

Foreign & Commonwealth Development Office

Prosperity Fund Global Future Cities Programme, Turkey

Bicycle Strategy, Master Plan  
and Pilot Implementation for  
Integrated Non-Motorized  
Multimodal Transport in  
Ankara

Technical Review

22.03.2021



# Global Future Cities Prosperity Fund Programme in Turkey

ARUP

## CLIENT

The UK Foreign, Commonwealth & Development Office (FCDO)



## CLIENT'S STRATEGIC PARTNER

UN-Habitat

*United Nations Human Settlements Programme*



## PRIMARY BENEFICIARIES

Istanbul Metropolitan Municipality

Bursa Metropolitan Municipality

Ankara Metropolitan Municipality

Cankaya Municipality



## DELIVERY PARTNER

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180 People

## SUBCONSULTANTS



9 Arup Offices



5 Universities

# Pillars and aims

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## PILLARS

Transportation  
Urban Planning  
Resilience

## BENEFITS

Enhancing Inclusive Economic Growth  
Reducing Poverty  
Reducing Gender Inequality and  
Having Social Inclusion



## AIMS

The Programme focuses on **technical assistance** to develop strategies, policies, road maps, plans, and capacity building with cross-cutting themes of smart technologies/data.

- Increase levels of productivity
- Generate sustainable wealth
- Help alleviate poverty
- Address gender inequality
- Increase quality of life for all societal groups
- Allow more people to live in an existing urban area
- Improve resilience
- Minimise any negative impacts on the environment
- Proactively involve the city's citizens and businesses in the process

*‘Future cities are innovative, sustainable and utilise technology in a smart way’*

# Programme timeline and projects

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ANKARA

Bicycle Strategy, Master Plan and Pilot Implementation for Integrated Non-Motorized Multimodal Transport in Ankara

Increasing Quality and Accessibility of Streets in Çankaya Neighborhoods in Ankara

ISTANBUL

Sustainable Urban Mobility Plan for Istanbul

Participatory Urban Planning Implementation Model, Training and Capacity Development Programme for Istanbul

BURSA

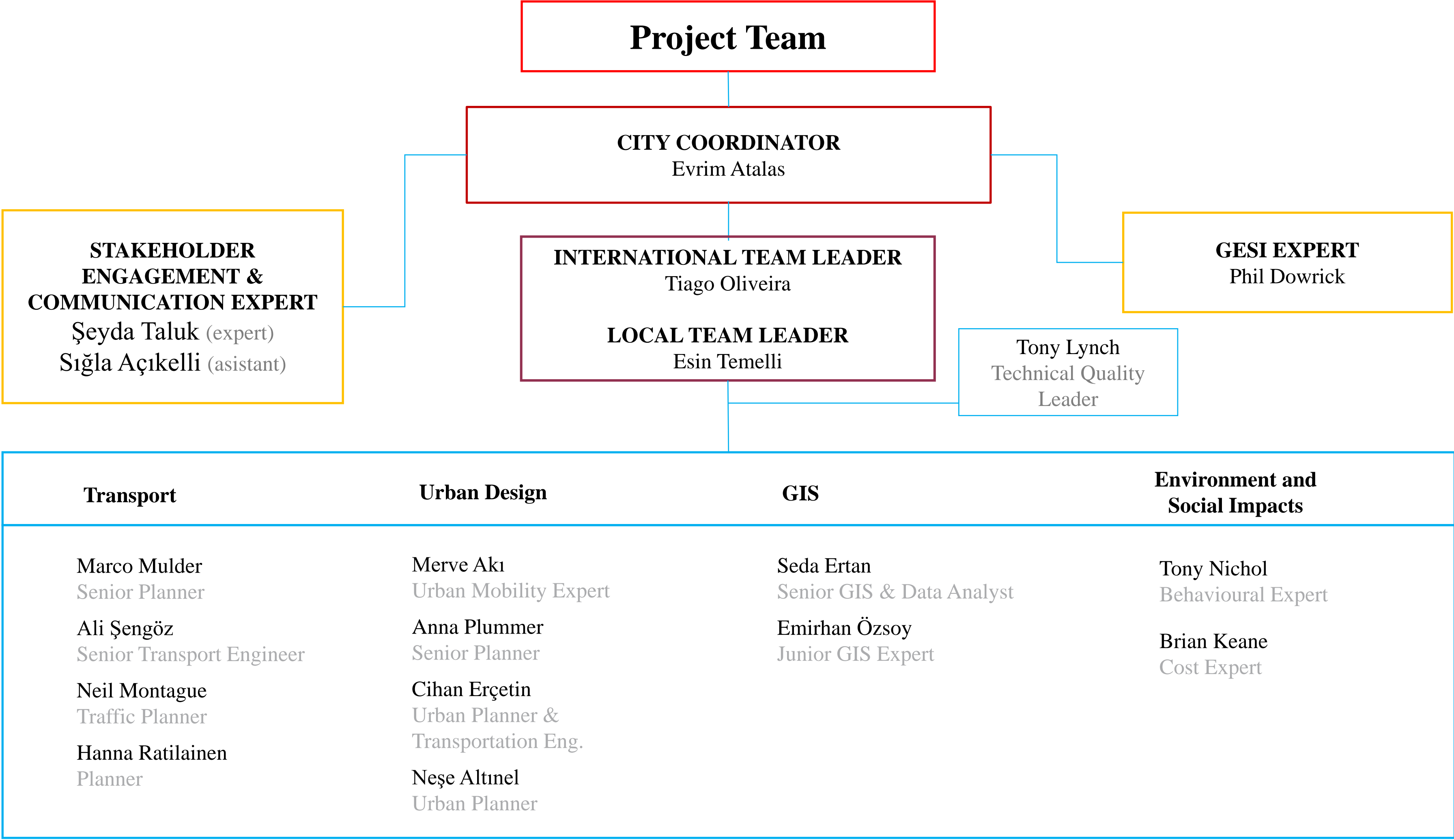
Transforming Bursa into a Smart City





# Organization Chart

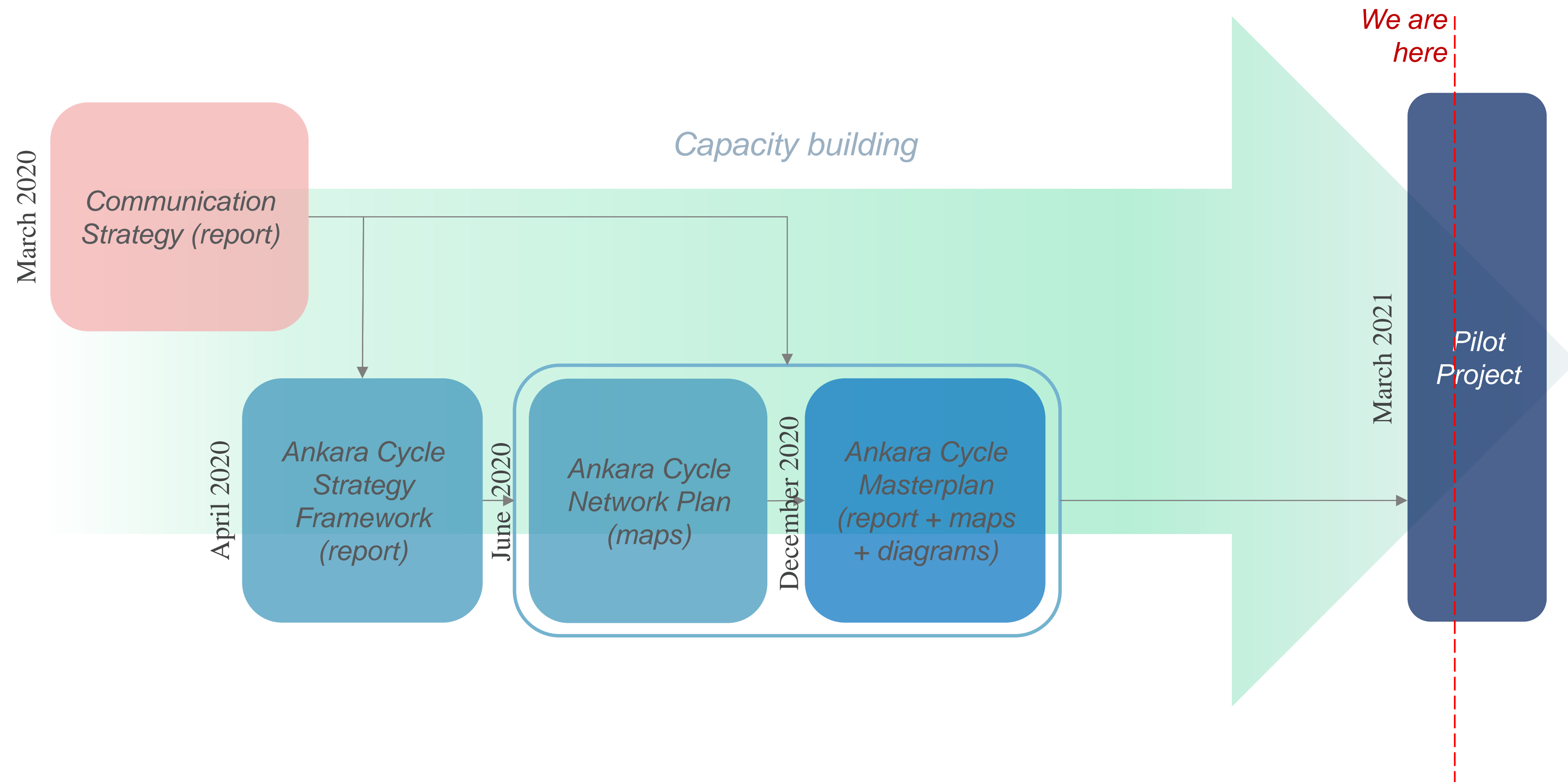
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# Flowchart and Deliverables

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# Gender Equality and Social Inclusion

A photograph of a person with short blonde hair, wearing a black shirt with white polka dots, sitting in a motorized wheelchair. The wheelchair is dark green and black, with a red ribbon tied around the back. The person is crossing a street with white zebra crossings. In the foreground, there is a white bicycle symbol painted on the asphalt. The background shows a sidewalk and some trees.

GESI-focused analysis and baseline studies

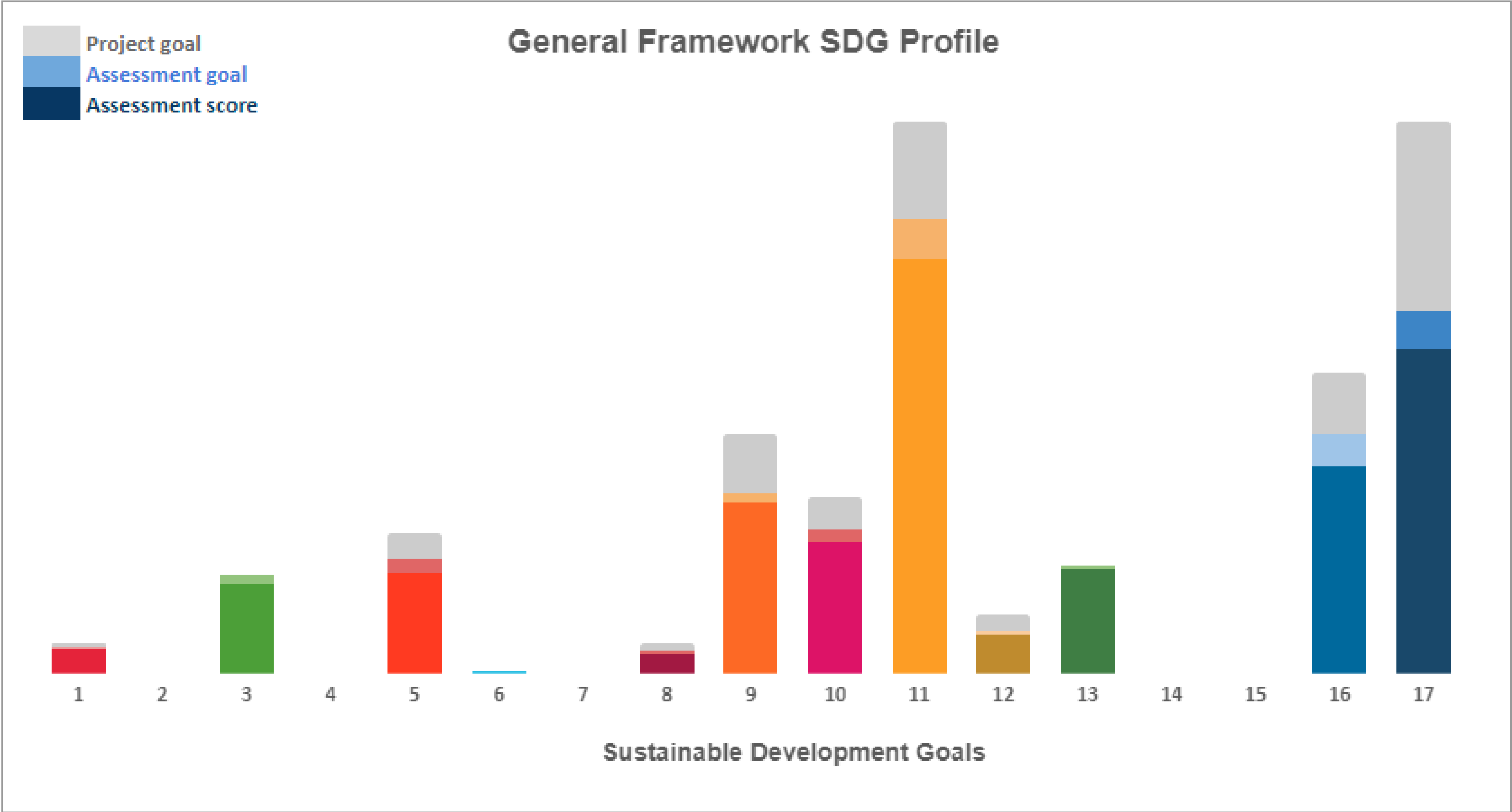
Diverse set of stakeholders to ensure wide representation in the consultation process

The study objectives and related proposals directly related to GESI outcomes., for example:

- Connections to schools to **improve young people's access to education opportunities;**
- Connections to employment areas to **improve the employment opportunities of low-income population** groups;
- Neighbourhood connections and local access to services to **enhance the mobility of women.**



# Sustainable Development Goals



Sustainable Development Goal	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Assessment score	22	0	83	0	93	3	0	18	157	120	380	36	95	0	0	190	298
Assessment goal	24	0	90	0	105	3	0	21	165	132	417	39	99	0	0	219	333
Project goal	27	0	90	0	129	3	0	27	219	162	507	54	99	0	0	276	507



# Location

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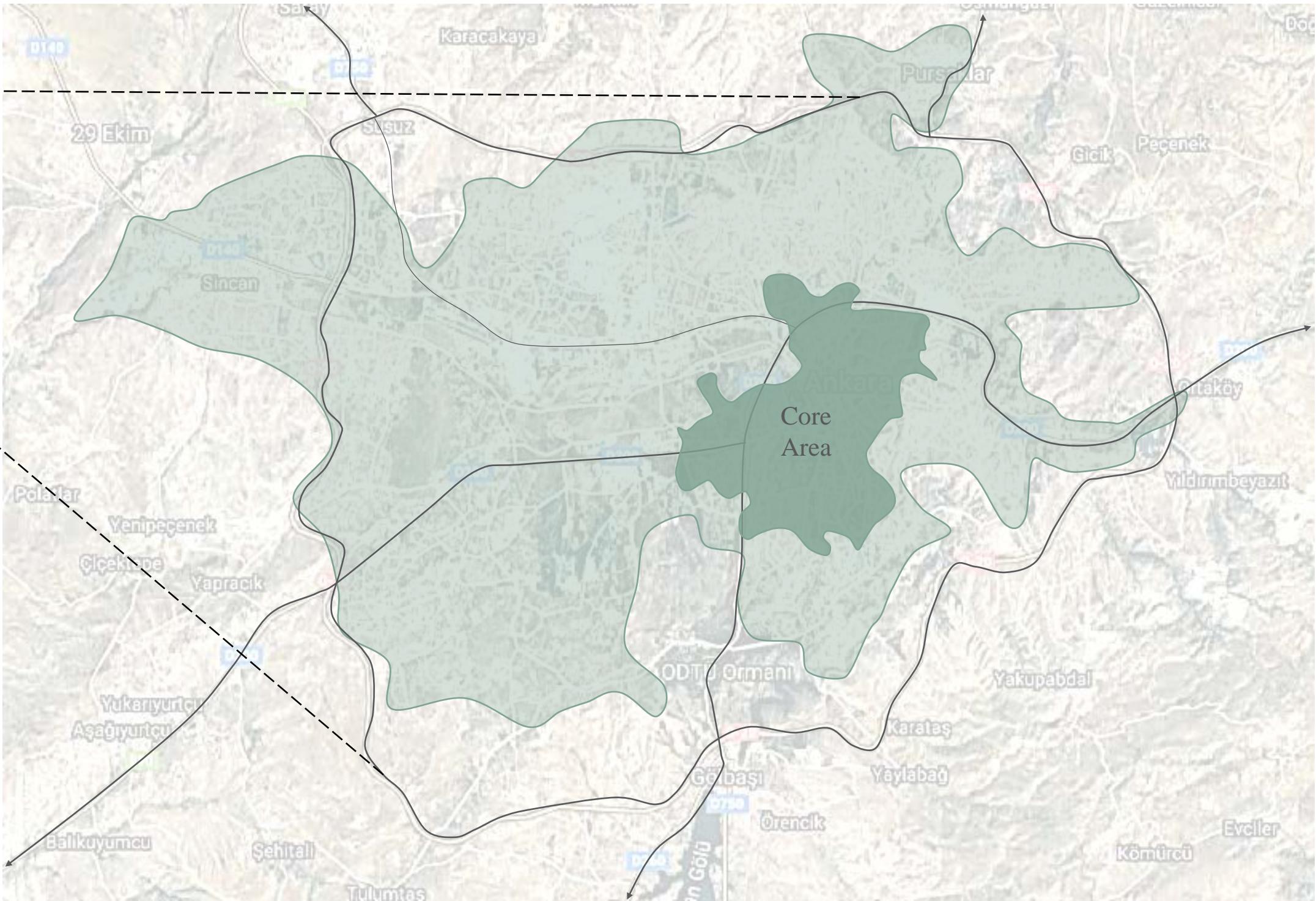
Ankara, Turkey



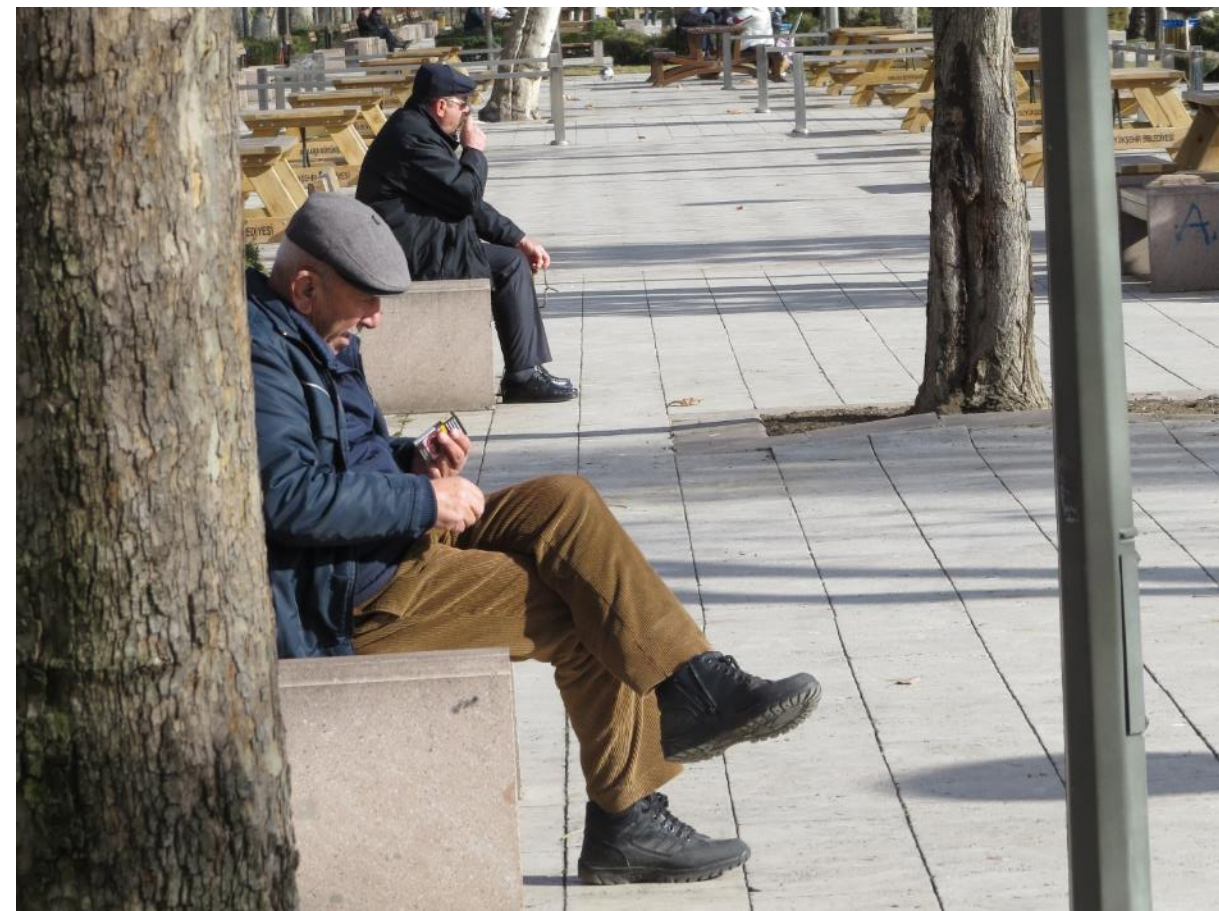
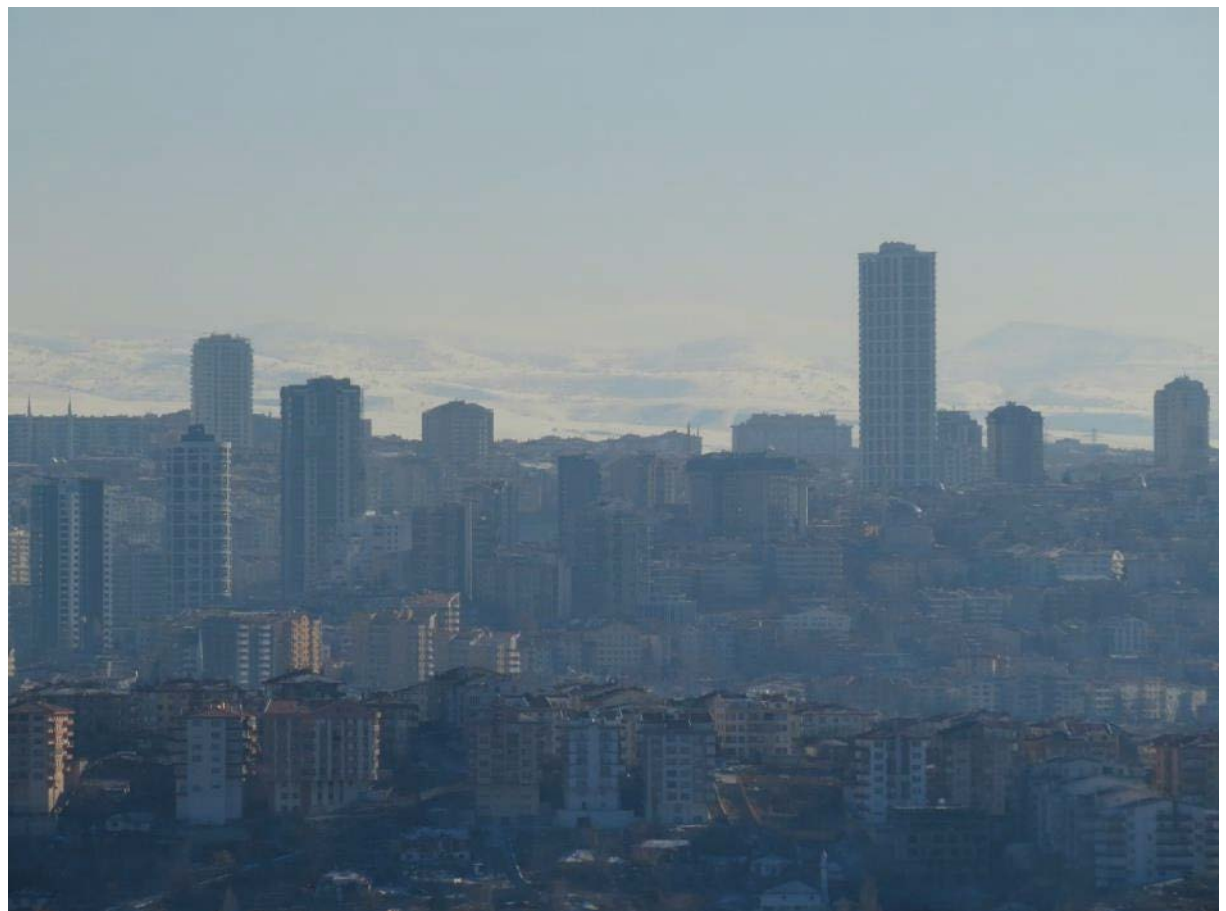
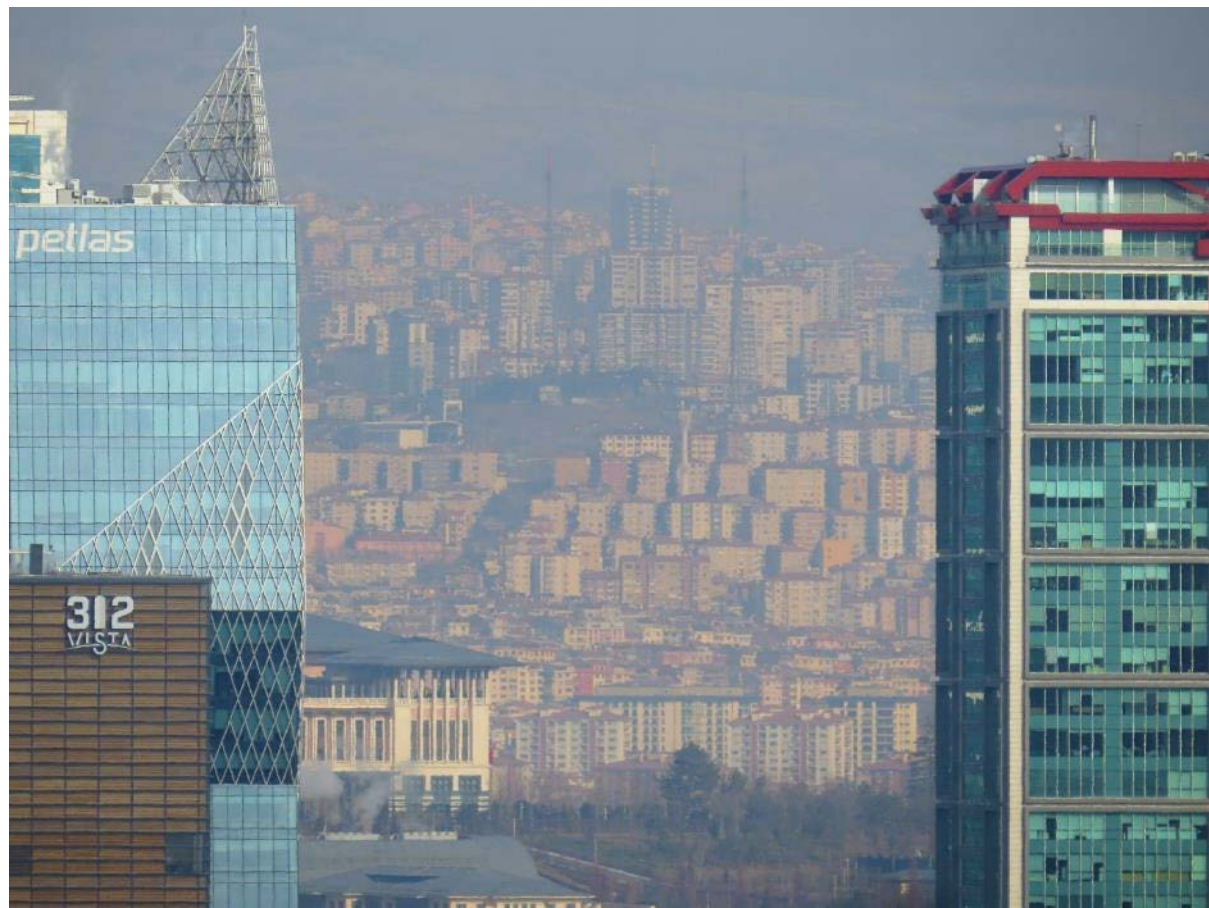
Ankara, Metropolitan Area



Ankara, Urban Area









# Ankara Context

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5,6 million

POPULATION OF  
METROPOLITAN CITY

8 MILLION  
INHABITANTS BY  
2030

CAPITAL CITY OF  
TURKEY

1,6 million

TOTAL VEHICLES

279

PASSENGER CARS PER  
1000 PEOPLE

TURKEY'S AVERAGE IS  
149

EUROPEAN AVERAGE  
IS 505

~700 km<sup>2</sup>

URBAN CORE AREA

25 000 KM<sup>2</sup>  
AMM TOTAL AREA

1,1 million  
STUDENTS

22 UNIVERSITIES

193.000 UNIVERSITY  
STUDENTS

448.000+

PUBLIC SECTOR  
EMPLOYMENT



# Deliverables

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**REPORT ON THE RESEARCH FOR  
IDENTIFICATION OF THE BICYCLE  
AWARENESS LEVEL OF PEOPLE OF  
ANKARA  
AND  
THE FACTORS AFFECTING THE  
TENDENCY OF CYCLING**

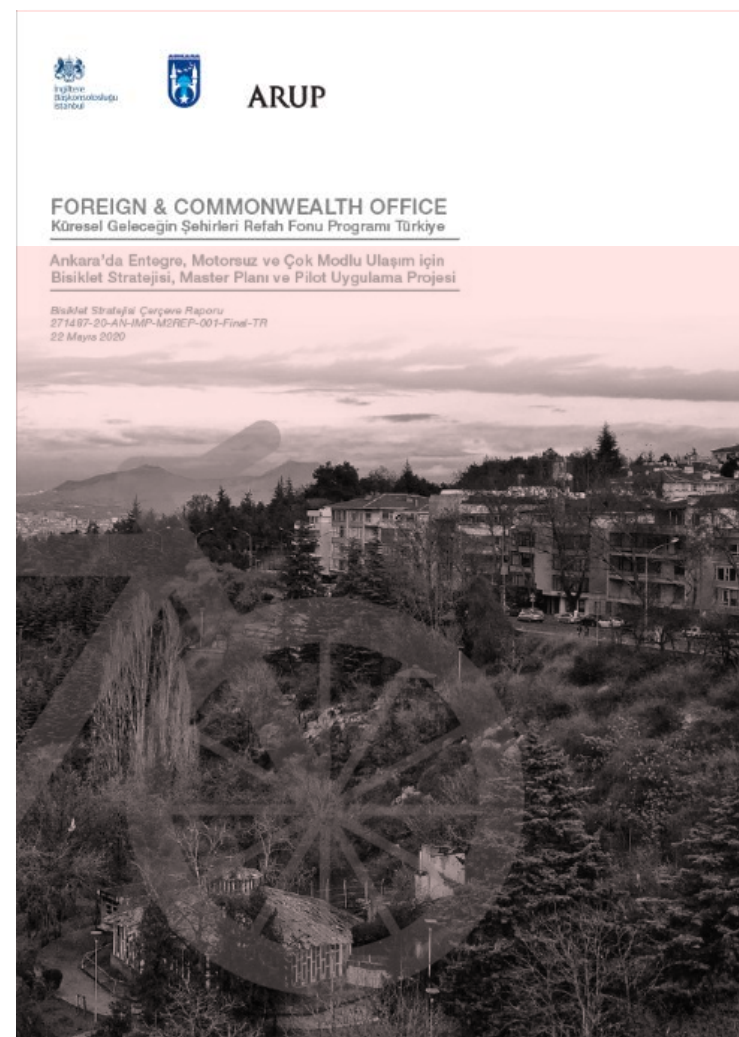
January - 2020 / Ankara



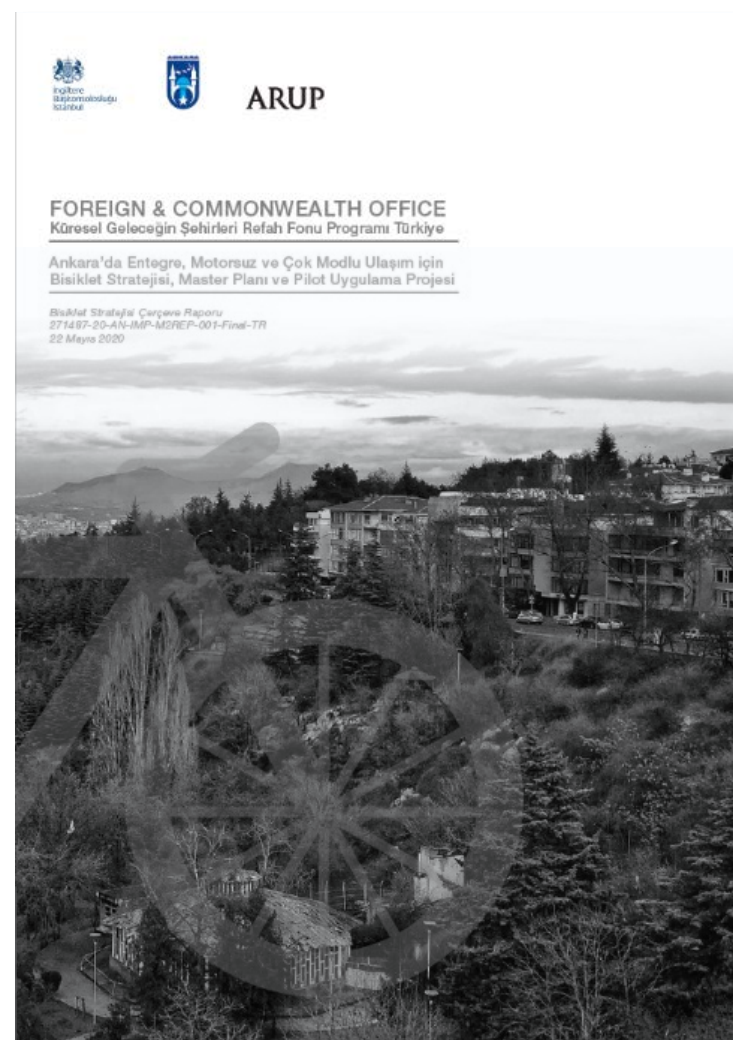
Bordo Araştırma Danışmanlık  
Mehmet Eşdem Sok. No:58 / 13 Çankaya - Ankara  
Tel: 0 (312) 417 1766 / 6 (506) 744 7587  
bordodanisman@gmail.com



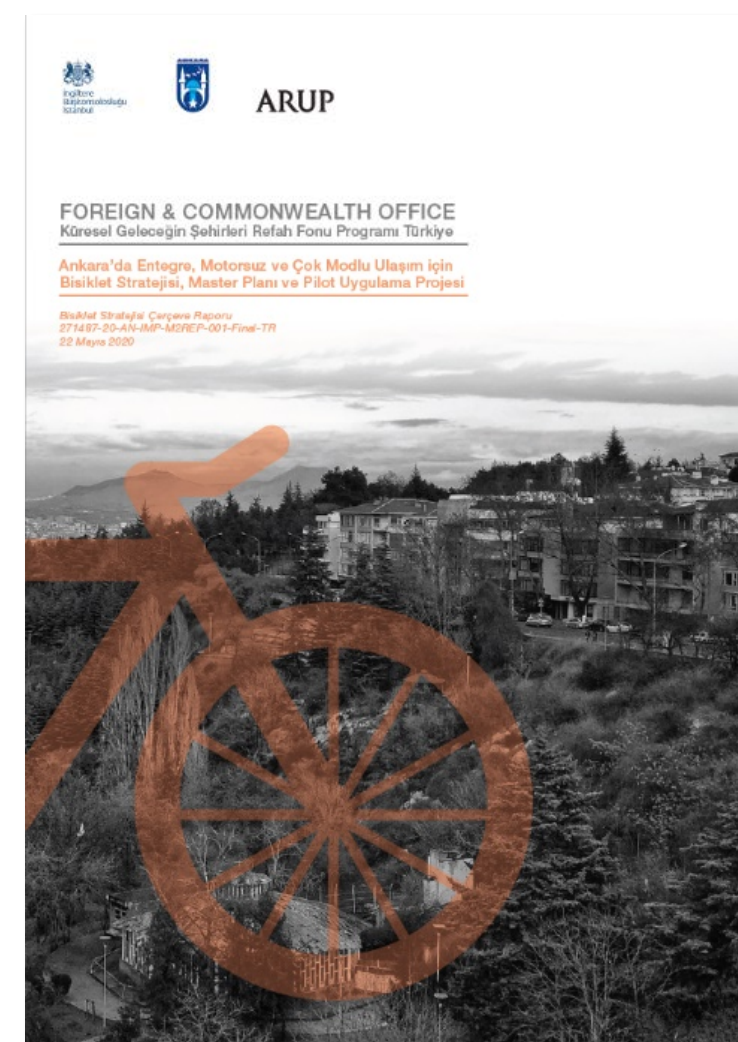
## Awareness Research Report



## M1- Communication Strategy Report



## M2 - Strategy Framework Report



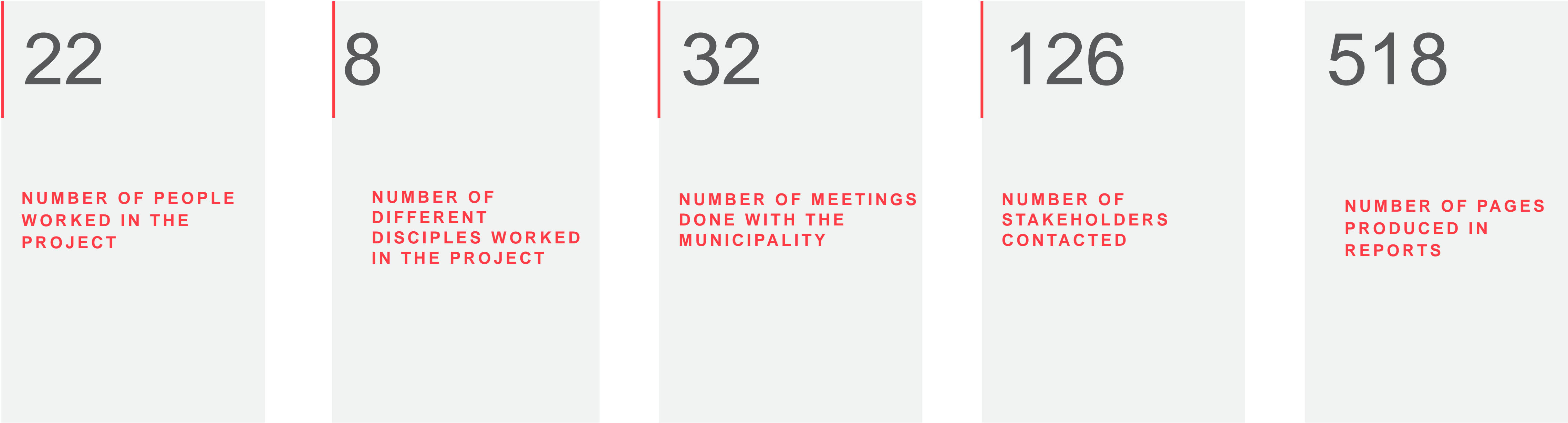
## M3- Ankara Cycle Masterplan

September October November December January February March April May June July August September October November December January February March

2020

# Project Facts

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**VISION**

**ARUP**

*Encourage cycling as a mode of urban mobility for all and integrate it into a multimodal public transport system.*





# The Project



# Communication Strategy

- Training events;
- Behaviour change and awareness raising campaigns;
- Events and promotional activities; and
- Urban strategy proposals to support cycling activities.





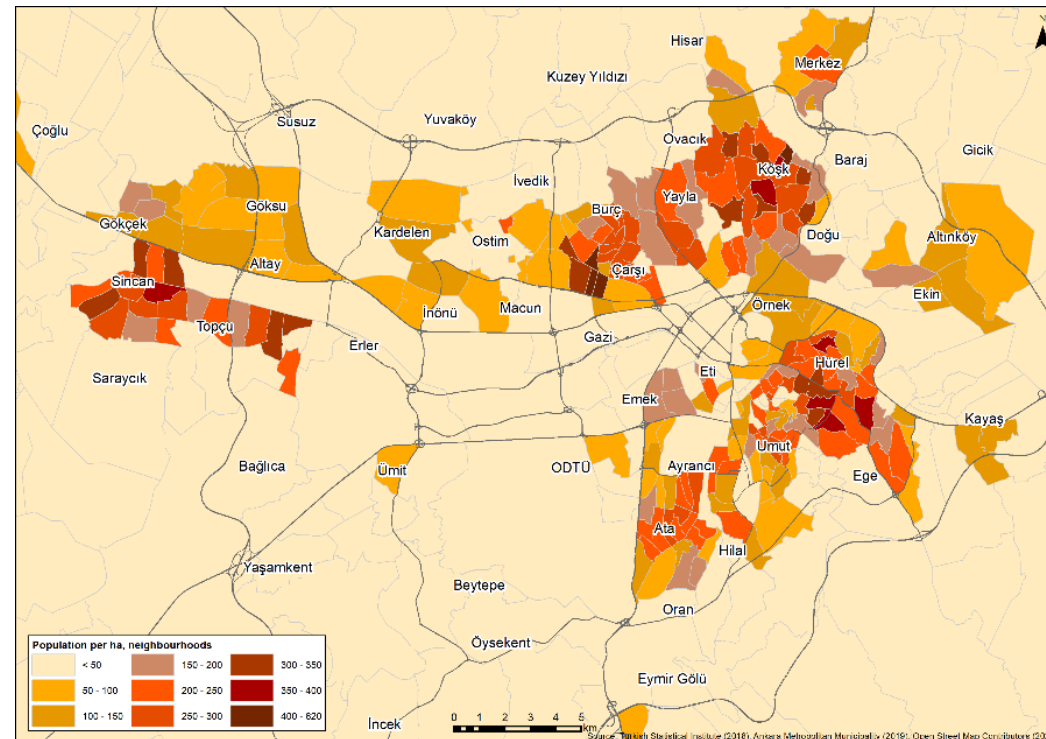
# Cycle Strategy Framework

- Baseline;
- Planning Context;
- Opportunities and constraints;
- Potential for cycling;
- Main concept and strategy; and
- Best practice examples.

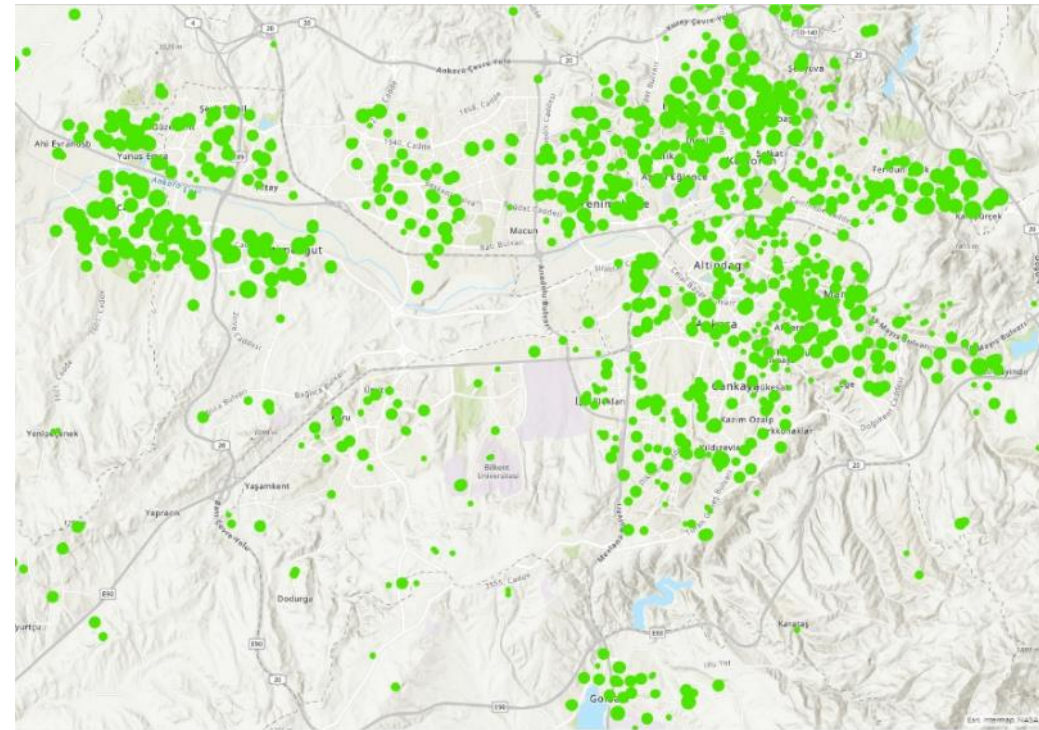




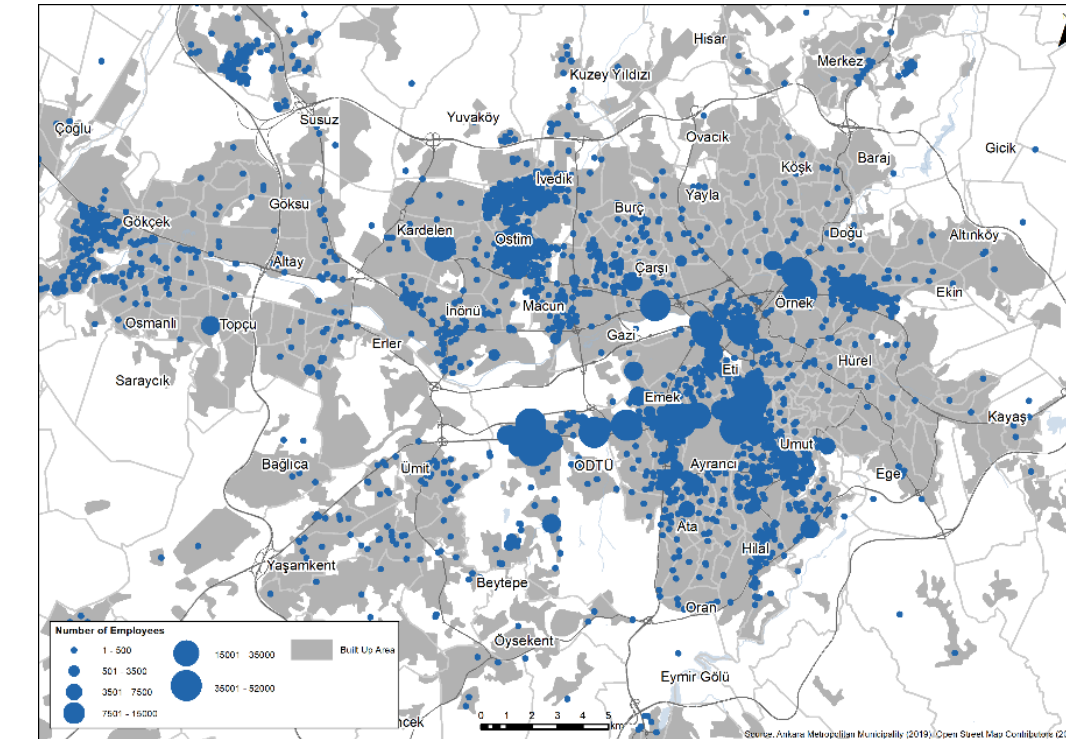
# Ankara Cycle Strategy Framework – Baseline studies



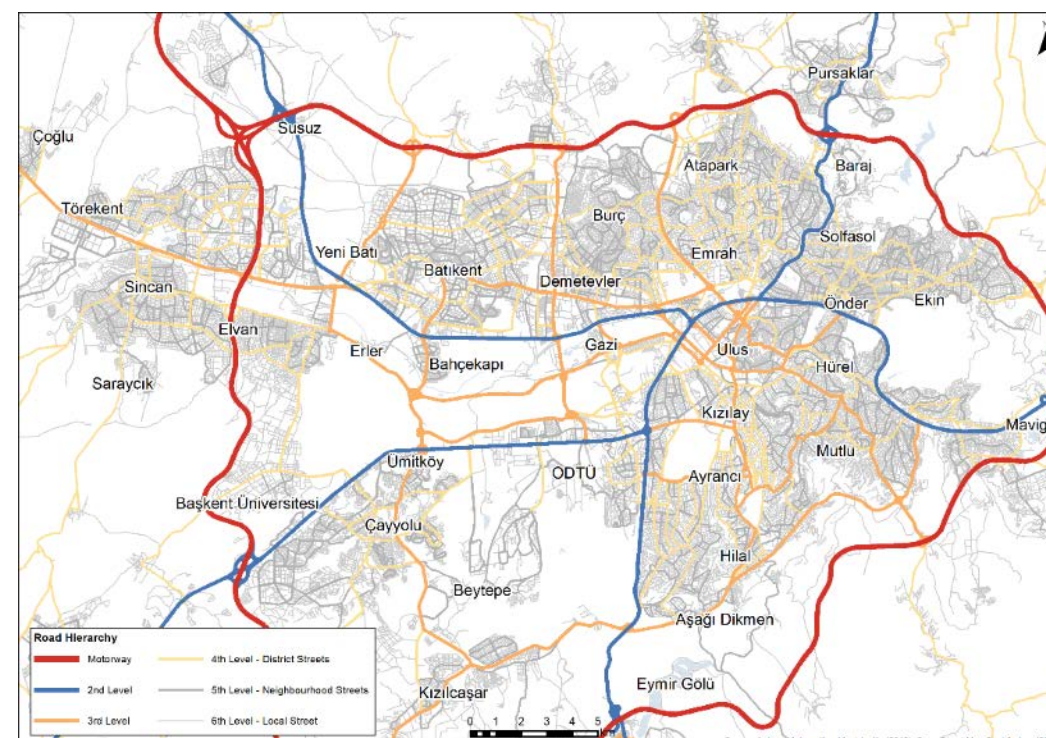
## Population density



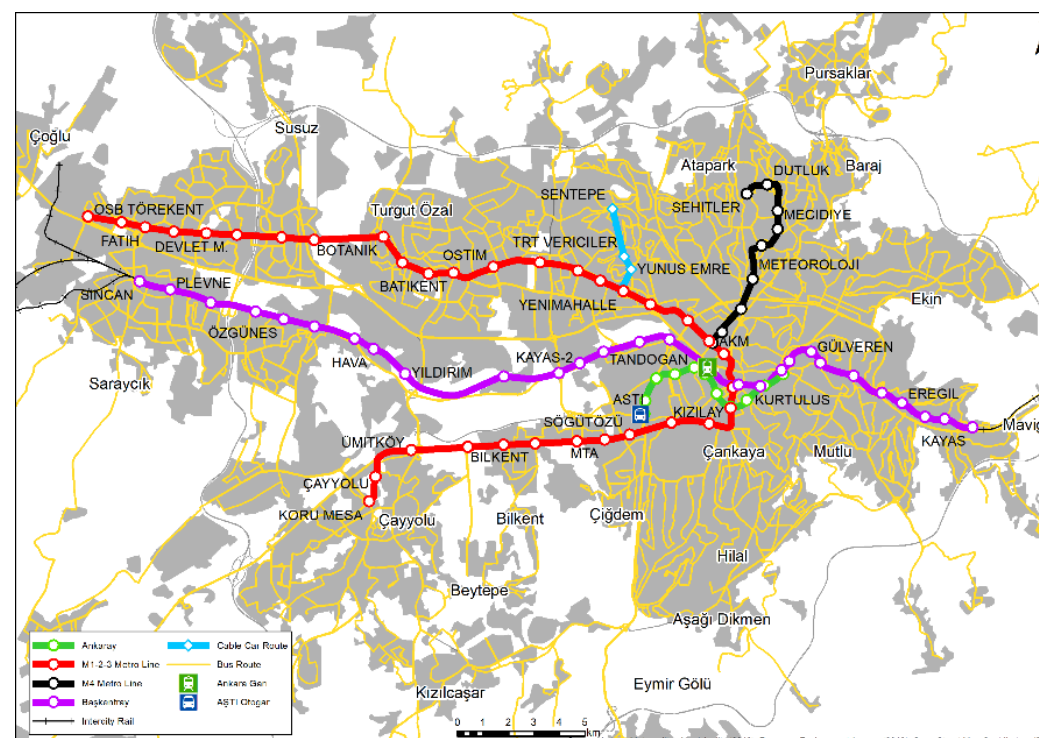
## Student distribution



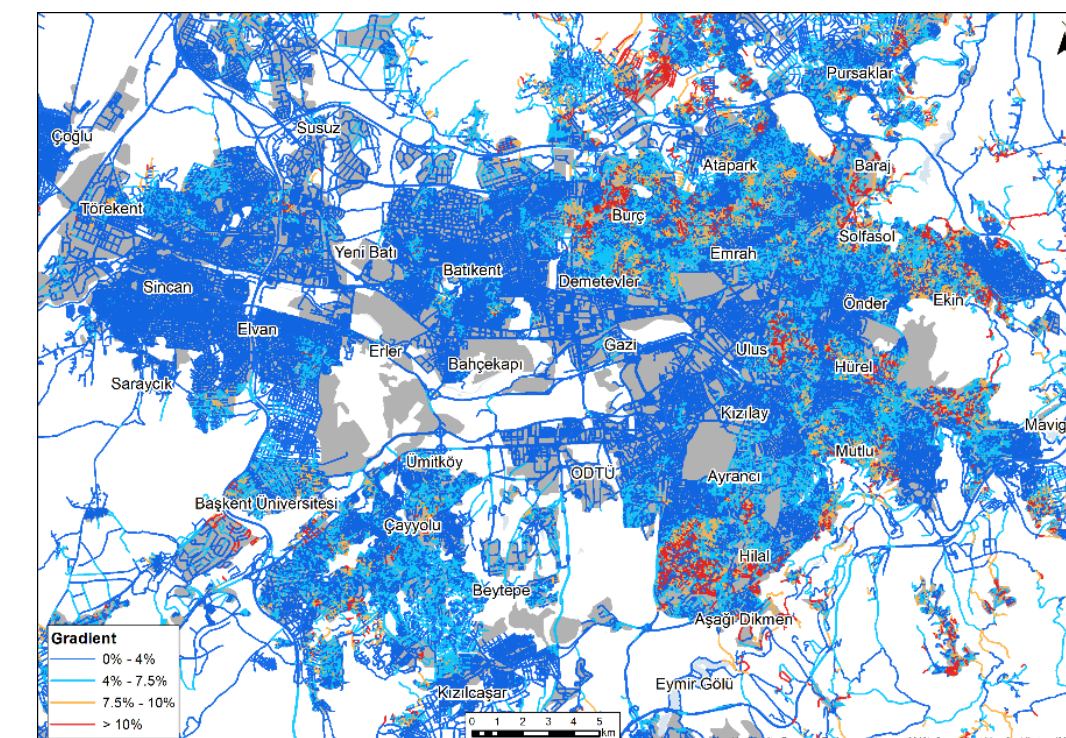
## Socio-economy and employment



## Road network



## Rail network



## Topography



# Ankara Cycle Strategy Framework – Baseline studies

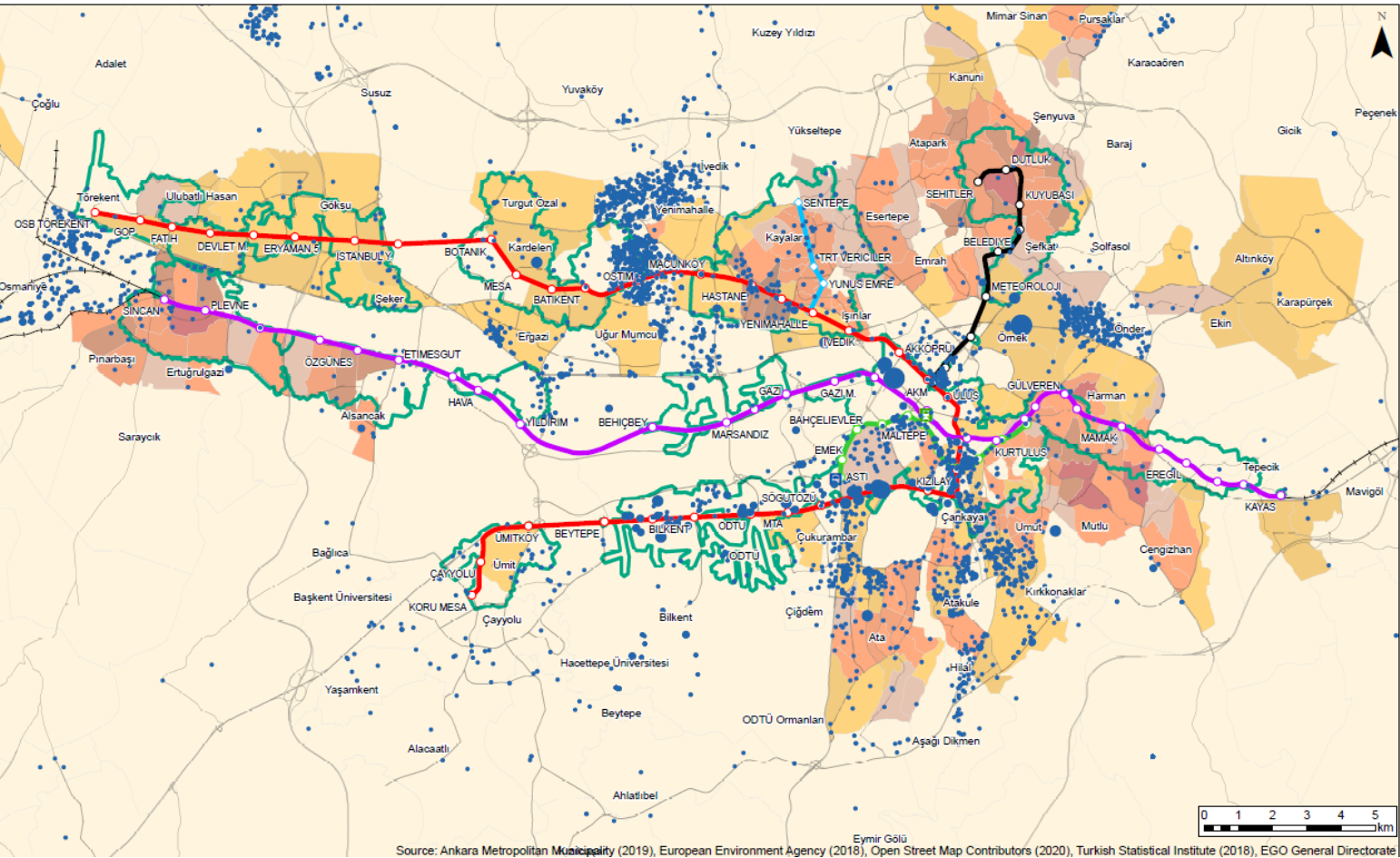
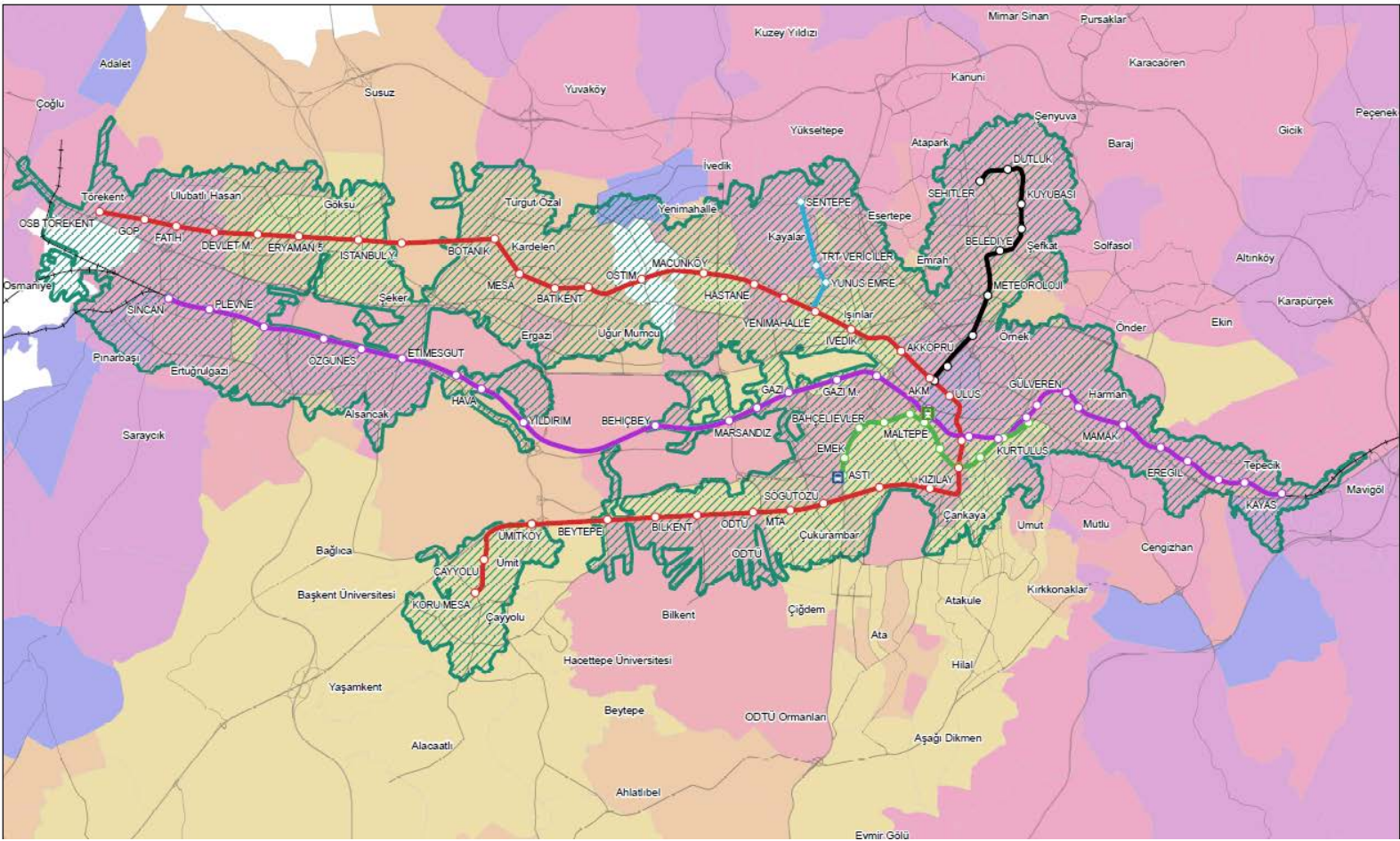
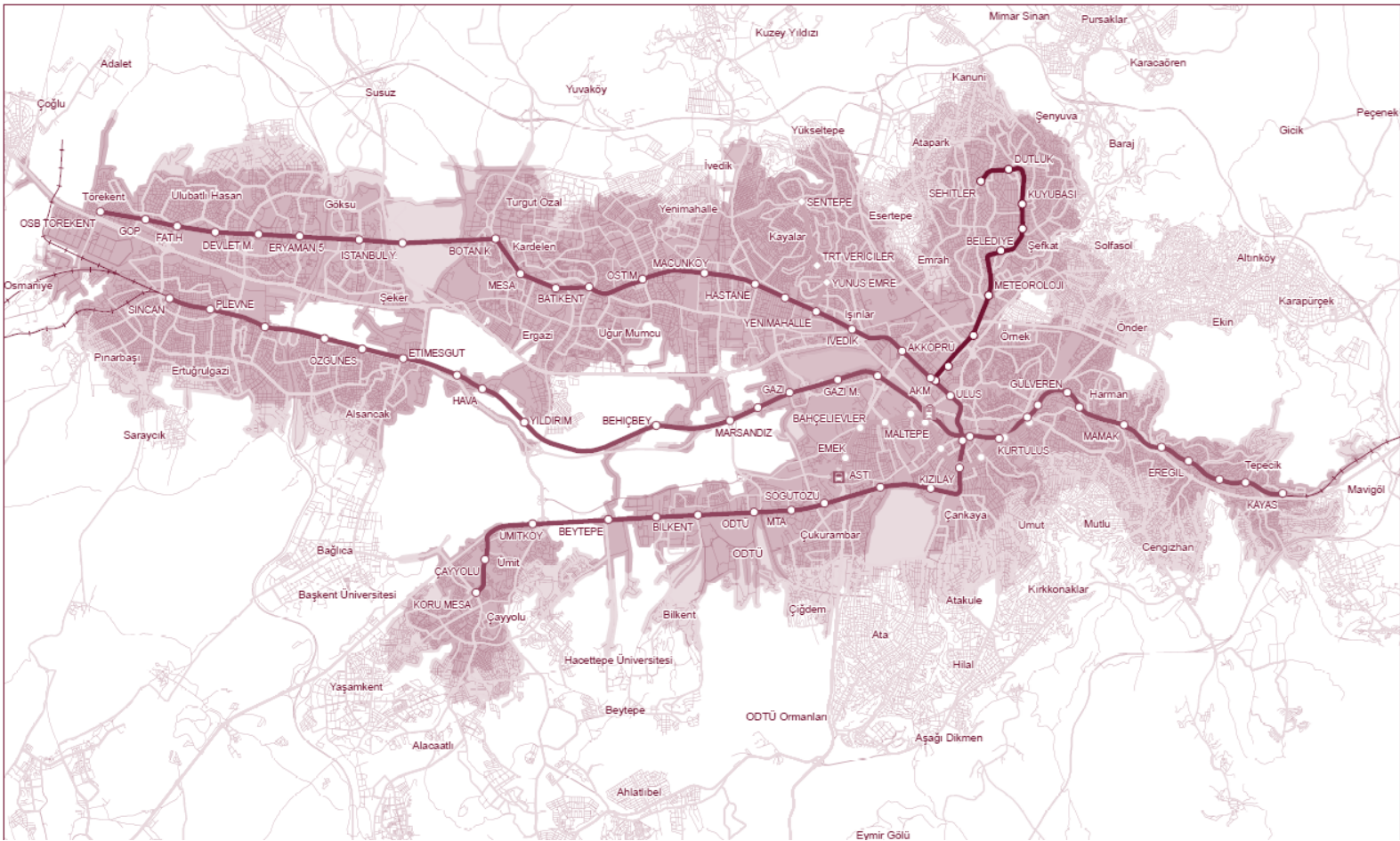
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## Public Transport catchment

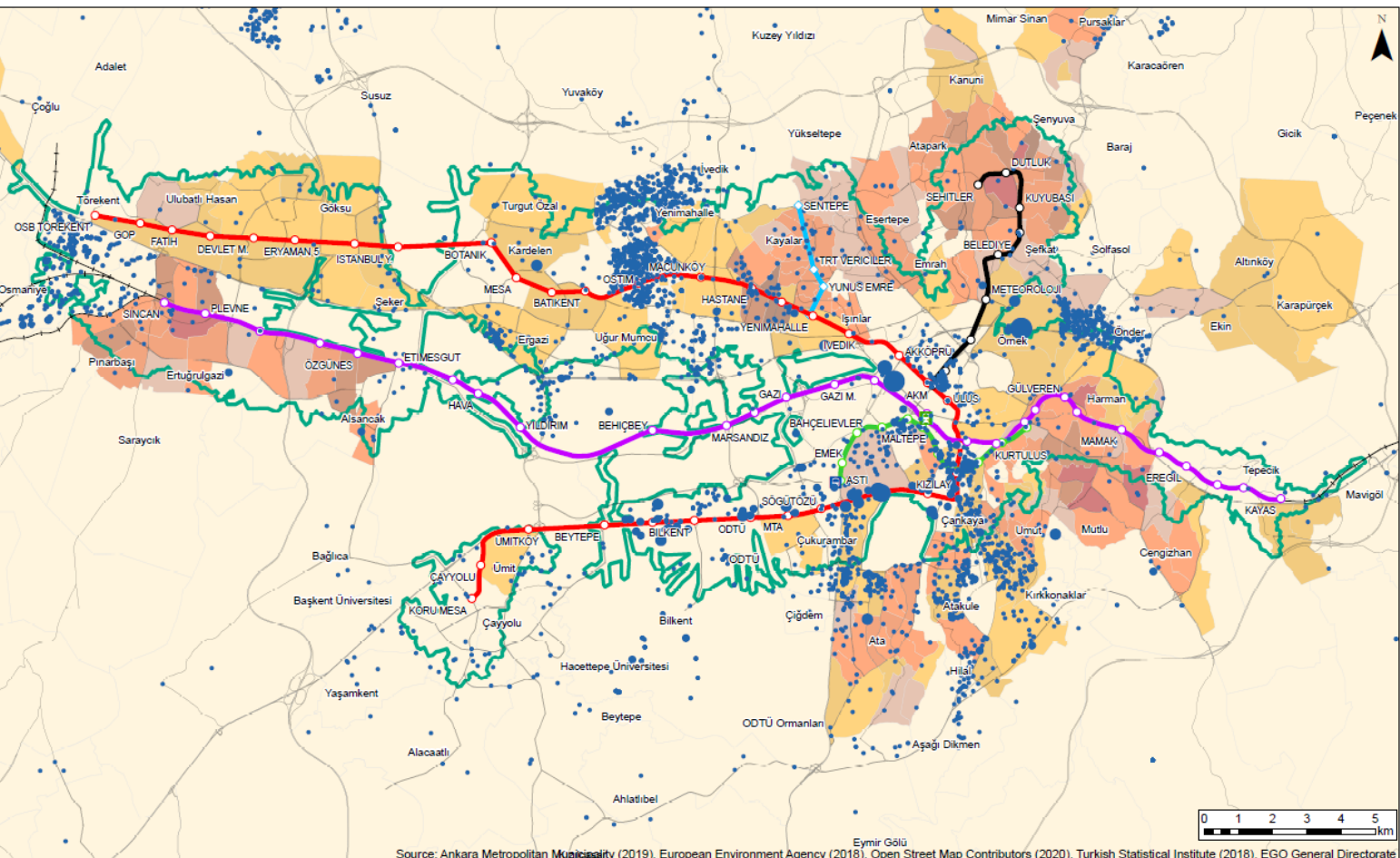
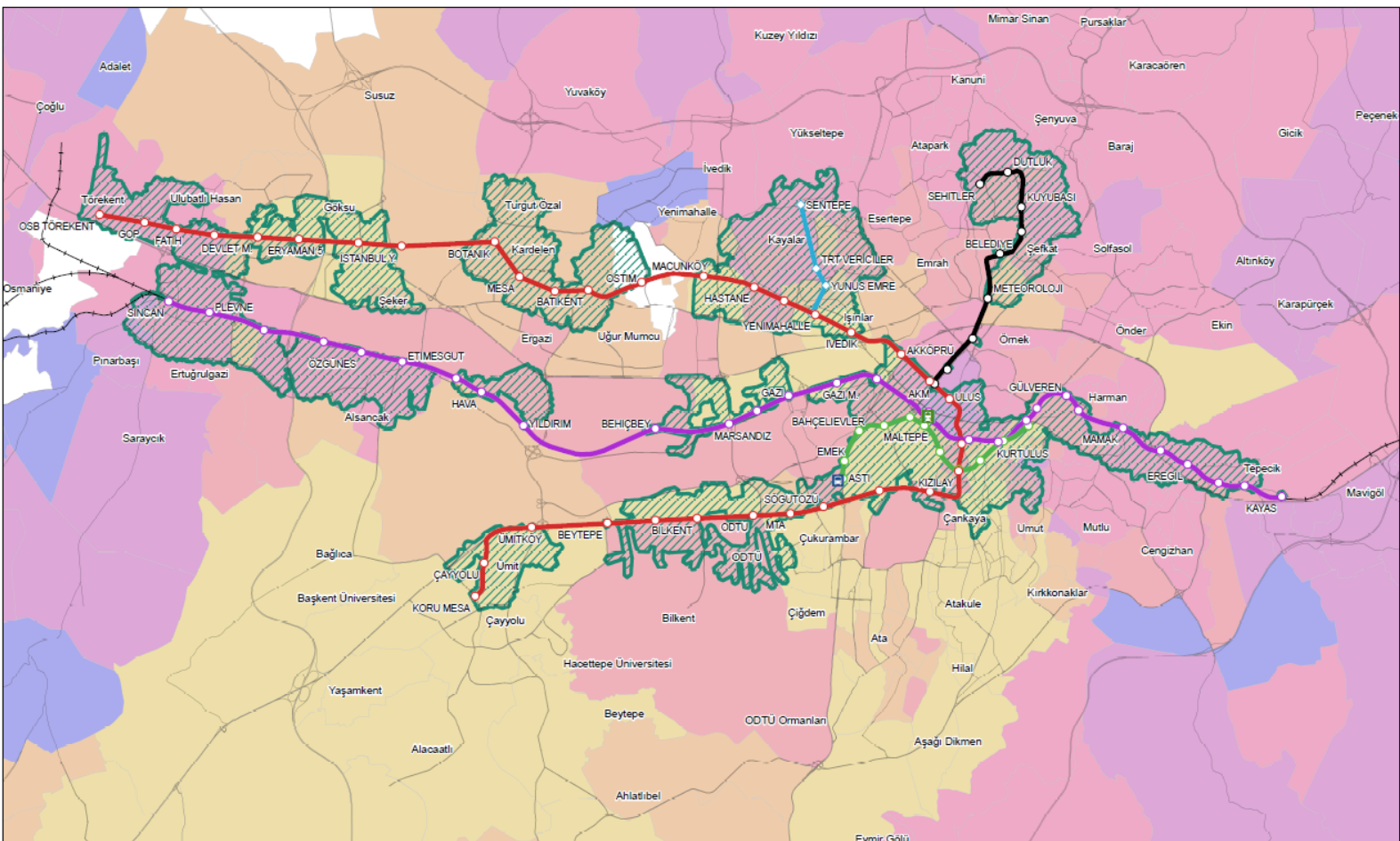
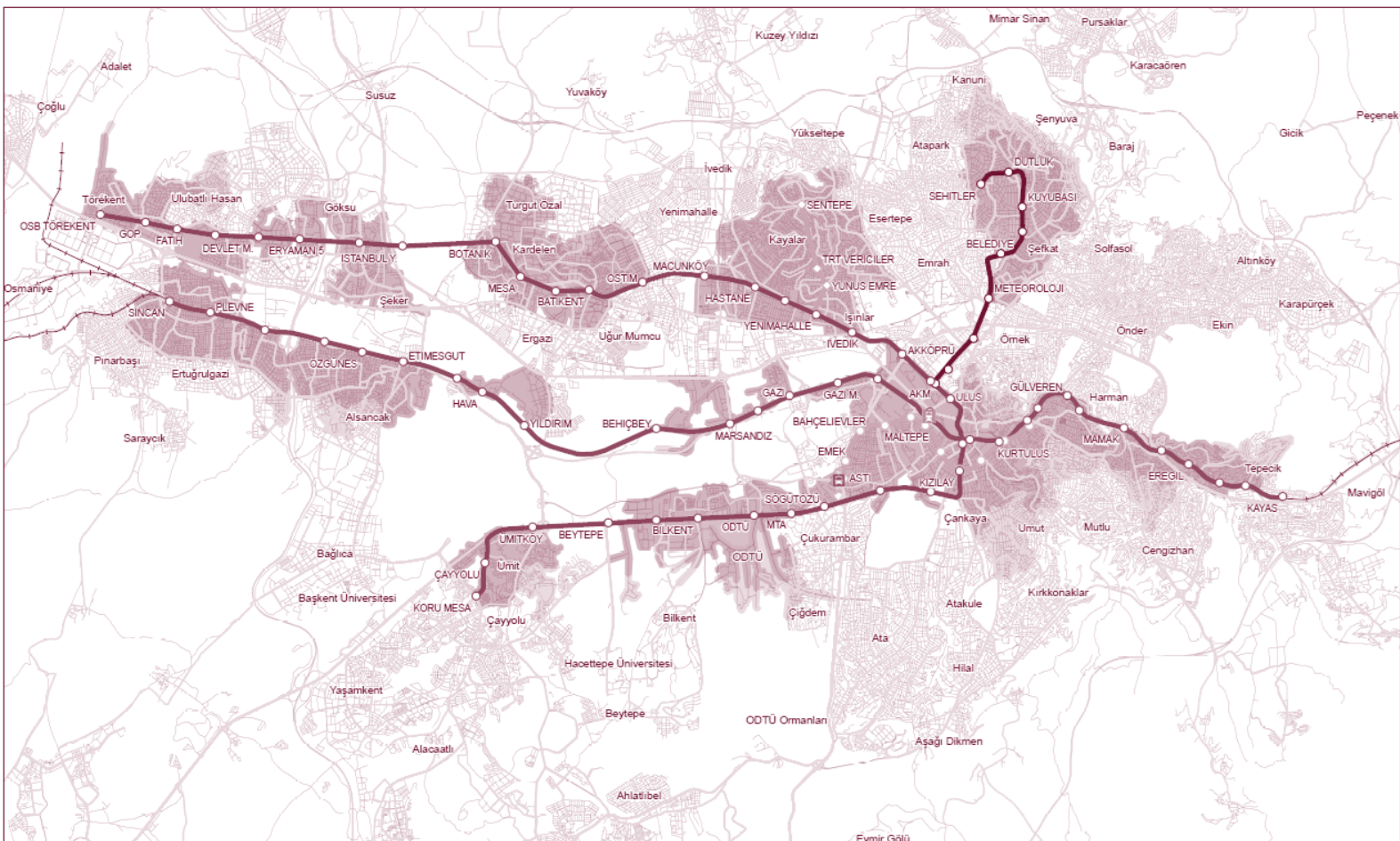
## Socio economic

## Population and Employment

Metro + all roads



Metro + lower





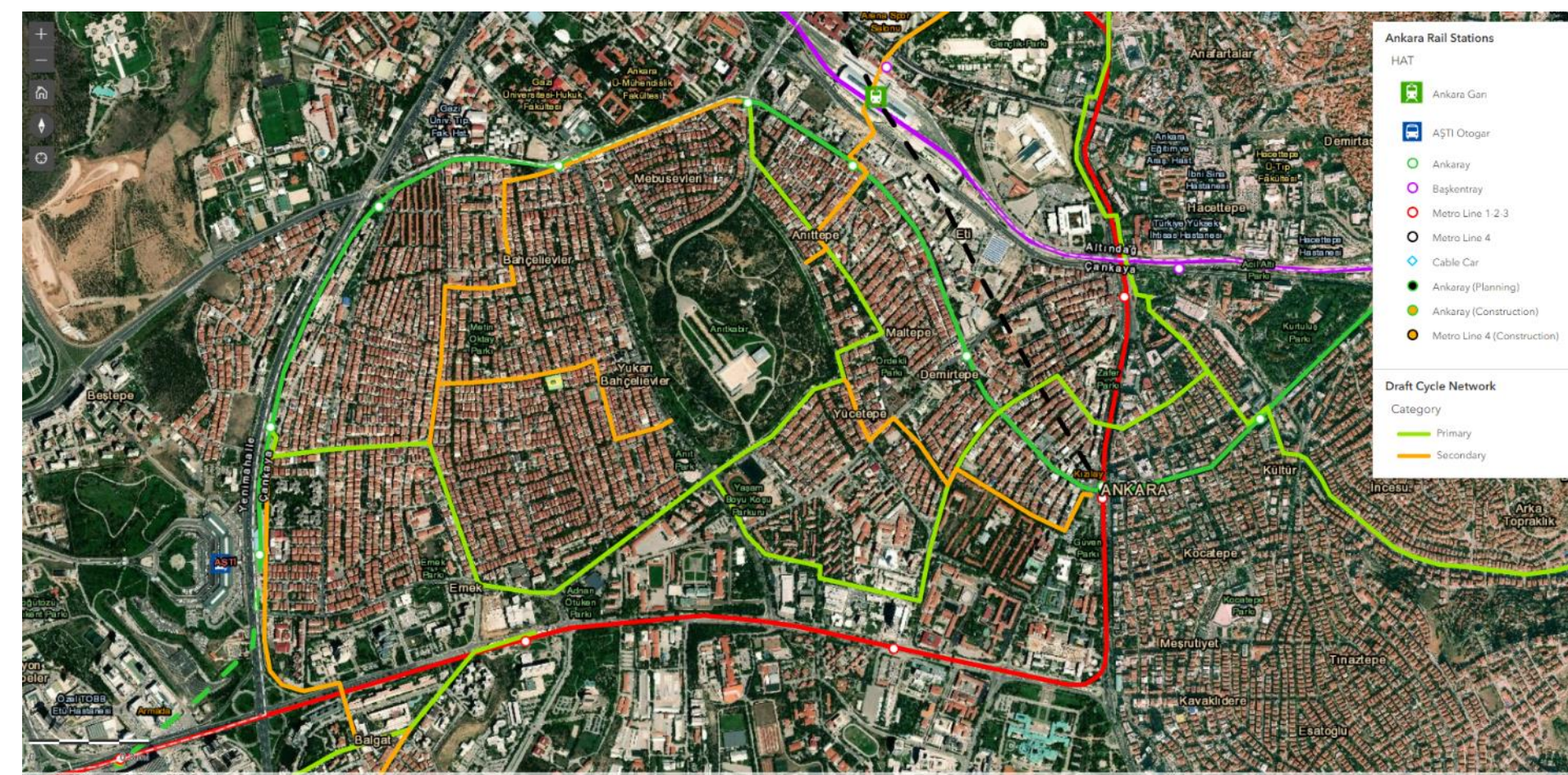
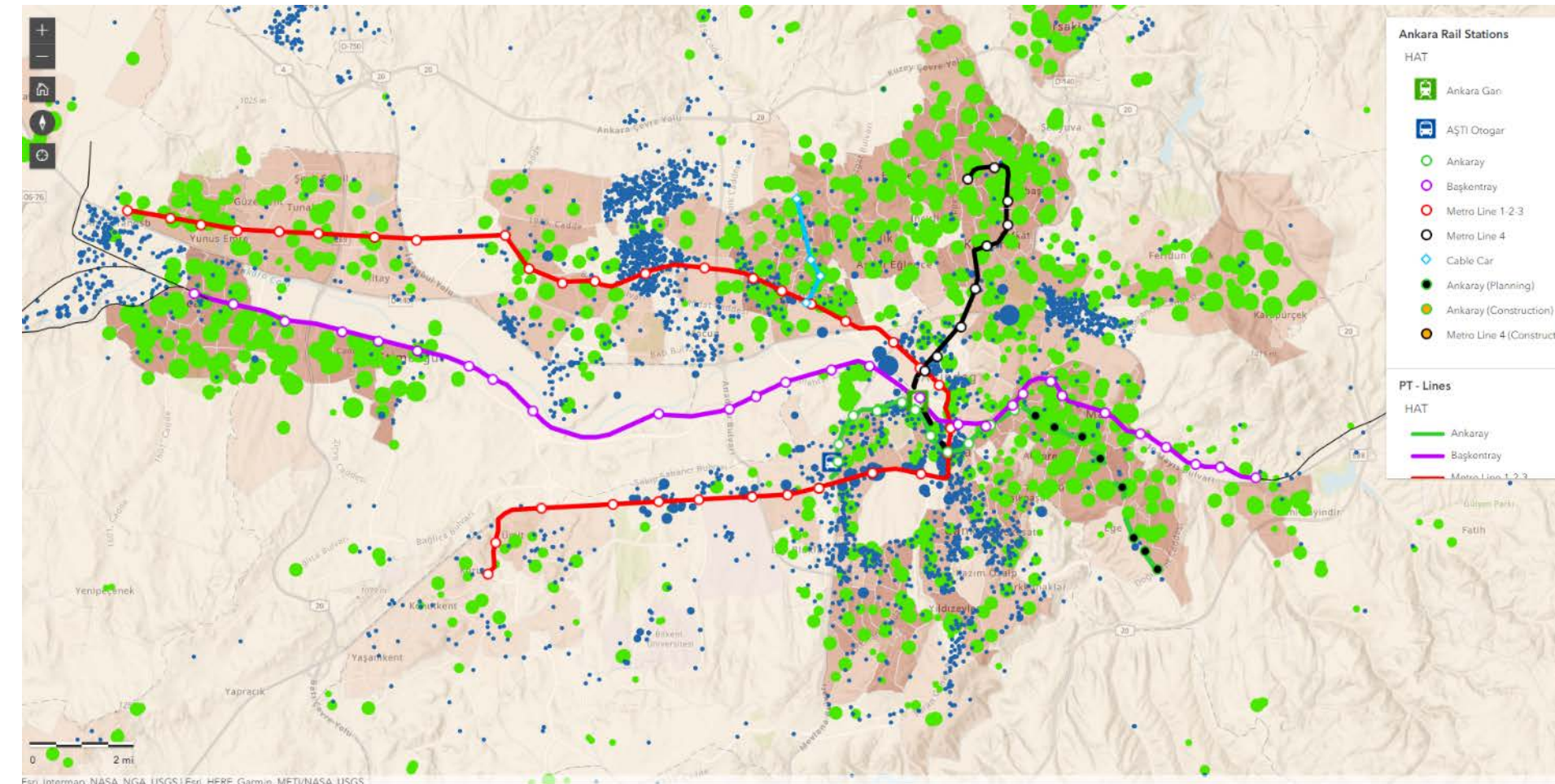
# Ankara Cycle Strategy – Digital Tools (ESRI Webmaps)

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Traditionally, GIS output would be through PDF/images, but the huge number of PDFs required have soon proved this output impractical in this Project.

The solution found was the use of **Webmap**. This allowed for:

- Zoom to any required scale
- Switch layers on/off
- Click for detail
- Any number of cross-comparisons possible
- Accessibility for all, not just GIS users



**Webmap** was widely used during meetings and workshops, and has proved an excellent tool for both internal team work and for the discussion of options to the Client and stakeholders



# Ankara Cycle Strategy – Stakeholder Engagement

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8,778

Online Survey  
Participants

415

Face-to-face Survey  
Participants

32

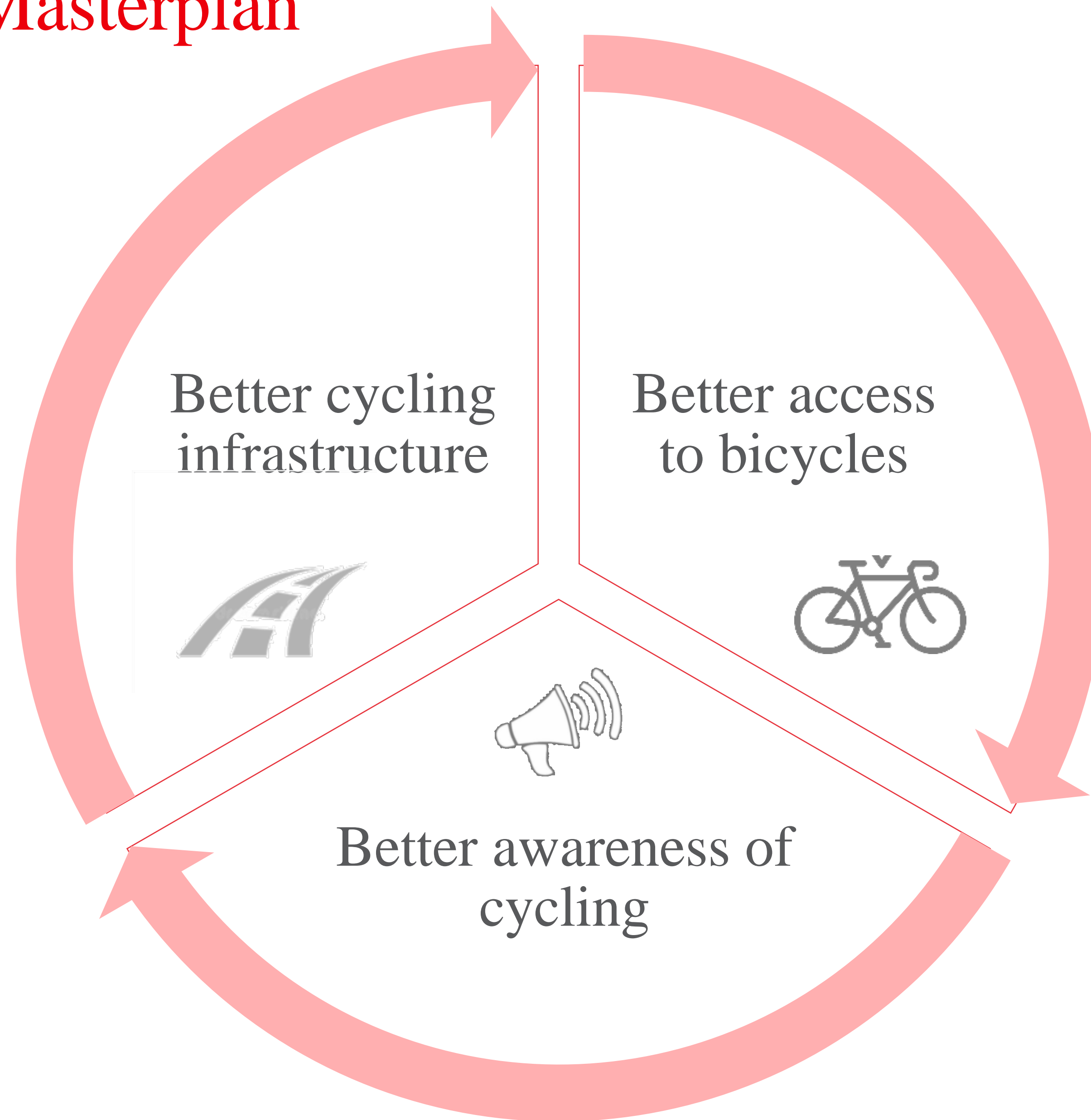
organizations contacted  
(Public and Professional  
bodies, community groups..)





# 3 Pillars of the Masterplan

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# 3 Pillars of the Masterplan

01

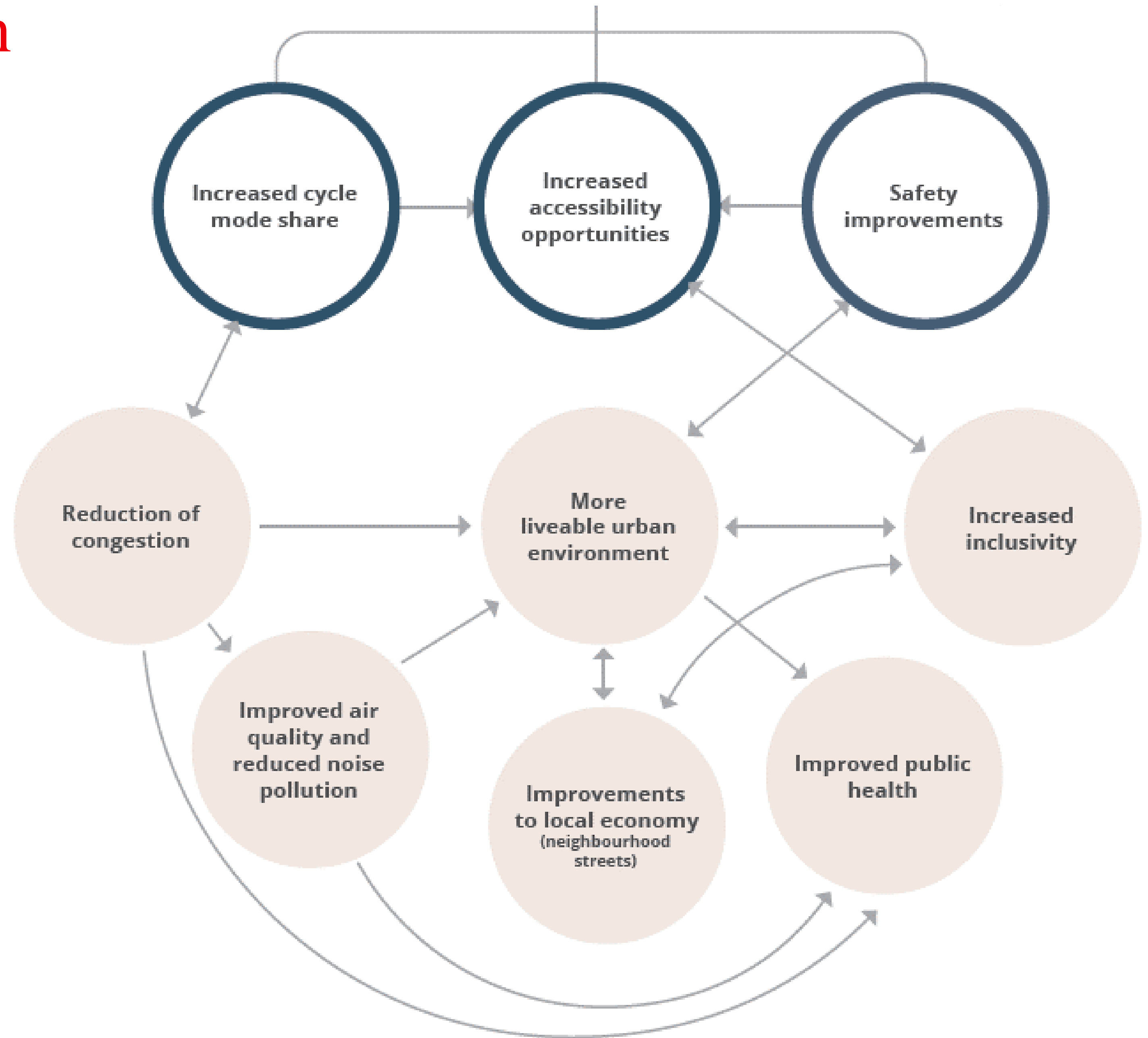
**Better awareness  
of cycling**

02

**Better cycling  
infrastructure**

03

**Better access  
to bicycles**





# Goals and Objectives

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## Bicycle Use

*Goal: All population groups in Ankara will see cycling as a natural choice for transport.*

## Cycling Infrastructure

*Goal: Ankara will have a comprehensive and consistent bicycle network that enables safe, coherent, direct, attractive and comfortable travel by bicycle.*

## Cycling in Regulation

*Goal: Cycling will have a stronger role in legislation and regulations.*

## Integration with the Urban Transport System

*Goal: The bicycle system of Ankara will be integrated with the urban transport system.*





# Goals and Objectives

## Organisational Capacity

*Goal: Public bodies will have the know-how and commitment to facilitate the implementation of a cycling culture.*

## Reputation of the Bicycle

*Goal: Cycling will be seen positively amongst decision makers, public bodies, private companies and all groups of the population.*

## Gender Equality and Social Inclusion

*Goal: Bicycle will be a mode of transport used by everyone.*

## Cycling Services

*Goal: Bicycle services will make cycling a more attractive mode of transport.*

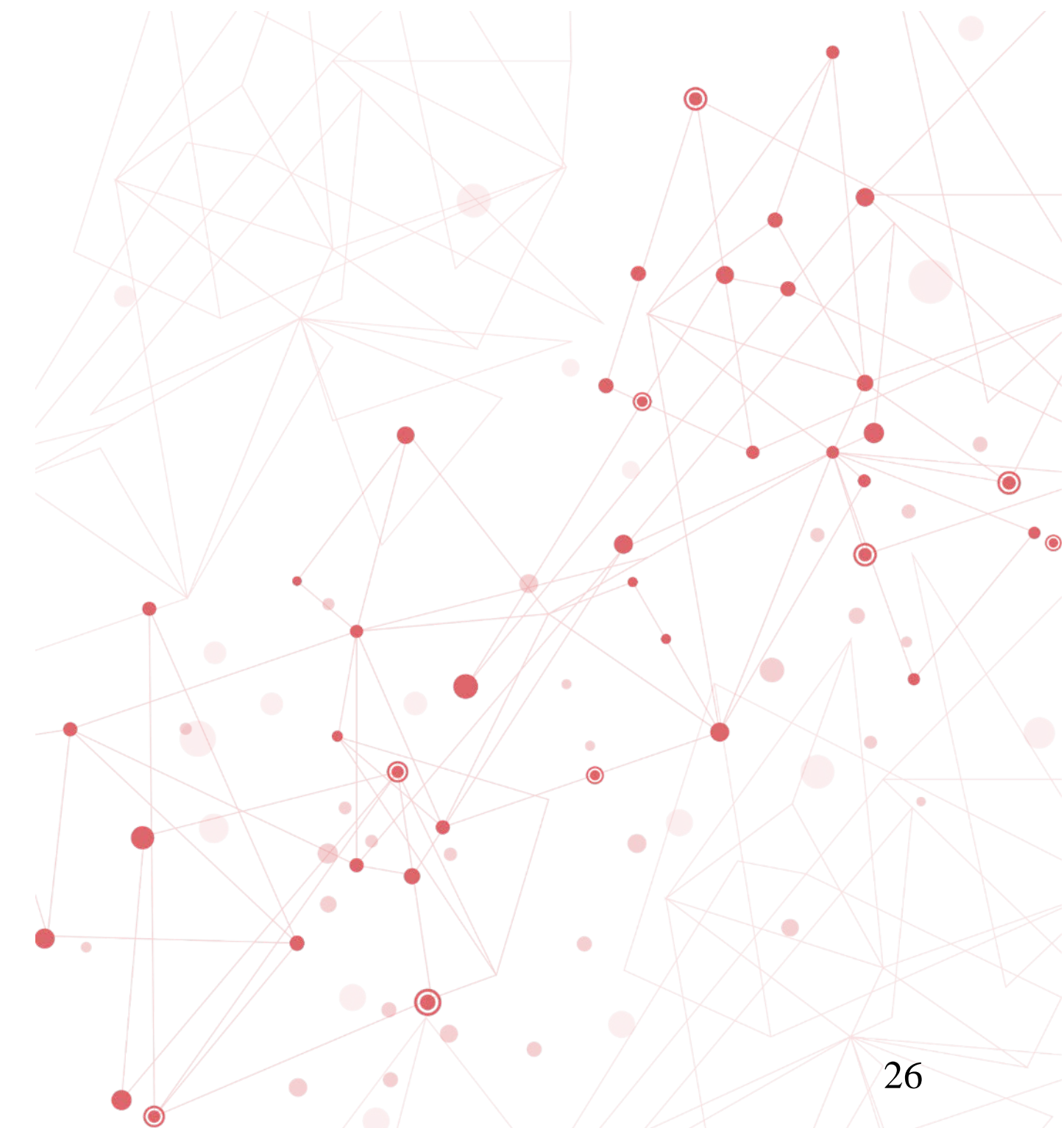
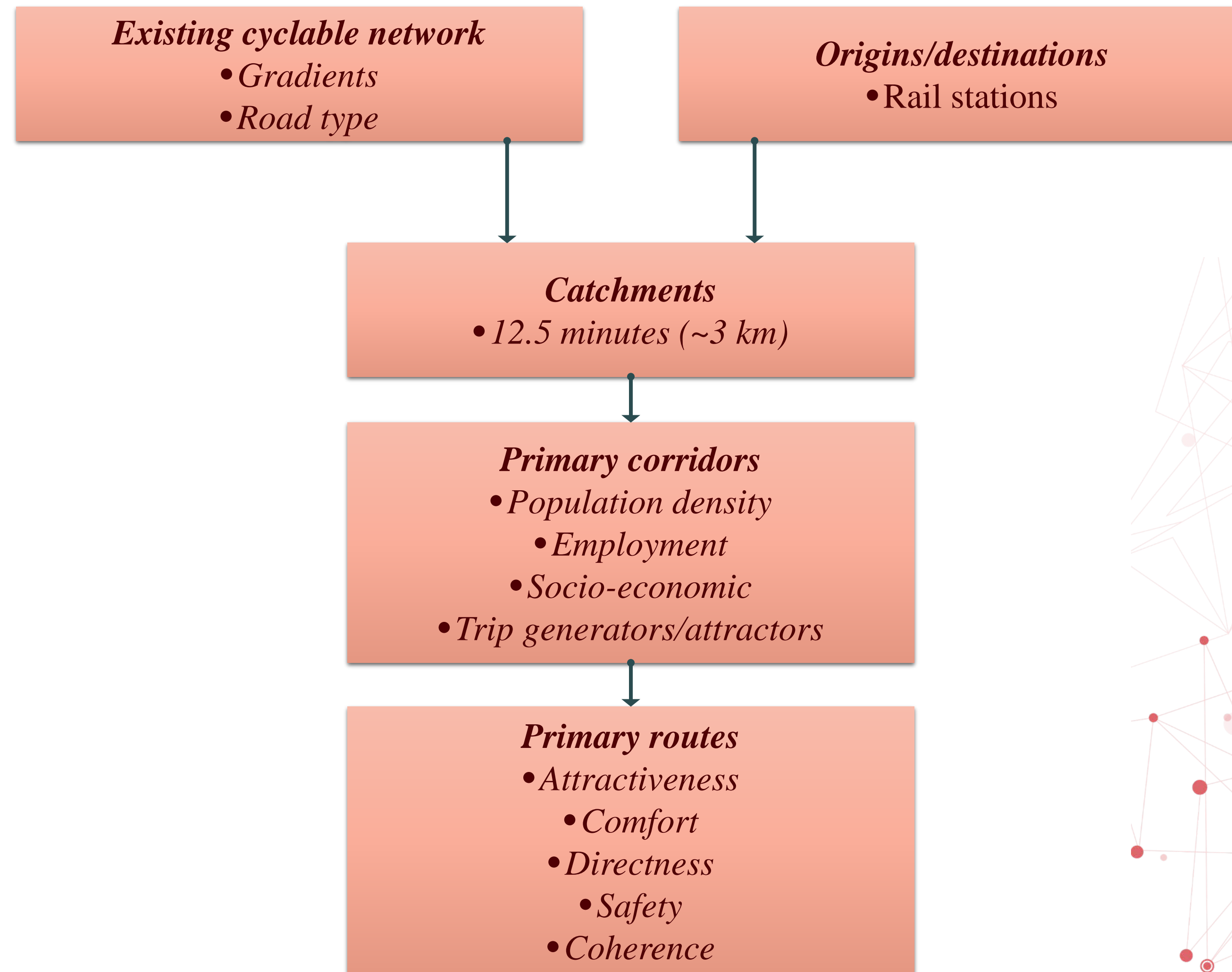
KPIs were defined for each goal.





# Cycle Network Methodology

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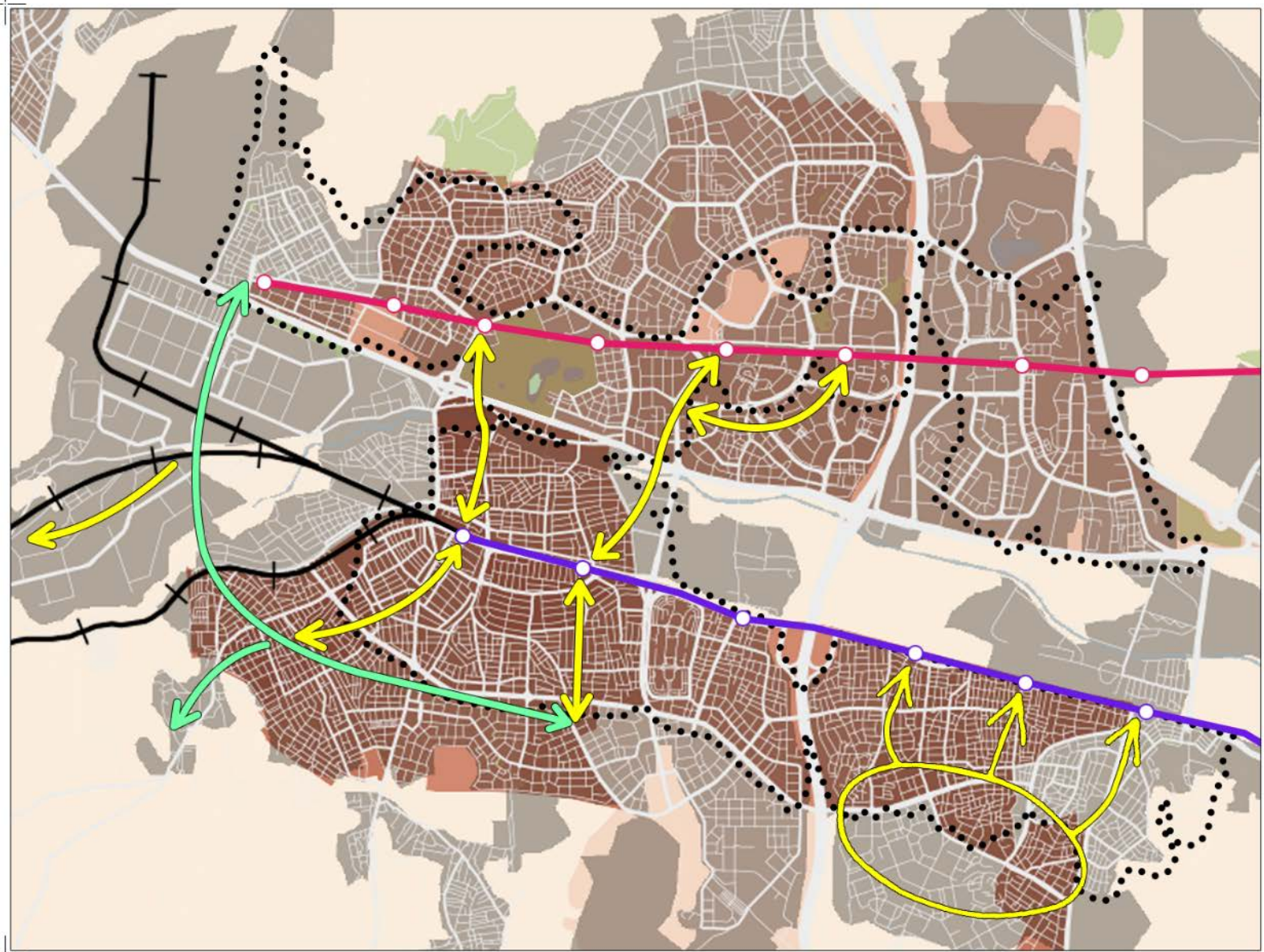




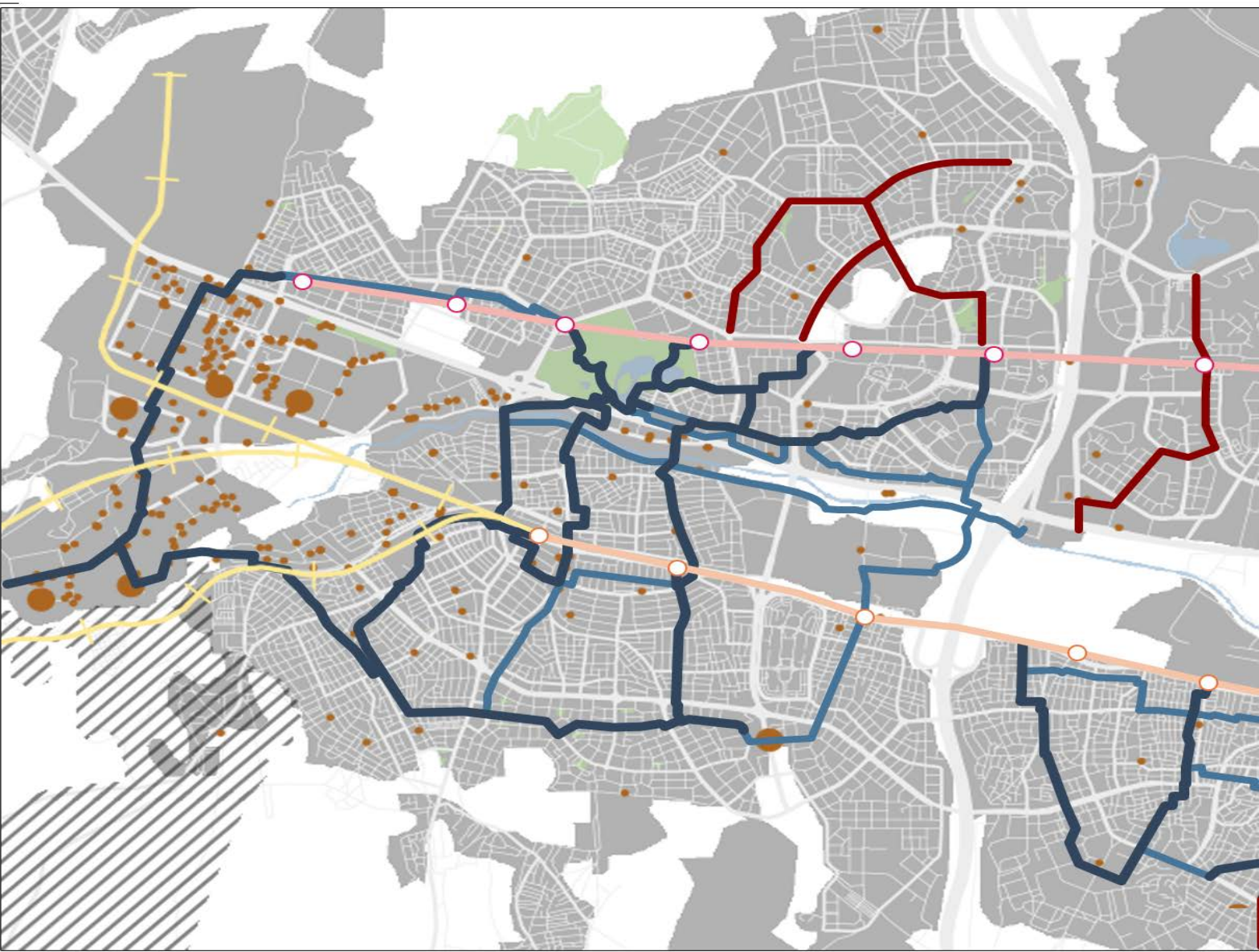


# Network Methodology

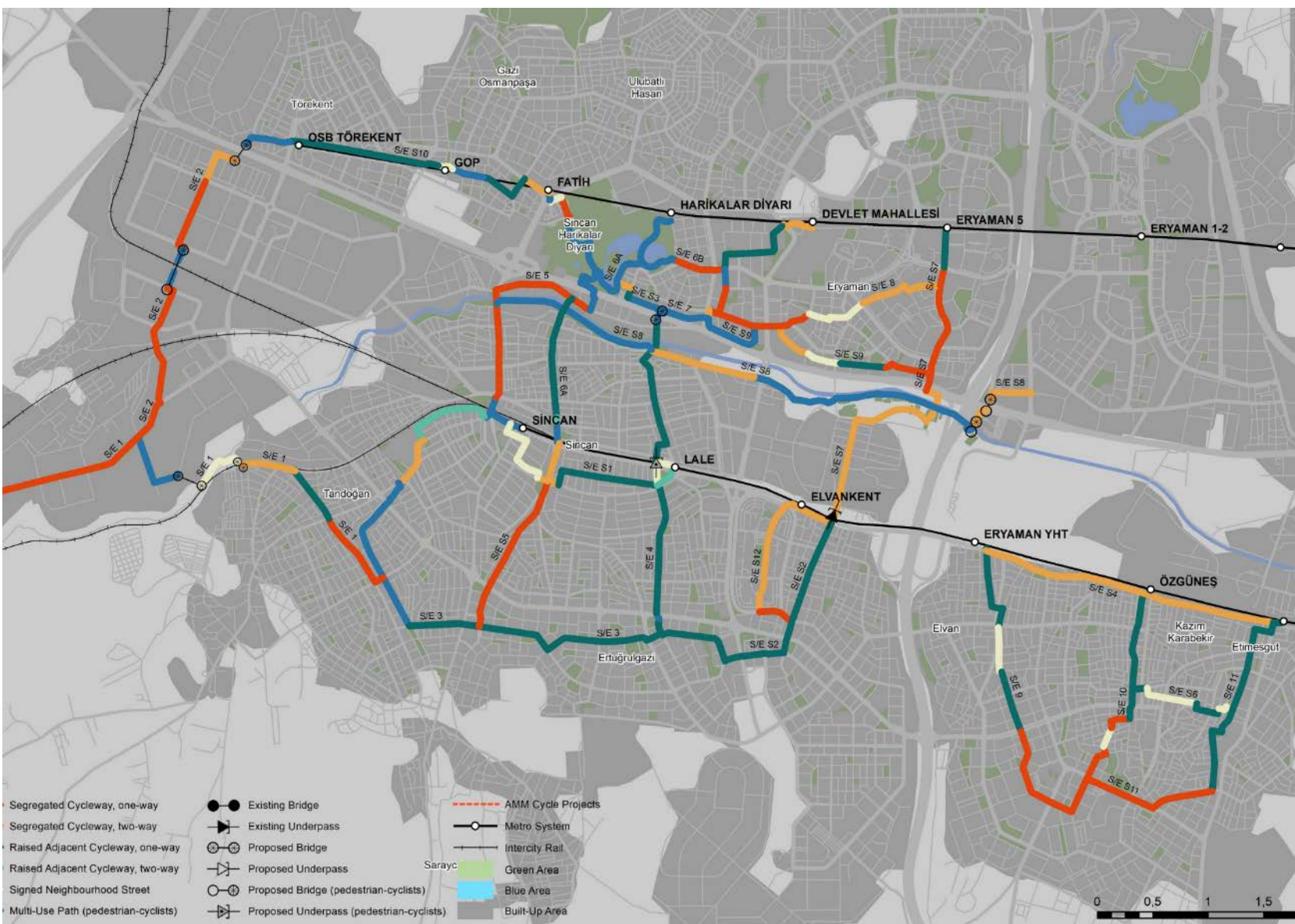
Desire lines



Primary and secondary routes



Facility types





# Ankara Cycle Network

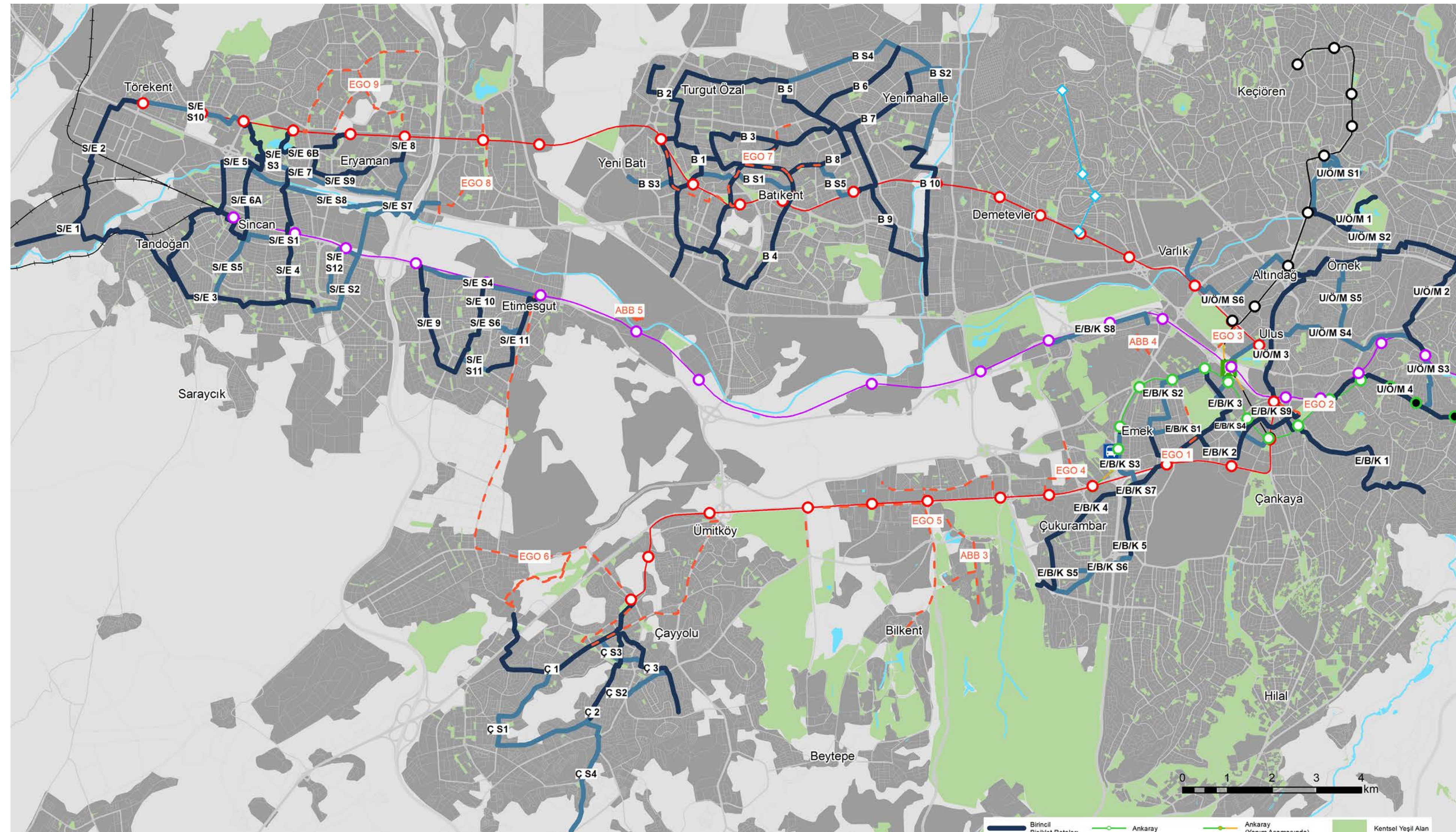
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## ANKARA CYCLE MASTERPLAN 2040

210km of  
Cycleways

70  
Routes

45  
Connected  
Stations





# Masterplan

## *Better cycling infrastructure*

- Cycle Network Infrastructure
  - Facility types (segregated, shared..)
  - Crossing and intersections
  - Infrastructure (lighting, surface, signage..)
- Bicycle parking
- End of trip facilities (workplace, university, schools..)



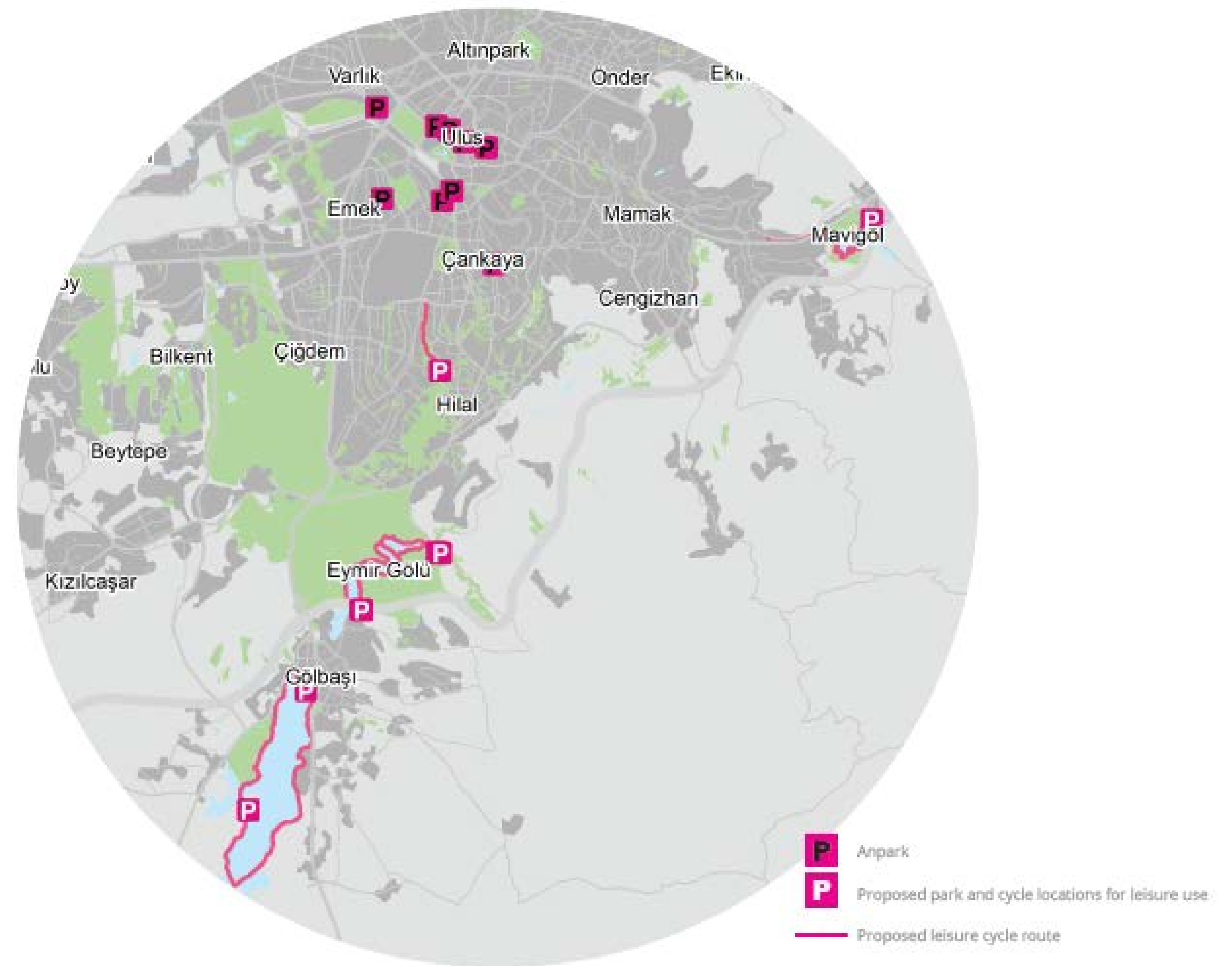


# Masterplan

## *Better access to bicycles*

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- Park and Cycle
- Maintenance
- Access to bicycles
  - Incentives for purchase and use
  - Bicycle sharing schemes





# Masterplan

## *Better awareness of cycling*

- Supporting policies
  - Car parking regulation
  - Car and cycle parking policy
  - Road hierarchy and vehicular speed limits
  - Bicycle on board PT
  - Traffic management and digital integration
  - Placemarking at stations
  - Cycling in planning procedures





# Ankara Cycle Network Implementation Plan

- Short Term (2021-2022)
- Medium Term (2023-2027)
- Long Term (2028-2040)

Metro System



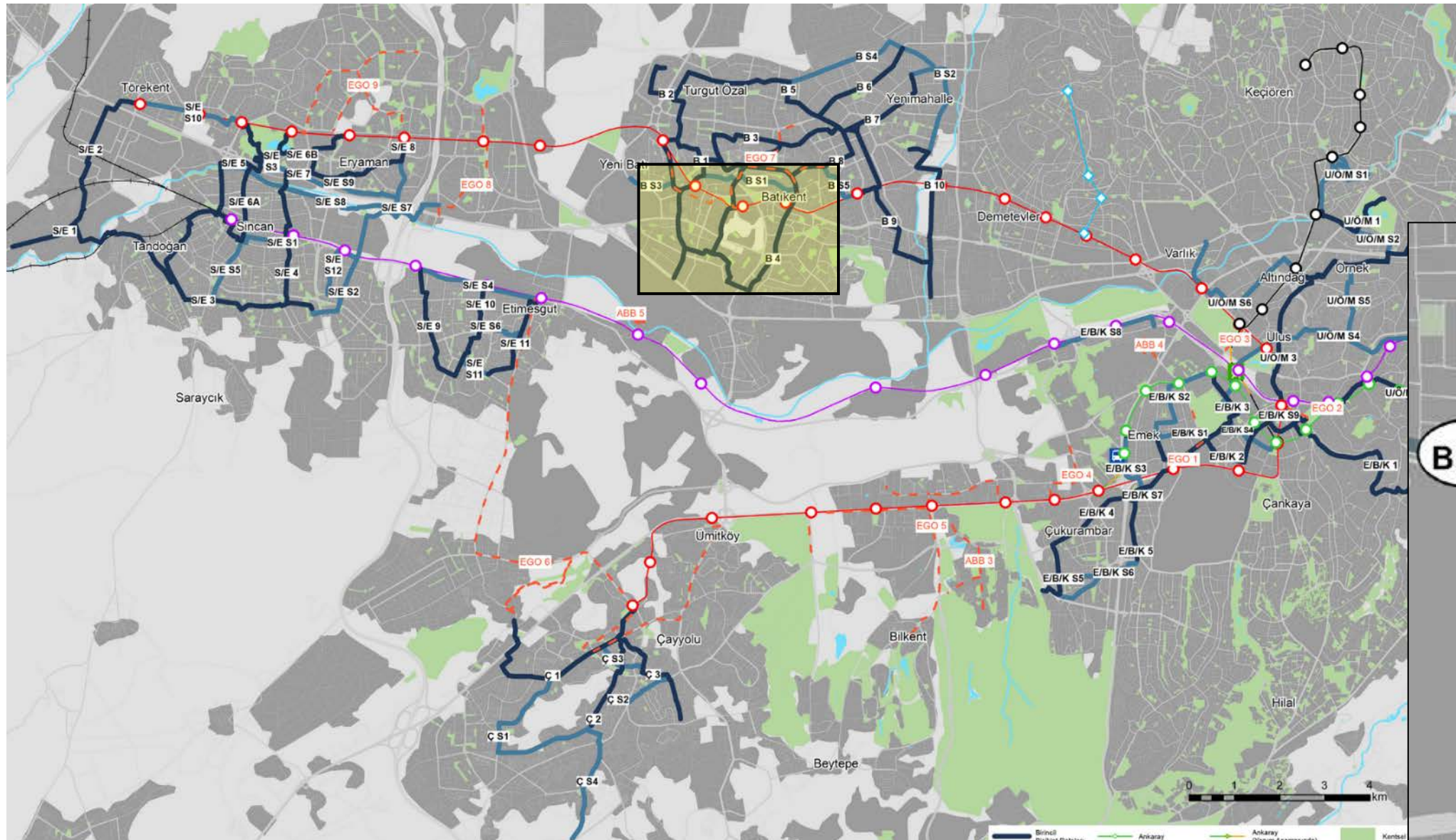


# Pilot Project

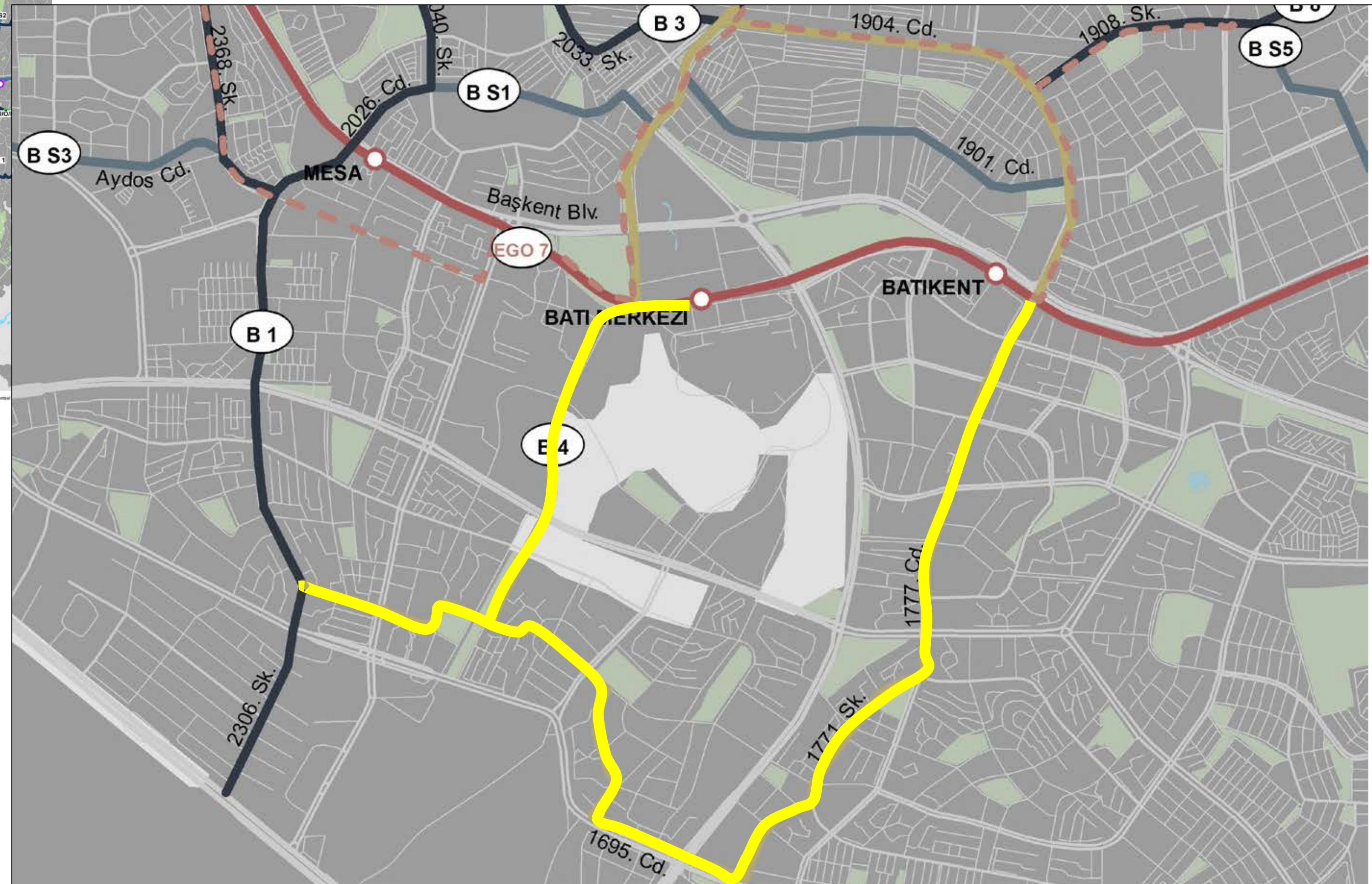


# Selected Pilot Route – Batikent Cycleway Project

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- 5,85km
- Direct connection with two metro stations
- Integrated with AMM's planned cycleways and Masterplan proposals for Batikent





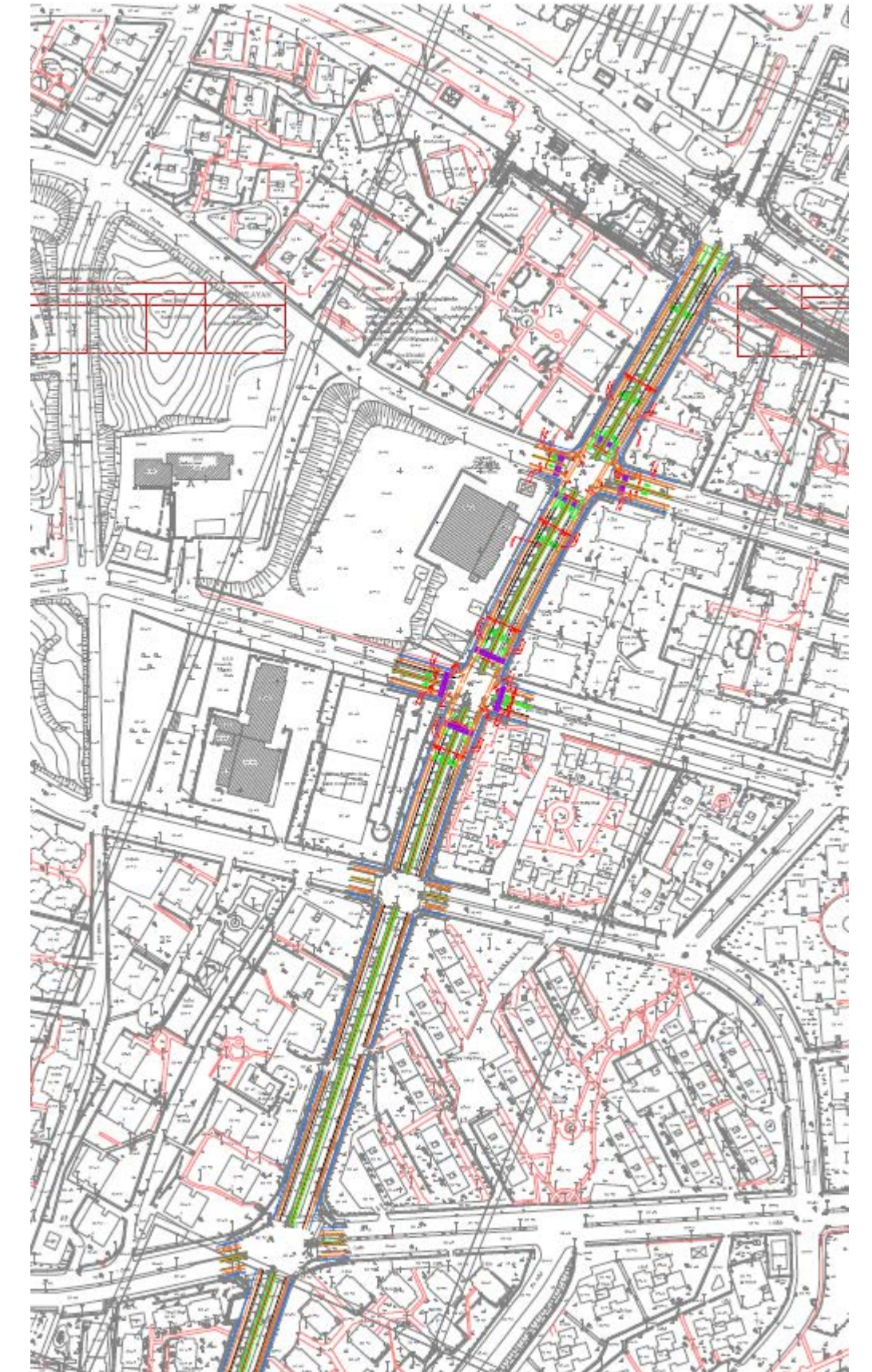
# Pilot Project

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Site Visits

Discussions with  
AMM

Stakeholder  
Engagement





# Design Criteria

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- Coherence
- Directness
- Safety
- Comfort
- Attractiveness
- Gradient
- Street Width
- Speed
- Surfacing
- Parking





# The difference from other design projects

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- Participatory approach
- Prioritizing GESI and all underrepresented groups
- Innovative solutions (digital tools for all users)
- SDG assessment





# Challenges and Outcomes

- Limited existing data
- Language barrier
- Internal politics (EGO)
- Covid-19





# Capacity Building

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We shape a better world