is also used to rearrange the UQOL dimensions and sub-dimensions and giving weights using point ranking system.

The targeted sample was Specialists: a number of PH.D & MSc candidates specialized in urban design, and a selected group of excellent students at the last year of their study.

Specialists in the targeted sample were asked 29 questions, these questions were divided into 8 sections. Every section represents a dimension. Section A- the social dimension, B- the Economical dimension, C- the Cultural, D- the Political, E- the Environmental, F- The Transit & Mobility, G- The physical, and H- The non-physical. In every section they were informed about the dimension's components –sub-dimensions- then they were asked to rate these sub-dimensions according to the Likert-type scale.

Table 1: The Urban quality of life dimensions analysis according to the questionnaire. The arrangement of the dimensions according to their ranking using descriptive statistics is as follows:

1. Environmental,
2. Non-physical,
3. Social,
4. Transit & Mobility,
5. Economical,
6. Physical,
7. Political,
8. Cultural



Specialists in the targeted sample were asked indirect questions to rate the sub-dimensions. They were not asked to arrange any of the dimensions or sub-dimensions. The questionnaire was analyzed using descriptive statistics to measure the median, mean, and standard deviation in order to use specialists rating of the sub- dimensions to arrange dimensions, and sub-dimensions according to their importance, and that will help to give relative weight in the Tool-kit (Proposed Model).



Table 2: Descriptive statistics of the questionnaire to re-arrange sub-dimensions, by the author.

D a t a n a l y s i s		The Urban quality of life (UQOL) Sub-dimensions	
N u m b e r o f v a l u e s	3	(A-1-1) Diversity degree	M i n i m u m
	3	(A-1-2) Safety	
	3	(A-1-3) Racial justice	
	3	(A-1-4) Social networks and ties	
	3	(A-1-5) Social esteem	
	3	(A-1-6) Cooperation	
	3	(A-1-7) Participation motives	
	3	(B-1-1) Securing affordability	
	3	(B-1-2) Employment and investment	
	3	(B-1-3) Jobs access and local ownership	
	3	(B-1-4) Marketing of goods and services	
	3	(C-1-1) Cultural relevance	
	3	(C-1-2) Arts and culture	
	3	(C-1-3) Sense of place	
	3	(D-1-1) Cooperation and political participation	
	3	(D-1-2) Federal policies and investment	
	3	(D-1-3) Making smart decisions	
	3	(D-1-4) Design and planning matters	
	3	(E-1-1) Environmental sustainability	
	3	(E-1-2) Healthy environment	
3	(F-1-1) Physical accessibility		
3	(F-1-2) Visual accessibility		
3	(G-1-1) Ensuring quality		
3	(G-1-2) Health-care and treatment access		
3	(G-1-3) Ensuring variety		
3	(G-1-4) Mixed-use		
3	(G-1-5) Efficient movement		
3	(H-1-1) Spiritual wellbeing		
3	(H-1-2) Motives and action triggers		
3	(H-1-3) Education		
3	(H-1-4) Inspiration and competitiveness		
2	5		%
P e r c e n t i l l e			
M e d i a n	4		



P a r a m e t e r	G e o m e t r y	U n i t	C o e f f i c i e n t	C l a s s i f i c a t i o n	
				U p p e r	L o w e r
3.466			29.28%	4	3
4.813			9.39%	5	5
4.643			11.56%	5	5
4.074			16.24%	4	4
4.606			15.00%	5	5
4.263			16.23%	5	4
4.076			21.70%	5	4
4.577			12.11%	5	4
4.428			15.09%	5	4
3.754			23.81%	4	3
4.025			21.43%	5	4
4.272			15.10%	5	4
3.837			24.15%	5	4
4.338			18.27%	5	4
3.74			24.73%	4	3
3.991			18.99%	5	4
4.378			17.24%	5	4
4.6			13.09%	5	5
4.316			17.34%	5	4
4.483			15.89%	5	4
4.276			18.32%	5	4
4.163			16.97%	5	4
3.962			18.65%	4	4
4.586			10.73%	5	4
4.294			16.29%	5	4
3.889			20.04%	4	3
4.325			16.31%	5	4
4.294			16.29%	5	4
4.263			16.23%	5	4
4.493			14.85%	5	4
4.232			16.14%	5	4

Item	Score	Weight	Priority
114	0.6113	-0.6655	4.002
50	9.031	-2.991	5.012
145	1.359	-1.457	4.866
128	-0.6424	-0.1521	4.334
145	6.853	-2.543	4.948
134	-0.7514	-0.5504	4.543
130	0.2604	-0.9765	4.479
143	0.2882	-1.092	4.802
139	-0.148	-0.9723	4.706
120	-0.8243	-0.2762	4.13
128	-0.7065	-0.574	4.393
134	-0.6121	-0.4364	4.529
124	1.911	-1.186	4.331
137	-0.7647	-0.9402	4.673
120	-0.6363	-0.459	4.142
126	-1.267	-0.1137	4.289
138	-0.4856	-1.009	4.698
144	1.5	-1.553	4.856
136	-0.7563	-0.806	4.627
141	0.3146	-1.311	4.789
135	-0.9847	-0.7517	4.602
131	-0.9148	-0.3677	4.446
125	-1.164	-0.05387	4.252
143	-1.889	-0.4875	4.776
135	-0.7093	-0.6444	4.579
123	-1.391	0.0593	4.192
136	-0.6339	-0.7424	4.615
135	-0.7093	-0.6444	4.579
134	-0.7514	-0.5504	4.543
141	0.358	-1.229	4.774
133	-0.7604	-0.4602	4.507

6. Urban quality of life Tool-kit (Proposed model)

Through the comparison between tree different organizations dealing with the urban quality of life in the theoretical part we could conclude frequencies for every indicator. The arrangement of the suggested dimensions and sub-dimensions of the tool-kit depend on the previous questionnaire statistics analysis. Then a relative weight is added relative to the questionnaire analysis re-arrangement of dimensions, sub-dimensions, and indicators. The tool-kit can be used to measure



the urban quality of life for low-income groups and suggest the used tools, and validation tool of the measurement.

Table 3 The Tool-kit proposed to measure the urban quality of life of low-income groups, by the author.

Dimensions	Sub-dimensions	Indicators	Numbering	[6]	[7]	[11]	Frequency	Relative Weight	Qualitative	Quantitative	Used tool	Validation tool	
1. Environmental	Healthy environment	Creating environment that enhance public health	1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2.4 9	<input type="checkbox"/>		Ethnography	Google Forum/ Interview	
		Better transit means	2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2.4 6	<input type="checkbox"/>				
	Environmental sustainability	Conserve resources through community design	3.		<input type="checkbox"/>		1	2.4 3	<input type="checkbox"/>				
2. Non-Physical	Education	Better education services	4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2.4 0	<input type="checkbox"/>		Ethnography	Google Forum/ Interview	
		Freedom of acting and expression	5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2.3 7	<input type="checkbox"/>		Phenomenology	Interview	
	Spiritual wellbeing	Life satisfaction	6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2.3 4	<input type="checkbox"/>		Ethnography	Google Forum/ Interview	
		Equitable, Affordable opportunities & Services	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2.3 1	<input type="checkbox"/>				
		Encouragement & Repetitive Feel of achievement	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2.2 8	<input type="checkbox"/>				Phenomenology
	Motives & action triggers	People's positive relation with the place	9.		<input type="checkbox"/>	<input type="checkbox"/>	2	2.2 5	<input type="checkbox"/>				
		Inspiration and competitiveness	Community that can be challenged and inspired by the successes of another	10.			<input type="checkbox"/>	1	2.2 2	<input type="checkbox"/>		Ethnography	Google Forum/ Interview
3. Safety	Safety	Ensure security	11.	<input type="checkbox"/>	<input type="checkbox"/>		2	2.1 9	<input type="checkbox"/>		Ethnography	Questionnaire	
		Safe routes & transportation means	12.	<input type="checkbox"/>	<input type="checkbox"/>		2	2.1 6	<input type="checkbox"/>				

	Racial Justice	Egyptian Context	13.		1	2.13		Phenomenology	Interview
	Social esteem and comfort within community	Services and community features that meet people's needs	14.		0	2.1		Ethnographic Obs.	Observation
		Ethnography	Questionnaire/Interview						
	Cooperation	Individuals role and leadership	15.		1	2.07		Phenomenology	Interview
		Fun factors that make participation to brings people together	16.		1	2.04			
	Participation motives & action triggers	Livability blooms locally, not centrally	17.		2	2.01		Ethnography	Questionnaire/Interview
		Amenity strategy as the bridge for crossing chasms	18.		2	1.98		Phenomenology	Interview
		Seizing opportunities & Making use of disasters	19.		2	1.95			
		Seeking for new civic actors	20.		2	1.92			
	Social Networks, trust and entertainment	Strong social ties among all people in the community - regardless of their role	21.		1	1.89		Ethnography	Questionnaire/Interview
	Diversity degree	Socio-economic classes	22.		3	1.86		Ethnographic Obs.	Observation
		Wide range of Age groups	23.		3	1.83			
		Wide range of Gender groups	24.		3	1.80			
		Wide range of Interest groups	25.		3	1.77			
4. Transit & Mobility + Accessibility <i>Abdomen's</i>	Physical Accessibility	Spatial Accessibility	26.		2	1.74		Space Syntax (UCL Depthmapx)	Interview
		Phenomenology							
		Walkability & getting around	27.		2	1.71		Walk-score	Observation
		The availability of public transit "Transit-oriented"	28.		2	1.68		Transit map (Quiros, Canales)	
	Visual Accessibility	Barriers Permeability	30.		0	1.62		Ethnography	Questionnaire/Interview



		Space Exposure	31.				0	1.59			
5. Economical	Secure affordability	Public economic well-being for Housing	32.				3	1.59		Ethnography	Questionnaire
		Decrease household transportation costs	33.				3	1.56			
		Employment and Enhancing Economic Competitiveness	34.				2	1.53			
	Employment & Investment	Economic Cooperation between the sectors-public, private and civic & Leverage Investment	35.				2	1.50		Phenomenology	Interview
		Target federal funding toward existing communities To increase community revitalization	36.				2	1.47			
	Marketing of goods and services	Excitement focusing to grow funding	37.				2	1.44		Ethnography	Google Forum/ Interview
		The availability and promotion of products & services	38.				2	1.41			
		Relevance	39.				2	1.38			
	Jobs access & Local Ownership	Employment gain quality	40.				3	1.35		Phenomenology	Interview
		Local Ownership	41.				3	1.32			
6. Physical	Health-care access and Treatment	Health-care services, disease management and emergency services	42.				2	1.29		Ethnography	Google Forum/ Interview
		Efficient movement	43.				0	1.26			
	Ensure Varsity	accommodate residents in different stages of their lives	44.				2	1.23		Ethnography	Google Forum/ Interview
Ensure quality		Physical urban High-quality choices	45.				3	1.20			

7.	Political	Enhancing the built environment look & feel	46.				3	1.1 7		Ethnographic Obs.	Observation
		Design on a human scale	47.				3	1.1 4			
		public recreational spaces	48.				3	1.1 1			
		Welcoming, well-defined and vibrant public places	49.				3	1.0 8		Ethnography	Google Forum/ Interview
	Mix-uses of urban Friendly components	Mixed-use for the neighborhood	50.				1	1.0 5		Ethnographic Obs.	Observation
	Design & Planning matters	Design, planning, and architecture as essential tools	51.				2	1.0 2		Phenomenology	Interview
		Creativity and originality as a hallmark of what you do	52.				2	0.9 9			
		Help to curb sprawl and promote stability for city neighborhoods	53.				2	0.9 6		Ethnographic Obs.	Observation
		Support Existing Communities	54.				3	0.9 3			
	Making smart decisions	Achieve holistic policymaking	55.				3	0.9 0		Ethnography	Google Forum/ Interview
Taking the first step in the community change process		56.				3	0.8 7				
Policies and organizational practices to ensure justice		57.				3	0.8 4				
Leverage federal policies and investment	Cooperatively align federal policies and funding	58.				2	0.8 1		Phenomenology	Interview	
8.	Sense of place	Individuals role and leadership & willingness to act for the common good	59.				3	0.7 8		Ethnography	Google Forum/ Interview
		Physical identity & preservation of the image	60.				1	0.7 5		Ethnographic Obs.	Observation



Relevance	Relevance of built environment	61.				3	0.7 2		Phenomenology	Interview
	Relevance of products & services	62.				3	0.6 9			
	Norms/Expected Behaviors & Attitudes	63.				3	0.6 6		Ethnography	Google Forum/ Interview
Arts & Culture	Participation through the arts	64.				2	0.6 3			

7. Conclusion

The proposed Tool-kit proved that in order to reach a clear measurement of the urban quality of life for low-income groups, it's important to take into consideration both quantitative and qualitative measurements. Further, one can think that only physical elements of urban are the basic needs for low-income groups, but low-income groups' non-physical elements of the toolkit have proved that they are critical for their quality of life and are ranking first.

On top of that mid-twenty's specialists are looking for more social and cultural factors, have more interested in non-physical ones. Moreover, they are looking for better, faster transportation to safe time for work. Furthermore, Younger and elder specialists show a lower interest in political factors while mid-twenties specialists have more interested. Thus, the best age for political contribution from specialists to tackle the urban quality of life issues is mid-twenties. While elder specialists are looking for better physical elements and considering the economic conditions for well-being, younger specialists have a higher interest and vision for a sustainable, healthy, and clean environment in the future.

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