Maria Aikaterina Travlou

NEORIA CULTURAL CENTER

A project of Restoration, Contemporary Addition and Adaptive Reuse of Chania's Venetian Shipyards

Diplomarbeit
Fakultät für Architektur und Raumplanung
Technische Universität Wien

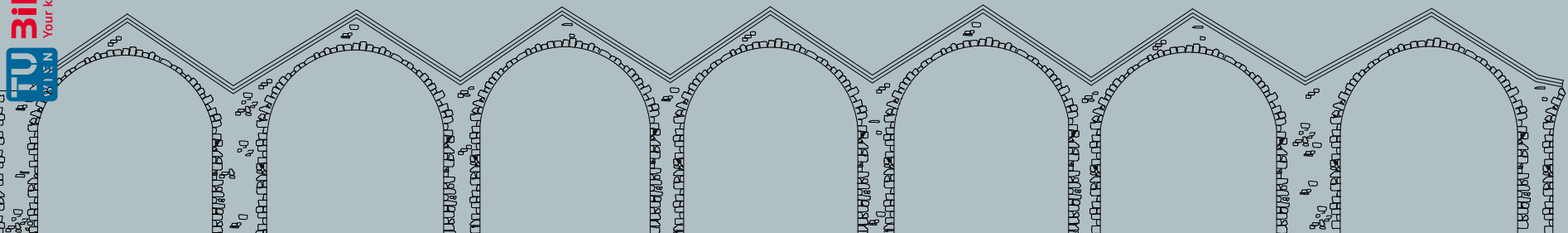

Fig. 1: The Venetian Port of Chania, photographer Nikos Kouklakis.

TU WIEN architektur + raumplanung

DIPLOMARBEIT

Neoria Cultural Center
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and Adaptive Reuse of Chania's Venetian Shipyards

ausgeführt zum Zwecke der Erlangung des akademischen Grades
Diplom-Ingenieur / Diplom-Ingenieurin
eingereicht an der TU-Wien, Fakultät für Architektur und Raumplanung

Submitted in satisfaction of the requirements for the degree of
Diplom-Ingenieur / Diplom- Ingenieurin
at the TU Wien, Faculty of Architecture and Planning

von

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Wien, am 17.03.2025

ABSTRACT

The city of Chania, located in northwestern Crete, has always been closely linked to its port. Along with its walls and castle, the port served as a primary defense line for the city and later, during Ottoman rule, became a significant trade center. Today, transportation and commerce are conducted through the port of Souda, allowing the old port to transform into a cultural hub, a major landmark for visitors, and a gathering place for everyone, offering enchanting views and a variety of dining and entertainment options.

This thesis primarily focuses on the venetian shipyards of Chania "Neoria", situated on the waterfront of the old harbor, amidst a series of cultural buildings. "Neoria" comprises a complex of seven remaining interconnected vaulted structures (Volti), constructed in the mid-16th century during Venetian rule to house the galleys of the Venetian fleet in the region. Although currently closed to the public and in evident need of restoration, "Neoria" remains a hallmark of the city, requiring careful architectural intervention with consideration of its historical significance.

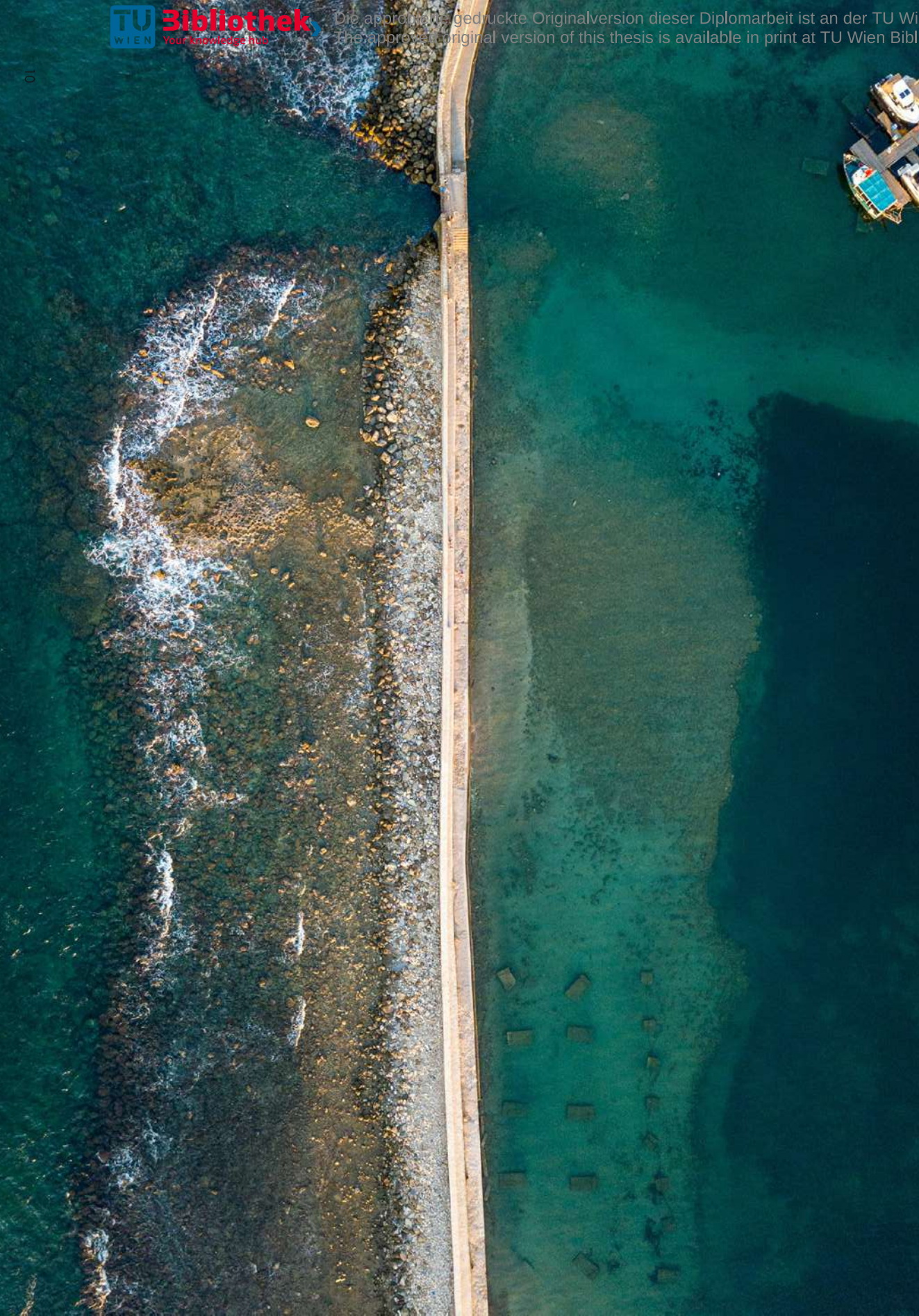
Therefore, the aim of this thesis is to highlight and enhance the building complex, utilizing its full potential and to integrate new uses that primarily focus on promoting culture, meeting the needs of citizens, attracting visitors, and serving as a communal gathering point.

Die im Nordwesten Kretas gelegene Stadt Chania ist seit jeher eng mit ihrem Hafen verbunden. Zusammen mit seinen Mauern und der Burg diente der Hafen als Hauptverteidigungslinie der Stadt und wurde später, während der osmanischen Herrschaft, zu einem bedeutenden Handelszentrum. Heute werden Transport und Handel über den Hafen von Souda abgewickelt, so dass sich der alte Hafen in ein kulturelles Zentrum, eine wichtige Sehenswürdigkeit für Besucher und einen Treffpunkt verwandelt hat, der bezaubernde Aussichten und eine Vielzahl von Gastronomie- und Unterhaltungsmöglichkeiten bietet.

Diese Arbeit konzentriert sich in erster Linie auf die venezianischen Werften von Chania „Neoria", die am Ufer des alten Hafens inmitten einer Reihe von Kulturgebäuden liegen. „Neoria" besteht aus einem Komplex von sieben noch erhaltenen, miteinander verbundenen Gewölbegebäuden (Volti), die Mitte des 16. Jahrhunderts während der venezianischen Herrschaft zur Unterbringung der Galeeren der venezianischen Flotte in der Region errichtet wurden. Obwohl derzeit für die Öffentlichkeit geschlossen und offensichtlich restaurierungsbedürftig, bleibt „Neoria" ein Wahrzeichen der Stadt, das einen sorgfältigen architektonischen Eingriff unter Berücksichtigung seiner historischen Bedeutung benötigt.

Ziel dieser Diplomarbeit ist es daher, den Baukomplex hervorzuheben und aufzuwerten, sein volles Potenzial auszuschöpfen und neue Nutzungen zu integrieren, die sich in erster Linie auf die Förderung der Kultur, die Befriedigung der Bedürfnisse der Bürger, die Anziehung von Besuchern und die Funktion als kommunaler Treffpunkt konzentrieren.

Fig. 2: The Venetian Port of Chania, photographer Marie Cheng Yu.



CONTENTS

PART I - ANALYSIS

PART II - DESIGN PROPOSAL

PART III - SECTIONS, VISUALISATIONS & DETAILS

Fig. 3: The Pathway to the Lighthouse, photographer Manos Koutras.

PART I

ANALYSIS

Fig. 4: The Lighthouse of the old Port, photographer Nathan Boadle.

THE EVOLUTION OF THE CITY OF CHANIA

A Brief History

Located on Crete's northwest coast, Chania is one of the world's oldest continuously inhabited cities, with origins dating back to the Minoan civilization around 5,000 years ago. This deep historical background is evident in Chania's diverse layers of cultural influences, shaped by Romans, Byzantines, Venetians, and Ottomans. Each period has left a unique imprint, creating a fascinating cultural blend.

The Old Town of Chania is a labyrinth of narrow streets and alleys, where Venetian, Ottoman and Greek neoclassical buildings create a rich urban tapestry, which offers a distinctive character and charm.

A key highlight of Chania is the Venetian Harbor, built between 1320 and 1356. This bustling area features a scenic promenade perfect for leisurely walks and enjoying views. The lighthouse at the harbor's end, originally built by the Venetians and later restored by the Egyptians, remains a significant symbol of the city's maritime heritage[1].

Cretan music is a big part of life on the island, with the sounds of the lyra and laouto filling the streets of Chania. From big concerts and festivals to street musicians, the citys love for music is very evident. Local markets, like the Municipal Market of Chania, provide a window into the region's agricultural and cooking traditions.

Chania's many historical buildings, some of which are in ruins, are in urgent need of restoration as time has taken its toll on the city's architectural heritage. At the same time, there's a growing effort to breathe new life into these structures by repurposing them.

1 West Crete, The Venetian harbour of Chania, (http://west-crete.com/chania-harbour.htm).
2 Municipality of Chania, "Prehistoric Times - Chania History" (2023), (https://chaniahistory.gr/prehistoric-times/).

Fig. 5: The Venetian Port of Chania, photographer Leonhard Niederwimmer.

Fig. 6: Geographical location of Chania on the map of Greece.

Prehistoric period (3650-1070 B.C.)

Chania, built on ancient Kydonia, was founded by Kydonas and as mentioned in Homer's Odyssey and by geographer Strabo, it was build in 3650 B.C. on Kastelli hill. Kydonia grew into a key Minoan center, thriving in agriculture and trade. By 1550-1450 B.C., it peaked with minted currency, organized urban planning, and significant trade. Despite fires around 1450 B.C. and 1300 B.C., it was rebuilt. However, by 1150 B.C., signs of life in Kydonia disappeared as the Minoan civilization declined[2].

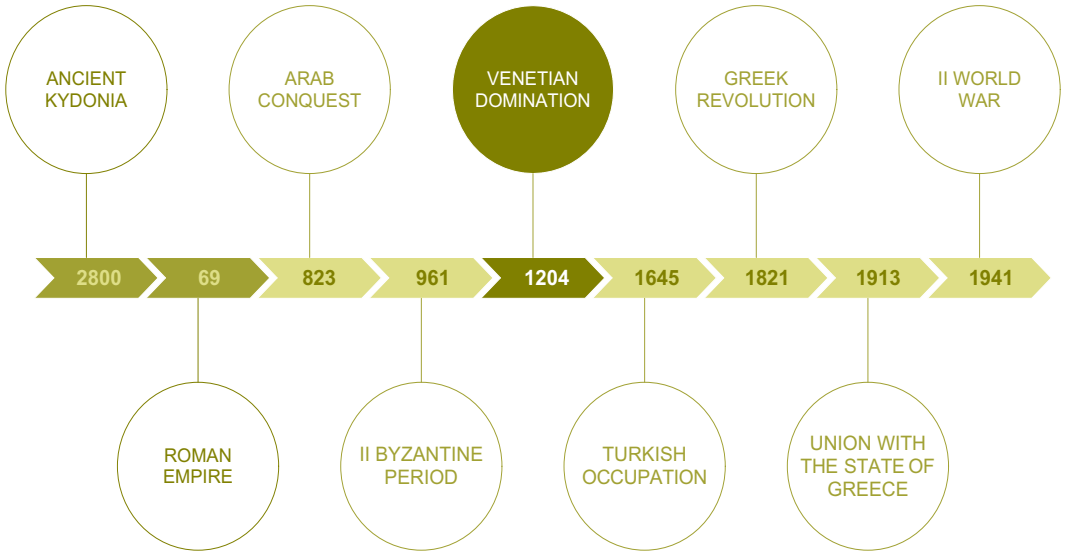
Historic era (1070- 330 B.C.)

Kydonia expanded from Kastelli, with notable events including Samian settlement in 524 B.C. and Athenian and Phocian attacks. Later on, the city developed good relations with Athens and joined the Aetolian League in 219 B.C. Conquered by Romans in 69 B.C., it became an independent, prosperous city by 30 B.C., with significant buildings and a theater. By 330, it was the largest city in the region and an early Christian Episcopate. Key archaeological finds include sculptures, mosaics, and a grand tomb. The Roman theater was unfortunately dismantled in 1583 by Venetians.

Byzantine Empire (330-1204)

In 330, Crete joined the Byzantine Empire. Kydonia remained significant, with fortifications built against Saracen attacks in the 7th century. Despite these efforts, Kydonia was destroyed by Arabs in 828. During Arab rule (824-961), the island suffered greatly. The Byzantines reclaimed Crete in 961, restoring Kydonia's economic role and building the fortress Kastelli. Noble families from Constantinople were brought to aid reconstruction[3].

3 Municipality of Chania, "Byzantine Times - Chania History" (2023), (https://chaniahistory.gr/byzantine-times/).

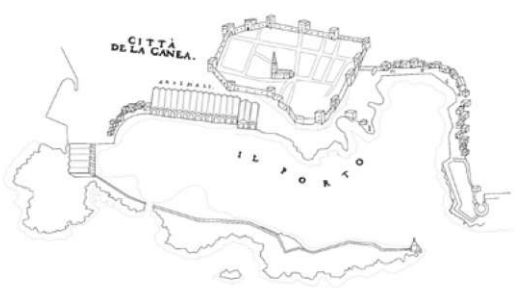


Venetian Domination (1204-1645)

After 1204, Venetians took control of Crete, renaming it to Chania from La Canea and rebuilding it on ancient Kydonia's ruins. The city faced Genoese attacks but was restored with Venetian architecture and fortifications in the 16th century. Key developments included new walls, a lighthouse, and improved infrastructure. By 1583, Chania had 8,200 residents. The Venetians expanded Orthodox privileges, leading to influential monasteries and contributing to the "Cretan Renaissance[4]."

Ottoman Empire (1645-1898)

The Cretan War began in 1645 with the Ottoman invasion of Chania, which surrendered by August 22, 1645. The Ottomans repurposed Venetian structures, building mosques and public facilities. Turks settled in the east, while Christians and Jews lived in the west. Under Ottoman and Egyptian rule, Chania expanded and modernized, becoming the capital of Crete in 1851. Despite tensions and uprisings, including the significant revolt of 1866-1869 and the 1896-1897 violence, Chania moved towards modernization and Greek integration. Spyros Kayales act of holding the Greek flag upright with his body despite enemy fire in 1897 lifted rebel morale, fueling their fight for Crete's union with Greece[5].



Left page:
Fig. 7: Schematic representation of the historical timeline of the city, highlighting key historical events. (Author's own illustration).
Fig. 8: Drawing of Città di la Canea, after the completion of the 17 Volti.

Right page:
Fig. 9: The old port of Chania prior to the construction of the promenade 1863- 1865, photographer Giussepe Berinda.
Fig. 10: Friedrich M. Hessemer's drawing, Canea 1829, Arsenali Vecchi.

4 Municipality of Chania, " Venetian Domination- Chania History" (2023), (https://chaniahistory.gr/venetian-domination/).
5 Municipality of Chania, " Turkish Rule- Chania History" (2023), (https://chaniahistory.gr/turkish-rule/).
6 Encyclopaedia Britannica, "Eleutherios Venizelos" (https://www.britannica.com/biography/Eleutherios-Venizelos).
7 Imperial War Museums, " What Was The Battle Of Crete? - World War II 1941", (https://www.iwm.org.uk/history/what-was-the-battle-of-crete).

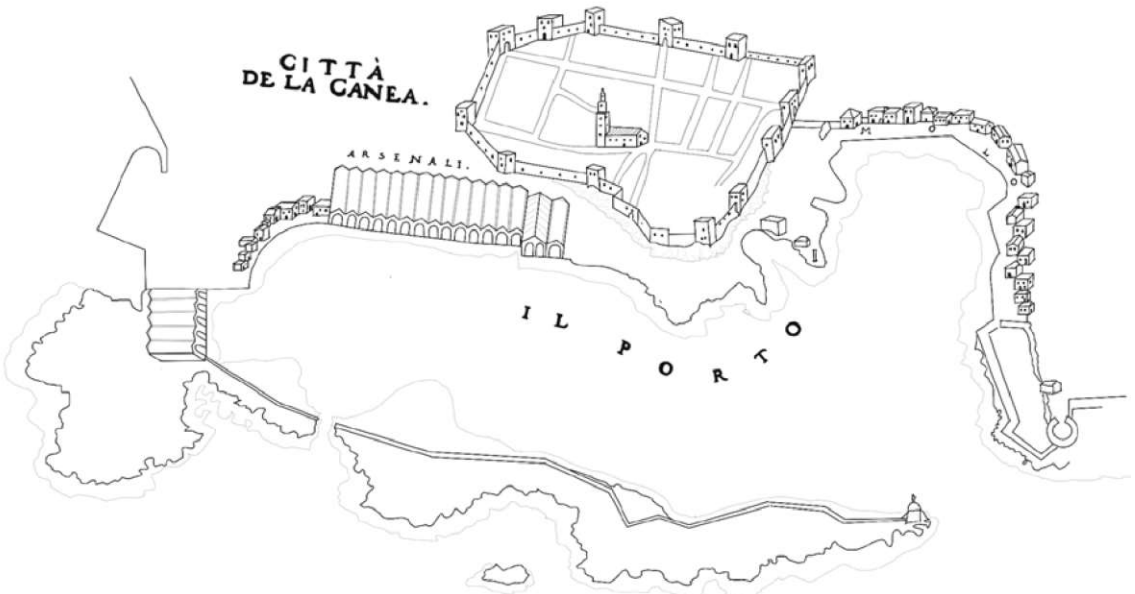
Cretan State (1898-1913)

In December 1898, the Cretan State was established with Prince George as High Commissioner. Chania became a thriving center, expanding beyond the Venetian walls with new roads and neoclassical buildings. Crete modernized with new institutions and the introduction of the Cretan drachma. Eleftherios Venizelos led political reforms and revolts[6], eventually leading to the declaration of union with Greece in July 1908. The official union occurred on December 1, 1913, after the Balkan Wars, with the Greek flag raised at Firka Fortress.

Modern Era (1913-1965)

On December 1, 1913, the island of Crete officially united with Greece, marking a new chapter for Chania. The city began to grow, with its population rising from around 20,000 in 1900 to over 30,000 by 1961, and to expand beyond the old town walls. In May 1941, during the Battle of Crete, German forces launched a major invasion[7]. Despite the legendary courage of the locals in fighting the invaders, the city suffered heavy bombing, and many Venetian and Ottoman landmarks were damaged. After World War II, Chania was slowly rebuilt and in 1965 its Old Town was officially declared a historical monument, protecting its unique character while the city continued to grow and evolve.

HISTORICAL OVERVIEW OF THE VENETIAN SHIPYARDS



The 'Arsenali' buildings, constructed between 1467 and 1599, were a series of docks and shipyards crucial to the Venetians' naval operations in Chania. These structures included 17 arsenals lined up in a terrace, with three additional docks called the Docks of Moro added in 1607 at the harbor's eastern end. Each arsenal was around 50 meters in length and 9 meters in width, featuring vaulted designs open on the sea side, facilitating the easy movement of ships in and out for repairs and construction. This design, open to the sea, was particularly innovative for its time, providing both functionality and efficiency in maritime operations[8].

During the Ottoman era in Chania, which began in 1645 and continued until 1898, the role of the arsenals remained crucial, although their purpose changed significantly. By the 18th century, nine of these arsenals were demolished and converted into military storage facilities. This change highlights a major shift in the function of the harbor, transforming from a busy center of shipbuilding to a key military depot essential for the Ottoman administration and defense[9].

Despite significant changes over the centuries, several of the original Venetian Arsenali in Chania have survived. These vaulted structures, that were once crucial for naval repairs and construction, now stand as remarkable examples of Venetian maritime engineering.

Left page:

8 Venetian Arsenals of Chania, Hellenic Ministry of Culture & The Architecture of the Venetian Navy Yard, P. Koutsoumpas.

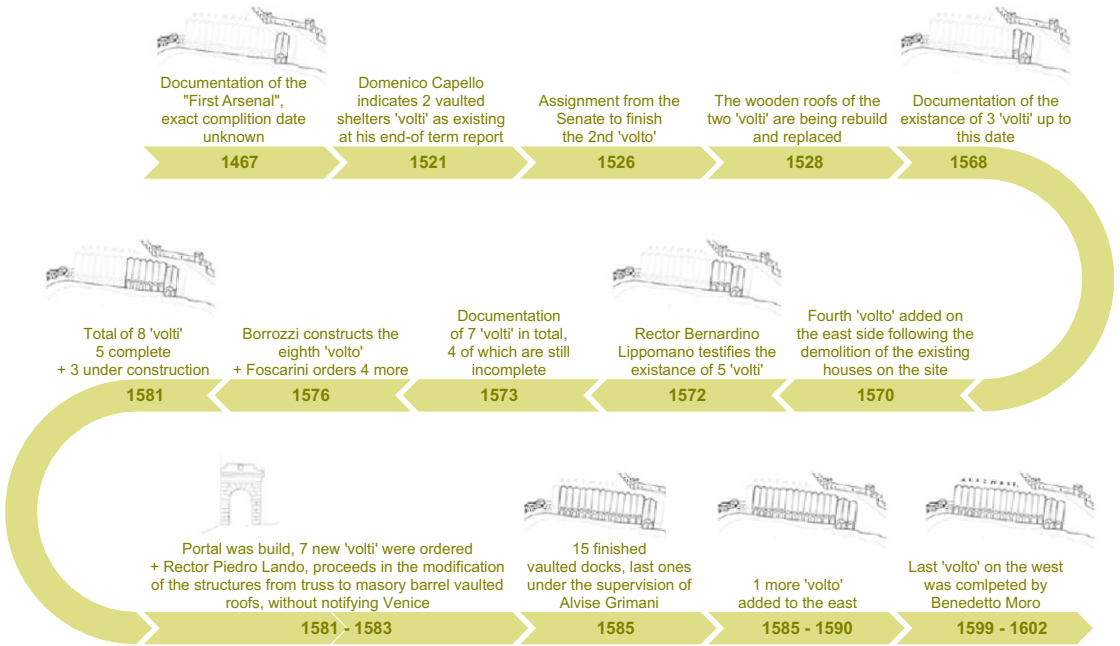
9 Venetian Shipyards of Chania, Ministry of Culture, Municipality of Chania, Technical University of Crete, (2023).

Fig. 11: Drawing of Città di la Canea, after the completion of the 17 Volti.

Right page:

Fig. 12: Schematic representation of the history of construction of the Arsenals from the beginning through to the completion of all 17 Volti, created for the purposes of this thesis.

Tracing the Construction of Chania's Neoria



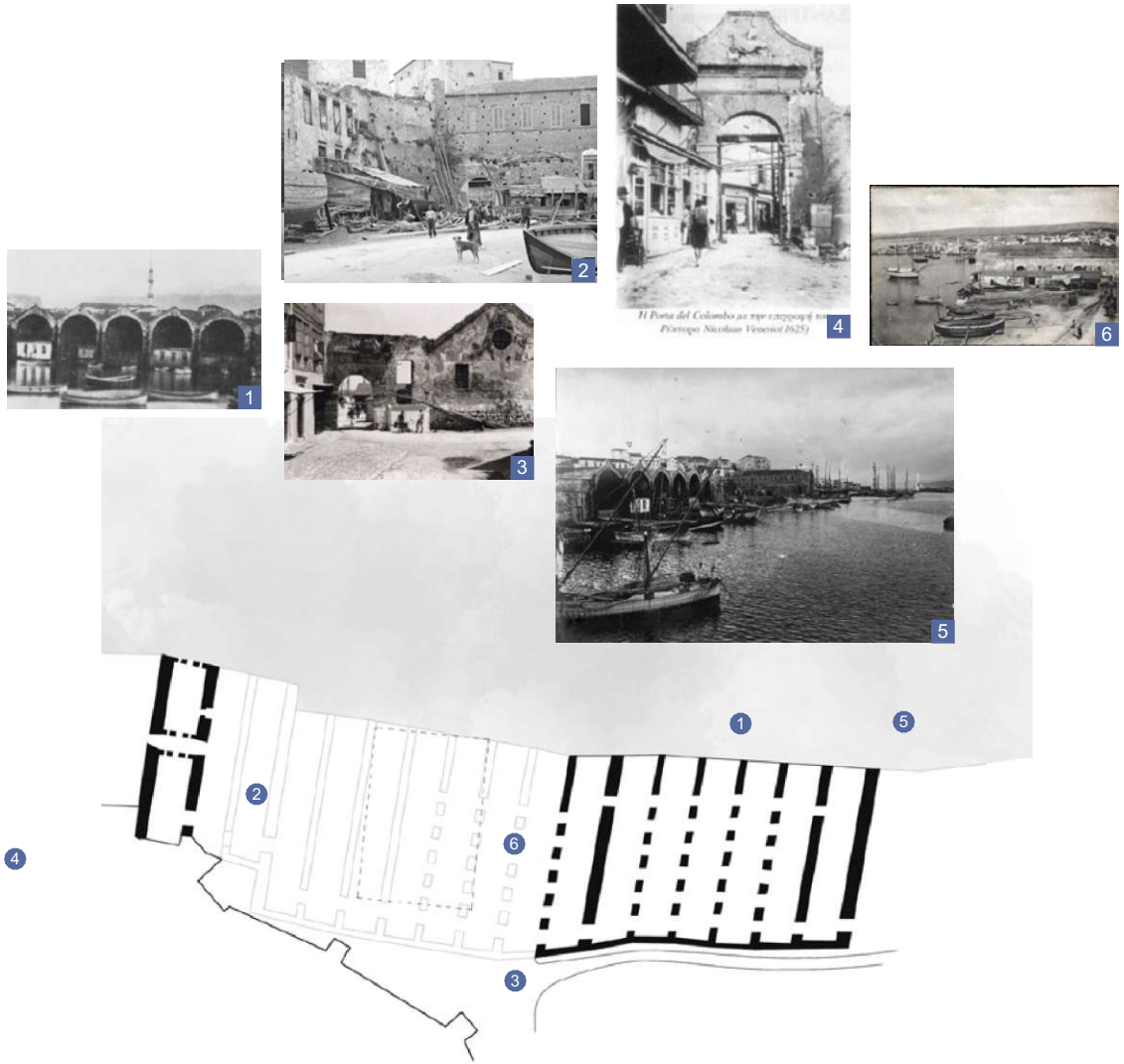
A Fragmented Historical Record

The information on the construction of the Neoria comes from various sources, primarily letters to the Senate rather than formal historical records. As a result, reconstructing an accurate timeline of the Arsenali's construction requires caution. Although historical maps provide some clarity, many details of the building process remain uncertain[10].

The resolution of 1467 initiated the construction of the first Arsenal in Chania, specifying the number of galleys to be accommodated but not the number of buildings. By 1521, Domenico Capello recorded the existence of 2 volti, likely those built in 1467. Information on the developments between 1528 and 1568 is limited, but sources confirm that only 3 volti existed by then. In 1572, rector Bernardino Lippomano documented 5 volti, comprising the original 3 and 2 new ones from the 1568 expansion plan. By the end of 1573, rector Piero Calbo reported 7 volti, with the shipyards able to accommodate 11 galleys[11]. In 1581, the Senate approved the construction of 7 additional volti in Chania, aiming to increase the total to 15. This expansion process, while crucial, lacks precise documentation of its timeline. In the same year, rector Pietro Lando, without notifying Venice, began modifying the existing structures by replacing truss roofs with masonry barrel vaults. He also declared that he had begun constructing 4 new volti as ordered by Foscarini. By 1583, 10 volti were completed, housing 15 galleys. By 1585, provveditore generale Alvise Grimani reported 15 finished volti, with 2 more nearly completed. The two additional volti were later added, one to the west and one to the east, with the western volto completed between 1599 and 1602 by Benedetto Moro after extensive work, including excavation into the rock.

10 Venetian Shipyards of Chania, Ministry of Culture, Municipality of Chania, Technical University of Crete, (2023).

11 The Contribution of Venice's Colonies to it's Naval Warfare In The Eastern Mediterranean In The Fifteenth Century, Ruthy Gertwagen.



Visual Documentation - Mapping of the site

Collection of images

1) Giuseppe Gerola photographed Neoria in the late 19th century, while Crete was still under Ottoman rule.

2) A lively view of the harbor around 1908. Fishing boat construction at the open-air shipyard, prior to the one on the opposite side of the port built few years later next to the Bastion.

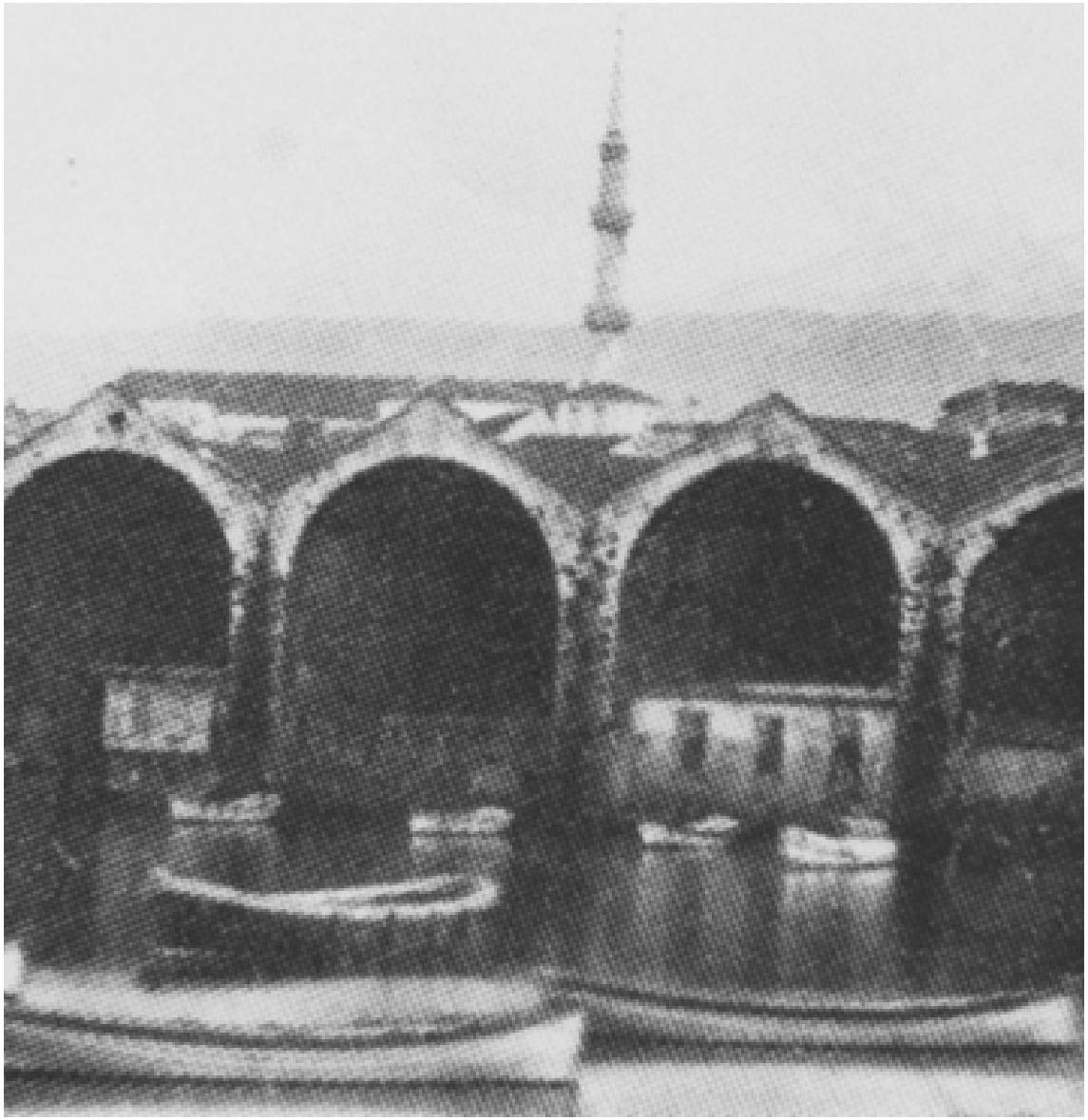
3) Porta Del Mare, located at the end of Arholeon Street when coming from Daskalogianni Street. It was demolished in 1952. Photographed by Fred Boissonnas, 1911.

4) The Portal del Colombo with the inscription of Rector Nicolaus Venerio (1625), photographed by G. Gerola between 1900-1902.

5) Chania, 1909, The Venetian Neoria and part of the port, photographed by G. Gerola.

6) The new open-air shipyard, located between the modern-day Center of Architecture and the first Arsenal, 1907.

The scheme displays the Arsenal's floorplans, with the surviving sections in black and the destroyed areas outlined in dashed lines. The accompanying image collection offers a look at the Neoria's surroundings from the late 19th and early 20th centuries, including photographs by Giuseppe Gerola taken when Chania was still under Ottoman rule, and landmarks like the destroyed Porta Del Mare and Porta del Colombo. It also features the Venetian Neoria and shows how shipmaking continued in the space between the remaining Arsenals, providing a glimpse into the ar-



During the Venetian period (13th–17th century), Neoria were built with solid stone walls and large arched openings, designed specifically for the storage and maintenance of the Venetian fleet. These features made it convenient for ships and supplies to access the facilities. When the Ottomans took over in the 17th century, they repurposed the Arsenals for different functions, including military barracks and warehouses. This led to notable changes in the facades, as many of the original Venetian arches were either blocked up or altered to fit new uses and create enclosed spaces. By the 19th century, the original openings were fully sealed to reflect evolving architectural trends and practical needs. In the 20th century, as the historical importance of Neoria became more recognized, efforts were made to restore and preserve its features. Today's facades blend Venetian and Ottoman influences, reflecting more the necessity of converting the Arsenals into enclosed spaces than the outcome of a thoughtful engineering study, which doesn't do justice to the buildings' magnitude.

Left page:

Fig. 13: Schematic representation of the Arsenal's floorplans (remaining Arsenals shown in black and demolished Arsenals indicated by dash lines) and image collection of the surrounding area in the 19th century.

Right page:

Fig. 14: Neoria in the late 19th century, under Ottoman rule, photo graphed by Giuseppe Gerola.

Fig. 15: Friedrich M. Hessemer's drawing, Canea 1829, Arsenali Vecchi.

Uses of the Arsenals: From Venetian Rule to Today

The construction of the Arsenali in times of the venetian dominations was part of the general defense mechanism of the city, enabling the presence of the venetian fleet on the island by providing **shelter for its galleys**.

As well as sheltering the galleys, the vaulted structures were also **shipyards**, building and repairing galleys under the orders of the Venetian Senate and local commanders.

VENETIAN DOMINATION

TURKISH OCCUPATION

After the Ottoman conquest, the Venetian **dockyards** of the port of Chania were certainly initially used in a similar way **by the Ottoman navy**.

During the 18th century and as the Venetian threat was disappearing, the port, as well as the Arsenali lost their military role and became important for the rising **trade of cretan products in the Mediterranean**.

1872 a licence of usage for the 'Big Arsenal' was granded to the christian community, which converted it into a **school facility** by demolishing its vaulted roof and raising another floor.

1884 - 1892 a new boardwalk was built, which hosted the coexistance between Christians, Muslims and Jews. The Arsenali were partly used as **storage facilities** for the new Customs House and later in 1929 for 'Chanias Raisin Association'.

TODAY

Archaeological findings are being housed today only inside the 4th Neorio, as it is the only one providing satisfactory conditions.

Left page:
Fig. 16: Illustrated Historical Timeline of the Various Uses of the Arsenals Throughout the Years, (Author's own illustration).
Right page:
Fig. 17: (up-left) The vault during the construction of a timber centering to support the restoration of the missing masonry.

Structural damages & present condition

Although the shipyards weren't built at the same time, they all followed the same construction methods. The walls were made using a mix of carefully cut stone and rough masonry, while the vaulted roofs were built with small, precisely shaped stones that fit together seamlessly. During World War II, bombings destroyed parts of the vaulted roofs of the fourth and fifth bays. To restore them, a wooden roof was added, supported by a reinforced concrete ring. However, in the 2006 earthquake, the roof of the fifth shipyard collapsed. It was later repaired by rebuilding the damaged section of the vault with carved porous limestone. As for the fourth shipyard, the opening in its roof remains to this day. Each Neorio is approximately 50m long, 9m wide, and 10m high on average. On the south side, each Arsenal has a door, two large windows, and a round skylight at the top. Even if we were to demolish the north-facing facades added later by the Ottomans, the building's natural lighting conditions would still be poor. The lack of natural light wouldn't be a major issue if the Neoria were to be repurposed as a museum. However, this approach would risk excluding the local community from the planning process, turning Neoria into a primarily tourist-oriented attraction. To integrate a library and working spaces into the spatial planning, which would require more natural light, the damaged sections of the fourth and fifth shipyards could be used as skylights. Since these areas have only been partially reconstructed and are not under preservation order, they present an opportunity to improve lighting conditions while maintaining the historical integrity of the space.

Fig. 18: (up-right) Provisional timber roof where the vault of the fifth bay had been destroyed by bombardment in 1941.
Fig. 19: The fifth bay after the collapse of the wooden roof in the 2006 earthquake.
Fig. 20: Birds eye view of the roofs.
Fig. 21: Picture of the roofs, where the repaire sections are visible.

PHOTO GRAPHIC DEPICTION OF THE ARSENALS TODAY

Fig. 22: Daytime view of the Neoria, photographer Nikos Kouklakis.

Fig. 23: Nighttime view of the Neoria, photographer Nikos Kouklakis.

ANALYSIS OF THE REMAINING ARSENALS

On this analysis of the seven remaining Neoria (Venetian shipyards), the construction phases are divided into three periods. The first and most dominant period is the Venetian era (shown in green). The second phase includes changes made during the Ottoman rule (shown in pink), followed by modifications from the 20th century (shown in blue). The shades of these colors range from darker to lighter tones depending on the more specific construction dates, as indicated in the captions of Figure 12.

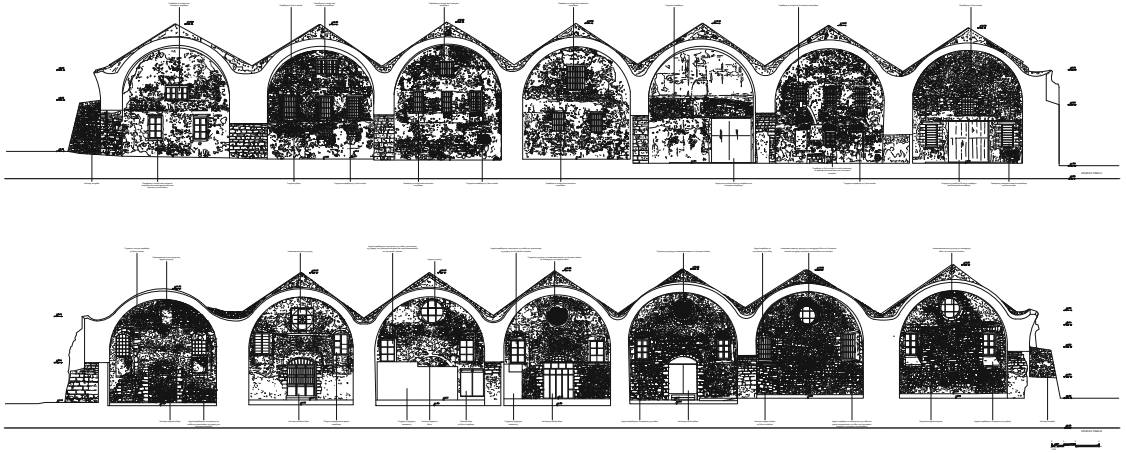
Examination of the Structure by Period of Construction

The construction of the complex of the 17 Shipyards began in 1467 from the western side of the port towards the east and was completed in 1599. During this period, the Shipyards were open to the sea, allowing water to flow inside a few meters to facilitate boat retrieval. The entrance from the land was through the central gate, while they were internally connected through arched openings in the thick walls. After the Ottoman conquest, the Neoria were neglected. During the 19th century, some work was carried out on the southern facade, which had most likely been damaged by an earthquake. By 1877, the Shipyards remained abandoned, and the space left by the collapse of two or three of them was used for shipbuilding. At the end of the century, small buildings were constructed on the northern side of the Shipyards (Fig. 9), parts of which were incorporated into the later northern facades. During the same period, buttresses were built on the western side to support the thrust and the forces of the vaults.

Towards the end of the 20th century, the Shipyards were used as storage for the raisin association, and the northern facades were sealed off to create enclosed spaces. The changes made to adapt the spaces for these new uses were described by the researchers of the Shipyards as provisional and poorly executed. In the 21st century, most of the interventions were carried out by archaeologists to address urgent issues, particularly following the earthquake of 2006. Today, the main issue is the humidity affecting the roofs, especially in the sixth and seventh bays, which are in need of serious waterproofing work.

Interpreting the Plans & Outcomes

From the above study, some conclusions arise regarding the questions posed about the restoration of the complex. In response to the question of whether parts of the masonry can be opened to create an open and flexible layout, as well as whether the facades can be opened to bring the Shipyards closer to their original Venetian form, the chronological diagram provides an answer. It is clear from this diagram that the internal arches were sealed during the Ottoman period and the facades were hastily constructed towards the end of the 20th century. Based on this information, the restoration will aim to return the Shipyards to their earlier form, which, paradoxically, facilitates the integration of modern uses and provides the Shipyards with flexibility for future changes in use. The relationship of the shipyards with the water remains another question that should be addressed in the course of this study.



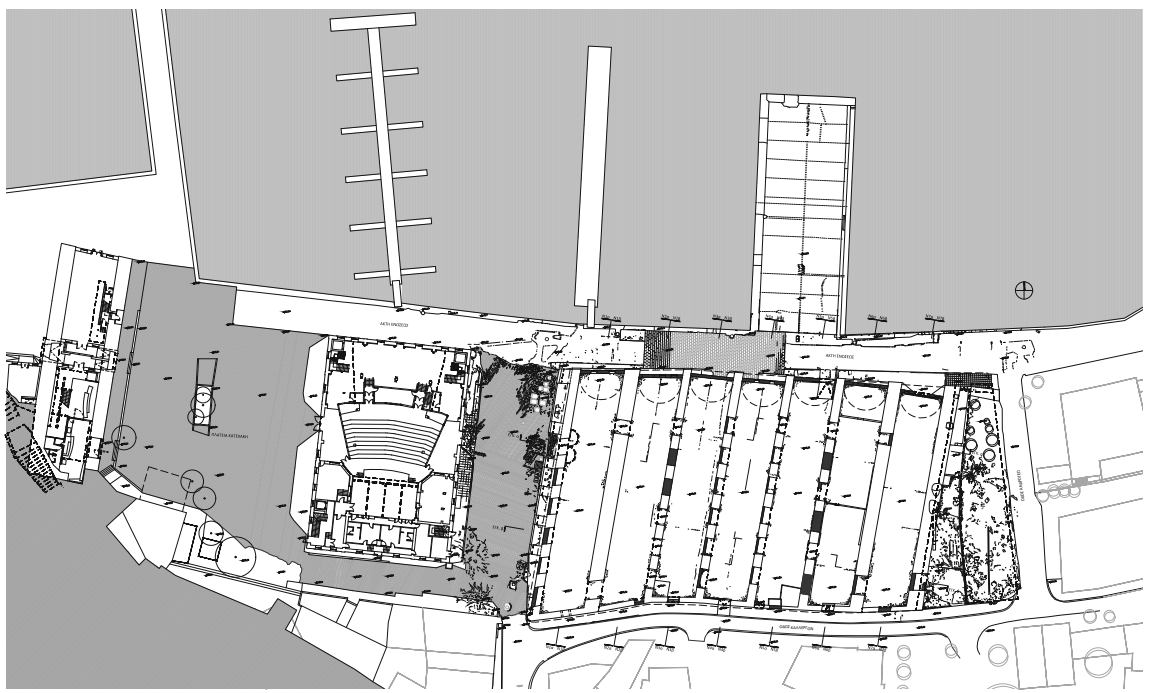


Fig. 24: Scheme, with color coding to indicate the construction period of each element on the floor plan and elevation drawings (Author's own illustration based on TUCs research).

Fig. 25: North & south cross - sections.

Fig. 26: Site plan at +4.00 m showing the floor plans of the existing buildings on the site.

SITE CONTEXT ANALYSIS

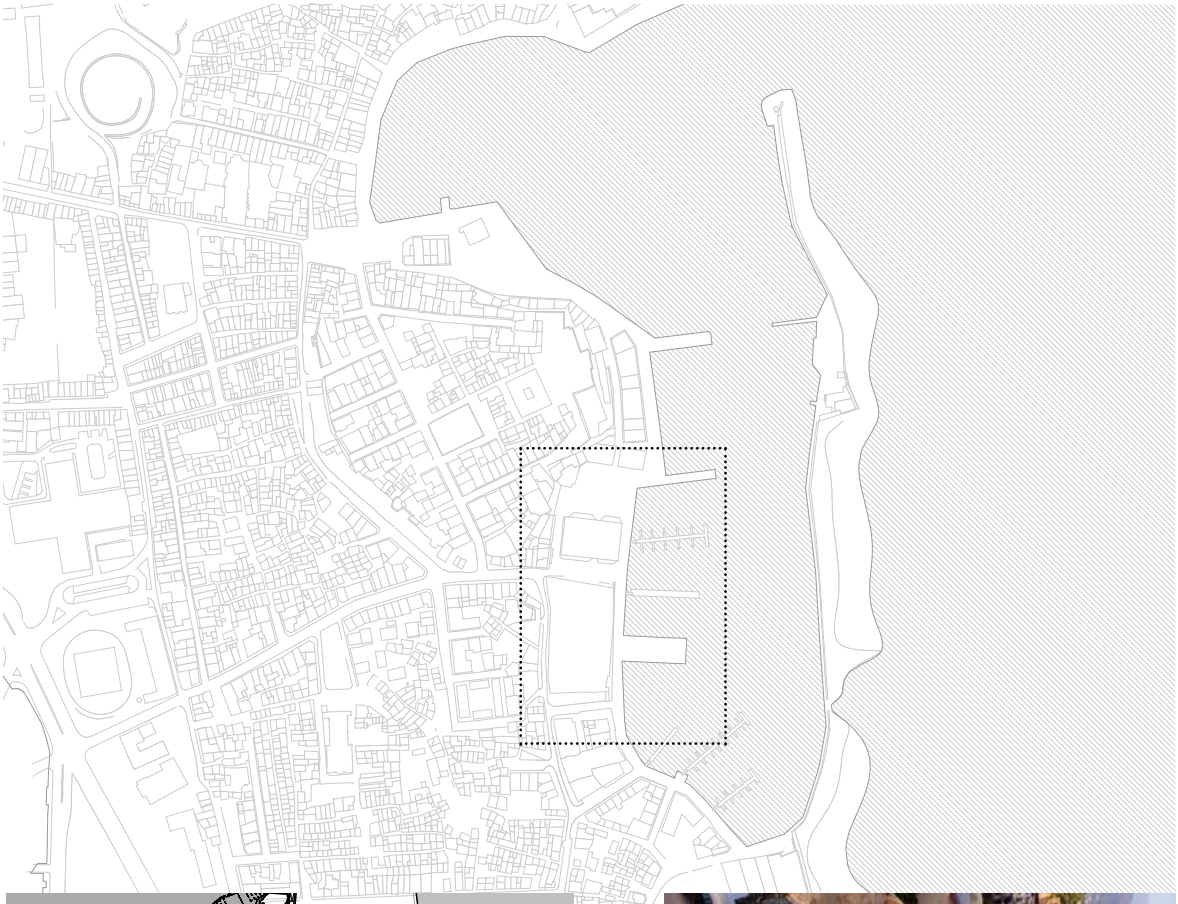
Creating an Extended Cultural Hub

Located in the eastern part of the port, the Venetian Shipyards of Chania sit next to the Mikis Theodorakis Theater and the Center for Mediterranean Architecture (CAM). The square between the theater and CAM has become a lively gathering spot and hosts cultural events like concerts, open-air exhibitions, and film screenings. The rich cultural atmosphere of the nearby buildings and their shared spaces highlights the area as a cultural hub. Unfortunately, the Venetian shipyards remain closed to the public today.

The following study of the region, its typologies, and its density, along with the key hotspots and meeting points where people gather around the Shipyards, will help us gain a better understanding of the area. Additionally, a traffic plan highlighting the busiest areas and main access points will provide further insight. Redesigning the complex in the most suitable and efficient way will follow, based on this analysis.

Left page:
Fig. 27: Mikis Theodorakis Theater, photographer Nikos Kouklakis.

Right page:
Fig. 28: Site plan of the old town, with a focus on the study area.
Fig. 29: Bird's-eye view of Neoria (1), the Mikis Theodorakis Theater (2), and the Center for Mediterranean Architecture - CAM (3).
Fig. 30: Site plan at +4.00 m showing the floor plans of the existing buildings on the site & indicating their positions and spatial relation.



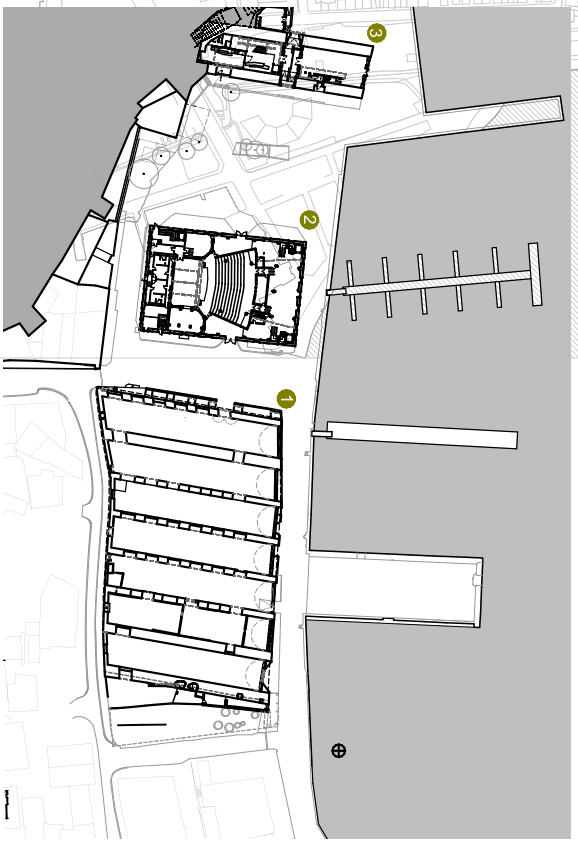


Fig. 31: Venetian Port of Chania, photographer Nikos Kouklakis.

Figure-Ground Plan

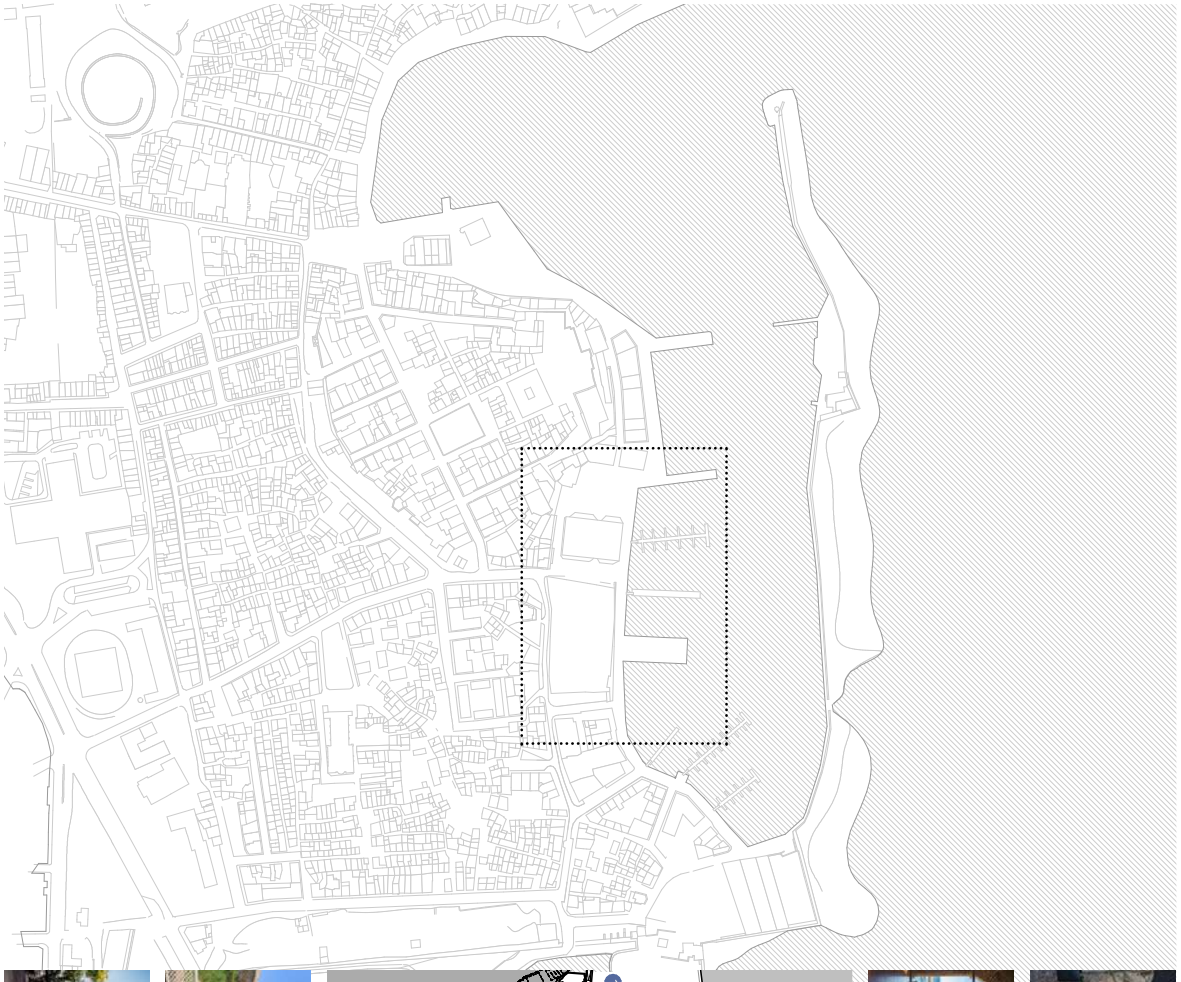
The figure-ground plan clearly illustrates the difference in urban structure between the old town, enclosed within the historic city walls, and the modern expansion beyond them. The comparison reveals a strong contrast between the narrow streets of the old town that evolved around the venetian port and the organized, rectangular layout of the newer areas.

This analysis emphasizes how the historical core continues to serve as the heart of Chania, preserving its distinct architectural heritage. In contrast, the surrounding urban areas reflect the city's evolution and response to contemporary needs, featuring a more structured and spacious layout that supports better traffic flow and modern infrastructure development.

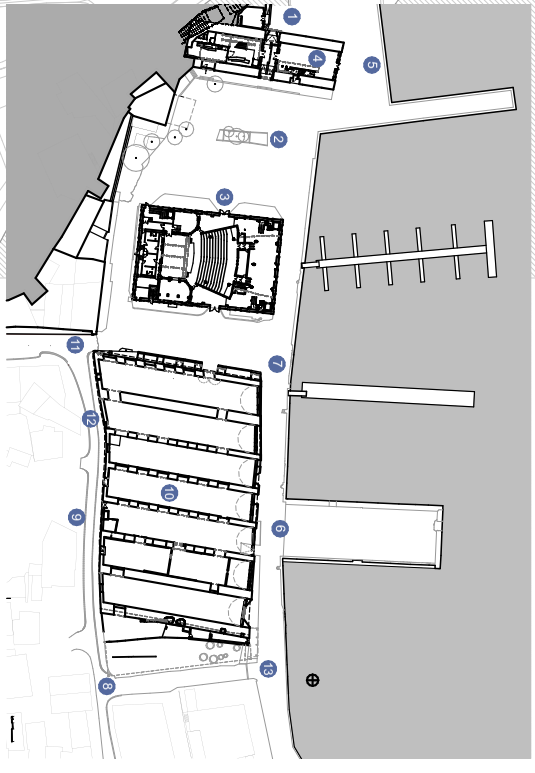
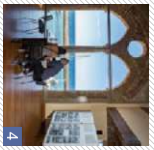
The Venetian Shipyards were strategically positioned beneath Kasteli Hill, and although only 7 of the original 17 volti remain today, they are still among the largest structures in the old town, alongside Firkas Fortress, the Agora, and the Mikis Theodorakis Theater.

Left page:
Plan 1: Figure-Ground plan of the old town of Chania highlighting the location of Neoria in red.

Right page:
Plan 2: Site plan of the old town, with a focus on the study area.
Fig. 32: Photographic representation of Neoria's surroundings, with their locations annotated on the site plan.

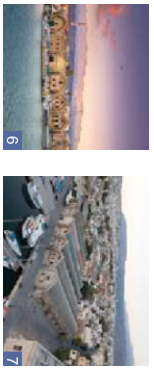











Usage Plan - Cultural Buildings

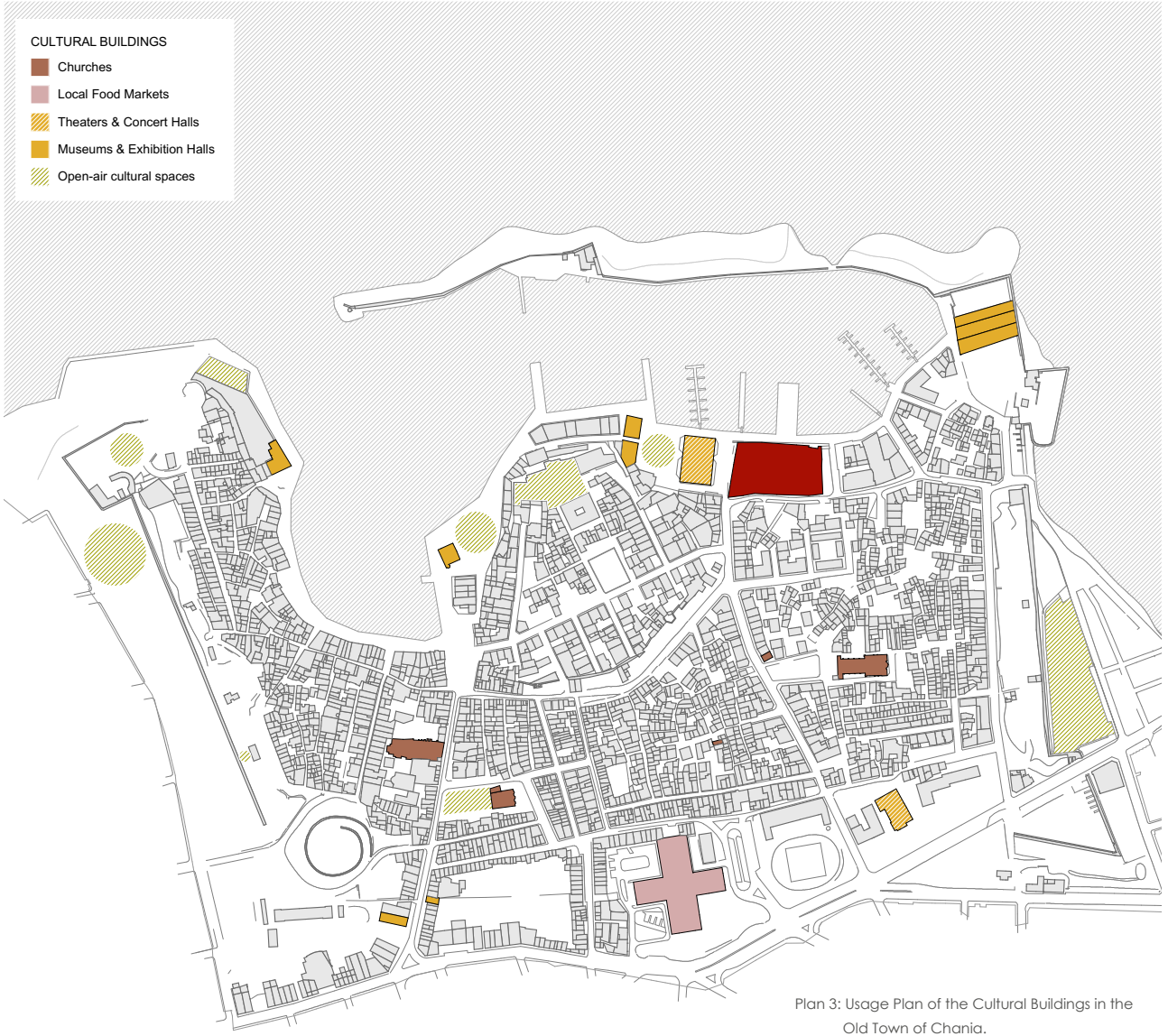
This usage plan indicates the location of cultural buildings within the old town, including numerous churches, museums, and exhibition halls. The local market is situated in a cross-shaped building on the southern border, while open-air spaces, marked in green, host various cultural events, primarily during the summer season.

Apart from the religious buildings, most cultural facilities are concentrated along the city's waterfront, with the centrally positioned Neoria underscoring its significance within the city's layout and cultural landscape.

Apart from the importance of a maritime museum within the Neoria, which would guide visitors through the monument's history, it is very important that new uses for the locals are also introduced in the complex, ensuring that it becomes part of the citizens' everyday life.

The absence of a library and study facilities in the area is evident in this usage plan, leading students and remote workers to study and work in the less conducive environment of local cafés.

This suggests a dual purpose for the complex: one that highlights its magnitude and history, attracting visitors, and another that offers locals access to large public spaces, allowing them to enjoy and connect with their city.



Plan 3: Usage Plan of the Cultural Buildings in the Old Town of Chania.
Plan 4: Usage Plan of Neoria's Surrounding Buildings.

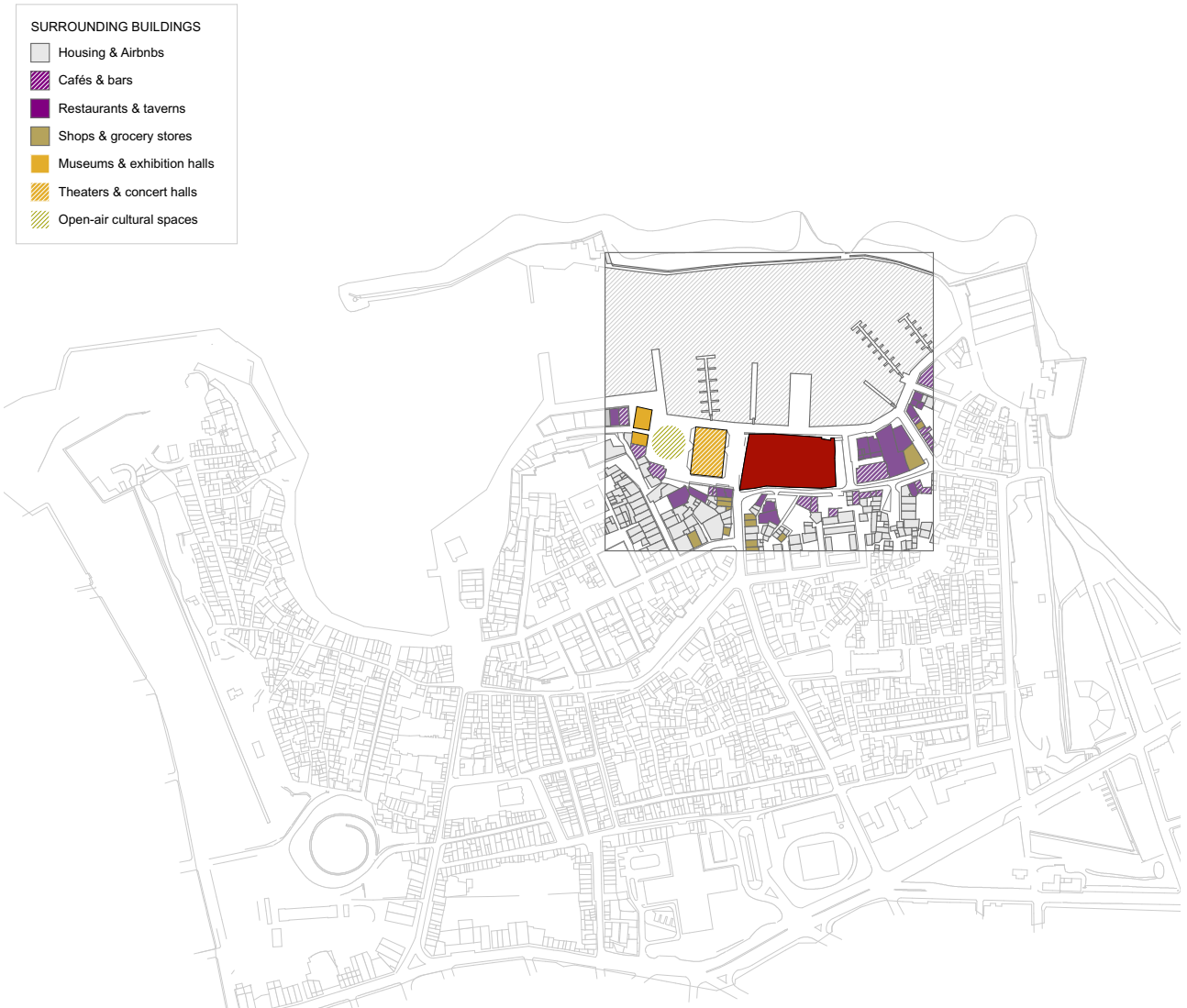


Fig. 33: Center of Mediterranean Architecture (CAM), photographed by Nikos Kouklakis.

Usage Plan - Site Context

Upon closer examination of the site's context, various uses become apparent. The southern surroundings primarily feature private-sector gastronomy and local shops, while the waterfront area exhibits a notable cultural character.

The Neoria, encompassing nearly 5,000 square meters, is the largest block in the area. When viewing the surrounding context of the shipyards, it's impossible to ignore their connection with two important neighboring cultural buildings—the Mikis Theodorakis Theater and the Center of Mediterranean Architecture (CAM). Along with the new uses of the Neoria, they could be considered a cultural hub for the area and the entire city.

Activity Hotspots

The port of Chania is a vibrant and popular gathering spot for locals. This Activity Hotspots Plan highlights areas where younger residents tend to hang out (marked in pink), spots preferred by older age groups (marked in green), and spaces that naturally attract people of all ages (marked in grey). As part of exploring how the Venetian Shipyards can serve both visitors and locals, this analysis helps to better understand the surrounding area and tailor the proposed uses accordingly.

For instance, the cafés and bars southeast of the Shipyards are especially popular among young people, so creating a public square in the open space at the southeastern corner of Neoria could be especially appealing to this age group. A study area and library—ideal for students and remote workers—could fit well on the eastern side of the complex, with easy access to the square. Meanwhile, a museum and a multipurpose hall would be best placed in the west, next to the theater and the Architecture Center, strengthening the connection between these cultural spaces.

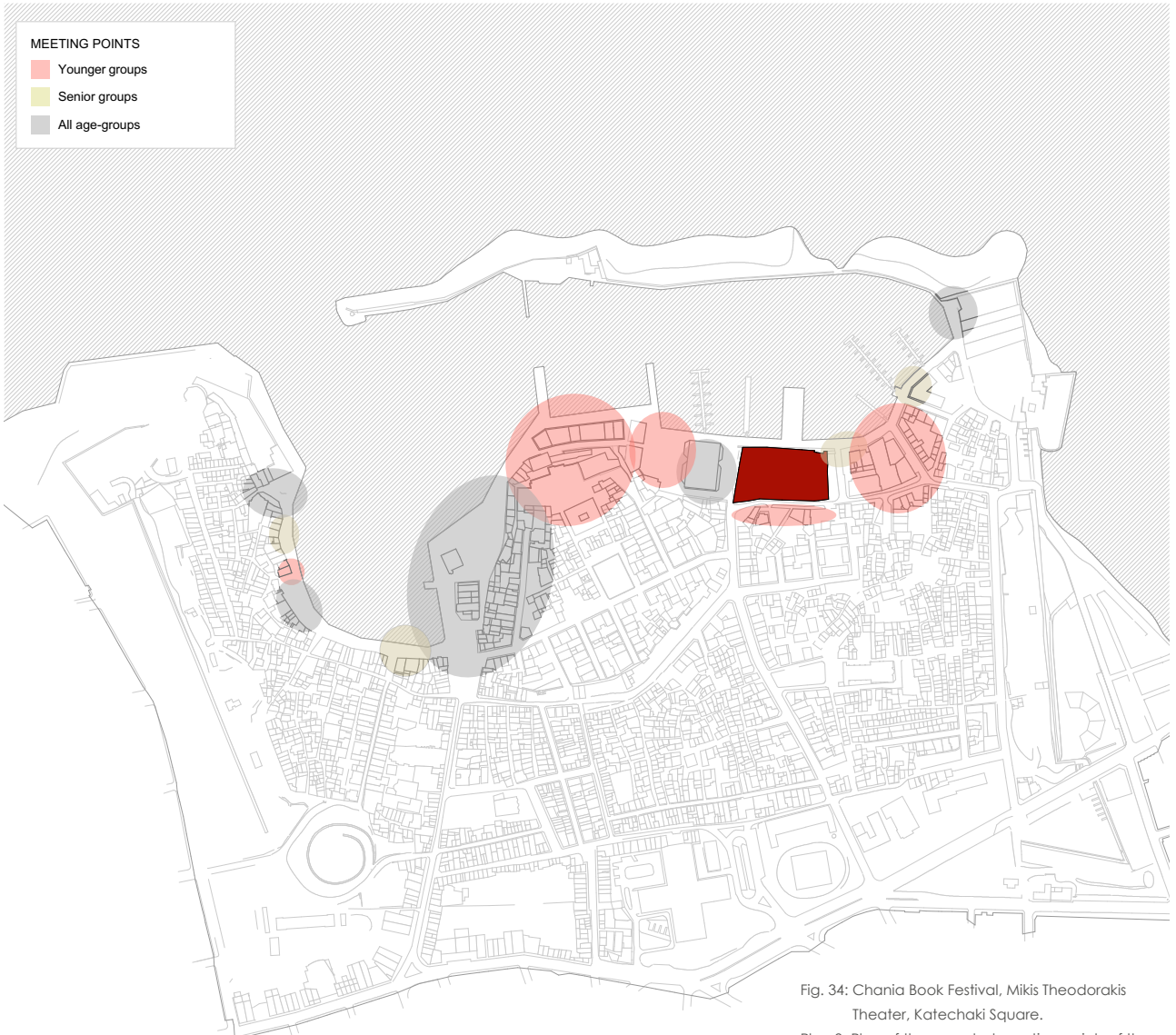
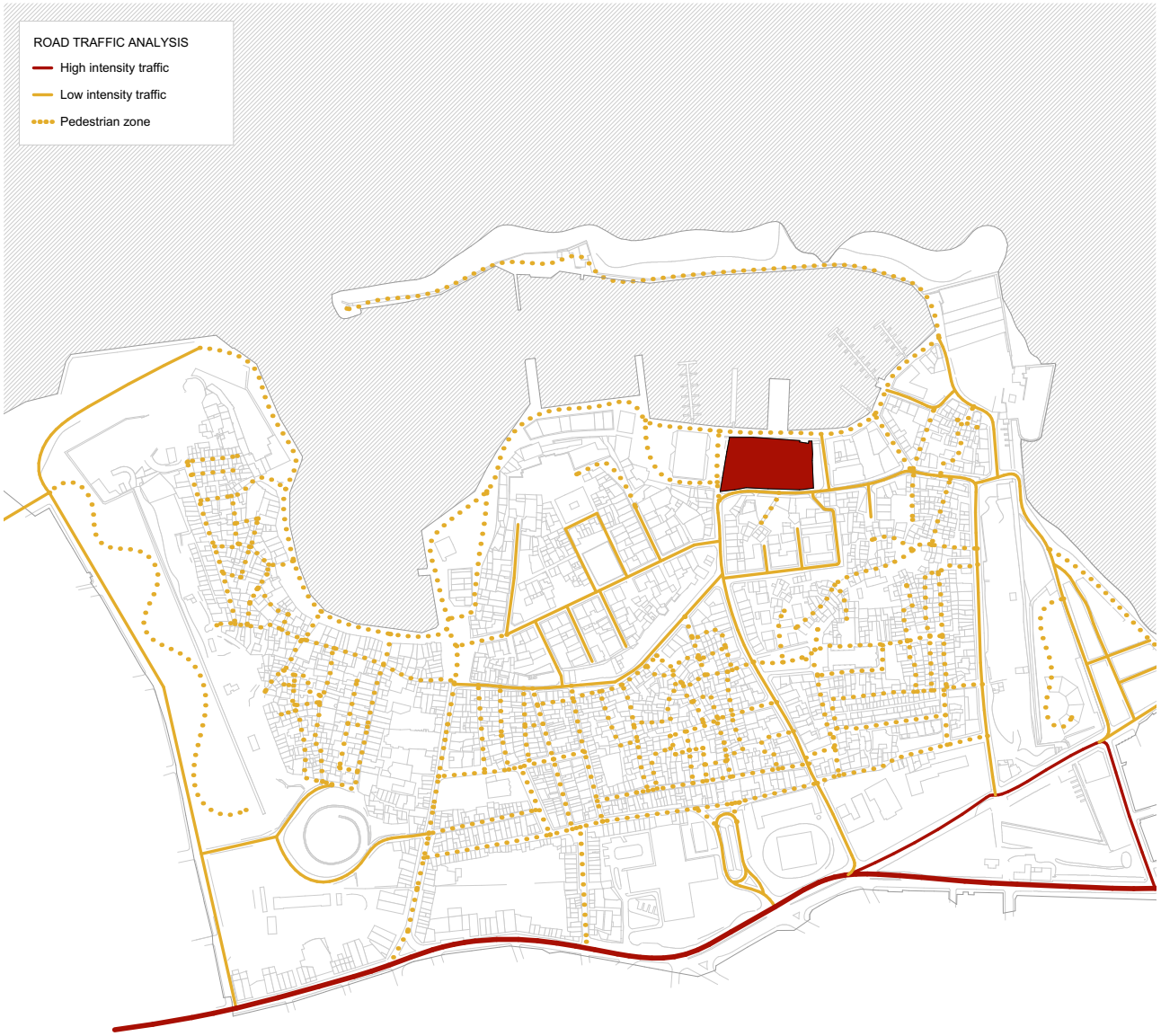


Fig. 34: Chania Book Festival, Mikis Theodorakis Theater, Katechaki Square.
Plan 3: Plan of the crowded meeting points of the old port categorised in age groups.



Traffic Flow Plan

The Traffic Flow Plan highlights the movement patterns in the old town, particularly around the port. Most of the area is a pedestrian zone (dashed yellow line), with some streets open only to residents cars. Vehicle-accessible roads are shown in solid yellow, while the city's main roads are marked in red. Many people stroll along the harbor, and visitors typically approach the monument from the front. The Shipyards can also be accessed via Daskalogianni Street, which links the new town beyond the walls to the site.

Both the northern and southern facades of the complex are key points of interest. To enhance connectivity, restoring the Shipyards' gate is proposed, along with creating a passage through the buildings, allowing visitors to enter from both sides rather than just one.

Fig. 35: Southern Facade and Kallergon Street.
Plan 3: Road Traffic Analysis with indications of the traffic intensity in the old town.

MY PERSONAL CONNECTION TO THE CITY & THE SITE

A brief story of Pariotaki's Family Shipyard

Being half-Chaniote, I return to the city more than twice a year, and although I was not born there, I still consider it my hometown. My family's history is deeply connected to the harbor of Chania. The shipyards evolved, changed hands and location, and were eventually moved across from the Neoria, next to the bastion of Agios Nikolaos of Molos, on the way to the lighthouse. The business was founded by my great-grandfather and later passed into the hands of my grandfather, Kyriakos Pariotakis, and his brother, Giorgos, who were shipwrights possessing specialized knowledge that had been passed down through generations, making a significant contribution to the region's shipbuilding heritage. Thus, we were known in the city as the Shipbuilders, or *Καραβομαραγκοί* in Greek.

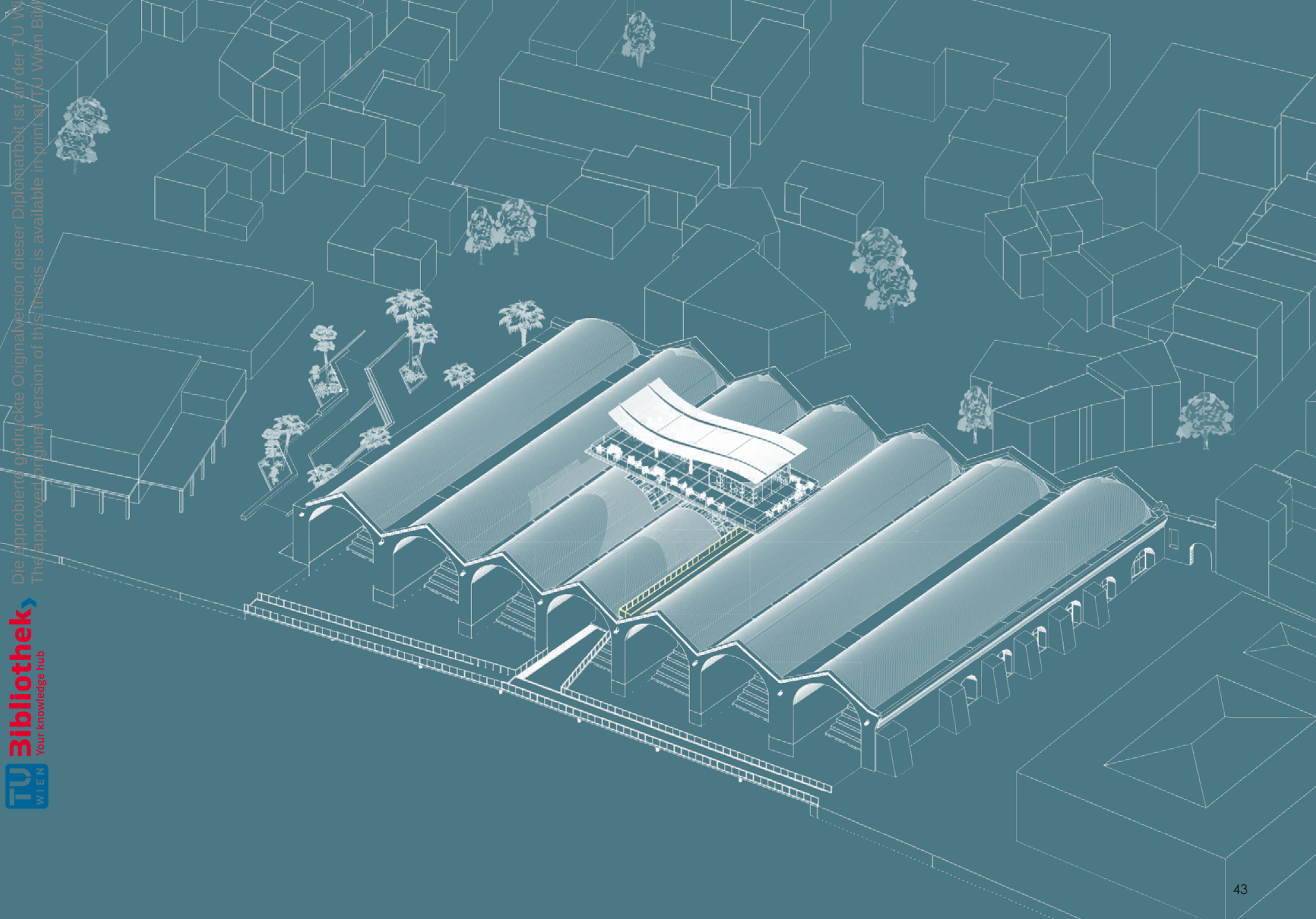
My uncle, Kostas, continued my grandfather's work. He studied naval architecture in Italy—"You must go study," my grandfather used to say. It pained him that his father had not allowed him to pursue an education, despite his sharp mind, as he had to take over the family business instead. The shipyard flourished, and the Pariotakis family, together with a team of workers, built and repaired most of the boats in the area, supporting both local fishermen and merchants. Between 1988 and 1989, father and son built what was meant to be my grandfather's swan song: a 23-meter-long, 6.15-meter-wide wooden sailing ship called Pegasus, which still sails the waters of Santorini to this day. A year later, he passed away. I never got to meet him. The business was taken over by his son, Kostas, while his brother, Giorgos, continued the profession, though it gradually faded away. Years passed, and in 1995, the family shipyard finally closed down. Its history, along with the machinery, remains in the old harbor, in the small building next to the bastion of Agios Nikolaos of Molos, on the way to the lighthouse.

For as long as I can remember, the Neoria have been closed to the public. As a child, I did not understand their significance. Their sheer size was always imposing, and their shape testified to their age, but there was no way to visit them. I had heard stories from my cousins about times when some sections were open and how they would gather there to listen to small concerts—an occasion that later stopped, I believe due to the 2006 earthquake and lack of maintenance. However, locals slightly older than me have at least a few memories of them. Today, they remain closed to the public, as does my grandfather's shipyard across the port.

Upon completing my architecture studies, I felt the need to present a study that would breathe life into them. Through this project, I have the opportunity to visit them, to rediscover them—not just by passing by but by spending time designing them. I would wish the same for my grandfather's shipyard and the abandoned machinery that holds its history, but perhaps that will be the subject of a future study.

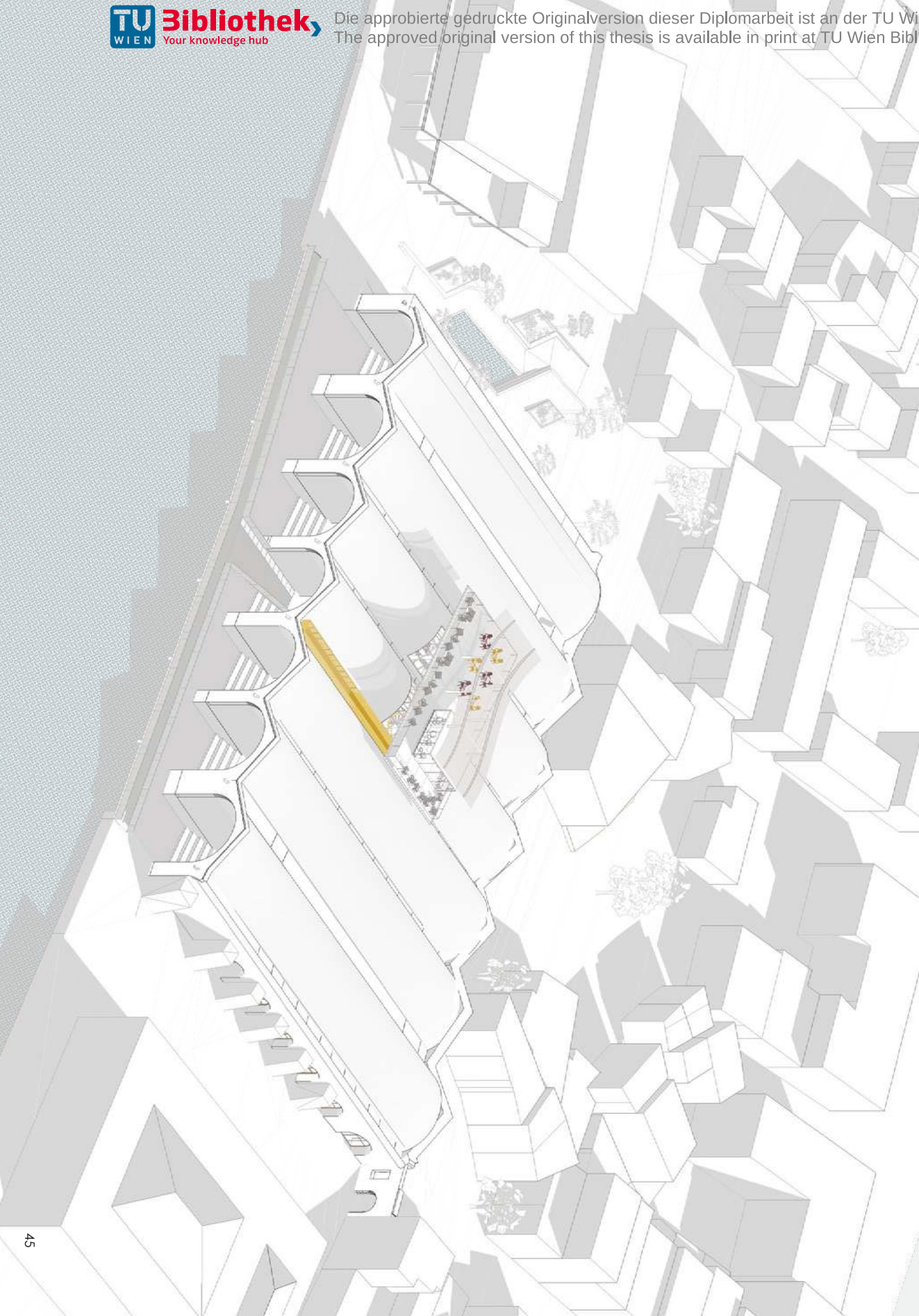
Fig. 36: The Shipyard of Pariotakis Family, 1950
Fig. 37: Pegasus exiting the port of Chania, 1989, photographer Fanis Manousakis

NEORIA CULTURAL CENTER



PART II

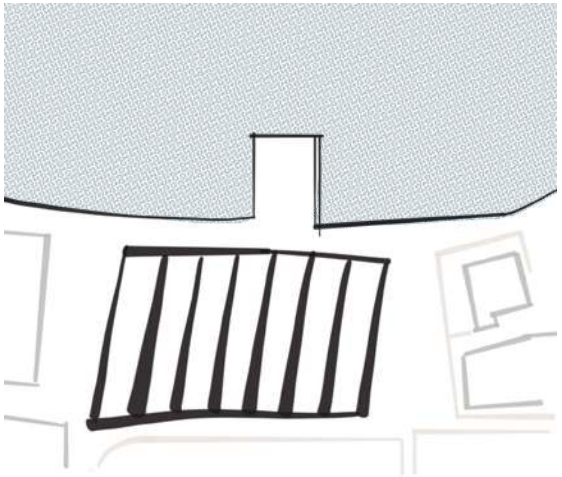
DESIGN PROPOSAL



CONCEPT

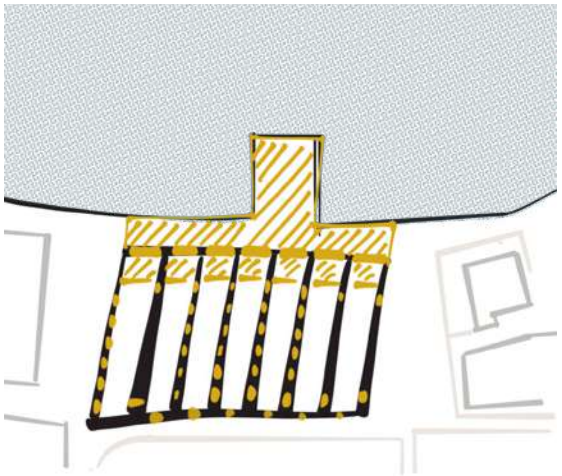
Introduction

There are many ways to approach a building of deep historical significance when it comes to its preservation and repurposing, with the aim of highlighting its value and making it accessible to the public. This study begins by presenting key historical events and analyzing the building and its surrounding area, with the goal of developing a study that explores the complex's potential. Based on these findings, it then proposes a concept for the renovation and expansion of the complex, transforming it into a center for culture and heritage. The selection of new uses to be integrated into the Neoria in this study is based on two key factors: the analysis presented at the beginning of this thesis and the conclusions drawn from it, as well as a consideration of and engagement with the wishes of the city's residents.



Concept Dissection

As part of the analysis, we observe that the Neoria, in their original form, were open to the sea, allowing water to enter up to a certain point to facilitate the towing and repair of galleys. Centuries later, a promenade was built along the length of the harbor, which, however separated the shipyards from the water and disrupted their connection to the sea. Later, in front of the 4th and 5th Arsenal, a concrete pier was constructed to support cranes and machinery that helped fishermen unload their large catches from their boats. Today, the cranes are no longer present, and the area is mainly used as a sea side parking lot and a space for unloading few small fisher boats, further distancing the shipyards from the water.



Facades & Promenade

The conclusions drawn from the analysis suggest the reopening of the northern facades, which were built

relatively recently and in a rather makeshift manner, as observed, in the late 20th century. Additionally, the removal of the concrete pier in front of the Neoria is proposed to restore their original relationship with the sea. Water will once again enter a few meters into each Arsenal, and the continuation of the promenade will be achieved through a metal bridge that expants in two axes, one that will connect the two sides of the promenade and one that will link it with the 4th Arsenal, which will be used as passageway.

Interconnections & Southern Facades

Inside the Shipyards, all the vaulted gateways that originally connected the spaces—later sealed off—will be reopened. This will create a more flexible layout, allowing for freer movement between spaces and enabling future modifications to the use or functionality of the Neoria without the need for major interventions. On the southern side of the shipyards, the few sealed openings will be reopened, and wooden frames will be installed in all openings to allow natural light to enter the space. The large openings at street level, which were once doors, will be converted into fixed glass elements, while the higher-positioned windows will remain operable to enhance vertical ventilation.

Circulation Axes

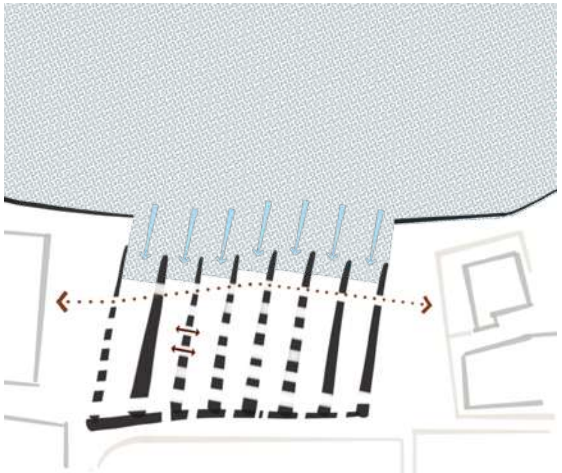
The 4th Arsenal will be transformed into a passageway, creating a new axis that connects the northern side and the bridge with the southern side of the complex. Access to the enclosed spaces will also be provided through the 4th Arsenal, except for the 1st and 7th, which will have their entrances on the eastern and western facades respectively. A second axis, parallel to the bridge, will allow visitors to move through Neoria without entering the enclosed spaces. The glass facades will be set back, creating an external corridor between the water and the glass frontage, passing through the first archway of each Arsenal. This design allows visitors to get a glimpse of the architectural character of the complex and partly observe the activities of the interior spaces before stepping inside.

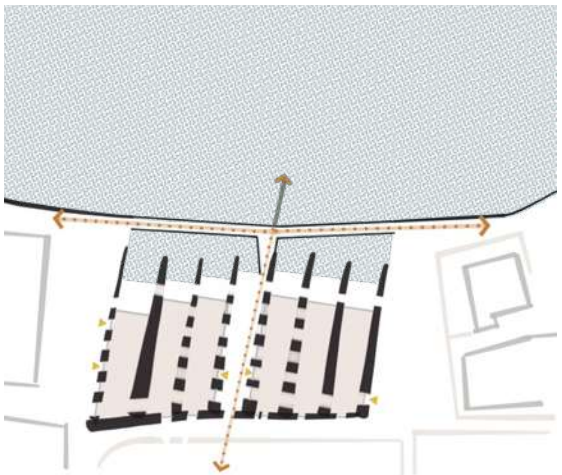
Enclosed Spaces & New Uses

Having defined the key axes, restored their relationship with the sea, and determined the placement of the new glass facades on the northern elevation, the next step is to define the enclosed spaces created on either side of the 4th Arsenal. This study aims to integrate functions for both visitors interested in the site's history and residents seeking to spend time within it.

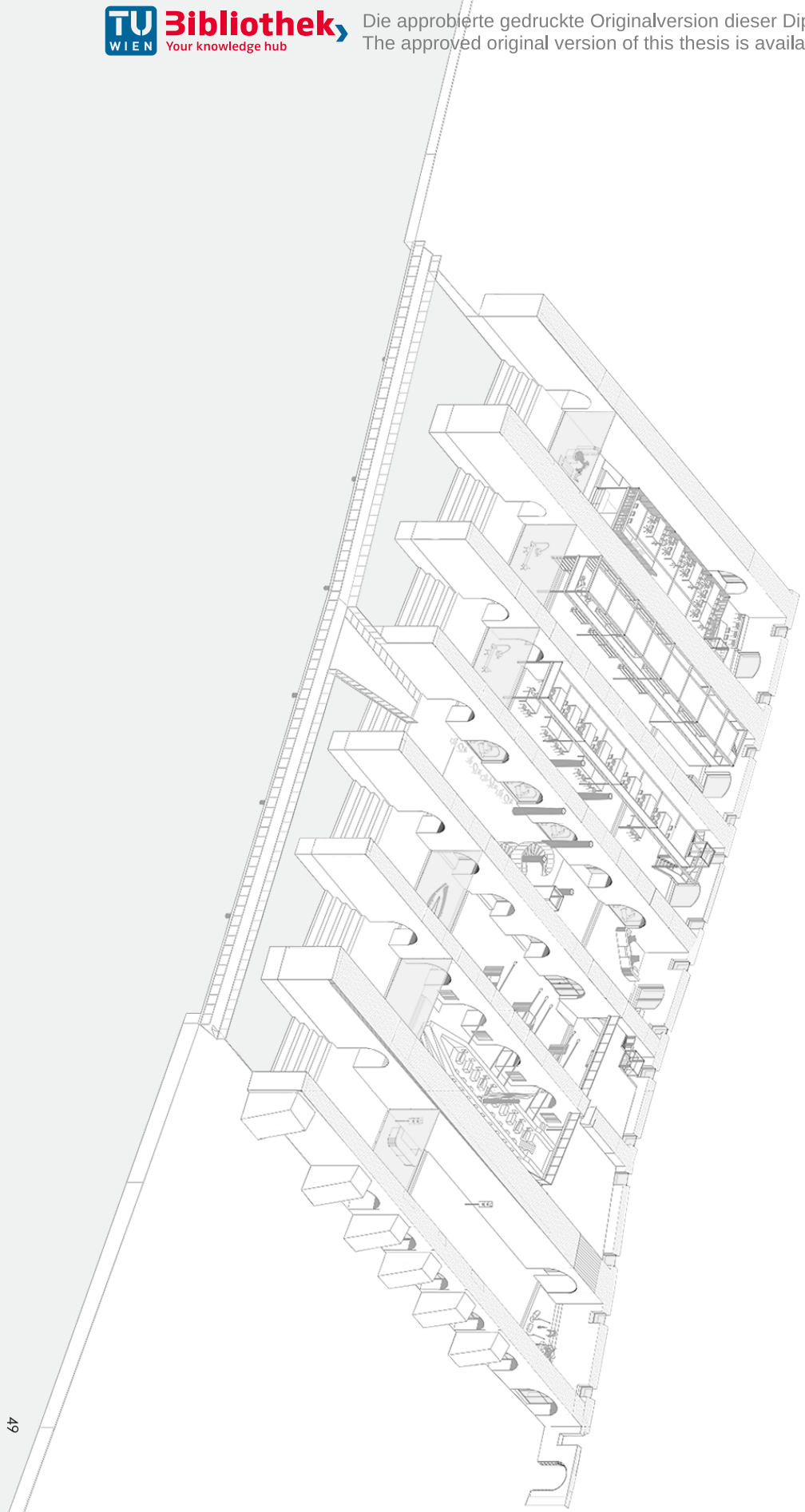
The spaces to the west of the 4th Arsenal, which serves as both a passageway and an entry point, share a unique connection with the Theater and the Architecture Center to the west of the complex, as well as with the intermediary spaces between them. In line with this, the 1st Arsenal will be redesigned as a multipurpose space for events and cultural activities, as it was in the late 20th century, while the 2nd and 3rd Arsenals will house the Neoria's Museum.

The 5th, 6th, and 7th Arsenals, located to the east of the 4th, will primarily serve the local residents. These spaces will be dedicated to a reading area, a library, and a carpentry workshop, all of which will offer environments for students and remote workers. The library will provide books and computers, filling a crucial gap, as the only physical public library currently exists in a small part of the Town Hall. Finally, the carpentry and robotics workshop will provide a fresh perspective on woodworking, drawing inspiration from the traditional craft of wooden shipbuilding, while also offering opportunities for idea development and creation, supported by modern technology. Thus, the new center of culture, along with it's neighboring buildings will create a cultural hub in the heart of Chania's old town.





AXONOMETRIC
GROUND FLOOR DRAWING

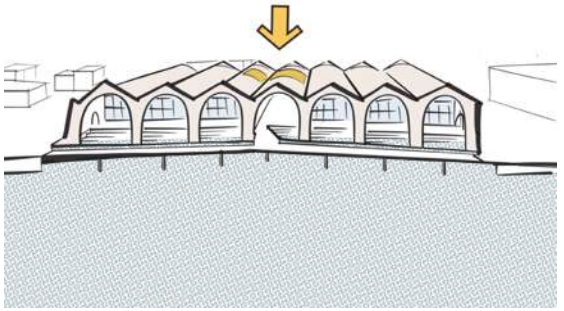


CONCEPT

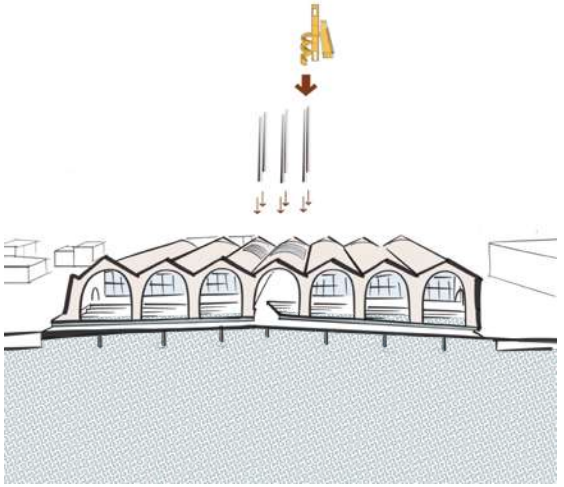
Natural Light Integration

At this stage of the study, it was necessary for me to address the issue of natural lighting within the complex, a question that had been a central concern from the beginning. With the Neoria facing north, the openings on the southern facade do not provide sufficient natural light to cover the average 50-meter length of each Arsenal.

Every intervention in the existing buildings was carefully considered and proposed only when deemed absolutely essential for improving the functionality of the complex. Following this logic, the only areas identified for potential openings to allow light in, were the roofs of the 4th and 5th Arsenals, parts of which were destroyed during World War II and later in the 2006 earthquake. Some sections were later rebuilt using different materials, such as reinforced concrete beams or modern masonry, which, while essential for their restoration, do not hold the same historical significance as the original structures. One small remaining opening still serves as a skylight.



As part of the study, these sections will be reopened and fitted with a specially designed metal structure consisting of a large frame and vaulted metal beams that will support the glass panels, distributing structural forces between the arches and walls where necessary. The placement of functions within the complex has been planned accordingly. The studying area, which requires the most daylight, will be housed in the 5th Neorio, ensuring a bright and inviting atmosphere for visitors. Spaces with lower lighting demands, such as the museum and book storage areas, will be positioned in sections where access to natural light is less crucial. These areas will instead rely on the glass facades on the northern side and the existing southern openings for natural illumination. This approach carefully balances historical preservation with contemporary needs, ensuring that the restored complex remains both functional and true to its architectural heritage.

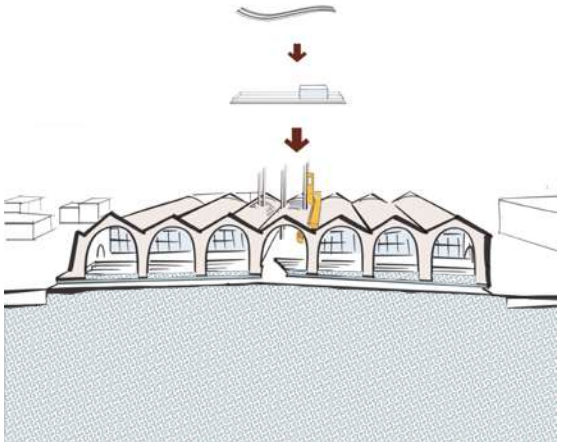


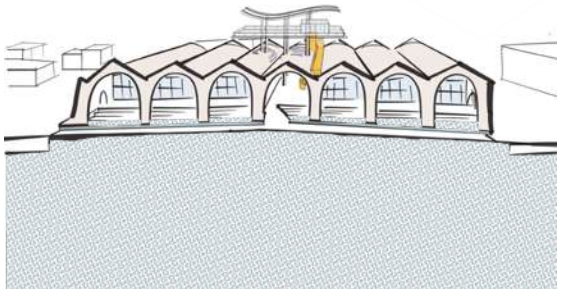
Viewing Platform

Another question at the start of this study was how to make use of the roofs of the Shipyards, which offer a stunning view due to the height of the structure and its prime position in the old harbor. The view includes the harbor, the Cretan Sea, the lighthouse, parts of the city, and the majestic White Mountains to the south.

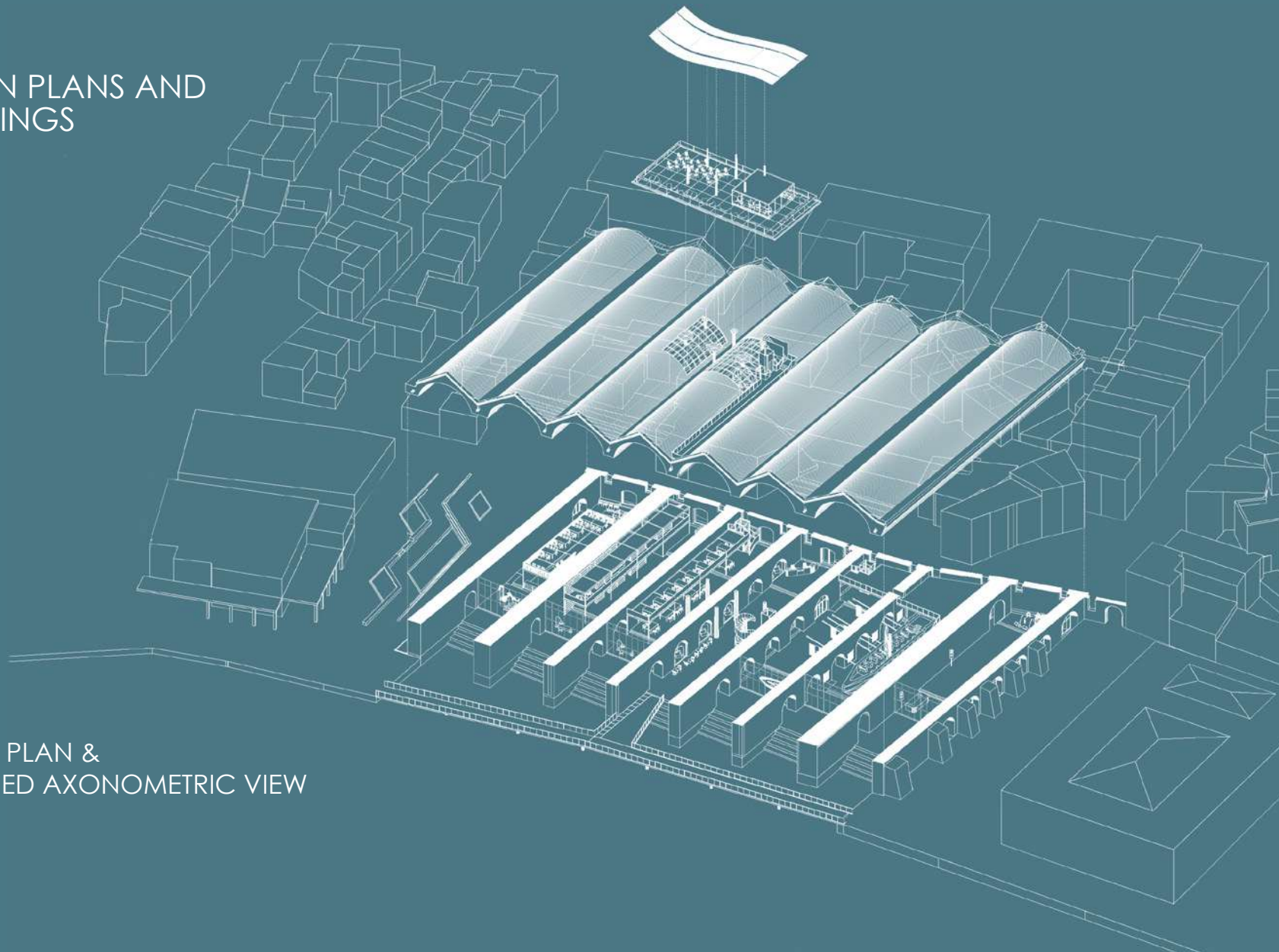
The design aimed to allow visitors to experience the building from above, offering a new perspective on the architectural complex and harbor. This was done while respecting the historical significance of the shipyards. From the very beginning, it was decided that this structure would not rest on the Neoria, adding extra load or damaging the vaults and their walls. The proposed solution is for the structure to stand independently, with its own foundation, piercing the skylights that will be built into the roofs as part of the study. The solution involves creating a viewing platform, which will predominantly be open, with the exception of a small enclosed café area, where the elevator will also terminate. This structure will be accessible via a metal staircase and elevator from the 4th Neorio and will serve as a public space, with no mandatory consumption.

The concept behind the design and form of the structure is to create a distinct separation between old and new. In contrast to the heavy, imposing and symentrical Neoria, the extension above is designed to completely differentiate itself, as it appears to hover above the complex, is made of steel and seems lightweight, minimal and asymmetrical. Ascending this central staircase, visitors will find themselves in a 2.5 meter-wide corridor between the vaults, guiding them to the edge of the front section of the buildings. This brings them closer to the water and allows them to admire the harbor view up close. At the end of this corridor, to the south, a second staircase leads to the platform, which is located one level above. Over the platform, resting on the continuation of the columns, a canopy of metal slats provides shading.

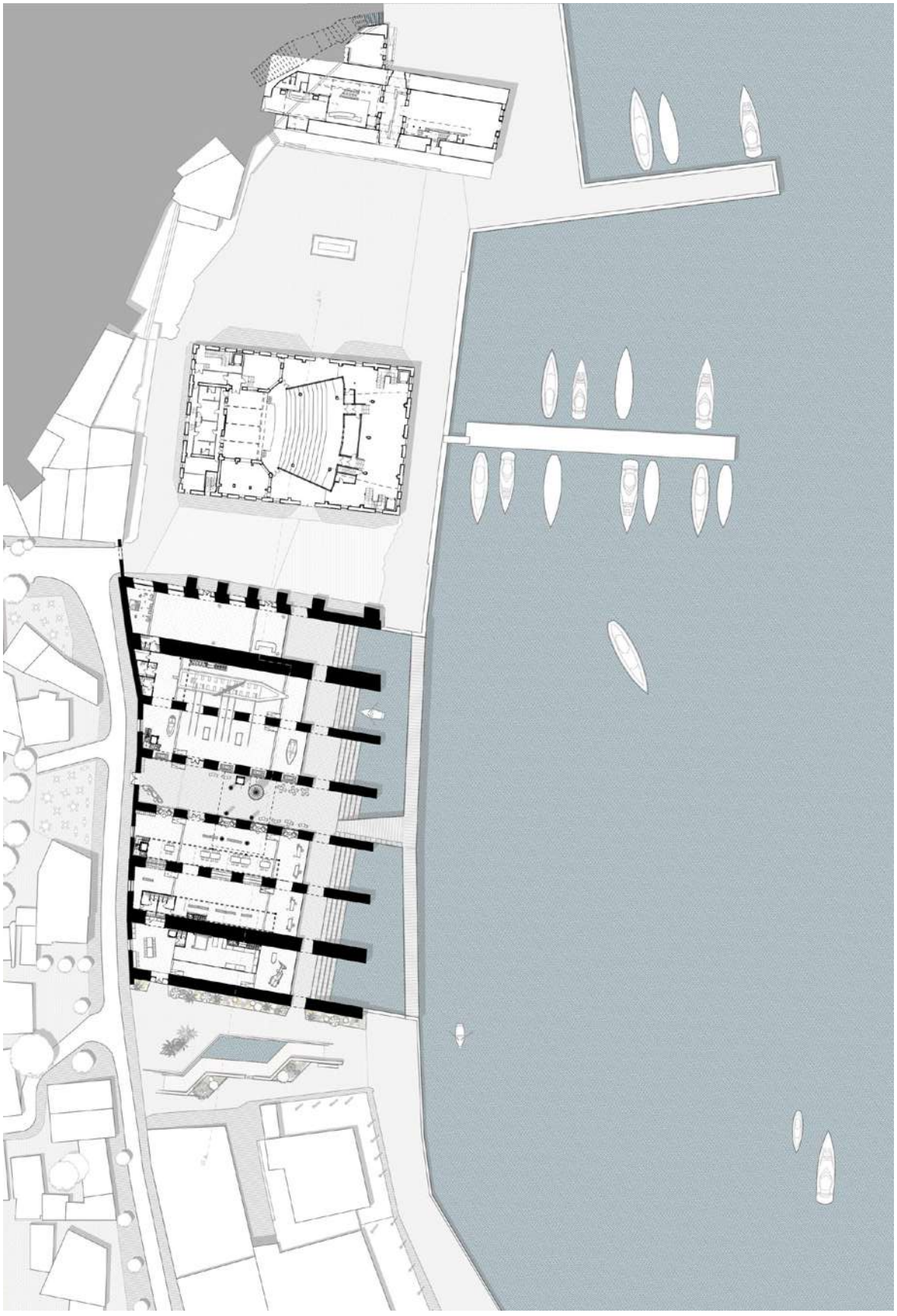




DESIGN PLANS AND DRAWINGS



1:1200
MASTER PLAN &
EXPLODED AXONOMETRIC VIEW



1:600
LEVEL I
GROUND
FLOOR PLAN

The ground floor plan embodies the concept of integrating new functions, movement axes, and the majority of modifications made to the existing buildings. This plan not only illustrates the layout of the enclosed spaces, their accessibility, and interior arrangement but also captures the surrounding environment.

A key feature is the bridge that extends the pier while allowing water to flow into the Neoria, seamlessly integrating with the design. Additionally, the new square on the western facade of the cultural center takes shape, centered around a reflecting water surface and surrounded by seating areas, trees, and green spaces, enhancing the site's public realm.

At the heart of the design, the passage through the 4th Neorio is prominently positioned as a pivotal connection between north and south, linking bridge and corridor, housing the spiral staircase and serving as an atrium for the cultural center.

1:600
LEVEL II
GALLERIES
FLOORPLAN

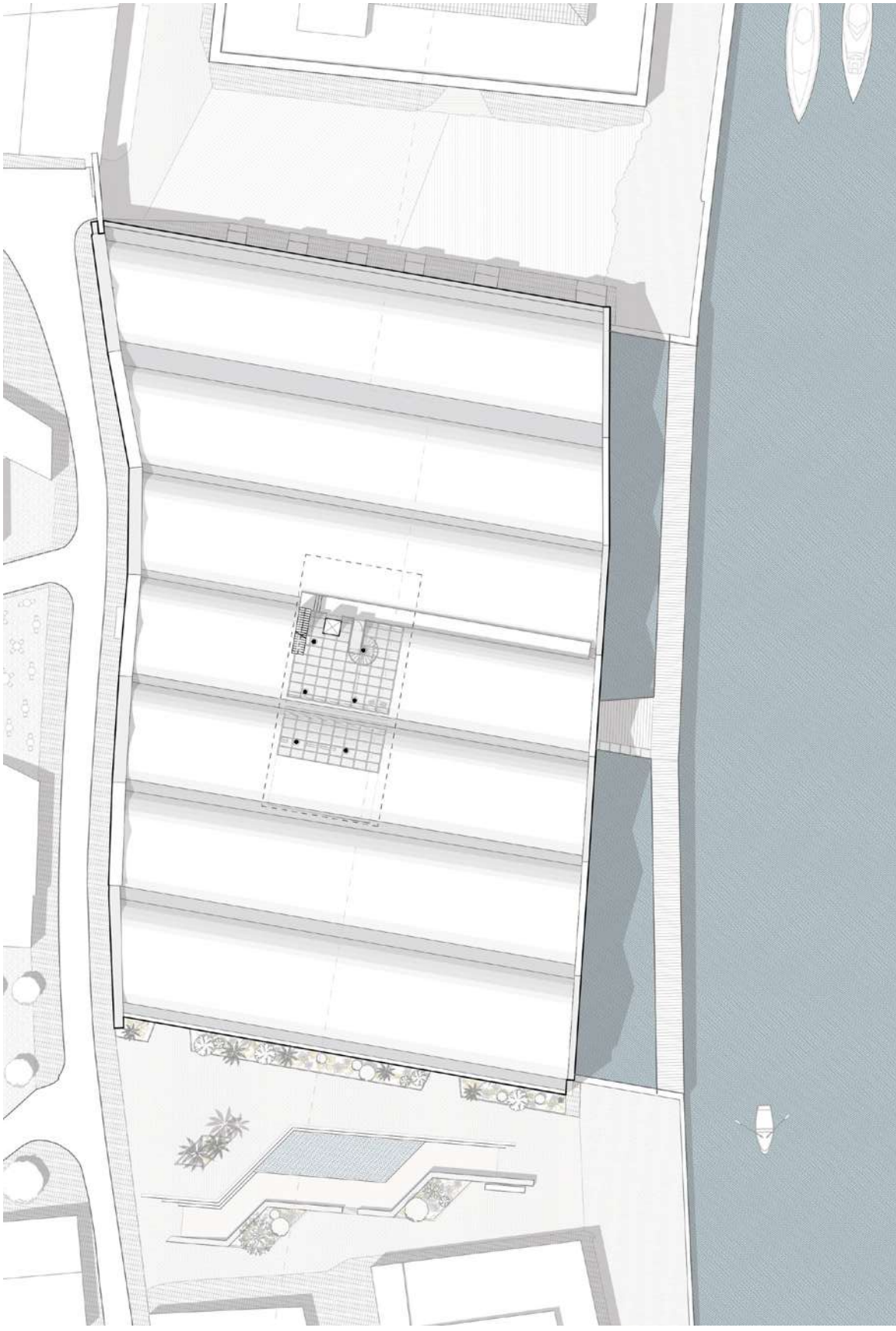
In the floor plan of the second level, the mezzanines and galleries of the center's spaces become evident, along with their positioning and proportions within the layout. Their design ensures they remain functional and provide more space to each compartment without overshadowing or overwhelming the Venetian Shipyards and their impressive volume. On the contrary, from this level, a different perspective and a new spatial experience of the Neoria emerge, taking advantage of their great height.

On the roof deck plan, we are positioned on the third level, above the Neoria, at the height of the vaults. The yellow metal staircase of the 4th Neorio leads to a glass door at the skylight level, which opens onto an external walkway, above the stone wall betweeen the 3rd and 4th vaults.

The walkway extends towards the front of the buildings, offering a stunning view of the harbor. At its far end, a second staircase provides access to the upper level—the viewing deck. Additionally, the elevator, which facilitates access to both the platform and the café, stops at the walkway level, ensuring full accessibility.

1:600
LEVEL III
ROOF PLAN

Beyond the new functions planned for the viewing deck, it is essential that visitors have the opportunity to walk among the vaults. This allows them to gain a deeper understanding of the historical buildings and to closely observe their architecture.



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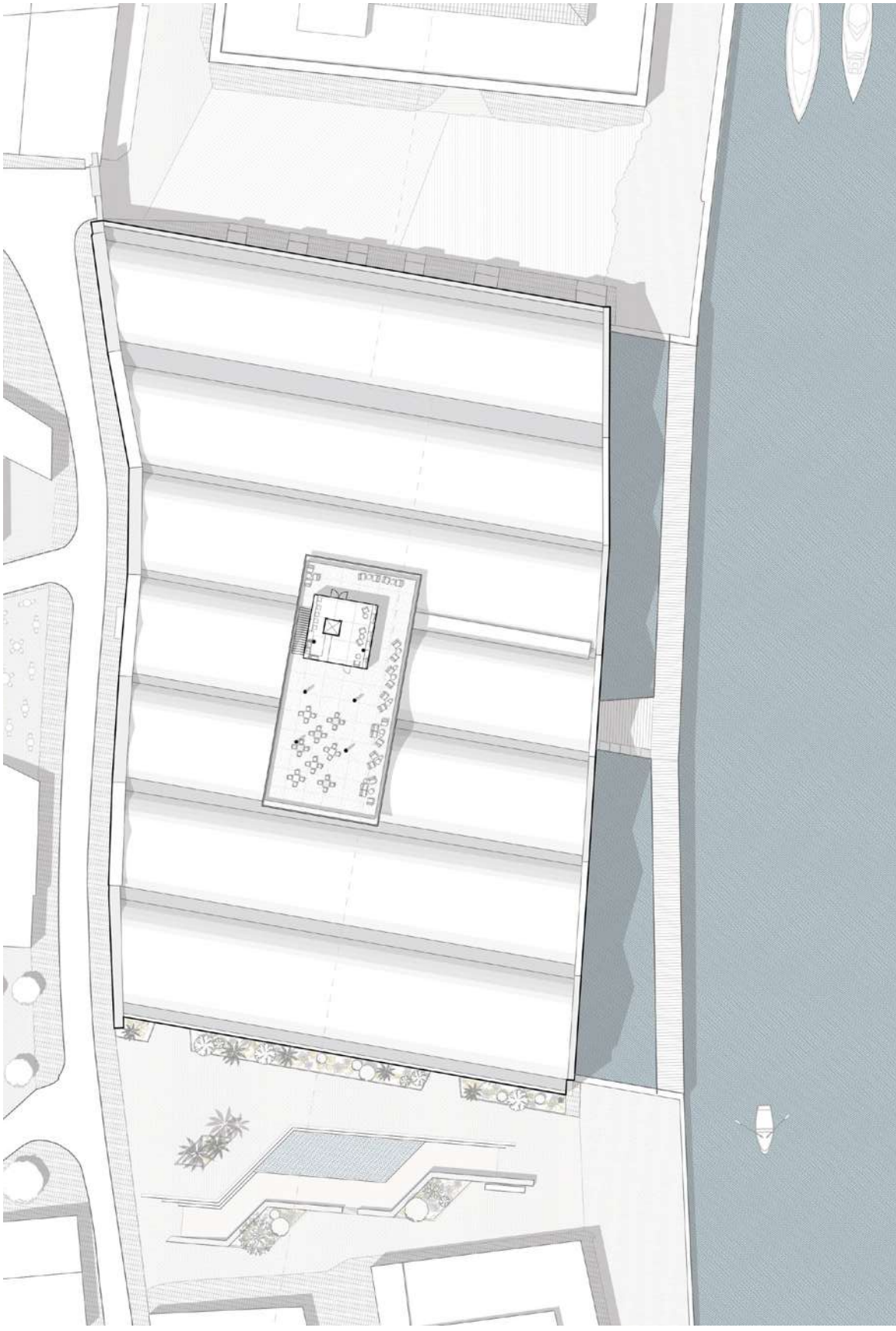
LEVEL IV
VIEWING
TERRACE PLAN

On the fourth and final level of the Cultural Center, we reach the viewing deck. On this plan, it is visible that most of the deck is an open space covered by a shading canopy for sun protection, while an enclosed area houses the café and the elevator. The Neoria deck is designed to offer visitors an unobstructed view of the harbor. The concept of this space is based on freedom of movement, allowing visitors to take a chair and choose their own spot to sit, without any obligation to make a purchase in order to stay.

This new "balcony" of the harbor, as Greeks often refer to such viewing decks, will offer panoramic views—not only of the harbor and the vast Cretan Sea stretching ahead but also of the White Mountains and parts of the city.

The technical description of the structure follows on pages 100-104.



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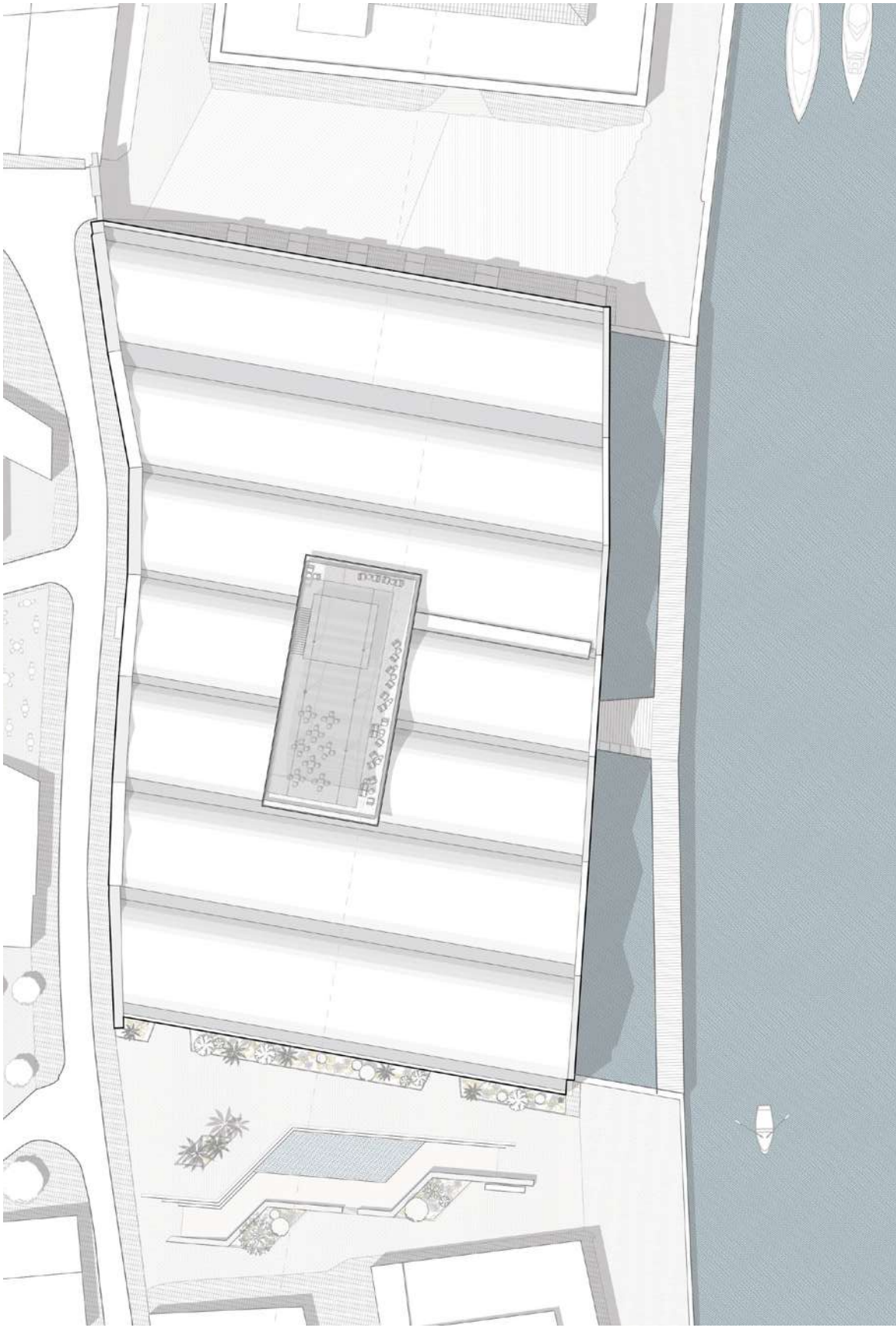
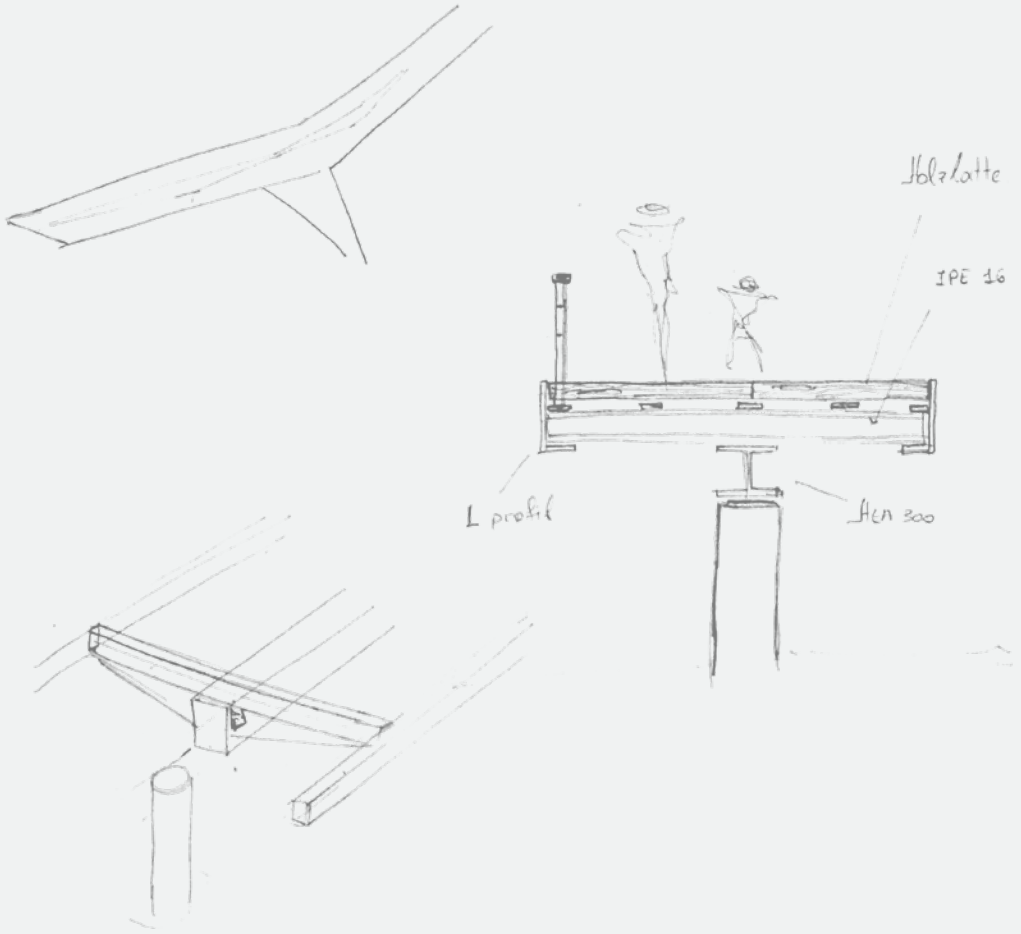
LEVEL V
ROOF DECK
PLAN

In the final plan, along with the vaults of the Neoria and the viewing deck, the canopy that provides shading is also depicted. This canopy is a key element of the design and the most visually prominent feature of the new part added to the buildings. Supported by six central columns, it appears to float like a cloud above the Neoria. Its asymmetrical, organic form breaks the symmetry of the imposing stone shipyards, adding a sense of movement and fluidity that seamlessly integrates the new structure with the historic architecture.

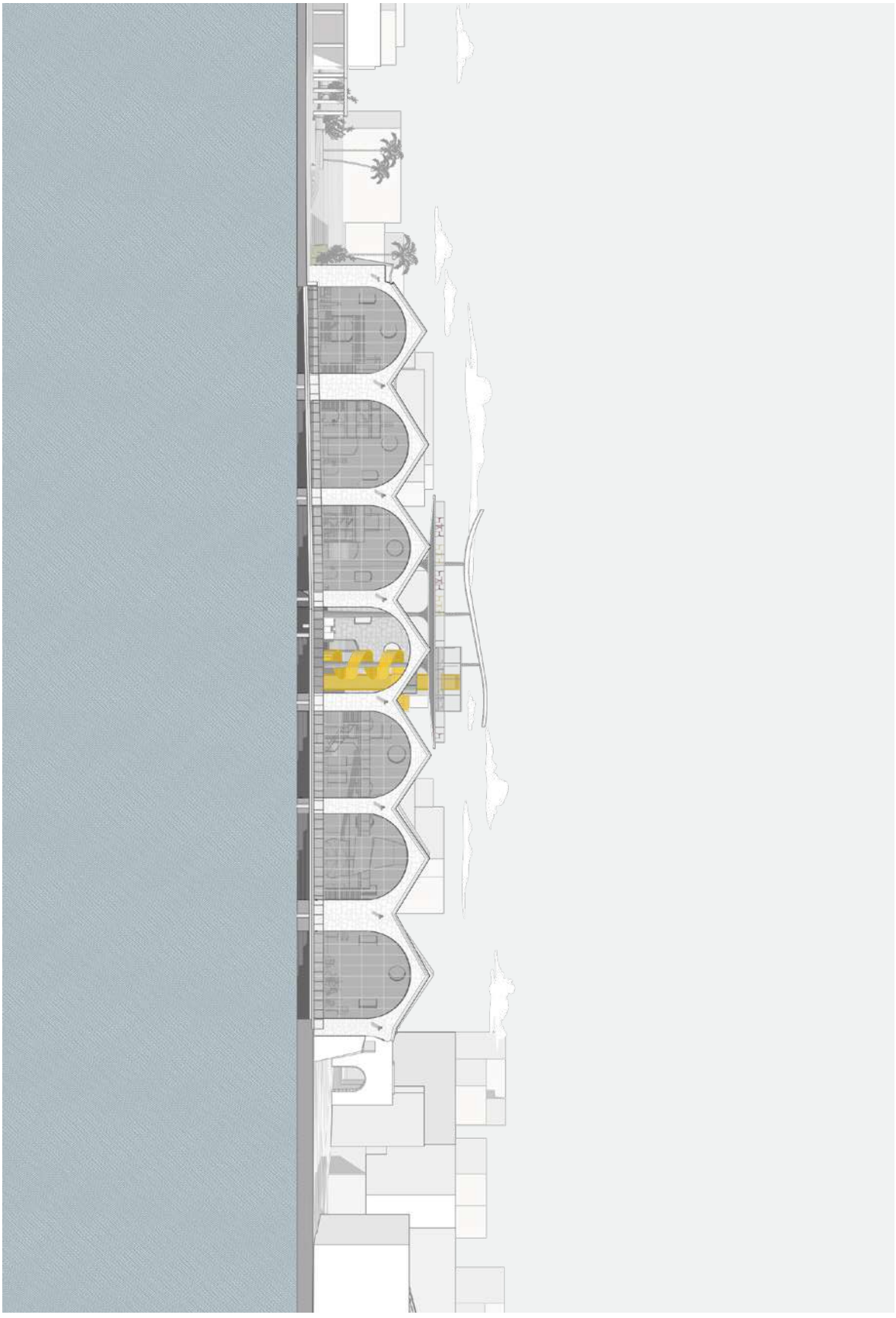




BRIDGE
NEORIA CULTURAL CENTER

1:600
NORTH
ELEVATION

In the drawing of the northern elevation, the Neoria are depicted with their new glass facades, the metal bridge, the viewing deck, and the canopy floating above them. Also visible is the relationship between the buildings, their surrounding environment and the Kastelli Hill.



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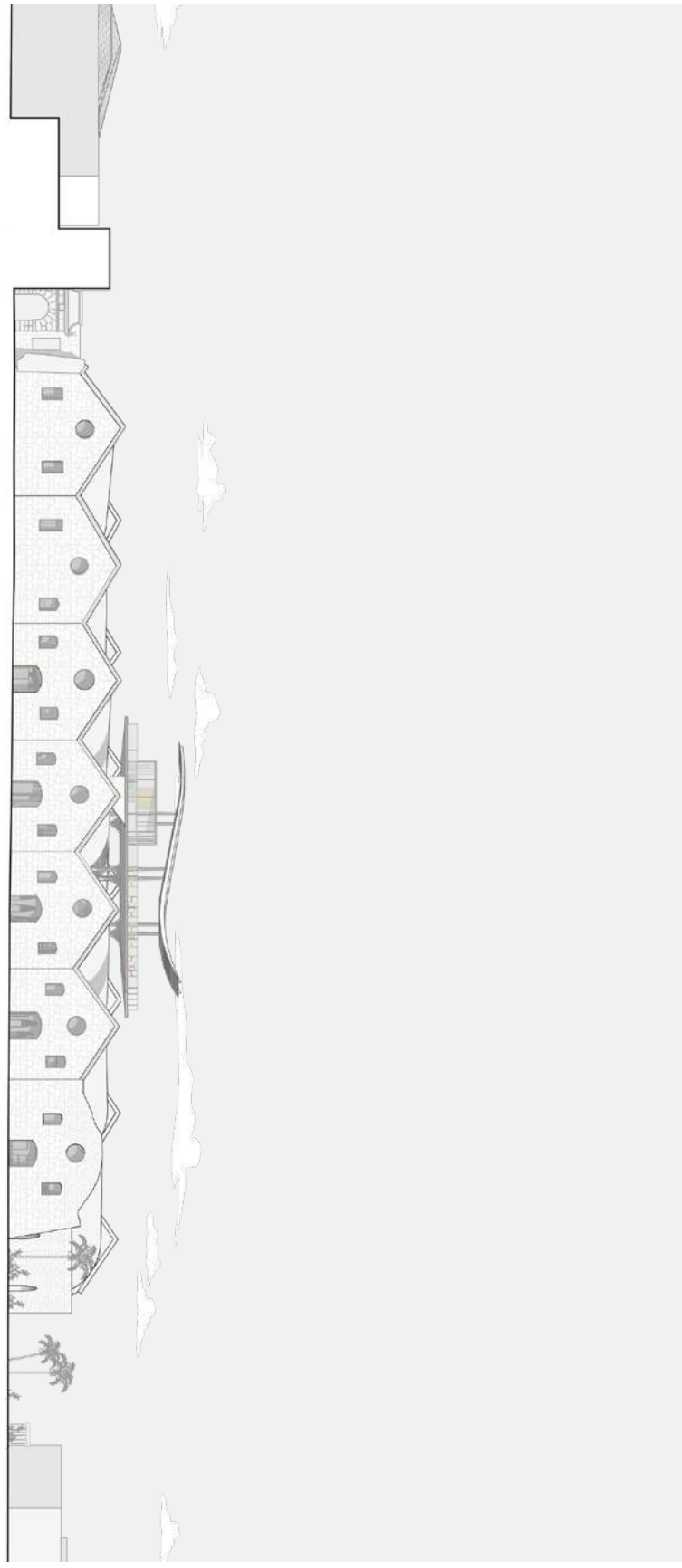
SOUTH
ELEVATION

In the drawing of the southern elevation it's interesting to observe the relation between the building complex and the new structure.

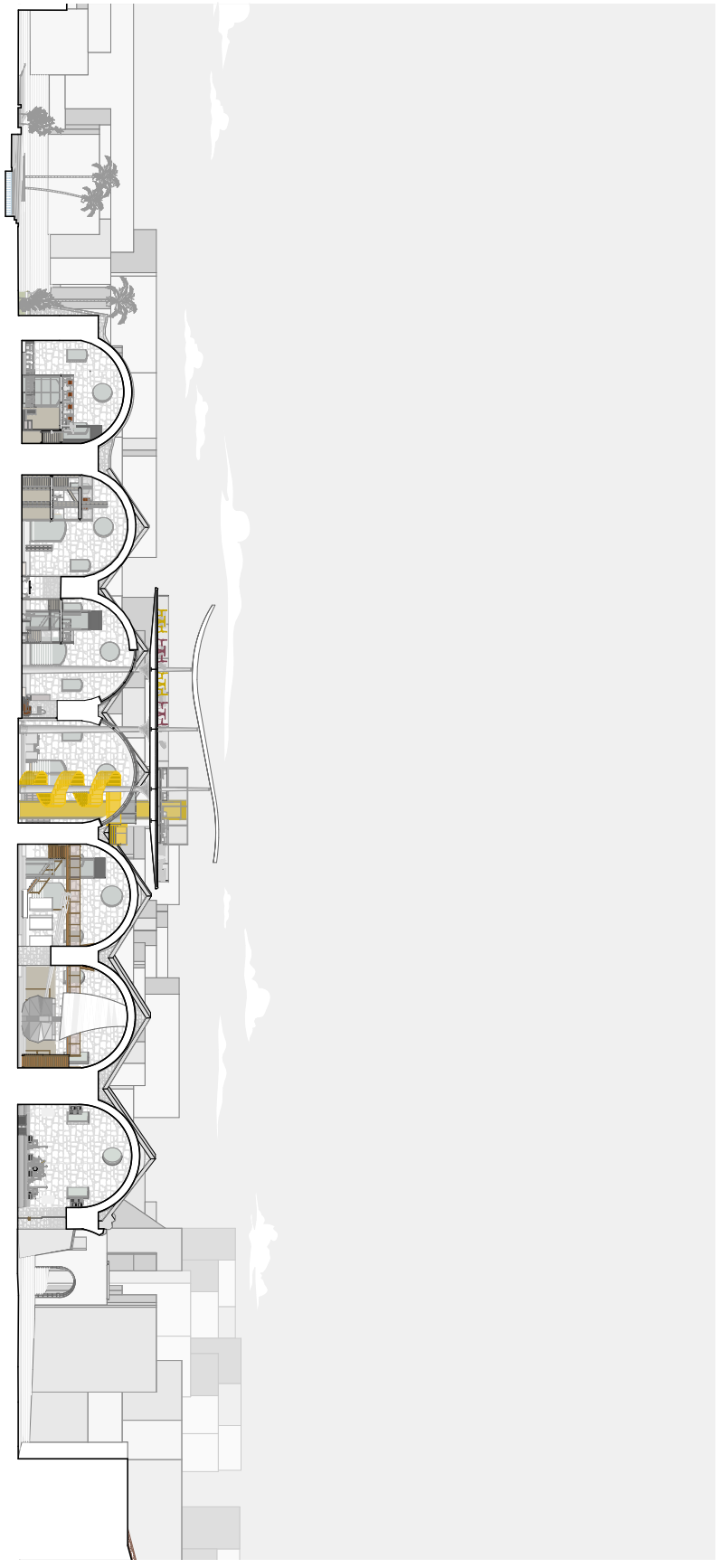
The mansory facades will be restored while maintaining their original form, with damaged sections beeing carefully repaired. The few sealed openings will be reopened, and those at street level will be fitted with fixed wooden frames, except for the doors of 4th Neorio. The upper windows will feature operable frames to ensure proper ventilation. Therefore, the overall appierance of the Shipyards shouthern facades will remain as is today.

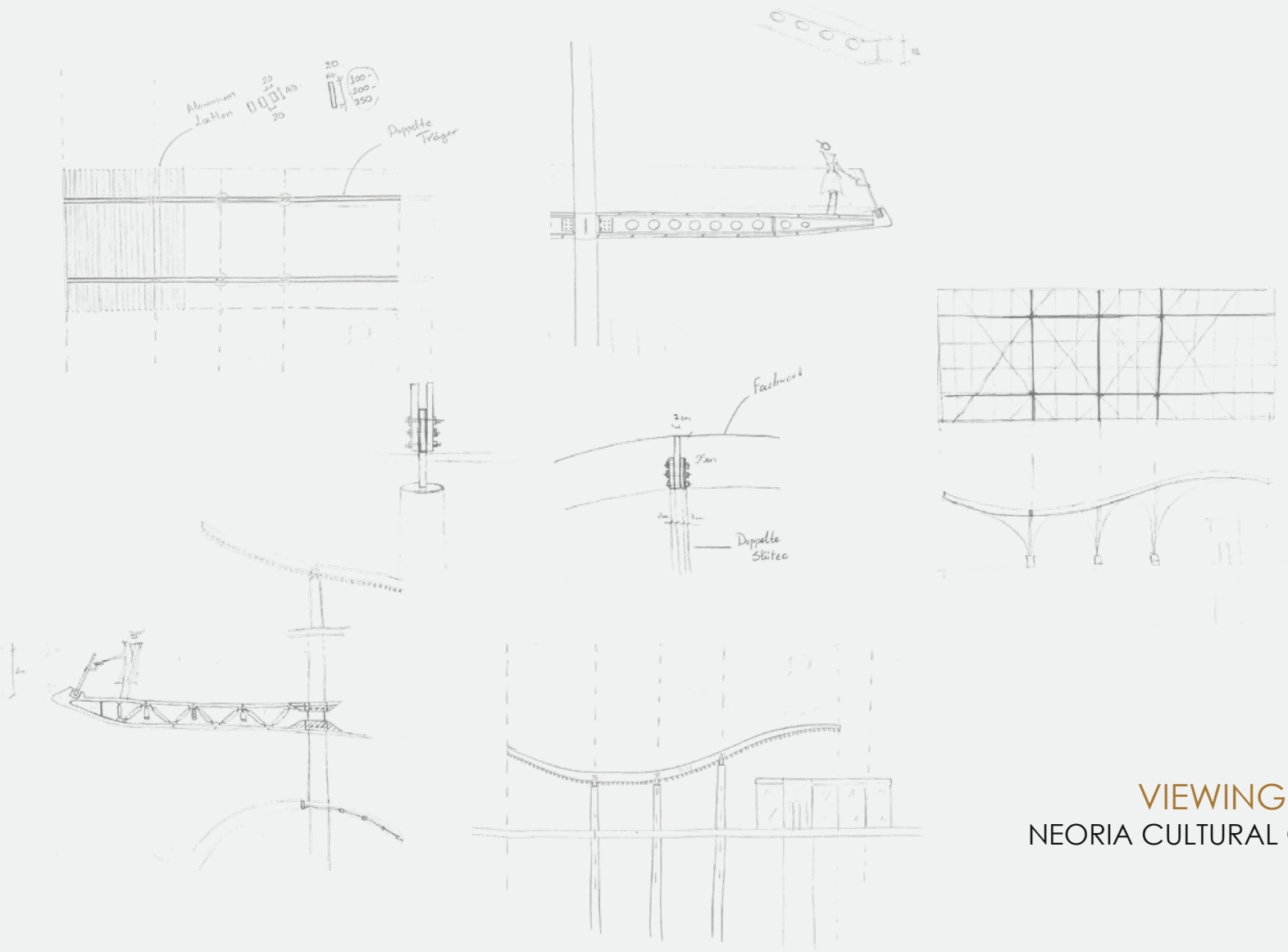
On the left side of the drawing, the Neoria gate—no longer present today—is also depicted, as it will be reconstructed in its original form.



1:600 TRANSVERSE-CROSS SECTION

The vertical section, as well as the 3D axonometric section on page 88, give us a better overview of the Neoria and their layout with the integration of new uses, as well as the interconnections between them. This section also clearly shows the conection with the viewing platform and it´s construction, which we will examine in more detail later.



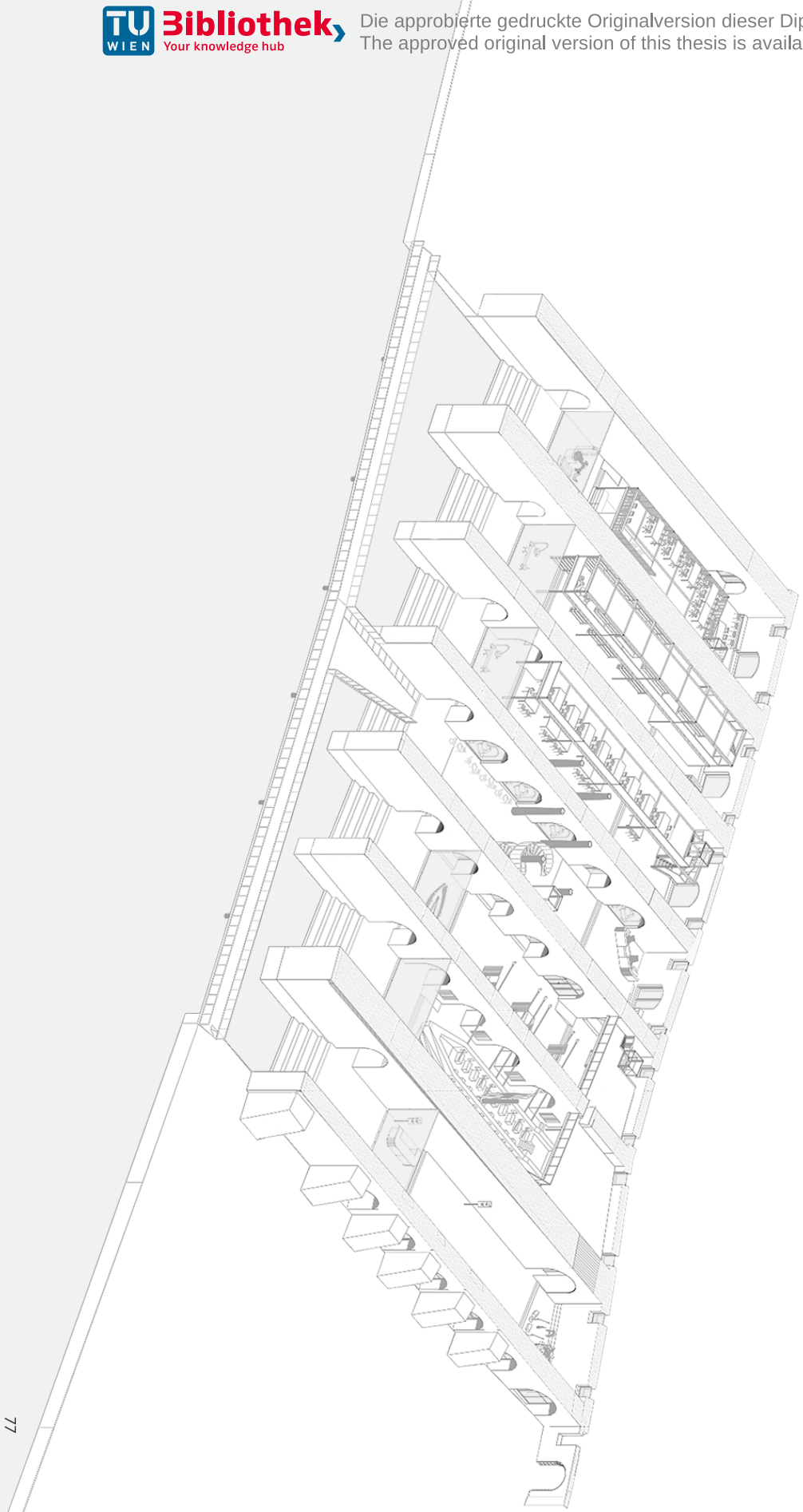


VIEWING DECK
NEORIA CULTURAL CENTER

MAIN VIEW
NEORIA CULTURAL CENTER

PART III

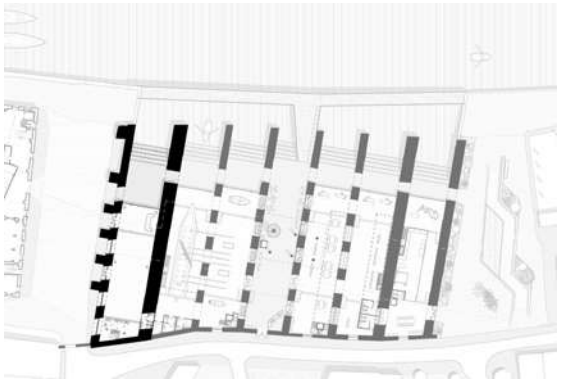
SECTIONS, VISUALISATIONS & DETAILS

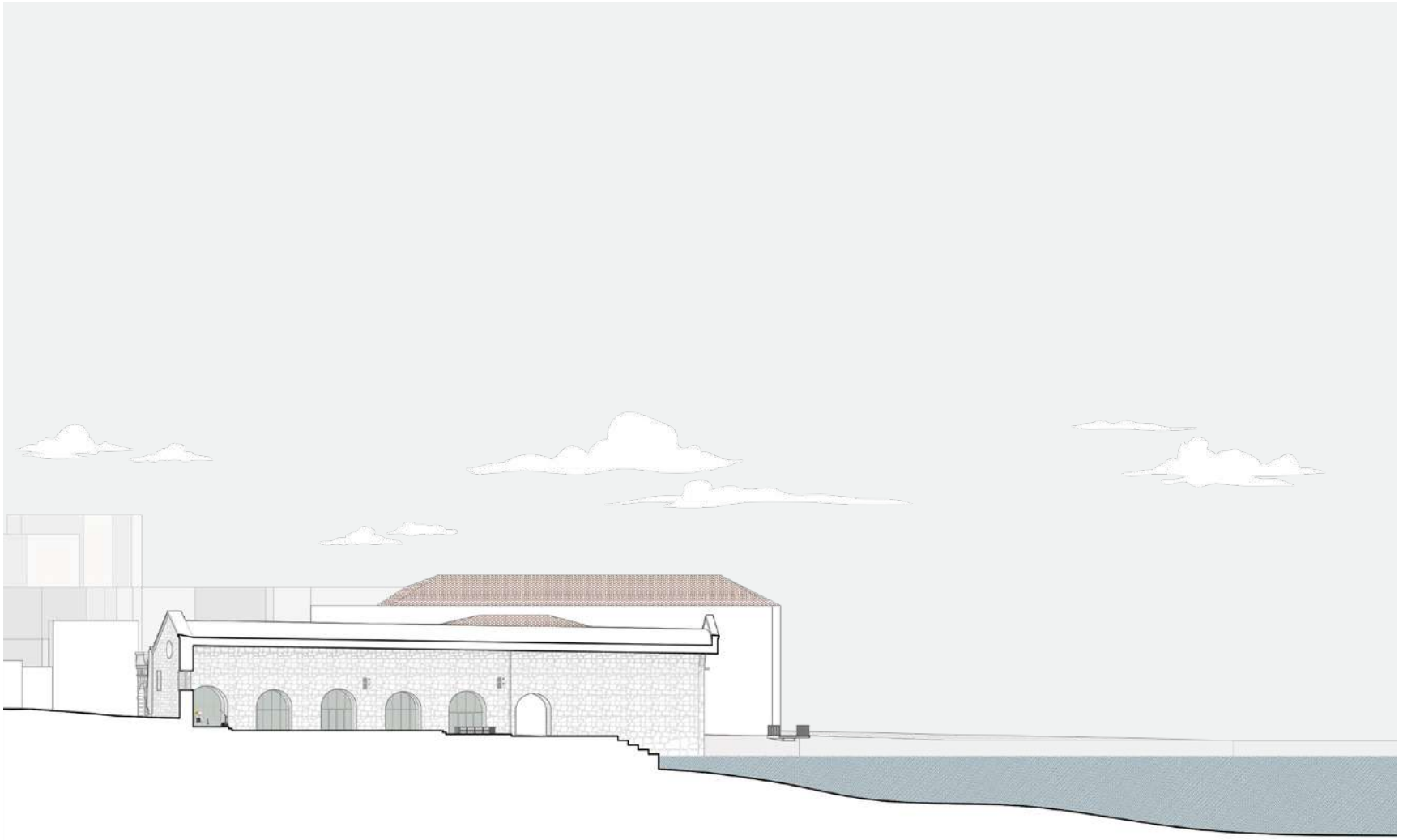


N1
MULTIFUNCTION ROOM

The 1st Arsenal was well known to residents in the late 20th century as an event space, as it was open to the public before the 2006 earthquake. For this reason, it will continue to serve as a venue for cultural events and a multifunctional space. Like the other Arsenals, it will undergo full restoration to ensure waterproofing and structural stability, with careful repairs of the masonry where needed.

Its generous length and height make it well-suited for a variety of uses, including a stage for small concerts, exhibition booths, and other temporary installations to accommodate exhibitions, festivals, and events. To support these activities, restrooms will be added only in the vaulted space along the eastern wall. The existing openings on the western wall will be transformed into large glass windows, with two of them functioning as entrance doors. During the day when no events are taking place, the space will remain open as a gallery for temporary exhibitions, ensuring it remains active and accessible. As explored later in this study, most of the Arsenals will incorporate additional spaces on a second level to maximize their use. However, it was important to preserve at least one Arsenal in its full original volume—allowing visitors to experience the scale of the structure as it was intended while keeping it fully open and accessible to all.





LONGITUDINAL SECTION N1 1:600

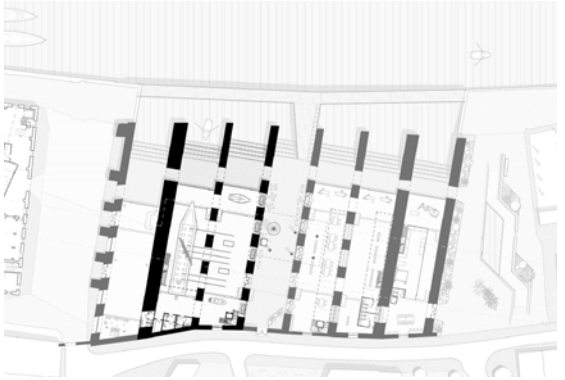
N1
MULTIFUNCTION ROOM

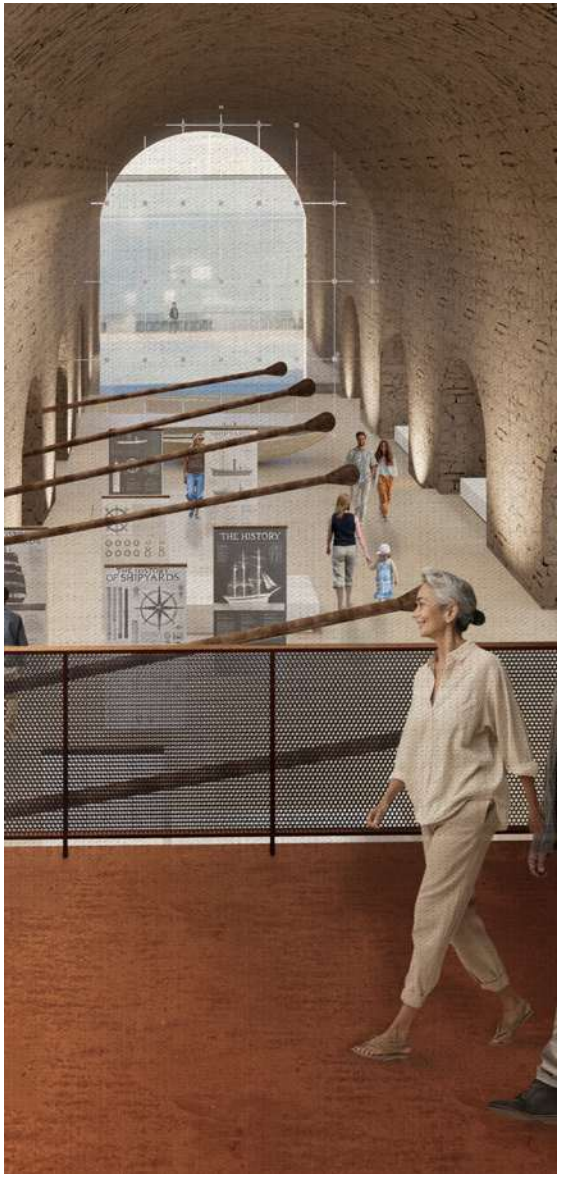
N2&N3
NEORIA MUSEUM

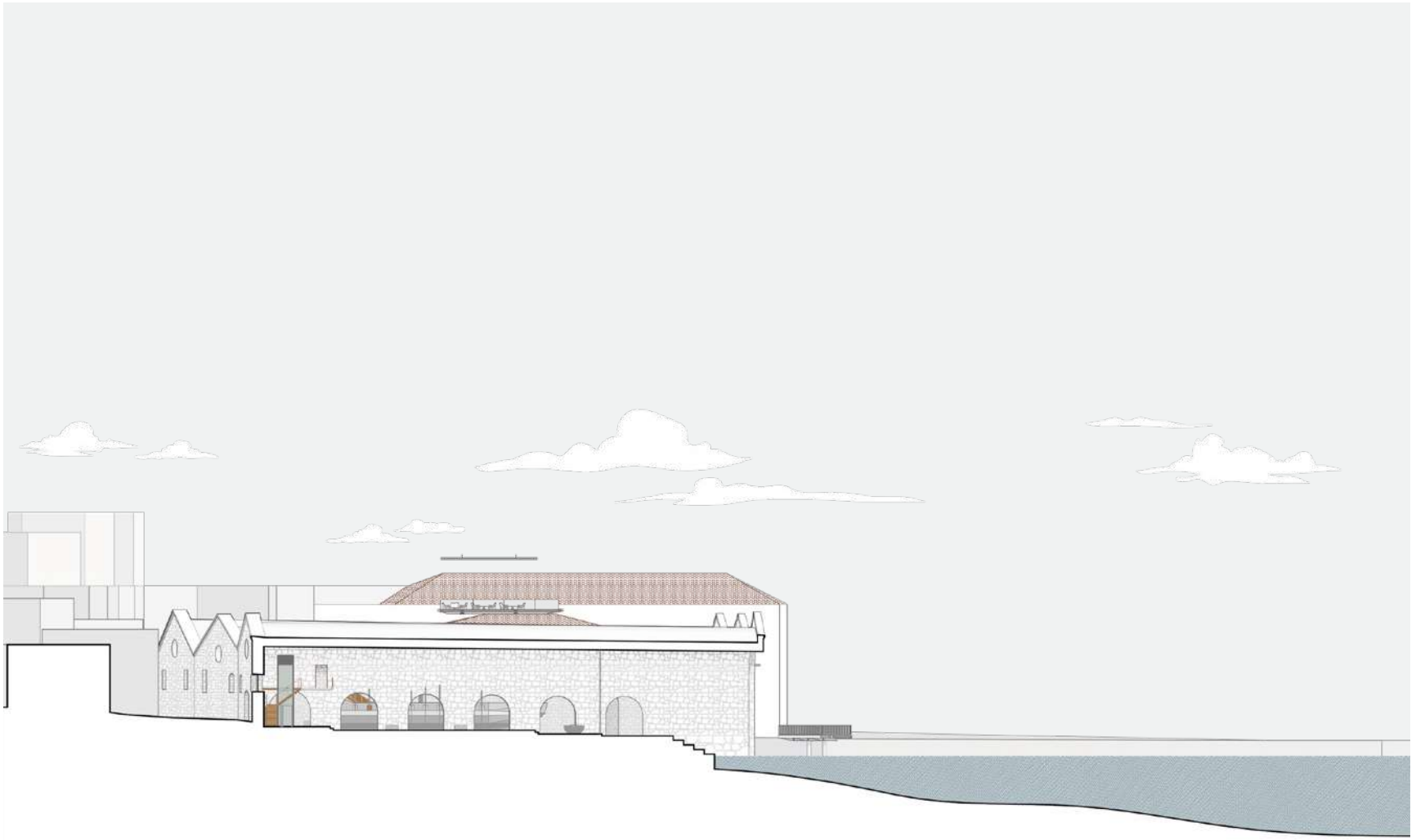
The 2nd and 3rd Arsenals will house the Neoria Museum, where visitors can learn about the history of the shipyard complex and the history of the venetian harbor from the 16th century to the present day. All the arches between these two sections will be opened, allowing for free movement between the spaces.

A full-scale replica of a Venetian galley will be constructed in the 2nd Arsenal as part of the museum. Its oars will extend through the openings into the 3rd Arsenal and exhibition panels will be hanging from them. At the rear of both spaces, a second level, or gallery, will be built. From this elevated platform, visitors will be able to view the galley from above and learn about its history, as well as observe the old shipyards and the exhibition space as a whole from a different angle.

A staircase next to the galley will lead visitors to the upper level of the 2nd Arsenal and through a small opening into the gallery of the 3rd Arsenal. Additionally, an elevator in the 3rd Arsenal will ensure barrier-free access. Beyond serving as observation platforms, these upper levels will expand the museum's exhibition space hosting additional artifacts, short films, and interactive displays. Finally, the arches facing the 4th Arsenal will offer visitors a preview of what lies ahead before entering the museum, featuring small exhibits and informational panels.







LONGITUDINAL SECTION N3 1:600

N2&N3
NEORIA MUSEUM

N2&N3
NEORIA MUSEUM

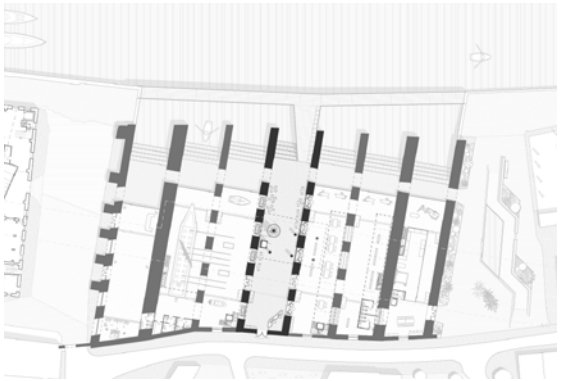
N4
PASSAGE

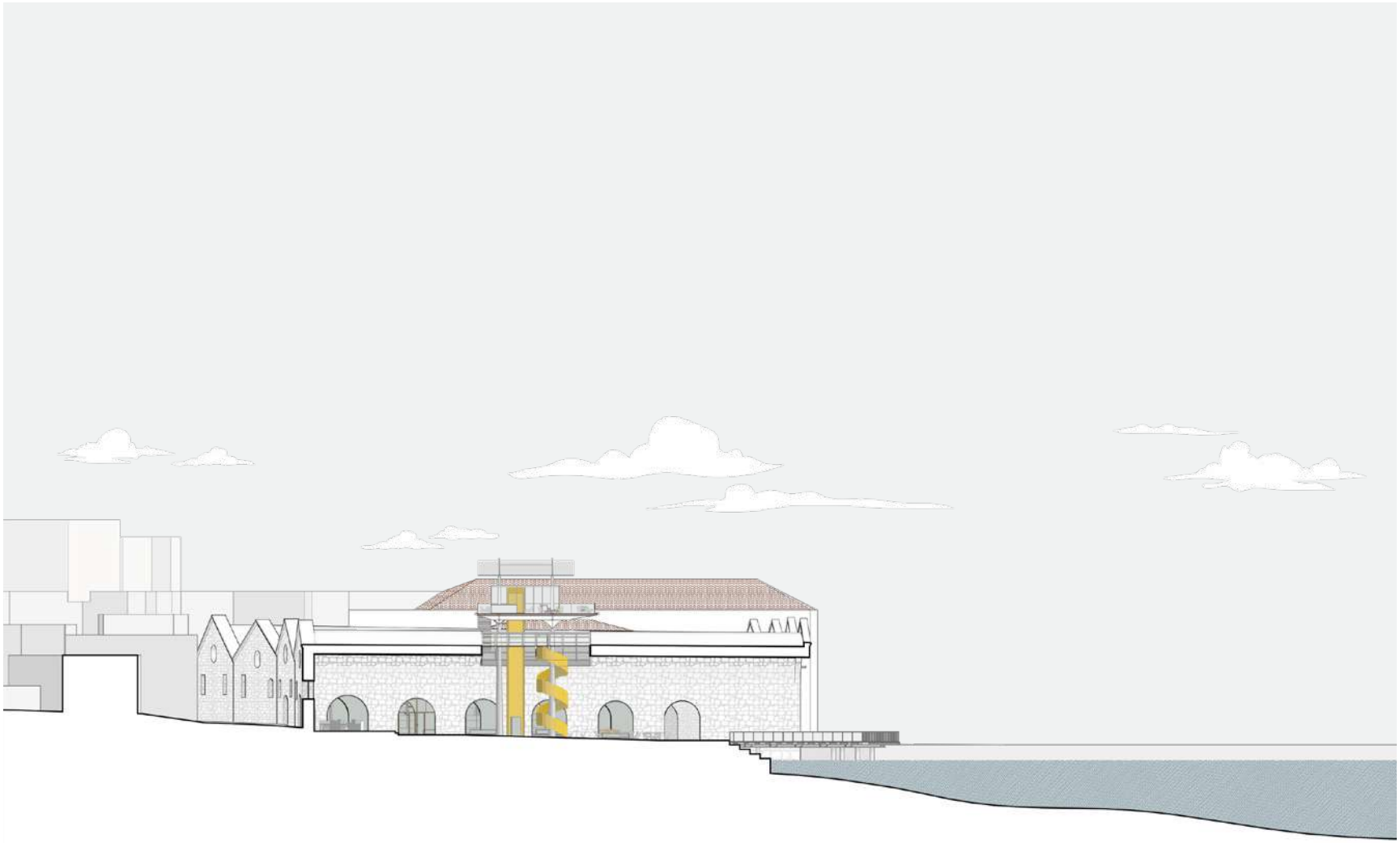
This space is one of the most unique in the new cultural center, as it is neither fully enclosed nor entirely open. It serves as both a reception area and a transition space—a highly functional area connecting the north to the south, housing the entrances to the museum and library, as well as ticket information and sales. At the same time it is benefiting from natural light coming through the large central glass vault and southern openings.

The arches on the left and right offer glimpses of the movement and activity in the spaces beyond. It is a lively and inviting area. A few metal tables and chairs provide an opportunity for passersby to sit and enjoy the space and the life flowing through it.

A key feature is the yellow metal staircase that projects from the center of the Arsenal, surrounded by 4 white metal columns. It sparks curiosity, making visitors wonder where it leads, and invites them to explore further.

The new bridge that will extend in front of the cultural center connects with this passage, and, in combination with the stone walls and the warm tones of the light-colored cement mortar terrazzo floor, as well as the striking central staircase, it creates a welcoming transition into the building's interior.





LONGITUDINAL SECTION N4 1:600

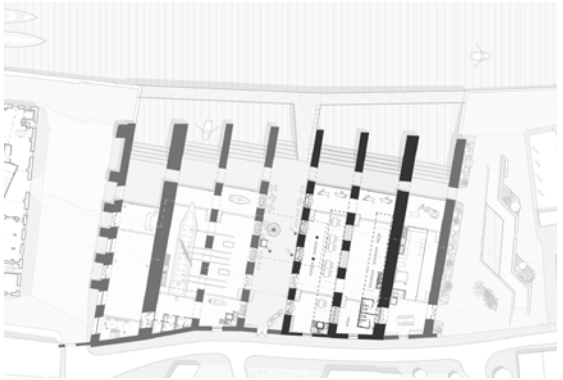
N4
PASSAGE

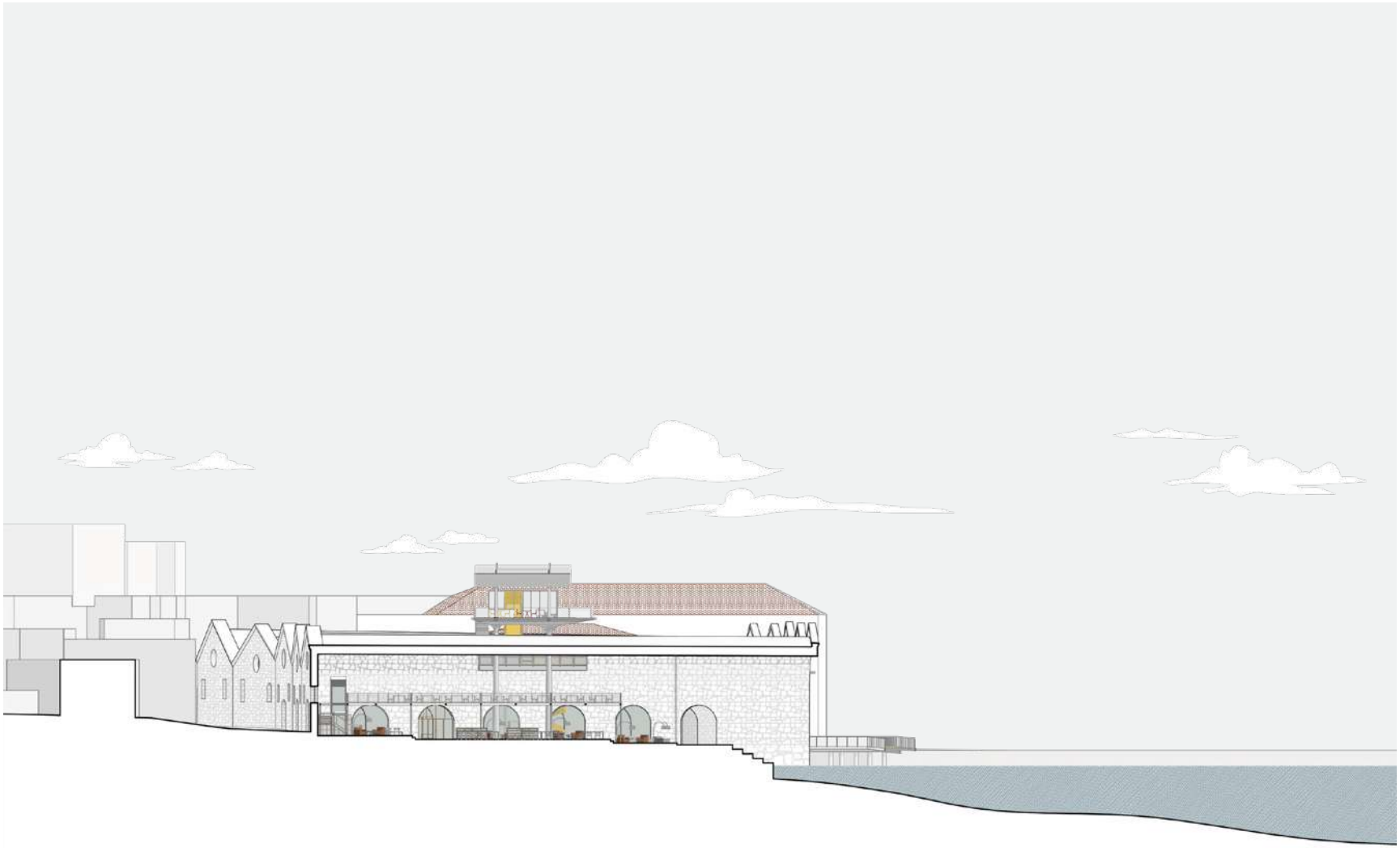
N5&N6
LIBRARY & STUDY ROOM

The 5th and 6th Arsenals will house the city's library and reading area. The new skylight allows natural light to flood the space, creating ideal conditions for integrating a reading area, the absence of which, along with a central library, has been felt in the city center.

The 6th Arsenal will house a collection of books, while the arches between the Arsenals will be fitted with study tables and computers. At the center of the reading area, two large columns support the viewing platform above the Neoria, which also serves as a shading element over the skylight.

Along both Arsenals, platforms (galleries) will be constructed, each occupying half the width of the room, offering space for a series of tables on the raised level of the reading area, and two additional levels of books in the library. This design takes full advantage of the Arsenal's volume without obscuring it. Each gallery is accessible via its own separate metal staircase, and a small elevator ensures accessibility to the elevated reading area. These structures are crafted from metal beams and are supported by slender columns to prevent additional strain on the stone walls. The flooring will be wooden, and the railings will consist of metal frames finished with perforated sheet metal.





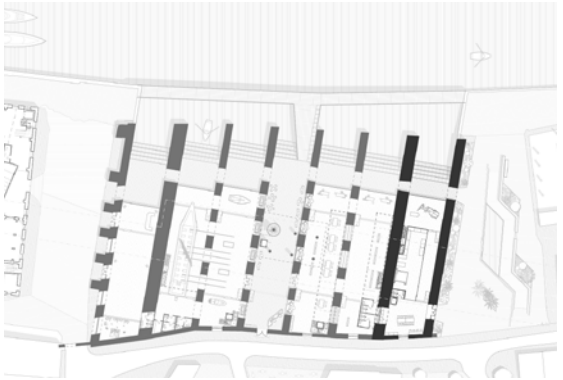
N5 LONGITUDINAL SECTION 1:600

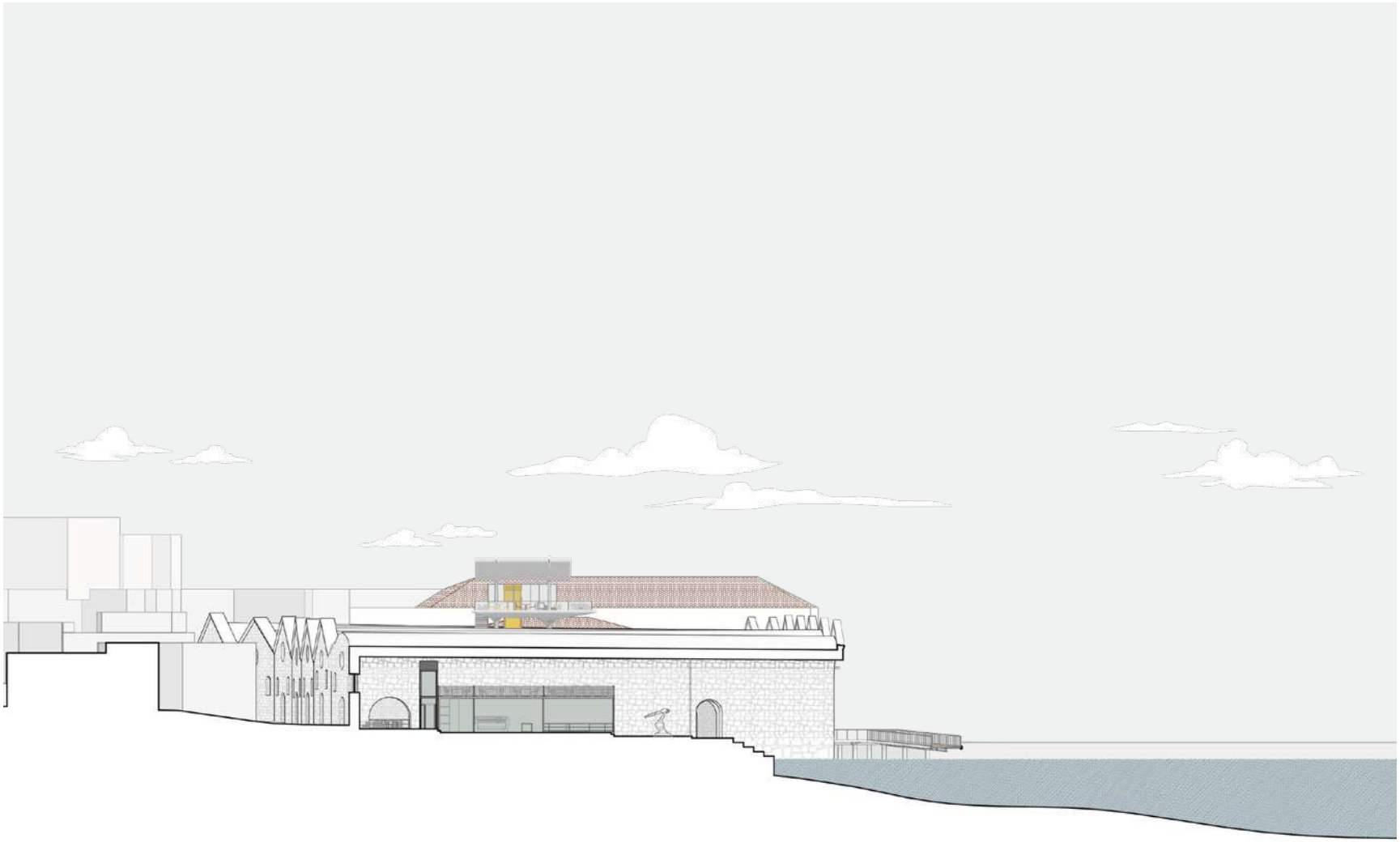
N5&N6
LIBRARY & STUDY ROOM

N5&N6
LIBRARY & STUDY ROOM

N7
WOOD FAB LAB

The easternmost of the Neoria will be transformed into a woodworking workshop, blending tradition with innovation. For centuries, the Neoria have been closely tied to wood and craftsmanship—from the 16th century, when Venetian galleys were being constructed and repaired, to the present day, where a small woodworking shop still operates in part of it´s space. Alongside the library, this new workshop will become a creative hub, bringing together students, professionals, and makers who want to develop their ideas in a fully equipped and inspiring environment. The workshop will have everything needed to bring projects to life: CNC machines, lathes, laser cutters, 3D printers, and well-stocked workbenches. Entry will be through the southeastern arch, leading into a thoughtfully designed space. At the back, a kitchen counter and communal work tables will create a welcoming area for collaboration, while a sealed "dusty room" will house the cutting machines. A staircase and a small elevator will lead to the upper level, where workspaces and 3D printing stations will be set up. Behind the glass facade, a Kuka robotic arm will stand available for workshop members to use. Passing by the Cultural Center, visitors will be able to watch projects come to life in real time, spreading the word about the innovative work happening here. This setup will help support and promote local startups, giving them visibility within Chania's community.





LONGITUDINAL SECTION N7 1:600

N7
WOOD FAB LAB

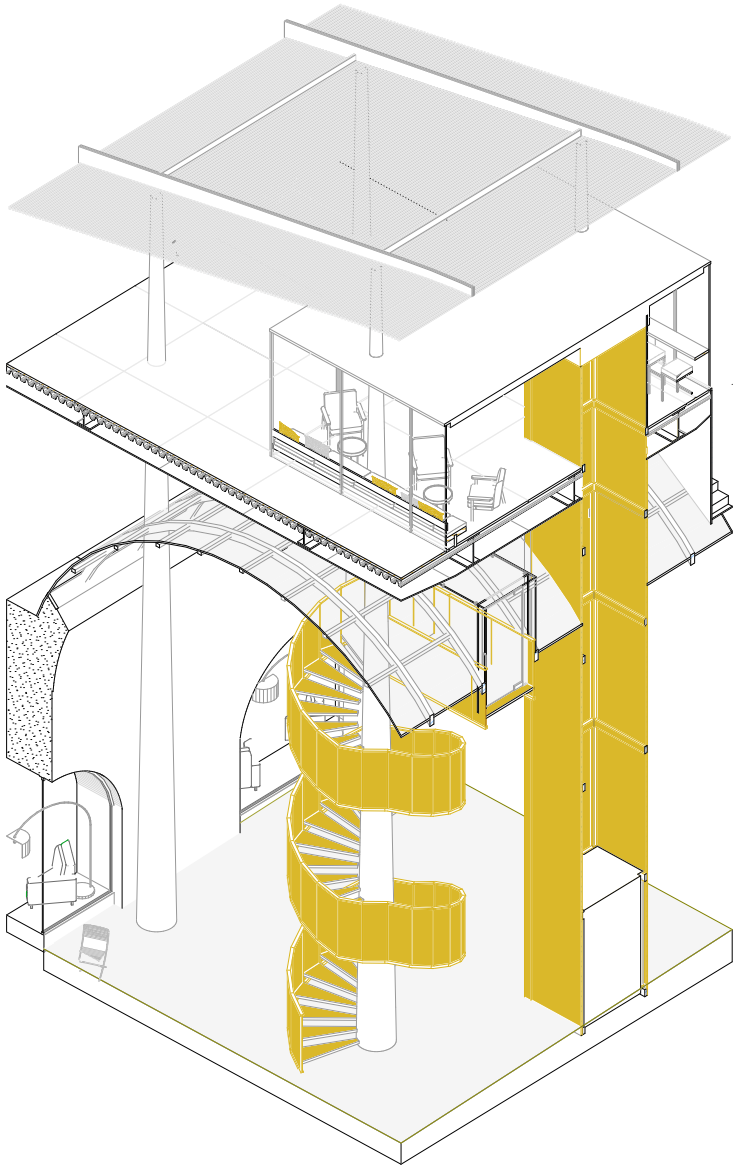
DETAIL DRAWINGS

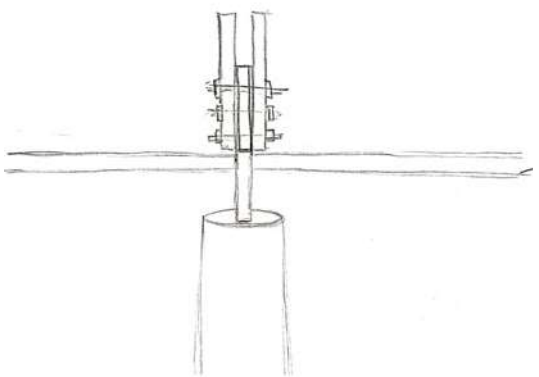
STRUCTURAL DESIGN OF THE PLATFORM & CANOPY

A platform measuring 25 meters in length and 11.5 meters in width will be supported by six centrally positioned steel columns. These columns extend upwards to also support a canopy, which consists of two rows of double beams from which slats are suspended to provide shading. The perforated roof design improves the structure's performance by reducing wind pressure on the canopy while offering shade and filtered natural light.

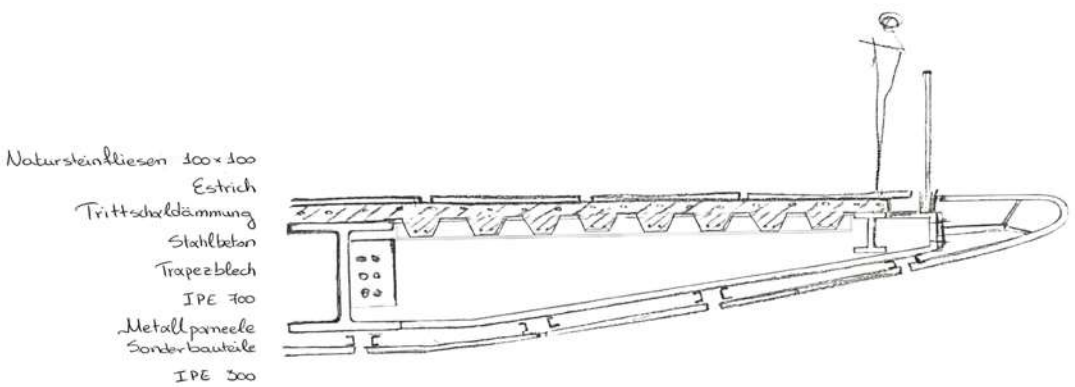
The platform's structural system is composed of IPE 700 steel beams, selected to accommodate the large cantilevers on the west and east sides of the structure. To create a sleek, lightweight appearance, the beams gradually decrease in height towards the edges, giving the impression of a thin slab when viewed from below. Above the beams, trapezoidal sheets and reinforced concrete form the main slab, which is finished with 100x100 cm tiles. The underside of the platform will be clad with specialized metal panels, with the final panel at the platform's edge curving upward, elegantly wrapping around the perimeter to conceal the gutter system.

The metal staircase will be fully supported by the central column, while the walkway it connects to, will be anchored to the supporting wall beneath it, given its relatively small size. The elevator core will be built using steel hollow sections, reinforced with a framework of perforated and solid metal panels to optimize structural stability and load distribution.





Sketch of the connection between column and canopy double beams



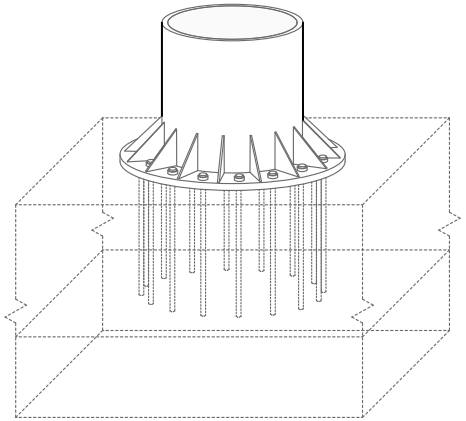
Sketch of the platform's cantilever structure

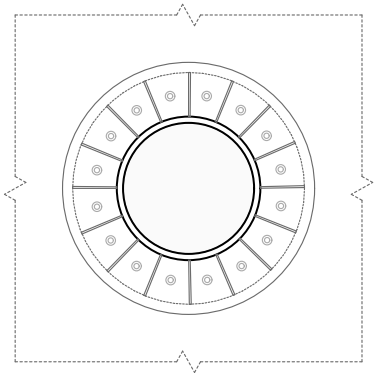
Raft - Slab Foundation

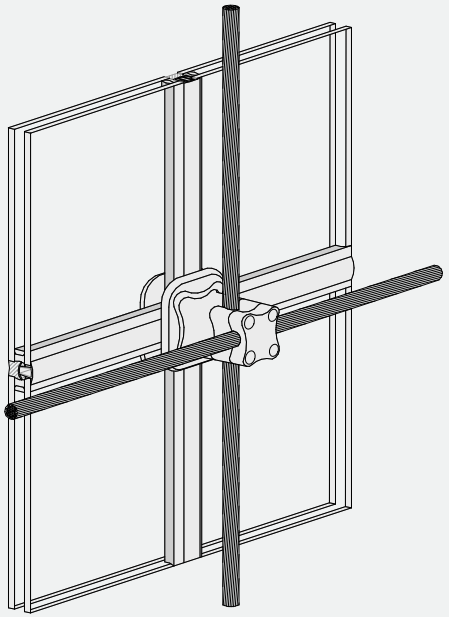
To avoid overloading the existing buildings, a fundamental principle of the concept is that the new structure must be supported independently on the ground. For this reason, the foundation of the steel columns is of critical importance to the project, ensuring stability and preventing future settlements that could have serious consequences. The choice of foundation type was based on three main factors: load distribution and structural requirements, soil bearing capacity and settlement control, and site conditions and environmental factors.

According to a study by the Technical University of Crete, the foundation of the Neoria extends along the entire length of the walls but does not exceed their width. Measurements indicate that the existing foundations reach a depth of up to 3 meters, resting on the rocky subsoil of the area, which provides a solid base for the new structure. However, the weight of the construction, the significant forces generated by the cantilevers, the crucial importance of precise alignment and leveling of the columns, and the need to account for potential groundwater require a foundation that guarantees the stability and safety of the structure.

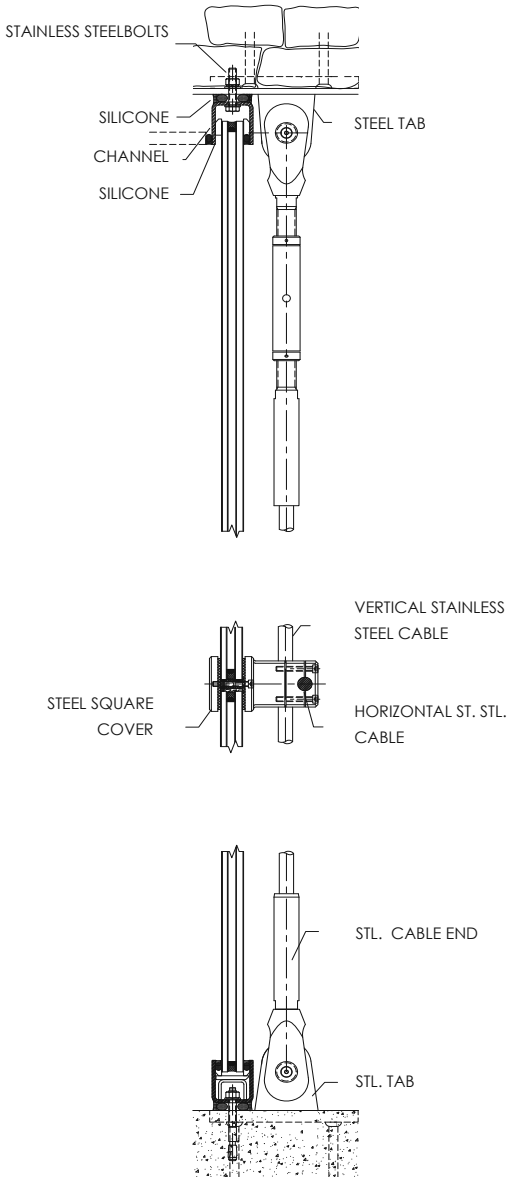
Therefore, the foundation for the six steel columns will be a raft-slab foundation, covering the entire base to evenly distribute the high loads and support the large cantilevers. A 1.5-meter thickness ensures the necessary strength to handle concentrated loads and resist bending, while a 2-meter depth allows it to rest on stable soil, preventing uneven settlement. Unlike individual footings, the continuous slab enhances structural rigidity, minimizes differential settlement, and improves resistance to overturning due to wind and cantilever forces. Acting as a single structural unit, it optimizes load transfer and ensures long-term stability, making it the most reliable solution for this project.







GLASS FACADE



Cable Net Wall System

The northern facades of the Neoria, which were sealed in the 20th century, will be reopened to restore the original spatial configuration and improve connectivity to the water. The new glass facades of each Neorio will be set back inside the structure, creating an external passageway that runs through the first arches of the Arsenals. These glass facades must withstand wind loads, maximize natural light intake, and ensure optimal transparency.

To achieve these performance criteria, the Cable Net System is proposed, utilizing high-strength stainless steel cables arranged in a minimal rectangular grid to support large structural glass panels with nearly invisible framework. This system eliminates the need for traditional mullions, reducing visual obstructions and maximizing daylight diffusion while maintaining a high load-bearing capacity.

A key factor in selecting this system is its structural compatibility with the vaulted geometry of the Neoria. The prestressed cable network ensures an even distribution of forces across the masonry arches, minimizing localized stress concentrations and reducing the risk of overloading them. The cable net wall system can span large openings while maintaining structural integrity, making it ideal for the Neoria, where the existing vaulted structures require a lightweight yet durable enclosure that seamlessly adapts to their curved geometry.

By combining transparency, structural efficiency, and adaptability, the cable net wall system enhances both the functionality and aesthetic value of the glass facades.

VIEWING DECK
NEORIA CULTURAL CENTER

ACKNOWLEDGMENTS

As I see my studies coming to an end, I am overwhelmed with the need to express my gratitude to the people who have supported me throughout this journey.

To my professor, Dietmar Feichtinger, whom I had the great fortune to meet in my very first semester at TU Wien in September 2021. He has been a source of inspiration for me ever since. That first project, which involved designing a university campus in Paris-Saclay, gave me the opportunity to travel to Paris alongside him, to work, to listen and learn from him. His perception of space and its possibilities, his advice, and his approach to the design process have profoundly influenced me and continue to come to mind when starting a new project. Thus, asking him to supervise my thesis was a decision that came naturally, and I am truly grateful that he accepted. I appreciate the time and effort he dedicated to my work, as it would not have been the same without his guidance. Thank you, Dietmar!

To the Hochbau 2 Institute, where I completed the majority of my courses, and to its professors, such as Sandra Häuplik-Meussburger, Daniel Schürr, San-Hwan Lu, and Michael Seidel, who guided me throughout my studies and do outstanding work at this university.

To my international friends, who made Vienna feel like home, shared truly great moments with me, supported me through challenges, and made my student years memorable. To my childhood friends, who accompany me from my early years until now. And to Levi, my partner and best friend, who supports me, listens patiently to my problems, always finds a solution, and fills my days with laughter.
I love you, thank you for everything!

Finally, I want to dedicate this work to my parents. They have given me unconditional love and supported me at every step, making personal sacrifices to offer me a better future. To them, who stayed up late holding my books, who applauded my every effort and to whom I owe not only my degree but also the person I am today. I love you, a simple “thank you” is not enough for all that you have given me!

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