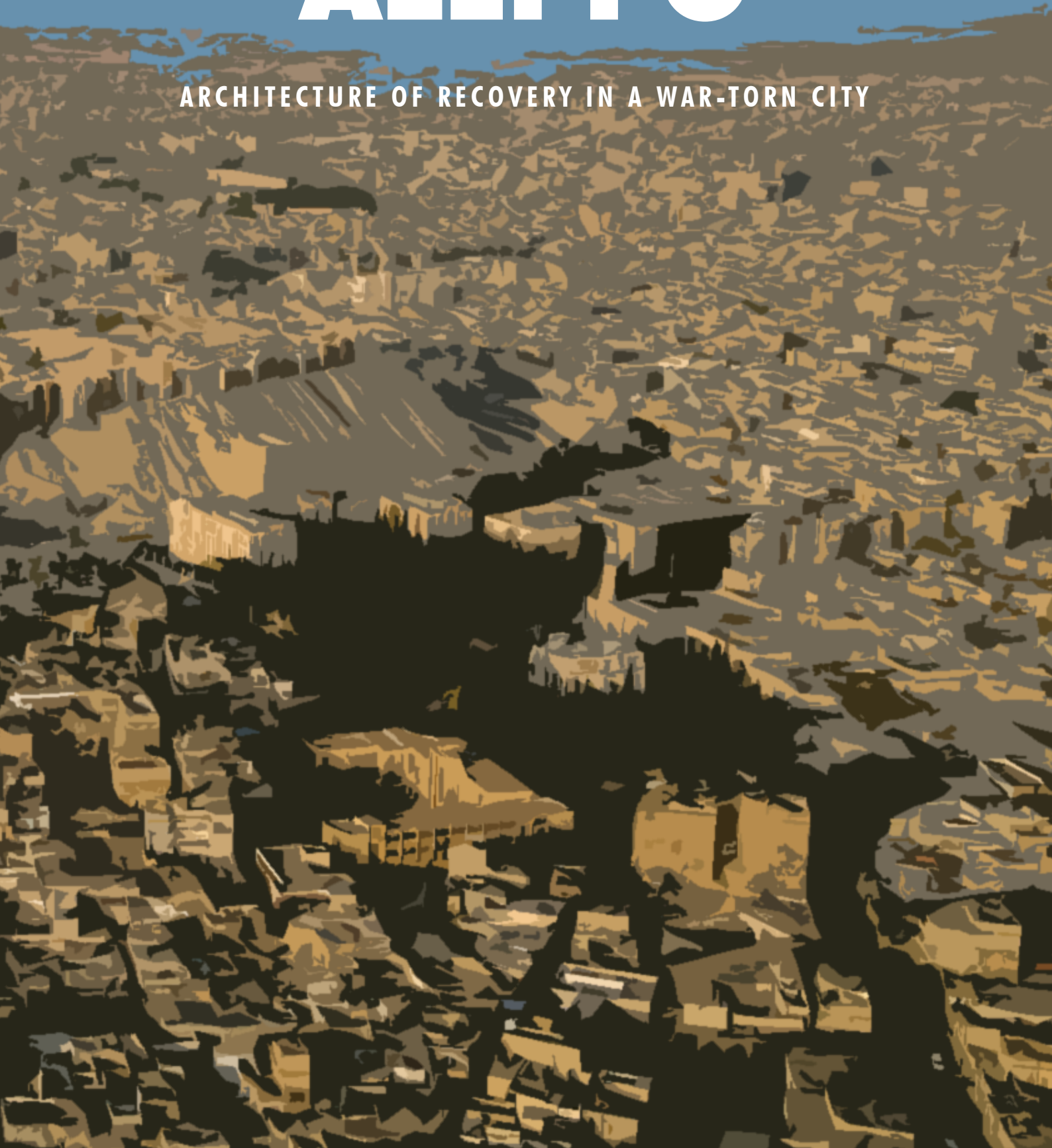
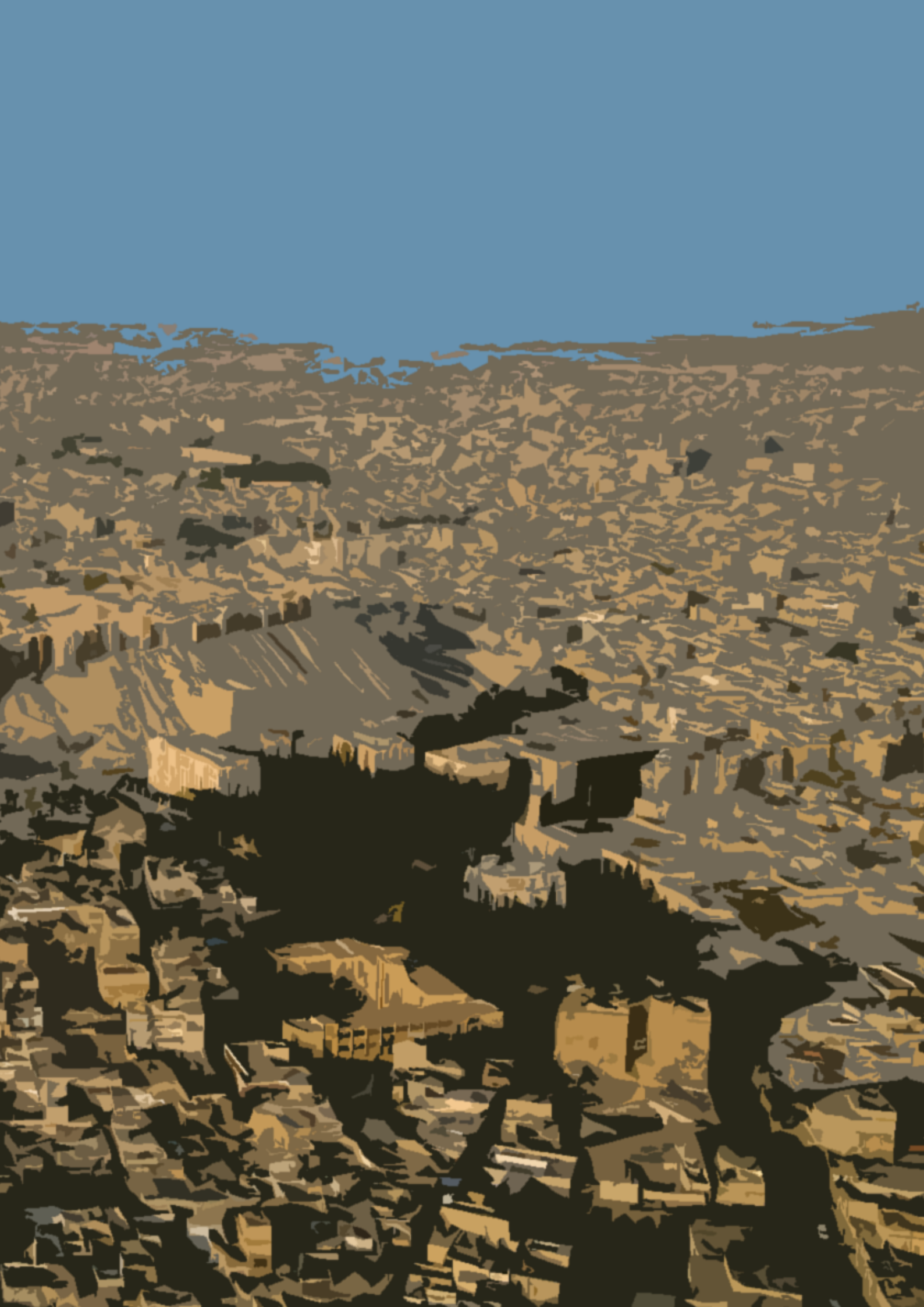


REBUILDING ALEPPO

ARCHITECTURE OF RECOVERY IN A WAR-TORN CITY





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ARCHITECTURE OF RECOVERY IN A WAR-TORN CITY



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Chapter 1 | Introduction



Figure 01. Destroyed street alley in East Aleppo. Residents who have returned to the streets, by Christian Werner, 2017

Background

The topic of the research is post-war reconstruction with preservation of the urban identity. The chosen city is Aleppo, which is one of the oldest continuously inhabited cities in the world, and which has an urban identity that is shaped by centuries of influences from different civilizations. With its roots stretching back over 8000 years, Aleppo has been shaped by different civilizations. Its rich history is reflected in the city's urban identity, also characterized by its iconic landmarks, such as the Citadel and souks. However, the war in Syria, which started in 2011, has brought destruction to Aleppo, with lots of damage to its historic Old City. Years of war have damaged Aleppo's architectural heritage, disrupted its urban fabric, and displaced a big part of the population.

My personal link with Aleppo is the city being my family's home. Since the Syrian war, I have always wanted to work on something regarding the reconstruction of the country. Once, I found on social media a couple of architectural renders that were made by a (architectural) firm from a gulfstate, for a redesign of a neighborhood in Damascus. I was a little bit disappointed as the renders were full of tall, glass buildings that do not represent the architecture of the city. Locals agreed with my position, and said about it: 'that's not Syrian', and they were not happy about how the renders did not look like a Damascene neighborhood at all. This first raises the question; what then is Syrian architecture? And in particular, for this research, Aleppine architecture. It also made me realize how post-war reconstruction is not merely constructing new buildings on top of where the destroyed ones lay, but also restoring the cultural and historical identity of a place that is of importance to the local community. The disappointment of the architectural render of Damascus thus emphasizes how reconstruction should involve more than just modern urban planning, that it should also preserve and integrate the unique characteristics that define the identity of the city. This research focuses on how Aleppo can balance the preservation of its urban identity and the different (political and economic) challenges in post-war reconstruction, particularly through the design of public spaces.

Problem Statement

The war in Syria has caused widespread damage to the city of Aleppo. Big parts of its urban fabric have been destroyed. The destruction of this historical city presents a major challenge in the post-war reconstruction: how to rebuild the city in a way that acknowledges its rich urban identity while also meeting the demands of urban life after the war.

In post-war reconstruction, cities as Aleppo face the challenge of preserving their identity while trying to address the needs of the post-war city. But, Aleppo's urban identity risks being overlooked if introduced to generic, globally influenced modern designs that do not reflect the city's unique character. Previous examples of post-war urban design in other cities, such as in the Netherlands, have shown that the pressures of modernization, and such developments often lead to architectural/urban homogeneity which can result in the erasure of the city's identity. Added to this, the rebuilding process in Aleppo includes even more complexities; of political instability, which Aleppo is facing at the moment, the economic challenges, and the post-war community needs that have to be addressed. Public architecture plays a key role in facing all these challenges, but to achieve a balance between addressing everything mentioned, a thoughtful and context-sensitive approach is required. The problem in this research lies in how to design public spaces in Aleppo that preserve its urban identity, while supporting community healing, and provide resilience against ongoing (political and economic) challenges.

Research Questions

The main research question posed is:

'How can Aleppo's urban identity be preserved in post-war reconstruction, particularly in the design of public spaces?'

To answer the central research question, the following sub-questions have been formulated:

1. *Which elements define Aleppo's urban identity?*
2. *How has the war impacted the site's urban fabric?*
3. *Which role can public architecture play in preserving Aleppo's cultural memory and supporting community recovery during times of political instability?*

The first subquestion focuses on identifying the key architectural, spatial, and cultural components that together make Aleppo's identity unique. The second subquestion investigates the destruction caused by the war and helps understanding how it has altered the urban fabric, in particular at the site that will be chosen for design. And the last subquestion has a more theoretical approach in finding strategies for how public buildings address memory, identity, and resilience to be used then, practically, in the design for the case of Aleppo.

In this research each subquestion will be discussed within its own chapter, starting with question 1 in chapter 2, then question 2 in chapter 3 and finally question 3 in chapter 4. Chapter 5 will be the chapter that implements the research findings into a design concept.

Theoretical Framework

This research is framed by two main themes that are connected in this research: the urban identity of the city and its post-war reconstruction.

Urban identity focuses on Aleppo's unique architectural and urban features such as its historic urban grid, use of local materials, forms and how these can be preserved or adapted in the reconstruction of the city. Christian Norberg-Schulz, in *Genius Loci: Towards a Phenomenology of Architecture* (1979), introduces the concept of 'place identity,' in which he focuses on how architecture and urban form shape the city's spirit. He suggests that the physical and spatial qualities of a city or place contribute to its emotional and cultural significance. In this case of Aleppo, it could for example mean preserving its narrow alleyways, local building materials, courtyard type of houses and souks. This theory also counters approaches that do advocate for architectural homogeneity in post-war reconstruction. Jean-Louis Cohen, for example, in *Architecture in Uniform: Designing and Building for the Second World War* (2011), argues that post-war architecture often sets standardization as a practical necessity, which could be seen in post-war buildings in the Netherlands of the 60s.

Memory and Architecture, by Eleni Bastéa (2004), looks into how architecture interacts with memory, identity, and cultural heritage with as main idea that urban fabric is not just a bunch of functional structures; it is basically a repository of social memory. The book discusses how buildings and urban layouts can help with fostering a community's identity, especially in the aftermath of conflict, where this is at risk of being lost. Further theories of urban resilience can be found in *Naked City: The Death and Life of Authentic Urban Places* (Sharon Zukin, 2010), which argues that reconstruction must also make cities more livable for current populations which would require integration of modern facilities like transportation networks or public services, while making sure they respect the city's historical layout.

In the context of post-war reconstruction, *Post-war Cities: Planning Recovery and Reconstruction* (Ludwig, Alvanides, & Laue, 2024) offers a framework for rebuilding cities devastated by war, and this book in particular includes the case of Aleppo. The text explores how local input and culturally sensitive practices are essential for a sustainable reconstruction, highlighting the need for community engagement to make sure that what is preserved aligns with the values of the locals. *Architecture, Power, and National Identity* (Lawrence Vale, 2008), emphasizes the importance of symbolic recovery in post-war cities. According to Vale, rebuilding iconic structures and spaces that reflect the city's (pre-war) identity can create a sense of continuity or renewal for the locals. In Aleppo, the restoration of the Citadel (which has been ongoing in recent years) for example acts as symbol of collective resilience. So, this plays a crucial role in reconnecting the community with its cultural heritage and building emotional resilience. It helps in

rebuilding a shared sense of identity and hope after the war. Vale also points out that resilience is not just about recreating/rebuilding the past but that it also involves adaptation to the new conditions, so that reconstruction efforts must not only focus on restoring what was lost but also create space for the city to evolve and address the new urban needs, like modern infrastructure and housing, but while maintaining the cultural and historical links.

Architecture and Armed Conflict: The Politics of Destruction (JoAnne Mancini and Keith Bresnahan, 2014) explores the destruction of architecture during conflict and its political, cultural, and symbolic implications of rebuilding in such post-war contexts. The book critically examines how architecture serves in a way as a cultural artifact that gets targeted to erase the city's identity. It also looks into how rebuilding can reshape collective memory. Another theoretical approach relevant to this research is what is argued by Kenneth Frampton in his essay, *Towards a Critical Regionalism: Six Points for an Architecture of Resistance* (1983). He critiques the adoption of global modernism and he advocates for an architecture that responds to the local context. This is thus related to the 'spirit of the place' theory from the book of Norberg-Schulz. Frampton's statement of 'resisting the placelessness' of global architectural trends is in particular relevant here, as it encourages designs that respond to the city's climate, culture and history. In Aleppo's case, this approach could suggest the avoiding of generic, modern design solutions which disregard the city's specific character (for example the glass towers rendered in designs for other Syrian cities).

Lastly, adaptive reuse, which refers to taking existing (damaged) structures and repurposing these for modern uses but while keeping their historical significance, plays another important role in post-war reconstruction, especially in cities with rich cultural heritage like Aleppo. *Conservation and Sustainability in Historic Cities* (Dennis Rodwell, 2007) suggests that adaptive reuse allows for cities to maintain their historical layers but at the same time meet contemporary needs. In Aleppo this could be crucial as big parts of the city have been destroyed, but for example traditional houses, markets, or other public buildings could still be saved and integrated into new urban designs.



Figure 02. Genius Loci – collages of cities, by Anastasia Savinova, 2016

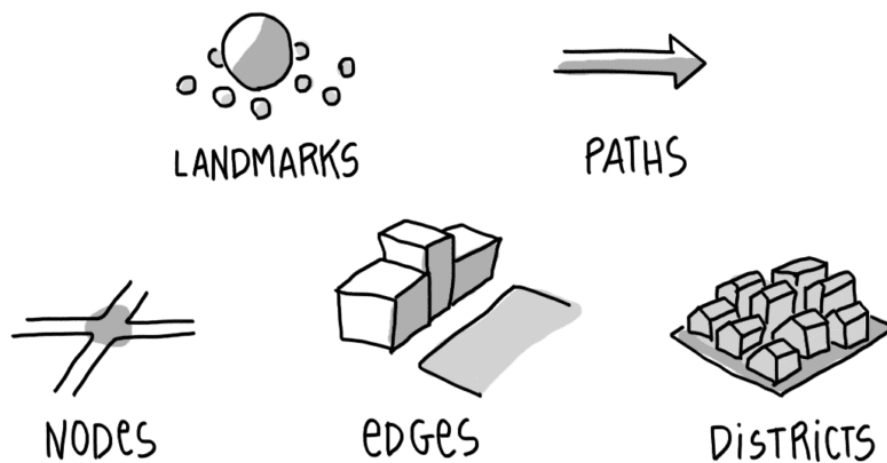
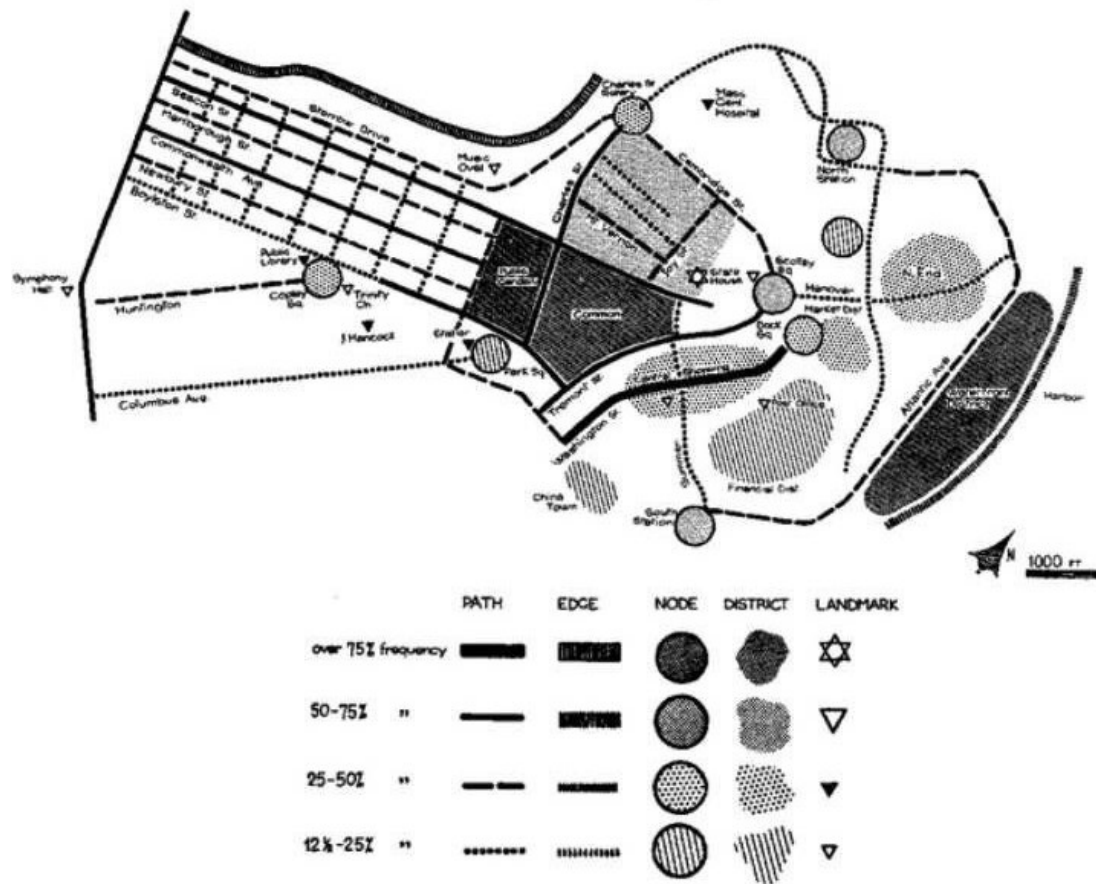


Figure 03. Lynch map and elements, by Kevin Lynch, 1960

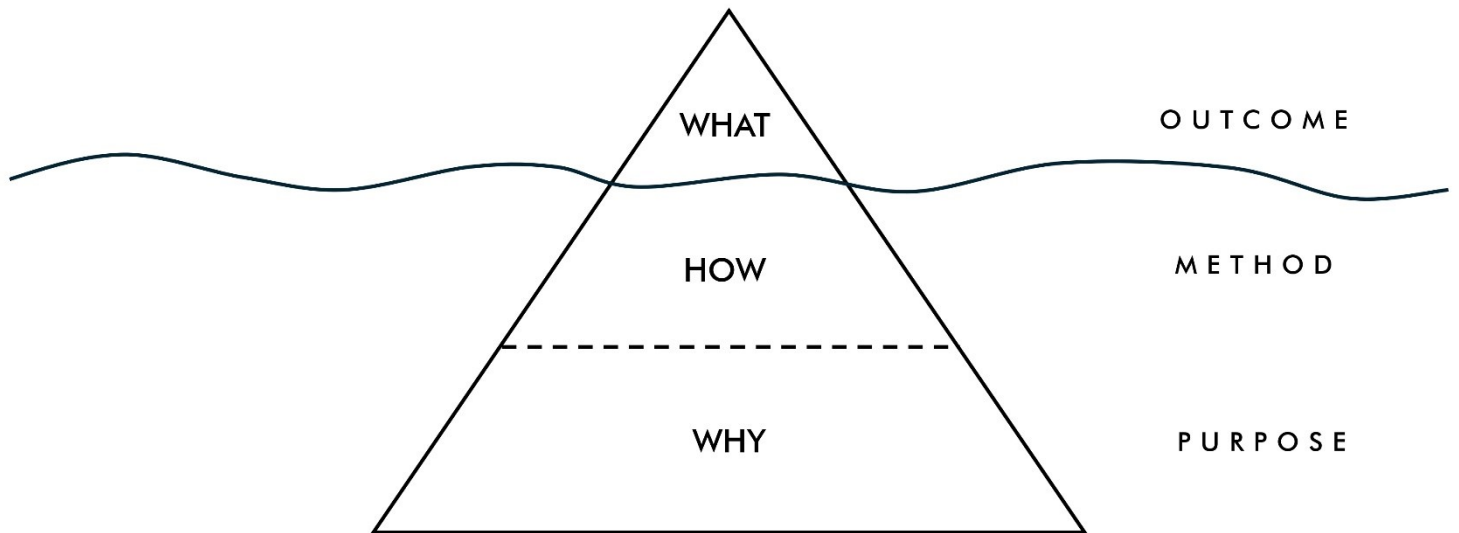
Methodological Framework

The research consists mainly of site analysis and partly literature, in which the site analysis is the main method that consists of multiple sub methods or tools.

The research consists of a site analysis of Aleppo using both primary and secondary data next to the literature that has been mentioned in the theoretical framework section. The site analysis is rather a combination of tools/methods such, such as maps, photographs, architectural drawings, videos, and archival documents to help understand the city and its history better. It also includes different methods of mapping such as the Lynch mapping method. Kevin Lynch's work in *The Image of the City* (1960) emphasizes how cities are perceived and structured through elements such as paths, edges, districts, nodes and landmarks. A method I discovered myself but perhaps is not an 'official' research method, is YouTube 'walkthrough videos'. There are YouTube channels with videos of the person literally just walking through a neighborhood or from point A to point B in Aleppo City with a camera strapped to themselves. These videos are not vlogs, they are really walkthroughs, showing the viewers how one navigates through the city. As there is no Google Street View available for the city of Aleppo, these videos ended up being very useful as a bottom-up tool. I call this method the 'virtual Lynch method'. The overall focus of the site analysis will be to:

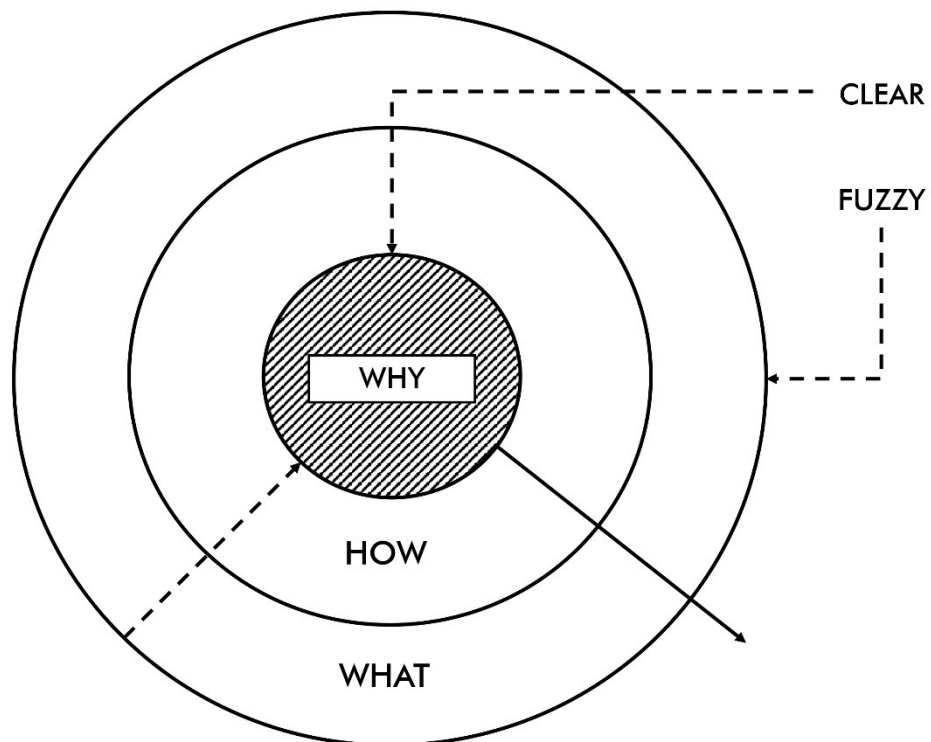
- **Examine urban fabric:** Using maps and satellite images to analyze for example the city's urban grid, infrastructure, street layouts and more.
- **Evaluate the state of destruction and current conditions:** By for example reviewing reports, photographs, and satellite imagery of post-war Aleppo.
- **Identify elements to be preserved:** Focusing on materials, forms, and patterns that define the city's architectural identity, and how these can be used for future reconstruction.

GOLDEN CIRCLE CONCEPT



RESEARCH DESIGN

START WITH WHY



UNDERSTAND WHY... (PURPOSE, CAUSE, BELIEF)

Often, the 'why' is fuzzy, while the 'what' is clear. In design it is common that we have in mind what we want to design and what we want it to look like, but in this research design, I **do not know** what the exact outcome will look like. I **do not yet know what I will be designing**. In this research, the 'why' needs to be clear and the 'what' is still open till research and design starts after P1.

Figure 04. P1 Research Design – Golden Circle concept diagrams, own work

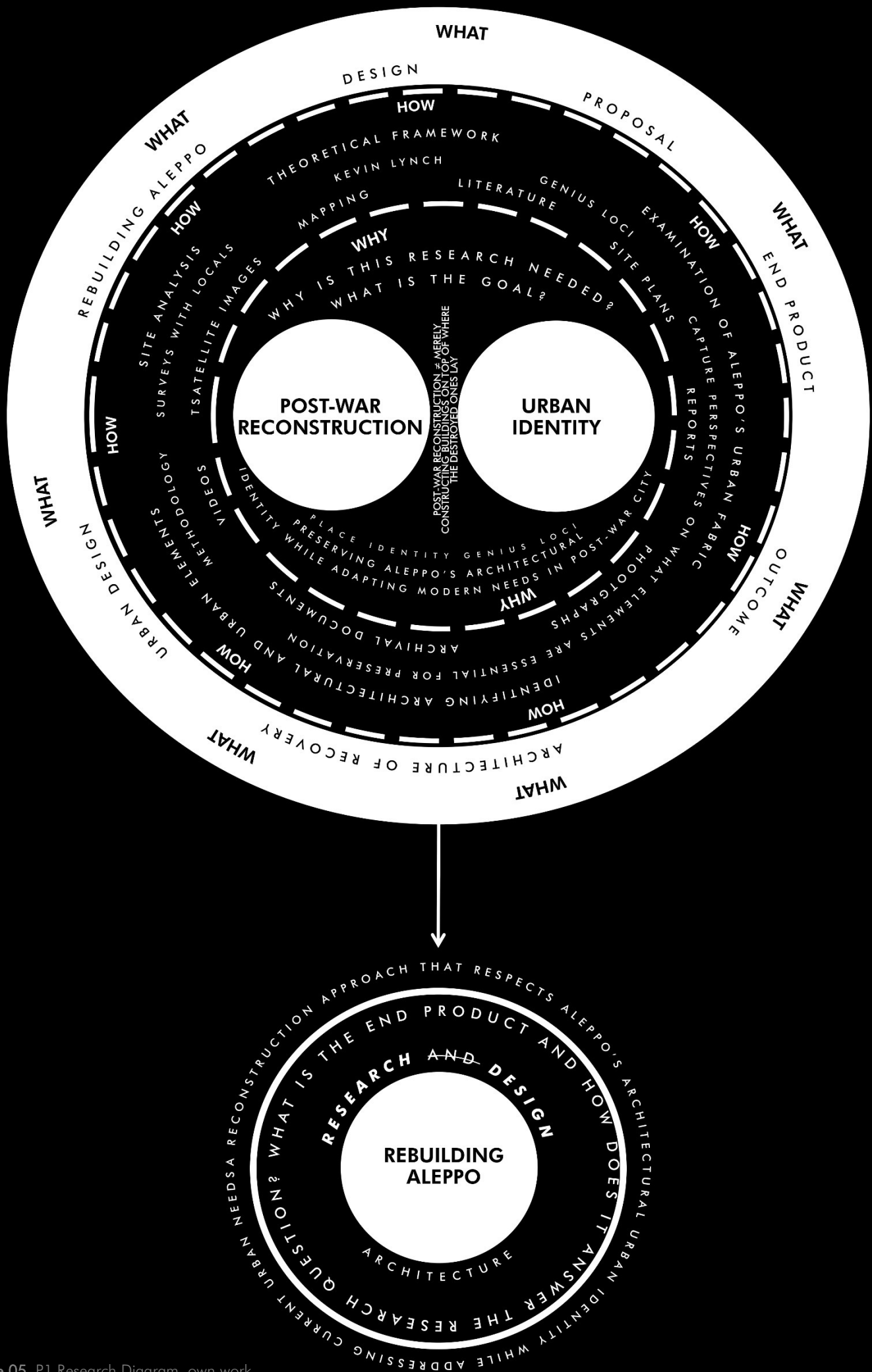


Figure 05. P1 Research Diagram, own work

Relevance

The relevance of the research lies in addressing the challenge of post-war design in one of the oldest continuously inhabited cities in the world while preserving its unique urban identity. Preserving this identity is crucial for maintaining a sense of place. As Lawrence Vale (2008) states in his book *'Architecture, Power, and National Identity'*, the reconstruction of iconic spaces or buildings can help with having a sense of belonging and community resilience among the locals. Public spaces and architecture in Aleppo have historically acted as hubs of trade, craftsmanship, and cultural exchange. Reviving and integrating these functions into design can strengthen social cohesion, reconnect residents with their heritage, and create opportunities for community-driven post-war recovery. Ultimately, this research seeks to contribute to rebuilding Aleppo as a city that is not only functional but also deeply rooted in its identity and traditions, ensuring a resilient and inclusive future for its residents.

Lastly, this research is directly related to my graduation studio, in which I will be designing for the city of Aleppo in parallel with this research. Chapter 5 addresses this part. This research will allow me to apply the insights gained from my research directly to the design. By integrating my findings into my design work, I aim for a more thoughtful and context-sensitive design approach to Aleppo's reconstruction.

GRADUATION

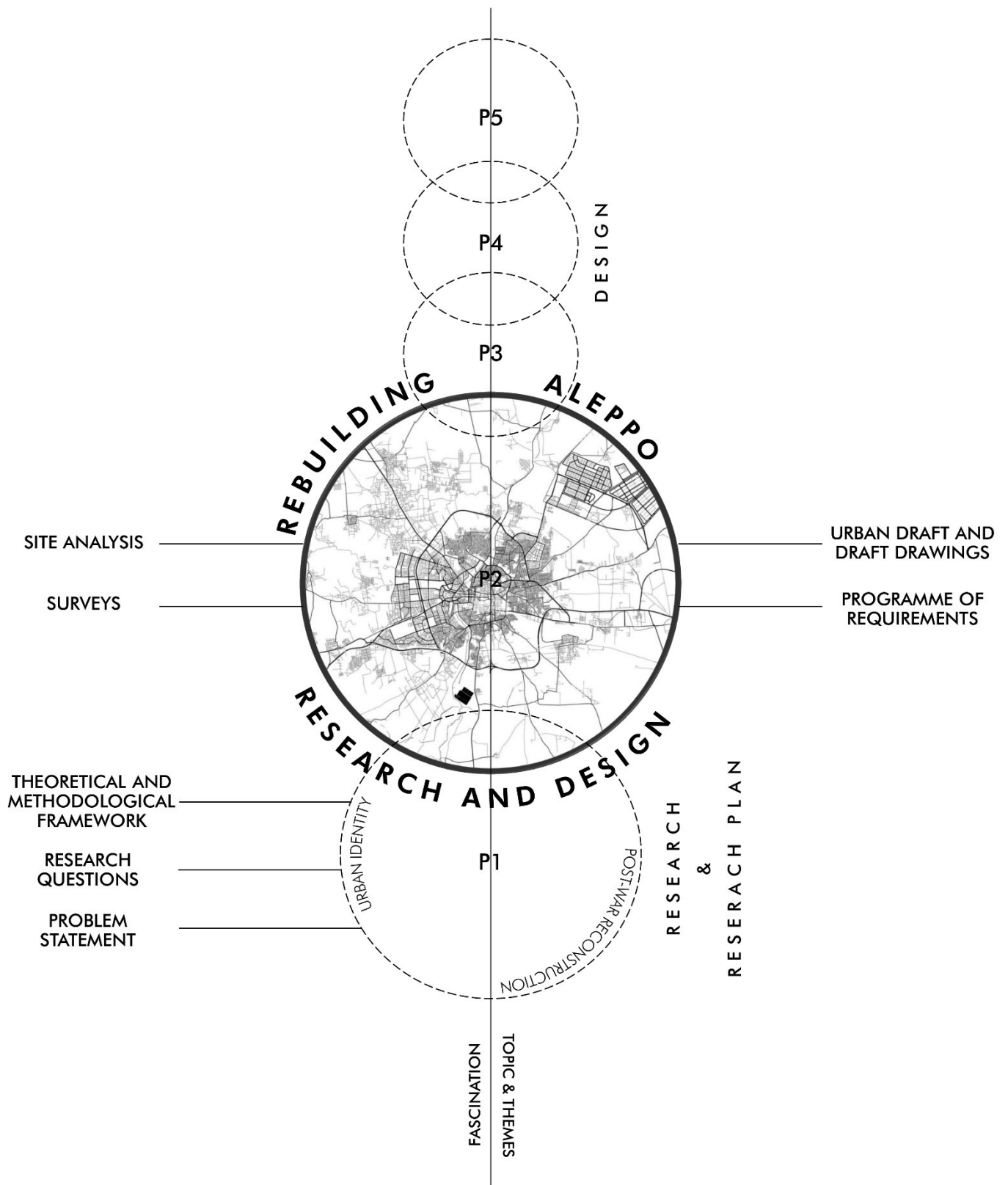


Figure 06. P1 Research Diagram - General Timeline, own work.

Chapter 2 | Urban Identity

Aleppo's urban identity is formed by its architecture, spatial organization, and cultural traditions. Architecturally, Aleppo is defined by courtyard houses, limestone buildings, and iconic public buildings such as mosques, hammams, and souks. The use of for example Aleppine limestone everywhere in the Old City strengthens the city's visual coherence and its adaptation to the hot climate. Elements like mashrabiya also show how the local architecture responded to cultural and environmental needs, such as shading, privacy, and ventilation. In terms of urban structure the Old City is a dense network of organic, narrow streets. Key elements as Al-Madina Souk, and the Citadel act as landmarks, nodes, and edges in Kevin Lynch's framework, structuring how people navigate, gather, and experience Aleppo. The city's cultural identity is rooted in its traditions of craftsmanship and trade, especially those in the souk system that have been passed down through generations.



Key terms breakdown

To start with conducting the research, first the research question needs to be completely clear as it includes terms that are too broad. Breaking down the research question will also help find a design site. The research question can be broken down like this:

‘How can Aleppo’s **urban identity** be **preserved** in **post-war reconstruction**, particularly in the **design** of **public spaces**?’

Aleppo’s urban identity

*The combination of physical characteristics, spatial organization, and cultural practices that make Aleppo unique as an urban environment give the city its unique sense of place. Physical characteristics are defined by for example architectural styles, materials and landmarks. Norberg-Schulz, in *Genius Loci: Towards a Phenomenology of Architecture* (1979), emphasizes that urban identity is closely connected to the spirit of place, which comes from the relationship between the built environment and the human experience. Spatial organization is the structure of streets, districts, and open spaces that shapes how a city is perceived and navigated. Kevin Lynch, in *The Image of the City* (1960), identifies 5 key elements (landmarks, nodes, paths, edges and districts) that define how people navigate through and interact with the city.*

Urban identity is also shaped by non-physical elements, such as social interactions, cultural practices, and the historical narratives that can be found in the urban spaces.

URBAN IDENTITY

Preservation of Aleppo’s urban identity

*Preservation involves maintaining but also reviving the physical and cultural characteristics of the urban area to ensure its continuity over time. Important elements are restoration, adaptive reuse, and cultural continuity. As Kenneth Frampton (*Towards a Critical Regionalism*, 1983) explains, preservation with local materials and techniques ensures both authenticity and respect for identity of the region. Adaptive reuse means reinterpreting existing structures for new purposes. Eleni Bastéa, in *Memory and Architecture* (2004), emphasizes how adaptive reuse is a way to ensure that architectural memory remains alive and relevant, as it integrates the past into the present. Lastly, preservation goes beyond the physical buildings, to include the cultural and social functions of urban spaces. Sharon Zukin argues this also in *Naked City: The Death and Life of Authentic Urban Places* (2010).*

PRESERVATION

Post-war reconstruction of Aleppo

The process of rebuilding Aleppo after the destruction caused by the war, with a focus on physical, cultural, and social recovery. Firstly, that includes physical rebuilding; reconstructing damaged or destroyed buildings, infrastructure, and public spaces. But beyond physical rebuilding, reconstruction involves restoring a sense of community and collective memory as well. This point is mainly argued by Bastéa (Memory and Architecture); how cities are not just physical entities but also collections of identity, making reconstruction a deeply symbolic process.

POST-WAR RECONSTRUCTION

Design of public spaces

Design in this context of reconstruction refers to the urban planning and creation of spaces that respond to both the historical context of the city and requirements of the citizens. In this case it is context-sensitive design; design that respects the historical and cultural context of the city and that involves integrating local materials, forms, and spatial patterns into new urban and architectural developments.

DESIGN

Public spaces

Spaces accessible to everyone, that could be serving as hubs of social, cultural, or economic activity which could be both an open or enclosed space. Public spaces, such as markets, plazas, parks, or public buildings are central to defining the city's character. Lynch (The Image of the City) describes them as nodes where urban experiences come together. As Zukin (Naked City) notes, these serve as spaces for cultural exchange, social interaction, and community building. In post-war contexts, public spaces could serve as a symbol of resilience and recovery, such as the Hiroshima Peace Memorial Park.

PUBLIC SPACES

The spirit of place in Aleppo

The concept of *Genius Loci*, which literally means the "spirit of a place," in this research is used to help understand Aleppo's urban identity. It refers to the unique character and identity of a location, shaped by its physical, cultural, historical, and social elements. Norberg-Schulz (1979) describes this as the qualities that define a place's emotional and cultural significance. For Aleppo, these qualities are deeply embedded in its unique architectural styles, spatial organization, cultural practices, and the city's historical narratives.

Physical manifestation of Aleppo's Genius Loci

The physical environment of the city plays a major role in its *Genius Loci*. The city's historic architecture, which is characterized by the use of limestone and its sandy/beige color, gives the buildings a distinctive, soft, luminous hue, see image below. This material not only defines Aleppo's aesthetic identity but has multiple functional purposes, such as providing thermal insulation because of the thick layer, and durability. Most of the landmarks in the Old City are made of this material and have been standing for hundreds of years. The traditional architecture of Aleppo further often has elements as vaulted ceilings, domes, and thick walls, which also help with regulating indoor temperatures and offer climate comfort in both summer and winter.



Figure 07. Al-Atroush Mosque, by Daniel Demeter, 2014

The traditional houses that are designed around inner courtyards reflect an adaptation to the local climate, being naturally ventilated, see figure 09. they also ensure privacy while being social focal points as well, as they function as kind of living rooms where families gather. Within the courtyard house, the courtyard is the *node*, according to Lynch's theory.

Outdoor public spaces, such as the covered souks, which are *nodes* as well according to Lynch, together with the narrow alleyways, which are *paths*, of the Old City, create an intimate urban experience. The design of the souks, often covered with vaults, helps manage the intense sunlight while creating a unique atmosphere of semi-darkness that enhances this sensory experience. This can be seen in the image below. The souks are also organized based on trade, with each section dedicated to specific trades, such as textiles, spices, soap, or metalwork. This spatial organization reflects the city's historical role as a key node on the Silk Road and a center of commerce and craftsmanship. Its narrow corridors, Lynch's element of *paths*, are situated in between tightly packed shops which create an engaging experience for its visitors. The sensory experience gets stronger with the blending of scents, of for example the spices, and all the sounds of the people, and the sight of all the goods.



Figure 08. Souk al-Shouneh, built in 1546. Currently functions as a market for trades and traditional handicrafts of Aleppine art, by Nina Pearson, 2019



Figure 09. "Museum of Popular Tradition", or "Ajikbash House", in Aleppo, by Huldra, 2001



Figure 10. "The streets of the Old City of Aleppo are deserted in the early morning hours where the inhabitants rise as lazily as the sun through the narrow streets", by Zishan Sheikh, 2009

Urban organization

The element of the *path* in the Old City of Aleppo comes in the form of a labyrinthine-like street network with organic patterns. The dense urban fabric has lots of narrow alleyways. These typical narrow paths in the Old City rather give a sense of enclosure and cause more social interaction while the inside of the houses, as mentioned before, ensures privacy. Again there is a reflection to the local climate as these narrow paths block most of the sunlight.

In Aleppo, *landmarks* such as the Al-Madina Souk and the Great Mosque serve as both practical waypoints and cultural key points. The Souk, for example, is an actual neighborhood, a *district*, within the city that leads to the Citadel.

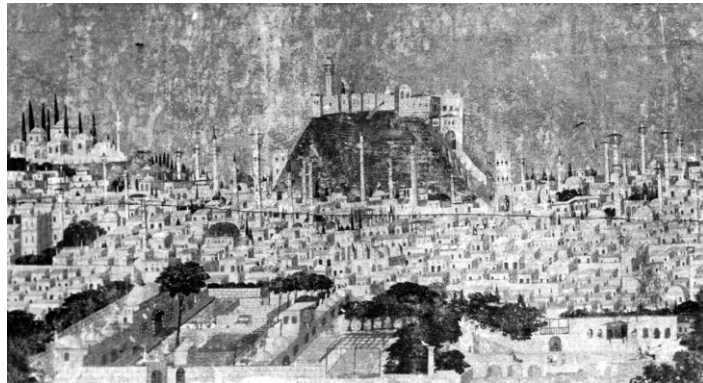


Figure 11. Aleppo Citadel painting by Murad al-Hamawi, 1700s

At the heart of Aleppo is located its Citadel, a fortress that not only dominates the city's skyline but also serves as a constant reminder of its historical significance and resilience of battles, invasions or natural disasters. In Kevin Lynch's *The Image of the City* (1960), edges are important elements in the perception and organization of urban spaces. The Citadel's walls act as an important edge, both visually and spatially separating the fortress from the rest of the city and drawing attention to its importance.



Figure 12. Aerial Photograph of the Citadel in Aleppo, by Écochard, 1936

Cultural and social factors

Aleppo has always been a cultural crossroads that is shaped by centuries of trade and different civilizations. These cultural factors are still in the city's traditions, as for example, Aleppo is globally recognized for its soap-making. The famous Aleppo soap for instance, is still being made in the same traditional way. Such practices have been passed down through generations and serve as symbols of its identity.

As for public spaces like markets and plazas, these have always functioned as hubs for trade, interaction, and communal activities. The city historically was a crossroad of trade, including the Silk Road. The souks, with their distinctive scents, sounds, and textures, reflect this role as a center of commerce and craftsmanship. Within Lynch's framework, the souk itself is a *district*, but its different souks act as *paths* as well, guiding the movement through the city while connecting its districts and landmarks such as the Great Mosque and the Citadel.

Similarly, public squares and spaces around landmarks, such as Saadallah Al-Jabri Square or the Citadel's perimeter, play the role of *nodes*, gathering points where activities happen, and the city's social and cultural life blooms. In the evenings, these spaces come alive as the locals gather to socialize, share meals, celebrate events, and enjoy the cooler hours of the day. On the image below can be seen how locals take chairs from home to gather in the public space and how the edges, the outer walls of the Citadel, are completely occupied by the people to sit on as well. Where in the morning or afternoon the perimeter consists of lots of empty benches, at night the perimeter is crowded and the benches do not draw much attention because of the dynamic social scene the perimeter becomes, see image below.



Figure 13. Citadel perimeter at night, by Safartas, 2024

Elements of Aleppo's urban identity

Having set a framework for urban identity and its relationship to the concept of the *Genius Loci*, this section gets into the specific elements that define Aleppo's distinct urban character. These elements provide the foundation for preserving the city's identity in post-war reconstruction. By identifying these components, the research directly addresses the first sub-question: *Which elements define Aleppo's urban identity?*

Architectural Identity

Aleppo's architecture is perhaps its most defining feature. Courtyard houses, an integral part of Aleppo's residential urban fabric, especially in the Old City are designed with a balance of privacy and communal living while addressing the climatic needs of the region. These houses are typically inward-facing, with rooms organized around a central courtyard. The courtyards often include elements such as a fountain, trees, or seating areas, creating microclimates that help regulate temperature in the hot environment.

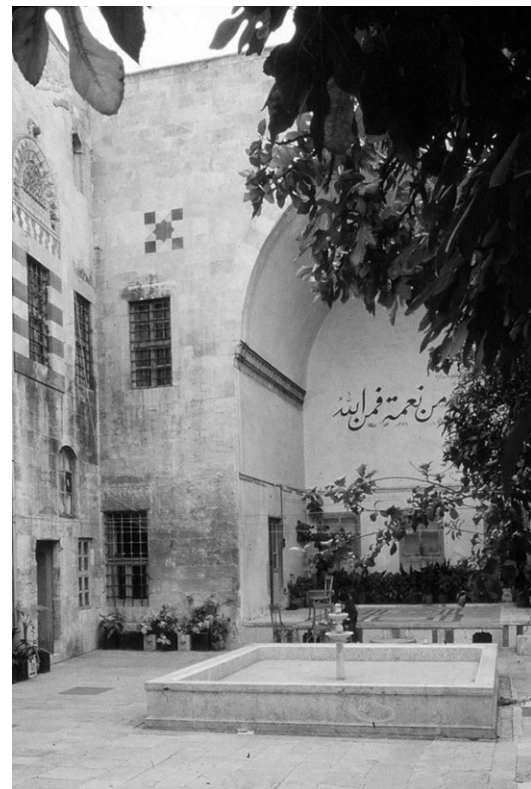
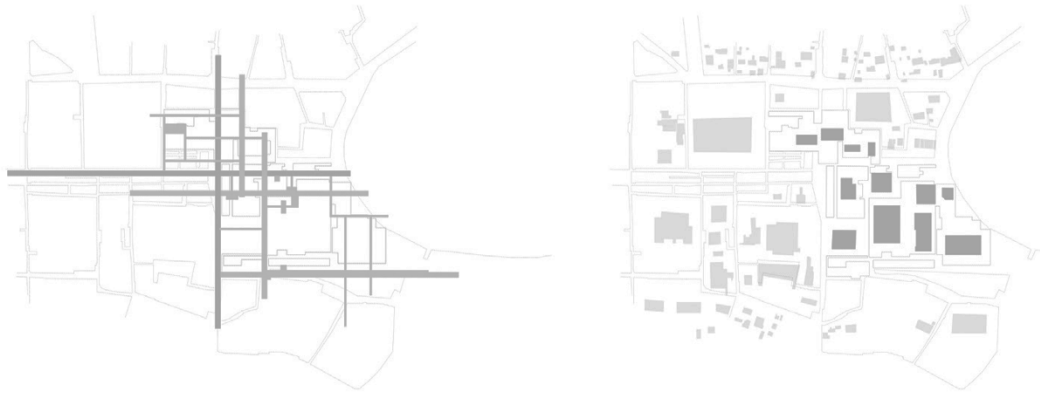


Figure 14. Bayt Maktabi photographs and axonometric, by Stefano Bianca



Another defining architectural typology of Aleppo is the linear structure of the souks, which follow a narrow, elongated spatial layout, often intertwined with khans, mosques, and hammams. They represent both the Lynchian 'path' and 'node' element, guiding movement through the city while being points of intersection in public life.

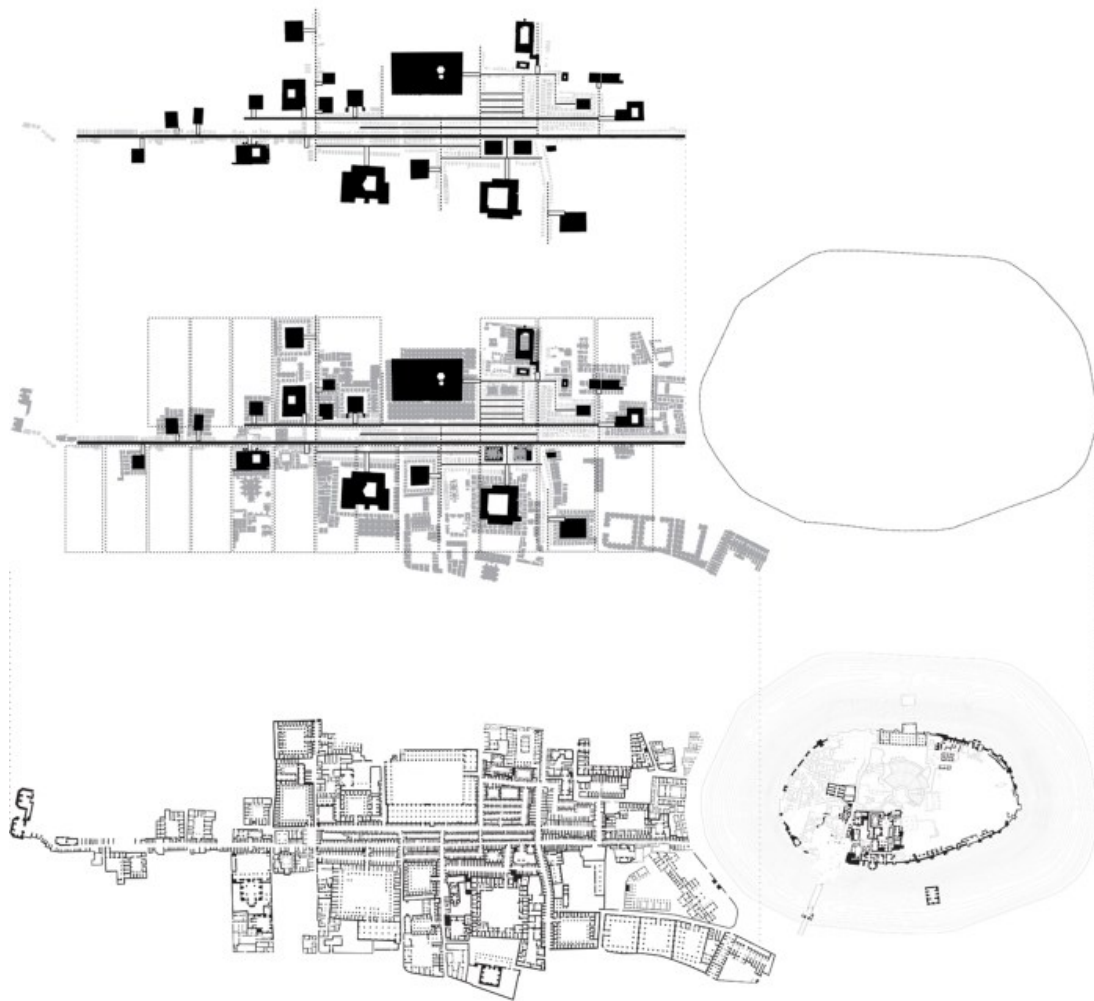


Figure 15. Structure of the souk, by Flavio Menici, 2020

The mashrabiya is a traditional architectural feature that can be found in many of Aleppo's historic buildings, particularly in the Old City and its traditional courtyard houses. It is a wooden lattice window or sometimes comes in the form of a balcony, often enclosed and projecting from the façade, which has both a functional and aesthetic purposes.

In Aleppo, mashrabiya were commonly seen in Ottoman-era houses they played an important role in climate control, privacy, and social customs. The wooden screens allow for natural ventilation, helping cool interiors during the hot summers by allowing airflow while keeping the sun out. They also provide privacy, particularly for women in traditional households, allowing them to observe the street without being seen.

Beyond their functionality, mashrabiya in Aleppo were also important elements of craftsmanship. They are often ornately decorated with geometric patterns and carvings, which really shows the skill of the local artisans. Many historic mansions, such as those in Jdeideh and Al-Jamiliyah, feature these wooden structures as part of their façades.

Figure 16. Mashrabiya on old houses in Aleppo, by Eric Lafforgue, 2012



The Citadel is the major landmark of Aleppo, dominating the city's skyline, it is a symbol of the city's historical and defensive significance, serving as a prime focus for Aleppo's urban structure, both visually and spatially. Most of the structure of the Citadel as it is known has been standing for almost a thousand years and that is why it has multiple architectural styles.

Built on top of a natural hill in the middle of the city, it has served as a defensive stronghold, as a political center, and lastly a cultural symbol. Its massive limestone walls, fortified entrance, and gates reflect its strategic importance, as it was continuously expanded by the Ayyubids, Mamluks, and Ottomans. Beyond its military function, the Citadel also played a civic role, housing mosques, palaces, and water cisterns within its walls.

Urbanistically, the Citadel's presence influenced Aleppo's street network, with roads and markets as the Aleppo souks developing around it. As a UNESCO World Heritage Site, it represents the city's layered history and architecture but also the city's resilience as it has been standing for almost a thousand years.

Figure 17. Aerial view of the Citadel, by Yann-Arthus Bertrand



Hammams, or public baths, are another significant architectural typology in Aleppo. The architecture of a hammam typically includes a domed roof with small, star-shaped openings that allow natural light to filter through. The sequential layout of hot, warm, and cold rooms is carefully designed to guide users through a process of relaxation and rejuvenation.

Hammam Yalbugha, one of the city's most famous and oldest, incorporates carved stonework and geometric patterns on its walls and ceilings. Within the city, the hammam is a landmark, but like the mosque it is a place where locals gather so it can be seen as a node as well.

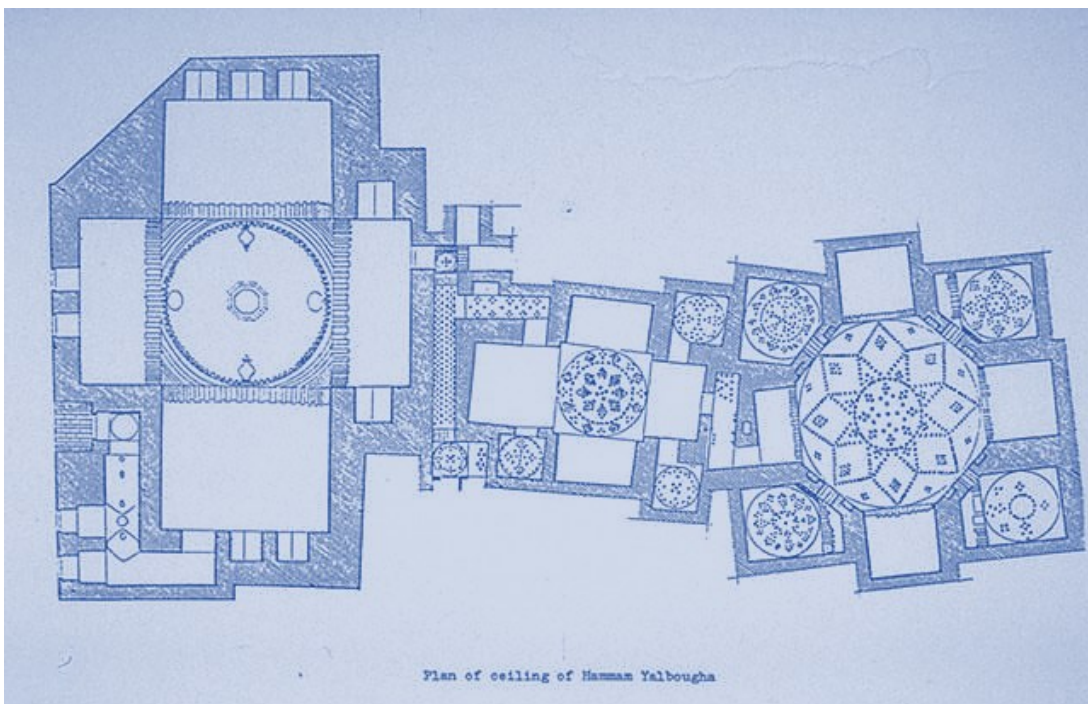


Figure 18 & 19. Hammam Yalbugha, by Iad, P., 2011 & Hammam Yalbugha ceiling plan, by Aga Khan Award for Architecture, 1989

The Aleppine limestone is a distinctive material, used for the buildings in the Old City, that gives Aleppo its recognizable visual identity. Its soft beige/sandy warm tones help in reflecting sunlight. Its durability and insulating qualities fit the local climate as well.

Lastly, craftsmanship of the Old City of Aleppo's architecture can be seen in the detailed stone carvings and ornamentation that are for example on facades, arches, and doorways. These elements often have geometric patterns, arabesques, and floral motifs, which shows the artistic traditions and

technical skills that were passed down through generations, mostly from the Ayyubid rule (12th -13th century) to the Mamluk rule (13th – 16th century).

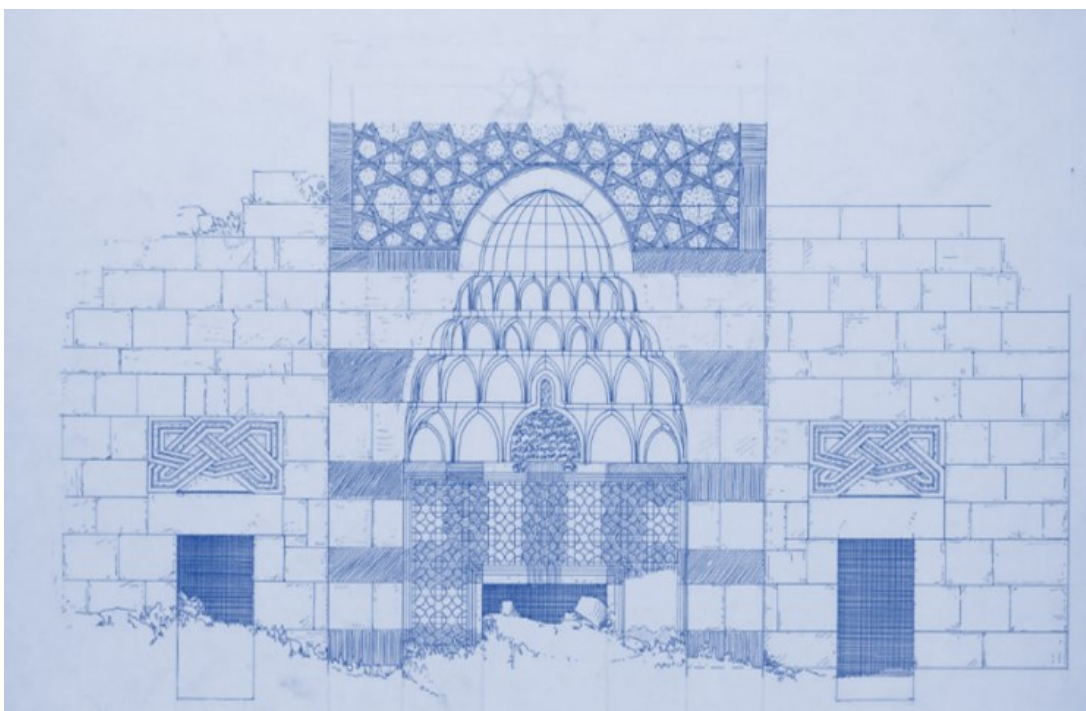


Figure 20 & 21. Muqarnasat, polychrome architecture, by Gordon, J., 2010 & Palace of al-Malik al-Zahir Ghazi, Entrance Portal Elevation, by Herzfeld, 1908-1914

Urban fabric and spatial organization

Aleppo's urban fabric is characterized by a dense network of organic, narrow streets, particularly in the Old City. This spatial organization promotes human interactions and provides natural shading, which reflects the city's adaptation to its environment. Traditional neighborhoods (haras) were organized around communal or public spaces, such as mosques or small markets, which also encourages a strong sense of community.

Aleppo's urban fabric has a clear line between public spaces (souqs, streets) and private spaces. Plazas (see image below) near mosques or major landmarks served as gathering places for festivals, markets, and public events. The souqs were not only commercial hubs but also spaces for social interaction and cultural exchange.



Figure 22. Souq al-Atmah, al-Madina Souq, by Iad, P., 2011



Al-Madina Souk (see image above), one of the world's largest covered markets, connects to various districts as well and leads to landmarks such as the Citadel. Landmarks like the Citadel, Al-Madina Souk, and the Great Mosque can serve as orientation points, creating a cityscape that is navigable but also full of discovery, see Kevin Lynch map.

The historic Souq al-Madina, illustrates Aleppo's economic life. Its architecture includes vaulted ceilings, narrow alleyways, and the atmosphere is full of lively activity.

Figure 23. Bab al Faraj square Aleppo, by Chouha Freres, 1920

Figure 24. Dar Basile alley of Jdayde
Historic district, by Kevork, 2010



Another important aspect of Aleppo's spatial organization lies in the transitions between public, semi-public, and private space. Residential areas, particularly in the Old City, are often structured as clusters of courtyard houses connected by alleyways (see image above and on the left) that gradually narrow as they move away from main paths. These spaces form what is traditionally referred to as the *hara*; a micro-neighborhood which strengthens strong social bonds through for example proximity and shared entrances.

Figure 25. Ayda alley at the Christian quarter of Jdeydeh, Aleppo, by Fede Ranghino, 2009

Cultural practices and traditions

Aleppo's *urban identity* is integrated with its traditions, which have been preserved and passed down through generations of craftsmanship, trade, and artistic expression.

The city of Aleppo has historically been a craftsmanship and trade hub due to its location being in the historic Silk Road which still goes through the Al Madina Souk. This is also why Aleppo used to be the economic heart of the country and why this historic function is a key element that defines the urban identity of the city.

Practices like soap-making, carpentry, stained glass manufacturing, mosaic, forming and manufacturing iron manually and textile production are elements of the Aleppine tradition. These trades are more than functional and economic, they carry the cultural narratives and a collective memory of the city.



Figure 26. The biggest piece of soap in the world weighing 1,520 kgs; soap Khan; Aleppo, by Syrian Trust for Development, 2023

Opportunities in the post-war context

Reconstruction is not merely about restoring what was lost; it is about addressing the needs of the city while safeguarding its identity. This balance offers an opportunity to shape a city that is both forward-looking and deeply rooted in its identity, making it resilient for generations to come.

Elements like shaded walkways, a combination of the linear souk typology with the courtyards, and typical Aleppine limestone can be blended with modern urban needs such as sustainability, but most importantly the needs of the residents after the war. Materiality plays a key role. By using Aleppine limestone and other local materials, the design can harmonize with its surroundings and strengthen the connection between the new and the old. Furthermore there is opportunity in this post-war context to use the debris of the buildings.

For the city of Aleppo, specifically focusing on reviving the Aleppine crafts would be a great economic opportunity after the crisis Syria has gotten into. This revival also supports local artisans, helping them regain their work while preserving the city's identity as lots of craftsmen had to close their workspace due to the war.

In an article of North Press Agency (2021), a craftsman interviewed sadly describes how it seems that he will be the last craftsman in the family even though the shops are hundreds of years old.

Stated from the article *Ancient handicrafts about to vanish in Syria's Aleppo* (North Press Agency, 2021):

'The retired teacher from the ancient city of Aleppo Mansour Qabbani believed that it is not only the war that affected the city, but also the government negligence and policies. The government is not concerned about reviving and supporting handicrafts and so far they have neither rehabilitated workshops nor serviced the ancient markets. Moreover, there is no supportive program for craftsmen in order to encourage them to back to their professions, according to Qabbani.'

"Pre-war time, when we were walking inside these markets, we saw fathers teaching their sons about work secrets and skills, but unfortunately, most of the handicrafts were lost and some others are about to vanish," Qabbani recalled.

"Heritage and handicrafts of Aleppo should be revived because they are not only a civilizational legacy of its people but also a humanitarian one," he added.'



Figure 27. A shop in the traditional Bab al-Hadid market in the city of Aleppo, by North Press, 2021

Chapter 3 | Impact of War

By 2014, Aleppo's Old City had lost over 75% of its population, with the remaining residents fleeing to less-affected western districts in the city. Informal settlements and eastern neighborhoods suffered the most damage, while western areas remained relatively intact. Infrastructure, housing, markets, and schools, were severely impacted, leading to widespread displacement. 1.2 million people were forced from their homes. The Great Mosque's minaret and large sections of the Souk were destroyed, contributing to the loss of Aleppo's cultural heritage. Economic collapse followed, with tourism, trade, and education coming to a halt. By the war's end, 28% of the city's urban area was no longer functional. Post-2016, reconstruction efforts began, including heritage reconstruction led by UNESCO and local initiatives, but much of the Old City remains in ruins.



Figure 28. Damage to the Great Umayyad Mosque of Aleppo, including damage to the minaret., by Francesco Bandarin, 2013

Aleppo city profile

Location: Northern Syria

Population: Approximately 2 million

History: One of the world's oldest continuously inhabited cities

Cultural Significance: A historic trade hub along the Silk Road, known for its medieval architecture, traditional souks, and heritage

Greatest landmarks: Citadel of Aleppo, a UNESCO-listed fortress; Aleppo's souks, once the longest covered markets in the world; and the Umayyad Mosque.

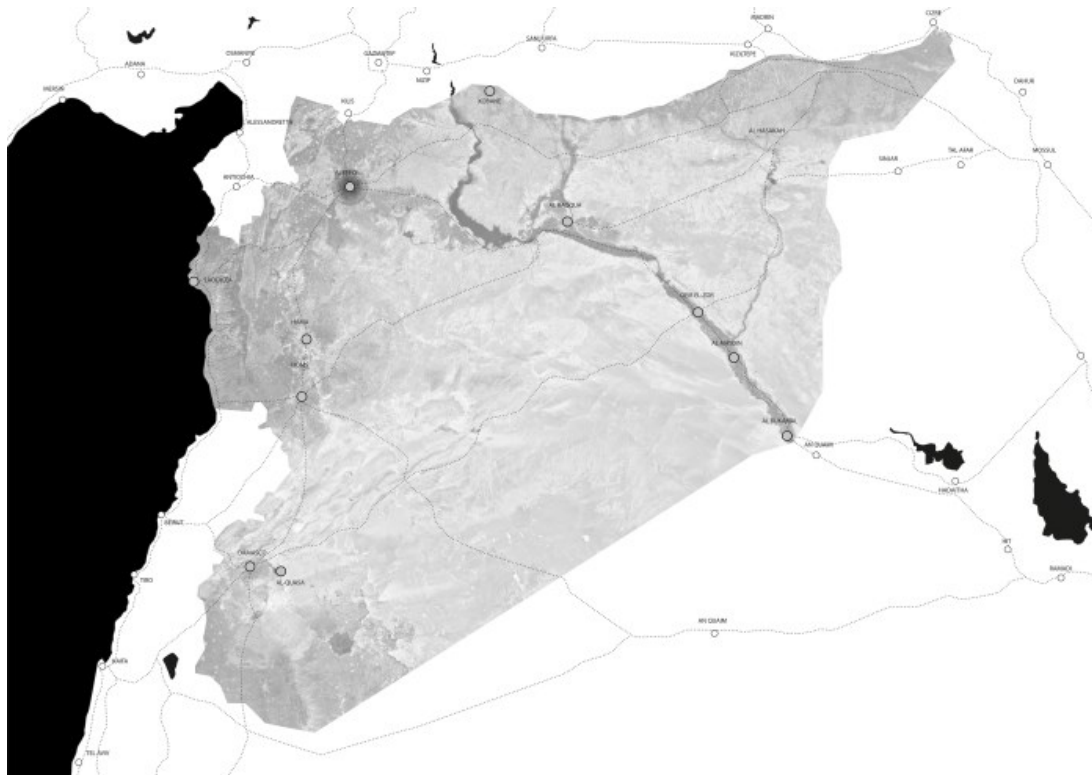


Figure 29. Territorial overview of the city of Aleppo, by Flavio Menici, 2020

Aleppo, one of the oldest cities in the world, has been a place for different civilizations for centuries as it was part of multiple empires and dynasties. Located in northern Syria, the city historically had a key position on the Silk Road, connecting the Mediterranean to the rest of the Middle East and Asia. It made the city a hub for trade and cultural exchange. The Citadel, built on a natural hill in the middle of the city, symbolizes this its role as both a defensive stronghold, as Aleppo used to be a border city until the Ottoman Empire, and a cultural center.

The urban form is characterized by a compact, walkable Old City with organic street patterns with a radial expansion into modern neighborhoods like Aziziyeh and



Figure 30. Planimetric outline of the city of Aleppo, in evidence the historical center, by Flavio Menici, 2020

Sulaymaniyeh, with wider streets. Key urban features are the Citadel, the souks, public spaces like the Public Park and Saadallah Al-Jabiri Square which provide green and social spaces and civic and religious landmarks including the Umayyad Mosque and Armenian and Syriac churches.

The Old City (green) is at the center, with a dense urban fabric, traditional souks, religious sites, and courtyard houses. It is a mixed-use area with both commercial and residential functions. The residential areas (blue) surround the Old City. Neighborhoods vary from planned urban districts to peripheral informal housing. Informal housing (orange) includes large sections of informal settlements that exist in the eastern, northern and northern peripheries, highlighting areas that experienced rapid urban expansion due to rural migration. These areas often lack proper infrastructure and were more vulnerable to conflict and displacement. Major industrial zones (purple) are concentrated in the northern and southeastern outskirts, including the Sheikh Najjar industrial city (upper right corner). The mixed residential & commercial (yellow) areas are transition areas between the dense Old City and modern residential zones. The commercial zones (dark red) are concentrated along major roads and in specific urban nodes, these areas serve as key business and retail hubs.

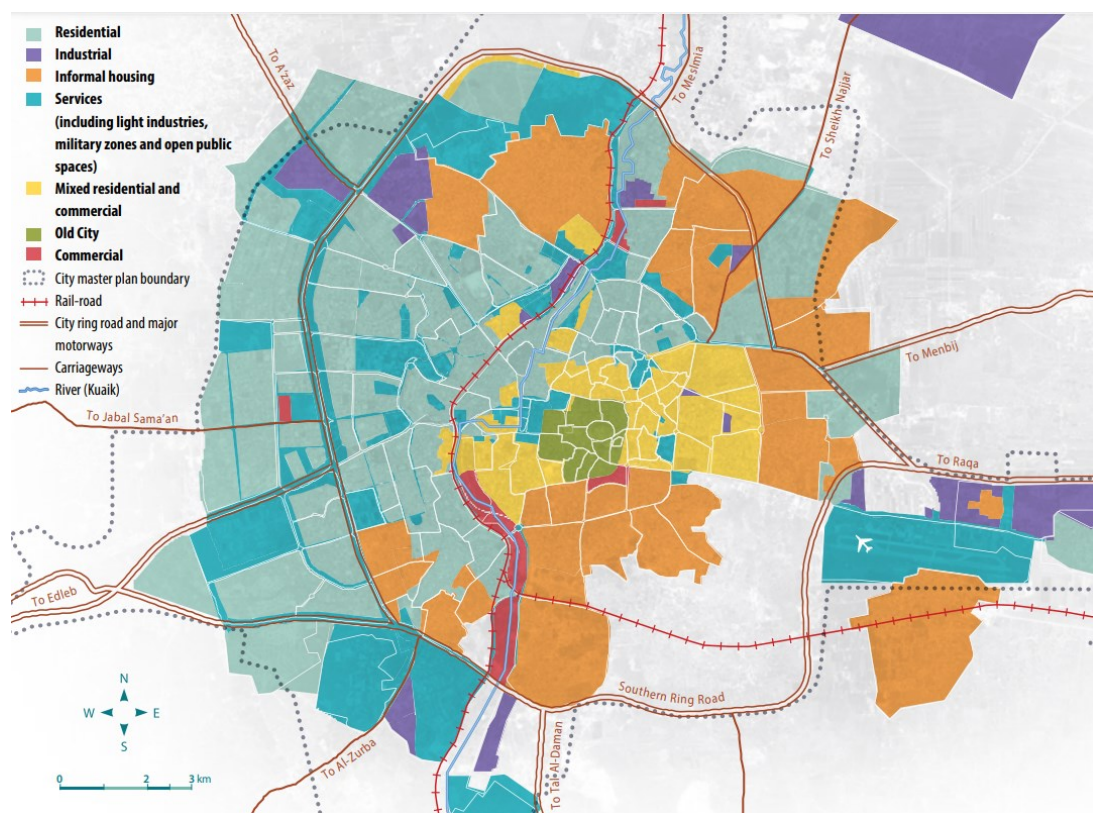


Figure 31. Aleppo city urban composition, by UN Habitat, 2014

In short the infrastructure and mobility: Aleppo is encircled by a ring road, with key highways connecting it to Idlib, Raqqa, and Turkey. Aleppo's railway station is a major node on Syria's rail network, linking Aleppo to Damascus, Latakia, and Turkey. Rail lines connect industrial and commercial districts. Aleppo International Airport is located in the southeast. Buses, minibuses and taxis are the main form of public transport, with taxis being affordable in contrast to how taxis are known in western countries.

Impact urban fabric

In 2011, Aleppo was Syria's largest city with almost 3 million inhabitants (25% of the national urban population). The city had a strong economy with historic and collaborative commercial relations with neighboring countries. 40% of the population lived in informal areas, as Aleppo was the most attractive city for rural migrants and had grown fast during the last decades. Since the beginning of the crisis, the city started to receive IDPs (internal displaced persons) from different governorates and cities. When the war reached Aleppo around the end of 2012, the IDPs migration trend reversed and a massive out-migration happened where people from Aleppo fled to other governorates and outside the country.



	AREA: A	AREA: B	AREA: C	AREA: D	AREA: E
Urban Description	Low density modern housing area	Very high density mixed residential and commercial area	Low density informal housing area Original population	The Ancient Old Historic City and the traditional surrounding Original population	Medium density residential areas, large industrial clusters
Pop. 2011	699.971	535.653	378.292	586.237	883.344
Current Pop. 2014	938.000	416.000	346.000	128.000	382.000
Number of IDPs	484.000\	121.000	81.000	39.000	88.000
Income level	Upper-income	Middle-income	Low-income	Upper middle-income	Middle-income
Damage level	Affected/minor damages	Partially damaged	Partially damaged	Heavily damaged	Heavily damaged
Level of functionality	Functional	Partially Functional	Partially Functional	Not functional	Not functional, partial functionality in limited areas
Predominant shelter types	Hosting, renting or squatting in buildings	Hosting, renting or lodging to partially damaged buildings	Unfinished buildings and rental accommodations	Many vulnerable original population lodging to partially damaged buildings	De-populated area with totally abandoned neighbourhoods
Average monthly rent	220 USD	120 USD	55 USD		
Electricity supply	2 to 3 hours/ day	4 hours/ day	4 hours/ day	2-1 hours/ day	4 hours/ day

Figure 32. Neighborhoods analysis for Aleppo, by UN Habitat, 2014

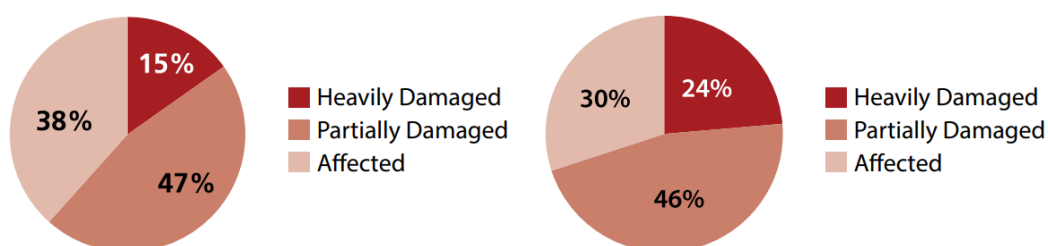
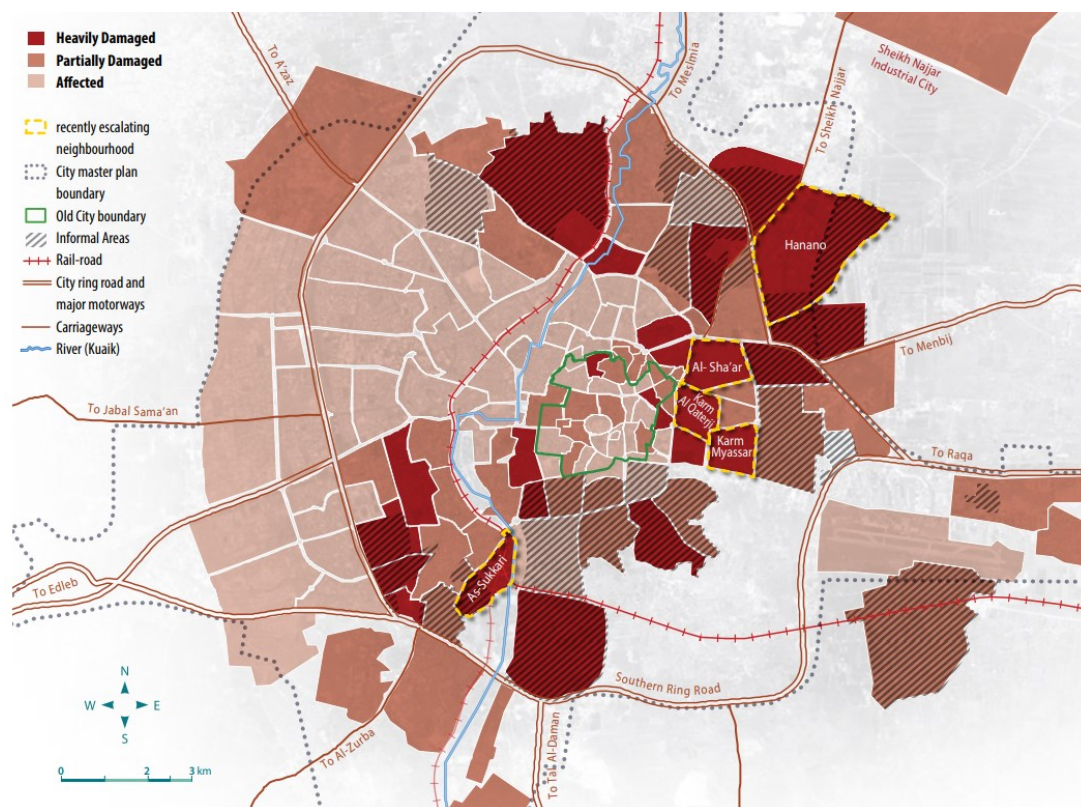


Figure 33. City damage map. Neighborhoods per damage level (figure bottom left) and affected population per housing damage (figure bottom right), by UN Habitat, 2014

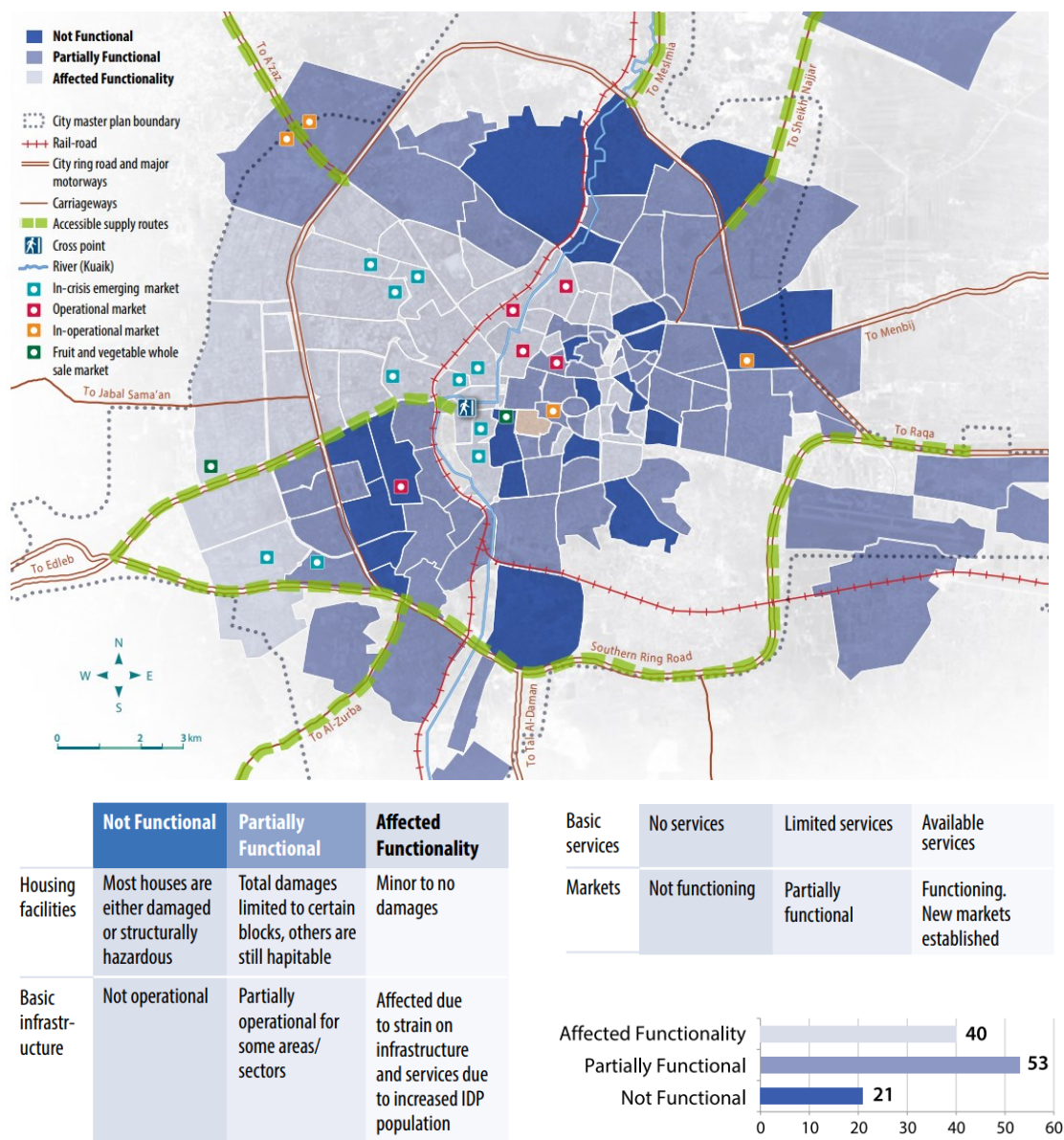


Figure 34. Urban functionality map. Urban functionality levels (figure left and top right) and classification of neighbourhood per urban functionality (figure bottom right), by UN Habitat, 2014

A war profile of the city of Aleppo

As can be seen from figure 32, the old city of Aleppo has shrunk the most during the battle of Aleppo which started in 2012. From 2011 to 2014, the population in the center has shrunk from 586.000 to 128.000. It is the mostly abandoned area of the whole city, unlike the west side of the area, this seems to be the place where most people fled to. The amount of people that fled towards Area A is almost half of the entire population there. It is the least affected area in the city. Area's B and C, south and southwest of the Old City are partially damaged, while area E together with the Old City, area D, are the most damaged. The Old City is also the area that because of the war got to be completely not-functional. The rebuilding here started after 2016, after the battle of Aleppo came to an end. Until today there is still lots of debris in the Old City, more from this can be seen in chapter 5, at the chosen design plot.

2.25 million of Aleppo's population have been severely affected by the damages of housing and buildings stock

1.2 million inhabitants have been forced to leave their homes due to severe housing damages

Tourism activity (half of pre-crisis employment) had stopped. The destruction and looting of the souq, the degrading condition of the archeology, and the lack of trade threatened future recovery. Remaining population during the war were almost totally jobless, and were dependent on savings and reserved food supplies. Many of the school buildings in the area have been damaged. This is important as the the university of Aleppo is the second biggest of Syria, having around 60.000 students. It was a popular university for students from all over the North and Northeast of the country but since the war, the educational numbers have dropped. In 2013, 82 people were killed during the Aleppo university bombing. It struck an area between Aleppo University's halls of residence and the architecture faculty.

In 2012, a bombing went through the Ancient Souk) and in 2013 the Great Mosque's 11th Century minaret was reduced to rubble, see photographs on the right. According to UN Habitat (2014), more than a 100



Figure 35. Before and after mosque of Aleppo by Lens of a Young Halabi, 2013

cultural buildings (houses, mosques, churches, Khans, markets and monuments) have been reported as damaged (either totally or partially destroyed, burned, or looted).

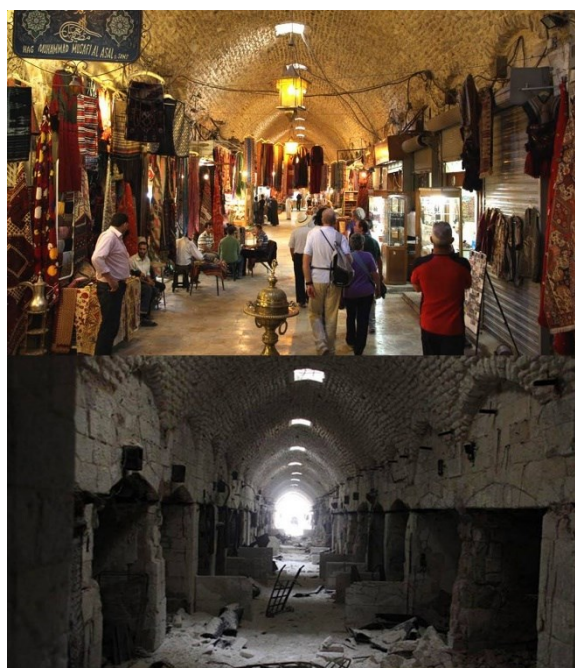


Figure 36. Before and after photographs Aleppo city including Carlon citadel hotel, great mosque, Aleppo souk, mixed use street blocks south of the citadel, Dar al Ifta, images from Olympia restaurant Aleppo, 2014

But, it was estimated that the damages in those cultural assets were under reported, because many neighborhoods in the Old City of Aleppo were not accessible during the war. In total, almost 80% of the old city population had fled from the center, mainly to the western part of Aleppo. Shops had gotten burned or looted, and most of the city services and infrastructure got damaged.

Various parts of the Old City underwent reconstruction, with help of international groups such as UNESCO as well, as the Old City is an official UNESCO-heritage site. It is important to note that the heritage damage maps from UN Habitat on the previous pages were made during the battle of Aleppo and therefore the damage is much greater. Below can be seen a map made after the battle with a much more accurate view of the destruction caused. On the next page is a zoomed in version of the Old City destruction map where can be seen that entire street blocks south and west of the Citadel have been wiped out by the end of the war. These are mostly public buildings surrounding the Citadel with the Souk district taking lots of the damage while we learned from the previous chapter that this is one of the greatest contributions to the urban identity of Aleppo. This destruction, as mentioned in chapter 2, led to hundreds of years of craftsmanship, and thereby also the economy, being impacted greatly.

28% of Aleppo urban area is no longer functional
Out of 125 neighborhoods, **74** neighborhoods are either not functional or only partially functional





Figure 37. War destruction on a territorial and urban scale, Aleppo, by Domenico Chizzoniti, 2021

Chapter 4 | Community recovery

Public buildings can hold collective memory by integrating elements of Aleppo's architectural traditions, such as material and typologies, while also adapting to local needs. Adaptive reuse of partially destroyed structures further ensures continuity between the city's history and future. Besides preservation, public architecture helps community recovery by creating inclusive, neutral spaces that promote social interaction and economic opportunities. Spaces like souqs for example, not only restore the city's sense of identity but also are practical places for rebuilding trust among the diverse communities. In the context of political instability, resilient public architecture can offer stability and safety as well. Important in the design is durability, adaptability, and neutrality, avoiding politically or sectarian-loaded symbolism that could provoke divisions.

Figure 38. Gate of the souq Khan al-Harir after its reconstruction in 2020, by Anas Badawi, 2020



Preserving cultural memory through public architecture

Public architecture plays an important role in preserving cultural memory and supporting community in post-war recovery. In Aleppo, where both the physical and social fabric of the city has been disrupted, public buildings and spaces can serve as important tools for rebuilding a shared sense of identity and encouraging resilience.

Architecture as a repository of memory

Bastéa (2004) explains how urban spaces and buildings make up the collective memory of a city, and serve hereby as “repositories of identity”, so basically architecture as a repository of memory, that link the past to the present. Key landmarks, such as the Citadel, the Great Mosque, and the souqs, represent Aleppo’s historical narratives but also, in the case of the Citadel, its resilience through years of change. UNESCO, within Aleppo has also put a focus on reconstructing these.

When designing new public architecture, elements of Aleppo’s architectural traditions, such as the earlier mentioned use of limestone or the courtyard layouts can be integrated into modern designs. Frampton (*Towards a Critical Regionalism*, 1983) emphasizes the importance of designing with sensitivity to local traditions and context, to make sure that new buildings honor thereby the city’s history while meeting the current needs.

Public architecture as a space for collective healing

Public buildings can also, especially in a city that has been divided by war, serve as spaces for healing. Spaces with functions such as schools, community centers, souqs, or cultural institutions can be designed to bring people together and strengthen the unity. Public architecture can include for example memorials or exhibitions, which do acknowledge the city’s war-experiences while emphasizing its resilience. An example of this is the Hiroshima Memorial Park. Such a space provides opportunity for reflection and dialogue, which can help communities process their shared experiences (Bastéa, 2004).

Partially destroyed buildings can also be repurposed to serve new functions while preserving their historical significance. For example, a damaged historic but maybe politically laden building (if flexible enough) could be transformed into a cultural center to create a new space for change and public engagement. This aligns with Rodwell’s argument (*Conservation and Sustainability in Historic Cities*, 2007) that adaptive reuse allows cities to hold their historical layers while addressing the new needs.

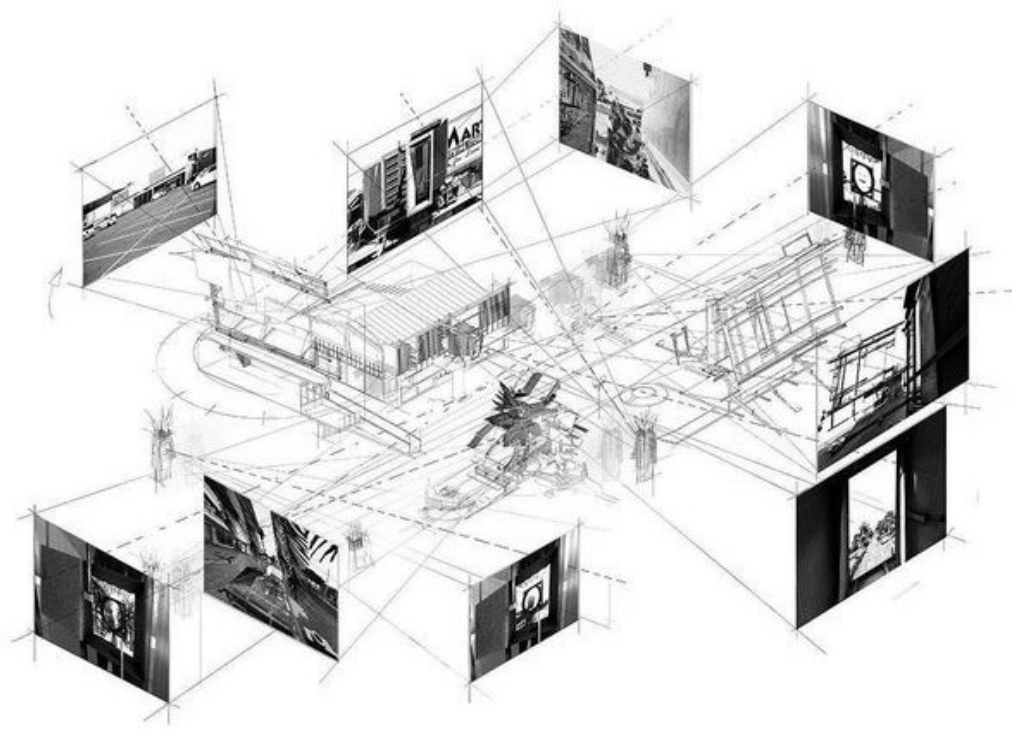


Figure 39. Reconstructing fragments of residual identities, by Jackson, T., 2022

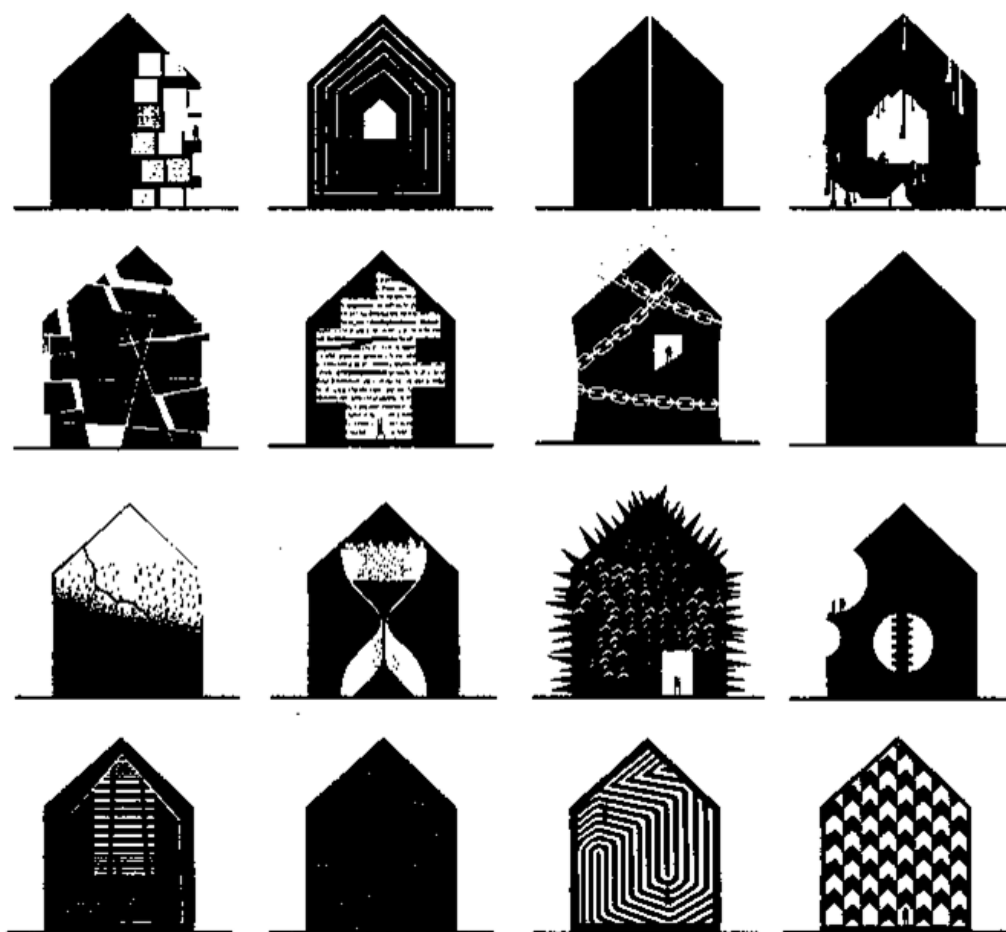


Figure 40. Archiatric, by Babina, F., 2017

Supporting community recovery through public architecture

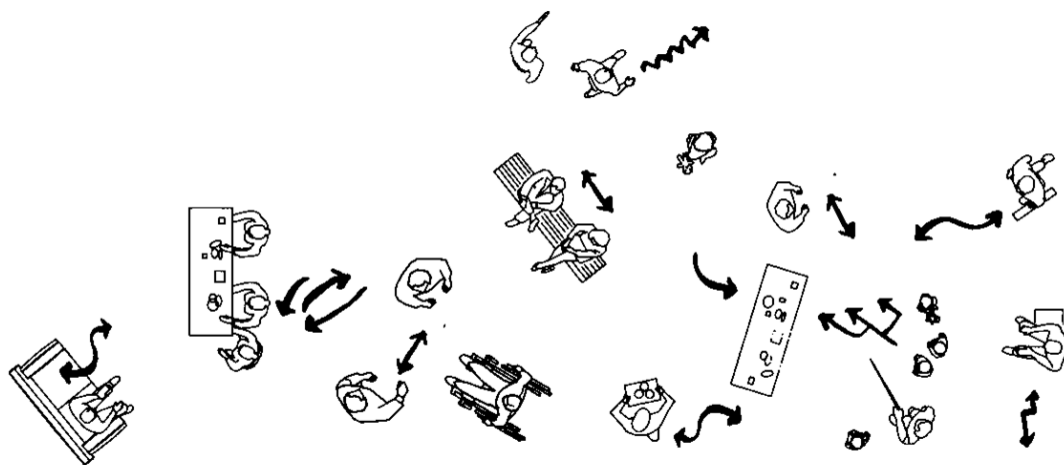
Rebuilding social fabric

Public architecture plays an important role in rebuilding the social fabric of a city. Schools and libraries, for example, can serve as spaces for learning but also cultural preservation. Having cultural programs in these spaces, such as workshops or maybe history lectures, can strengthen sense of community and at the same time help younger generations reconnect with the city's history and traditions (Ludwig, Alvanides, & Lave, 2024). Important is further that such community centers and public buildings should be designed as neutral spaces which are accessible to all, regardless of political or religious beliefs. These spaces can help encourage inclusivity and collaboration between the people, which helps in rebuilding trust among the different communities as well (Vale, 2008).

Public architecture as social and economic hubs

Markets, cultural institutions, and other public buildings can act as important places for both economic recovery and social cohesion. For example, rebuilding a souq like the Al-Madina Souk would not only restore an important part of Aleppo's identity but would also provide economic opportunities for the local artisans, traders, and small businesses.

Public buildings could be designed to serve multiple purposes, by combining spaces for commerce, education, and cultural activities. The flexibility ensures that these spaces remain alive and relevant to the community's needs over time (Frampton, 1983). Especially in Aleppo where certain functions or places only get used at specific times due to the local climate, this would be beneficial.



Navigating political instability through resilient design

Resilience design

In politically unstable contexts, which Aleppo recently has showed itself to be in, public architecture can provide a sense of stability, even in uncertain times. Such public buildings can offer safe spaces and spaces for social interaction. Public architecture must in this case of Aleppo be designed to withstand the different challenges posed by this instability. That would include using durable materials, having flexible layouts, and making sure that buildings can adapt. For instance, a school could also function as an emergency shelter during times of crisis (Rodwell, 2007).

Cultural neutrality

The last important mark is to consider designing a 'neutral building'. That would mean to avoid political or sectarian laden designs when creating public spaces which will need to be inclusive and really meant for all. In the context of Aleppo, The Grand Serail got destroyed because of its political character, as it was a palace for the governor. To rebuild a similar kind of function on the same spot would be provoking tensions among the locals.

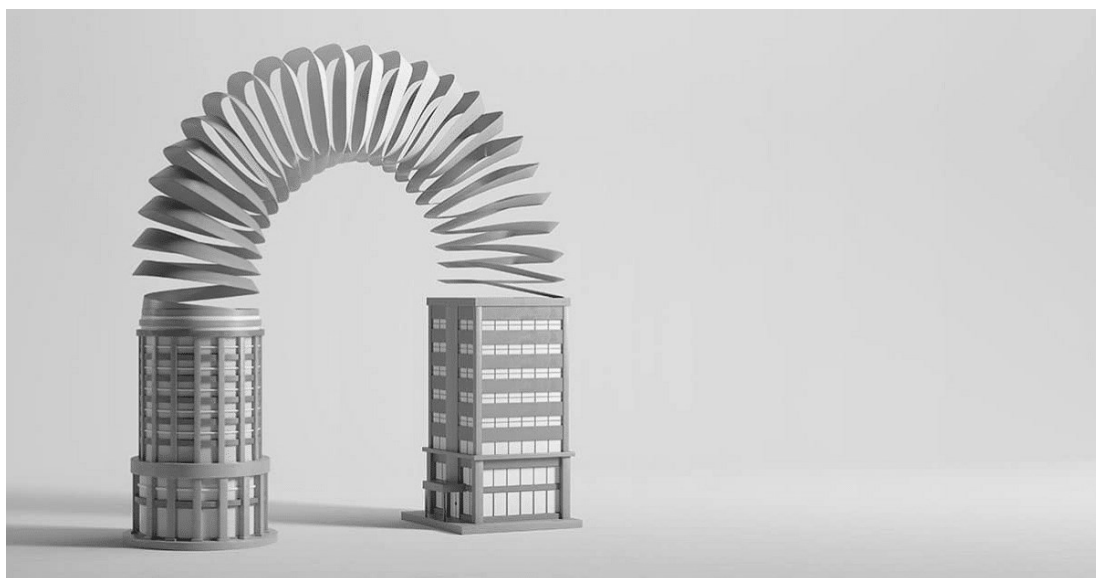


Figure 41. The flexible building, by Yonito Tanu, 2021

Chapter 5 | To design



Figure 42. Aleppo Citadel Perimeter, overview of plaza in front of entrance tower, by Christian Richters, Aga Khan Historic Cities Programme, 2009

The Site

The chosen site for this project is the location where the Grand Serail of Aleppo once stood, situated directly south of the Citadel, within the heart of the city. This site lies in the center of a street block which has been almost completely wiped out and which used to be bounded by several key urban elements, see Kevin Lynch map, making it a historically, culturally, and strategically significant location. The Grand Serail, a building for the governor before the war, played an important role in fabric of Aleppo before its destruction. Its original location within the Old City demonstrated its importance, as it was right in front of the Citadel, acting as a link between the Citadel, the souq (market district), and the surrounding neighborhoods. This plot, which now lies in complete ruins, offers an opportunity for reconstruction close to the context of this research.

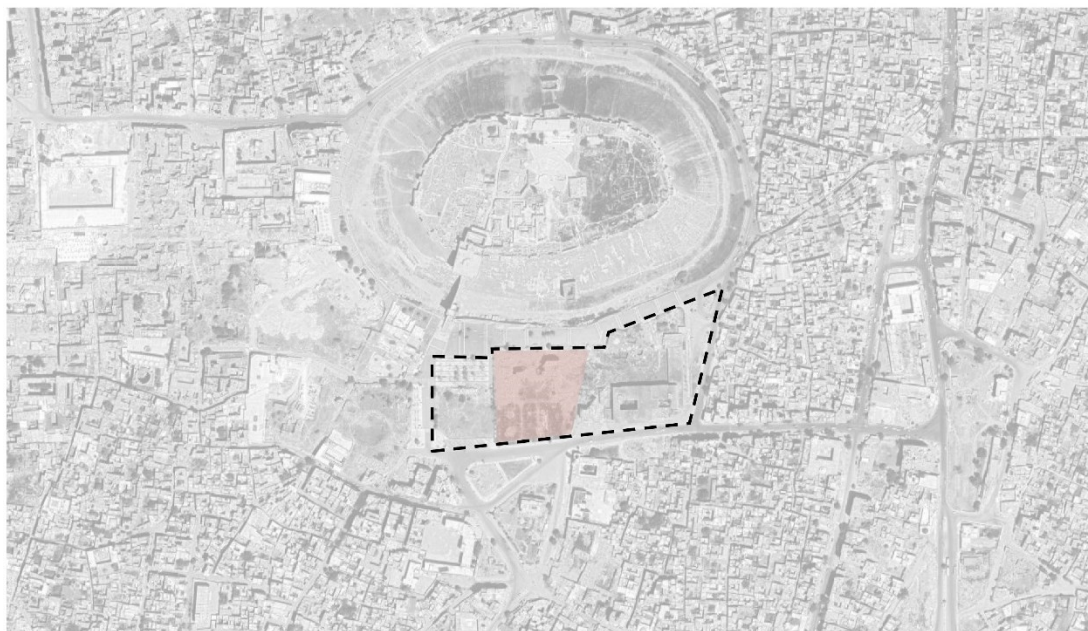
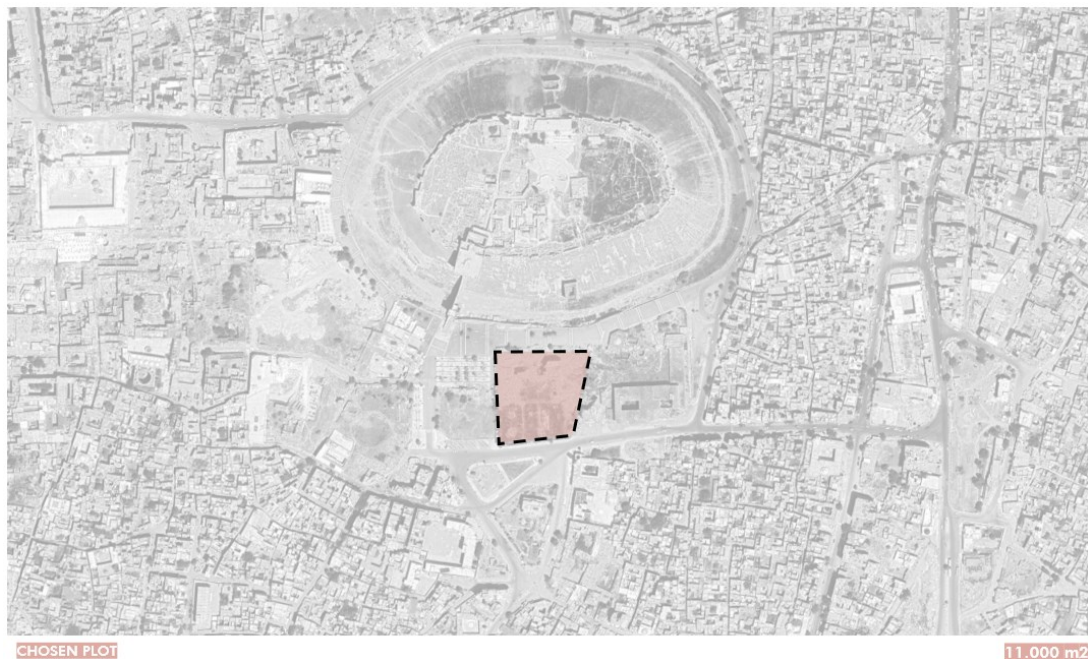


Figure 43. Chosen plot and its street block, directly south of the Citadel, own work.



Figure 44, 45, 46. Aleppo Grand Serail, by Kevork, 2010. Screenshot from militants' video blowing up the Grand Serail, 2014. Grand Serail leftovers after the explosion, by Nawafir tours

Site surrounding

The site is located within a dense urban fabric south of the Citadel of Aleppo, in a street block that housed as mentioned earlier the Grand Serail, a mosque, a hammam and a court house. The mosque and the Grand Serail are in completely ruins, but the court house is still standing. The hammam structure is also mostly intact, but the historic building suffered lots of damage to the walls and the domes on the roof. However, it is in good enough shape for restoration as recently the hammam has been in use again.

In front of the street block is a pedestrian area, the perimeter of the Citadel, of which the southwest is fully car-free, while the northeast side of the perimeter is a car road, see Lynch map of Aleppo. The street block is surrounded by mostly dense residential area but also mixed use area and the souk in the west, and the Citadel in the north. With this, a couple site context concepts can be set to take into account for the design. Firstly, the car-free perimeter that borders the north of the Citadel is an urban path that is very popular among the locals, a gathering place in the evenings especially. So this is an element that can be complemented and used in the design to work together with. Second, the design should complement the Citadel as it is the major landmark of the City, and stands elevated, creating a strong presence that defines the urban identity of Aleppo. Bayt al Madina should not compete but rather reinforce it by for example creating sightlines, integrating traditional architectural elements, and utilizing materials that go well with the Citadel's stone-built character. Lastly, the street block acts as a transitional element, as it is located between the very public and open perimeter and the dense urban fabric in the south.

Logics behind the choice of site

This site was not randomly selected it came as the most fitting plot for a project based on the research with roots in urban identity, memory, and post-war reconstruction.

First of all, According to Lynch's framework, the Citadel, the souq, and the surrounding historic street blocks act as landmarks, edges, paths, and nodes. The site of the Grand Serail is located exactly at the intersection of these elements being surrounded by the Citadel and its perimeter in the north, the souks in the west and the historic dense urban fabric in the east and south.

Then, research on the impact of war (chapter 3) shows that the plot of the Grand Serail south of the Citadel was among the most devastated, see figure 37. And this actually both in terms of physical destruction and functional disintegration. Placing a new public function here can act as a tool to sort of stitch the damaged urban fabric; to reconnect spatial, cultural, and social links, especially between the Citadel, the souq, and the residential quarters. This directly responds to the third question of how public architecture can support community recovery in a practical way: by having a shared, inclusive program at the heart of what was once a politically loaded location. The former Grand Serail used to be a space of state authority. However, in post-war conditions, rebuilding such a symbol could reignite tensions, as is highlighted in chapter 4, in the reflection on political neutrality in post-war reconstruction. Instead, the site becomes an opportunity: a shift from state-controlled space to community-owned space. Especially in the current uncertain context of Aleppo that has been mentioned before. By introducing programs such as craft, knowledge, and public gathering, the site reorients the Serail's politically loaded context toward collective recovery and cultural resilience. Lastly, the site is a real transitional zone as well connecting the very public and the very residential area of the Old City.

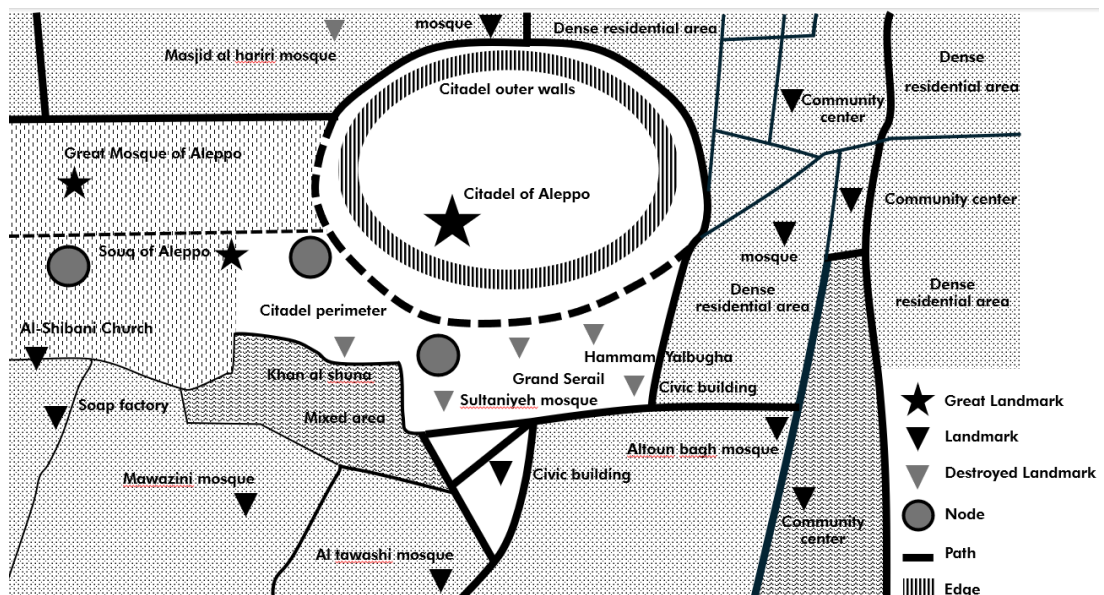
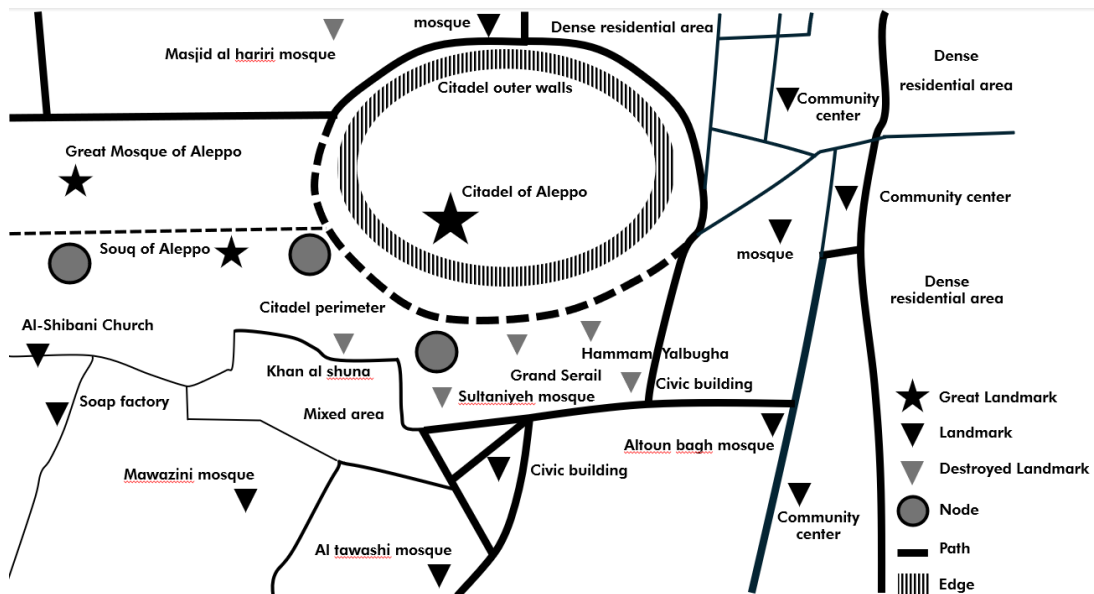
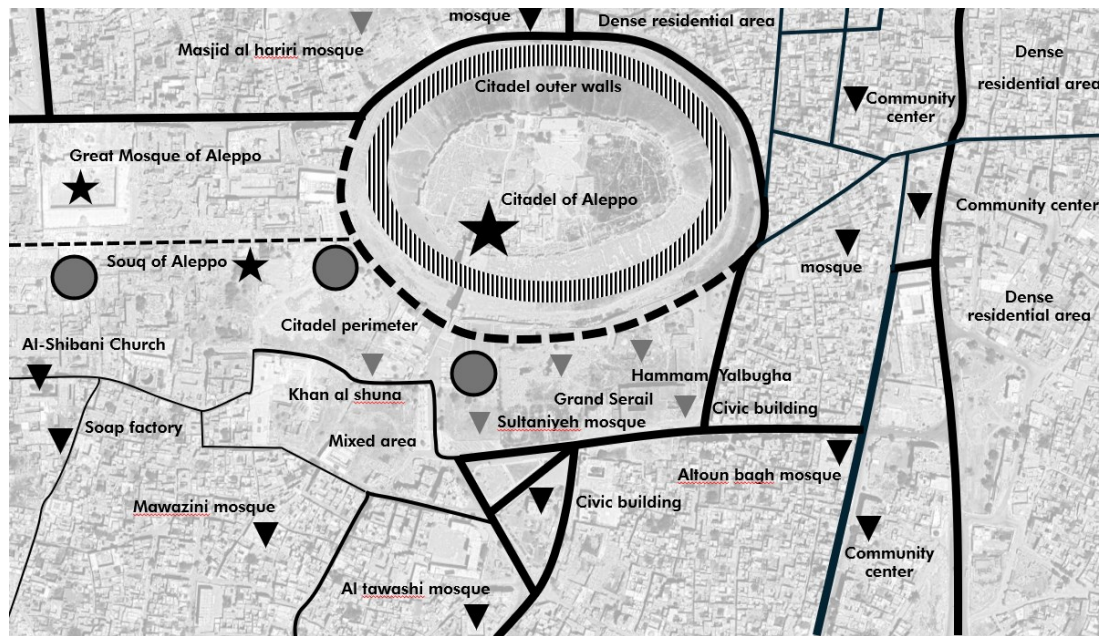
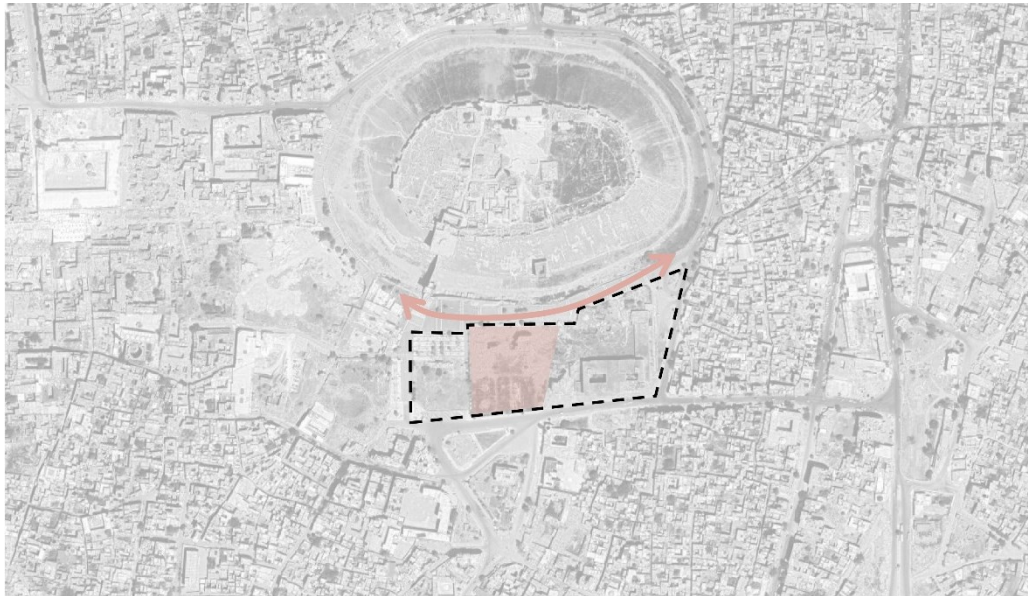
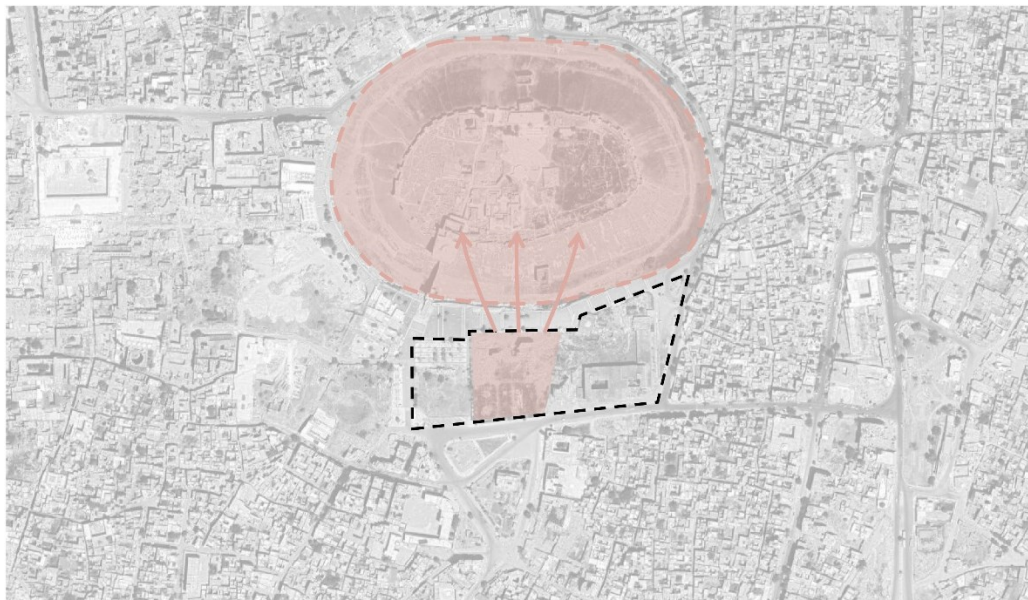


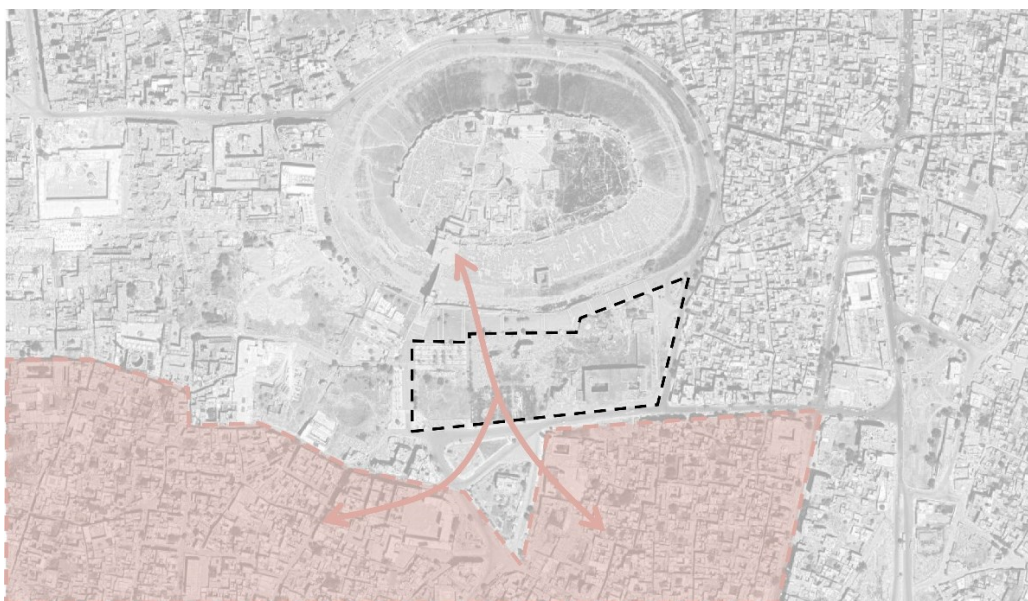
Figure 47. Lynch map of the old city of Aleppo, own work.



COMPLEMENTING THE PERIMETER
SITE CONTEXT



COMPLEMENTING THE CITADEL
SITE CONTEXT



A TRANSITIONAL BLOCK
SITE CONTEXT

Figure 48. Design principles regarding the use of the plot and street block, own work.

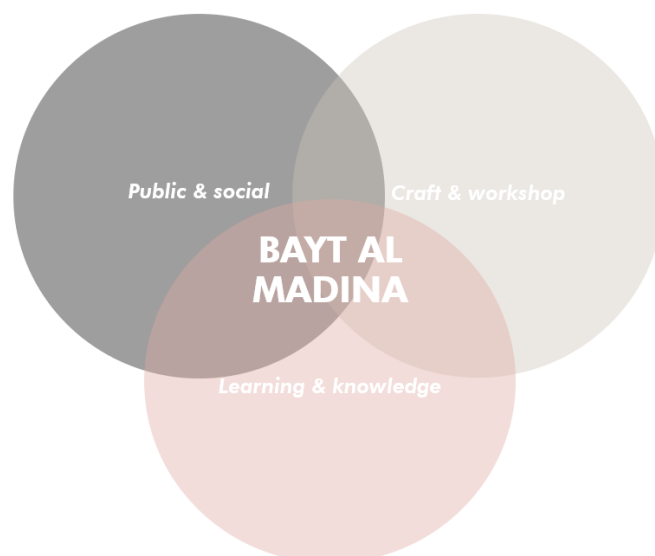
Design concept

Bayt al Madina (House of the city)

بيت المدينة

The design is a hub consisting of a learning/knowledge space in the south of the plot and a craft/workshop zone in the middle, being connected as a whole by a courtyard in the middle. The hub, Bayt al Madina, means literally translated, House of the city. The research identified key elements that define Aleppo's urban character such as the typologies, materiality, and nodes of social interaction. Bayt al Madina builds on these principles, integrating them into an architectural design.

The design concept, as of P3 in the Graduation Studio, uses both the courtyard typology of the buildings in the Old City, and the linear typology of the souks of the city. It incorporates the wooden mashrabiya window inspired climate concept but with its own modern interpretation, here in the form of the 'Rawaq al Bayt' (literally meaning arcade of the house) where the linear souk path through the khan is being continued in a shaded, naturally ventilated semi-open space directly parallel to the perimeter, see images starting from page 70. It thus compliments this important path by sort of expanding it but making this part south of the major landmark a more attractive semi-open in the hot climate as the perimeter is only very used at night. The rest of the hub uses local Aleppine limestone, one of the major elements that define Aleppo's urban identity.



Logics behind the concept of the design

The design concept of Bayt al Madina is grounded in the research findings on the preservation and reinterpretation of Aleppo's urban identity, its architectural heritage, and cultural memory.

The project draws from two main typologies of Aleppo; the courtyard dwelling and the linear souk path. These are integrated but also reinterpreted. The central courtyard functions as a node in the complex, connecting the workshop/craft zone and the learning/knowledge center, while encouraging social interaction. This while the Rawaq al Bayt, a shaded, semi-open linear space along the Citadel's perimeter, extends the historic souk into the new public form. However, here this spine supports both circulation and gathering, and it also strengthens or adds quality to the underused edge of the Citadel's southwest side, turning it into a more climate-appropriate and vibrant urban space not just used at one part of the day.

The design reinterprets traditional climatic concepts, such as mashrabiya windows, arcades, and courtyards, into a new design concept. Those elements work not only to have thermal comfort through natural ventilation and shading, but also to preserve the atmospheric quality of the spaces. The new concept of the Rawaq al bayt space moderates heat and sunlight inspired from the arcades and mashrabiya window, but while creating a new type of transitional urban experience.

The organization is further designed as a gradient going from enclosed, more quiet learning spaces in the south, to open and more noisy craft and workshop areas in the north, using the street block as a real transitional block from quiet and residential to open and public. The project's Knowledge and Learning Center responds to the research's call for spaces of intellectual regeneration (chapter 3), while the Craft and Workshop Zone revives Aleppo's identity as a place of production, making, and trade, responding directly to the needs of the inhabitants (chapter 2) and drawing from the spirit of the souks, where craftsmanship partly shaped both economy and culture.

Logics behind the functions of the project

The programmatic structure of Bayt al Madina comes from the identified needs of post-war Aleppo, as is revealed through the research.

The inclusion of a Knowledge and Learning Center addresses the need for intellectual and cultural regeneration after years of conflict. Research by Bastéa (2004) others in chapter 4 emphasize how public architecture plays an important role in preserving collective memory, especially when it provides spaces for reflection, education, and dialogue. This function encourages youth and community members to reconnect with their history while building toward their future and the future of the city. It responds directly to the post-war loss of educational infrastructure as mentioned in chapter 3 and at the same time offers a safe, neutral space for knowledge exchange, learning, and skill-building.

The craft and workshop zone is a direct response to the economic and cultural role of craftsmanship in Aleppo, particularly in the Souq al-Madina where craftsmanship has been diminishing due to the war. It responds directly to the locals' needs, as quoted also in chapter 2: 'unfortunately, most of the handicrafts are lost and some others are about to vanish', 'the government is not concerned about reviving and supporting handicrafts and so far they have neither rehabilitated workshops nor serviced the ancient markets, there is no supportive program for craftsmen in order to encourage them to back to their professions' and 'heritage and handicrafts of Aleppo should be revived'.

Why a knowledge/learning/workshop/craft hub?

What makes it ideal for Aleppo and suitable in the context of the site?



Below, a map can be seen that has been made based on responses of a thousand locals to a survey on public space and infrastructure. It shows the most important public spaces of the city that were mentioned. The biggest four were the Citadel perimeter, the public park, the Saadallah al Jabri square and the al Sabil park. Those are two parks and two non-greenery open spaces. A note to take into account that was said about the open non-greenery spaces is that there is not enough services, meaning it does not have much options for different activities, not any functions. The perimeter as can be seen in figure 42 for example is a long open square with the same benches places everywhere. In the evening it is alive because of the hot weather, but people have to make the space their own by bringing furniture, food, drinks and other things from home. The walls of the Citadel are also being used as benches by the locals and in the afternoons there is not much shade in the hot weather. On the parks was noted that they are being enjoyed by the locals but that there are not enough of them in the city. When looking at the Old City below, there can be seen that there is no green space or structure at all.

This and all the previously mentioned 'design logics' were important for the answer to the question of *what* to design. On the following pages, a selection of drawings is presented to illustrate the current development of the project not as any final drawings or outputs, but as a snapshot of the design-in-progress, showing how the research findings and concepts have begun to come alive spatially, functionally, and architecturally.

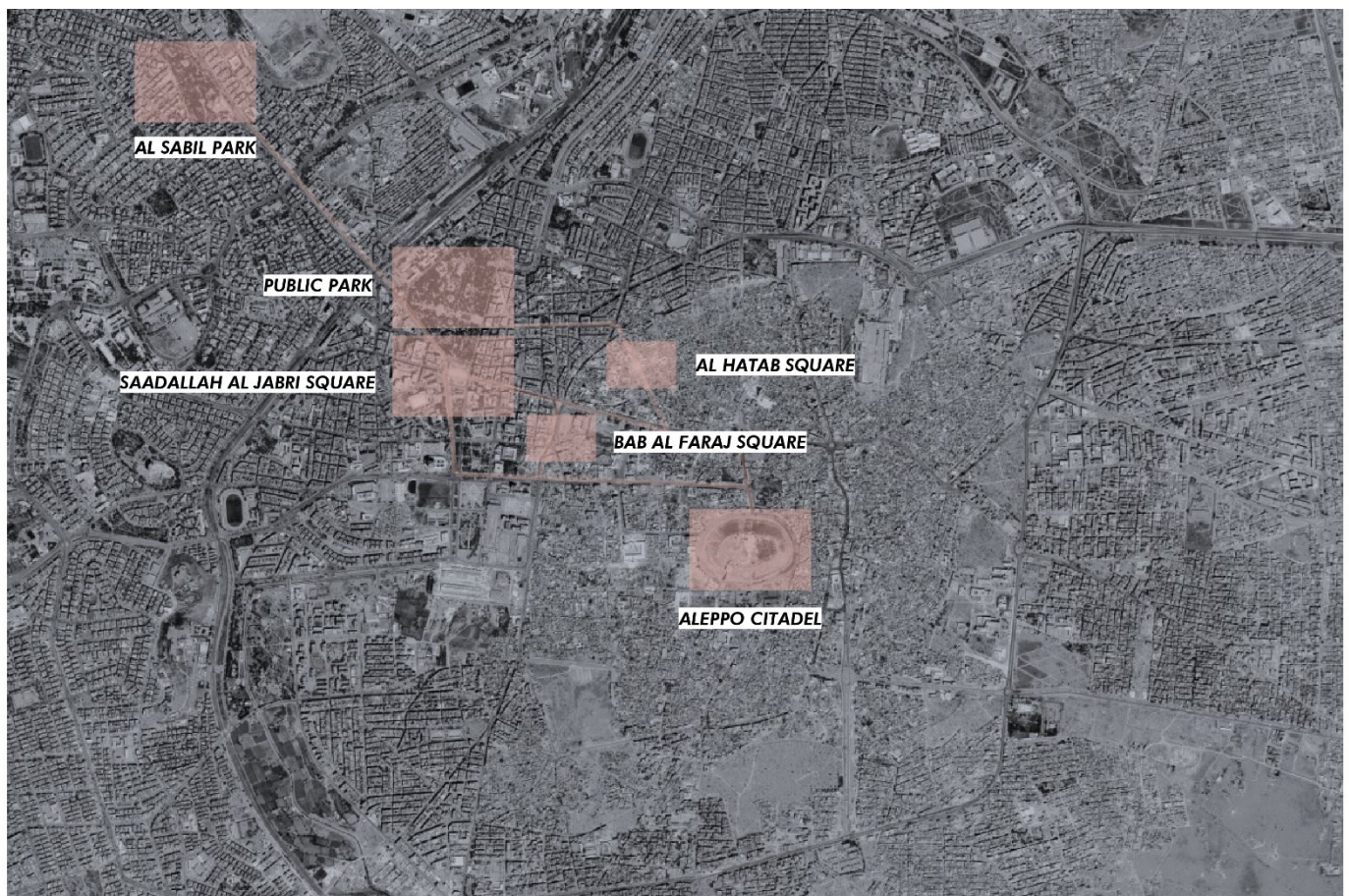
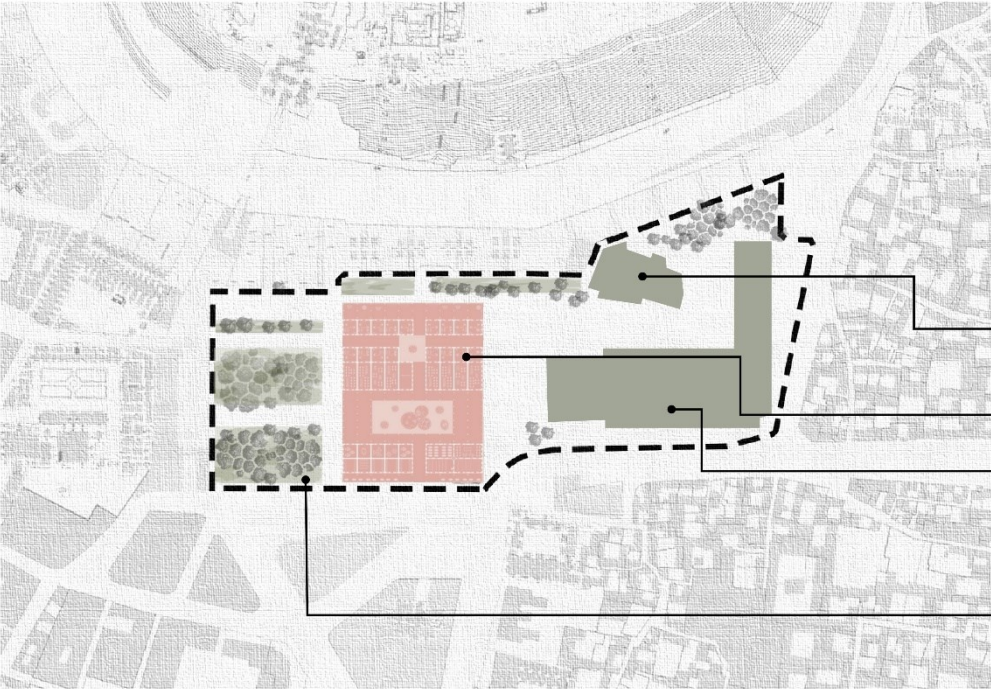


Figure 49. The most important public spaces according to the locals highlighted, mostly parks and squares, own work.



MASTERPLAN
BAYT AL MADINA

- NEW STRUCTURES
- EXISTING STRUCTURES

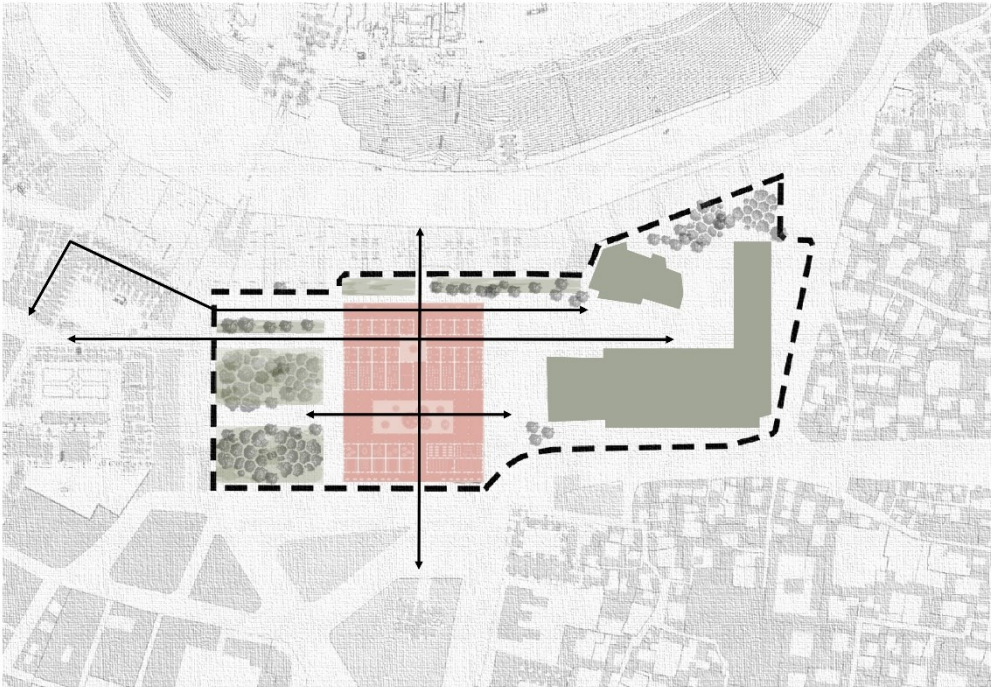
HAMMAM YALBUGHA

BAYT AL MADINA

COURT HOUSE

PARK

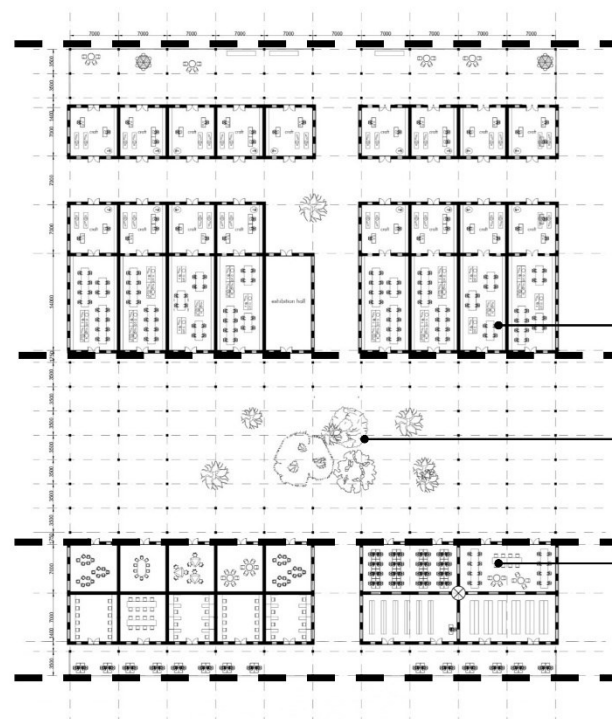
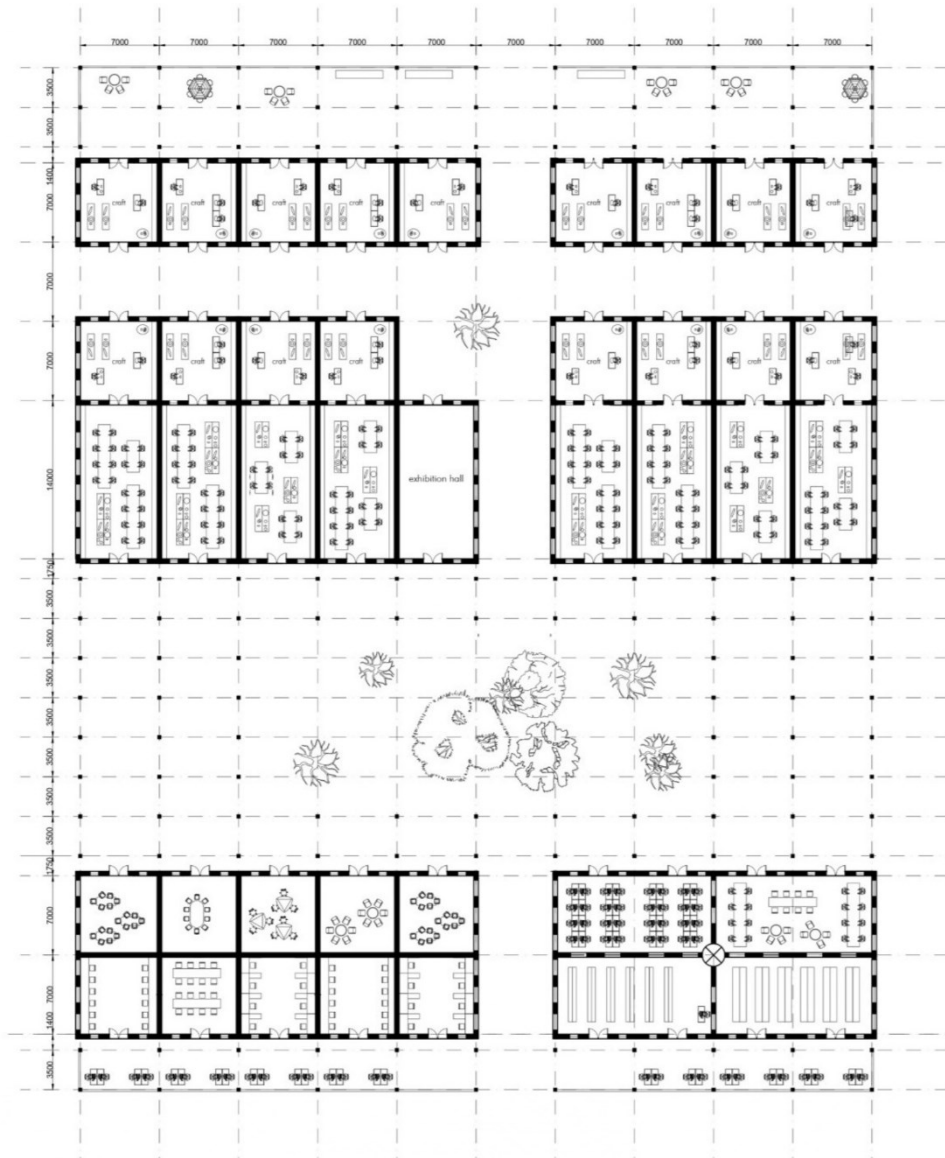
SCALE 1:1000 0 10 20 50 100m



MASTERPLAN
MAIN AXIS

- NEW STRUCTURES
- EXISTING STRUCTURES

SCALE 1:1000 0 10 20 50 100m



BAYT AL MADINA
FLOORPLAN

CRAFT/WORKSHOP

COURTYARD/HOFJE

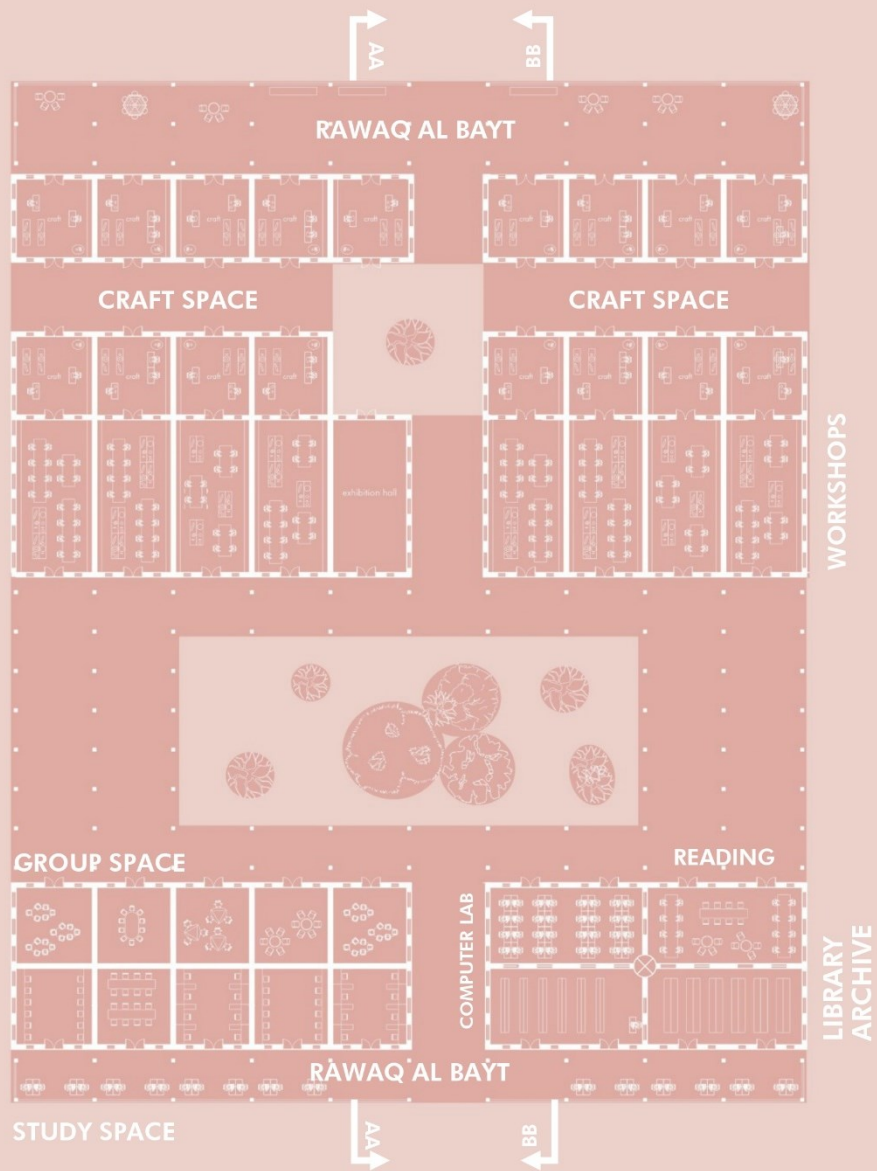
LEARNING/KNOWLEDGE

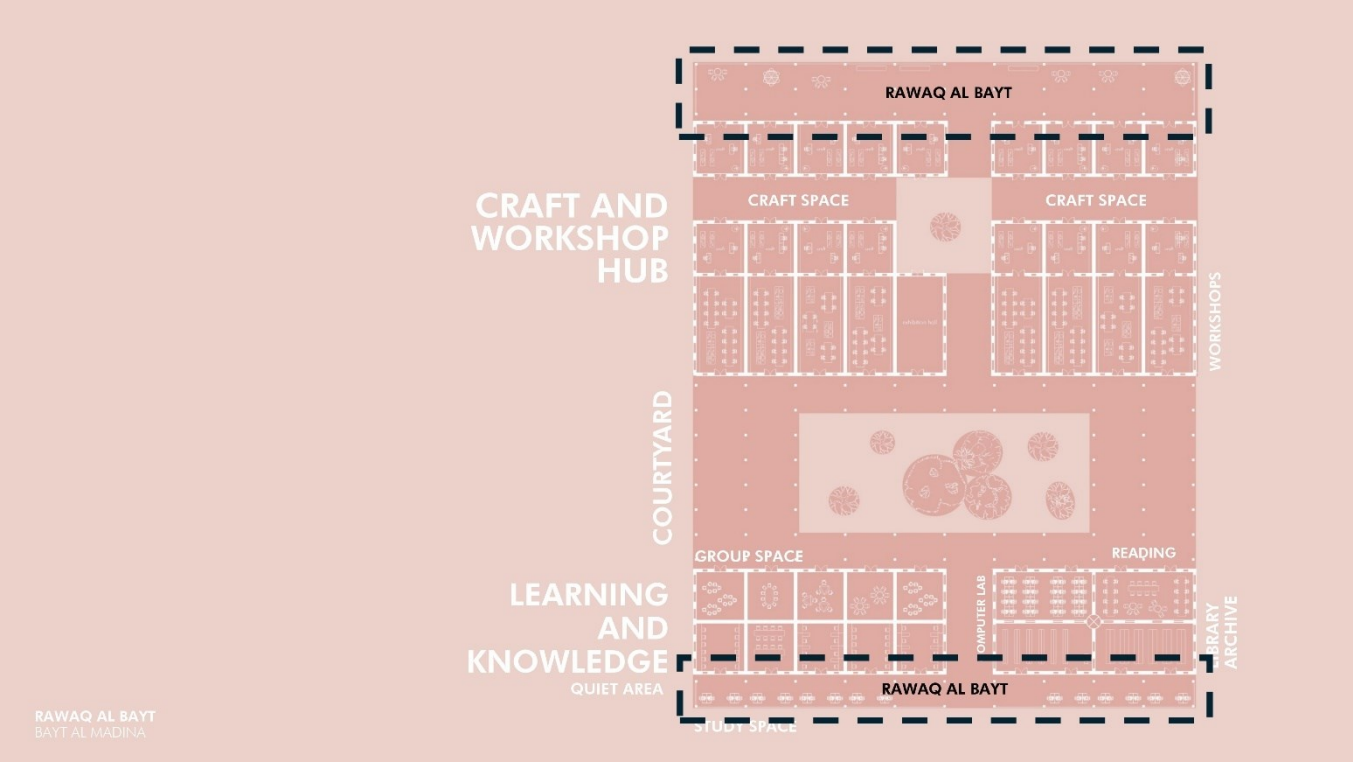
SCALE 1:200

CRAFT AND
WORKSHOP
HUB

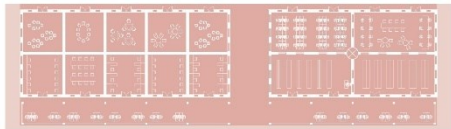
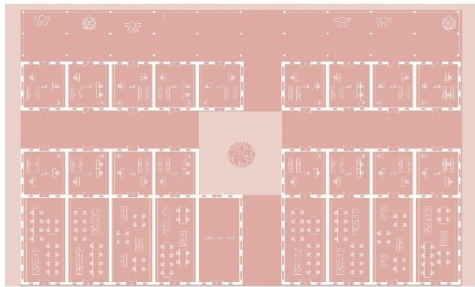
COURTYARD

LEARNING
AND
KNOWLEDGE
QUIET AREA





REFERENCE IMPRESSIONS
RAWAQ AL BAYT PARTS



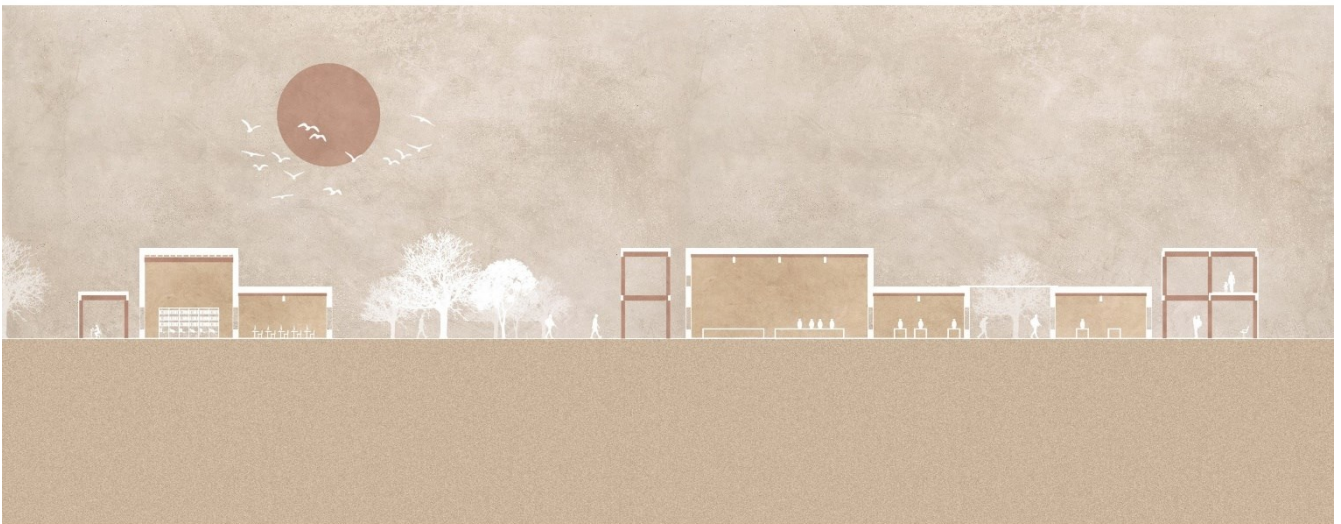
WORKSHOP/CRAFT AREA

LEARNING/KNOWLEDGE AREA

SECTION AA
BAYT AL MADINA



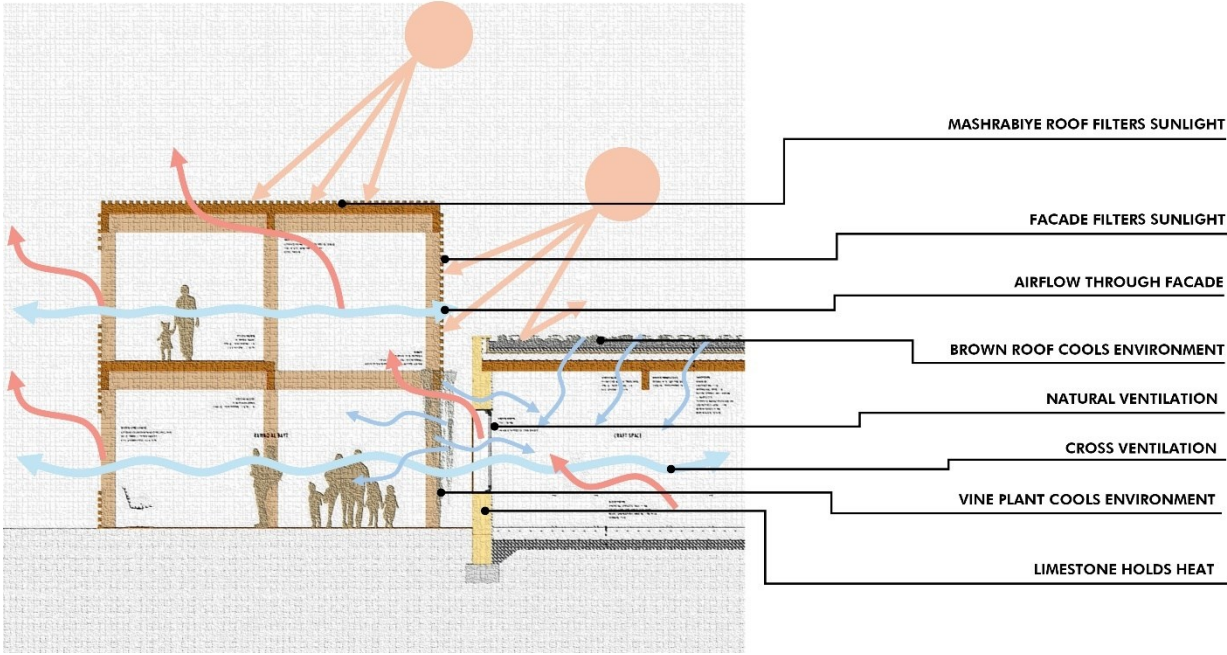
SECTION BB
BAYT AL MADINA



1:20 FRAGMENT
SECTIONS + FACADE



CLIMATE DIAGRM
PASSIVE SYSTEM



Conclusion

The central question of this research was: *How can Aleppo's urban identity be preserved in post-war reconstruction, particularly in the design of public spaces?*

This research shows that rebuilding Aleppo is not only about rebuilding the former buildings, but about reviving the city's cultural, social, and urban fabric. Public spaces, in particular, are important in this process. When designed with cultural sensitivity, they can become places for community healing and renewal.

Aleppo's identity lies not just in individual landmarks but in the combined layers of the city's fabric; its architecture, spatial patterns, and traditions. From the Aleppine limestone facades to the courtyards and souks, the city's urban fabric has been shaped by a history of craftsmanship, community life, and trade. The war fractured this, but through thoughtful design, and implementation of the research findings it can be 're-stitched'.

In this case of Aleppo, reviving craftsmanship specifically would be very powerful as it respects the urban identity of the city and is at the same time a direct response to the needs of the residents and the economical challenge that the city is facing right now. In Aleppo, designing as inclusive and neutral as possible is essential due to the political instability in the country at the moment. Then, with all this combined, such public spaces can act as both economic and social city hubs, providing opportunities for recovery after war, cultural exchange, and collective healing.

Preserving Aleppo's identity through public architecture means designing spaces that reimagine traditional typologies as that of the courtyard and the souk not just as reproductions, but as adaptable frameworks which can carry forward the logic, atmosphere, and materiality of the place. The design proposal made parallel to the research, *Bayt al Madina*, incorporates this. Situated at the political, now-empty site of the Grand Serail, the project transforms a site of power into a public hub. Through its use of Aleppine limestone, reinterpretation of local, spatial, climatic systems, and functions centered around learning, craft, and workshops, the project demonstrates how new architecture can grow from the urban identity of the city itself. It becomes a node which is rooted in the city's history, is responsive to the present, and open to the future. In conclusion, Aleppo's urban identity can be preserved in post-war reconstruction through the design of public spaces that are rooted in place, shaped by local knowledge, and inclusive in function.

Reflection

This reflection looks into the research and design development of my graduation project, which was done within the City of the Future studio, under the MSc Architecture track at TU Delft.

My graduation topic, Rebuilding Aleppo, focuses on post-war reconstruction and urban identity in Aleppo, and directly aligns with the Architecture track (A) and the broader MSc Architecture, Urbanism and Building Sciences (AUBS) programme. It integrates urban and architectural design strategies to address the post-war reconstruction challenge. The project focuses on both physically rebuilding an important part of the city and exploring social and cultural revival strategies for this public space. I tried to base this as much as possible on aspects the war took from the locals, what is lacking according to the locals, and at the same time has potential in community rebuilding after the war but could help boost the economy as well to a certain degree. Within the context of the City of the Future graduation studio, the design looks into how historical urban and architectural elements, such as certain building/urban typologies of Aleppo or certain architectural elements that were designed from in a certain time for a certain purpose, such as the mashrabiya window, can be used and adapted for the future development of the city without literally copying the exact traditional window but appreciating this smart climatic element to adapt to recent challenges as well that we need to have in mind when designing, such as global warming and circularity. In the next paragraph I will be explaining more about what I mentioned with direct examples reflecting on my research and design experience.

Research-design relationship

The research shaped the design by, firstly, identifying Aleppo's urban identity through spatial, material, and cultural elements. By analyzing Aleppo's urban identity and its Genius Loci, I was able to identify key design principles that guided for example the spatial organization (typology), material choices and more. Concepts like the courtyard architecture, Aleppine limestone, public nodes, and linear souq typologies were drawn from the research findings and translated into spatial strategies.

For example, the study of Kevin Lynch's five urban elements helped define the project's relationship to landmarks, nodes, and edges, particularly in relation to the Citadel's perimeter and the surrounding urban fabric. Then also, as the design evolved, new spatial and functional ideas came, which led to further research on mashrabiya facades, courtyard typologies, and pedestrian-oriented urban planning with the later designed Rawaq al Bayt zone (my own adaptation to the traditional mashrabiya window). I for example did not plan to have any research on this element but I ended up doing it while in the designing phase. I ended up not literally copying such an element but made my own version of it being inspired by its smart climatic system that was invented hundreds of

years ago. This whole process encouraged the entire dialogue between analysis and design, and motivated to keep experimenting.

As the research and design developed, it raised new questions: How should public space function in a politically unstable context? This was not really a planned question but ended up being one of the sub research questions due to events happening in Syria at the moment I was still conducting research during P2. And what is the appropriate balance between preservation and renewal? Such questions pushed me back into research. I mentioned before that I tried to keep in mind aspects the war took from the locals, what is lacking according to the locals, and what at the same time has potential in rebuilding social and economic resilience. This is one of the most important parts of my research and design process that I will elaborate on further. By having a site-specific public program within a war-damaged historical (UNESCO-site) context, the whole research-design process felt like working, or rather, looking for/into the intersection of heritage preservation, economic and social resilience, public architecture and the earlier mentioned recent challenges to keep in mind. I was trying to find something where all of these come together, an intersection point of all those things in my research that could be translated into a design concept. This came together into the idea of a craft/workshop hub with study/learning spaces. These zones in Bayt al Madina were directly influenced by identifying the functions that historically shaped Aleppo's economic and social life. Aleppo used to be an important intersection in the historic Silk Road and this shaped Aleppo historically as a craft/trade hub. It is also the reason Aleppo has always been the economic centre of the country. The souk of Aleppo, being one of the major landmarks of the city, illustrates this as well. So these functions are deeply rooted in the history, economy and social life of the city. Also, designing these functions spatially clarified conclusions drawn from the theoretic research of the literature on community rebuilding (chapter 4). As research also showed that this function is currently vanishing and locals need this to be revived, also stating there is no supportive program for craftsmen in order to encourage them to back to their professions, this became the great intersection of my research and design, the foundation upon which I built my design concept.

Personal learning

This project has helped me being able to put together contextual research with conceptual design. I learned to work with a cultural sensitive context, a politically instable context, with spatial recovery and programmatic functionality and I tried to learn as much from the research as possible so that the 'why' became very clear. The challenge of designing for a post-conflict context also pushed me to engage with ethical questions around what should be preserved, reinterpreted, or left behind. I, at first, spent too long on existing traditional elements, wanting to preserve them and introduce them into the design, because I thought that they must be the solution as I recognized their great values, but I realized how such architectural elements were designed during a certain time in history, for a certain purpose or a certain function and that its value is great but it is not applicable to modern times or the specific needs and needs adaptation when

wanting to use that value for a different function. The mashrabiya window as great example has been designed for domestic use, being very closed for the outsider but open for the insider as it was designed in the past with the idea that a woman can sit behind a closed window looking outside without being seen. This purpose and function is not relevant in a public building where you would want to create an inviting façade, however, the climatic value is great and is something that should be used in the hot climate of Aleppo but with its own architectural or urban adaptation.

Something I also realized during the research-design process in particular is how much we could learn from traditional design of historical cities for new buildings that comes with modern day challenges we are faced with, such as building in a circular economy, using passive design, and other sustainability aspects. The historical city of Aleppo has very strong circular design principles that also depends greatly on passive design, even though hundreds of years back they had no idea that they were doing that. In other countries in the Middle East, the wind tower for example is a traditional element which has great climatic value for the building. For Aleppo that was the mashrabiya window and the great thermal mass of its Aleppine limestone. That is an eye-opener to building in modern times where it gets much more standard to just use concrete instead of the natural stone outside the Old City of Aleppo and I am trying to show that it can still be done.

Methodological reflection

My approach combined site analysis, historical analysis, mapping, literature and given the limitations of physically visiting Aleppo, I used virtual walkthroughs (youtube videos), photographs and satellite imagery to perform my site analysis. This was complemented by the theoretical framework I set. I had to set a framework for the research question as well as to get a hold of each key term which is in general very broad, such as 'urban identity'.

One of the most valuable tools was what I called the virtual Lynch method, an adaptation of Lynch's theory applied to online street walk videos to understand districts, nodes, edges, paths, and landmarks. This bottom-up approach allowed me to see how residents actually navigate and reclaim the post-war city. It for example showed me how the Citadel's perimeter is very much alive at night and what the site at the moment exactly looked like. No satellite images would have been able to get me this crucial information for my design. On the contrary, from a top-down approach the perimeter looked very deserted, but I learned, and this is deeply connected again to the climate and social life of Aleppo, that the perimeter is very much alive at night while quiet during the day. As I studied the site more and realized there was no actual shading in the perimeter so no one wants to be there during the day half of the year, I saw this lack as an opportunity for my design where I provided a shaded, naturally ventilated half-open zone parallel to the perimeter as to compliment it but give the space quality during the day as well.

Lastly, I found however that not all the research methods I described in my research at P2 were fully relevant to both the research and design process. I had mentioned lots of literature that I ended up not reading because I basically tried to find as much as possible about one theme such as post-war reconstruction but realized it was not all needed. What I should have done better is diving deeper into the literature during the P1 period while writing the research plan.

Also, after the P2 I had put the research a bit on the side as I was developing my design concept, but when I got stuck during the design phase after the tectonics workshop week, I went back to the 'why' and the broader context of both the site and research and from there tried to look more into the intersection I mentioned. This thus helped me refocus on the broader goals of the project. I think a more structured process between research and design would have helped streamline decision-making. That would have maybe given me the idea of the Rawaq al Bayt zone earlier on in the design process. I got really excited about the idea but in my opinion it happened too late in the design process, so that in combination with better time management is something I could have done better.

Sketching and digital modeling were very helpful in testing spatial design strategies. While this method proved effective, I found that it costs me lot of time to making digital visuals even though this in particular helps me set a view of the space I want. Sketching on other hand seemed much more effective and were easy to use as a communication tool during tutoring sessions. It is much easier, quicker and a better way of experimenting as digital tools set limits.

Reflection on feedback

Throughout the process, feedback from mentors has been essential in refining the whole coherence of the design strategy. An important example would be the tectonics workshop week. Because of the feedback moment at the end of that week I could start brainstorming again on how to adapt the idea of the traditional mashrabiya element into my own design in a new way while still holding the climatic values but reinterpreting the whole element. One of the earliest feedback moments I could remember that also really helped was when I was working on the research and I didn't have a design site yet, my research mentor advised me to first split my research question into key terms which helped me to find a potential site and this became one of my design logics (see chapter 5).

Early feedback brought me to the foundations of the design; the 'why' and 'where' while later on I developed the 'how' each week with plans, technical drawings and more. A key takeaway from this experience has been the importance of balancing research depth with design. Initially, the project was research-heavy, until P2, and while this provided a solid conceptual base, translating the findings into clear architectural decisions really required more exploration and this happened after the P2 with a bigger turning point at the

tectonics workshop week between P2 and P3. So I could say that in my experience the research provided the foundation of the general design decisions and these did not completely change but the more specific *how* of these were going to be actually conducted, comes forth from the tutoring later on, weeks after the P2.

Lastly, it was quite evident from the beginning that architecture and building technology were inseparable in the process, but the tutoring sessions emphasized this as every change in the building technology part also changed the architecture and for this reason having tutoring sessions with both and receiving feedback from both at the same time helped to have the project as one integrated whole instead of the two being separate parts of the design. The same accounts for research; I brought up research findings during architecture feedback sessions and this made it feel as a truly integrated project.

Academic and societal value

Academically, the project provides insights into how architectural interventions can bridge the very historical context of the city and its new spatial needs. It connects architectural thinking with heritage preservation, reconstruction, and urban sociology. It also offers a framework for context-sensitive reconstruction, which can be applied to other post-conflict cities.

Societally, the project advocates for the reconstruction of a post-war city not just as physical infrastructure, Bayt al Madina also emphasizes the role of architecture in cultural resilience by proposing a space that encourages learning, craftsmanship, and community rebuilding. The design helps to reconnect the locals with their built heritage, creating a sense of urban identity in the rebuilding process. Ethically, the project raises important questions about authenticity in reconstruction such as; what do we rebuild, and what do we let go? Or rather; how much should be restored, reinterpreted, or innovated? And how do we avoid political instrumentalization of architecture in a contested context? All these considerations are central to ensuring that the project respects the city's historical and cultural importance while responding to the new urban dynamics. In my context it's even more sensitive as the destruction of my site for example was not due to the building itself but the function of it. So if this same building would have a different function in it, this big work of architecture would have still been standing there.

Transferability of project results

While Bayt al Madina is in the specific context of Aleppo, its underlying ideas such as the role of public space in urban recovery are applicable also to other cities facing similar challenges. Its principles, such as integrating local materials, and climate strategies into public buildings are applicable to many other heritage cities recovering from conflict or actually any disaster. The use of a flexible program, traditional passive design, and spatial zoning offer a transferrable concept for community/cultural regeneration somewhere else in the MENA region or beyond.

The research findings could also contribute to broader discussions on post-war urban planning and heritage conservation. And even though the project is Aleppo-centered, the approach that has been taken in this project is applicable to other similar situations. For example, the intersection that I found for all the different challenges of Aleppo was craftsmanship. In another (historical) city that intersection would be something different, but a similar approach could be applied to that city in which an intersection could be found for it and, like in my case, can become the foundation of its reconstruction design concept. In short it can be seen as a framework for integrating the theoretical research on community recovery into public architecture, as a design method that blends heritage typologies or preservation of its elements with new spatial needs and as a model for climate-resilient architecture which is rooted in traditional materials and passive design.

In the final phase of the graduation process (P4 to P5) I will mainly focus on preparing additional visual and narrative communication for the final review, compared to the P4, this time more in 3D, so as to produce for example a physical model to communicate a certain part of the design, and also to apply the given feedback from the P4.

Lastly, I posed a set of reflection questions for myself that I tried to answer:

How can historical architectural elements be adapted to new public functions?

The reuse of historical elements goes beyond just the literal form, for me it ended up being about translating the deeper meaning into new use. In Aleppo, elements like courtyards and mashrabiyas hold cultural, climatic, and social importance. In Bayt al Madina, the courtyard becomes not only a climatic device as in the domestic use, but also a space of gathering, learning, etc. The mashrabiya, traditionally used for privacy and ventilation, is reinterpreted as a second façade that holds a real added zone in front of the hub, being more open and public while still providing climate control. This approach respects tradition while enabling innovation.

How can public buildings in a politically unstable environment still contribute to social cohesion and inclusivity?

Inclusivity was approached through designing neutral spaces accessible to different groups that avoid political symbolism, and have embedded flexibility in program and layout, more or less applying the theory researched in chapter 4 into practice. The courtyard as example, acts as a shared civic space, while paths from the area integrate with the new urban fabric, the Rawaq al Bayt zone, to invite all residents into the hub.

How did working with a historical and politically loaded site affect my design decisions?

The decision to build on the former Grand Serail site, came with the challenge of reimagining the entire space but without reviving its political weight. Instead of reproducing authority, I introduced openness and publicness to the design, allowing citizens to reclaim a space that was once closed off and not so much of a public space in

a street block which is. The most important note is that the approach is to instead of designing *for* a (political building) context to design *with* and *through* the city and its locals.

How did integrating the concept of Genius Loci shape my architectural and spatial strategies?

I used the Genius Loci not just as a theoretical concept but as guide throughout the forming of the design concept which resulted in an emphasis on materiality (Aleppine limestone), spatial typologies (courtyards, linear souk paths), and traditions (crafts). Rather than imposing a universal form, I looked to interpret the spirit of Aleppo into the modern needs, developing a design that still honors the 'old' without copying it.

In chapter 4 memory is mentioned often, how did I end up dealing with the tension between memory and innovation in the design process as these two things at first seemed very contradictory (preservation vs change)?

Memory often asks for preservation, while innovation calls for change. I learned after the tectonics workshop week that the key is not to frame them as opposites but rather as collaborators. I think that memory is not something static, it evolves through interaction. In Bayt al Madina, memory is kept alive not by freezing the past, but by including already familiar forms (a courtyard, a connection to the souk) into new functions and flexible programs such as workshop spaces that Aleppo is maybe less familiar with. This balance allows the design to still resonate with the city's cultural memory but while staying open to new future uses.

What did I learn from studying informal spatial practices in Aleppo (like how the locals use the Citadel's perimeter at night)?

Observing these informal practices, like how people bring chairs from home to sit at the Citadel's perimeter, taught me the value of adaptable space. It encouraged me to design for potential, not control. So my idea was not to replace the perimeter but to add something parallel to it that gives the whole space more quality. In Bayt al Madina, this insight led to the open but shaded Rawaq al Bayt. I think that the perimeter specifically shows that social life sometimes happens in spaces that aren't overly designed. The perimeter to me looked at first like a very empty underappreciated piece of space but as I watched the youtube videos going around the Citadel, I saw how it is actually very well used, maybe even overused, but during a certain time of the day and as the perimeter is one element that apparently 'works' well spatially, I added quality to the environment based on what locals said about it (see chapter 5), and what it lacks and took this as opportunity for my design.

How did working with climate-responsive strategies influence my spatial design?

Climate strategies weren't just add-ons they were integrated from the start. I learned that passive design in Aleppo's context is inherently tied to identity: the courtyards, thick limestone walls, inner windows and shutters, all serve a purpose but make up the architectural elements of the city. Rather than importing foreign systems, the project reactivates local climate techniques. I also told my building technology mentor in one of the first tutoring systems how the techniques used by the locals in the Old City are already very passive and contribute a lot to the circular economy even though the locals did not really think about that when building their city.

Bibliography

Bastéa, E. (2004). *Memory and Architecture*. University of New Mexico Press.

Cohen, J. L. (2011). *Architecture in uniform: Designing and building for the Second World War*. Editions Hazan.

Frampton, K. (1983). *Towards a critical regionalism: Six points for an architecture of resistance*. In H. Foster (Ed.), *The anti-aesthetic: Essays on postmodern culture* (pp. 16-30). Bay Press.

Ludwig, C., Alvanides, S., & Laue, F. (2024). *Post-war Cities: Planning Recovery and Reconstruction*. Springer.

Lynch, K. (1960). *The Image of the City*. MIT Press.

Mancini, J., & Bresnahan, K. (2014). *Architecture and Armed Conflict: The Politics of Destruction*. Routledge.

North Press Agency. (2021). *Ancient handicrafts about to vanish in Syria's Aleppo*. <https://npasyria.com/en/60034/>

Norberg-Schulz, C. (1979). *Genius loci: Towards a phenomenology of architecture*. Rizzoli.

Rodwell, D. (2007). *Conservation and sustainability in historic cities*. University of Pennsylvania Press.

Tate, L., & Shannon, B. (2018). *Planning for AuthenticITIES*. Routledge.

United Nations Human Settlements Programme (UN-Habitat). (2014). *City profile: Aleppo – Multi-sector assessment*. UN-Habitat. https://unhabitat.org/sites/default/files/documents/2019-05/aleppo_city_profile.pdf

Vale, L. J. (2008). *Architecture, power, and national identity* (2nd ed.). Routledge.

Zukin, S. (2010). *Naked city: The death and life of authentic urban places*. Oxford University Press.

List of Figures

Figure 00. Arthus-Bertrand, Y. (2008). *Aleppo Aerial Photograph*. Edited by author.

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Figure 02. Savinova, A. (2016). *Genius Loci – collages of cities*.
<https://www.itintandem.com/it/art/photography/genius-loci-anastasia-savinova/>

Figure 03. Lynch, K. (1960). Kevin Lynch map and elements. *The Image of the City*. MIT Press.

Figure 04. Author. (2024). P1 Research Design – Golden Circle Concept Diagrams.

Figure 05. Author. (2024). P1 Research Diagram.

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Figure 07. Demeter, D. (2014). *Al-Atroush Mosque*.
<https://syriaphotoguide.com/aleppo-al-atroush-mosque>

Figure 08. Pearson, N. (2019). *Souk al-Shouneh, built in 1546. Currently functions as a market for trades and traditional handicrafts of Aleppine art*.
<https://ninstravelog.wordpress.com/2013/04/19/the-souk-of-aleppo/>

Figure 09. Huldra (2001). "Museum of Popular Tradition", or "Ajikbash House", in Aleppo.
https://en.wikipedia.org/wiki/Beit_Achibash#/media/File:Ajikbash_House036.JPG

Figure 10. Sheikh, Z. (2009). "The streets of the Old City of Aleppo are deserted in the early morning hours where the inhabitants rise as lazily as the sun through the narrow streets". <https://www.flickr.com/photos/zishansheikh/3627829839/in/photostream>

Figure 11. Murad al-Hamawi, A. (1700s). *Aleppo Citadel painting*.
https://www.facebook.com/photo.php?fbid=1201847193207797&id=461364413922749&set=a.483007038425153&locale=sq_AL

Figure 12. Écochard, M. (1936). *Aerial Photograph of the Citadel in Aleppo*.

https://www.archnet.org/collections/151?media_content_id=91323

Figure 13. Safartas. (2024). *Night Walk around Aleppo Citadel*.

<https://www.youtube.com/watch?v=HUKGY8raa4c>

Figure 14. Bianca, S. (n.b.). *Bayt Maktabi*. <https://www.archnet.org/sites/20656>

Figure 15. Menici, F. (2020). *Structure of the souk*. [http://link-springer-](http://link-springer-com.tudelft.idm.oclc.org/chapter/10.1007/978-3-030-48279-4_53)

[com.tudelft.idm.oclc.org/chapter/10.1007/978-3-030-48279-4_53](http://link-springer-com.tudelft.idm.oclc.org/chapter/10.1007/978-3-030-48279-4_53)

Figure 16. Lafforgue, E. (2012). *Mashrabiya on old houses in Aleppo*.

<https://www.flickr.com/photos/mytripsmypics/7118216235>

Figure 17. Bertrand, Y-A. (n.b.). *Aerial view of the Citadel*

<https://www.yannarthusbertrand2.org/collection/syria/>

Figure 18. Iad, P. (2011). *Hammam Yalbugha*

[https://commons.wikimedia.org/wiki/File:Hammam_Yalbugha,_Aleppo_\(2\).jpg](https://commons.wikimedia.org/wiki/File:Hammam_Yalbugha,_Aleppo_(2).jpg)

Figure 19. Aga Khan Award for Architecture (1989). *Hammam Yalbugha ceiling plan*

https://www.archnet.org/sites/536?media_content_id=11366

Figure 20. Gordon, J. (2010). *Byzantine legacy, polychrome architecture in Syria*

https://commons.wikimedia.org/wiki/File:Byzantine_legacy,_polychrome_architecture_in_Syria_-_2.jpg

Figure 21. Herzfeld, E. (1908-1914). *Ayyubid Palace of al-Malik al-Zahir*

Ghazi, Entrance Portal: Plan and Elevation. .

<https://www.si.edu/object/archives/components/sova-fsa-a-06-ref8757?destination=object/archives/components/sova-fsa-a-06-ref29578>

Figure 22. Iad, P. (2011). *Souq al-Atmah, al-Madina Souq*

[https://commons.wikimedia.org/wiki/File:Souq_al-Atmah,_al-Madina_Souq,_Aleppo_\(2\).jpg](https://commons.wikimedia.org/wiki/File:Souq_al-Atmah,_al-Madina_Souq,_Aleppo_(2).jpg)

Figure 23. Chouha Freres. (1920). *Aleppo (Alep), Syria - Rue Bab-El-Faraj, clock tower - postcard c. 1920s*

<https://www.ebay.co.uk/itm/305774079553?mkevt=1&mkcid=1&mkrid=710-53481-19255-0&campid=5338722076&customid=&toolid=10050>

Figure 24. Kevork. (2010). *Dar Basile alley of Jdayde Historic district*
https://commons.wikimedia.org/wiki/File:Dar_Basile_alley_of_Jdayde_Historic_district,_Aleppo,_2010.jpg

Figure 25. Fede Ranghino. (2009). *Ayda alley at the Christian quarter of Jdeydeh, Aleppo*
[https://commons.wikimedia.org/wiki/File:Ayda_alley,_Aleppo_Christian_Quarter_\(01\).jpg](https://commons.wikimedia.org/wiki/File:Ayda_alley,_Aleppo_Christian_Quarter_(01).jpg)

Figure 26. Syrian Trust for Development. (2023). *The biggest piece of soap in the world weighing 1,520 kgs; soap Khan; Aleppo* https://ich.unesco.org/en/7b-representative-list-01370?include=slideshow_inc.php&id=02132&width=620&call=slideshow&mode=scroll#https://ich.unesco.org/img/photo/thumb/17492-HUG.jpg

Figure 27. North Press. (2021). *A shop in the traditional Bab al-Hadid market in the city of Aleppo* <https://npasyria.com/en/60034/>

Figure 28. Francesco Bandarin. (2013). *Damage to the Great Umayyad Mosque of Aleppo, including damage to the minaret* <https://www.getty.edu/publications/cultural-heritage-mass-atrocities/part-2/10-bandarin/>

Figure 29. Menici, F. (2020). *Territorial overview of the city of Aleppo*. http://link-springer-com.tudelft.idm.oclc.org/chapter/10.1007/978-3-030-48279-4_53

Figure 30. Menici, F. (2020). *Planimetric outline of the city of Aleppo, in evidence the historical center*. http://link-springer-com.tudelft.idm.oclc.org/chapter/10.1007/978-3-030-48279-4_53

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https://unhabitat.org/sites/default/files/documents/2019-05/aleppo_city_profile.pdf

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https://unhabitat.org/sites/default/files/documents/2019-05/aleppo_city_profile.pdf

Figure 33. UN Habitat. (2014). *City damage map*.
https://unhabitat.org/sites/default/files/documents/2019-05/aleppo_city_profile.pdf

Figure 34. UN Habitat. (2014). *Urban functionality map*.
https://unhabitat.org/sites/default/files/documents/2019-05/aleppo_city_profile.pdf

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<https://www.archdaily.com/921640/the-great-umayyad-mosque-of-aleppo-from-historic-islamic-monument-to-war-battlefield>

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<https://www.facebook.com/Olympia.Rest/photos/a.770898579647858.1073741863.125274874210235/770901946314188/?type=3&theater>

Figure 37. Domenico Chizzoniti. (2021). *War destruction on a territorial and urban scale, Aleppo.* DOI: 10.12838/fam/issn2039-0491/n55-2021/747

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Figure 39. Jackson, T. (2022). *Reconstructing fragments of residual identities*
<https://www.instagram.com/p/CoW1ZQer87i/>

Figure 40. Babina, F. (2017). *Archiatric* <https://www.designboom.com/art/federico-babina-archiatric-mental-illness-architectural-illustrations-02-17-2017/>

Figure 41. Yonito Tanu. (2021). *The flexible building* <https://www.the-possible.com/the-ultimate-flexible-building/>

Figure 42. Christian Richters. (2009). *Aleppo Citadel Perimeter, overview of plaza in front of entrance tower.* Copyright Aga Khan Historic Cities Programme.
https://www.archnet.org/sites/6415?media_content_id=76406

Figure 43. Author. (2024). *Chosen plot and its street block, directly south of the Citadel.*

Figure 44. Kevork. (2010). *Aleppo Grand Seray.*
https://fr.m.wikipedia.org/wiki/Fichier:Aleppo_Grand_Seray.jpg

Figure 45. alarabiya. (2014). *Explosion destroying Grand Serail.*
<https://english.alarabiya.net/webtv/reports/2014/07/30/Syrian-Islamic-Front-destroys-Police-HQ-in-Aleppo->

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<https://nawafir-tours.com/aleppo-citadel/>

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