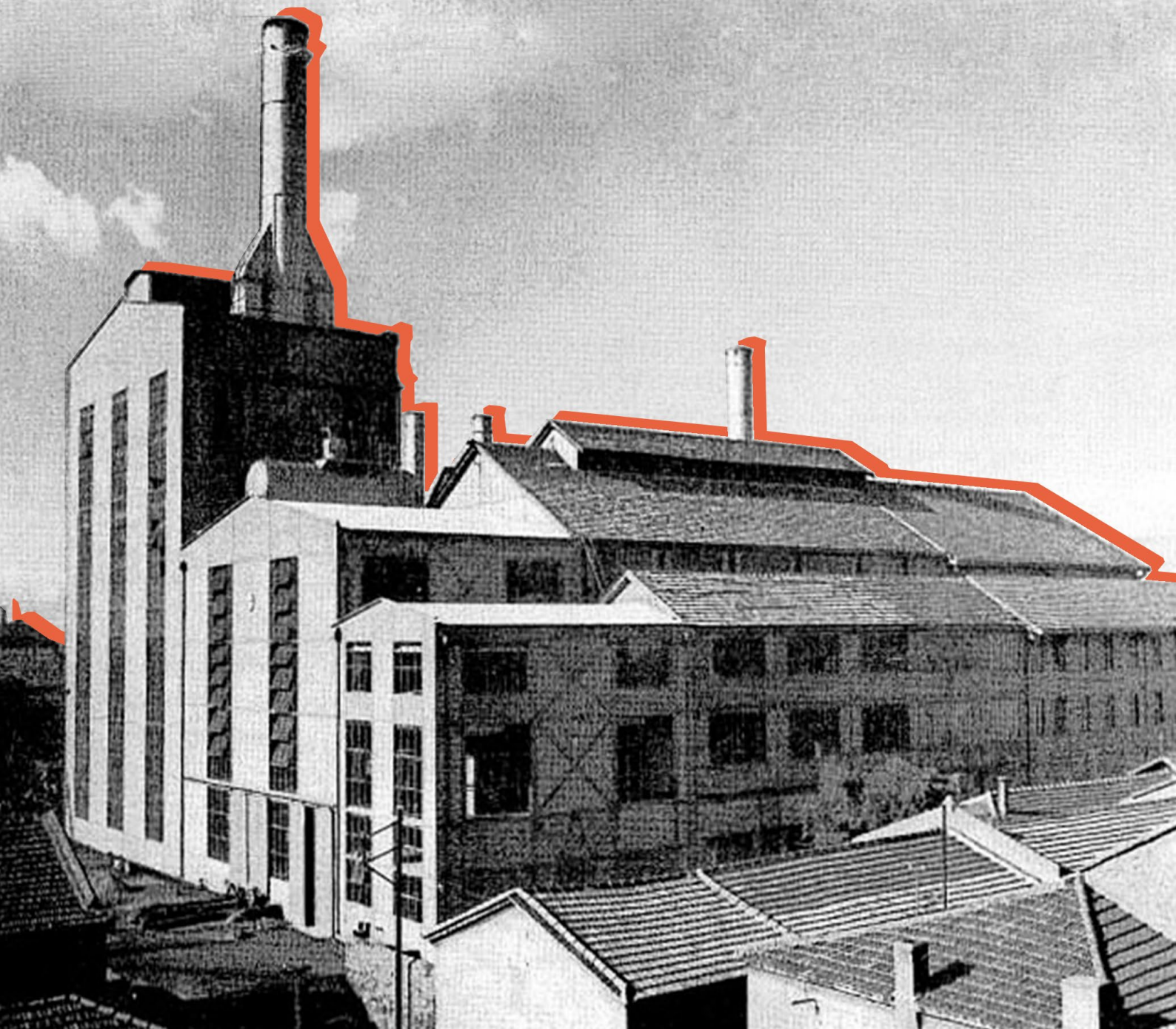
Disconnected Circuits: A Spatial Reading of Adaptive Reuse in Izmir's Former Power Plant in Turkey

'A Search for Meaning in a Forgotten Urban Fabric'



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Department of Architecture and Design
Master Program In Architecture, Construction
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Disconnected Circuits: A Spatial Reading of Adaptive Reuse in Izmir's Former Power Plant in Turkey

'A Search for Meaning in a Forgotten Urban Fabric'

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The journey towards pursuing my Master's in Architecture has been a rewarding and life-changing experience, made all the more precious by individuals whom I have met along the way who have enriched its value.

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The past three years have been filled with invaluable experiences and personal growth. I am deeply grateful to you all..

ABSTRACT

This thesis provides an answer to the feasibility of adaptive reuse as a holistic approach to regeneration of non-active industrial heritage buildings, in the case of Izmir city's historic electricity factory situated in Alsancak district. Izmir, as one of the principal port cities of Turkey, was the leading port of Turkish national industrialization and urbanization starting from the late Ottoman period until the beginning of the Republican period. Alsancak zone, which is the city's former industrial core, retains significant architectural and cultural remnants that present a singular opportunity for research into the interaction between heritage conservation and urban renewal. The research aims to answer the new city's needs for sustainable, inclusive, and memory-sensitive urban development by examining how industrial heritage can be reinterpreted and reused but for today's purposes without ignoring its past.

Theoretical investigations focus on socio-economic and environmental effects of industrial remnants, considers global conservation standards such as the TICCIH Principles, and analyses from comparative case studies in an effort to create best practice in adaptive reuse. One of the central questions posed in the thesis is how concepts of adaptive reuse can revitalize the abandoned industrial structures— particularly the Izmir power plant—into new urban fabric without diminishing cultural and historical value. Sub-questions informing the research concern matters of local identity, public engagement, spatial continuity, and preservation of industrial memory, all of which are essential in creating future-oriented narratives of the contemporary city.

In bringing theoretical argument to design-based intervention, the study evaluates the abandoned Former Power Plant not only as a part of history but as a latent socio-cultural catalyst in Izmir's new cityscape. Lastly, the thesis promotes a contextual approach to reuse—one which negotiates between preservation and change to allow for a sustainable and meaningful future for post-industrial urban space.

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Keywords: industrial heritage, industrial buildings, adaptive reuse strategies, urban regeneration, hinterland of Alsancak Port, idle spaces, revitalization of the place, cultural sustainability, urban memory.

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INTRODUCTION

Fig 1: Interior photograph of Izmir Power Plant

Fig 1: Suha Tarman Archieve, APIKAM

“After the Building”

“This thesis traces the spatial and historical significance of a forgotten structure in the heart of the city. Through the story of a former power plant in Izmir, a layered inquiry begins.”

1.1 Background of the Study

Izmir is one of Turkey's major cities situated in the Aegean Region, and being a significant port city and world fair center for local and international organizations. One of the basic characteristics of Izmir throughout its history has been that it is a significant port city. On the other hand, the industrial district in the Alsancak Port hinterland played a considerable role in shaping the industry of the city. This site contains Turkey's earliest industrial plants built in the last quarter of the 19th century to the first quarter of the 20th century, following those in Istanbul.

The Izmir Electricity Factory complex is one of the establishments built during the early republic period of Turkey. The industrial complex stands quite prominently in the collective memory of the city due to the innovations it brought to the city starting from its production phase. Even after the shutting down of production, the complex still retains its uniqueness with respect to modern architecture, large volume, and unique construction system of the time [2]. These unique aspects can be discussed in the following topics:

1. Industrial Heritage Value: Its historical significance relates to the time of industrialization and modernization in Izmir, from the end of the Ottoman with the early Turkish Republic era, whereby the factory was built in the early 1900s,. The largest industrial complexes to be established in this site served a very important function in the establishment of the electrical system of the city and in the economic growth of the city.

2. Architectural Significance: It is an industrial complex built in early twentieth-century architectural style with some early modernist and functionalist influences. Its preservation and status as a monument to this day is an invaluable aspect of Izmir's architectural heritage, wherein the shape and form reflect industrial design sensibilities during this era.

3. Social and Cultural Role: Located in the Alsancak district, the factory ties its fate to the industrial working-class heritage of Izmir, its role in the growth of the city, and its history past the confines of being a site of production, thus serving as a source of jobs and an element in the social life of the city itself.

4. Connection to Izmir Modern Development: This building signifies the transition of Izmir from an Ottoman city port to a modern Turkish metropolis, marking changes that occurred in the country's industrial landscape in the early 20th century, and its preservation signifies recognition of the role that industrial heritage played in developing Turkey.

5. Regeneration and Cultural Transformation: In recent years, the Old Electric Factory has been present within urban renewal discussions in Izmir. Recent visions of municipal initiatives envision the building to be a sign of changing for the city, where similar industrial buildings get to be re-used with modern functions, e.g., cultural centers and so on. The almost rapid conversion from derelict, near-industrial to cultural and daily will spark possible conversions for derelict industrial heritage places in the wider area.

[1] Simsek, Eylem, "Endustri Yapılarının Kulturel Miras Olarak Irdelenmesi ve Degerlendirilmesi Izmir Liman Arkası Ornegi", Y.L.T., Dokuz Eylul Universitesi, Fen Bilimleri Enstitusu, Izmir, 2006.

[2] N. Koyuncu Peker, "Conservation principles for industrial heritage Izmir-Alsancak liman arkasi district," Thesis (M.Arch.) -Graduate School of Natural and Applied Sciences. Conservation of Cultural Heritage in Architecture, Middle East Technical University, 2019.

1.2 Purpose and Objectives

The goal of this research study is to probe and develop widely adaptable reuse strategies for deserted industrial heritage sites, with a specific interest in the Power Plant site in Izmir. Through the revitalization of such industrial edifice and monument- the study demonstrates potential of sustainable urban regeneration by embracing symbioses at the same time preserving their historical and architectural value and addressing contemporary needs for the social, cultural, and economic dimensions in the present.

The specific objectives of the study are as follows:

- To investigate the historical, architectural, and urban context of the old power plant site and its hinterland in the city of Izmir.

- To investigate the problems and prospects of industrial heritage that are abandoned in the region including the socio-economic and environmental effects.

- To review critically-adaptive reuse of conservation frameworks including internationally recognized conditions such TIIHCIH Principles and analyze them in Turkish context.

- To compile successful benchmarks and good examples of adaptive reuse local and international, as inspiration and reference for future work.

- Develop an overall design proposal that embodies the principles of adaptive reuse in regenerating the Former Power Plant in the process contributing to urban regeneration and sustaining culture.

- Assess potential impacts of proposed intervention on urban fabric, community engagement, and heritage conservation.

Thus, this research intends in such a way to bring practical and theoretical outputs into the world of industrial heritage preservation and urban design for sustainable shaping of the industrial history of Izmir.

1.3 A Journey Led by Questions

This investigation focuses mainly on the following research question:

What adaptive reuse strategies can be employed in abandoned industrial heritage sites, particularly the former power plant in Izmir, to incorporate these sites into the urban context while preserving their historic, cultural, and architectural significance?

To elaborate on this main question, the following sub-questions will then be pursued:

1. What are the main challenges and opportunities in the revitalization of abandoned industrial heritage sites, and especially that of the former power plant in Izmir?

2. How may the historical and architectural values of the former Power Plant be safeguarded in the midst of conversion into urban contemporary uses?

3. What successful adaptive reuse strategies, as applied in other cities, could be implemented in the case of similar industrial heritage sites pertaining to Izmir?

4. If revitalization of the former Power Plant takes place, what would be the impacts upon the community, economy, and urban identity of Izmir?

5. What opportunities for sustainable urban development and cultural heritage protection arise by integrating the former power plant with the contemporary infrastructure of the city?

The answers to all these questions will lead to developing a comprehensive framework for the adaptive reuse of abandoned industrial heritage sites, especially the case of the former power plant in Izmir, operating along the lines of preservation, revitalization, and integration of the site into the changing urban fabric of the city.

1.4 Structure and Methodology: Tracing, Observing, Reframing

The thesis explores adaptive reuse approaches to abandoned industrial heritage buildings in terms of regeneration and reincorporation of the Izmir Historical Electricity Factory into modern urban life. The research takes into account how these industrial reminders can be adapted by architectural and urban design interventions that retain cultural value and pave the way for new uses.

The study adheres to a qualitative research methodology that merges urban studies, architectural research, theoretical research, and design research. The thesis contains four major components, unrolling from the context analysis to theory establishment and finally design intervention.

The first part begins with a thorough urban study of Izmir city and the Alsancak area, analyzing their historical development, locational pattern, and industrial character. This includes exploration of the hinterland of the Alsancak Port as an industrialized past and its transformation over time. Attention is given to taking into account the broader network of industrial heritage sites in the region, along with past adaptive reuse interventions, in a bid to place the research in a broader urban and historic context.

The second part includes a series of examinations that are locally focused and aimed at Izmir Historical Electricity Factory itself. This part includes a detailed examination of the building's location regarding landscape, architectural composition, historical evolution, current physical condition, and relationship to the surrounding urban context. These findings form the basis for the interpretation of the site's value and potential as a heritage asset.

The third component of the thesis is a theoretical analysis of the adaptive reuse and industrial heritage guidelines by way of literature review. It attempts to articulate abandonment, preservation, and refunctioning; evaluates heritage preservation policies in Turkey; and considers international guidelines, in this instance, the TICCIH Principles. The latter half of this section consists of international case studies that displays successful adaptive reuse measures and provide comparative lessons for adoption in the Izmir case.

The fourth and final section presents a design proposition that synthesizes the analytical and theoretical findings. It deals with reimaging the Electric Factory complex and its immediate context by way of a spatial intervention grounded in adaptive reuse principles and sensitive to the specific site conditions. The proposition includes architectural schematics, master planning, and three-dimensional visualizations illustrating the evolution of the site as a unified and open component of Izmir's expanding urban fabric.

The study is founded upon an interdisciplinary theory which synthesizes heritage conservation, adaptive reuse, and urban regeneration but with a focus placed upon the unique challenge and opportunity of post-industrial urban landscapes.

Fig 2: Collage of the Structure Schema

Fig 2: Produced by author

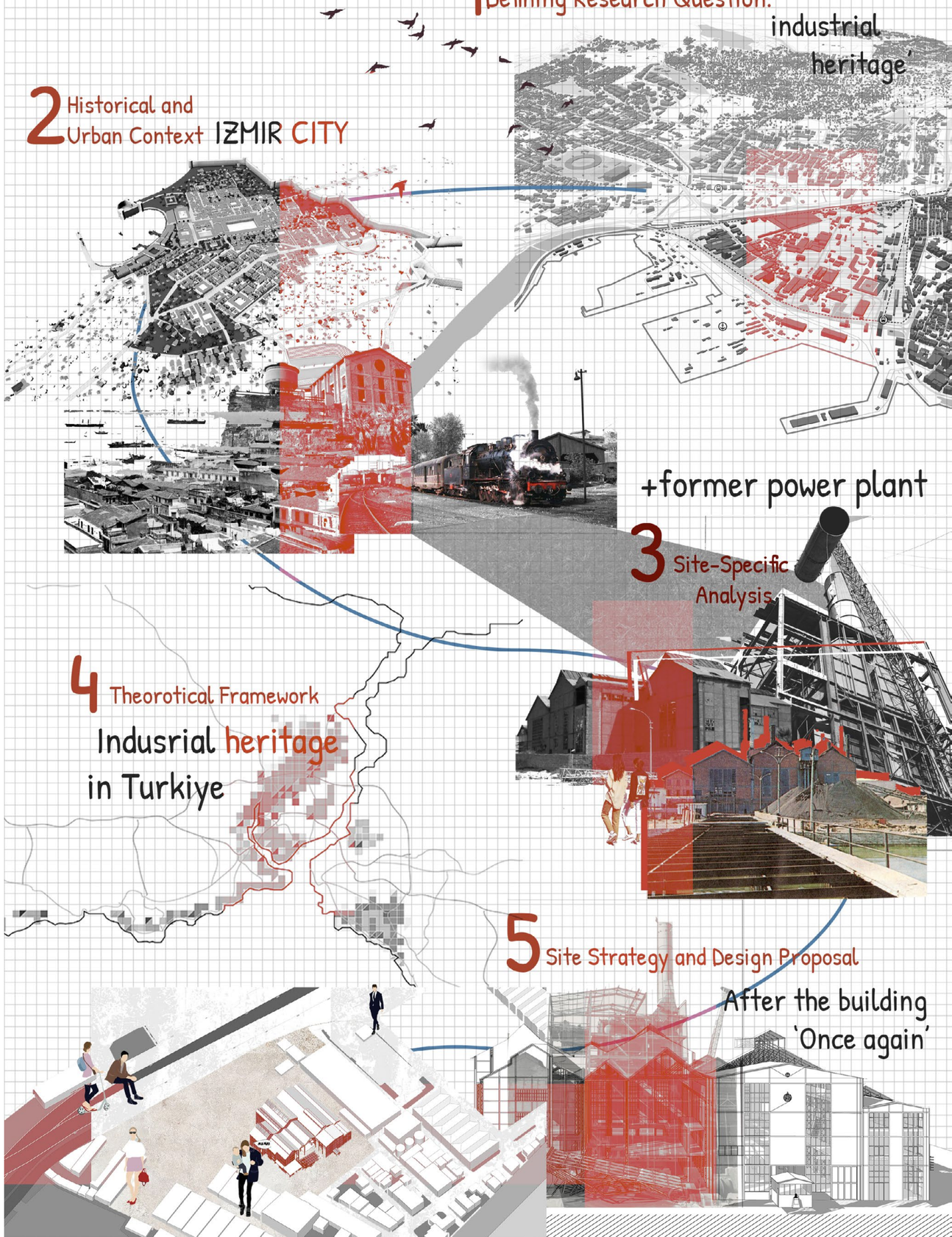
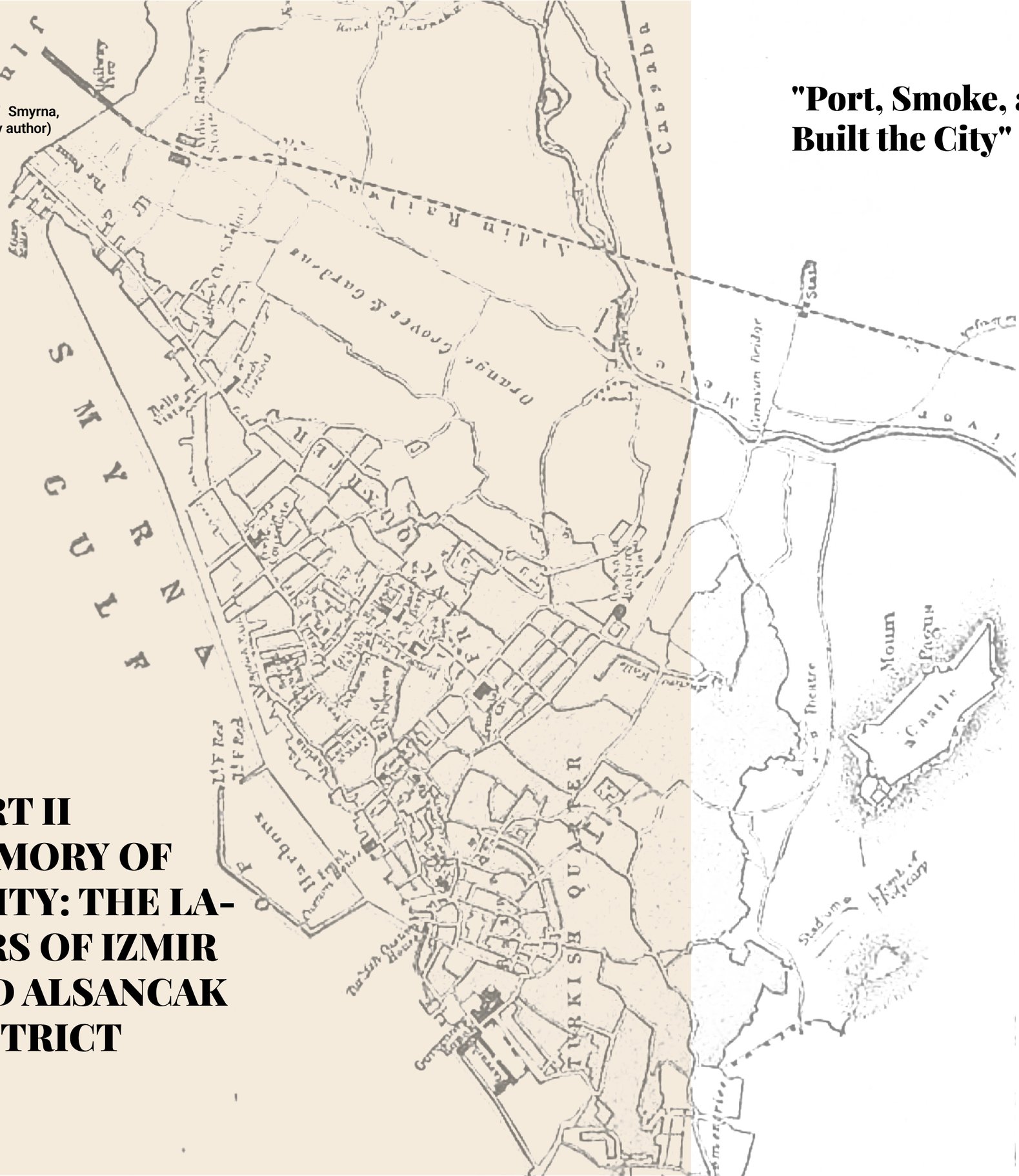


Fig 3: Map of Smyrna, 1891 (edited by author)



PART II
MEMORY OF A CITY: THE LAYERS OF IZMIR AND ALSANCAK DISTRICT

"Port, Smoke, and Stone: Layers That Built the City"

> *“A port, a railway, factories and steam – this chapter explores Izmir’s lesser-known industrial backdrop and its spatial evolution.”*

Cities are not merely physical constructs but piled with memory, conflict, and various transformations. Izmir, as one of Turkey’s most historically stratified urban settlements, carries both visible and invisible marks of centuries of changing forms — from ancient Smyrna to an Ottoman port city, and finally, to a modern-style industrial center. This chapter examines the urban memory of Izmir, tracing themes of industrialization and spatial restructuring with a focus on the area of Alsancak and its port hinterland. While the coastal and trading identity of Izmir is often praised, its industrial history has typically stayed in the background of collective memory. By means of historical mapping, urban plans, and socio-spatial analyses, this section aims to disclose how the logics of trade, infrastructure, and modernization have all intermingled to shape the spatial form and cultural memory of the city. This would give context to the site of the former power station and offer a wider consideration regarding how cities remember — or forget — their industrial legacy.

Fig 3:https://mapsofantiquity.com/products/1891-smyrna-antique-map?srsltid=AfmBOoorGwQIrGIIZM-uajiXoQ07_QPnNYjqyY3A0j0HEUv7aqKMcxVr

2.1 Geographical and Historical Overview of Izmir City

Turkey is located at the gateway of Asia and Europe and shares its frontiers with Greece and Bulgaria on the northwest, with Georgia on the northeast, and Armenia, Azerbaijan, and Iran on the east. With the Black Sea to the north, the Mediterranean to the south, and the Aegean to the west, the country is bordered by three major seas. Thus Turkey acts as a bridge connecting the Middle East and Europe with immense geopolitical and cultural importance.

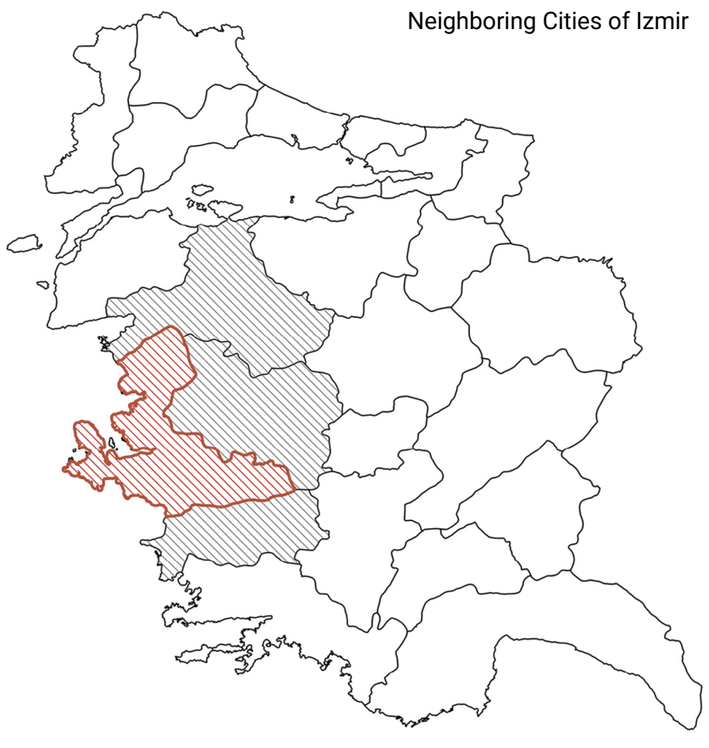
Izmir is a large city located on the western extremity of Turkey along the Aegean Sea coast. It is the third largest city in Turkey and an important center for economic, cultural, and historical activities. The city is situated in a bay and surrounded by rolling hills and mountains, creating an extraordinarily scenic beach environment. Coordinates of Izmir are approximately 38.4192° N latitude and 27.1287° E longitude. [3]

Numerous neighboring cities surround it in western Turkiye to the east of Izmir; it borders Manisa, known for its industrial production and agriculture. Manisa is to the east, and to the south lies Aydin, a city known for its agricultural products such as figs and olives. To the southwest is Mugla, a tourist city well-known for coastal resorts including Bodrum and Marmaris. Balıkesir, with a history of agricultural productivity, especially olives, adjoins it to the northwest. Each of these surrounding cities plays a part in the economic, agricultural, and cultural perspective of the Izmir region.

[3] http://www.Izmir.gov.tr/ilin-cografi-bilgileri

Fig 4: Location Maps

Fig 4: Produced by author



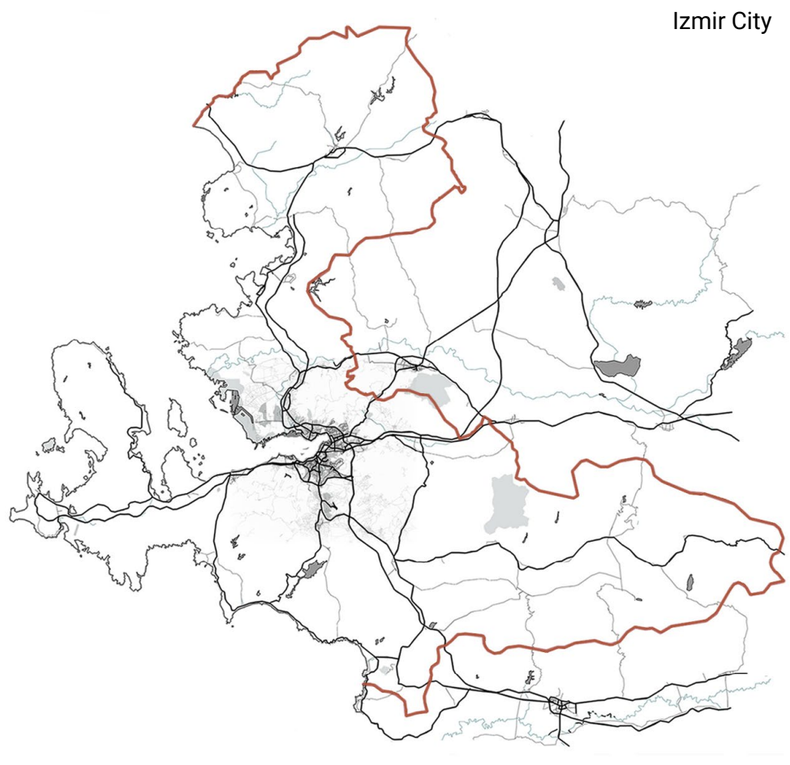


Fig 5: Analysis of Izmir City

Fig 5: Produced by author

To BALIKESIR PROVINCE

To MANISA PROVINCE

To ANKARA PROVINCE

To CESME DISTRICT

KARSIYAKA

BAYRAKLI

TUZLA

BORNOVA

KONAK

BALCOVA

KARABAGLAR

BUCA

GAZIEMIR

LEGEND

- Main Centers
- Sub-Centers
- Commercial Zones
- Industrial Zones
- University Zones
- Un-planned Urbanization
- Infastructures - Airport
- Planned Urbanization
- Green Areas - Natural Parks
- Touristic Centers
- Dense Population
- Shoreline

SPHERES OF INFLUENCES

Fig 6: Analysis of Izmir City

Fig 6: Produced by author

TUZLA

KARSIYAKA

BAYRAKLI

BORNOVA

KONAK

BUCA

BALCOVA

KARABAGLAR

GAZIEMIR

LEGEND

- Port Hinterland
- Educational Center
- Airport
- Historical Center
- Commercial Center

ZONES AND DENSITIES

Fig 7: Analysis of Izmir City

Fig 7: Produced by author

LAND USE

LEGEND

- Arable Land
- Green Areas
- Settlements
- Commercial Use
- Industrial Use
- Heritage Zone

Fig 8: Analysis of Izmir City

Fig 8: Produced by author

TRANSPORTATION

Balikesir Direction

Yamanlar Mountain

Spin Mountain

KARSIYAKA

BAYRAKLI

TUZLA

Ankara Direction

BORNOVA

KONAK

BUCA

BALCOVA

KARABAGLAR

Cesme Direction

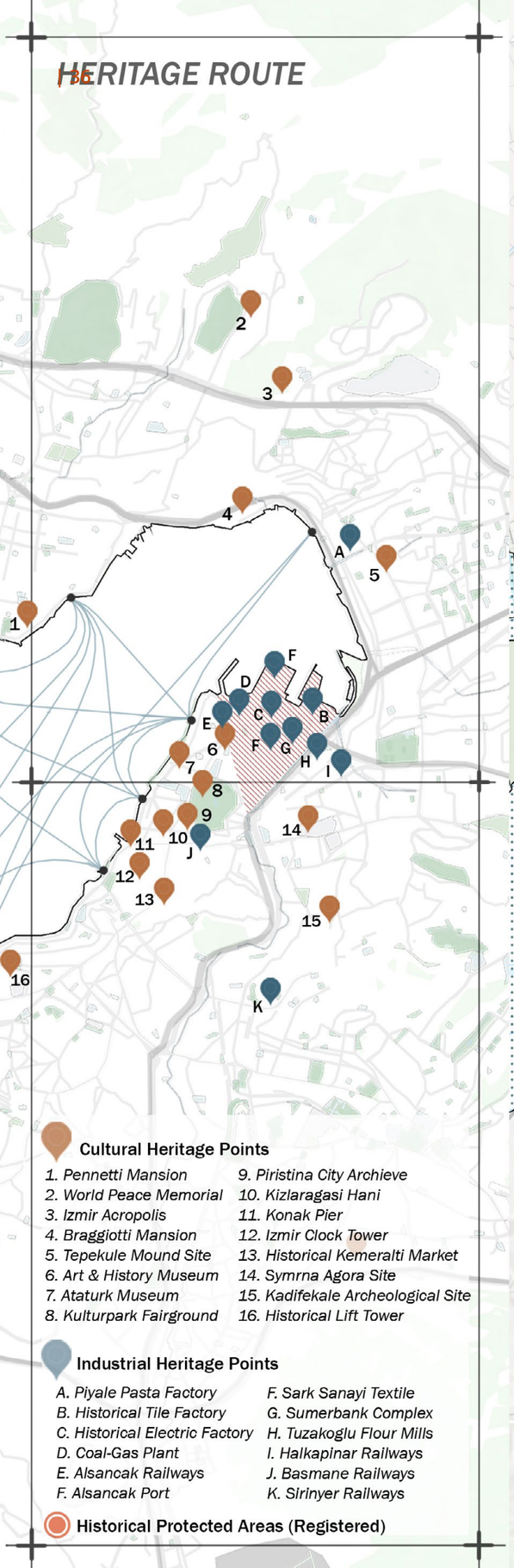
GAZIEMIR

Kemalpasa Mountain

LEGEND

- Green Areas
- Water Resources
- Main Highways
- Metro Line
- Metro Line Under Construction
- Planned Metro Line
- IZBAN Line
- Tram Line
- Tram Line Under Construction
- Urban Railway Facilities

HERITAGE ROUTE



Cultural Heritage Points

1. *Pennetti Mansion*
2. *World Peace Memorial*
3. *Izmir Acropolis*
4. *Braggiotti Mansion*
5. *Tepekule Mound Site*
6. *Art & History Museum*
7. *Ataturk Museum*
8. *Kulturpark Fairground*
9. *Piristina City Archieve*
10. *Kizlaragasi Hani*
11. *Konak Pier*
12. *Izmir Clock Tower*
13. *Historical Kemeralti Market*
14. *Symrna Agora Site*
15. *Kadifekale Archeological Site*
16. *Historical Lift Tower*

Industrial Heritage Points

- *A. Piyale Pasta Factory*
- *B. Historical Tile Factory*
- *C. Historical Electric Factory*
- *D. Coal-Gas Plant*
- *E. Alsancak Railways*
- *F. Alsancak Port*
- *F. Sark Sanayi Textile*
- *G. Sumerbank Complex*
- *H. Tuzakoglu Flour Mills*
- *I. Halkapinar Railways*
- *J. Basmane Railways*
- *K. Sirinyer Railways*

Historical Protected Areas (Registered)

CULTURAL AND INDUST-RIAL HERITAGE

Fig 9: Analysis of Izmir City

Fig 9: Produced by author

Fig 10: Analysis of Izmir City

Fig 10: Produced by author

BIRD SANCTUARY

1

TUZLA

YAMANLAR
NATURAL PARK

2

Yamanlar
Mountain

Spin
Mountain

KARSIYAKA

BAYRAKLI

BORNOVA

KONAK

GOKDERE
CANYON

3

4

MELES
STREAM

BUCA

BALCOVA

KARABAGLAR

6

BALCOVA
FOREST

5

IGDIR
FOREST

Kemalpasa
Mountain

GAZIEMIR

NATURAL HERITAGE

LEGEND

- Project Area
- Ports
- Natural Assets
- Meles Stream
- Stream Bed (Active/Passive)
- Main Vehicle Axis
- Green Areas
- Grade 1 Natural Site Area
- Grade 2 Natural Site Area
- Grade 3 Natural Site Area

From Ancient Smyrna to Modern Izmir

The Izmir city, which houses The historical Power Plant, is one of the most important cities in Turkey's Aegean region. From past to present, Izmir has been a city that has attracted attention in every period of history, both as a cultural heritage and as a trade center. Over time, it has come under the control of various states, each leaving its cultural imprint on the city. A key factor in Izmir's status as a center of attraction is its location as a port city. The city, located along the coast of the Aegean Sea, holds significant strategic importance both geographically and historically.

Although there is contradictory information about the date and place, Izmir's founding is known to start from the archaeological site now called Tepekule, which is located in the Bayrakli district. It is assumed to be a peninsula, however the sediment carried by the rivers into the bay over many millennia has silted up the sea and forms the coastline today. [6] Influencing factors upon the founding location included not only safety but commercial activity as well. Its position on a peninsula created a natural harbor where maritime trade could develop effectively. Moreover, considering the establishment area of old Izmir in Bayrakl district, it is possible to observe a few small rivers that flowed from close distances into the sea. These rivers fed very fertile agricultural lands before they reached the sea. Thus, the chosen site provided wide advantages related to defense, security, economic activities, and food resources.

Archaeological excavations in the Bayrakli region and historical records reveal that the founding of Izmir dates back to around 3000 BC. Research findings have established that, in ancient times, Izmir was the city of Aiolis, attached to a Greek tribe. [7] After the Ionians captured the city, a new era for the city, which was known as Smyrna in that period, began. The takeover by the Ionians, who had a well-functioning trade network, led to a rapid transformation in the city's history. Along with the wealth of trade, Smyrna kept on developing physically as well. Around 610-600 BC, the city was captured by the Lydians. In 545 BC, after the attack of the Persians-who took it over-the city was destroyed, thus coming to an end of the city's initial phase.

During the reestablishment of the city, after defeating the Persian Empire's army in Anatolia in 334 BC, Alexander the Great advanced towards Ephesus. With its second founding, therefore, the city was shaped by extending downward from the hillside area known as Kadifekale toward the sea. The area where the city was located was situated between a high hill and a small cove, creating a natural harbor. For this reason, the city's existence was closely tied to maritime trade. The eastern walls of the city descended from Kadifekale to present-day Basmane, extending parallel to the sea to the location of the current Hisar Mosque. The western walls also started from Kadifekale and reached the vicinity of the present-day Bayram Place, continuing to the sea near the Government Mansion. [8]

[4] Charles River Editors (2021). Ancient Smyrna: The History and Legacy of the Influential Greek City in Anatolia. 979-8739809827

Fig 11: https://kvmgm.ktb.gov.tr/Eklenti/102377, Izmir Excavation Research II

Fig 11: Map of Ancient Settlements from different periods in the Smyrna

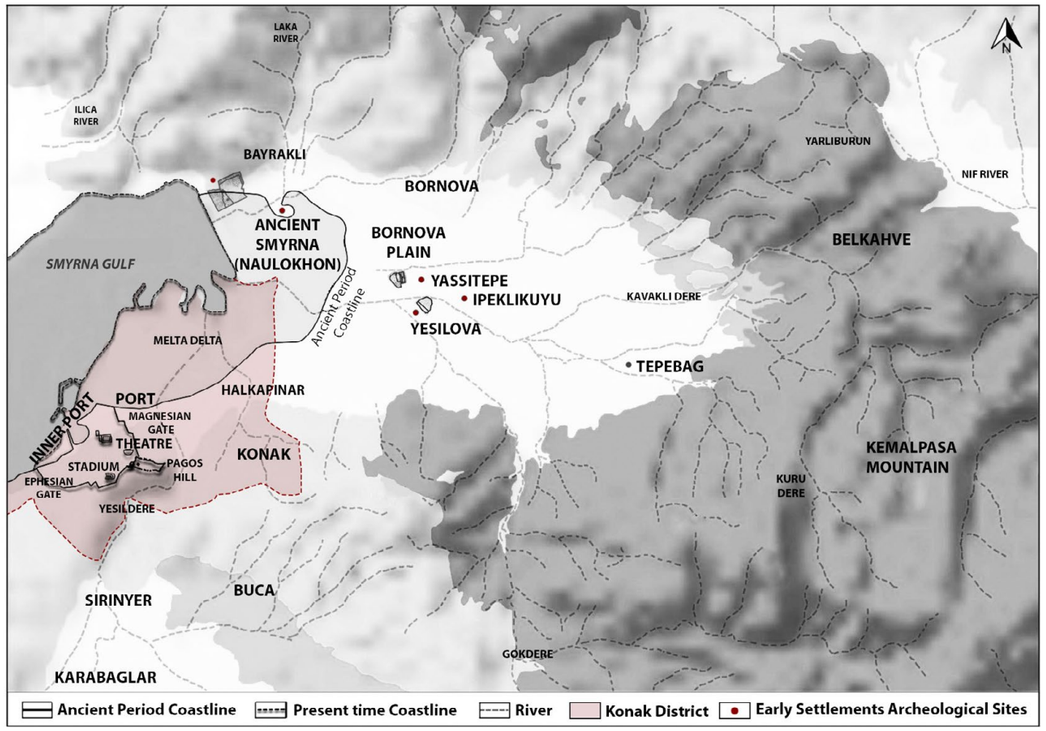


Fig 12: The Gulf and Izmir in Antiquity

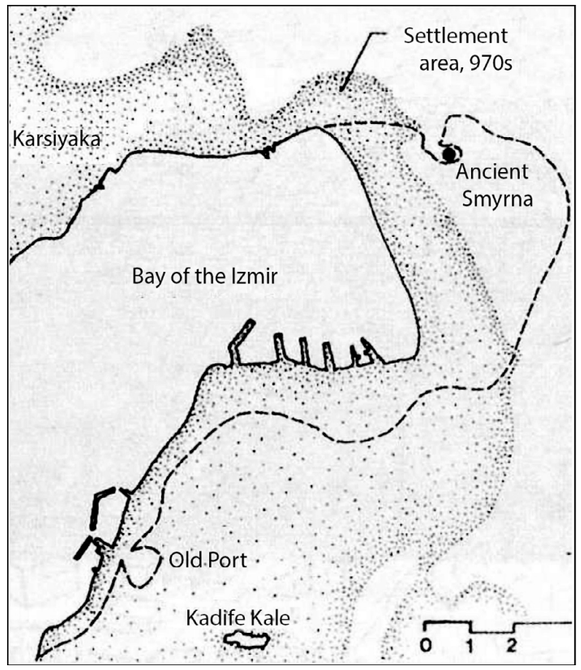


Fig 12: Yılmaz, Fikret- Yetkin, Sabri. Izmir Kent Tarihi. Izmir: Izmir buyuksehir belediyesi, 2002.

Gates were located on both the eastern and western sides of these walls. In the following times, as today's Izmir Smyrna continued to develop as a city of the Kingdom of Pergamon up to 133 BC. When the kingdom joined the Roman Empire, the city became a part of Roman territory.

During the Roman period, the city developed importance only gradually, starting to take shape as a trade city. The massive earthquake in AD 178, which almost razed the city to the ground, led to its rebuilding. During this period, the Roman Empire contributed to the city with several important constructions, some of whose remains are still standing today. Of those that have not survived into the modern era are the stadium and amphitheater at the foot of Kadifekale, while the city's commercial agora is thought to be located near the inner harbour; its counterpart, the state agora lying in the south of the city, has survived. By the division of the Roman Empire in AD 395, Anatolia, therefore, Izmir, came under the reign of the Eastern Roman Empire. [5]

Later, through the fall of the West Roman State in AD 476, the Eastern Roman Empire, then known as the Byzantine Empire, became the dominant power in the region. Izmir continued to exist as an important city of the Byzantine Empire. Although all these internal and external problems of this era impeded Izmir's development, the city continued its developments starting from the 9th century onwards. Developments in maritime activities strengthened Izmir militarily as well, enabling it besides being an administrative and religious center to recover.

Later, the defeat of Byzantine armies by the Seljuk army in 1071 was a turning point in the history of Anatolia.

As a result, Izmir came to be ruled by the Turks from the Byzantine. Urbanization was started with building and construction at the foothills of Kadifekale, then expansion towards today's Basmane, Kemeraltı, and Konak districts. Although it survived many different administrative processes for 20 years due to the power conflicts among the Turkish principalities, Ottomans ended Beylik of Aydınoglu in the year 1426 and took over West Anatolia and Izmir, therefore putting an end to administrative uncertainties in the city. [6]

During the period of the sovereignty struggles, the port and the settlement area of Izmir had been destroyed. The Ottomans revitalized Izmir and the Aegean Region, thus creating conditions for a resurgence of life. Sultan Mehmed II ordered the rebuilding of the Port fortress, which was in a ruined state at the entrance of the Izmir port and thus allowed the city to regain its former appearance. This meant that once again, the city was united, from Kadifekale which can be considered an inner castle, lying on Mount Pagos and the fortress at the port. [7] Between them, outer walls ran along the eastern and western sides of the city, from the inner castle down to the port fortress. The few civilian settlements were largely confined to the slopes of Kadifekale and a commercial area around the inner harbour where today's Kemeralti district stands. Through the 15th century and for most of the 16th, Izmir remained a small coastal town. [8]

[5] https://Izmir.ktb.gov.tr/EN-239221/history-of-Izmir.html
[6] Tekoglu, R. (2021). New Inscriptions from Smyrna. Gephyra 22.
[7] Yılmaz, Fikret- Yetkin, Sabri. Izmir Kent Tarihi. Izmir: Izmir buyuksehir belediyesi, 2002.
[8] Ayonu, Y. (2009). Izmir'de Turk Hâkimiyetinin Baslaması. Turk Dunyası ncelemeleri Dergisi, 9(1), 1-8.

Fig 13: Gulf of Smyrna, Roman Period

Fig 13:https://www.smyrnaagorasi.com/smyrna-antik-kenti/

Fig 14: Visualization of Site of the Smyrna City

Fig 14: https://reshontheway.com/smyrna-antik-kenti/

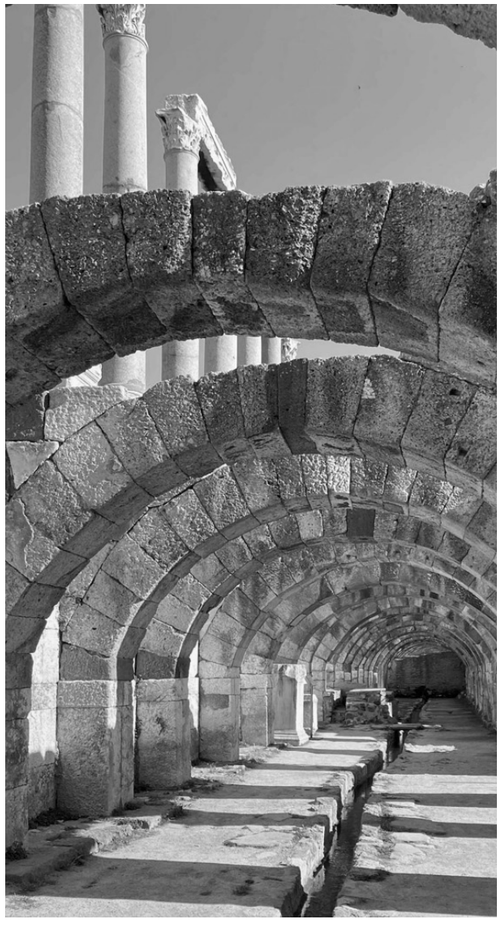
In the year 1453, Izmir attained rapid growth and population increase after the conquest of Istanbul and its declaration as the capital of the Ottoman Empire. With such development, Izmir started to take precedence in western Anatolia due to its location, fertile agricultural areas and port city status for the agricultural needs of the Ottoman Empire. Besides, the consecutive inclusion of Cyprus and Chios into the Ottoman territories totally changed the balance of trade in both the Aegean and Mediterranean in favor of the Ottomans. [9] In addition, the development of international trade networks enhanced the trading potential of Izmir's port even further.

While the population was constantly increasing throughout the 16th century, the physical structure of the city grew and then new quarters were established. In time, with the increase in the presence of merchants in the city, the appearance seen in the port of Izmir by 1620 was very different from that in the 16th century. With the revitalization of this port, the number of arriving ships gradually rose, and different types of establishments started to emerge around the port area. Mainly, European merchants began settling along the coastline of the city.

In a short period of time, consulate buildings and trading houses were rapidly built along this street, which changed the physical appearance of the port area. This fact is supported by the engravings of the 17th century, which show that the settlement

Fig 15: Archeological Site of Ancient Smyrna City in Konak District

Fig 15:Konak Municipality, 2021



area of the city had expanded and the physical structure of Izmir had changed. The engravings and written documents indicate that the settlement that originally began at the base of Kadifekale developed north along the coast to a promontory known as Punta (Alsancak Burnu), while it reached the Jewish cemetery, which signals the starting point of today's Varyant, in the south. [10] On the eastern part of the port,

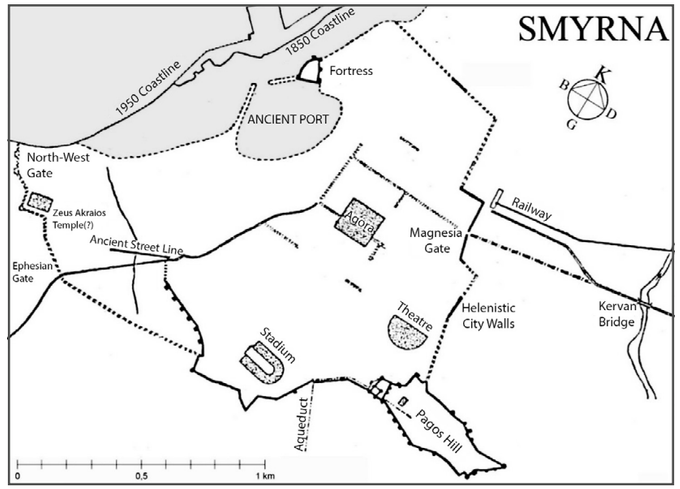


Fig 16:Konak Municipality, 2021

Fig 16: Naumann Map, Ancient City of Smyrna in the Roman Period

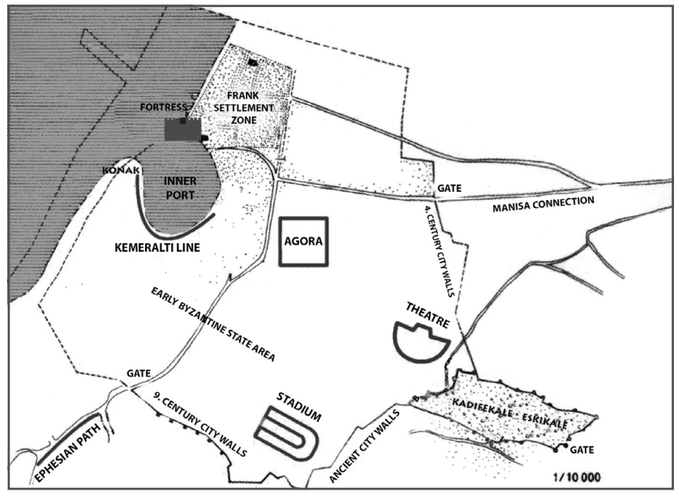


Fig 17: Smyrna in Byzantine Period

Fig 17:Seymen, D. A. (2014). Dıs Ticaret. APİKAM içinde, Kent Ansiklopedisi Ekonomi Cilt I (s. 231-317). Izmir: Izmir Buyuksehir Belediyesi.

there were Turks at the foot of Kadifekale; in the inner parts lived Jewish settlements and Greek settlements along the coasts.

Along with the fact that international trade became the dominant economic sector of the city, commercial vitality turned Izmir into a cosmopolitan hub in terms of its population. Though it was a city where both Western and local elements coexisted, Izmir had a different demographic structure compared with the rest of the Ottoman cities. Its inhabitants did face significant difficulties throughout its history. One of these was the pandemics that took place in the population, as generally faced by port cities. In addition, the city had always fought in its history against wars, earthquakes as well as major fire incidents which destroyed and caused the city to be ruined. However, after each of these disasters, the city managed to revive and to continue its life more strongly. The growth process of Izmir, which continued in the 17th century,

[9] Dan, Anca. (2017). Ancient Smyrna in Its Anatolian and Aegean Environment : the foundation stories. 189-220.
[10] Akurgal E. 1946, Arkaik ve Klasik Ça larda Izmir, pp. 55-71.

[11] Ser e, E. (2020). Izmir Tarihi Kent Merkezi'ne Yolculuk. Izmir: Izmir Buyuksehir Belediyesi.
[12] AP KAM (2013), Izmir Kent Ansiklopedisi Mimarlık Cilt-I-II

gained more acceleration in the 18th century. This process of development transformed Izmir from an international port city into a world city. Between 1650 and 1750, Izmir played an intermediary role in intercontinental trade. [12] During the hundred years between 1770 and 1870, Izmir shed its function as a trade intermediary. In the 18th and 19th centuries, it can be considered a kind of “golden age” where the city became one of the most important port cities of the Eastern Mediterranean, ranking also among the leading export ports of the Ottoman Empire.

With the arrival of the 19th century, both Izmir and Western Anatolia began to transform considerably in their course of history. The rise of commercial capacity in Izmir and Western Anatolia created the emergence of financial organizations. Importantly, in 1843, a group of merchants founded the Commercial Bank of Izmir. It was followed by the opening of the Izmir branch of Credit Lyonnais in 1860 and then the Ottoman Bank opened a branch in Izmir in 1863. Along with these developments in trade, there was a substantial influx of capital into Izmir after the 1850s. [13] Thereafter, development and transformation gained a very rapid pace, parallel to the increase in the trade volume with the Western states. This accelerating process continued uninterruptedly until the outbreak of World War I in 1914.

Undoubtedly, the development and transformation of Izmir took on a new dimension with the construction of railways. This was further accelerated by the subsequent port and dock construction. The railway connections established between Izmir-Aydın and Izmir-Turgutlu were the first railway lines in Turkey. The existing port and dock in Izmir could not meet the expanding trade until the 1860s. With the increased flow of goods from the interior regions, such large-tonnage ships needed a dock where ships could easily moor and load or unload their cargo. [14]

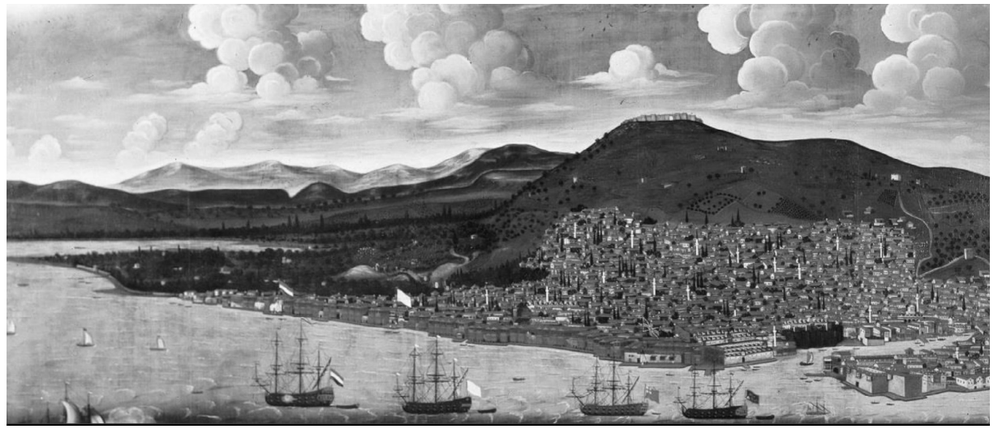


Fig 18: Gravure Smyrna during late 17th century

Fig 18:Cornelis de Bruyn, door de vermaardste deelen van Klein Asia-1698

This therefore resulted in the completion of a new dock by a French firm and opened to service in 1876, which was located in the area in front of the customs building at today’s Alsancak promenade. Later on, a tram line was laid to the dock and the valuable lands obtained from the sea and surrounding areas were sold, creating wide areas for rich and Western-style neighborhoods within the city.

Starting from 1858 when Alsancak train station was opened, the British people began buying large areas of land in this region and building lodgings, warehouses, and repair workshops. A concentration of industrialization, especially in the late 19th century, also came along with the railway. Dara acı district became a settlement for Greek workers because it was the route from Alsancak to Bornova which is the street in front of Alsancak Stadium today. This district is considered the industrial heritage zone located in the Alsancak port hinterland today. Steam mills, cigarette and paper factories, a gaswork factory (1860), a pomace factory, cottonseed oil and pasta factories which belonged to foreigners had been established here. [15]

Seeing that the British community were especially good at the textile industry, the textile factory called Sark Sanayi and other Cotton Textile factories were established in the port hinterland. In addition, in 1886, the Reji company set up a tobacco and cigarette factory, and manufacturing workshops of wooden boxes used for exporting valuable regional products like grapes and figs began to settle in Punta, which is now the Alsancak area.

This increase in the trade of agricultural products, along with incoming capital, developed industry and the need for cheap labor. Since there was not a sufficient workforce in Izmir and Western Anatolia, Greeks from some Aegean islands started to be brought to Anatolia. While a portion of the Greek population was hired for agriculture, a large number were employed as workers in Izmir’s production facilities. The coming of Greek workers changed the structure of settlement in the urban fabric. The residential areas which started to take form just like the informal housing developments such as slums began to appear in Dara acı district, today’s port hinterland and in neighborhoods like Halkapınar and Tepecik.

The increase of industrial facilities in the city contributed to the improvement of the service sector and opportunities. Foreign companies provided gas, water, and tramway services in Izmir where the modernization process had already started, on a small scale. These developments did not prevent the growth arising from the increasing importance of Izmir in international trade, thus creating a need for infrastructure developments. In this respect, two different municipalities began serving the city in 1880. [16]

[13] Akurgal, E. (2000). Ege Batı Uygarlıklarının Do du u Yer. Izmir: Izmir Buyuksehir Belediyesi Kultur Yayınları.
[14] Frangakis Elena. (1985) The Ottoman port of Izmir in the eighteenth and early nineteenth centuries, 1695 -1820. In: Revue de l'Occident musulman et de la M diterran e. The Ottomans in the Mediterranean - Navigation, diplomacy, trade. pp. 149-162.
[15] Yılmaz, Fikret- Yetkin, Sabri. Izmir Kent Tarihi. Izmir: Izmir buyuksehir belediyesi, 2002.

With Izmir's emergence as a prominent port city in the 19th century in the Eastern Mediterranean, the commercial activities in the Aegean Region had been totally dominated by Levantines and foreigners. Small trade, industry, banking, and coastal trade were greatly under the control of Greeks and Armenians, while the Jews mainly engaged in banking and money exchange. On the other hand, during this period, the Turkish population in Izmir and the Aegean Region benefited very little from the riches generated by international trade and economic activities. Since the beginning of the 1900s, the Turkish masses, which had been economically marginalized, began fighting for a more active role in economic life.

During the Second Constitutional Era, the Muslim-Turkish community in Izmir and Western Anatolia united their capital and established various economic organizations such as local banks, construction companies, and agricultural cooperatives through cooperative solidarity. Due to World War I in 1914, the Ottoman Empire found an opportunity to implement its ideas on the National Economy and one-sidedly abolished the Capitulations, thus ending the privileges of foreigners. This move started to yield positive results in Izmir, where many Turks started taking leading roles in trade and economic activities.

However, as the war advanced and the Ottoman Empire was nearing its collapse while the Allied Powers were getting stronger, life in the city was severely affected. Trade goods became unavailable, and enemy fleets threatening the port of Izmir brought trade to a standstill, preventing developments along the path of the National Economy. The beginning of an end politically for Izmir and Aegean Region had taken place with the progression of war. From May 15, 1919, the whole Aegean region fell under Greek occupation.

The Sevres Treaty put forward by the enemy powers foreseen that a large portion of the Aegean Region including Izmir was to be annexed to Greece. [17] For this reason, a strategic plan was drawn in order to make the Greek population in the region visible more decisively. Large numbers of Greeks were transported to the city from the Aegean islands and Greece during the years of occupation.
Before the occupation, Izmir had a population of around 200,000, but it suddenly became a city with a population of 500,000 to 600,000. However, despite such maneuvers and occupations, the Turkish people launched a resistance movement under the leadership of Mustafa Kemal Ataturk to defend the integrity of their homeland. This occupation of Izmir marked the beginning of the “Turkish War of Independence”, which turned out to be a turning point for Turkish society and the Turkish nation. The period following the occupation, almost three and a half years, until the liberation, was full of developments in the road to salvation for the Turkish nation.

[16] Gule , Ece & Savasir, Gokcecicek. (2022). Izmir Dara a 'taki Taktiksel Sanat Uretim Pratiklerine, Yer Olusturma Ikeleriyle Bakmak. Meltem Izmir Akdeniz Akademisi Dergisi. 10.32325/iaad.2022.1.
[17] Beyru, R. (2011). 19.Yuzyılda Izmir Kenti (Birinci Basım b.). stanbul: Literatur Yayınları.
[18] Yılmaz, Fikret- Yetkin, Sabri. Izmir Kent Tarihi. Izmir: Izmir buyuksehir belediyesi, 2002.

Fig 19: Filling of the Sea in the Frenk Neighborhood During the Construction of the Pier, 1870

Fig 19: Durmaz, Omer. 2019. Manzaram Izmir. IZKA. Izmir. [Alphonse Rubellin, 1870 ~ (Akdeniz Medeniyetleri Arastırma Merkezi / Research Center for Mediterranean Civilizations).]

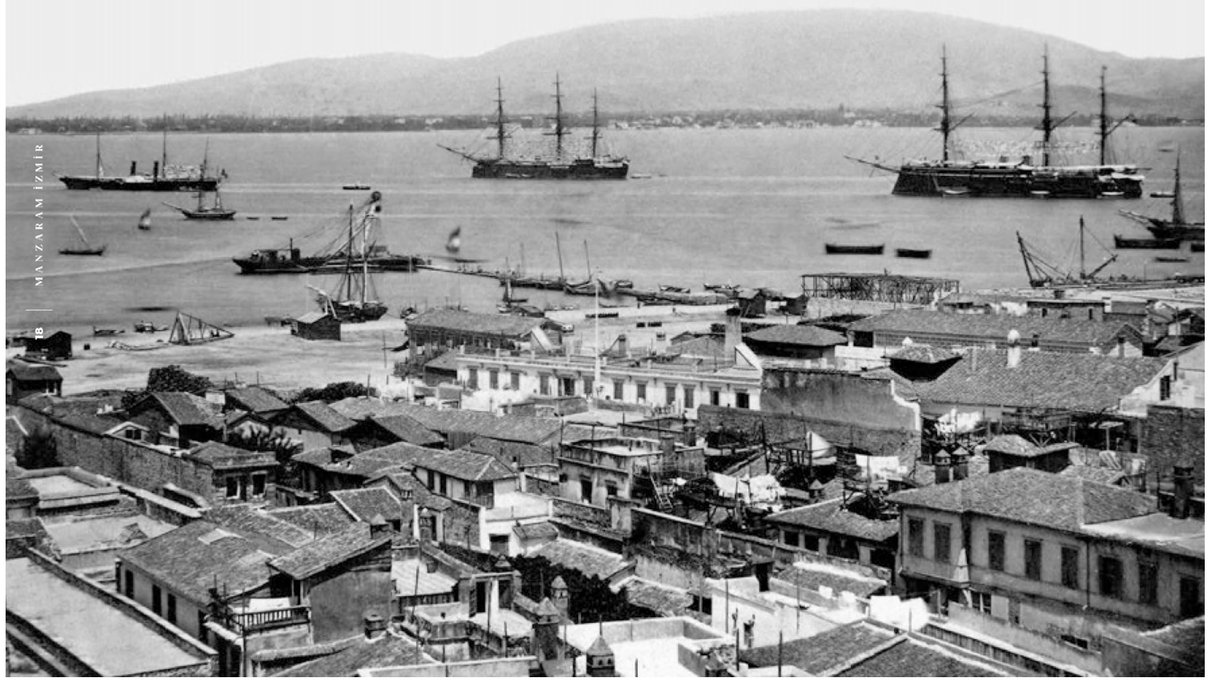


Fig 20: Public Transport with Horse-Drawn Tram on Izmir Pier

Fig 20: Durmaz, Omer. 2019. Manzaram Izmir. IZKA. Izmir. [Kordon Promenade, northern part. Sébah & Joaillier, 1900 / German Archaeological Institute Istanbul]

Thanks to the resistance organization named Kuva-yı Milliye created from Turkish society and to the efforts of Mustafa Kemal and his military colleagues, steps were taken in order to transition from the monarchical, theocratic, and multinational Ottoman Empire to a national, secular, and modern Republic of Turkey.[18] The Turkish War of Independence, which started on May 19, 1919, and lasted until July 24, 1923, with the defeat of the Allied Powers, came to an end. For Izmir, September 9, 1922, was the day of liberation; it was for all of Turkey the dawn of independence. [19]

The mass exodus out of the city during the war and the war itself brought much negative impact on Izmir. However, with the defeat of the Greek forces in Izmir and their withdrawal, the city finally gained its independence. It was only on 24 July 1923, when the Treaty of Lausanne was signed, that independent Turkey was recognized on the global stage, and the Republic was proclaimed on 29 October 1923. Among one of the key issues of Izmir in the early years was the economic disarray caused by migration.

While trade and production had come to a standstill during this period, Izmir had lost its former importance gradually when it was the busiest port and trade city of the Mediterranean. Thus, Izmir started to be revitalized with the declaration of the Republic accordingly.

In order to rebuild its trading, it became necessary to attract foreign capital into Izmir. Thus, foreign states and companies were invited, and local products which formed the richness of Izmir were introduced to them. Within this context, to reinforce such efforts, the Izmir Fair known as “Kulturpark” was formed in 1936 in the region of Konak.

While efforts were made to revive the commercial structure and agricultural production of Izmir, steps were taken toward its industrialization. The fundamental goals of the Republic included achieving economic independence by means of industrialization. Within this scope, Izmir entrepreneurs made great strides with the establishment of the “Izmir Industrial Union” in 1927 and the acceptance of the Industrial Incentives Law at that time. In ten years, the number of industrial facilities in Izmir doubled-from 60 factories in 1923 to 129 in 1933. Among those constructed was the Izmir Electric Factory, founded in 1926, an important actor in this development process, became prominent among the industrial facilities that had been established in the early years of the Republic.

Industrialization in the 1930s aimed at processing the region’s agricultural products for the domestic market. In addition, the establishment of Izmir Tradesmen and Public Bank in 1928 marked an important milestone for Turkish economic history. Yilmaz states that these comprise the early phase of the Republic when Izmir tried to recapture its previous status as a city of trade, thus reordering the legacy of a port city from the Ottoman era.

[19] Ediz, Ismail. (2011). Batı Anadolu’da Yunan isgali (1919/1922). stanbul Universitesi / Sosyal Bilimler Enstitusu.
[20] Mehmet Fatih Sansar-Suleyman Ozmen, (2023) “The Story of 100 Years: Turkish Independence (National Sovereignty) and the Process Leading to the Republic,”, History Studies, 15/Cumhuriyetin 100. Yılı Ozel Sayısı, s.337-352

Fig 21: Izmir Greek Invasion during World War I, 1919

Fig 21:https://www.turkishnews.com/2023/05/16/Izmirin-isgalinin-yildonumunde/

The real transition of Izmir and the Aegean from trade to industry took place in 1945, following World War II. After 1950, the introduction of mechanization into agriculture by Marshall Plan aid urged a rapid shift: Izmir started to develop from an agricultural trade city into an industrial center. During the 1960s, the city entered a period of rapid industrialization in planned economic development. By the first half of the 1970s, the accelerated growth of the industry continued, shifting from an agricultural base of industrial structure to non-agricultural sectors such as chemicals, iron and steel, automotive, and paper.[20] Thus, the advancements in industry, the investments in infrastructure led by the state, and economic developments into the 1980s brought major demographic and urban changes to Izmir, which gained from rural-urban migration.

[21] Yılmaz, Fikret- Yetkin, Sabri. Izmir Kent Tarihi. Izmir: Izmir buyuksehir belediyesi, 2002.

Unlike some other coastal cities in Turkey, Izmir was not a European colonial outpost for trade until the late 19th century. Beginning in the mid-1980s, it underwent transformation through Turkey's export-oriented industrialization policies. The industrial activities were more traditional, starting in textiles, food, and agriculture-based production. This changed with opening up of the city into the free market economy, with setting up of Organized Industrial Zones (OSBs), and Aegean Free Zone (ESBAS).

OSBs in areas like Alia a, Kemalpasa, and Torbalı allowed for the transfer of industries from the city center to outlying wards in the 1990s. However, at the same time, foreign investments and high-tech firms were lured to the city, even though traditional sectors had retained a significant weight throughout.

By 2000s, Izmir's industry shifted to technology-based production in automotive suppliers, machinery, chemicals, and renewable energy equipment. By strengthening the logistics infrastructure, Izmir shall become the exportation hub of Turkey.

In the post-2010 era, growth was witnessed in areas such as environmentally sustainable production, wind energy equipment manufacturing, and R&D investments. There has been increasing collaboration between universities and industry, thereby allowing Izmir to move forward from its traditional manufacturing role towards an advanced technology setting, thus producing a qualitative transformation in its industrial structure. [22]

[22] Ayık, U., & Ogel, C. (2020). Kent i Sanayi Alanlarının Donusumune Dair Nitel Bir Arastırma: Izmir Liman Ardı Bolgesi. Yerbilimleri Dergisi, 15(2), 123-145.

Fig 22: Celebration of Liberation Day of Izmir, Ataturk Square. September 9th, 1938.

Fig 22: Durmaz, Omer. 2019. Manzaram Izmir. IZKA. Izmir. [Cemal Yalkıs, 1938 ~ (Izmir Ticaret Odası / Izmir Chamber of Commerce)]

As a by-product of these transformations and changes, between the 1980s and 2020s, Izmir was transformed from a traditional agriculture-based economy into one defined by export, technology, and sustainability. Industrialization not only created a large volume of employment but enhanced the diversification of the city's economy, marking its emergence as one of Turkey's foremost industrial centers. However, great spatial disruptions were introduced through this transformation.

The fact that industries began expanding toward the outskirts gave birth to dense industrial zones in Alia a, Torbalı, Kemalpasa, and Menemen, upon which the next great realization was that residential areas would migrate towards the newly established industrial areas. Natural consequences of this new settlement pattern soon began to emerge: for instance, transportation, infrastructure, and environmental challenges. Meanwhile, with the shift of industries from the city center, many former industrial sites in areas such as Alsancak and Halkapınar became redundant. These areas, once alive with production activity, slowly turned into ghost lands or empty lots awaiting redevelopment.

This scenario clearly illuminated the need for the transformation of these outmoded industrial zones in the city center while maintaining cultural heritage and including urban-renewal initiatives in such a way that they become normalized within the urban fabric of Izmir. Thus, the process of industrialization not only meant economic viability but brought very significant challenges and opportunities towards urban planning and use of public space.

Fig 23: Izmir International Fair. Kulturpark, Lozan Gate, 1936

Fig 23: Durmaz, Omer. 2019. Manzaram Izmir. IZKA. Izmir. Cemal Yalkıs, 1936 (Izmir Ticaret Odası / Izmir Chamber of Commerce).

Hellenistic Period
333 BC-2 BC

Roman Period
2 BC-395 CE

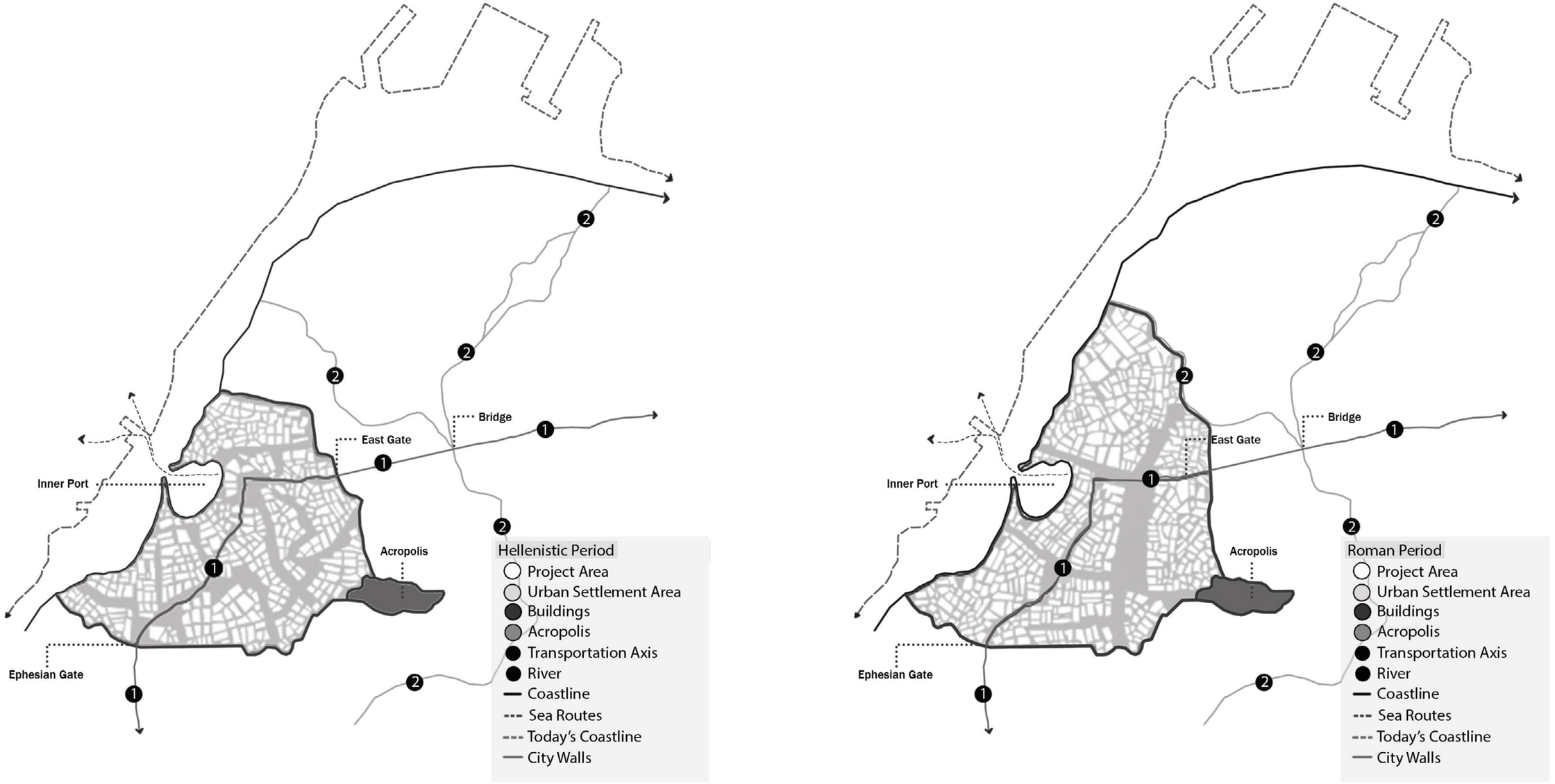


Fig 24: Timeline of Izmir (Hellenistic and Roman Period)

Fig 24:Produced by author

Byzantine Period
395 - 1310

Turk Beyliks Period
1310 - 1422

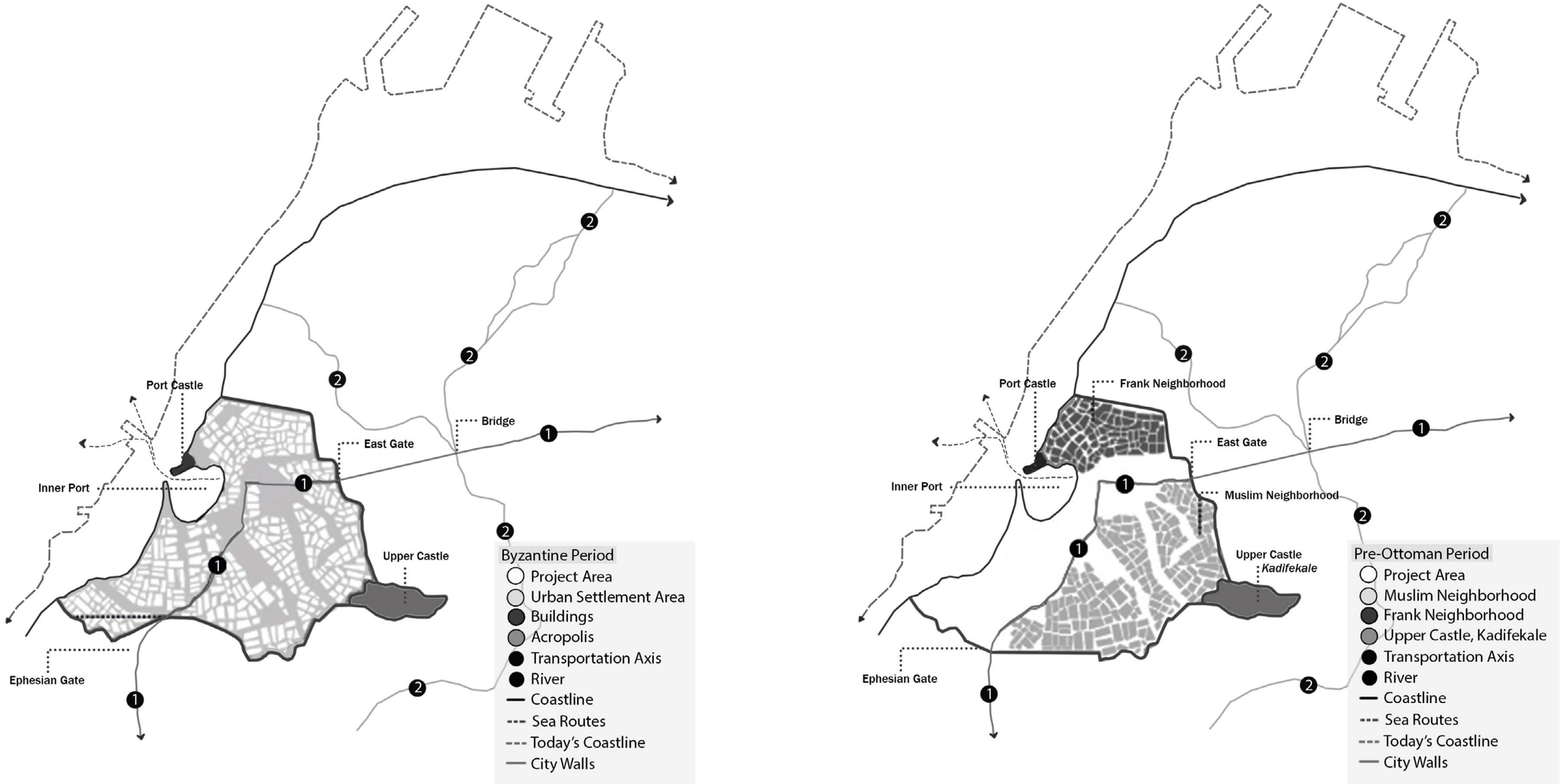
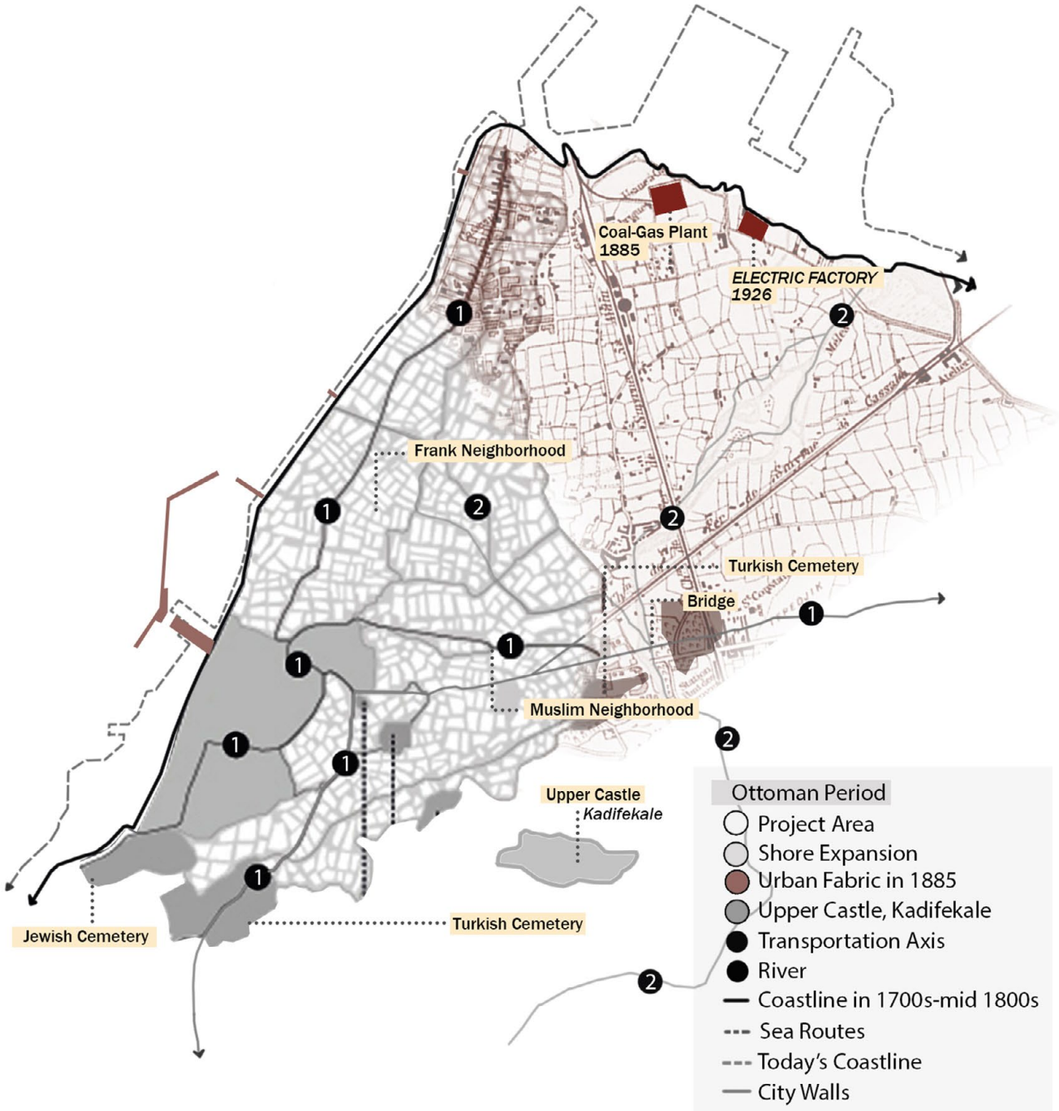


Fig 25: Timeline of Izmir (Byzantine and Turkish Emirates Period)

Fig 25:Produced by author

Ottoman Empire Period
1422 - 1923



Post Republican Period
1923 - 2025

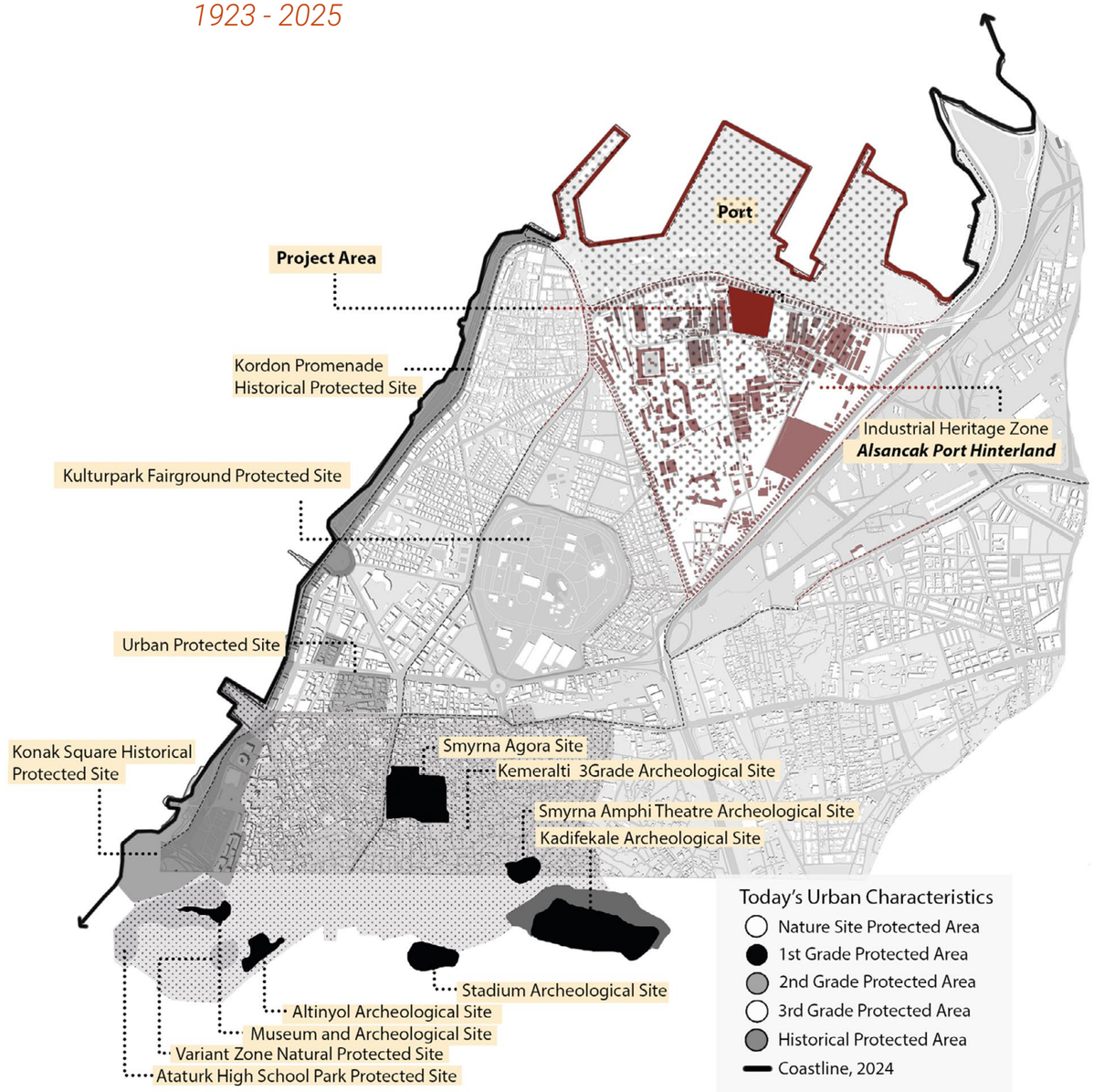


Fig 26: Timeline of Izmir (Ottoman period and Republic period)

Fig 26:Produced by author

Remarks

As explained in the section of From Smyrna to Izmir, it is seen that the structure of the city has been formed with six different periods. These six different periods can be summarized as follows:

1. The first period when the first settlement phenomenon happened and the Hellenistic characteristics of ancient Smyrna have been set.

2. The Roman period - the period when this city was formed by the dominance of the Byzantine Empire.

3. The period characterized by Turkish domination after political developments, which can be considered an initial step towards the Ottoman period.

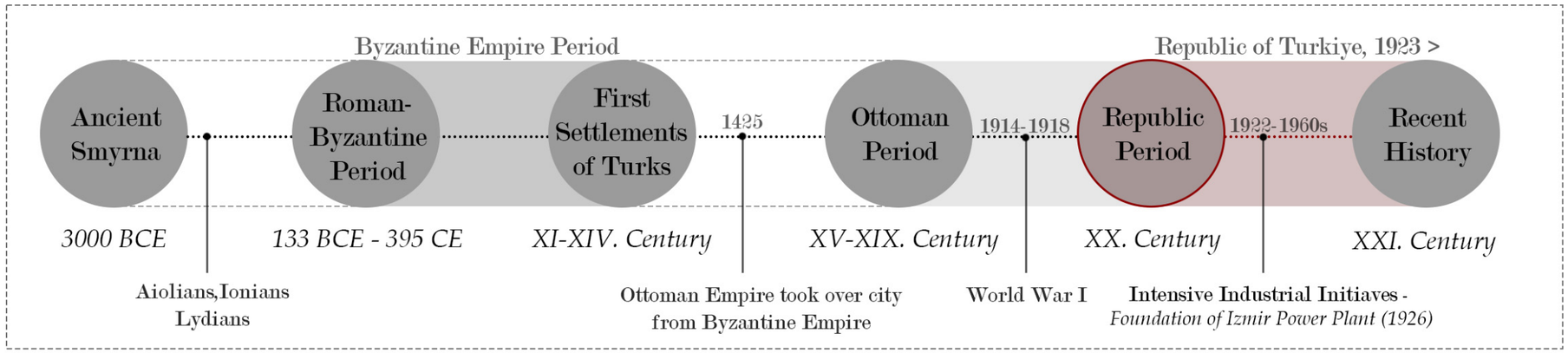
4. The fourth period, during which Ottoman rule lasted for many years with the taking of important steps for the city's cosmopolitanism, proved to be a turning point - with the political developments brought about by World War I - against the independence of the city.

5. The fifth period is the one starting in 1922, after the official victory of the War of Independence, whereby a secular democratic republic was established and Turks declared their independence. In this period, major industrial advancements took place and large economic projects, such as opening Izmir Historical Electric Factory.

6. The last period is a period of recent history, the phase about Turkey, starting in the 1970s until today, during which development pertaining to globalization has been reflected in the city.

Fig 27: Timeline Schema of Izmir

Fig 27:Produced by author



Considering the fact that Izmir has been an uninterrupted settlement since the Neolithic period and it is located on the eastern side of the Izmir Gulf, holding a significant geographical and strategic position, the city preserved its significant position over its history constantly, even today. Moreover, in relation to its characteristics as a port city, it features a variety of architectural structures from different important periods in close proximity.

Therefore, it can be seen that it serves as an important settlement in the Mediterranean Basin for land and maritime trade between Europe and Anatolia for a long time. In addition, its harbors built in different periods have a multi-layered cultural fabric, containing traces of both tangible and intangible cultural heritage from various cultures such as Hellenistic, Roma, Byzantine and Ottoman periods. With the proclamation of the republic, the city entered a new era that encompassed many industrial initiatives, and these industrial advancements shaped the city, strengthening its industrial identity. Thus, new production sectors came in, and the social, societal, and morphological fabric of the city developed in that direction.

As a part of these industrial developments, the Izmir Power Plant, which had been built in 1926, holds significance in this context for several reasons. Such as it reflects the characteristics of its era, has preserved its cultural and industrial qualities to reach the present day, and has maintained its strategic importance due to its location within the current urban fabric. Therefore, the ongoing research that aims to investigate and reintegrate this structure into the city is of great importance. In this respect, the following subsection provides the reader an in-depth analysis of the surroundings and the location of the historical building in question within the context of the study that will be elaborated in the further sections of the thesis.

2.2 The Shadows of Industry: Traces in the Urban Fabric

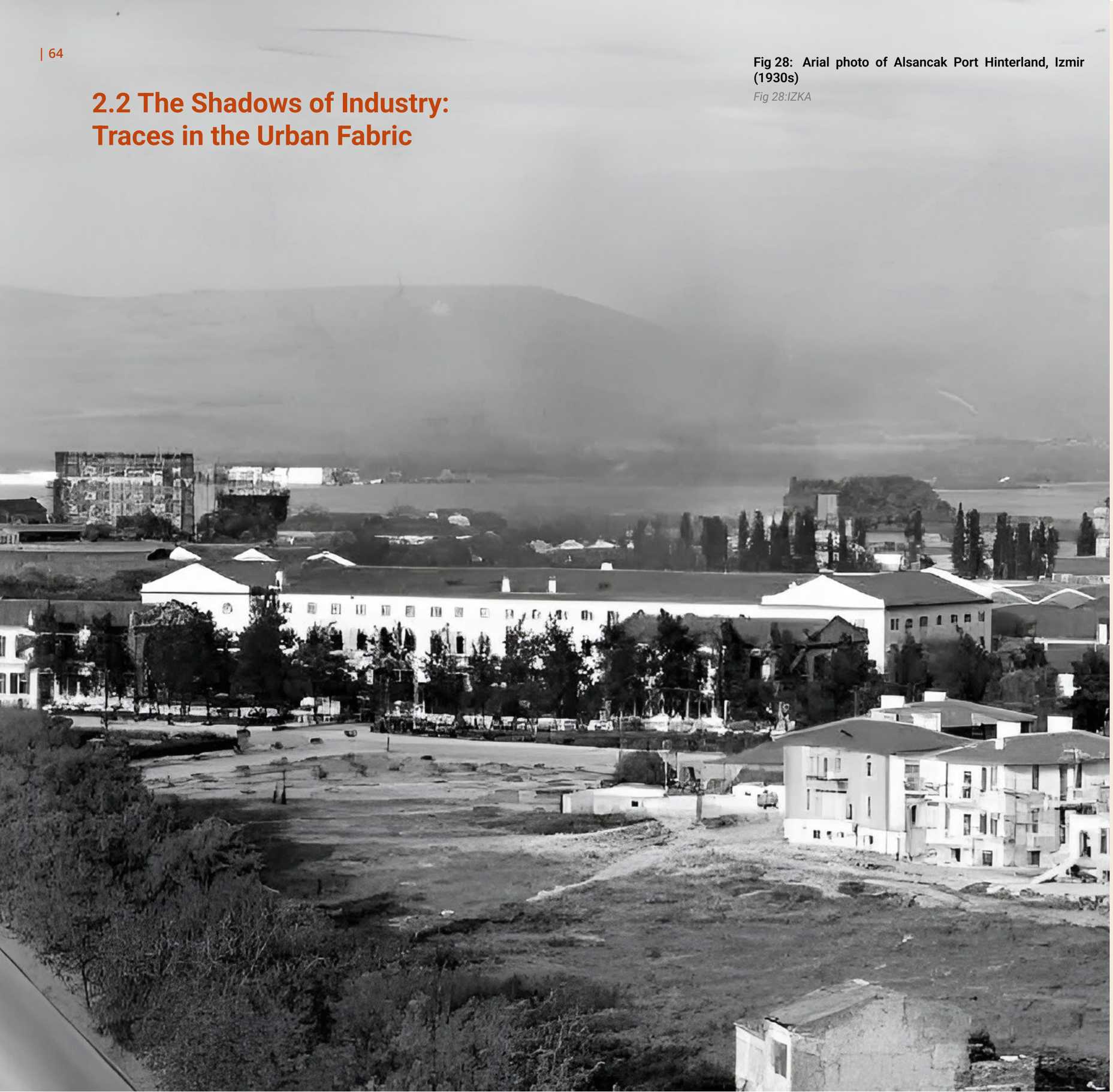


Fig 28: Arial photo of Alsancak Port Hinterland, Izmir (1930s)

Fig 28:IZKA

Izmir's historical status as a trade hub is generally attributed to its geographical location. This has certainly made the city a center of attraction for capital investments in the post Industrial Revolution era. It is fair to say that the Sumerbank Basma Plant, which employed 600 people and gave the area its name (Basmane), and the Paper Mill built near Halkapınar Water Plant were the first steps towards industrialization in Izmir. Even though industrial products were shipped overseas, the conditions for domestic and foreign trade were different because the infrastructure was poor and inadequate and the Turkish entrepreneurs were not provided with the same privileges and adva tages the foreigners enjoyed under the 1838 Treaty of Balta Limani. These emergent conditions discriminated against Muslim businesses preventing them from accumulating capital and giving foreign investors a clear advantage in undertaking high-risk industrial investments that required large capital outlays. Accordingly, unable to keep up with their big foreign competitors, Turkish entrepreneurs were forced out of business.

On the other hand, when British and French investors enhanced the transport infrastructure in Izmir, the Alsancak (Punta) Compound, which was the starting point of Turkey's first railway between Izmir and Aydın, the Port area and its Hinterland became a new industrial hub filled with factory buildings and storage areas. At the end of this rapid expansion, Izmir became one of the most modern Ottoman cities that kicked off the industrialization movement in the Empire in the 19th century. Undoubtedly,

the Izmir–Aydın railway line triggered the industrial development of the port city of Izmir. Investors picked the area (what is known today as the Hinterland of the Port Zone) as a hub and built large industrial structures there beginning with the second half of the 18th century. This area constitutes today the heart of the city's industrial heritage that emerged. The railroad played a key role in the proliferation of industry in rural areas because it was the primary means of transporting agricultural products (such as olives, cotton, tobacco, figs, and grapes in the semi-processed or unprocessed form) grown in Izmir's rich, fertile plains to the production and storage facilities, and the seaports. Given the stage of urban evolution at the time, we can say that industrial structures developed along certain axes. While the Dara a axis running from Punta (Alsancak) Train Station to Bayraklı stands out with its concentration in the food industry, the Basmane Railroad Terminal and Halkapınar Water Plant axis stands out with its concentration in the tannery industry and the oil mills.

With their far reaching influence even in rural areas, industrial structures continued to develop in the early years of the Republic. Marked by the overarching dynamics of the new Republic, industrial production played a key role in the development of the city during the reconsruction period that followed the Turkish War of Independence. Production and trade, however,suffered when foreign merchants and entrepreneurs had to leave Izmir at the end of the War of Independence. Unfortunately, Turkish entrepreneurs were not equipped to make up for the difference, not in numbers nor in financial means. A key strategic initiative taken to overcome this decline in economic output was the first Economic Congress of 1923 held in Izmir. Following the Congress, Turkish entrepreneurs replaced the merchants and entrepreneurs that had to leave Turkey, and the transportation infrastructure such as railroads, ports, trams and public utilities including water, electricity and Coal-Gas were purchased from the foreign companies and nationalized by the Republic of Turkey. The establishment of Izmir Association of Industry helped accelerate the rapid development of a well-planned industry.

The establishment of the Association marked the start of the Second Industrial Revolution for Izmir in the early Republican Period. During that period, major enterprises and compounds were founded (e.g.Sark Sanayi 1924, Izmir Pamuk Mensucat 1932, Kula Mensucat 1933, Izmir Yun Mensucat 1935, Çimentas 1950 and Sumerbank Basma Sanayi 1953). The Hinterland of the Port Zone constitutes the heart of the Industrial Heritage of Izmir. It is ascribed aspecial significance because the said facilities are located there and they should be preserved as cultural heritage sites. Currently registered as cultural assets, these plants comprise the said major enterprises and compounds. Those major industrial investment areas lost their original functionality during the period

Fig 29: Mustafa Kemal Ataturk in the Sumerbank factory opening (1930s)

Fig 29:https://markut.net/sayi-4/sumerbank-fabrika-yatirim-ekonomi-tasarim/

of de-industrialization. While early production structures such as the Coal-Gas Plant (1859), Halkapınar Railroad Maintenance and Repair Shops (1865), Bomonti–Nektar Breweries (1912), Tile Factory (circa pre-1918), and Power Pant (1928) stand out as the hallmark of the pre-Republican Era, numerous other factories and plants built during the early years of the Republic Xare considered national landmarks and pioneers of the national economy. They are the standard bearers that bore witness to the birth and growth of the young Republic. While most of the production structures, which are part of the industrial heritage, are registered and preserved, a few of them have been repurposed and put into urban use.

The industrialization Process in Izmir

To define the industrialization process in Izmir, it is first necessary to examine the changes in the city's commercial, agricultural, demographic, institutional, and transportation activities throughout history. Izmir's need for industrialization began in the 18th century with the development of trade through the initiatives of European merchants. The necessity for mass production and processing of traded goods, along with the inadequacy of traditional production methods, led to industrialization in the 19th century. The industrialization history of Izmir is discussed in two main periods: the Ottoman era and the Republican era.

Due to its coastal location and the fertile plains of the Aegean Region, Izmir has had the potential for development throughout history. However, the city center of Izmir remained a town until the late 16th century. Although it was established at the intersection of important transportation routes, it did not receive the necessary attention due to its distance from the administrative center of the Ottoman Empire. During the Ottoman period, the industry in Izmir can be examined in two parts: the factors that prepared the city for industrialization before the 19th century and the industrialization efforts throughout the 19th century.

However, these efforts did not have as significant an impact on the city as the developments that took place during the Republican period. With the end of World War I and the Turkish War of Independence, a new era began for the city, which gained its independence. In the early years of the Republic, Izmir had lost its former vitality and appeared in a ruined state after the war. In 1923, the city had only 10 factories (Gursoy, 1993, p. 165). Turkish capital owners, who wanted to evaluate the industrial experience Izmir had gained during the 19th century, came together to take advantage of the incentives and opportunities of the new era and established the Izmir Industrial Union. Founded in 1927, this union was organized to find solutions to the problems of the industry. However, in the first ten years following the declaration of the Republic, the number of factories established in Izmir remained quite low. Most of the factories were in the textile sector, and only a few operated in the food industry (Barbaros, 1999, p. 22). By 1933, the number of factories had increased to 129 (Gursoy, 1993, p. 165). Some of the important textile factories from this period include Sark Sanayi (1924), Izmir Pamuk Mensucat (1932), Kula Mensucat (1933), and Izmir Yun Mensucat (1935). During the 1950-1960 period, with the establishment of infrastructure facilities, factories such as Çimentas (1950), Ta Sanayi in the textile sector (1952), Sumerbank Basma Sanayi (1953), DYO in the paint industry (1953), Bayraklı Boya (1957), Betontas (1955), Metas (1956), and Etitas (1957) were established. Meanwhile, the Alaybey Shipyard began operations in 1952 (Izmir Provincial Yearbook, 1973, p. 524).

Fig 30: Alsancak Railway Facility, Izmir (1860s)

Fig 30:https://www.facebook.com/photo/?fbd=1029061717255322&set=a.137533429741493

Applying advanced production techniques and construction methods has started determining the architectural features of industrial buildings throughout the 20th century. In the first quarter of the 20th century, as in the late 19th century, some older materials and forms were still used in industrial buildings along with the new ones. At the same time, the widespread use of reinforced concrete, along with the development of prestressed and prefabricated building components that are still in use today, became common. Starting from the early years of the Republic, industrial complexes were built that proposed both work and living environments under a single facility, addressing workers' accommodation concerns, and educational needs, and improving productivity while further enhancing social life. The industrialization efforts during the Republican period were conducted according to five-year development plans. Just like in the rest of the country, Izmir's industry was influenced by World War II and the subsequent economic crises. Thus, the course of development of Izmir's industry, along five axes, was a continuation of that earlier established in the 19th century. The area formerly called Dara acı was behind the port and extended from Bayraklı towards Alia a and from Basmane towards Pınarbası and Kemalpasa. Industrial zones were created where infrastructure was deemed suitable along these axes, thus determining the modern shape of the city.

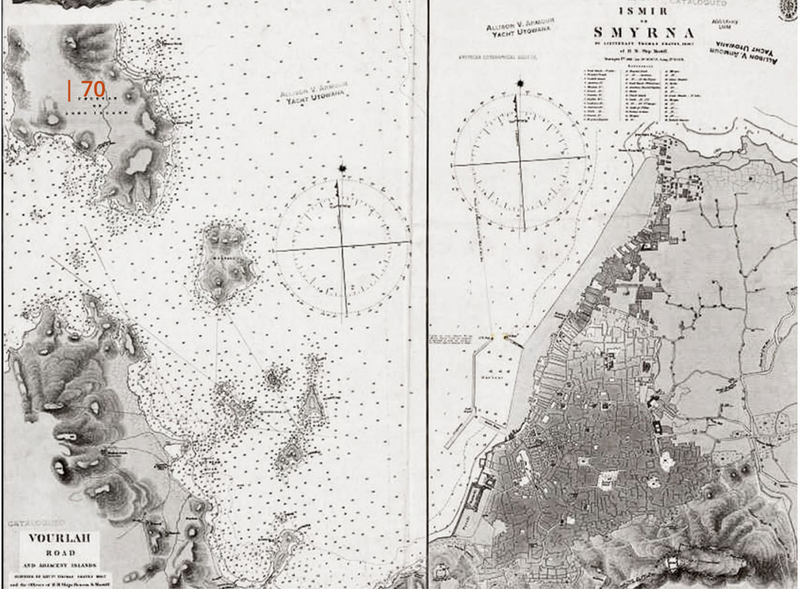


Fig 31: Lieutenant Thomas Graves, H.M.S. Beacon & Mastiff, 1836-7.

Fig 31: Ports in the Gulf of Symrna, 1844

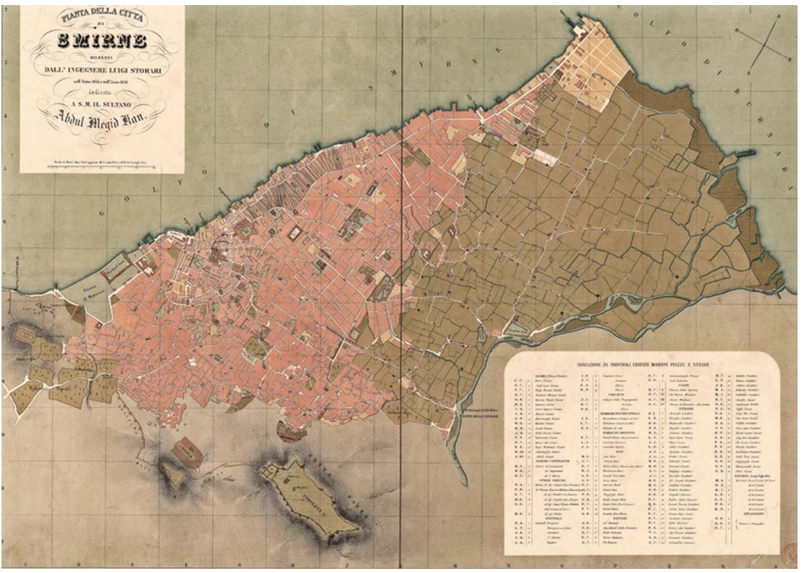


Fig 32:http://gpoulimenos.info/tr/kaynaklar/haritalar

Fig 32: Map of Smyrna, Produced by Luigi Storari, 1850

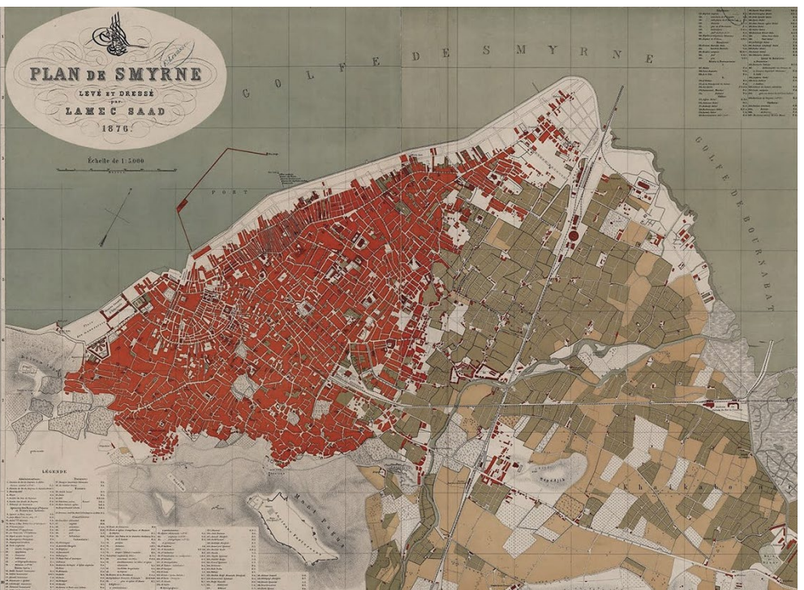


Fig 33: Map of Smyrna, Produced by Lamec Saad, 1876

Fig 33:https://www.levantineheritage.com/emiliano-bugatti-interview.html

From 19th Century and to Early 20th Century

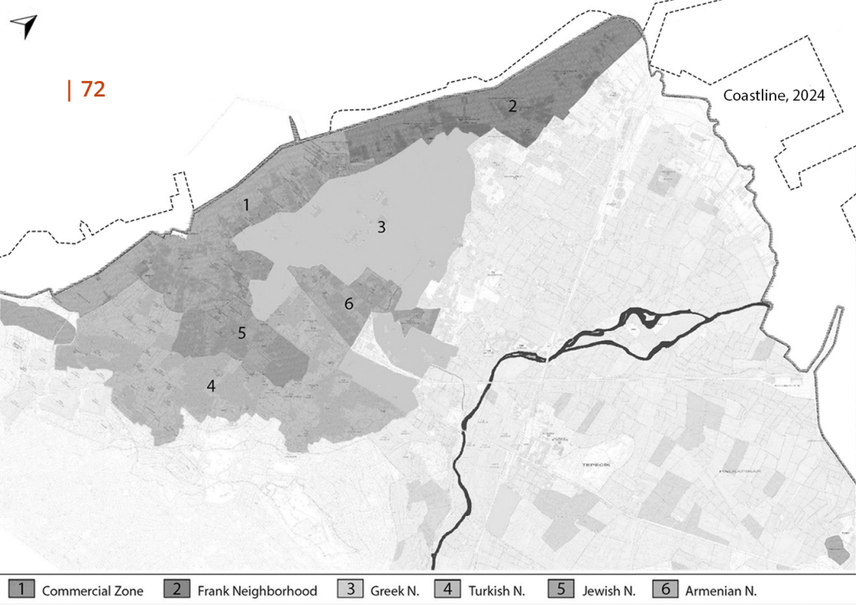
The development of the Izmir Port Hinterland Area has been influenced by the Pasaport port and railway activities, evolving alongside these developments. Therefore, it is necessary to first discuss the historical development of the port.

The construction of the Izmir Pasaport Port began to be considered in the 1860s. The proposal by the Marseille-based Dussaud Brothers was accepted, and the construction of the port started in 1867. The port's construction involved the building of all necessary roads, the expansion of the southern breakwater, the construction of new customs and related public buildings, and the necessary works to protect the city of Izmir from the flooding of the Meles stream.

With the establishment of the Punta (Alsancak) train station, the Alsancak district became a new center within the city, while Dara acı emerged as a new industrial settlement next to this center. Around the Pasaport port, hotels, port-related institutions, customs buildings, and large caravanserais were built, and residential areas developed in rings centered around the port. As the city continued to develop around the port, a railway line was laid along the Kordon, operating at certain times and during the night, to ensure the flow of commercial goods from the Punta station to the port. Later, a tramway was also introduced on this railway line. On the other hand, factories increased around the Punta station, and workers' housing was built. Thus, a residential settlement from Pasaport port to Alsancak was developed (Say, 1941, p. 55). At the end of the 19th century, the site of the current Alsancak Stadium was home to a football and sports field known as the Panionik Stadium, alongside a Jewish cemetery (Atay, 1978, p. 92). In 1895, during the mayoralty of Esref Pasa, a horse-drawn tramway line was laid in Dara acı (Izmir City Guide, 1941, p. 187). This 1500-meter line, which extended from Alsancak station to Halkapınar, was completed in 1900 (Atay, 1978). Up until the 20th century, Dara acı did not experience significant urban development before its transformation into an industrial area.

To the east of Alsancak station, the gas factory, warehouses, wheat silos, and olive oil factories were located. These production and storage buildings, concentrated around Sehitler Street, were accompanied by a small number of residences to the northwest and southeast of the street (Karada , 2000, p. 52). The eastern coast of the Gulf, except for a small pier providing maritime transportation between Bornova and Izmir, remained empty.

The foreign capital influx and developments in trade and industry throughout the 19th century in Izmir also caused changes in the urban space of Dara acı. In the 20th century, as the hinterland of Pasaport port, Dara acı initially developed as a storage area and later saw industrialization activities (Suel, 1977, p. 156). Census records from 1913-1915 indicate that Dara acı housed six mills, a cement factory operating in the ceramics industry, two leather factories, two olive oil and cotton oil factories, and a soap factory (Barbaros, 1995, p. 98-100). A 1920 report titled "Survey of Some Social Conditions in Smyrna" mentions European companies establishing factories behind Punta Station, where machines could be easily accommodated in large, well-lit, and ventilated spaces. A cotton weaving factory and flour mills in this area were equipped with modern machinery (Candemir, 2000, p. 21).



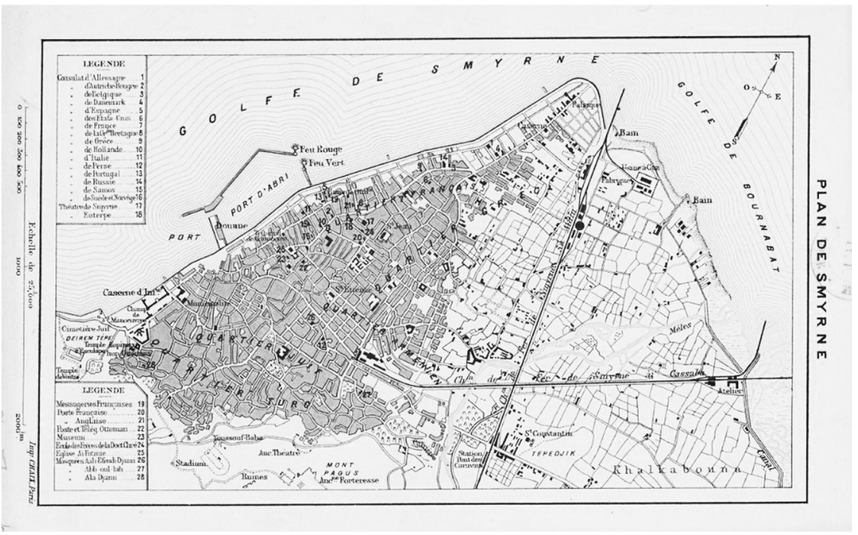


Fig 34: Lieutenant Thomas Graves, H.M.S. Beacon & Mastiff, 1836-7.

Fig 34: The Distribution of Neighborhoods in Izmir in the 19th Century (Map is obtained through the digitization of the Goad, Storari, and Saad Maps)

Fig 35: Plan of Smyrna, Georgiades Demetrius, 1885

Fig 35:http://gpoulimenos.info/tr/kaynaklar/haritalar

Fig 36: Map of Smyrna, 1888

Fig 36:https://www.levantineheritage.com/emiliano-bugatti-interview.html

From the Declaration of the Republic to late 20th Century

The first planning efforts for Izmir during the Republican era focused on addressing the issues caused by the neighborhoods that were destroyed in the great fire of 1922. The urban plan approved in 1925, prepared by Danger Prost, proposed the establishment of a new port at Alsancak and a brief rail connection linking the city's train stations. Additionally, the plan envisioned the construction of modern railway facilities in Halkapınar, which would be connected to the port via a new dedicated link. Given that the new port would cover a vast marshland along the coastline, it was anticipated that the land could be reclaimed and utilized for the construction of warehouses (Baran, 2003, p. 62). [24] The plan also suggested a radial layout for the southern part of Darağacı and the establishment of worker housing adjacent to the railway facilities. Due to the municipality's financial constraints, the implementation of the plan was delayed until 1935. The shallow swamp between Alsancak and Halkapınar was prepared for the construction of the new port. From the Punta station to Mersinli, encompassing the Darağacı area, the region was structured as an industrial zone. This planning effort laid the foundations for the current settlement structure of Alsancak, which had been reduced to a ruinous area after the 1922 fire (Karada , 2000, p. 51). During the tenure of Mayor Aziz Akyurek in 1928, the slaughterhouse facility, now known as the salhane, was established in Bayraklı. A monument was erected on Sehitler Street, and the municipality purchased the buildings of the Tuzakoğlu flour factory (currently the site of the former State Security Court) (Izmir Municipality, 1941, p. 189). During the period of Kazım Dirik's governorship (1924-1934), the Alsancak Stadium was constructed (Gursoy, 1993, p. 273). [25]

In 1928, a foreign-capitalized electric factory was established near the gasworks in the region, which began production that year. The activation of this factory led to the replacement of coal-gas by electricity in powering the machinery in factories and workshops, which had a positive impact on the industrialization process. The Sark Sanayi Factory, founded in 1924, became one of the largest industrial complexes of its time, with a significant export share. The location of these factories behind the port later encouraged other industrial institutions in various sectors to establish operations in the region. According to the 1933 census, among the major industrial establishments in the area, three textile factories (the woolen yarn factory—William Grift, Sark Sanayi Company—Sark Sanayi Kumpanyası AS, and the worsted factory—Çolakzade Halı Kumpanyası), two flour mills (belonging to Izmir Municipality and Filibeli Hacı Suleyman Mahdumları), and one pasta factory (belonging to Tikvesli Ahmet Hamdi) were recorded. In 1936, the Gomel Oil Factory (currently Ba Oils) was established south of the Sark Sanayi Factory (Gursoy, 1993, p. 167-265).

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[24] Baran, T. A. (2003) Bir Kentin Yeniden Yapılanması Izmir:1923-1938, İstanbul: Arma Yayınları.

[25] Gursoy, M. (1993) Tarihi, Ekonomisi ve İnsanları ile Bizim Izmirimiz, Metis Yayıncılık, Izmir.

Fig 37: Map of Industrial Heritage Buildings in the Alsancak Port Hinterland

Fig 37:Produced by author

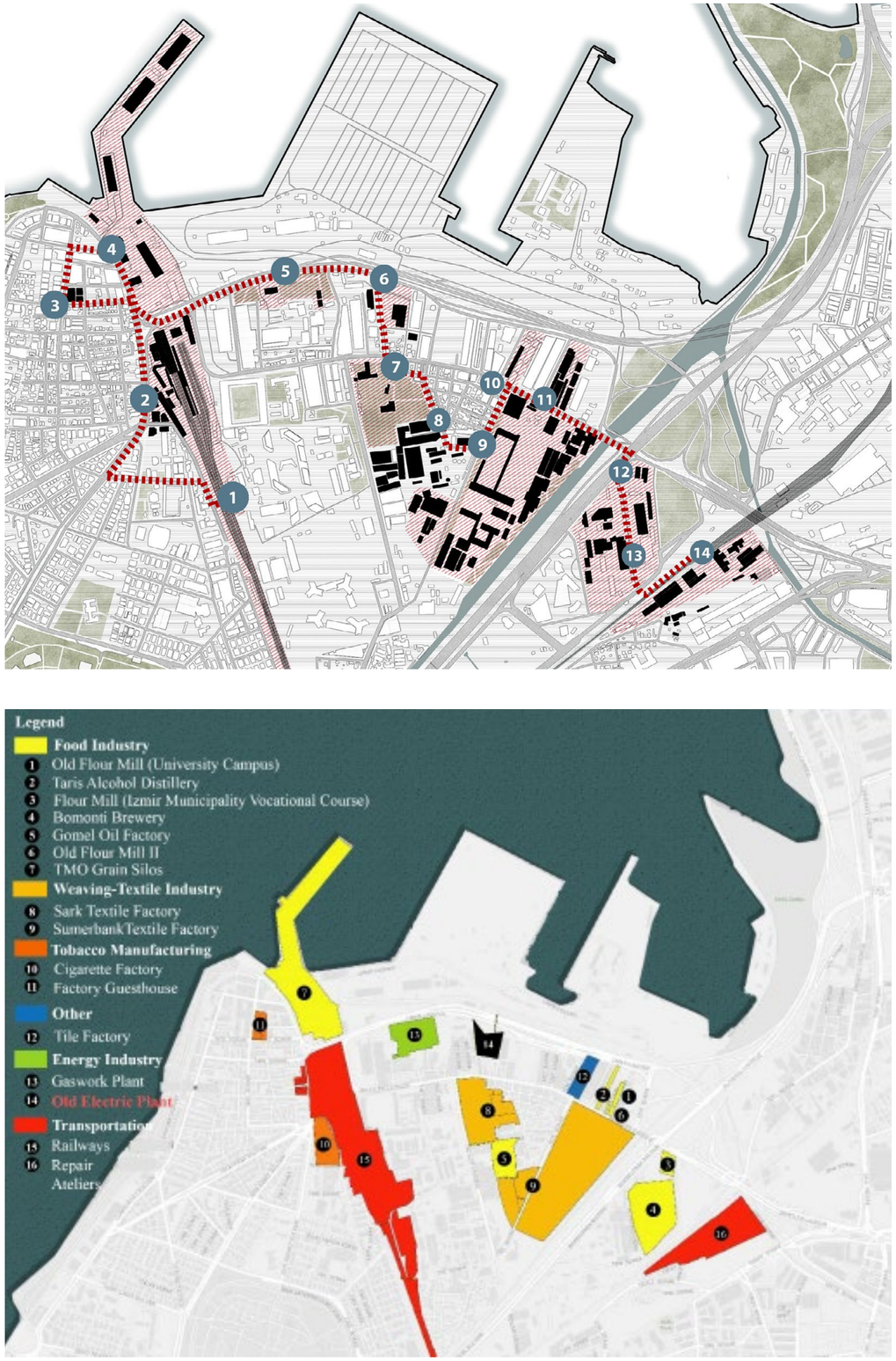
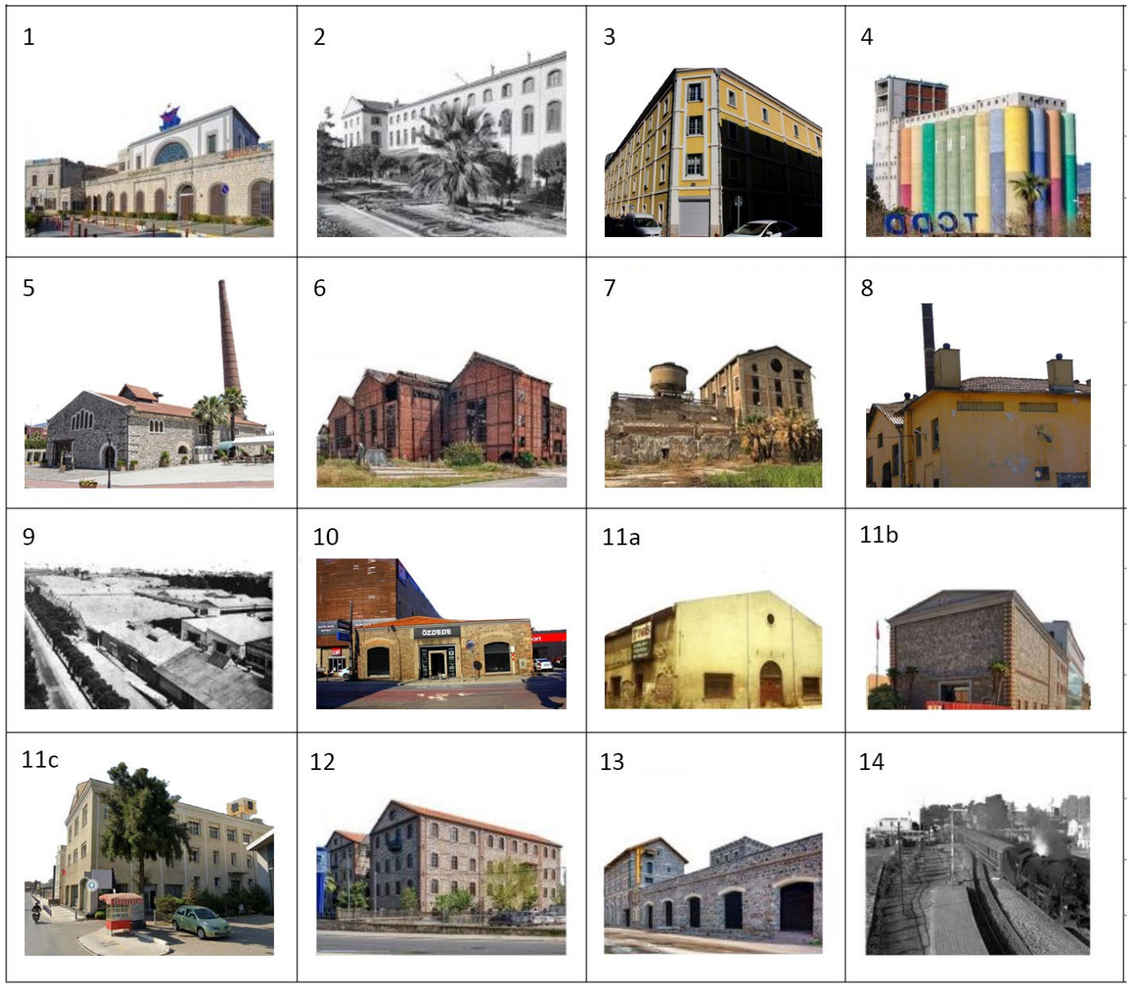


Fig 38: Projected Industrial Heritage Route in the Port Hinterland

Fig 38:Produced by author



Alsancak Railroad Compound

In the Hinterland of the Port Zone, the starting point of the Izmir–Aydın railway line, the Alsancak Railroad Compound, is located in Umurbey Neighborhood. Its fa ades face Ataturk Avenue in the west, Liman Avenue in the north, and Sehitler Avenue in the east. Covering an approximately 12-hectare layout area, the compound is accessible from all three avenues. The compound covers the Alsancak Railroad Terminal, plants, and TCDD (Turkish State Railways) offices and shops. Started as a British investment on October 30, 1858, following the grant of the privileges requested from the Ottoman Government on September 23, 1856, the compound was built in Punta because of its proximity to the port. Not affected by the congested traffic of the city center, it was largely populated by the non-Muslim community. Enclosing splendid buildings resembling those of a British town, and mixed units, the compound was commissioned on December 28, 1860. With time, the area around the compound rapidly developed to attract not only commercial but also residential demand as well as factories and warehouses. The Railroad Compound was purchased and nationalized on June 1, 1935, as resolved by the Economic Congress of Izmir, and the TCDD Directorate of Operations Region–2 was established. [26]

While the architecture of the compound possess the characteristics of its time, it is an ostentatious and complex structure that incorporates many different units and serves several purposes with connections to different modes of transport. The first clock tower of Izmir arises inside the passenger waiting area of the Alsancak junction of the Buca commuter train line added to the Izmir–Aydın railway axis. It is located in the southeast of the compound. [27]

However, an archive review on the history of the Alsancak Railroad Compound revealed that the structures in the compound were concentrated in three areas. In Area–1, there were eight structures consisting of the terminal building, TCDD Operations Region–3, and other facilities such as a hospital, public toilet, telegraph office, dormitory, lodging, and residential units. In the second area, there were ten structures consisting of the Technicians' Office, Printing House, and other facilities such as cafeteria, water tower, steam depot, and archive, way depot, two warehouses, and lodging building. In the third area, there were five structures consisting of the ESHOT Customers Department Technical Supervision Office, TCDD Healthcare Service Clinics, TCDD lodging units, and a residential unit. [28]

[26] Ekizo lu, G. (2012). Problems Involved in Preserving Railroad Compounds as Industrial Heritage Landmarks: Example—Railroad Compounds on the Izmir–Aydın Line (Unpublished Master's Thesis). Izmir: Dokuz Eylul University, Graduate School of Natural and Applied Sciences.
[27] 8. Bilsel, C. (2000). Large-Scale Urban Projects and Metamorphosis of Urban Space in Izmir in the Second Half of the 19th Century, Ege Journal of Architecture, (36), 34–37
[28] R.O.T. Ministry of Culture and Tourism, Izmir RCC–1, (Date of Access: December 2019 – January 2020)

Fig 39: Alsancak Railway Compound

Fig 39: IZKA

Fig 40: Alsancak Railway Compound Administrative Building

Fig 40: IZKA

Izmir Gasworks

The Old Coal-Gas Plant is situated on Liman Avenue in Konak, Umurbey Neighborhood. It is built on a 23,250-square-meter plot. Earning a fame as an iconic symbol of Izmir in time, the Coal-Gas Plant was repurposed in 2009 after a long period of disuse, becoming another win for the city. It is a rare example of 19th century architecture in the industrial world. Although the idea of illuminating the City using Coal-Gas was first entertained by the French investor Andre Marchais, the project was shelved after his death. Then, the British journalist A. Edwards applied for a license to build a Coal-Gas plant and he was given the green light on November 1, 1859. He was given the franchise to build and operate the plant for 40 years.

The location of the plant had to be the windiest spot in the City to avoid the accumulation of coal dust at the premises. And the Alsancak Daragaci location fit that requirement. Because of political reasons and lengthy correspondence with foreign countries, the ground breaking for the project did not happen until 1862 and the plant became operational in 1867. The plant equipment required for the construction was procured from both the United Kingdom and Germany. The gas distribution network first reached the urban neighborhoods where foreigners live and then extended to Karsıyaka, Bornova and the areas where Turks live. [29] The streets were illuminated for the first time on June 25, 1864, and by 1902, the entire city had been switched to gas lighting. ith the introduction of electricity for illumination in 1904, however, the gas use was limited to the kitchens mostly. During the period 1907 through 1913, the plant was modernized and upgraded with the addition of gas coolers, gas lift and force pumps. [30]. Despite the ongoing war in the country and the increase in electricity use/demand, the plant continued to operate during the Republican Era. With the abolition of capitulations, the title was transferred to the Municipality on September 15, 1935, and the plant was recommissioned after minor repairs. In 1940, the plant had a comprehensive repair and maintenance, and various functional modifications continued and the plant remained operational until 1994. However, because it had completed its economic life, the plant was shut down on October 24, 1994, under the resolution passed by the Izmir Metropolitan Municipal Council. In 1995, some of the equipment was loaned to the Rahmi Ko Industry Museum in Istanbul to be exhibited. By the end of the 1990s, the facility was used for the repair and storage of municipal buses.

[29] Beyru, R. (2011). The City of Izmir in the 19th century (First Ed.). Istanbul: Literatur Publications.
[30] Kayın, E. (2013). Inside The Architecture of Industrial Structures; Izmir City Encyclopedia: Architecture (Vol. 1) 378–412, Izmir: Izmir Metropolitan Municipality Publications.

Fig 41: Alsancak Coal-Gas Plant, 1910s
Fig 41: IZKA

Fig 42: Alsancak Coal-Gas Plant
Fig 42: IZKA

Sark Textile Complex

Situated in the Hinterland of the Port Zone on Sehitler Avenue in Umurbey Neighborhood, which is populated by warehouses and residential houses, the Sark Sanayi Compound covers 42,516.4 square meters. Founded in 1892 as a flour mill named “Couzinery-Pittaco,” the Sark Sanayi Compound was switched to yarn production in 1893 by Couzinery and the plant produced only yarn for two years. In 1895, the plant was converted into a textile manufacturing business by Ellie Guiffray and Charles Verbeke partners, where a Brussels-based company, “Compagnie Industrielle du Levant,” produced woven textile and hosiery. Owners of one of the oldest business establishments of the Aegean Region, the Verbeke Family moved the head office of the company to Izmir in 1924 and changed the name of the company to “Sark Sanayi Kumpanyası.” Although Sark Sanayi provided significant contributions to the Turkish economy in the 1950s, the international liberalization policies of the 1960s and the company’s inability to compete in an overcrowded domestic market greatly undermined its prospects. Even though the company was able to maintain good trade relations with Germany by modernizing its yarn production facilities, it could not adapt itself to the new technologies and decided to liquidate the business in 1976 by selling the equipment in the factory. The compound was sold to the Koru family in the same year, but its operations were halted. The facility remained idle until 1994, when the owners weighed new prospects because most structures in the compound had already been torn down. Options included a hotel, residential compound, shopping mall, or entertainment park, but nothing happened. A fire razed through the plant some years later, leaving almost nothing behind but the land. Only the Water Tower and the Landscape of the original Plant have survived. The palm trees, mulberries, and eucalyptus trees left on the land were registered as a Designated Landmark by the incumbent RCC under a resolution passed in 1998. [31] Sark Sanayi stretches over a vast terrain, and incorporates authentic production components that bear the hallmark of the Ottoman Era and the Early Republican Period. The compound is surrounded by stone walls along its Sehitler Avenue border and row housing and stone walls on the Is iler Avenue front. While plants from the relatively modern times and the businesses they feed line up along the eastern border, the west side is laden with office buildings and shops that face the street. Except for the Engine House and Water Tower left on the terrain, all other structures were razed to the ground as this can be witnessed from their marks left on the ground. While most of its equipment, which belonged to the compound that was shut down and transferred a long time ago, was dismantled and sold, other items simply rotted and were scrapped. [32]

[31] Esen, G. (2019). Deindustrialization and Neoliberal Urbanization: Hinterland of Izmir Port, Alsancak (Unpublished Master’s Thesis). Izmir: Izmir Institute of Technology, Institute of Engineering and Natural Sciences.
[32] Topal, H. (2019). Cumhuriyetin Tanı ı Olan Bir Endustri Mirasının Kısa Oykusu: Izmir Alsancak Elektrik Fabrikası, Ege Mimarlık, (103), 60-63.

Fig 43: Sark Sanayi Textile Complex

Fig 43: IZKA

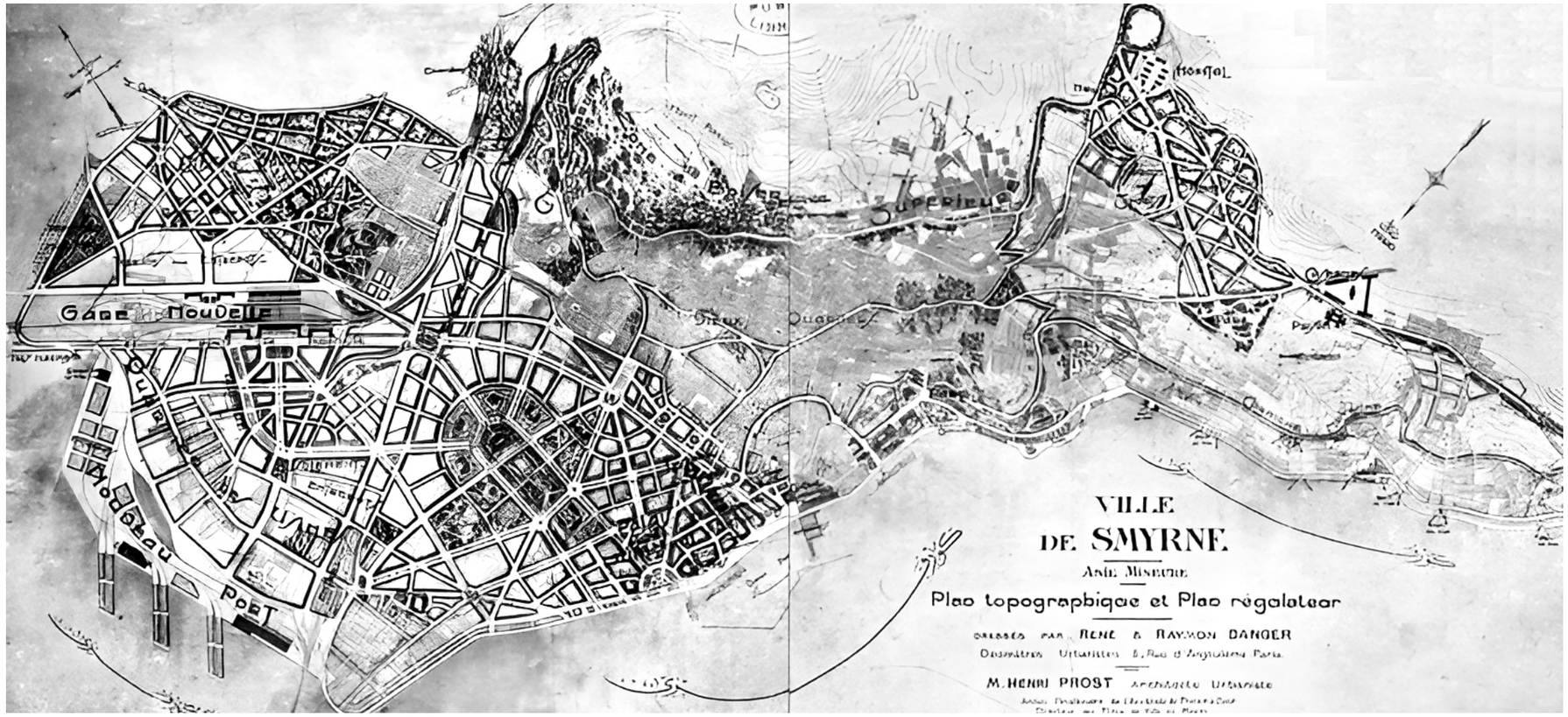
Fig 44: Sark Sanayi Textile Complex

Fig 44: IZKA

Re-evaluation of the Hinterland

Fig 45: Danger-Prost Plan, 1924

Fig 45:L'Architecture 40, no. 4 (1927): 124.



Comprehensive urban planning for Izmir was first undertaken during the term of Mayor Beh et Uz (1931-1941). These planning efforts did not include proposals specific to Dara acı but instead focused on decisions affecting the city as a whole. The swamp area between Meles and Bornova streams was drained, and eucalyptus trees were planted. In 1937, the name Dara acı was changed to Umurbey to better reflect Turkish identity. A review of the 1939 plan reveals that construction in the Dara acı region had developed around Sehitler Street, while the back portions of the area remained sparsely populated, with few buildings. At the southern tip of the triangular area, residential developments began to emerge, in proximity to the Kahramanlar district (Izmir City Plan, 1939). The settlement established by the municipality by selling affordable housing to the poor marks the first buildings of the Aegean District (Kaya, Zengel, 2002, p. 76). [33] The 1939 zoning report indicated that Alsancak was developing as an industrial area towards Halkapınar (Izmir Municipality, 1939, p. 8). As a result, the industrial area was reorganized and expanded, and in the 1940s, a new industrial zone was planned between Halkapınar and Tepecik (Karada , 2000, p. 55).

One of the most significant planning efforts of the 20th century was carried out by Le Corbusier. However, his work was not intended for direct implementation but served as a general framework aimed at guiding local authorities and urban planning professionals. In 1939, the municipality sought to establish a planning commission with Le Corbusier as an advisor. Due to World War II, Le Corbusier could only visit Izmir in 1948 and stayed for a mere week. During his time in the city, he produced two conceptual proposals. One of these focused on the port area, where he proposed a new business district and the concept of 'green industrial areas' by suggesting the creation of 1000 hectares of green space both within the city and its surroundings. In the Alsancak area, he proposed a new port, which did not yet exist, and an associated 'green industrial site.' Areas for administrative functions were also identified, including an "Industrial Site" in Alsancak and a "Management Site" in Konak (IBB, 2001, p. 11).

In the plan for Izmir prepared by the architect, a new port (located at the current site of the Alsancak port) was proposed. Along with this, the industrial zone was to be reorganized, and an industrial site was suggested for the Bayraklı direction. The 'Green Industrial Site' was one of Le Corbusier's primary proposals for the Izmir plan. He emphasized that the location of the proposed industrial zone, due to its proximity to the port and rail connections, was highly suitable for the model's implementation. However, although the model required an independent industrial settlement organized linearly around a threefold transportation system (road, railway, and waterway), in the Izmir plan, Le Corbusier proposed that the new industrial site be positioned immediately adjacent to the urban area, continuing from the existing industrial zone. The industrial site's connection to the port and the main railway lines was envisioned to be facilitated by a railway line extending along

[33] Kaya ., Zengel R. (2002), "Izmir'de bir Marjinal Mekan: Çingene Mahallesi", Arredemento Mimarlık, sayı:100+47, s.74-79.

the coast (Bayraktar, 1992, p. 324).

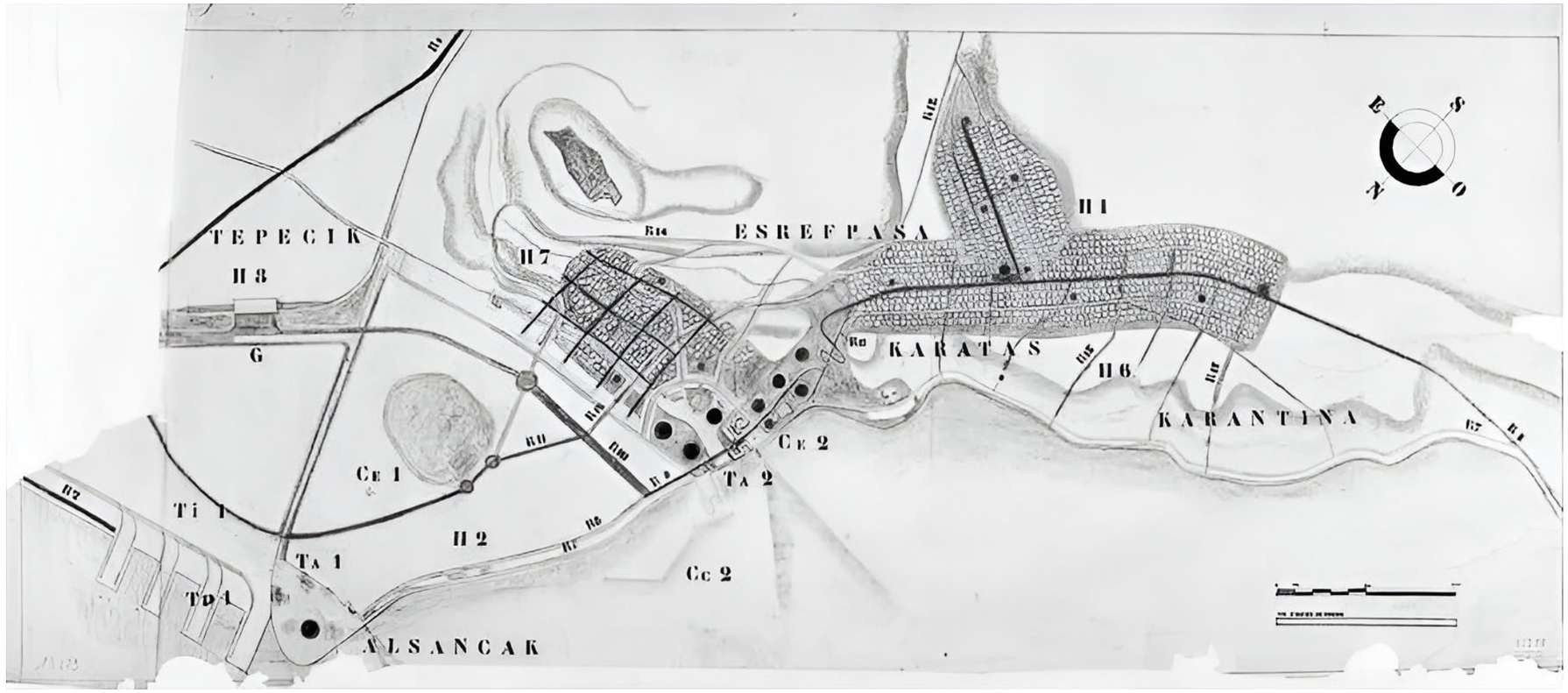
The transformations in the Izmir port hinterland area were primarily industrial until the 1950s. Specifically, in 1954, the encouragement of private sector investments in industry and the implementation of the Marshall Plan led to the establishment of new industrial facilities in the region. Between 1950 and 1960, various factories, such as Sumerbank, as well as cooperatives for the processing of apricots, figs, and grapes, and factories for olive oil, cologne, and vinegar, were located around Sehitler Street and the southern part of the area.

In 1953, the Izmir city plan, prepared by Kemal Ahmet Aru, Emin Canpolat, and Gunduz Ozdes, was approved and put into effect. This plan expedited the transformation of Alsancak into a major commercial port, planned the preservation of industrial facilities to the south of the port, and facilitated the expansion of this area towards Halkapınar and Salhane. This planning effort formed the basis of the modern urban structure of Izmir (Bilsel, 1999, p. 17). [34] As per the plan, the coastline from Alsancak to Halkapınar, Salhane, and Turan developed as an industrial area (Karada , 2000, p. 58).

The Pasaport port maintained its significance throughout the 20th century. However, the port facilities eventually became insufficient. Consequently, a new port was constructed in Alsancak, which was naturally protected from wave and wind effects. The Alsancak port, with its modern facilities, was opened in 1959. Following the establishment of Alsancak Port, the hinterland area was once again designated as a storage zone in the 1950s (Suel, 1977, p. 156). Multi-story warehouse buildings were constructed, primarily for storing tobacco and other products from the Aegean region.

Fig 46: Danger-Prost Plan, 1924

Fig 46:https://www.fondationlecorbusier.fr/en/work-architecture/projects-urban-planning-Izmir-turkey-1948/



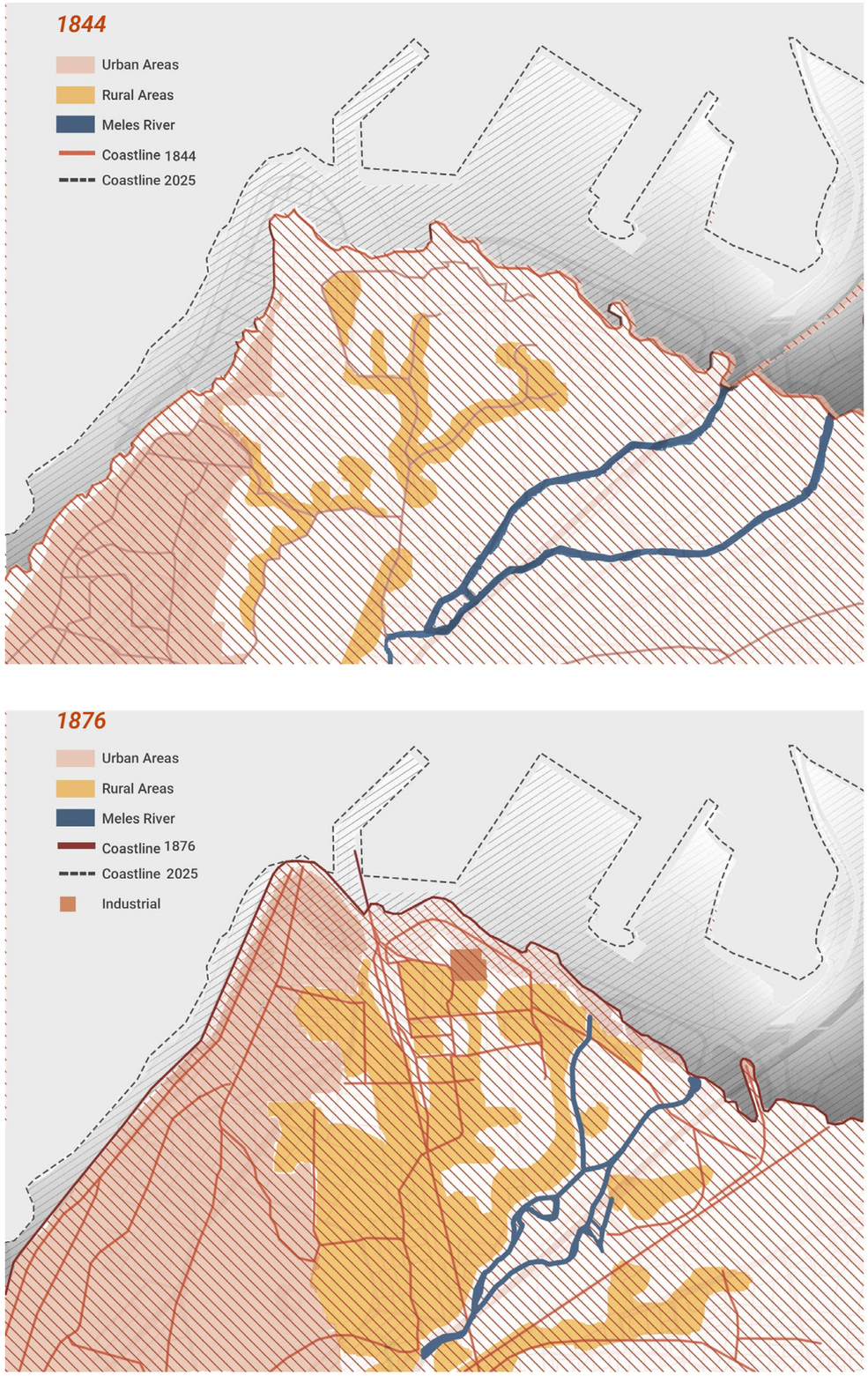
In the 1989 revision zoning plan (1/25000), renewal decisions were taken for the port hinterland area. In line with these decisions, the area was designated for central business district use. Industrial complexes, such as Sumerbank and Taris, were identified as institutions to continue their operations, and it was suggested that these areas be restructured once their economic lifespan had expired. However, the revision plan's preservation provisions were relatively weak. From the 1990s onward, structures for management and service functions began to emerge in the Izmir port hinterland, and the area saw developments involving a variety of new usage types. By the 2000s, the Arkas Group, operating in the maritime sector, constructed its management and office center, which served as a prestige project. Educational buildings belonging to the D.E.U. were added, along with the Yasar University structure. In 1998, Izmir's No. 1 Cultural and Natural Heritage Protection Committee (KTVKK) placed 53 buildings, including industrial complexes, factories, and warehouses in the port hinterland, under protection. The preservation decision for the area, where skyscrapers were planned in the central business district, faced opposition from district and metropolitan municipality officials. From the 1990s onward, the region, which saw an increase in land value, gained attention from local governments and capital owners. The functional transformation of the area began, with initial investments and projects being driven by the private sector.

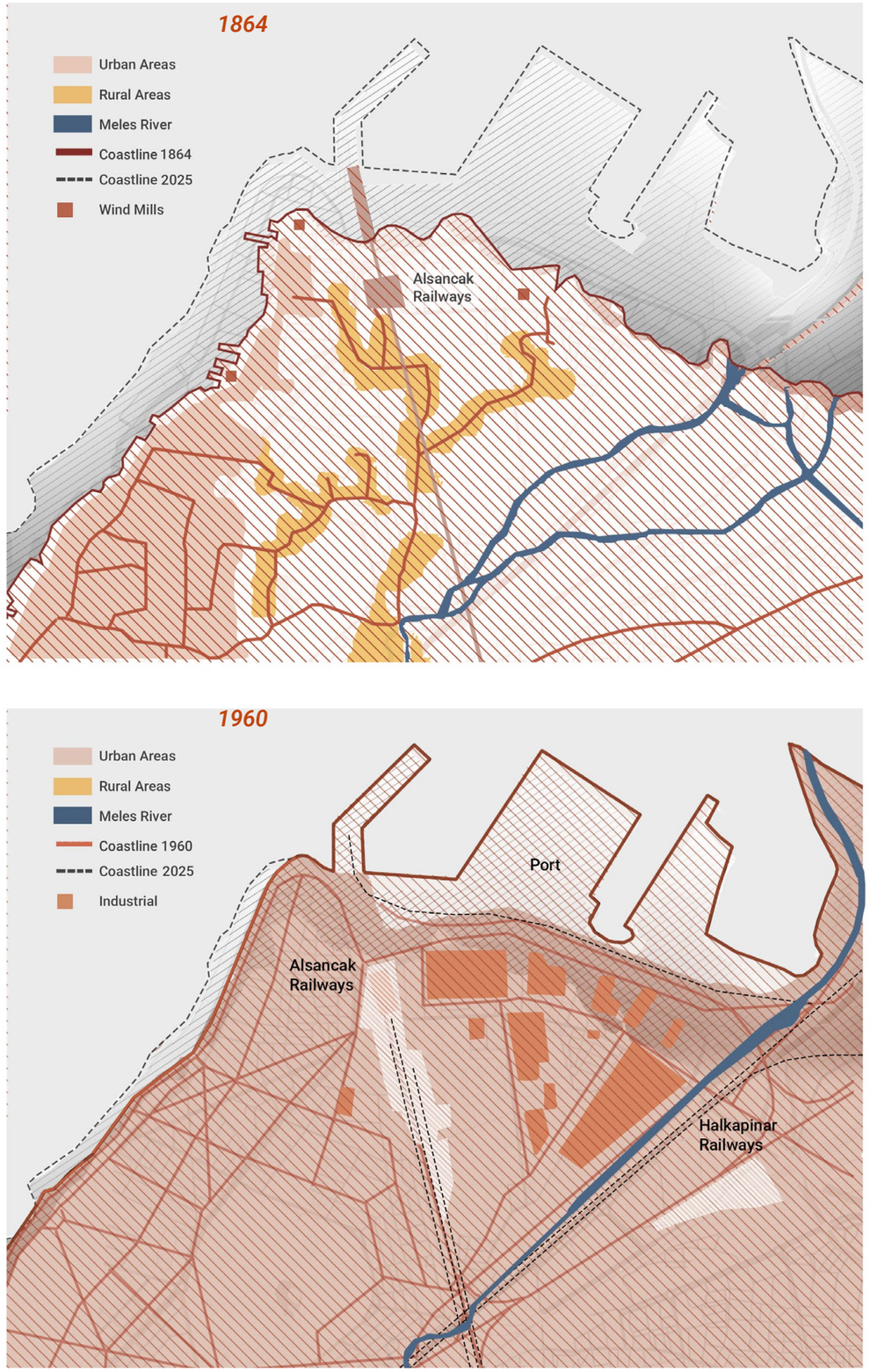
In the urban planning efforts for Izmir, the importance and potential of the port hinterland region were recognized too late. Initially, the area was planned as a space for the expansion of the city center, surrounded by substandard buildings, but it wasn't until the end of the 20th century that substantial implementation occurred.

[34] Bilsel, C. (1999), "Le Corbusier'in Izmir Nazım Planı ve 'Yesil Endustri Sitesi' Onerisi", Ege Mimarlık, sayı:33, s.13-17.

Fig 47: Alsancak Port Hinterland Development

Fig 47:Drawn by author





Regeneration Initiatives at the Beginning of the 21st Century

Although the current potential of the Izmir Port Hinterland area was determined through the 1989 revision plan, the targeted renewal and transformation have not been realized. The Izmir Metropolitan Municipality decided to designate the area, extending towards Karsıyaka and continuing through Turan, as the new city center. To achieve this, an international ideas and design competition was organized in 2001 for the Izmir Port area, including the hinterland. This international competition marked the first concrete step taken towards the region's redevelopment. In 2003, utilizing the ideas proposed in the competition, a new city center master plan was developed for the area between Turan and Alsancak Port.

In 2001, the Izmir Metropolitan Municipality organized an international competition for the urban design of the Alsancak-Turan region, which was defined as a port area. This competition aimed to revitalize a region that had been home to industrial facilities since the late 19th century, was adjacent to the Izmir port, and served as the central point for urban integration. The primary goal of the competition was to find preliminary ideas for the architectural features and urban development of the Izmir Port Area, with the intention of enhancing the city's contemporary image and creating a new city center within the port area (BB, 2001).

The competition brief specified that the relocation of the port's cargo terminal, which had been anticipated since 1962, would primarily transform the hinterland area by allowing the port to exclusively serve passenger ships. The transformation of the region was expected to proceed in parallel with this change. The competition brief also noted that large public parcels in the area would be suitable for proposed uses and investments, and thus, the proposals were expected to be developed in this context. Furthermore, the brief recommended that the preservation and adaptive reuse of early Republican-era industrial buildings and industrial sites, such as the Gas Factory, Electric Factories, Sumerbank Factory, Sark Sanayi, and the Alsancak Railway Station building, which are registered as cultural heritage, be considered (Cultural and Natural Heritage Law).

The competition was won by the German architect Jochen Brandi, and the objectives, targets, and data outlined in the competition brief were discussed in the context of urban design and transformation. In the competition's objectives, urban design was primarily viewed as a visual and spatial task, with the social dimension somewhat overlooked. As a result, the designs presented by the participants tended to be disconnected from the context and more formulaic.

The competition brief emphasized that the historical values of the city should be taken into account when designing the new city center, referred to as "Third Izmir." These historical values were expected to be reflected in the competition proposals through the following ele-

Fig 48: City Plan of Joshen Brandi (Ege Mimarlık, 2001, s.62)

Fig 48:Izmir Chamber of Architects, 2011,edited by author

ments: emphasizing the old geographical layout of the city, preserving the characteristics introduced by the 19th century, establishing historical connections in the names of newly designed spaces, reassigning new functions to historic buildings in the area, and incorporating historical elements into the presentations. The competition projects highlighted the Tepekule Mound in Bayraklı and the Meles River, focusing on topographical interventions and shifting functions. It was observed that historic buildings in the port hinterland area were assigned recreational and cultural functions. Some proposals suggested educational uses, while others included theme parks designed within a comprehensive preservation approach (Kayın, 2002, pp.57-58).

Izmir 'New City Center' Project

The Izmir New City Center Master Plan was developed by the Izmir Metropolitan Municipality Port Area Planning Group, drawing from the ideas generated in the urban design competition. This plan was approved by the Izmir Metropolitan Municipality Council on July 7, 2003, with decision number 05/82. The planning area covers regions along the coastline, including Turan Mahallesi to the north, the Alsancak Port Hinterland Area to the south, and Salhane to the east.

For the Port Hinterland Area, the section extending to Ege Mahallesi has been designated for commercial, tourism, and cultural

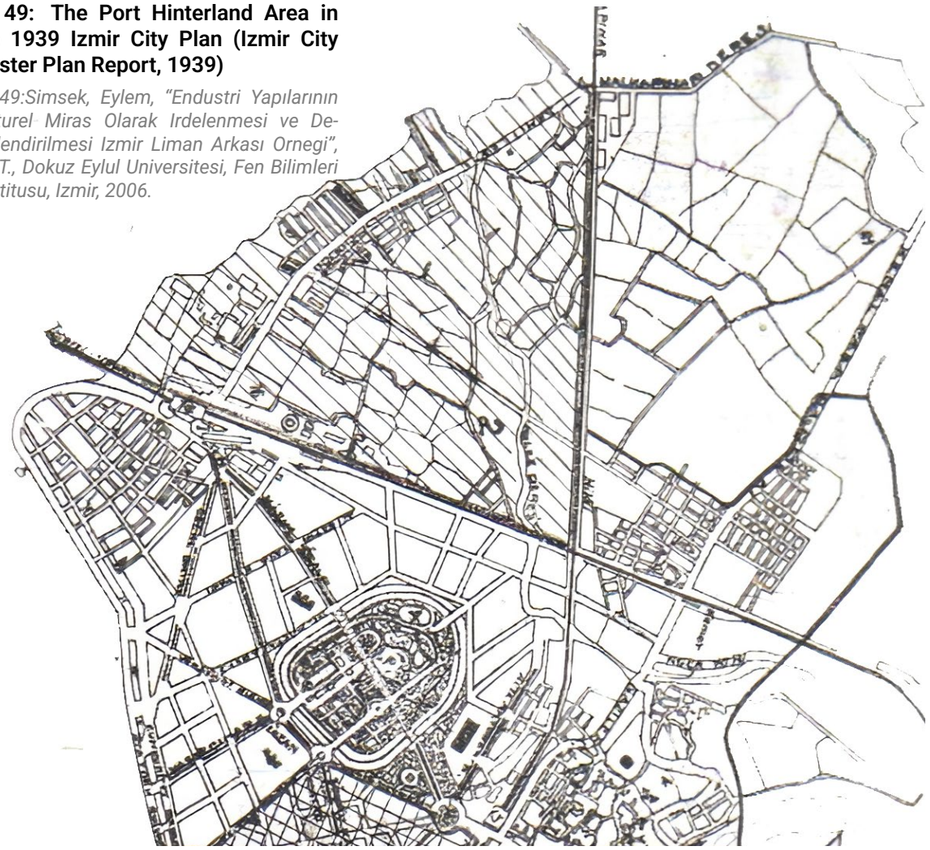


Fig 49: The Port Hinterland Area in the 1939 Izmir City Plan (Izmir City Master Plan Report, 1939)

Fig 49:Simsek, Eylem, "Endustri Yapılarının Kulturel Miras Olarak Irdelenmesi ve Degerlendirilmesi Izmir Liman Arkası Ornegi", Y.L.T., Dokuz Eylul Universitesi, Fen Bilimleri Enstitusu, Izmir, 2006.

use. The area between Sehitler Caddesi, Liman Caddesi, and Meles Stream has been proposed as a special project area for culture and tourism, where the historical industrial buildings will be repurposed for tourism and commercial functions. No new construction is suggested in these special project areas, and a minimum parcel size has been set for the formation of larger plots. s iler Caddesi has been planned as a pedestrian-prioritized street suitable for vehicle traffic, with small commercial establishments that could have residential units on upper floors.

The Sumerbank factory site has been designated for use as an industrial archaeology museum, as well as for conference, cultural, and educational functions. Areas outside the registered buildings have been allocated as special project areas. South of Sehitler Caddesi, and bounded by Alsancak station and the railway to the west and 1525 Street to the east, the area extending to Ege Mahallesi has been designated for commercial, tourism, and cultural facilities.

The existing residential areas in the region have been designated for tourism and housing, encouraging the renewal of these areas through small-scale tourism operations and fostering the preservation of registered buildings. Alsancak Stadium and Dokuz Eylul University (DEU) educational structures have been preserved. Given the presence of registered buildings in the Port Hinterland area, it has been proposed that the existing vehicle roads, as well as s iler Caddesi, which will undergo a pedestrian-prioritized road design, be taken into account. Additionally, it is planned to widen 1525 Street to create a collector road connecting the area with Kulturpark, passing through Ege Mahallesi.

The plan aims to create a contemporary city center around the port while preserving Izmir's historical identity. Proposals have been made to ensure continuity between the old city center and the planned new center, particularly through the Port Hinterland area. Some areas have been allocated for tourism, commerce, and the preservation of industrial heritage structures for cultural uses, which is expected to accelerate social change in the region.

The plan's emphasis on tourism, culture, and commercial uses for the region is generally positive. However, the plan does not specify what solutions would be applied to potential problems that may arise during implementation. The relationships between the special project areas, such as the registered factory landscapes, and their surrounding environments have not been defined. While the public ownership of the registered factory landscapes is considered an advantage, the suggestions for these areas were made without consulting the various public institutions that own the lands. As stated in the report, no large-scale spatial interventions were proposed for the historical buildings and their surroundings, and care was taken to ensure their preservation (Yeni Kent Merkezi Nazım mar Planı Raporu, 2003, pp.13-14).

2.3 The Hinterland of the Port: A Hidden Urban World

The Izmir Port Hinterland Area is situated in a triangular expanse defined by Alsancak Port to the north, Alsancak Train Station along with its facilities and railway to the west, and Meles Stream and highways to the east. The western extension of the area is Alsancak, and the district has developed as a central business district, now expanding towards the Port Hinterland. To the south-west of the Kahramanlar district, residential structures coexist with business centers, the Tekel Tobacco Factory, and TCDD (Turkish State Railways) facilities. Highways passing through this area link the historical city center to Karsıyaka and Bornova. In the past, stiklal Avenue was the most used for this purpose; presently, however, Liman Avenue holds heavy vehicle traffic. s iler Street and 1525th Street make the link between the Port Hinterland Area and the Kahramanlar district. The railway lines in the area can be distinguished in three separate zones: east of Alsancak train station, west of Halkapınar Station, and the port railway. Halkapınar Station has been refurbished as a station for light rail system, thus relieving the urban transport to a greater degree. The facilities that stretch along the northern coastline of the region make the Izmir Port of great importance, not only to the region but also to the national economy.

Generally, the Port Hinterland Area is used for residential, commercial, and industrial purposes. The residential ones are located between Sark Sanayi and Sumerbank Printing Factories, lying within the triangle formed by the Meles Stream and the railway (the area in the Ege District), and some are also located opposite the DEU (Dokuz Eylull University) faculty buildings. The residences are generally low-quality buildings occupied by low-income groups. The commercial activities in the area are among small-scale shop owners. Around the residential facilities, shops such as grocery stores, restaurants, bakeries, and barbers satisfy local needs, as do repair shops and workshops, especially along Sehitler Street.

In addition, there are large inactive industrial sites, such as the Electricity Factory, Gas Factory, Sark Sanayi Factory, and Sumerbank Printing Factory, along with agricultural product-processing industries. These include factories for processing cologne, vinegar, figs, cottonseed oil, olive oil, animal feed, and wine oils, associated with Taris. Also present in the region are printing sector enterprises.

Three types of buildings have survived as architectural heritage making out the historical usage diversity of the Izmir Port Hinterland Area: residential buildings, small shops and storage buildings with an incipient concession towards commercial activities, and factory buildings and industrial complexes. The term “shop” is used to name small constructions consisting of a single space in which small-scale commercial activities take place, while large constructions designated for storage and sale are named warehouses. Alsancak Port construction has increased the usage of storage facilities concentrated between Sehitler Street and Liman Street.

Fig 50: The Alsancak Railways *Fig 50:IZKA*

In the area, two types of warehouse buildings are found. One type consists of two rows of warehouse buildings in traditional construction methods built in early industrial development. Some are still in use for storage while others are now called into service for repair workshops. The second consists of reinforced concrete buildings with either a shed or gable roof form, usually two to three stores. These warehouses are given out on rent to public institutions, private companies, and individuals.

The historical values in Izmir Port Hinterland Area, along with transport infrastructure and location, play a strategically significant role in shaping the spatial, economic, and social structure of the city. However, the region is affected by physical and environmental aging and socio-economic problems. The general properties in the building stock are aged and in poor condition. Historical buildings are conserved, yet many are abandoned and inoperative because of reaching the end of their economic lifespan.

The historic workshop and service buildings of TCDD are located east of the railway behind the Alsancak Train Station. Though these historic buildings are in the Port Hinterland Area, they are part of a wider TCDD facility, which encompasses the Alsancak Train Station, hospital, and other buildings that lie outside the borders of the area.The historical residential buildings at Port Hinterland Area lie between the Sark Sanayi Factory and the Sumerbank Printing Factory, and to the southwest between Liman Street and Sehitler Street. Generally, these houses are still used for the original function; however, they stand unoccupied due to social infrastructures which are lacking in the area. These houses are mostly single or two-story high and made with load-bearing brick systems. Depending on where they stand on the plot, the houses have either hipped or gable roofs. The facades are usually treated with cornices, window surrounds, and bargeboards, with some buildings having bay windows.

The historical commercial buildings in Izmir Port Hinterland Area consist of three shops and seven warehouses. The buildings are located along Sehitler Street and on the streets that cross it. The historical commercial buildings still continue their original functions. The historical warehouses are either used for storage or repair workshops, which are the common functions of warehouses in the area. These warehouses are mostly rectangular in plan and are built in one or two floors. The load-bearing system is generally made of brick with wooden truss roofs. The warehouse buildings on Sehitler Street maintain similar architectural treatment with facades accentuated with gable roof eaves, peak windows, and barge boards. The fa ade openings are enhanced through lintel or arch patterns and window surrounds.

Warehouse number one situated on the south parallel street to the south of Sehitler Street appears to be less elaborate compared to the rest. A major variable affecting the conservation and adaptive reuse of historical buildings in the urban transformation project is the ownership status of the properties.

Fig 51: Izmir Basmane Railway Compound, 1950s

Fig 51:https://kentstratejileri.com/2017/12/12/bastian-chlondun-Izmir-trenleri/

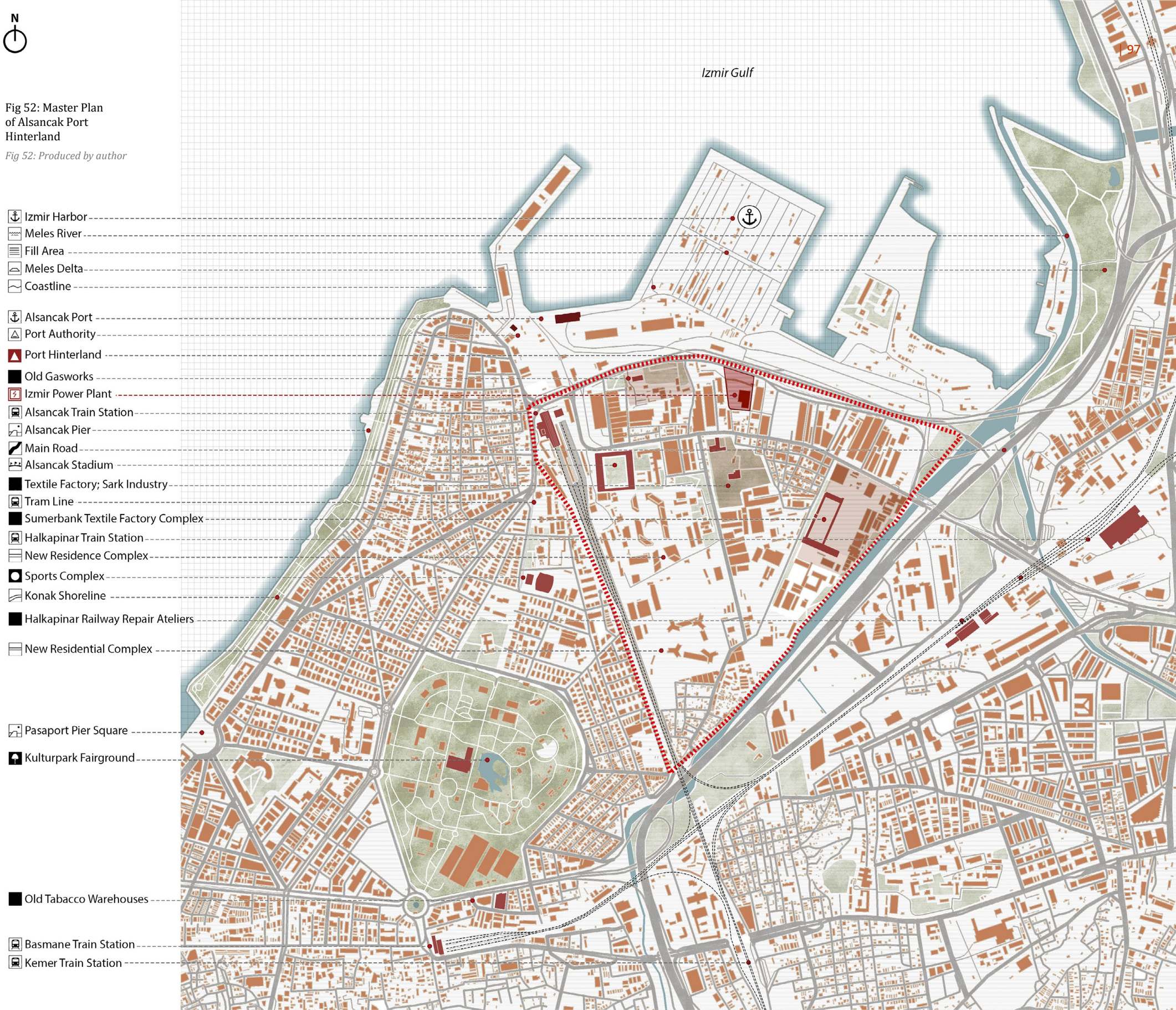
Alsancak is an inner city district in Izmir, which lies near the shore and the city's port. It is a cosmopolitan, lively neighborhood renowned for its cultural attractions, commercial facilities as well as institutions of education, and proximity to the Aegean seashore.

Alsancak Port Hinterland that constitutes the core base of the study is a triangler area located by the port of the city. It is a previously identified Daragaci neighborhood and close proximity to alsancak railway complex, with several industrial heritage buildings built in republic period of Turkiye.

Alsancak Port which has influenced the hinterland throughout history is one of the busiest ports of Turkiye, where containers, cargoes, and passenger ferries are primarily trafficked.The port is located in the city center of Izmir, just adjacent to the downtown area and proximate to it. The hinterland of the port extends to the surrounding industrial estates, urban settlements, and transportation facilities.

Fig 52: Master Plan of Alsancak Port Hinterland

Fig 52: Produced by author



The hinterland of the Alsancak Port includes:

- The Izmir Metropolitan Area: Major roads and infrastructure linking to the port, a focal point for shipping and logistics.

- Industrial Sites: The area consists of industrial and commercial regions relying on the port for the exportation and importation of goods, particularly in manufacturing, textile, and chemicals. These industrial areas can be evaluated in the two major categories. First, the industrial complexes developed in the early 20th century and currently in a state of disrepair. Second, is the industrial structures which are more small-scale and still in use.

- Transportation Networks: It is also supported by a highly advanced transport network made up of railway connections, motorways, and access to the city's public transport system. The region's most prominent railway interchanges are Alsancak Railway facility, Halkapinar railway facilities. The port is accessed by the Izmir-Karabaglar Road and other major roads. [35]

[35] https://kalkinmaguncesi.izka.org.tr/index.php/2021/08/23/Izmir-liman-arkasi-bolgesinin-dunu-bugunu-ve-gelecegi/

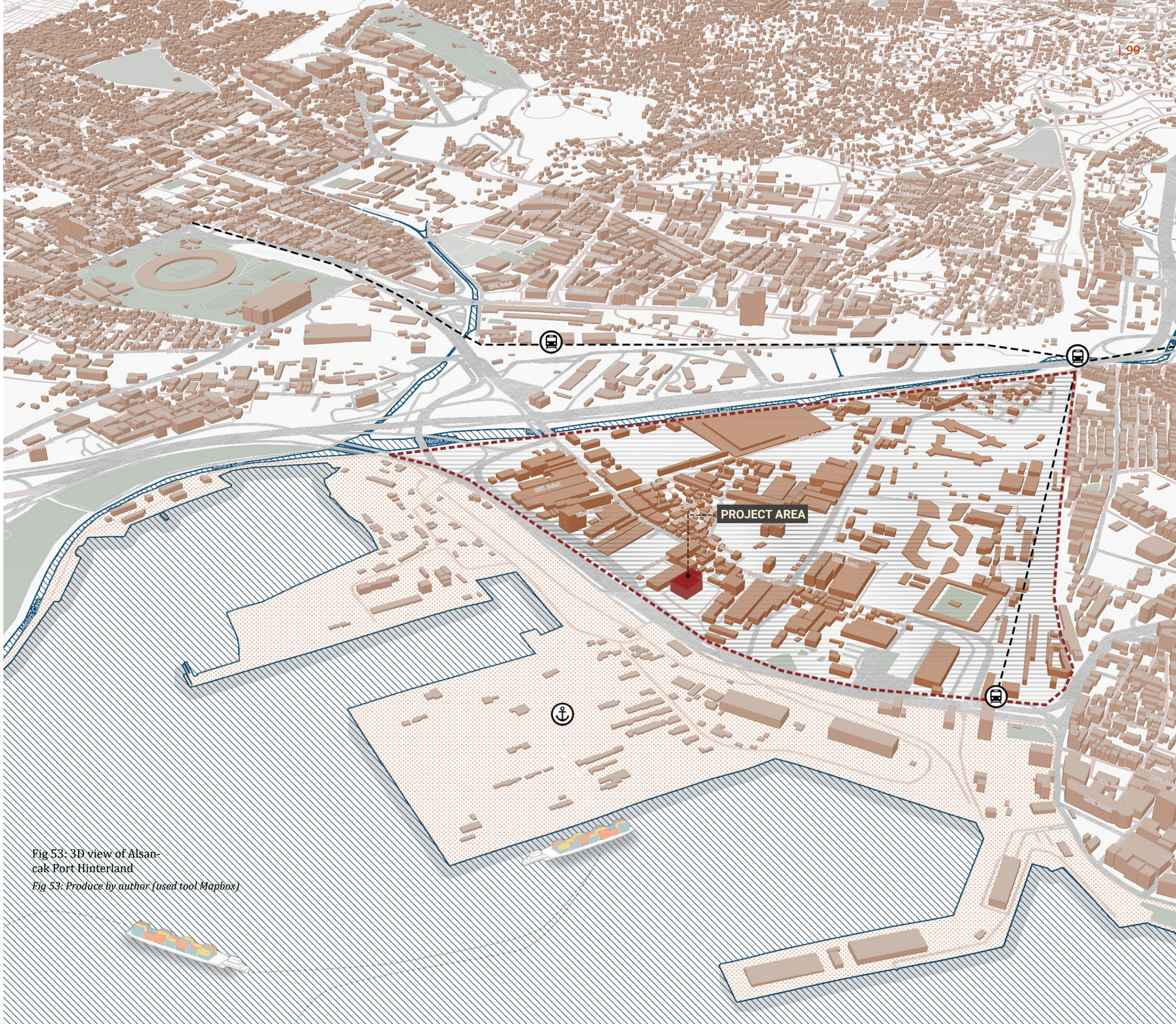
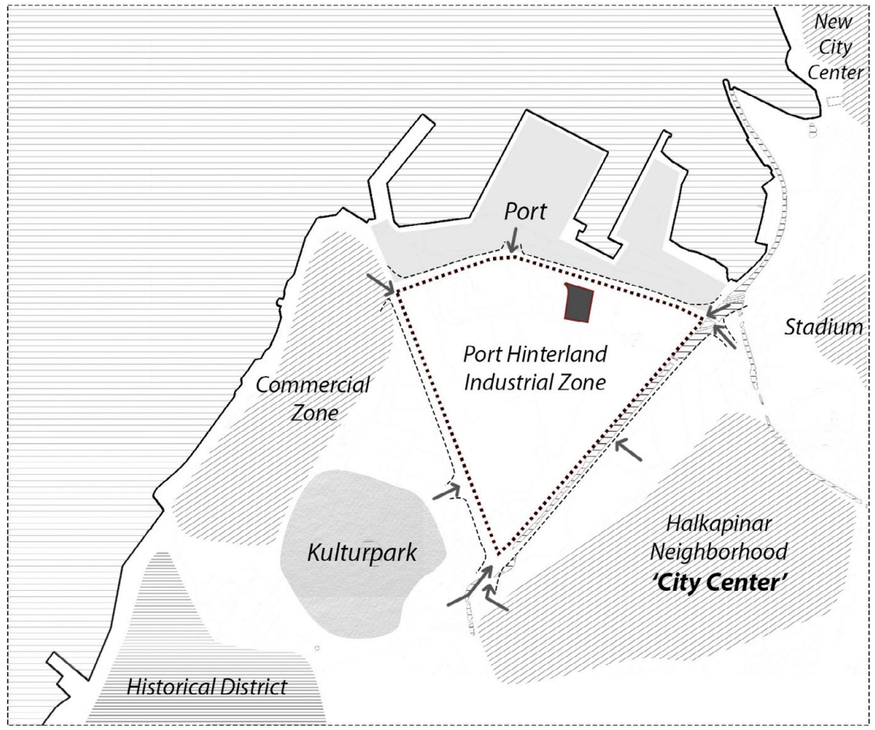


Fig 53: 3D view of Alsancak Port Hinterland

Fig 53: Produce by author (used tool Mapbox)

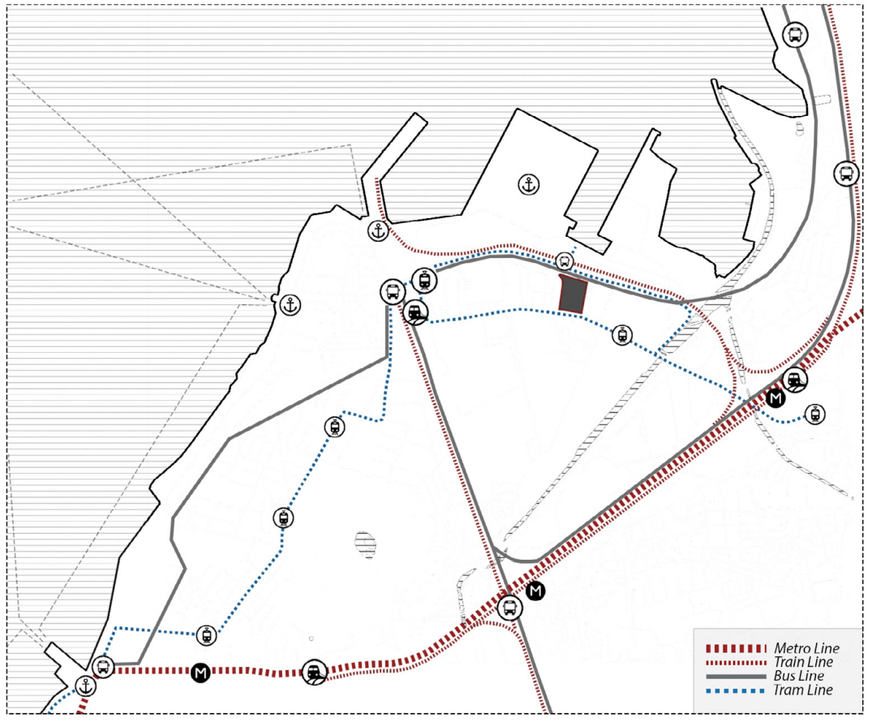
Fig 54: Analysis of the Alsancak Port Hinterland

Fig 54: Produce by author



Zoning

Green Area Use



Transportation Network

Industrial Heritage Buildings

Port hinterland has been a crucial focal point for years which encompasses the region situated between Liman Street and Sehitler Street, runs parallel to the Alsancak Port also known as Izmir harbor. However, the administrative definition extends beyond the commonly recognized boundaries used in daily discourse. According to the New Urban Center Zoning Plan report prepared in 2003 by the Izmir Municipality, the Port hinterland area is a triangular zone bordered to the north by Alsancak Port, to the west by Alsancak Railway Station and its facilities, and to the southeast by Meles Stream and Murselpasa Boulevard which is one of the main transportation axis in the area. [36]

The hinterland area analyzed and examined within the scope of the thesis is located in the Konak district, one of the 30 districts of the city of Izmir. Konak has a multi-layered structure due to its continuous history of settlement since the early periods of the city's establishment and houses many historical and important buildings. Historically, the district retained the identity of being the city center. Nowadays, the region where the cultural and commercial activities are intensive, and a considerable portion of the city's population resides, still has been preserving its status.

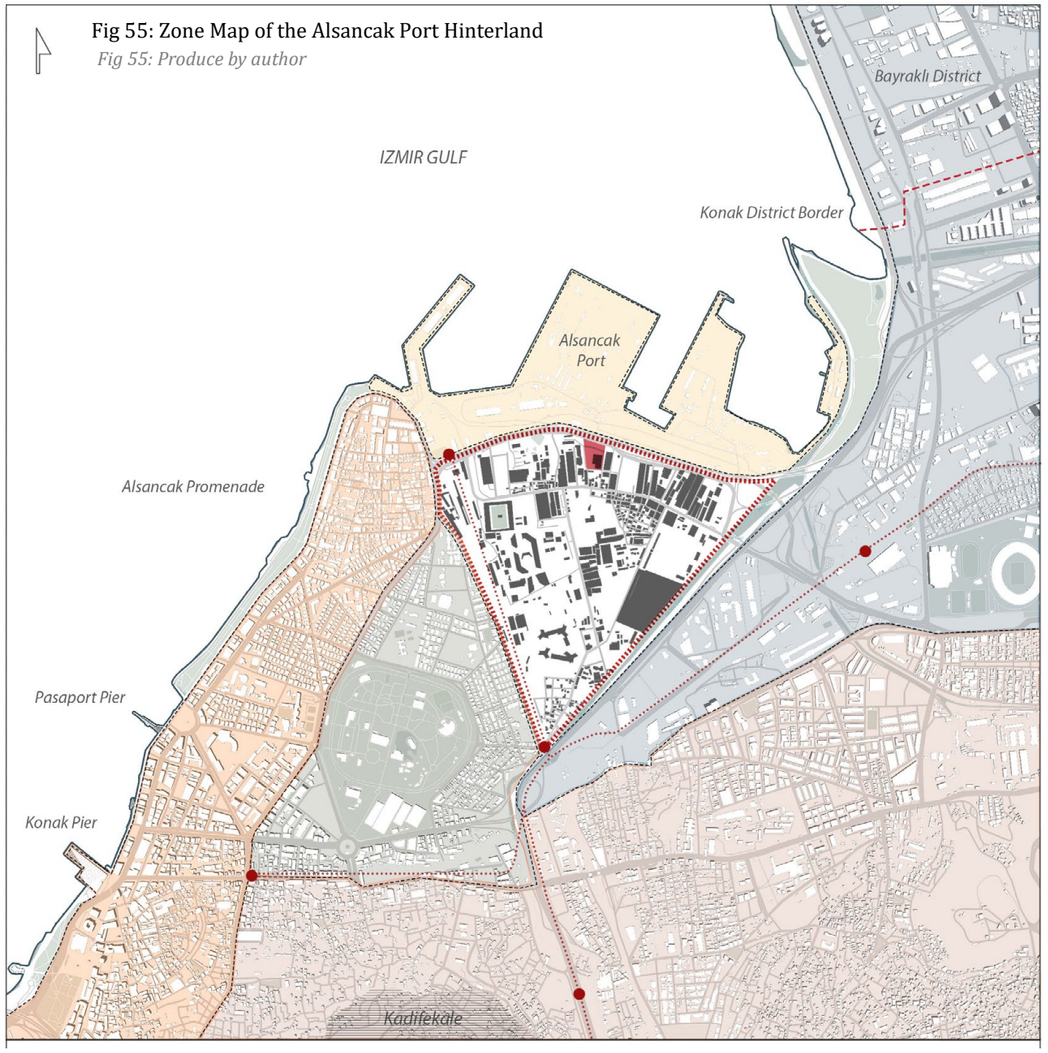
As the cadastral records of the Izmir Metropolitan Municipality states, there are currently 113 neighborhoods in the Konak district. The port hinterland area, whose name originates from Umur Bey, a Turkish military leader who captured the Izmir Port Castle in 1329 during the Byzantine Empire's rule, is located in the Umurbey neighborhood. [37]

The port hinterland area, which is considered an industrial heritage zone, is surrounded mainly by five different zones with specific characteristics. The first of these is the so-called Konak Promenade, located on the western part of this area, running parallel to Izmir Gulf. This coastal strip and its extension, joining gradually with the inland areas, is considered the historical district of this city. It hosts several significant historical buildings, including the ancient Smyrna Agora and Kadifekale, which developed during the Roman era and are regarded to be among the very first settlements of Izmir. Also various historical buildings built during the Ottoman period and followingly the Republic period can be still observed today within this zone. Today, Konak Promenade, which is home to intense commercial and cultural activities, has become a central point for maritime transportation, with the Konak Pier and Pasaport Pier serving as key hubs. [38]

The second zone surrounding the hinterland area is a cultural axis between the Konak Promenade and the railway lines of Alsancak. The most significant structure forming this area is the Kulturpark, an international exhibition complex built on an area of 420,000 m² that was devastated by the Great Fire of Izmir in 1922, and opened in 1936. Being one of the innovative projects of the Republican era, Kulturpark became a focal point for the city's cultural activities. This multifunctional complex, still in operation today, is located within a large circular parcel and includes cultural facilities such as theaters, exhibition halls, concert venues, and museums, as well as sports facilities like a running track, swimming pool, indoor sports hall, and tennis courts. With its expansive green spaces and recreational areas, Kulturpark also maintains its role as a major city park. [39]

Fig 55: Zone Map of the Alsancak Port Hinterland

Fig 55: Produce by author



Thirdly, another zone that could be marked out is the Izmir Port, known as Alsancak Port, forms the boundary between the Izmir gulf and the port hinterland area. The port, which is situated in the north side of the hinterland, was established by Ottoman Sultan Abdulaziz in 1875. It can be seen that the Alsancak Port has expanded

[36] Gungor, Sezin. (2022). Culture-Led Regeneration Potential and Problems of Industrial Heritage Buildings: Case of New City Center of Izmir, Dokuz Eylul Universitesi (Turkey), 30833330.
[37] https://www.konak.bel.tr/sayfa/gecmisten-bugune-konak

[38] Akyol Kuyumcuo lu, Duygu. (2019). Izmir-Konak il esi iinde Alsancak ve Konak meydanını kapsayan bir Mekansal Tanımlamada Kentsel Tasarım Strateji Onerisi Gelistirilmesi. Journal of International Social Research. 12. 521-532. 10.17719/jisr.2019.3845.
[39] Hazar, Dalya & Ozturk, Sevim & Ozkan, Pelin. (2021). Kentsel Belle in Musterek Mekânı: Kulturpark. 109.

through land reclamation over the years and grew gradually, thus it has reached its current condition today. Still maintaining its industrial identity, the port has been in operation for 149 years. According to the records of TCDD Alsancak Port, this facility complex has an area of 635.000 m² with 25 docks and has the potential to serve 25 ships simultaneously. [40] Today, this area continues to support both commercial and industrial activities and serves as a crucial point for cargo and cruise ships, significantly contributing to maritime transport. The concentration of industrial buildings in the hinterland area throughout history is a direct result of the opportunities created by the port. On the other hand, the historical electric power plant, when it was in operation, maintained a close relationship with the port. Its location next to the sea, connected by the highway that runs alongside, makes the physical and functional connections between this factory building and the port of significant importance for understanding its integration into the city. In addition to the first three zones mentioned above, the fourth zone is located on the land side, in the south-eastern edge of the hinterland area. It is considered as the residential area, forming the city center of the Konak district. Mainly, residential zones can be divided into two parts. First is concentrated in the perimeter of Kadifekale settlement which dates to the Roman era of the city, and shows more scattered as well as informal housing typology such as slum neighborhoods.[41] On the other hand, the other part which is divided by Murselpasa boulevard and Halkapinar Railway Station from the port hinterland has more intense and extensive characteristics and it can be seen that it has expanded through Buca and Bornova districts. This residential settlement also includes many service structures that support residential quarters, such as health and educational facilities. Moreover, it is connected to the fifth zone by Murselpasa boulevard and Ataturk Stadium, which is located in the east side of the port hinterland.

This last zone, within the boundaries of the Bayraklı district, was formed by the continuation of the coastal promenade of Izmir Bay. Several high-rise buildings have been built in this region. These buildings primarily consist of business centers and luxury residential complexes, and the area has a character defined by newer constructions, in contrast to the historic city center of Konak. The promenade in Bayraklı and its continuation stretches around the remaining part of the bay and connects to other neighborhoods in the northern part of the city, such as Karsiyaka and Bostanli. [42]

Alsancak port hinterland area is strategically situated close to many key points of the city center of Izmir. It is also in the very heart of major transportation routes in Izmir. In addition to the road connections linking the region to Bornova and Karsiyaka districts where a considerable number of inhabitants live, it also connects to important railway transportation hubs such as Halkapinar train station, Alsancak train station and Hilal train station. Also, due to its location immediately south of the port, the area has strong relationships with marine transportation including both passenger and cargo maritime transport routes. The Alsancak Port hinterland, formerly known as Daragac, is currently located within the borders of Umurbey Neighborhood. It's an old settlement where industry and residential buildings are intertwined, with a history dating back to the Republic Era and earlier. Before 1922, a considerable amount of Greek community was residing, and until the 1970s, it continued being an important industrial district of the city. Many factory complexes and warehouse structures from the past of Umurbey neighborhood stand today. Alongside industrial buildings, the area also contains worker housing that was constructed after the Great Izmir Fire, including single- or two-story homes. Additionally, some important structures that no longer exist but hold a significant place in the neighborhood's memory include the Alsancak Stadium, established in 1910, and the Faculty of Fine Arts of Dokuz Eylul University, founded in 1975. [43]

Some of these industrial heritage buildings in the area, such as factories and warehouses, have been repurposed for educational and artistic activities, while a significant portion has been left to deteriorate. The area is also a focal point of future urban transformation. In addition to Bayrakli, which is known as the new city center of Izmir, the area surrounding Alsancak Port Back and its vicinity is planned for redevelopment under a 1/5000-scale zoning plan approved in 2011. The new plan envisions a range of uses, including tourism, commerce, culture, arts, and education. In line with this, project initiatives involving mixed-use developments, such as residential, office, and shopping centers, have already begun to design in the area. Currently, luxury residential blocks are under construction along the southwestern line of the port hinterland, between the Hilal metro station and the Alsancak railway. These developments also pose a threat to the remaining industrial buildings, which have become obsolete and abandoned. The large number of structures from the industrial heritage still exist despite transformation held in the area. Due to this fact, Izmir Metropolitan Municipality has taken some steps towards the protection and contribution of heritage buildings. In relation to this, in 2009, the restoration of Izmir Gas Factory, located near Izmir Electric Factory in the west, was completed and opened under the name of Kultur Fabrikasi once again joining the cultural life of this city. [44] This ongoing redevelopment reflects broader trends in urban regeneration and the adaptive reuse of industrial spaces.

[40] Baran, H., & Atay, Ç. (2010). Izmir ALSANCAK L MANI'NIN ETK ALANI VE Izmir KENT N N EKONOM K YAPISI LE BA I. Dokuz Eylul Universitesi Denizcilik Fakultesi Dergisi, 2(2), 67-81.
[41] Çetin, . (2011) Kenti i bir okuntu alanı orne i Kadifekale'de mekan sosyolojisi denemesi. Sosyoloji Dergisi, 25, s.53-80.
[42] Turkmen Çelebi, B. (2018). Urban transformation in Izmir/Bayraklı district. Unpublished master's thesis, Izmir Institute of Technology, Izmir, Turkey

[43] Gule , Ece & Savasir, Gokcecicek. (2022). Izmir Dara a 'taki Taktiksel Sanat Uretim Pratiklerine, Yer Olusturma Ikeleriyle Bakmak. Meltem Izmir Akdeniz Akademisi Dergisi. 10.32325/iaad.2022.1.
[44] Çetinkaya, Ç. (2015). Yeniden islevlendirilen endustriyel mekânların gorsel algı de erlendirmesi: Izmir Tarihi Havagazı fabrikası. (Doktora Tezi). YOK Ulusal Tez Merkezi. Ege Universitesi, Fen Bilimleri Enstitusu, Izmir.

Problems in the area

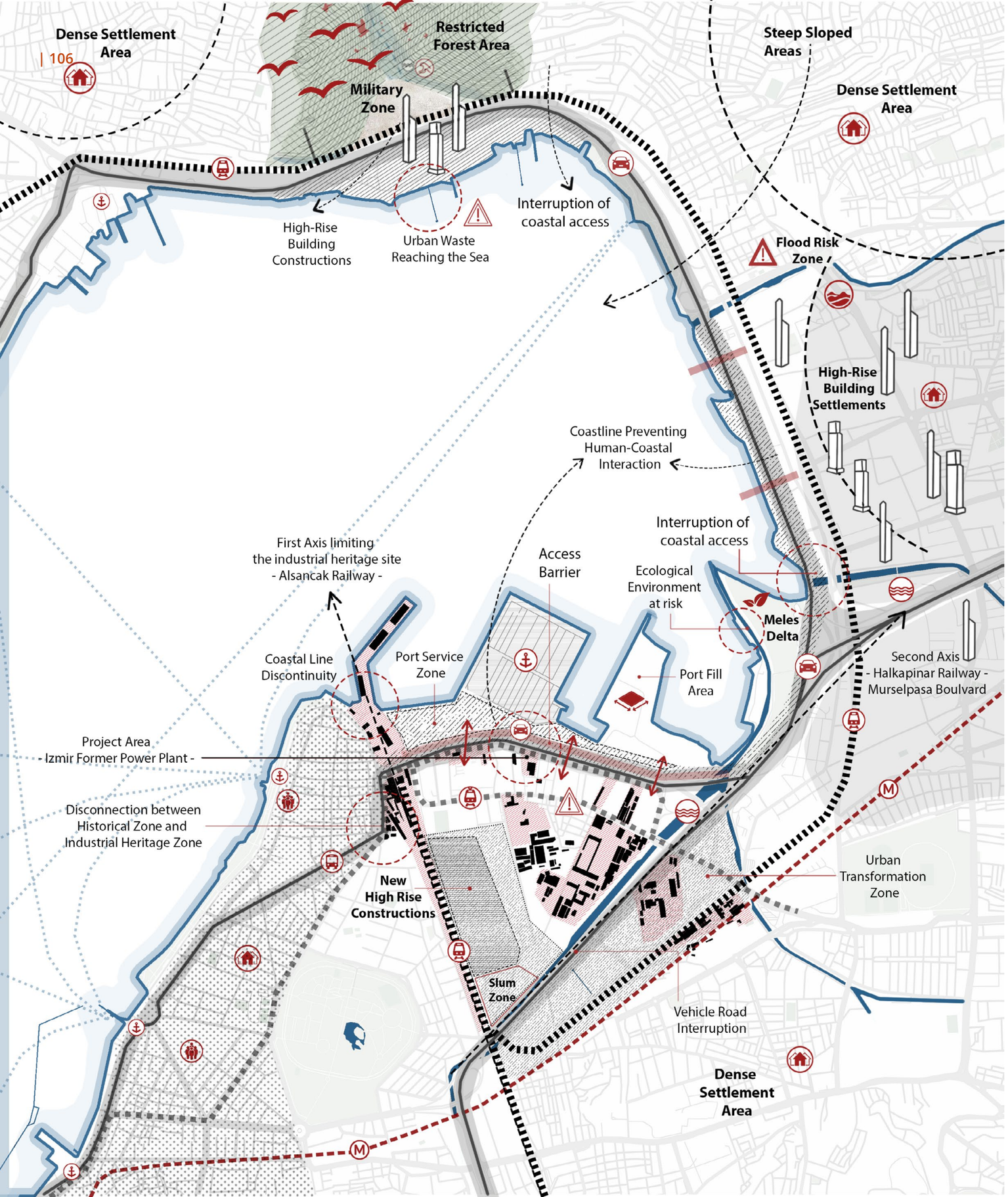


Fig 56: Problem Analysis of the Alsancak Port Hinterland

Fig 56: Produce by author

Fig 57: Potentials Analysis of the Alsancak Port Hinterland

Fig 57: Produce by author

'High - Rise Housing Construction Zone'

has the potential to support pedestrian circulation and public use along the coastline by providing the necessary public space along the shoreline.

'Bayrakli - Bornova Coastline'

has many high-rise buildings which built during last decades and houses many residential and office units. Considering the proximity to the Alsancak Port, area has the advantage of having strong engagement with Industrial Heritage District.

'Alsancak Cargo Port'

has extensive surface area and strong relationship between industrial heritage district known as port hinterland. Reorganization of the port would provide a viable solution to the accessibility issues and enable to the abandoned area,thereby facilitating its reintegration into the urban landscape.

'Alsancak Historical District'

The district of Alsancak has historically been closely connected with the port hinterland, which has been the center of production. Renewal of the hinterland presents an opportunity to revitalize this relationship.

'Industrial Heritage District'

Many abandoned historical industrial structures within the region can be restored and integrated into the city, allowing for the development of the area and the preservation of historical buildings, thereby reintroducing them to the city.

'Urban Transformation Zone'

In the area undergoing urban transformation, the construction of numerous new high-rise residential buildings is ongoing. A strong connection can be established between this new residential area and the industrial heritage zone.

Potentials in the area

1. Zone: High-Rise Housing Construction Area

Urban renewal process

2. Zone: Bayrakli-Bornova Coastline

Re-Organisation of the Shoreline

3. Zone: Alsancak Cargo Port

Re-Organisation of Port Use

4. Zone: Alsancak Historical District

New connections with historical area

5. Zone: Industrial Heritage District

Adaptive Re-use of Abandoned Buildings

6. Zone: Urban Transformation Zone

Urban renewal process

Urban Infastructure

- Vehicle
- Metro
- Train / Tram
- Autobus
- Port

Urban Analysis

- Residential Settlement
- Meles Delta - Ecohabitat
- Flood Risk Zone
- Dense Population
- Military Zone
- Construction Zone

Focal Points

- Residential Zone
- Historical Zone
- Other Side of the Gulf

Fig 58: Suggestions for the Alsancak Port Hinterland

Fig 58: Produce by author

1 **'Alsancak Industrial Port Zone'**
will be designed to maintain the continuity of the coastline, providing uninterrupted pedestrian access to the other side of Izmir Bay.

2 **'Port Administration Zone '**
will be planned as a green space and public area for the expansion of the Meles Delta, which creates an ecological strip along the coastline of Izmir Bay.

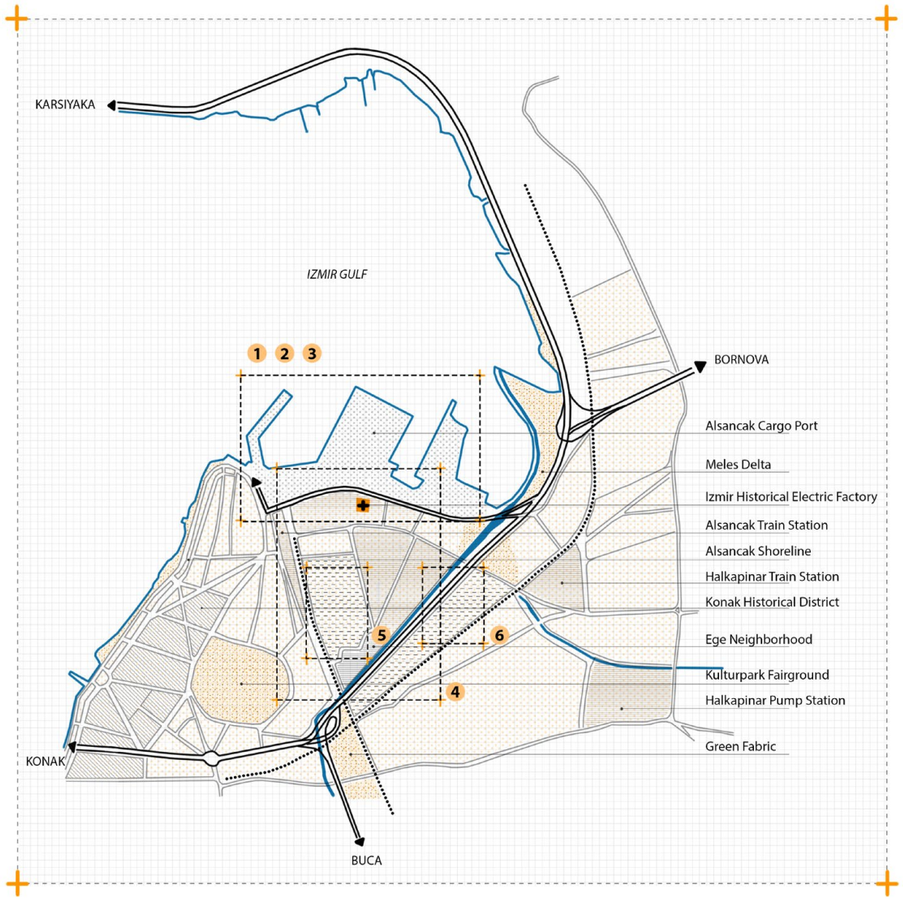
3 **'Industrial Heritage Zone'**
This abandoned area, located in the Alsancak Port Hinterland, includes several important industrial buildings. It is planned to be redesigned as a new Industrial Park that incorporates all the heritage buildings in the area, offers a cultural route for visitors, and provides various public and social amenities to the inhabitants and users through its services.

4 **'Extended Port Service Zone'**
will be used to maintain the continuity of the coastline, providing uninterrupted pedestrian access to the other side of Izmir Bay.

5 **'Urban Transformation Zone'**
The ongoing construction of the new residential area is planned to be considered as part of the public and social spaces of the proposed new industrial heritage zone.

6 **'Urban Transformation Zone 2'**
The area under transformation, located at the intersection of several transportation hubs, includes some important industrial heritage buildings. It is considered a crucial part of the newly proposed masterplan for the port hinterland zone, aimed at creating a comprehensive Industrial Heritage District.

Suggestions in the area



ZONES

1 **Alsancak Cargo Port**
2 **Port Administration Zone**
3 **Extended Port Service Zone**

4 **Indutrial Heritage Zone**

5 **Urban Transformation Zone (Ege Neighborhood)**
6 **Urban Transformation Zone (Halkapinar)**

3. THE SILENT WITNESS: IZMIR'S FORMER POWER PLANT

"A Disconnected Circuit: Spatial and Historical Re-adings"

"More than a building — a system, a memory, a relationship with the city. The power plant stands as a suspended potential in the urban void."

Fig 59: Izmir Historical Power Plant

Fig 59:https://www.visitIzmir.org/tr/destinas-yon/11968

3.1 Place and Memory: Locating the Site

The former Electric Factory is located in the northern side of the Port hinterland, between the liman street and isciler street, where trade and storage activities are intensive. According to the Izmir buyuksehir municipality, the current address is defined as Umurbey Mahallesi, 1505 Street No: 1, Konak. In cadastral terms, it is: Map: 281/282, Parcel: 3535, Section: 6. Considering its location, it has a considerably strong relationship with the port and main vehicle axis via liman street comparing other industrial buildings in the area. We can observe numerous warehouse facilities and small scale industrial facilities in the immediate of the Historical Electric Factory. Whereas the Ottoman Bank Commodity Depot is to the east and an open truck parking area, warehouse buildings belonging to Is Bank are located to its west. The Koreta Printing House to the southeast may also have a production value worth mentioning in its sector within the regional context. Around the factory, repair ateliers and small-scale production facilities exist. It is possible to reach the main entrance of the factory landscape opening to 1506, 1507, and 1508 Streets intersecting with Sehitler Avenue through 1505 Street. [45] Also, there is a registered residential building and a depot on 1505 Street.

Notably, industrial heritage structures that have survived to the present day in the vicinity of the former power plant include many different production facilities in various sectors such as food industry, textile industry, tabacco manufacturing, power plants as well as transportation facilities. From historical point of view, when British and French investors enhanced the transport infrastructure in Izmir, the Alsancak (Punta) Compound, which was the starting point of Turkey's first railway between Izmir and Aydın, the Port area and its Hinterland became a new industrial hub filled with factory buildings and storage areas. At the end of this rapid expansion, Izmir became one of the most modern Ottoman cities that kicked off the industrialization movement in the Empire in the 19th century. Undoubtedly, the Izmir–Aydın railway line triggered the industrial development of the port city of Izmir. [46] Investors picked the area (what is known today as the Hinterland of the Port Zone) as a hub and built large industrial structures there beginning with the second half of the 18th century. This area constitutes today the heart of the city's industrial heritage that emerged. The railroad played a key role in the proliferation of industry in rural areas because it was the primary means of transporting agricultural products (such as olives, cotton, tobacco, figs, and grapes in the semi-processed or unprocessed form) grown in Izmir's rich, fertile plains to the production and storage facilities, and the seaports. [47] Given the stage of urban evolution at the time, we can say that industrial structures developed along certain axes. While the Dara a axis running from Punta (Alsancak) Train Station to Bayraklı stands out with its concentration in the food industry, the Basmane Railroad Terminal and Halkapınar Water Plant axis stands out with its concentration in the tannery industry and the oil mills.
One of the most significant buildings can be listed chronologically as follows: Alsancak Railroad Compound (1860), Halkapinar Railways Repair Ateliers (1865), the Historical Coal-Gas Plant (1867), Tekel Cigarette Factory (1884), the Old Flour Mill (1895), Bomonti Nektar Breweries (1912), the Tile Factory (circa pre-1918), spinning and cotton factory called Sark Industry (1924), the Sumerbank textile factory complex (1928), Gomel oil factory (1928) as well as the Alsancak grain silos (1958).

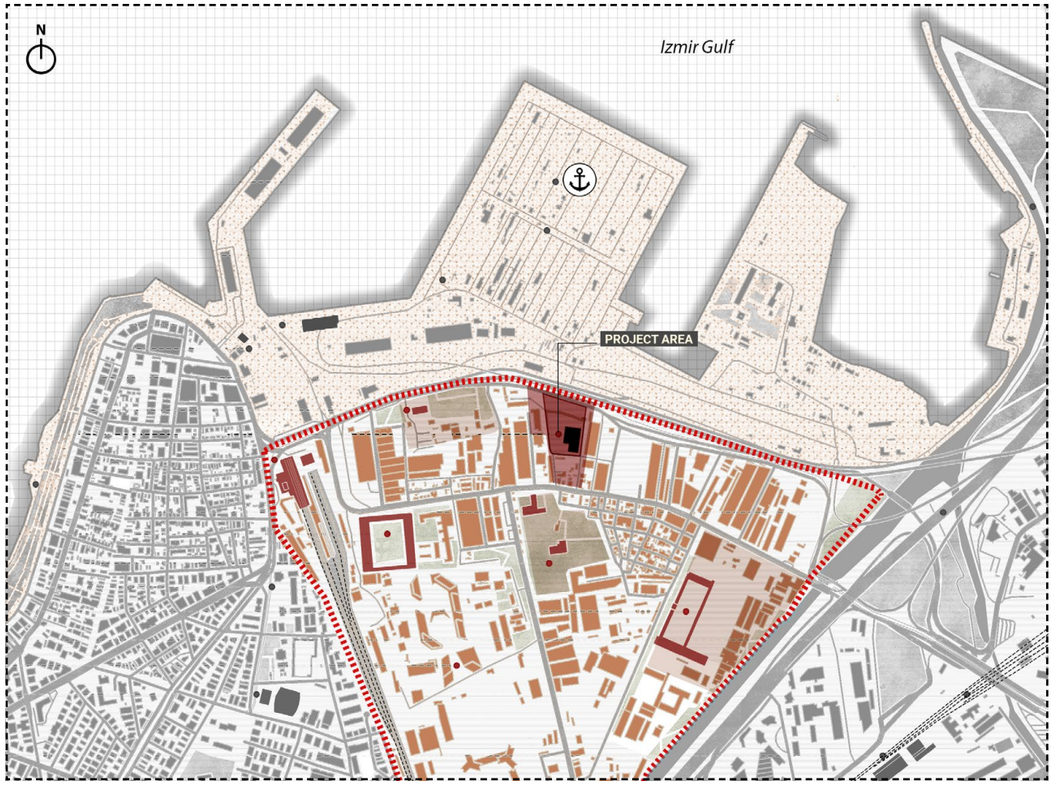
The Hinterland of the Port Zone constitutes the heart of the Industrial Heritage of Izmir. It is ascribed a special significance because the said facilities are located there and they should be preserved as cultural heritage sites. Currently registered as cultural assets, these plants comprise the said major enterprises and compounds. Those major industrial investment areas lost their original functionality during the period of de-industrialization. While early production structures such as the Coal-Gas Plant, Halkapınar Railroad Maintenance and Repair Shops, Bomonti–Nektar Breweries, Tile Factory, and Power Pant stand out as the hallmark of the pre-Republican Era, numerous other factories and plants built during the early years of the Republic are considered national landmarks and pioneers of the national economy. They are the standard bearers that bore witness to the birth and growth of the young Republic. While most of the production structures, which are part of the industrial heritage, are registered and preserved, a few of them have been repurposed and put into urban use. [48] The rest of these structures will be opened to visitors once the efforts to preserve and repurpose the industrial heritage are put into action.

[45] Simsek, Eylem, "Endustri Yapılarının Kulturel Miras Olarak Irdelenmesi ve Degerlendirilmesi Izmir Liman Arkası Ornegi", Y.L.T., Dokuz Eylul Universitesi, Fen Bilimleri Enstitusu, Izmir, 2006.
[46] Ekizo lu, G. (2012). Demiryolu Yerleskelerinin Endustriyel Miras Olarak Korunma Sorunları: Izmir- Aydın Hattı Uzerindeki Demiryolu Yerleskeleri Orne i (Yayımlanmamıs Yuksek Lisans Tezi). Izmir: Dokuz Eylul Universitesi Fen Bilimleri Enstitusu.

[47] IZKA, (2021). Izmir Industrial Heritage Inventory, Izmir Development Agency, Izmir.
[48] Kayın, E. (2013). Endustri Yapıları Mimarisi inde; Izmir Kent Ansiklopedisi: Mimarlık (Birinci Cilt) 378-412,Izmir: Izmir Buyuksehir Belediyesi Yayınları.

Fig 60: Map of Alsancak Port Hinterland

Fig 60: Produce by author



3.2 A Pause in Time: Functional History and Abandonment

After the liberation of Anatolia then Izmir on September 9, 1922, national economic development and the improvement as well as expansion of urban infrastructure became primary agendas for the city administrations. Energy and lighting were at the forefront of these needs. In Izmir, this pursuit and effort were prioritized. The urban lighting system of Izmir was initiated with the establishment of the gasworks factory in 1862. Following the inclusion of small generators in energy production from 1905 onwards, Izmir became the third city, after Istanbul and Tarsus, to receive electricity. However, the electricity production that commenced with the gasworks factory was insufficient to meet the growing demand for electricity, which resulted from the city's expansion and industrial development. This shortfall prompted the city administrators to explore alternative solutions (Topal, 2019). [49]

Establishment

In 1924, the Gas Factory began providing electricity to the city, but the supply was insufficient to fulfill demand. In 1925, Traction-Electricit , a Belgian corporation, was granted a concession to produce electricity and operate tramways in Izmir. The Electricity Factory was initially planned to be established first in Guzelyali neighborhood and later in Bahribaba district. However, it was deemed problematic for the city's development and public health in these areas considering residential buildings located in the neighborhoods. In 1925, the municipality and the electricity company agreed to establish the factory in Daragaci district which is address the Alsancak Port hinterland area today, which at the time was a key junction point for land, rail, and sea transportation in the city (Kurt, 1996, p. 238). [50]

[49] Topal, H. (2019). Cumhuriyetin Tanı ı Olan Bir Endustri Mirasının Kısa Oykusu: Izmir Alsancak Elektrik Fabrikası. Ege Mimarlık. 103, 60-63.

[50] Kurt, S. "Public Service Organizations in Izmir, Unpublished Doctoral Thesis, DEU Ataturk Principles and Reforms Institute, Izmir, 1996.

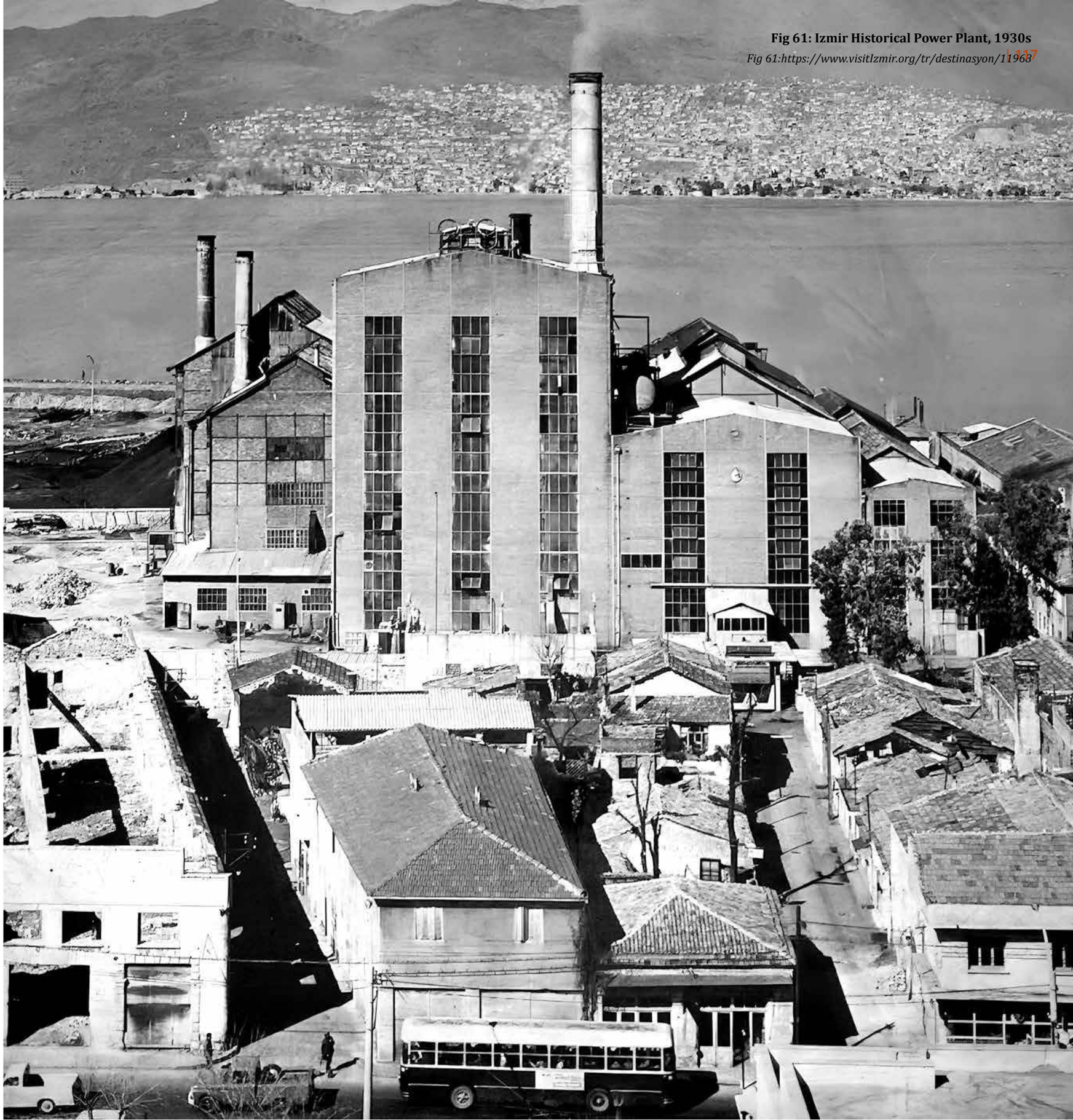


Fig 61: Izmir Historical Power Plant, 1930s

Fig 61:https://www.visitIzmir.org/tr/destinasyon/11963

By 1926, expropriation was carried out for the establishment of the electricity factory in an area near the Izmir Gas Factory. In March of the same year, the Belgian company Traction-Electricit began the construction work, and the groundbreaking ceremony took place on May 12, 1926. The construction was delayed due to water emergence from the foundation and a subsidence of about 20 cm. Consequently, the area around the factory building was reinforced with steel plates and cement. As a result of inexperienced personel employed by the company during the construction, the factory opened later than planned. It was finally put into operation on ***October 18, 1928***, with a 2500 kW "la Meuse" turbine alternator and three vertical tube Kesstner boilers operating at eighteen atmospheres (Izmir City Yearbook, 1973, p. 414). With this energy, small industrial activities in Izmir were stimulated, horse-drawn trams were replaced by electric trams, and the city's major districts and main streets were illuminated.

Fig 62: Izmir Historical Power Plant, after establishment, 1930s

Fig 62: APIKAM, Suha Tarman Archieve, Izmir.

Fig 64: Izmir Historical Power Plant opening

Fig 64: APIKAM, Suha Tarman Archieve, Izmir.

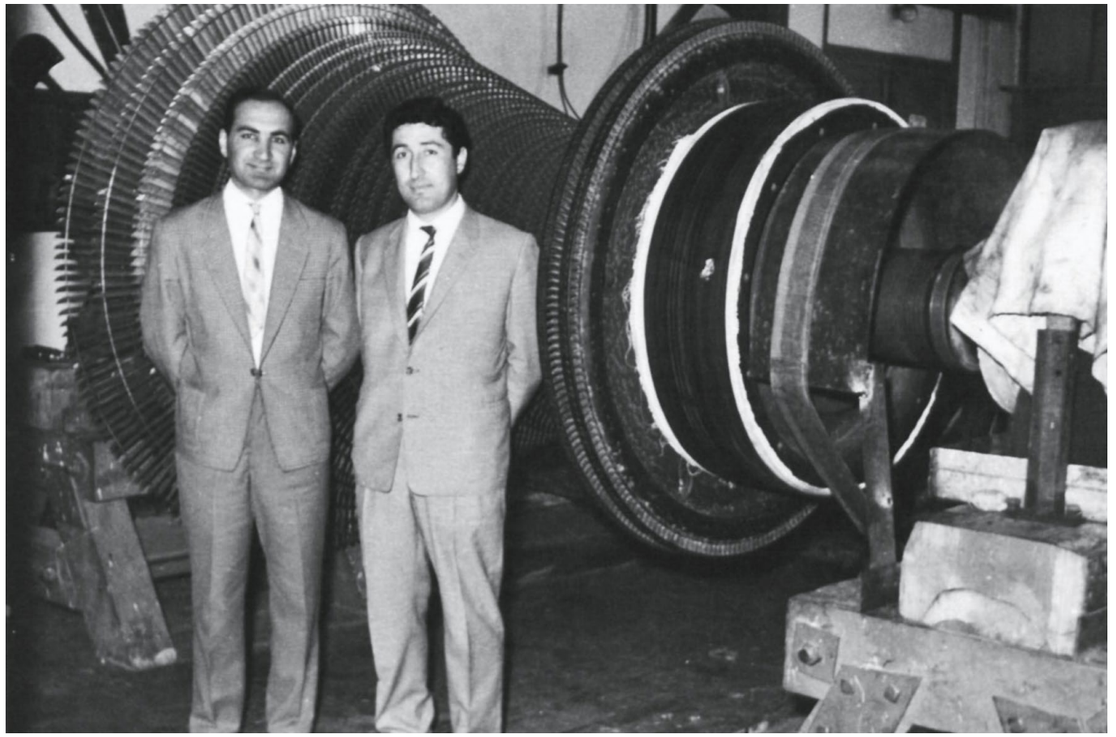
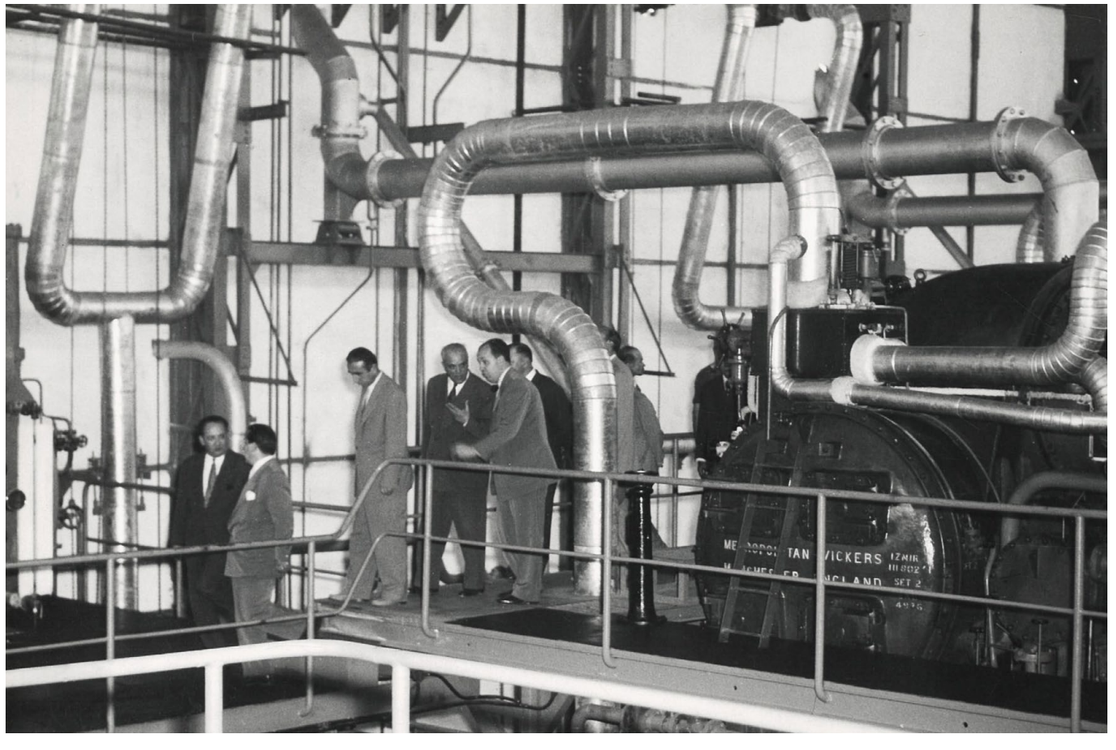


Fig 63: Izmir Historical Power Plant, after establishment, 1930s

Fig 63: APIKAM, Suha Tarman Archieve, Izmir.



Construction Phase

Izmir power plant construction fairly represents engineering and construction techniques of its time. The construction methods for power generation facilities were well advanced and innovative, particularly in the early 20th century and during the period of rapid industrialization.

The expropriation of 1926 was followed by the commencement of construction works in March 1926 under the auspices of the Belgian company Traction-Electricite. The ceremony for the foundation stone laying was held on May 12 of the same year. However, construction was delayed due to water seepage from the foundation, which caused settling of about 20 cm. The soil reinforcement is always very critical for the construction of such power plants, especially in the zones where heavy machineries and generators are proposed to be placed. Therefore, the foundation of the building was designed for high load-bearing capacities. Hence, soil improvement was decided upon very early on in the construction process, and the area around the foundation was reinforced by using steel plates and cement.

Consequently, concrete was chosen as the main material for the foundation constructions because of its strength and durability, complying with the engineering standards of the time. After the completion of the foundation, the construction went ahead with the erection of a frame structural system and a roof in steel, which permitted very large openings within the designed structural layout to permit production activities. The walls were constructed from pressed brick material. The said steel members permitting large spans are still structurally sound in the building now.
Compared to other industrial buildings of its time, Izmir power plant remains an innovative example both for the construction technologies used and for its futuristic design.

During construction, turbine rooms were built; generators and their respective electrical interconnections were in place. Generator and turbine design incorporated a water-cooled system to ensure against overheating during operation. A cooling pipeline was constructed to cater for the drawing of water from Izmir Bay - the main water source in the vicinity. In addition to this, various wells were constructed in the industrial complex. Remnants of these wells can still be seen at the site to date.

Added to the main production structure were various auxiliary buildings including storage, carpentry and metal workshops, a dining hall, and accommodation.

Fig 65:IZKA, (2021). Izmir Industrial Heritage Inventory.

Fig 65: Construction of Structural System - Phase I

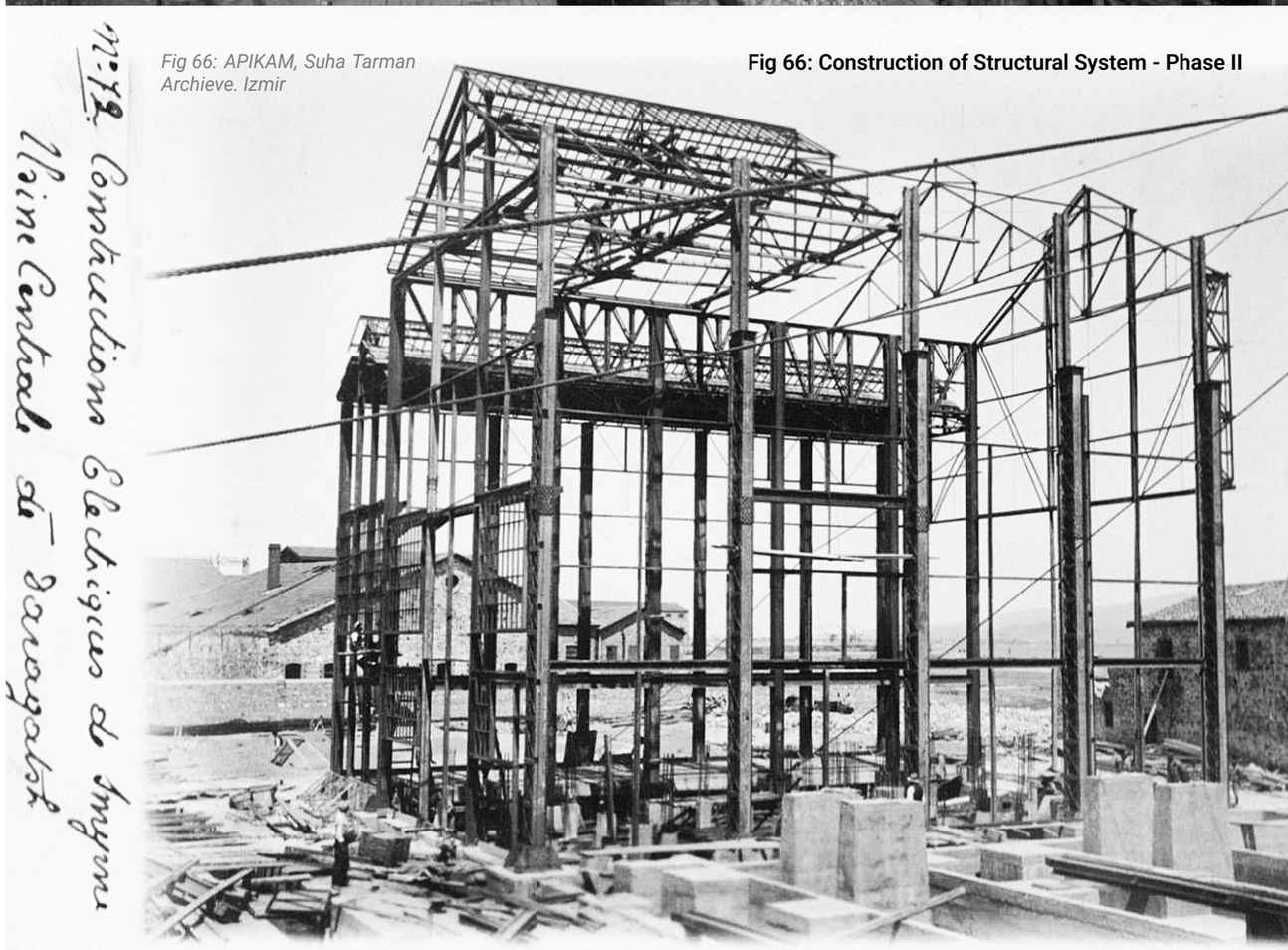


Fig 66: APIKAM, Suha Tarman Archieve. Izmir

Fig 66: Construction of Structural System - Phase II

Fig 67: Construction of the northern block

Fig 67: APIKAM, Suha Tarman Archieve. Izmir

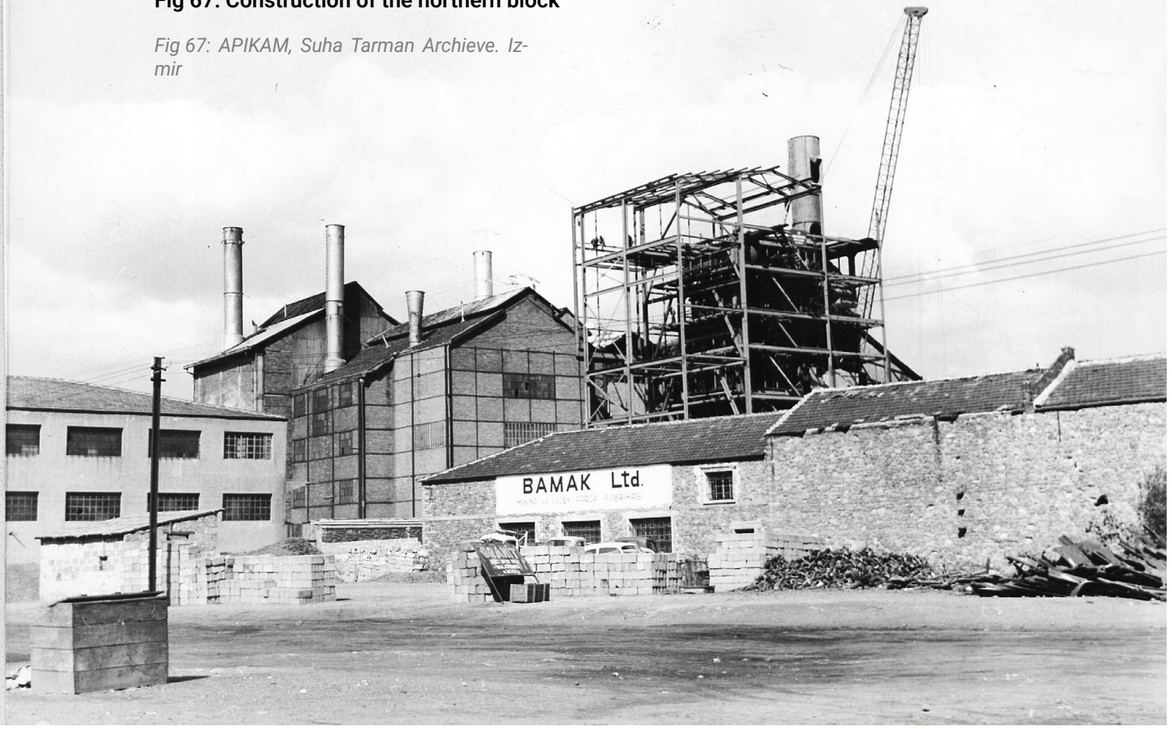


Fig 68: Construction of the brick walls

Fig 68: APIKAM, Suha Tarman Archieve. Izmir

Fig 69: Construction of the southern block

Fig 69: APIKAM, Suha Tarman Archieve. Izmir

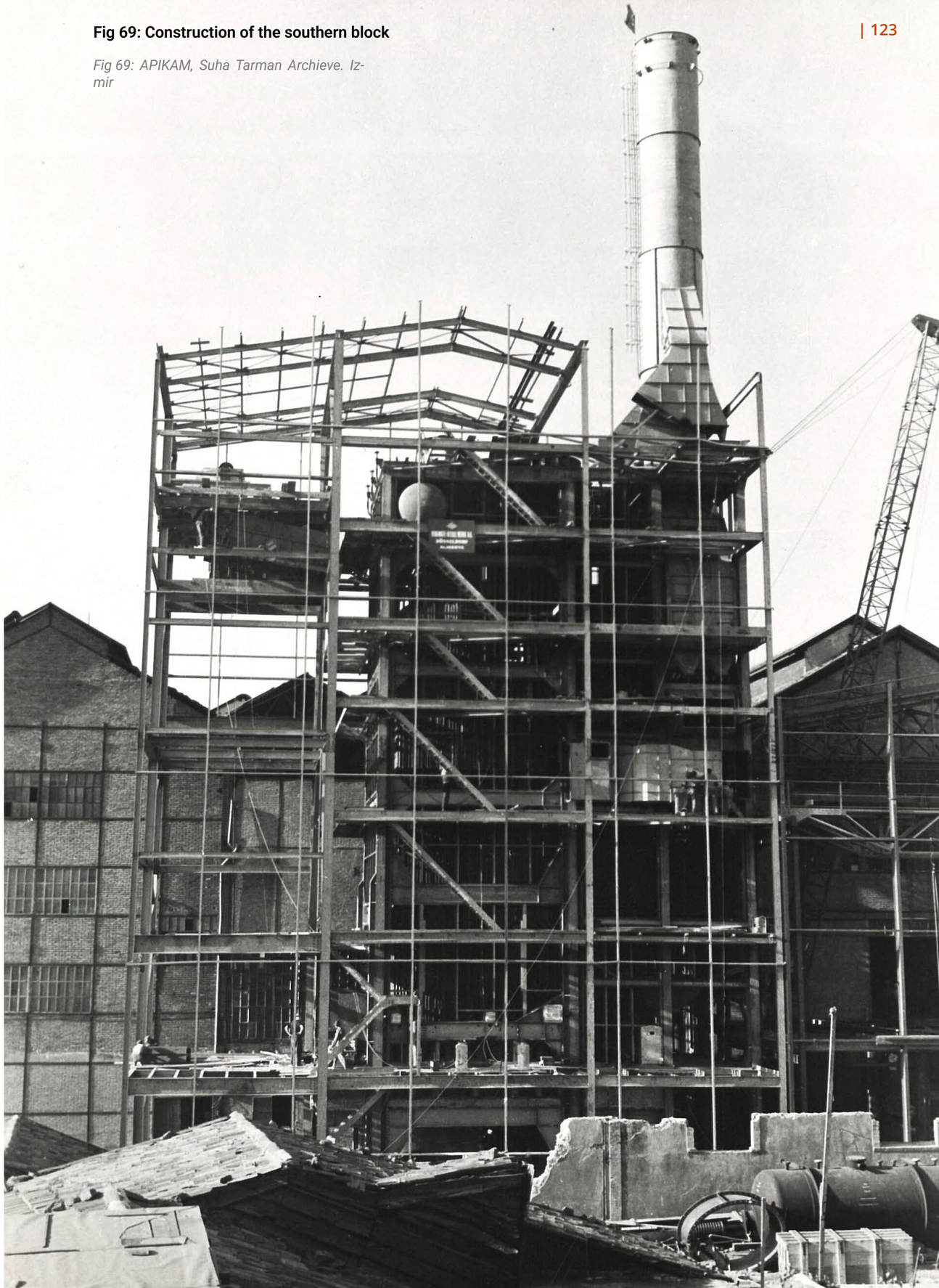


Fig 70: Installment of the cooling water pipes

Fig 70: APIKAM, Suha Tarman Archieve. Izmir

Production Principle

At the factory, the two sources of electrical energy production were seawater and coal or lignite. The coal was brought to the factory location by rail and stored in the mine-like landscape of the factory area. The steam produced by burning coal in grate-type boilers drove the turbine that enabled the generator to produce electricity. The produced electrical energy was carried by cables to transformers scattered all over the city. It was from there that high-voltage lines eventually watered various parts of the neighborhoods. (Tarman Suha Archieve, APIKAM)

Expansion and Improvements

In 1944, the factory was transferred from the Belgian company to the Izmir Municipality. The management of the factory was placed under the General Directorate of ESHOT which is a bus company run by the Izmir Municipality. During this period, to meet the city's increasing energy demand, the factory installed three 5000 kW Metropolitan-Vickers turbo alternators, one in 1949 and two in 1953, raising the power of the plant to 20,000 kW (Izmir City Yearbook, 1973, p. 414).

The major renovation and power increase at the electricity factory under ESHOT management occurred between 1953 and 1955. On October 3, 1953, the proposals from several companies such as Brown Boveri (BBC) Baden (Aargau), Vereinigte Kesselwerke (VKW)-Dusseldorf, and Hochtief-Essen were accepted. VKW was responsible for the boiler facilities, BBC for the electrical equipment, turbine, and generator installations, and Hochtief for the construction work. A 20,000 kW Brown-Boverie turbo alternator was installed, raising the plant's power to 40,000 kW. Following these upgrades, the factory was classified as a power plant starting from 1956. [51]

Anticipating further increases in energy demand, starting from 1957, energy was sourced from the Bornova Transformer Center, which was fed by the Soma Thermal, Kemer, and Demirkopru hydroelectric power plants. The electricity produced at the factory was distributed through 16 feeders (Izmir City Yearbook, 1973). In 1958, ETIBANK established a step-down transformer center (Izmir No. 1 KTVKK, File No: 3500/2469).

The power plant was transferred to the Turkish Electricity Authority (TEK) on July 1, 1971. Due to reaching the end of its economic life, the TEK Board of Directors decided to take it ***out of production on August 30, 1989.*** After TEK was split into two entities, the factory was officially registered in the name of Turkiye Elektrik Dagitim A.S. known as TEDAS which can be translated as Turkiye Electric Distribution Company on March 15, 1995 (Izmir No. 1 KTVKK, File No: 3500/2469).

[51] Simsek, Eylem, "Endustri Yapılarının Kulturel Miras Olarak Irdelenmesi ve Degerlendirilmesi Izmir Liman Arkası Ornegi", Y.L.T., Dokuz Eylul Universitesi, Fen Bilimleri Enstitusu, Izmir, 2006.

Fig 71: APIKAM, Suha Tarman Archieve, Izmir.

Fig 71: Izmir Historical Power Plant, machiene room

Fig 72: APIKAM, Suha Tarman Archieve, Izmir.

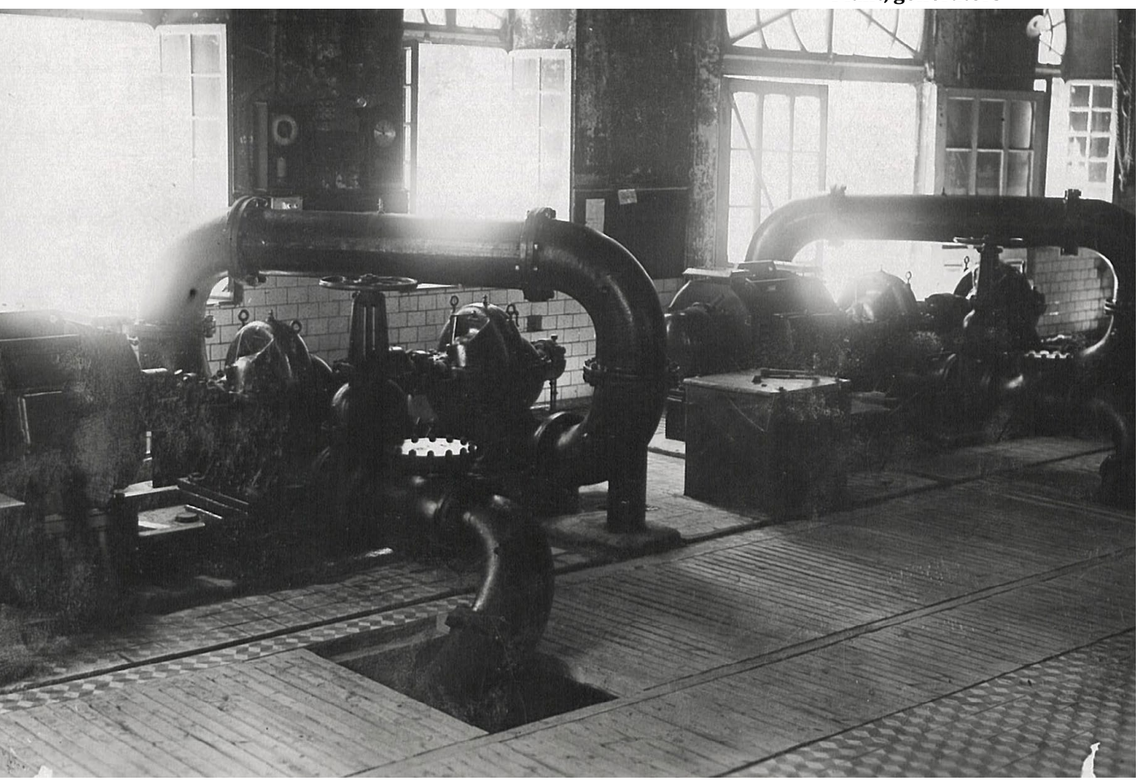


Fig 72: Izmir Historical Power Plant, generators

Abandonment

The equipment of the power plant, which had reached the end of its technical and economic life, was put up for scrap sale by TEDAS. The auction was awarded to Birlik Metal ve Ticaret Ltd. company with a contract dated December 4, 1996. During the deconstruction process, the building's steel structure was also damaged due to a fire and faulty deconstruction work.

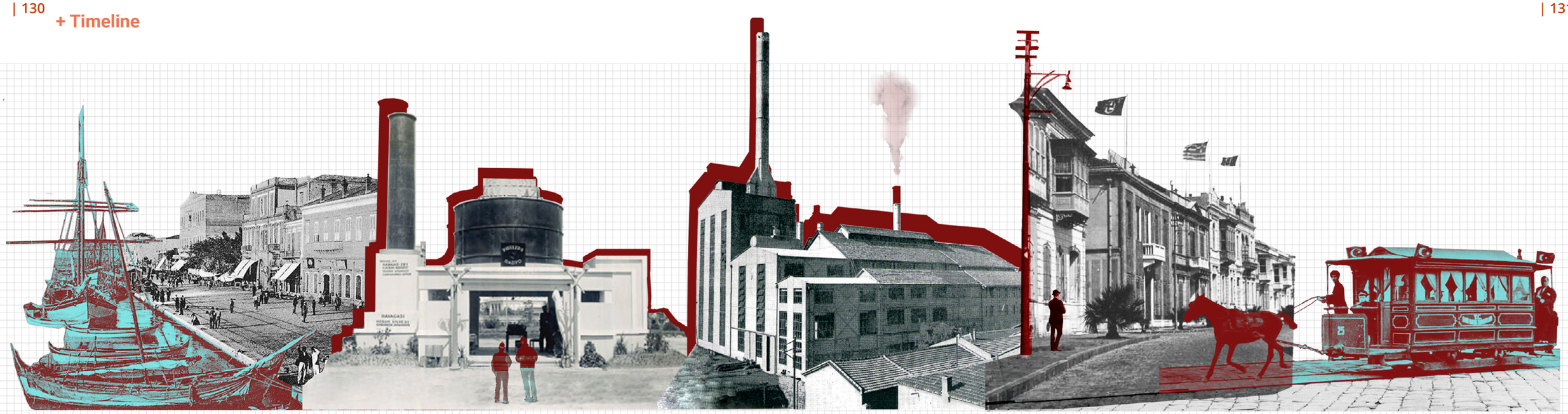
The Izmir Electricity Plant is registered as a 2nd Group cultural asset requiring protection by the Izmir No. 1 Cultural and Natural Heritage Preservation Board with decision number 7003, dated January 8, 1998. Upon TEDAS's request, due to the increased energy needs of the area served by the old transformer center in the existing factory landscape, the increase of the capacity is recognized. Additionally, the structural support system of the thermal power plant was in poor condition, and potential earthquakes could increase this risk. Therefore, the board accepted the construction of a new transformer center.

The transformer center within the electricity factory landscape was reinforced and renamed as the Thermal Power Plant Transformer Unit. Today, this transformer center supplies energy to various locations, including Alsancak Port, two agricultural product silos, the Fairground, Mustafabey, Umurbey, Halkapinar, Basmane neighborhoods, as well as Alsancak State Hospital, private hospitals, small industrial facilities, and the Taris Oil Plant, among others. Currently, the factory has a technician responsible for the transformer and a security guard on duty.

On the other hand, the factory building has remained abandoned and non-functional. The area within the industrial landscape became a storage place for some vehicles and buses. Despite this neglect, the Municipality of Izmir has been making considerable efforts in order to preserve the industrial heritage in the legal ground.

Fig 73: Aerial Photograph of the Factory, 2019

Fig 73:https://www.arkitera.com/yarisma/Izmir-elektrik-fabrikasi-ne-olmak-ister-ulusal-ogrenci-mimari-fikir-projesi-yarismasi/



1700s
The concentration of the East-West trade route on the Izmir port

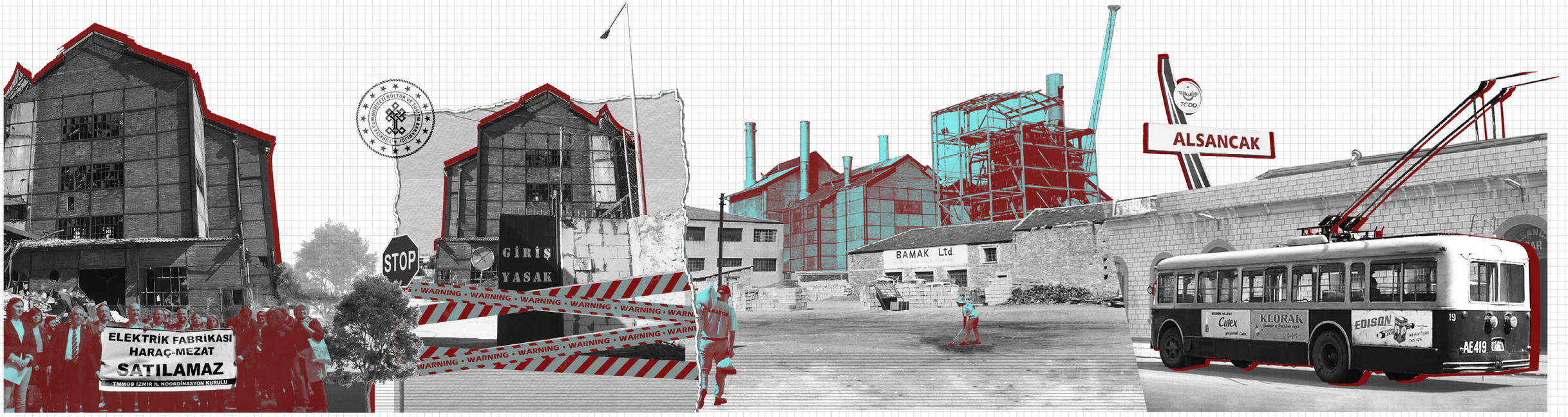
1800s
Expansion into the global arena

1900s
Developments in the Port hinterland
New construction of Industrial buildings

1926
Establishment of **Izmir Power Plant**

1928
The first implementation of street lighting

October 31, 1928
Horse-drawn tram system is terminated



2024
The ownership status of the structure is problematic. The structure is at risk of potential destruction.

1998
The factory structure has been registered as a cultural heritage asset that necessitates preservation.

1996
A fire occurred during dismantling, a part of the steel structure is damaged.

1987
The operation of the factory is terminated, and the facility is closed.

1956
Izmir Electric Factory achieved global standards with a capacity of 40 MW.

1954
Trolleybuses are introduced in place of horse-drawn trams, with a factory supplying electricity to the trolleybus system.

Fig 74: Timeline of the Factory

Fig 74:Produced by author

3.3 Architectural Body: Physical and Spatial Features

The Izmir Electricity Factory's main production structure and landscape consist of auxiliary facilities located along the southern, eastern, and western boundaries. The landscape includes various types of trees, including two registered eucalyptus trees. Access to the landscape is via the reinforced concrete canopy on 1505 Street. Along the southern boundary of the landscape, starting from the west, there are sequentially: a telephone exchange, a carpentry shop, an oil storage building, warehouse II, and a checker room. Immediately to the east of the entrance is a guard room. In the corner of the landscape, there is an inscription written in Ottoman script. These buildings were constructed with a load-bearing system of stone masonry and covered with a corrugated sheet metal roof. Directly opposite the entrance, the Ataturk Monument is prominently visible.

Along the eastern boundary of the landscape, there is a single-story, stone masonry building with a corrugated sheet metal roof, which contains changing rooms for the staff. Adjacent to this is a masonry building with a broken roof covered in Marseille tiles, which serves as the lunchroom. On the western boundary of the landscape, there are single-story, low-quality warehouse structures that were built in a later period.

A high stone wall, supported by vertical buttresses, separates the part of the landscape without structures from the rest of the site, extending from the northeast to the west. To the north of the landscape, there are channels, partially covered with concrete slabs, that historically facilitated water intake from the sea, located between the factory structure and Liman Street. The railway tracks used for transporting coal within the landscape are still in place. The dense green cover around the collector foundation in the northwest of the factory landscape enhances the perception of the well cooling system and the pump room.

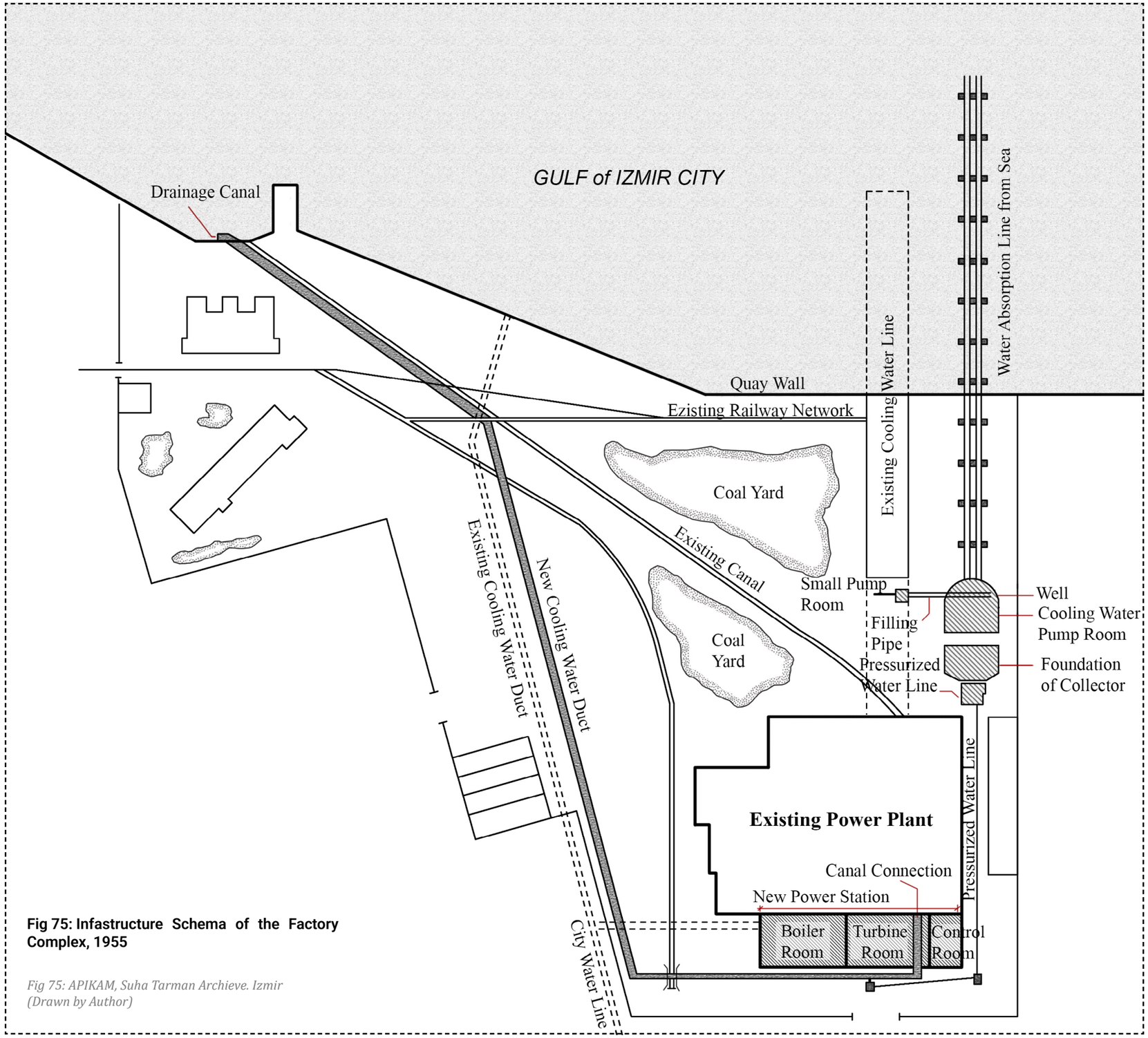


Fig 75: Infastructure Schema of the Factory Complex, 1955

Fig 75: APIKAM, Suha Tarman Archieve. Izmir (Drawn by Author)

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Fig 76: Izmir Former Power Plant, current state

Fig 76: Drawn by Author

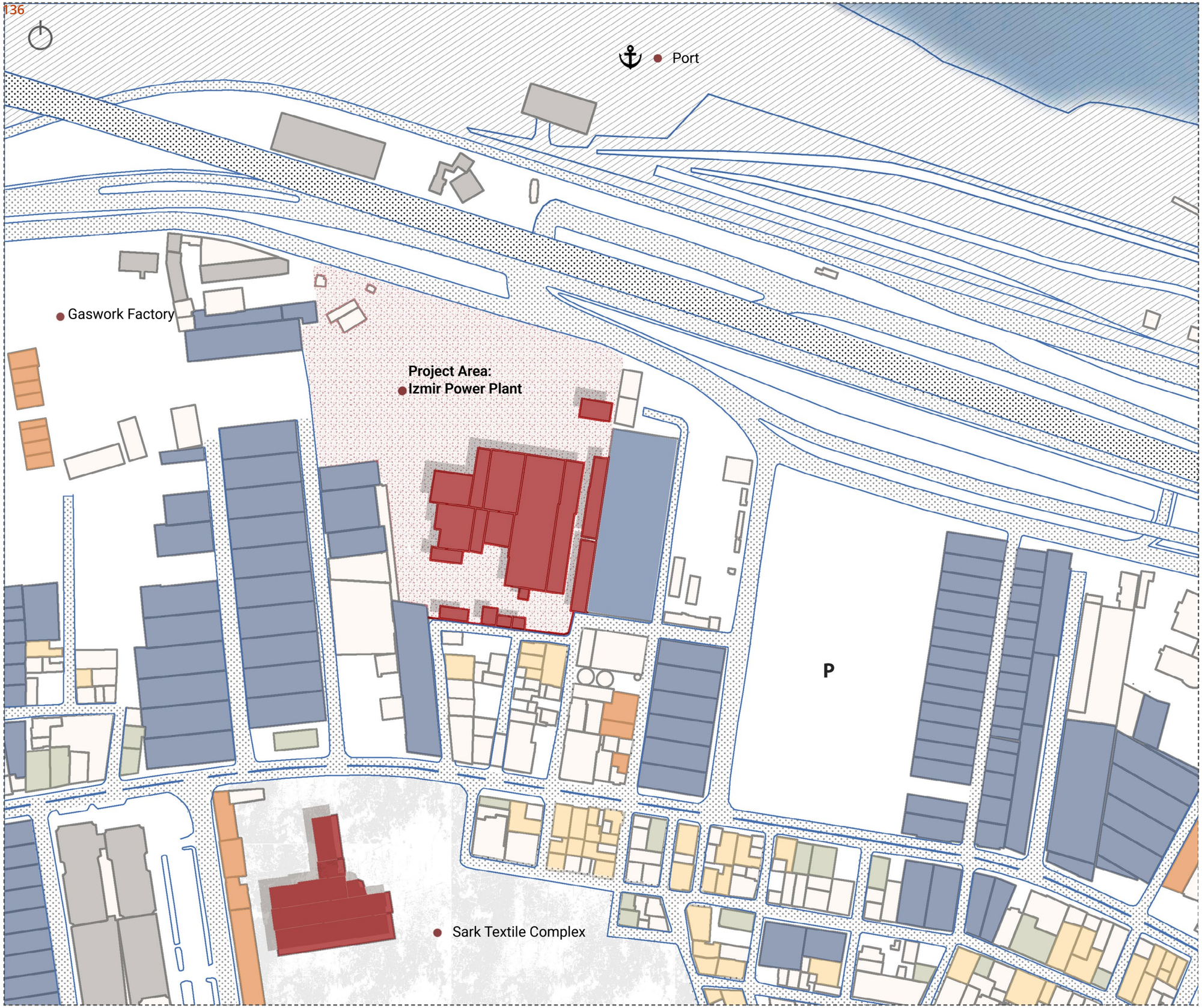


Fig 77: Function Analysis of surrounding of Izmir Former Power Plant, current state

Fig 77: Drawn by Author

Architectural Components

The main production facility of the factory stands out from other industrial buildings in the area due to its distinctive architecture. The building's height reaches up to 30 meters in places, and its overall space, mass, and form are shaped entirely by functional concerns related to the dimensions of mechanical equipment, without regard for aesthetic considerations (Akyurtlakli, Caylan, Pogun, 1999, p.37). The structure is built parallel to the boundary lines, set back 15 meters from the southern boundary and 10 meters from the eastern boundary. To the south, immediately behind the Ataturk bust, there is a tribune chamber with a gable roof covered in sheet metal, adjacent to the building.

The factory structure features a steel frame support system. Some of the supporting columns are composed of two profiles joined with short diagonal braces. The spaces between the steel columns are filled with pressed bricks. The floors consist of reinforced concrete slabs supported by steel beams. The metal roofs are covered with corrugated sheets and are supported by steel trusses. Certain sections of the roofs are elevated above the main ridge for lighting purposes.

The building's floor plan consists of four rectangular masses extending in the north-south direction and two smaller rectangular masses adjacent to the western block. The main production functions are situated within the large rectangular masses. The remaining spaces and the eastern mass contain auxiliary functions related to production. First rectangular block in the eastern

+ The Factory - Former State

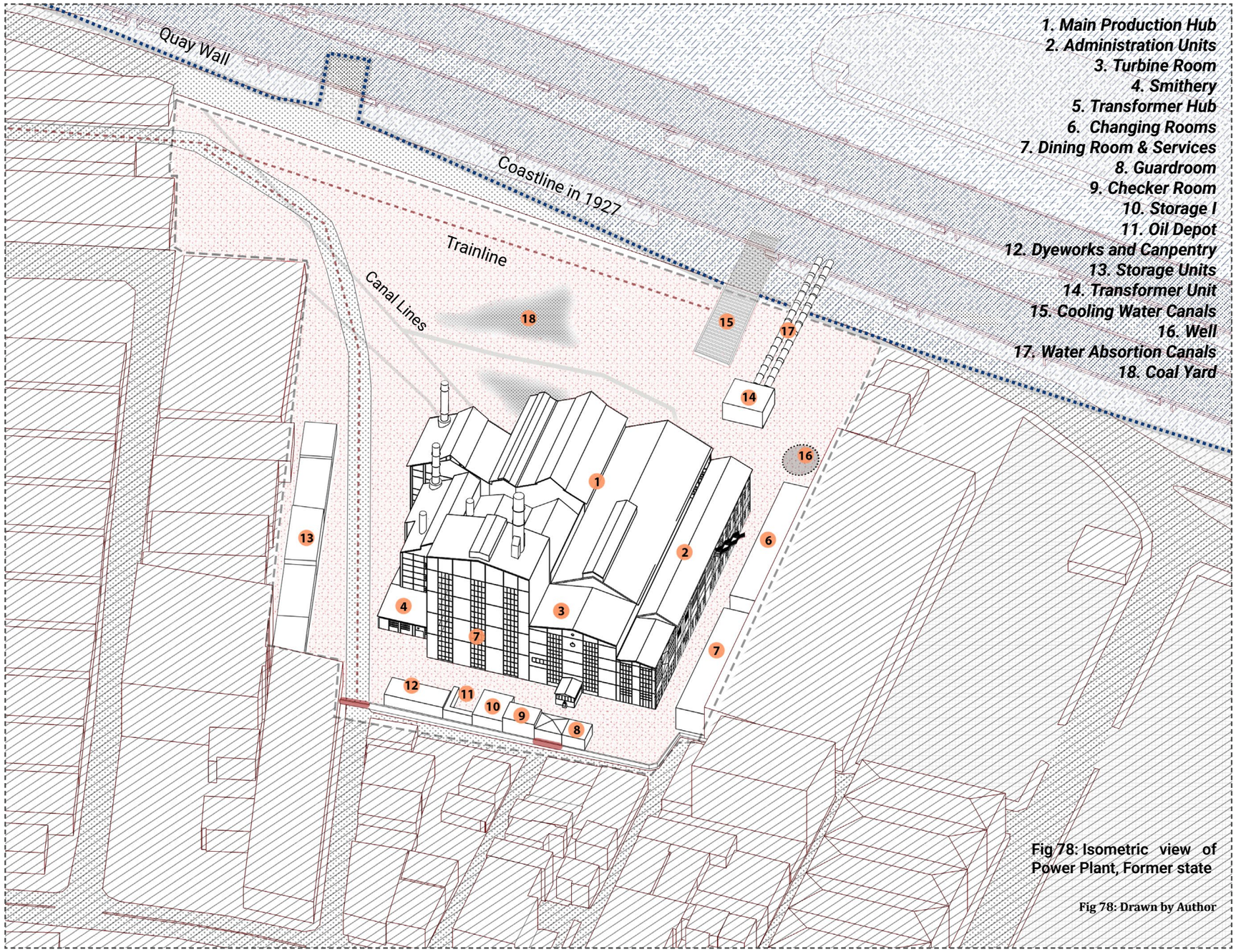


Fig 78: Isometric view of Power Plant, Former state

Fig 78: Drawn by Author

facade, the ground floor serves distribution transformers, while the upper floors contain administrative facilities. This block is divided into two sections by a staircase, which leads from a door on the eastern facade of the building to the second floor of the adjacent second rectangular block. To the north of the staircase, there is a long corridor ending in a larger space, with twelve rooms on either side. To the south of the staircase, the ground floor contains four transformers, and the upper floor features a control room. Additionally, a metal staircase was later added to the southern facade of this block to provide access to the second floor.

In the second block, there were originally 20 feeders arranged towards the turbine hall in the south, which were responsible for the primary electrical generation. However, only the structural thick walls of the feeders remain today. This block has a large, uninterrupted volume due to its expansive span. A balcony console extends along the eastern wall, accessible from the control room. The clock on the southern facade of the block is still operational. Inside, there is an overhead crane that can move along the length of the block between the eastern and western walls.

In the third and fourth blocks, five boilers were exist and used for burning coal in the facility. The fourth block, with its rectangular plan, is shorter than the others but expands and rises at certain intervals. During the deconstruction process, the southern part of the third block was almost destroyed. A large crane is visible in the northern part of the third block. In the single-story structures

+ The Factory - Function Distribution

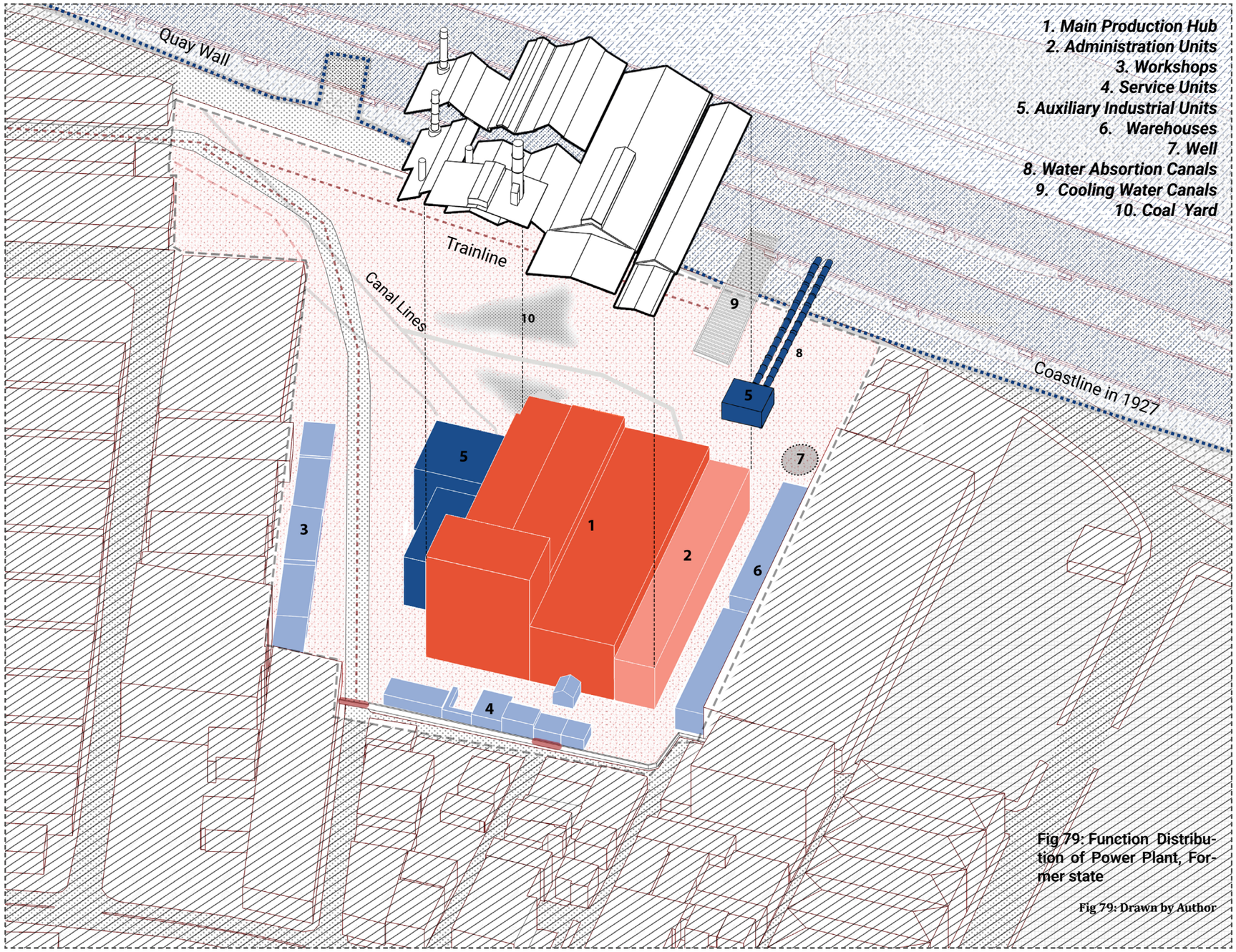


Fig 79: Function Distribution of Power Plant, Former state

Fig 79: Drawn by Author

Fig 80: Turbine Room, Izmir Power Plant

Fig 80: Suha Tarman Archieve, Apikam

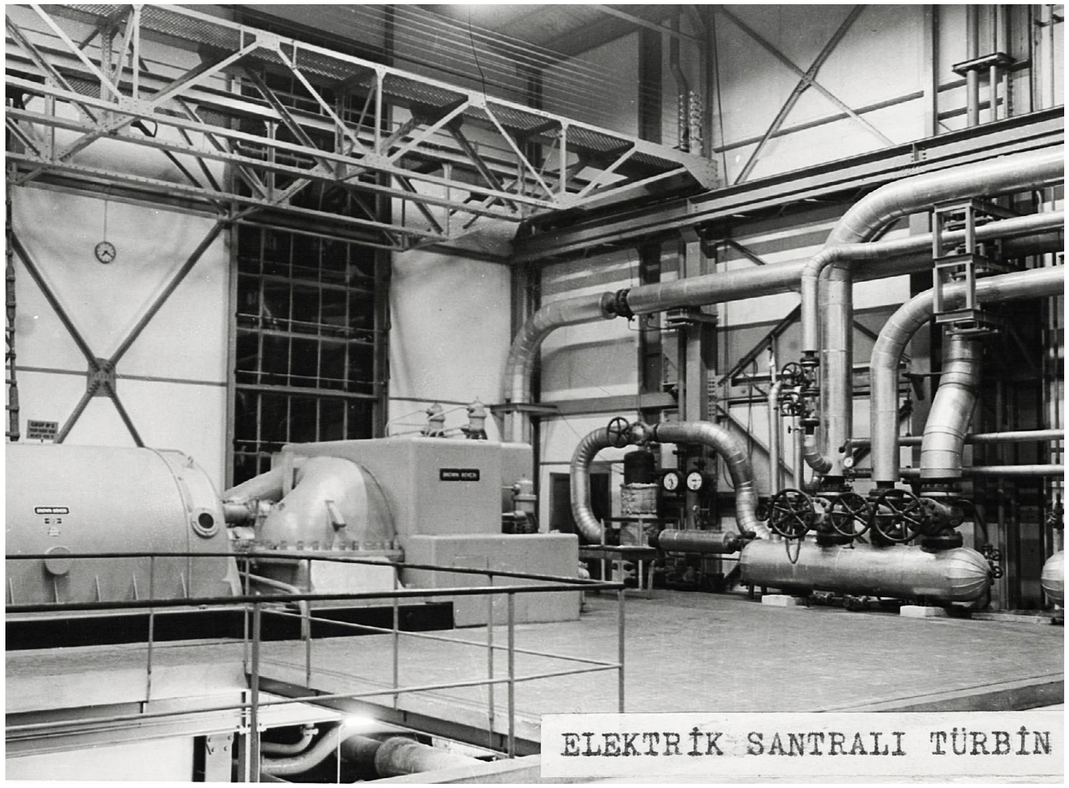
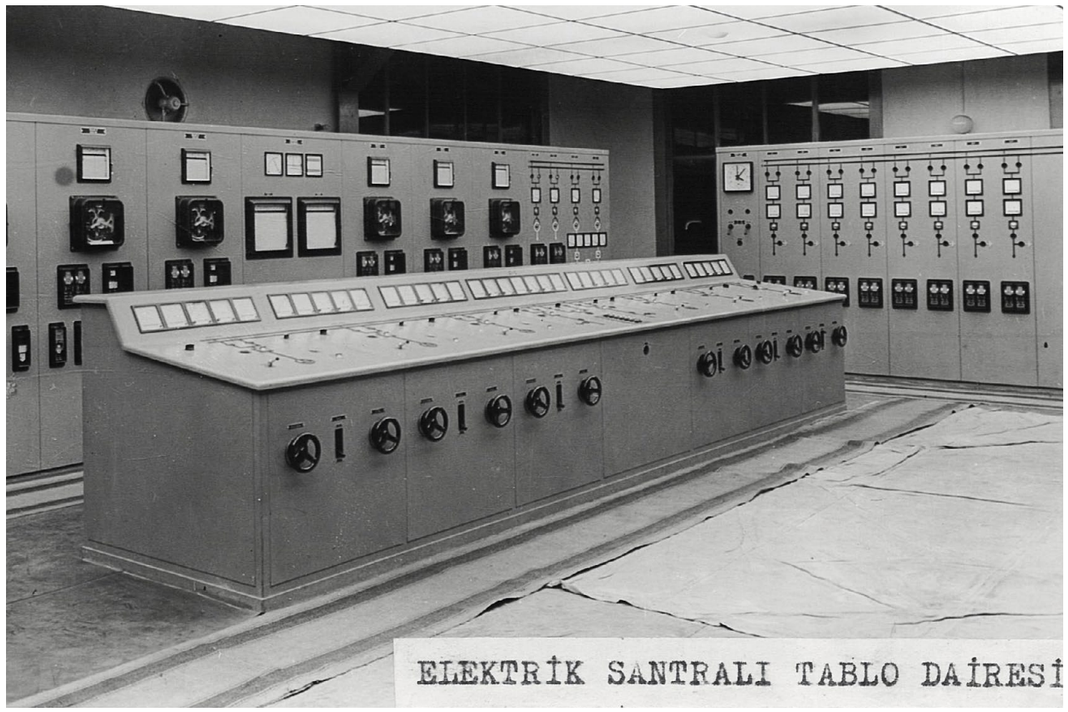


Fig 81: Control Room, Izmir Power Plant

Fig 81: Suha Tarman Archieve, Apikam



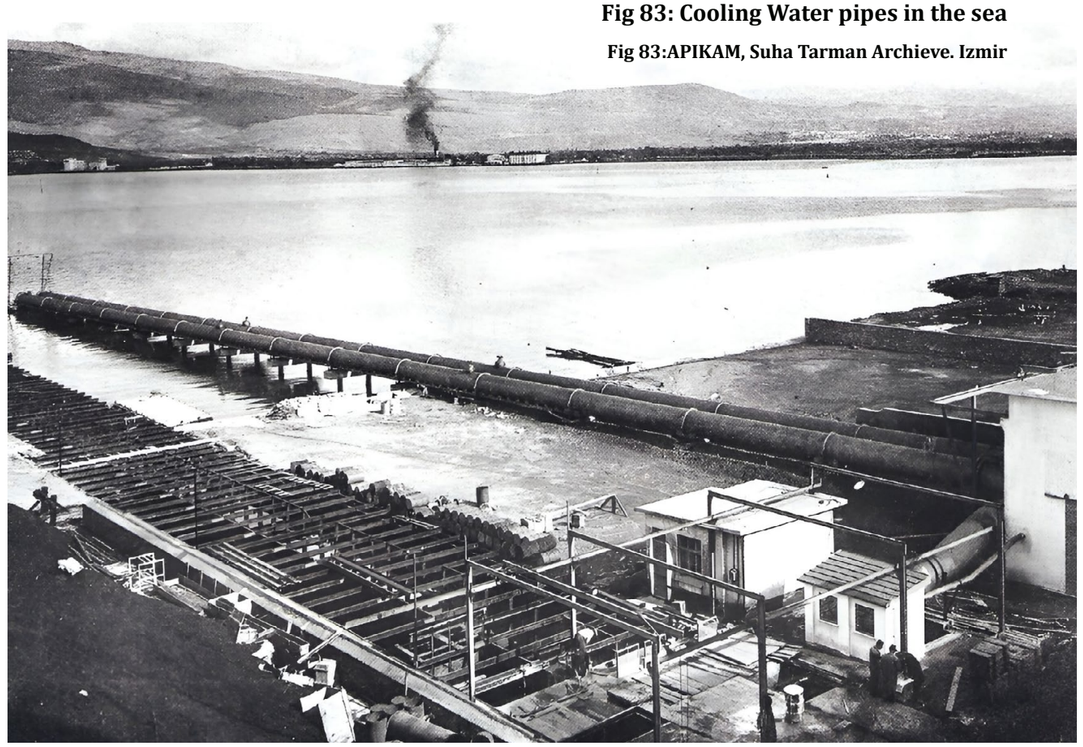
1. Main Production Hub
2. Administration Units
3. Turbine Room
4. Smithery
5. Transformer Hub
6. Changing Rooms
7. Dining Room & Services
8. Guardroom
9. Checker Room
10. Storage I
11. Oil Depot
12. Dyeworks and Canpentry
13. Storage Units
14. Transformer Unit
15. Cooling Water Canals
16. Well
17. Water Absortion Canals
18. Coal Yard

Fig 82: Function Distribution of Ground Floor

Fig 82: Drawn by Author

Fig 83: Cooling Water pipes in the sea

Fig 83:APIKAM, Suha Tarman Archieve. Izmir



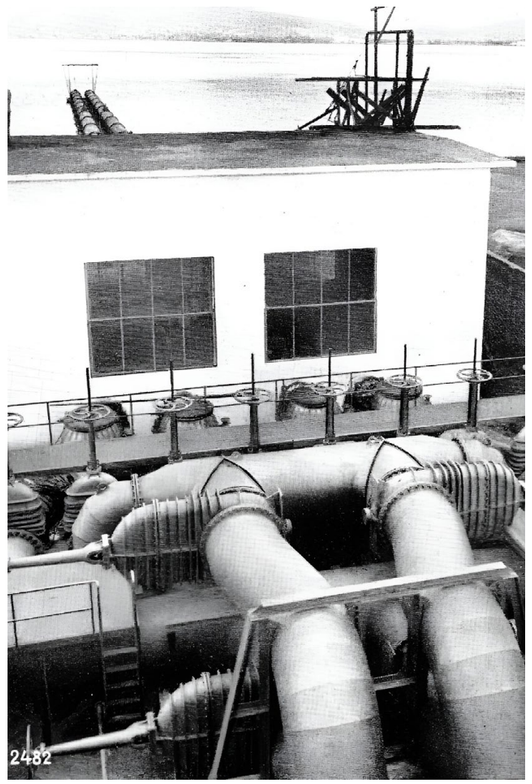


Fig 84: Collector and Pump room

Fig 84:APIKAM, Suha Tarman Archieve. Izmir

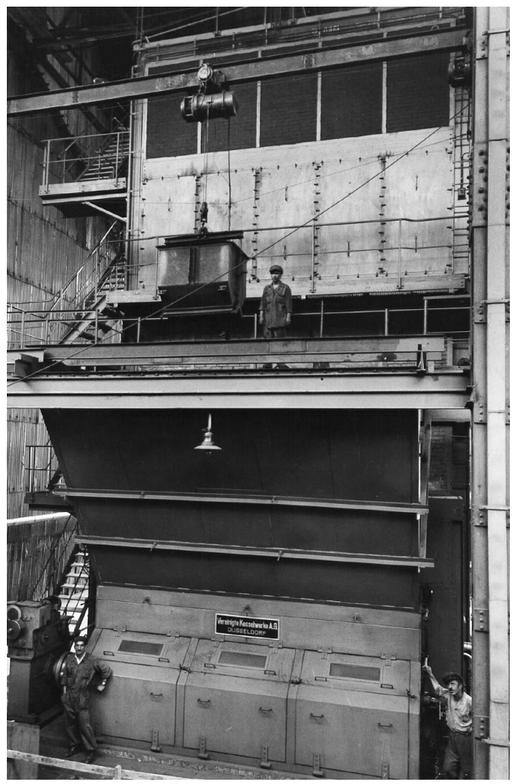


Fig 85: Movable Crane in the third block

Fig 85: APIKAM, Suha Tarman Archieve. Izmir

1. Boilers
2. Control Room
3. Administration Units
4. Machiene room
5. Platform
6. Machiene room
7. Dining Room & Services
8. Guardroom
9. Checker Room
10. Storage I
11. Oil Depot
12. Dyeworks and Canpentry
13. Storage Units
14. Transformer Unit
15. Cooling Water Canals
16. Well
17. Water Absortion Canals
18. Coal Yard

Fig 86: Function Distribution of First Floor

Fig 86: Drawn by Author

Fig 87: Pump Room, Izmir Power Plant *Fig 87: APIKAM, Suha Tarman Archieve. Izmir*

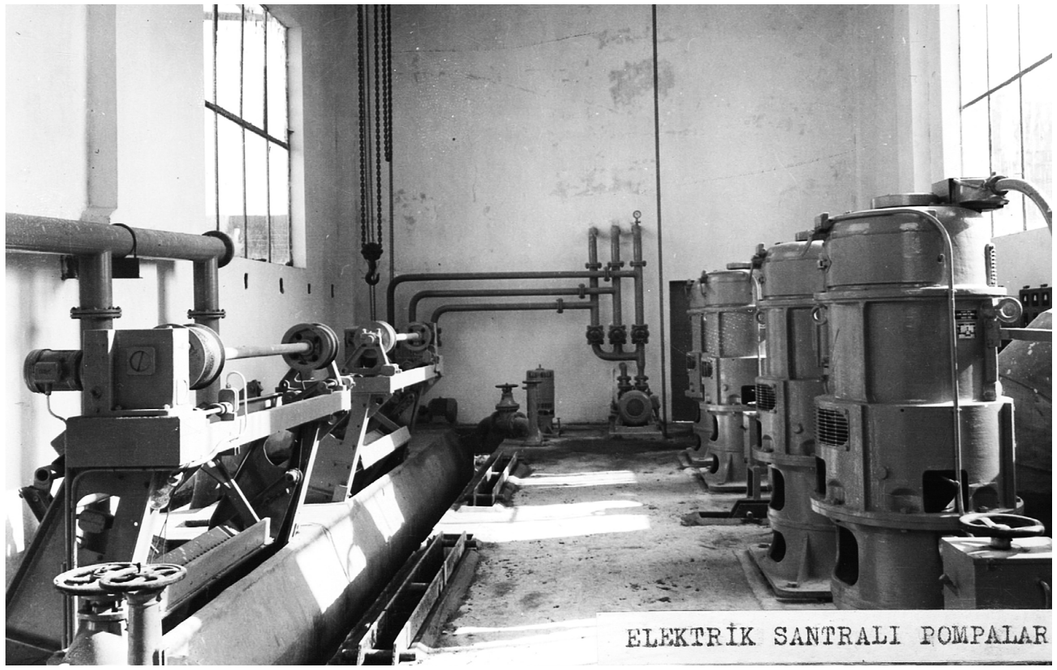
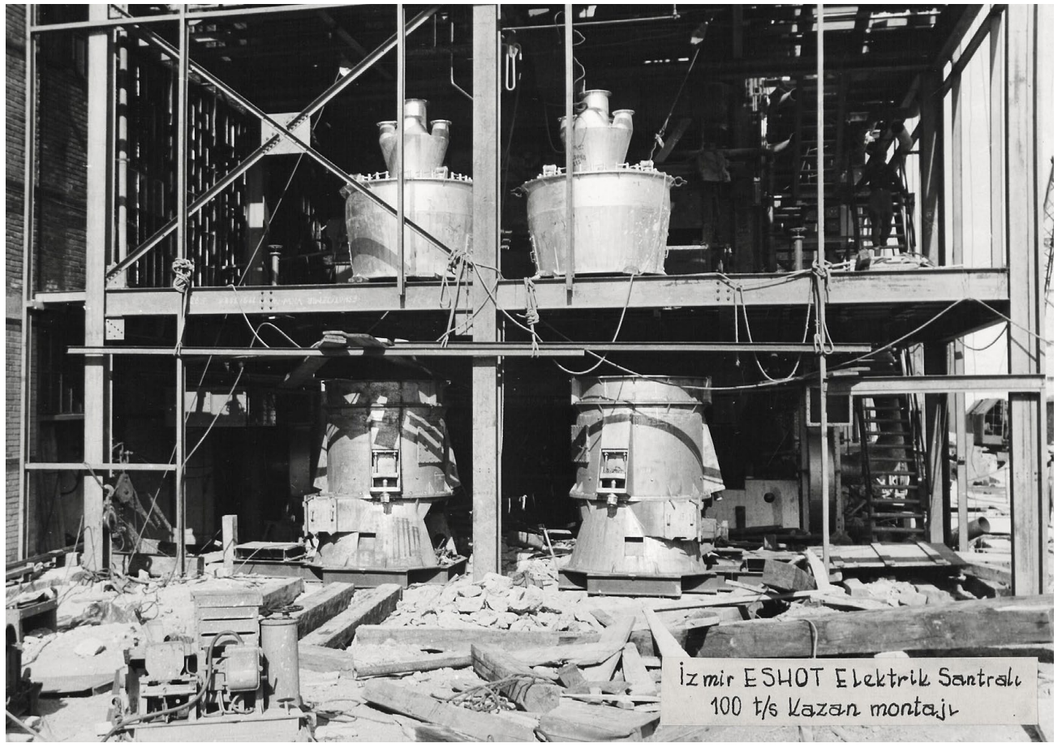


Fig 88: Boiler Installation *Fig 88: APIKAM, Suha Tarman Archieve. Izmir*



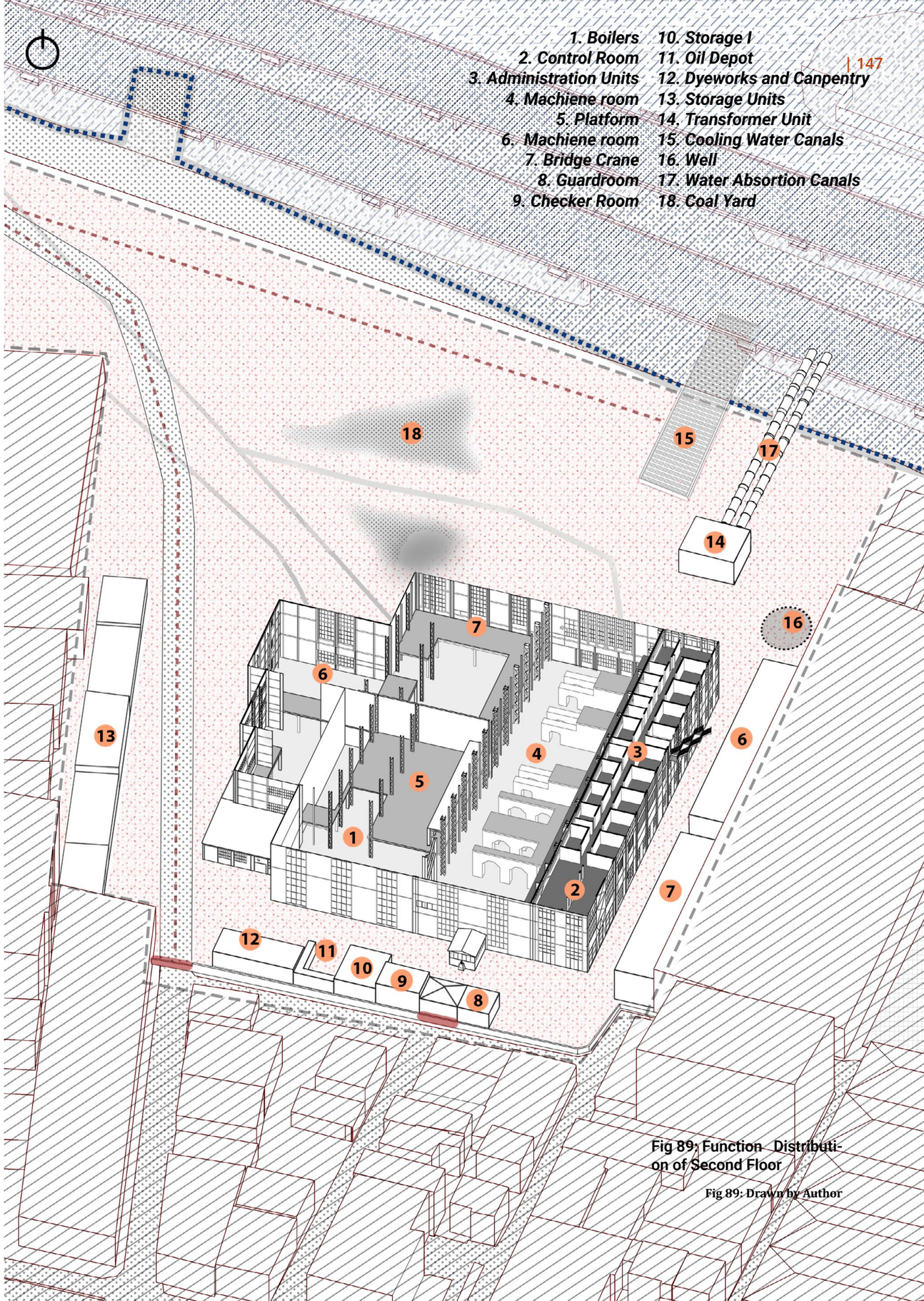


Fig 89: Function Distribution of Second Floor

Fig 89: Drawn by Author

+ The Factory - Current State

to the southwest of the building, which have the same supporting system, there is a forge and a workshop.

The building's facades are distinguished from other industrial structures in the area by the brickwork grids formed by the structural system elements and the strip windows created by removing some of these grids. The varying heights of the blocks that make up the building contribute to the dynamic appearance of the facades. The northern and southern facades are identified by triangular gables formed by the roof.

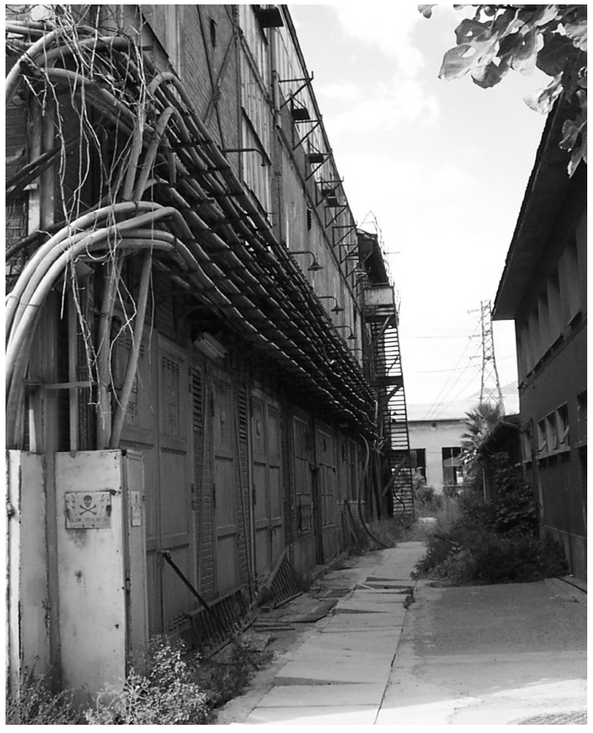


Fig 90: East Wall- Cable Distribution

Fig 90: APIKAM, Suha Tarman Archieve. Izmir

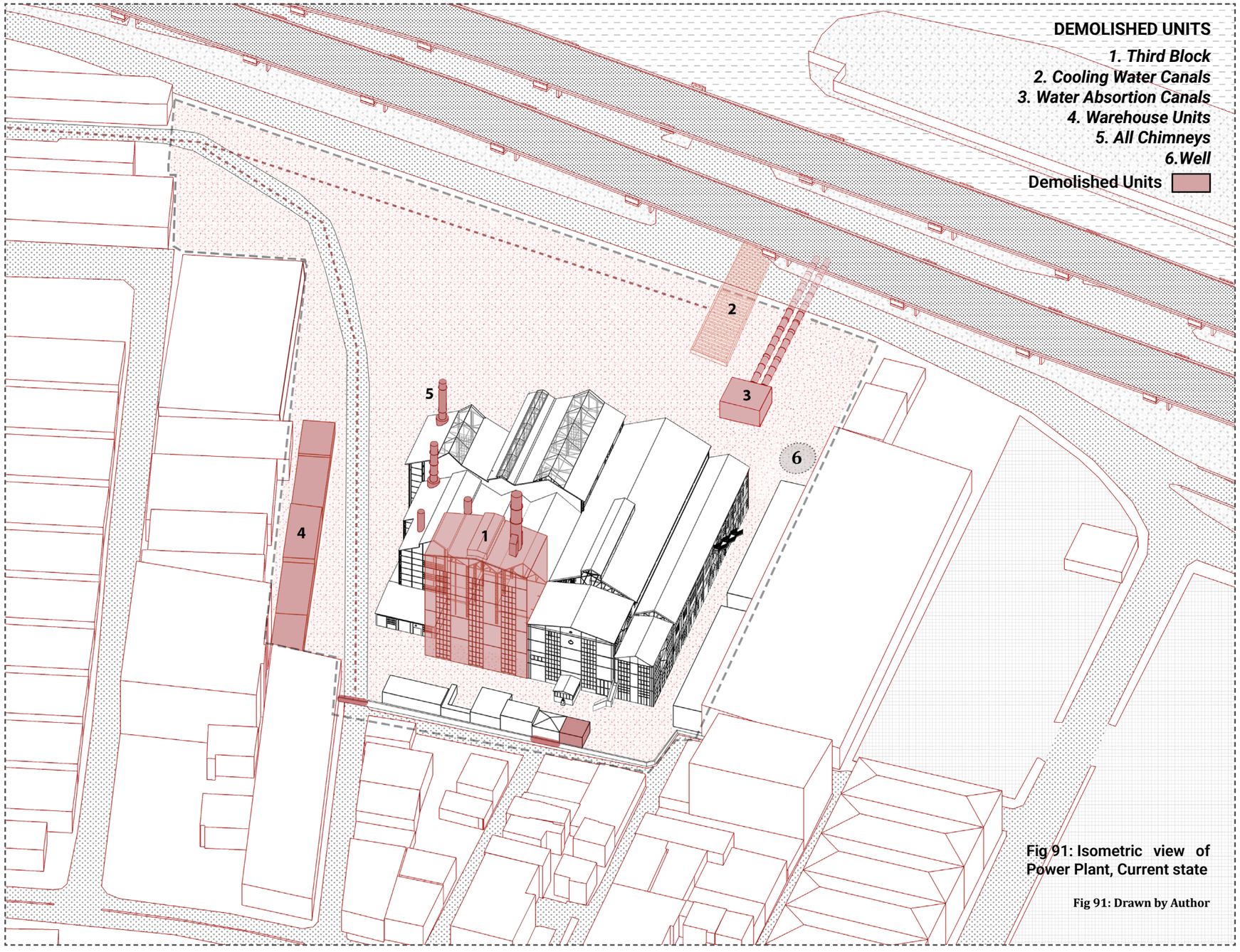
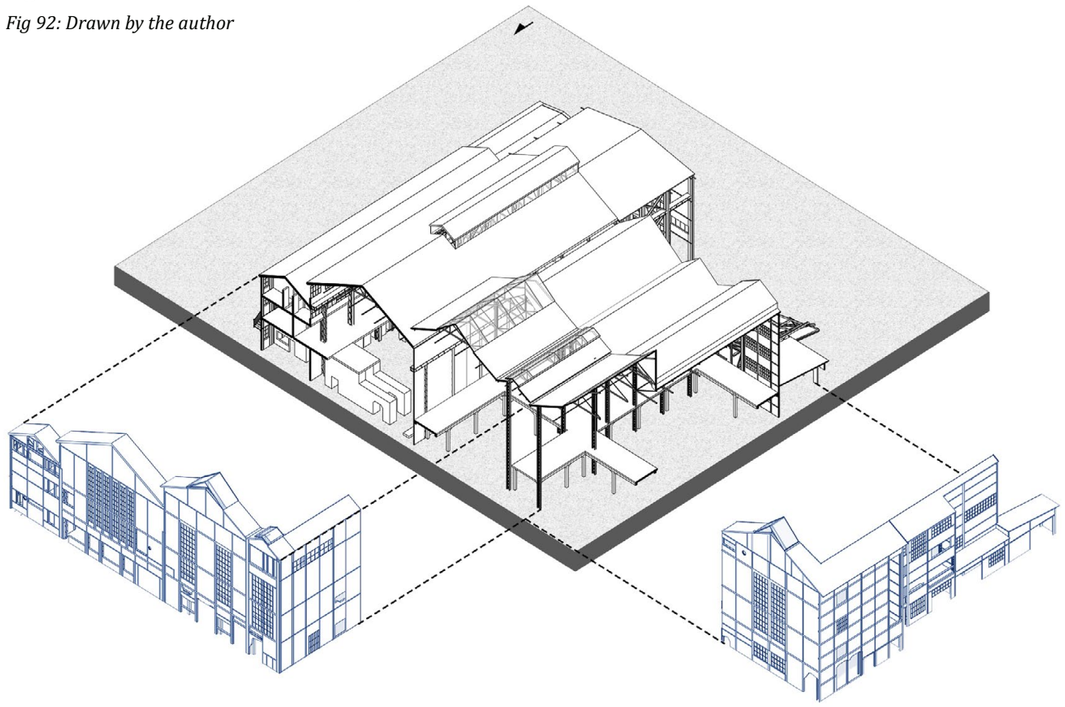


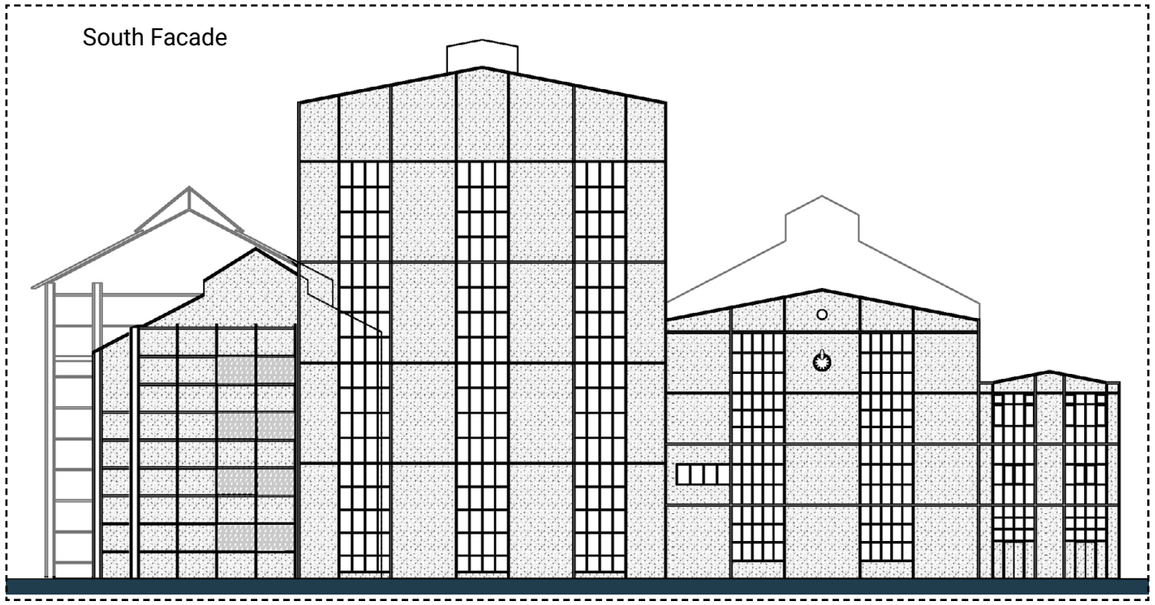
Fig 91: Isometric view of Power Plant, Current state

Fig 91: Drawn by Author

Fig 92: Isometric View of the Factory

Fig 92: Drawn by the author





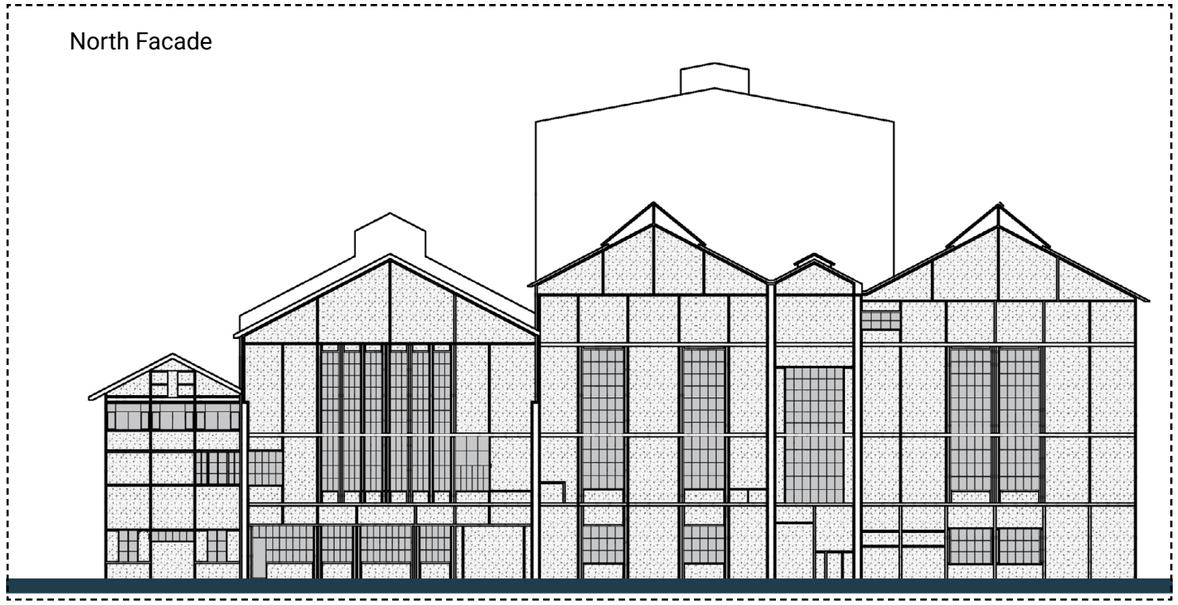
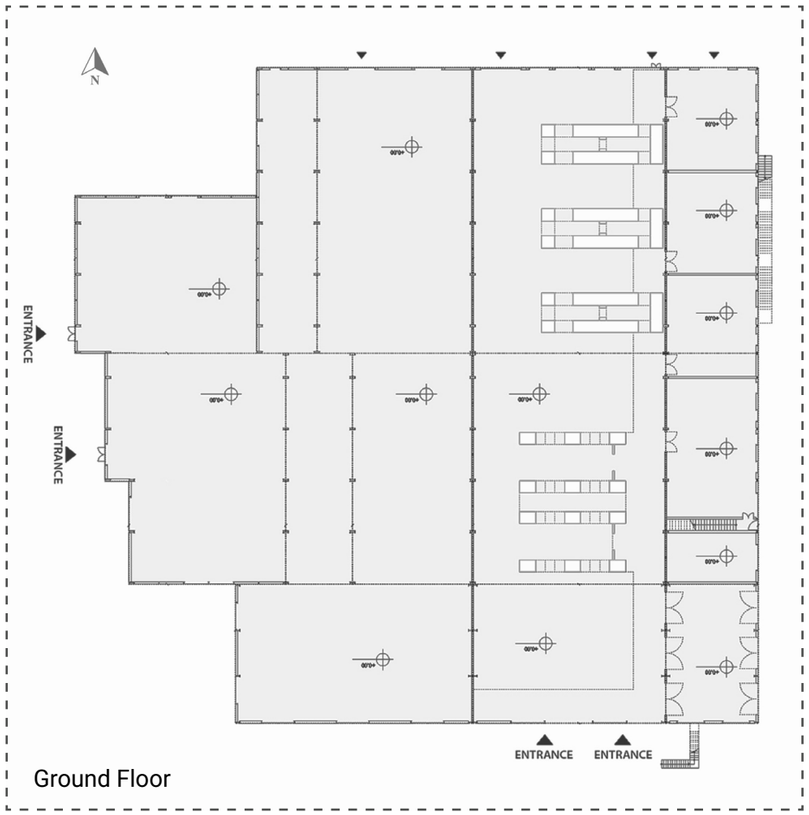
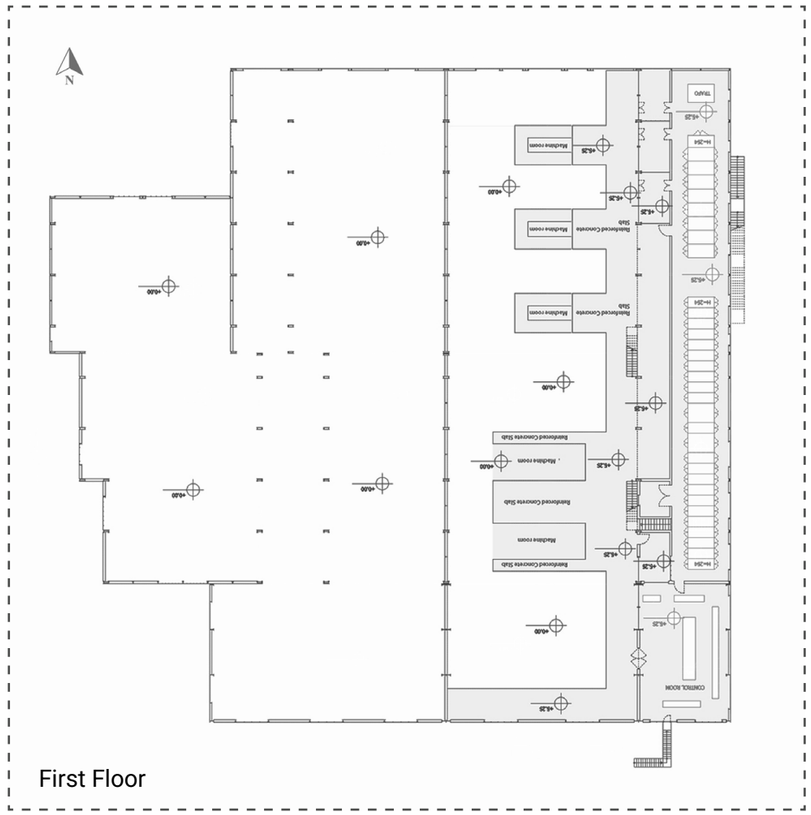


Fig 93: Power Plant, Facade Elevations

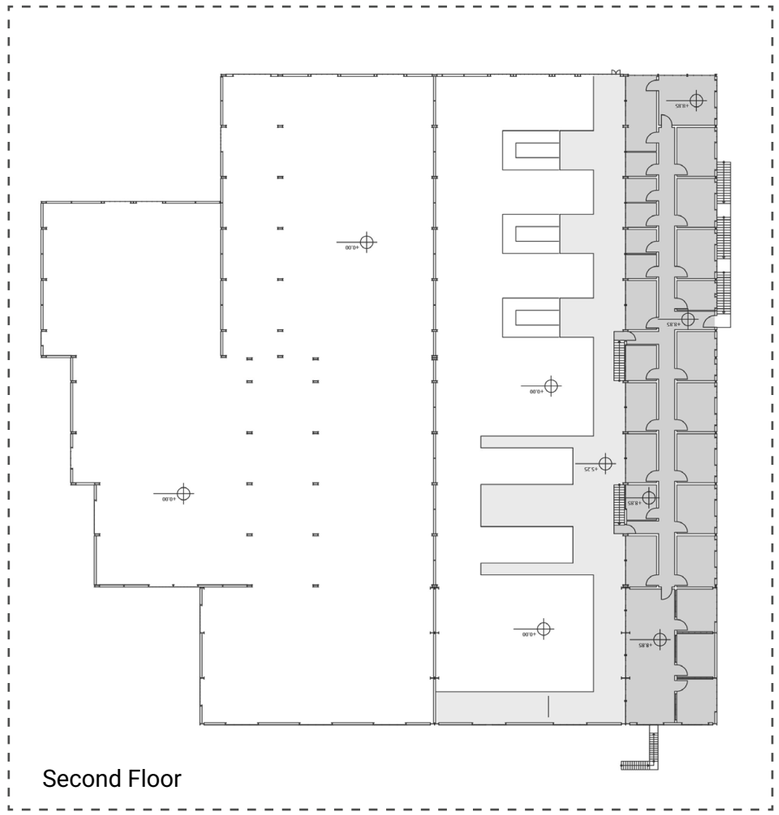
Fig 93: Suha Tarman Archieve, APIKAM (drawn by Author)



Ground Floor



First Floor



Second Floor

Fig 94: Power Plant, Floor plans

Fig 94: Sekerci, Yaren & Ormecioglu, Hilal. (2020). Yakın Tarihin Onemli Bir Endustri Mirası Olarak Izmir Tarihi Elektrik Fabrikası. 38-43. (drawn by Author)

3.4 Waiting Through Bureaucracy: Institutional Processes

The factory, which began operations on October 18, 1928, was transferred to the Izmir Municipality in 1943 and was later affiliated with the ESHOT General Directorate. As Izmir's electricity demand increased, electricity from the interconnected system began to be used in 1957. The plant was nationalized when it was transferred to the Turkish Electricity Authority (TEK) in 1971 (Kokturk, 2015). The facility, which ceased operations in 1989, has remained unused.

On January 8, 1998, by decision number 7003, the Cultural and Natural Heritage Preservation Board certified the following industrial structures as Cultural Assets that need to be preserved: the Gasworks Factory (1860), the Electric Factory (1928), the Sumerbank Factory, and the Sark Sanayi Factory (1885). With this decision, the Preservation Board also designated several examples of civil architecture in the same area as Cultural Assets that need to be preserved, and some trees and tree groups as Natural Assets that need to be preserved. Despite the Protection Board's decision, Izmir Metropolitan Municipality filed a lawsuit with Izmir 2nd Administrative Court under case number 1998/93, seeking the annulment and suspension of this decision. [52]

During the litigation process, the court ordered an expert examination of the area. The expert report found that the decision to register the old industrial buildings and some examples of civil architecture as cultural assets was appropriate and correct. On October 14, 1998, Izmir 2nd Administrative Court, based on the expert report, rejected Izmir Metropolitan Municipality's request for annulment. The court ruled that the registration of the cultural assets was in accordance with the law and public interest. As a result of this decision, the old industrial buildings and some examples of civil architecture in the Alsancak Port Hinterland Area were saved from complete demolition. The urban planning scheme proposed by Izmir Metropolitan Municipality was rendered unfeasible and invalid. On December 16, 1998, the Chamber of Architects requested that the municipality revise the urban plan to reflect the registration decisions for the Port Hinterland Area. However, during the approximately two-year period of assessment and registration work, significant damage occurred to the Electricity Factory, the Gasworks Factory, and other industrial buildings. [53]

Although the electricity factory was officially registered in 1998 (IKBISMA, 2018), a fire occurred on March 7, 1998, during unauthorized demolition and dismantling activities. The fire started when a spark from cutting scrap metal with a torch ignited the building's roof, causing significant damage to the factory. [54] The brick wall on the southern part of the third section was mostly destroyed by the heat, and some of the steel structural elements have turned into scrap. Unfortunately, the factory's four chimneys have not survived to the present day. Some of the machinery from the factory still remained inside the structure, while others are thought to be in the storage of museums belonging to Koc Holding. [55] Despite the lack of maintenance or repair work on the building after the fire, it has managed to stand until today.

[52] Cumhuriyetin Bir Tanı ı Alsancak Elektrik Fabrikası, Hasan Topal, 1999.
[53] Bal, E., Altınors, A., Do mus, O.E., 2005. Kente Yon Veren Aktorler Temelinde Izmir Yeni Kent Merkezi Nazım Planı. Ege Mimarlık Dergisi 2005/1 (53), 32-36

[54] IKBISMA, Izmir Konak Municipality Department of Urban Planing and Development Archive, 2018
[55] https://indigogiller.blogspot.com/2012/07/48-yl-onceki-Izmir-elektrik-fabrikas.html

Fig 95: Izmir New City Center Master Plan (Izmir Metropolitan Municipality, 2005) edited by author

Fig 95: Oner, Asli & Pasin, Burkay. (2015). Emerging Towers in Bayraklı: Sustainability as a Branding Strategy or a Tool for Local Development. Buildings. 5. 834-859. 10.3390/buildings5030834.

In response, the Izmir Chamber of Architects submitted a report on the Electric Factory to the candidates for Izmir Metropolitan Municipality Mayor in March 1999, prior to the local elections. The Chamber recommended that, if elected, the candidates incorporate the Electric Factory into the city's cultural life. In the March 1999 local elections, Ahmet Piristina was elected as the Metropolitan Municipality Mayor. During his term, the policy of planned urban development became dominant in the city's practices.

On September 16, 1999, the Conservation Board decided that the building should be urgently protected and secured, and that a restoration project should be drawn up and submitted to the board due to its significance as Izmir's first electricity factory and its architectural importance.After these developments, the 1/1000 Scale Alsancak Port Hinterland Area and Salhane District Implementation Zoning Plan approved on May 13, 2011, designated the factory's location, Parcel 3535 block 6, as a "Special Project Area" with a building condition of TAKS: 0.50 and KAKS: 1.50. [56] However, no improvement works were carried out on the building complex.

In the following years, the Alsancak Electricity Factory and its area were included in the privatization scope. Then, the industrial complex and its land were put up for auction in January 2018, but the sale was temporarily halted due to interventions by Izmirmod4 and various organizations. Despite the requests and demands from the Izmir Chamber of Architects, the Privatisation Administration of the Ministry of Treasury and Finance decided to proceed with the auction of the Izmir Alsancak Electricity Factory on April 16, 2019. The factory and land were re-auctioned along with other properties in Eskisehir and Zonguldak by Ankara Natural Electricity Production and Trade Inc., as announced in the Official Newspaper on January 10, 2019.

In the local elections in 2019, Tunc Soyer was elected as the Mayor of the city. In his campaign program, Soyer had expressed the intention to make the Electricity Factory available for the city's cultural use. As a result, the historical electricity factory was privatized through a public auction held on April 16, 2019. The Izmir Metropolitan Municipality was awarded the auction for the factory and ultimately purchased the Izmir Alsancak Electric Factory for 35,000,000 TL. [45] The purchase of the factory by Izmir Metropolitan Municipality and its retention in public ownership was positively received by concerned city stakeholders. There was a strong expectation for the factory to be quickly restored and integrated into the city's cultural and public life.

In summary, the Historical Electricity Factory, which was once owned by Izmir Municipality as a public institution, was transferred to the Turkish Electricity Authority (TEK) through legislative changes. Following the fragmentation of TEK, it became the property of Ankara Dogal Elektrik Uretim ve Ticaret A.S. under privatization policies. Eventually, through the privatization sale, it was reacquired by Izmir Metropolitan Municipality for 35 million Turkish liras.

[56] Izmir New City Center Master Plan Report, 2003

Fig 96: Protests againts privatization of the Factory, Izmir (2019)

Fig 96: https://www.konak.bel.tr/haber/baskan-mutludan-elektrik-fabrikasi-icin-ortak-mucadele-cagrisi-3433

Fig 97: Protests againts privatization of the Factory, Izmir (2019)

Fig 97: http://www.Izmir.bel.tr/tr/Haberler/tarihielektrikfabrikasi-nin-ihalesini-Izmir-buyuksehirbelediyesialdi/39562/156

In other words, the Historical Electricity Factory located in the Alsancak Port hinterland, which was once under Izmir Municipality's ownership half a century ago, has returned to the ownership of Izmir Metropolitan Municipality. Reflecting the industrial building technology, characteristics, and spatial design of its construction period, and having played a significant role in the city's economic, social, cultural, and spatial development during its operational years, the factory has been a subject of discussion for nearly a quarter-century. The initiatives for returning the industrial complex to public use and integrating into the city represents a significant development in terms of preservation of the historical industrial complex.

Fig 98: Newspaper showing factory protests against to privatization

Fig 98:https://www.emo.org.tr/genel/bizden_detay.php?kod=122703&tipi=5&sube=7

"HARAÇ MEZAT SATTIRMAYIZ"

Tarihi Elektrik Fabrikası'nın haraç-mezat satılmasına İzmirliler olarak izin vermeyeceklerini dile getiren EMO İzmir Şb Bşk. Uğurlu, arazinin 'Korunması Gerekli Kültür Varlığı" olarak tescilli olmasına vurgu yaptı

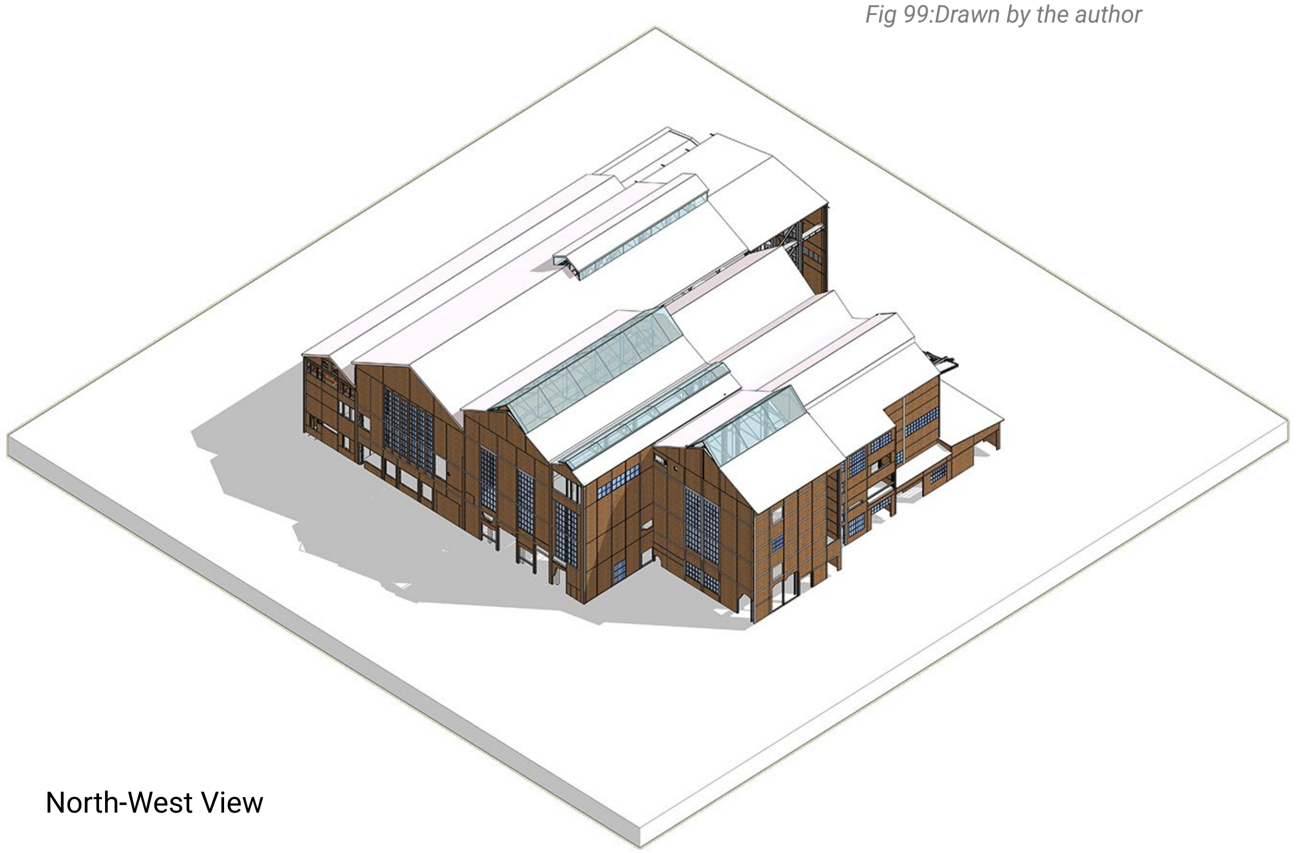
Sanayileşme tarihi

"İzin vermeyeceğiz"

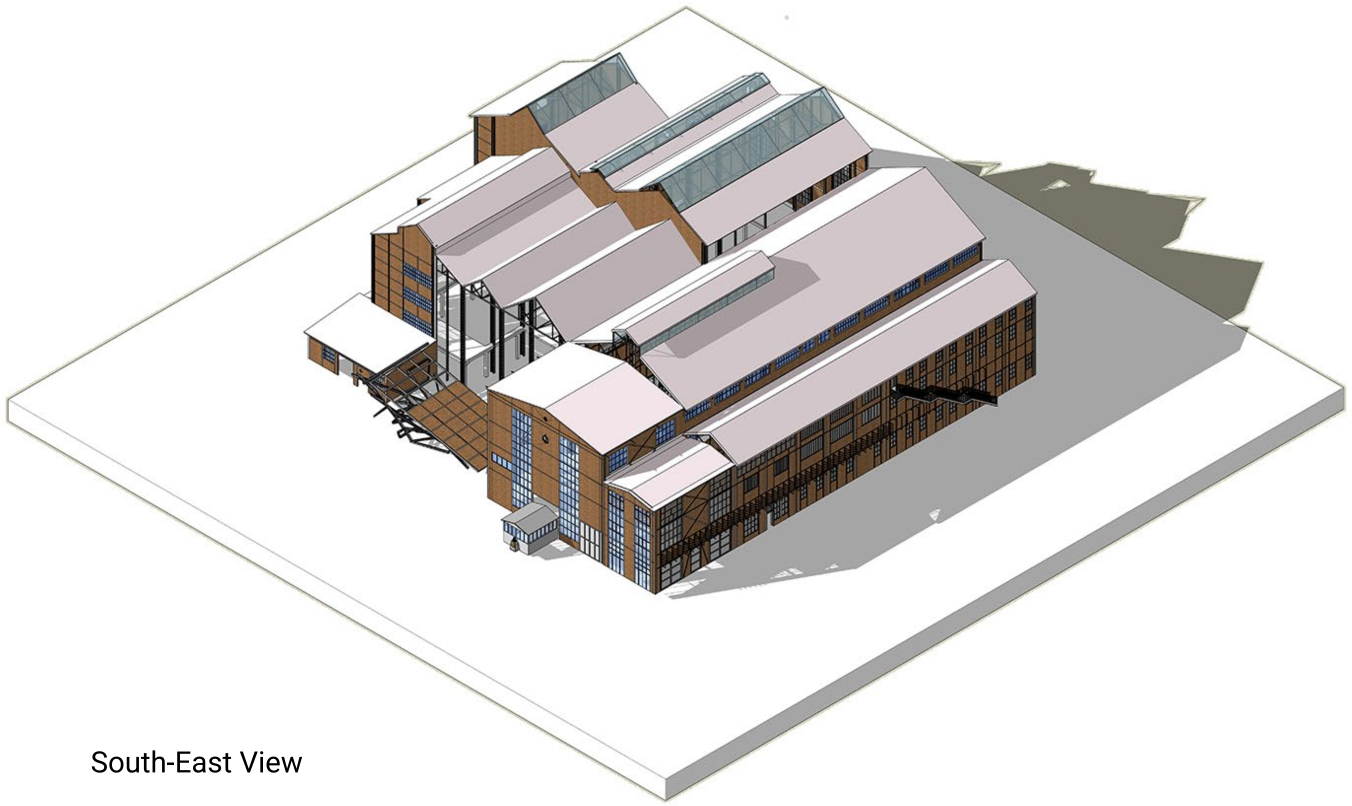
3.5 Notes from the Field: Observations

Fig 99: Isometric Views of the Factory

Fig 99:Drawn by the author



North-West View



South-East View

Exterior Photographs

Fig 100: Factory vehicle entrance gate

Fig 100: Photograph is taken by author during site visit

Fig 101: Factory worker and pedestrian entrance gate

Fig 101: Photograph is taken by author during site visit

Fig 102: Factory vehicle entrance, 1505 Street

Fig 102: Photograph is taken by author during site visit

Fig 103: Factory, Demolished third block

Fig 103: Photograph is taken by author during site visit

Fig 104: Factory, Southern Facade

Fig 104: Photograph is taken by author during site visit

Fig 105: Factory, Southern block demolished section

Fig 105: Yagiz Soysal, 2019

Fig 106: Factory, Northern Facade

Fig 106: Yagiz Soysal, 2019

Fig 107: Factory, Northern block and Movable Crane

Fig 107: Yagiz Soysal, 2019

Fig 108: Factory, West Facade

Fig 108: Photograph is taken by author during site visit

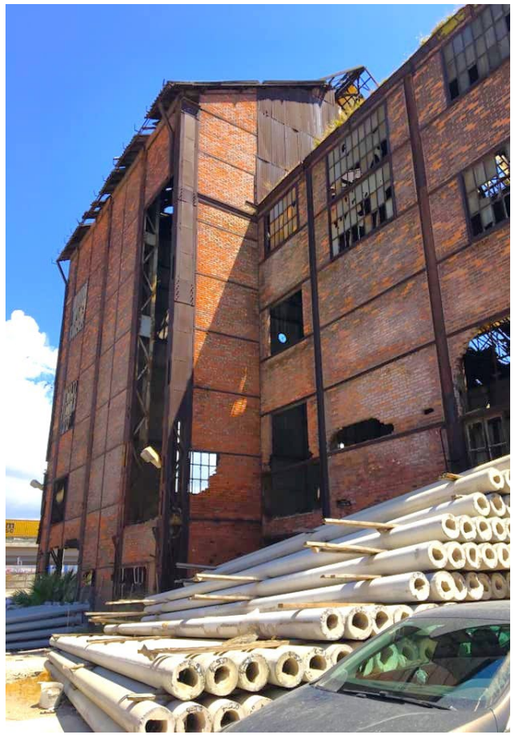


Fig 109: Factory, fourth bock

Fig 109: Photograph is taken by author during site visit

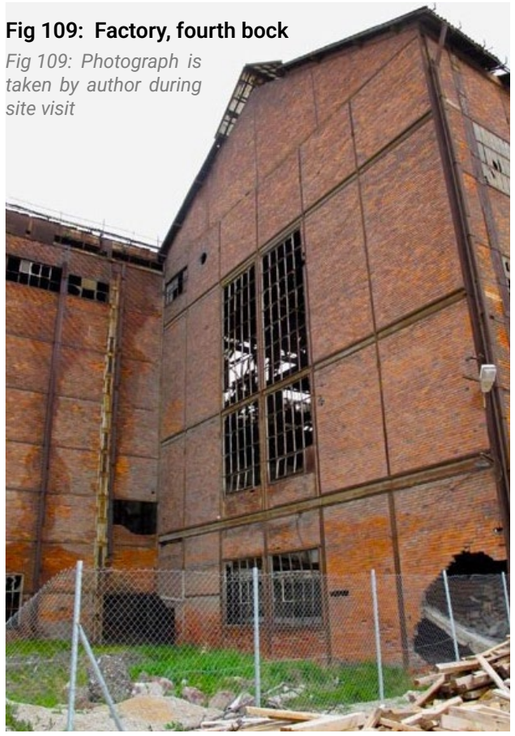


Fig 110: Factory, North Facade

Fig 110: Photograph is taken by author during site visit

Fig 111: Factory, North Facade

Fig 111: Yagiz Soysal, 2019

Interior Photographs

Fig 112: First Floor, Panel Room

Fig 112: Yagiz Soysal, 2019

Fig 113: Ground Floor, Machine Hubs

Fig 113: Yagiz Soysal, 2019

Fig 114: First Floor, Control Room

Fig 114: Yagiz Soysal, 2019

Fig 115: Second Floor, Third Block

Fig 115: Yagiz Soysal, 2019

Fig 116: Second Floor, South Block and Movable Crane

Fig 116: Yagiz Soysal, 2019

Fig 117: First Floor, Control Room

Fig 117: Yagiz Soysal, 2019

Fig 118: Second Floor, The lift

Fig 118: Yagiz Soysal, 2019

Overview

During World War II, Izmir gained significant importance not only as an export harbor but also as a major industrial production city within the scope of industrial developments. The city's demand for electrical energy has continually increased. The developing industry brings spatial and structural changes to Izmir's factories, transportation, and warehouse facilities. Wide-span industrial buildings constructed with steel roof trusses and steel structures have a distinctive identity in the city's silhouette (Simsek, 2006).

The city is a pioneer in public services and is the third city in Anatolia to receive electricity, following Istanbul and Tarsus. Electrical production in Izmir began in 1905 with modest generators. However, due to economic and political challenges during World War I, the city did not have access to an electrical factory or lighting infrastructure until 1928. After improvements in the industry, electricity becomes a symbol of modernization since it allows for the illumination of modern cities, and the structures of the facilities where it is produced represent modern construction techniques. Thus, electricity and power plant structures emphasize the city's modernity image while reflecting its technological advancement.
The factory, which began operations in 1928, is located at a significant point where the city's railway lines and port area are situated. In the port hinterland district where the electricity factory complex is built, there are many industrial buildings established during the Late Ottoman, Early Republican, and Republican periods. This area reflects Izmir's modernization process alongside its industrial revolution. While gasworks and flour mills represent the last examples of the pre-mechanization era, the power plant became one of the most important symbols of the city's modernization period with the emergence of mechanization. On the other hand, the Sumerbank Print Factory and the Taris Alcohol Factory, established during the Republican era when large industrial complexes began to spread, illustrate the transformation of individual factory buildings into industrial complexes over time.

On the other hand, the historical electric factory which is located in the alsancak port hinterland distinguishes itself and stands out among various industrial buildings with some specific features. These features can be examined under three main headings; Architectural identity and uniqueness of the building, the role and significance in the context of technological history as well as impact and importance on cultural and social life.

The Izmir Electricity Factory has made its way through time, with a unique architectural identity; it has a different view compared to other buildings in the area. It is not like balcony railings in this view, and its window openings also span the long height of the building.
Akyurtlakli noted that it is one of the first examples of the "Machine Aesthetics" that appeared in Turkey and in Europe. [57] The factory has an area of about 3500 square meters, with a maximum height of 30 meters that meets all the needs regarding the mechanical equipment. (Kokturk et al., 2015). [58] Between the establishment of Turkey's first electric factory in 1910 and 1932, when fifty-three electric factories had been built in Turkey, some of these factories used steel roof trusses. [59] Yet, of this number, only four factories - namely, Izmir Electricity Factory - employed a fully steel supporting system. The prefabricated steel structures have been laid upon the reinforced concrete base since 1927.

In addition, it is different from other power plant construction of its time in being superior and distinctive in terms of the technical equipment used during production and the capacity of the establishment's production. Electric factories of this era were usually water turbines or diesel engines, and as of 1932, only two thermal plants had been established: Silahtaraga Electric Factory in Istanbul and Izmir Electric Factory. An electric plant with this uniqueness is indeed precious.

Izmir Electric Factory was the second-largest power plant in total turbine capacity after Silahtaraga Electric Factory among the electric factories constructed during this period. Moreover, from a technology perspective, it stands out as it produced its electricity from lignite coal; hence, it was the first electric plant in Turkey to generate energy from such a source. [60] The factory was neither faced with the post-Second World War import challenges as diesel power plants were, since it ran with locally abundant lignite material.

[57] Akyurtlaklı, Sinan; Çaylan, Didem; Pogun, Yuksel (1999); Olanaklar; Ege Mimarlık Dergisi, 31. Sayı, 37-417.

[58] Kokturk, Gulden; Akkurt, Humeyra Birol; Tokuc, Ayca (2015); Yenilenebilir Enerji Alanında SosyalBilincin Arttırılması; ISEM: Izmir Yenilenebilir Enerji Muzesi; Dokuz Eylul Universitesi Muhendislik Fakultesi Fen ve Muhendislik Dergisi, cilt:17, no:3, sayı:51, ss:191-200, Izmir

[59] Isikpinar, Hasan Halet (1932); L'Industrie Electrique et le Ressource Motrice de la Turquie; Tsitouris Fr res, Istanbul

[60] Artel, Nurettin (1976); Elektrik Enerjisi Uretiminde Komur; Elektrik Muhendisligi Dergisi, Sayı: 232, 183-193 ss

4. SEEING THE WHOLE: A THEORETICAL PERSPECTIVE

Fig 119: Santral Istanbul, 2020 (edited by author)

Fig 119: https://www.santralistanbul.org/tr/hakkinda/

4.1 Industrial Heritage in Turkey: Conceptual Framework and Recognition

The Emergence of Industrial Heritage

Industrialization has significantly changed urban skylines through accelerating the urbanization of the rural world. Previously at the outskirts of cities, factory complexes were increasingly incorporated into developing urban agglomerations, subsequently losing their original functions. Toward the conclusion of their economic life, the structures were more or less abandoned and fell into disuse. However, some buildings retain their physical integrity and possess excellent potential for adaptive reuse.

From the 1960s and 1970s, the industrial society and heritage culture began to be reconsidered from different perspectives. At the close of the 20th century, rapidly developing information and communication technologies transformed intervention policies in the cities and their peripheries, targeting again the re-use of industrial sites.

As such, the industrial heritage ideology moved to center stage, particularly during and after industrialization in industrial nations, to the effect of perennial contestation regarding what is understood as heritage and broadening the conceptual framework beyond time (Alfrey & Putnam, 1992). As such, various definitions and connotations of industrial heritage have thus followed.

In global scholarship, former industrial locations are typically studied under optimized categories of brownfields, industrial heritage, industrial archaeology, industrial landscape, and heritage industry. Such notions encapsulate the cultural, historical, technological, and social significance of industrial structures, rendering them topics for disciplinary inquiry across fields from architecture to engineering, history, and archaeology. Industrial heritage, therefore, is a broad, inter-disciplinary topic that requires collaborative research and concerted management action.

The word has its roots in the United Kingdom during the latter half of the 20th century, as a response to the increasing threat to industrial complexes—particularly those which had been developed most fervently with the Industrial Revolution. It was more of a cultural and emotional reaction towards the destruction of old industrial complexes, rather than scientific inquiry. The origin of the concept lies in an interest in technological progress and in recognition of the physical, built forms of industrial culture.

Industrial heritage has been the concern of various civil society organizations in consideration of their preservation of industrial heritage. Tanyeli (2000, p. 50) [61] describes industrial heritage broadly as the cultural heritage encompassing specialized architecture of the production of goods and services by mechanical means. Industrial heritage resources, as defined by Kıra (2001), are also movable cultural property (such as machinery and tools) and immo-

[61] Tanyeli, U. (2004). stanbul 1900: Konutu ve Modernlesmeyi Metropolden Okumak. stanbul: Akın Nala Kitapları.

vable property (such as industrial buildings and landscape). Although typologically diverse, these considerations combined make up the material basis of industrial heritage.

The phrase industrial archaeology was first used by British historian Michael Rix in his 1955 lecture, Industrial Archaeology. Rix advocated the exploration of industrial monuments for the promotion of their continued relevance and preservation. Industrial archaeology is an interdisciplinary endeavor today that explores the physical remains of past industrial productive activities, expanding the traditional heritage and archaeology to include the preservation and adaptive reuse of modern industrial structures.

Historian Buchanan characterizes industrial archaeology as a field that has an interest in the record, on-site study, and preservation of industrial monuments. It is an interdisciplinary pursuit at the confluence of technology and the built environment, and it comprises elements of the history of technology, archaeology, architectural history, sociology, and heritage conservation.

These type of historical structures represents the social and cultural values of the period while these structures were being constructed. Neil (1999) expresses that Industrial structures and complexes are important cultural referents for urban communities. Not only do they reflect the architectural and cultural situation during their time, but they also represent collective memory and shared experience that transcends nostalgia. Similarly, Geijerstam (2006) views industrial landscapes as cultural heritage that function as symbols, metaphors, points of attachment, and sources of historical identity for people and societies.

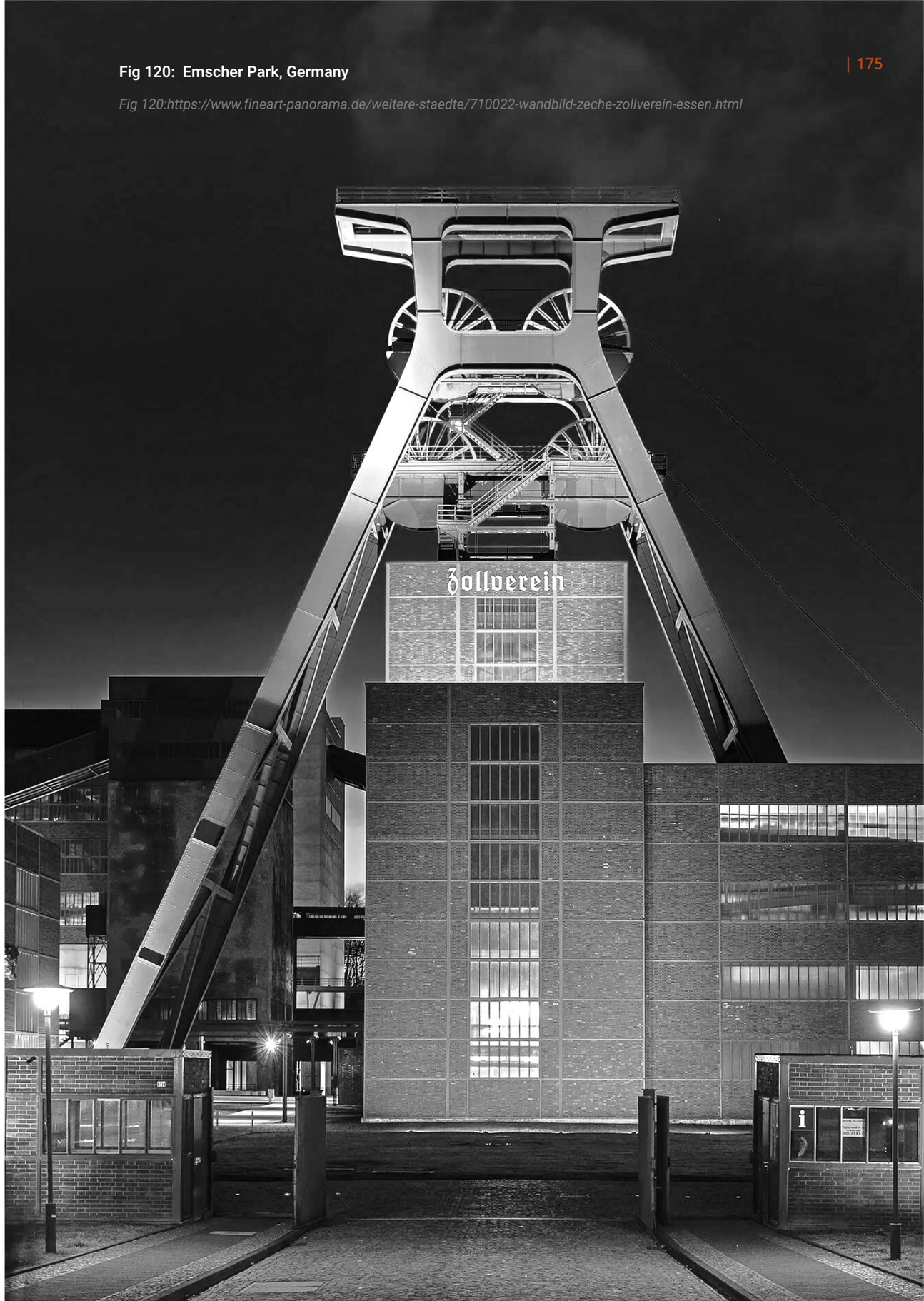
Since the Industrial Revolution, industrial buildings have become central to modern architectural heritage due to their modernist architectural ideals, functionalist aims, and associated social infrastructure. Contemporary conservation and adaptive reuse policies aim to preserve such buildings both for cultural significance and potential use today.

Industrial heritage is vestiges of industrial culture with historical, technological, social, architectural, and scientific importance. They include production and processing buildings; machines, workshops, mills, factories, and mines; depots and commercial buildings; buildings related to the production, transmission, and consumption of energy; transportation systems and infrastructure; and social buildings such as housing, worship, and education (www.ticcih.org, n.d.).

Production artifacts (i.e., boilers, steam engines, cranes, extractors, condensers) form the essence of science and industry museums. The architectural items of industrial heritage are further stretched to encompass engineering ones like canals and bridges, otherwise referred to as technical heritage.

Fig 120: Emscher Park, Germany

Fig 120:https://www.fineart-panorama.de/weitere-staedte/710022-wandbild-zeche-zollverein-essen.html



A New Perspective on Industrial Buildings: Conservation Initiatives

The construction of the concept of 'industrial heritage' is in fact rooted in efforts to prevent loss and damage—a preconditions for conserving. While the origin of industrial heritage has typically been linked with the acquisition and appreciation of machinery and industrial equipment sparked by technological interest in the late 19th century, its actual birth is more aptly linked to the post–World War II urban renewal movements in European towns. At that point, proposals for mass demolition of factory structures brought public demands fWor their preservation (Altınoluk, 2000, p.7).

In 1987, the Council of Europe gave primary measures for industrial building preservation:

* The policies were to be based on the multi-disciplinary nature of the industrial heritage concept.
* Legal and financial mechanisms must be put in place in support of preservation.
* Business archives must be saved.

* European-level coordination is to be encouraged.
* Industrial heritage should be studied in depth at the university level.
* Detailed inventories of locations of industrial heritage should be prepared for undertaking.
* Countries must share the expense of maintaining large industrial establishments.

At first, industrial heritage preservation leaned mainly on voluntary and private endeavors. With time, these actions became institutionalized, and already established national heritage organizations started on surveys, recorded data, and ultimately built institutions devoted to industrial heritage.

Several international organizations have played significant parts in advancing identification, conservation, and assessment of industrial heritage. Among the most influential of these are the International Council on Monuments and Sites (ICOMOS), the European Route of Industrial Heritage (ERIH), and the International Committee for the Conservation of the Industrial Heritage (TICCIH). In 2006, ICOMOS defined industrial heritage in the following terms:

> "Industrial architecture, large-scale agricultural complexes, foundries, mines, railway stations, and other industrial heritage are indicators of workplaces and factories, of the same sacred nature as religious places and, in most instances, rated first residential buildings" (ICOMOS, 2006).

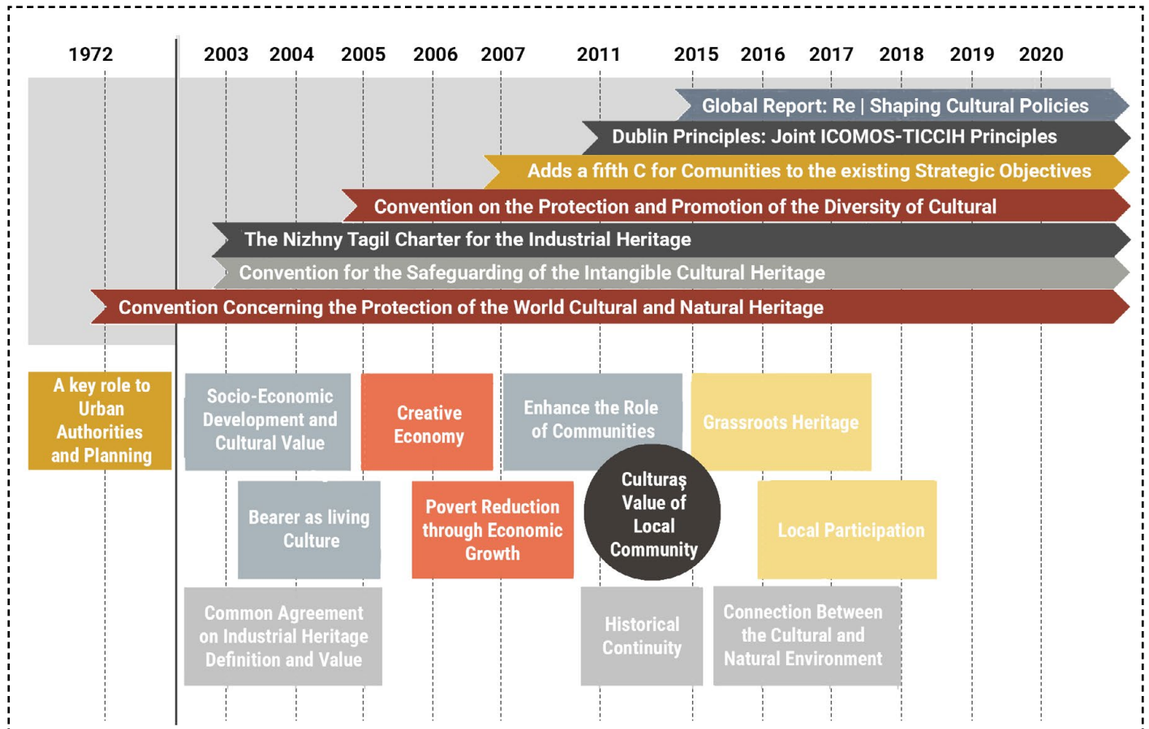
The initial international acknowledgement of industrial heritage occurred with the inscription by UNESCO, in fulfillment of its cultural and social mandate under the direction of the United Nations, of many industrial sites to the World Heritage List. These include the Ironbridge Gorge of the UK, and the Zollverein Coal Mine Industrial Complex, which was inscribed in 2001 (www.icomos.org, n.d.). [62]

TICCIH has served as an official advisory committee to ICOMOS since 2000, reflecting the integration of TICCIH's industrial heritage specialization into the broader cultural heritage activities of ICOMOS. TICCIH's scope of interest is the physical legacy of industrial production since the Industrial Revolution through to the present day, including factories, workshops, mines,

[62] ICOMOS. (1999) The Burra Charter: The Conservation of Places of Cultural Significance.

Fig 121: Schema of Industrial Heritage Conservation, TICCIH (edited by author)

Fig 121:https://heritage-beijing-2022.epfl.ch/ticcih-2022-congress-industrial-heritage-reloaded/



transportation systems, workers' housing, and industrial landscapes. To further these aims, TICCIH has developed principal international standards and principles. Most prominent among them are the Nizhny Tagil Charter (2003) and the Dublin Principles (2011). The Nizhny Tagil Charter goes on to define industrial heritage as:

> "Cultural remains of historical, technological, social, architectural, or scientific value, ranging in scale from individual machines to entire industrial cities."

A case in point is Ivrea, an Italian town that was inscribed on the World Heritage List in 2018 as a "20th-Century Industrial City." The significance of this type of heritage was elaborated further by TICCIH:

The buildings and structures built for industrial purposes, the processes and machinery run in them, and the landscapes and towns in which they are found, along with all their tangible and intangible manifestations, are of outstanding importance" (TICCIH, 2003).

One of the most significant institutions aimed at raising awareness of industrial heritage, showcasing exemplary projects, and developing cultural tourism is ERIH (European Route of Industrial Heritage), established in 1999. ERIH spreads the view of industrial history as a valuable cultural asset and encourages its revaluation and appreciation from this perspective.

Rediscovering Turkey's Industrial Legacy

Industrialization efforts initiated in the late Ottoman period were still constrained by capital shortages, inadequate technical infrastructure, and dependence on foreign materials. Such efforts were mostly small-scale investment confined to urban commercial centers like Istanbul and Izmir (Quataert, 1999). [63] This modest industrial foundation was lost to the nascent Republic of Turkey in 1923, which wanted to build it up by policy-directed growth as part of a broad goal at economic self-sufficiency.

From the Republic's earliest years, industrialization was not only desired as an economic development strategy but also as a constituent component of modernization and nation-building. In the centralized planning and state-led development paradigm, the industrial complexes being built during this period were strategic production sites that were being developed to further national self-sufficiency. Public investments, particularly in the form of the First and Second Five-Year Industrial Plans in the 1930s, were directed at industries like textiles, iron and steel, sugar, and chemicals. These projects, other than their economic relevance, were also equated with modernity in the fields of architecture and space (Boratav, 2007). [64]

Subsequent policy shifts in the economy in the post-1950 era resulted in functional obsolescence for the majority of industrial buildings. The introduction of a private-sector-led growth model under the Democrat Party and the following neoliberal restructuring from the times after 1980 resulted in privatization or closure of several state-owned factories (Keyder, 1993). Unplanned urbanization, technological obsolescence, and shortage of investments in these times caused numerous industrial buildings to come idle and remain abandoned city districts (Gunay, 2005).

By the 1990s, consciousness in Turkey of the cultural and historical significance of factory buildings was on the rise. Such heightened consciousness led to international and national organizations taking part in the conservation and reassessment of industrial heritage.

The national committee of ICOMOS in Turkey, originally established in 1965, began functioning in 1974 as a half-official ministry council. Its activities were legalized with the introduction of a permanent regulation in 1992, which is still valid today. Initially concentrating on conventional heritage buildings, ICOMOS Turkey broadened its activity in the early 2000s to cover industrial heritage, in cooperation with the programs of TICCIH. Since the foundation, ICOMOS Turkey has been a platform that provides interrelation and knowledge sharing between public institutions, academics, and professionals who are involved in the conservation and interpretation of both industrial and traditional heritage. [65]

Industrial heritage consists of structures and sites such as factories, workshops, and warehouses that arose following the Industrial Revolution and are of historical, technological, architectural, social, and economic significance. ICOMOS Turkey offers the scientific studies needed for sustainable use and conservation of such locations, is involved in the development of the restoration criteria, and emphasizes the value of industrial heritage to urban planning and development and expands the scope of discussion on cultural heritage.

Early Republican industrial architecture came to be understood not only as an indicator of economic progress but also as an indicator of modernization in architecture and social change (Aslano lu, 2001; Tanyeli, 2004).[66] Consistent with this, several industrial buildings were recognized as heritage structures and preserved through adaptive reuse as museums, culture centers, and exhibition halls (ICOMOS Turkey, 2006).

This belated appreciation of industrial heritage was the beginning of a broader recognition of conservation in Turkey. It acted as the basis for policy-making and academic discourse that reassessed these buildings both in terms of collective memory and architectural value. High-profile examples such as the Sumerbank textile factories, sugar plants, and Etibank complexes have all become important locations of adaptive reuse projects and now have different uses within the urban collective memory (Erkut & Altaban, 2003). Some of these projects have served as good models, contributing to further initiatives within the industry.

Nevertheless, Turkey's initiatives for the restoration and re-use of industrial heritage are faced with a myriad of challenges. The next section will elaborate extensively on problems and challenges of preserving and renovating industrial heritage in Turkey.

[63] Quataert, D. (1999). Sanayi devrimi a ında Osmanlı imalat sektoru (2. baskı). letisim Yayınları.

[64] Boratav, K. (2007). Dunya Ekonomisi ve Turkiye: 2007 Gozlemleri. Mulkiye Dergisi.

[65] ICOMOS. (2013). Turkiye Mimari Mirası Koruma Bildirgesi, (http://www.icomos.org.tr)

[66] Aslano lu, R. A. (2000). Kent, Kimlik ve Kuresellesme, Asa Kitapevi, Bursa

Fig 122: Hasanpasa Gaswork Museum, Istanbul / Turkey

Fig 122:https://aposto.com/s/gazhane

4.2 A Heritage or a Burden? Challenges in Turkish Industrial Heritage

Although the principles of conservation and reassessment of cultural heritage require tailor-made protection for each heritage building, they are no exception for industrial heritage. The industrial building to be conserved is chosen based on historical, cultural, and architectural values. The approach to reassessment depends on the conservation problems of industrial heritage. The disregard for historic industrial buildings as heritage, and the lack of particular approaches to this type of heritage, lead to severe conservation problems. This study discusses conservation problems under three main headings at an urban scale: architectural, landscape, and urban.

Urban Scale Problems

Industrial heritage buildings exist in rural and urban settlements. These industrial buildings interact with their context until they cease to operate or lose their use, and they maintain this interaction as heritage buildings afterward. [67]

- Inner city industrial heritage buildings are important as they have large landscapes. These industrial complexes tend to occupy land with high speculative value, and city development and land speculation place pressure on them.
- Urban industrial areas turn into socially degraded zones after abandonment, and this makes preservation harder because of the social degradation around the heritage buildings.
- The environmental pollution resulting from industrial operations and visual pollution resulting from abandoned and low-quality buildings have negative impacts on the preservation of heritage buildings.
- Another challenge facing the preservation of industrial buildings boxed within inner cities is the heavy traffic and lack of parking spaces, an urban problem at large. Narrow streets brought about by intensive neighboring development restrict access to industrial landscape. In addition, infrastructural inadequacies in the surrounding area pose challenges to preservation.
- Problems of rural industrial heritage conservation are less severe in comparison with those of urban areas, although possibilities for reassessment and reuse are limited by transport issues.
- A root problem in the conservation of industrial heritage is a lack of finance and insufficient initiatives in reassessment.
- Ownership issues pose a series of challenges in conservation. Fragmented ownership of industrial areas prevents overall treatment, and disputes over ownership hold up preservation.

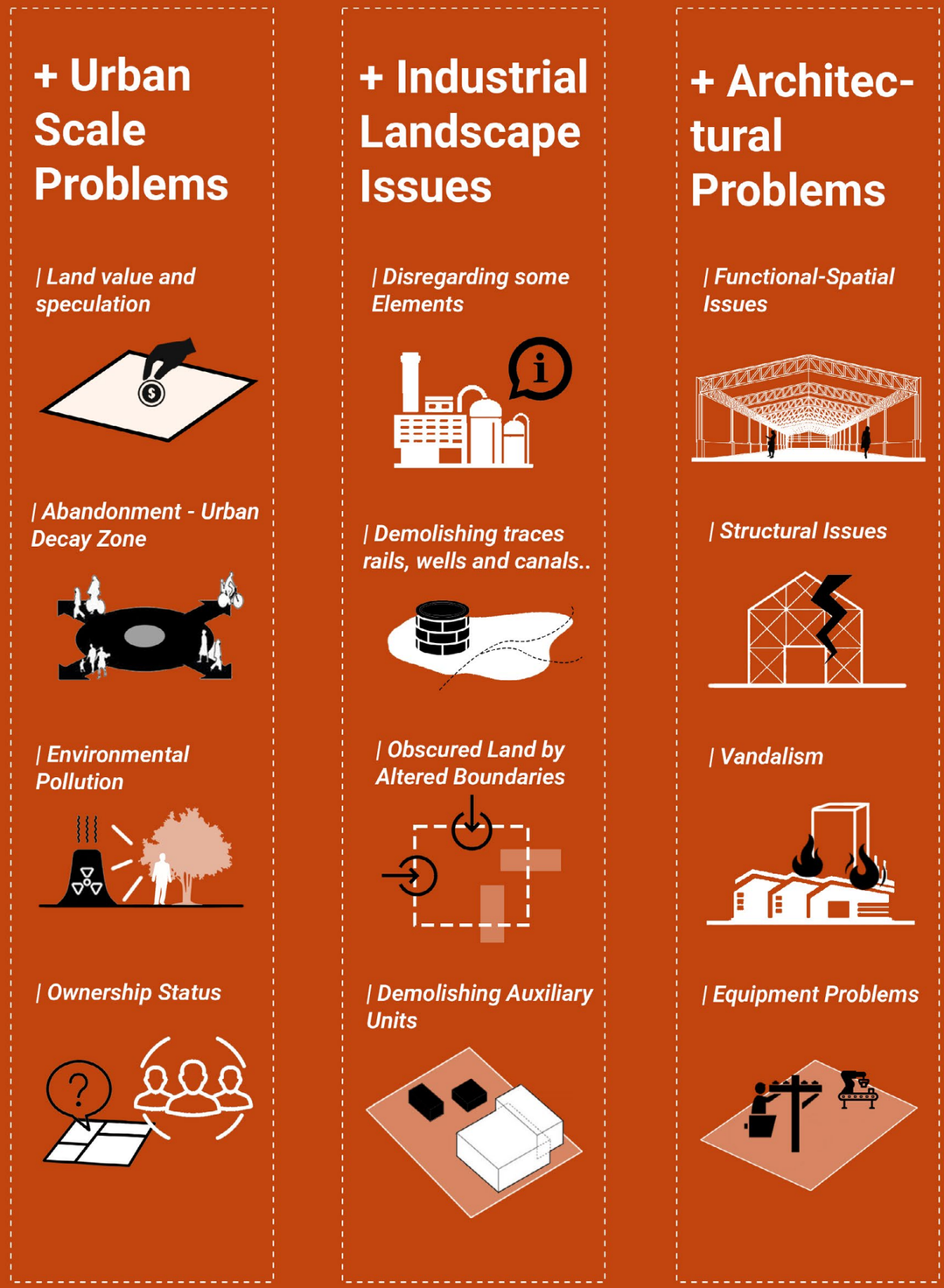
Challenges Related to Industrial Landscapes

Problems Connected to Industrial Landscapes

- The primary issue in the preservation of industrial complexes is the lack of recognition and disregard for the industrial landscape shaped by the production process.

[67] Nart, D. (2015). stanbul'da Endustri Yapılarında Gereklesen Donusumlerin Mekansal A ıdan
[68] rdelenmesi. Yayımlanmamıs Yuksek Lisans Tezi, stanbul Teknik Universitesi, stanbul.

Fig 123: Industrial Heritage Conservation Challenges *Fig 123: Drawn by author*



* There is a preference for preserving architecturally unique buildings, and the other structures that make up the landscape shaped by the production process are regarded as unimportant and are demolished.
- The alterations to the edges and openings of the landscape make the place impossible to define.
- Sociological and technological evidence within the landscape is erased. Details defining the industrial complex—such as signs bearing building names and warning signs for laborers—are removed.
- Topography of the landscape, shaped according to production equipment, is graded for potential applications. Wells are sealed, rails that allowed product mobility are removed, watercourse channels are filled, and ground cover is stripped.
- Parks and rest areas designed for workers' recreation, the intrinsic elements of the complex, are lost due to abandonment.

Architectural Challenges

The architectural conservation problems of the industrial heritage can be classified as functional-spatial, structural, and equipment problems.

Functional-Spatial Problems

- Abandonment is the greatest threat to industrial heritage structures, usually after they have lost their productive use. Original industrial functions are rendered obsolete by technological advancement. For example, with the wider availability of natural gas and electricity, the consumption of town gas declined, and gasworks and gas factories were shut down. With evolving technology, the spatial layout of the industrial buildings became inappropriate and they were left abandoned.
- Industrial heritage buildings are assigned new functions that their spatial qualities cannot sustain. These interventions result in a loss of original spatial qualities, with internal organization disrupted by inserted partitions. [69]
- Prioritizing new functions over the cultural significance of industrial heritage buildings hinders cultural interaction, transmission, and sustainability.
- Maintaining visual unity and traditional aesthetic understanding during conservation is a major concern due to the absence of knowledge and research or familiarity with industrial heritage.
- Authenticity in industrial architecture is a complex phenomenon. Additions and spatial modifications made during the building's functional lifespan to respond to technical innovation are often removed during conservation efforts aimed at reviving "original" architecture, erasing evidence of transformation.

Structural Problems

Structural problems are caused by natural deterioration, human destruction, and the absence of a proficient workforce or proper expertise for the revamping of the building's material and structural system.

- Empty industrial buildings are destroyed by natural elements, especially steel buildings which can collapse.
- Follow-up modifications in use end up destroying the originality and material quality of the load structures, reducing the architectural value.
- Vandalism is another type of man-made destruction common in abandoned industrial buildings.
- Industrial buildings employ materials that are distinct from other conserved buildings, and lack of experience and knowledge regarding how they are to be repaired results in conservation issues that are peculiar to industrial heritage. [70]

Equipment-Related Problems

Industrial production spaces are characterized by their equipment, which is architecturally as well as historically relevant.

- At abandonment, mechanical machinery that is part of production is typically discarded for economic reasons. When historical significance of equipment is recognized, it is removed from its original environment in order to be exhibited in museums.
- Once equipment is abandoned, it deteriorates through lack of maintenance and oxidizes through decay and rust, mostly metal components.
- Shortage of skilled conservationists who are capable of repairing and keeping industrial equipment.

[69] Kariptas, F. S., Erdin , J. E. ve Din er, B. O. (2015). Endustriyel Mirasın Kentlerdeki Kulturel Surdurulebilirlik Kapsamında De erlendirilmesi. 2nd International Sustainable Buildings Symposium (28-30 Mayıs 2015), ss.512-516, Ankara

[70] Saner, M. (2012). Endustri Mirası: Kavramlar, Kurumlar ve Turkiye'deki Yaklasımlar. Planlama, 1-2, 53-66.

4.3 From Vacancy to Vitality: Adaptive Reuse in Theory

Industrial zones that once stood at the edge of cities have subsequently been enveloped by urban growth and are no longer amenable to active industrial use today. Changes in production processes and raw materials, rapid technological innovation, industry relocation outside city limits, and rising land values are among the phenomena that have effectively rendered them obsolete. As companies moved their plants out of the central cities, many industrial properties closed and gradually decayed. Urban transformation—namely the redevelopments of inner-city areas as commercial hubs and the ensuing land scarcity—have further driven this trend. [71]

While such structures often possess robust buildings, their abandonment guarantees that structural decay is unavoidable. Machine removal and dismantling plant systems also compromise their integrity. This calls for sensitive intervention and adaptive reuse strategies.

Fohl (1995) states that it is a worldwide process that aging, polluting facilities lose their function and shut down. [72] Yet, the intentional destruction of these industrial plants—significant both technologically and culturally—is unacceptable. More than machine history is represented in these buildings: they illustrate social, cultural, and economic transformation. Hence, internationally, there is a tendency to preserve and convert such plants.

Roberts and Sykes (2000) note that through comprehensive planning, these distressed inner-city areas are reintegrated into city life, serving contemporary needs and enhancing vitality. With growing heritage awareness, adaptive reuse schemes frequently incorporate cultural and public uses. As Atagok notes, large industrial buildings like factories, warehouses, gasholders, and railway stations now offer ideal spaces for contemporary art. [73]

Increasing numbers of industrial heritage projects today seek to retain cultural identity, collective memory, and continuity for posterity. Machin and Powell (1990) describe some of the advantages of reusing industrial buildings:

* Durability of the building and potential for a variety of reuse situations through upkeep;
* Versatility due to spacious interiors and adaptable sizes;
* Strong strategic sites attractive to an array of types of organizations;
* Easy access to facilities such as transport networks and water sources;
* Existing utilities and few ownership concerns.

Hohmann (1992) organizes intervention strategies in the following categories:

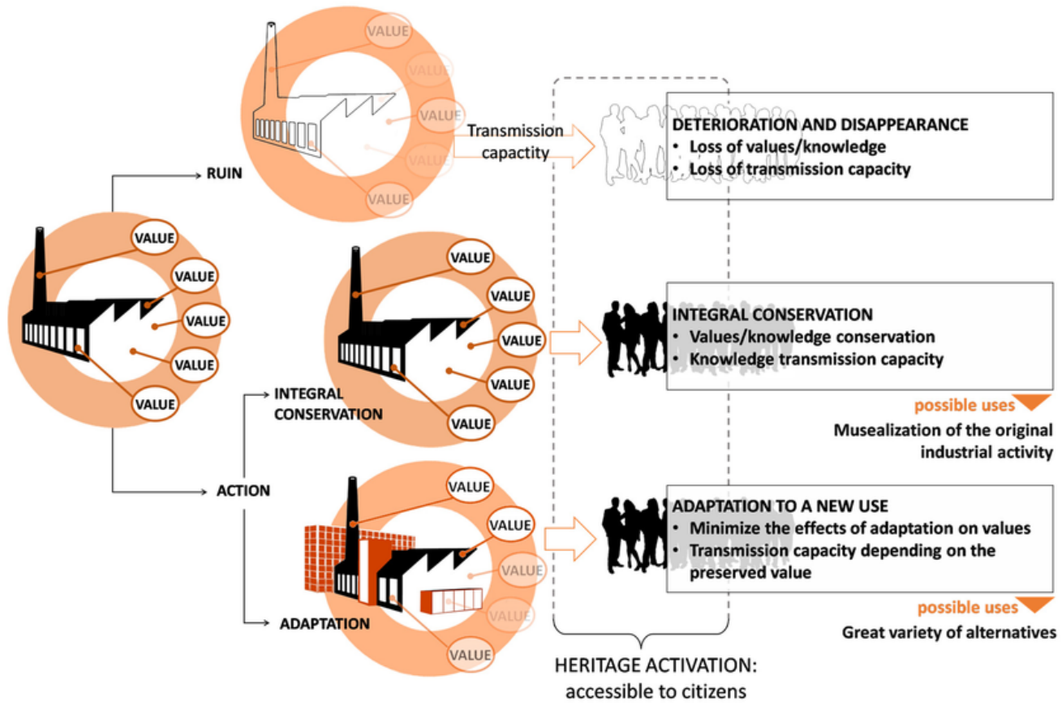
[71] Alpan, A. (2012). Eski Sanayi Alanlarının Yazındaki Yerine ve Endustri Arkeolojisinin Tarih esine Kısa Bir Bakıs. Planlama, 1-2, 21-28.

[72] Fohl, A. (1995). Bauten der Industrie und Technik, Schriftenreihe des Deutschen Nationalkomitees fur Denkmalschutz, Bonn

[73] Atagok, T. (2000). Sanayi Mekânlarından Sanat Mekânlarına, Mimarlık, Sayı: 292, Sf. 7-8, stanbul.

Fig 124: Conservation and Activation of Industrial Heritage

Fig 124:Claver Gil, Juan & García Domínguez, Amabel & Sebastián, Miguel. (2020). Multicriteria Decision Tool for Sustainable Reuse of Industrial Heritage into Its Urban and Social Environment. Case Studies. Sustainability. 12. 10.3390/su12187430.



1. Conservation without modification;
2. Minimum modification with similar function;
3. Conversion to museums;
4. Full adaptive reuse for new uses.

These are followed by successful transformation planning requirements to adhere to the following basic principles:

* View industrial buildings as heritage assets;
* Offer legal protection and comprehensive documentation, handling the site as a whole;
* Retain original equipment and landscape setting intact;
* Adopt a general, master-plan approach to avoid patchwork re-development;
* Utilize strong research led by experts and provide ongoing monitoring (Fohl, 1995);
* Integrate sites into urban transportation networks;
* Prioritize public interest over private interests;
* Secure state funding in order to stimulate interest in areas of industry;
* Design interventions that respect architectural heritage without replication—new additions must harmonize in scale, form, materials, and detailing (Stratton, 2000). [74]
* Be flexible and responsive in terms of function towards long-term sustainability;
* Incorporate socioeconomic factors and foster mixed-use developments;
* Encourage multi-stakeholder engagement, including the local community, authorities, investors, NGOs, universities, and conservation groups from the start.

[74] Stratton M. (2000). Understanding the potential: location, configuration and conversion options, Industrial Buildings Conservation and Regeneration, Michael Stratton (Ed.), London.

Adaptive reuse is a process of recycling urban space that is socio-culturally and physically deteriorating—typically areas that have lost their original use and economic utility—so that it can be made to meet the demands of the present. It typically involves reusing historically or functionally obsolete buildings, thereby helping to maintain cultural heritage as well as attain social and economic benefits. It is also globally acknowledged as a green measure worldwide.

Adaptive reuse is the most appropriate pattern of transformation for conserving and re-evaluating industrial buildings considered as cultural heritage, according to Kıra (2001).[75] Adaptive reuse intends to conserve the building, restore it based on its original and current function, and bring it back to urban life based on modern needs. Industrial heritage buildings are historically reused as cultural places (museums, galleries), educational establishments (universities), or residential units (lofts) (Koksal, 2000). [76]

The driving forces for adaptive reuse can be categorized into three prevailing dimensions, i.e., cultural, environmental, and economic. It is born culturally through the recognition of industrial buildings as heritage assets that have to be saved and passed on to generations to come (Altınoluk, 1998). As soon as the surrounding environment of an industrial zone changes, the need for conversion and reuse then spontaneously emerges. There are other benefits, such as using less energy and recycling previous materials during renovation.

For Severcan and Barlas (2007), conservation and recycling of industrial heritage is important due to the following reasons:

* Redevelopment of central or waterfront industrial space can stimulate high amounts of social, cultural, and economic activity;
* Due to their size, industrial structures can be repurposed into industrial parks or technology museums in the open air;
* Their load-bearing capability allows for a wide range of uses, with cultural being very promising;
* Preservation of symbolic or monumental industrial buildings reaffirms collective memory and sense of belonging and identity;
* They are likely to possess unique architectural features for their era, so their reutilization is important to heritage preservation and public ownership.

Stratton highlights the significance of typological diversity in adaptive reuse:

* Single-story industrial buildings are suitable for industrial reuse, educational purposes, or storage;
* Multi-story industrial buildings are more suited to office or residential conversion;
* High ceilings accommodate space for contemporary technological installation;
* Open floor areas and extensive column spans are conducive to flexibility in design.

In the same way, horizontally extended buildings (e.g., factories, markets) are suitable for cultural functions, while circular and vertical buildings like silos, water towers, or gasometers can be transformed into specialized functions like observatories or diving schools (Koksal, 2000). According to some scholars, it is believed that the new function should coincide with the original one in order to provide conceptual continuity (Altınoluk, 1998).

Redevelopment of industrial buildings—previously the “production spaces” of the city—is evaluated on social, economic, and cultural levels to determine that these spaces continue to be significant in their functions. Fohl (1995) criticizes the mode of preserving only the facades of industrial buildings and denuding them of interior fittings, emphasizing the importance of adhering to the basis of conservation principles. One should be cautious not to overlook the spatial, structural, and technical characteristics of the building.

Koksal (2005) explains that irreversible interventions have occurred due to the lack of proper analysis of architectural and technical aspects during reuse. Adaptive reuse has been a process in too many cases rather than being a goal in the context of preservation. Unqualified and rushed interventions, lack of expert supervision, insufficient monitoring, and inadequate checking of suitable new functions are the main reasons for irreversible interventions. [77]

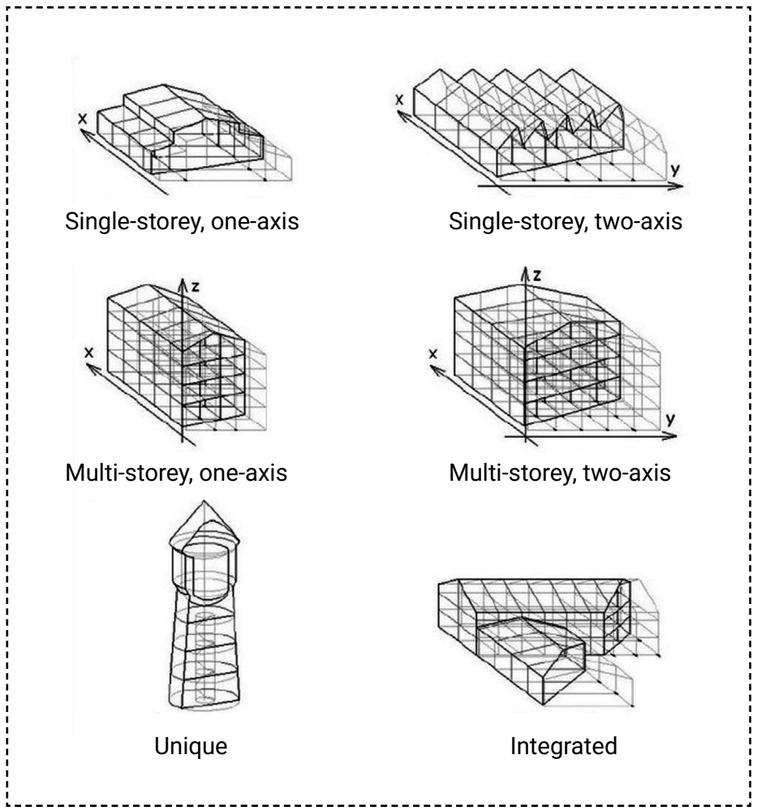


Fig 125: Industrial Heritage Building Typologies

Fig 125:Lepel, A. (2006). Changing the Function of Industrial Buildings-Survey, Series: Architecture and Civil Engineering, Cilt: 4, Sayı: 2, Sf. 71-84.

[75] Kıra , B. A. (2001). Turkiye’deki Tarihi Sanayi Yapılarının Gunumuz Kosullarına Gore Yeniden De erlendirilmeleri Konusunda Bir Yontem Arastırması Doktora Tezi), M.S.G.S.U. Fen Bilimleri Enstitusu, stanbul.

[76] Koksal T. G. (2000). Yeniden Hayat Bulan Endustri Yapıları, Domus M Dergisi, Sayı: 8, Sf. 68-72.

[77] Koksal, T. G. (2005). stanbul’daki Endustri Mirası i in Koruma ve Yeniden Kullanım Onerileri, (Doktora Tezi), .T.U. Fen Bilimleri Enstitusu, stanbul.

4.2.1 Case Studies

Protection and Adaptive Re-Use Approaches

Various methods have been created for industrial heritage protection. Stratton and Kıra categorized reassessment methods according to the location of the industrial structure, risk level, preservation state, and architectural type. In the context of this study, reassessment strategies have been analyzed in three major topics in accordance with preservation concerns.

Urban-Scale Strategies

Environmental protection problems of industrial heritage buildings, particularly those within urban areas, have direct impacts on their reassessment potential. The redevelopment of these heritage buildings irresistibly has a spur effect on city rejuvenation towards the rejuvenation of the location. Internationally, the need to re-examine the context of the heritage buildings arrived in Article 14 of the Venice Charter in 1964, which states:

"The site on which a cultural property is located requires special care in order to preserve its integrity and to present it in a healthy and habitable manner." [78]

General conclusions derived by way of examples at regional levels for conserving industrial heritage are as follows:

- Industrial heritage structures are reconsidered from a cultural heritage and sustainable conservation perspective.

- Legislations encourage businesspeople and investors to safeguard industrial heritage. Infrastructure conditions, such as transport systems, are established to make the area appealing for investment, like in ***Vienna Gasometers***.

- Private ownership of industrial heritage structures is desirable for achieving required funding and fast enactment of reassessment.

- Besides existing protection challenges, industrial heritage buildings offer opportunities for uses like museums, exhibition halls, and cultural centers, especially if there is no land in the city available for new construction. Industrial heritage is brought to society via urban application.

- The preservation-oriented re-evaluation of old industrial buildings also brings economic activity into their surroundings. An example is the industrial area in the ***Emscher Park*** application, which is opened up for tourism.

Industrial heritage building strategies in the urban and rural contexts have been developed based on the character and problems of their contexts. These are as described below:

- Those areas which are socially degraded and in which the industrial heritage buildings exist are also refurbished for their restoration. For this purpose, planning activity is undertaken under urban regeneration, like in ***Docklands***. Strategies formulated with an integrated approach evaluate the viability of former factory buildings.

[78] https://www.icomos.org/charters-and-doctrinal-texts/

Fig 126: Urban Developments of London Docklands

Fig 126:https://architecturecompetitions.com/urban-redevelopment-of-the-london-docklands

Fig 127: Urban Developments of London Docklands, 3D View of the Area

Fig 127:https://www.urbanstrategies.com/project/london-docklands/

- Environmental planning is conducted and city amenities planned for the development of the area. Golden Horn (Halic), formerly an industrial site until recently, assumed a new role through the conservation and cultural re-appreciation of its industrial past. These projects are actually examples of reassessment in practice: ***Feshane Culture Center, Sutluce Slaughterhouse Culture Center, and Rahmi Koc Industrial Museum.***

- Rural industrial structures have comparatively less but still significant reassessment potential compared to city ones. Rural industrial heritage is represented by mainly old production facilities. Keeping them visible and in a structurally sound condition is generally sufficient (Tanyeli, 2000, p.51). If rural industrial structures contain small businesses and equipment, they are kept as monuments and museums.

- The presence of industrial heritage buildings in potential tourist settlements will influence the reassessment process. Particularly along Turkey's North Aegean coast, some settlements have olive oil facilities repurposed for other uses. In Burhaniye, an olive oil factory and machinery were preserved and redeveloped into an olive oil factory museum, yielding both cultural benefits and as a tourist indicator (www.oren.gen.tr, n.d.). Such valued industrial buildings become stop points along cultural tour routes.

Approaches to Industrial Landscape

The industrial landscape is addressed in a comprehensive conservation concept along with its buildings in order to decide on the production process. The big surface of the landscape, especially in complexes which are located in cities, offers various options for urban use. Industrial landscapes are evaluated with recreational uses in ***Emscher Park*** applications. High walls have been utilized as climbing walls, water canals as diving tunnels. Industrial compounds with vast landscapes offer open and airy spaces for cultural events. Overall environmental designs are prepared in this regard in industrial landscapes. Areas are cleaned of dangerous industrial wastes, whereas some wastes are preserved as evidence of the production process. Industrial landscapes are redeveloped as attraction points with park schemes derived from themes set by indigenous vegetation and water elements, supplemented by light shows, laser lighting, and other such effects.

Architectural Strategies

Industrial heritage buildings differ from other heritage structures in their functional-spatial, structural, and equipment character, which allows diversity in reassessment strategies.

Functional-Spatial Strategies:

Since the threat to industrial heritage buildings is in the form of functional obsolescence, functional viability must be ensured along with structural preservation and cul

Fig 128: Landschaftspark Duisburg-Nord (Duisburg-North Landscape Park)

Fig 128: https://landezine.com/post-industrial-landscape-architecture/

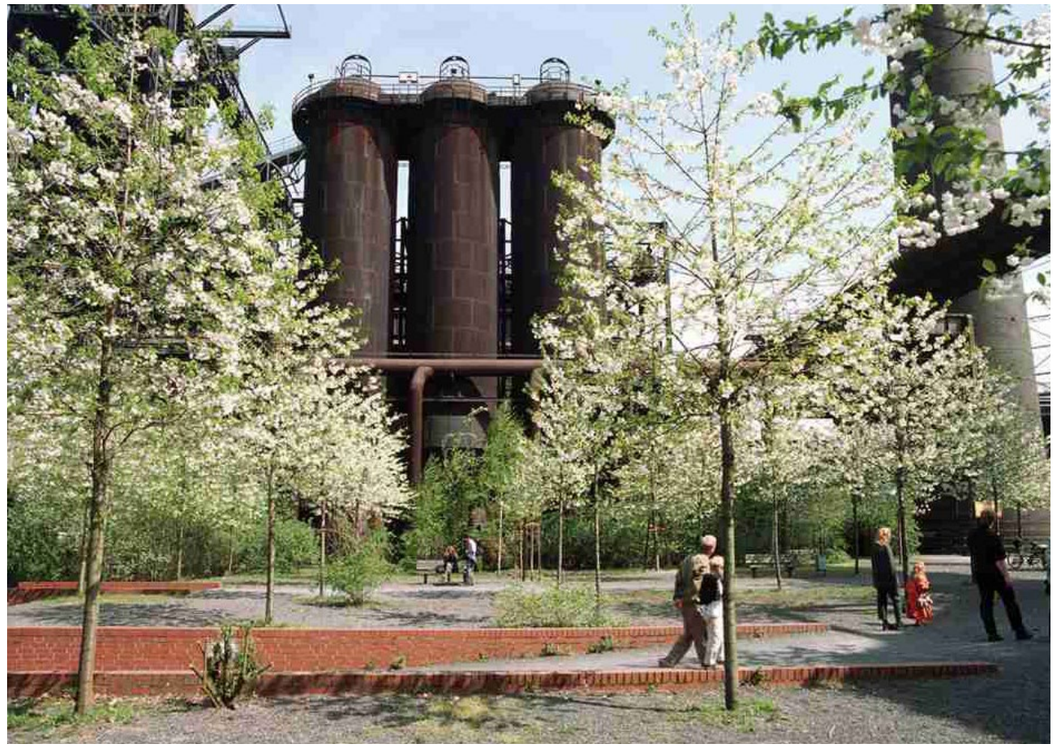


Fig 129: Emscher Park Landscape

Fig 129: https://www.metalocus.es/en/news/emscher-landscape-park

tural value promotion for safeguarding in a sustainable manner. In the international safeguarding forum of 1981, under the Athens Charter of the United Nations, the maintenance of ancient buildings by finding appropriate uses was established as one of the most important tasks of monument preservation (Cimcoz, 2002, p.125). Industrial heritage buildings that evolved over a period of time have reached the present day with various architectures. Their reevaluation offers possibilities that vary from other heritage buildings in spatial qualities. Reevaluation practice varies in relation to load-carrying systems, spatial dimension, spatial flow, and industrial landscape. New functional approaches derived from spatial qualities of industrial buildings can be classified as follows:

* Traditional production industrial heritage buildings constructed with load-bearing masonry systems are typically used for cultural purposes such as monuments and museums due to their architectural characteristics. A few examples in Istanbul include Lengerhane, Haskoy Shipyard, Mint, and Tophane. These buildings were reassessed by preserving their original spatial form. In the Lengerhane building, a new gallery was inserted under the courtyard floor for museum use due to the inability to find appropriate existing spaces without altering the original texture.

* Multi-story buildings with close load-bearing systems allow partition walls and generally accept residential, office, and educational uses (Koksal, 2000, p.70). Textile factory, flour factory, and beer factories are some of the industrial buildings with poor natural lighting. Abroad, an insurance company uses a low-ceiling building of this type as an archive; a brewery in Texas is used as a municipal art museum (Stratton, 2000, pp.34-35).

* Early 20th-century reinforced concrete skeleton structures with predominantly glass walls have been recorded and preserved as light factories. The Highland Park factory complex, incorporating Henry Ford's moving assembly line, has stood vacant since 1908 (Stratton, 2000, p.35).

* Steel-framed, wide-span, and well-lit factory buildings in industrial heritage give diverse uses. Industrial heritage train stations, airplane hangars, and energy-producing industrial complexes usually possess these spatial qualities. Overseas, factory outlet stores, industrial areas transformed into parks, or entire business parks are some examples. Recycling of train station complexes varies with urban strategies but generally, they are used as museums for exhibition. Airplane hangars along with their workshops are recycled as aviation museums. Industrial structures that produced energy are also being used for cultural exhibitions (Stratton, 2000, pp.36-37). The ***Bankside Power Station*** in the UK is transformed into ***Tate Modern***. In Turkey, Istanbul ***Silahtaraga Electric Plant*** was included in a reassessment project in 2007 and currently it is used as a university campus and cultural center.

* Single-storey shed-roofed factories are considered as evidence of the architectural revolution caused by the transition from wood to steel framing and the introduction of north light and then top-lit roofs. Few buildings are simply documented, while most are recycled (Stratton, 2000, p.37). Axial planning, characteristic of factory layout, allows for temporary divisions within these buildings. Their single-story nature makes them suitable for educational use (Kıra , 2001, p.250). Clement-Tablot factory in Notting Hill, Argyll Automotive Factory in Glasgow, and Hoover Factory in London—factory buildings demolished, office blocks preserved—are some examples. A weaving factory with a brick vaulted roof close to Barcelona was converted to a museum (Stratton, 2000, p.37). Feshane and Menekse Match Factory are now cultural centers in Turkey.

* Non-building structures such as gasometers, water tanks, water towers, and grain silos are part of industrial complexes. Abroad, these non-building structures have been adapted for alternative uses. Gasometers serve as exhibition halls, diving clubs when filled with water, and theaters. In Vienna Gasometers, the inner space was preserved by minimizing the center and introducing new spaces with radial partitions sympathetic to the building form. There have been grain silos into hotels; water tanks into houses and science towers. Even these buildings are used for recreational purposes such as climbing walls based on new landscape functions (Stratton, 2000, p.37). In Turkey, Istanbul's Hasanpasa Gasworks has been converted to a museum complex, a representative in this group.

Structural Approaches:

In the protection process, industrial structures are restructured based on the needs of new functions, generally with interventions that reveal the original structure. Monumental industrial structures are left intact, eliminating only late-period additions. Other actions involve meticulous restoration based on restoration of ancient photos, drawings, and documents. Architectural value of additions to be razed becomes important in restoration. Selective preservation is achieved by assessing the architectural value of additions. Two approaches prevail in new additions and designs: one merges with the original texture in material, form, or color while being easily discernible; the other is entirely different with contemporary materials and structures but creates congruent expressive spaces. Correct methods stop structural deterioration. All preservation work prioritizes preventing weathering first. In working historic factories or abandoned complexes, common material deteriorations include first identifying deterioration agents and stopping the process. Restoration utilizes minimally invasive methods under expert supervision (Koksal, 2004, pp.587-593). Steel reclaimed from dismantled portions is mixed with new steel for repairs (Okem, 2000, p.16). [79]

Equipment-Centered Strategies:

Spaces in industrial buildings are created according to equipment features related to mechanized production. Museum and educational facility use is common in cases where machinery has been preserved to this day. In new uses other than museums, original uses are highlighted with control panels and by operating units related to production. The Silahtaraga Electric Plant, preserved along with its machinery, is an excellent example as a museum and cultural center.

[79] Okem, S. (2000). Çelik altarlı tapınaklar: Endustri binalarının yeniden kullanımı. Mimarlık, 292, 15–20.

Case Study I: Tate Modern

Original name of the building:
Bankside Power Station

Location: Bankside, London, United Kingdom
Construction period: 1947–1963
Original architect: Sir Giles Gilbert Scott
Original purpose: Oil-fired power station
Decommissioned: 1981

Adaptive Reuse and Redevelopment

New purpose: Museum of contemporary art
Redevelopment architects:
Herzog & de Meuron
Museum opening date: 2000

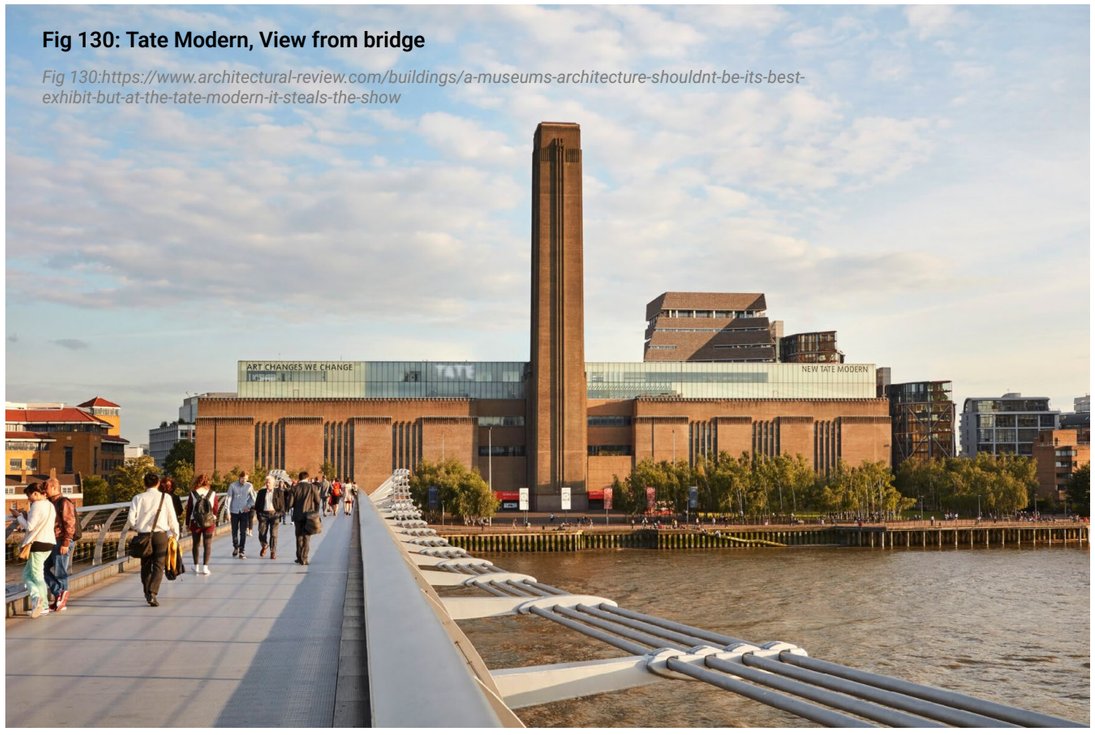
Maintenance of industrial character

- Insertion of modern elements
- Turbine Hall transformed into big public art space
- Former Boiler House reconfigured as gallery spaces
- Architectural Features

Material: Brick frontage (preserved from original structure)
Height: Middle chimney is 99 meters tall
Building shape:Longitudinal, linear massing
Extension:
- Blavatnik Building (opened 2016, same architects Herzog & de Meuron)
- Angular geometry clad with perforated brick
- Provides additional gallery and visitor accommodation

Fig 130: Tate Modern, View from bridge

Fig 130:https://www.architectural-review.com/buildings/a-museums-architecture-shouldnt-be-its-best-exhibit-but-at-the-tate-modern-it-steals-the-show



Tate Modern is one of the most significant examples of the return of industry to architectural relevance-renovation on the south bank of the River Thames in central London. Originally designed by Sir Giles Gilbert Scott as the Bankside Power Station, the building is a very fine example of mid-20th industrial design-as it boasts its brick chimney and fa ade-all of which were retained and reinvigorated in the redevelopment by the redeveloper of the building. In 1981, the power station shut down. This led Herzog & de Meuron-a Swiss architecture firm-to lead the firm redevelopment into the museum in 2000. The design approach followed was adaptive reuse: the industrial character remains, but now has new contemporary interventions. Some impressive architectural gestures include the reuse of the vast Turbine Hall as public space for large-scale installation, and the invention of new gallery space in the former boiler house. In 2016, the museum was completed by the dramatic Blavatnik Building-a jagged extension wrapped in pockmarked brick-that carries the physicality of the old structure but, in a loud way, announces a new architectural presence. Tate Modern owns some of the most important modern and contemporary artworks on Earth but is also widely cited by the international community as one of the few best-practice case studies in sustainable city rejuvenation and politically aware transformation of industrial infrastructure into cultural capital.

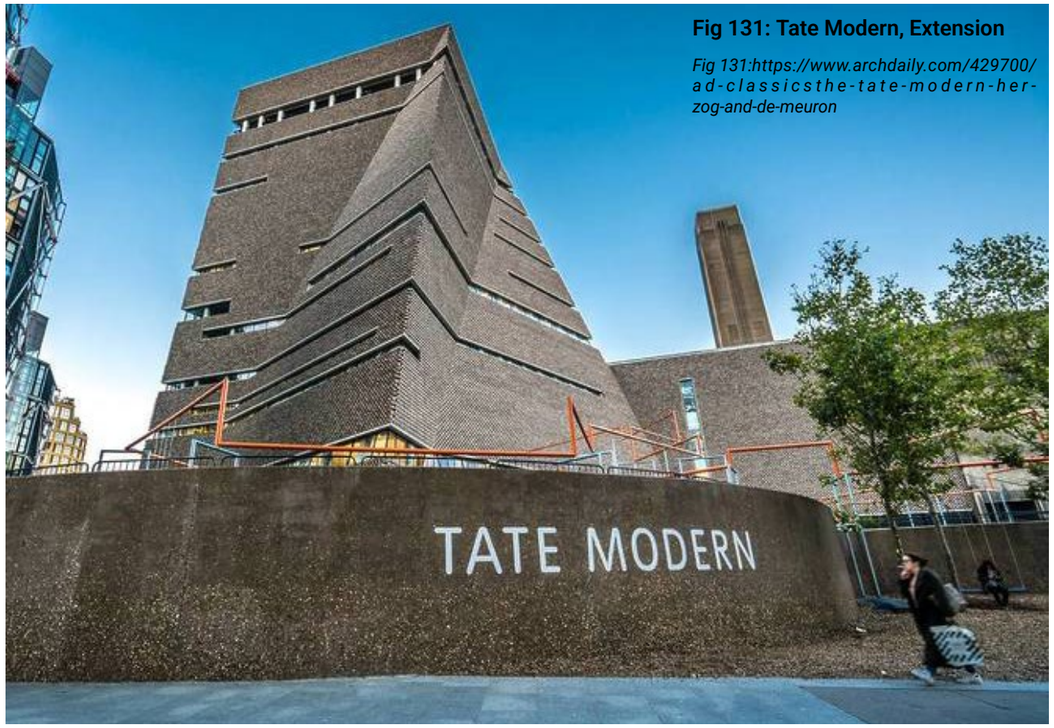


Fig 131: Tate Modern, Extension

Fig 131:https://www.archdaily.com/429700/ad-classicsthe-tate-modern-herzog-and-de-meuron

Fig 132: Tate Modern, Section

Fig 132:https://www.archdaily.com/429700/ad-classicsthe-tate-modern-herzog-and-de-meuron

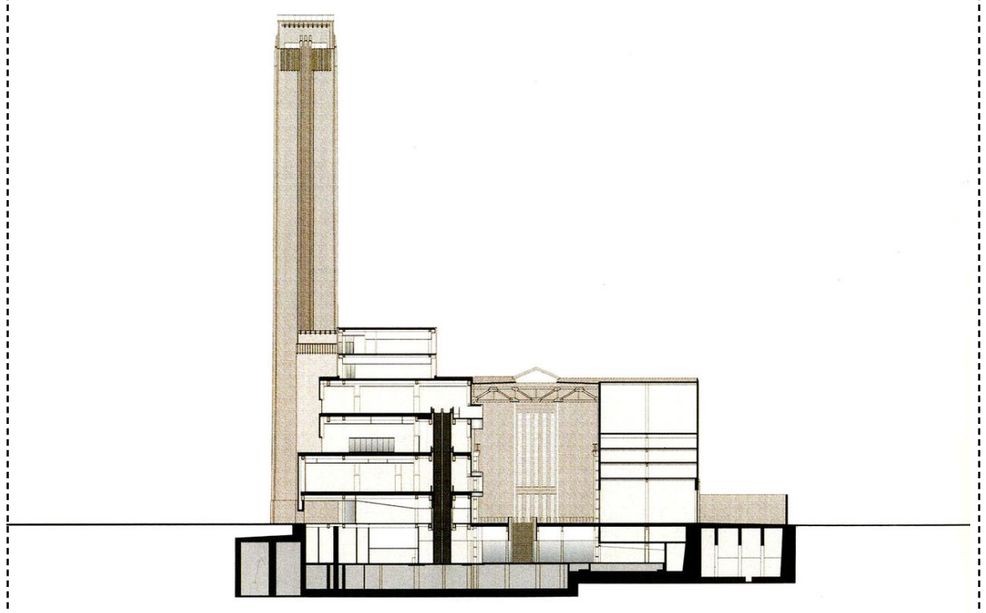


Fig 133: Tate Modern, Isometric View

Fig 133:https://www.archdaily.com/774101/herzog-and-de-meurons-tate-modern-expansion-to-officially-open-in-2016

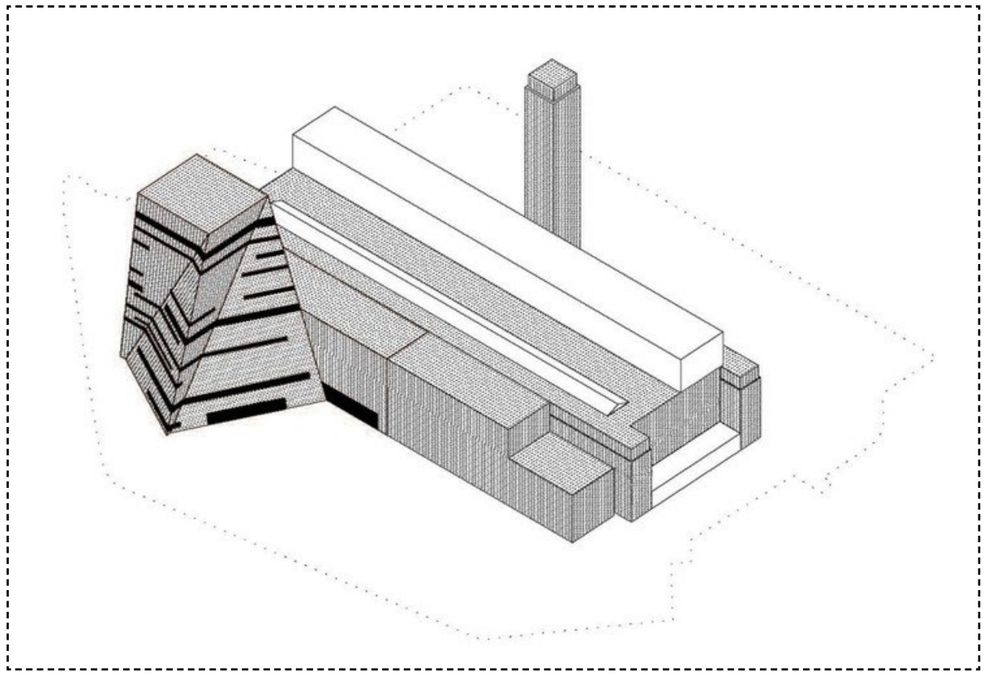


Fig 134: Tate Modern, Floor Plan

Fig 134:https://www.archdaily.com/429700/ad-classics-the-tate-modern-herzog-and-de-meuron

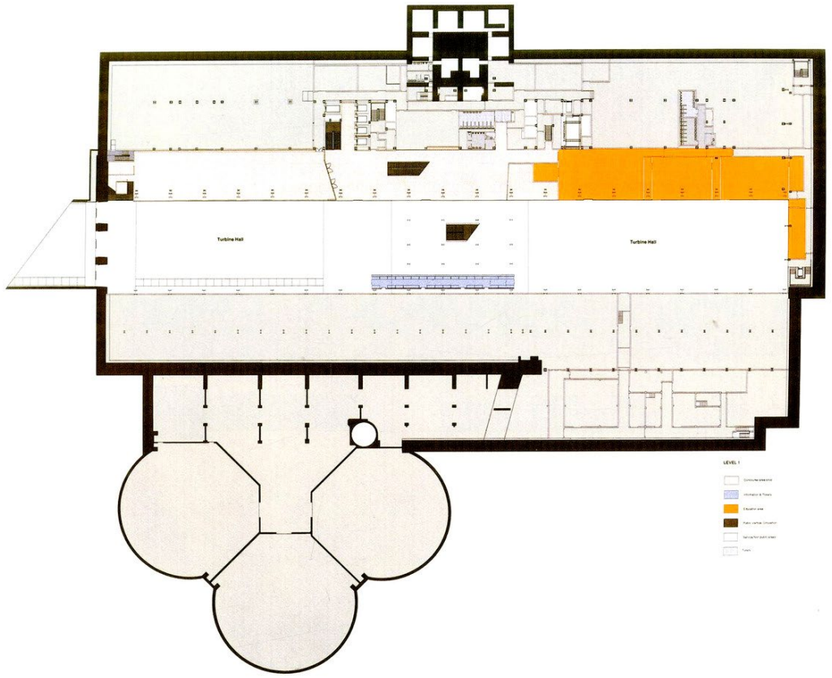
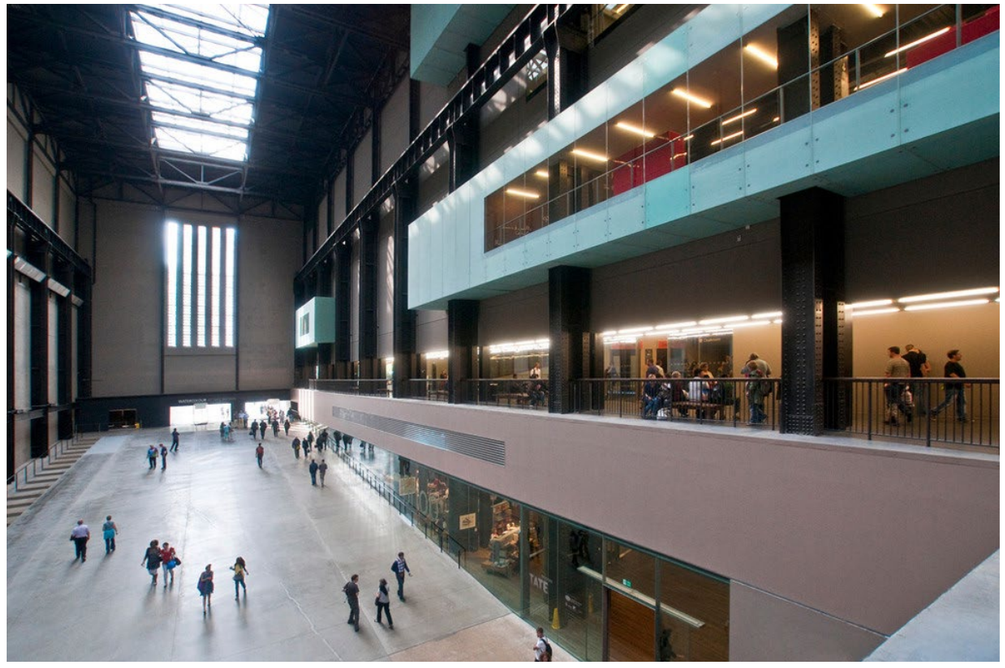


Fig 135: Tate Modern, Former Turbine Hall

Fig 135:https://www.archdaily.com/429700/ad-classics-the-tate-modern-herzog-and-de-meuron



4.4 National Practices: Successes, Failures, and Hesitations

In the 20th century, many industrial buildings in Turkey became obsolete due to advances in production technology and urbanization. These buildings are not only physical witnesses to the industrial era but also hold cultural memory, spatial continuity, and city identity. Over the last decade or so, adaptive reuse of such buildings—using them for another use without demolishing their historic character—has been the key strategy to architectural conservation and sustainable urban design.

Of the reuse projects in Turkey, there are pilot projects as they target cultural and public interests. SantralIstanbul in Istanbul is one of the most famous examples. Constructed in 1914, Silahtara a Power Plant was the Ottoman Empire's first city-sized electricity production facility. When the power plant stopped producing electricity in 1983, the complex remained vacant for decades. Between the years 2004 and 2007, the complex was renovated and reconstructed as a multifunctional public center with the campus of Istanbul Bilgi University, a contemporary art museum, the public areas, and the Energy Museum. Existing turbine rooms, panels, and equipment were left in place in order to maintain the industrial character of the facility but to transform it into an active cultural-educational complex.

Similarly, Istanbul's Muze Gazhane (Hasanpasa Gasworks), built in 1892 and shut down in 1993, opened its doors again in 2021 as a centre for culture with exhibition spaces, libraries, theatres, workshop spaces, and open spaces. It was restored according to the original industrial design and also incorporated sustainable design features to reduce carbon emissions.

Another successful intervention is the Bomontiada, the rehabilitation of Istanbul's historic Bomonti Beer Factory. Rehabilitated in the 2010s, the building is now used as a mixed-use complex of art galleries, restaurants, performance venues, and public squares. The intervention incorporates new functions in the original historic tissue without losing the original material and structural identity of the building, rendering it an urban social and cultural center.

One of the most prominent cases in Izmir is the Historic Gasworks. Built in 1862 and shut down in 1994, the site was restored by the Izmir Metropolitan Municipality and reopened in 2009 as the Historic Gasworks Cultural Center. Primary industrial features such as the gasometer, chimneys, and casting halls were preserved and used in new functions like outdoor performance spaces, libraries, and exhibit rooms. The 23,000 m² site was renovated as a well-accessible cultural park, which enhanced people's support and participation in favor of urban renewal.

Not every adaptive reuse has been successful, however. In some cases, buildings of industry were adapted mainly to their commercial use and not for their cultural and architectural value. A classic critical case in point is the failed redevelopment of Sumerbank factories. The Alsancak, Izmir Sumerbank Textile Factory, for instance, was to be converted into a cultural complex. But issues of ownership, funding, and management kept it inactive for long durations and eventually abandoned the building. In Nazilli, a Sumerbank factory was partially rehabilitated, but as there was no master plan of conservation and management, its cultural value was concentrated on very little.

The most frequent ailments in such failed projects are:

* Disregard for architectural integrity and heritage value
* Failing analysis of functional needs
* Inadequate community-based and participatory planning
* Neglect of long-term maintenance and sustainability plans
* Prioritizing profit-generating functions over public good

Lastly, adaptive reuse of Turkish industrial heritage will be contributing towards the preservation of urban identity and sustainable development on an extremely large scale. Successful ones have been careful to retain architectural integrity while introducing new contemporary public functions. Such projects with only an economic brief—so prevalent in those who lack intensive planning and cultural understanding—have resulted in isolation from society and loss of historical reference.

The fate of Turkey's industrial heritage is not solely the domain of good design but rather rests on a multi-faceted strategy that resolves the tension between cultural sensitivity, public imagination, and social sustainability.

Silahtaraga Power Plant Revitalization - University Campus, Istanbul

Location: Eyupsultan, Istanbul

Original Function: Silahtara a Power Plant (Electricity generation, 1914)

New Function: Cultural complex, university campus, museum, public spaces

Restoration Period: 2004–2007

Site Area: 107,000 m²

Architects: Emre Arolat Architects, Nevzat Sayın, Han Tumertekin

Main Features:
 * Retained original turbine halls and machinery

 * Istanbul Bilgi University campus
 * Energy Museum
 * Contemporary art galleries and exhibition spaces
 * Public event and performance spaces

Opening Date: September 2007
Significance: one of the unique example of adaptive reuse of industrial heritage incorporating education, culture, and public participation in Turkey

Fig 136: Silahtaraga Power Plant Revitalization - University Campus, Istanbul

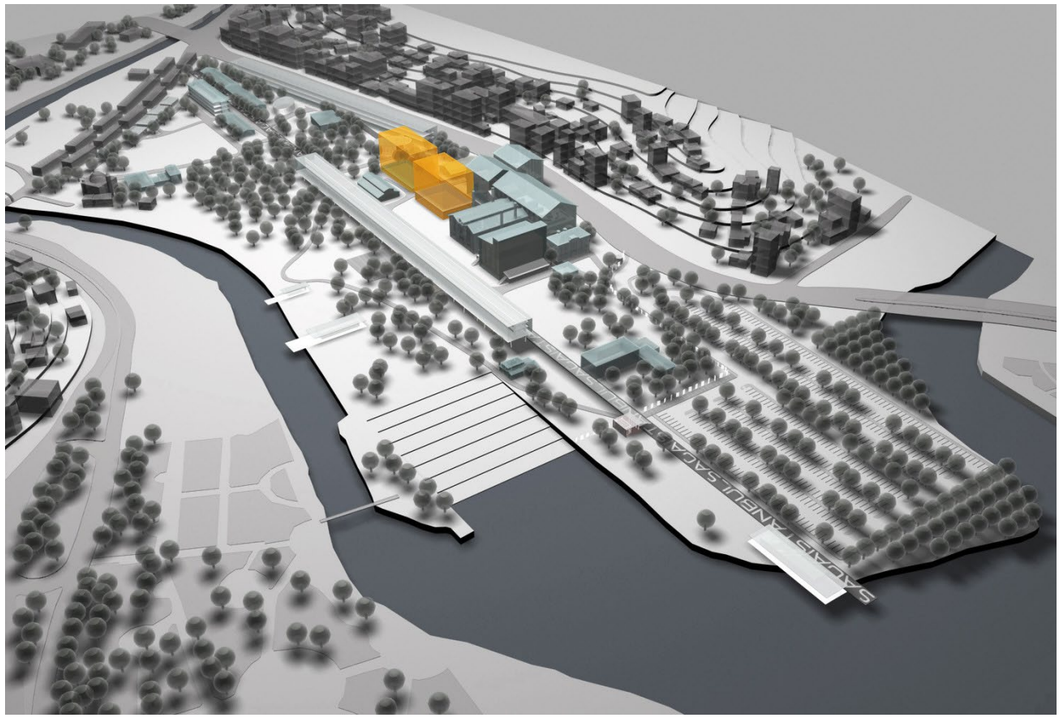


Fig 136:https://www.archdaily.com/506692/santral-istanbul-museum-of-contemporary-arts-emre-arolat-architects

Fig 137: Silahtaraga Power Plant Construction, Istanbul

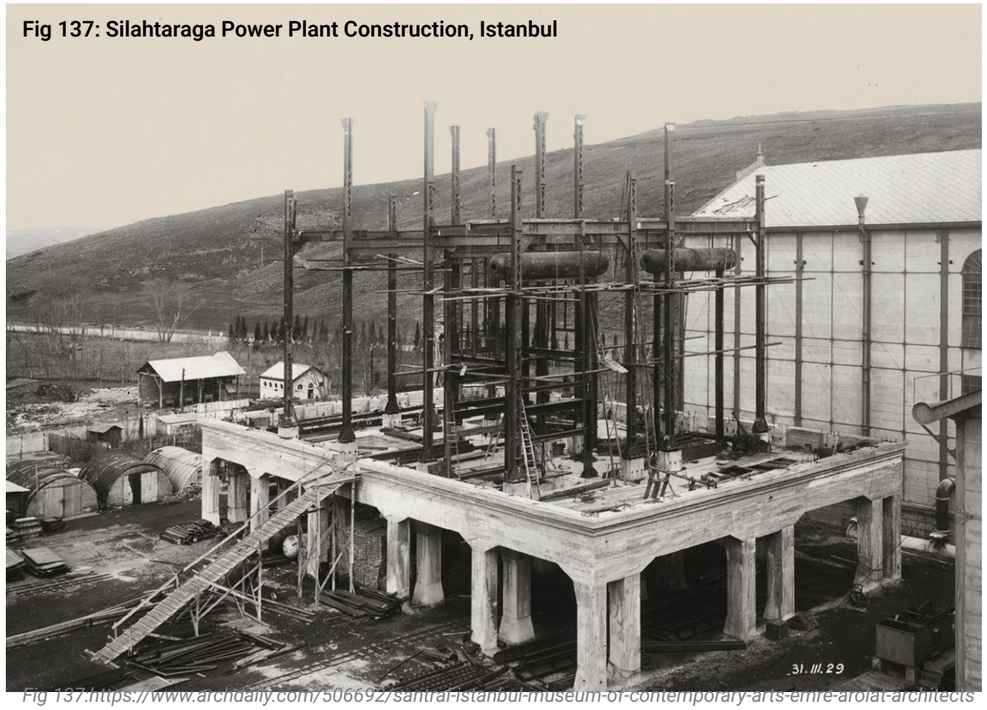


Fig 137:https://www.archdaily.com/506692/santral-istanbul-museum-of-contemporary-arts-emre-arolat-architects

Fig 138: Silahtaraga Power Plant Revitalization - Bilgi University Campus, Istanbul

Fig 138:https://www.archdaily.com/506692/santral-istanbul-museum-of-contemporary-arts-emre-arolat-architects

Fig 139: Silahtaraga Power Plant Revitalization - University Campus, Istanbul

Fig 140:https://www.archdaily.com/506692/santral-istanbul-museum-of-contemporary-arts-emre-arolat-architects

Fig 140: Silahtaraga Power Plant Revitalization - Bilgi University Campus, Istanbul

Fig 139:https://www.archdaily.com/506692/santral-istanbul-museum-of-contemporary-arts-emre-arolat-architects

Fig 141: Power Plant Revitalization - University Campus, Floor Plans

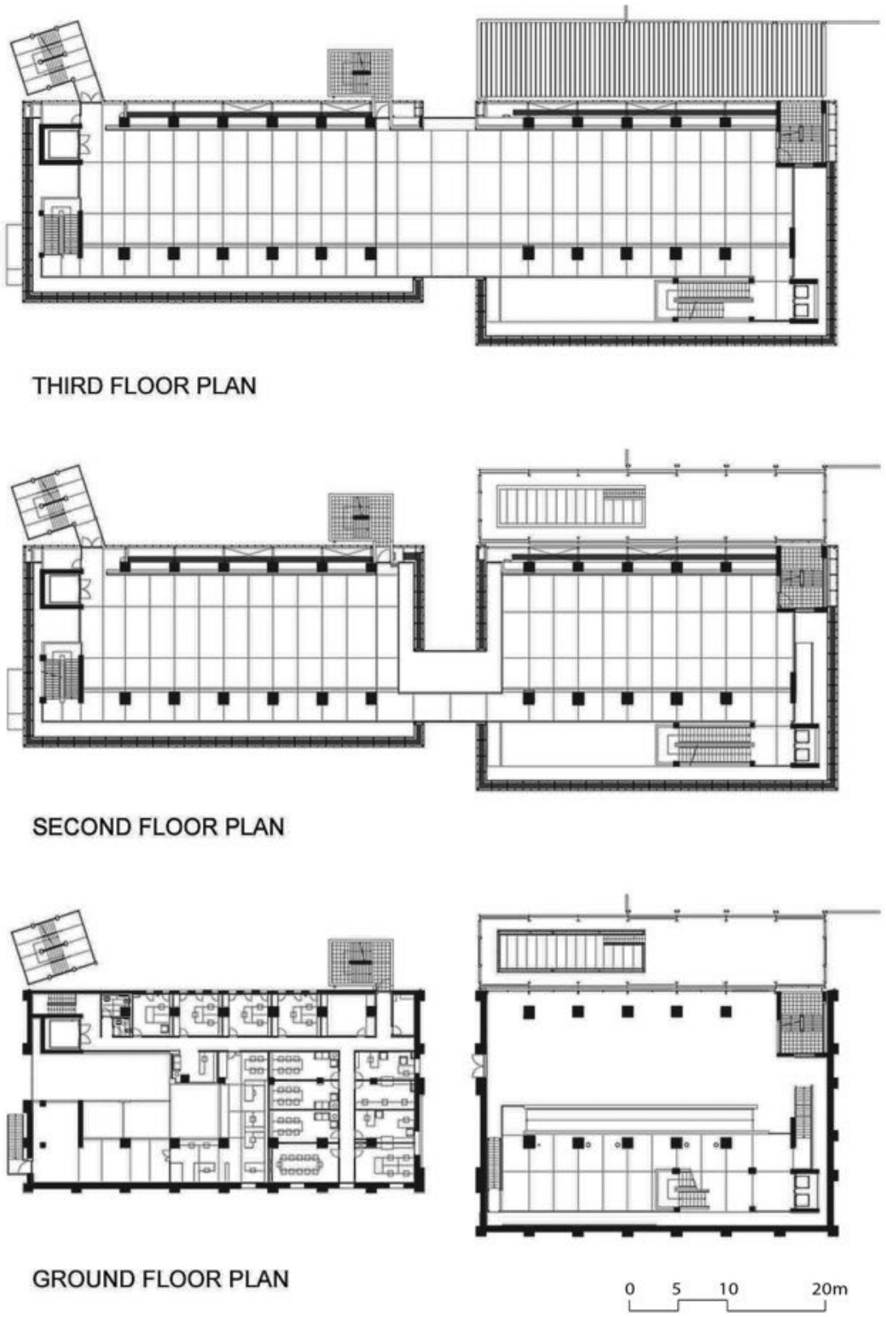


Fig 141:https://www.archdaily.com/506692/santral-istanbul-museum-of-contemporary-arts-emre-arolat-architects

Fig 142: Power Plant Revitalization - University Campus, Sections

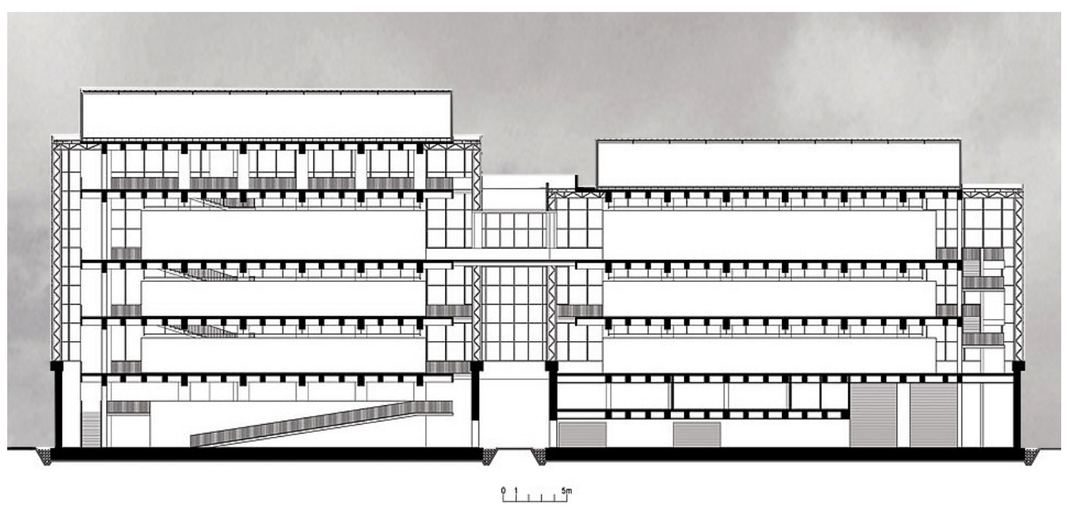


Fig 142:https://www.archdaily.com/506692/santral-istanbul-museum-of-contemporary-arts-emre-arolat-architects

Fig 143: Power Plant Collage

Fig 143: Drawn by author

5. REIMAGINING SPACE: A DESIGN PROPOSAL

"Giving Voice to a Silent Space"

"What could this building become? What functions would perpetuate its memory? The design proposal is both a spatial reconstruction and a social invitation."

5.1 Strategy and Design Principles

This chapter demonstrates the conceptual and strategic framework that guided the adaptive reuse of the abandoned power plant in Izmir's Alsancak district-both a landmark but an industrial complex previously neglected. The project aims to turn the building into an active and multifaceted public space while preserving the architectural and historical identity of the site. The design embarks on a double challenge in paying homage to the industrial history of the site and at the same time to meaningfully interlace it within the fabric of contemporary urban life.

The former power station, which once served as a symbol of the industrial evolution of Izmir, stands today as an artifact of both historical memory and urban decay. The reuse would thus provide a unique opportunity to consider issues of identity, sustainability, and cultural continuity. These issues are examined within a post-industrial paradigm. The design principles governing the process respected minimal intervention, reversibility, and legibility of historical layers while introducing new spatial programs addressed to present and future needs.

The underlying strategy is that spatial dialogue-concerning the past and the present of forms and functions, permanence and change. Through intensive investigations of the structural and material characteristics of the building, the design strategy will pursue the integrity of the original architecture while inviting reinterpretation in modern guise. This section will present the major strategies and principles that were followed throughout the project concerning theoretical and practical design solutions influencing the remaking of the site.

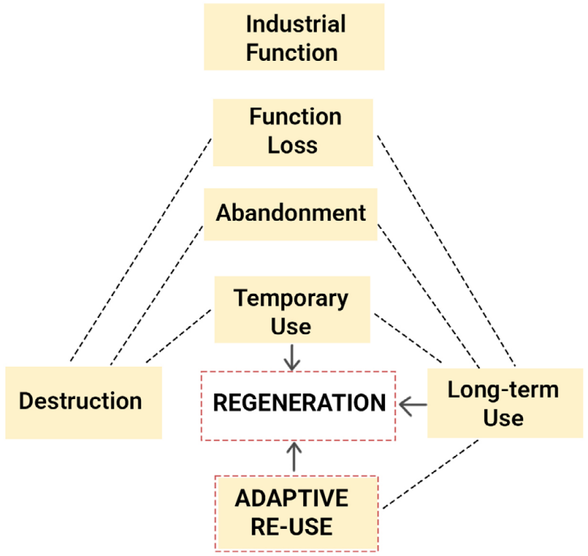


Fig 144: Transformation of Abandoned Industrial Sites

Fig 144: Lepel, 2006 (edited by author)

Fig 145: Port Hinterland SWOT Analysis
Fig 145:Drawn by author)

INTERVENTION ZONE 1: ALSANCAK PORT

Strengths

- Strategic location
- Well established infrastructure
- Accessibility
- Strong relationship with urban center
- Connections with other ports of Izmir
- Proximity to the factory

Weakness

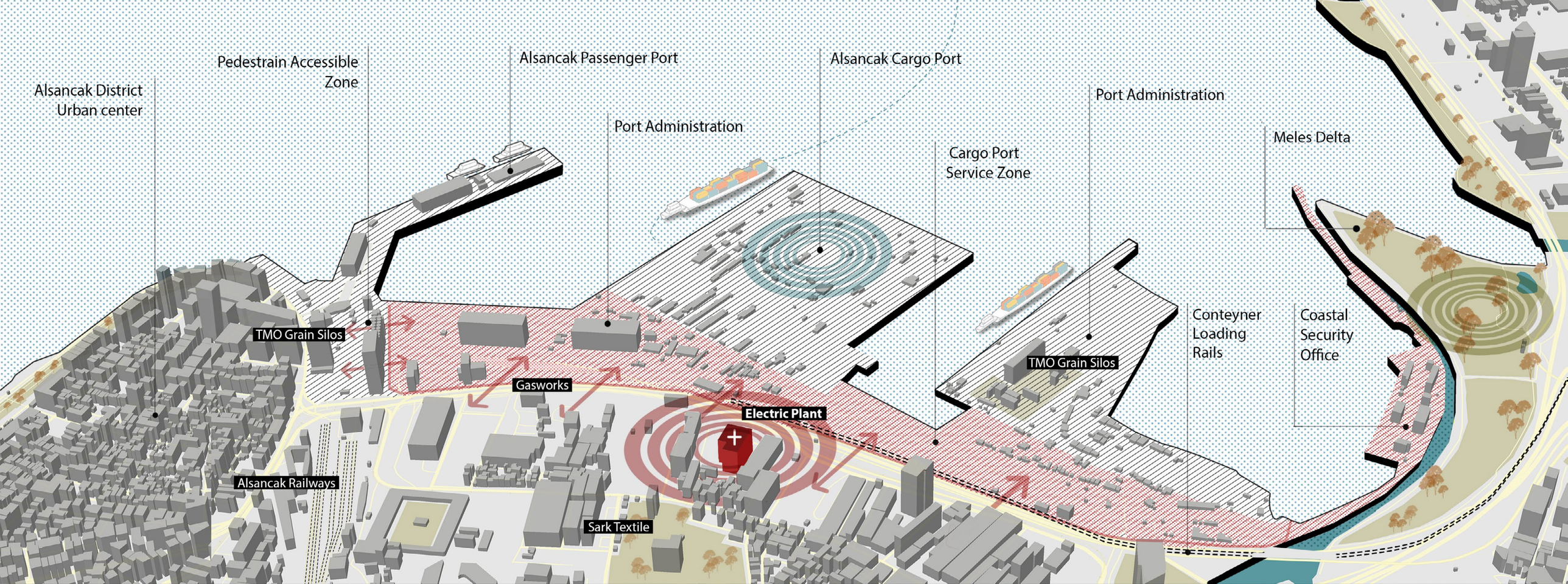
- Congestion and capacity issues
- Location considerably close to housing settlements
- Environmental concerns
- Limited expansion potential
- Poor accessibility to the factory (project area)

Opportunity

- Port modernization and urban regeneration
- Logistic hub for local trade
- Sustainability initiatives
- Regeneration approach with industrial heritage
- Possibility of continuation of shoreline for pedestrians

Threats

- Economic fluctuations and less strenght in the industry
- Administrative instability
- Adaption challenges
- Rising competition with other ports in Izmir (Aliaga Port) less popularity
- Environmental regulations
- Disconnection with urban center
- Restricted area as accessibility



In this thesis, considerable effort has been devoted to conducting in-depth investigations regarding the Izmir Power Plant. From an architectural and urban scale, it presents what can be described as a multi-dimensional reading of the project site and a wider context. As for the critical conditions and important problems of the area, these have arisen through studies previously carried out in earlier sections.

Analysis extending even to the immediate vicinity of the project area indicates that the site is situated at the meeting point of major transportation networks. While this condition improves accessibility in some areas, it also introduces barriers to pedestrian access in other areas. In this context, greater attention is paid to the northern port area, the area around Alsancak Port, where a vast space is occupied by different functions, the most dominant being the container cargo section. Besides these, the port also contains docks for passenger and cruise ships, as well as some administrative buildings situated within a buffer zone between the shoreline and the main coastal highway, this being a two-level multilane rolling structure.

The viaduct, located on the upper level, thus creates a physical layer between the historic power plant and the shoreline. While this infrastructure blocks the building's visibility from the sea, it does not pose a barrier to pedestrian access at ground level. However, pedestrian access on the port side is currently restricted due to a boundary wall, as the structure is abandoned and partially damaged. Removing this barrier is crucial not only for reestablishing uninterrupted pedestrian access but also to protect the visual silhouette of the building.

Another design proposal, targeted at the port area, relates to the unsatisfactory pedestrian circulation. The cargo section currently occupies a considerable portion of the port, which is suggested to be retracted inward toward the port authority's premises so that the new footprint becomes slightly more reasonable. Such action would present a clear physical separation between the cargo section and the western wing of the port extending toward the Meles Delta. Consequently, it becomes simpler to delineate the boundaries. This shift would also enhance the creation of green areas in the western part of the port and allow uninterrupted pedestrian movement within the site.

Urban-scale improvement plans around the factory include more existing industrial buildings nearby. The hinterland of Alsancak port has numerous Republican industrial heritage buildings beside the Izmir Power Plant. As a region that has lost most of its industrial use over time, it has eventually turned into an urban void. Nevertheless, recent work and the endorsements of the Izmir Municipality, the Chamber of Architects, and some academics have enlivened the prospects for transformation, with a promise to bring back and reuse other trashed heritage structures.

The historical Gasworks Factory, just to the east of the Izmir Power Plant, is perhaps the best example of these. This formerly industrial complex has now been adapted and transformed into a cultural center. Indeed, both the building's architectural restoration and reconfiguration of its immediate surroundings are instrumental in reintegrating this building into the urban fabric. Being rather close, the building spatially relates to the Izmir Power Plant. Accordingly, interventions are proposed in the intermediate space to strengthen this connection. It is proposed that the low-quality, late-period buildings currently occupying the area between the two structures be demolished and that the space be redeveloped into a publicly accessible park and plaza.

Likewise, south of the power plant is a strong spatial relationship with the historic Sark Textile Complex, occupying a neighboring plot and currently not being in use or renovated. However, these are all adversely affected by the presence of poor low-rise buildings from the late 20th century in the hinterland. This is one reason why it is suggested that some of these structures, especially those in strategic locations, be removed. This would allow key intersection points to be re-imagined as public gathering areas - yet another urban-scale intervention aimed at giving freshness to the overall port hinterland.

Fig 146: Port Hinterland Macro Scale Interventions
Fig 146:Drawn by author)

INTERVENTION ZONE 1: ALSANCAK PORT

1	Decreasing the load capacity of Alsancak Cargo Port	Adjustment of Ship Loading Point, layout reorganisation	Reducing the work surface of the port towards to the factory (main avenue)	Adding Green belt towards to Meles Delta and partially pedestrianization
2	Removing non-funtional small scale buildings	Adjustment of landscape towards to Meles Delta, new platforms	Increasing green areas and creating echological belt	Involving public spaces and services to the area
3	Reducing the excessive storage area next to rails	Replacing service and repairment units along east.	Reorganization of container unloding point to main area	Adjustment of service zone landscape
4	Replaicing the parking lot next to Grain silos	Continuation of pedestrian zone from port administration	Creating a platform which provide uninterrupted circulation	Connecting the pedestrian zone to the Meles Delta and nort of the coastline

Alsancak District Urban center
Pedestrain Accessible Zone
4
Alsancak Passenger Port
Port Administration
1
Alsancak Cargo Port
2
Port Administration and ***URBAN PARK***
3
Cargo Port Service Zone
Meles Delta
BUFFER ZONE
TMO Grain Silos
Gasworks
Electric Plant
Alsancak Railways
Sark Textile
TMO Grain Silos
Conteyner Loading Rails
Coastal Safety Office

Fig 147: Transformation of Abandoned Industrial Sites
Fig 147: Lepel, 2006 (edited by author)

Fig 148: Port Hinterland/ Industrial Heritage Rote

Fig 148:Drawn by author)

Passanger Port

Cargo Port

Grain Silos

Expansion of
Meles Delta

Industrial
Heritage Park

Gasworks
Historical center

Historical
Power Plant

Historical
Warehouses

Historical
Tile Factory

Alsancak Railway
Facilities

Historical
Textile Factory

Historical
Taris Brewery

Sumerbank Textile
Complex

Meles River

1 2 3 4 5 6 7 8 9

Scale:1/5000

Fig 149: Alsancak Port Pedestrian Zone

Fig 149:Drawn by author)

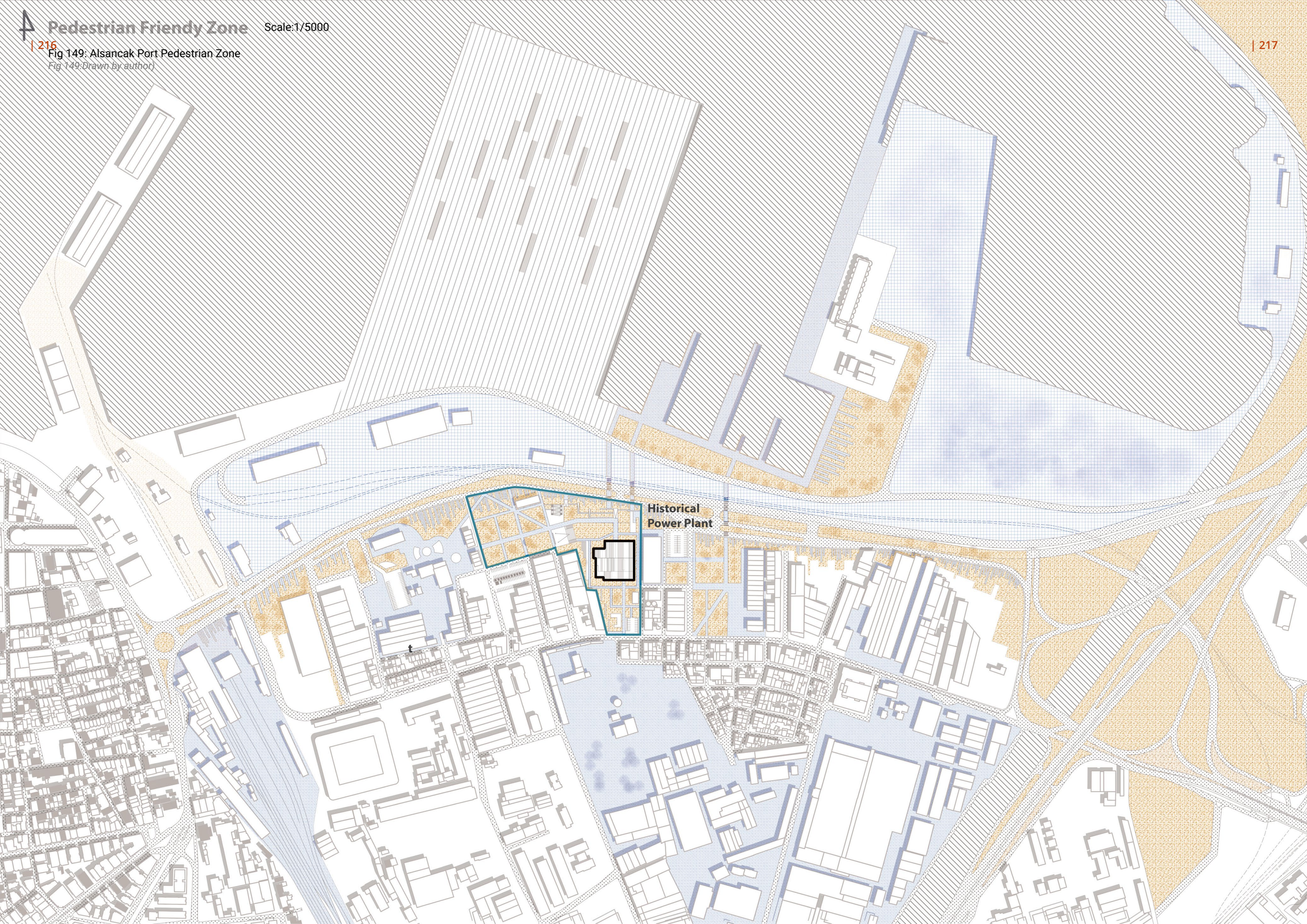


Fig 150: Proposed Master Plan for Port Hinterland

Fig 150:Drawn by author)

Scale:1/2000

Container Port

Port Adminitration

Port
Expansion

Grain Silos

Expansion of Meles Delta

Heritage park
Open Exhibitions

Historical
Gaswork

Cultural
Hub

Power Plant
Project Area

Historical
Warehouse

Park
Fairground

Historical
Warehouses

Tile
Factory

Historical
Railway Hub

Sark Textile
Complex

Sumerbank
Textile Complex

Stadium

Meles River

S W O T

Fig 151: SWOT Analysis of Project Area
Fig 151 Drawn by author)

Scale:1/1000

Alsancak Port

10 Min.

Port & Sea Interaction

Echological Interaction

Culturally Intense Zone

Tram Line

NO ACCESS

Culture Center

Gasworks

15 Min.
To Alsancak Railways

5 Min.

3 Min.

Electric Plant

Housing Density

P

Tile Factory

8 Min.

Sark Textile

16 Min.

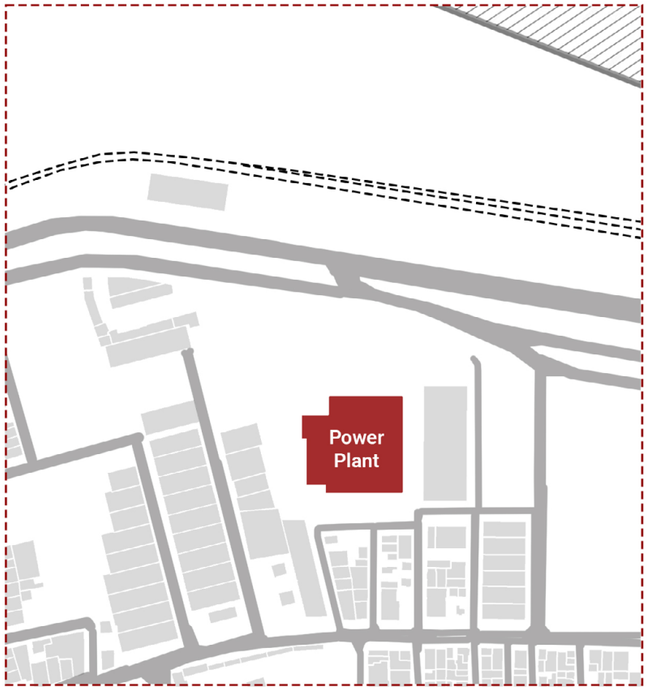
Alsancak Stadium

Sumerbank Textile

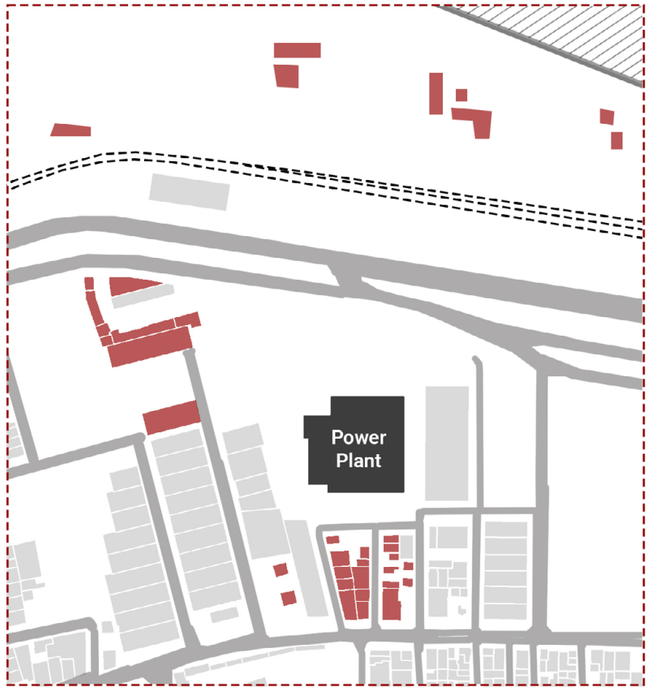
Fig 152: Interventions in Immeadiate Surrounding of the Factory

Fig 152:Drawn by author)

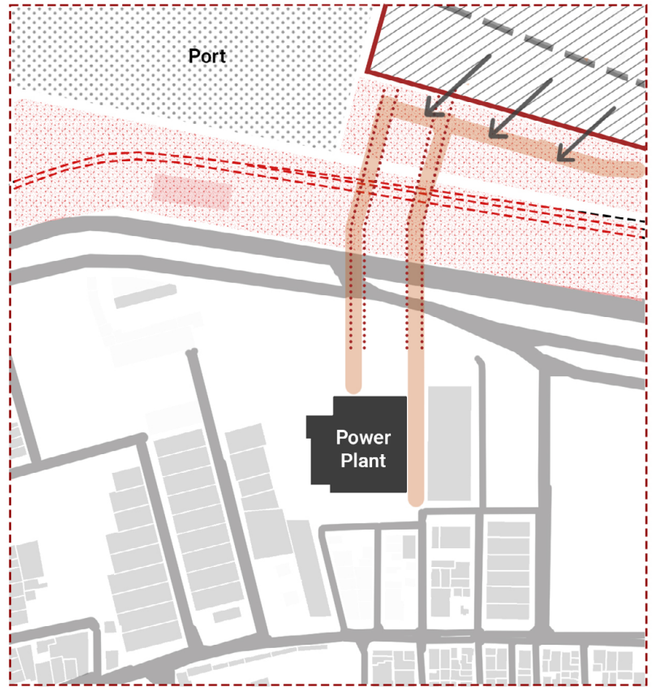
| Current Site



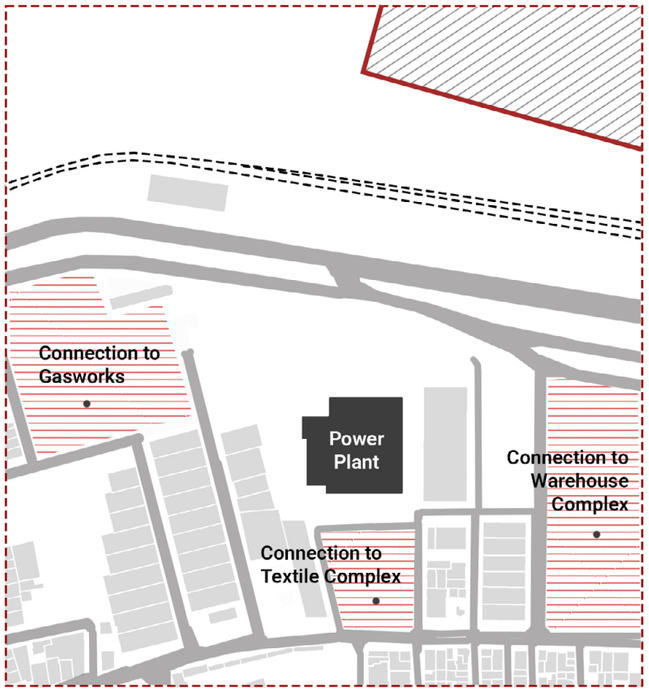
| Elimination of Unqualified Buildings



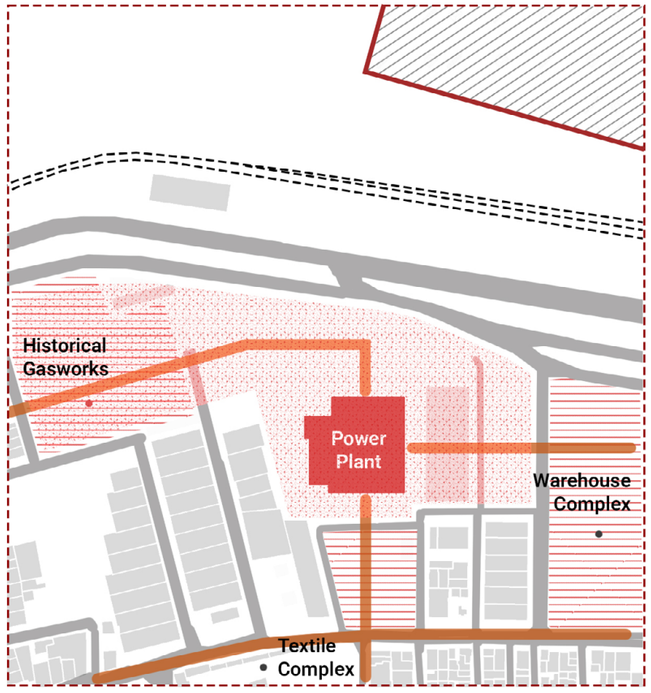
| Re-Defining the Coastline



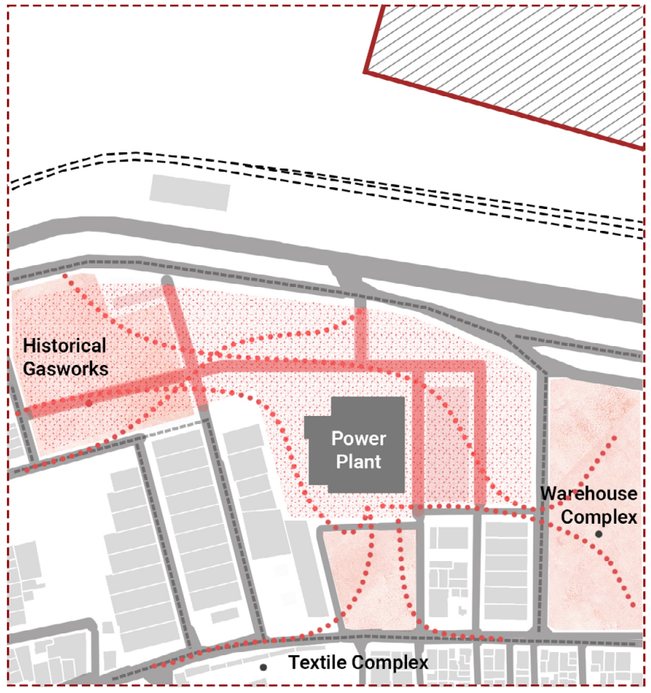
| Identification of Public Spaces



| Creating Industrial Heritage Route



| Vehicle and Pedestrian Axis



SWOT data mostly supported context analysis around the Izmir Electric Factory building disclosing disconnections and accessibility issues regarding the spatial historic industrial structures around it. These facts resulted in the functional proposals' spatial arrangements, corresponding to the currently existing site setup. A greatly significant reference point in this configuration is the former gasworks building situated on the western face of the factory and in close proximity to the site. This structure spatially relates to the cultural active district of historical Alsancak which includes the connections to the Alsancak Railway Station and Alsancak Stadium. Thus the western axis is the most vital reference point for programmatic decisions concerning cultural activities and public involvement.

Another determinator is the northern boundary of the site, which is aligned with the port zone-an area commonly bounded by factories and services. This strip, too, has other main infrastructural networks, even though it is hindered by many access problems. These impediments would therefore be overcome by redefining the coastal edge and creating novel public axes that will enhance pedestrian connectivity. The same applies concerning the southern boundary, which joins a zone populated by some other historical industrial edifices. This segment has large-scale industrial complexes but is spatially fragmented. The project suggests making a new schematic design to link back these fragmented areas and fashion a coherent spatial narrative across the broken areas of the industrial landscape.

Design considerations surrounding the Electric Factory usually begin with removing low-grade, recent additions that obscure entrances and reduce historical integrity at the site. Upon clearing these structures, new public plazas will be formed to invigorate access and transitional spaces connecting preserved industrial buildings. Afterward, interventions will be made onto the waterfront and port facilities nearby because the aforementioned-edge port near the factory is pulled back to distinctly separate cargo container zones from the public shoreline, establishing a more definite spatial hierarchy.

New pedestrian axes are proposed to serve the building with the redesigned green coastal promenade running east toward the Meles Delta, at which time the contiguous ecological corridor is introduced into town. In parallel with this idea, the fragmented historic industrial sites and abandoned areas will be tied together under a new vision termed "Industrial Heritage Park." This park proposal intends to re-engage these zones through integrated public space systems, coupled with improving user engagement with the historic structures. Furthermore, vehicular, pedestrian, and bicycle circulation networks will be reorganized along desired urban trajectories for coherent movement and enhanced access onto the site.

Fig 153: Proposed Master Plan for the Power Plant
Fig 153:Drawn by author)
Scale:1/1000

Port

Pier

Pier

Port Administration

Shoreline - Park
Expansion of Meles Delta

+2.00

+1.50

+1.00

-2.00

Heritage Park
Open-air Exhibition

+2.00

0.00

Museum

-3.00

0.00

Gasworks
Cultural Center

Power Plant
Building
'Research Center
&
Cultural Hub'

Historical
Warehouse

Fairground

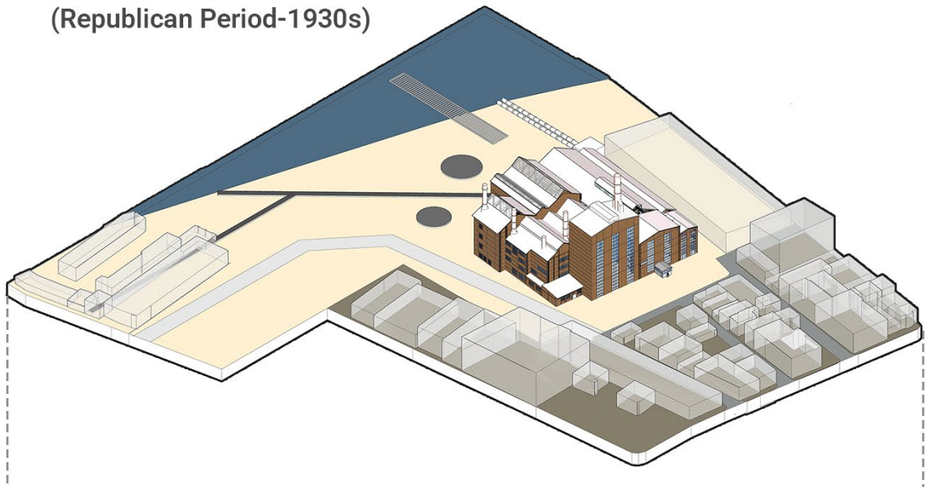
0.00

Heritage Building

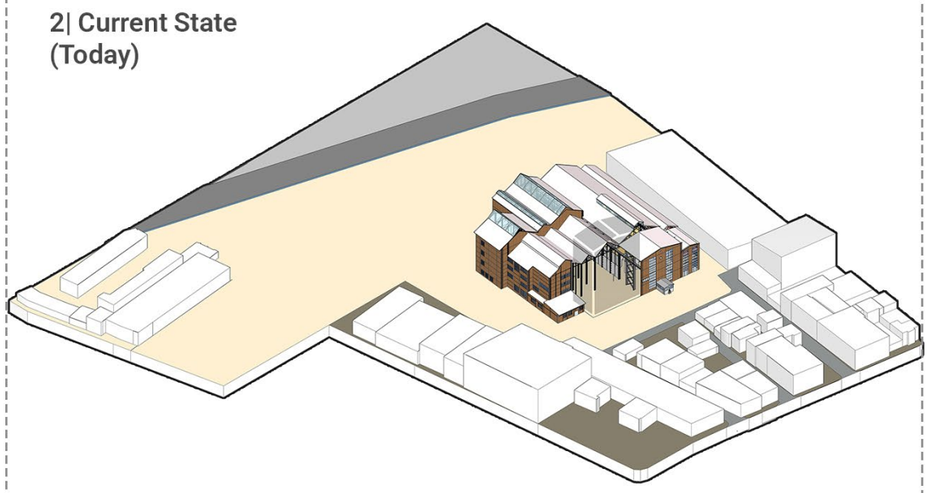
Fig 154: Mass Diagram - Building Development

Fig 154:Drawn by author)

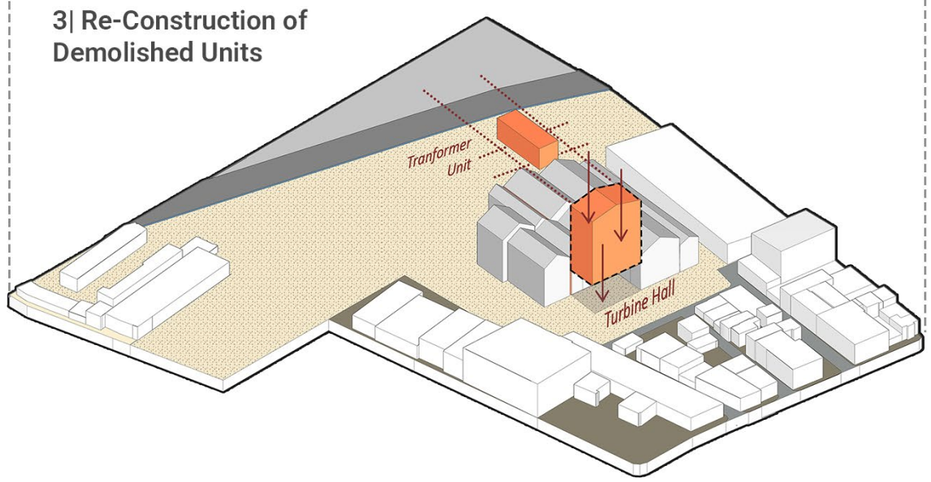
1| Former State (Republican Period-1930s)



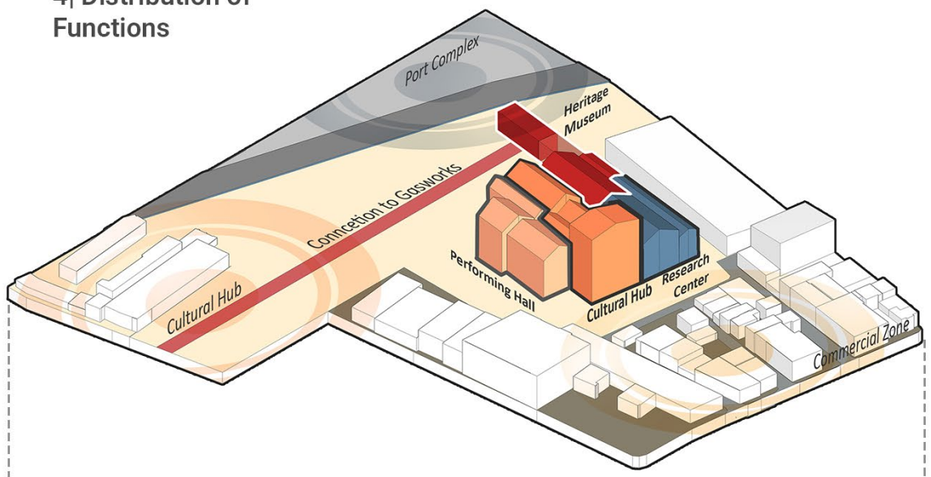
2| Current State (Today)



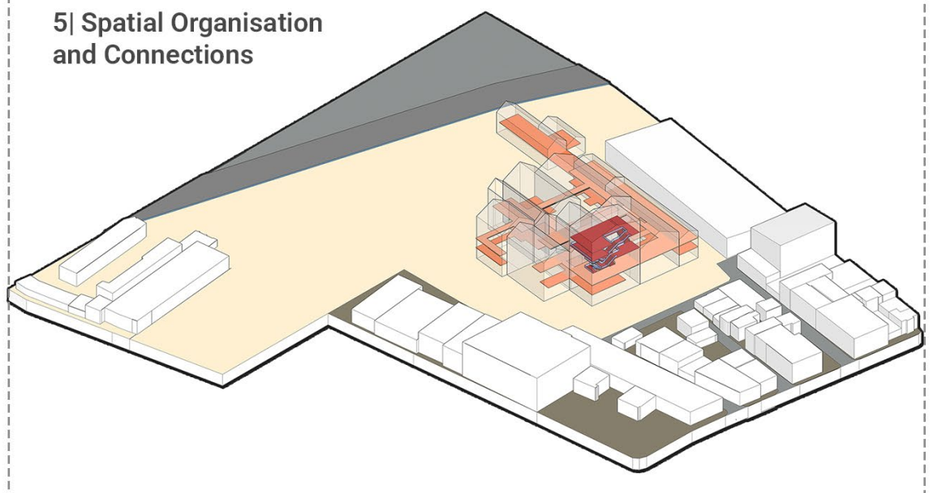
3| Re-Construction of Demolished Units



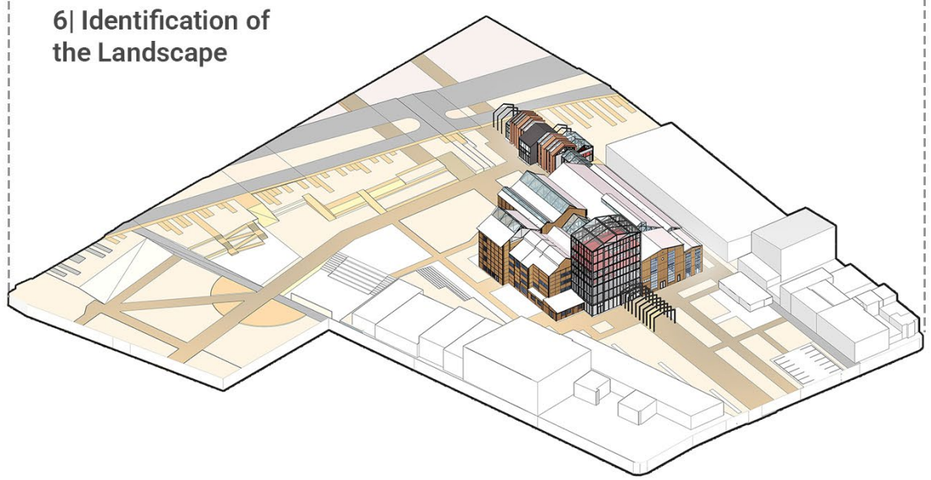
4| Distribution of Functions



5| Spatial Organisation and Connections



6| Identification of the Landscape



Architectural interventions for the Izmir Electric Factory are developed alongside analysis performed in the previous sections. Currently, the research regarding the spatial traits of the factory during early Republican history, the components of its industrial landscape, materials utilized, and structural details has yielded comparison of such features with the present state of the building. One of the most intriguing changes is that the southern block - formerly the third and tallest building - which belonged to the turbine hall, is no longer standing. Auxiliary structures, like workshops, storage cabins, and facilities for guests, situated within the perimeter of the site, have also vanished. In addition, the factory lost old channel extensions into the sea and regional dock infrastructure. The main reason for this has been the expansion of the port and the reclamation of lands from the shoreline.

These findings were, thus, reflected in the proposed design interventions. Some of the remnants of the site include the former railway tracks and vehicular roads; however, some of the historical wells that were active and located on the site have left some physical signs. The first action is undertaken to have a regenerated public gallery at the southern edge of the building, reinstating the former turbine hall. In this regard, besides returning the historical silhouette of the factory and the spatial hierarchy, the original structural composition of the building will once again become visible. Additionally, another new built form will be added to the northern side of the building - its site being somewhat referenced to where the previous transformer building stood alongside former water channels that no longer exist. This newly added mass is designed to house a museum program, simultaneously marking lost historical layers and revitalizing the edge condition.

Solid observational contexts have informed the new programmatic distribution. The nodes were composed under the west blocks - as marked cultural activity - in which one of these two multistories could serve as a venue for the dynamic performance of contemporary art. The "spine" of the factory between these two east and west volumes is a continuation of the Cultural Center, with flexible program elements for gallery spaces, connector platforms, and multifunctional zones. As a central volume, this acts as a mediator that integrates the terminal programmatic ends of the building.

To the east are two truly different programs. The initial function in a newly added volume extending toward the waterfront is an Industrial Heritage Museum. For the museum integrates more as itself with surrounding landscape and very much to the public plazas in front, along creating a palpable relationship between the factory and other industrial heritage structures in the area. Adjacent to the Museum is another programmatic entity: the Research and Development Institute. Part of the ground floor and extending upward, this program gradually becomes more pronounced in terms of bulk and presence at the top than its runner. Different kinds of offices, laboratories, conference rooms, meeting spaces, and collaborative units will be available. Passage to this area of the complex will be defined typically semi-public, presenting a different user profile than other fully public spaces.

Supports diverse programmatic organization of space with a gallery of voids, bridges, and interstitial platforms that connect volumes both physically and visually. Each function has its own dedicated core and service infrastructure, ensuring autonomy and efficiency. Of accessibility: public entrances are two major ones located along the southern faces. The first is the reconstruction turbine volume; the second opens right into the main gallery of the Cultural Center. Entry to the Museum is along the northern side through a vast public plaza. The circulation and functional layout informed the landscape design consisting of newly defined hardscapes, connection pathways, and pedestrian access networks. Pathways run continuously and inclusively across the site, allowing movement across the areas to be uninterrupted.

Circulation was supported by other public amenities, such as: seating areas, level-shifted activity zones, outdoor cinemas, and equivalent multi-functional gathering spaces scattered throughout the landscape. The outcome is such that each elevation and section of the building furnishes an interaction of its own with the space thereby continuing to form the promise of the entire building as a dynamic, layered, and community-centric public place.

5.2 Programmatic Decisions: Defining the New Narrative

In the adaptive re-use model of the factory complex, new uses were designated taking into account the user needs of the surrounding environment, as well as the network of relations established by the existing social and cultural structures. As indicated earlier, the railway line extending to Alsancak includes a range of social, educational, and cultural facilities, and the area is perceived as offering an intensive density of social activities. At the same time, the newly designed building scheme includes cultural usage and adaptable, socially-oriented spaces in a way that also maximizes interaction with the existing urban fabric.

Continuing with this strategy, and as already stated, the envisioned industrial heritage museum is located to have a direct connection with the surrounding public square. The new building is planned on the site of the demolished transformer building, retaining the spatial imprint of the initial building. Through this, the museum engages in a dialogue at the same time with the Sumerbank Textile Complex and historical warehouse structures to the east, the public square before the electricity factory, and the park beside the old gasworks to the west. In doing so, the museum establishes physical and meaningful contact with the surroundings, positioned at the heart of the port hinterland and surrounded by industrial heritage structures.

This is then followed by a new idea of the former electricity factory — formerly always operating factory premises but now abandoned and idle — as a building with the role of a research and entrepreneurship facility in the aspiration of maintaining it productive according to the knowledge and innovation paradigm of the times. This function is located in the fourth block of the building, from the southern to the northern facade. Historically, this volume had contained factory administration functions, where managers and workers had formerly carried out operating work. In the new plan, it contains offices, laboratories, and co-working areas, referencing the historic space arrangement and hierarchy of purposes.

The three-layered building plan, developed in response to three main functions — the industrial heritage museum, the research institute, and the cultural center — offers users a broad spectrum of possibilities. These components form an interdependent system wherein each function is supplemented and augmented by the others through programmatic and spatial connection.

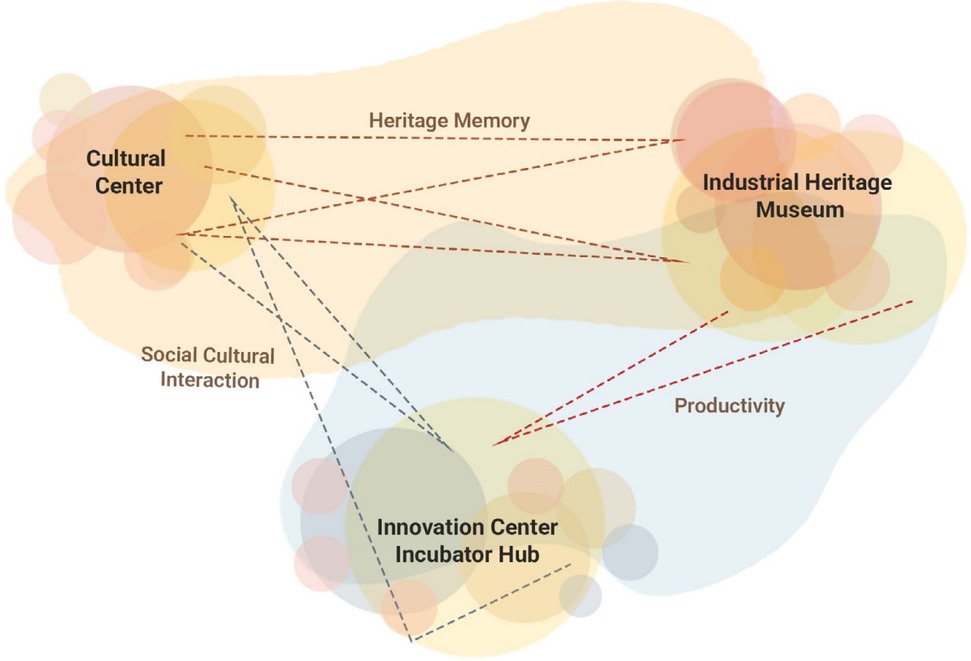


Fig 155: Mind Map of Proposed Building Program Schema

Fig 155: Drawn by author

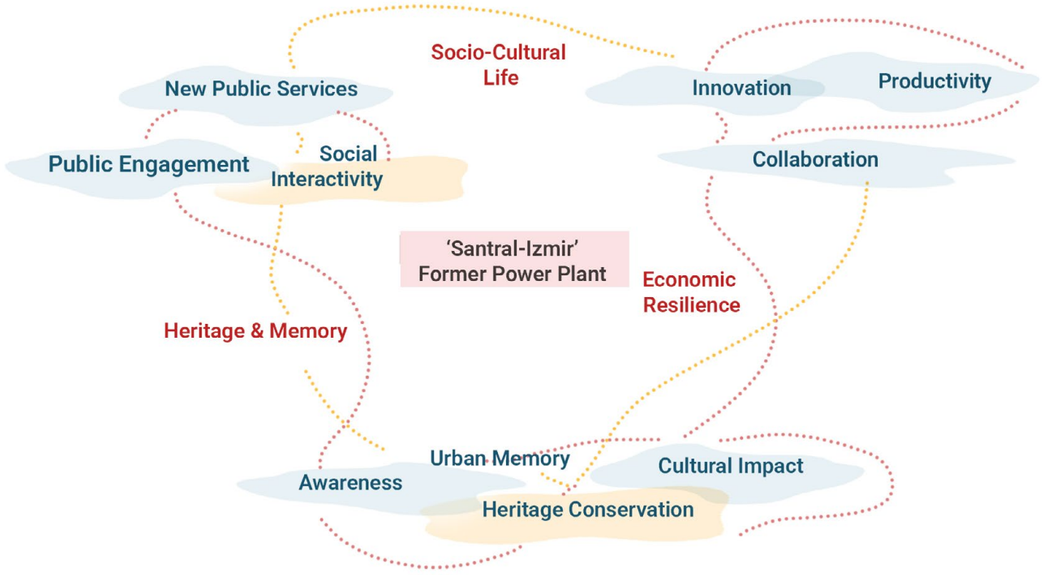


Fig 156: Mind Map of Proposed Building Program Schema

Fig 156: Drawn by author

Fig 157: Ground Floor Schema

Fig 157: Drawn by author

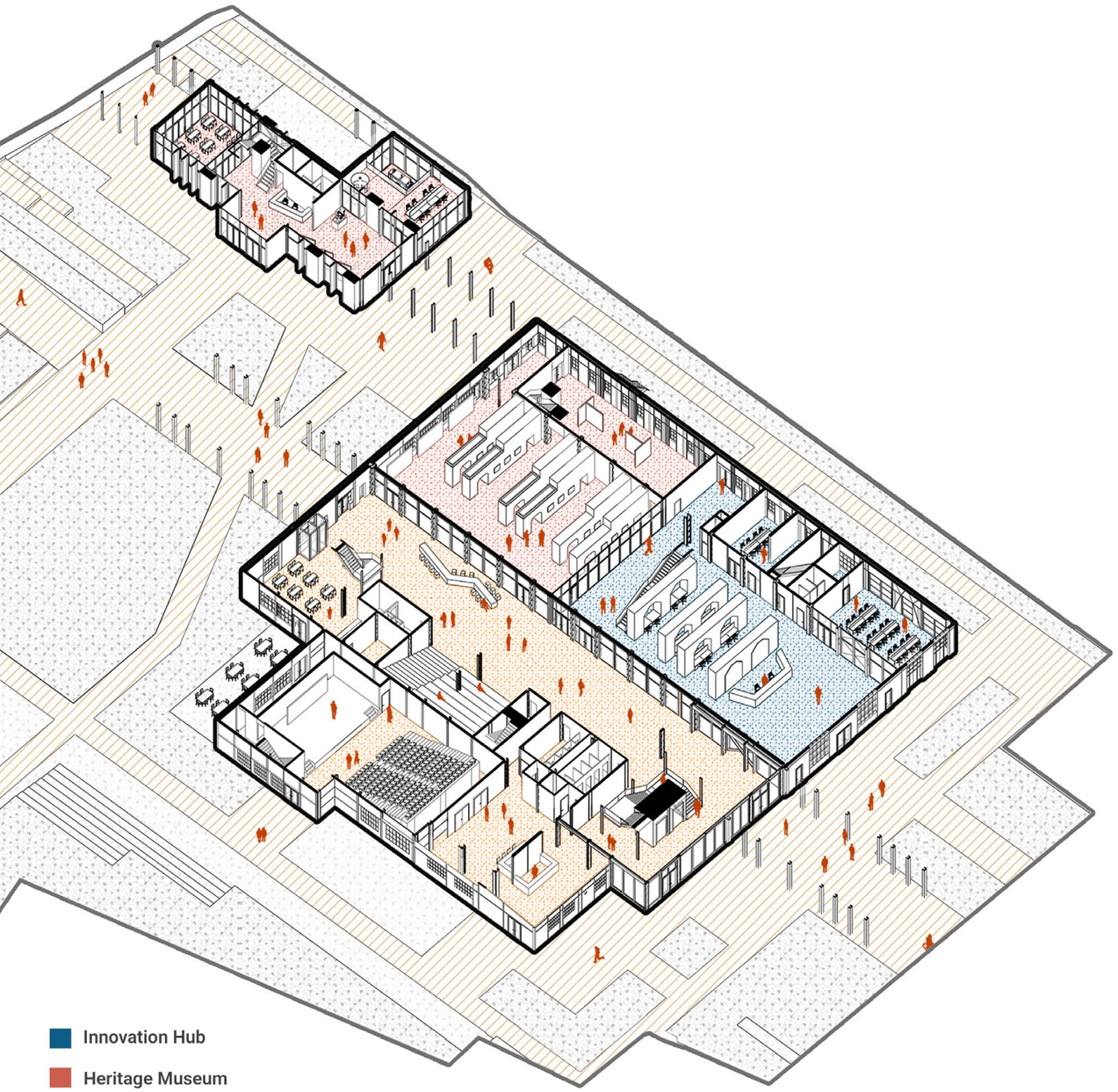


Fig 158: Building Program - Function Distribution

Fig 158: Drawn by author

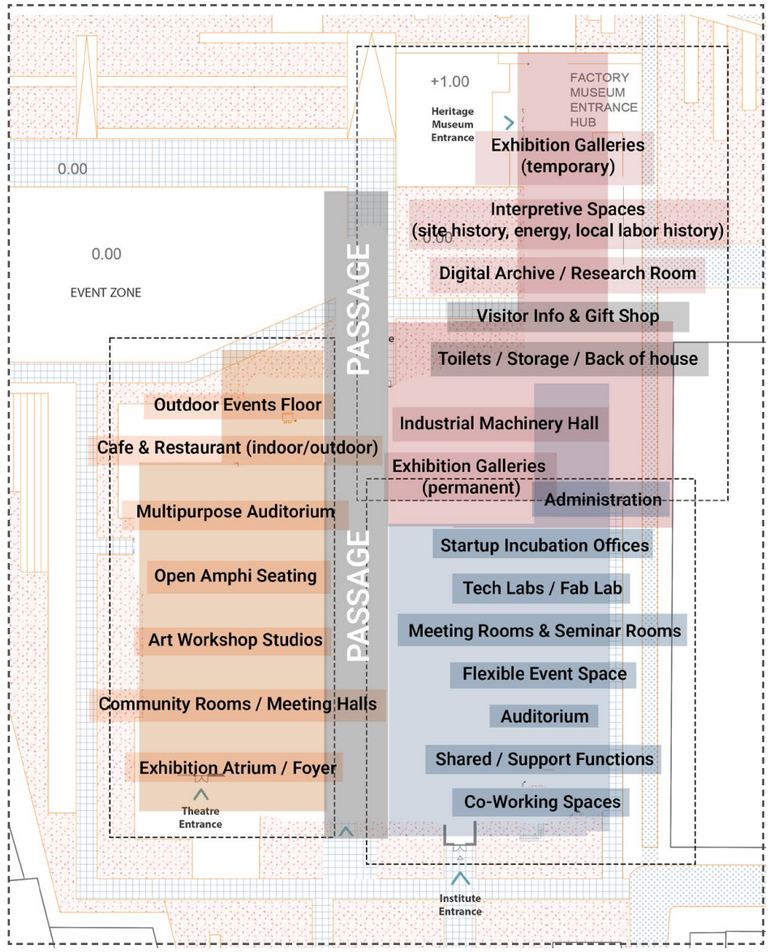


Fig 159: First Floor Schema

Fig 159: Drawn by author

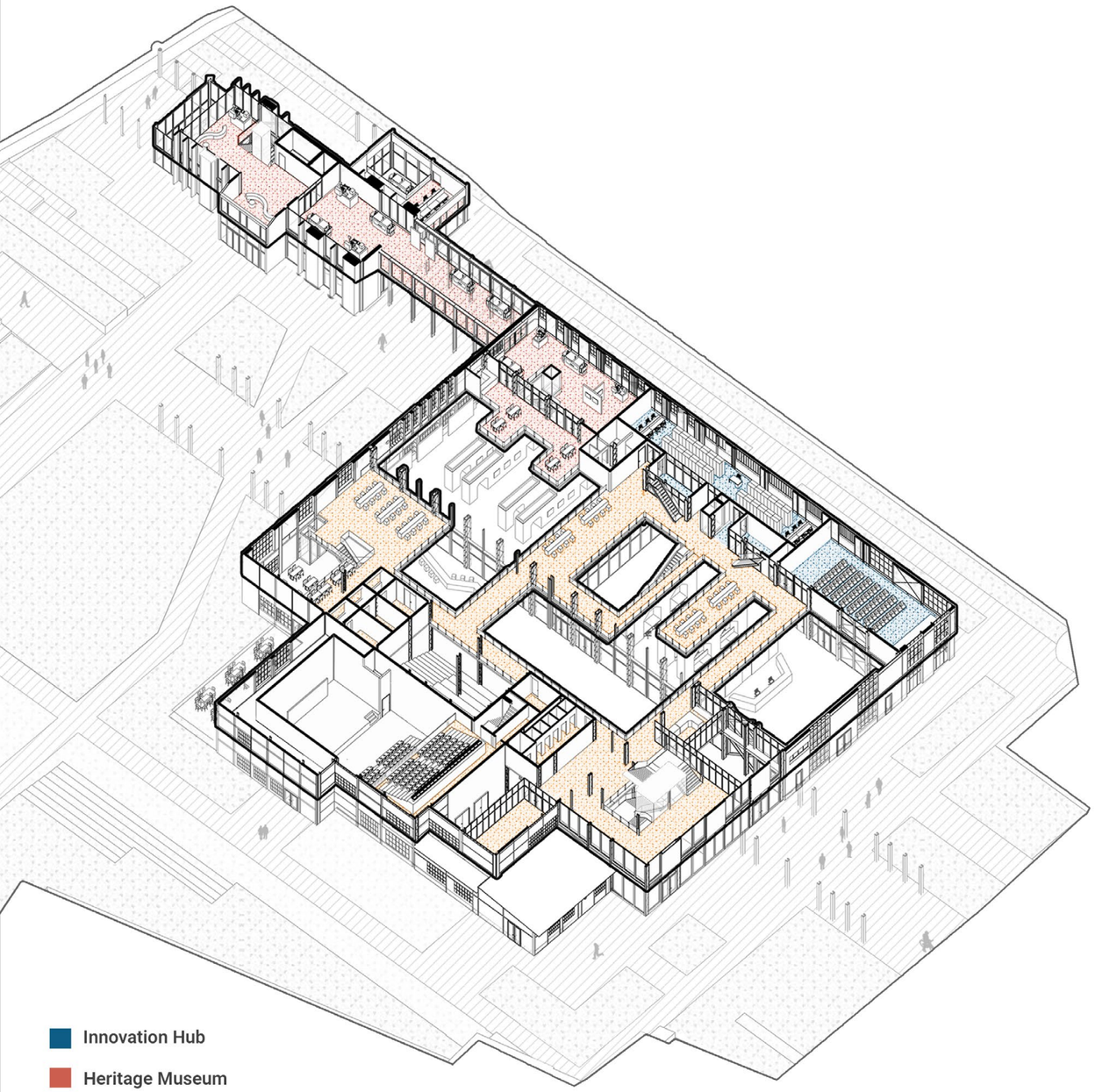


Fig 160: Second Floor Schema

Fig 160: Drawn by author

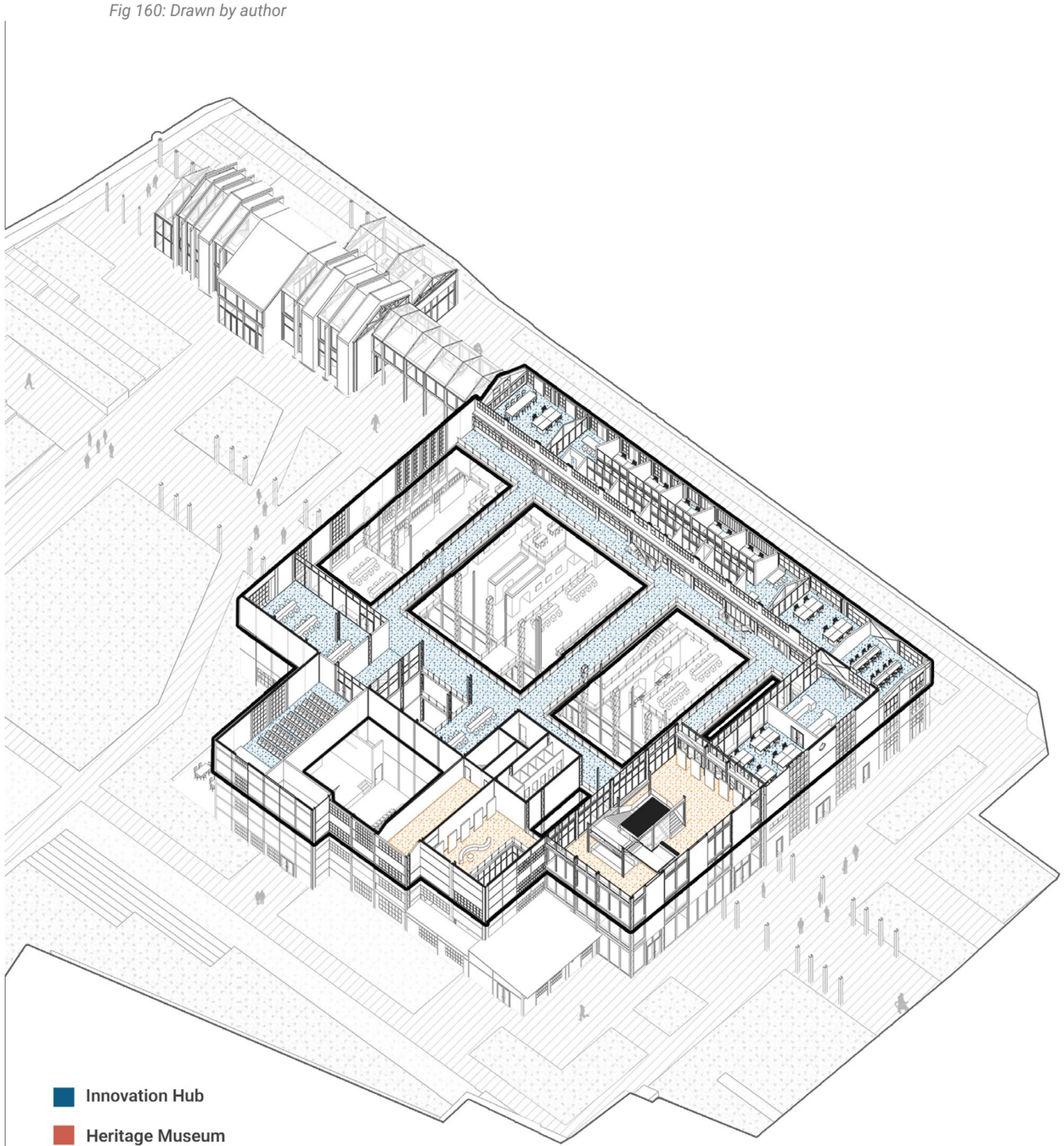
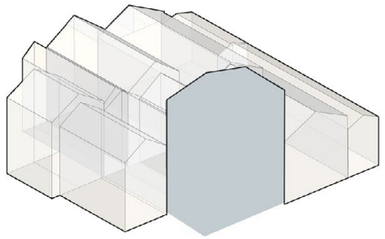


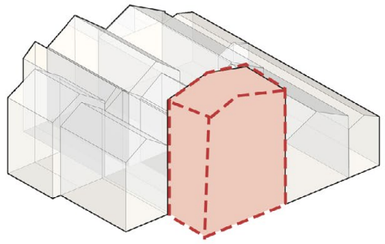
Fig 161: Building Development Stages

Fig 161: Drawn by author

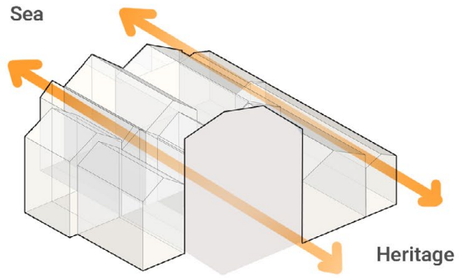
+ Design Stages



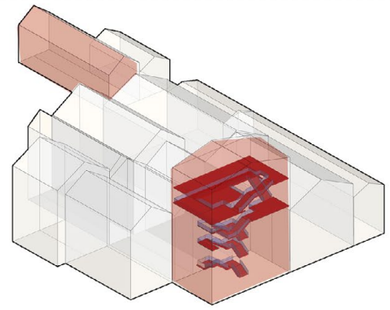
Existing Factory



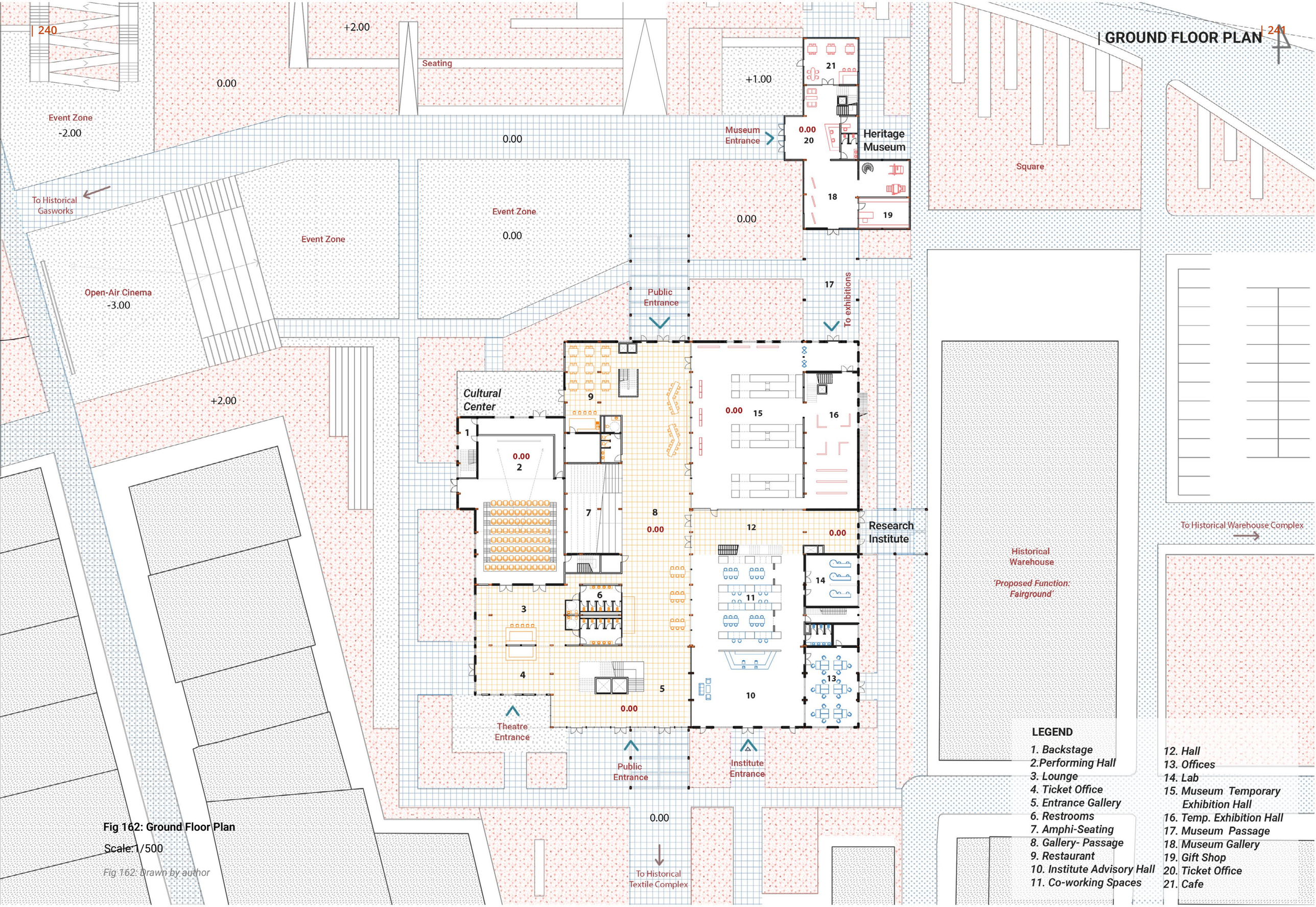
Construction of demolished block



Main Axis



Expansion, New Museum Hub



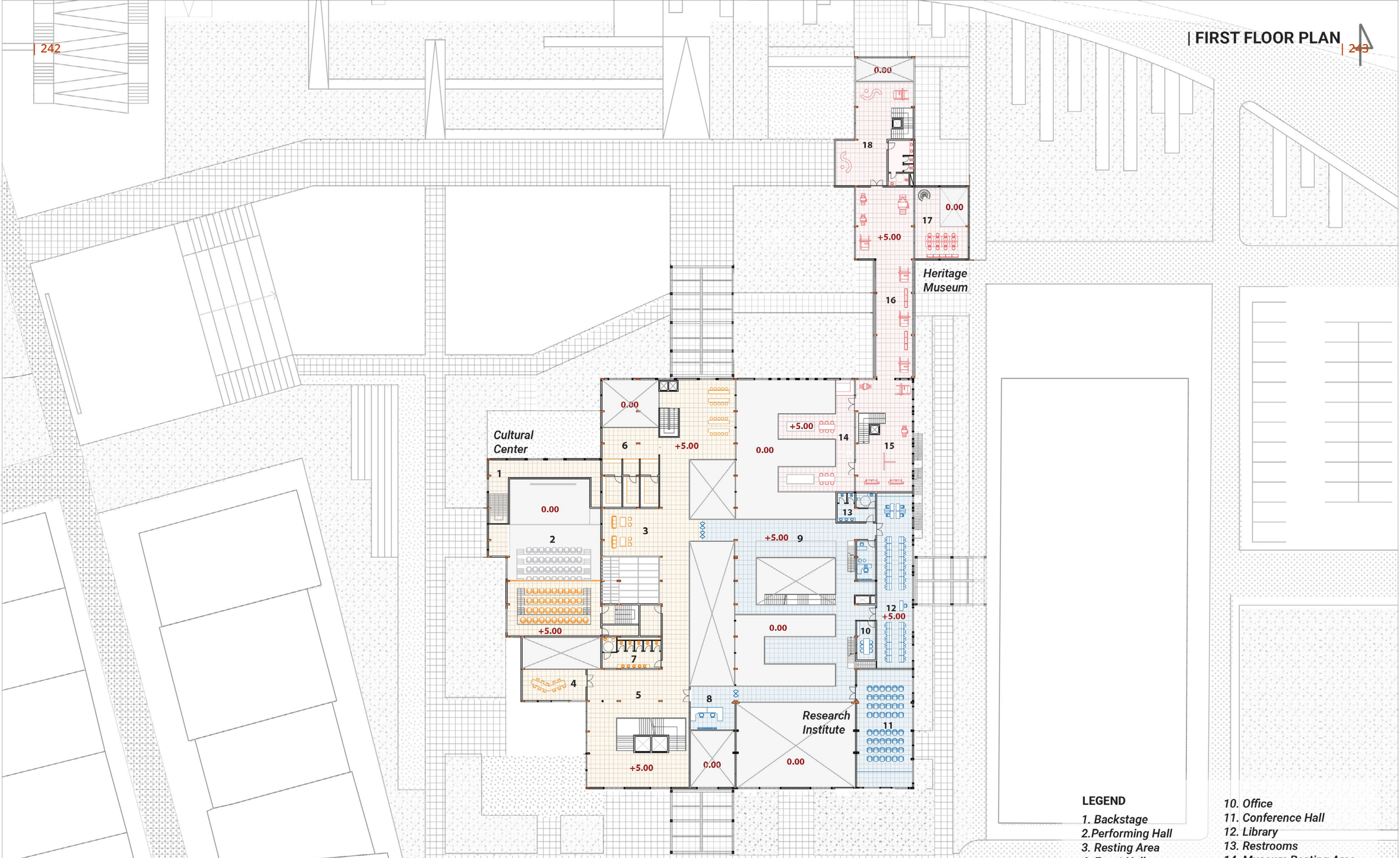
LEGEND

1. Backstage
2. Performing Hall
3. Lounge
4. Ticket Office
5. Entrance Gallery
6. Restrooms
7. Amphi-Seating
8. Gallery- Passage
9. Restaurant
10. Institute Advisory Hall
11. Co-working Spaces
12. Hall
13. Offices
14. Lab
15. Museum Temporary Exhibition Hall
16. Temp. Exhibition Hall
17. Museum Passage
18. Museum Gallery
19. Gift Shop
20. Ticket Office
21. Cafe

Fig 162: Ground Floor Plan

Scale: 1/500

Fig 162: Drawn by author



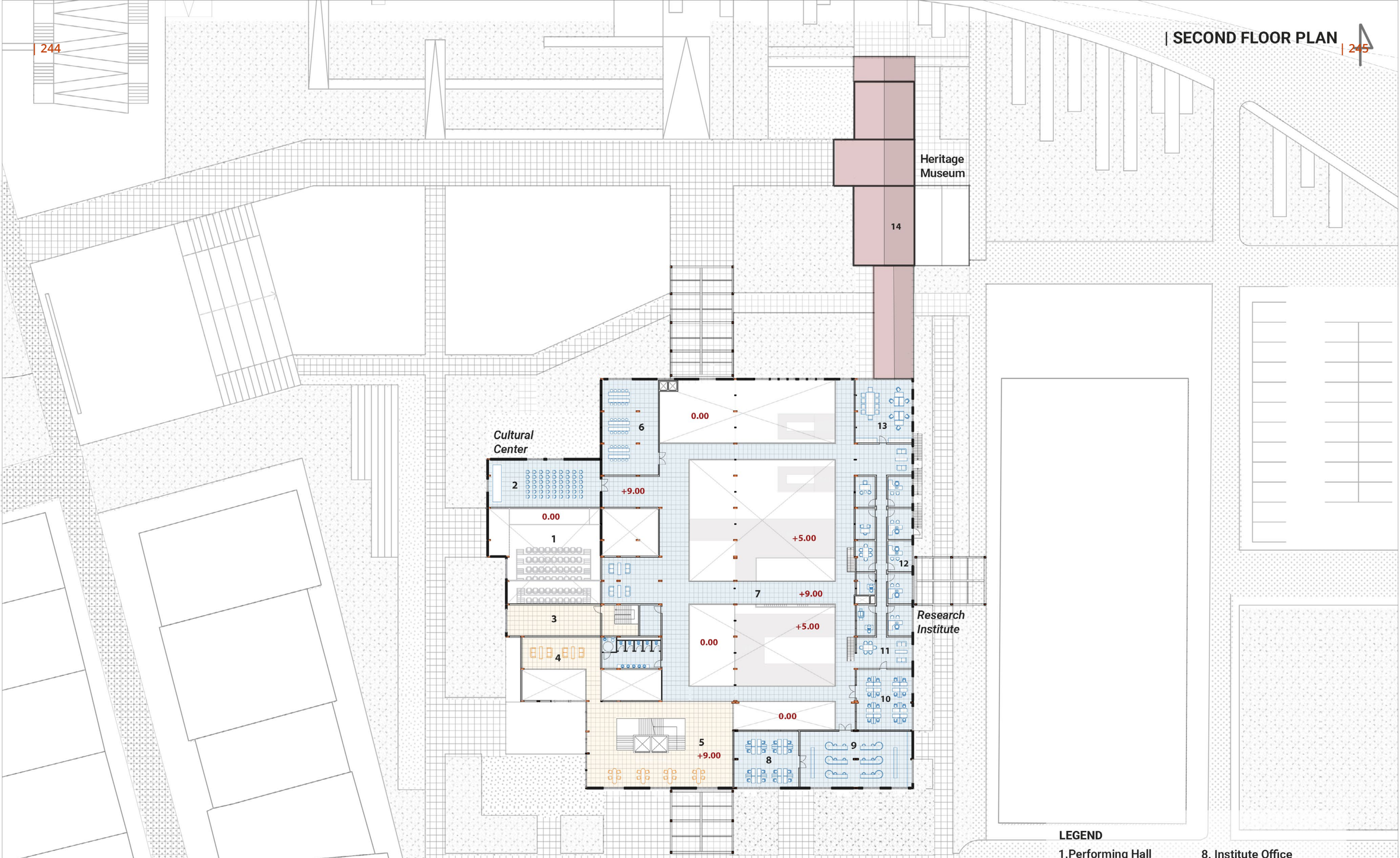
LEGEND

1. *Backstage*
2. *Performing Hall*
3. *Resting Area*
4. *Event Hall*
5. *Gallery*
6. *Food Court*
7. *Restrooms*
8. *Institute Advisory*
9. *Institute Flexible Area*
10. *Office*
11. *Conference Hall*
12. *Library*
13. *Restrooms*
14. *Museum Resting Area*
15. *Museum Permanent Exhibition Hall*
16. *Museum Exhibition Hall*
17. *Digital Exhibition*
18. *Museum Gallery*

Fig 163: First Floor Plan

Scale:1/500

Fig 163: Drawn by author



LEGEND

1.Performing Hall
2. Workshop
3. Tecnic Room
4. Event Hall
5. Gallery-Event Hall
6. Workshop
7. Platform
8. Institute Office
9. Institute Lab
10. Office
11. Resting Area
12. Administrative Offices
13. Meeting Room
14. Heritage Museum

Fig 164: Second Floor Plan

Scale:1/500

Fig 164: Drawn by author

Fig 166: A-A Section

Fig 166: Drawn by author

Fig 165: B-B Section

Fig 165: Drawn by author

Fig 168: C-C Section

Fig 168: Drawn by author

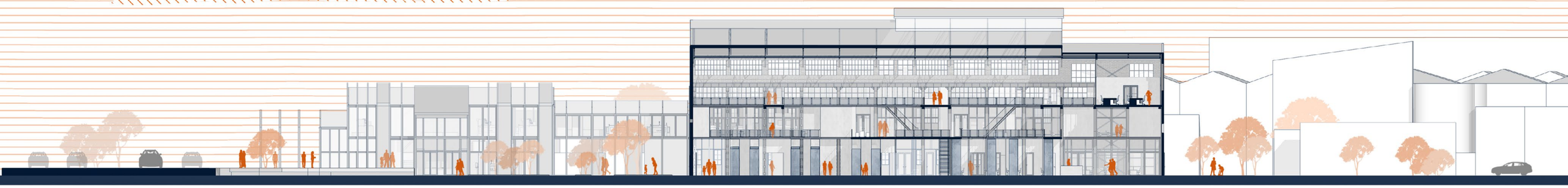


Fig 167: E-E Section

Fig 167: Drawn by author

Fig 169: E-E Section

Fig 169: Drawn by author

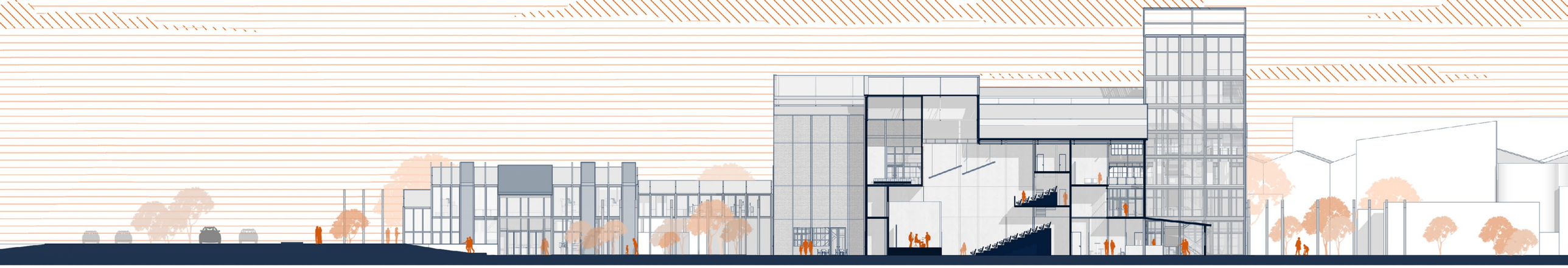


Fig 170: North Facade Elevation

Fig 170: Drawn by author

5.4 Urban Interface: Publicness and Connectivity

Fig 171: View from Main Avenue to Power Plant Complex

Fig 171: Drawn by author

Fig 172: View from Port to Industrial Heritage Museum

Fig 172: Drawn by author

Fig 173: View from Historical Textile Complex to Power Plant

Fig 173: Drawn by author

Fig 174: View of East Passage

Fig 174: Drawn by author

Fig 175: View from Square to Museum Entrance

Fig 175: Drawn by author

Fig 176: View of Research Institute Entrance Hall

Fig 176: Drawn by author

Fig 177: View of Gallery

Fig 177: Drawn by author

Fig 178: View of Co-Working Spaces

Fig 178: Drawn by author

Fig 180: View of Passage to Institute Entrance Hall

Fig 180: Drawn by author

Fig 180: Drawn by author

Fig 181: View of Research Institute Resting Area

Fig 181: Drawn by author

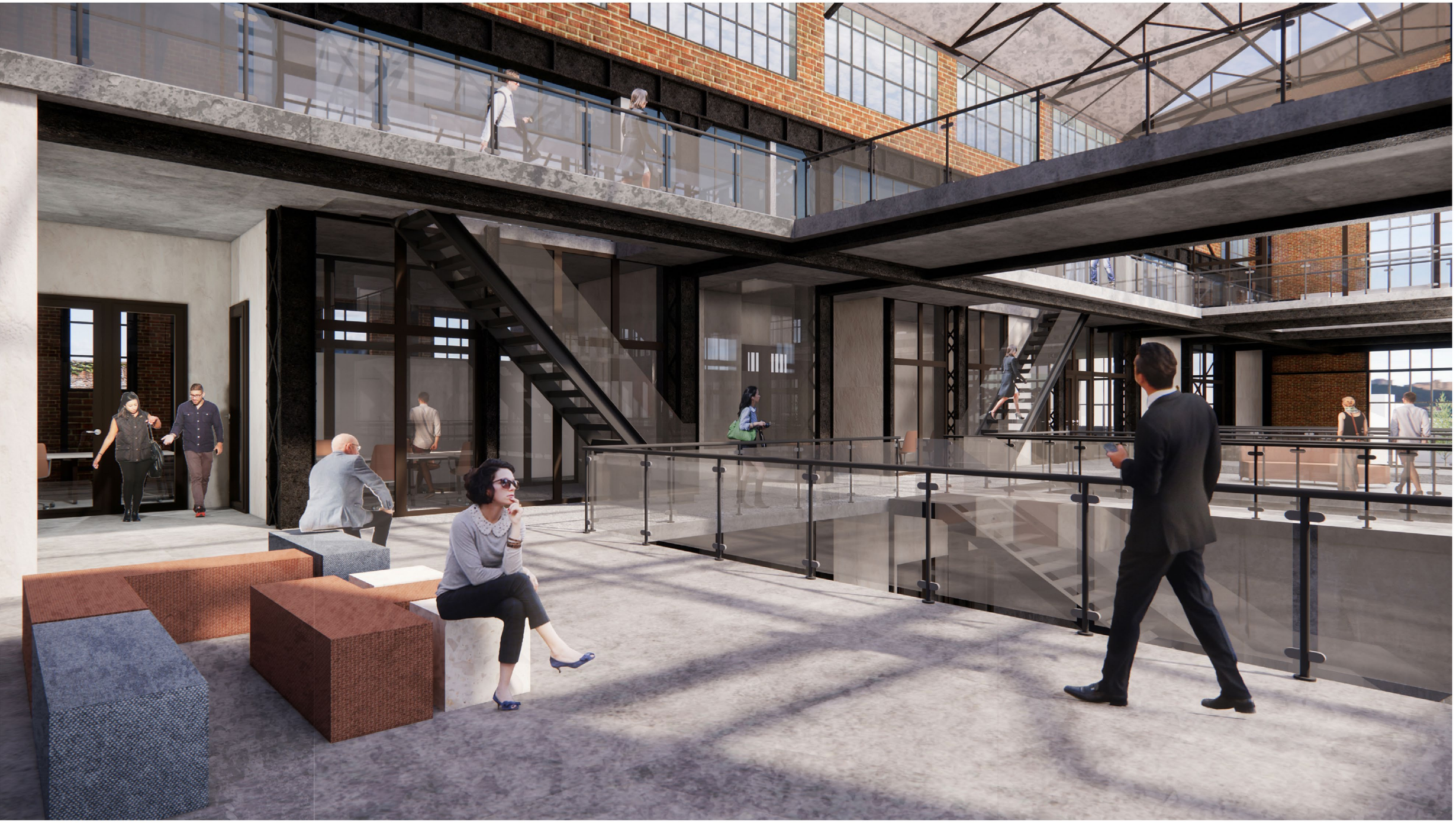


Fig 182: View of Upper Gallery

Fig 182: Drawn by author

CONCLUSION

CONCLUSION

The thesis has presented findings from an intensive investigation into the adaptive reuse of Izmir's Electric Power Plant with a proposition that it is more than simply a relic of early Republican industrialization but rather opens up to interpretation as a latent catalyst for cultural regeneration. Located in hinterland terms of Alsancak Port, an area with long industrial memory and, currently, serious stagnation, the site represents both the vulnerability and the potential of an industrial heritage such as Turkey's. The inherent architectural and spatial character of industrial structures is entirely different from a customary heritage typology or kind. Their monumental scales, production-oriented spatial organization, and layers of technological history render them complex and full of potential.

These buildings in Turkey are too many to mention; all those that have been constructed have become disused due either to functional obsolescence or abandonment or otherwise by the speculative forces of urban development. Recently, with increasing institutional and scholarly interest, however, this does not reflect meaningful integration of the buildings into the everyday urban fabric.

This thesis bridges the gap between frozen—that is, isolated—monuments and today's civic spaces. It proposes a design strategy that transforms the old plant into a new civic space, directly responding to contemporary needs. The intervention retains the architectural integrity while introducing new functions that will re-establish its relevance in the city on principles of reversibility, legibility, and historical continuity. The proposal accepts the layered material history while creating a spatial framework for renewed cultural, intellectual, and public life.

Within the theoretical framework and all the contextual analyses, the project develops a two-scale strategy, which is both an architectural and an urban one. At the urban scale, reconsideration of functional distribution within the port district integrates the currently isolated Meles Delta into a new coastal promenade, and the road infrastructure running parallel along the waterfront is re-evaluated concerning accessibility and interaction with historical structures. The proposal promotes a much more coherent urban fabric by reviewing the spatial relations of the nearby industrial heritage buildings with educational institutions and public facilities.

In turn, readdresses accessibility and physical connections at the architectural scale, while regulating controlled, careful interventions based on the material and spatial qualities present within the structure. The reconstruction of the missing turbine hall into a new contemporary volume and the addition of a new museum wing on the north facade, representing the historical positions of the transformer building and water intake channels, are important moves within this context.

This new program consists of three core functions: an Industrial Heritage Museum, a Research and Development Institute, and a Cultural Center. The building aims to reinforce the historical legacy of the structure and raise public awareness of other abandoned industrial buildings in its vicinity. In addition to tying it to the gasworks and the central square, this strategic position enhances its symbolic role. The R&D Institute ensures the continuity of productive activity with innovation while activating the site with new uses. Lastly, the Cultural Center serves as a connective hub for these programs—serving both the museum and the institute while responding to social needs in the urban public. The three programs link together through bridge-like galleries, assuring spatial continuity and functional independence. Through this, the industrial character of the building is recontextualized and melded into a broader urban vision rooted in cultural participation, public memory, and sustainable reuse.

This approach is not only specialized in the intervention of the Electric Power Plant in Izmir but also a constructive and pluralistic model responding to widely encountered problems of conservation and reuse of industrial structures in Turkey. Many such buildings are derelict and replaced by new ones, so public memory and urban diversity have been erased. This study stands up to such trends by showing how adaptive reuse to meet contemporary needs is likely the best way to reinterpret disused industrial structures rather than demolishing or freezing them into preservation.

By emphasizing spatial continuity, functional diversity, and cultural intercon-

nectivity, this proposal exemplifies how similar structures all across Turkey can be interpreted with transformation intent so that they may reintegrate into the urban environment and be reinvented. Industrial heritage ceases to be a mere remnant left by the past but a producing, multifunctional civic resource contemporary to and adamant for sustainable urban development and cultural continuity.

Thus, although dealing with a specific case, this study provides a participatory, transformative, and sustainable pathway for the preservation of industrial heritage in Turkey by defining the approach and principles that it harbors today, leaving traces of the past in the surround of future urban fabric.

The over-doing of rapid urban change, coupled with economic pressure, has continued to make many industrial buildings out of date or stripped off their original character. The consequences resulting from this will be more damaging than merely physical loss; the risk will redefine cultural memory tied in production histories and collective identity. This thesis propounds an alternative trajectory: one that frames industrial heritage not merely as an object to be preserved, but as a dynamic process to be reactivated.

So, the proposal demonstrates that these structures can be converted into valuable and functional urban areas, able to address modern requirements while staying strongly linked to the past. In this respect, preservation is perceived, not as a fixed restoration, but as a process enhanced with social involvement, cultural continuation, and spatial versatility. This paradigm will offer a framework for the additional extension of conservation strategies in Turkey and explore industrial heritage within a broader social and urban setting.

Therefore, with every ensuing project-opposite of industrial demolition-it's going to ground such public imagination in these multifaceted, identity-filled spaces that allow the city to communicate via its own history.

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