

Case of Aachen

Urbanity and Urban Planning – Bases for a circular economy?

MSc. Transforming City Regions - RWTH Aachen - SS 2025

Compulsory Course | URBAN TRANSFORMATION II

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LOCATIONS

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CLASS EVALUATION

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CITY OF AACHEN – CORES/ EDGES

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LOCAL PLANNING - GLOBAL GOALS

01 COURSE CONTENT

Evaluating ongoing processes of urban transformation in different locations/ their morphologies with relevance for the urban structure.

Understanding strategies/ measurements of guiding urban transformation in Europe/ Germany holistically. Finding regenerative answers to ongoing processes of urban transformation, the case of Aachen (core-edges).

Applying criteria of qualifying the environment by setting goals for local culture, space, nature, people and the (circular) economy with reference to the European history of urban growth/ decline.

Considering ways of PLANNING as compulsory approaches to Visioning/Concept-finding/Land-use Management in Germany, relative to the autonomy of the Municipality in the Federal Planning System of Germany.

02 CLASS EVALUATION | Starting Point of Investigation

The class evaluation builds up deductively on theme-related inputs from lectures and literature reviews; it applies the derived guidance for identifying and localizing opportunities for helping to imagine a circular economy inductively by in-depth analyses of selected locations through group-specific approaches. Territory/ Space/ Arena are the key terms on the journey to discovering local potentials for multi-scale visions (area/ town/ region). The requested multi-scale visions are to show perspectives for overcoming restrictions to innovation, locally and for the municipality in the region.

The multi-scale approach focuses on translating the vision per area into strategies and measurements for innovating the municipality locally, starting with ideas for small-scale changes, mainly on underutilized ground. Herewith, the global sustainability development goals are broken into the inherent and unique logic of the municipality to date, with its urban structure and its space-become history relative to topography and geography. As the selection of locations per group covers the major historical periods of urban development in Aachen (including the discussion about urban expansion for the northern periphery in Richterich), the existing logic of development and the spatial patterns of the urban fabric needed to be given all the respect which they deserve historically as a valuable heritage – and all the freedom of thought and creation which is needed to imagine innovative visions for the overall urban fabric.

The distinction of „what to be continued - how?“ from „what to be altered/ changed/ replaced – how?“has therefore been guiding the working process. The major aims of teaching and learning are to prepare for planning by distinguishing a vision for a strategy and measurements in formal/ informal planning concepts.

03 EXERCISE | STEPS OF TASK

Step 01 | Urbanity - Identify and localize types of “urbanity” in Aachen city (core and edges) relative to the ring-radial development of the compact urban structure and its periods of urban development (fulfilled group-wise, documented class-wise).

Step 02 | Space/ Area/ Town - Select a location/ morphology representing one of the major historical periods; characterizing ongoing processes and phenomena of urban transformation in consequence of the land-market (elevation/ extension of built form on private ground ... emptiness/ decay ... maintenance/ preservation) and summarize your impressions of local spatial conditions.

Step 03 | Opportunities/ Restrictions – Innovation - Identify/ localize criteria for guiding urban transformation relative to the original urban concepts/. State factual problems/ potentials for the “healthy city in a circular economy” per location/ morphology/ town.

Step 04 | Multi-scale Visions - Synthesize traditional and innovative values for urban space/ area/ town.

Step 05 | Intervention - Define goals for innovative urban changes by planning intervention/ area/ town.

Step 01 | Urbanity – A collective review

1.1 Historical and Urban Development

Roman period (1C–5C)
9 streets with an angle of 36°. city plan of 1820

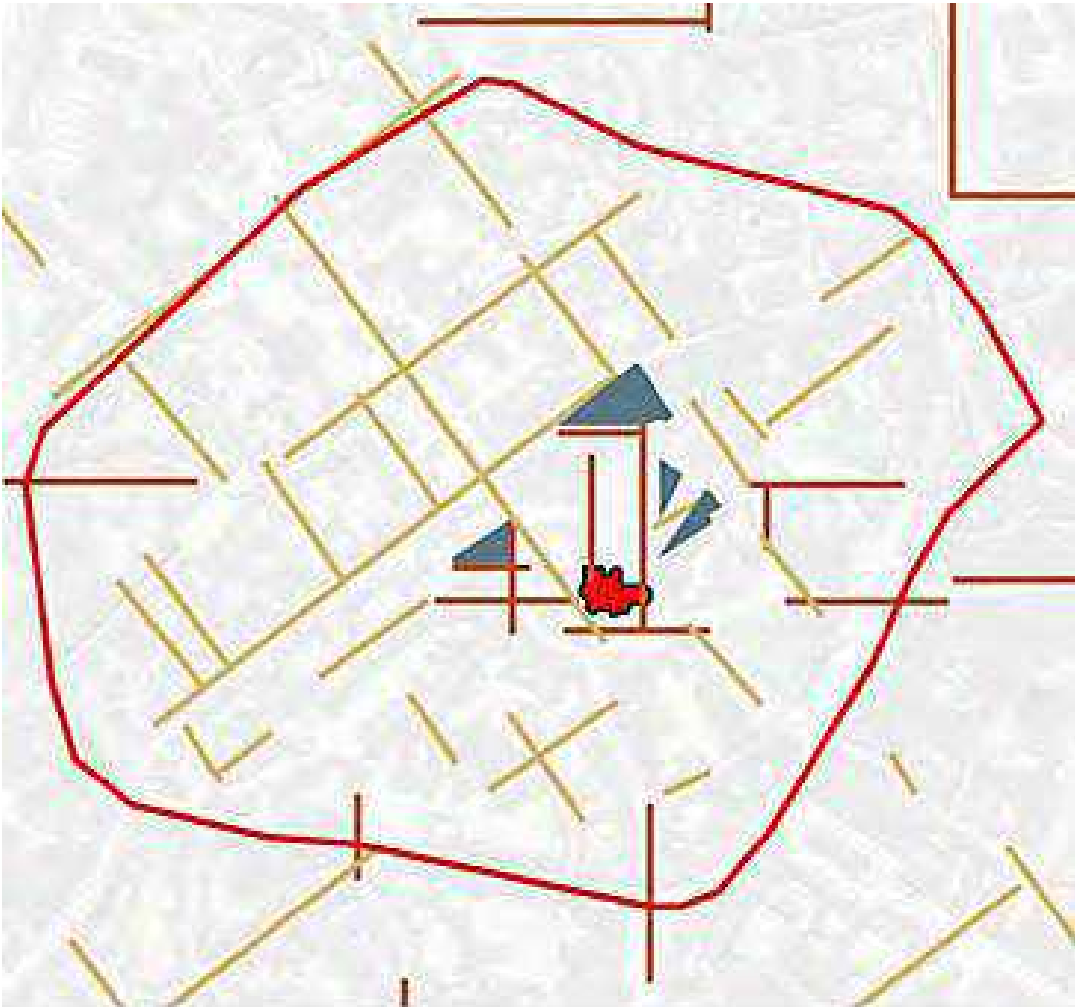


Carolingian period (8C–9C)
Fragments in the Carolingian orientation



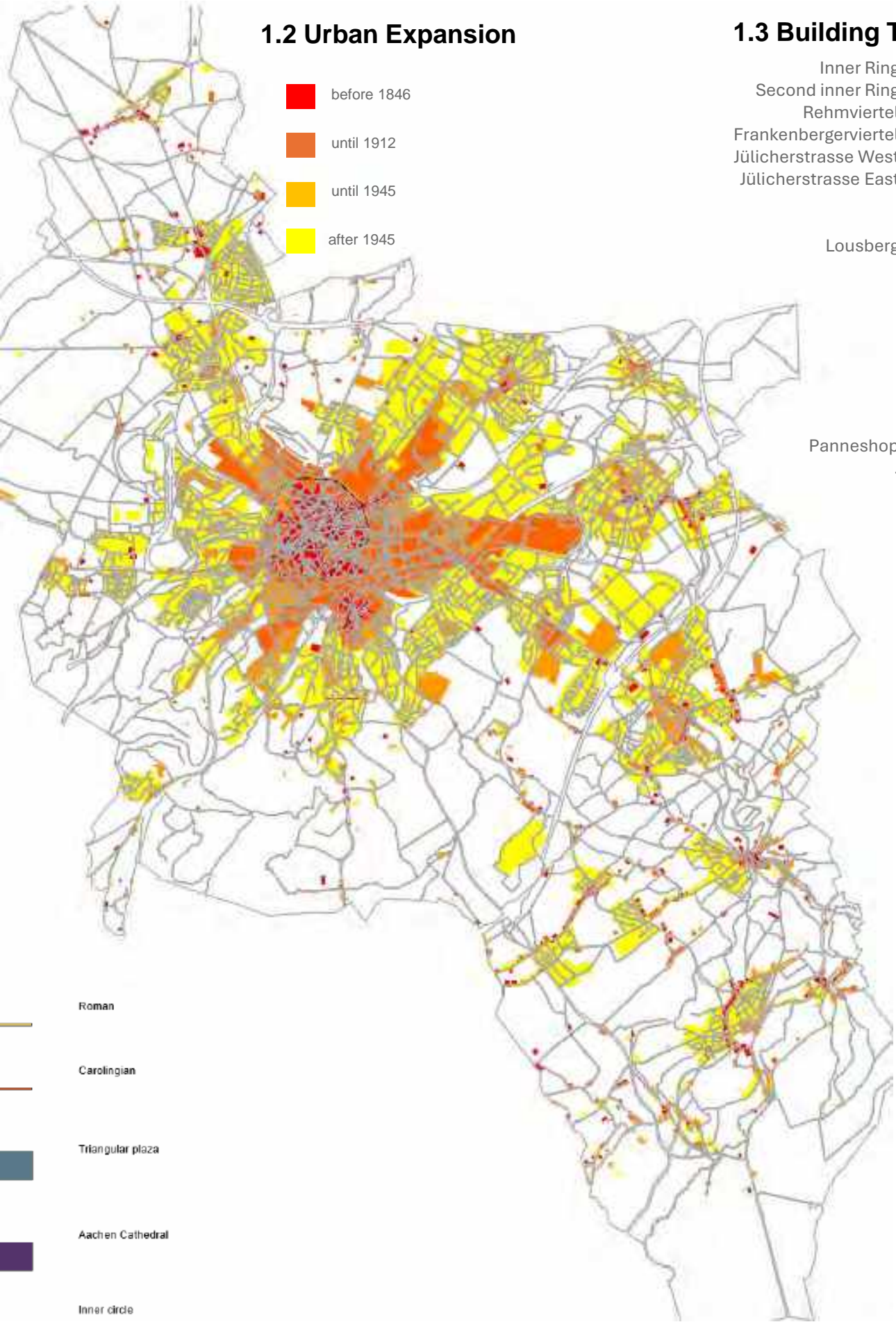
Maps Source: source:Die Entwicklung des Aachener Stadtraumes

Historical Street Layouts Overlaid on Contemporary Map



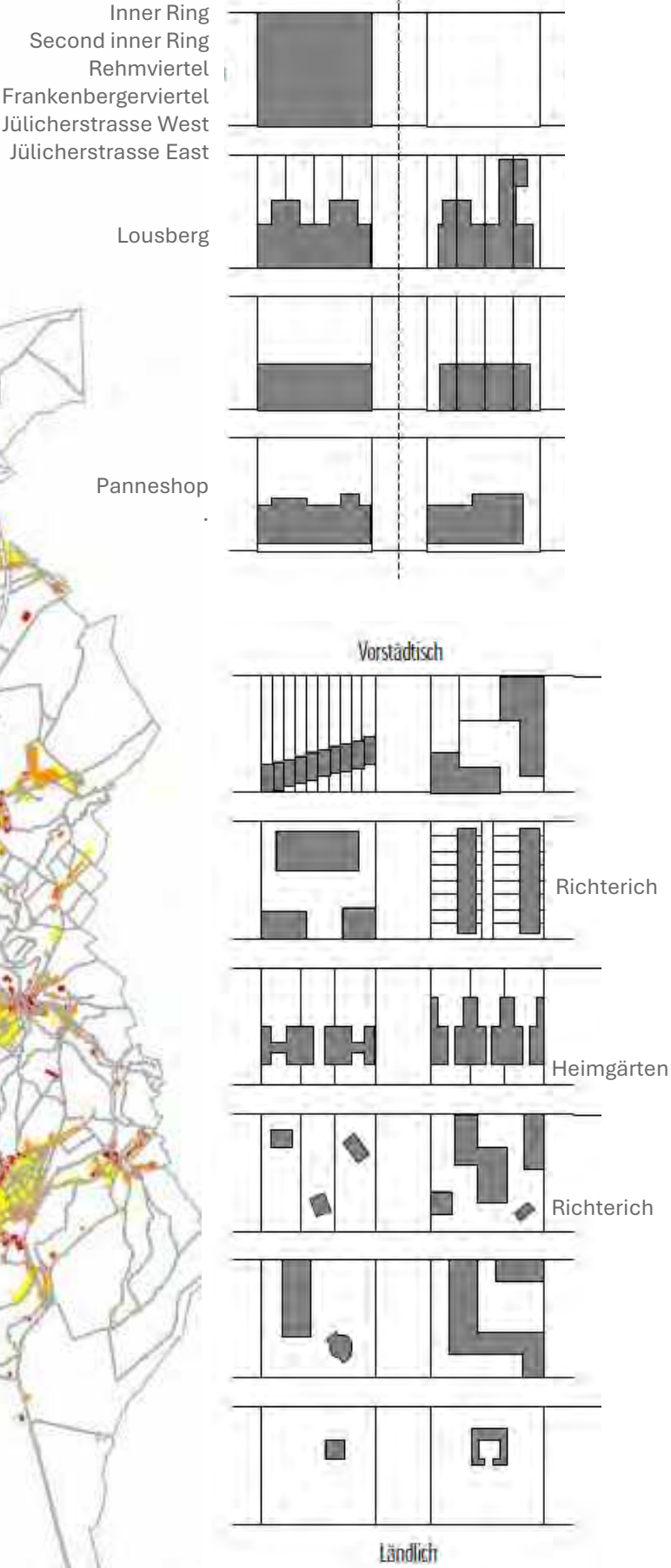
Source:Die Entwicklung des Aachener Stadtraumes

1.2 Urban Expansion



Source: ISL- Aachen in Schichten. GRÜN.RAUM.STRUKTUR. 1997

1.3 Building Typology

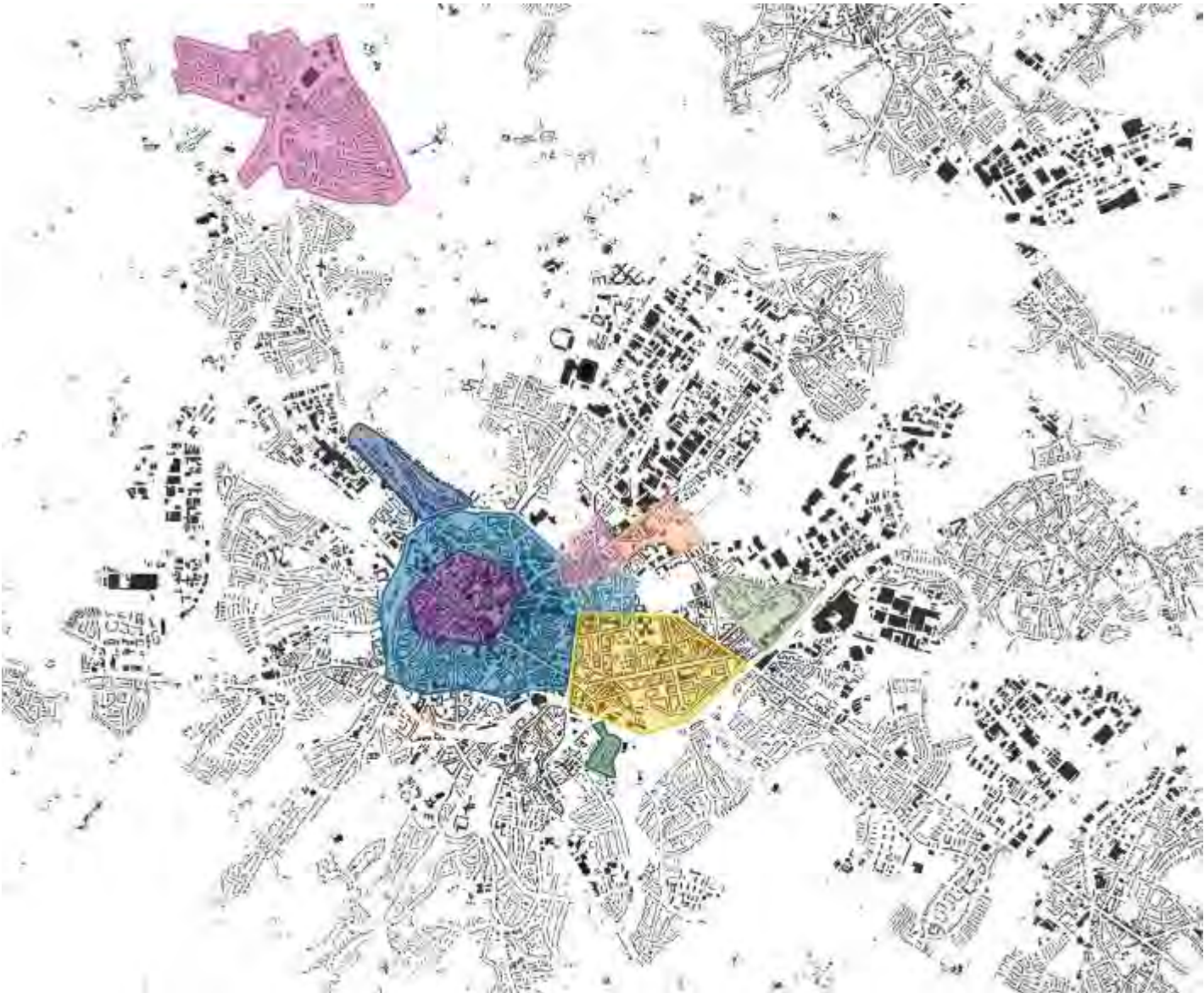


Source: BISL 1997 - Aachen in Schichten

Step 01 | Urbanity – A collective review

1.4 Locations Overview

- Inner Ring – Roman and mediaval foundations
- Second inner Ring – Medieval foundations
- Rehmviertel – First industrial expansion
- Lousbergviertel – First expansion of elite residences
- Frankenbergerviertel – Second industrial expansion
- Heimgärten – First Garden settlement
- Panneshop – Reform Block
- Jülicherstrasse West – Contemporary inner urban transformation area
- Jülicherstrasse East – Contemporary outer urban transformation area
- Richterich – Contemporary urban/ rural expansion area



Source: Aachen- Noli plan

Step 01 | Urbanity – A collective review

“Urbanity” has been introduced as a quality of self-organization of valuable socio-cultural activities throughout day and night times and in between private and public spaces. The spatial distinction between private and public spaces is mainly predominant for this quality. However, there can be differences in between local “urbanities”, relative to the structural conditions of separating/ connecting private and public spaces, as parts of the overall framework of the urban structure. The ring-radial structure of the city of Aachen shows a clear hierarchy of public spaces, decreasing in their importance from inner to outer urban and suburban areas.

The selected locations and their qualities of “urbanity differ accordingly relative to their structural conditions within the urban structure and relative to their morphologies with different urban and suburban types of built form arrangement.

“Urbanity” had been tested within the different locations, mainly following the search for “arenas” – which represent a site per location, offering opportunities for reflecting on urban changes and/ or practicing them in different forms relative to local needs – by giving respect to the origins and concepts of urban development over time, their heritage values and their usabilities for urban changes. It is noticeable that the expansion areas from the time after WWII have not been selected for investigation.

The stated characteristics of local “urbanities” in Aachen are thoroughly based on knowing about and considering carefully the values of cultural and spatial heritage, of wellbeing in consequence of access to green open spaces and of the chances for adaptive reuse from industrial functions to late. Industrial qualities of urban spaces.

The periphery of Richterich was a specific case, in this class comprehensively dealt with to prepare an innovative master-plan for establishing new forms of urban-agricultural uses. This perspective was, as a very complex one, deepened and successfully responded to in a different, accompanying seminar course (“Research by Design”) through a strategy and measurements for expanding the urban edge by leaving the “edge” spatially undefined and open to further processes of expansion.

Inner Ring – “Urbanity” is a challenge here for 24 hours a day- and nightlife to be enhanced. Main “arenas” are underused spaces from the period of post-WWII era.

Second inner Ring – “Urbanity” is a providing long-term questions about how to organize mobility access to inner urban areas in a way which connects the inner and the outer urban areas for the benefit of the pedestrians. “Arenas” are underused traffic spaces.

Rehmviertel – “Urbanity” is bound to life and urban changes on (limited) private ground, relative to the limitations of public space by the origins of founding the quarter (“Rehmplatz”). “Arenas” are the inner urban yards on private ground, ready to be reused for staying after stages of industrial functionalization.

Lousberg Viertel – “Urbanity” is at the edge of sub-urbanity because of the overall dominance of very private residential uses; however, it has its major “arenas” on sites where either clerical or retail uses have mixed up the strictness of residences.

Frankenbergerviertel – “Urbanity” has a much wider range of options for “arenas” on private and on public ground than the younger Rehmviertel, because of the spatio-functional irregularities around former factories, the remaining niches, and the much more generous concepts of distributing private/ public spaces, in later stages of urban development

Heimgärten – “Urbanity” finds its challenges within the spatially founded, semi-private neighborhood conditions representing the very early “Garden City” concepts with clear definitions of inner and outer spaces relative to a nearby public park, its spatial edges, and with the highlight of a locally centralized public plaza.

Panneshop – “Urbanity” is restricted here to “arenas” on common yard spaces and public street spaces with different entries into the settlement, integrating the famous Church of Rudolf Schwarz and connecting to Kennedy Park.

Jülicherstrasse West – “Urbanity” needs a lot of encouragement here to connect plazas of different dimensions and a private initiative into a strategy for enhancing an overall atmosphere of “arena” on Blücherplatz

Jülicherstrasse East – “Urbanity” is restricted here to the (very essential) repair-work of closed-built form and protecting open spaces on private ground from triadic noise and pollution. A connectivity in between West- and East-Jülicherstrasse might introduce a “green axis” north of Blücherplatz towards Kulturforum Ludwig

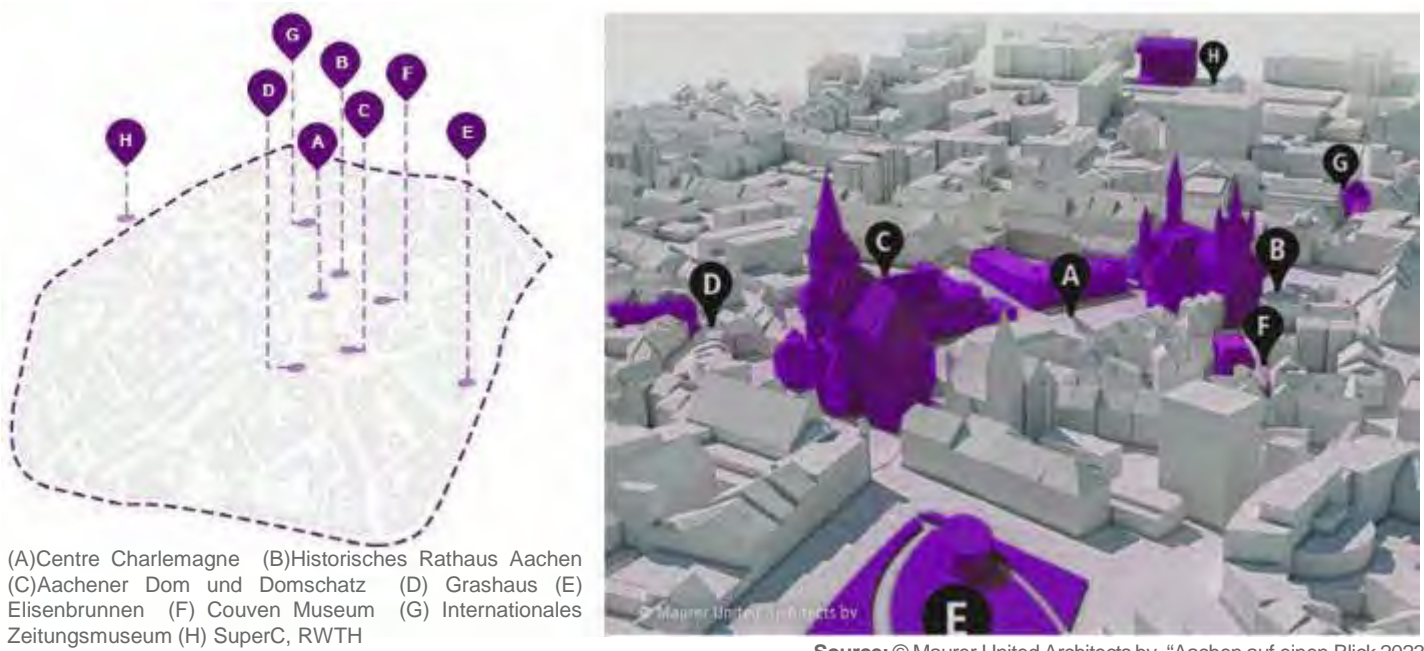
Source: BISL 1997 - Aachen in Schichten | ISL- Aachen in Schichten. GRÜN.RAUM.STRUKTUR. 1997

Aachen's Inner Circle | Hamed Ataeimonazah, Ryuhei Takahashi, Irine Lomadze

Step 2 | Space/Area/Town

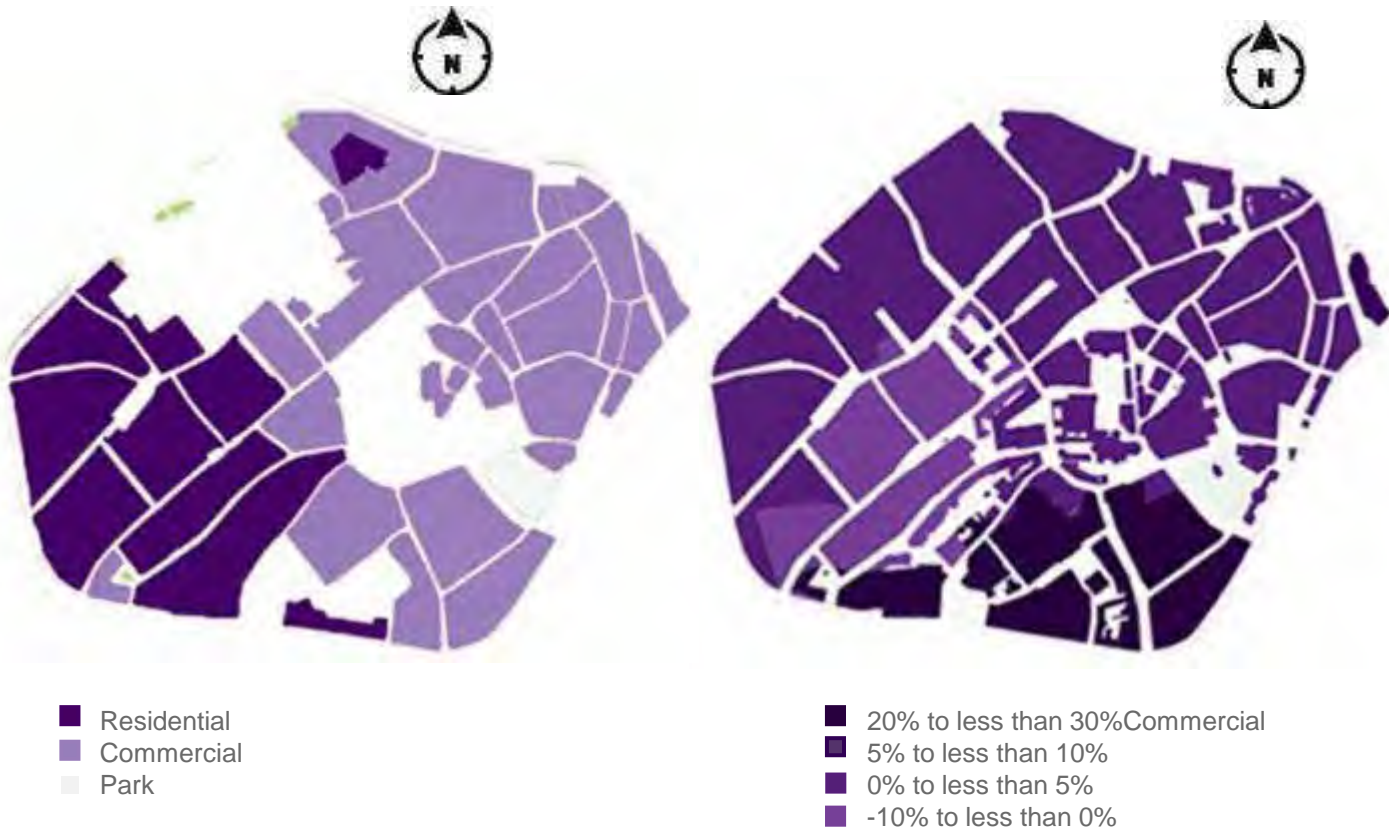
The inner ring of Aachen, particularly the central pedestrian zones, is undergoing significant spatial and socio-economic transformation. Historically composed of tightly packed medieval and early modern structures, the area has adapted over time to become a regional hub for retail and leisure. Iconic areas like Krämerstraße reflect a commercialized morphology with storefronts dominating the ground floors and upper levels increasingly converted into office spaces or high-rent apartments. One notable transformation process is the substitution of small local businesses by international chains, particularly in areas just outside the historic core. While this has modernized the shopping infrastructure, it has also displaced traditional uses and weakened local identity. The land market in this area is highly competitive, leading to frequent renovations, upward extensions, and adaptive reuse of historic buildings. For instance, many old warehouses and administrative buildings have been converted into co-living apartments or student housing. This dynamic presents both opportunities and threats. While the economic vitality is evident, spatial tensions emerge due to overcrowding, lack of greenery, and reduced space for inclusive public functions. The inner ring, despite its iconic architecture and intense activity, risks becoming overly consumption-driven unless balanced by policies that promote cultural use, affordable housing, and sustainable public space design.

Spatial Structure and Historical Layers



Source: © Maurer United Architects bv, "Aachen auf einen Blick 2023"

Landuse Percentage Population Change 2014–2023



Images: By Authors | data from Open Street Map (2025).



Ursulinerstraße



Holzgraben

Images: taken by the authors

Step 03 | Opportunities/ Restrictions - Innovation.

Aachen's inner circle faces five key issues: Inactive Urban Frontages after 6 PM, Unbalanced Nighttime Activity, a lack of Stable Residential Uses, Insufficient Green and Public Spaces, and Low-Quality or Underutilized Spaces. However, these challenges reveal three main opportunities to enhance urban quality by leveraging local assets.

Opportunity 1: Night-Time Economy Based on Public Transportation
Although the area lacks stable residential uses, it benefits from a strong public transit network. Night buses (Nachtexpress) run from Elisenbrunnen and Bushof at 1:30, 2:30, and 3:30 AM on weekends and holiday eves, enabling safe late-night access and supporting a vibrant nighttime economy.

Opportunity 2: Smart Mobility & Car-Free Zones
The inner circle has lower traffic than the second ring and features a pedestrian zone that eliminates through-traffic. This offers potential to expand pedestrian- and bike-friendly corridors, especially around transit hubs like Bushof, encouraging sustainable mobility.

Opportunity 3: Utilization of Open Spaces
Though large parks are limited, many small, underused open spaces—like staircases and plazas—exist. Activating them with greenery, seating, or temporary programs can improve livability. While some appear public, several are privately owned, highlighting the need for clearer ownership identification in future planning.

Underutilized spaces within the inner ring



Image: By Authors | data from Open Street Map (2025).

Daily traffic volume

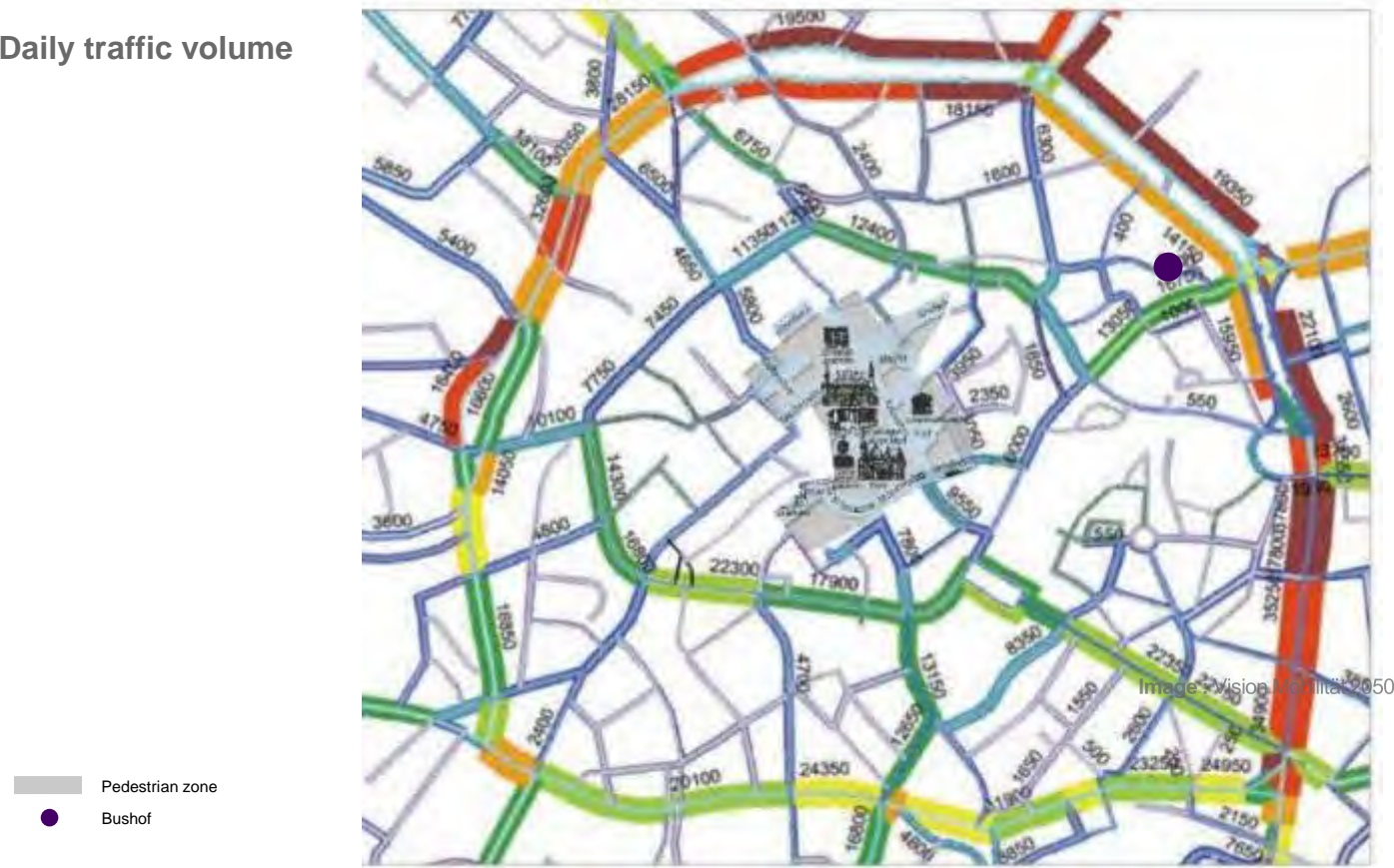


Image : Data from <https://www.aseag.de/nachtfahrten/nachtexpress>

Low-utilization pocket park - Typology



Images: By Authors | data from Open Street Map (2025).

Step 04 | Multi-scale Visions

The inner ring of Aachen holds huge potential for low-threshold, high-impact urban regeneration through culturally anchored interventions. Many underutilized spaces—**vacant courtyards, transitional squares, and residual pockets near bus stops or rear facades**—can become vibrant **micro-arenas** for **night-time** cultural activation. These spaces can support a circular economy by **reusing urban voids** instead of building anew, fostering social interaction and creative economies.

Night activities such as **food stalls, open-mic events, and projection art performances** could extend the active hours of public space, improving both **safety and attractiveness**. A decentralized strategy involving **small-scale lighting upgrades, modular street furniture, and low-noise street stages** supports inclusivity without overwhelming the historic character of the inner ring. At a large scale, we propose a **networked system of these revived pockets**, connected via **walkable routes that guide users through lesser-known yet character-rich alleys**. Partnerships with local schools of music, theater, and design—as well as city planning authorities—can ensure regulatory feasibility and cultural authenticity



Image: taken by the authors



Image: By Authors



Image: taken by the authors



Image: By Authors

Nighttime activities such as open-mic events and projection art performances can extend the active hours, contributing to improved safety and overall attractiveness.

Informal Tools

- **Modular lighting systems**
- **Mobile furniture**, such as movable benches
- **Low-noise infrastructure**, such as quiet speakers and compact stages
- In addition to community engagement and partnerships with local artists and cultural institutions, **collaboration with adjacent commercial facilities** is also a key component.



Image : By Authors

Step 05 | Intervention

The arena that was most suitable for the plans was the **Bushof** area. Despite being a central mobility hub in Aachen, it suffers from severe spatial neglect. The **abandoned concrete staircase**, once meant for pedestrian connectivity, now serves as a barrier—cut off, uninviting, and misused. The **crosswalks in the area**, meanwhile, function merely as traffic facilitators rather than spatial assets. The atmosphere after dusk is particularly unwelcoming due to **poor lighting, low pedestrian presence, and lack of active uses**.

This neglected urban condition undermines both **safety** and **vibrancy**, despite the area's strategic location near transit, commerce, and student flows. However, its visibility and spatial potential make it an ideal canvas for **circular, culture-driven intervention**.

Intervention Goals

1. Reactivate the Staircase as a Vertical Performance Zone

- Transform the abandoned staircase into a **stepped open-air stage**: Clean, repair, and apply anti-slip surface treatment;
- Sidewalls repainted with murals designed by local youth or art students.

2. Transform Crosswalk Forecourt into a Programmable Cultural Square

The zone in front of the staircase and bus stops can serve as a **“night plaza”**:

- Temporary street closures or shared-space strategies during events

3. Improve Lighting and Identity

- Install warm, low-glare lighting to improve visibility without harshness
- Use **light projections** on walls or pavement (e.g., poetry, animated shadows)
- Add signage highlighting evening event schedules

4. Encourage Local Participation & Program Ownership

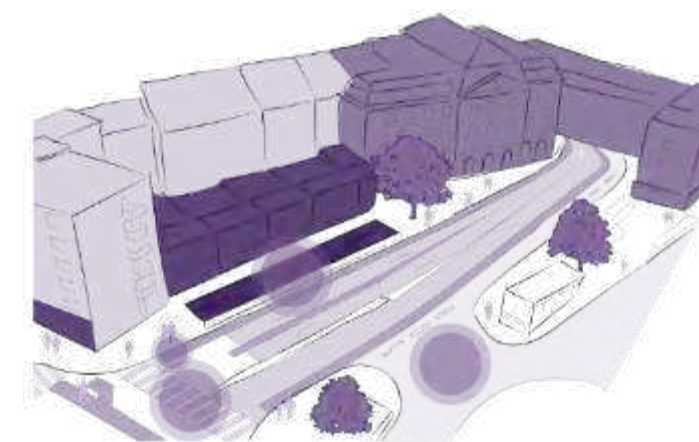
- Create a Bushof-based "Night Residency" for performers or collectives to activate the space on rotation
- Establish a shared-use calendar for informal performers (street musicians, poets)

5. Low-Cost Circular Upgrades

- Use repurposed materials
- Integrate vertical gardens or modular green panels to soften concrete surfaces
- Incorporate a “material library wall” showcasing circular design methods

Area of intervention and existing conditions

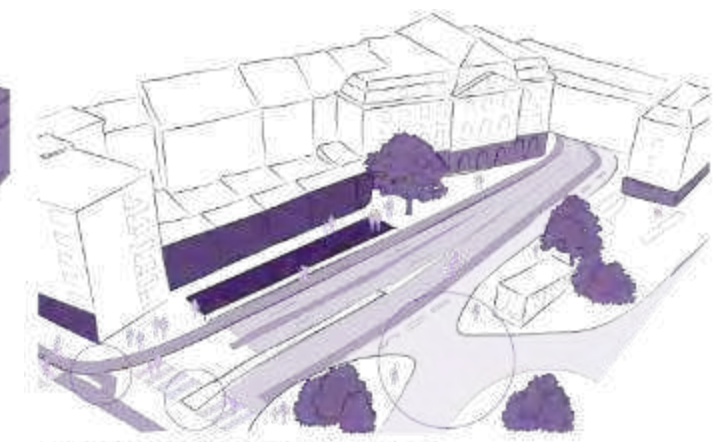
Bushof area is concentrated and dedicated mainly for cars. Pedestrian areas are far away from each other and dangerous for elderly and children. This repels pedestrians and consequently causes small businesses to fail.



- Area of intervention
- Stairs with no purpose
- Commercial buildings
- Public buildings
- Residential buildings
- Bike lane
- Car road
- Bus road

Small improvements for better environment

Shortening crosswalks and merging bike lanes to sidewalk makes paths safer and more comfortable. Reducing roads and creating green islands makes spaces safer, cleaner and pleasant to visit. Overall this small interventions invites pedestrians to this space.



- Small intervention for improvement
- Stairs with opportunity
- Commercial front faces
- Public front faces
- Bike lane
- Car road
- Bus road

Image: By Authors

Second Ring | Felix Florack, Parisa Borzooie, Yasamin

Step 2 | Space/Area/Town

The urban development of the area within the two rings in Aachen’s city center reflects a layered history and evolving priorities. Originally shaped by medieval fortification nodes such as Ponttor and Jakobstraße, the area transformed in the 19th century with the construction of monumental institutional buildings like the RWTH main building, symbolizing scientific progress. The post-war decades introduced modernist academic structures, including the Audimax and the Kármán Auditorium. However, there was also a drastic shift from pedestrian- to car-friendly infrastructure. The consequences of this shift are still felt today, as the pedestrian-dominated university campus is split in half by the high-speed ring road. This conflict is evident in the isolation and decline of the Ponttor and the underutilized underground passage, which serves as a failed attempt to overcome this conflict. More recent developments focus on contemporary infill projects and pedestrian-friendly redesigns, such as the SuperC building and the car-free Templergraben zone. Urban change has occurred at various scales—from the renovation of historic buildings to the redesign of streets and integration of mixed uses within urban blocks. RWTH Aachen University, the city’s Planning Department, heritage authorities, and local communities all play critical roles in shaping these developments. The results include improved pedestrian environments, a stronger academic identity in the urban fabric, and vibrant streetscapes activated by student life. However, tensions remain, especially regarding housing and green open public space demand and can be tackled by reusing of some space and buildings like Ponttor gate and the park close to it, also large parking lot close to Pontstraße.

Variety at Different Scales

blocks

building types

size of plots in a block



Map of private and public ground

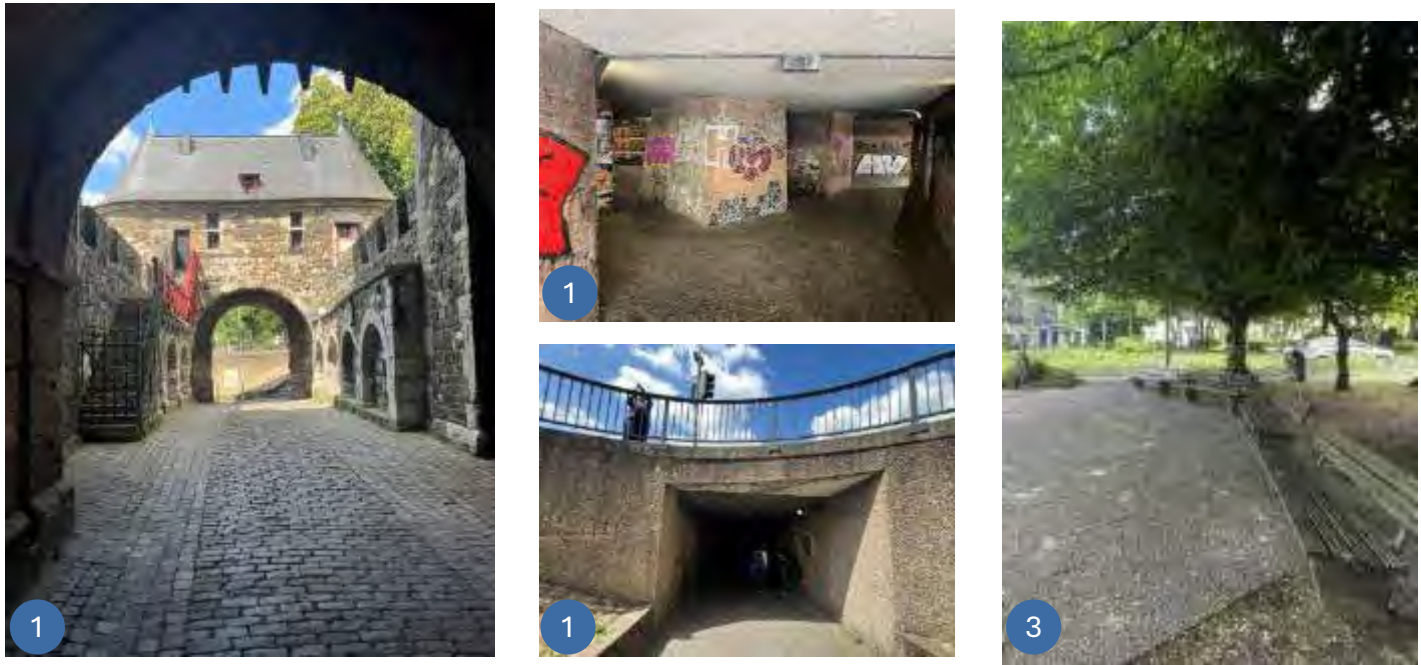


Ponttor: Medieval Island in a Sea of Modern Road Infrastructure



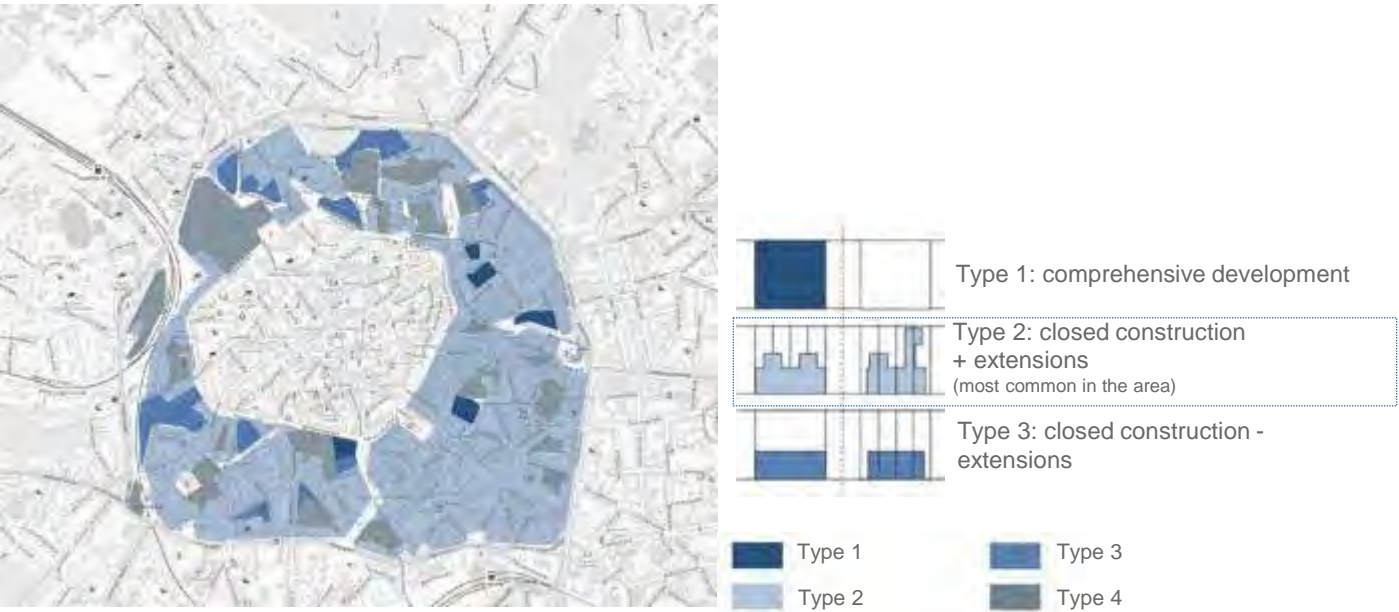
Images: by authors | using data from Apple Maps (2025).

Ponttor: Decay of Underground Path and Surrounding Green space



Images: taken by the authors

Structural Types & Space-Forming Features



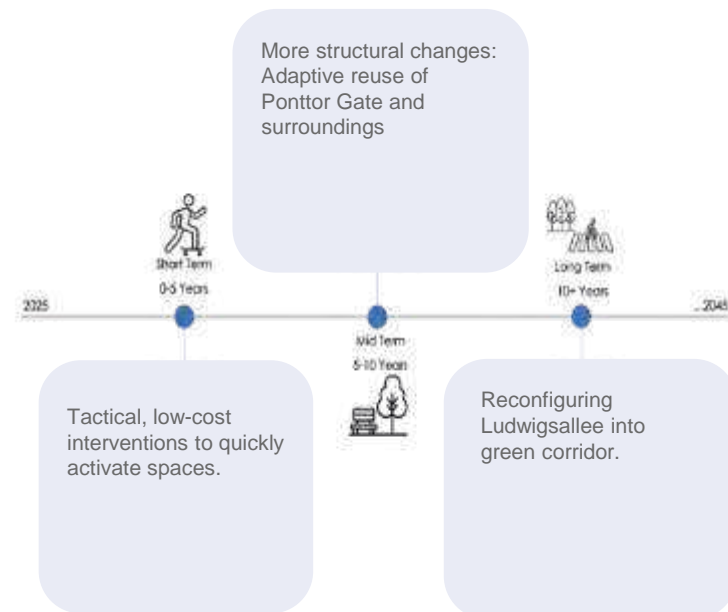
Step 03 | Opportunities/ Restrictions - Innovation.

The RWTH-Ponttor district presents both promising opportunities and notable constraints in the pursuit of a circular, sustainable university-city. With a high concentration of academic institutions, the area is well-suited for experimenting with innovative systems such as energy-efficient buildings, rainwater harvesting, and active mobility. Landmark sites like Ponttor and the RWTH main building enhance the district's cultural identity, while redesigns like the Templergraben zone showcase climate-responsive, inclusive urban planning.

To further strengthen the area, Ponttor gate could be reimagined—drawing from examples like Cologne—to become more integrated into the surrounding urban fabric. Its underutilized underground space could house creative functions, such as an underground skatepark. Calming traffic on Pontwall would better connect the gate and adjacent park with the Mensa and northern campus, promoting cross-campus unity. In addition, transforming the nearby parking lot into a mixed-use development with open public spaces would support social interaction, housing, and services, and could serve as a vibrant arena for student life.

The district's high pedestrian activity and dense, low-income student population highlight the urgent need for consumption-free third places. However, this demand is currently unmet. While semi-public/private areas like Pontstraße exist, they are typically tied to commercial use. Expanding inclusive, green public spaces is crucial for climate resilience and social equity.

Interventions Timeline



Images: By Authors



Redesigning Ponttor gate area to make it more integrated to surrounding (like Cologne case study).



Reusing the underground space through innovative ideas



Calming the traffic in Pontwall area to make the Ponttor gate, the park and other vegetations close to it more connected.



Open public spaces at the parking lot

Map of Opportunities in the Area

Image: By Authors | data from Open Street Map (2025).

Step 04 | Multi-scale Visions

The RWTH–Ponttor area presents a multi-scalar vision that merges historical identity with forward-looking innovation.

At the macro scale (city level), the district serves as a strategic link between Aachen's historic core and the expanding university area toward Campus West. Calming traffic along Pontwall would strengthen connections between the Mensa, Ponttor, and surrounding spaces, enhancing the campus experience across the ring road. The Ludwigsallee green corridor currently underperforms due to traffic barriers on both sides. Our vision is to integrate fragmented vegetation and public spaces, reroute traffic to the upper side, and prioritize soft mobility—especially cycling and walking—on the lower side. This would result in a continuous, pedestrian-oriented axis aligned with Aachen's climate, mobility, and green infrastructure goals.

At the meso scale (neighborhood level), revitalizing the Ponttor Gate—drawing from models like the Cologne Gate—and transforming the adjacent parking lot on Pontstraße into a multifunctional urban space will encourage adaptive reuse, compact urban form, and social resilience. This intervention addresses the urgent need for inclusive, non-commercial third places.

At the micro scale, smart street design, underground reuse (e.g., skateparks), green courtyards, and small urban gardens promote repairable, nature-based, and human-centered design—advancing livable, inclusive, and climate-adaptive public spaces.

Vision Map



Image: By Authors | data from Open Street Map (2025).

Visual Projections

Underground skatepark



Integration of the Gate



The Arena



Images: By Authors

Step 05 | Intervention

The RWTH–Ponttor area presents a unique opportunity for innovative urban transformation grounded in circular economy principles and Aachen's planning vision. The strategic goals of the intervention include strengthening mixed-uses and ensuring 24-hour vibrancy to support urban life and public safety, revitalizing underused functional spaces, enabling adaptive reuse on both public and private land, creating inclusive social arenas, reconnecting fragmented vegetations and public spaces, and improving accessibility for soft mobility.

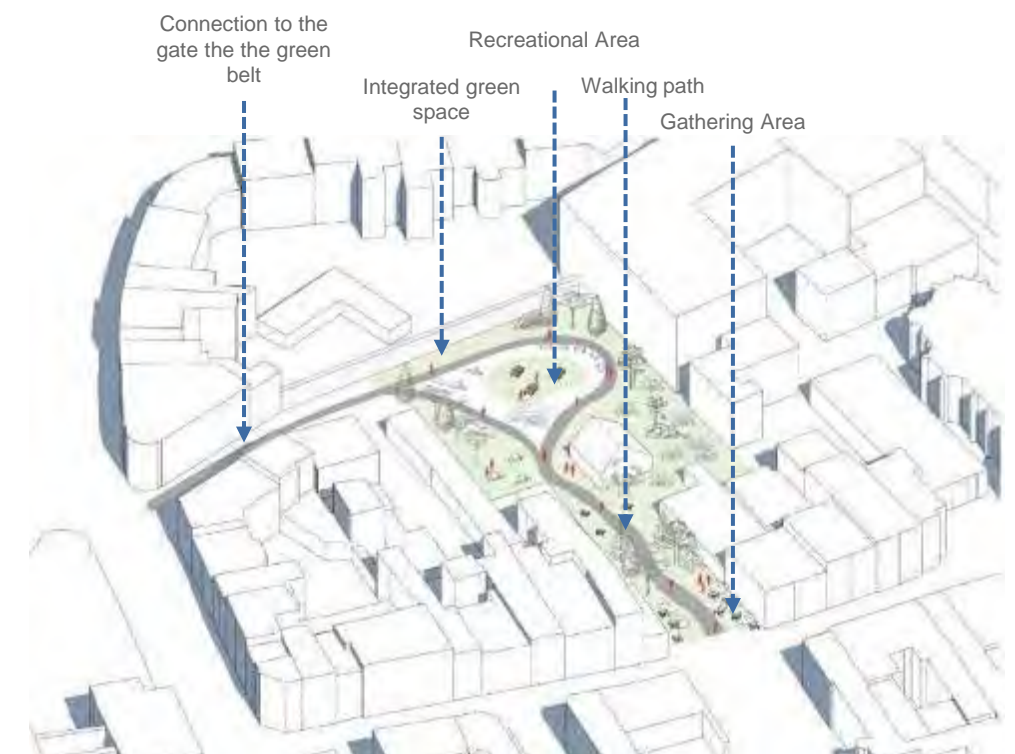
In the short term (0–5 years), the focus is on activating spaces through tactical, low-cost and fast interventions. Traffic calming along Pontwall (using methods like change in paving in some parts) can significantly improve connectivity between the Mensa, Ponttor, and surrounding green spaces—supporting a seamless campus experience across the ring road. Similarly, reusing the underground spaces near Ponttor through creative design solutions—such as transforming them into a skatepark or youth cultural venue—and improvements in lighting and signages will increase safety, visibility, and access and can activate overlooked areas while aligning with circular economy principles of reuse and spatial efficiency. Smart street design, green courtyards, and small-scale urban gardening further contribute to a more human-centered, climate-adaptive public realm. These actions can be developed flexibly through informal tools like masterplans and participatory methods, led by Stadt Aachen in collaboration with RWTH, local communities, and civic groups.

In the mid-term (5–10 years), more structural changes are envisioned. Adaptive reuse of Ponttor Gate and its immediate surroundings—taking inspiration from similar situations like Eigelsteintorburg in Cologne gate—can unlock the site's cultural and spatial potential while integrating it into a more vibrant public realm. Another key mid-term intervention is transforming the underused parking lot east of Pontstraße into a multifunctional urban plaza. This inclusive social arena would meet the urgent need for non-commercial third places and foster everyday urban life for students and residents alike. These projects support compact city principles, adaptive reuse, and social resilience. Mid-term goals will require formal and informal planning instruments—especially masterplans—and involve coordination among stakeholders including RWTH Campus Development, Stadt Aachen's Urban Development and Mobility Departments, and Denkmalamt.

The long-term (10+ years) vision centers on reconfiguring Ludwigsallee into an integrated green corridor. Currently split by heavy traffic and underperforming ecologically, the corridor would be reimagined by concentrating traffic on the upper side and relocating the bicycle lane to the southern side, allowing for a widened, pedestrian-oriented green access along the south. This intervention aims to reconnect fragmented spaces, integrate existing vegetation, and build a continuous, walkable green network linking Pontwall, Ludwigsallee, Veltmanplatz and Monheimsallee. This transformation strongly supports Aachen's climate adaptation, green infrastructure, and CO₂ neutrality strategies. A formal Bebauungsplan and a Master plan may be necessary to regulate design interventions within heritage zones and ensure the quality of long-term developments.

Altogether, these multi-phase interventions—anchored in circular thinking and collaborative planning—aim to establish the RWTH–Ponttor area as a model of sustainable, inclusive, and interconnected urban regeneration in Aachen.

3D Visualization of the Arena



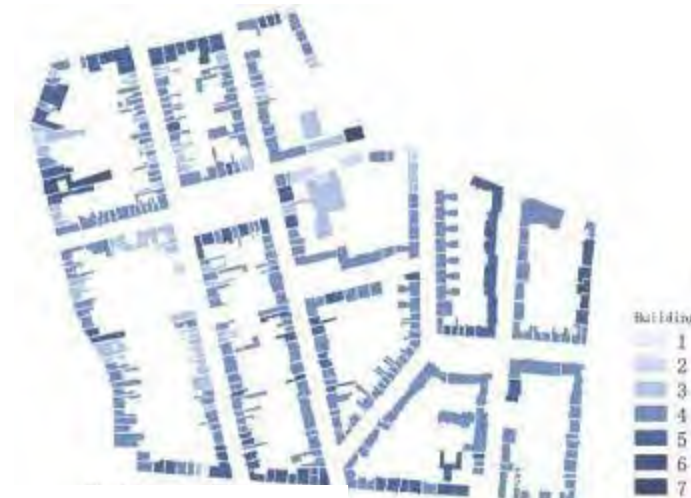
Images: By Authors | data from Cadmapper (2025)

Rehmviertel | Xizi He, Yiqian Pu, Jialuo Zhong.

Step 2 | Space/Area/Town

- Rehmviertel, located in the eastern inner city of Aachen, reflects complex layers of historical development and present-day transformation. Shaped by late-19th-century industrial growth, the area is characterized by perimeter block structures, consistent 3–5 storey building heights, and a coherent grid layout. However, field observation reveals fragmented spatial use and uneven land-use efficiency.
- Rising land value has driven private interventions such as rooftop extensions and rear-yard developments, indicating market-driven adaptation. Simultaneously, signs of functional decay appear: vacant shops, abandoned homes, and poorly maintained facades—particularly in side alleys—illustrate spatial decline.
- Despite these challenges, Rehmviertel offers strong foundations for circular urbanism. Mixed-use land functions, historical building stock, and a compact form provide adaptability. Public spaces like pocket parks and redeveloped courtyards support social life, while semi-open blocks hold potential for communal transformation.
- The coexistence of preservation and redevelopment highlights the area's dual identity—anchored in historical memory yet facing contemporary needs. Rehmviertel stands as a representative example of inner-city transformation under spatial and social pressures.

Spatial Structure and Historical Layers



Building height analysis

Image: Created by the authors using data from OpenStreetMap



Building street openness analysis



Building and open space analysis

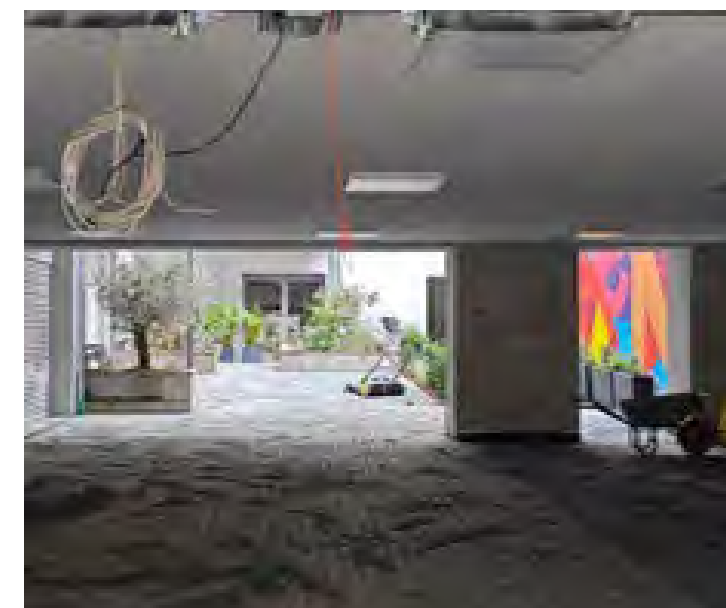
Image: Created by the authors using data from OpenStreetMap



Road period analysis



Image: Created by the authors using data from OpenStreetMap



Images: taken by the authors

Step 03 | Opportunities/ Restrictions - Innovation

Ottostraße, located in Rehmviertel, is a transitional street linking Aachen's historic city core with its eastern neighborhoods. Originally shaped by 19th-century industrial planning, it features dense perimeter blocks, narrow roads, and limited public space.

Today, the street faces both spatial and social challenges. Physically, it suffers from compressed pedestrian areas, closed-off façades, inaccessible inner courtyards, and severe parking shortages. Socially, inactive street frontages and a lack of multicultural expression limit community interaction.

A notable difference exists between the north and south sides of the street. The south features more open, multifunctional courtyards—including a parking area with charging stations, a warehouse, and a workshop under construction—while the north side is dominated by private garages that are not accessible to the public.

Despite these issues, Ottostraße has high potential for inclusive transformation. Its multicultural population and strong spatial structure offer opportunities for courtyard activation, intercultural gardens, and temporary markets. By reclaiming underused spaces and enhancing cultural visibility, the street could evolve into a vibrant, circular, and socially integrated urban corridor.



Images: taken by the authors

Map of Opportunities in the Area

Image: Created by the authors using data from Open Street Map



Step 04 | Multi-scale Visions

Ottostraße presents strong potential for transformation across urban, neighborhood, and street scales. At the street level, its traditional perimeter-block structure preserves 19th-century industrial character—compact, walkable, and functionally mixed. However, street life remains limited, with enclosed façades and underused courtyards.

Neighborhood Scale

- Ottostraße and its inner courtyard can serve as a platform for cultural expression, such as multicultural markets, to enhance the sense of belonging and participation among diverse communities. By incorporating Turkish migrant culture and other community characteristics, the street's "identity" can be further strengthened.
- While preserving the traditional enclosed block structure and architectural forms from multiple historical periods, Ottostraße can introduce flexible new functions through shared courtyards—such as children's play areas and micro-studios—to activate underused backstreet spaces and inner courtyards. This helps transform the traditional street from a "residential + limited commercial" pattern into a multifunctional space of "residential + social + commercial" integration.

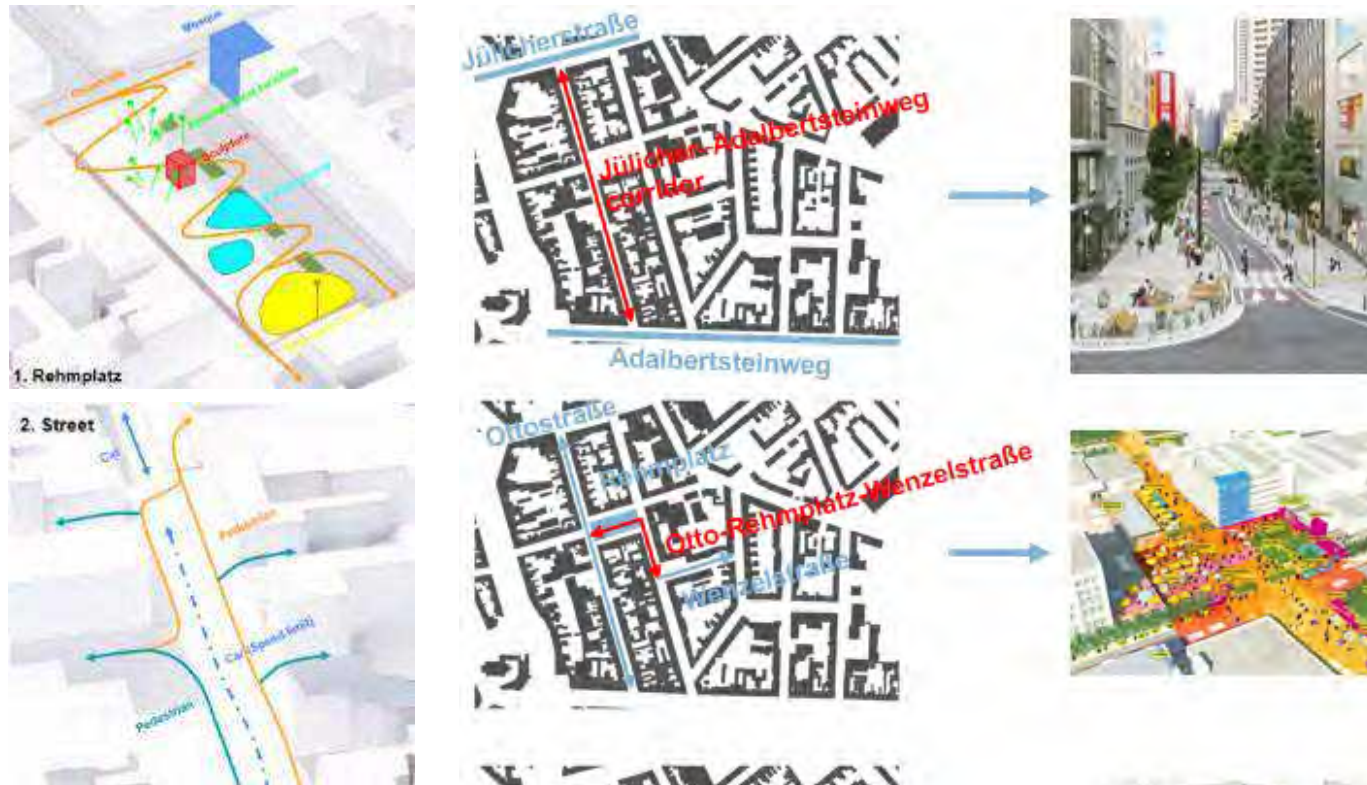


Image: Created by the authors using OSM
Reference chart: From Pinterest

Urban Scale

- Revitalising the street corridor through widened pedestrian zones and changing the parking lot, improving the walkability for cultural activities in the street.
- Transforming the inner-block areas into shared multicultural courtyards, supporting informal markets, children's play areas, and neighbourhood interaction.
- Establishing a cultural-religious integration corridor along the local mosques, enabling community-run services, multi-language social programmes, and inclusive micro-public spaces.

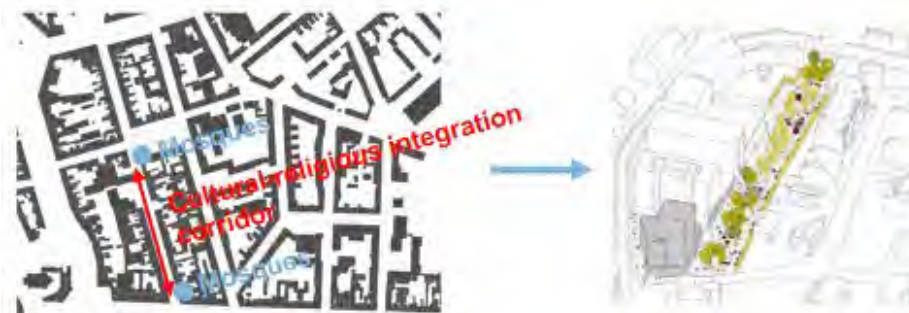


Image: Created by the authors using data from OSM

Reference chart: From Pinterest

Regional Scale

- Rehmviertel is a dense, multi-ethnic, multifunctional community.
- As part of the "Soziale Stadt" program, it shows strong community governance and integration.
- Its compact grid, open courtyards, and street commerce support local renewal.
- The area aligns with Aachen 2030's neighborhood transformation strategy.
- It has potential as a pilot for inclusive, multicultural urban development.

Step 05 | Intervention

The proposed interventions for Ottostraße aim to transform it into a vibrant, inclusive, and sustainable urban corridor. At the street level, the plan includes widening sidewalks and reducing parking to create pedestrian-friendly spaces with seating, greenery, and play areas. These improvements activate street life and promote walkability.

In the inner courtyards, underused spaces—particularly on the southern side—can be opened and redeveloped for multifunctional use, including co-working studios, family spaces, and small-scale cultural hubs. Existing elements like charging stations and warehouses offer a foundation for reuse.

To support social integration, cultural and temporary uses are proposed: community gardens, food-sharing markets, storytelling events, and multicultural art installations. These encourage participation and visibility of the diverse local population.

A digital platform can further empower residents, especially youth from immigrant backgrounds, to co-design public space and initiate bottom-up projects. Environmental goals—such as rooftop greening, rainwater collection, and energy retrofitting—complement the transformation.

Altogether, the interventions follow circular economy principles and reflect the needs of a multi-ethnic community. Ottostraße holds the potential to become a pilot for inclusive and localized urban regeneration in Aachen.

The open courtyard serves as a multicultural exchange space and a revitalized industrial heritage



Widen sidewalks to turn negative parking spaces into positive walking spaces, also add some public facilities



Image: By Authors | data from Open Street Map (2025).



Image: By Authors | data from Open Street Map (2025).

Step 2 | Space/Area/Town

Aachen exhibits a complex urban morphology rooted in a compact, ring-radial structure that reflects successive historical development phases and long-standing spatial patterns. The historic core, shaped from Roman times (1st century AD) and fortified during the medieval period (12th–15th centuries), shows a dense, mixed-use urban fabric. This area evolved through medieval planning and the Gründerzeit expansion (1871–1914), forming enclosed block structures and clear spatial boundaries that generate a strong sense of place.

Morphological density maps of the city center reveal compact block patterns and layered spatial structures, indicating a high degree of continuity shaped by centuries of social, political, and economic transformation. Beyond the medieval walls, outward growth accelerated in the 19th century with industrialization, producing transitional zones characterized by worker housing and industrial belts. These areas reflect adaptations to modern planning, where open urban fields and wider street layouts began to replace the tightly woven medieval fabric. After World War II (post-1945), the city experienced dispersed suburban growth, especially during the 1960s–1980s, resulting in fragmented, low-density urban forms on the periphery.

The ring-radial structure of Aachen effectively localizes these varying types of urbanity—radiating from the compact historical core toward more adaptive and incoherent outer zones. Since the early 2000s, regeneration projects have transformed former industrial zones into cultural and community-oriented spaces. Meanwhile, suburban areas reveal socio-economic shifts, including signs of suburban poverty and uneven development.

Overall, Aachen’s urban typology illustrates the interplay between historical layers, changing spatial forms, and evolving planning strategies.

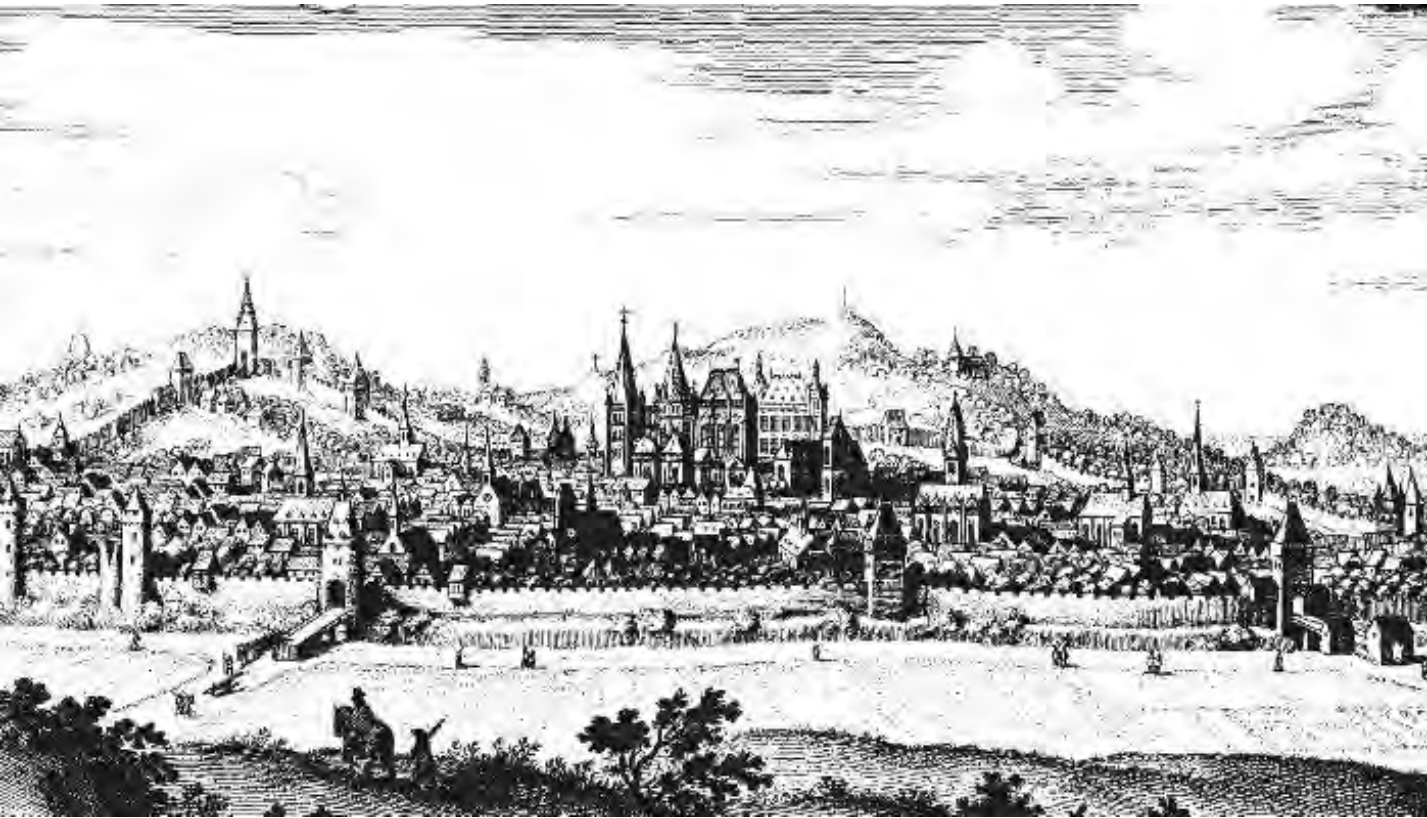


Image: Matthäus Merian, Aachen, copper engraving, 1647

Historical morphology of Lousberg



1910

1992

2025

Image: Stadt Aachen-Open Data Portal

Step 03 | Opportunities/ Restrictions - Innovation.

The Lousberg neighborhood offers significant landscape and cultural potential, but certain challenges limit its full activation. Although much of the area is peaceful, sections near the radial and ring streets suffer from noise and environmental pollution.

Accessibility becomes limited toward the less densely populated edges of the neighborhood, particularly near the park. The historic monastery and its immediate surroundings remain largely inaccessible either due to physical barriers or proprietary restrictions.







Due to the historical significance of the neighborhood and the many protected buildings, protection obligations further limit the scope of potential interventions and modernization. Despite these constraints, Lousberg presents rich opportunities for inclusive and sustainable transformation.

Introducing mixed-use functions could increase vibrancy, while extending the existing green corridor into the city core would enhance ecological connectivity. The street corner at Lousbergstraße and Försterstraße, along with the adjacent green strip, could be redesigned for social interaction and community life.

Adaptive reuse of the monastery, inspired by circular economy principles, could open it up for public uses such as urban agriculture, nature education, and neighborhood events.

By combining cultural heritage with ecological value through healthy living routes, green cultural trails, and micro-scale circular systems such as local production-consumption, rainwater collection, or waste recycling, Lousberg can evolve into a model of regenerative, community-driven urban design.

PROBLEMS/RESTRICTIONS

- | | |
|--|---|
|  City entrance with need for qualification |  Heritage preservation vs. modernization |
|  Lack of public amenities |  Pressure of student housing expansion |
|  Noise and environmental pollution |  Poor accessibility |

OPPORTUNITIES

- | | |
|---|---|
|  Fostering mixed-use |  New quarter as stimulus for connected development |
|  Extension of green finger |  Qualification of public open space for social interaction |
|  Green multimodal corridor |  Community garden |
|  Re-use hub |  Adaptive re-use of building as cultural center |
|  Preservation and qualification of green open space | |



Image: Created by the authors using data from Geoportal Aachen (2024).

Step 04 | Multi-scale Visions

The transformation of the Lousberg neighborhood is guided by a set of criteria that blend historical continuity with ecological and social innovation. These criteria aim to preserve the cultural identity of Lousberg while promoting a circular and regenerative local economy, strengthening natural systems, fostering social inclusion, and improving spatial connectivity.

This framework culminates in a multi-scale vision concept that centers on circular economy principles grounded in community involvement and local food production. At the heart of the vision is the idea of reinforcing Lousberg's historical and cultural fabric while introducing sustainable systems that serve everyday life. On the plot level, the strategy focuses on transforming currently underutilized spaces into lively, green, and accessible places. These small-scale interventions become the seeds of broader systemic change. On the neighborhood scale, the concept envisions a more socially cohesive and ecologically resilient Lousberg.

Circular resource flows, including water reuse and household waste recycling, support a small-scale, localized food system. Community gardens, composting areas, and urban agriculture become everyday components of public life. Food grown in the neighborhood is sold both locally and beyond the neighborhood, turning Lousberg into a small hub of productive urban landscape.

Cultural events, open gardens, and shared spaces further extend its reach, attracting residents from beyond the neighborhood and positioning Lousberg as a model for inclusive, sustainable, and identity-rich urban living.

CULTURAL-HISTORICAL CONTINUITY & IDENTITY

- **Goal:** Strengthen and preserve the local cultural identity and history of the Lousberg while fostering contemporary relevance.
- **Criteria:** Protect and highlight historic landmarks/ Promote adaptive reuse of heritage buildings in line with European charters on urban conservation/ Integrate public art and storytelling that reflect Lousberg's cultural history

CIRCULAR ECONOMY & SUSTAINABLE URBAN METABOLISM

- **Goal:** Transition toward a circular and regenerative local economy rooted in resource efficiency and innovation.
- **Criteria:** Promote local reuse, recycling, and upcycling (e.g. material banks, repair cafés, library of things) / Encourage local production-consumption cycles (urban farming, maker spaces)

NATURE-BASED SOLUTIONS & ENVIRONMENTAL STEWARDSHIP

- **Goal:** Utilize and restore natural systems for resilience, biodiversity, and climate adaptation.
- **Criteria:** Apply green infrastructure and ecological design (e.g. rain and urban gardens, tree corridors, native species plantings)/ Protect and enhance Lousberg's biodiversity as an urban green lung.

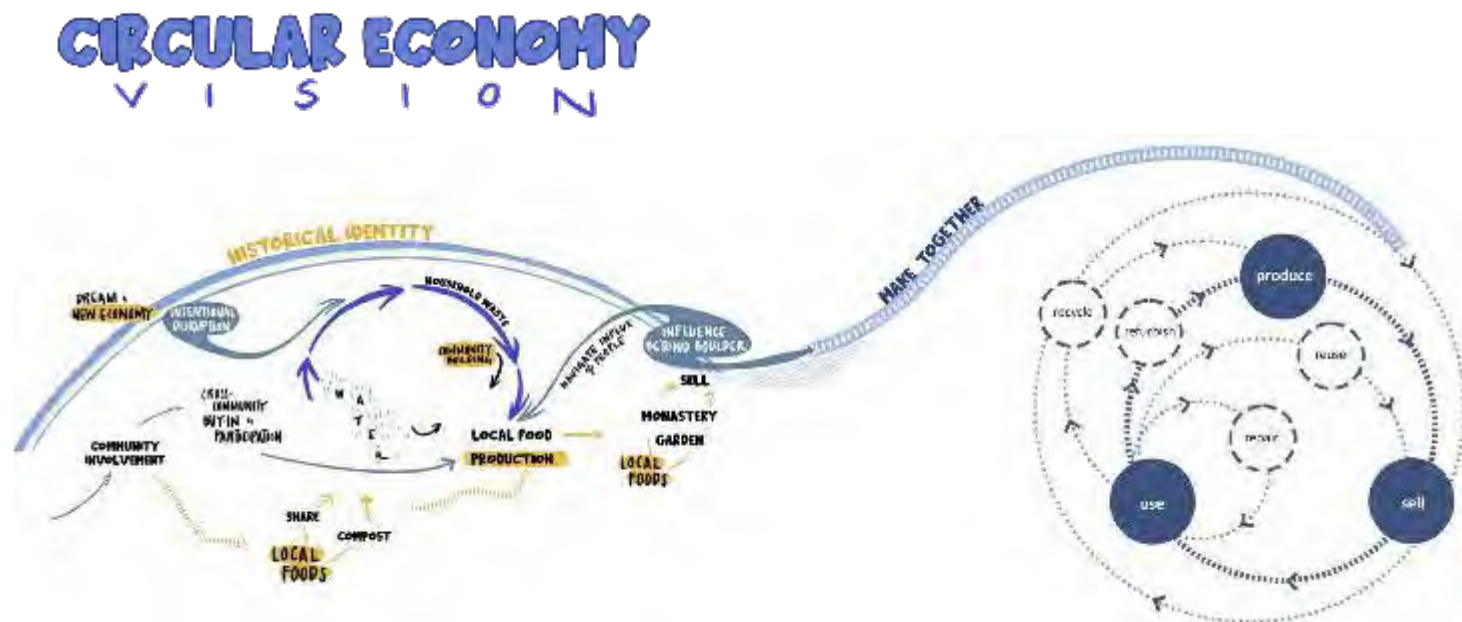


Image: Adapted from: Metabolic (2021), Boulder Circular Economy Report

SOCIAL INCLUSION & PARTICIPATORY GOVERNANCE

- **Goal:** Foster community building, inclusion, and co-creation.
- **Criteria:** Provide spaces for community-led initiatives (gardens, workshops, festivals)/ Address housing equity, affordability, and intergenerational needs.

SPATIAL INTEGRATION & CONNECTIVITY

- **Goal:** Enhance spatial cohesion between Lousberg and surrounding urban areas to support accessibility, social cohesion, and livability.
- **Criteria:** Improve walkability and cycling infrastructure, especially on ring, and radial Street. / Encourage mixed-use that fosters vibrant neighborhoods/

Step 05 | Intervention

The Abtei für Alle envisions the adaptive transformation of the historic monastery and its surrounding landscape into an inclusive, sustainable, and community-oriented urban space. Building on the site's intrinsic strengths such as its integration with the residential area, strong historical identity, multiple access points, walkable layout, and existing book-sharing station the project reinforces community connection and cultural continuity. The intervention introduces opportunities that enrich local life: engaging residents through community-led events, plant sales, and open-air cinema; promoting local food production through compost-based planting; and activating educational and ecological layers within the site. These actions foster circularity, sustainability, and socio-cultural exchange.

This design intervention aligns with the criteria for qualification, as set up in Step 4, and fulfils the following criteria: it promotes adaptive reuse of heritage structures (1.2), supports local production-consumption loops (2.2), implements green infrastructure (3.2), provides platforms for community initiatives (4.1), and encourages mixed-use, vibrant neighborhoods (5.2). By bridging the past with future-facing ecological and participatory strategies, Abtei für Alle not only revitalizes the monastery grounds but also redefines Lousberg as a model of circular, inclusive urbanism. The result is a resilient urban landscape rooted in local identity and shaped by active civic involvement.



Image: Elevation adapted from RWTH Aachen University – Das Karmelitinnenkloster am Lousberg, WiSe 23/24.

Frankenberger Viertel | Zachary Dudeck, Leonard Kraye, Daniel Schiefer

Step 2 | Space/Area/Town

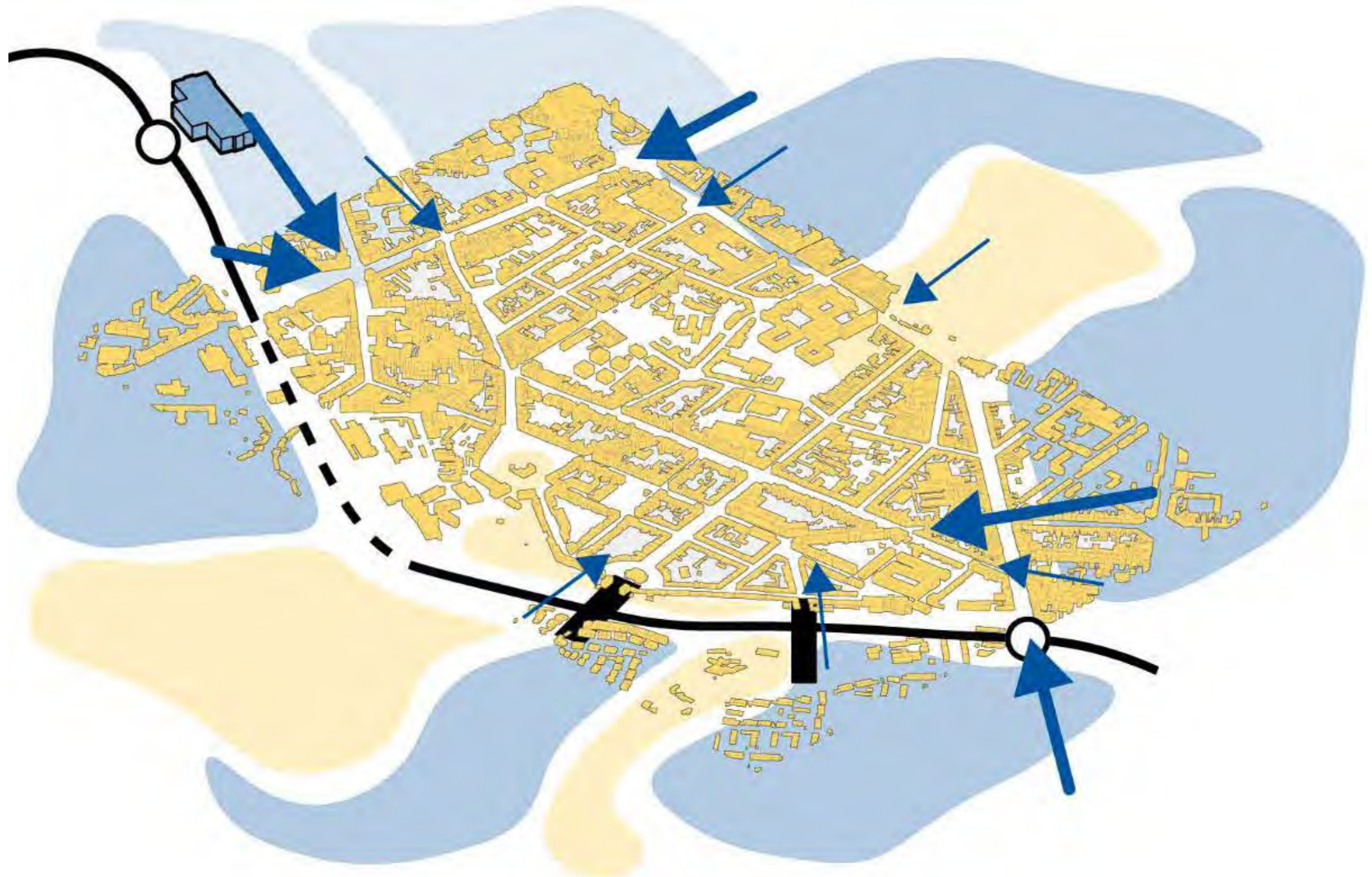
Urban Transformation Processes in Frankenberger Viertel

The Frankenberger Viertel faces various transformation processes driven by land-market dynamics and citizen initiatives. The elevation and extension of built form on private property manifest in modernized apartments, rooftop retrofitting, and refurbished facades - attempts to maximize real estate value while maintaining historical integrity. This is especially visible in the founders period (Gründerzeit) buildings, for example in Oppenhofallee or Viktoriastraße. Concurrently, emptiness and decay are evident in a few aging structures that struggle with preservation efforts due to financial constraints or changing market demands. Examples of this are the Tuchfabrik or the Kongressgarage.

However, strong maintenance and conservation initiatives, often supported by local heritage advocates, work to sustain the district's architectural identity, balancing modernization with preservation. This was also true for the transformation of Oppenhofallee, where parking was removed or the reuse of the bunker, today a party location. The neighborhood's urban life and identity is strongly influenced by its historical structure but equally influenced by its residents - a dynamic mix of young adults, families, and students.

The spatial conditions create a fascinating contrast - between the old and new; preservation and expansion - reflecting broader urban trends in historical European cities. While economic pressures drive change, the Frankenberger Viertel retains its distinctive founders period charm through thoughtful adaptation.

Frankenberger Viertel Accessibility



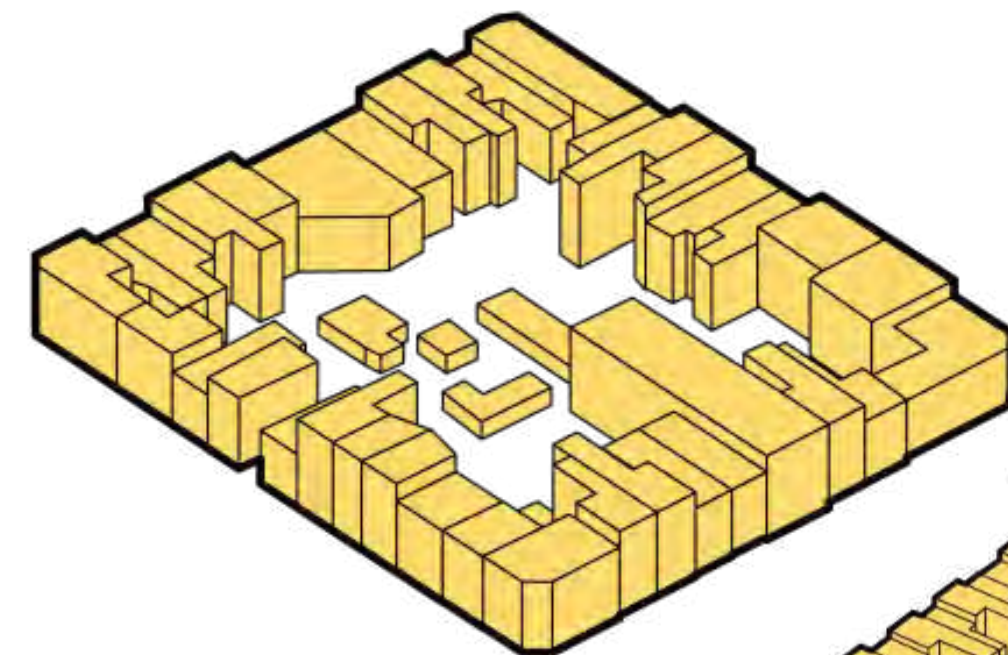
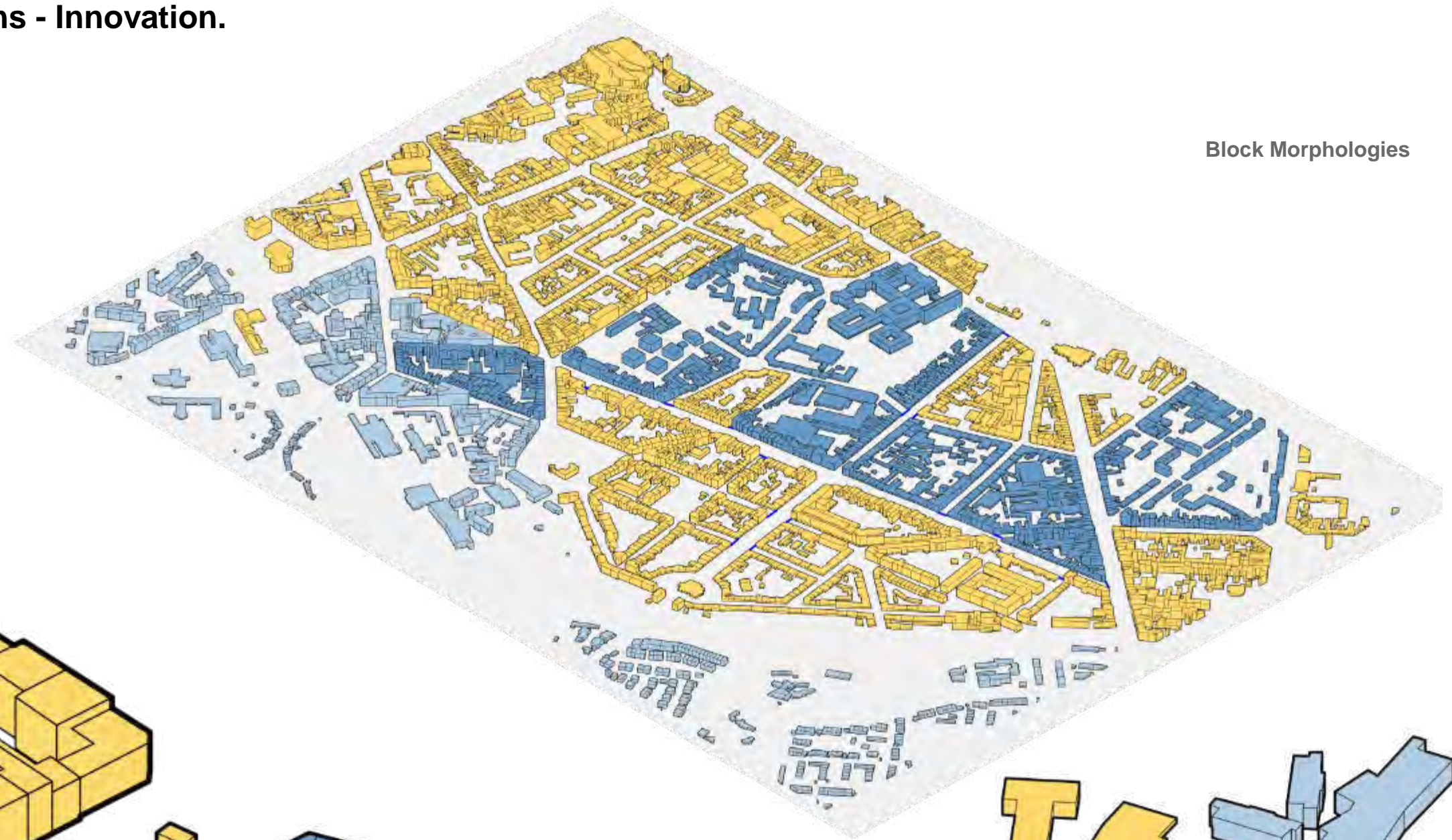
Images: Illustration by author, based on ASTOC Architects & Planners

Step 03 | Opportunities/ Restrictions - Innovation.

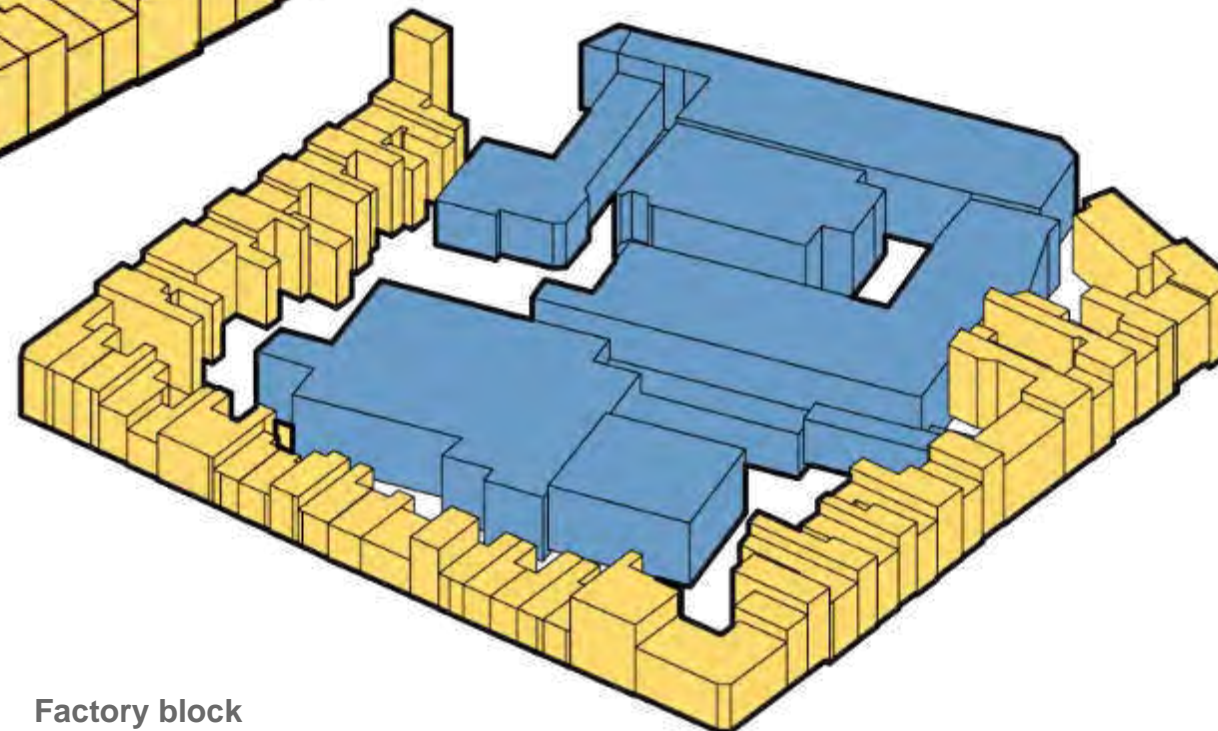
There are three distinct morphologies identified: factory blocks, founders period (Gründerzeit) blocks, and heterogeneous structures. Factory and founders period blocks share many similarities, as both are standard block formations with houses and small shops along the edges and a shared open space in the center. The key difference lies in the size of this central space founders period blocks typically have smaller courtyards, while factory blocks feature much larger ones to accommodate production activities. The heterogeneous structures, primarily located in the southern region, consist of partial block formations with mixed open spaces and scattered buildings.

Problems emerging from this three structures are sealed ground in the courtyard (parking + build structures), private plots and some building restrictions because of heritage protection. Opportunities lie in the courtyard areas, where old factory plots and private ground can be revitalized or desealed, for vegetation and community spaces. Other opportunities are to expend the street occupation by pedestrians and restaurants at Bismarkstraße and strengthen local arenas like Neumarkt to have more events.

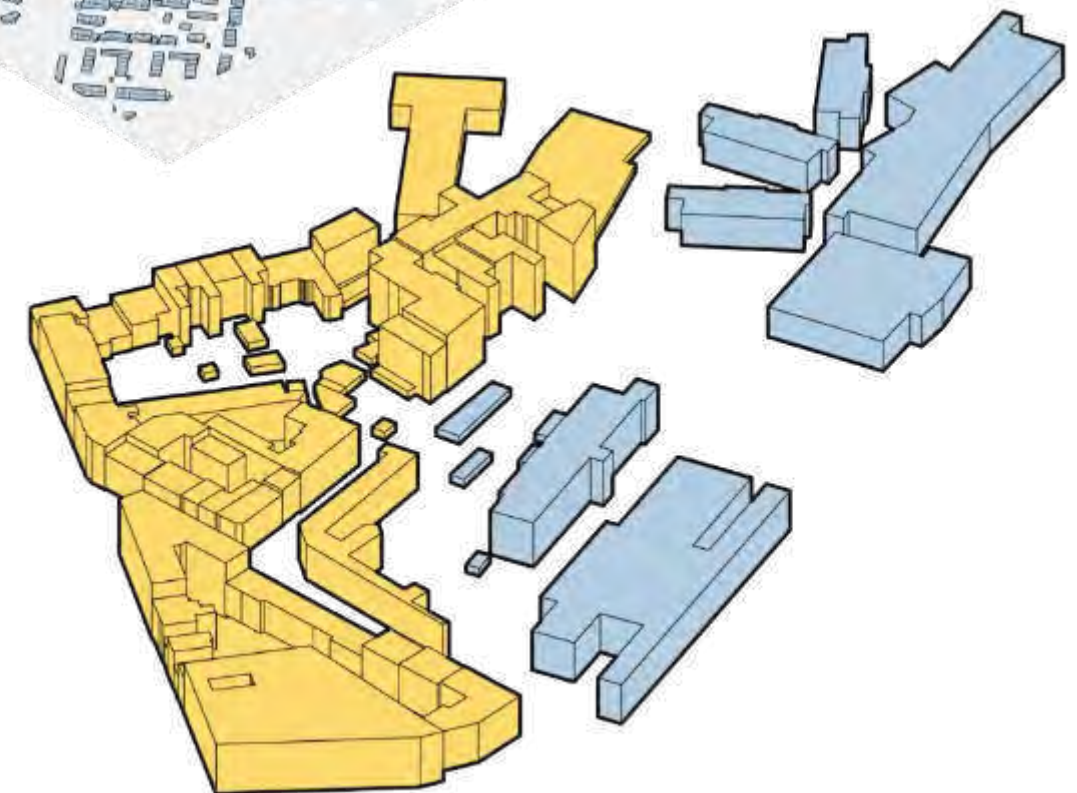
Block Morphologies



Standard block



Factory block



Heterogeneous Formation

Images: Illustrations by authors

Step 04 | Multi-scale Visions

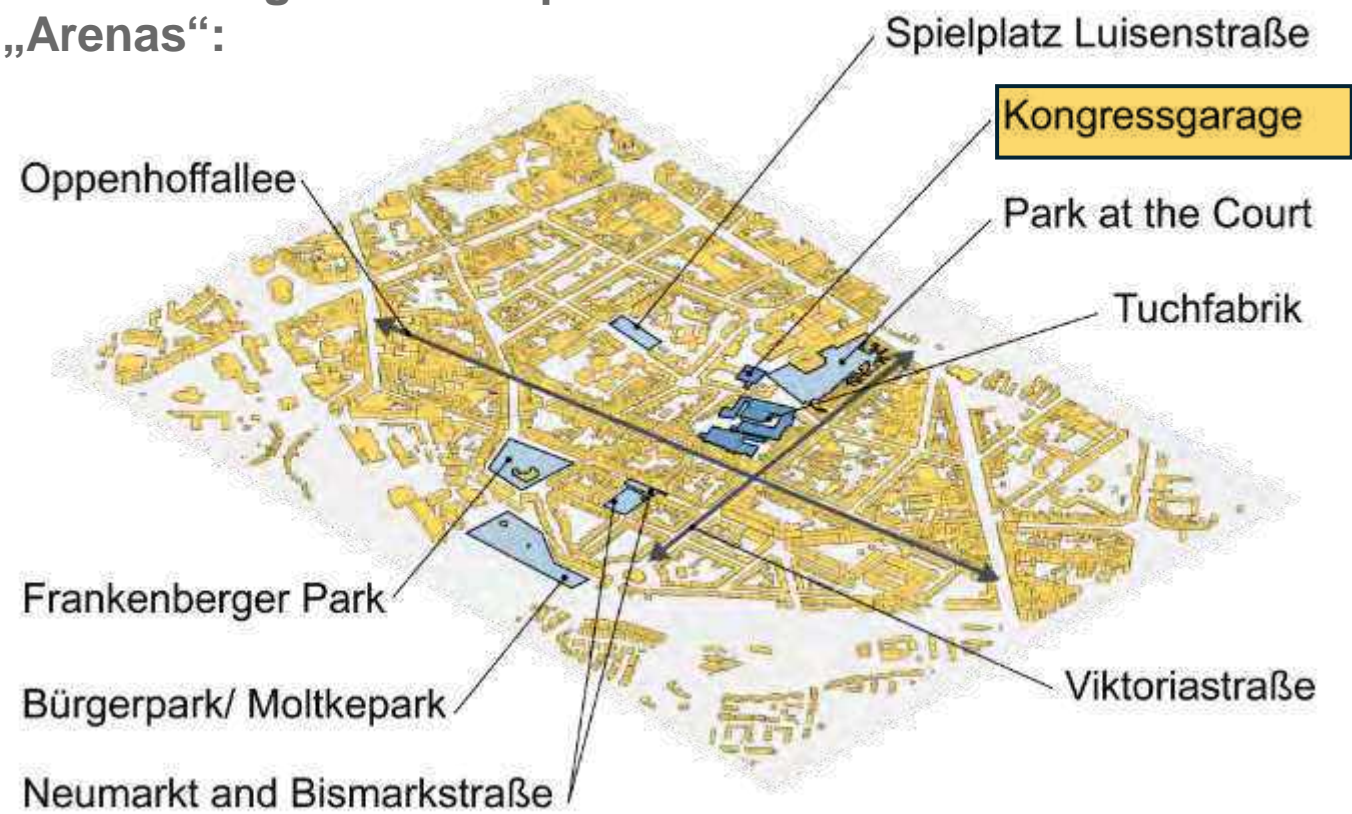
The Frankenberger Viertel is a district shaped by its rich historical fabric and dynamic urban evolution. Preserving its distinctive Founders' Period architecture is essential to maintaining its character, while embracing innovative urban strategies ensures continued relevance in a modernizing city.

On the neighborhood scale: The quarter's axial layout and vibrant streetscapes form a foundation for enhancing connectivity through more pedestrian-friendly interventions, bicycle infrastructure, and integrated mobility hubs. Blocks can incorporate energy-efficient retrofitting as well as courtyards with vegetation, green facades and balconies while maintaining historical facades to the streets, ensuring sustainability without compromising identity.

At the regional scale: Strengthening community-driven initiatives such as the Open-Hof and neighborhood events fosters deeper social cohesion and participatory urbanism. Adaptive reuse of underutilized spaces, such as the Tuchfabrik or Kongressgarage can provide opportunities for creative industries, co-working spaces, and community-oriented innovation hubs.

Vision: Frankenberger Viertel thrives at the crossroads of tradition and transformation. By embracing its architectural heritage while facilitating progressive urban solutions, it can strengthen its role as a resilient, adaptable, and socially engaging district - one where historical charm meets future-forward sustainability.

Frankenberger Viertel - potential „Arenas“:



Images: Illustration by authors

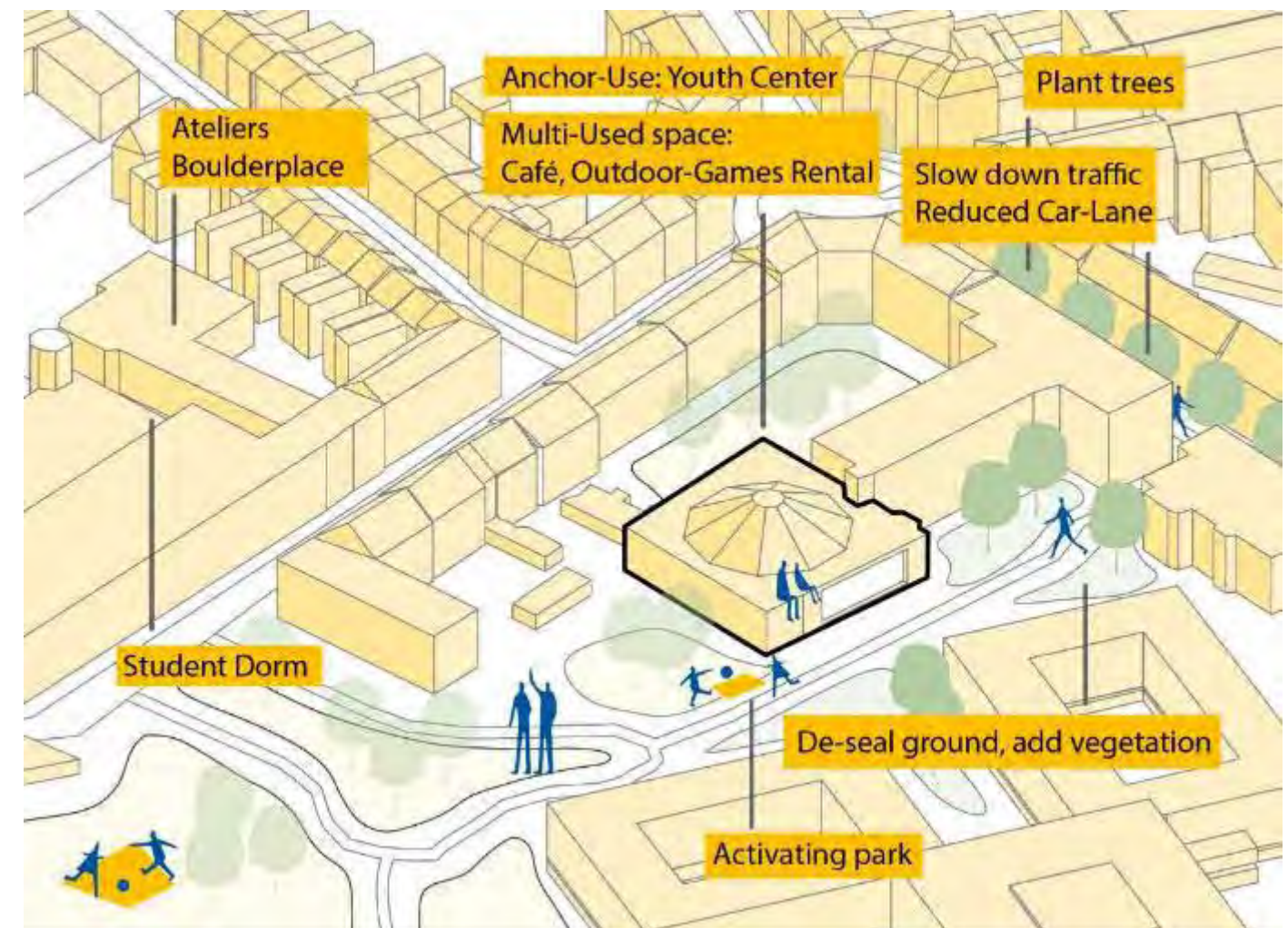
Step 05 | Intervention

While the Frankenberger Viertel already has important and central places where people can meet and events can happen (arenas such as Neumarkt and Bismarktstraße, Bürgerpark/ Moltkepark, Frankenberger Park and Spielplatz Luisenstraße), the city quarter offers additional promising opportunities for innovative urban transformation, particularly within its courtyard zones. These underutilized spaces, including remnants of old factory grounds and privately held backlands, can be revitalized and desealed to introduce vegetation, recreational zones, and community gathering areas. Two notable sites, at the important cross of Oppenhoffallee and Viktoriastraße, that reflect this potential are the historic Tuchfabrik and the Kongressgarage, both poised for meaningful reinvention and at the same time being part of the process to use grey energy in a circular economy.

Our planning approach focuses on adaptive reuse and ecological retrofit, combining sustainability and circular economy with heritage preservation. The vision includes energy-efficient refurbishment of the existing buildings, green courtyards, vegetated facades, and the addition of balconies. This ensures environmental compatibility while honoring the architectural character that defines the area.

For the Tuchfabrik, a design proposal by Lea Auer and Pia Ockenfels from RWTH Aachen already exists. We plan to incorporate this into our development strategy, while also aligning it with our broader social and environmental goals. The Kongressgarage, currently a parking structure lacking visibility and function, is proposed as a new youth center. Its proximity to several schools combined with the absence of youth-focused infrastructure in the neighborhood makes this intervention particularly relevant. A youth center here would create safe, empowering spaces for learning, interaction, and recreation, actively strengthening community ties.

Intervention Kongressgarage Youthclub



Images: Illustration by authors

Step 2 | Space/Area/Town

Heimgärten’s spatial configuration reflects a carefully planned early 20th-century Garden City morphology with a dominant public space and accompanying, spatially well integrated semi-public spaces on front and on back sides of the built form arrangement, connected by public paths. It is characterized by symmetrical row houses, front gardens, and internal green corridors. The layout consists of a central axis with tree-lined streets and a parking square, backed by generous private gardens that provide continuity and ecological depth.

The neighborhood exhibits consistent morphological rhythms: façades align with street edges, entry thresholds transition into semi-public front spaces, and fence lines define subtle gradations between private and communal zones. Preservation rules limit drastic architectural interventions, yet subtle adaptations—solar panels, bike storage, façade changes—signal slow transformation.

Public life is spatially fragmented. While residents actively use their private outdoor areas, shared public spaces are minimal. The central square is underutilized and car-dominated, and sidewalks vary in width, limiting walkability. Nonetheless, the in-between spaces—garden thresholds, fence edges, and pedestrian lanes—present latent potential for reactivation.

Rather than formal redevelopment, transformation in Heimgärten emerges plot-by-plot through informal adaptation. These spatial conditions reflect the coexistence of preservation and possibility. Understanding these everyday patterns of use and the micro-geometries of fences, façades, and paths is key to designing regenerative, community-based upgrades.



Image: By Authors | data from Open Street Map (2025).

Space Characteristics

Central square



Images: taken by the authors



Image: By Authors | data from Open Street Map (2025).

Main street with hedges



Images: taken by the authors

Semi-Private and Private Open Spaces



Images: taken by the authors

Step 03 | Opportunities/ Restrictions - Innovation

Heimgarten offers both stability and untapped potential within Aachen's urban framework. As a preserved Garden City settlement, it retains strong environmental qualities such as private gardens and low-density housing contributing to biodiversity and local climate regulation. However, the area faces new challenges: increasing car dependency, aging infrastructure, fragmented ownership, and lack of usable public space. Yet, micro-scale interventions can unlock new opportunities:

- Green semi-public spaces (front yards, edge zones) for composting or social use
- Central square for local market/gathering
- Rainwater systems and shared solar co-ops for decentral circularity

These interventions align with Aachen's 2030 goals for climate neutrality, local resilience, and social inclusion. Rather than large-scale redevelopment, Heimgärten can evolve through **incremental adaptation**, guided by soft planning tools and neighborhood cooperation. Its preserved fabric enables experimentation with circular systems — turning gardens, fences, and parking lots into productive, shared spaces. This approach also addresses SDG-linked concerns observed in the district: reduced walkability, lack of youth-centered infrastructure, and social isolation. Heimgärten's spatial character and historical depth offer fertile ground for innovation that respects the past while preparing for a more regenerative urban future.

OPPORTUNITIES



GARDEN CITY ORIGINS

RAIN GARDENS



HERITAGE STATUS

DEFINED PUBLIC SPACES

RESTRICTIONS

Image: By Authors

Map of Opportunities in the Area



Image: By Authors | data from Open Street Map (2025).

Informal intervention



Image: By Authors | AI Generated Image

Step 04 | Multi-scale Visions

Heimgärten's transformation vision builds on its heritage as a low-density Garden City while responding to climate and social needs at multiple spatial scales.

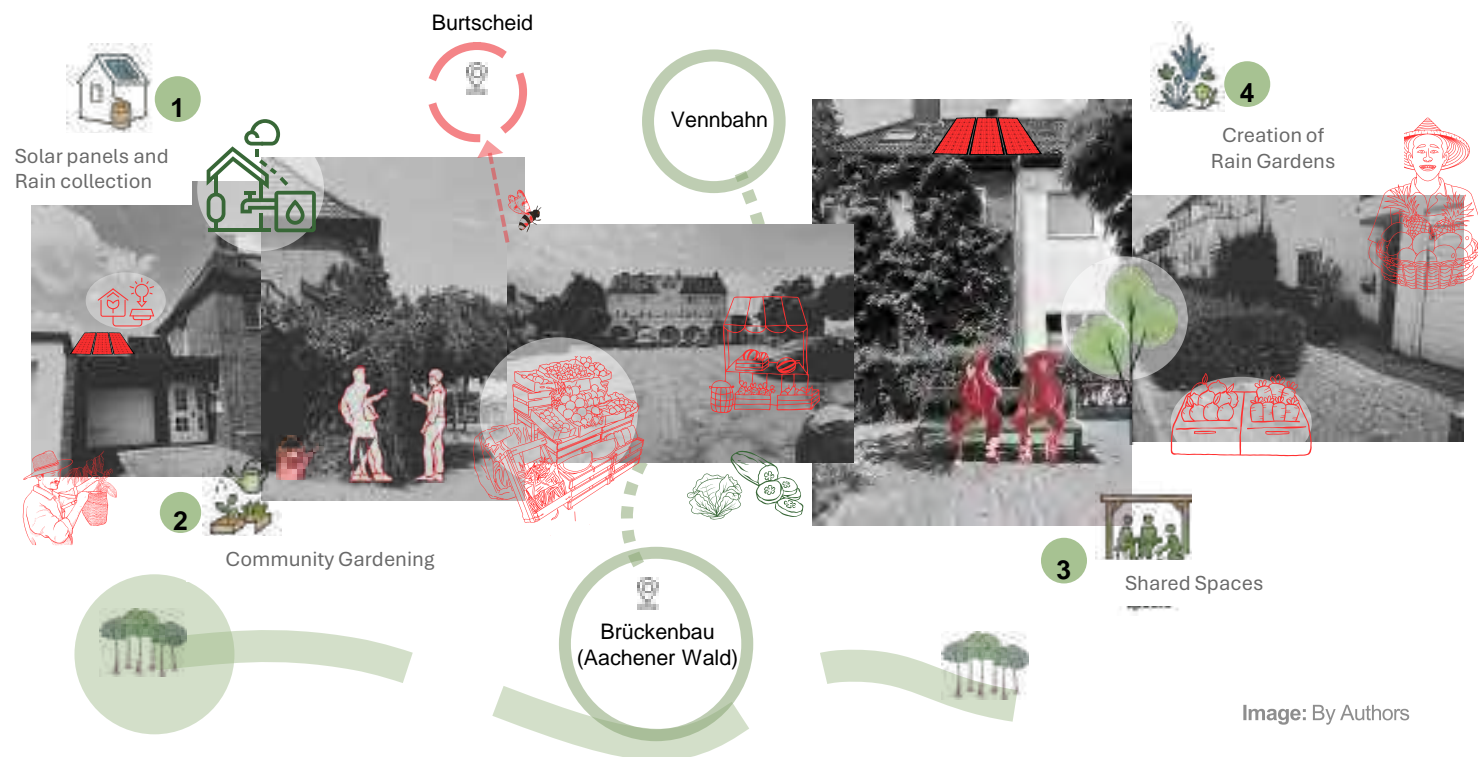
At the plot scale, individual residents can implement upgrades like solar panels, rainwater barrels, and compost bins. These low-tech, household-level interventions promote circularity without disturbing the architectural heritage. Private gardens and rooftops become productive landscapes that support energy and water cycles.

At the neighborhood scale, shared spaces like the underused parking square and fence-lined front gardens offer potential for semi-public activation. The square can host a weekly market or seasonal gatherings, while gaps between fences allow shared composting or informal benches—fostering community life and intergenerational interaction.

At the regional scale, Heimgärten integrates with Aachen's Burtscheid Health District and the Gillesbachthal green corridor. Its preserved layout and decentralized infrastructure make it a potential testbed for regenerative strategies: water reuse, greywater irrigation, biodiversity corridors, and aging-in-place models. These systems contribute to Aachen's broader climate resilience and SDG commitments.

Rather than relying on densification, this vision proposes step-by-step interventions rooted in the site's spatial identity. Heimgärten becomes a living model of how tradition and innovation can co-exist to create a socially resilient and ecologically active suburb.

Multi-scale Interventions



Step 05 | Intervention

Heimgarten does not have a formal urban development plan. Instead, its transformation relies on informal planning tools such as voluntary agreements, participatory frameworks, and community collaboration. The intervention strategy focuses on small-scale, low-cost actions that respect the area's heritage while activating underused spaces for circular and social use.

Arena 1: Central Square

Currently underutilized, the central parking area offers the potential to become a vibrant, multifunctional community hub. By shifting the focus from private vehicle use to collective public life, this space can be reimagined with minimal structural changes. Seasonal programs; such as a weekly market, mobile cafés, bike rentals, and shaded seating can bring life and purpose to the square throughout the year.

Temporary, modular design elements such as planters, pop-up stands, and moveable benches ensure flexibility while maintaining the square's original structure. In summer, the space hosts lively gatherings, outdoor commerce, and informal seating under tree shade. Autumn introduces wooden stalls and gardening areas, promoting calmness and natural cycles. Winter brings a more minimal layout, emphasizing accessibility and warmth perhaps with firepits or festive decorations. In spring, greenery and planting boxes reinvigorate the space, encouraging residents to spend time outdoors.

This seasonal adaptation transforms a static parking lot into a dynamic civic platform that serves both functional and emotional needs, strengthening local identity while reducing car dependency. Importantly, the interventions are light-touch and low-cost, meaning they can be easily tested, adjusted, or removed based on community feedback.

Arena 3: Circular Infrastructure

To support long-term sustainability, basic circular systems can be introduced at the block scale. These include greywater reuse, community composting, and rooftop solar panels. Managed collectively, they reduce environmental impact while promoting local ownership and resilience. Such decentralized systems allow Heimgarten to adopt sustainable practices without major redevelopment or loss of heritage character.

Arena 1: Central Square

Summer



Autumn



Winter



Spring



Image: By Authors | AI Generated Image

Panneschopp Quarter | Chenhao Xu, Shiyao Li, Shanyu Ke

Step 2 | Space/Area/Town

The study area, located on the eastern fringe of Aachen, presents a distinctive urban morphology shaped by early 20th-century planning ideals and later incremental adaptations. At its core lies the Panneschopp residential settlement, a characteristic Reform-Block development featuring geometrically structured housing blocks, enclosed green courtyards, and clearly defined public-private boundaries. This fabric reflects the social vision of its time, combining compact urban living with accessible green spaces for workers and their families. Adjacent to the settlement, Pfarrkirche St. Fronleichnam stands as a cultural and spatial landmark, reinforcing the neighborhood's identity and anchoring its community life. To the southeast, Kennedy Park, one of Aachen's largest urban parks, provides an expansive green edge, contrasting with the dense residential fabric and offering opportunities for recreation, social interaction, and ecological value.

The area's street network reveals a layered structure: the inner blocks maintain a compact, enclosed grain typical of early modern worker housing, while surrounding streets create radial connections to the broader city. Despite its cultural and historical richness, the district faces challenges related to underutilized public spaces, fragmented connections to Kennedy Park, and the need for adaptive reuse of its open areas. Together, the Reform-Block settlement, the church, and the park form a unique urban triad, illustrating the interplay between social history, spatial continuity, and opportunities for low-intervention, community-driven regeneration.



Demolition of the yellow barracks, 1963 Source: Stadt Aachen

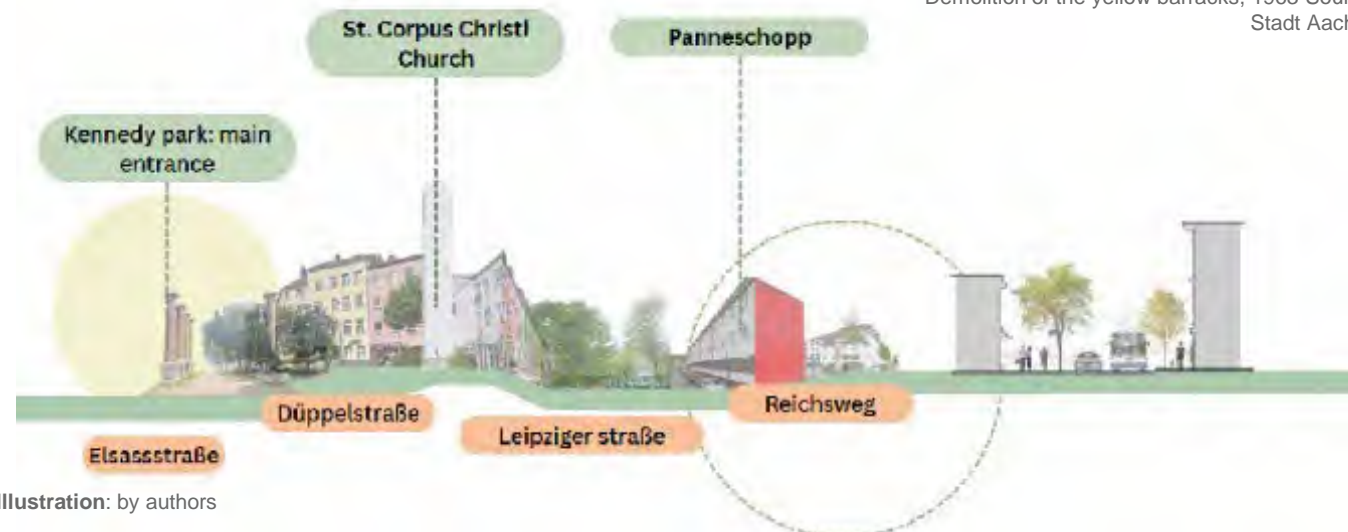


Illustration: by authors

Land use



(Diagrams: by authors using data from OpenStreetMap)

Street framework



Diagrams: by authors using data from OpenStreetMap

Step 03 | Opportunities/ Restrictions - Innovation

Restrictions and opportunities map



Diagram: by authors using data from Open Street Map

The Panneschopp settlement and its surrounding public spaces represent a district of remarkable historical value yet underutilized potential. Its Reform-Block structure, with enclosed courtyards and a dense urban grain, creates a strong sense of place but also imposes significant constraints: heritage preservation regulations restrict large-scale construction and functional densification, while outdated infrastructure and limited investment capacity hamper transformation efforts. These constraints, however, frame an opportunity for a “low-intervention – high-participation” renewal strategy, one that builds on the area’s historic character while addressing contemporary social and spatial needs.

We identified two main types of spaces with high transformative potential: small public squares at key intersections and enclosed courtyard greens within the Reform-Block. These areas, though currently underused, can be reimagined as a network of shared micro-spaces. Courtyard greens can serve as semi-public “pocket parks,” maintained by local residents and hosting small-scale cultural or recreational events. Public squares and adjoining streets can be upgraded as cultural corridors, linking the settlement to Kennedy Park and Pfarrkirche St. Fronleichnam, two major landmarks that define the district’s identity.

This vision is anchored in a dual-path strategy: a direct pedestrian route along Lützowstraße, facilitating everyday access to Kennedy Park, and a cultural narrative route passing the church and Steubenstraße, designed to celebrate the area’s layered history through storytelling panels, ground-mounted light strips, and small-scale art installations. These paths not only improve spatial connectivity but also make history tangible in daily life.

To further activate these spaces, shared micro-facilities (e.g., mobile book kiosks, modular seating, community tool cabinets) and regular cultural programs (e.g., flea markets, storytelling events) can foster stronger resident participation and social cohesion. In this way, Panneschopp can regain its vitality — strengthening neighborhood identity, improving public life, and showcasing how a heritage district can adapt to modern needs through inclusive, community-driven, and culturally embedded regeneration.

Spaces analysis



Source: BISL 1997 - Aachen in Schichten GRÜN. RAUM. STRUKTUR. 1997



Diagrams: by authors using data from Open Street Map

The reform-block



Diagrams: by authors using data from Open Street Map

Main entrance of Kennedy Park

Images: By authors



Step 04 | Multi-scale Visions

Rooted in its working-class identity, the future vision for Panneschopp proposes a multi-scalar urban renewal strategy based on circularity, inclusion, and low-intervention transformation.

At the neighbourhood scale, we aim to empower community co-governance through everyday activation. Lützowstraße Square will feature movable seating, a communal toolbox, and a message wall to foster resident ownership. Elsassplatz will become a “neighbourhood memory platform” with rotating exhibitions, small markets, and dialogue benches, all designed as reversible, community-oriented interventions.

At the urban scale, Panneschopp serves as a key interface between East Aachen and Kennedypark. A dual-pathway strategy enhances connectivity: a direct route via Lützowstraße and a cultural path via St. Corpus Christi Church, enriched with narrative elements such as story plaques and historical imagery.

At the regional scale, Panneschopp is redefined as a strategic edge zone in East Aachen, linking green corridors and post-industrial zones. Its integration into Aachen’s Reformblock plan allows it to host social initiatives and serve as a pilot area for low-carbon, socially driven renewal. Through everyday activation, cultural recognition, and regional integration, Panneschopp becomes more than a peripheral district—it transforms into a cultural corridor and connector within Aachen’s evolving urban landscape.

Regional scale strategy

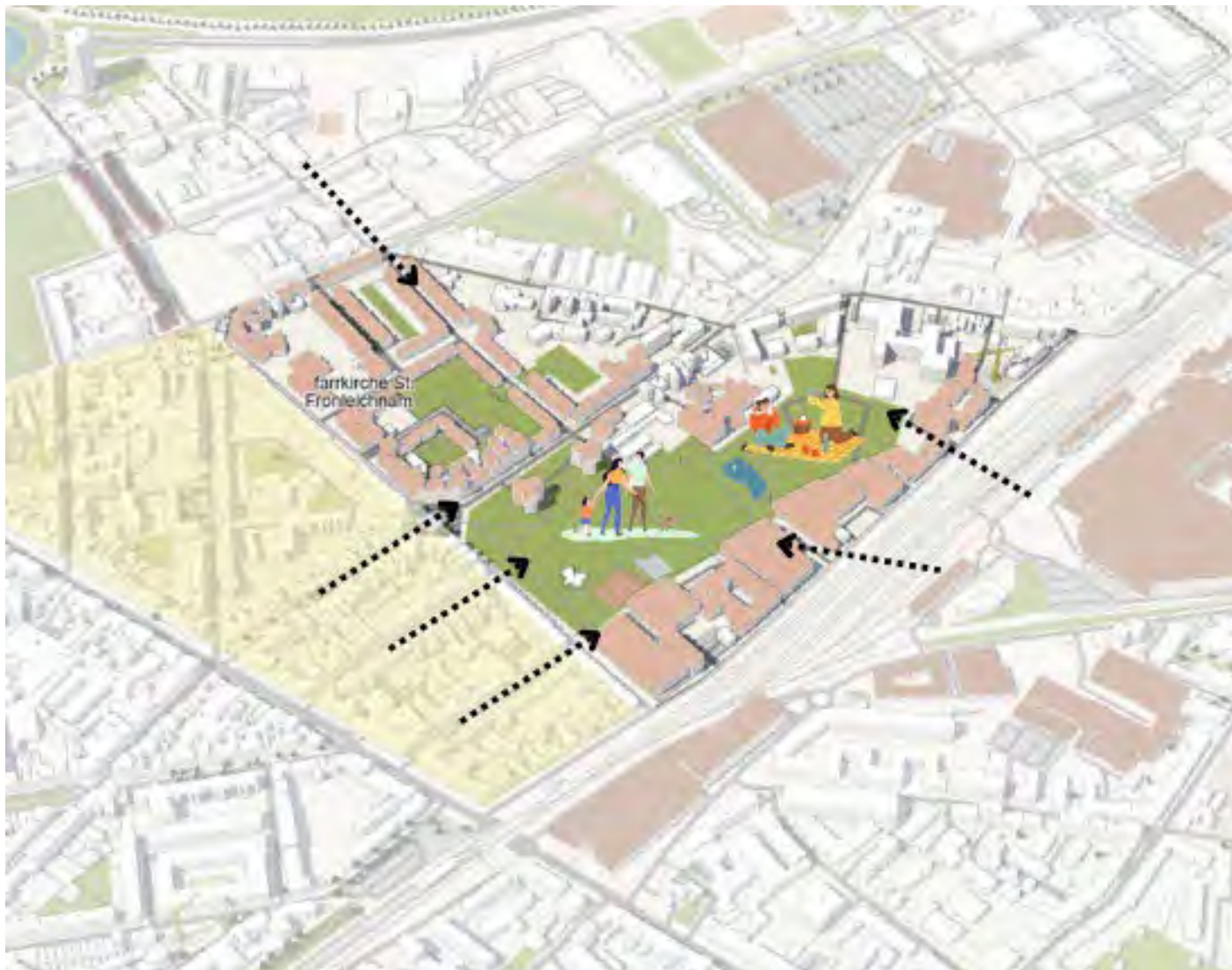


Image: by the authors

Step 05 | Intervention

This project is rooted in preserving the historical fabric and neighbourhood traditions of Panneschopp, proposing a “low intervention – high participation” renewal strategy. Its core objectives include revitalising community life, promoting intergenerational interaction, and reinforcing the role of Aachen’s eastern fringe within the urban structure. Key design elements comprise co-created shared micro-spaces (e.g. activity corners, tool cabinets), neighbourhood memory installations (oral history QR codes, wall story murals), and narrative path nodes (guide signs, ground lighting), implemented through a dual-path approach (main route + diversion route).

Implementation phases focus on collaborative design with residents and social organisations (e.g. Lebenshilfe, Fauna e.V.), establishing shared management schemes, introducing mobile facilities (such as book boxes and information points), and continuously documenting the renewal process to enable community reflection and feedback.

Expected outcomes include the activation of public and cultural life on the city’s eastern edge, a strengthened sense of belonging and shared governance among residents, and the establishment of an inclusive “light regeneration” model. This approach seeks to avoid overdevelopment, embed cultural narratives into the urban fabric, and offer a replicable micro-regeneration strategy for fringe residential districts in Aachen.

To strengthen the connection between Kennedypark and the residential area, we propose improving the signage and wayfinding system by introducing two key pedestrian routes: one leading directly from the residential area via Lützowstraße into the park, and another passing Kirche St. Fronleichnam and Elsassplatz to access the park from its main entrance. Using low-cost, lightweight installations such as directional signs and historical panels, we aim to enhance spatial identity and visual appeal while also offering insights into the neighbourhood’s history. Additionally, we recommend introducing a “community walking map” that highlights resident-recommended daily routes and local landmarks, encouraging people to explore the area from new perspectives and to foster a stronger sense of belonging through everyday movement.

Local Strategy map



Diagram: by authors using data from Open Street Map

Jülicher Straße West | Amin Amini, Ghazal Laghaee, Luis San Jose

Step 2 | Space/Area/Town

Urban Transformation Process in Jülicher Straße/ West

Since the 19th century the western area of Jülicher Straße has evolved from industrial roots into a mixed-use neighborhood. Post-war changes focused on rebuilding, while recent efforts concentrated on renovating Gründerzeit buildings, reusing former industrial sites for housing and creative industries, as well as improving to public spaces like Rehmplatz. (The Aachen-Nord district)

Typologies - The area is dominated by late 19th-century Gründerzeit perimeter block typologies: Dense and multi-story residential buildings arranged around courtyards.

These structures originally supported mixed uses, while public squares and semi-public courtyards were designed for social interaction and are still central to the neighborhood's layout. (stadtteile-und-projekte)

Scale - Transformation occurs at both the block and neighborhood scale. While specific interventions target buildings and streets (especially along Jülicher Straße) the changes collectively impact the larger urban fabric.(https://www.lebendiges-aachen.de/)

Actors - Led by the “Soziale Stadt Aachen-Nord” program, the development process includes private investors, residents, community groups, RWTH researchers, and the creative sector.(pbs-architekten, stadtteile-und-projekte)

Goals - Preserving the historic character. Improving living conditions and promoting social integration. Enhancing public spaces and mixed-use development

Current Stage- Renovated Gründerzeit housing. Revitalized squares like Rehmplatz Reuse of industrial buildings for cultural and residential purposes. All in all, the area has become more attractive to middle-class residents and students, while maintaining a socially mixed and culturally active identity.

Dominant Building Types: Closed Block Structure



Robenstraße

Image: Illustration by author



Passstraße

Image: Illustration by author

Ongoing Transformation

Urban transformation →

Key changes →

Goals →

Programs →

Actors →

Driven by public initiatives and private developments

Renovation of Gründerzeit-era buildings, conversion of industrial sites into residential spaces, enhancement of public areas

Revitalize area, improve living conditions, preserve historical character, accommodate contemporary urban needs.

“Soziale Stadt” program pivotal for social integration and infrastructure improvements

City of Aachen, private developers, housing companies, local residents, community groups, RWTH Aachen, creative sector.

Neighborhood

Block typology

Late 19th-century Gründerzeit block typology.

Public space

Rehmplatz, located in the southern part of the area.

Features

Dense, Multi story residential buildings, Historical facades, Mixed-use functions (Shops on the ground floor and apartments above)

Image: Illustration by author

Step 03 | Opportunities/ Restrictions - Innovation.

The inner-city section of Jülicher Straße holds key potential for transformation within Aachen’s circular and healthy city goals. A major opportunity lies in the unused plot directly on Jülicher Straße, which could support inner-city densification, a core urban concept of Aachen. Proper usage could enhance the vitality and liveability of the area. However, the street suffers from high traffic volume and noise, limiting walkability and air quality while complicating transformation efforts.

Much of the neighborhood is sealed, intensifying heat stress and runoff. Resealing with green and permeable surfaces could enable sponge city functions, supporting Aachen’s climate resilience strategy. Gründerzeit-era buildings, some well-preserved, offer architectural value and reuse potential, yet monument protection limits alterations, favoring vertical or internal retrofits. The area’s socio-economic vulnerability, marked by high unemployment and welfare dependency, requires socially inclusive redevelopment. Mixed land uses bring both challenges (noise, truck traffic) and circular-economy opportunities (reuse hubs, repair cafés).

A future-oriented transformation must combine careful infill on key vacant plots and the unsealing of paved areas. Integrating social equity, through affordable housing, community services, and job creation via reuse-based industries, ensures that innovation supports resilience and inclusion. Like this, the neighborhood can develop aligning with the original urban concept, potentially paving the way for a healthy and circular city.

Sealed Ground



Image: Illustration by author, based on OpenGeodata.NRW



Green Roof Potential



Image: Illustration by author, based on Städteregion Aachen 2025

Step 04 | Multi-Scalar visions in Richterich: Blending tradition and innovation & Step 05 | Towards a Regenerative Urban Future

Goal - The goal of the intervention is to address the issues facing the neighborhood through an approach that utilizes circularity and sustainability. The first issue that has to be addressed is the desealment of the ground. This empty lot of land which is covered in asphalt and lacking a clear function, provides us with an opportunity to boost the local economy and address the most pressing problems. The proposed project is a mixed-use urban development on a currently unplanned inner-city site in Aachen. It includes a police station, modular office spaces for workshops and integration services, a community café that activates the corner of Jülicher Straße and Rosenstraße, and an urban agriculture component supplying the café. Additionally, an underground garage will serve residential uses, the police station, and a nearby hotel, while also functioning as a flood retention basin. Green roofs and direct integration into the existing building fabric complete the concept. These interventions tie everything together through sustainability and provide a livable space that promotes circularity.



Image: Illustration by author

Legal conditions - From a legal-planning perspective, the development is situated on a plot for which no binding local development plan (Bebauungsplan) exists. However, the land is designated as "mixed-use building land" (Gemischte Baufläche) in the city's land use plan. While this designation does not confer direct building rights, it indicates long-term municipal planning intentions that are supportive of combined residential and commercial use (Geodatenportal Aachen 2022). In the absence of a binding plan, the project can be assessed according to §34 of the German Federal Building Code. This provision allows for development if the proposed project integrates into the type and scale of the surrounding built environment and if sufficient infrastructure is in place (BauGB n.d.). In this case, the site is part of a connected built-up urban area and is covered by sufficient infrastructure. Furthermore, it lies directly opposite the area covered by development plan 825 I (Geodatenportal Aachen n.d.). Development plan 825 I designates most of its area as mixed-use, with an emphasis on residential use, retail, and non-disruptive commercial activities. It explicitly prevents socio-spatial decline to maintain a functional urban mixed-use (Stadt Aachen 2020). The intended project aligns well with these goals. It continues the mixed-use character, strengthens community infrastructure, and incorporates green and resilient design principles. It also connects seamlessly with the adjacent urban fabric and avoids uses deemed harmful under development plan 825 I. In summary, the proposed development is consistent with both the planning intent of the city's land use plan and the urban structure established under development plan 825 I. As such, it is likely to satisfy the requirements of §34 BauGB, making it eligible for approval under current planning law (BauGB n.d.).

Illustrative Axonometric of Future Urban Block



Image: Illustration by author



Image: Illustration by author



Blücherplatz | Ghazaleh Gomari, Lizia Santucci, Sona Sajan

Step 2 | Space/Area/Town

Blücherplatz in Aachen-Nord is a significant example of Gründerzeit-era urban development from the late 19th and early 20th centuries. The square was historically surrounded by key buildings such as St. Elisabeth Church (1904–1907), the former administrative testing institute (1907), and the Stadtbad (1930). Together with the surrounding residential blocks, these structures served a working-class population connected to nearby industries. Although the area was once a lively social and architectural hub, Blücherplatz today is largely used as a parking area. Signs of neglect, such as abandoned courtyards and waste accumulation, point to a lack of recreational infrastructure and declining public use. In recent years, the departure of large industrial companies has opened space for new types of activity. Cultural and creative institutions, like the Ludwig Forum, the municipal music school, and the adaptive reuse of historic buildings, have begun to reshape the area. The rise in mixed-use and residential functions, alongside public programs such as Soziale Stadt Aachen-Nord, reflects a broader shift in planning priorities and market interest. These developments illustrate how policy and land market dynamics work together to transform formerly peripheral industrial zones into emerging centers of urban life and cultural innovation. At the same time, land market pressure turned Blücherplatz, from a historic Gründerzeit square, into a parking area, showing how public space can be reduced or misused over time.



Built Form Typologies

Images: Adapted from ISL Aachen (eds.), Grün.Raum.Struktur. RWTH Aachen, 1997



Closed built form with no frontside common space



Closed built form with frontside common space

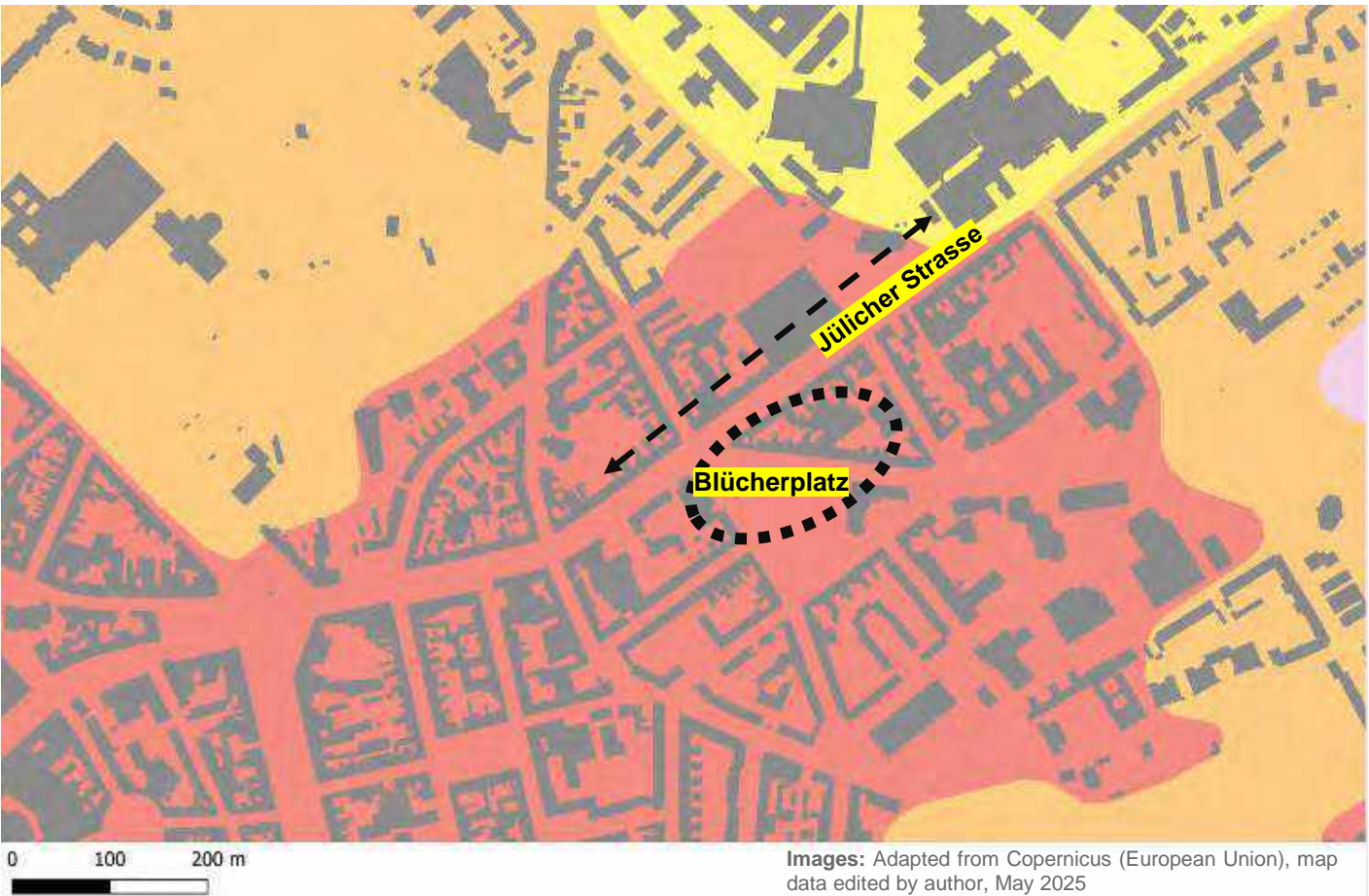


Reform blocks with courtyard

LEGEND:

- Dense urban area, >80% artificial surfaces (e.g., city centers)
- Public parks, gardens, and green spaces in cities
- Residential areas with lower density, intermixed with vegetation
- Grazing areas used for livestock
- Factories, business parks, malls, etc.

Land Use 2018:



Step 03 | Opportunities/ Restrictions - Innovation.

Located in Aachen-Nord, Blücherplatz and its surroundings form a transitional zone between the dense city core and peripheral green landscapes. As part of Aachen’s historical ring-radial urban structure, organized around concentric rings and radial axes, this area lies between the inner city ring and the second ring, playing a key role in connecting urban and natural environments.

Europaplatz, once a green gateway framed by trees and wide walkways, has lost much of its spatial quality due to vegetation loss and car dominance. In contrast to Aachen’s compact historic center, the area around Blücherplatz developed with lower building density, allowing for more openness and greenery.

Blücherplatz was originally conceived as a civic square, framed by landmarks such as the music school, St. Elisabeth Church (now the Digital Church), the Stadtbad, and the Ludwig Forum. Today, it has deteriorated into a fragmented, car-oriented space with little cohesion.

The area features varied urban typologies: geometric planning, reform blocks with courtyards, closed built forms with front spaces, and some without any front open space. Now part of the “Premium Footpaths” network, future strategies emphasize ecological and social upgrades, urban gardens, microclimate improvements, and active public spaces, to restore Blücherplatz as a vibrant node in Aachen’s evolving landscape.

The area around Blücherplatz and Europaplatz offers strong potential for a circular and resilient urban transformation. The Wurm River and nearby green spaces, such as Stadtgarten, present opportunities for ecological restoration, natural drainage, and the creation of inclusive social spaces like community gardens and urban farms. Blücherplatz can exemplify adaptive reuse through circular construction strategies, such as reusing existing buildings and materials. Modular construction and reclaimed components help reduce carbon emissions while preserving architectural identity. Examples like the Ludwig Forum and Digital Church illustrate the successful reuse of industrial and religious structures for cultural and innovation purposes.

Enhancing pedestrian and cycling infrastructure, while removing surface parking and introducing shared mobility hubs, can support a transition to low-traffic, human-centered streets. Within early 20th-century housing blocks, currently underused garden spaces can be reimagined as community-oriented recreational areas that improve well-being. The proximity of Europaplatz to the Technology Center further supports the development of a knowledge-based innovation hub for circular economy initiatives. However, the area faces challenges such as heritage restrictions, car-dominated layouts, and limited bike lanes. Legal and regulatory barriers, including zoning and ownership constraints, require coordinated planning. Institutions like the Music School can serve as anchors for cultural interaction and neighborhood identity.

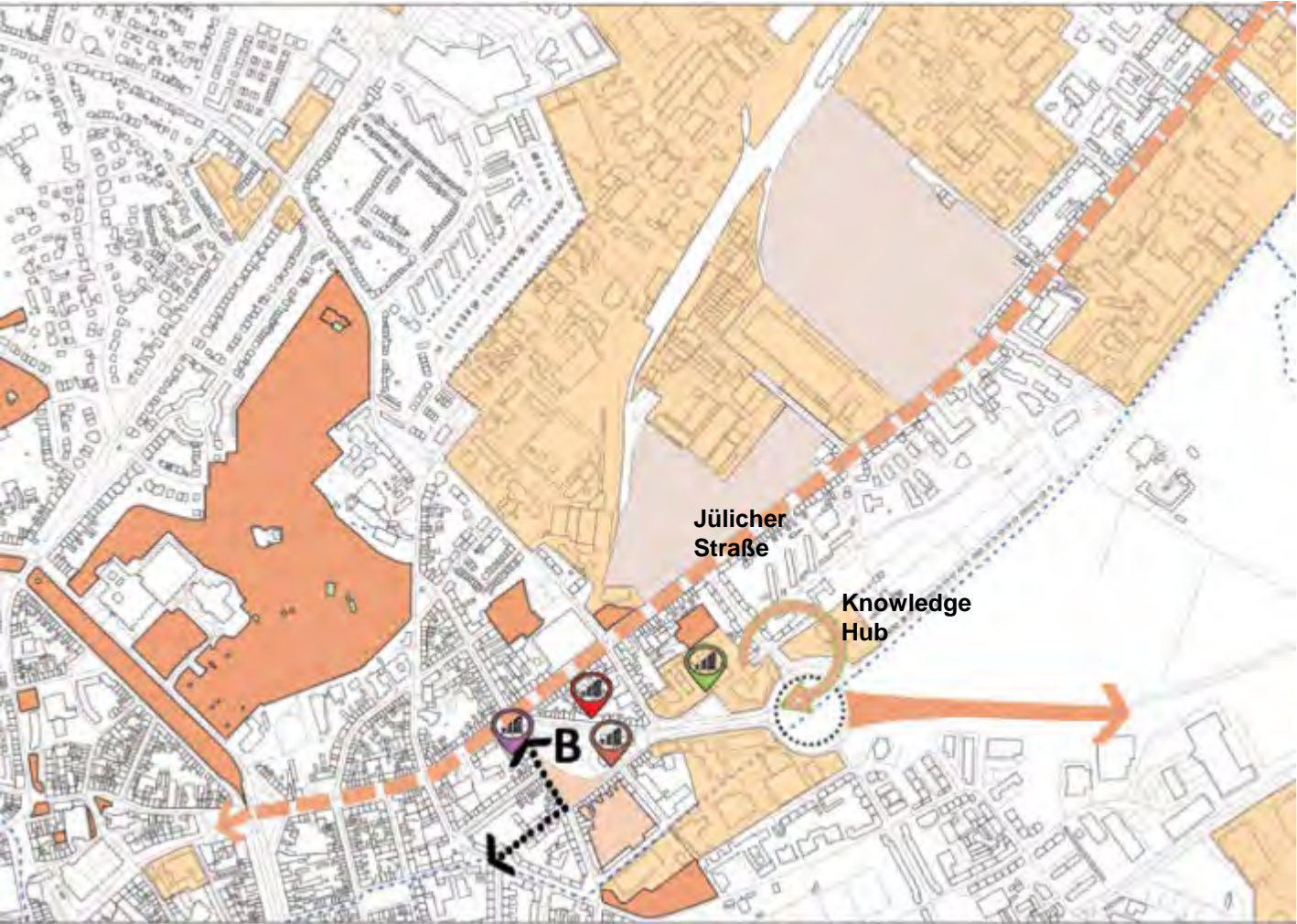
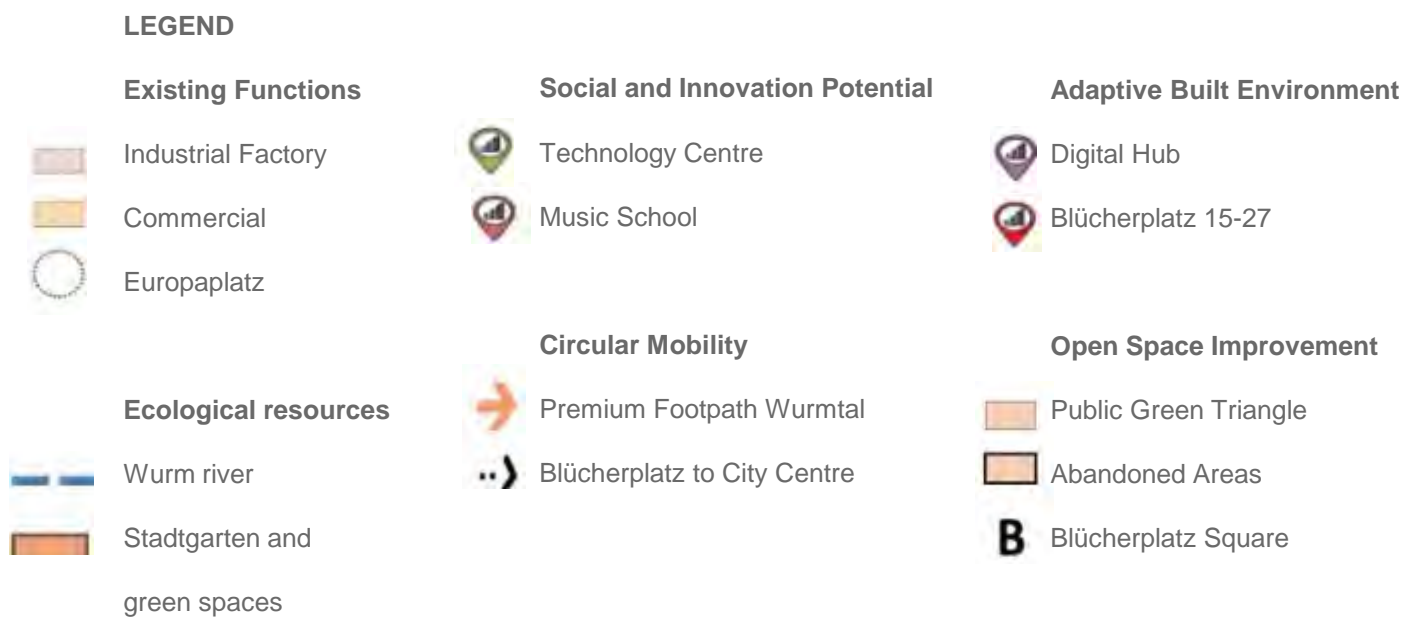


Image: Created by the authors using data from Open Street Map (2025).



Step 04 | Multi-Scalar visions in Richterich: Blending tradition and innovation & Step 05 | Towards a Regenerative Urban Future

The focus area offers strategic potential for transformation across multiple urban scales. At the local scale, the proposal seeks to restore the square's social function through accessible, inclusive design. Eliminating surface parking makes space for shaded leisure areas, while the adjacent triangular plot becomes a rain garden to support urban drainage and thermal comfort. Courtyards in nearby buildings can offer additional community uses. A regular flea market and a bike rental point will promote local activity, sustainable mobility, and circularity. The revitalization is not limited to physical upgrades; it also applies circular economy principles by reactivating underused spaces and optimizing existing infrastructure. For example, the Stadtbad, which is already a key cultural venue, can be enhanced by adjacent outdoor areas for events and informal gatherings. This reinforces its role as a local arena closely linked to everyday public life.

At the urban scale, the revitalization strengthens cultural ties and the active mobility network in Aachen-Nord. The bike lane connecting the square to Rehmsplatz is part of a larger network, including streets like Jülicherstraße and Lombardenstraße, expanding sustainable access between neighborhoods. Furthermore, Blücherplatz can serve as a node in a network of public cultural spaces, bringing together the Stadtbad, the music school, and the Ludwig Forum, creating a vibrant cultural corridor in Aachen-Nord.

At the regional scale, a green corridor is proposed to connect Stadtpark, Blücherplatz, and the Wurm River, integrating green infrastructure and well-being. Europaplatz, originally a 1960s traffic hub, is envisioned as a green, multimodal gateway, combining sustainable mobility, public space, and urban uses. This can reinforce Aachen-Nord's regeneration as a resilient, creative, and connected district.

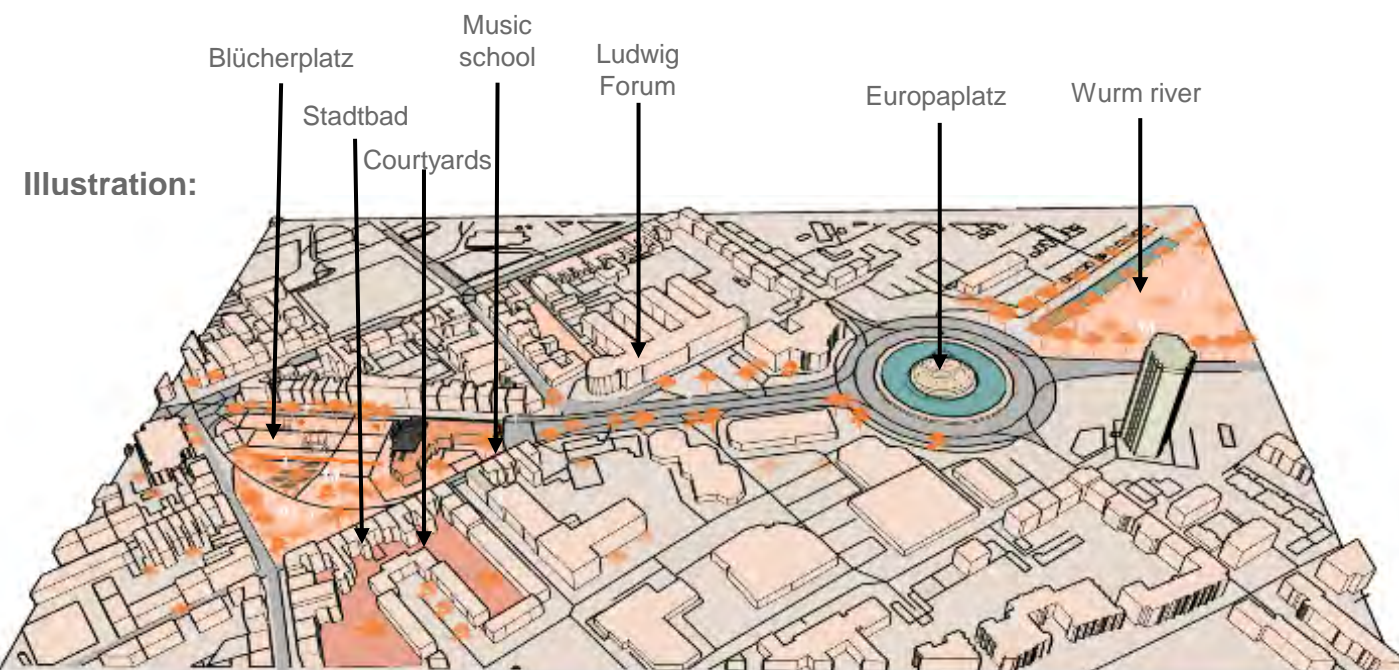


Image: Created by the authors using data from Open Street Map (2025).

Blücherplatz, once conceived as a dignified civic square in Aachen-Nord, has over time lost its spatial and social significance. Currently reduced to a traffic-surrounded parking island, the square is underutilized and disconnected from its urban and cultural context. This intervention proposes a comprehensive urban planning strategy to restore Blücherplatz's function and identity, embracing ecological restoration, social inclusion, cultural activation, economic resilience, and sustainable mobility, all in alignment with Aachen's vision for a circular and climate-conscious urban future.

Ecologically, the transformation begins with the complete removal of surface parking, allowing the square to be reimagined as a vibrant green public space. A rain garden will be installed in the triangular green area of the square to manage stormwater, increase biodiversity, and mitigate urban heat. Across the site, pollinator-friendly plantings and new tree canopies will be introduced to enhance air quality and support local ecological systems. These nature-based strategies create not only environmental benefits but also opportunities for everyday ecological awareness and learning.

Social and cultural components are equally central to the project. The redesign introduces shaded seating areas and natural play features that promote intergenerational use and community engagement. The square's role as a civic and cultural anchor will be reinforced through stronger connections with its immediate neighbors. The municipal music school, already engaging with the square, will be encouraged to use it more actively for outdoor rehearsals and performances. Additionally, the intervention strengthens the relationship with the nearby Stadtbad, an active cultural venue, by providing a higher-quality public setting that supports exhibitions, gatherings, and street-level programming.

From an economic perspective, the project introduces a weekly flea market at Blücherplatz. This flexible and inclusive format fosters a circular economy by encouraging reuse and informal exchange, while also offering local residents a platform for entrepreneurship and social interaction. Over time, the improved design and increased foot traffic will enhance the square's attractiveness for small-scale commerce and everyday activities, contributing to the economic regeneration of Aachen-Nord.

Sustainable mobility is a key element of the intervention. A bicycle rental station will be installed at the square, and cycling infrastructure will be improved with clear lanes and safer connections to nearby streets such as Jülicherstraße. These improvements integrate Blücherplatz into the city's existing cycling network and support broader goals of reducing car dependency and promoting active mobility.

Stakeholders in this process include the City of Aachen, particularly the departments of urban planning and environment, alongside residents, local cultural institutions, community organizations, and environmental NGOs. Funding may be sourced through municipal programs or regional development funds supporting climate adaptation, green infrastructure, and sustainable transportation. The project will also comply with relevant local regulations concerning traffic, heritage preservation, and land use, requiring close collaboration with planning authorities.

Altogether, the intervention seeks to reclaim Blücherplatz as a meaningful, inclusive, and forward-looking public space, one that celebrates its civic role while responding to urgent urban and environmental challenges in Aachen.

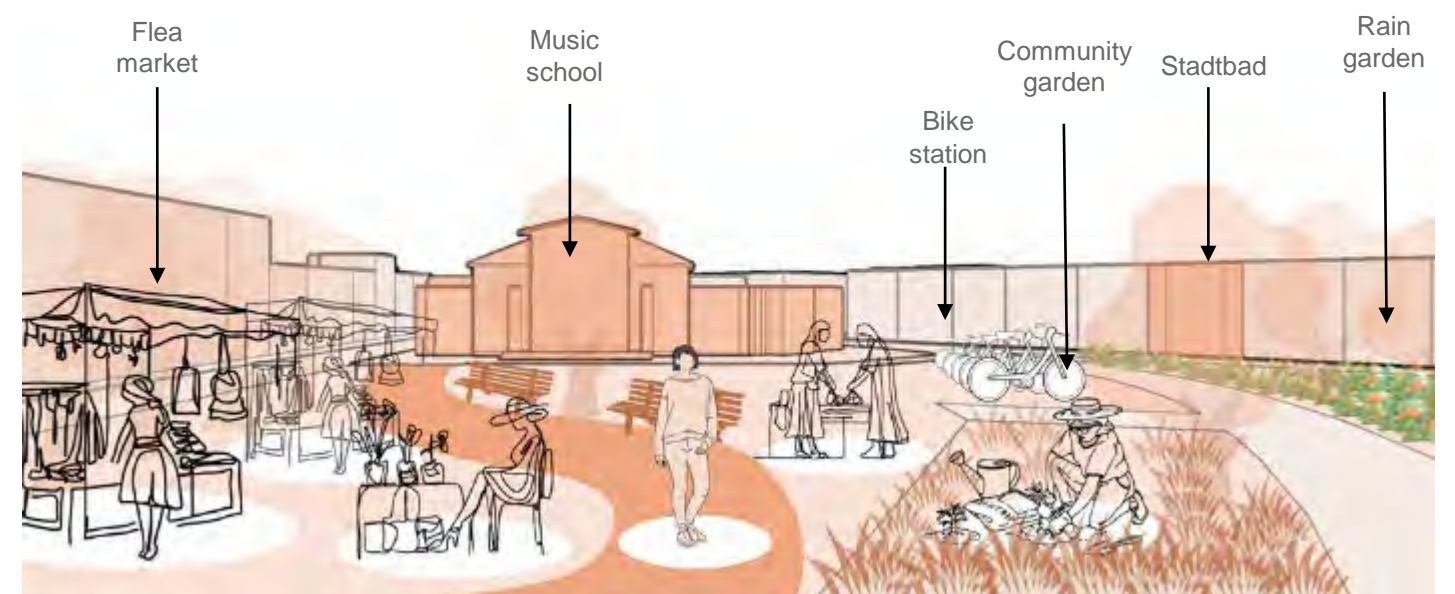


Image: Created by the authors using data from Open Street Map (2025).

Step 2 | Urban Transformation in Richterich

The district of Richterich represents a unique form of urbanity within the ring-radial structure of Aachen. Historically an independent village, Richterich was incorporated into the city of Aachen in 1972 during municipal reforms. Its spatial structure reflects semi-rural urbanity, combining open landscapes, scattered settlements, and gradual integration into the urban framework.

Urbanity in Richterich is characterized by low-density residential housing, extensive green spaces, and agricultural land use. Unlike the dense medieval and industrial cores of Aachen, this district features broader streets, detached single-family homes, and proximity to natural ventilation corridors (Kaltluftströme), critical for the city's climate strategy.

Since the late 20th and early 21st centuries, Richterich has experienced controlled suburban expansion. Projects such as the Klimaschutzsiedlung Richtericher Dell exemplify conscious efforts to blend sustainable urban development with ecological preservation. These projects introduce compact, energy-efficient residential clusters while maintaining the area's open and green character.

Today, Richterich acts as a transitional zone: preserving its rural heritage while gradually adopting urban features aligned with Aachen's climate and sustainable development policies. The main challenge remains preserving ecological functions (cold air corridors, fresh air generation) amidst increasing housing demands.

Urban Transformation Process in Richterich

The urban transformation of Richterich illustrates the transition from a predominantly rural landscape to a semi-urban suburban area within Aachen's framework.

Typologies

Initially, Richterich was defined by dispersed rural housing, farms, and open agricultural lands. Recent developments have introduced more compact residential typologies focusing on sustainability, notably seen in the Klimaschutzsiedlung Richtericher Dell, comprising row houses, connected villas, and small apartment blocks integrated with green infrastructure.

Scale

Transformation occurs at the neighbourhood level; focusing on sustainable residential clusters covering approximately 37 hectares (Dell project) without major disruption to the rural structure.

Actors

Main actors include the City of Aachen Planning Department, private developers, environmental agencies, and citizen groups. Their collaboration ensures ecological conservation alongside urban growth.

Goals

- To provide new energy-efficient housing.
- To preserve natural ventilation corridors.
- To integrate renewable energy and sustainable drainage systems.
- To create community-oriented residential environments.

Results (so far)

- Successful establishment of new residential areas with minimal ecological disruption.
- Preservation of major green spaces and cold air generation zones.
- Strengthening the model of suburban sustainability in Aachen.
- Increasing the attractiveness of Richterich as a sustainable and climate-friendly Residential area.

Urbanity in Richterich

Images by authors



1980

- Enlargement / densification
- Construction of the Schöнау housing estate
- Businesses on Roermonder Straße

2003

- Further development on the Banker-Feld-Straße



1986

- Roder Weg industrial estate
- Residential areas Pfalzgrafenstraße and Am Lütterbüschen
- Schönaauer Friede residential area

2021

- Halls at the sports field through residential buildings replaced



Source: Stadt Aachen *Perspektive Richterich*

Step 03 | Opportunities and Constraints in Richterich – Toward a Circular City

The district of Richterich presents both promising opportunities and tangible constraints for guiding urban transformation in the direction of a circular city model.

Opportunities:

- Abundant open and green spaces in Richterich offer a foundation for implementing circular urban systems, such as decentralized rainwater infiltration, community gardening, and localized food production.
- The presence of existing ecological corridors (cold air flows, natural ventilation paths) supports passive climate regulation, a core principle of climate-adaptive circular design.
- Ongoing projects like the Klimaschutzsiedlung Richtericher Dell provide pilot models for energy-efficient construction, low-carbon mobility solutions, and smart water use strategies.
- The semi-rural character of Richterich encourages community participation and social cohesion, crucial for bottom-up approaches in circular urbanism.





















Constraints:

- Pressure for suburban densification driven by population growth and housing demand may threaten green land reserves and cold air corridors.
- Infrastructure limitations (especially public transport and connectivity to central Aachen) reduce accessibility and hinder circular mobility goals.
- Socio-economic segmentation risks emerging if new sustainable housing is not made inclusive and affordable for diverse population groups.

Conclusion:

Richterich stands at a crossroads between preserving its ecological assets and accommodating urban growth. For the district to contribute meaningfully to Aachen’s vision of a circular city, urban transformation strategies must prioritize environmental integrity, spatial justice, and participatory planning. Ensuring continuity of green corridors, investing in low-carbon transport infrastructure, and promoting inclusive housing policies are essential for unlocking Richterich's full potential within a regenerative urban future.

Opportunities



Attractive residential areas for families with potential for generational change

Attractive residential area for small housing units in central location

Town centers with different focal points

Productive landscape space

Settlement area

Potential areas for wind energy

Attractive green spaces

"Panoramic view" / open view into the landscape

Paths into the landscape

Stream / water areas

Underground stream course

Inter-local connection

Pedestrian / bicycle connection

Historical / identity-defining / cityscape-shaping place

Daycare center

Primary school

Youth recreation center

Academy (Gut Rosenberg)

Places for clubs (carnival, sports, music)














Retail / local supply

Sports areas

Playgrounds



Constraints



Barriers

Rail crossing for pedestrian and bicycle traffic requiring action

Rail crossing for motor vehicle traffic requiring action

Residential areas with low usage mix

Commercial areas, unattractively designed, partly vacant, without green elements

Potential areas for wind energy: conflict potential within the community

Separate centers

Town centers in need of redesign

Town entrances in need of redesign

Settlement edge in need of redesign

Poor motor vehicle connection to Alt-Richterich and Richterich-Schönau

Lack of public services (daycare places & care facilities for seniors)

Missing rail connection



Source: Stadt Aachen, *Perspektive Richterich*.

Step 04 | Multi-Scalar visions in Richterich: Blending tradition and innovation & Step 05 | Towards a Regenerative Urban Future

At the urban scale: As part of Aachen’s overarching climate strategy, Richterich can serve as an intermediary between dense urban cores and surrounding rural zones. Combining inclusive housing policies, investments in public transportation, and the preservation of green space can create a development path that is both innovative and grounded in place.

At the neighborhood scale: The semi-rural fabric, dispersed housing, and natural ventilation paths offer a foundation for preserving architectural and social traditions. These elements can be complemented by modern technologies such as solar energy systems, smart drainage infrastructure, and participatory design practices.

At the regional scale: Sustainable initiatives like Richtericher Dell demonstrate how innovative approaches such as low-carbon construction and green mobility can be rooted in local identity. Developing continuous green networks enhances the ecological and social functionality of the area.

Vision: The future of Richterich lies in simultaneously embracing its heritage and forward-looking potential — a place where spatial memory merges with ecological and social innovation to shape a resilient, dynamic, and participatory district.

Intervention Area: The proposed intervention focuses on the eastern edge of the Klimaschutzsiedlung Richtericher Dell, where residential expansion meets underused agricultural lands. This transitional area will be transformed into a resilient and inclusive eco-neighborhood, connecting the urban fabric to surrounding farmland.

Goals of the Intervention

- Sustain farmland continuity through spatial integration with housing.
- Enhance social equity by providing inclusive and affordable living environments.
- Support environmental resilience through green infrastructure and climate-adaptive design.
- Align with Aachen’s climate neutrality strategy and circular city vision.

Key Design Elements

- Inclusive Housing: A mix of cooperative housing and affordable units designed for multigenerational, diverse residents, fostering social cohesion and shared ownership models.
- Green Mobility Hub: A transit-oriented node offering e-bike rentals, EV-sharing, bus access, and pedestrian priority networks connecting Richterich to the city center.
- Productive Landscapes: Integration of community gardens, agroforestry strips, rainwater wetlands, and rooftop gardens to combine food production with ecological restoration.
- Resilient Public Spaces: Climate-shaded plazas, edible playgrounds, and multifunctional commons enabling social interaction, thermal comfort, and community-led stewardship.

Implementation Phases

1. Participatory Planning & Community Co-Design: Workshops with local residents, farmers, NGOs, and urban planners to co-develop spatial priorities and design narratives.
2. Ecological Infrastructure Setup: Constructing green corridors, bioswales, and WSUD systems to manage runoff, improve ventilation, and enhance biodiversity.
3. Pilot Housing Development: Modular, energy-efficient buildings using circular materials and flexible typologies, constructed in adaptive phases.
4. Monitoring & Feedback Loop: Ongoing evaluation of social cohesion, microclimate performance, and land productivity, enabling mid-course corrections.

Expected Outcomes

- Transformation of Richterich into a “living lab” for sustainable edge development.
- Enhanced integration of agriculture and housing, ensuring long-term food and land security.
- Improved green connectivity and access to public services for all social groups.
- Reinforcement of Richterich’s identity as an ecological transition zone between urban Aachen and the rural periphery.

Conclusion – Final Position

The integration of agriculture and housing is not only a design strategy—it is a necessity for building resilient, inclusive, and ecologically coherent urban futures. Richterich, in this scenario, becomes a model for productive, circular, and adaptive suburban transformation, where living and cultivating are not opposites but complementary ways of sustaining both land and community.

Intervention

Image by authors



Generational change in single family homes, conversion / renovation

New construction of neighborhoods

Improving Richterich’s rail connection

Improving the cycle path network

Urban development

Connection of landscape and settlement area

Design of the transition between landscape and settlement

New public space

Upgrading town centers

03 CLASS EVALUATION – Outcomes of Investigation

The group investigations have provided a rich variety of insights and considerations of valid factual and methodical substance. One of the most essential tasks per location/ space-become history was, to find spatial opportunities for a „circular economy“ in „Arenas“ – as we had been searching for places where social activities might be initiated, enhanced and encouraged.

Following the search for „Arenas“, the different socio-spatial approaches per location have opened up a severe range of local perspectives for different kinds of environmental qualification

- On the ground (private and public land use, urban agriculture at the peripheries and rain water retention at all the locations)
- In the third dimension (vegetation cultivated alongside the building facades, roof gardens) and
- On selected sites: Existing or needed adaptive reuse on private/ public ground (Altes Stadtbad/ Blücherplatz, Monastery/ Lousbergstrasse, underused parking space east of Pontsstrasse, closed staircase to the deep parking garage at Komphausbadstrasse ...).

These findings give mainly attention to urban spaces themselves for reuse etc. before helping to address to individual businesses as stakeholders of local/ regional economies for changing their economic routines.

The outcomes of investigation are showing the different local needs for a wide range of informal planning influence on ongoing processes of urban and socio-economic transformation. The needs for guidance by planning intervention range from

- Strengthening historical heritage for land use and urban/ built form design (Gestaltungssatzung: Heimgärten Settlement, Rehm Quarter, Lousberg Quarter, Panneshop Settlement)
- Strengthening a mixture of uses and a 24-hours guarantee for „life in the city“/ security/safety in public space (first and second inner urban ring area)
- Revitalizing + desealing underused functional spaces in inner urban areas (parking near Pontsstrasse, Ponttor + surroundings, tunnel with staircase + underground entrances to parking at Bushof area + surroundings in public space...)
- Reusing and activating public and private spaces in early industrialized areas (Rehm Quarter: former factory + Rehmpfatz; Frankenberger Quarter: Former Textile factory + Neumarkt; Jülicherstrasse West: underused site near Hanseemann Platz, Jülicherstrasse East: Europaplatz, Blücherplatz, common open spaces in housing yard; Panneshop: Interior Plaza + 3 entrances with former corner shops to be connected to Kennedypark; Lousberg Quarter: Former Monastery + corner coffee-shop; Heimgärten: Interior Plaza + pathways crossing the settlement to be connected to Stadtpark)
- Establishing a new quality of mixed landuse for living + working with agriculture and urban gardening: Richterich

The inductively achieved findings per location announce the following options for an intervention by planning:

04 CITY OF AACHEN – CORES AND EDGES

Formal intervention by Local Law:

- Inner urban area (First + second inner rings): Gestaltungssatzung/ Legally binding plans for selected sites (f.i. parking sites/ public space around Bushof)
- Industrial expansion areas (Rehm Quarter/ Frankenberger Quarter/ Jülicherstrasse West and East): Legally binding VEP-plans on private ground; Grün-Raum-Order on public ground
- Urban expansion in Richterich, developing concepts for a mixture of land use, built form arrangement in between agriculture

Informal intervention by Masterplanning + Participation

- Settlements (Heimgärten/ Panneshop/ Lousberg/): Framework-plans for the integration of solar energy, bindings for uses and open spaces qualification.
- The settlements of the time after WWII have not been selected for investigation and are therefore not considered. They might be urgent cases for informal masterplanning as well.

05 LOCAL PLANNING – GLOBAL GOALS

The outcomes of classroom discussion and group-exercises have indicated that global goals need to be applied only carefully in order not to destroy local potentials

- Provision of 24 hours-security in inner urban spaces depends on the connection of public and private spaces (Inner Ring)
- Calming down traffic on one side in allees might disturb the historically valid balance of the original concept of two sides (Second Ring)
- Dropping fashionable images over local conditions does not generate new spatial qualities (Rehmviertel)
- Urban growth patterns find orientation alongside major traffic routes (New buildings on the real estate markets: South of Rüttscher Strasse/ Lousberg Quarter)
- The variety of industrial influences from different periods and the roots of nature (brooks) allow for a variety of options to be continued (Frankenberger Quarter)
- Installing organic layouts for urban gardening in classical ground-plans with public spaces hierarchies from historically valid periods of urban development do not enhance the existing traditional values of place but rather risk to destroy them (Heimgärten)
- Establishing bike-lanes alongside major traffic routes might cause another functional separation of public spaces instead of strengthening the recognition of existing historically valid landmarks of built form arrangement as a framework for activating a settlement unit as a framework for socio-cultural activities (Panneshop)
- Vacant land alongside major transport routes needs reframing of open spaces by built form (Jülicherstrasse West)
- Different categories of public/ common space (from different periods of history) need different responses of qualification (Jülicherstrasse East)
- Urban expansion (waiting for implementation since 30 years) needs a contemporary response to obsolete patterns of sub-urbanization (Richterich)