



**Politecnico
di Torino**

Honors Thesis

Master's Degree Architecture for Sustainability.

Abstract

AFTER THE GAS STATION

**Revitalising Spaces: atmospheres, movement and new free zones:
narratives for ISTANBUL**

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In recent years, the global conversation surrounding climate change and the urgent need to transition to cleaner energy sources has gained significant momentum. As governments and industries commit to reducing carbon emissions, the future of gas stations has come under scrutiny. With the rise of electric vehicles (EVs) and the increasing popularity of alternative fuels, it begs the question: what will happen to gas stations after 2035? This topic explores the potential uses for gas stations and how they could be repurposed in line with the principles of acupuncture urban planning for urban regeneration. We began to wonder whether there was an exciting opportunity embodied in these parcels. Istanbul is a city that has been grappling with urbanization challenges, such as urban sprawl, lack of green spaces, and increasing air pollution. These problems are primarily caused by the rapid population growth and urbanization that the city has experienced over the years. Through a comprehensive methodology framework, the study assesses the feasibility of converting gas stations into green infrastructure, utilizing principles of acupuncture urban planning. The Bağcılar district is utilized as a pilot case to illustrate the practical application of selected indicators derived from sustainable neighborhood tools.

The thesis critically reviews successful green space strategies from global cities such as New York, London, and Vienna and adapts these strategies to Istanbul's unique context. Key objectives include enhancing urban green spaces, improving social inclusivity, and promoting environmental sustainability. By integrating bluegreen infrastructure, the study proposes creating interconnected networks of natural, semi-natural, and cultural areas that enhance ecosystem services.

In conclusion, the transformation of gas stations and urban spaces presents a unique opportunity to address the pressing challenges of urbanization and climate change. As Istanbul grapples with issues such as urban sprawl, air pollution, and the need for more green spaces, repurposing these parcels aligns perfectly with the principles of acupuncture urban planning. By converting former gas stations into blue-green infrastructure, the city can create sustainable, interconnected networks of natural, semi-natural, and cultural areas that enhance ecosystem services and functions. This approach fosters a closer connection between people and nature, promoting biodiversity and ecological balance. For Istanbul to become a naturefriendly, environmentally conscious city, it is crucial to protect existing green areas and systematically increase the number of accessible green spaces. This transformation will not only enhance the city's resilience to climate change but also create healthier, happier, and more peaceful living environments for its residents. By prioritizing the development of green infrastructure, Istanbul can lead the way in urban regeneration and sustainability, ensuring a better quality of life for current and future generations.

Vision :

Vision is to maximize living condition for residents in Bağlar. For this reason potential strategic applications for gas station sites. Five different strategic application is introduced in this part.

Targets:

1.Maximize Strategic Location Benefits:

Increase connectivity and access to other parts of Istanbul by expanding transportation networks.

2.Leverage Diverse Population:

Foster a culture of inclusivity and innovation by utilizing the diverse skills and talents of the population.

3.Improve Public Infrastructure:

Ensure all areas of Bağlar have access to reliable public services-Action, Invest in upgrading utilities, transport networks, and public spaces.

4.Enhance Educational Institutions:

Raise the quality of education and increase access to advanced educational opportunities.

5.Combat Environmental Challenges:

Reduce air and noise pollution levels

6.Expand Green Initiatives:

Increase green space per capita by 50%.

7.Enhance Social Programs:

Increase participation in community programs.

8.Address Social Tensions:

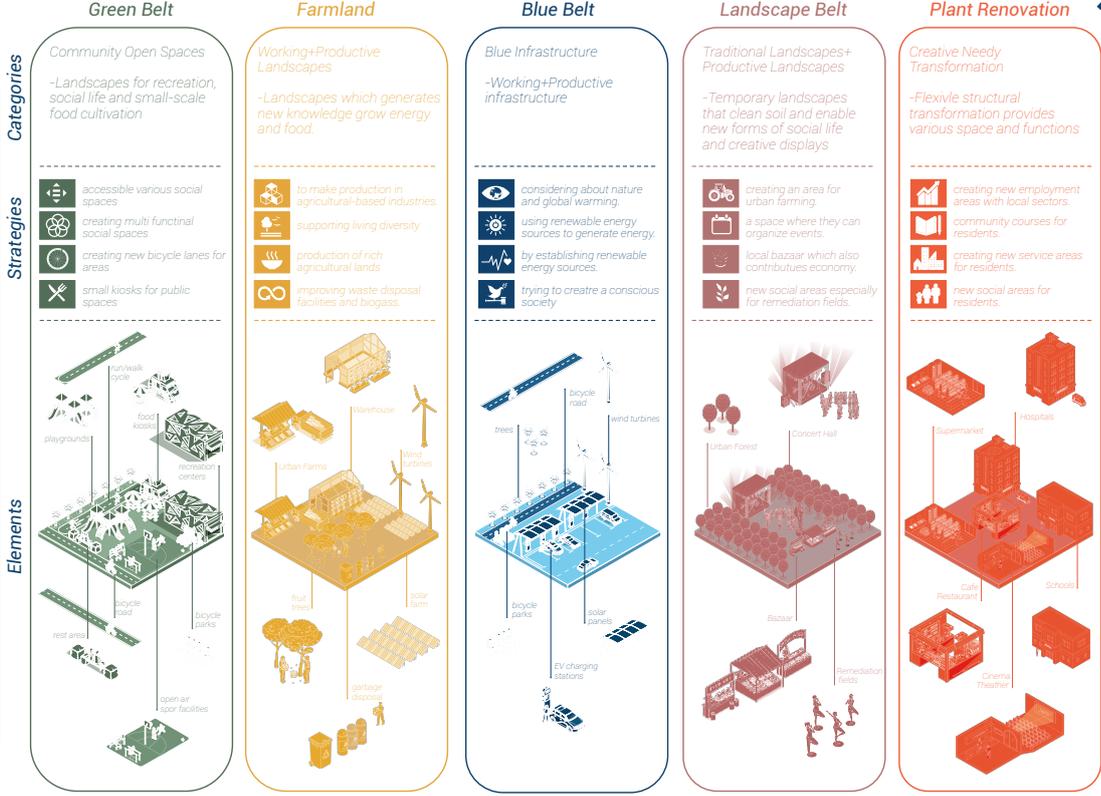
Reduce incidents of social conflict and increase community cohesion.

9.Mitigate Environmental Risks:

Increase resilience to natural disasters and climate change impacts.

10.Expand Industrial and Commercial Base:

Attract new businesses and industries to further strengthen the economy.



Strategic Development Plan:

The Strategic Development Plan for the urban regeneration of Bağlar outlines a comprehensive approach to transforming the district into a more sustainable, vibrant, and healthy community. This plan integrates various themes and initiatives to address the district's socio-economic and environmental challenges. This map highlights the potential use strategies for gas stations in selected neighborhoods.



Green Corridor Introduction

The Green Corridor initiative focuses on creating a continuous network of green spaces throughout Bağlar to enhance environmental sustainability and residents' quality of life.



Blue Corridor Introduction

The Blue Corridor initiative aims to create a sustainable and eco-friendly urban environment in Bağlar by integrating renewable energy and green transportation solutions.



Strategies

- creating new employment areas with local sectors
- community courses for residents
- creating new service areas for residents.
- new social areas for residents.
- accessible various social spaces
- creating multi functional social spaces
- creating new bicycle lanes for areas
- small kiosks for public spaces
- to make production in agricultural based industries
- supporting living diversity
- production of rich agricultural lands
- improving waste disposal facilities and biogas.
- considering about nature and global warming
- using renewable energy, EV car charging
- by establishing renewable energy sources
- trying to create a conscious society
- creating an area for urban farming
- a space where they can organize events
- local bazaar which also contributes economy.
- new social areas especially for remediation fields.
- stations turned into "blue belt"
- stations turned into "green belt"
- stations turned into "farmland"
- stations turned into "landscape belt"
- stations turned into "plant renovation"
- stations that we don't interfere

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