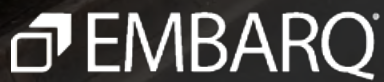




# İZMİR SUSTAINABLE TRANSPORTATION PROJECT

*Executive Summary*



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## TABLE OF CONTENT

1	<b>FOREWORD</b>	25	<b>SUGGESTIONS ON SUSTAINABLE TRANSPORTATION</b>
3	<b>STUDY AREA AND METHODOLOGY</b>	26	Deciding Street Typologies, Planning Public Spaces and Pedestrian Routes
7	<b>ASSESSMENT OF USER BEHAVIOURS</b>	30	Planning Cycling Routes
8	Focus Group Interviews	31	Planning Carriageway
9	SWOT Analysis	33	Planning Parking Areas
10	Survey and Inventory Study	34	Planning of Public Transportation Transfer Centers, Stations and Stops
13	<b>SPATIAL USAGES</b>	35	<b>AN APPROACH FOR SUSTAINABLE TRANSPORTATION</b>
14	Spatial Usages	37	<b>REFERENCES</b>
15	Urban Open Area Usages	38	<b>ACKNOWLEDGEMENT</b>
19	<b>TRANSPORTATION SYSTEMS</b>		
20	Public Transportation and Parking		
21	Walkability		

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# FOREWORD

WRI Turkey Sustainable Cities is a non-governmental organization and a member of the WRI Ross Center for Sustainable Cities, a program of the WRI, focusing on the implementation of sustainable urban transport and development practices based on global researches and experiences. One of our primary objectives is to foster the quality of life around cities by providing sustainable solutions to problems related with urban transport. In line with this objective, WRI Turkey Sustainable Cities has prepared the “İzmir Kemeraltı Sustainable Transport Project” within the framework of the İzmir-Tarih project initiated for the Historical Kemeraltı Region of İzmir Metropolitan Municipality.

This project has provided alternatives of Sustainable Transport to individuals residing or working in Kemeraltı and around in order to support and complete the İzmir-Tarih Project. It has also enabled the region to get integrated with the transport networks in its surroundings in order to increase accessibility for everyone and to implement an approach that prioritizes walking and cycling.

Within the framework of this project, analyses such as focus group meetings, workshops, pedestrian and vehicle countings, resident-cyclists-pedestrian surveys, field studies were carried out in order to provide recommendations on bicycle usage, pedestrian mobility, public area usage and public transport solutions. The recommendations offered in this report have been supported by good practices from different cities around the world.

This project is a crucial guide for plans and implementations that would develop public functions to support accessibility for all users.

I would like to extend my gratitude to all individuals and institutions that have contributed to this report; my colleagues, İzmir Metropolitan Municipality, Konak Municipality, İzmir Development Agency, TARKEM, Dokuz Eylül University, İzmir Technology University for their cooperation, and the shopkeepers and residents of Kemeraltı who participated to our surveys.

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## STUDY AREA AND METHODOLOGY

“İzmir Sustainable Transport Project” is integrated with the İzmir Tarih Project and strives to increase accessibility by integrating urban transport networks in the surroundings of the region, to offer public transport alternatives, undertake the region from a perspective that is people-oriented and that prioritizes pedestrians and cyclists in İzmir Konak Kemeraltı and around its Renovation Area.

With 5,000 years of history, Kemeraltı is one of the most colorful places of İzmir and the traditional center of the city. Kemeraltı is a 3rd degree archeological site that includes 1st degree archeological sites and natural sites.

The change of the historic city center with so many significant components is inevitable.

Kemeraltı is perceived as a value that should be protected among the public, especially in the recent period. As a result of this recent awareness gained through 30 years work of institutions and organizations, İzmir Metropolitan Municipality started to protect historical and socio-cultural buildings in the region. However, these implementations were not sufficient in order to make this region a more livable and joyful place as the activities in the area continue whole day. For this reason, İzmir Metropolitan Municipality has initiated new design projects that would protect and develop

the integrity of the area. Within this framework, the “İzmir Tarih Project” has been initiated in order to strengthen the residents’ relation with history in a 248 hectare area consisting of the 1st degree, 2nd degree and 3rd degree archeological and urban sites located at the southern part of Fevzi Paşa Avenue, and Kadifekale urban transformation region.

Within the project area, there are 19 Sub-regions that have different properties and that were described with reference to İzmir Metropolitan Municipality Conservation Development Plan, the study

of Murat Belge and the boundaries of the districts (Tekeli, 2015).

- Sub-region 1 was identified as the first and second archeological sites of Agora.
- Sub-region 2 is Havralar; synagogues, which are an important cultural heritage, are situated in this region
- Sub-region 3 was identified as Kemeraltı Market and Commercial Centers.

- Sub-region 4 encompasses some part of Fevzi Paşa Avenue and, just like Sub-region 3, commercial activities are intense in the area.
- Sub-region 5, which is located at the east of Sub-region 4, is defined as the Hotels Area.
- Neighboring Anafartalar Avenue, Sub-region 6 encompasses an important ax which is Kestelli Avenue.
- The frontier of Sub-region 7, described as Konak, is Milli Kütüphane Avenue.
- Sub-region 8 encompasses Bahribaba which is an important transition point. Within the region, functions such as İzmir Girls’ High School, Atatürk Urban Public Library, Konak Sergeant Club are situated.
- Sub-region 9, called Değirmendağı is located in the south of Sub-region 8 and Sub-region 10.
- Sub-region 10, which is located at the intersection of Cici Park and Roma road, encompasses an area where a market is established every Saturday.
- Sub-region 11, which is called the 2nd lap of Anafartalar Avenue, connects Eşrefpaşa (İkiçeşmelik) Avenue and Basmane Train Terminal.

- Sub-region 12 encompasses Aya Vukla (Saint Vukulos) Church.
- Sub-region 13 is surrounded by the 1st Social Housing Region. This region is different because of the İzmir Tarih Design Workshop and has a traditional architecture. It encompasses important historical values such as Pazaryeri and Patlıcanlı Hill.
- Sub-region 14 consists of the 2nd Lap of Social Housing.
- Sub-region 15 is part of Kadifekale shanty area, which is also called Northern Side Shanty Area.
- Kadifekale which is an important historical center in İzmir, and the antique theater which is an important cultural heritage, are located within Sub-region 16.
- Sub-region 17 consists of the Southern Avalanche Area located in the northern direction of Kadifekale.
- Sub-region 18, which divides the project area into two parts, is called Eşrefpaşa (İkiçeşmelik) Avenue and is in interaction with Sub-regions 1, 2, 4, 6, 10, 11, 13.

- Anafartalar Avenue is described as Sub-region 19 and connects Konak Square with Eşrefpaşa (İkiçeşmelik) Avenue.

In order to determine these different features and assess the user behavior; literature review, focus group meetings, SWOT analysis, surveys and inventory study were done. After this analysis process, the planning process which consist of designing pedestrian and cycling transport, public transport and parking areas was conducted.

Figure 1 | Study Area Consisting of 19 Sub-regions

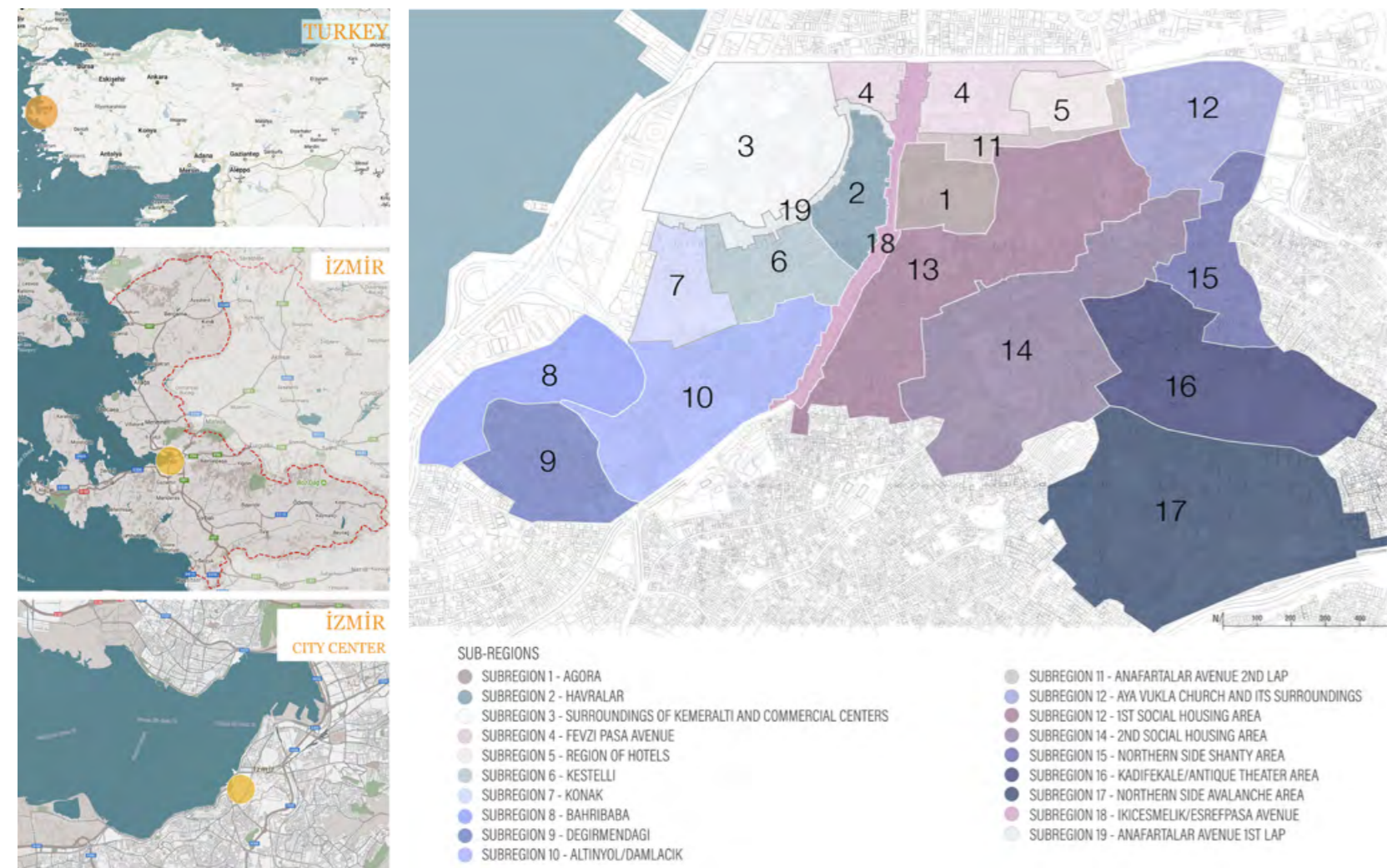


Figure 2 | Methodology





# ASSESSMENT OF USER BEHAVIOURS

In order to determine the different properties of the project and to assess user attitudes, methods such as literature review, focus group meetings, SWOT analysis, surveys and countings were used within the analysis process. This step was followed by a planning process of pedestrian and bicycle transport, public transport, and parking areas.

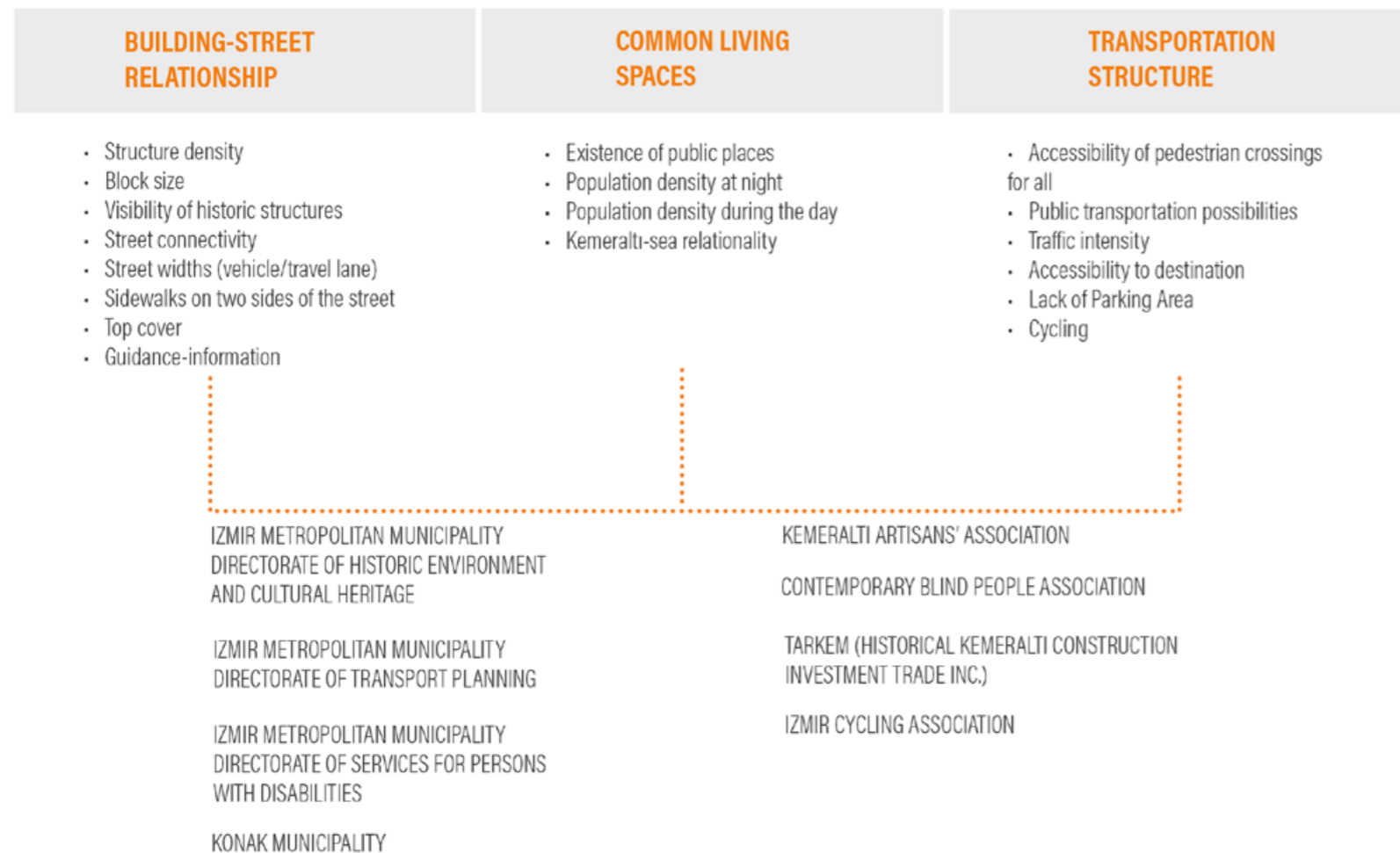
# FOCUS GROUP INTERVIEWS

Focus group meetings were carried out to collect opinions and recommendations of decision makers working in Kemeraltı region, and the stakeholders of the respective area, under the following titles: building-street relationship, public spaces, and transport structure. Figure.3 offers detailed information on topics of interest and stakeholders.

Topics that stakeholders pointed out during focus group meetings include:

- The shades added later are not appropriate to the buildings,
- Hanging objects and products block signboards,
- Damage caused by parking and the use of vehicles which are inappropriate for street width are used,
- The significant difference in the population during the day and at night,
- The difficulty of accessing the inner sides of housing regions by public transport and the frequent change in the location of bus stops,
- Deficiencies in terms of orientation that can be especially be detected in transport centers and historic structures,

Figure 3 | Stakeholders and Topics Regarding Focus Group Interviews



- The fact that Kemeraltı is not connected to the sea, except for transport purposes,
- Invasion of commercial areas,
- Use of stairs in front of streets and houses because of the lack of public spaces in housing regions,
- Illegal parking on pedestrian facilities,
- The fact that ramps and tactile surfaces do not respect TSE (Turkish Standards Institution) standards,
- Pavements that are not conforming standards,
- The lack of pedestrian crossings in some regions where they are needed or the existence of interchanges instead of level crossings,
- The fact that shopkeepers invade the crossings that needed for road safety, signalization and accessibility for people with disabilities.

## SWOT ANALYSIS

A SWOT analysis that investigates the region's strengths, weaknesses, opportunities, and threats have been carried with the help of face to face interviews and the workshop. The stakeholders' opinions collected within the framework of this analysis are listed below.

Figure 4 | SWOT Analysis



# SURVEYS AND TRAFFIC COUNTINGS

Surveys and traffic countings (pedestrian, bicycle and vehicle traffic) have been carried out for the 19 sub-regions located in Kemeralti.

Counting on vehicle traffic was done twice a day during morning and evening rush hours for 5 days (Monday, Wednesday, Thursday, Friday, Saturday). Bicycle traffic counting was done simultaneously with vehicle traffic counting, at the same places. Traffic counting was carried out on main arterial roads, while pedestrian traffic counting points were located in pedestrianized roads where the pedestrian traffic is dense. Pedestrian traffic counting was done in the points determined in two different periods of rush hour. The volumes of pedestrian traffic were calculated as the total of mutual flows instead of a single flow direction. As a result of the pedestrian traffic counting, it was found that sub-regions 3, 4, 6, and 7 are used intensively.

Traffic countings (Vehicle and Pedestrian) within the limits of the study area were carried out during the morning (08.00-10.00) and evening (16.00-18.00) for weekdays and for the weekend. The survey study concentrated on 3 different user profiles: residents,

Figure 5 | Percentage Distribution of Survey Participants

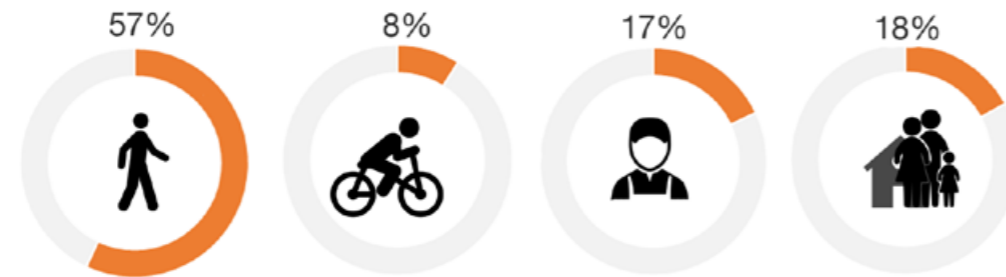


Figure 6 | The Distribution Survey Participants According to Their Ages

	Pedestrian	Cyclist	Employee	Resident
<b>Gender</b>	%42/%58	%38/%62	%46/%54	%27/%73
<b>Age Range</b>	<ul style="list-style-type: none"> <li>below 18 years old</li> <li>18-25 years old</li> <li>25-40 years old %33</li> <li>40-60 years old</li> <li>above 60 years old</li> </ul>	<ul style="list-style-type: none"> <li>below 18 years old</li> <li>18-25 years old</li> <li>25-40 years old %36</li> <li>40-60 years old</li> <li>above 60 years old</li> </ul>	<ul style="list-style-type: none"> <li>below 18 years old</li> <li>18-25 years old</li> <li>25-40 years old</li> <li>40-60 years old %35</li> <li>above 60 years old</li> </ul>	<ul style="list-style-type: none"> <li>below 18 years old</li> <li>18-25 years old</li> <li>25-40 years old</li> <li>40-60 years old</li> <li>above 60 years old %42</li> </ul>

employees, and visitors in the region. These groups were also used to evaluate information about pedestrians and cyclists. In total, about 3.000 individuals participated in the surveys. Moreover, 30 people with disabilities and 931 visitors from outside were also included in the survey study.

The distribution of survey participants is as follows: 57% were pedestrians, 8% were cyclists, 17% were employees, and 18% were residents (Figure.5).

33% of pedestrians who answered the surveys were between 24-40 years old, while 36% of cyclists were between 18-25 years old, 35% of residents were between 40-60 years old, and 42% of shopkeepers were between 25-40 years old.

Survey participants were asked what they think about the current situation of public spaces and means of transport. The majority of pedestrians (visitors in the region), cyclists, residents and employees agreed that recreation areas, walking areas, parks and playgrounds for

children were very limited. Two points all the participants agree on is that public transport services are more or less accessible and comfortable.

While survey participants consist of residents, cyclists and employees emphasized that transport should be developed in terms of road safety; pedestrians pointed out that the duration of the travel should be shortened.

Figure 7 | Survey Participants' Opinions About Public Spaces and Transportation Opportunities

	Recreation Areas	Walking Area	Playgrounds and Areas Dedicated to Children	Street Lightings	Street Cleaning	Forestation	Guidance	Roads Closed to Traffic	Bike Lanes
Pedestrian	%75	%69	%77	%53	%74	%70	%58	%58	%63
Cyclist	%76	%62	%64	%62	%73	%69	%52	%53	%65
Employee	%74	%74	%88	%66	%77	%88	%58	%66	%62
Resident	%84	%82	%88	%55	%82	%74	%73	%78	%88
	Public Transportation Services	Comfort Level of Public Transportation	Frequency of Public Transportation	Parking	Ramps	Tactile Surface	Discomfort Caused by Vehicles	Noise Caused by Vehicles	
Pedestrian	%58	%48	%48	%72	%84	%81	%71	%77	
Cyclist	%56	%47	%50	%57	%80	%81	%74	%73	
Employee	%52	%48	%52	%78	%82	%81	%71	%73	
Resident	%59	%46	%48	%83	%92	%90	%80	%83	







# SPATIAL USAGES

In order to analyze and evaluate the spatial usage in the region; land use, open spaces, recreation and staying activities were assessed.

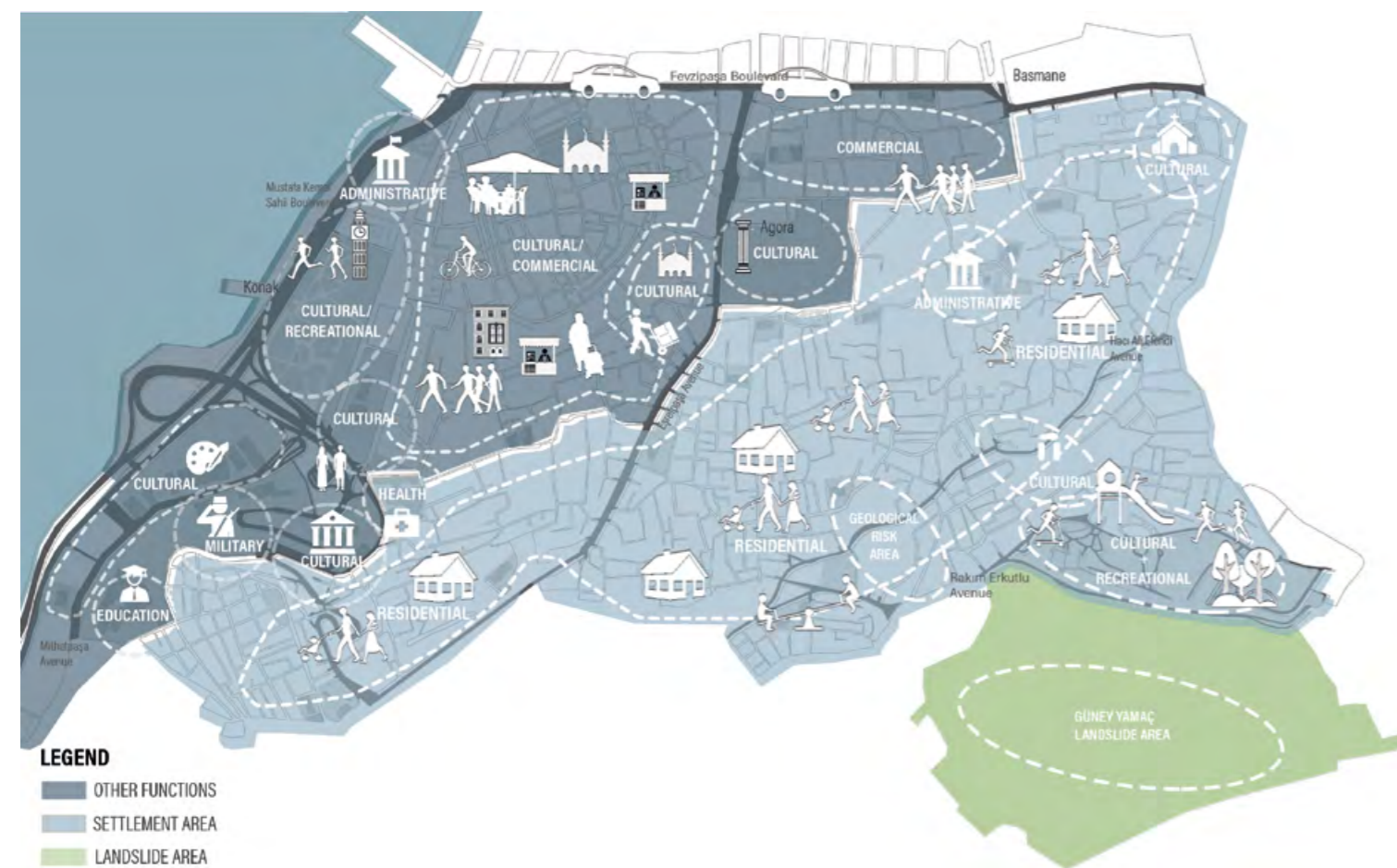
## LAND USE

The project area not only hosts many historical and cultural heritage, but it is also an important commercial and residential area. As Eşrefpaşa (İkiçeşmelik) Avenue divides the commercial and residential area in visible way, it is possible to divide the study area into two regions that can be described as housing, and commerce. It seems that it is not really possible to divide the commercial region, which is located in the western part of Eşrefpaşa (İkiçeşmelik)

Avenue, according to its functions or according to wholesale/retail commercial properties. As a result of the interviews and the data-driven from the latter, it was observed that the number of wholesale percentage in this commercial region has been declining and that wholesale is not concentrated in a specific area. Moreover, commercial functions are not agglomerated in specific areas either. For this reason, the region misses out the advantages of agglomeration economies.

Commercial areas have different units such as warehousing, production, and sale. However, these are not agglomerated in specific areas either. Although exceptions can be detected in some areas and streets, it was observed that units such as textile, food, and production are located next to each other on the same street. These units are not agglomerated in any way and cannot perform common storing-production-sale activities.

Figure 8 | Thematic Land Use Map of the Region

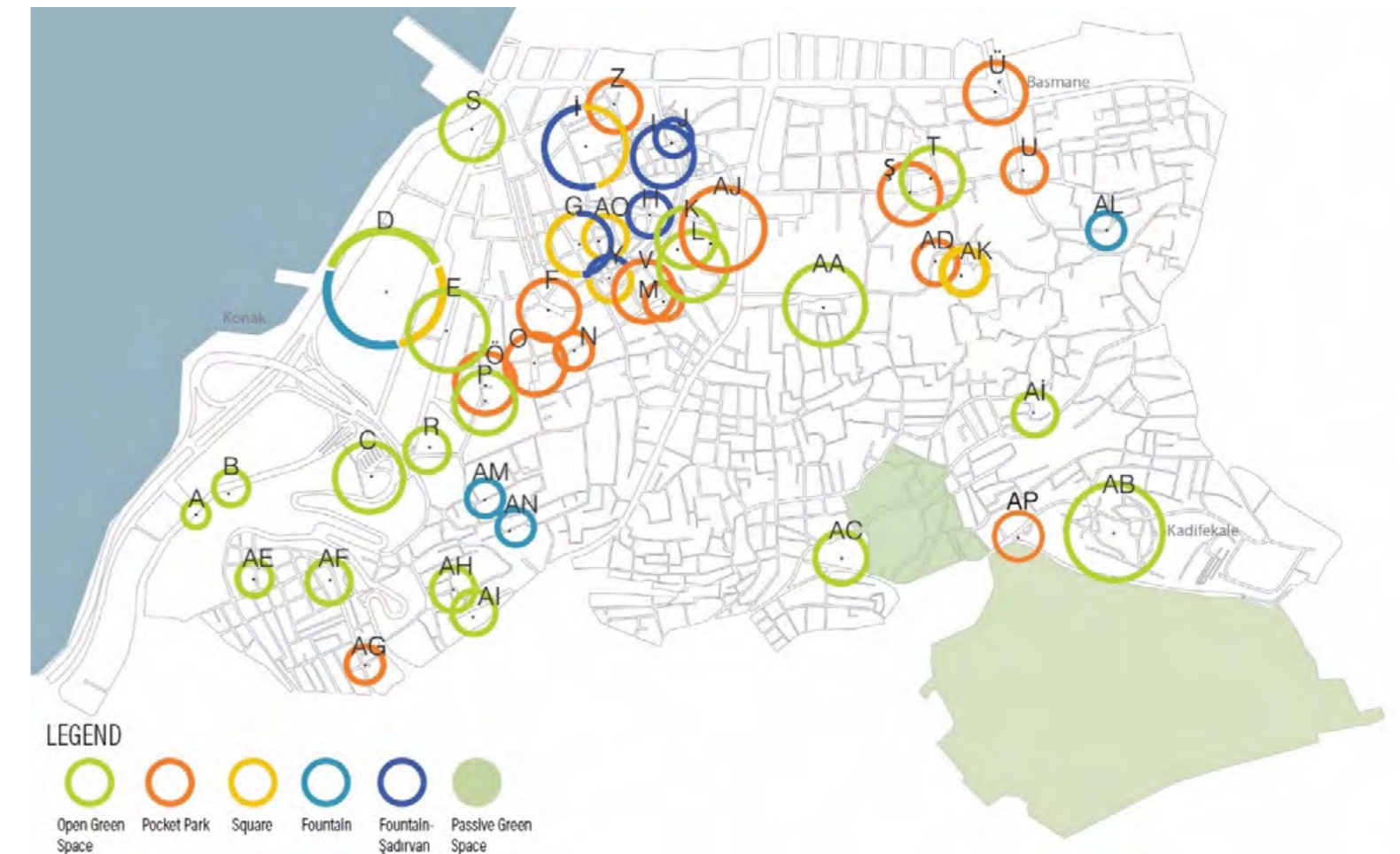


## OPEN SPACES

The study area is one of the oldest residential area in İzmir. Therefore, many traditional urban elements such as religious structures, traditional houses and historical fountains are located in the region. From this perspective, it is a rich resource in terms of open areas and squares. **Green spaces**, which are open space usages and public spaces, identified in this study are either observed as **pedestrian pockets** arising with streets becoming wider at some certain points,

The population in day-time and night-time differs greatly due to adjacency of functionally similar areas. Therefore, the region that is highly populated in day-time includes quiet and unused places in night-time.

Figure 9 | Distribution of Open Spaces

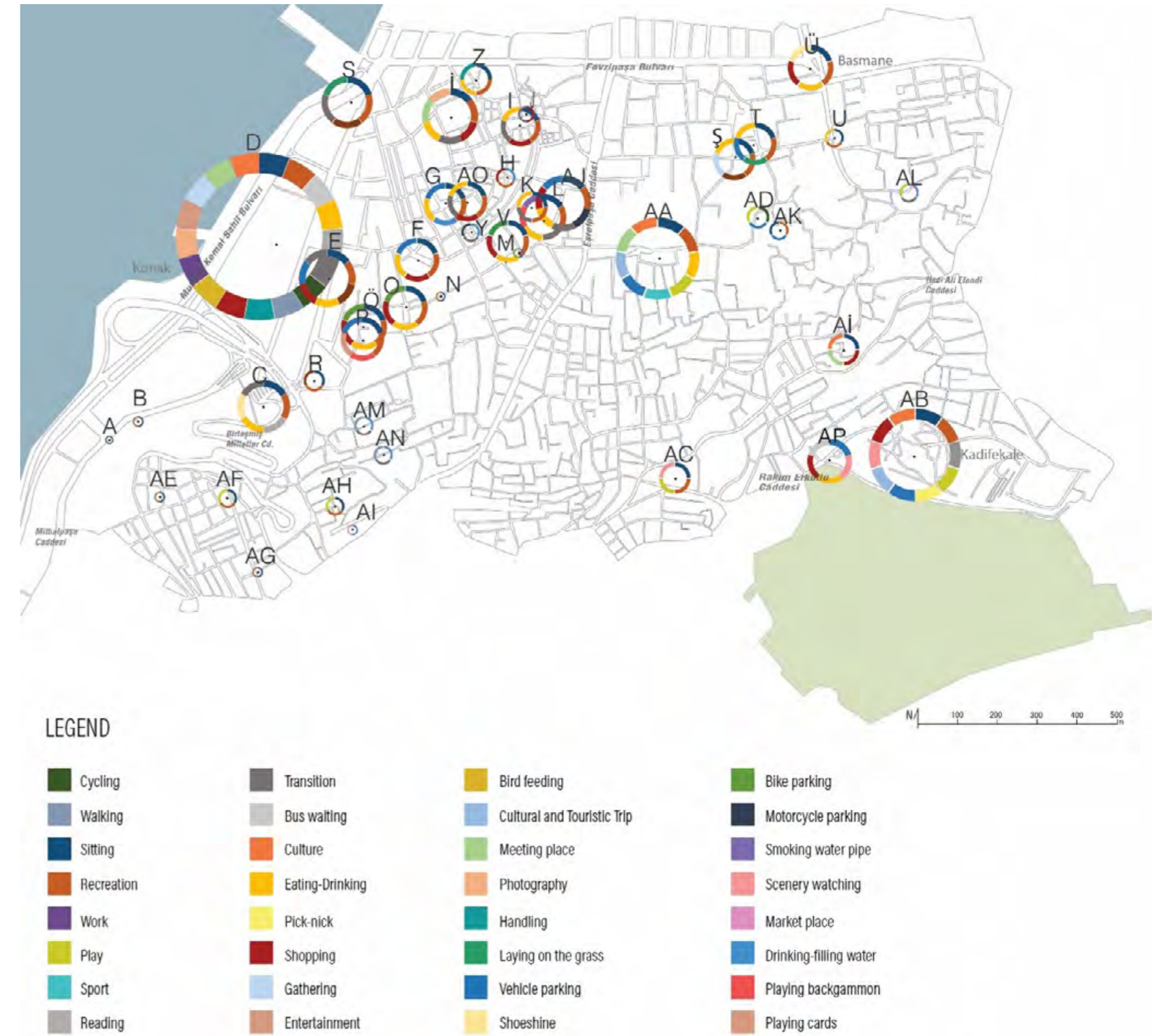




or defined with a fountain in a mosque or out of the mosque/in the street of the mosque. The fountains that are still in the residential areas with flowing water are categorized as **fountain**. Besides the fountains, urban areas that integrate many activities and services can be found. In this study, these were referred as **squares**.

Field studies were carried out within the study area in order to determine the urban open spaces used by citizens for different purposes. In order to understand these areas' level of usage, services provided, and activities carried out by users were observed for a time period of 15 minutes in each point. After this observation, usage type – **light green area, pedestrian pockets, fountain, square** – services provided, and activities realized were determined for each detected area. While the detected areas are shown in Figure.9 and are expressed by letters, Figure.10 represents the recorded activities in the points determined. By means of this method, the purpose was to analyze the system inherent within urban open space usages, and the relations with pedestrian ways/pedestrian spaces.

Figure 10 | Distribution of Staying Activities





# TRANSPORT SYSTEMS

In order to analyze the transport system in the region; current public transport & parking, transfer hubs and walkability of the region were assessed.

## PUBLIC TRANSPORT AND PARKING

Public transport systems functioning in İzmir are listed below:

- Rubber Tired Public Transport Systems (ESHOT General Directorate and İZULAŞ)
- Rail Systems: Light Rail Transit (İzmir Metro), Suburban Train (İZBAN)
- Sea Transport System (İZDENİZ)
- Cabled Transport System

In addition to these systems, different cooperatives and authorized people offer transport services in İzmir (M license plate, GIB, and D4 documented vehicles).

In İzmir, every day, 1.7 million people use public transport. 63% of these travels consist of rubber tired public transport systems, followed by the metro with 19%, İZBAN with 16%, and sea transport with 2%.

The public transport systems offering services in the study area according to the İzmir Sustainable Transport Project is as follows:

- Rubber Tired Public Transport Systems (ESHOT General Directorate and İZULAŞ)
- Railed Systems: Light Rail System (İzmir Metro)
- Sea Transport System (İZDENİZ)

The comparison of public transport systems within the project area and İzmir showed that the transport systems, except from the cabled transport system and the suburban system (İZBAN), give services within the study area.

When we look at the distribution of parking areas, we can see that 31 of them is located in Kemeraltı region. 10 of them (4 multi story car park, 4 off-street, and 2 free parking areas) are managed by

İzelman. Moreover, 6 private and 15 illegal parking areas were detected. While the total parking capacity of parking areas managed by İzelman is 2.207 cars, 291 cars for off-street parking areas, and 150 for off-street free parking spaces.

In order to evaluate the current need for parking, the distribution of land use was analyzed in the study area and the total of parking spots necessity was roughly calculated based on the coefficient value determined by Article 5/a of the Regulation on Parking, which was drafted on the basis of Articles 37 and 44 of the Zoning Law numbered 3194. While the parking capacity of the study area is 5.440 cars, the calculated need is 45.000. The need for parking is 8 times higher than the actual capacity.



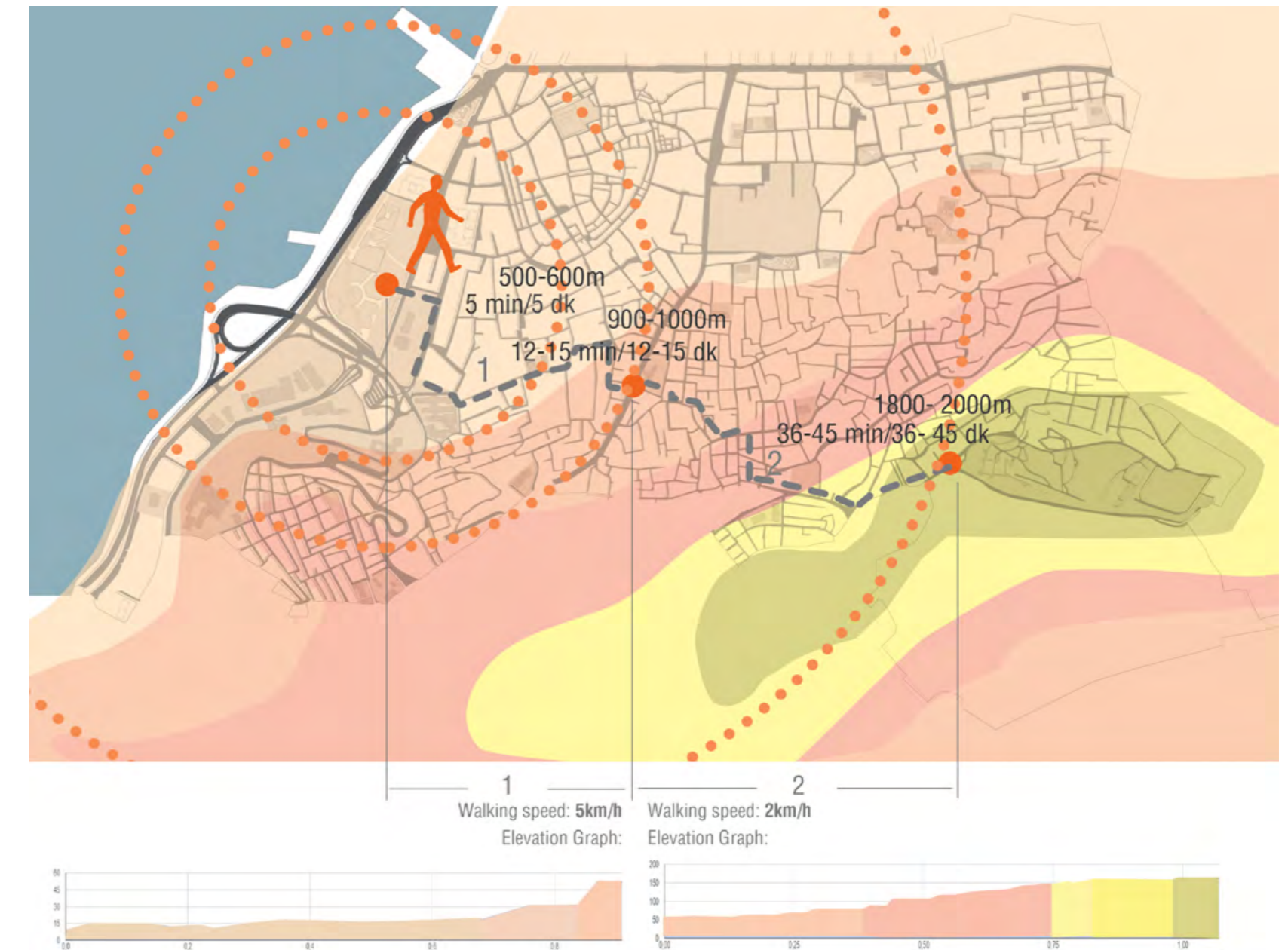
## WALKABILITY

Depending on the density of pedestrian traffic, the fact that the service level decreases in specific regions is a

general problem that we face in terms of walkability. As we especially face this situation in Anafartalar Avenue during the day, which is now a pedestrian area

exclusively, it sets a good example. However, another problem is the use of pedestrian streets and avenues by vehicles for transport and parking. This

Figure 11 | Reasonable Walking Distances



Konak Square is within a reasonable walking distance for most part of the region; thus, the square is accessible for the majority of the pedestrians. However, the housing area located in the eastern part of Eşrefpaşa (İkiçeşmelik) Avenue is out of the reasonable walkable distance.

results in an unsafe walking environment for pedestrians. On the other hand, an important problem in motorways is the lack of appropriate sidewalks or the inexistence of sidewalks. The fact that pedestrian crossings are not visible or distinct enough on Eşrefpaşa (İkiçeşmelik) Avenue is also another serious problem faced by pedestrians.

While planning urban areas, the reasonable walking distance should be between 500 and 1000 meters. This distance is correlated with walking speed in order to establish a walking space. The preferred walking speed is 5kms per hour and a 5-15 minutes' walk is reasonable. The walking area shows differences in terms of factors such as topography and safety. The reasonable walking area from Kemeraltı to Kadifekale was revealed according to aerial view measurements

(Figure.11). It takes 12-15 minutes to travel from Konak to Eşrefpaşa (İkiçeşmelik) Avenue – the distance is less than 1000 meters – with a speed of 5kms per hour. From Eşrefpaşa (İkiçeşmelik) Avenue to Kadifekale, with 100 meters of height, a route of maximum 1000 meters can be walked in 36-45 minutes with a speed of 2kms per hour (Map 13). As these assumptions are not valid for everyone, the distance and the duration are expressed in intervals. When the map is taken into consideration, the access to Kadifekale from Eşrefpaşa (İkiçeşmelik) Avenue is not at a reasonable, hence preferable, level.

Accordingly, Konak Square is within a reasonable walking distance for most part of the region, thus the square is accessible for the majority of the pedestrians. However, the housing area located in the

eastern part of Eşrefpaşa (İkiçeşmelik) Avenue is out of the reasonable walkable distance.

Apart from that, the area is generally perceived as unsafe, especially during the night. Due to the lack of lighting infrastructure, unsafe streets can especially be found in sub-regions 2, 3, 6, and 7, which are located in the western direction of Eşrefpaşa (İkiçeşmelik) Avenue, (Figure.12).

Designs that prioritize vulnerable road users such as pedestrians and cyclists and their accessibility are important in the sense of walkability and quality of life in a general context.



Figure 12 | Street Lighting System





# SUGGESTIONS ON SUSTAINABLE TRANSPORT

This sub-section consists of pedestrian routes, bicycle infrastructure planning, public transport infrastructure planning and parking management.

# STREET TYPOLOGIES AND PEDESTRIAN INFRASTRUCTURE PLANNING

In order to establish defined urban areas, it is recommended that streets within the study area should be categorized as “pedestrian-only streets”, “shared streets” and “neighborhood streets”.

The general suggestions offered for the planning of different street typologies within the framework of the study include:

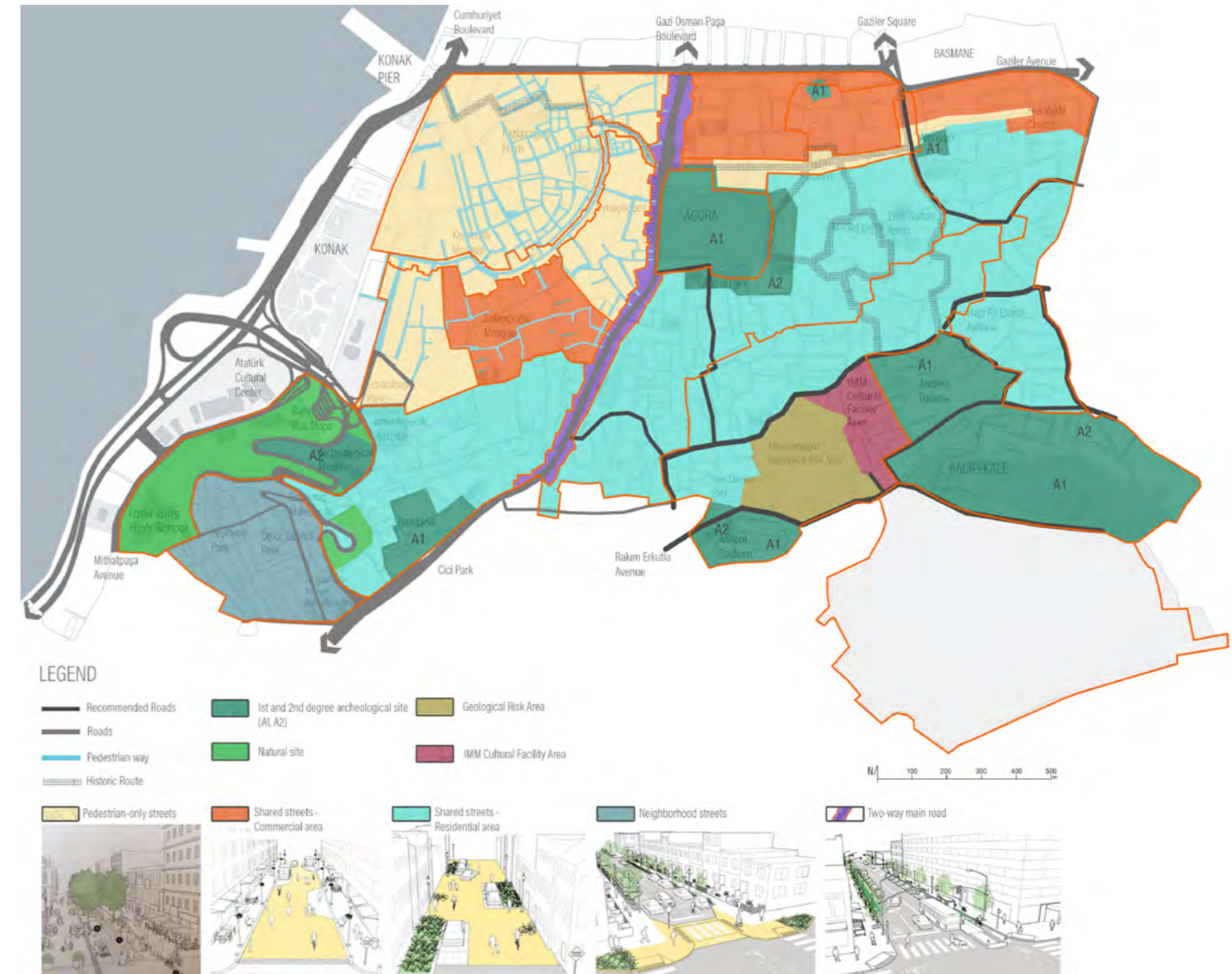
- Accessibility for all should be provided throughout Kemeraltı.
- Extensive, effective and safe walking routes should be created in order to take full advantage of the opportunities offered in the study area.
- Streets and avenues where the incline makes more difficult to walk should be transformed into more attractive environments.
- Streets dedicated to walking should reflect their function in a clear way and should be designed accordingly.

- Arrangements that allow pedestrians to actually experience this space should be made
- An integrated wayfinding system should be applied.
- A human scale compatible lighting system should be constructed.

In order to establish urban areas defined in the region, it is recommended that streets within the study area should be categorized as “pedestrian-only streets”, “shared streets”, and “neighborhood streets” (Figure.13).



Figure 13 | Suggestions of Typologies According to Street Structure





Recommendations regarding the planning of public areas are as follows:

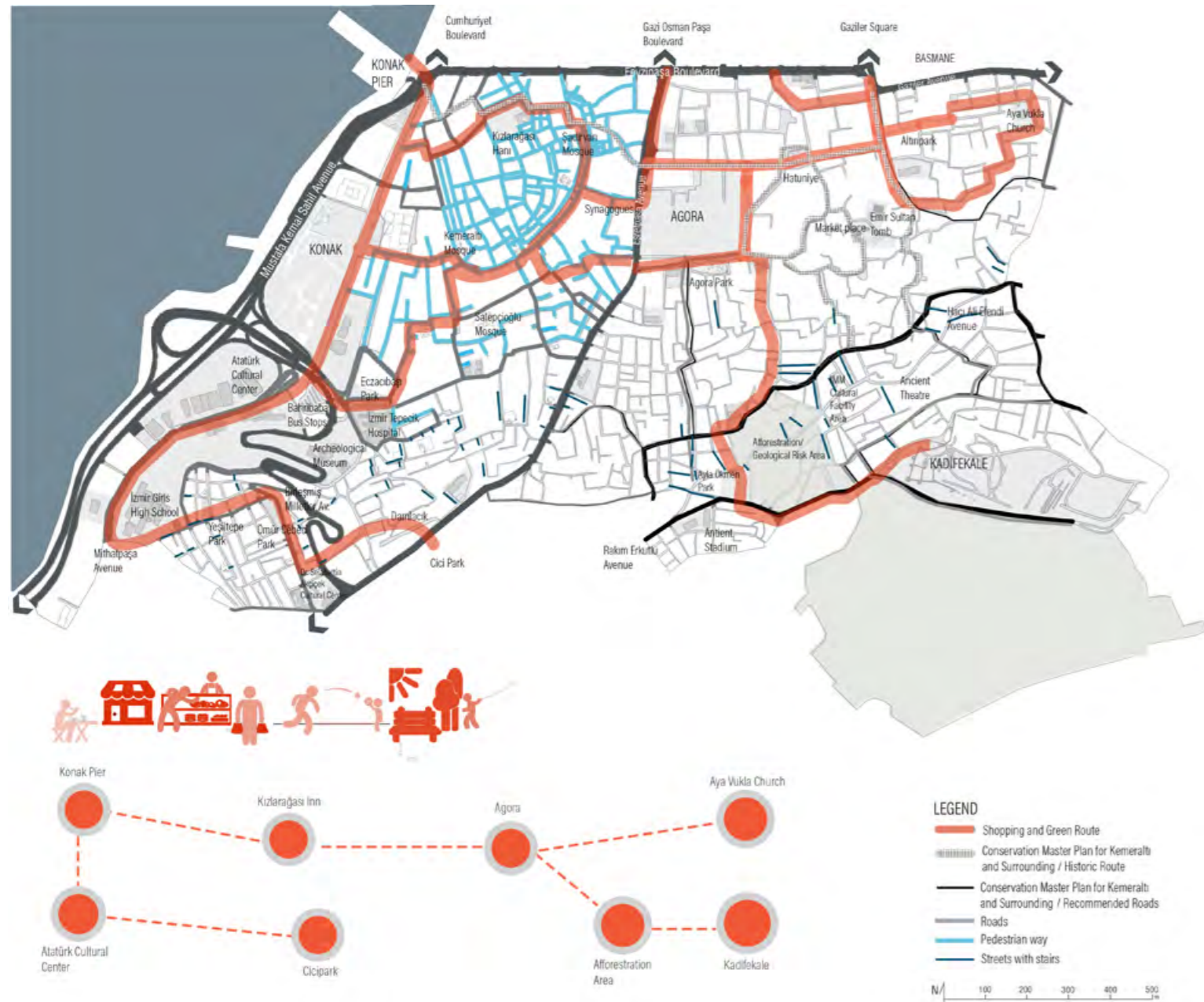
- Public areas should be designed systematically.
- The livability of the public spaces should be increased/Public spaces should be designed for all.

- Guidance/Information facilities should be increased.
- Public spaces should be easily accessible.

Within the framework of this study, walking routes are created taking the users' needs and expectations, as well as

the potential of the area into consideration so that the pedestrian environment and public spaces get connected and create a network. By means of this thematic route, more alternatives were created so that residents, visitors, and tourists spend more time in the area.

Figure 14 | Shopping and Green Route



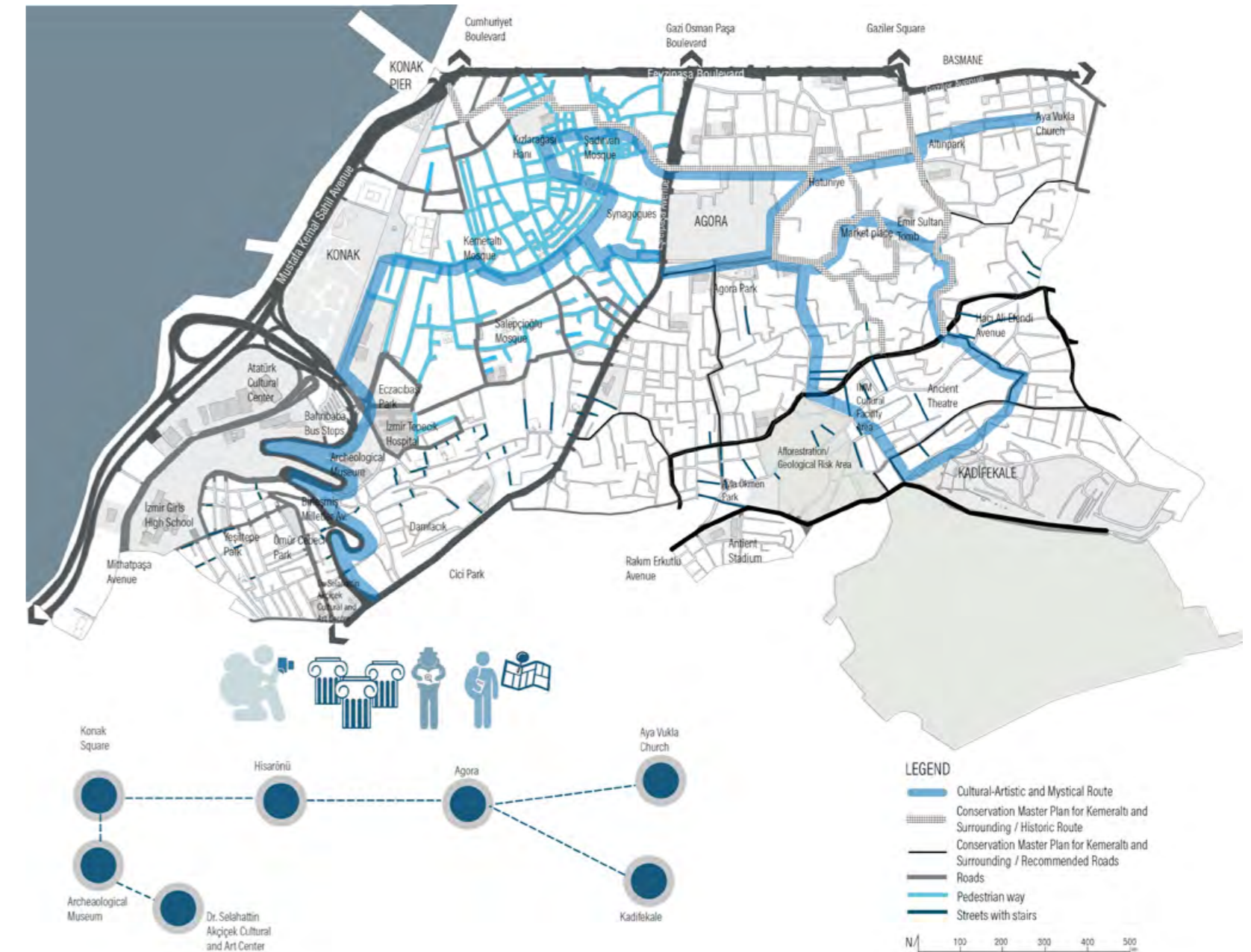
Two suggested pedestrian routes are listed below:

- Shopping and Green Route
- Cultural-Artistic and Mystical Route

Taking commercial activities and the potential of the region, the purpose of creating a shopping and green route is to allow users to see all kinds of products that are sold in the region together and to establish recreational places where they can eat and drink while they are still connected with the sea.

The purpose of creating a cultural-mystical route is to make the historical and cultural areas, as well as current artistic and performance centers visible.

Figure 15 | Cultural-Artistic and Mystical Route



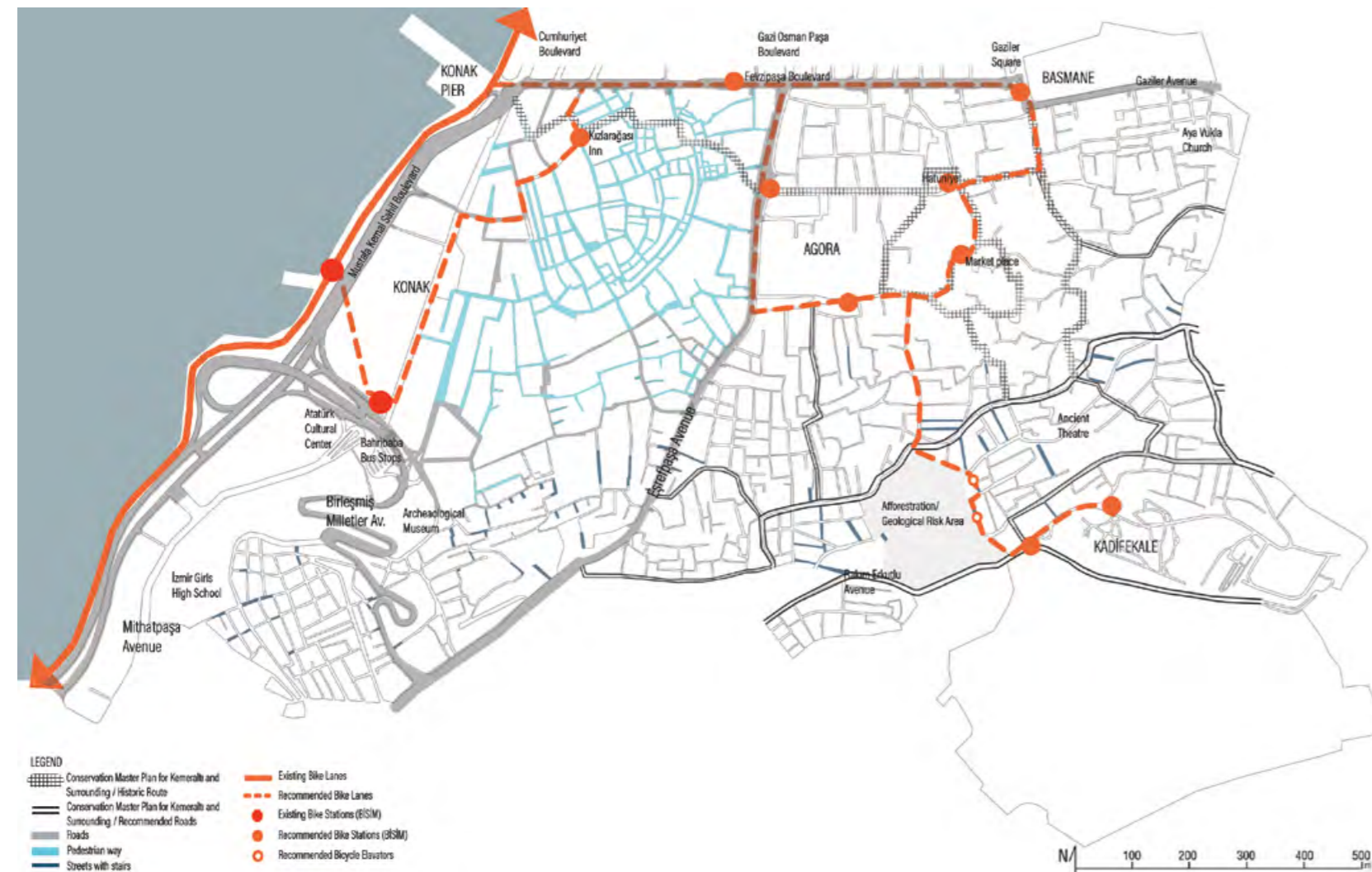
## BICYCLE INFRASTRUCTURE PLANNING

The existing bike lanes in İzmir are more intense around the Gulf. Bike lanes start from İnciraltı and continue until Sasalı, except for Alsancak Harbor. It is suggested in this report that the

existing bike lanes along the coast continues along Fevzi Paşa Avenue and Çankaya Intersection until Eşrefpaşa (İkiçeşmelik) Avenue. Moreover, it is important to provide an integrated bike-

sharing system in residential areas. Taking the geographical properties of the area, bicycle elevators are recommended where necessary.

Figure 16 | Suggested Cycling Routes and Bike Sharing Stations



## PUBLIC TRANSPORT INFRASTRUCTURE PLANNING

It is suggested that a “Shared Bus-Bike Lane” should be applied along Fevzi Paşa Avenue, which is already applied in different cities around the globe, e.g. the UK, mainly London, and different states in the United States of America. In the

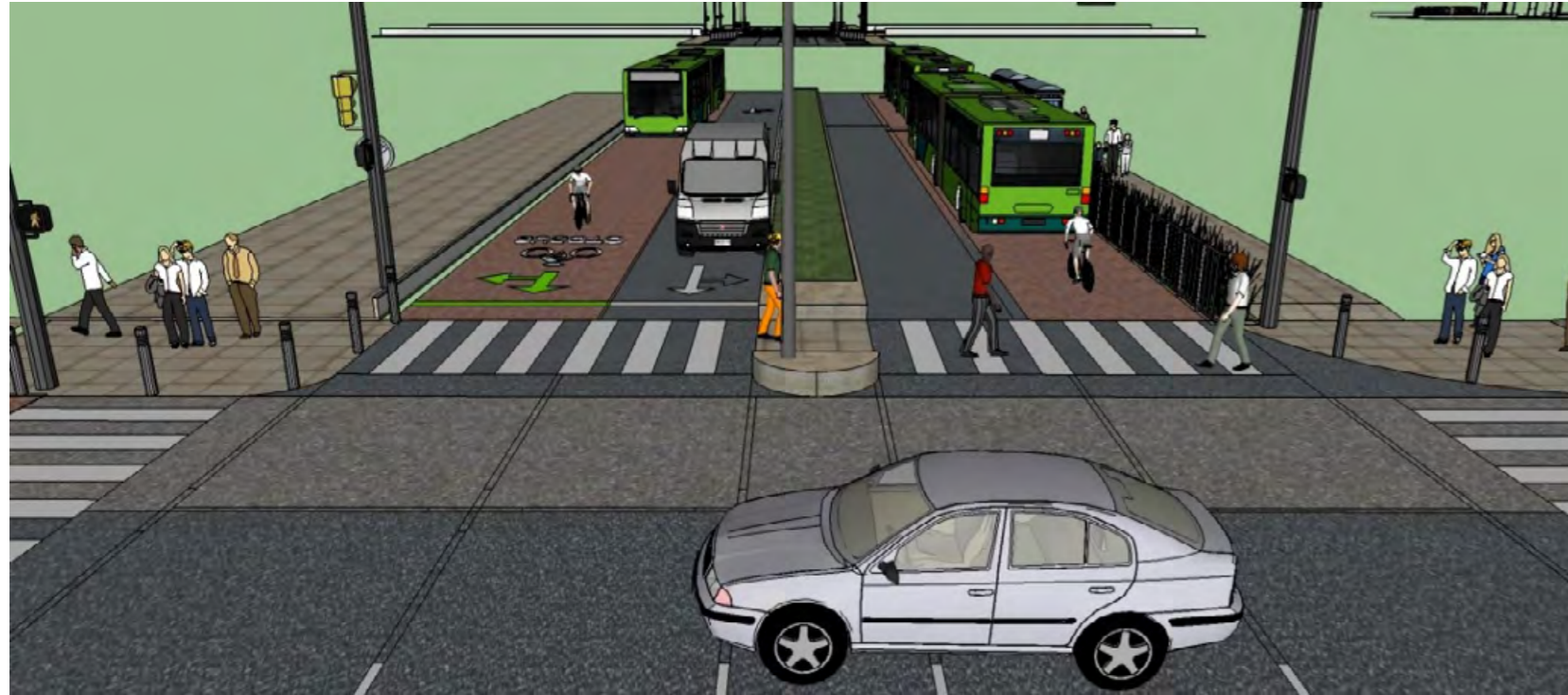
implementation of routes, a healthier and more comprehensive feasibility study for bus and bicycle shared lanes can be carried out by means of the analysis of the data sets needed. It has

also been suggested that a shared bus-bike lane should be applied at Eşrefpaşa (İkiçeşmelik) Avenue.

Figure 17 | Conceptual Design Belonging to the Shared Bus-Bike Lane Application for the Road Platform on Fevzi Paşa Avenue Near the Çankaya Intersection



Figure 18 | Conceptual Design Belonging to the Shared Bus-Bike lane Application for the Road Platform at the Conjunction of Eşrefpaşa (İkiçeşmelik) Avenue and Çankaya Intersection



## PARKING PLANNING & MANAGEMENT

Suggestions regarding the planning of parking areas are as follows:

- Arrangements should be made, and necessary measures should be taken in order to decrease the demand of parking.
- Arrangements and applications should be realized in order to promote active transport modes such as walking and cycling.
- Shared parking examples, which do exist in the region, should be arranged and extended.
- Standards of the parking areas should be developed to meet the needs of the users.
- Parking areas should be established outside the region without being too remote from the region.
- The capacity of the existing parking areas managed by İzelman should be increased.
- Travel fees should be reduced.
- Information systems for parking should be improved.
- Developing application and control mechanisms: A control mechanism should be developed for non-motorized parking areas.

Unlike the current practice, pricing policy should be revised as low-cost for short term parking and increasing unit price by increasing parking time. Thus, while existing capacity remains stable, circulation and efficiency of parking spaces can be increased.



## PLANNING OF TRANSPORT HUBS, STATIONS AND STOPS

The main approach in the planning of public transport hubs, stations and stops should be as follows:

- Hubs and bus stops should be accessible to everyone.
- The integration between the stop and the ferry station in hubs should be ensured.
- The safety of the bus stops should be increased with the support of lighting elements.
- The bus stops should become more visible.

- It makes it difficult for people with disabilities to access the bus stops at Bahribaba as the platforms are considerably high from the ground. Moreover, it poses a threat to pedestrians. Either the platform height should be on the same level as the ground or disabled access ramps and lift systems should be integrated.

Transfer Hubs, stations, and bus stops are essential in terms of passenger comfort and are defined as "access point" of the system. These access points should be considered as public spaces.

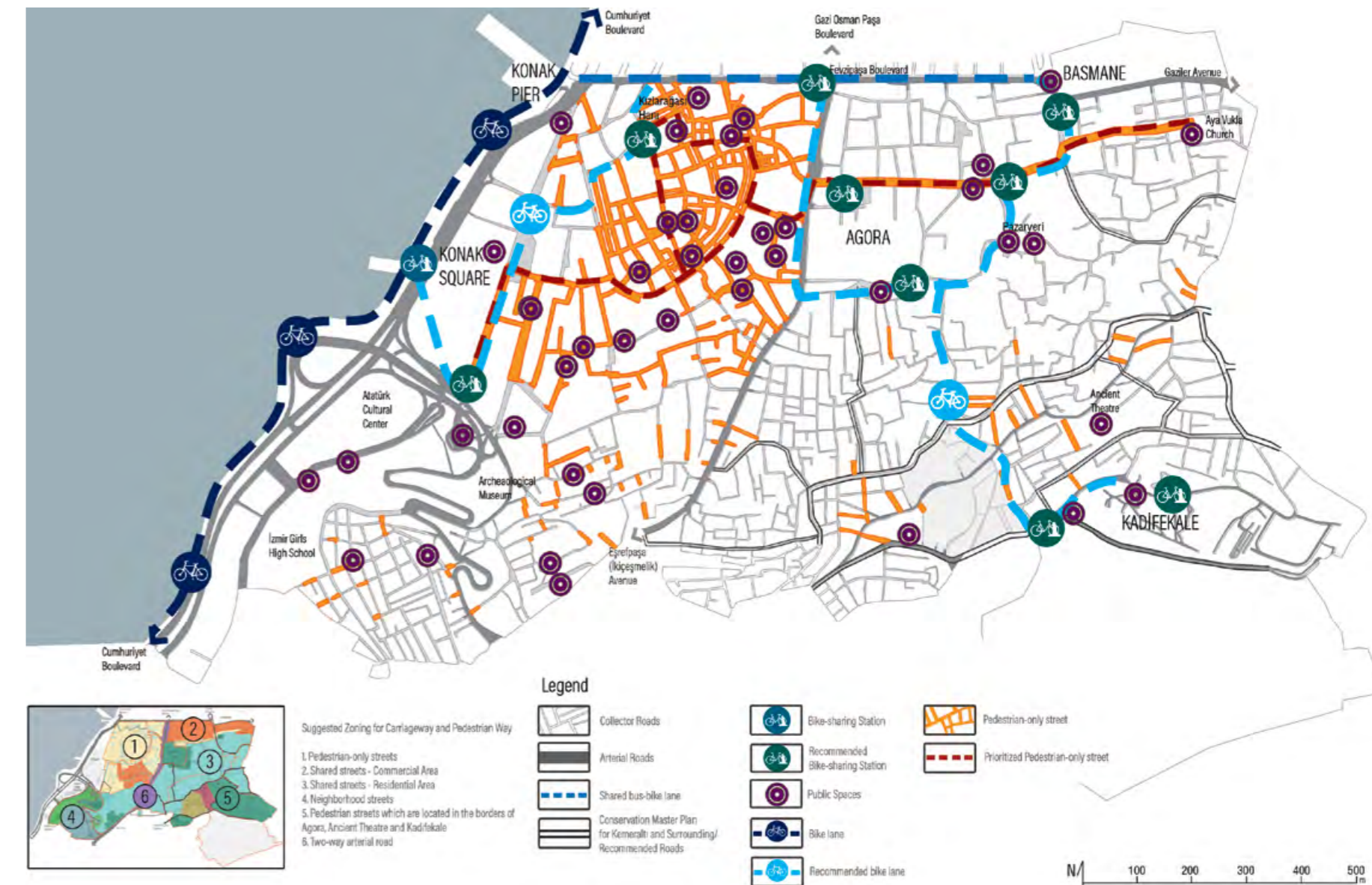
## SUGGESTION: SAFE AND ACCESSIBLE TRANSPORT OPTIONS FOR ALL

Considering pedestrian, bicycle and public transport systems on the one hand, and suggestions developed throughout this report on the other, we can observe the situation depicted in Figure.19 (see below). Within the framework of accessibility and

road safety principles, pedestrian as well as bike lanes were prioritized and main public transport channels were reevaluated for their transformation into shared usage in order to provide more sustainable transport systems in the region. This

system was backed up by suitable parking suggestions. All in all, the region's history, its cultural values, the scale of streets and the functions situated in these streets were supported by this system.

Figure 19 | Suggested Pedestrian and Vehicle Circulation Network





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## PHOTO CREDITS

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