



MASTER-/DIPLOMARBEIT

Ausstellungsschiff der Kunsthochschulen an der Donau

Exhibition Ship for the
Art Academies Situated
in Danubian Cities

Förderung des transkulturellen
Austauschs zwischen

Kunststudierenden aus Städten
an der Donau durch Planung
mobiler Ausstellungsschiffe

Facilitating a trans-cultural
Exchange Between Art Students
from Different Danubian Cities
through Providing Mobile
Exhibition-Ships

ausgeführt zum Zwecke der Erlangung
des akademischen Grades eines
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ABSTRACT

Die Donau verbindet als zweitlängster Fluss in Europa zehn Länder und fünf Hauptstädte und diente in der Historie als eine der wichtigsten Handelsrouten. Der Fluss hat bis heute eine weitreichende Geschichte, auch im Sinne der Verbindung verschiedener kultureller und wirtschaftlicher Kreise.

Vor diesem Hintergrund schlägt das vorliegende Projekt ein Programm vor, bei welchem zwei Ausstellungsschiffe regelmäßig verschiedene Städte entlang der Donau besuchen und dort bestimmte Zeit anlegen um den Studierenden die Möglichkeit zu bieten, ihre Kunstwerke in den Schiffe zu präsentieren, über die eigene Stadt- oder Landesgrenze hinaus.

Durch die Planung und das zur Verfügungstellen der mobilen Ausstellungsschiffe wird ein transkultureller Austausch und ebenso Networking zwischen Kunststudierenden aus Städten entlang der Donau ermöglicht. Das Programm soll daher von Kunsthochschulen in Wien, als ein Zentrale Punkt des Flussverlaufs der Donau, betrieben werden.

Das Projekt zielt darauf ab, die enorme kulturelle Vielfalt entlang der Donau zu nutzen, um neben transkulturellen Austausch auch Sichtbarkeit für aufstrebende Künstler:innen zu fördern. Dies könnte nicht nur den Kunststudierende und junge:n Künstler:innen, sondern auch der gesamten Region zugutekommen.

The Danube, connecting ten countries and five capitals, has always played an important role as a tradind route. It has a past that continues to shape the present fostering connections between cultural and economical communities.

In light of everything, this project proposes an initiative where two exhibition ships regularly visit cities along the Danube. These ships will dock for a period providing students with an opportunity to showcase their artworks beyond their city or national borders.

By implementing these mobile exhibition ships it is aimed to facilitate exchange and networking among art students from cities along the Danube. This program will be coordinated by art schools in Vienna, which serves as a hub, along the rivers course.

This project seeks to harness the diversity found along the Danube to promote both transcultural exchange and visibility for up and coming artists. This initiative would benefit not art students and young artists. Also contribute positively to the entire region.

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Image 1: Vasquez Pinos, 1838; Ofen und Pesth

INTRODUCTION

The Danube River holds significance in Europe both as a waterway and, as a culturally and historically influential lifeline for the continent. It flows through ten countries and four capitals traversing landscapes and cultures and has played a role in shaping Europe's rich heritage. The river's impact on cultures is vast and profound.

For thousands of years the Danube has served as a trade route facilitating the exchange of goods, knowledge and ideas between regions. It witnessed many trade activities and migrations that fostered cultural interactions. Notably it formed part of the Roman Limes, the border of the Roman Empire. Has witnessed the rise and fall of empires and civilizations throughout history.

The Danube River stands as a meeting point for

cultures across time. It is considered as a cradle of civilization itself. Cities located along its banks such as Vienna, Budapest and Belgrade have played roles in shaping central Europe or even Eastern World, such as Ottomans, in history. These cities have been centers for arts, science, diplomacy: A testament to their contributions to culture over centuries. Vienna particularly holds recognition as a hub for music. Renowned composers such as Mozart, Beethoven and Strauss drew inspiration from this city's association, with the Danube.

Throughout history the Danube River has not exerted its influence. Has also played a significant role, in nurturing local traditions and folklore. It intertwines with the rhythms and cycles of festivals, rituals and celebrations. The waters of the Danube have been at the heart of folklore, mythologies and



legends across the regions it flows.

Nowadays even though the Danube does not hold the same importance as before as a means for transporting goods and people, it serves as a connecting element among European Union member states along its course while representing cooperation and connectivity.

With its background and cultural significance the Danube River stands as a testament to Europe's shared heritage. Throughout centuries this remarkable river has acted as a bridge between nations and a wellspring of inspiration for artists and thinkers. Its impact on cultures cannot be overstated: it showcases the interplay between geography, history and human creativity. This grand waterway symbolizes the fusion of identities and holds immense cultural and historical value for the entire continent. Because of all these reasons there is a case for revitalizing the role of the Danube in connecting and enriching Europe's cultures. Projects aimed at revival should be strongly supported to ensure that this river continues to serve as an essential conduit, for cultural exchange, economic cooperation and inspiration for generations to come.

1.1. Motivation

In the world of art and creativity, collaboration and exposure hold value. Showcasing, celebrating and fostering connections, among emerging artists and their groundbreaking works are considered crucial. This project stems from a belief that the Danube River spanning across ten countries serves as an ideal platform for nurturing and promoting future talents.

The historical significance of the Danube, in connecting cultures and serving as a trade route cannot be underestimated. It's important to note that this waterway could be utilized to establish a platform, for art students. This is achieved by transforming a barge into a floating exhibition ship that sails along the currents of the Danube.

The exhibition ship acts as a platform for art students to showcase their work while journeying through different European cities along the Danube. This physical mobility creates a chance for students to engage with diverse regional cultures. They can interact with artists, art enthusiasts and professionals from countries fostering cross-cultural connections and an appreciation for different artistic styles and traditions.

By exhibiting their artwork on a traveling ship, students gain exposure to an audience that is more diverse in nature. This increased visibility goes beyond their art communities and offers chances for recognition on a European scale. Art students have the opportunity to showcase their talent to a range of art enthusiasts, potential patrons and fellow artists. In turn, this expands their network and visibility, within the industry.

The ship provides space for exhibitions, workshops and collaborative events that attract art students and professionals from both international backgrounds. This environment encourages students to connect with one another, exchange ideas and establish relationships with artists. Such connections can be highly valuable for collaborations, exposure opportunities and even potential career prospects.

Another aspect for the realisation of the Project is creating a networking tool for the future artists. Transitioning from academia to the art world can be challenging without a solid network of connections. The ship facilitates meetings with art galleries, curators and esteemed art institutions allowing students to establish professional contacts. These connections can open doors for exhibition opportunities. Further enhance their career prospects. It is widely acknowledged that networking within the art community significantly contributes to the professional growth of students. Additionally exposure to diverse styles, ideas and collaborations with artists can ignite innovation and broaden their artistic horizons. Through the exhibition ship project, it is mainly aimed to help the young artist and especially art students to use the ship as a networking tool.

To foster innovation and creativity the ship encourages collaboration between art students and those from disciplines such, as music, literature or science during its journey. These interdisciplinary collaborations result in projects that enrich the students portfolios while expanding their network beyond the boundaries of traditional artistic endeavors.

In summary this project serves two purposes; empowering art students by providing them with a venue to exhibit their artworks and taking advantage of the cultural fabric woven along the Danube to foster connections. By transforming a barge into an exhibition ship that sails along the Danube a hub is being created-a space where ideas flow as freely as the river itself.

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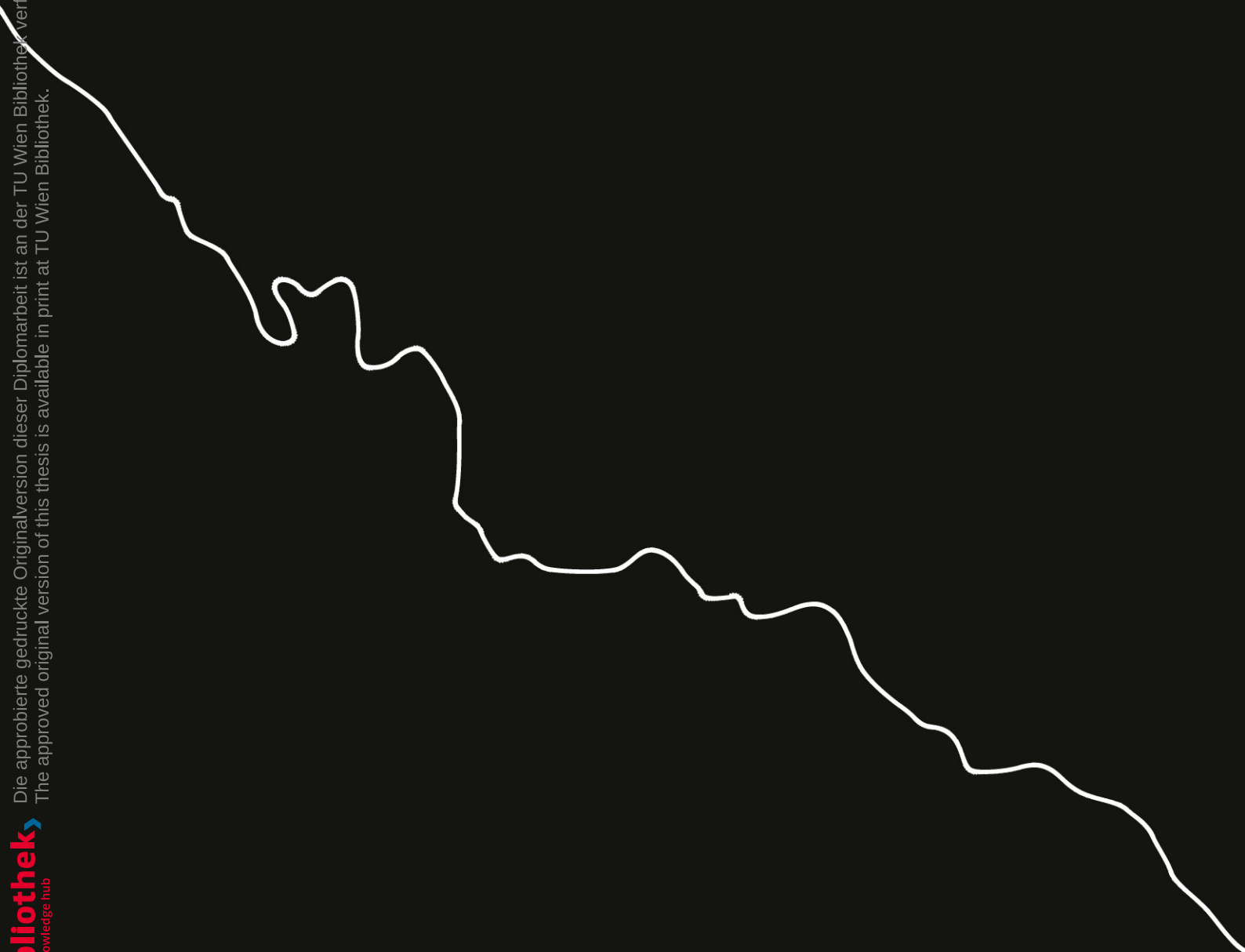


Image 2: ViaDonau, Danube river simplified

SITE ANALYSIS

2.1. About the Danube

The Danube River Basin is renowned as the diverse international river basin globally bringing together a total of 19 countries. Within this basin 79 million individuals from different cultures and languages call it their home. For centuries these nations have forged connections through the vast network of waterways that define the Danube. Moreover all countries encompassing an area exceeding 2,000 kilometers within the Danube River Basin alongside the European Union have formally pledged their commitment to safeguarding this precious natural resource through their membership in the ICPDR (International Commission, for the Protection of the Danube River).¹

The Danube River holds a standing importance, as a vital trade route in Europe connecting various cultural communities. Throughout history political conflicts and wars have often led to blockades and disruptions, along this waterway.

As stated by Winiwarter, Schmid and Dressel, „Two driving forces dominate the Danube and its

continuing transformation today: Power generation and long-distance bulk transport. Interest, and hence perception, practices and arrangements have shifted from the nutrient-carrying abilities of the river and the use of fertile floodplains to the use of its energy in power plants. Banks are steep, secured with stones, while groynes and dikes along the river secure a stabilised difference between land and water. Vienna has become a major harbour, ever larger ships use the river for transportation, and harbours are built with huge concrete landings. Tourism along the river also flourishes. Boats of various sizes travel up and down the river, providing passengers with views of the area between Vienna and Bratislava.

Although it might appear as though the industrial re-creation of the river has erased all former interventions and that conditions are fundamentally different now from those, 'in the past', the past is in fact visible in the layout of Vienna and its four 'Danubes' and continues to influence urban development."²



Image 3: ViaDonau, Danube river map with cities

2.1.1 Location in Europe

The Danube River Basin spans an area of 817,000 kilometers. Its size expands from, around 47,000 kilometers at the point where it meets the Inn River to 210,000 kilometers at its confluence with the Drava River. Further downstream it continues to grow and covers 590,000 kilometers.

This river flows through ten countries; Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, Moldova and Ukraine. It also passes through five capital cities; Vienna, Bratislava Budapest Belgrade and Bucharest.

As it progresses downstream in the basins direction of flow diminishes. More than half of the basins area is drained by tributaries on its bank that collect water from the Alps and contribute to the outflow of this river.

The course of the Danube can be divided into three sections; upper course, main course, and lower course.

The upper section of the Danube originates from Germany's Black Forest. Notable tributaries in this

part include Inn River Iller River Lech River Isar River Traun Enns Morava rivers.

In its course section the Danube assumes a lowland river character with banks and a wider bed. At points along its route such as Visegrád in Hungary and Iron Gate it briefly passes through gorges. This particular part of the basin mainly consists of flatlands, as low mountain peaks.

The lower part of the river, where the water flows slowly and has a riverbed leads to the Danube Delta. Inside this delta the river splits into channels called Chilia, Sulina and Sfântu Gheorghe. The delta is also famous, for its system of streams and lakes as well as areas used for agriculture and forests. Eventually the river reaches the Black Sea through the Danube Delta, from Romania but, with a portion coming from Ukraine.³

2.1.2 Significant Cities Situated along the Danube

Regensburg, Germany:

Population: 153,542 [2021]⁴

also known as Ratisbon is situated in the part of federal State, Bavaria, in Germany. It occupies a position on the stretch of the Danube River, where it meets the Regen River. Located 105 km northeast of Munich, Regensburg holds importance as a hub for culture, industry and commerce. It serves as a transportation intersection with connected road and rail networks featuring a bustling port area, along the Danube River.⁵

Passau, Germany:

Population: 53,093 [2021]⁶

Passau, a town, in Germany situated near the border in Bavaria earned the nickname „the three river town“ due to its location at the confluence of the Inn, Ilz and Danube rivers. Since 1952 Passau has been organizing „ weeks“ that primarily focus on events fostering numerous exchanges across Europe. The town places emphasis on fostering relationships with Southeast Europe.

Passau has established agreements with Cagnes sur Mer in France and Krems in Austria. Additionally there are connections with Lanzo/Intelvi and Udine in Italy.⁷

Linz, Austria:

Population: 210,118 [2023]⁸

Linz is a city situated in the north region of Austria serving as the capital of the state Oberösterreich (Upper Austria). It is located 160 km to the west of Vienna along the banks of the Danube River.

The city has a history starting from its origins as a fortress known as Lentia. Over time it grew into a trading hub during times. Although it possessed all the characteristics of a city in terms of its appearance, by the century it did not possess the legal rights associated with being officially recognized as a city. In the century Linz gained prominence when Holy Roman Emperor Frederick III made it his residence and established it as the capital. The city became renowned for hosting fairs. Played host to cultural activities. Linz has evolved

into a center with several esteemed institutions such as Johannes Kepler University, art and music schools, an Academy of Industrial and Art Design seminaries, scientific research centers, museums and art galleries libraries, archives, an opera house and theaters. Additionally it has been home to a bishop since 1785⁹

Vienna, Austria:

Population: 1,982,097 [2023]¹⁰

Vienna, located in the part of Austria, along the Danube River has a history that dates back to ancient Celtic and Roman settlements. Over time it transformed into a medieval and Baroque city eventually becoming the capital of the Austro-Hungarian Empire. Throughout the centuries Vienna has been a hub for music attracting renowned figures who shaped its musical landscape from the 16th to the 20th centuries. In 1683 Vienna also became the seat of power, for the Habsburg Empire. Experienced growth as it embraced the grandeur of Baroque architecture¹¹.

Budapest, Hungary:

Population: 1,682,426 [2022]¹²

The Danube River divides Buda and Pest each offering a charm. Budas Castle Hill captivates with a blend of Baroque architecture while in Pest mostly, 19th century buildings stand out. Recognized as a UNESCO World Heritage Site Buda Castle encompass the city and the meandering Danube River.¹³

Bratislava, Slovakia:

Population: 476,922 [2022]¹⁴

Bratislava, the capital city of Slovakia stands out as one of Europes capitals. It is highly esteemed, for its Old Town and medieval castle (similar to Budapest). which is situated by the river. Known as Pressburg in German and Pozsony in Hungarian Bratislava is located in a region of Slovakia. It rests alongside the Danube River, which has carved a gorge through the Carpathian Mountains near the convergence point of Slovakia, with Austria and Hungary. Vienna can be found 56 km to the west¹⁵

Belgrade, Serbia:

Population: 1,681,405 [2022]¹⁶

Belgrade, the capital city of Serbia offers a landscape shaped by various historical influences such, as Ottoman, Austro Hungarian and Brutalist styles. It is situated at the meeting point of the Danube and Sava rivers in the part of the country. Belgrade occupies a location where three significant travel routes between Europe and the Balkans intersect; one follows the Danube River valley from Vienna to the Black Sea in an east west direction; another runs westward along the Sava River valley, towards Trieste and northern Italy;. A third route stretches southeast through Morava and Vardar river valleys to reach the Aegean Sea. To its north and west lies Pannonian Basin encompassing Vojvodina region renowned for its grain cultivation.¹⁷

Novi Sad, Serbia:

Population: 260,4:38 [2022]¹⁸

Novi Sad serves as both a transit port along the Danube River and a key stop on the Belgrade Budapest rail line. It holds significance, as the capital of Vojvodina, an ethnically diverse autonomous region.¹⁹

Bucharest, Romania:

Population: 1,716,961 [2021]²⁰

Bucharest is famous, for its Belle Époque architecture and expansive boulevards. The city presents a blend of styles ranging from neoclassical buildings in the heart of the city to impressive structures from the Communist era, such, as the Palace of Parliament. Bucharest, also called București in Romanian serves as Romanias administrative and cultural hub. It is situated in the middle of the plain along the banks of Dâmbovița River, a tributary that flows into the Danube.²¹

2.1.3 Art Universities along the Danube

Linz, Austria:

University of Art and Design Linz^I

Vienna, Austria:

University of Applied Arts Vienna^{II}

Academy of Fine Arts Vienna^{III}

Bratislava, Slovakia:

Academy of Fine Arts and Design in Bratislava^{IV}

Budapest, Hungary:

Moholy-Nagy University of Art and Design^V

Hungarian University of Fine Arts^{VI}

Novi Sad, Serbia:

University of Novi Sad, Faculty of Fine Arts^{VII}

Belgrade, Serbia:

University of Arts in Belgrade^{VIII}

Ruse, Bulgaria:

Angel Kanchev University of Ruse, Faculty of Fine Arts^{IX}

Tulcea, Romania:

Lower Danube University of Galati, Tulcea Branch^X

Galati, Romania:

Lower Danube University of Galati, Faculty of Visual Arts^{XI}

I Kunstuniversität Linz

II Universität für angewandte Kunst Wien

III Akademie der bildenden Künste Wien

IV Akadémia výtvarných umení v Bratislave

V MOME - Moholy-Nagy Művészeti Egyetem

VI Magyar Képzőművészeti Egyetem

VII Univerzitet u Novom Sadu, Akademija umetnosti

VIII Univerzitet umetnosti u Beogradu

IX Университет „Ангел Кънчев“ - Русе, Факултет по изобразителни изкуства

X Universitatea Dunărea de Jos din Galați, Filiala Tulcea

XI Universitatea Dunărea de Jos din Galați, Facultatea de Arte Vizuale

2.2 A Brief History of Danube Utilization

The Danube River has played a role, in civilization for centuries serving as an important waterway. It has been instrumental in facilitating trade and communication among civilizations in Europe since ancient times.

During the Middle Ages and Renaissance the Danube continued to hold its position as a trade route connecting Central Europe to the Black Sea. It enabled the exchange of goods, culture and ideas between regions. Many renowned castles and fortresses along the Danube were built during this period as river fortification was essential for defense. The river also served as a route for military campaigns and conflicts of that time. For instance when the Ottomans advanced through the Balkans towards Vienna they utilized the Danube River as a passage.

In the 19. century significant efforts were made to improve navigation on the Danube. Construction projects involving canals, locks and dams greatly enhanced reliability for river transportation.

The Treaty of Paris in 1856 marked a milestone regarding the use of the Danube River for navigation by all nations involved in the Crimean War. To oversee navigation and management, along this waterway the Danube Commission was established in 1856.²²

The Danube River held significance during both World Wars and, throughout the Cold War with international agreements and implications aimed at protecting its utilization.

To enhance sustainability in the region the European Union has implemented the Danube Strategy 2020 which focuses on improving navigation, water management and potentially revitalizing the Danube.²³

However there are challenges that the Danube currently faces, including pollution, habitat loss and invasive species. Steps are being taken to address these issues and preserve the rivers ecosystems.

In addition to its importance the Danube plays a role as a transportation route for goods a source of energy a popular tourist destination and an integral part of cultural heritage, in countries it traverses.²⁴

2.3 The Danube as a Trade Route and Cultural Crossroads

Throughout centuries the central region of the Danube has acted as a bridge between the powers and influences of the Occident and the Orient serving as a transition zone, a „liquid space“ between East and West. This area has played a role in shaping the history of Central Europe, which still remains vibrant today.

Trade has always thrived along the Danube animating this space. As one of Europe's trade routes it holds a wealth of stories, encounters and experiences that transcend borders.

Merchant families have expanded across countries through marriages, corporate alliances and collaborative efforts. They have encountered currencies and payment systems while embracing trade customs and culinary traditions. Some Merchants have not only brought cultures together but have also left an indelible mark on their surroundings. Over generations families have built houses and commercial properties that fostered art and culture along the Danube. One can observe trading dynasties akin to those depicted in literature, like Buddenbrooks. The movement of those people along the Danube fostered cultural exchanges that encompassed art, literature and skilled craftsmanship. For instance during the Renaissance period characterized by an intellectual revival ideas circulated through trade routes, like the Danube significantly influenced this transformative era.

On the other hand merchants set up trading outposts and settlements along the Danube contributing to the growth of centers. Cities, like Vienna and Budapest owe their prosperity at least in part to their positioning along this trade route.

The strategic location of the Danube River situated between Central and Eastern Europe naturally established it as a trade route. This connection fostered interactions among the Mediterranean, Western Europe and the Black Sea region enabling them to exchange goods, ideas and technologies.

Throughout the era the Danube River played a role in facilitating trade for highly sought after commodities such as amber and salt. The „Amber Road“ stretched from the Baltic Sea to the Mediterranean with the Danube serving as a part of this trade route. Similarly the „Salt Route“ enabled transportation of salt from regions like Austria's Salzkammergut to destinations across Europe.

Trade guilds were often central to the organization of Danube cities regulating aspects of commerce. These guilds played a role in shaping both the social fabric of cities situated along the river.

The influential medieval trading alliance known as the Hanseatic League expanded its reach along the Danube connecting Northern Europe with the Black Sea. The League's extensive network greatly influenced development in regions spanning this waterway.

Today the Danube continues to serve as an corridor connecting multiple countries and fostering trade relationships, across borders. It enables the transportation of goods between countries. Plays a vital role in fostering economic integration in the region.

To summarize the historical importance of the Danube as a trade route is closely connected to interactions, economic progress and urban expansion. Its contribution to facilitating the movement of goods and exchange of ideas across Europe has had an impact establishing it as an element, in the history of the continent.²⁵

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Image 4: Rachel Ossip, 2015, To Touch

OBJECTIVE

Project Proposal: Navigating Artistry - Transforming a Barge into an Exhibition Ship

This project encompasses a spectrum of objectives, all rooted in the empowerment and professional growth of art students while harnessing the cultural significance of the Danube River.

The core aspiration is to furnish a dynamic platform for art students to express their creativity. Simultaneously, it seeks to forge cross-cultural connections and exchanges, drawing from the Danube's rich tapestry of history and culture. By doing so, it intends to elevate the visibility of art students and their work on a broader, European canvas.

A pivotal component is the creation of opportunities for art students to engage with established professionals in the art industry, forging valuable networking prospects. This project also champions innovative, interdisciplinary collaboration among students, offering them an environment where their creative ideas can flow freely. In this journey, art students can enrich their portfolios and extend their professional networks, a pivotal step towards the growth and recognition of emerging artists.

At its heart, this initiative revolves around the transformation of a barge into a captivating exhibition ship, navigating the meandering path of the Danube River. This transformative vessel will serve as a dynamic platform, akin to a floating canvas upon which art students can unveil their creations, fostering cross-cultural exchanges and interdisciplinary collaboration.

The ship will play host to a vibrant array of activities, including exhibitions, workshops, and collaborative events, creating a crucible for creativity. It will also serve as a bridge for art students to connect with art galleries, curators, and esteemed art institutions, paving the way for their professional growth and recognition. Ultimately, this endeavor seeks to empower the emerging artists of tomorrow,

invigorating their creative spirits, and fostering an environment where creativity and ideas flow freely, much like the ever-fluid Danube itself.



Image 5: Louis Kahn, 1967 , Point Counterpoint II

METHODOLOGY

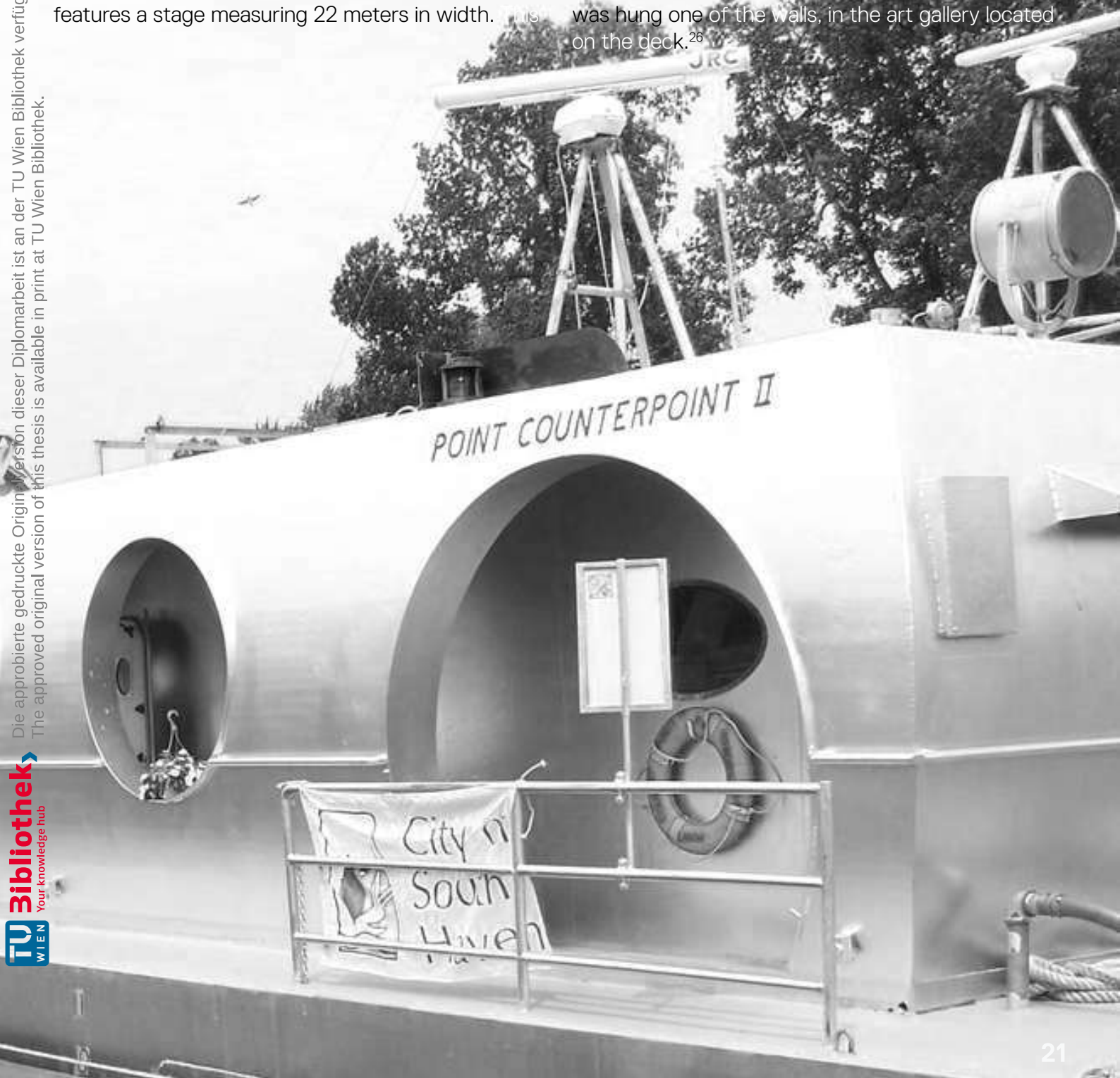
4.1 Similar Concept Variations

Louis Kahn, Point Counterpoint II, 1967:
Built between 1964 and 1967 to celebrate the American Bicentennial this vessel spans approximately 59 meters in length. It has been used as a floating home for the American Wind Symphony Orchestra (AWSO) allowing them to bring their performances to far flung destinations, like Paris, France and St. Petersburg, Russia. Alongside its entrances and portholes the design features a stage measuring 22 meters in width.

stage can be effortlessly lowered using a hydraulic lift system.

During the summer season the entire ship served as a floating showcase, for art and crafts from the Americas. The ships office and galley were equipped with crafted oak tables made by a woodworker from Maine. Additionally an eye catching kinetic light sculpture, created by Finnish artist Eino Ruutsalo was hung one of the walls, in the art gallery located on the deck.²⁶

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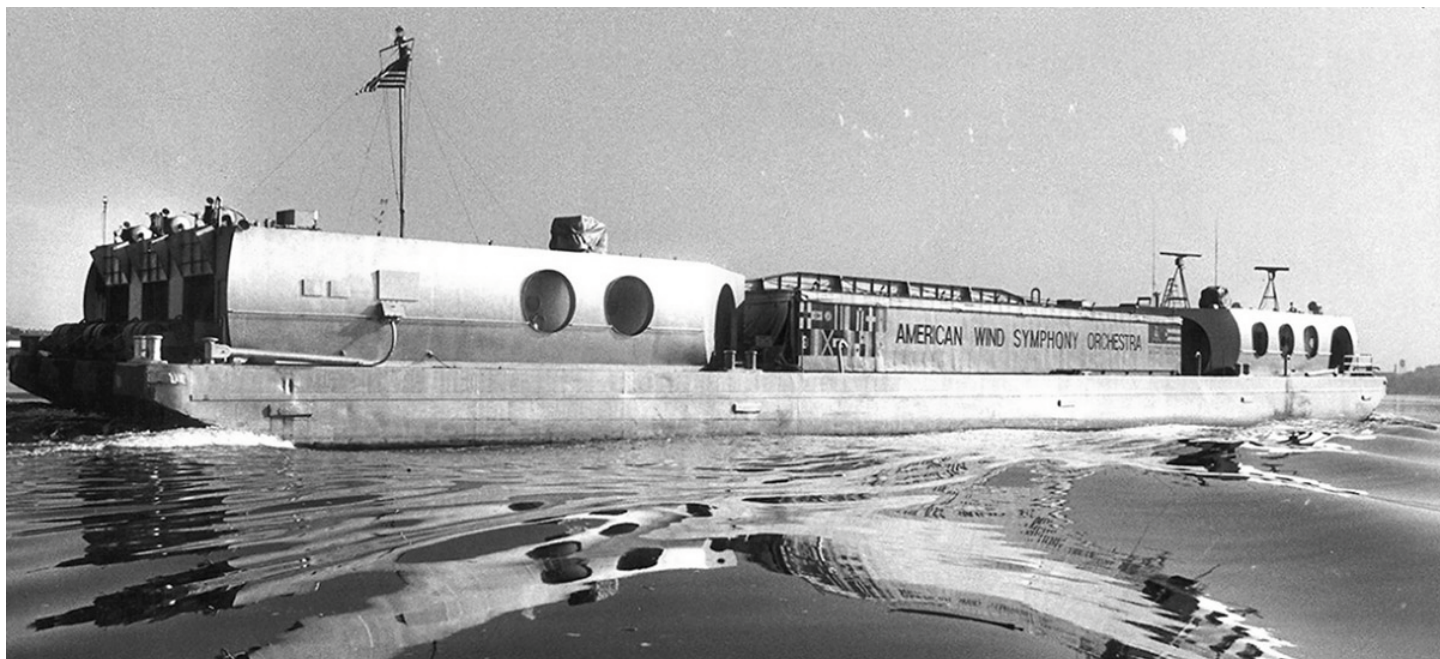


Image 6: Louis Kahn, 1967 , Point Counterpoint II



Image 7: Louis Kahn, 1967 , Point Counterpoint II



Image 8&9 (left and right on the page): 1953, Virginia Museum's Historic Artmobile

Virginia Museum's Historic Artmobile, 1953:

In October 13 1953 a truck transported 16 works of art to Fredericksburg, Virginia. This was the beginning of the Artmobile initiative, by the Virginia Museum of Fine Arts (VMFA) which aimed to bring VMFA's collection to parts of the state. The truck held paintings from the 16th and 17th centuries, including an original triptych by Hieronymus Bosch.

Nowadays VMFA plans to relaunch this initiative in the fall of 2018 as „VMFA on the Road.“ The new vehicle was designed to visit schools, community centers, smaller museums, retirement communities and colleges in areas and underserved regions of Virginia.

The original Artmobile program featured exhibitions inside four Chevrolet tractor trailers measuring about 10 meters each. However, due to concerns about preserving the artworks this program had to be discontinued. With „VMFA on the Road „, it is aimed to take conservation measures seriously. Also added features like Wi Fi connectivity and interactive exhibits is foreseen. The revival includes improved security measures and better control, over temperatures.

The Artmobile, an initiative has the purpose of displaying artworks and changing exhibits every 18 months. The themes covered will include art, musical instruments depicted in art and representations of weather and seasons, in art.

The aim of the whole program is to provide access to art for Virginians who may face difficulties in visiting the VMFA, in Richmond.²⁷

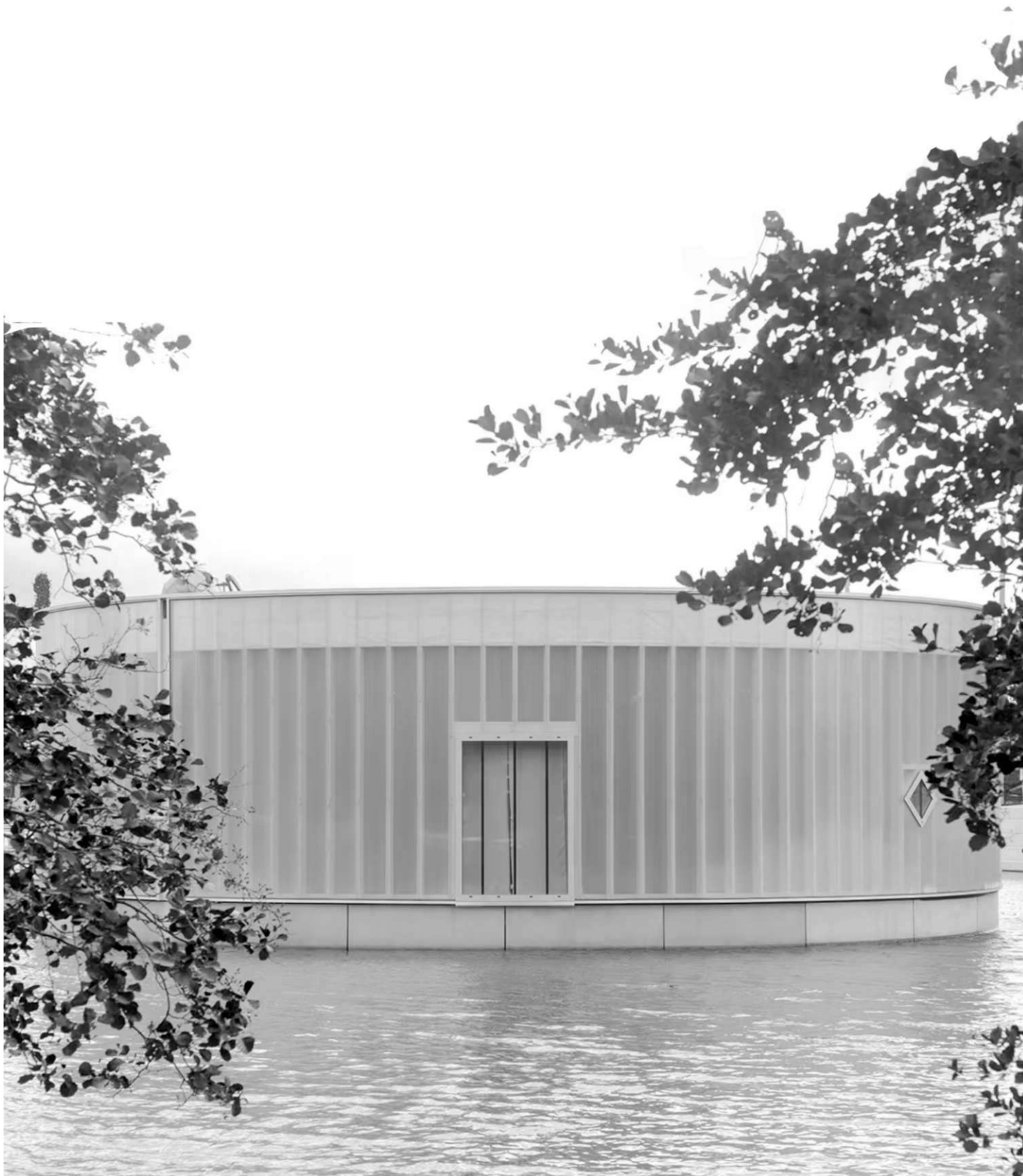


Image 10, 11&12 (left page and right page): Studio Ossidiana, 2022, Floating Art Gallery, Almere, Netherlands

Floating Art Gallery, Studio Ossidiana, 2022, Almere, Netherlands:

A temporary art gallery called „M“ has been created in the city of Almere by Studio Ossidiana, a design duo based in Rotterdam. Consisting of two structures and a floating platform, on Weerwater Lake, the purpose of „M“ is to establish a space in a city that previously lacked significant galleries or museums.

Studio Ossidiana developed a plan that engages all senses while paying homage to Almeres tradition of pioneering and experimentation. The resulting pavilion seamlessly integrates with the provinces collection of land art. Is considered an artwork itself.

Studio Ossidiana drew inspiration from the sea and Weerwater Lake upon which their pavilion floats.



They used terrazzo surfaces adorned with materials such, as shells, mussels, clay and charcoal found in the surrounding soil.

Visitors have the opportunity to explore three interconnected area: The Port, which provides activities and events, The Stage, an island, within the structure, and The Observatory, consisting of two exhibition spaces that offer captivating views both inside and outside.

Some of the exhibitions has showcased the works of up and coming artists. Each artist presents their perspective on nature and its future. The exhibits include a mesmerizing world in hues and innovative devices designed to assist birds in building their nests.²⁸





Image 13, Shigeru Ban, 2023, Simose Art Museum, Hiroshima, Japan

Simose Art Museum, Shigeru Ban, 2023, Hiroshima, Japan:

Simose is an art complex located on a 4.6 hectare plot overlooking the Seto Inland Sea, in Hiroshima. It encompasses elements, including the Simose Art Museum, the Simose Art Garden Villa, a boutique art hotel with ten villas and an exquisite French restaurant.

The primary buildings, such as the museum entrance hall, exhibition hall and administration building are designed parallel to the sea. Connected by a corridor adorned with a 190 meter long mirrored glass screen that stands at 8.5 meters high. This corridor leads to eight galleries above a water basin that showcase captivating glass artwork inspired by the enchanting landscapes of Setouchi islands.

Adjacent to the end of the glass screen lies Emile Gallés Garden, which boasts an array of seasonal flowers and plants that served as inspiration for renowned French artist and designer Emile Gallés creations.

On one side of the site facing towards water basin are five waterfront villas positioned while, on side surrounded by trees are five forest villas offering a

seclusion amidst nature.

In the middle of these is a restaurant and an herb garden located.

The Art Museum on the other hand, offers a chance for visitors to immerse themselves in art and design and hosts around 500 artworks and objects, in its collection offering a platform to showcase the range of art and design.

The architectural design pays homage, to Hiroshimas ship building legacy with eight exhibition rooms that resemble shipping containers placed directly on a pond. These floating structures are adaptable moving along with the water and seamlessly blending into their environment.

Furthermore the museums special exhibitions room features walls that can be easily adjusted enabling it to transform for each exhibition.²⁹



4.2 Form Development

4.2.1 Significant Parameters in Design Process

The height of a ship and the clearance of bridges are aspects to consider during the ship design process. These factors play a role, in ensuring the safety, smooth navigation, cost effectiveness, adherence to regulations and environmental impact of vessels when they pass under bridges on waterways.

Safety is a priority as insufficient clearance can lead to accidents.

Navigability is also important as ships need to be designed to navigate through bridges without any disruptions along their planned routes. It is equally important to comply with regulations regarding bridge clearances. Additionally it is necessary

to assess the impact caused by ships having to reduce their height in order to pass under bridges, which may lead to increased emissions and fuel consumption.

The design progress of the exhibition ship project has started by selecting the bridge clearance height as the primary parameter in the design process. Then an examination of the list of bridges along the Danube was conducted. It's important to note that this parameter was not chosen arbitrarily; it directly affects ship safety, navigability, efficiency, compliance and environmental impact when passing through areas with bridge heights.

After conducting an inspection (see image 15) it was found that the bridge clearance height in Germany was significantly lower compared to cities along

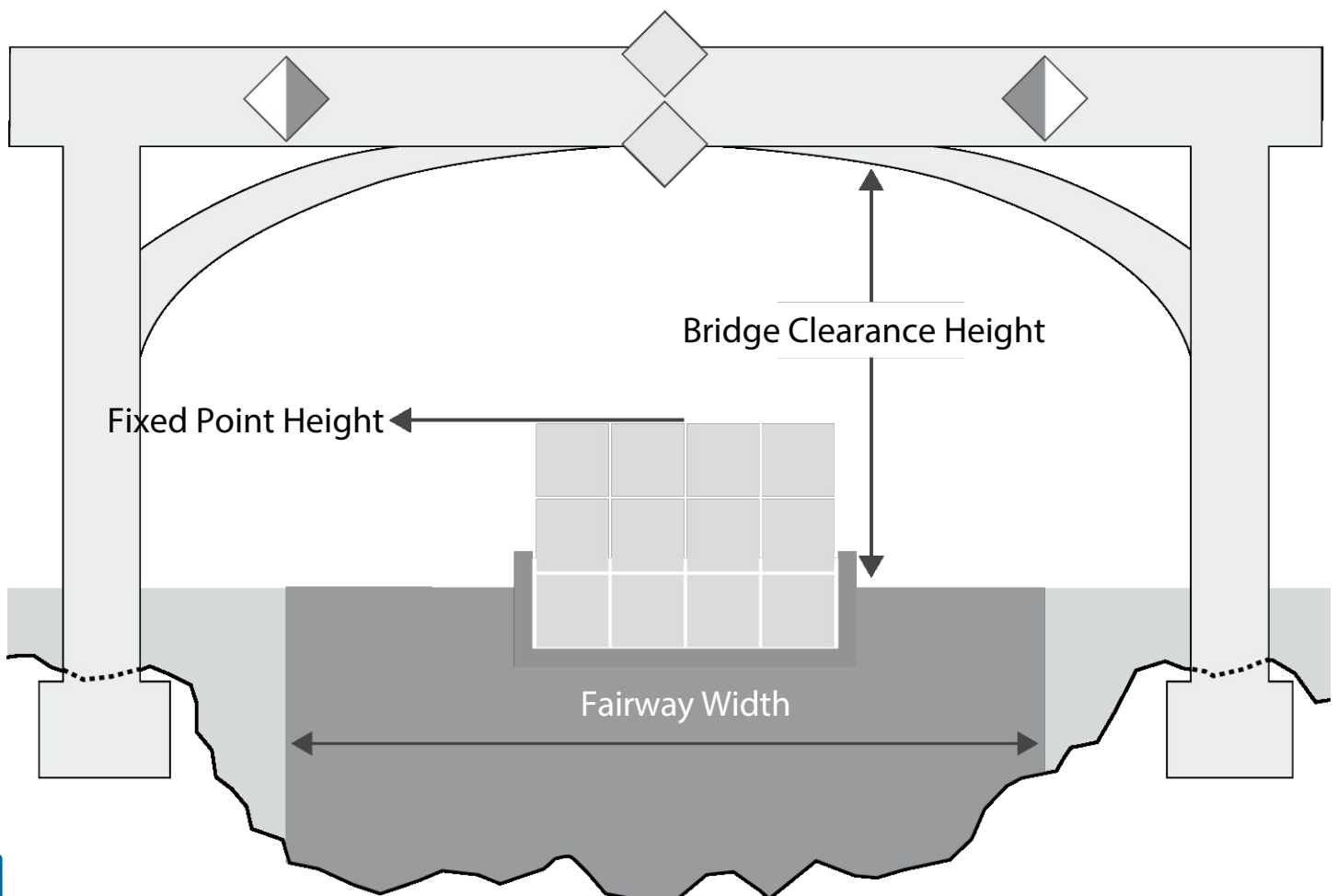


Image 14, ViaDonau, The fixed height of the ship and the bridge clearance height as determining parameters for bridge passages.

the Danube. This is because the upper Danube is less voluminous and narrower. This highlights how regional geographic and hydrological factors play a role in bridge designs.

Furthermore as part of the research and analysis of the river routes a decision was made to create two ships that are specifically designed to operate in sections of the river. One ship is intended for navigation from the Danube in German Danubian Waterways to countries along the Danube while the other ship is meant to operate from Austria through the Balkan Danubian Waterways. This strategic approach ensures that each vessel is optimized for efficiency minimizes its impact on the environment and complies with regulations.

The first ship, which is smaller as mentioned before, will begin its operations in Regensburg, Germany. Continue its journey through cities along the Danube. To ensure sailing throughout this route it has to be designed with a height below 5 meters as this marks the clearance height Eisenbahnbrücke Bogen (lowest Bridge on the river).

The second ship, larger in size and height is specifically designed for operations starting in Vienna and visiting cities along lower sections of the Danube. This ship can be planned with a height below 7.71 meters considering that this is the clearance height of U6 Brücke-Wien being the lowest the along this route.

Additional Note: In Table 1, in which the clearance heights of the Danubian Bridges are listed ascendingly, the heights are average heights for all four seasons and seasonal changes may apply.

The specified clearance heights correspond to the distance (in meters) between the lowest point of the bridge's underside across the entire fairway width and the Highest Navigational Water Level (HNWL)

The specified navigational channel widths refer to the width of the fairway at the regulated low water level (RLW)

Nr.	River-km	Right Shore	Left Shore	Designation of the Bridge (Names are kept in original)	Primary Use	Passage Opening 1			Passage Opening 2	
						Right Shore, as Viewed from the River's Current			Left Shore, as Viewed Downstream	
						Height (m)	Width (m)	Direction	Height (m)	Width (m)
23	2 311,27	DE	DE	Eisenbahnbrücke Bogen	Railway	5	43,95	Upstream	--	--
39	2 225,75	DE	DE	Luitpoldbrücke (Passau)	Street	5,15	80,55	Upstream	--	--
1	2 414,25	DE	DE	Maximilianbrücke (Kelheim)	Street	5,25	17,25	Downstream	--	--
15	2 376,82	DE	DE	Eisenbahnbrücke Schwabelweis	Railway	5,95	34	Upstream	6	33
36	2 230,28	DE	DE	Eisenbahnbrücke Steinbach (Passau)	Railway	6,3	59,2	Up + Downstr	--	--
5	2 401,74	DE	DE	Wehrbrücke Bad Abbach	Street	6,4	48,45	Downstream	--	--
12	2 380,17	DE	DE	Oberpfalzbrücke (Regensburg)	Street	6,4	65	Up + Downstr	--	--
6	2 400,28	DE	DE	Wirtschaftswegbrücke Bad Abbach	Street	6,45	48,6	Upstream	--	--
11	2 381,04	DE	DE	Wegbrücke Pfaffenstein (Regensburg)	Pedestrian	6,6	37	Up + Downstr	--	--
13	2 379,56	DE	DE	Protzenweiherbrücke (Regensburg)	Street	6,65	12	Up + Downstr	--	--
10	2 381,13	DE	DE	Autobahnbrücke Pfaffenstein (Regensburg)	Street	6,75	35	Downstream	--	--
2	2 412,72	DE	DE	Europabrücke (Kelheim)	Street	6,8	31,1	Upstream	--	--
14	2 378,39	DE	DE	Nibelungenbrücke (Nordarm, Regensburg)	Street	6,95	50,2	Downstream	--	--
4	2 401,92	DE	DE	Eisenbahnbrücke Poikam	Railway	7,05	28,75	Up + Downstr	--	--
3	2 410,10	DE	DE	Straßenbrücke Saal	Street	7,1	64,4	Up + Downstr	--	--
96	1 767,80	HU	SK	Komáromi-híd [road]	Street	7,29	80	Up + Downstr	7,29	80
19	2 353,32	DE	DE	Straßenbrücke Pfatter	Street	7,35	85,35	Up + Downstr	--	--
38	2 226,96	DE	DE	Schanzbrücke (Passau)	Street	7,7	101	Up + Downstr	--	--
75	1 931,17	AT	AT	U6-Brücke Wien	Subway	7,71	67	Up + Downstr	7,85	67
69	1 963,15	AT	AT	Straßen- and Eisenbahnbrücke Tulln	Street /	7,76	75	Up + Downstr	7,9	78
41	2 203,31	DE	DE	Kranbrücke KW Jochenstein	Crane	7,8	24	Downstream	7,8	24
77	1 928,90	AT	AT	Reichsbrücke Wien	Street	7,88	60	Downstream	7,94	60
79	1 925,76	AT	AT	Praterbrücke Wien	Street	7,91	131	Upstream	--	--
64	2 001,51	AT	AT	Eisenbahnbrücke Krems	Railway	7,94	70	Up + Downstr	8,02	73
32	2 249,16	DE	DE	Straßenbrücke Vilshofen (Marienbrücke)	Street	8	89	Downstream	--	--
58	2 060,42	AT	AT	Kranbrücke Schleuse Ybbs-Persenbeug	Lock	8,01	24	Downstream	8,01	24
80	1 924,96	AT	AT	Ostbahnbrücke Wien	Railway	8,02	65,3	Up + Downstr	7,99	66
47	2 135,10	AT	AT	Nibelungenbrücke Linz	Street	8,04	90	Up + Downstr	--	--
42	2 194,10	AT	AT	Straßenbrücke Niederranna	Street	8,06	107,3	Up + Downstr	--	--
112	1 480,22	HU	HU	Bajai-híd (Türr István) (Baja)	Street /	8,09	60	Up + Downstr	8,4	60
18	2 358,26	DE	DE	Autobahnbrücke Wörth	Street	8,1	138,45	Up + Downstr	--	--
74	1 931,20	AT	AT	Nordbahnbrücke Wien	Railway	8,12	65	Up + Downstr	8,15	67
100	1 651,40	HU	HU	Árpád-híd (Budapest)	Street	8,16	70	Downstream	8,19	70
43	2 162,92	AT	AT	Fußgängerbrücke Schleuse Aschach	Pedestrian	8,18	24	Upstream	8,18	24
102	1 647,00	HU	HU	Lánchíd (Széchenyi) (Budapest)	Street	8,2	130	Downstream	--	--
48	2 133,82	AT	AT	Neue Donaubrücke Linz	Street /	8,22	80	Up + Downstr	--	--
78	1 925,99	AT	AT	Donaustadtbrücke	Subway	8,24	125	Downstream	--	--
65	1 999,77	AT	AT	Straßenbrücke Krems	Street	8,25	111	Downstream	--	--
20	2 321,82	DE	DE	Straßenbrücke UH Schleuse Straubing	Street	8,3	24	Downstream	--	--
57	2 080,82	AT	AT	Straßenbrücke Grein	Street	8,31	100	Up + Downstr	--	--
73	1 931,71	AT	AT	Floridsdorfer Brücke Wien	Street /	8,32	118	Up + Downstr	--	--
55	2 111,05	AT	AT	Straßen- and Eisenbahnbrücke Mauthausen	Street /	8,35	72	Up + Downstr	8,35	73
52	2 127,73	AT	AT	Straßenbrücke Steyregg	Street	8,36	71	Downstream	8,18	71
71	1 932,62	AT	AT	Nordbrücke Wien	Street	8,37	65	Downstream	8,12	58

Table 1. ViaDonau. Table of Danubian bridges listed the clearance height ascending

Opening 2	Reference Water Level (HNWL)"	Remarks
Height (m)	Direction	
--	620 cm Pfelling	Clearance Height Indicator
--	780 cm Passau-Donau	Height at the Apex: 5.95; Clearance Height Indicator
--	540 cm Kelheim	
Upstream	520 cm Regensburg-Schwabelweis	Clearance Height Indicator
--	780 cm Passau-Donau	Clearance Height Indicator
--	Reservoir Water Level Bad Abbach	
--	Reservoir Water Level Regensburg	Height at the Apex: 8.16
--	Reservoir Water Level Bad Abbach	
--	Reservoir Water Level Regensburg	
--	520 cm Regensburg-Schwabelweis	Clearance Height Indicator
--	Reservoir Water Level Regensburg	
--	540 cm Kelheim	
--	520 cm Regensburg-Schwabelweis	
--	Reservoir Water Level Bad Abbach	
--	480 cm Oberndorf	Height at the Apex: 8.22
Downstream	536 cm Komárom / 588 cm Komárno	Height at the Apex: 9.31 (Passage Opening 1) and 9.29 (Passage Opening 2)
--	600 cm Pfatter	Height within the recommended passage: 8.05
--	780 cm Passau-Donau	
Downstream	666 cm Wien-Nordbahnbrücke	
Upstream	177.32 Metres above the Adriatic Tulln	
Up + Downstream	290 Metres above the Adriatic OW Schleuse Jochenstein	
Downstream	743 cm Wien-Reichsbrücke	Height at the Apex: 8.42 m (Passage Opening 1 + 2)
--	847 cm Wien-Praterbrücke	
Upstream	194.74 Metres above the Adriatic Krems-Eisenbahnbrücke	
--	480 cm Hofkirchen	
Up + Downstream	226,50 Metres above the Adriatic OW Schleuse Persenbeug	
Downstream	919 cm Wien-Ostbahnbrücke	
--	5,01 m Linz	Height at the Apex: 8,36 m
--	281,61 Metres above the Adriatic Kager-Niederranna	Height at the Apex: 8,77 m
Upstream	805 cm Baja	
--	520 cm Regensburg-Schwabelweis	
Downstream	666 cm Wien-Nordbahnbrücke	
Upstream	668 cm Budapest	Height at the Apex: 8.16 (Passage Opening 1) and 8.19
Up + Downstream	280,70 Metres above the Adriatic OW Schleuse Aschach	
--	668 cm Budapest	Height at the Apex: 8.20 with a width of 80 m
--	5,30 m Linz Eisenbahnbrücke	Height at the Apex: 9,02 m
--	847 cm Wien-Praterbrücke	
--	194.58 Metres above the Adriatic Krems-Straßenbrücke	Height at the Apex: 8.35 m
--	505 cm Straubing	
--	228,70 Metres above the Adriatic Grein Straßenbrücke	Height at the Apex: 10.47 m
--	643 cm Wien-Floridsdorferbrücke	Height at the Apex: 9,15 m
Upstream	5,10 m Mauthausen	
Upstream	251,52 Metres above the Adriatic Steyregger Brücke	
Downstream	627 cm Wien-Nordbrücke	Height at the Apex: 8,49 m (Passage Opening 1) and 8,31 m

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Image 15, Jake Nebov, a Push Barge on a River,

4.2.2 Choosing a Proper Vessel

A push barge, also known as a barge or tug barge is a floating cargo container that is moved by a Tugboat. It operates without a propulsion and does not require a crew onboard.³⁰

The selection of the Europa II and SL Blumenau push barge for this project was based on considerations that make it the suitable choice compared to other available ship types.

First and foremost push barges stand out for their simplicity and practicality. Unlike ships that may have machinery and extensive crew quarters push barges are intentionally designed without an operating machine or an elaborate captains room. This streamlined design not reduces costs but also makes it highly efficient for specific applications.

Another significant advantage of such push barge is its construction. This brings benefits such, as improved fuel efficiency and increased payload capacity. It can carry cargo while minimizing impact making it both sustainable and cost effective.

Furthermore one notable feature of a push barge is its ability to accommodate vessels.

Such push barges can have ships added behind it allowing for the formation of a convoy or a push tow arrangement (See Image 17). As part of the project plan two ships are intended to be operated in situations, which is made convenient by the push barge setup. This flexibility and scalability are seen as advantages, for the success of the project.

When compared to types of ships like cargo vessels, container ships or even larger push barges the Europa II and SL Blaumenau stand out in their ability to navigate shallow waters and pass through low clearance bridges. Their reduced draft allows access to areas that might not be accessible to vessels increasing its versatility regarding routes and destinations.



Image 16, Justin Wilkens, A Push Barge being pulled by a Tugboat

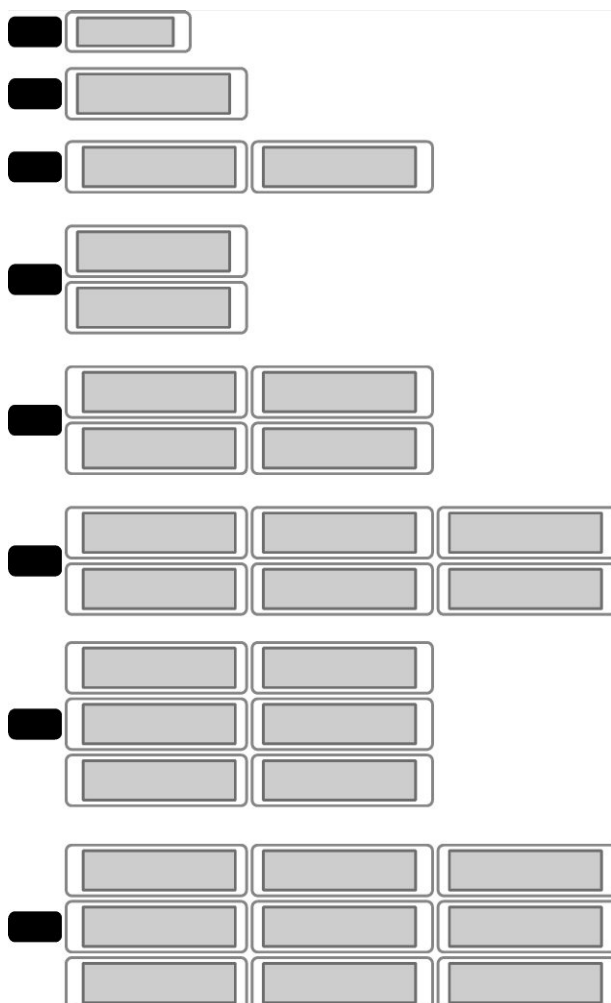


Image 17, Push Convoy Shema

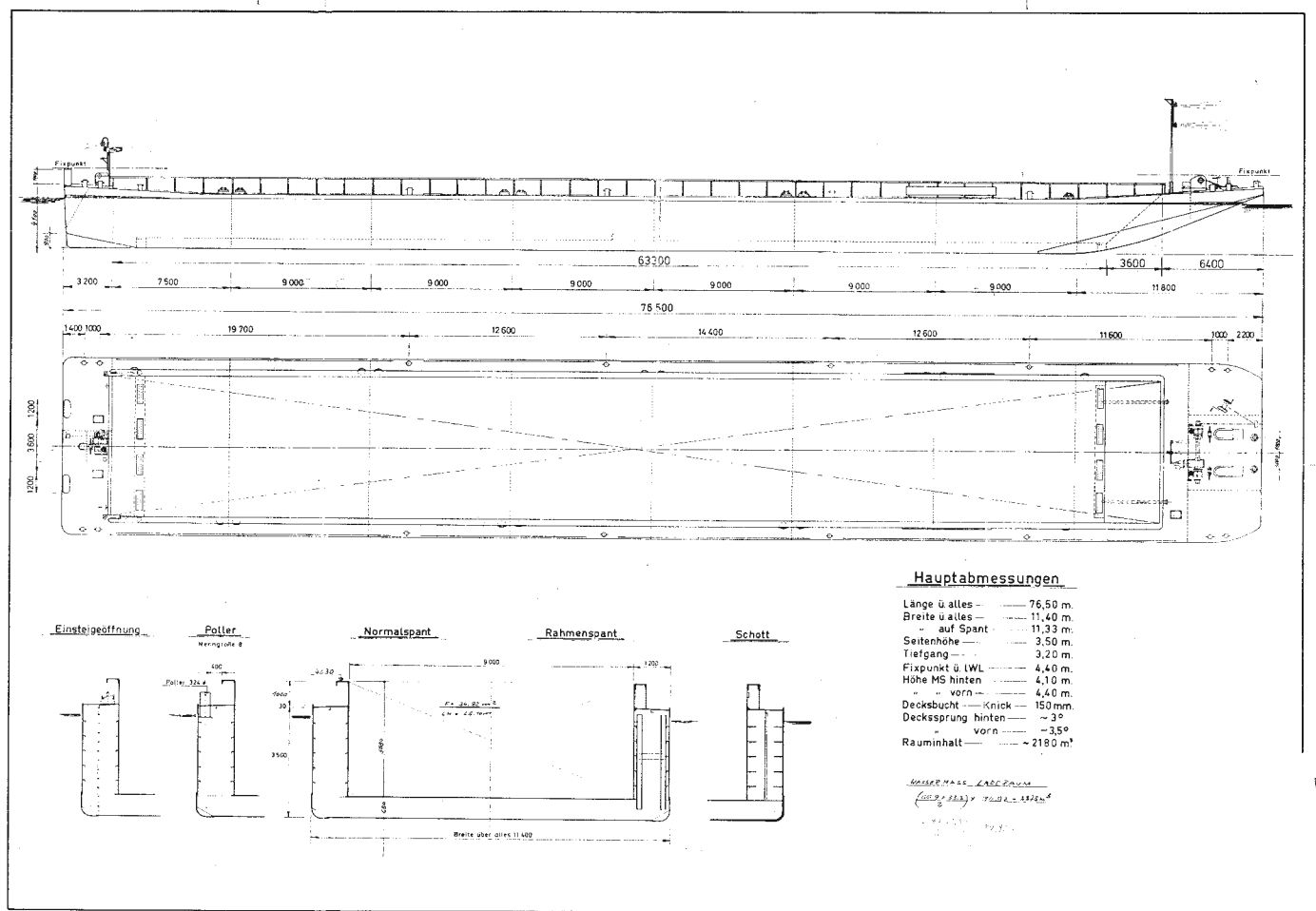
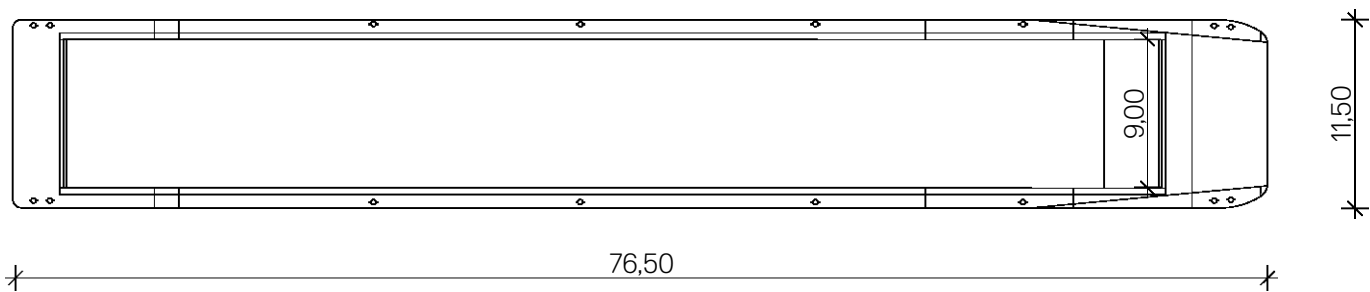
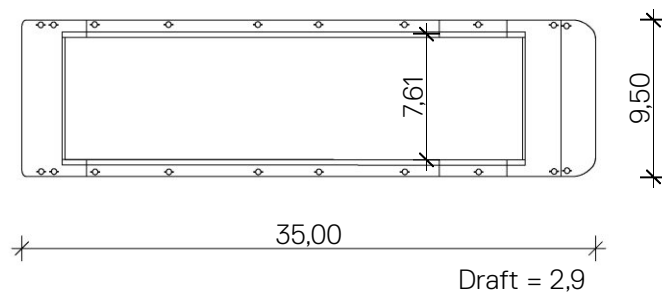


Image 18, Original Technical Drawings of a Push Barge Type Europe II



Draft = 3,2

Push Barge - Typ Europa II
Load Capacity: 2.774 t



Draft = 2,9

Push Barge - SL Blumenau
Load Capacity: 702 t

Plan 1, Push Barges Type Europa II and SL Blumenau

4.3.3 Form Development: Converting a River Barge into an Exhibition Ship

In the realm of creating forms that go beyond functionality and embrace artistic expression we find inspiration in the timeless wisdom of nature itself. The exhibition ships embody the connection between creativity and the organic world.

The design of the vessels pays homage to the undulations of river waves reflecting the fluidity and constant movement that defines life. Every contour seeks to evoke the yet powerful presence of water going beyond practicality to embrace aesthetics.

As we delve deeper into the creation we encounter an interplay between light and shadow. This dance of illumination partially obscured by the textures of tree leaves creates a mesmerizing and ever changing pattern on the forest floor. It serves as a reminder of lifes transformations, akin to an enthralling ballet.

When we gaze upon the ships facade we are reminded of the branching patterns found in trees. These branches form a web network symbolizing interconnection and unity, among all living things like arteries nourishing life itself.

Wrapped in semi translucent foils the exhibition ships appear cloaked in translucency resembling water itself. The semi-transparent sheen reflects the nature of existence just as ripples on a pond reveal what lies beneath its surface. This architectural choice seeks to uncover hidden beauty, within its form and beckons observers to explore beyond what's merely superficial.

The way these elements come together in the architecture goes beyond the usual. Delves into something we celebrate how everything in life is connected the beauty of change and discovering the truths beneath the surface. The exhibition ship becomes more than a place for art, it becomes a space, for reflection and connecting with the world around us.

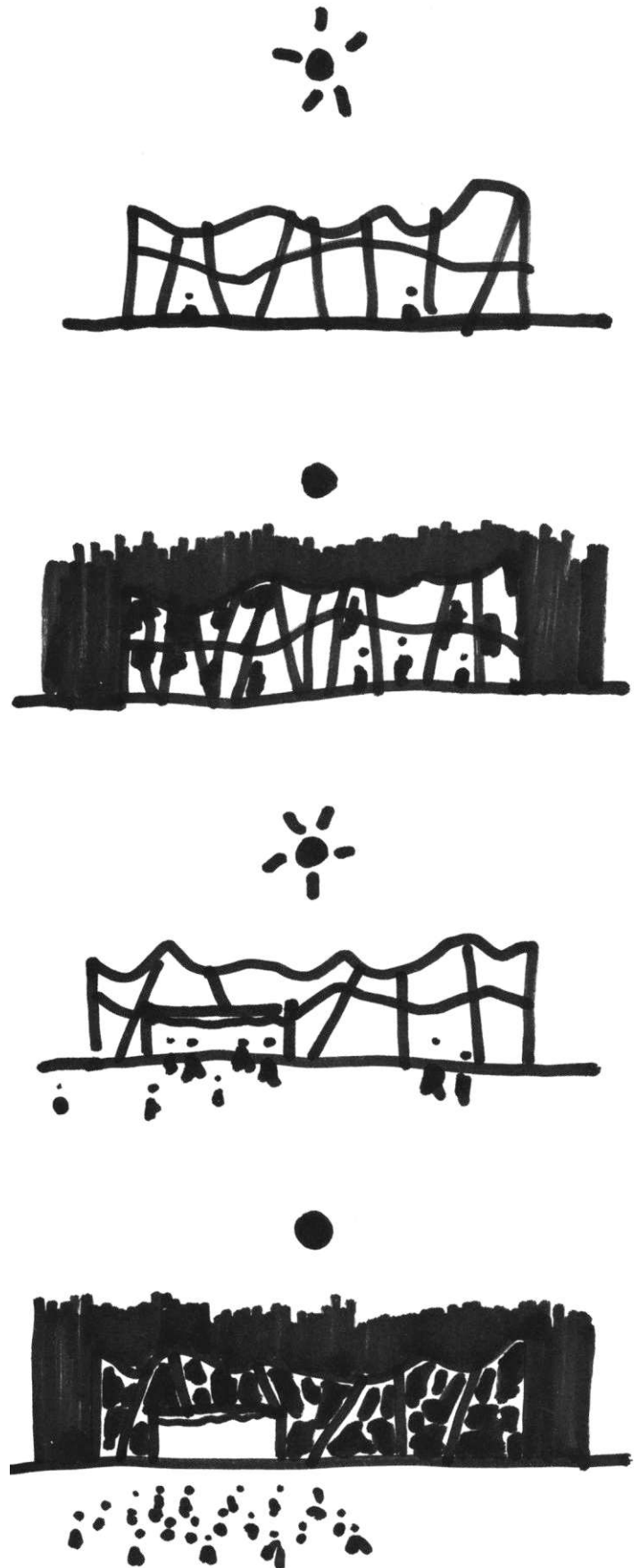


Image 19, Concept Sketches

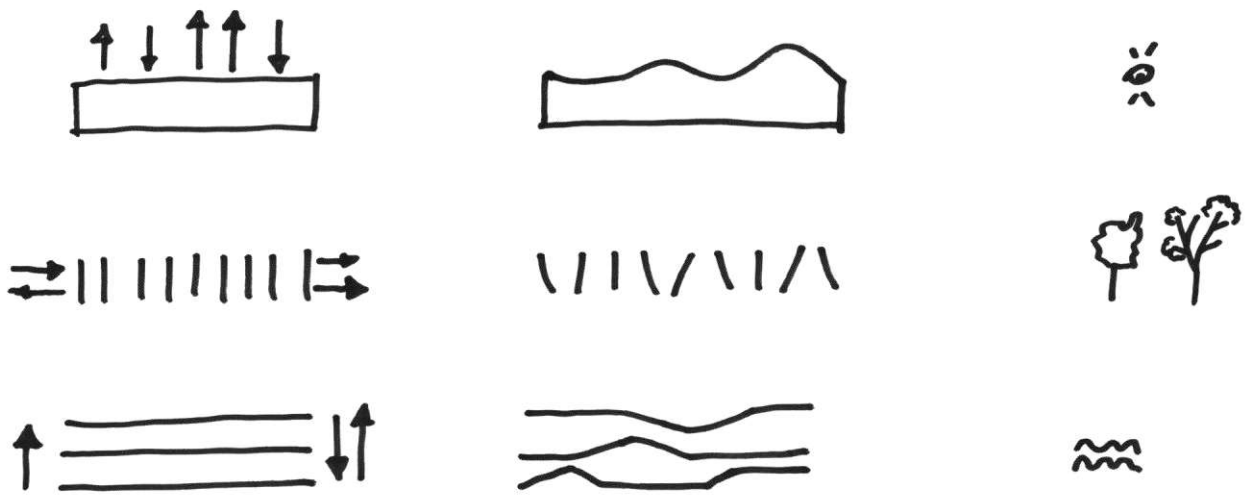
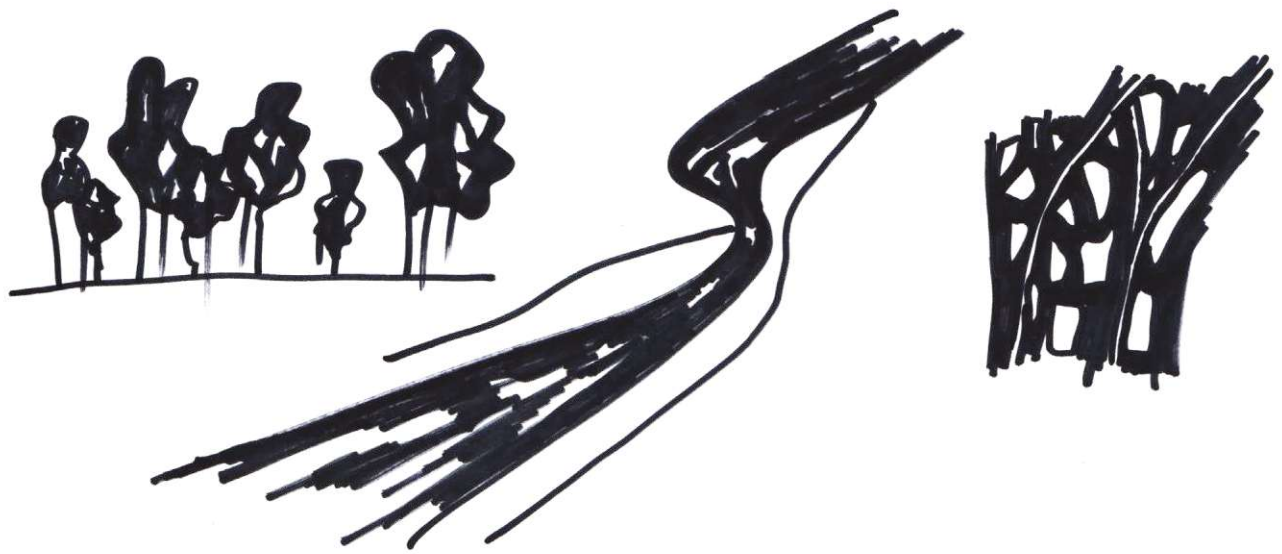
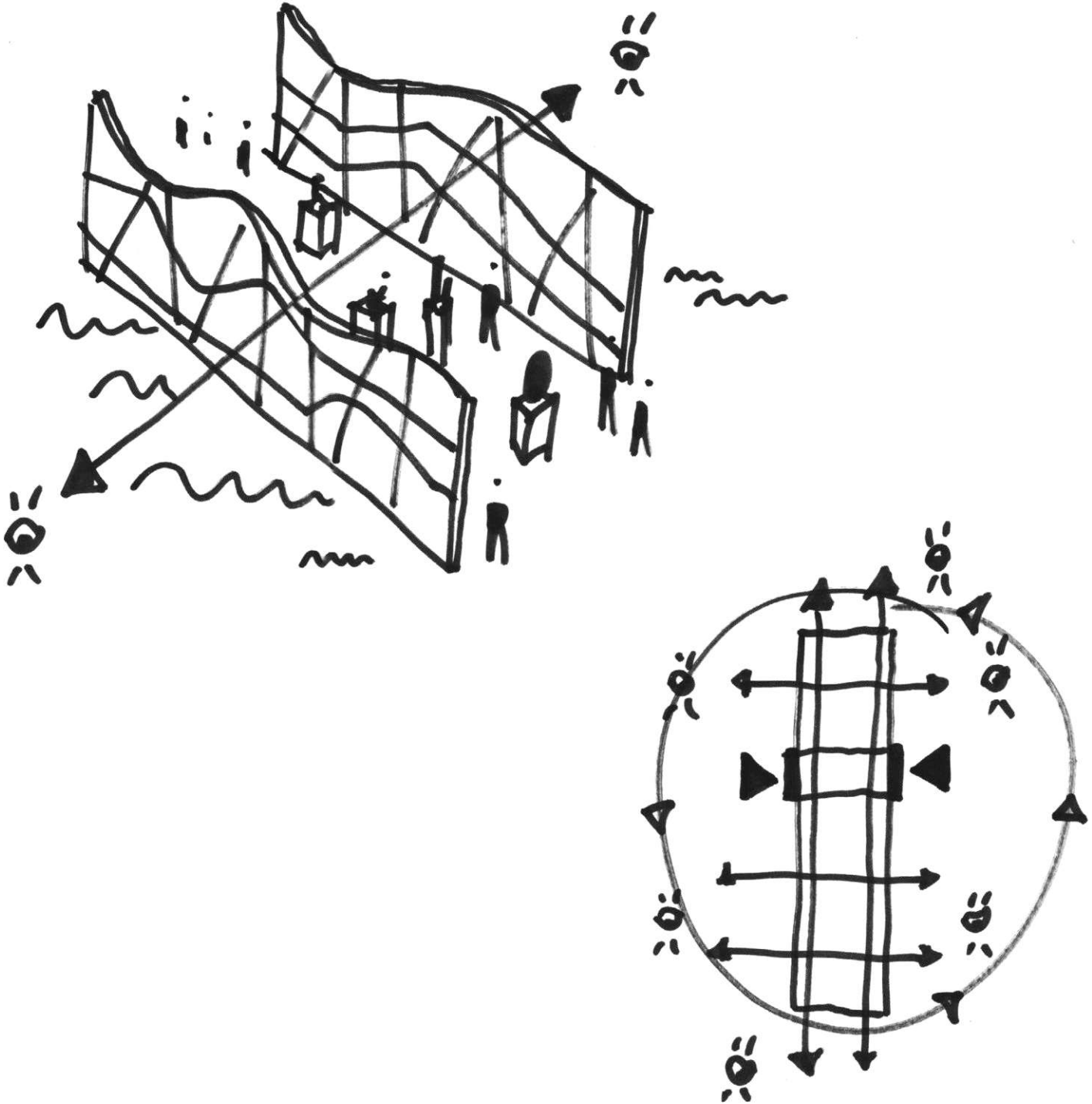


Image 20, Concept Sketches

The architectural approach focuses on a design that combines the Danube river journey with a structure that offers an uninterrupted 360 degree panoramic view. The ships feature an ETFE Covering, which allows an amount of light to pass through while providing a slightly opaque look. Underneath there is a glass facade that lets guests enjoy the landscape along the Danube River while exploring exhibitions inside the ship. On the other hand, the partial privacy effect given by the ETFE Covering adds to the comfort of the passengers creating a space where they can reflect and immerse themselves in the exhibitions without being exposed to distractions. The gentle light that filters through the foil combined with the sense of privacy offers and promotes a feeling of calmness and seclusion. This enables guests to fully embrace and interact with the experiences, on board.

Overall the concept aims to blend peaceful river travel, with experiences. The intention is to create a one of a kind and captivating experience, for those traveling on the vessel.



Visibility through the space / around as a sculpture / day-night schemas. opening / concert light.

Image 21, Concept Sketches

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Rendered Image 1, Visualised.in Vienna, Reichsbrücke in the Background

RESULT

5.1 Large Ship Drawings and Renderings

Built on push barge Europa II covers a space of 1,150 square meters.

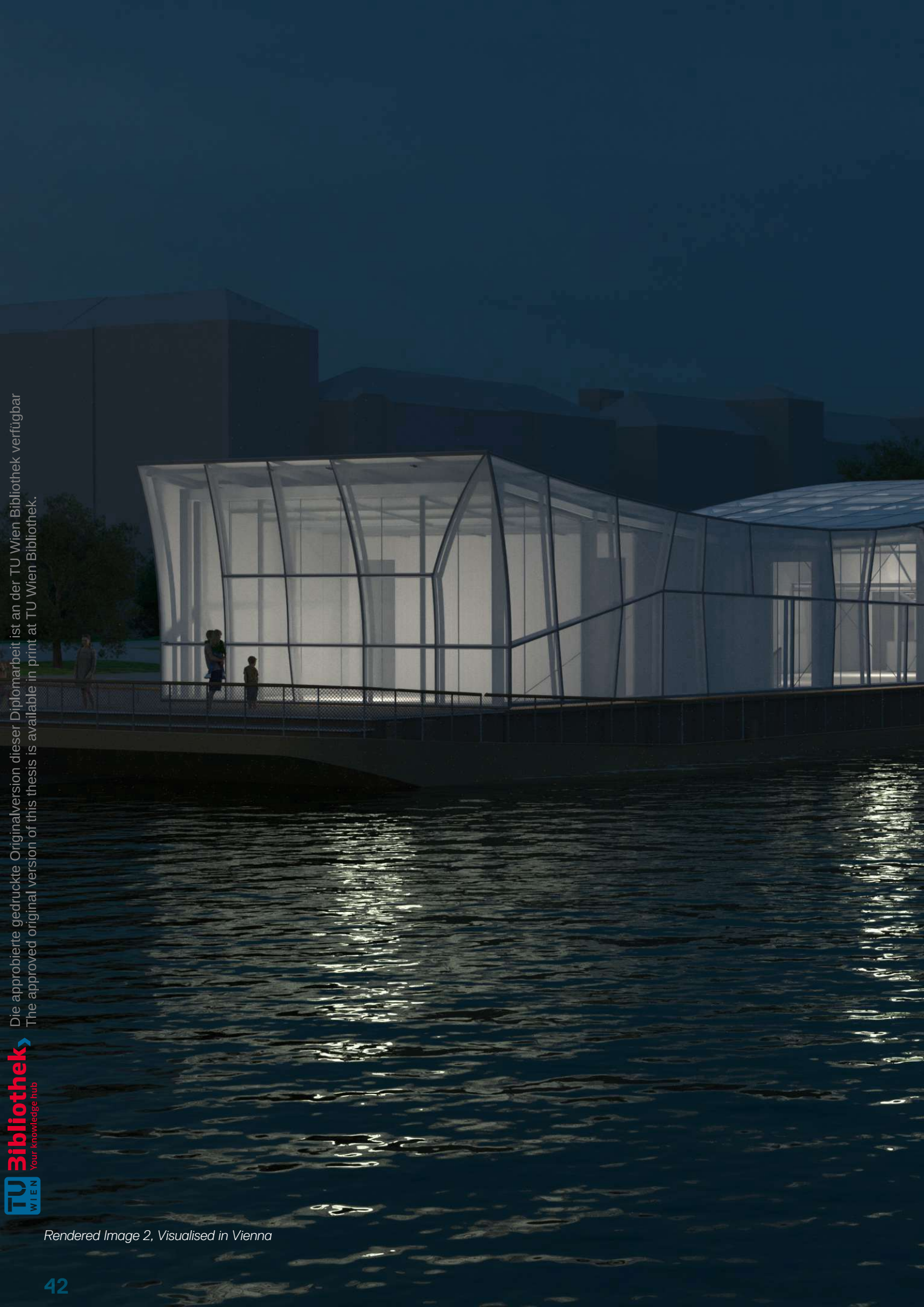
This large ship combines innovative elements to showcase forms of art. It features traditional art exhibition rooms as well as a Digital Exhibition room for multimedia installations and interactive exhibits. Furthermore the ship includes also a Concert area where music performances and cultural events can

take place. This versatile space accommodates expressions and serves as a dynamic platform for artists and musicians to share their talents with the public.

Concealed in the background are storage and technical areas that ensure operations behind the scenes. These unobtrusive spaces play a role in maintaining the ships day to day functions.

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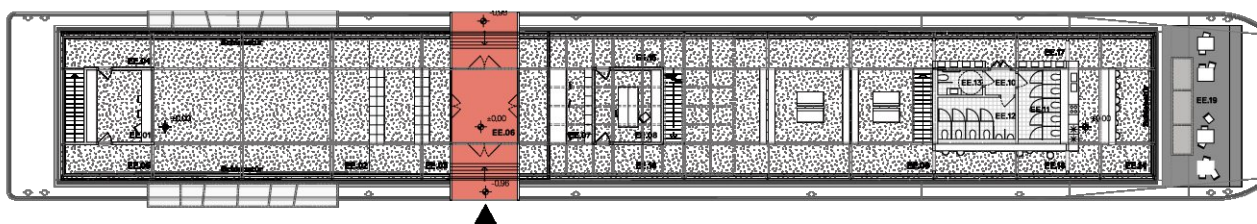
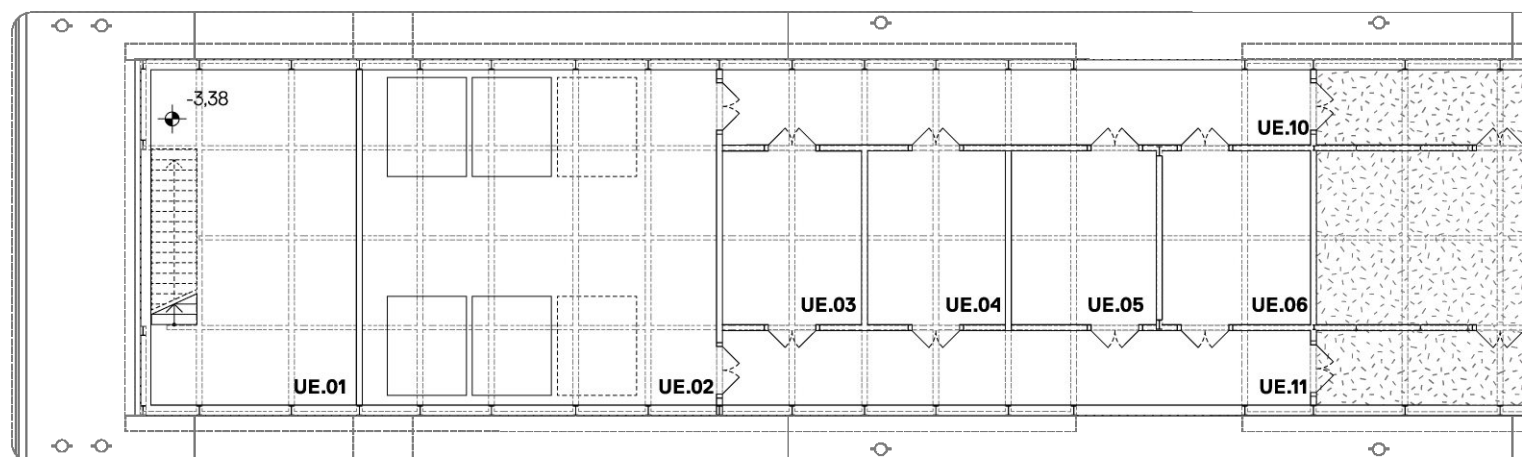
Rendered Image 3, Visualised looking down from the Reichsbrücke in Vienna



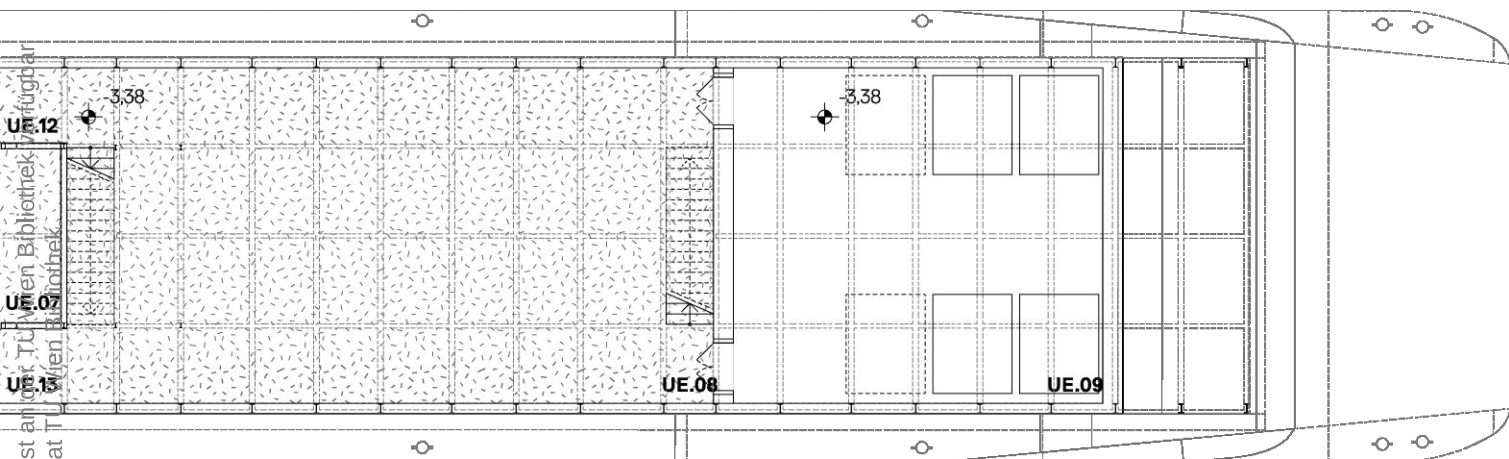
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5.1.1 Floorplans



(Level Above)

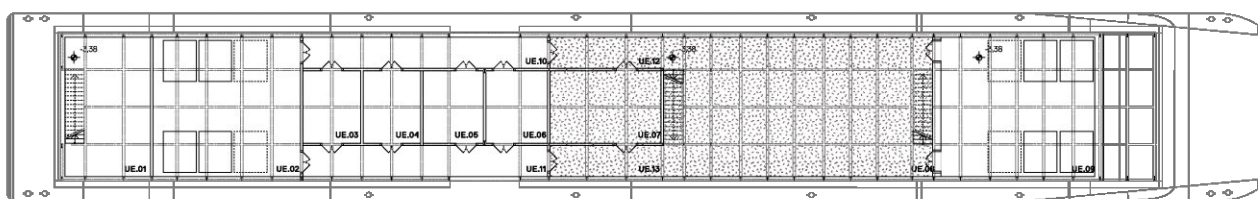
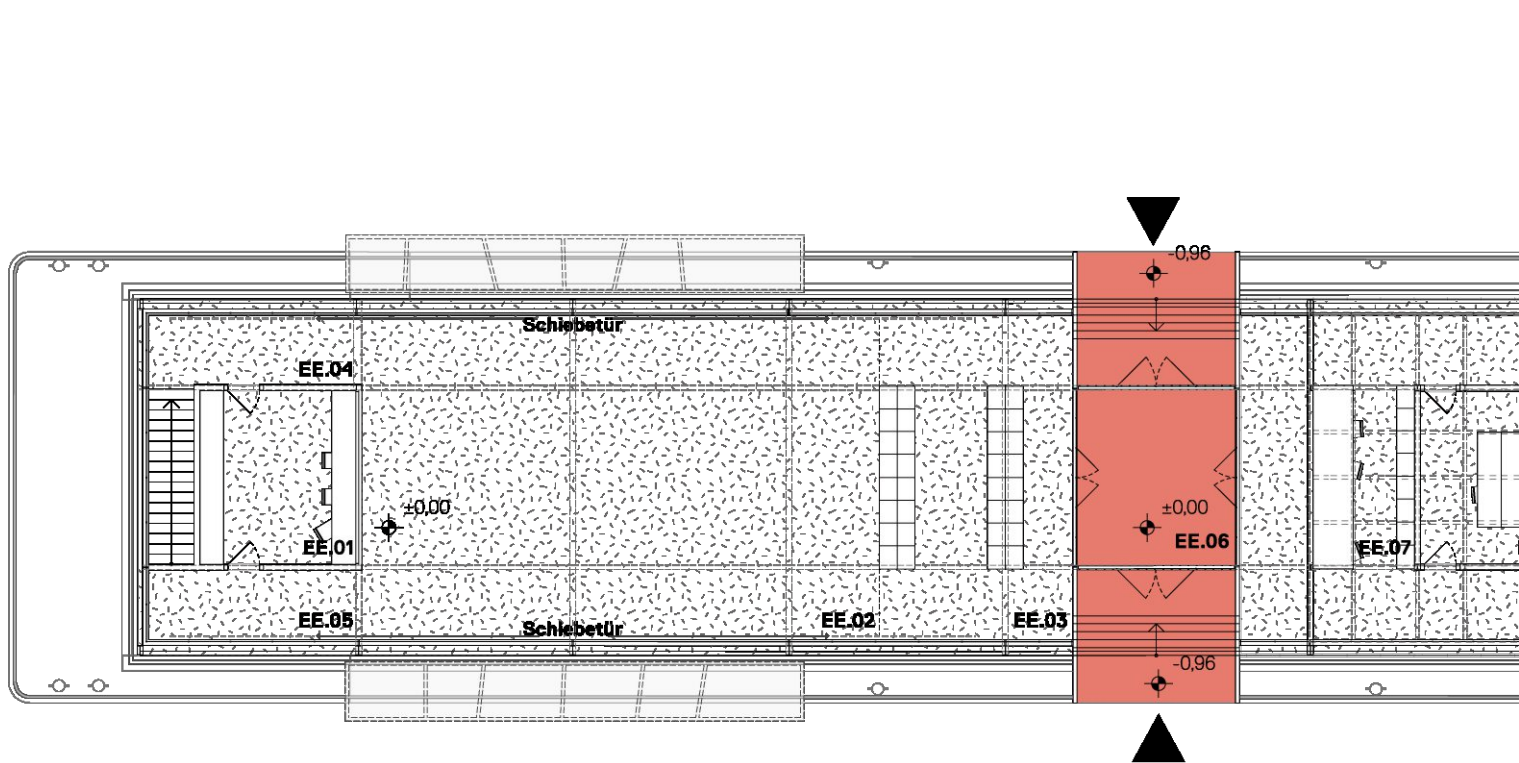


Rooms Lower Level (UE in German)

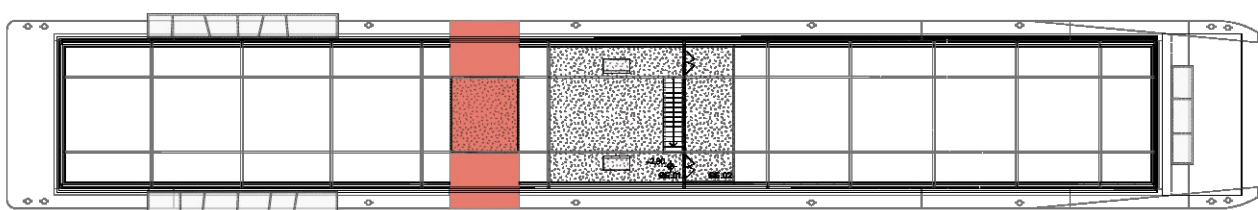
NR	Name	Measured Area
UE.01	Concert Room Storage	44.30 m ²
UE.02	Trim Tank Storage	76.00 m ²
UE.03	Fuel Storage	15.20 m ²
UE.04	Storage	15.00 m ²
UE.05	Storage	16.10 m ²
UE.06	Storage	16.50 m ²
UE.07	Technical Room	29.20 m ²
UE.08	Digital Art	140.50 m ²
UE.09	Clean and Black Water Storage	79.50 m ²
UE.10	Corridor	28.90 m ²
UE.11	Corridor	28.90 m ²
UE.12	Corridor	13.30 m ²
UE.13	Corridor	13.40 m ²

Total Area: 516.80 m²

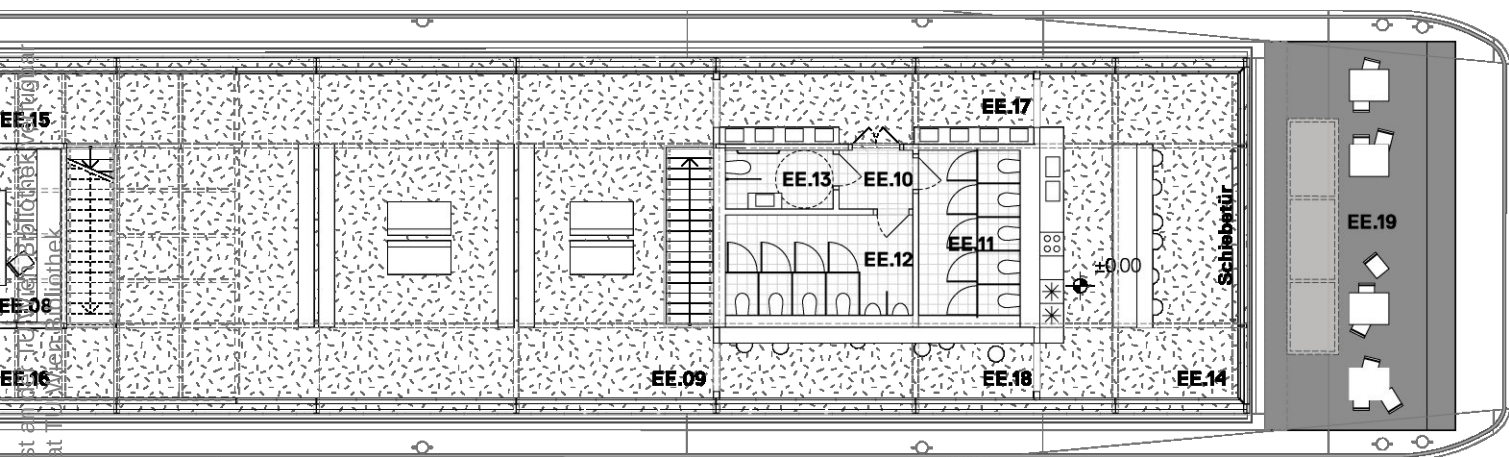
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(Level Below)



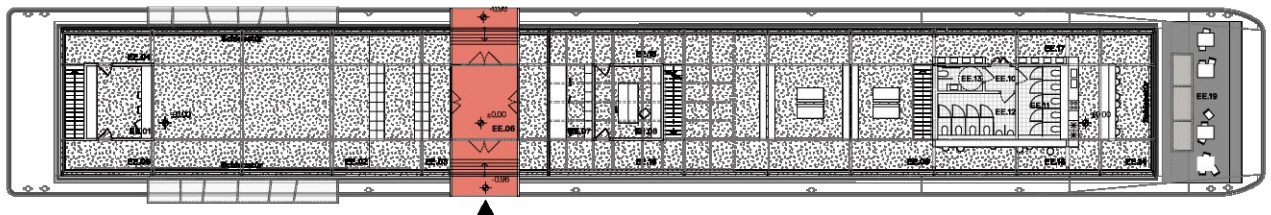
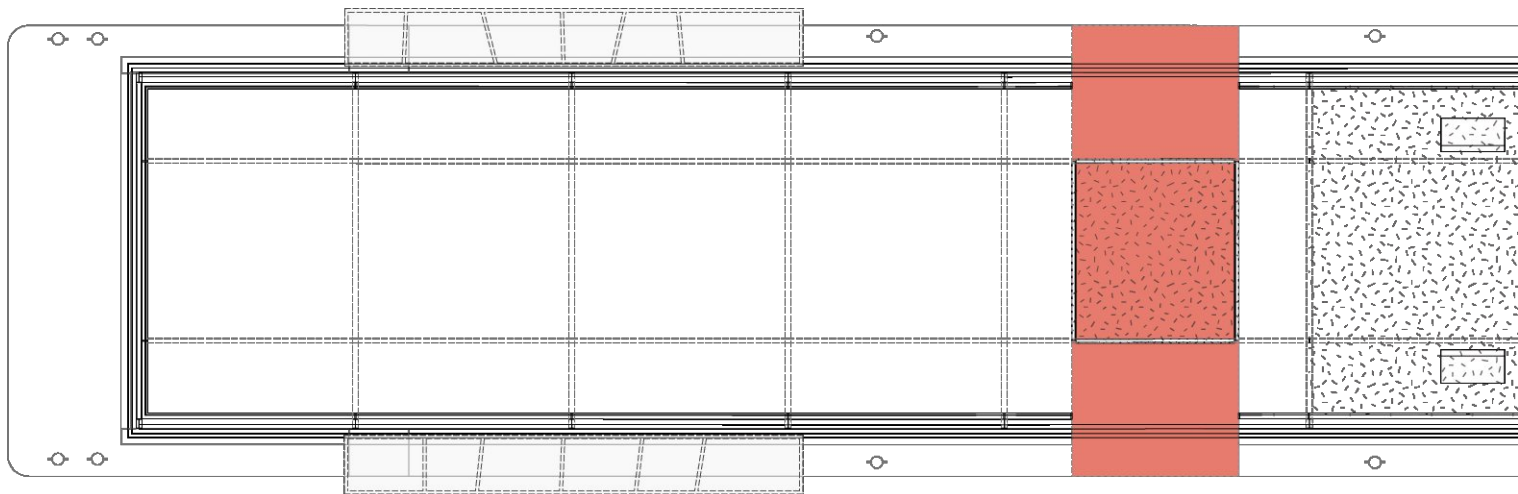
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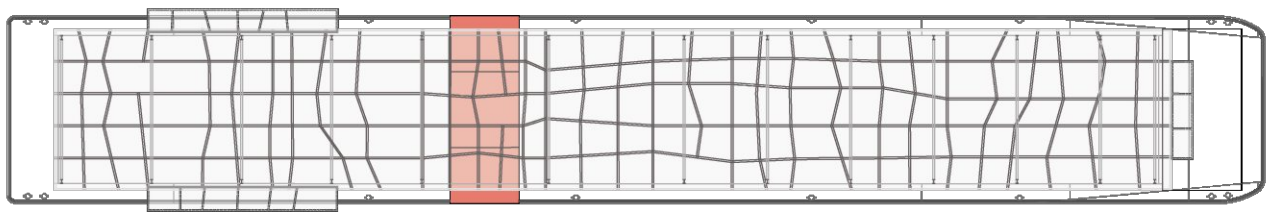
Rooms Entrance Level (EE in German)

NR	Name	Measured Area
EE.01	Technical Room	17.40 m ²
EE.02	Exhibition Room 2	109.20 m ²
EE.03	Wardrobe	40.60 m ²
EE.04	Corridor	9.70 m ²
EE.05	Corridor	9.60 m ²
EE.06	Entrance Area	17.80 m ²
EE.07	Information	19.60 m ²
EE.08	Office	19.10 m ²
EE.09	Exhibition Room 1	124.60 m ²
EE.10	Anteroom WC	2.80 m ²
EE.11	Womens' Restroom	10.70 m ²
EE.12	Mens' Restroom	12.70 m ²
EE.13	Accessible Restroom	4.00 m ²
EE.14	Café	42.10 m ²
EE.15	Corridor	16.10 m ²
EE.16	Corridor	16.10 m ²
EE.17	Restroom WC	15.20 m ²
EE.18	Media Library	15.20 m ²
EE.19	Terrace	41.20 m ²

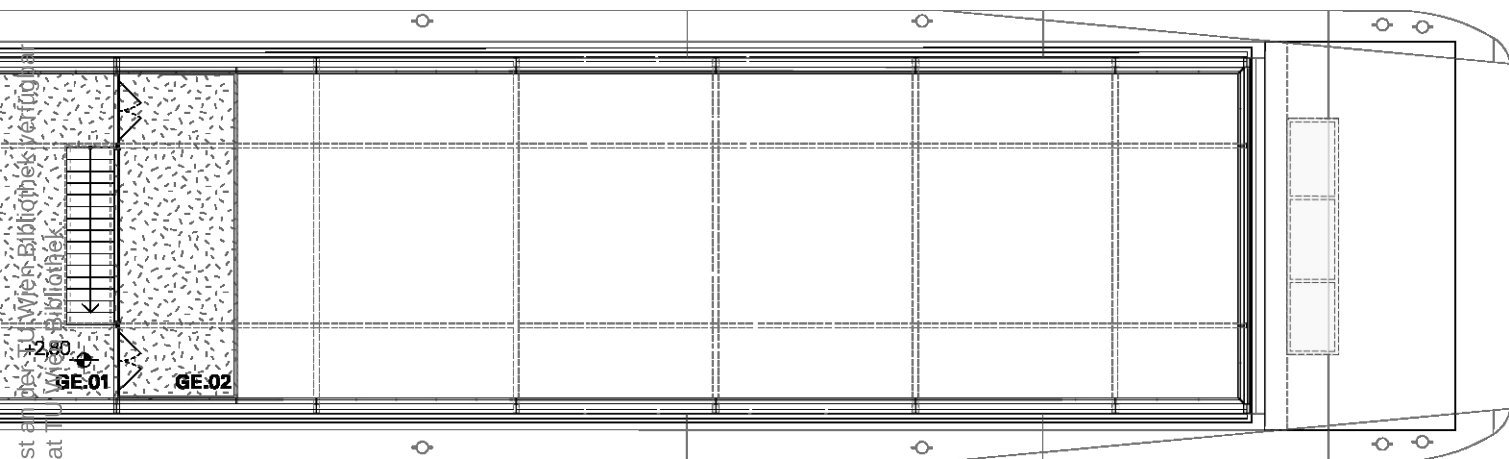
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(Level Below)



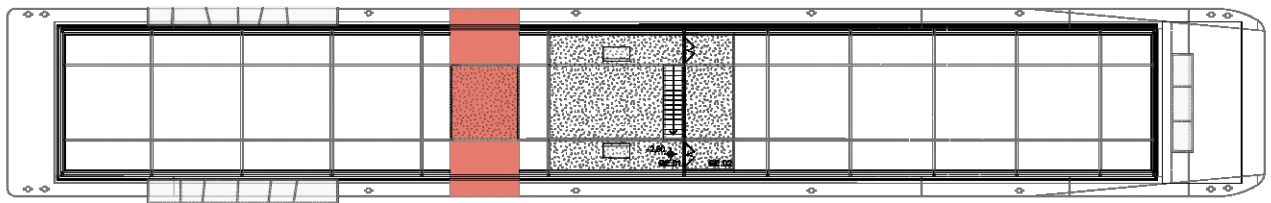
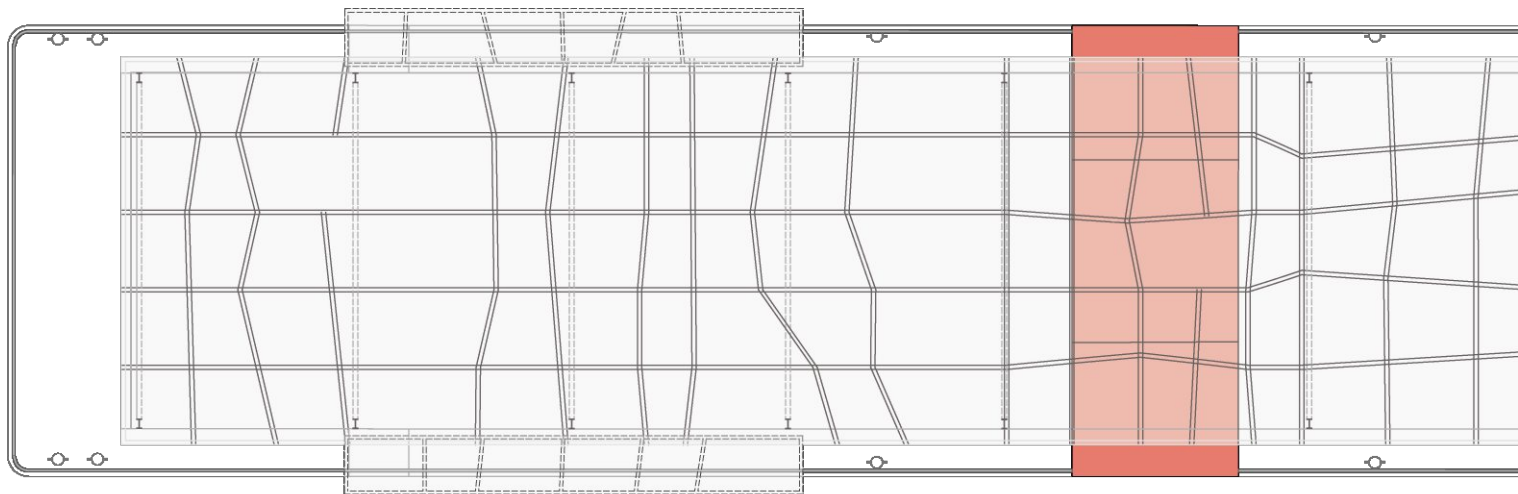
(Level Above)



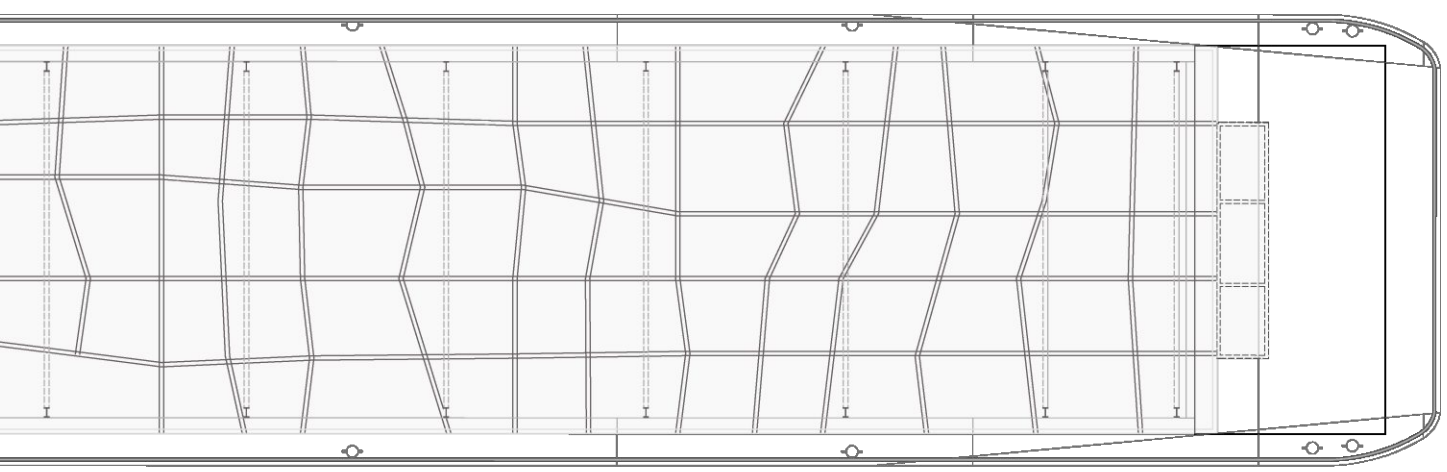
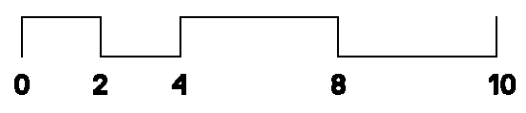
Rooms Gallery Level (GE in German)

NR	Name	Measured Area
GE.01	Exhibition Room Upstairs	62,80 m ²
GE.02	Balcony	24,50 m ²

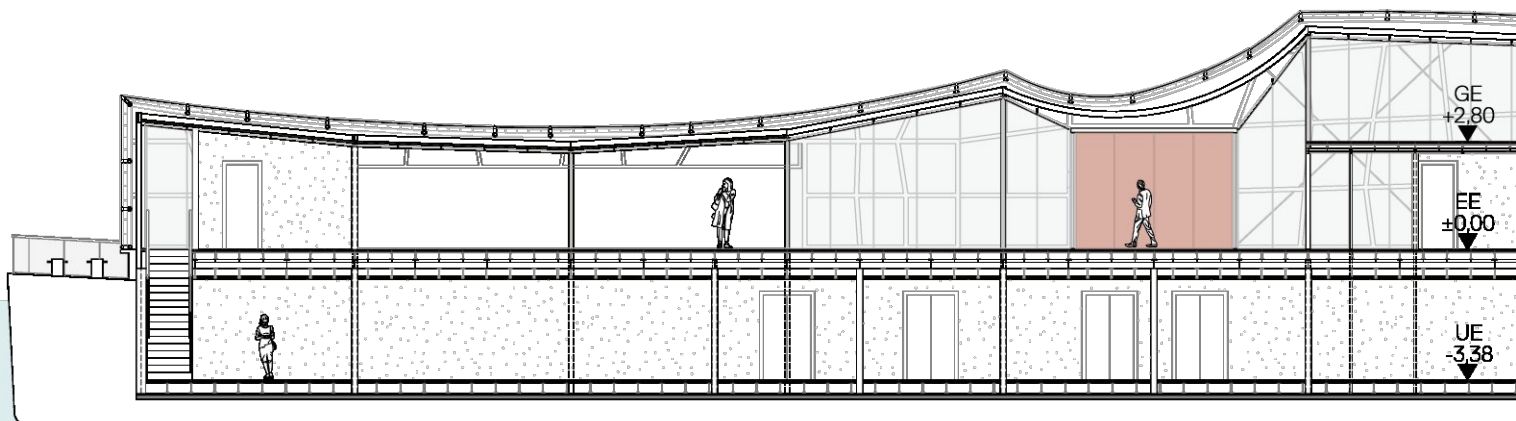
Total Area: 87.30 m²



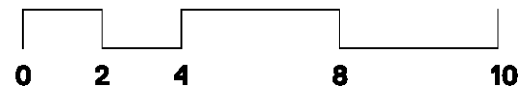
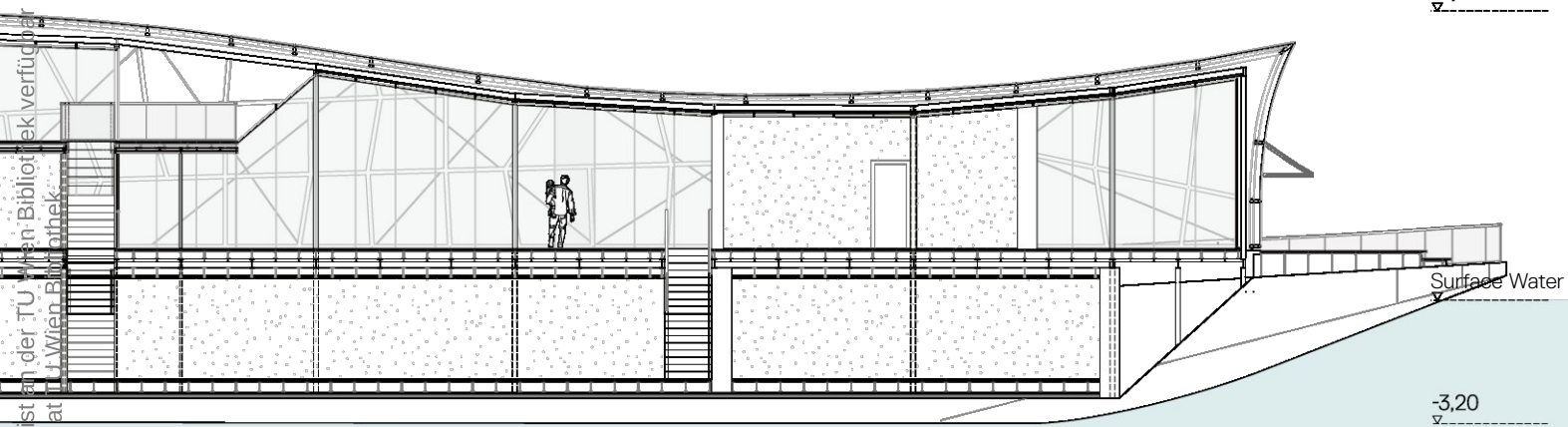
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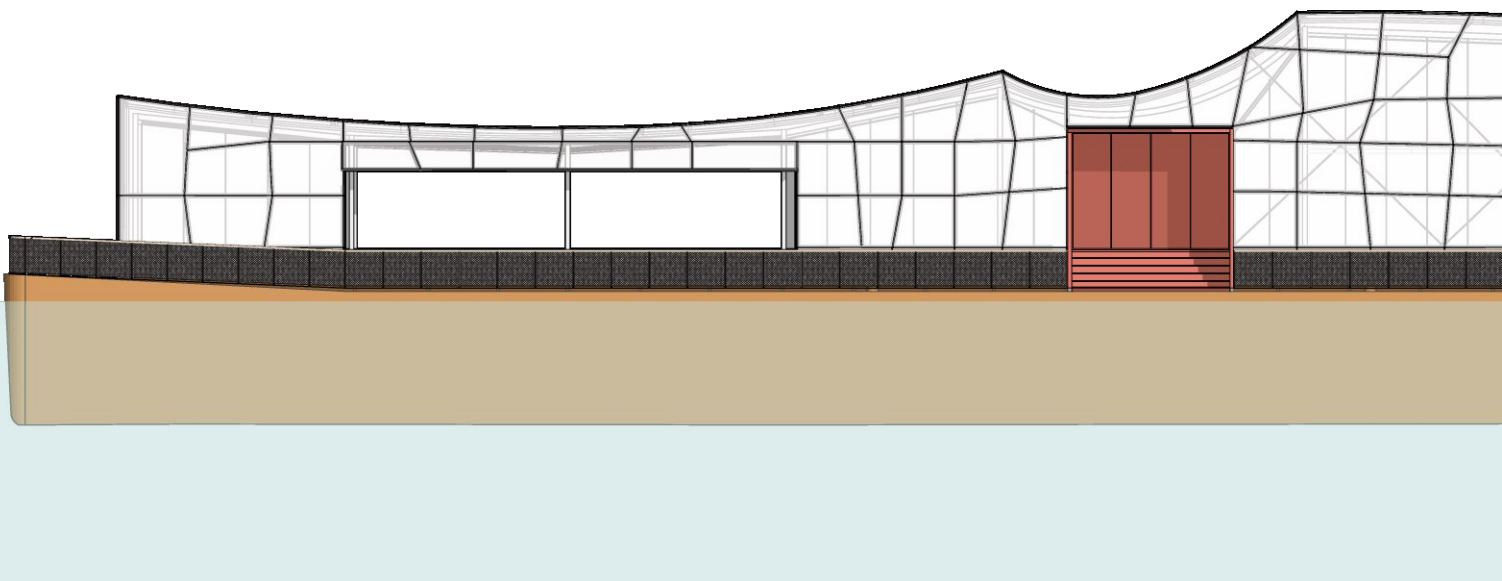


5.1.2 Elevations & Sections

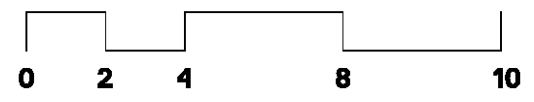
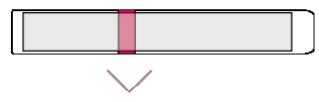
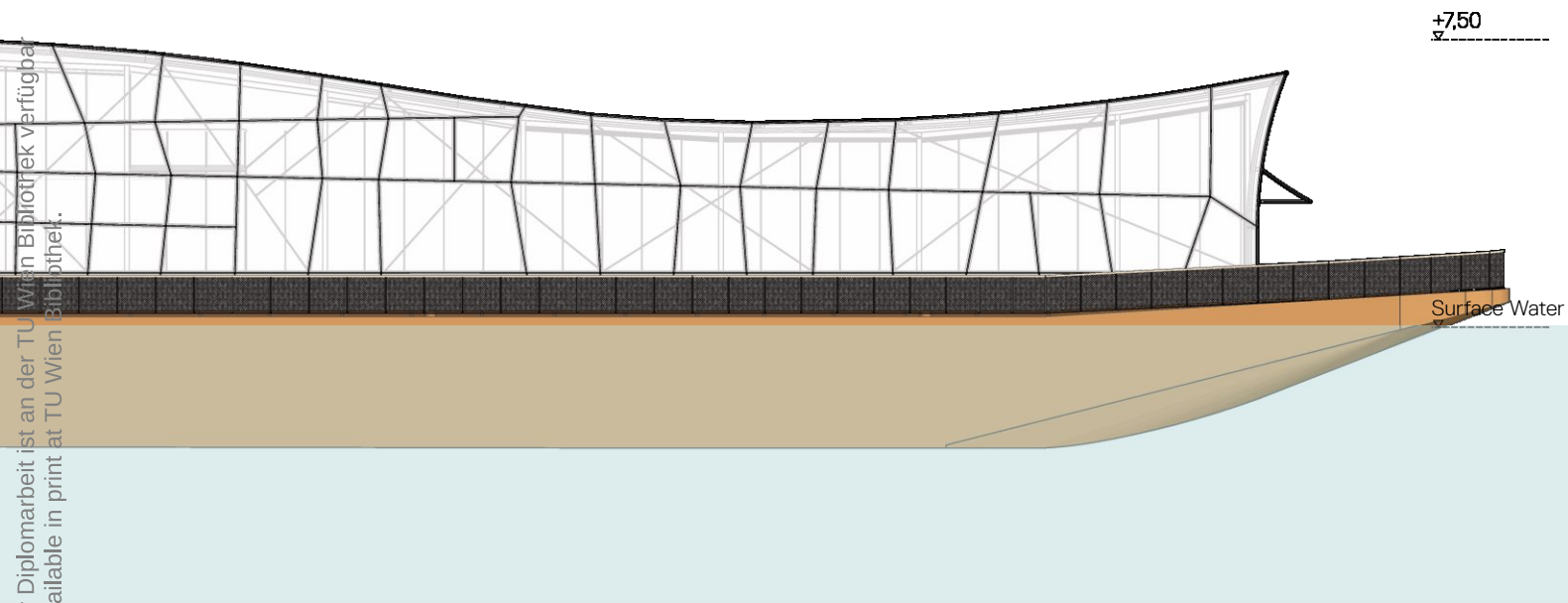


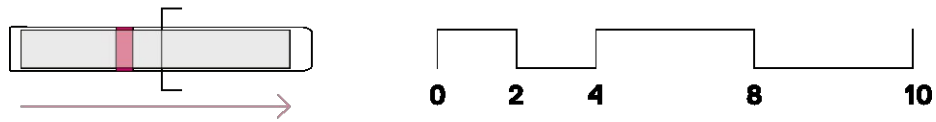
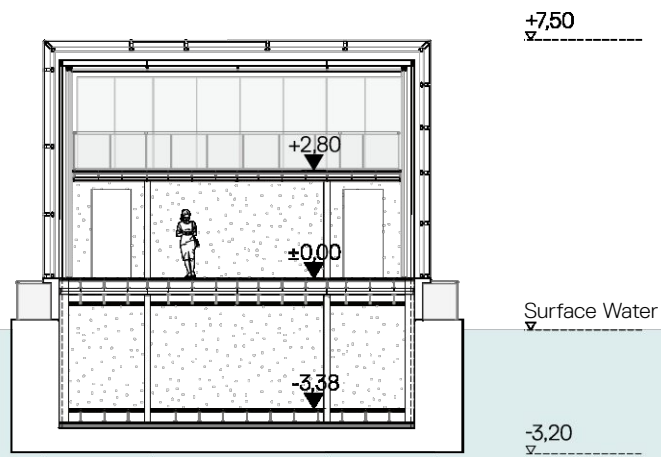
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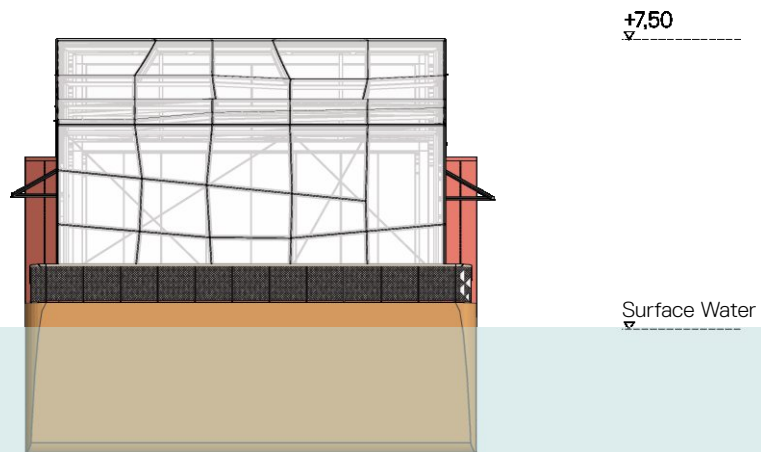




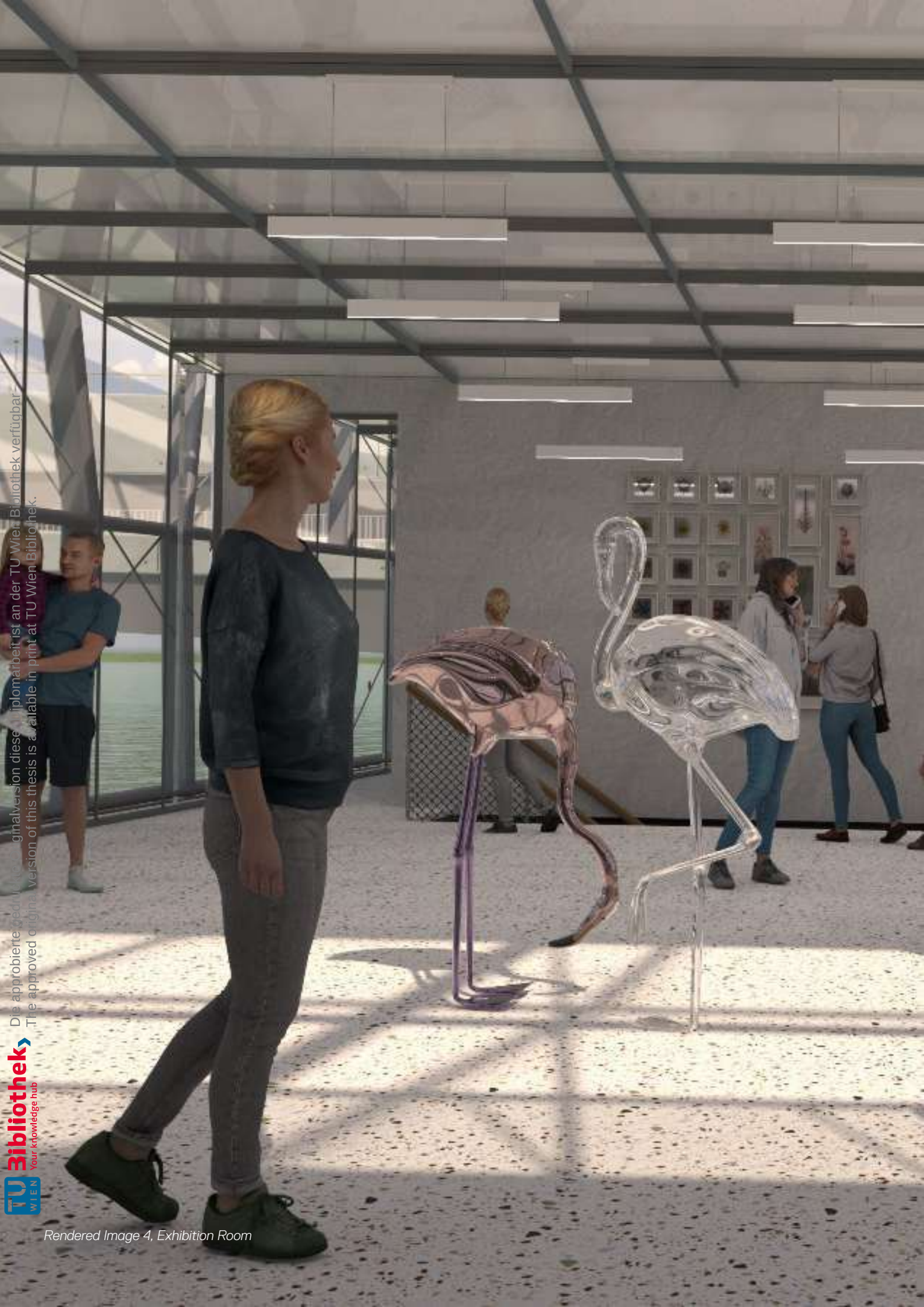
Plan 7, Starboard Elevation







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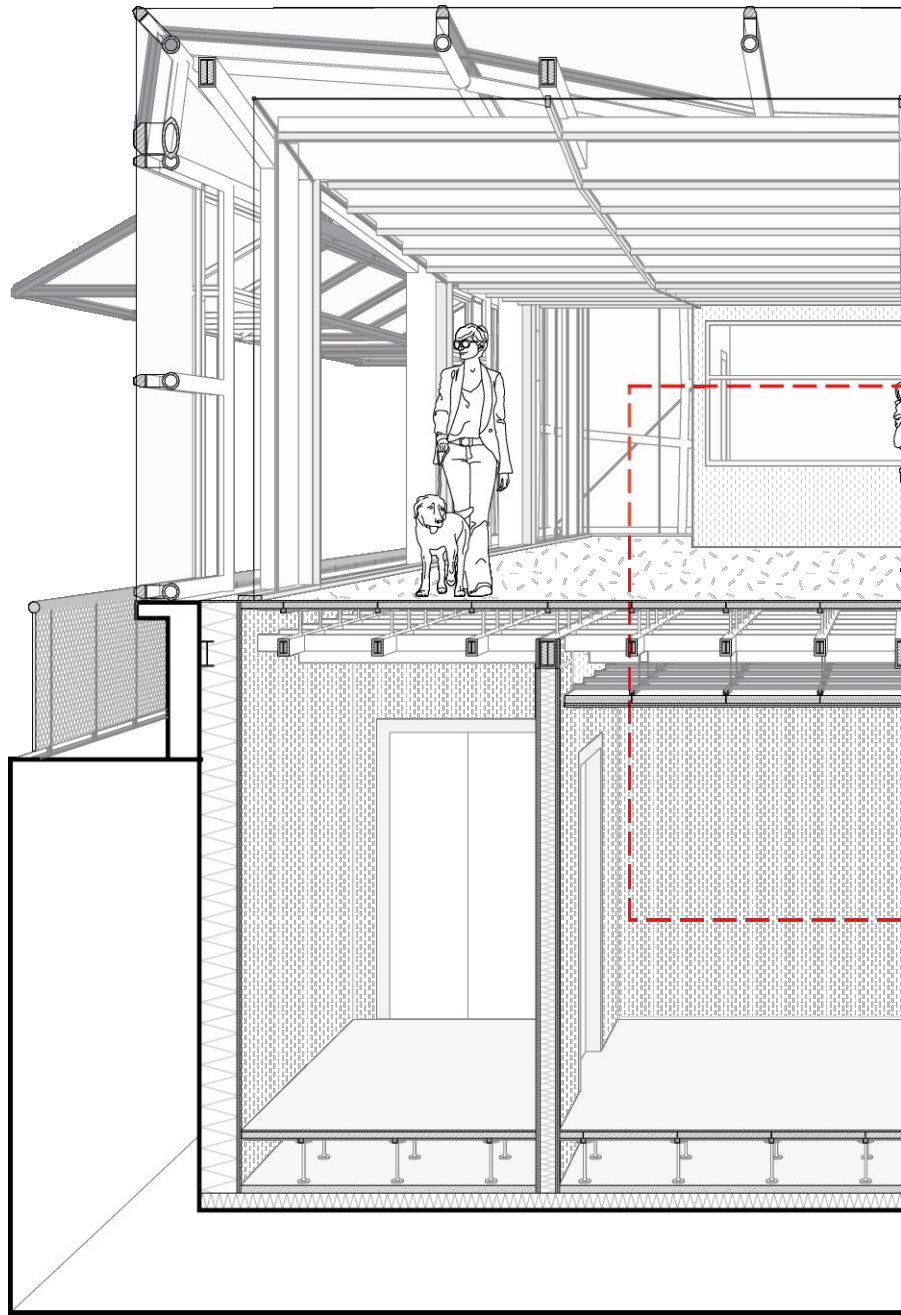
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Rendered Image 6, Looking in the Terrace Direction

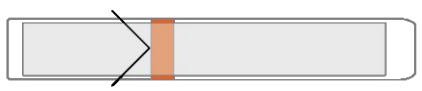
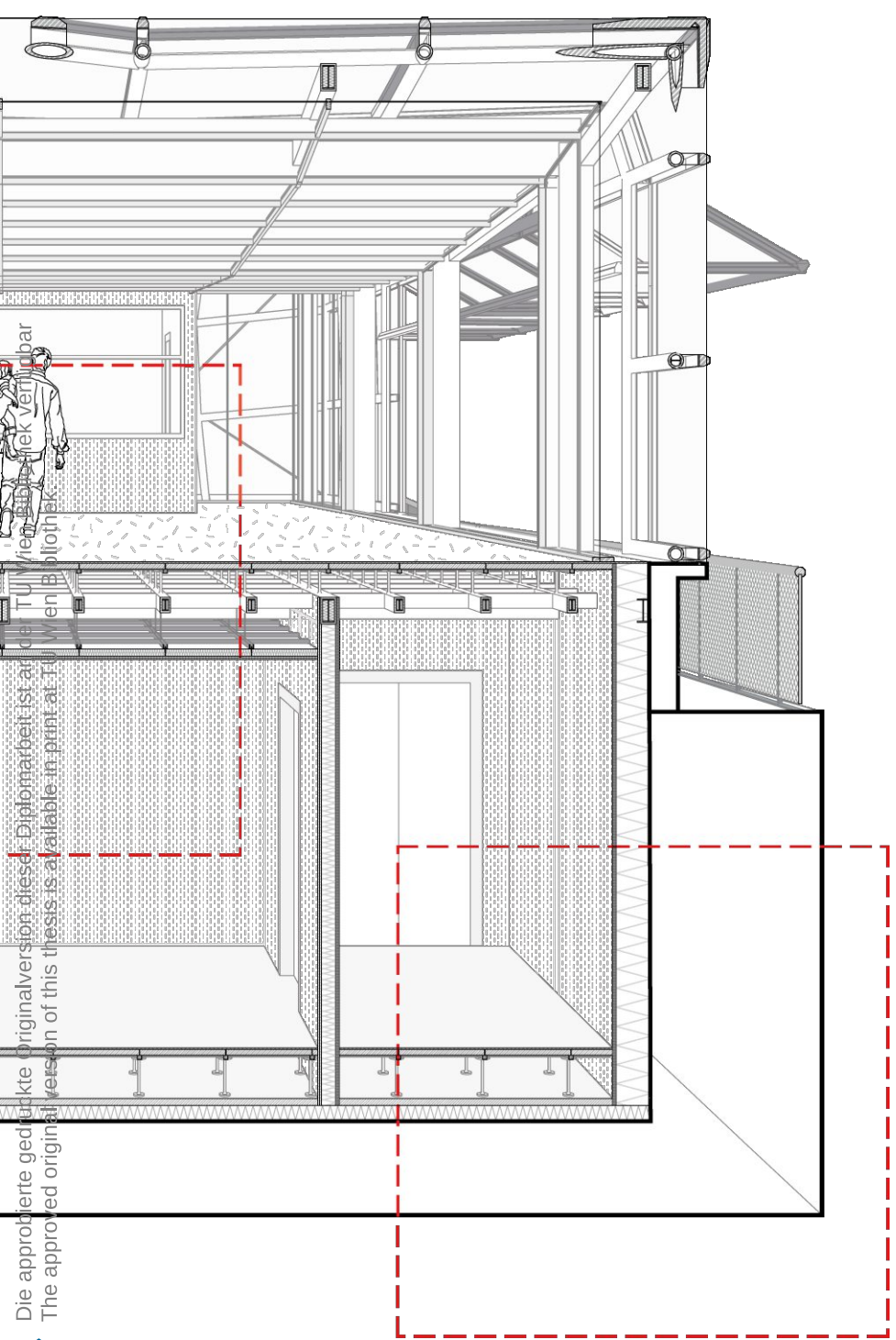


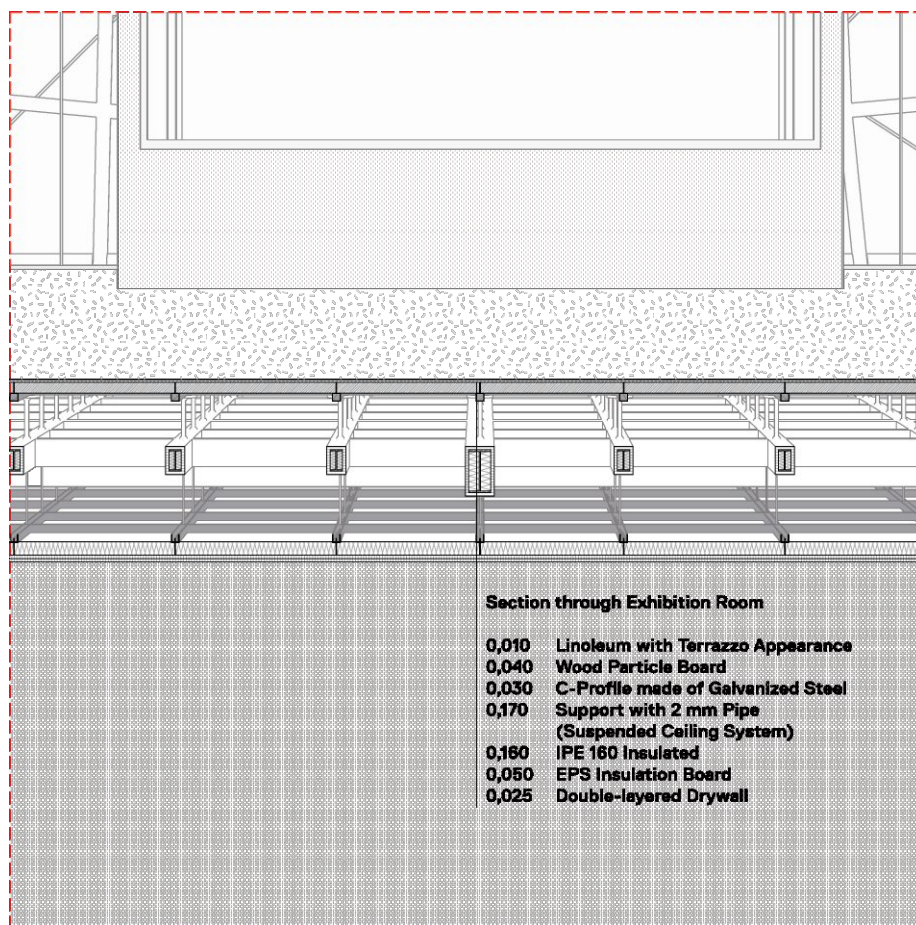
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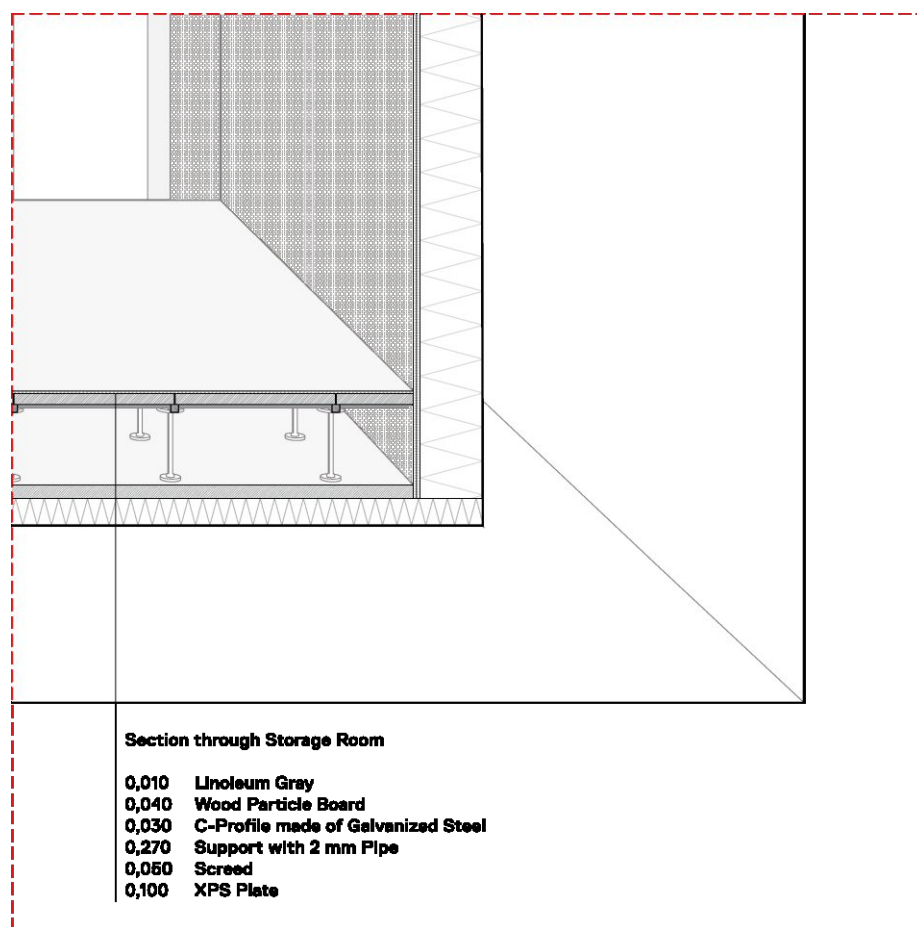
5.1.3 Sectional Perspectives & Construction Details

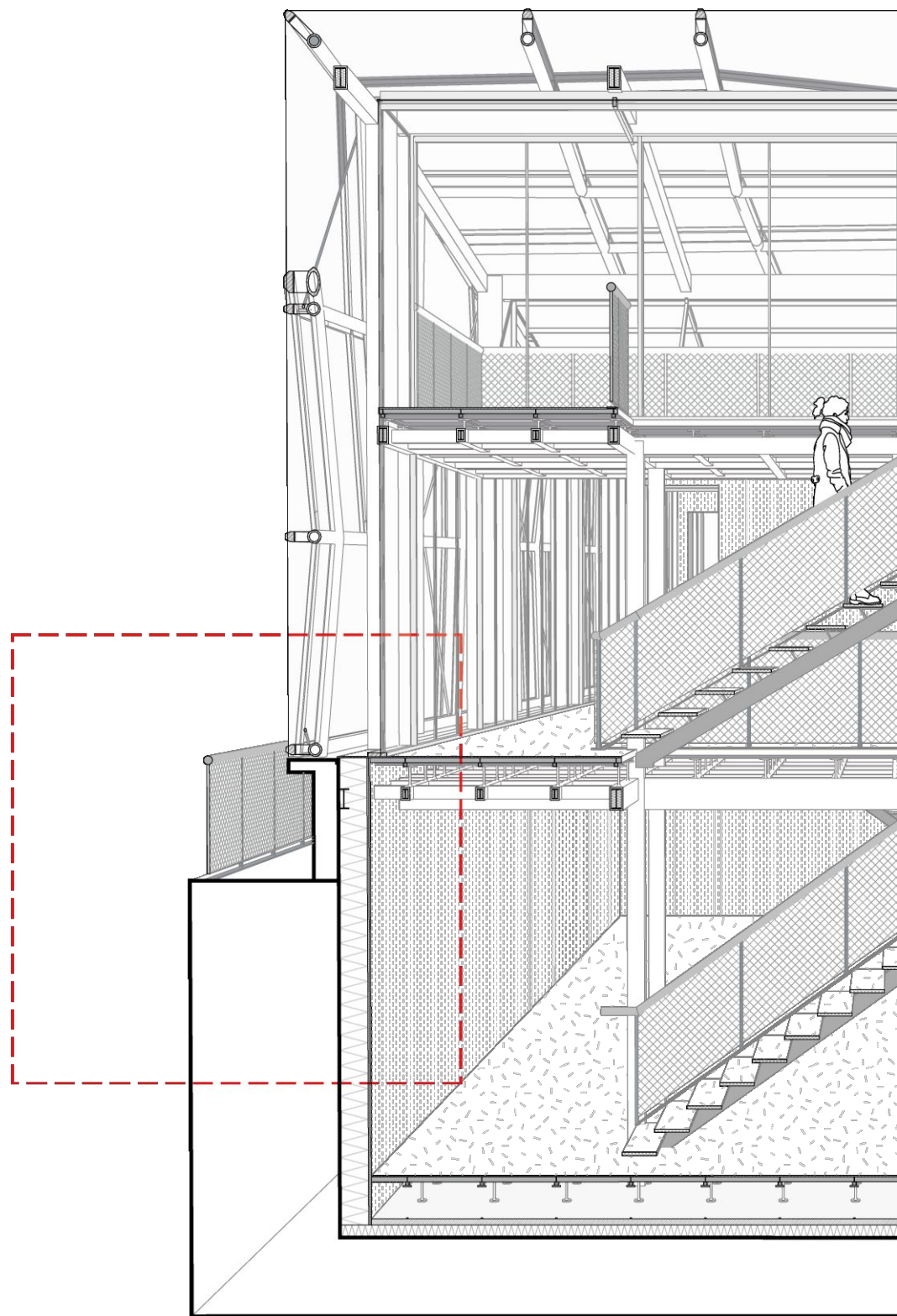


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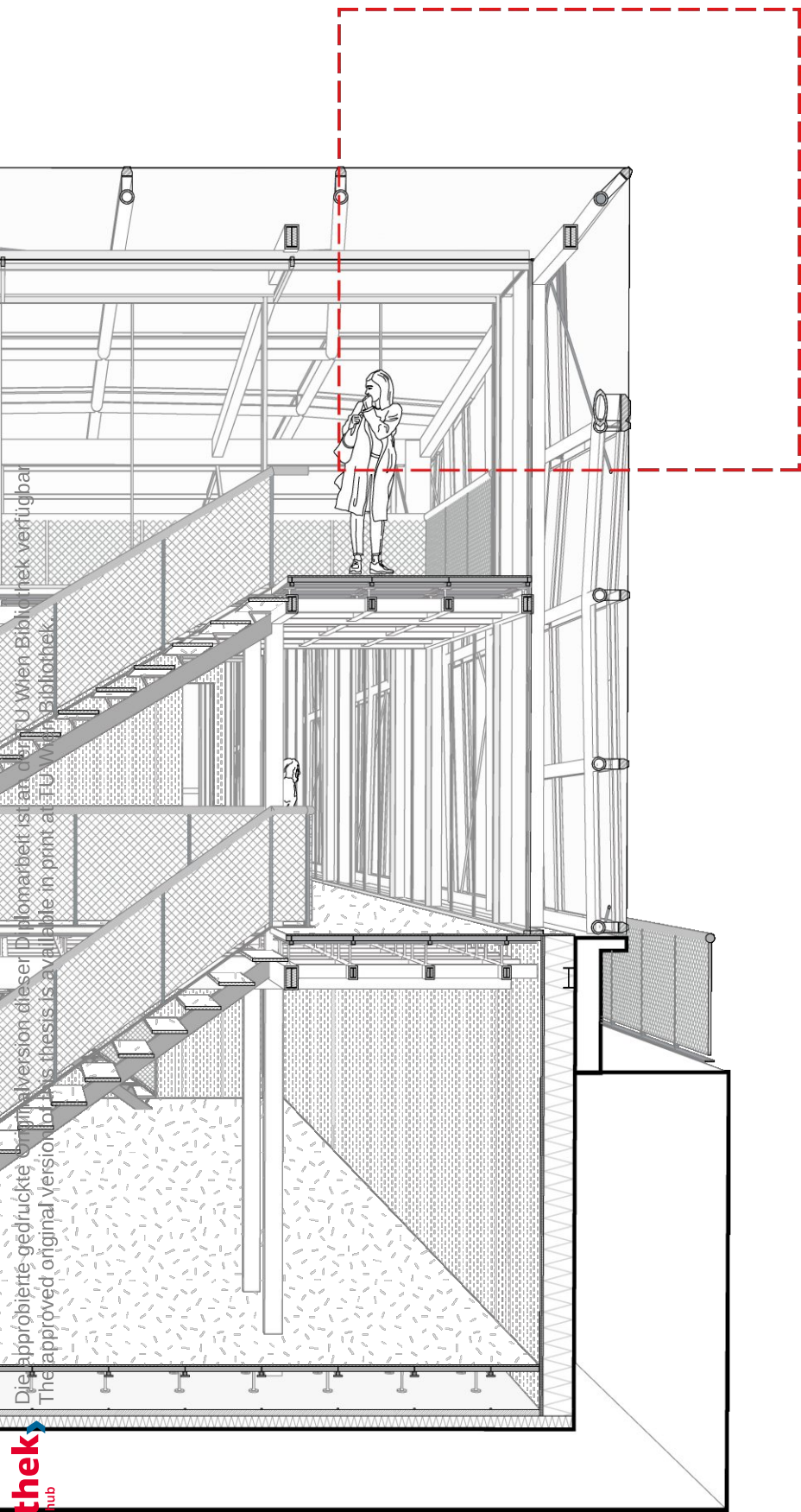






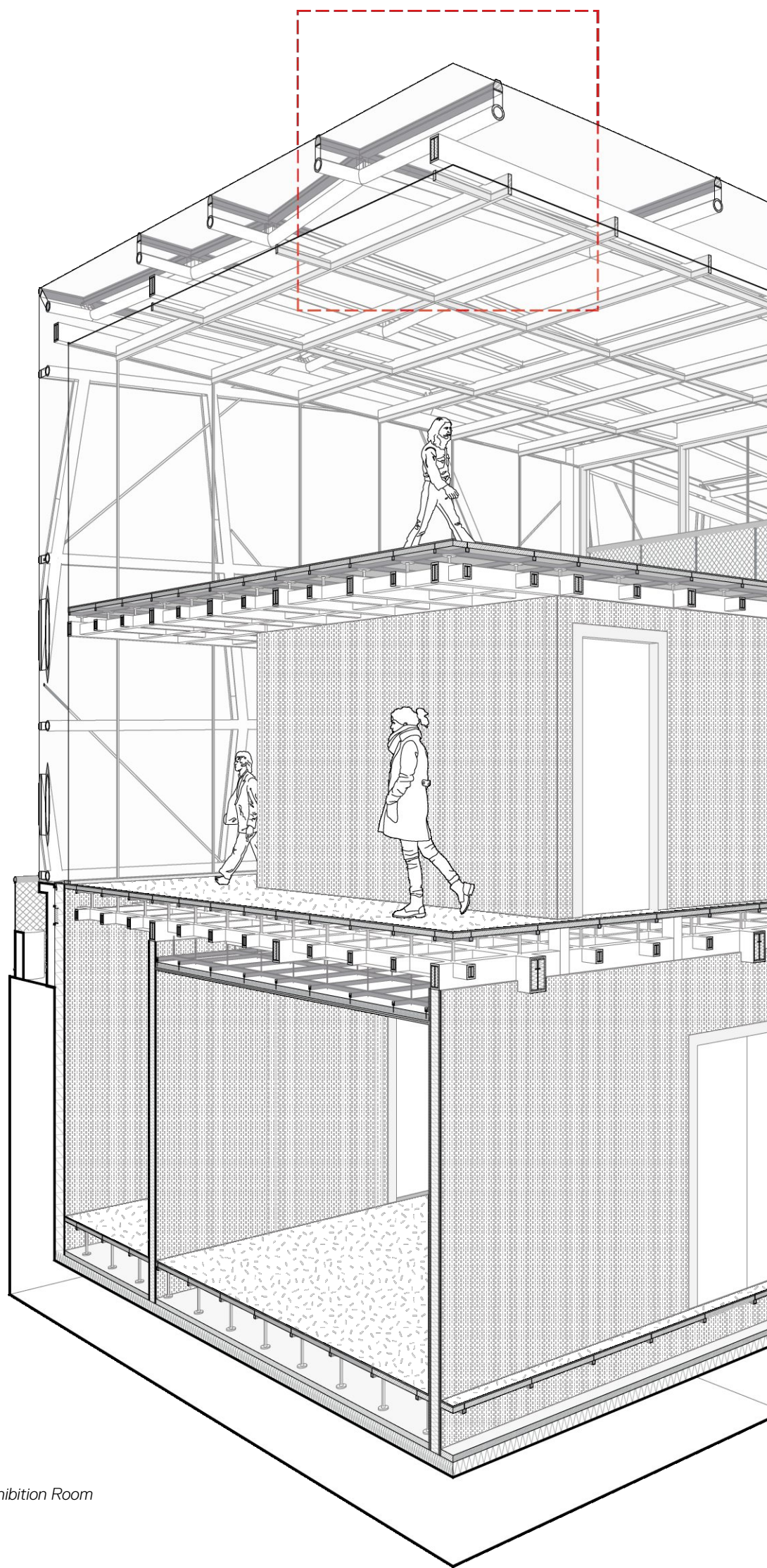


Plan 13, Sectional Perspective through Exhibition Room

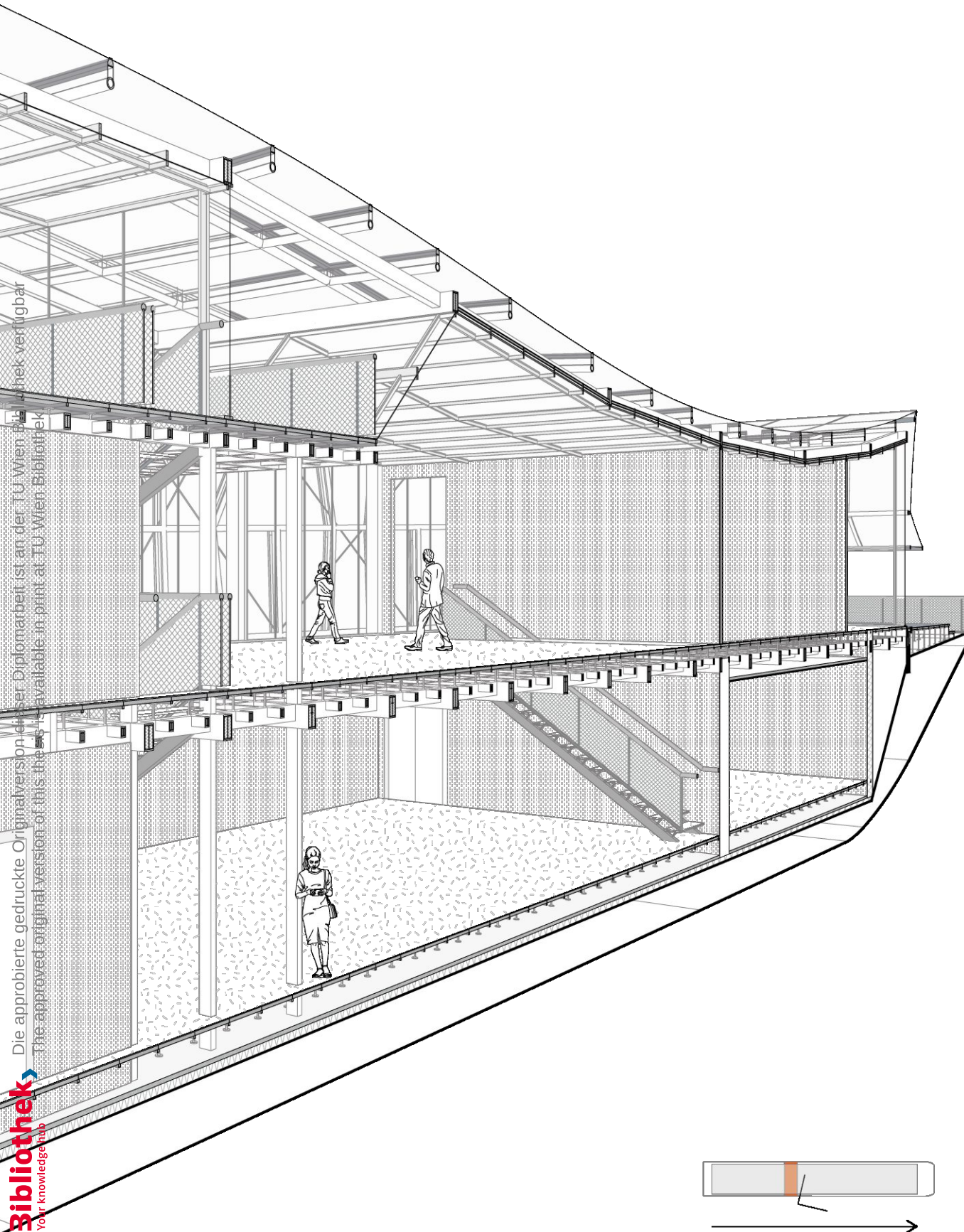


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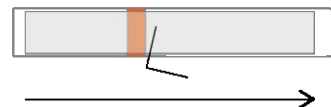


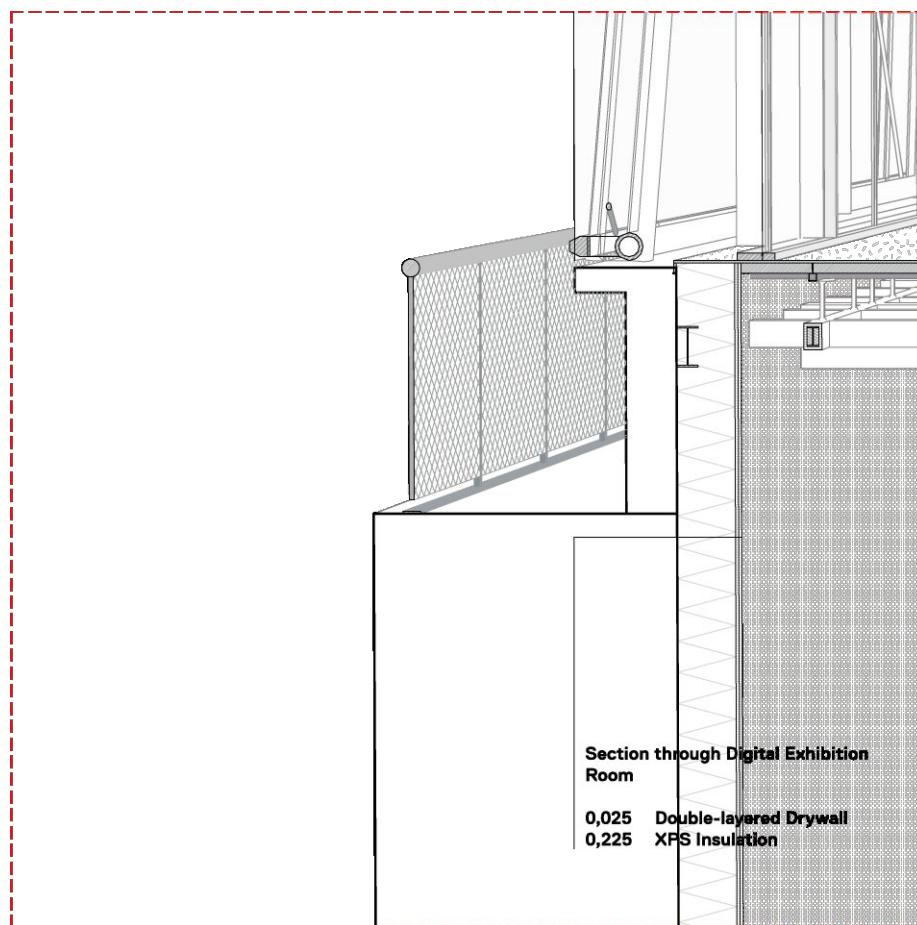


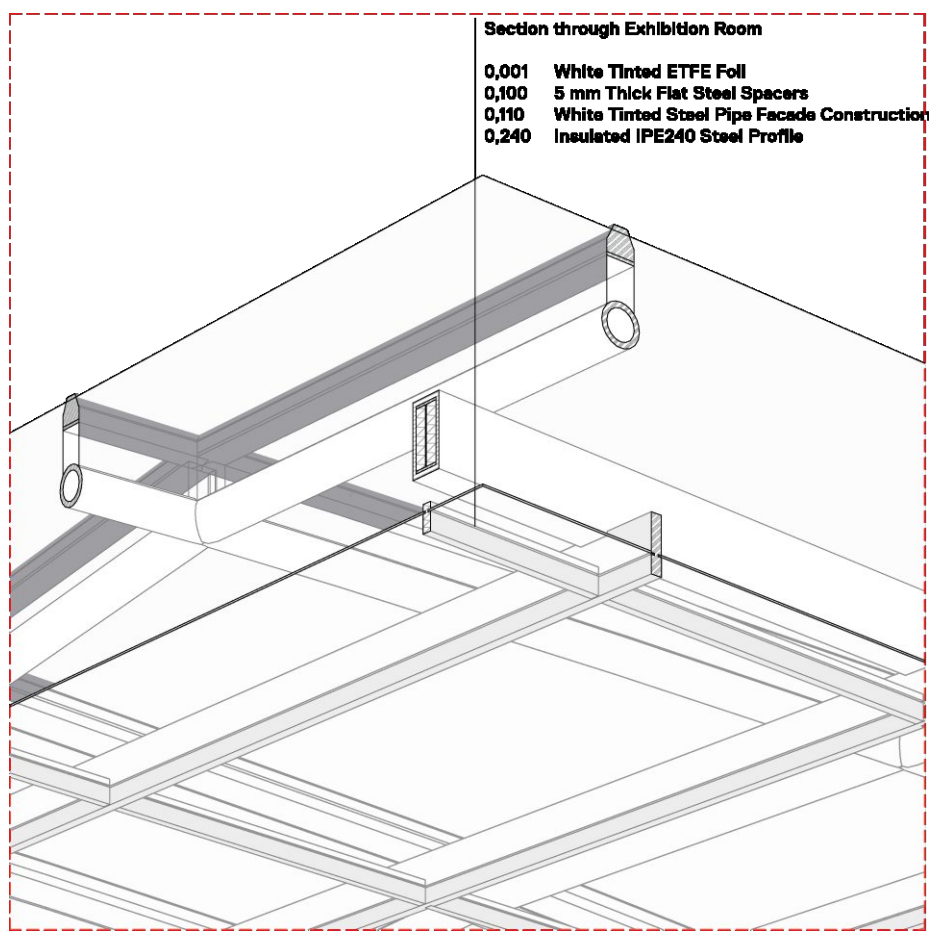
Plan 14, Sectional Perspective through Exhibition Room



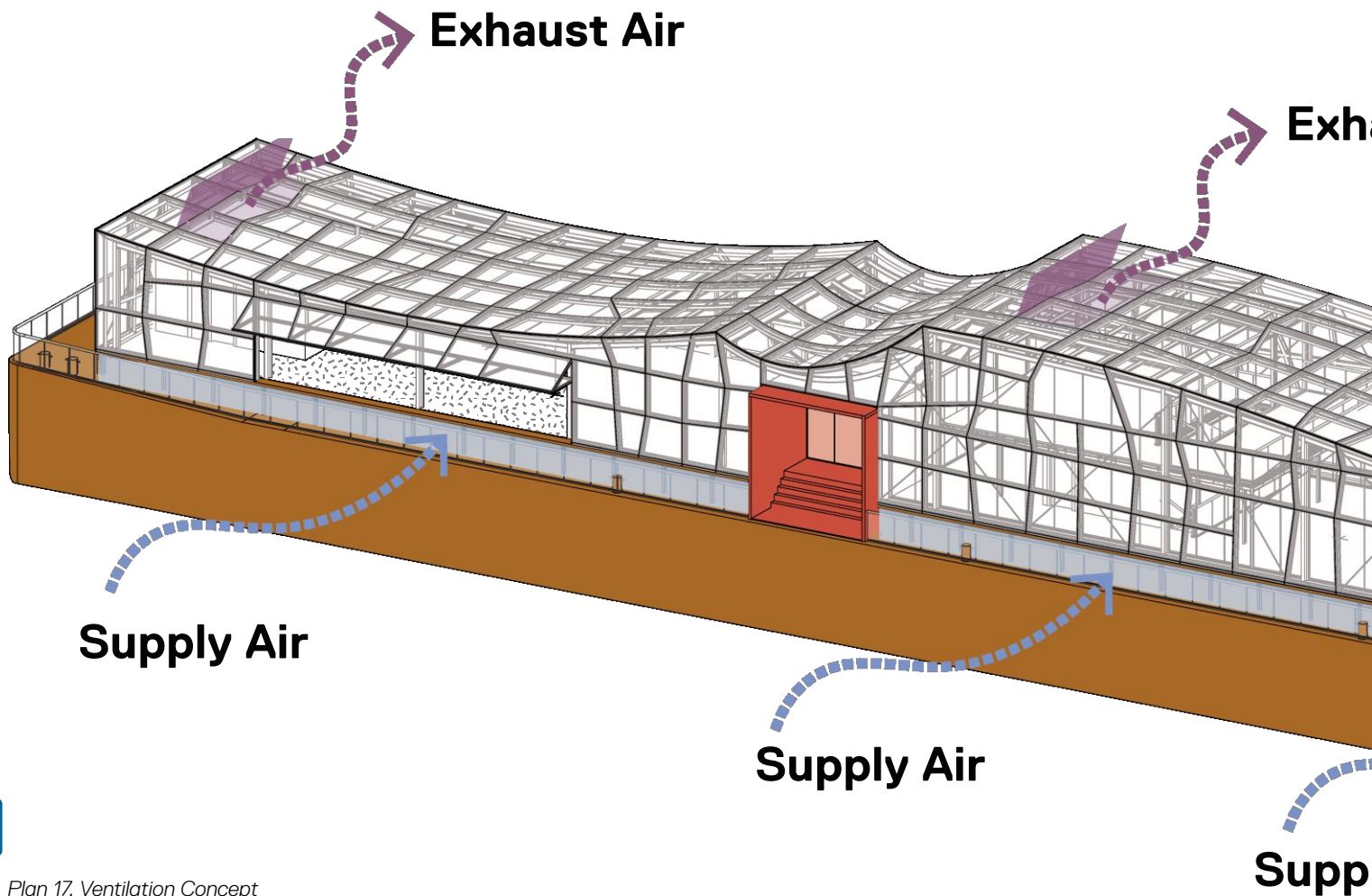
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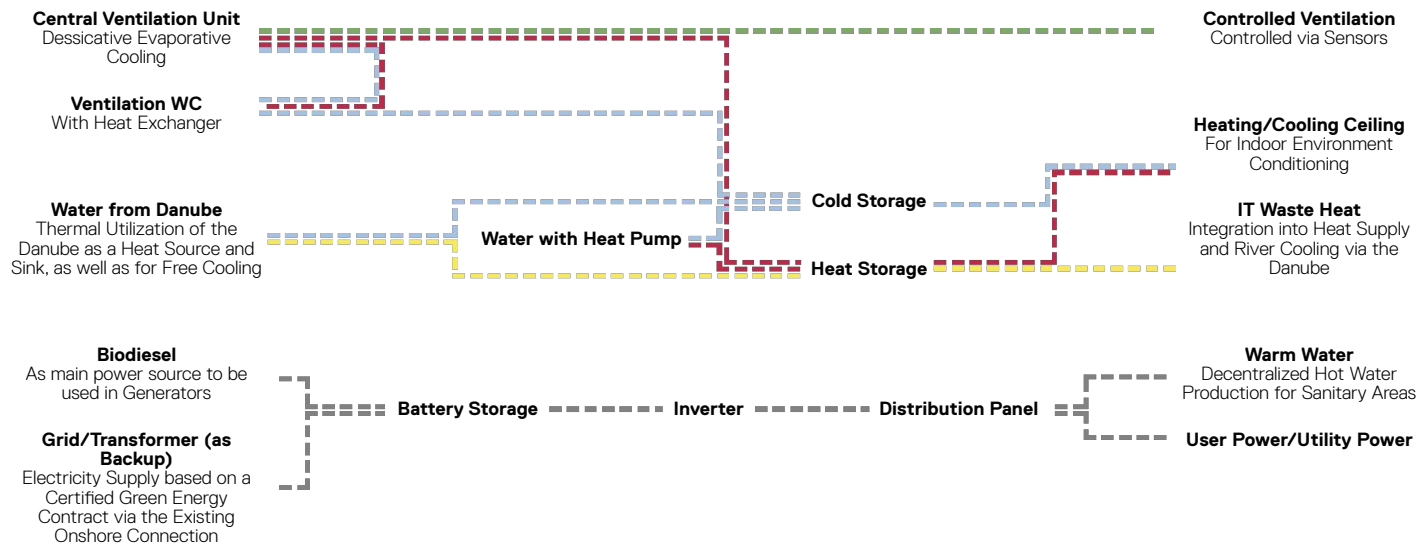


5.1.4 Ventilation Concept



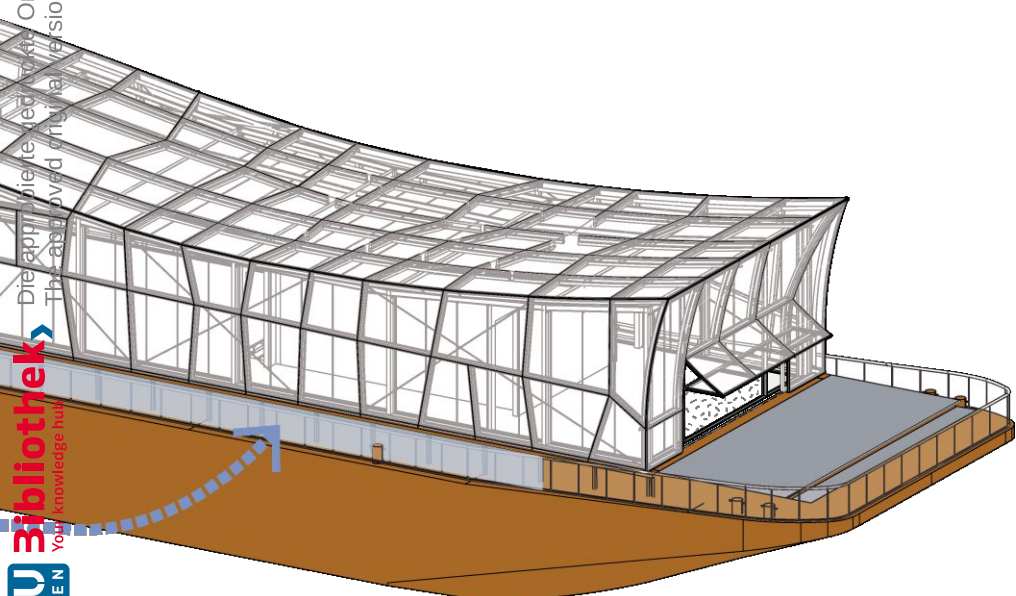
Plan 17, Ventilation Concept

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Plan 18, Ventilation and Building Services Concept

Exhaust Air



Supply Air

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Rendered Image 7, Looking through the Concert Area

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5.1.5 Renderings

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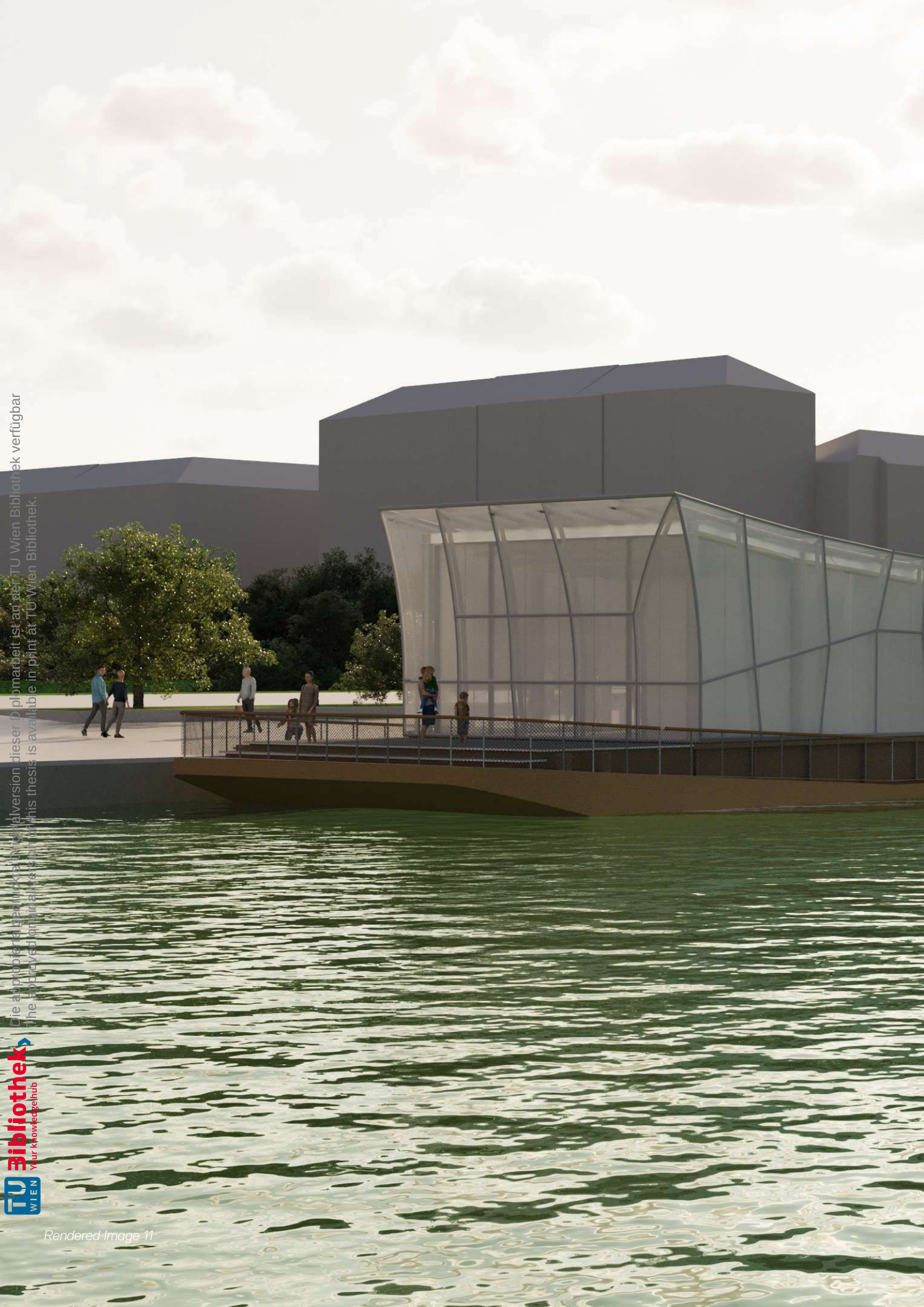
Rendered Image 10



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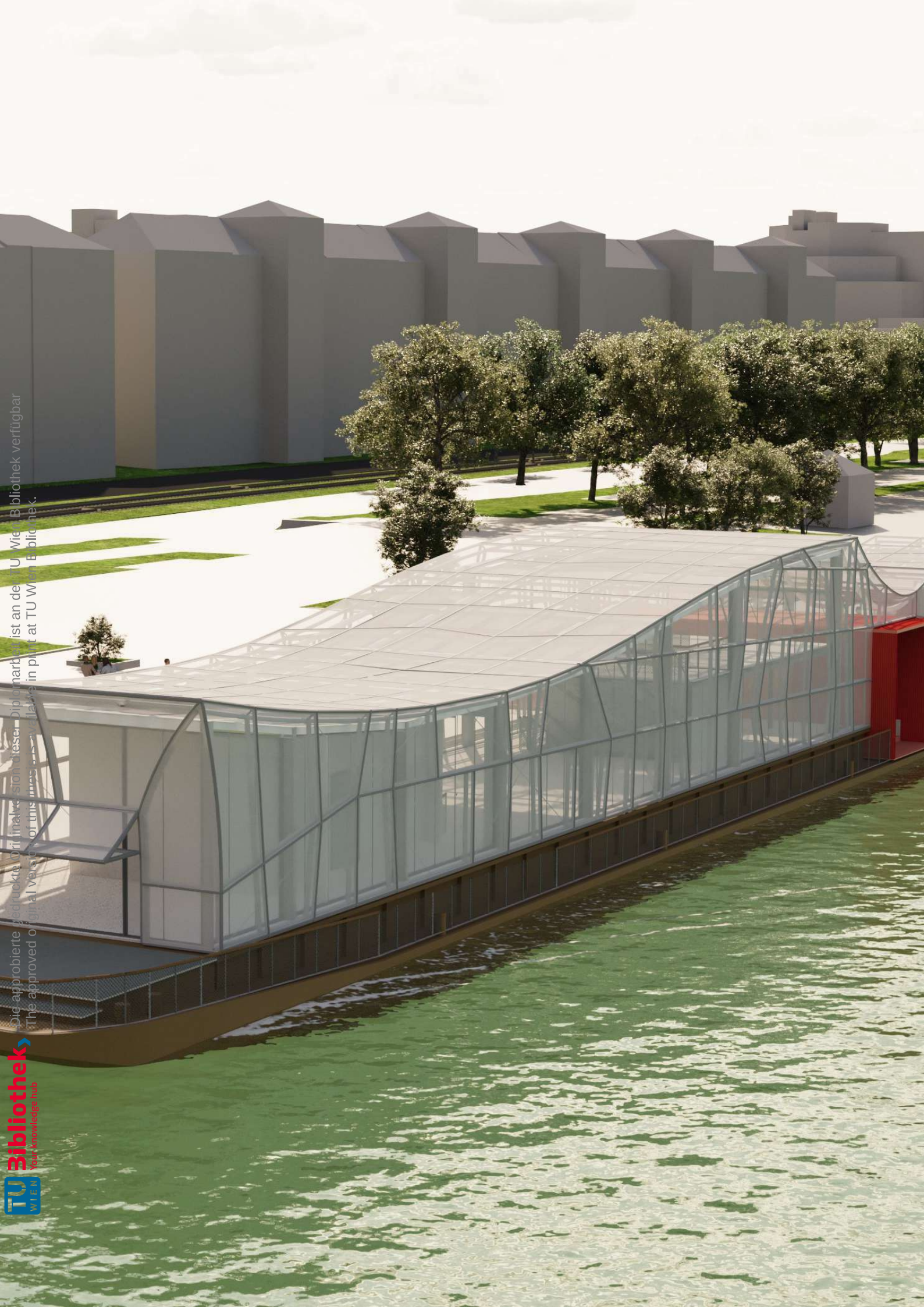
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Rendered Image 12





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5.2 Small Ship Drawings and Renderings

Built atop the push barge SL Blumenau covers a space of approximately 355 square meters.

As visitors step aboard they will come across the anteroom and cloakroom which provide a comfortable transition, from the entrance.

The exhibition room connects directly to anteroom and connects to the café in the back area.

The ship designed to invite guests to embrace a blend of artistry, functionality and aesthetics.

Although compact in size this intimate vessel offers an art experience that fosters connections, with creativity and culture.

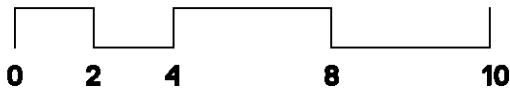
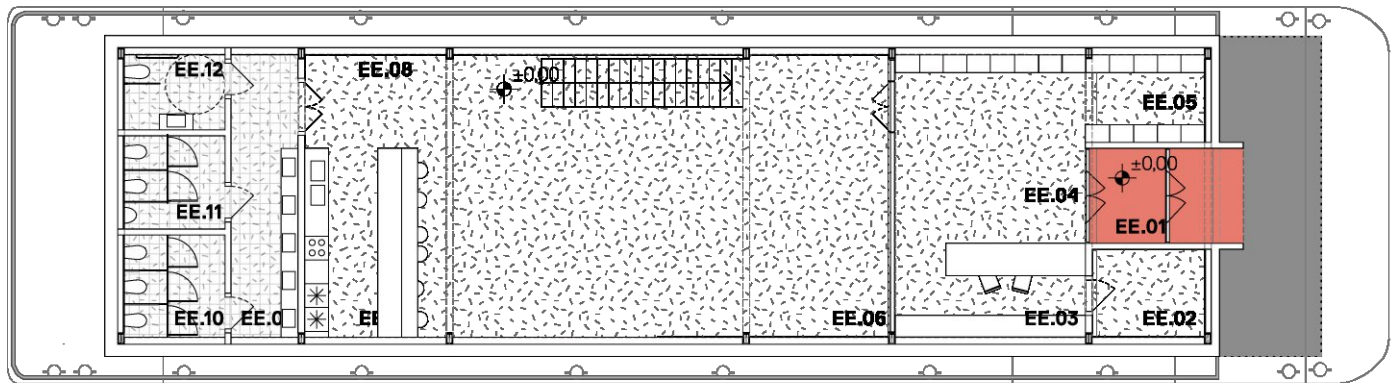
It adds its touch to the diverse fabric of artistic creativity.

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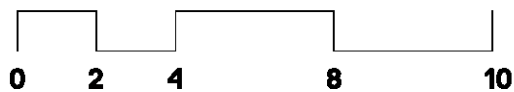
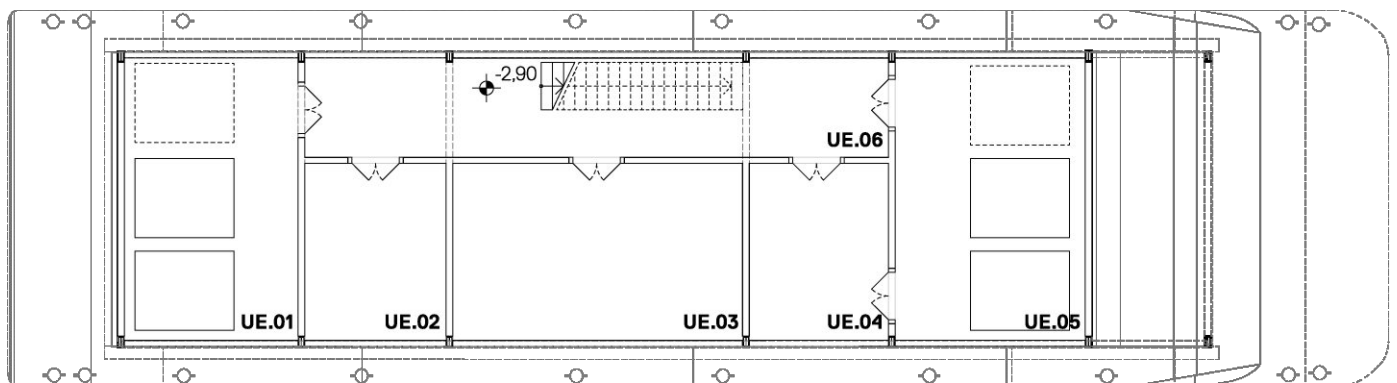
5.2.1 Floorplans



Rooms Entrance Level (EE in German)

NR	Name	Measured Area
EE.01	Entrance Area	4.50 m ²
EE.02	Storage Room	6.30 m ²
EE.03	Information	11.40 m ²
EE.04	Foyer	11.50 m ²
EE.05	Wardrobe	17.30 m ²
EE.06	Exhibition Room	87.50 m ²
EE.07	Café	13.80 m ²
EE.08	Corridor	6.80 m ²
EE.09	Restroom Foyer	12.00 m ²
EE.10	Women's Restroom	6.60 m ²
EE.11	Men's Restroom	6.00 m ²
EE.12	Accessible Restroom	4.80 m ²

Total Area: 188.30 m²

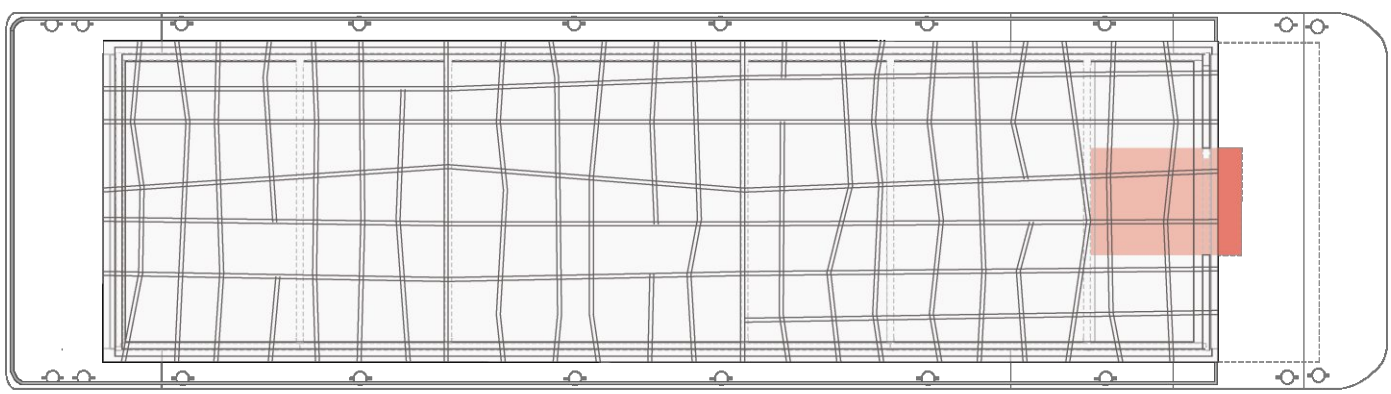


Rooms Lower Level (UE in German)

NR	Name	Measured Area
UE.01	Clean and Black Water Storage	31.30 m ²
UE.02	Storage 1	16.00 m ²
UE.03	Storage 2	32.80 m ²
UE.04	Technical Room	15.70 m ²
UE.05	Fuel Storage	34.20 m ²
UE.06	Corridor	37.00 m ²

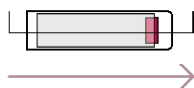
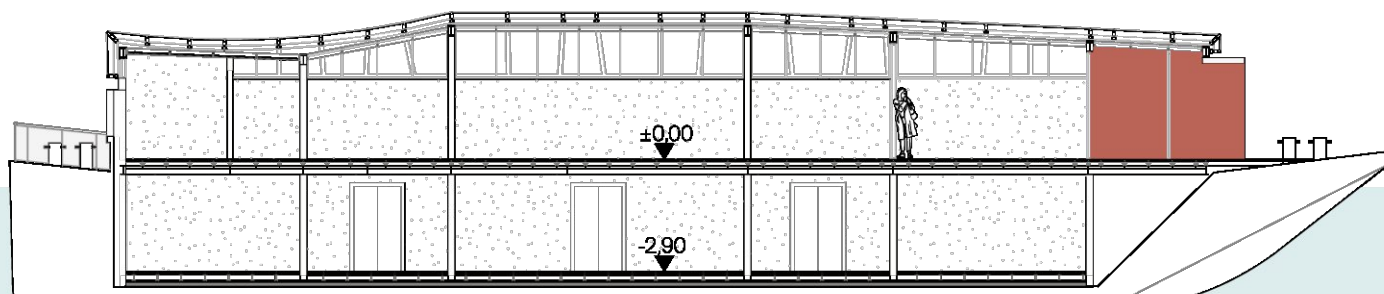
Total Area: 166.90 m²

Plans 18&19 (above and under), Entrance Plan (above) Lower Level Plan

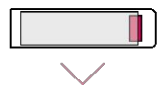
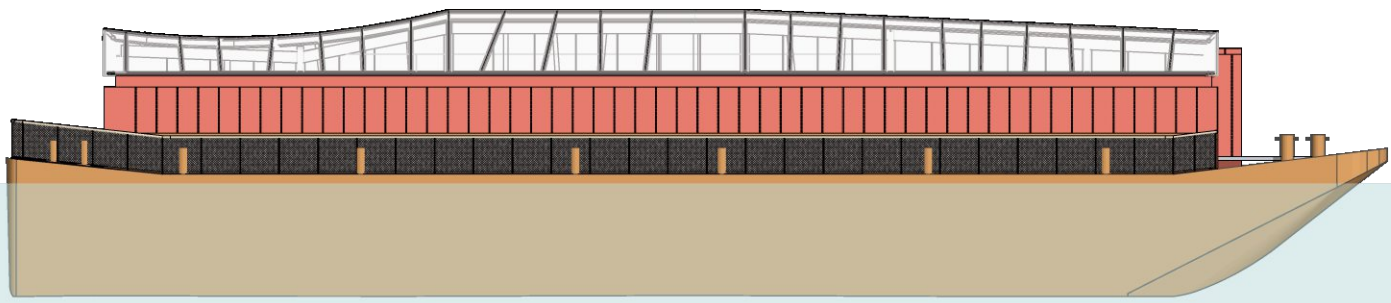


Plan 20, Top Elevation

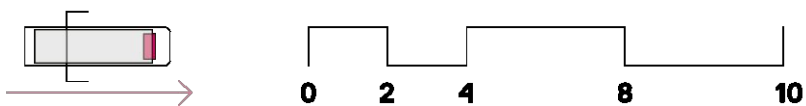
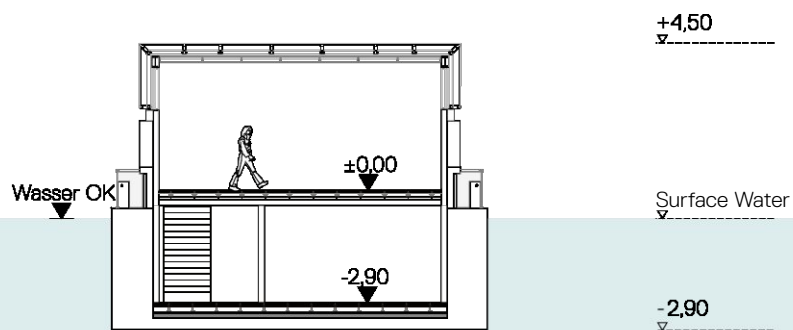
5.2.2 Elevations & Sections

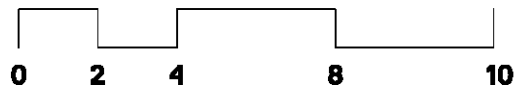
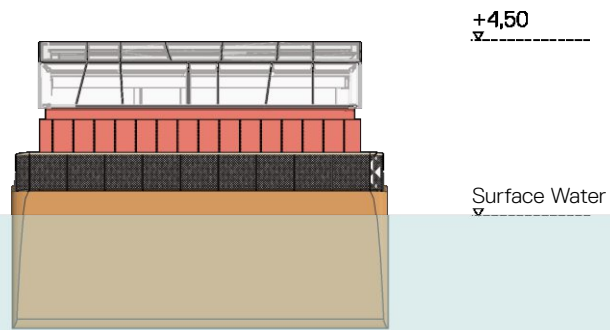


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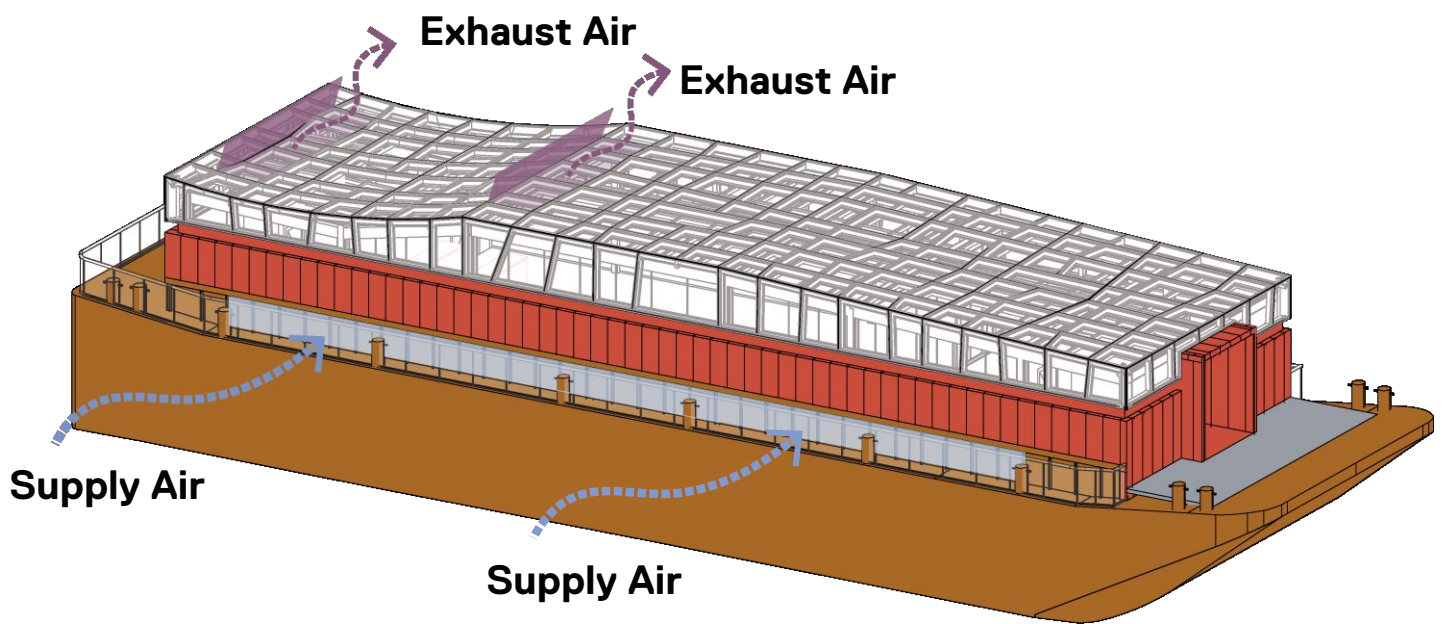


Plan 22, Starboard Elevation

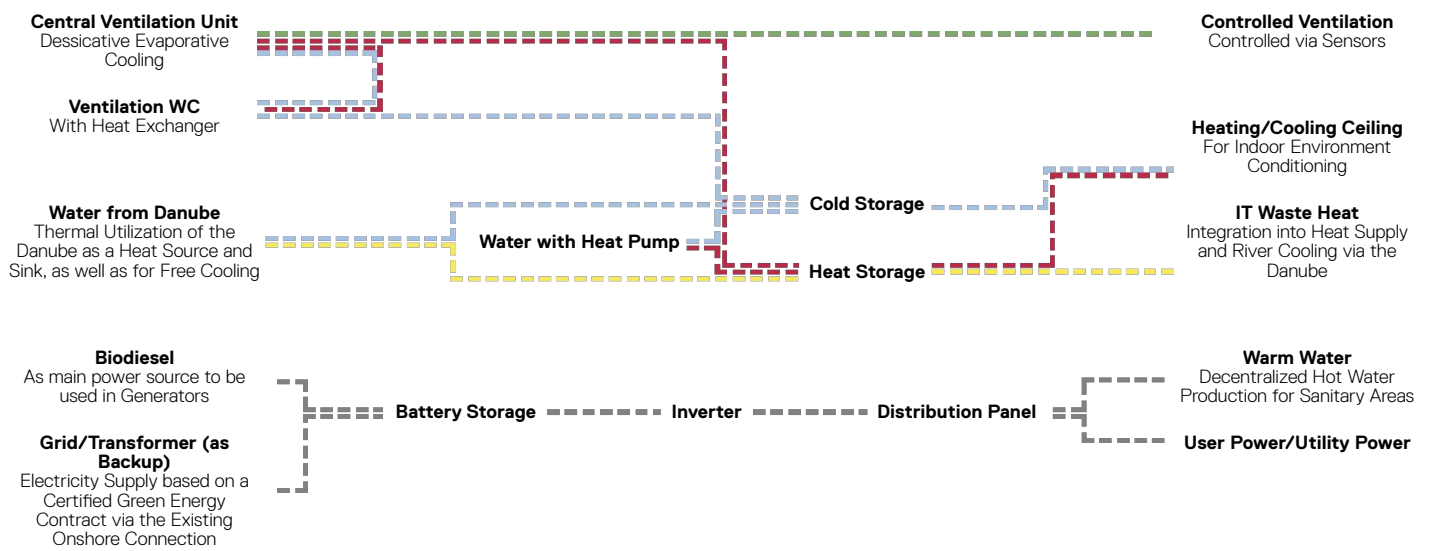




5.2.3 Ventilation Concept



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Rendered Image 14: Both Ships Viewed from Reichsbrücke



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Rendered Image 15, Both Ships





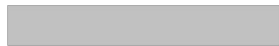
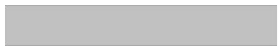






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Rendered Image 16. Both Ships being towed



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	Plot	Open Space	Gross Floor Area (as BGF in German)	
Lower Level	 658,38 m ²		 658,38 m ²	
Entrance Level	 209,43 m ²	 209,43 m ²	 867,82 m ²	
Gallery Level			 94,93 m ²	
Total All Levels	867,81 m ²	209,43 m ²	1.621,13 m ²	









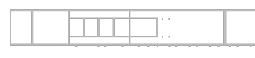



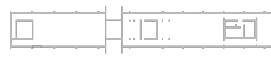



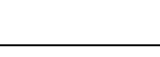
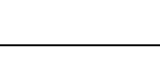
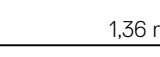



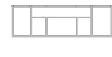






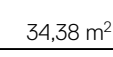
	Plot	Open Space	Gross Floor Area (as BGF in German)	
Lower Level	 228,17 m ²		 184,34 m ²	
Entrance Level	 102,60 m ²	 102,60 m ²	 229,76 m ²	
Total All Levels	330,77 m ²	102,60 m ²	414,10 m ²	

Table 2&3 (above and below), Large Ship Space Evaluations (above), Small Ship Space Evaluations (below)

EVALUATION

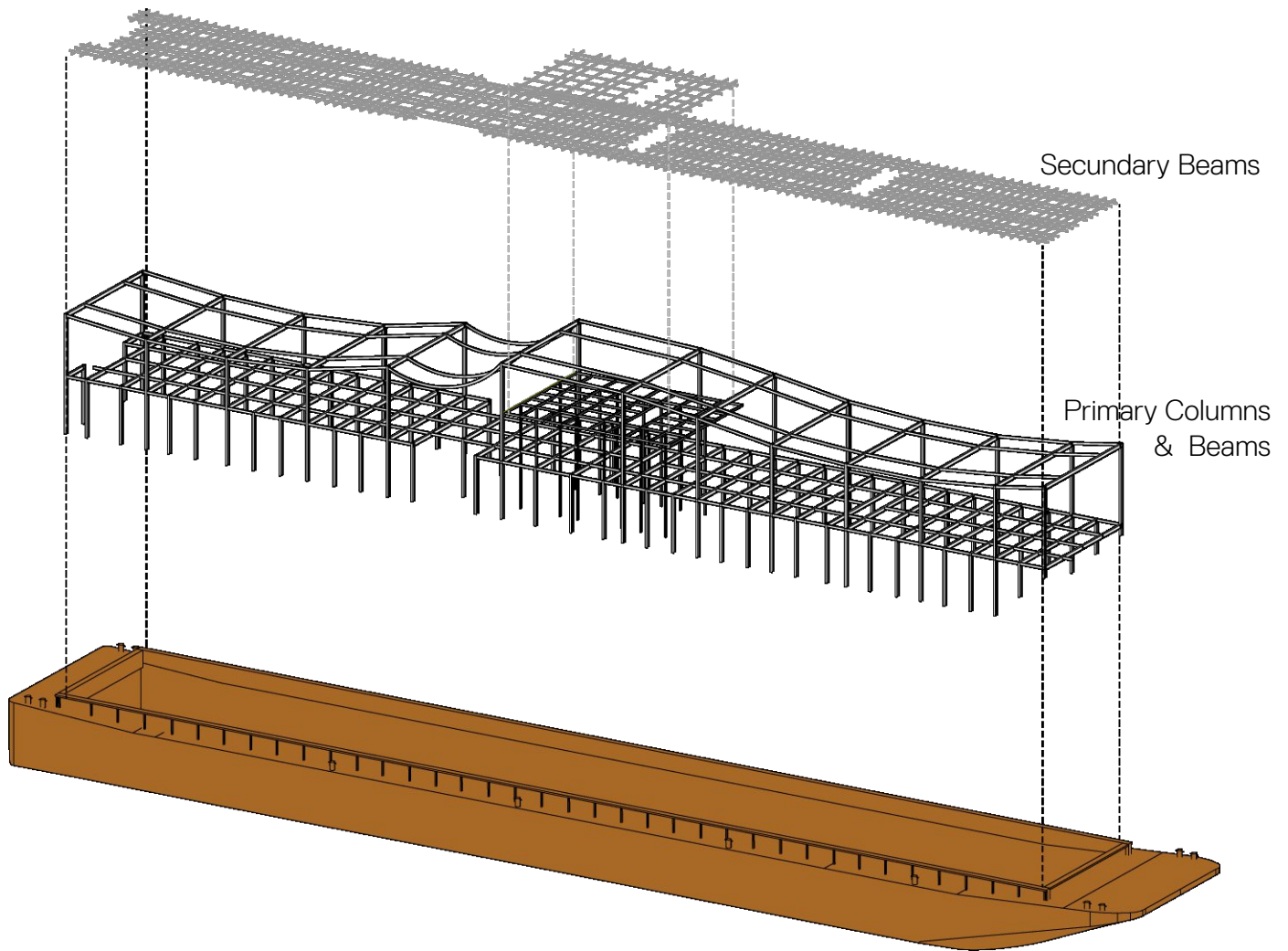
6.1 Surface Area

Usable Area (As NF in German)	Technical Premises and Equipment Area (as TF in German)	Circulation Area (As VF in German)	Construction Area (As KF in German)
 229,56 m ²	 185,51 m ²	 101,01 m ²	 55,01 m ²
 412,28 m ²	 17,35 m ²	 104,80 m ²	 38,57 m ²
 22,87 m ²			 1,36 m ²
 204,72 m ²	 202,86 m ²	 205,81 m ²	 94,95 m ²

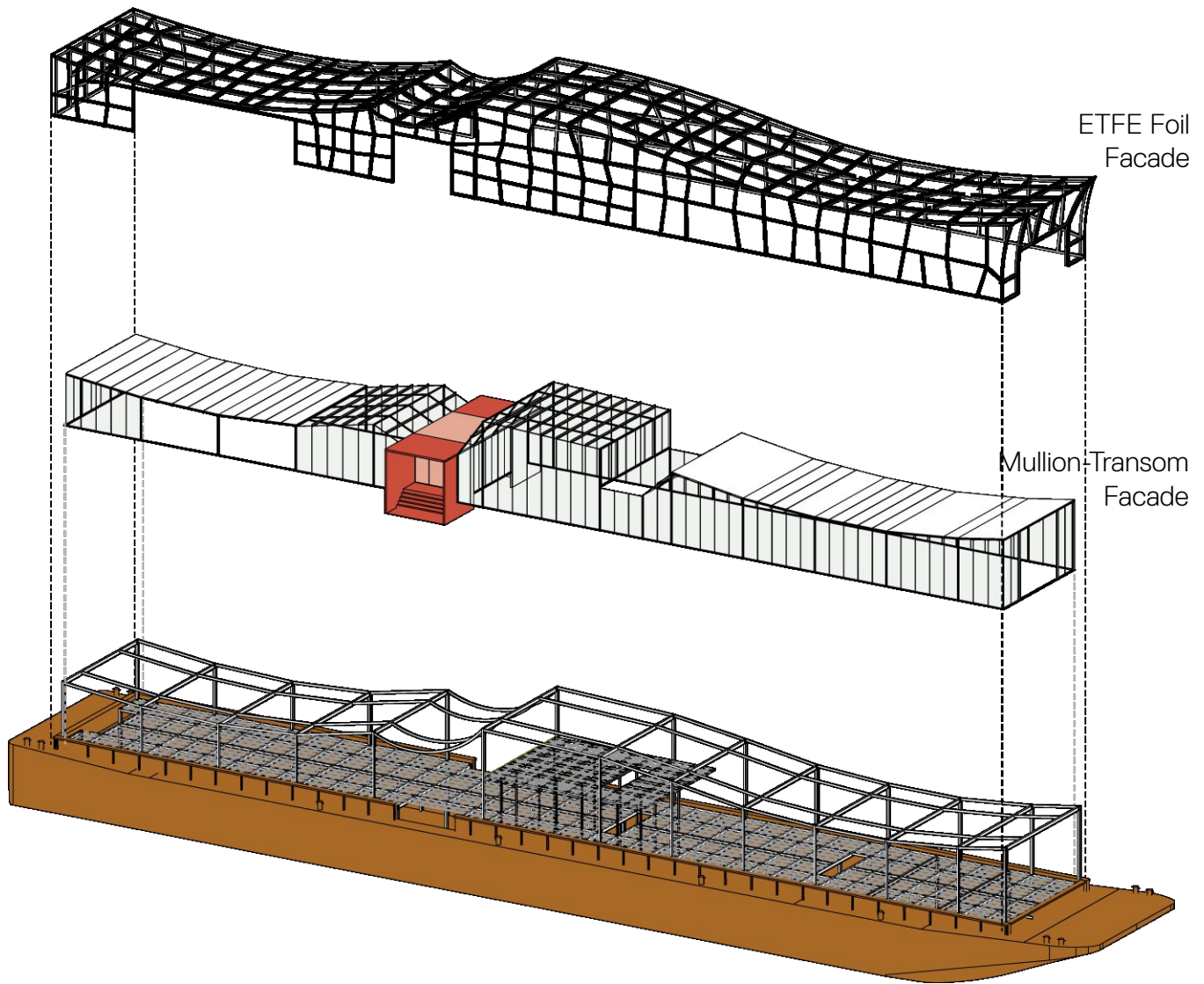
Usable Area (As NF in German)	Technical Premises and Equipment Area (as TF in German)	Circulation Area (As VF in German)	Construction Area (As KF in German)
 18,71 m ²	 81,20 m ²	 36,98 m ²	 16,06 m ²
 57,98 m ²		 34,52 m ²	 18,32 m ²
 106,68 m ²	 81,20 m ²	 71,50 m ²	 34,38 m ²

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6.2 Explosive Axonometries



Plan 27, Explosive Axonometry, Primary and secondary Carrying Structures



6.3 Calculations

6.3.1 Calculations of Loads

Calculation of Loads - Large Ship								
Component	Classification	Pieces	Length [m]	Area [m ²]	Weight per meter [kg]	Weight per square meter [kg]	Weight per unit [kg]	Total weight [t]
Roofing	Glass roof - Multiple Glazing			159,24		50,00		7,96
	Insulated PVC panels			329,36		6,00		1,98
	Flooring Insulation			513,33		126,50		64,94
	Suspended Ceiling			286,21		24,50		7,01
Ceiling and Flooring	Raised Floor			1219,90		39,90		48,67
	Suspended Ceiling Substructure		575,83		2,00			1,15
	Raised Floor Substructure (t=4cm Aluminum Beams)		4597,08		1,74			8,00
Railing	Railing (Interior and Exterior the Same)		234,25		11,30			2,65
Column	Steel Profile IPE 240		398,94		30,70			12,25
	Steel Profile IPE 120		104,00		10,40			1,08
Stairs	Stairs All (Combined)			29,60		32,00		0,95
Beam	Steel Profile IPE 80 (Secondary)		1802,90		6,00			10,82
	Steel Profile IPE 120		158,12		10,40			1,64
	Steel Profile IPE 160		588,87		15,80			9,30
	Steel Profile IPE 240		448,80		30,70			13,78
Door	Single-leaf Door	7					32,50	0,23
	Double-leaf Door	17					65,00	1,11
Wall	LB 10cm Metal Stud Wall			1,10		29,80		0,03
	LB 15cm Metal Stud Wall			16,96		49,00		0,83
	LB 24cm Metal Stud Wall			33,68		55,00		1,85
	LB 30cm Metal Stud Wall			3,62		57,00		0,21
	LB 50cm triple Metal Stud Wall			6,57		63,00		0,41
Exterior Cladding	ETFE Foil 0,25 mm			1312,86		0,43		0,56
	Load-Bearing Steel Structure (ø=11cm)		1014,90		0,44			0,45
Post and Beam Facade	Glass - Multiple Glazing			519,22		50,00		25,96
	Steel Structure Post and Beam		707,19		0,82			0,58
Tanks	Clean Water Tanks	2					5000,00	10,00
	Black Water Tanks	2					5000,00	10,00
	Trim Tanks	4					5000,00	20,00
TOTAL WEIGHT								256,43

Permanent Load (ständige Last) = G₁ = 256,43 t

Payload (Nutzlast) = G₂ = 500 [kg/m²] × 910,53 [m²] (NF+VF)
= 455,27 t

Minimum Load = Permanent Load = G₁ = 256,43 t

Maximum Load = G₁ + G₂ = 711,70 t

Table 4&5 (left and right), Calculation of Loads Large Ship, (Left), Calculation of Loads Small Ship, (Right)

Calculation of Loads - Small Ship								
Component	Classification	Pieces	Length [m]	Area [m ²]	Weight per meter [kg]	Weight per square meter [kg]	Weight per unit [kg]	Total weight [t]
Roofing	Glass roof - Multiple Glazing			194,91		50,00		9,75
Ceiling and Flooring	Flooring Insulation			206,99		126,50		26,18
	Raised Floor			413,98		39,90		16,52
	Raised Floor Substructure (t=4cm Aluminum Beams)		191,94		1,74			0,33
Railing	Railing (Interior and Exterior the Same)		71,26		11,30			0,81
Column	Steel Profile IPE 240		107,53		30,70			3,30
Stairs	Stairs All (Combined)			6,11		32,00		0,20
	Steel Profile IPE 240		107,53		30,70			3,30
Door	Single-leaf Door	4					32,50	0,13
	Double-leaf Door	7					65,00	0,46
Wall	LB 15cm Metal Stud Wall			11,30		49,00		0,55
	LB 24cm Metal Stud Wall			39,22		55,00		2,16
	LB 30cm Metal Stud Wall			10,20		57,00		0,58
Exterior Cladding	ETFE Foil 0,25 mm			324,96		0,43		0,14
	Load-Bearing Steel Structure (ø=11cm)		236,61		0,44			0,10
Post and Beam Facade	Glass - Multiple Glazing			100,81		50,00		5,04
	Steel Structure Post and Beam		272,92		0,82			0,22
Tanks	Clean Water Tanks	1					5000,00	5,00
	Black Water Tanks	1					5000,00	5,00
	Trim Tanks	2					5000,00	10,00
TOTAL WEIGHT								80,02

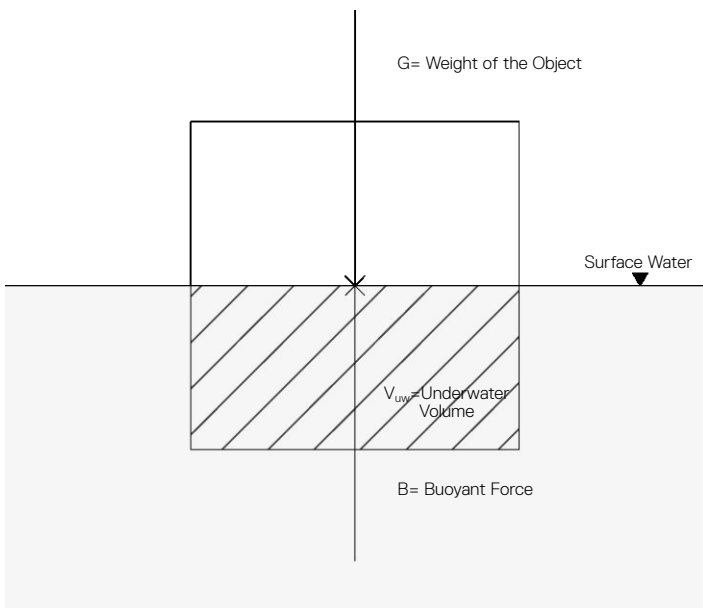
Permanent Load (ständige Last) = G₁ = 80,02 t

Payload (Nutzlast) = G₂ = 500 [kg/m²] × 278,18 [m²] (NF+VF)
= 139,09 t

Minimum Load = Permanent Load = G₁ = 80,02 t

Maximum Load = G₁ + G₂ = 219,11 t

6.3.2 Calculations of Buoyancy



$$B = V \times \rho f \text{ (Density of the fluid)}$$

$$\rho = 1 \text{ [t/m}^3\text{]} \text{ for Water}$$

in this equation;
 $B = V_{UW} \times 1$

G = total load
 $G_1 = G_{min}$ = Permanent Load (ständige Last), Minimum Load
 G_2 = Payload (Nutzlast)
 $G_{max} = G_1 + G_2$ = Maximum Load

$$B = V_{UW} = h_{UW} \times w \times l$$

Load of Buoyancy for the Large Ship:

$$G_{min} = V_{min} = h_{min} \times w \times l$$

$$G_{min} = 256,43 \text{ [t]} \quad \text{-----> the table 6 : } h_{min} \approx 0,335 \text{ [m]}$$

$$G_{max} = V_{max} = h_{max} \times w \times l$$

$$G_{max} = 711,70 \text{ [t]} \quad \text{-----> the table 6 : } h_{max} \approx 0,930 \text{ [m]}$$

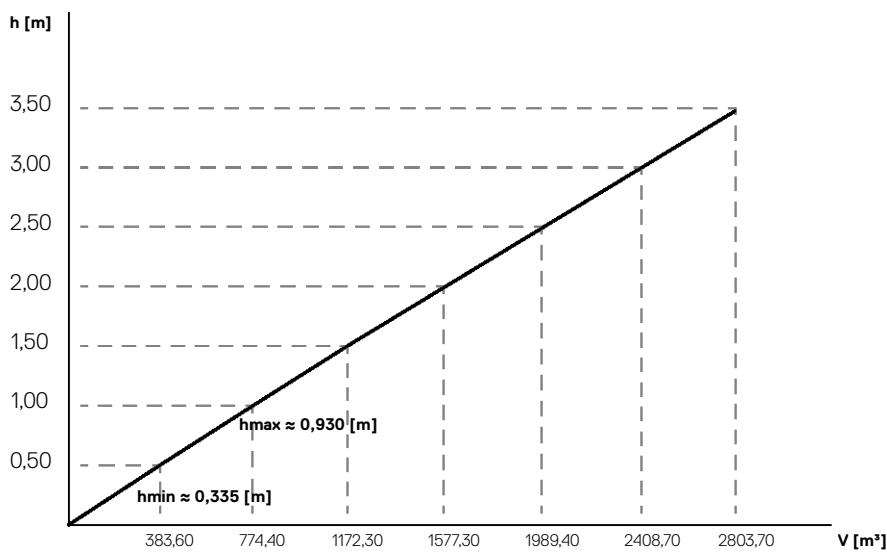
Load of Buoyancy for the Small Ship:

$$G_{min} = V_{min} = h_{min} \times w \times l$$

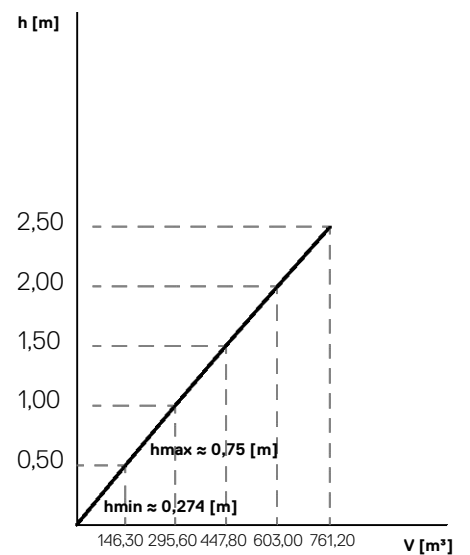
$$G_{min} = 80,02 \text{ [t]} \quad \text{-----> the table 7 : } h_{min} \approx 0,274 \text{ [m]}$$

$$G_{max} = V_{max} = h_{max} \times w \times l$$

$$G_{max} = 219,11 \text{ [t]} \quad \text{-----> the table 7 : } h_{max} \approx 0,75 \text{ [m]}$$

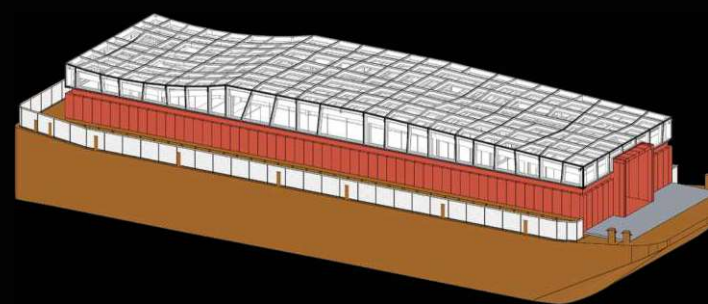


Height of the Volume Under the Water Under Different Forces for the Large Ship



..for the Small Ship

Table 6&7 (left and right), Heights Under Water for the Large Ship (Left), Heights Under Water for the Small Ship, (Right)



Plan 29, Both Ships together Axonometric Views

CONCLUSION & OUTLOOK

In conclusion this Project represents a forward thinking endeavor that intersects art, culture and innovation. It embodies a vision that aims to empower art students and honor the significance of the Danube River. By converting a push barge into an exhibition ship this project provides a platform, for emerging artists to showcase their creativity and establish connections with established professionals in the art industry.

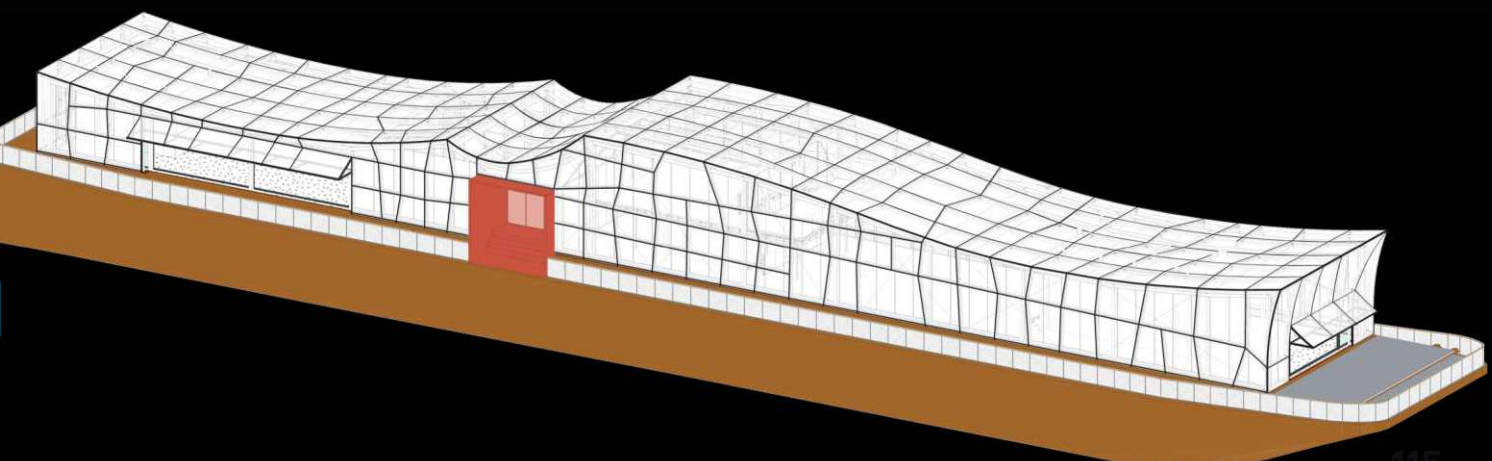
The selection of the Europa II and SL Blumenau push barges, known for their simplicity, practicality and sustainability reflects consideration for efficiency and adaptability. These vessels are not merely functional. Also serve as expressions themselves paying tribute to nature's beauty and reminding us of our interconnectedness.

This project goes beyond art exhibitions by creating a space for introspection, connection and exploration. It nurtures an environment where creativity flourishes effortlessly akin to the flowing Danube River. In doing it promises to rejuvenate the spirits of emerging artists while expanding their visibility, on a wider European scale.

To sum it up „Navigating Artistry“ goes beyond converting a barge into a ship, for exhibitions. It aims to promote cultural connections and embrace the profound significance of change and hidden truths.

The Project exemplifies how art can unite people and cultures offering the potential to make an impact, on the realm of art and imagination.

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