

October 2018

### CO-DESIGNING A HEALTHIER COMMUNITY:A COMPREHENSIVE MOBILITY PLANFOR SAIDA'S WATERFRONT

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#### Recommended Citation

TOHME, M OHAMAD Research Assistant, Faculty of Architecture-Design and Built Environment, and MOHSEN, HIBA Assistant Professor, Faculty of Architecture-Design and Built Environment (2018) "CO-DESIGNING A HEALTHIER COMMUNITY:A COMPREHENSIVE MOBILITY PLANFOR SAIDA'S WATERFRONT," *BAU Journal - Health and Wellbeing*: Vol. 1 : Iss. 3 , Article 12.

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### Abstract

Designing and improving cycling and walking as a soft mobility mode of transport has both environmental and social benefits and is a key in promoting healthier communities. In recent years, there has been a growing interest in redeveloping a master plan of Saida city, the gate of southern Lebanon in order to enhance the public realm, but unfortunately, a clear vision to develop comprehensive plan is still lacking. Among all Lebanese cities, Saida is the only city banned from motorcycle use for 20 years ago due to security issues. Moreover, Saida has a flat terrain, therefore it has the potential based on a collaborative platform of redesigning the street networks to encourage of cycling and walking in the urban and waterfront landscape. Using Saida as case study, this paper attempts to generate urban interventions by integrating multidisciplinary skills as a collaborative approach to suggest urban design solutions. It develops a methodology based on theoretical and analytical studies as well as the findings of five urban redevelopment workshops for Saida city attended by key stakeholders. The challenges of Saida municipality, Academia, citizens, private sectors and NGOs over the period 2014-2018 are analysed and discussed. In conclusion, a holistic approach is adopted at the intersection of landscape, urban design and planning by identifying several urban parameters based on a collaborative platform such as legibility, connectivity and mixed used activities and suggesting guidelines for the implementation strategies.

### Keywords

Saida, Urban planning, Soft mobility, Co-designing, Healthy community

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**ABSTRACT:** *Designing and improving cycling and walking as a soft mobility mode of transport has both environmental and social benefits and is a key in promoting healthier communities. In recent years, there has been a growing interest in redeveloping a master plan of Saida city, the gate of southern Lebanon in order to enhance the public realm, but unfortunately, a clear vision to develop comprehensive plan is still lacking. Among all Lebanese cities, Saida is the only city banned from motorcycle use for 20 years ago due to security issues. Moreover, Saida has a flat terrain, therefore it has the potential based on a collaborative platform of redesigning the street networks to encourage of cycling and walking in the urban and waterfront landscape.*

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## 1. INTRODUCTION

Over the past decades, cities are striving to be more attractive and competitive to provide a high quality of life and create a livable place through economic development. The urban environment has a profound effect on how we live, react and behave at the neighborhood scale as well as the city scale. Therefore, it is necessary to implement urban design facilities based on “people first” design philosophy. This design approach promotes healthy and socially interactive community and contributes to the economic success of the city (Brandão & Brandão, 2017). Foremost, it encourages a compact urban form, which promotes sustainable transportation choices, such as walking and cycling. For people, walking and cycling are the lowest transportation mode cost (Galderisi & Ceudech, 2010). Whereas, from the economical point of view, it means increased productivity and increased footfall in the commercial zones. Nevertheless, the benefits for the society as a whole are numerous such as lower congestion, better air quality, more social interaction and attractive places. Therefore, this paper aims to propose a comprehensive mobility plan based on the collaborative feedback from the stakeholders of Saida city.

## 2. BACKGROUND

### 2.1 Benefits of walking and cycling

It is well known that regular walking and cycling have various health benefits.

A half hour of walking daily can strengthen bones and muscles (Muhlbach, 2012). It also reduces the risk of developing cardiovascular diseases, fat and diabetes (Dempsey et al., 2016). On the other hand,

economic values of walkability includes market resources such as labour and capital market and nonmarket resources such as better natural and built environments (Litman, 2017).

Therefore, sustainable transport contributes to minimise air pollution. Moreover, a study has found that residents with neighborhood retail establishments within 200 meters of their home have higher tendency to walk compared with those who live in neighbourhoods with at least 600 meters from the closest retail (Krizek & Johnson, 2006).

## 2.2 Participatory Approach: tools for co-designing the city

The aim of engaging the public actively in the planning process is not only to enlighten them but also to make them a keen contributor to the procedure. (Stelzle, Jannack, & Noennig, 2017). It also gives more credibility to any intervention. (Maier, 2001). New digital technologies such as App development can facilitate the involvement of public in local planning processes (Wilson, Tewdwr-Jones, & Comber, 2017). Moreover, it develop social ties and networking among community members (Berta, Bottero, & Ferretti, 2018). Web based is considered as a new technological tool for public participation in urban planning (Brabham, 2009).

Based on the review of the participatory approach, the following points can be deduced:

- 1- Prioritizing aims based on the stakeholders' opinion
- 2- Weighting Design Criteria
- 3- Selecting the suitable design solutions according to the pre-set criteria

## 3. THE CASE OF SAIDA CITY

Saida is the third largest city in Lebanon. It is considered as the gate to the South and extends for 8 km along the Mediterranean Sea and the altitude does not exceed 15 m. In spite of the irregular expansion which is caused by the civil war (1975-1990) and the destruction of a part of the city, the urban fabric of the city organizes more than the other cities since the extension of the old centre took place before the beginning of the war - and which is becoming a place for pedestrians - with the principles of the French city, then the clear axes were guides for planners after. since the 1950s, there have been several projects to organize the plains surrounding the city - and that they are not taken into account because of the civil war - but the interests of the owners after the 90s, after the construction of the motorway running parallel to their land and the number of heirs, which is becoming more and more numerous, had played a very important role in rendering this large piece of land isolated and preserving its original character. This gives the city a distinctive character compared with Lebanese's city, which has a virgin land and accessible to all residents and now considers the lung of Saida, the capital of the south (Nahas, 2001).



Fig. 1 Map of Saida showing the urban fabric and loops

### 3.1 Urban Challenges to redesign SAIDA’S WATERFRONT

Improving conditions of walking and cycling is vital for urban zone’s public health, especially in small towns like Saida - its area does not exceed 8 km<sup>2</sup> - inhabited by almost 60,000 people which extends on the Lebanese coast on a flat ground is a great challenge because of the condition of streets, public spaces and cultural background. But at the same time, the municipality is always updated and assiduous to improve the lifestyle of the residents and make this city a model of the Lebanese’s city of tomorrow, through warning students and local residents, and developing some public facilities to enjoy a safe, healthier and sustainable urban life, which makes it a distinctive city among the cities of the Lebanese coast.

During the last 10 years, young people suffer from many health problems, such as obesity, which is caused by the lack of movement due to the excessive use of the mobile phone (Video games, Rely on free delivery, Disintegration of family bonds ...). Their activities are just going out to meet, and using their private cars to get around this small town, to finally get to a restaurant - since the city does not have many public spaces that interest young people - equipped with Wi-Fi, sofas and tables, and probably offer fast food, Shisha, and many things that affect health indirectly. Health problems among adults due to unhealthy lifestyle and low physical activity in Lebanon is notable, especially in cities, including Saida, which are the results of spending long hours inside their houses and workplaces, and use their private vehicles to move between the two, which has a very dangerous reflection on their health and is increasing the pollution which affect the quality of life, because of the lack of facilities that are oriented for pedestrians and cyclists.

Based on an Interview with Dr. Mohamad Bader, Psychologist says:” The electronic revolution that the world is facing today has affected our life, which has led to the emergence of many video games, due to the lack of public spaces that bring young people together to practice a variety of activities, which led them to addict these video games to escape the pressures and social problems experienced by the Lebanese today.

For these reasons, many workshops and lectures took place in Saida city, as effective method in solving these problems. Residents, visitors and their behaviour are an important issue, integrate them – known as co-operation - will allow the stakeholders to understand their problems more clearly and open a new horizons to hear ask more questions and interact, that will help them to organize the priorities to ensure a better lifestyle based on the principles of healthy urban city – known as co-designing.

## 4. STUDY METHODOLOGY

### 4.1 Study Design and settings

With the aim to address the existing urban condition of Saida city, this flow diagram

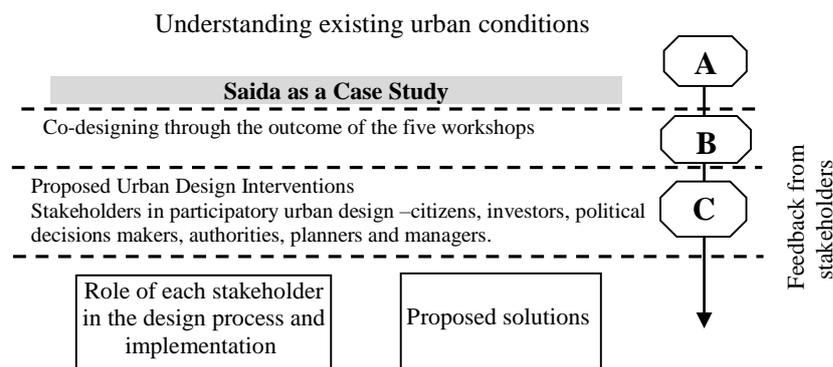


Fig. 1 Methodology Flow Chart

### 4.2 Analyzing the existing Urban Condition.

To achieve these goals, it is necessary to list the necessary principles of design which support and analyses this proposal. But in our case – A city in the process of developing - it is very necessary to take into consideration the conditions of the streets, public areas, and the results of each workshop through each principle to have a general and clearer vision of the city's character and understand the behaviour of

residents such as uses, transports and interests. Therefore, the mobility of pedestrians remains easier than that of cyclers, but in this part, there is an analysis of the city conditions in relation to the norms and design principles of the safe and healthy places for mobiles, with a general intervention, in each part, of the points of view of the participants in different workshops, which have brought together stakeholders, such as the municipality, architects and residents who have discussed, expressed and asked questions that reveal a clearer and more effective vision for the application of this type of projects.



Fig. 3 Map of Saida shows the main streets uses (Blue: Pedestrian, Orange: Vehicles)



Fig. 4 Saida City Skyline

Table 1 SWOT Analysis of Saida city water front

**SWOT ANALYSIS**

	HELPFUL	HARMFUL
INTERNAL FACTORS	<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>-Sea Promenade</li> <li>-Sand Beach (Suitable for kids&amp; beach activities).</li> <li>-Touristic Attraction</li> <li>-Castle of Saida</li> <li>-City Social Core</li> <li>-Sport Activities</li> <li>-Fishing Activities</li> <li>-Secure (Visual Connection)</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>-Unsafe(Direct connection with a high-speed vehicular road)</li> <li>-Lack of Public amenities:Toilets,Cabinets...</li> <li>-Lack of security</li> <li>-Lack of proper accessibility for the disabled</li> <li>-Absence of Sustainable Design</li> <li>-Low level of Maintenance</li> <li>-Absence of bicycle track</li> <li>-No connectivity with city's urban fabric.</li> <li>-Mixture between Pedestrians,bicycles,and movable kiosks.</li> <li>-Absence of sports Installations</li> </ul>
EXTERNAL FACTORS	<p><b>OPPURTUNITIES</b></p> <ul style="list-style-type: none"> <li>-Location of Sidon promenade on the Sidon entrance gate.</li> <li>-Different Facilities around.</li> <li>-Hosting of different events from outside(Cirque du Liban, stadium...).</li> <li>-Place for all social Classes.</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>-Taking over the seashore</li> <li>-Losing historic assets</li> <li>-Unorganized activities &amp; lack of management.</li> </ul>

### 4.3 Workshops Outcomes as informative for design decisions

Table 2 Co-creating design alternatives based on the recommendations of the 5 workshops

Workshop name	1	2	3	4	5
Aim objectives	Understand the future's vision of the new generation of Saida	To know the opinions of the traders about transforming the streets for pedestrians the souk of the city	Encourage people to walk on the waterfront	Re-design of Chark Al-Wastani	Redesigning saida water front
	Train the students and children how to be involved in the future decisions	To know about their future vision and ideas concerning	to make the national stadium is a point of attraction for young people and residents of Saida	Develop the public area + Attractive space for entertainment	To provide along the promenade an attractive and vibrant living environment
	To know which place is the most attractive for them	To know the pedestrians and cyclists needs	Build kiosks (contemporary design) with recycled materials	Create a strategy to people to reduce the use of energy ( Transportation and uses )	To develop a new image for the seafront respecting its cultural and historical identity
	To know which place is the worst attractive for them	To know the pedestrians and cyclists needs	Help them to express their ideas for improving the wrong places	Exchange and negotiate ideas among students themselves with drawings and photos	
Duration time	2 days	3 days	7 days	7 days	14 days
Actors	Students of schools  Municipality's representatives The instructors and the Spanish organizers	The owners of shops and restaurants. The pedestrians and cyclists Vendors  Some residents from outside of Saida ( Southern Lebanon, Chouf and Beirut )	The municipality  Architecture students  Artisans	The municipality  The land's owners  University Students Politicians	Municipality  Ungraduated students
Tools	Lecture / Expressing by photos / Collages and drawings	Questions and answers	Water front analysis ( Economic, Social and Architectural ), and questions		Landscape design course
Outcome	The sea is the most attractive place in the city, that reflect the importance of the Corniche  Concentration on the mountain of waste and imagine it as public spaces for social interaction  Protect remaining green spaces in the city  Clean the beach so that it remains an important cultural and natural feature of Saida ensure safe paths for pedestrians and reduce the number of cars that is a cause of pollution	Prevent cars from passing helps traders earn more space to show their products  Ensure safe places for vendors to move and show their product Increase the number of trees on the sidewalks to have more shadows  keep cars away from restaurants as they give off dust and noise	Introduce contemporary architecture in the city and encourage recycling  Make the link between the different landmarks more accessible Encourage people to reuse materials for construction of small architecture  Making the Corniche is the most attractive place in the city	Protect the largest possible area of green space.  Protect the interest the owners (private and public investments)  Have strong links and clear axes with the old city	Gathering spaces for residents and tourists where they can enjoy leisure time shopping, evening experience as well as waterfront cultural expositions and performance.  A projected deck into the sea to be a pedestrian walkway overlooking old Saida, fishing activities and seating places.  To break the continuous balustrade by creating pockets of seating, wide steps leading down to the beach

**Therefore, the goals can be summarized in through these four points**

- Creating a network that links the largest number of landmarks that form the most important points of attraction in the city compared to residents and visitors.
- Provide a line equipped with facilities such as signs, parking lots for bicycles and shelters for pedestrians and cyclists for this network.
- Walking and biking must become the most used ways to get around the city to go to work and have daily needs every day.
- Innovate the design of the bicycle that will be equipped with a cage to put the bought and a GPS to specify the rental directly in case of injury, which encourage les shoppers who form a large portion of the people who move on the street.

Identifying the common outcomes related to promoting pedestrian and walking ...

Meeting the needs of people is very important to improve their way of life during their time, but turning their conversations into good habits will be more effective for their times and the future...

**A. Legibility**

A simple development target within the city main axes (Where the big and important features and Landmarks) enable visitors and residents to understand their distribution and how they are accessible and by what means.

According to the workshops and the meetings organized, the residents proposed to develop the facilities and to put more equipment on the ledge to facilitate the use of the cyclists to practice sport. Unfortunately, for them, the use of bicycles is very complicated to move in the city, because the width of the sidewalks is irregular, sometimes it is 1 m in front of the residential buildings (built in the 50's), because they border their garden with 1.5 m high walls, while in Al-Awkaf Street, which is a commercial neighbourhood, the sidewalk width becomes wider between 3m to 4m max. On the other hand, the illegal extension of the shops on the sidewalk and the hiding of the signs which organize the movement of merchants and vehicles behind advertisements and photographs which cause accidents, the distribution of trees and benches did not take into consideration to put a clean line for cyclists to use bicycles. This explicitly affects the continuity of the streets.

Then, the passages of the bicycles and pedestrians must be chosen according to the places in which there is the possibility of ensuring a continuous line with the least conflation between them and the other means of transport especially the cars. After a selection of the most important and attractive attractions in the city (commercial place, public spaces, historic monument, virgin green fields, seafront, restaurant ...). Then, the following document shows the selection of these landmarks, which has generated 2 loops, the first one which is the largest includes the seafront, the green fields that are considered the lung of the city and which reserves an original identity, new shopping centres and the education zone). While the second which is the smallest, it includes the historic centre of Saida, which is divided into four commercial and the historic city which includes all the historical and tourist monument. These two loops meet each other in several points that take into account the location of health services (hospitals, clinics and pharmacies), which ensures a very strong connection in pedestrians and users of bicycles.

**B. Landmarks**

The lines must include the largest number of landmarks in the city to make it more accessible to each other. The landmarks of Saida are divided into three categories:"

- The ancient city: In this zone, the widths of the footbridges are between 2.5 m and 4 m, which connect the most important historical monuments most visits and piazzas. But, access is quite complicated to reach in case of injuries, that make the movement of cyclists is almost impossible. According to the first workshops held in Saida with the students of the schools, he was asked to take photos for the most beautiful place and the worst place in the city. Most of the students are residents of Saida, who made a collage of the most beautiful place and that they were the castle of the sea, the old souk, the sea, the mosques, the public gardens,

the plains of the banana and lemon trees, the river and many other symbolic places ... and after the majority chose hill or waste is thrown, they were asked to suggest ideas of their imaginations, then the ideas were almost similar to creating a large green space that includes places to do sports, mosques, beautiful buildings, a yacht club, restaurants and many other ideas are all about creating a public space that attracts everyone

- The commercial area: which is the small loop that includes the modern extension of the ancient city, and the streets that connects it to the two attractive mall in the city (Saida mall and The Mall). The streets bordering this loop are quite wide and may include a special path for cyclists, although this width varies irregularly, which requires a great precision in design and a detailed study of how people are moving in these crowded places to perceive landmarks, signs and facilities safely.
- Is the largest loop, which includes the Saida Corniche, the east highway of the city that connects Beirut to the south and which is considered an important area line, and finally with the wide green fields of baboons and lime trees which lies to the north from the city and parallel to the seafront.



Fig. 5 Map of Saida shows the main landmarks and green spaces Fig. 6 Green Integration along the Corniche

### C. Continuity and enclosure.

A continuous built form street frontage is needed, throughout an area of the city or neighbourhood to allow users to easily understand where they are, directions to where they need to go and the purpose of the street itself. According to the standards of design, the way of the bicycles must be in different colour to provide them a safe lane to move, and generally it is covered with the trees to have more shadow which encourages them and pedestrian to move easily, and to be more protected during all the seasons either the sun during the summer or the rain during the winter.

In the case of Saida, the difference between sidewalk levels, the texture and distribution of furniture, trees and all other facilities were very important factors in drawing this tragedy. On the other hand, the participation of residents after the workshops has opened a horizon to hear their experiences and how they are still acting. The urban structure of the city is a network of connected spaces and routes, cyclists, public spaces, transit and vehicles. This organizing structure sets the framework of streets, blocks and lots that direct the overall land use pattern and built form of a community. Streets are the arteries of cities and neighbourhoods. A place's success can depend on how well it is connected to local services and boarder city. In reality, streets have many other

functions, they are vital components of neighbourhood and greatly affect the overall quality of life for the residents.

#### D. Visual connectivity and façade articulation.

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The presence of the doors close to the street and the entrances reflects a feeling of security, so what encourages people to circulate that is why shopping districts are the most attractive neighbourhoods, there are many services that are open on the sidewalk by ports. In Saida, these quarters are still in maintenance, and the municipality concentrates well on this area because it reflects the image of the city, and it was a very important reason that influenced the plan of this project. The function and the width of the street also plays a very important role, in fact, the Lebanese always try to look for the places where it can find places for the parking, which makes too many unknown streets in spite of that they connect points very important in which they can move on foot or on a bike. For example, we find a large number of vehicles that circulate to the place of the star, then we notice that there are two large parking that can include more than

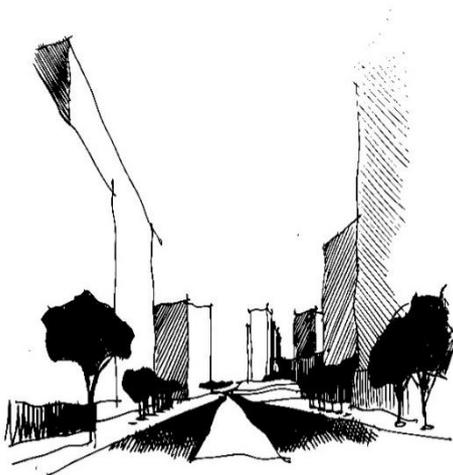


Fig. 7 Buildings heights – Takyedine AL-Solh Street

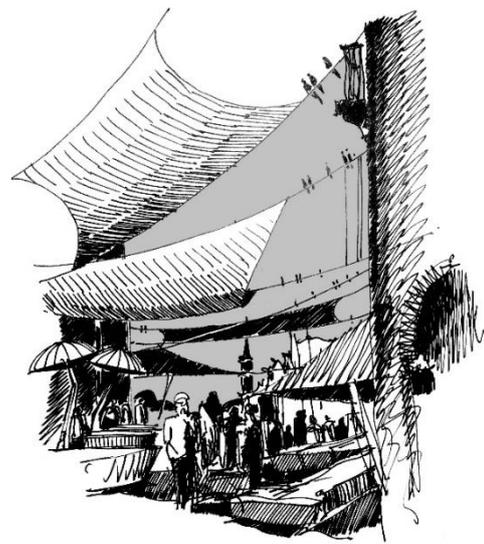


Fig. 8 Visual connectivity in the old city

#### E. Pedestrian movement

Older neighbourhoods within cities are usually configured for maximum convenience as the area has high connectivity and it is a place for pedestrians. A compact urban form, a legible urban structure, short blocks, pedestrian priority and a built form that is transit and pedestrian oriented ensures an area has maximum convenience for movement. In newer neighbourhoods, the street systems are usually curvilinear in nature with larger blocks, which reduces overall convenience and frustrates ease of movement for pedestrians.

According to the results of the studies done by SWEROAD in 2007, most of the problems of vehicle traffic are caused by the lack of cooperation between the public and the private sectors, or between public sectors themselves, and internal units dealing with security issues in some institutions seem ineffective and these units are not always fully supported by senior officials. And

that has given several proposals that facilitate the movement of vehicles, while if they have tried to develop the facilities to use bicycles and walk, it will reflect positively on the problem of cars and that will become less complicated. During the last three years, the city aims to create another highway that runs parallel to the current highway, to eliminate the amount of cars and transform part of the street just for the pedestrians, but it will have very dangerous effects on the city's economy.

A well-integrated system of roads, paths and transit routes encourages and allows people to move safely that create vibrant and healthy city.



Figure 6 Multi-use of the pedestrian – Fouad Chehab Street.

#### F. Permeability

Urban design principles states that spaces are vital to the health and sustainability of the city's neighbourhood. People of Saida need the ability to move through and around the city, so the main goal is to improve how people move and to provide them freedom of movement through connections and choices in mode of transportation, through safety and security. When the design and facilities in the city are oriented to develop the use of cars (larger roads, parking's ...), then this city becomes a city of vehicles, and their number increases more and more. On the other hand, when it is directed towards the people, one finds that the city is for the people, and more and more they fill the streets and the public space. Developing the pedestrian and cycling need to take into consideration their needs, and strengthening the relationship between them and the other modes of transportation, by generous sidewalks and amenities such as streetlight and street furniture and equipment and natural shelters.

#### G. Traffic calming

Urban design principles states that spaces are vital to the health and sustainability of the city's neighbourhood. People of Saida need the ability to move through and around the city, so the main goal is to improve how people move and to provide them freedom of movement through connections and choices in mode of transportation, through safety and security. When the design and facilities in the city are oriented to develop the use of cars (larger roads, parking's ...), then this city becomes a city of vehicles, and their number increases more and more. On the other hand, when it is directed towards the people, one finds that the city is for the people, and more and more they fill the streets and the public space. Developing the pedestrian and cycling need to take into

consideration their needs, and strengthening the relationship between them and the other modes of transportation, by generous sidewalks and amenities such as streetlight and street furniture and equipment and natural shelters.

#### H. Urban Health Facilities

Sidon has many medical and clinical centres, and is considered the healing centre that are in the city that does not exceed an area of 8 km<sup>2</sup>, so there are 4 hospitals, two in the surrounding neighbourhoods of the old city, and two east of the city (just one kilometre from the al-alwastany area). In addition to a big number of clinics and the centre of the Red Cross in the city. This is an important factor in ensuring the safety of passengers and pedestrians in the case of injury. The old city centre, where more than the width of the road 3 m, in addition to the encroachment of shop owners on the streets to show their goods, it is almost impossible to design a private path for cyclists, so the riders collide with the pedestrians because of density of the streets, and the result is difficult to access to reach the injuries locations.

#### I. Adaptability

Cities and neighbourhoods are constantly changing, and if there is not a clear plan that responds to the needs of the people, the development of the city will be complicated, Which hinders any integrated development project aimed at improving the lives of the people of the city in terms of health, social and economic. The future plan of the city must be understood to make this proposal more effective depending on the new change, and it must influence the changings too.

For example, most restaurants, institutions, business and commercial centres are located on the main streets of the city to be clearer and available for cars, like the highway east of the city – a large axe -where there is a large number of cars passing by and which is positively reflected on the city's economy. But, there is a future vision that aims to turn this highway to an internal street that includes private lanes for cyclists and pedestrians while cars traveling from Beirut to the south and the opposite will pass on a new highway that borders the city, which has very dangerous effects on the economy of the city. While the organization of this current highway and aware the residents about the importance of using bicycles and walking and its positive impact on their health that comes directly from their participation.

Another example, making safe and attractive places for people will increase its value which attracts commercial activities that enrich the economy of the city and that the existing streets of the city instead of making extensions that eliminate green spaces in the city that makes landmarks more disconnected.

#### J. Street furniture

Furnishings are not limited to seat shapes, lighting, and bike position. There are many problems due to the lack of a system of uses. For example, the place where the waste can be placed in places that hinder the movement of pedestrians, and the irregular distribution of trees may affect the safety of people and their property, bird droppings and fall leaves and branches may cause people to slip and in case if the street is not always cleaned, or add shelters to protect the people and the pavement in some places. So in this case, it must have a harmonious design that includes all pieces of furniture that sign for public use, and that form points of identification for merchants and cyclists. This Harmony is through colour, accessible localization, form and materials.

Here is a list of some furniture that are specific to this proposal that meets the needs that invites people to participate in a permanent way:

- Small kiosks that contain an electronic board in several important points in the city and that connect to several restaurants, and or have water directly, which help people to make orders directly and pay by cart instead of using their phones. In this case, these points become more and more attractive especially if they are surrounded by quiet public spaces to relax and eat something.
- A variety of bench design helps people to do several activities, such as reading, eating, drinking, preserving and picnics, especially beside the electronic kiosks that serve them directly and encouraging them to stay longer in public spaces.
- Have a specific line for bikes and pedestrians with distinctive colours and car parks and that will be accessible to all public spaces and to different kiosks.

- The bicycles must be equipped with baskets, each one contains a place to put the private objects or put the purchases, and a glass to drink water from the electronic kiosks directly in using plastic bottles.
- Small lights that work on solar energy to light the sidewalks during the night, since in Saida, after 9:00 pm, the movement of people the movement is almost disappearing.
- Shelter needs in places where trees cannot be grown because of sidewalk widths.
- All schools that turn directly on the line in previous documents must provide parking for bicycles to discourage students from using them. Finally, schools are the most effective places to build a new generation more aware.

## 5. CONCLUSION

Urban design is a shared responsibility, requiring holistic, multi-dimensional approaches. The involvement of public before the adaptation of urban strategies is essential to ensure that the final design will respond to their needs. This research is based on the outcome of several workshops conducted in the city of Saida and showing that there is a potential of change by reusing the existing infrastructure and adding small but powerful features in a different way - It is also essential to monitor the citizens awareness by tracking their daily behaviors which are reflected directly on the city's urban design.

## ACKNOWLEDGEMENT

We would like to express our special thanks to the different workshops organizers in Saida, they have all provided a huge amount of their effort in order to involve all segments of Saida's inhabitants to share their ideas and visions.

Secondly, we would also like to thank the municipality of Saida and its members, for their support and initiatives.

## REFERENCES

- Berta, M., Bottero, M., & Ferretti, V. (2018). A mixed methods approach for the integration of urban design and economic evaluation: Industrial heritage and urban regeneration in China. *Environment and Planning B: Urban Analytics and City Science*, 45(2), 208–232.
- Brabham, D. C. (2009). Crowdsourcing the public participation process for planning projects. *Planning Theory*, 8(3), 242–262.
- Brandão, A. L., & Brandão, P. (2017). Public Space, Infrastructure, Landscape: an interdisciplinary matrix for urban spatial continuity. *The Journal of Public Space*, 2(1), 123–134.
- Dempsey, P. C., Larsen, R. N., Sethi, P., Sacre, J. W., Straznicky, N. E., Cohen, N. D., ... Kingwell, B. A. (2016). Benefits for type 2 diabetes of interrupting prolonged sitting with brief bouts of light walking or simple resistance activities. *Diabetes Care*, dc152336.
- Galderisi, A., & Ceudech, A. (2010). Soft Mobility and Pedestrian Networks in Urban Areas. *Tema. Journal of Land Use, Mobility and Environment*, 2.
- Krizek, K. J., & Johnson, P. J. (2006). Proximity to trails and retail: effects on urban cycling and walking. *Journal of the American Planning Association*, 72(1), 33–42.
- Litman, T. A. (2017). *Economic value of walkability*. Victoria Transport Policy Institute.
- Muhlbach, J. D. (2012). Building Healthy Communities: Integrating Walkability Concepts into Local Land Use Planning.
- Stelzle, B., Jannack, A., & Noennig, J. R. (2017). Co-design and co-decision: Decision making on collaborative design platforms. *Procedia Computer Science*, 112, 2435–2444.
- Tukiainen, T., Leminen, S., & Westerlund, M. (2015). Cities as collaborative innovation platforms.
- Wilson, A., Tewdwr-Jones, M., & Comber, R. (2017). Urban planning, public participation and digital technology: App development as a method of generating citizen involvement in local planning processes. *Environment and Planning B: Urban Analytics and City Science*, 2399808317712515.
- Mr. Dalibalta Ali - interview, municipality of Saida, April (2013)
- Mrs. Al-Zayn Aya - interview, Department of real states, April (2013)