LIVABLE CITY: A STUDENT DESIGN PROJECT ON AYVALIK, TURKEY

YAŞANABİLİR KENT: AYVALIK' TA BİR ÖĞRENCİ PROJESI TASARIMI

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Abstract

Today historical cities live difficulty to cope with the changes that deplete urban life. Streets are overloaded with vehicles and scarify the pedestrians on streets and open spaces which lose their relevance while being slowly replaced with parking lots. Generally, urban open space is slowly detaching from sustainability, accessibility and pedestrian friendliness which are important criteria to make a city livable. However, livability criteria of the city are an important factor of residents' overall well-being which can be practiced and accelerated where needed. A modern city should provide features to raise inhabitant's quality of life as much as possible. This paper proposes measures that theoretically increase life quality for a livable city. Two urban qualities, sustainability and accessibility are presented as encompassing a pedestrian friendliness through layers of networks such as pedestrian paths, open spaces, facilities and greenery. Once the measures are established those were to be evaluated through a case of Ayvalık. After the city's historical and urban analysis, the recommendations on livability layers are given. Decisions and principles of transformation are shown in detail on a chosen smaller city neighborhood at the center of the city. These principles have been applied to a cultural center architectural design project which is an experimental student work of a master student on architecture in Istanbul Technical University.

Keywords: Livability, sustainability, accessibility, pedestrian friendly, open spaces, connectivity, walkability.

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Özet

Günümüzde tarihi kentler kentsel yaşam kalitesini azaltan değişimlerle başa çıkmakta zorlanmaktadır. Sokaklar taşıtlar ile aşırı yüklenmekte ve işlevinden uzaklaşarak yayalar için korkutucu olacak şekilde araç park alanlarına dönüşmektedir. Genellikle, kentsel açık alanlar bir şehri yaşanabilir hale getiren en önemli ölçütler olan sürdürülebilirlik, ulaşılabilirlik ve yaya dostu olma özelliklerinden uzaklaşmaktadır. Buna karşılık kentin yaşanabilirlik ölçütleri, deneyimlenebilen ve güçlendirilebilen toplu iyi olma hali için önemli bir etmen olmaktadır. Modern bir kent yaşayanların yaşam kalitesini artırabilir özelliklere sahip olmalıdır. Bu makale yaşanabilir bir kentin teorik olarak yaşam kalitesini artıran ölçütleri önermektedir. İki kentsel kalite olan sürdürülebilirlik ve ulaşılabilirlik kavramları, yaya yolları, açık alanlar, hizmet alanları ve yeşil alanlar ağ katmanları üzerinden yaya dostu olma teması ile ortaya konmuştur. Ölçütler ortaya konduktan sonra Ayvalık kenti vakası üzerinden değerlendirilmiştir. Kentin tarihsel ve kentsel analizi yapıldıktan sonra, yaşanabilirlik katmanları üzerine öneriler sunulmuştur. Kararlar ve dönüşüm ilkeleri kent merkezinde seçilen bir alan üzerinde detaylı şekilde açıklanmıştır. Bu ilkeler İstanbul Teknik Üniversitesi' de yüksek lisans bölümü öğrenci deneysel projesi olarak bir kültür merkezi mimari projesi üzerinden uygulanmıştır.

Anahtar Kelimeler: Yaşanabilirlik, sürdürülebilirlik, ulaşılabilirlik, yaya dostu, açık alanlar, bağlanabilirlik, yürünebilirlik.

Introduction

The urban environment is continuously transforming with new technologies, transportation modes, lifestyles on streets and public spaces parallel to population and building increase. These modifications seem to develop a challenge for urban planners and architects for a better and healthy urban life. Today, many aspects of urban planning are based on a concept of livability. Livable city notion has borne as an extension of urban quality and sustainability seeking after the 1980s in North America with a response to car-dependent urban sprawl (Auckland, 2000). A primary aim of this concept is to create a life quality and sense of belonging within a human-scale in a sustainable urban milieu. Livability and sustainability concepts are used interchangeably in terms of "quality of life and well-being" (Woodcock, 2009). "Livability is considered as a subset of a sustainable city" (Giap et. Al., 2014) as they are intimately connected to each other (Girardet, 2004).

"Sustainability is the ability to sustain the quality of life we value or to which we aspire. In operational terms it is often viewed as enhancing the economic, social, cultural and environmental well-being of current and future residents" (Timmer & Seymoar, 2005). In their research article, Leach et. al. (2016) point out three themes that arouse the relation between sustainability and livability: environmental performance, urban context and drivers of change as technology, climate change, resource use and global urbanization. Sustainable urban environment pretends to be a prerequisite of a livable city.

"... a livable city is a 'sustainable city': a city that satisfies the needs of the present inhabitants without reducing the capacity of the future generation to satisfy their needs… In the livable city both social and physical elements must collaborate for the well-being and progress of the community, and of the individual persons as members of the community" (Salzano, 1997).

A city is a multi-layered organism in which citizens seek for a sustainable lifetime quality which can be provided by livability concerns. This paper works on a theoretical livable city model and discusses the variables of this model on a master's degree student project designed in terms of livable city pedestrian-friendly concept in a mid-scale town located at Aegean coast of West Anatolia: Ayvalık, Turkey.

Livable City Approach

Livability refers to an urban system that contributes to the physical, social and mental well-being and personal development of all city inhabitants. It is about exceptional and desirable urban spaces that offer and reflect cultural and sacred enrichment (Timmer & Seymoar, 2005). Livability is a complex concept that encompasses multiple aspects of urban life (Southworth, 2003). The quality of life is tied to people's opportunity to access infrastructure as communication and transportation modes, food, clean air, housing, networks of paths, open spaces, facilities, greenery and parks. In general, livability can be determined as a quality of living and the quality of a daily routine which city residents can experience.

In practical life and literature, *Urban Livability* is treated in terms of health (Freeman et.al., 2013), experience (Cambra, 2012), environmental attractiveness (Park, 2008), security, sustainability, accessibility (Chiu et. al., 2015), walkability (Lo, 2009), lifetime quality (Southworth, 2003), connectivity and legibility (Jun &Hur, 2015). In recent years, walkability has become a dominant criterion for a livable city environment, because livable cities define an urban formation that inspires walkability by linking street patterns and facilities for living, working and recreation (Forsyth & Southworth, 2008) within an optimum closeness to encourage security, sustainability and pedestrian- friendly environment (Jones, 2006). Walking is "the foundation of a sustainable city" by providing social, environmental and economic benefits (Forsyth & Southworth 2008), because it is a green and simplest mode of transportation (Cambra, 2012) and it is healthy and enjoyable (Littman, 2011). Ewing and Hardy (2009) propose a conceptual framework that defines urban design qualities in terms of perception and former experience of a person. These qualities expand from objective physical features and urban design qualities to subjective individual reactions as a sense of safety, comfort and level of interest. The combination of these three factors defines overall walkability and walking behavior as a conclusion.

Pedestrian cities are growing in popularity in many top regions around the world where European cities are some of the finest examples of pedestrian-friendly livable forMS Ljubljana is an example where vehicle traffic is banned in certain city area which is composed of only pedestrian streets. Furthermore, Paris is gaining a reputation as a pedestrian city. With its narrow and Medieval streets Marais is one of the oldest parts of the city. It is going to become one of Paris's new zones intended only for people as pedestrians. The analogy to city livability can be lined with a Cittaslow program which searches towns that are "rich of theatres, squares, cafes, workshops, restaurants and spiritual places with untouched landscapes and charming craftsman where people are still able to recognize the slow course of the seasons" (Cittaslow, 2017). This program is focusing on environmental, infrastructural, touristic, agricultural and artisan policies, improvement of urban programs, social cohesion; while providing more deep criteria for accomplishing progress in general.

The conceptual framework underlying in this study of "livable city approach" is the combination of two basic qualities: sustainability and accessibility. These two urban qualities encompass to a proposed "pedestrian-friendly" urban environment that has multiple layers of a network as pedestrian paths, open spaces, facilities and greenery (Fig. 1).

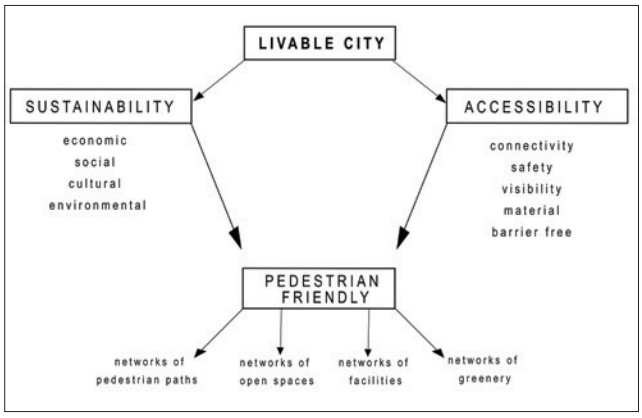

Figure 1. Basic qualities of livable city / *Yaşanabilir kentlerin temel nitelikleri*

Pedestrian Friendly City

Livability status is higher when a city is planned as pedestrian friendly. To enhance livability and pedestrian friendliness in the city, networks of pedestrian paths; open spaces; facilities and greenery should be provided. Pedestrian paths provide walkability and movement, open public spaces enable interpersonal activities, diversity of facilities increase the usage level and finally greenery over the city scope offers recreational points of the city.

Network of Pedestrian Paths

"The paths, the network of habitual or potential lines of movement through the urban complex, are the most potent means by which the whole can be ordered. The key lines should have some singular quality which marks them off from the surrounding channels: a concentration of some special use or activity along their margins, a characteristic spatial quality, a special texture of hour or facade, a particular lighting pattern, a unique set of smells or sounds, a typical detail or mode of planting" (Lynch, 1960).

An organized network of pedestrian paths supports vehicle free paths with high livability index. The walkability describes how the built environment is actually pedestrian friendly. It is a useful criterion for evaluating the characteristics of an area. Some key features of a walkable community may be identified as connected, clear, comfortable, convenient, pleasant, safe, secure, universal and accessible (Ceccon & Zampieri, 2016) .

Designing crosswalks where possible, providing pedestrian amenities as street lighting and street signage are minimum requirements for creating paths and public spaces that are pleasurable, comfortable and attractive (Shrestha, 2011). Connectivity of the paths should be enabled for use during various seasons. Different shadow elements should be provided where needed, the greenery of a specific kind should be chosen to protect the users from the uncomfortable weather influences. Choosing the proper materials of pavements or urban elements is also an important factor in the adaptation of the space due to the seasonal changes.

Paths should be advanced in its program which is going to enrich its usage. "If we wish to encourage walking we need to deal with more than connectivity, land use patterns, safety, and quality of the path itself. A safe, continuous path network in a monotonous physical setting will not invite pedestrians. The path network must engage the interest of the user" (Southworth, 2005).

To summarize, in general and wider scale; important public spaces and people-oriented activity nodes should be connected through continuous and convenient pedestrian paths. Public transport stops and stations should be located at convenient locations and connected to the main pedestrian movement pattern and pedestrian activity nodes.Sidewalks should be kept free from street vendors (Shrestha, 2011) (Fig. 2 & 3).

Figure2. Strøget, Denmark Retrieved from https://www.pps.org/reference/8-p rinciples-streets-as-places/ / *Strøget, Danimarka, Alıntı adresi; https://www.pps.org/reference/8-principles-streets-as-places/*

Network of Open Spaces

"A livable city is a city where common spaces are the centers of social life and the foci of the entire community. A livable city must be built up, or restored, as a continuous network – from the central areas to the more distant settlements – where pedestrian paths and bicycle-paths bind together all the sites of social quality and of the community life" (Salzano,1997).

Figure 3. Brugge, Belgium Retrieved from https://www.weelz.fr/fr/indemnite-kilometrique-velo-conseil-valide-loi/ / *Brugge, Belçika, Alıntı adresi; https://www.weelz.fr/fr/indemnite-kilometrique-velo-conseil-valide-loi/*

Open spaces are the points of social interaction and public activity. They can be seen as comfort zones of a town or with another point of view; outer living rooms of the neighborhoods. The medieval town square, or as it is called; piazza, is often qualified as the heart of a city with its support for outdoor living and socializing spaces; a site for markets, celebrations, and the place where one goes to hear news, buy food, talk politics, or just watch the world pass by (Cooper Marcus, Francis, 1976).

To enable open spaces to exist and live properly it is important to give them a function and a value. Those kinds of spaces should gather various programs and be occupied by determined usage, in such a way that it will engage the interest of users. An open space network should encourage more active lifestyles by offering a variety of safe and attractive spaces that are well distributed throughout a neighborhood and fulfill the various needs of the community (Auckland City Council, 2007). Preferably, public open space should attempt to attract and invite various users. For example, through landscaping and the addition of facilities, a sporting area could be designed to attract sportspeople, walkers and children (Giles-Corti, 2005).

To encourage movement, action and walkability in a city, the network of open spaces should be organized in major or minor urban scale. There is a connection between movement and space. Because, the public space allows all possible movements and, at the same time, influences the form of movements (Ceccon, Zampieri, 2016). For pedestrians or cyclists, proper accessibility to open space is an important factor to enable the dynamic use of the network of open spaces.

Public space should offer comfortability to the residents and users of the public milieu of the city. Benches, street furniture and amenities should be creative, qualified, safe and designed with innovative solutions to engage the interest of the users and bring them out on the streets and open spaces while encouraging the social interaction and activity of a city. Adaptation of the cityscape and its public spaces to the seasonal changes enables the adaptation of the city to the whole cycle of the year by providing a diversity of architectural and smart solutions with a preferred quality in use. Then, the usage level of the places shall increase with the aid of creative and flexible solutions to encourage the livability of the city (Fig. 4 & 5).

Figure 4. Place d'armes, Luxembourg Retrieved from https://i.ytimg.com/vi/kXVgZbz6ipY/maxresdefault.jpg / *Place d'armes, Lüksemburg, Alıntı adresi; https://i.ytimg.com/vi/kXVgZbz6ipY/maxresdefault.jpg*

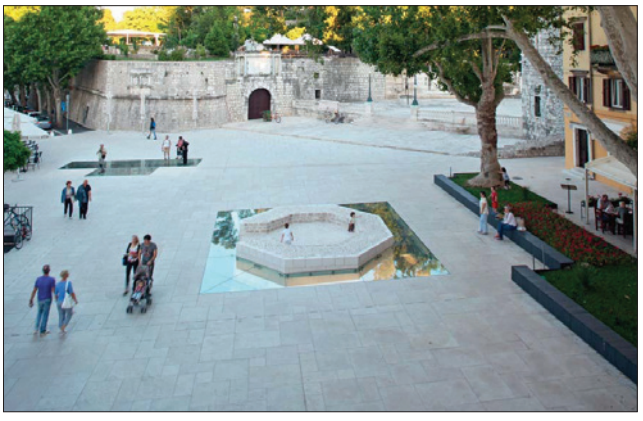

Figure 5. National square Zadar, Croatia Retrieved from https://vizkultura.hr/trg-i-poljana-u-zadru/ / *Zadar Ulusal Meydanı, Hırvatistan, Alıntı adresi; https://vizkultura.hr/trg-i-poljana-u-zadru/*

Network of Facilities

"The building with a lively building edge is connected, part of the social fabric, part of the town, part of the lives of all people who live and move around it…If the edge fails, then the space never becomes lively" (Alexander, 1977).

A Network of the facilities provided for the city itself will enrich the usage of the programs and at the same time, consequently, will encourage people into the movement. While targeting a certain facility or program, residents are living the city space; passing through the provided paths or enjoy offered public open spaces. These facilities are the utility background of the city and it is the second most important purpose for the city residents after residential needs. Gathering the facilities around the public spaces will increase the activity of the open spaces itself, or locating them through the lines of streets will enrich the operation communication over the paths. For instance, a good dining facility such as a restaurant or just a coffee place adjoined to the open space is certainly going to improve its usage. Similarly, facilities like a school or a library with a qualitative environment and pedestrian connections are going to attract the people to the streets.

These facilities can be seen as landmarks of the city as well, serving to provide orientation and imageability of the environment. "Landmarks, the point references considered to be external to the observer, are simple physical elements which may vary widely in scale. There seemed to be a tendency for those more familiar with a city to rely increasingly on systems of landmarks for their guides—to enjoy uniqueness and specialization, in place of the continuities used earlier" (Lynch, 1960). Creating the network of facilities, or to say landmarks, over the city will strengthen the other layers of the city such as open spaces or paths and consequently increase the quality of pedestrian friendly city.

Network of Greenery

Greenery has always played an important role in towns. The need for green spaces has been present at a city level since old times. Greenery supplementing the street profiles, squares, intersections of the paths, is going to improve the space on many different levels. Whether handing a shadowing solution, cleaner air, heating insulation improvement, inducing a cooling effector by just providing visually more pleasurable surroundings, greenery increases the quality of the city. Especially under the topic of pedestrian friendly determined city, these features, that more nature in the town give, are more welcomed and desired. Green spaces have a crucial role in the promotion of an urban image and a confident perception of the urban space by citizens, justified by the visual interest that nature provide; hiding aesthetically uninteresting surfaces and valuing the property. Greenery is a promoter of a positive environmental image at the city scale, provided by extensive spaces invoking the presence of the nature on a built context. Furthermore, it can be used in urban rehabilitation actions as being an icon of modernity in a competitive city, which typifies the contemporary society (Virtudes, 2016).

Livability Coherent with Turkish Culture

Turkish culture is one of the highly social interactive cultures. People are spending their free time outside, meeting each other and sharing daily routine. As well as adult part of population, youth is also willing to interact. Children are involved in neighborhood group plays, while youth is socializing in open areas or closed social places.

This culture supports a strong outdoor cafe and tea culture. Outdoor cafe seating is a large contributor to the liveliness and spirit of the public realm. The possibility to sit outside having a meal or a tea, and at the same time being able to be a part of the public street life has a strong appeal to people worldwide (Gehl et al., 2013).

Conclusively, Turkish people are willing to use social places, whether those are open, semi-open or closed. The important fact is that it is providing interaction, shelter or interest for an individual (Fig. 6).

Figure 6. Social interactions between people at open spaces (Zec, September 30, 2017) / *Açık alanlarda insanlar arasındaki sosyal etkileşimler (Zec, 30 Eylül 2017)*

Case Study: Transformation of the Ayvalık to a Livable City

In this case study, Turkish city Ayvalık is going to be examined from the viewpoint of proposed qualities of a livable city model. The analysis is based on the data collected in the field and through literature resources. Suggestions are to be implemented in order to enhance the city to the higher level of livability with respect to its historical and present values.

History of Ayvalık

Ayvalık is a county of Balıkesir province, located on Turkey's north Aegean coast, opposite to the Greek island of Lesvos at the north of İzmir and south of Çanakkale provinces (Fig. 7). It is a coast town united of 22 islands, bays, peninsulas and hills. This rare geography is boarded by Aegean sea on the west and by two mountains on the east, which are covered with olive groves expanding over almost half of the city region.

The effects of the period of political instability in the Ottoman State between the second half of the 19th century and the beginning of the Turkish War of Independence were noticed in Ayvalık too. At the end of this period, during which the political and demographic structures of the region were entirely changed, Greeks of Ayvalık were pushed to migrate to different places in the Greek mainland while Turks from Lesbos and Macedonia were resettled in Ayvalık.

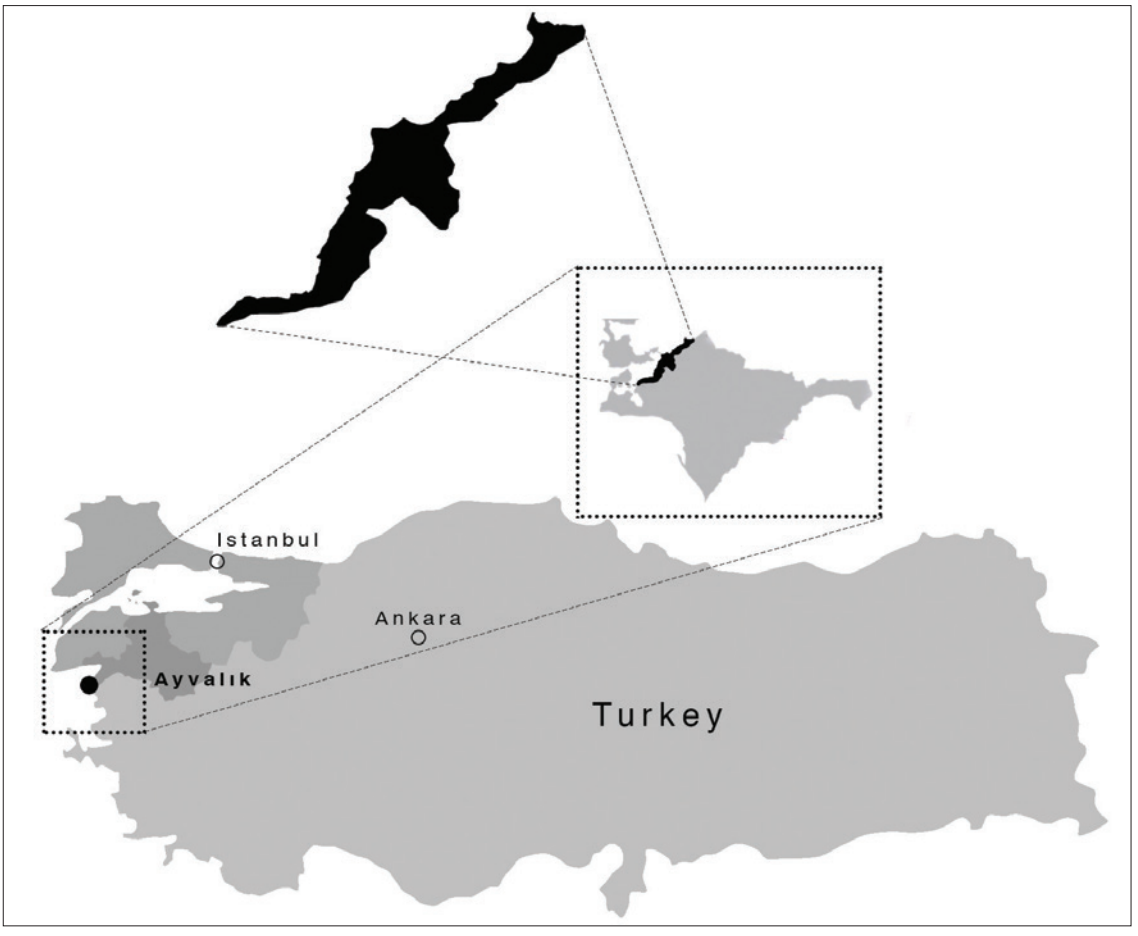

Figure 7. Location map of Ayvalık city / *Ayvalık kentinin konum haritası.*

Ayvalık has grown as a settlement where Christians and Muslims lived together since the 15th century. The progressive development of the settlement started after the 18th century. Under the Ottoman rule where Greeks were almost the entire population in 18th and 19th centuries, Ayvalık has been an important Greek settlement. As a result of advances in the production of olive and side-products Ayvalık became an important trade port after the 1880s. This success in economy produced an unparalleled cultural identity which found its physical expression in the cultural building patterns, materials etc. constituting the urban fabric itself in the 19th century.

In population exchange Ayvalık has lost approximately half of its population. So it can be assumed that some of the buildings were abandoned and part of existing building stock became out of use after the population exchange. While the new residents tried to revitalize agricultural production in Ayvalık, the earthquake that took place in 1944 caused great demolishment within the settlement. The population of Ayvalık started to increase after the1950s when olive production and relevant industrial sectors started to develop (UNESCO, 2017).

Urban Development and Architectural Features of the City

Until the early 19th century, Ayvalık developed intensively. After the Turkish – Venetian wars (1714 – 1718) there had been a migration from the Aegean settlements to Ayvalık. This population increase caused the settlement to expand towards the south part of the river which divided Ayvalık into two in a north-south axis (Fig. 8). In 1770, the slopes of the hills near the city-center began to be occupied by another immigrant group which came from the Peloponnesian (Morea island) after the Ottoman – Russian war in 1769 (Psarros, 2004).

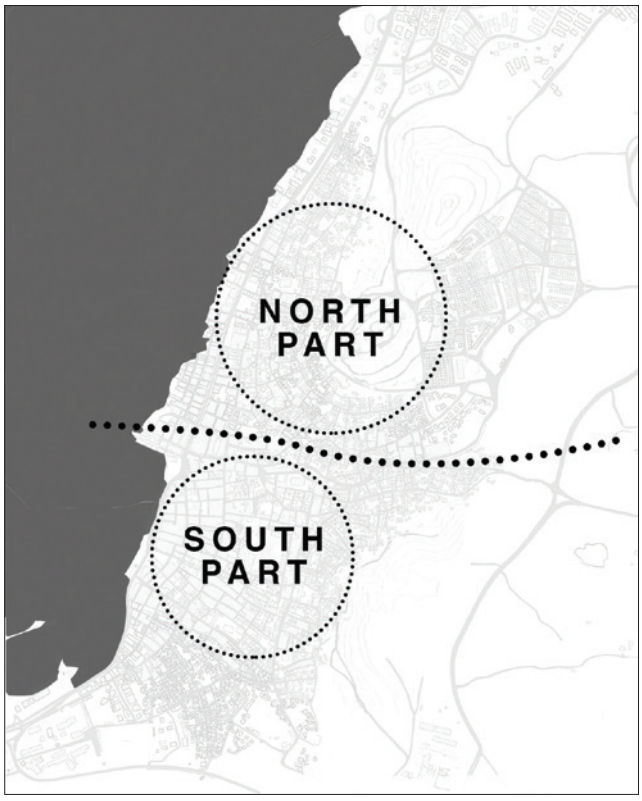

Figure 8. Ayvalık divided into two, in a north-south axis / *Kuzey-güney ekseninde ikiye bölünmüş Ayvalık kenti.*

In historical perspective, the town has developed towards the sea on the West starting from the hills on the East along the perpendicular river basins towards the coastal line. Town center is marked by this two hills located on North-East and South-East. Ayvalık Port forms the Western boundary of the town center and also the sea plays the important role of the urban life in Ayvalık (Çetin, 2012).

In the microscale Ayvalık is again divided in subzones, bordered with the main city axes; the roads, perpendicular or parallel ones. Four major arteries of the town center are Barbaros Street, Atatürk Street, *13th of April Street* and *Dereboyu Street.* Four districts of the town center are Coastal Zone, Middle Zone, Hill Zone 1 and Hill zone 2 (Kıyak, 1997) (Fig. 9). Coastal Zone is one of the most vital zones of the town. Middle Zone accommodates two churches which are currently used as mosques, Bazar, creating an important urban void (Çetin, 2012).

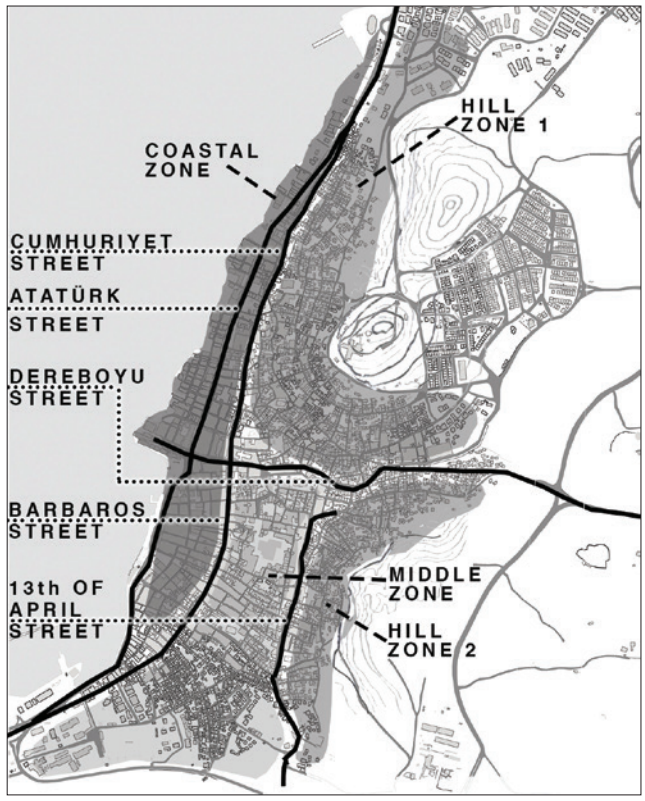

Figure 9. Physical development of Ayvalık (Psarros, 2004) / *Ayvalık kentinin fiziksel gelişimi (Psarros, 2004).*

The Development Plan prepared in 1972 was implemented in a partial extent of the overall area. Among other, there was also the decision of relocating the olive-oil factories which cause pollution in the city, to the new industrial zones outside the city. Although this transformation solved some problems in the city, it caused a majority of the industrial buildings in the city center to become non-functional. Later, new development areas were only permitted outside the boundaries of 'urban' Conservation Areas in Ayvalık and Cunda. In these new areas especially summer houses and touristic buildings were constructed. Building density was kept at the minimum in new development areas (Terzi, 2007).

Ayvalık still reserves a rich variety of buildings from the 19th -century. The industrial and commercial core of Ayvalık city is located on the coastline and are recognized by the tall brick chimneys that are an important component of the urban identity and most of them are remaining today. The main transportation axis of the city, Ataturk Boulevard, separates this production zone from the urban pattern in the north. Responding to the topography, the street pattern follows an irregular griddle plan.

The residential zone spreads from the coast to the east and is followed by a pine grow. The buildings forming the residential fabric in Ayvalık include churches, some of which have been converted into mosques. Schools were constructed adjacent to churches and houses. Schools that are attached to churches are considered as the heart of the neighborhood. Typical Ayvalık house gives a unique character to the city. These houses are usually built in long and narrow building lots directed towards the street front. However, the paths are mainly defined by the facades. The alcove in the street façades of the houses, which is formed by the entrance door and stairway, provides movement in the masses altogether with extrusions and balconies extending towards the street line. Every house has a courtyard and/or a back garden. The houses, almost all of which were built in the 19th century, have lots of characteristics of the traditional architecture of Mediterranean and Aegean regions. Distinguishing feature of Ayvalık houses is the reflection of the spaces locally called *mağaza* (shop), which are used as storages and/or workshops, on the street. These spaces, which are accessible directly from the street, can be ordinarily designed or they can be decorated in more complicity and serve as the city center shops (Fig. 10) (UNESCO, 2017).

Existing historic industrial and commercial cores and the residential fabric around them in Ayvalık and Cunda are still protected in a holistic manner. Although the number of abandoned and neglected historic buildings among the current building stock in the historic quarters of the city is high, buildings with different properties both in the historic city center and in the residential fabric have reached to the present day with partial functional changes yet by keeping their originality (Terzi, 2007).

Figure 10. Religious industrial and residential traditional architecture of Ayvalık, (Zec, September 29, 2017). / *Ayvalık kentinin dini, endüstriyel ve geleneksel konut mimarisi (Zec, 29 Eylül 2017).*

Constraints and Potentials of Ayvalık

Livability of a city is strong and interrupted at the beginning in terms of pedestrian friendliness. But after the the vehicles have been integrated to existing streets of the city walkability has been limited and streets' functions have been weakened. However, in Ayvalık the pattern of the city with its narrow streets perpendicular to the sea are preserved until today. The city's sustainability is increased with these narrow streets which disable the negative effect of the strong sun in a hot Aegean climate, and street orientation towards the sea provides a convenient summer breeze.

Ayvalık is also rich with its cultural diversity with its preserved Greek-origin churches which are now used as mosques, various monuments and buildings of industrial heritage, olive oil and agricultural industry. Today, the presence of all these monuments contribute to the general city accessibility and orientation. Their distribution around the town is in a pedestrian reachable scale in not more than the radius of 400 meters.

Some of the pushbacks of the city are is the extreme increase of population number in summer and decrease in winter due to the city's reputation as a summer holiday town. Consequently, second-home owners are taking up prime locations on the waterfronts around the city. Although the olive oil industry has supplied the formation of city character, it does not resonate through the town like older times. It is a dominant threat that city will lose its identity with time if this transformation process proceeds in this way. The continuous blockage of the waterfront will weaken the connection of the city with the sea and distance the city of its historical and cultural background.

Due to the strengths and correctable drawbacks, the city still has an opportunity to regenerate itself in a valuable development in the region. If the historic buildings and monuments would be regenerated and connected through convenient paths, the city could gain its value of cultural heritage once again. An industrial landscape which is on the UNESCO's tentative list (UNESCO, 2017) should be preserved properly and emphasized as the points of new programs such as various educational, cultural or entertainment contents. Thus Ayvalık can regain its reputation and the city can become a known industrial heritage city. Existing industries can be encouraged by opening up institutes, providing education and gain an important role on the market as a real productive city. The pedestrian layer should be laid across the city to serve the utility and enable practicing of all the city highlights.

Livability Analysis of Ayvalık

In order to give a constructive recommendations and proposals, detailed analysis of the city macro scale is necessary. Data collected on the site has been presented through various mapping and interpreted according the proposed livable city model.

Network of Pedestrian Paths - Current Condition and Proposal

"Walking is the main mode of human movement and is necessary for experiencing urban space. While walking, one becomes an observer and judge of the urban landscape. Although pedestrian traffic is the main category in moving around a town, it is frequently regarded as a self-regulating system, created as a "by-product" while developing a vehicle traffic system" (Cieślak, Szuniewicz, 2015). When observing Ayvalık's streets, it is visible that all of them are vehicle allowed. Despite the insufficient width or inadequate pavement conditions car park is spread all over the city streets or public open areas. This way of the uncontrolled parking area is disabling any possibility of appropriate circulation or open space usage by the residents, whether they are pedestrians, cyclists or drivers. Vehicles, cars or smaller trucks are passing through the streets and distracting daily activities of the city residents. Any kind of open-air street usage is not possible if a car is to pass.

To increase walkability, we recommend to close city center for vehicles in a certain time period of the day from 9:00 am to 6:00 pm. Besides this time period, delivery or emergency vehicles should be allowed to access to the streets. Car parking is to be organized under the biggest open area in the middle of the city, supplying the area within 5-minutes walking distance. Around this area it shall be provided a vehicle allowed a circular connection, reaching the underground garage. With the above regulations, streets can be completely left to the pedestrians and utilities of the streets could be richer. Open spaces would really be for pedestrians and enabled for many different usages. Because, "the key to establishing lively and safe public spaces is pedestrian traffic and pedestrian activities" (Gehl et al., 2004) (Fig. 11).

Network of Open Spaces - Current Condition and Proposal

Ayvalık has a high-density urban pattern. Mostly, buildings are built completely one next to the other, leaving the streets a low percentage of leisure spaces and any void spaces inside built urban pattern. Existing public open areas are accommodating vehicle parking areas, and are generally in a bad physical condition. Pavements are of a poor quality, with bad drainage solution or with no solution at all. Urban equipment is not provided in almost any way, as well as any greenery or shadowing elements.

However, despite mentioned factors, high density of the area is strongly defining existing open areas and a number of areas in the city are open for the improvement measures and adaptation to a people-friendly public space.

To enhance Ayvalık's livability or to make it more pedestrian friendly it is certainly recommended to increase the number of public open spaces in the city which would be mutually well connected with pedestrian paths. "Worldwide examples show how public spaces with unfortunate compromises for pedestrians result in unattractive and deserted public spaces" (Gehl et al., 2004). These open places should be recognizable in the city structure and provide social interaction,

Figure 11. Network of pedestrian paths - current and proposed condition / *Yaya yolları ağı – mevcut ve öneri durumu*

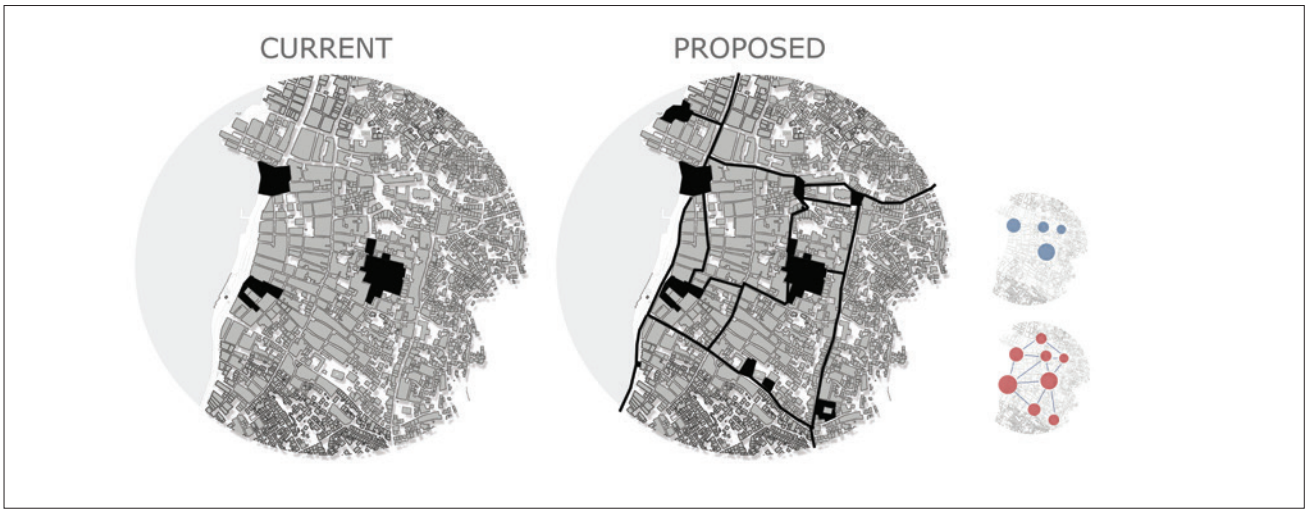

Figure 12. Network of open spaces - current and proposed condition / *Açık alanlar ağı – mevcut ve öneri durumu*

accommodate different programs such as local and periodic events. Pavements should be renovated, with the possibility of keeping the traditional element; block grey stone. The place should be designed in inviting and attractive way for programs and visitors.

When trying to improve the livability of a town or a city, planners need to take the varying needs of people of different ages into account. Each of the age groups benefits from having special attention paid to their specific needs. For instance; one of the keys to improving livability for youth is providing qualitative public areas that are designed to attract their interests. These kinds of places include sports grounds and facilities such as skate parks and skating rings, and entertainment facilities including cafes, cinemas and music venues (Easton et al., 2016) within a cultural diversity. The maps of existing open spaces and proposed ones are shown below in Figure 12. Proposal plan enlarges the final number of public spaces and connects these places in a network o open spaces dispersing in all the city.

Network of Facilities - Current Condition and Proposal

To increase walkability or livability of a city it is recommended to give aims, destinations or facilities for people. Ayvalık is a city lacking of those elements. In order to attract people outdoor, rich facilities should be provided. Those facilities should be flexible and open for accepting new programs, such as exhibitions, student clubs, workshops, study rooms and similar activities.

When concentrating on a local existing population in Ayvalık, to invite them to use new or improved pedestrian-friendly spaces, it is suggested to design socially intended semi-closed or open programs, like cafés, playrooms, reading rooms or exhibition halls which are then flexibly opening to the social open places of the city. The existing and proposed facilities inviting to the walkability or usage of open spaces are indicated in Figure 13. The number of those facilities is enlarged and connected within a walking distance.

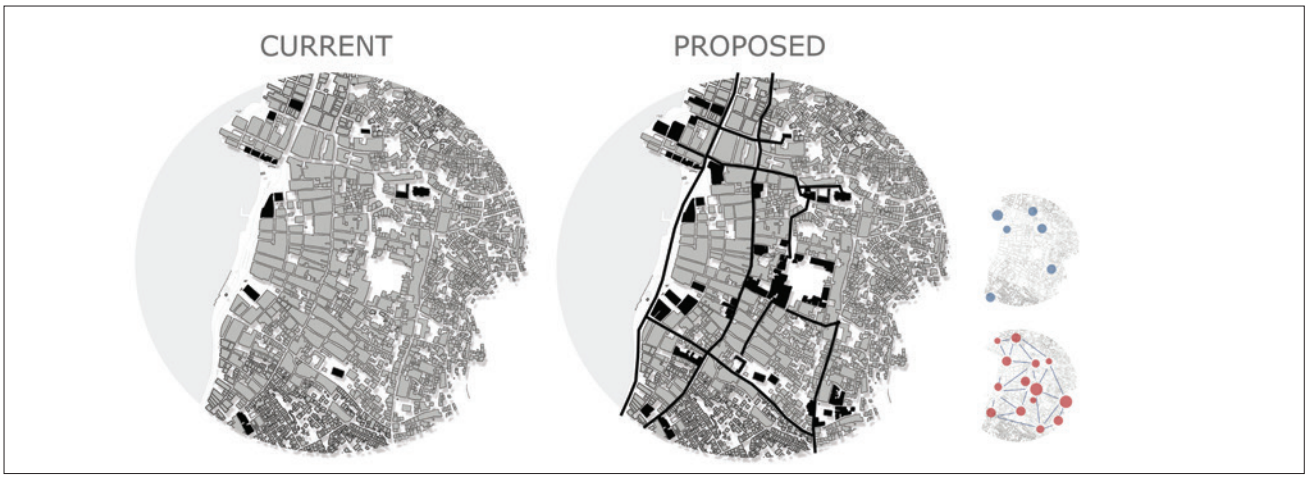

Figure 13. Network of facilities - current and proposed condition / *Hizmet mekânları ağı – mevcut ve öneri durumu*

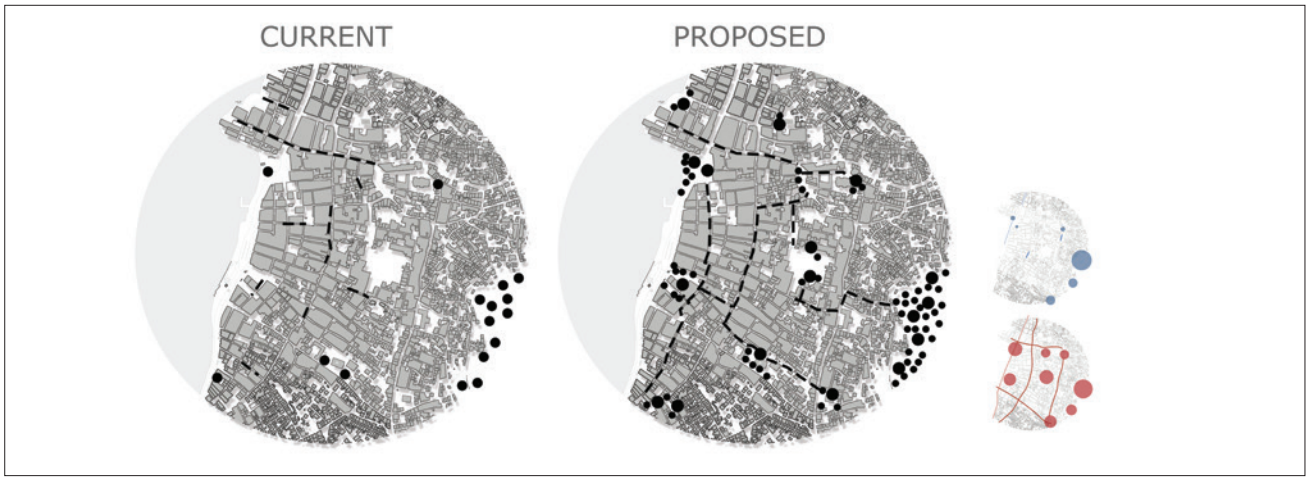

Figure 14. Network of greenery- current and proposed condition / *Yeşil alanlar ağı – mevcut ve öneri durumu*

Network of Greenery - Current Condition and Proposal

In a dense urban pattern of Ayvalık it is hard to find recreational green islands. Green lines are not observed in the street profiles. Also, open space design does not enliven in the city. Also landscape with rich greenery does not exist. Peripheries of Ayvalık are covered with olive groves and they are rich in terrestrial and marine species and hosts endemic species of the northern Aegean region (UNESCO, 2017). This important green fauna should be reflected inside Ayvalık by improving the use of green outer spaces. "Network solutions of the green areas based on the ecological core of the city stabilize urban structures, promote co-functioning of the built environment and green zones, and provide accessibility for the users. Accessibility of well-designed and maintained green areas within a walking distance from home, school or workplace is, therefore, one of the most important factors, that influence the quality of city life" (Kowalewska, 2011).

It is recommended to implement greenery in potential network design of open spaces. Such greenery can improve the image of the place and provide a shelter against uncomfortable climate conditions. The preserved monumental trees and plants should be emphasized as important memory components of the place.

In the narrow streets of city center shadowing problem can be noticed. In most cases this problem has been solved poorly with plastic industrial nets and ivies creeping horizontally and vertically. Planting solution is more convenient when we consider the need for sun in winter and shadow in summer. This solution of shadowing should be provided at all street spots that orient directly to sun direction. The number of implemented greenery in the city should be improved. In this study, the coastal green line has been prolonged, and more green shadowing elements are proposed (Fig. 14).

7. Collaboration of Pedestrian Friendly Criteria in The City

Examples of implementation of pedestrian paths, open spaces, facilities and greenery layers in the physical tissue of the city is demonstrating the city's potential for regeneration in terms of livability (Fig. 15). A pedestrian city can enhance its pedestrian friendliness with simple solutions recommended in macro scale with the collaborative opportunity of all different layers inside same urban pattern.

The presence of many monuments and their distribution over the city is giving it a special character. Those are landmarks to follow while walking or to meet by with a friend; for instance, churches and schools which are perceived as central points of neighborhoods. These monuments and area gathered around them can be renovated one by one in order to gradually regenerate the city.

The diversity of city main facilities can be used as a starting point for grouping the landmarks or destinations of walking in the city (Fig. 16). For instance, existing facilities and landmarks together with the proposed ones can be implemented in a walking route, which, leads the pedestrian to explore and understand the town. In this way, a new component is added to the story of pedestrian-friendly city walkability.

8. Transformation Project Proposal of Ayvalık Çınarlı Mosque Area

In order to contribute to a livability of the city livable city criteria are to be implemented, as to the scale of the whole city, same in the scale of its smaller parts and

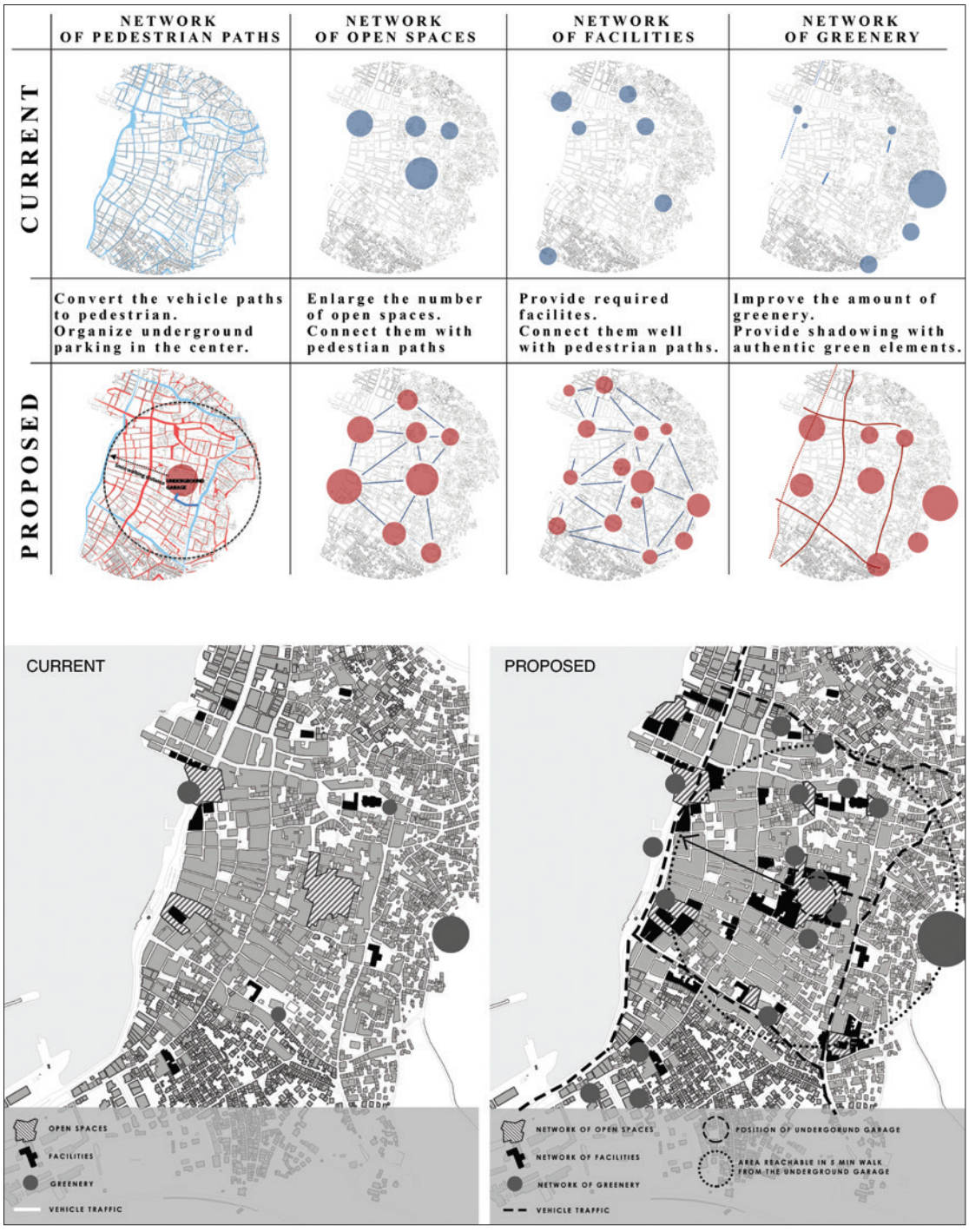

Figure 15. Table of interventions and transformation from current to proposed livable criteria in the city / *Kentteki mevcuttan öneri yaşanabilirlik ölçütlerine geçişteki müdahale ve dönüşümler tablosu*

neighborhoods. The implementation of open spaces, pedestrian paths facilities and greenery networks is going to be shown in a smaller city area with the design project.

Like others, this area (Fig. 17) owns its landmarks and monuments too. Orthodox church, now transformed into Çınarlı Mosque, and Istiklal school of Ayvalık, with its following open spaces are not currently identified properly. Transformation of this area in Middle Zone of Ayvalık is an example for similar situations over the city, which, if transformed in similar principles could contribute to the pedestrian friendliness of the city (Fig. 18).

Selected case study area is considered to be in the central, inner part of the city, situated north of the biggest open space and directly connected to the coast. The area is characterized with a well-preserved orthodox church which is currently used as a mosque, two open spaces on two opposing sides of the mosque and an old masonry elementary school. Arabacılar Square is containing an

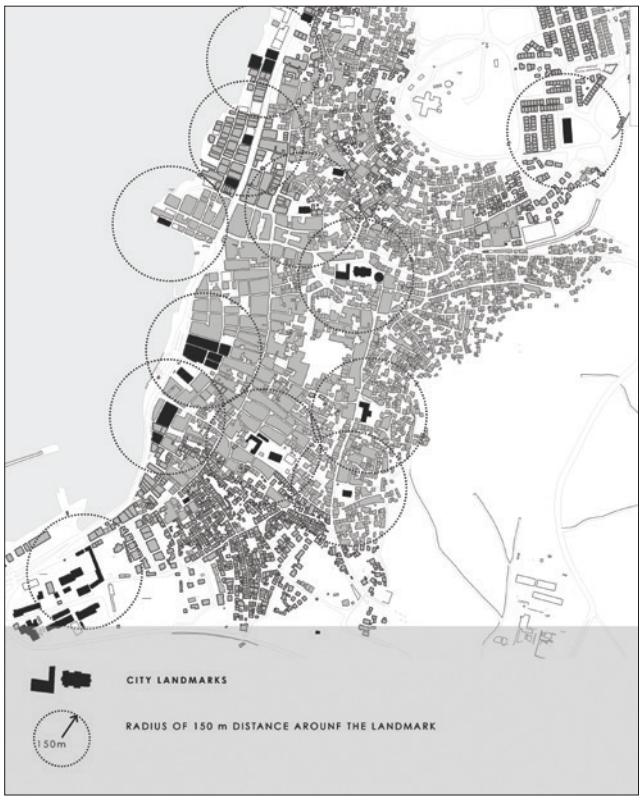

Figure16. Landmarks of the city / *Kentin röper noktaları*

Figure 17. Location of the intervention area in the city / *Müdahale alanının kent içindeki konumu*

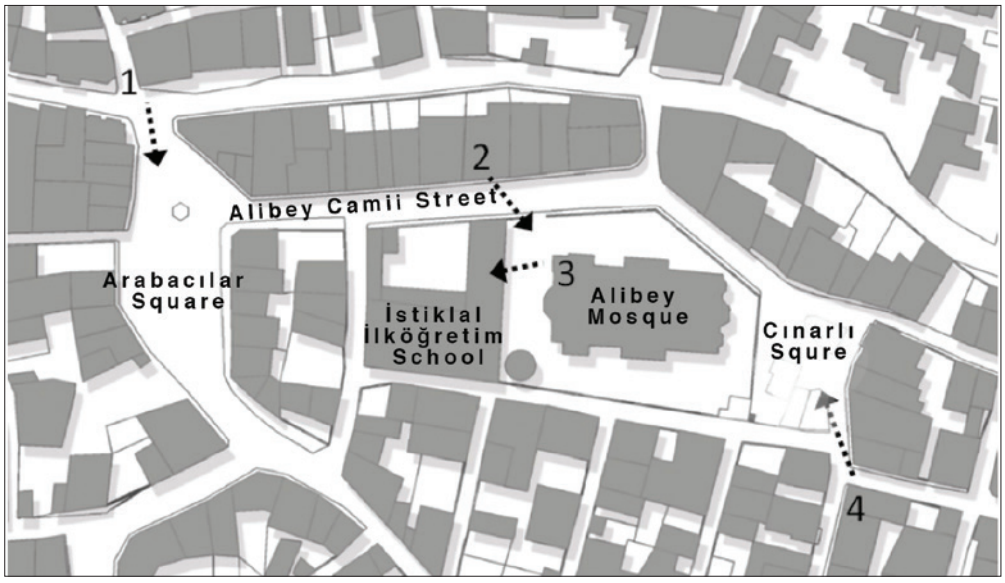

Figure 18. Map of the intervention area / *Müdahale alanı haritası*

old water element and is surrounded with shops in the ground level, while upper floors are residential. Currently it is mostly used as a parking area. Çınarlı square is has an old tree formerly conceived as the gathering point of the locals.

The principles of transformation in the area are to create a flexible open spaces adaptable to seasonal changes, connecting the area with pedestrian paths, introducing a fluid space with tempting facilities and greenery, providing accessibility with opening a vista to the church and keeping the memory of the area (Fig. 21). The decision of which programs are to be implemented in the area has been made according to the city's needs and the position of an area inside the town. Since the city at current point does not own a library and area is in a central position, the open spaces are to be enriched in educational, cultural and entertainment prograMS

Figure 19. Position 1, 2 and 3 (Zec, September 29, 2017) / *Konum 1, 2 ve 3 (Zec, 29 Eylül 2017)*

Figure 20. Position 4 (Zec, September 29, 2017) / *Konum 4 (Zec, 29 Eylül 2017)*

As the vista to the previous orthodox church, a view is blocked with the school next to it. The space in front should be cleared from an additionally added unregistered objects and further on treated as an open space with culturally attractive programs such as exhibitions, local events, summer theatres and etc.

Relocating the school at a more suitable location with more space and safety, the educational program is to be preserved with the new library inside the original masonry school walls. Implemented canopy light construction is to mark the previous borders of the space and accommodate under itself various programs for different interests of users (Fig. 22). Architectural interventions are kept in humanized scale (Fig. 23).

At the same time, canopy as a perimeter is working like a gradual connection between two open spaces opposite in character (Arabacılar and Çınarlı Square). The west open space; Arabacılar Square, is to have remained as more public one with the retail in the ground level and residential usage in an upper level. The square is to contain a sitting place from which the new vista to the church can be enjoyed. The east open space, Çınarlı Square, owning an old and valuable tree is going to be improved in perception as more quiet place providing a seating under the tree like it was in previous times as well as the vista to the church from a different angle.

Numerous newly added facilities are functioning as a youth center gathered around the common open space and are working as a network connected with pedestrian paths. Those are the infills in the gaps of an existing urban pattern (Fig. 24), which are to be designed in the similar architectural language.

With this kind of a design approach the area is enriched in a socially rich programs and possibilities for human interactions are improved (Fig. 25). Open areas are enhanced in programs, comfort and greenery, inviting the people varying in interest and age, tempting the visitors as well as the native people. Seating and recreational places are provided. City's youth has got its place for expression as well for work, utilities and entertainment (Fig. 26). The rea has got its pedestrian friendliness back, like it has been intended in its occurrence.

9. Conclusion

Livability strategies are the path to the better quality of living. For the general well-being of people, small things which form a daily routine are essential. To be able to pleasantly going to the work, school or recreation, or ease to participate in social interactions in outdoors implements a quality of city on a higher level. To sustain and to improve the benefits which are enjoyed in every day's life, improvement measures in the cities, which are losing their essences with incoming modern times, should be taken into consideration.

Resistance to a change is usually present due to the already established patterns. But to provide a

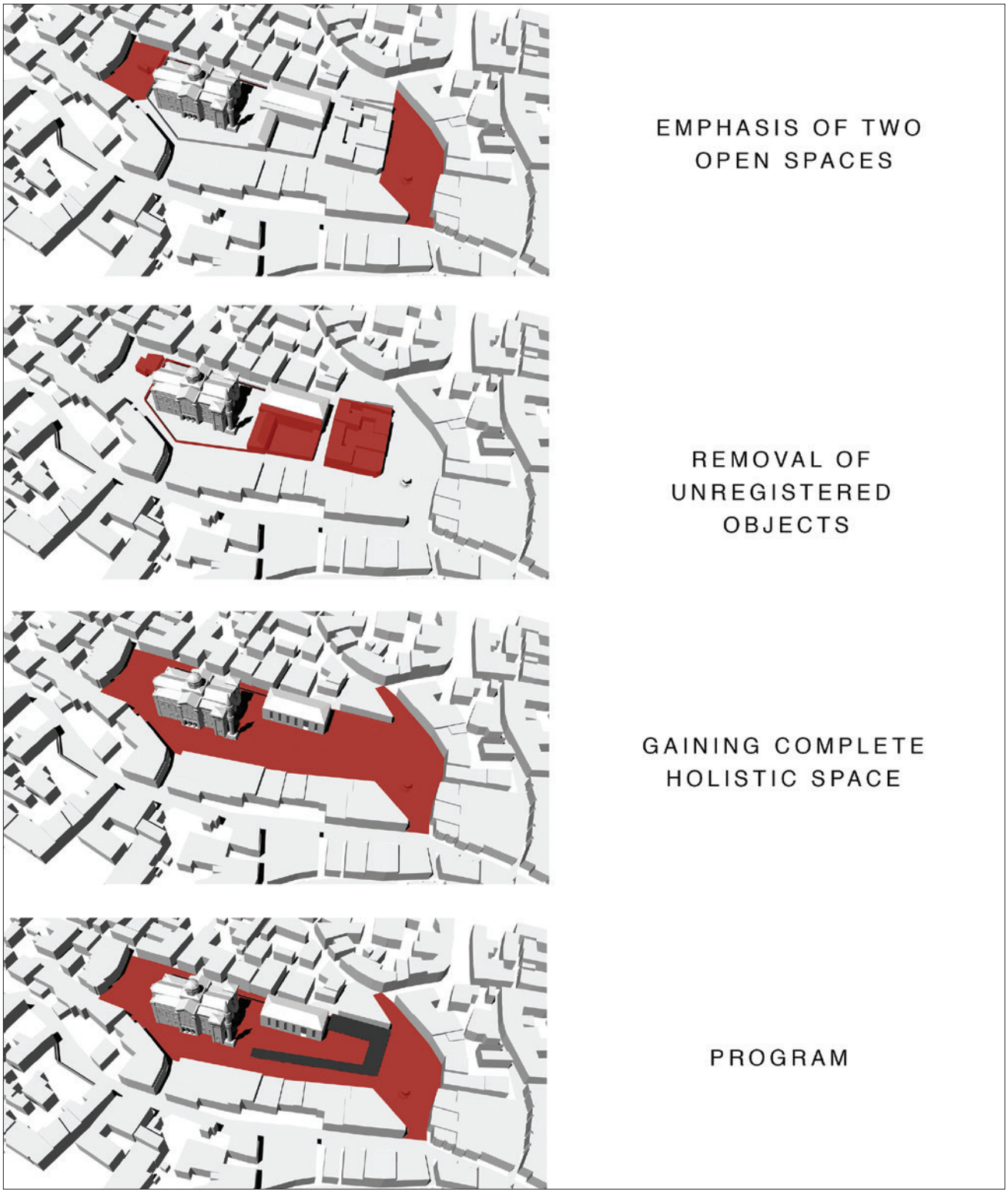

Figure 21. Diagram of design decisions / *Tasarım kararları şemaları (İki açık mekânın önemi, Kaçak ve niteliksiz yapıların kaldırılması, Bütüncül kentsel mekân kazanımı, Program).*

sustainable, accessible and pedestrian friendly place, changes should be pushed forward. To make it possible, the transformation should be made gradually; from an easier implementation towards the tougher ones. A good start could be increasing the public awareness about the problems and benefits of potential solutions. In this kind of city strategies cooperation with the public should definitively be present.

In this paper, a method for advancing the city towards a higher livability index is investigated through the case of Ayvalık. Focus on pedestrian paths, open spaces, facilities

and greenery are applied on the existing urban tissue which upgrade the overall urban quality. Contribution to inhabitant's life is made when this layers are overlapped and enriched.

To show the interventions in more detail, a transformation of Çınarlı Mosque area has been made. The space is enhanced in open space quality, programs, greenery, and the pedestrian friendliness. The residents can gain a place for recreation, leisure, education, culture or entertainment. The potential of a transformation of other areas in the city can gradually regenerate and revise the city to a livable city.

As a conclusion, enhancing a city in a livable one is a complex process. With the modern developments and new lifestyles, if the city is left behind at the time, it will lose its possibility of healthy and contemporary living. It is important to cope with the changes and think of solutions.

Figure 22. Programs of the perimeter / Çevre yapıların programları 1 - Open space with commercial and dynamic character, providing social interactions between pedestrians / *Yayalar arasında sosyal etkileşim sağlayan ticari ve dinamik karakterli açık alan.* 2 - Open space with a static character, providing social interaction with sitting places / *Oturma alanları ile sosyal etkileşim saplayan statik karakterli açık alan.* 3 - Connecting pedestrian path of two open areas, urbanized in character / *Kentleşmiş karakterli iki açık alanı bağlayıcı yaya yolu.* 4 - Connecting pedestrian path, non-frequent character / *Seyrek karakterli bağlayıcı yaya yolu.* 5 - Library - providing social interactions between students, group work , interaction with local population through workshops / *Kütüphane – Çalıştay alanları yardımıyla yerel halk ilegrup çalışmaları yardımıyla öğrenciler arasında etkileşim sağlayan alan.* 6 - Social area - closed and semi-closed, sitting places in greenery and a cafe / *Sosyal alan – yeşil alan içinde ve kafede açık ve yarı-açık oturma alanı*. 7 - Entrance zone / *Giriş zonu.* 8 - Area under the canopy communicating with the street, providing roofed public areas for social interactions, buffet and exhibition / *Büfe ve sergi alanı ile üstü kanopi örtülü kamusal alanda sosyal etkilişim sağlanması ve sokak ile iletişim kurma.* 9 - Greenery with sitting places / *Oturma alanlarındaki yeşil alan.* 10 - Social area for the local population, grouped sitting places / *Grup oturma alanları ile yerel halk için sosyal alanlar.* 11 - Inner open space providing flexible programs (open theatre, cinema, local events..) / *Esnek kullanım alanları sağlayan iç açık alan (açık sinema, tiyatro, yerel etkinlikler).* 12 - Exhibition area - buffer zone to the church / *Sergi alanı – kilise (cami) ile arasında tampon alan*

Figure 23. Sections / *Kesitler*

Figure 24. Proposed network of youth center facilities as an infill to the existing urban pattern / *Mevcut kentsel dokuya yapılan eklenti olarak gençlik merkezleri ağı önerisi*

Figure 25. Perspectives of the proposed project / *Öneri proje perspektifleri*

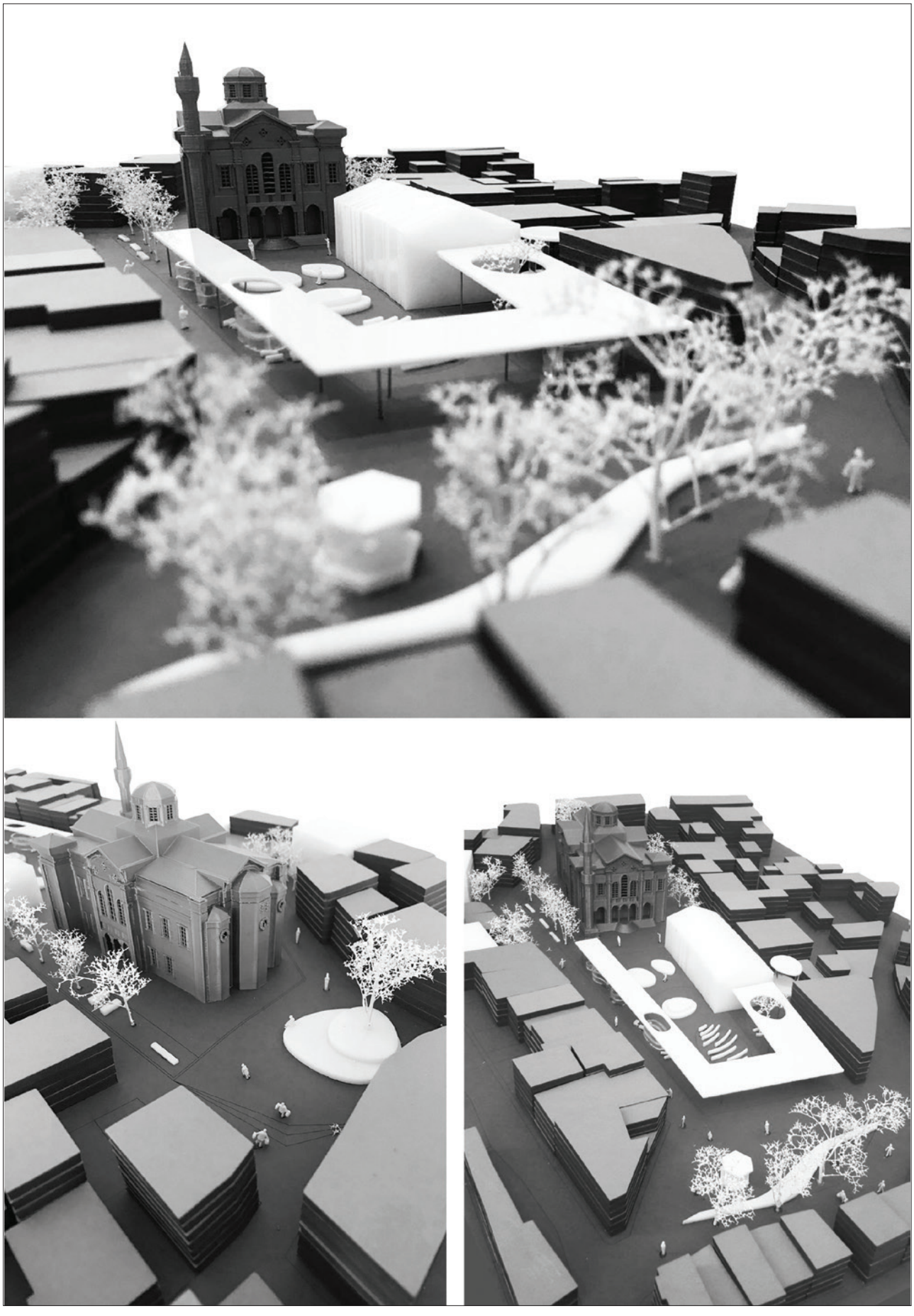

Figure 26. Physical model photos / *Maket fotoğrafları*

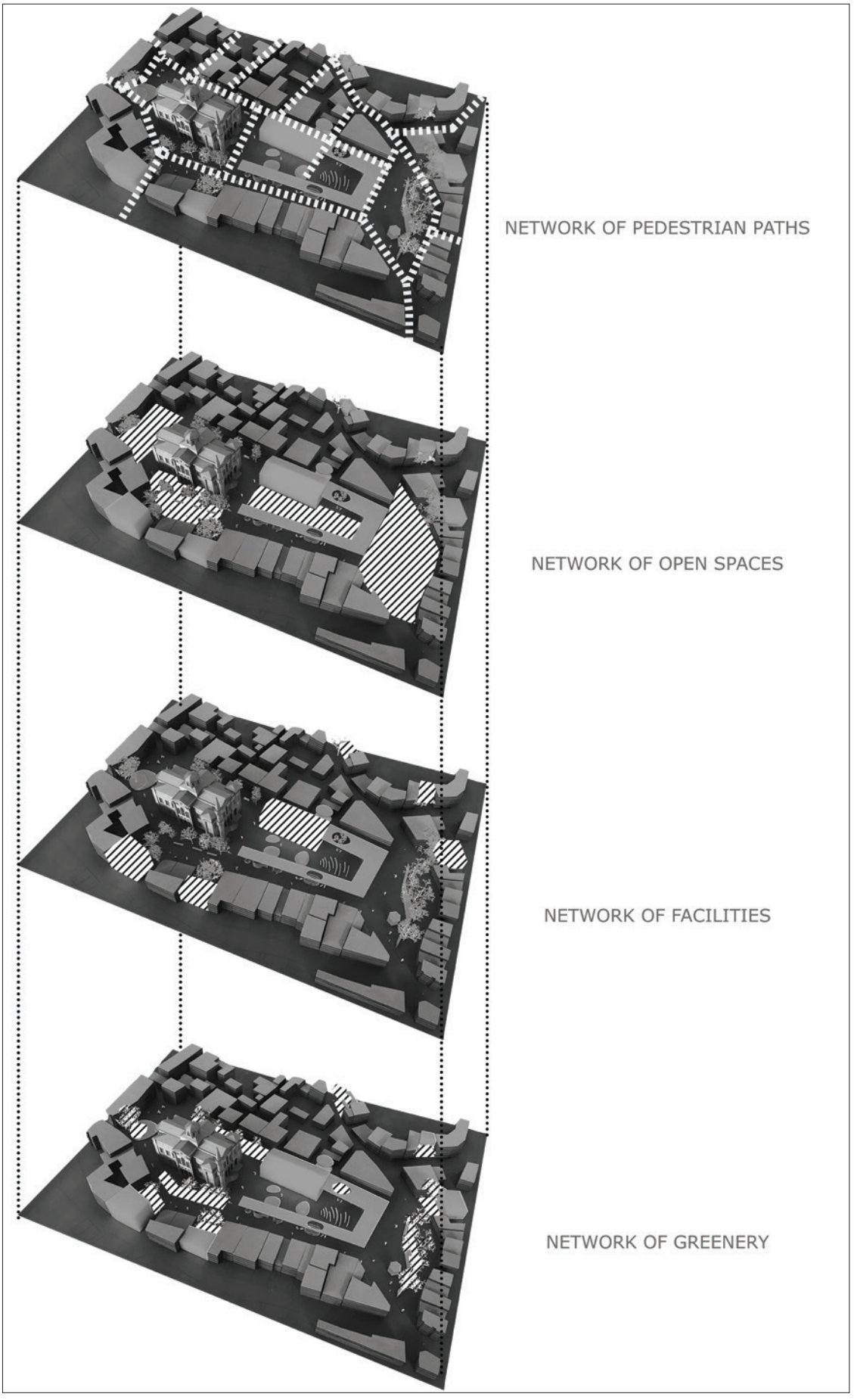

Figure 27. Proposed networks on the physical model diagram / *Fiziki model şeması üzerinde ağ önerisi*

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