**Integrated Research and Design II**
Summer term 2022

# Urban Transformation:
# Schoettle-Areal


MSc *Integrated Urbanism & Sustainable Design* (IUSD)
ILPÖ INSTITUT FÜR LANDSCHAFTSPLANUNG UND ÖKOLOGIE
SI / STÄDTEBAU-INSTITUT INTERNATIONAL URBANISM /
University of Stuttgart

Documentation / Dokumentation
Summer term 2022
Sommersemester 2022

Publishers / Herausgeber
Universität Stuttgart
M.Sc. Integrated Urbanism & Design (IUSD)
Institut für Landschaftsplanung und Ökologie (ILPÖ)

Institutes Directors / Institutsleiterinnen
Prof. Dr. Leonie Fischer (ILPÖ)
Prof. Dr. Astrid Ley (SI)

Academic Staff / Akademische Mitarbeiter*innen
M.Sc. Jesús Martínez Zárate (ILPÖ)
M.Sc. Friederike Thonke (SI)

Editorial and Design / Redaktion und Gestaltung
M.Sc. Jesús Martínez Zárate (ILPÖ)
M.Sc. Friederike Thonke (SI)
Jonas Czikl (ILPÖ)
Alfred Palacios (ILPÖ)

Guests / Gäste

| | |
|---|---|
| Engelhardt, Anthea | Projektkoordination KUGEL - Internationaler Bund e.V. (IB) |
| Strömer, Kalle | Stadtplanungsamt Heidelberg - Abteilung Städtebau und Konversion |
| Runge, Anette | Familienzentrum Stuttgart e.V. (MüZe Süd) |
| Bansbach, Barbara | |
| Schulze, Dorothea | Initiative Solidarische Nachbarschaft Schoettle-Areal |
| Britta, Wente | |
| Schlegel, Sandra | |
| Fadini, Thomas | |
| Gantert, Marius | TELEINTERNETCAFE Architektur und Urbanismus |
| Bauer, Markus | Internationale Bauaustellung 2027 (IBA'27) |
| Srivastava, Rahul | urbz |
| Echanove, Matias | |
| Kramer, Wulf | Yalla Yalla! Studio for change |
| Bauer, Sascha | Studio Cross Scale |

Participants of the Panel Discussion / Teilnehmende an der Podiumsdiskussion

| | |
|---|---|
| Pätzold, Peter | Bürgermeister der Landeshauptstadt Stuttgart. Referat Städtebau, Wohnen und Umwelt |
| Grieb, Raiko | Bezirksvorsteher Bezirksbeirat Stuttgart Süd |
| Gerstenäcker, Christel | NaturFreunde in Heslach e.V. |
| Fadini, Thomas | Initiative Solidarische Nachbarschaft Schoettle-Areal |
| Hofer, Andreas | Intendant der IBA'27 GmbH |

Image Sources / Bildquellen
Unless otherwise stated, photos and illustrations were taken by staff and students of the institute / Soweit nicht anders angegeben stammen Fotos und Illustrationen von Mitarbeiter*innen und Studierenden des Instituts

Stuttgart, February 2023

# Acknowledgements

In the summer term of 2022, the M.Sc. programme Integrated Urbanism & Sustainable Design (IUSD), jointly conducted by the Institute of Landscape Planning and Ecology (ILPÖ) and the Chair of International Urbanism of the Institute of Urban Planning and Design (SI) at the University of Stuttgart, worked on an integrated design project about urban transformation processes in Heslach, a district in the south of Stuttgart. The building complex at Böblinger Straße 68, the location of the Statistical State Office since 1974, and the complex currently used by the University of Stuttgart at Böblinger Straße 70-78, were used a case study. These two complexes are now commonly referred to as the ”Schoettle-Areal”.

With the objective of developing strategies and solutions using co-creative design methods, the project asked: How can a new Schoettle-Areal drive the transformation towards a socially just, culturally diverse, and productive, yet ecologically responsible, Stuttgart-Süd?

To integrate the needs and demands of the neighbours and local actors, the project relied on local initiatives and partners like the Initiative “Solidarische Nachbarschaft – Schoettle-Areal” that opened communication channels for the project, allowing staff and students to have insightful exchanges that helped bridge the current local needs with the long-term development objectives of a sustainable city.

The IUSD programme thanks all the organizations, institutions, local partners, and neighbours that contributed their ideas, time, resources, and knowledge. We hope the visions and strategies developed in this studio can help you lead a resilient urban transformation.

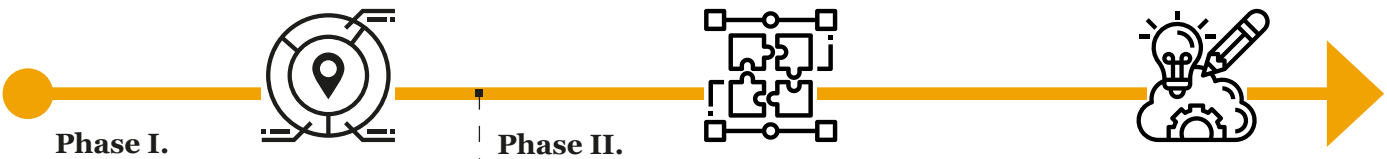
Im Sommersemester 2022 bearbeitete der M.Sc. Studiengang Integrated Urbanism & Sustainable Design (IUSD), gemeinsam durchgeführt vom Institut für Landschaftsplanung und Ökologie (ILPÖ) und dem Lehrstuhl Internationaler Städtebau am Städtebau-Institut (SI) der Universität Stuttgart ein integriertes Entwurfsprojekt über urbane Transformationsprozesse in Heslach, ein Stadtteil in Stuttgart-Süd. Der Gebäudekomplex Böblinger Straße 68, seit 1974 Sitz des Statistischen Landesamtes, und der derzeit von der Universität Stuttgart genutzte Komplex in der Böblinger Straße 70-78, wurden als Fallstudie verwendet. Diese beiden Gebäudekomplexe werden heute gemeinsam als „Schoettle-Areal“ bezeichnet.

Mit dem Ziel, Strategien und Lösungen durch co-kreative Gestaltungsmethoden zu entwickeln, stellte das Projekt die Frage: Wie kann ein neues Schoettle-Areal die Transformation hin zu einem sozial gerechten, kulturell vielfältigen und produktiven, aber ökologisch verantwortungsvollen Stuttgart-Süd vorantreiben?

Um die Bedürfnisse und Forderungen der Nachbar*innen und lokalen Akteur*innen zu integrieren, stützte sich das Projekt auf lokale Initiativen und Partner*innen wie die Initiative „Solidarische Nachbarschaft – Schoettle-Areal“. So gelang es, die Kommunikationskanäle für das Projekt zu öffnen, und Mitarbeiter*innen und Studierende einen aufschlussreichen Austausch ermöglichte die dazu beigetragen haben, die aktuellen lokalen Bedürfnisse mit den langfristigen Entwicklungszielen einer nachhaltigen Stadt zu verbinden.

Das IUSD Programm dankt allen Organisationen, Institutionen, lokalen Partner*innen und Nachbar*innen, die ihre Ideen, Zeit, Ressourcen und ihr Wissen beigesteuert haben. Wir hoffen, dass die in diesem Studio entwickelten Visionen und Strategien ihnen helfen können, eine nachhaltige urbane Transformation zu leiten.

# Table of Contents



**Phase I.**
**Site Analysis**
**Standort Analyse**

- Blue and green infrastructure
  Blaue und grüne Infrastruktur
- Housing and built environment
  Wohnen und gebaute Umwelt
- Social, cultural, and economic infrastructure
  Soziale, kulturelle und ökonomische Infrastruktur

**Phase II.**
**Strategic Planning**
**Strategische Planung**

- Creating a socially just vision together
  Entwicklung einer gemeinsamen sozialgerechten Vision
- Strategic development of individual topics
  Strategische Entwicklung einzelner Themenbereiche

**Spatial Interactions**
**Räumliche Interaktionen**

- Co-design and production of pop-up installations
  Co-Design und Umsetzung von Pop-Up Installationen

# Introduction

The project “Urban Transformation: Schoettle-Areal” addresses two major challenges of urban development. First, the integration of green and blue spaces in cityscapes to foster climate-resilient cities and societies. Second, the need for flexible and affordable housing models due to increasing urbanization.

The pressure to act requires innovative and integrated approaches that comprise cultural, social, and economic perspectives that also consider potential conflicts, thereby facilitating tangible short- and long-term urban transformation for citizens and the city administration. With its 15,000 square meter footprint, the Schoettle-Areal in Stuttgart-Süd offers an ideal opportunity to accommodate solutions for different needs, actors, and timeframes.

According to the latest public statements, the Schoettle-Areal is planned to become vacant in phases, adding another layer of complexity to the planning: the statistical office plans to move out at the end of 2023 while the university estimates 2035 as a likely target for relocation of their laboratory and offices.

The design studio first focused on analysing the local context under ecological, cultural, economic, social, and planning lenses (Phase I). The acquired knowledge was then used to extract five topics of concern for the locals, for which transformation processes were designed that tackled these issues while also addressing the challenges of sustainable urban development (Phase II).

This documentation summarizes the studio’s work in its original version (English) and supplements it with individual introductions and summaries in German and English.

Das Projekt „Urban Transformation: Schoettle-Areal“ adressiert zwei große Herausforderungen der Stadtentwicklung: Erstens, die Integration von grünen und blauen Strukturen in urbanen Landschaften, um klimaresiliente Städte und Gesellschaften zu fördern, zweitens, den Bedarf an flexiblen und bezahlbaren Wohnmodellen aufgrund der zunehmenden Urbanisierung zu diskutieren.

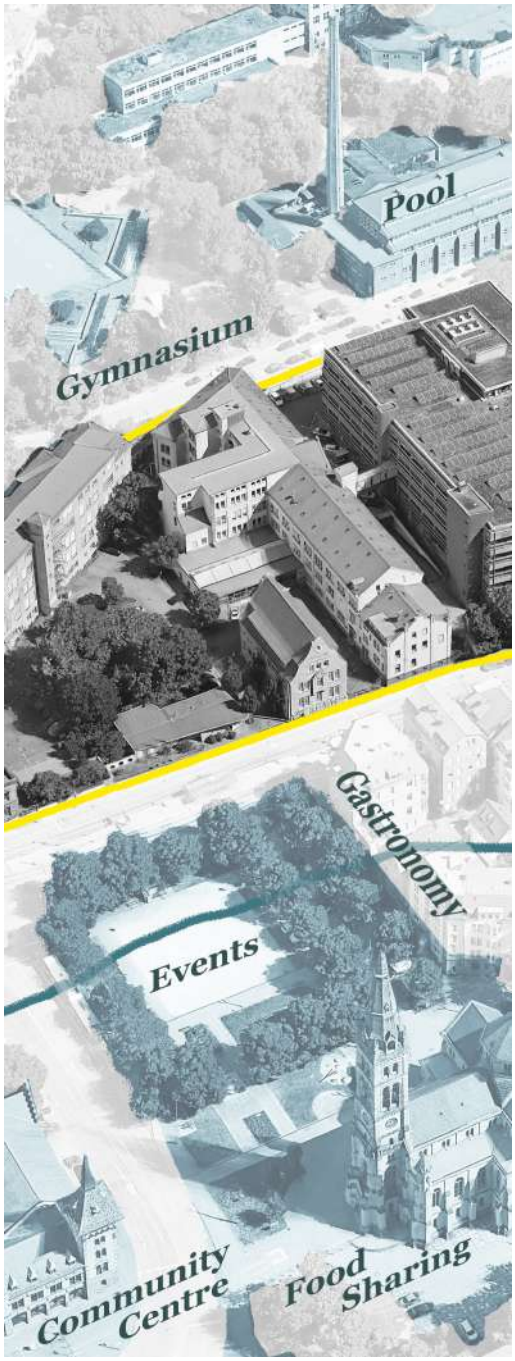
Der Handlungsdruck erfordert innovative und integrierte Ansätze, die kulturelle, gesellschaftliche und ökonomische Perspektiven umfassen, und gleichzeitig Konfliktpotenziale zu berücksichtigen, um so kurz- und langfristige urbane Transformation für Bürger*innen und Stadtverwaltung zu ermöglichen. Das Schoettle-Areal in Stuttgart-Süd bietet mit seinen 15.000 Quadratmetern eine ideale Möglichkeit, Lösungen für unterschiedliche Bedürfnisse, Akteur*innen und Zeiträume hervorzubringen.

Das Schoettle-Areal soll nach jüngsten öffentlichen Bekanntmachungen phasenweise frei werden, was die Planung noch komplexer macht: das Statistische Landesamt plant den Auszug Ende 2023, die Universität rechnet mit einer Verlegung der Labor- und Büroräume im Jahr 2035.

Das Entwurfsstudio konzentrierte sich zunächst auf die Analyse des lokalen Kontexts unter ökologischen, kulturellen, ökonomischen, sozialen und planerischen Gesichtspunkten (Phase I). Aus den gewonnenen Erkenntnissen wurden anschließend fünf Themenfelder herausgearbeitet, die die Menschen vor Ort bewegen, und für die Transformationsprozesse konzipiert wurden, die diese Themen angehen und gleichzeitig die Herausforderungen einer nachhaltigen Stadtentwicklung adressieren (Phase II).

Diese Dokumentation fasst die Arbeiten des Studios in ihren Originalversionen zusammen (englisch) und ergänzt sie mit einzelnen Einleitungen und Zusammenfassungen auf deutsch und englisch.


Green Accessibility
Green Corridors
Air Quality
Greenroofs
Nesenbach
Biodiversity
Urban Cooling


Pool
Gymnasium
Gastronomy
Events
Community Centre
Food Sharing


Mixed-Use
Accessibility
Affordable Housing
Housing Availability
Inclusion
Social Engagement

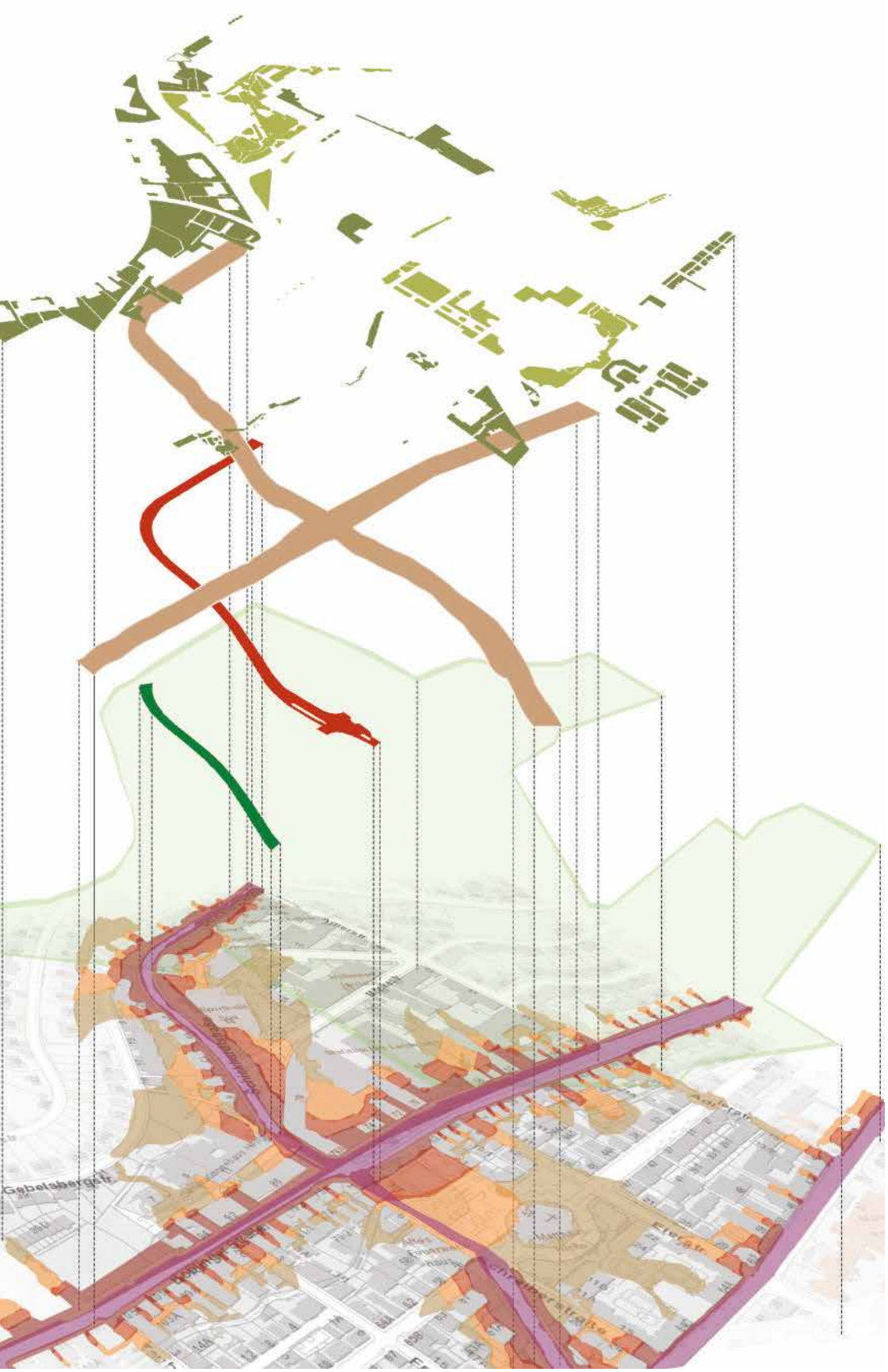
# Phase I. Site Analysis

The first phase focused on understanding the surroundings of the Schoettle-Areal and the neighbourhood of Heslach. Heslach's social and cultural relevance for Stuttgart-Süd was examined, as well as how its location between the Hasenberg and the Nesenbachtal influences the built environment, and how water and vegetation (green and blue infrastructure) are integrated in the daily life of the community.

To analyse these aspects together with the local community and to integrate their knowledge with the findings of the design studio, various methods and tools for spatial, social, and governance research were implemented. This chapter documents these results.

In der ersten Phase ging es um das Verstehen der Umgebung des Schoettle-Areals und des Stadtteils Heslach. Untersucht wurde die soziale und kulturelle Relevanz Heslachs für Stuttgart-Süd, und wie deren Lage zwischen dem Hasenberg und dem Nesenbachtal die bauliche Umwelt beeinflusst, und wie Wasser und Vegetation (grüne und blaue Infrastruktur) Bestandteil im Leben der Nachbarschaft ist.

Um diese Aspekte zusammen mit der lokalen Gemeinschaft zu analysieren und ihr Wissen in den Erkenntnissen des Entwurfsstudios zu integrieren, wurden verschiedene Methoden und Werkzeuge der räumlichen, sozialen und administrativen Forschung angewendet. Dieses Kapitel dokumentiert diese Ergebnisse.



Green spaces

Private green
Public green

Traffic emissions

Very high traffic load

Particulate matter

Particulate matter ≥22

Nitrogen dioxide

≥36 µm/m3
≥32 µm/m3

The european limit value for the concentration is 40 µm/m3

Noise levels dB(A)

≥50-55
≥55-60
≥60-65
≥65-70
≥70-75

Fig. 1 - Meso-scale:
Traffic, Pollution and Noise Map
based on Landeshauptstadt Stuttgart 2017

# Blue and Green Infrastructure

A. Shrivastava, G.A. Rivera Echavarría, M.J. Palacio Ramirez,
V. Krimmer, A. Altom Babiker Mohammed, V. Kumar and D. Loli Teza

Urban blue and green infrastructure (BGI) refers to the renaturation, integration, and implementation of waterbodies and vegetation in urban areas. Urban BGI is recognized as a method to help mitigate the effects of climate change and the urban heat island (UHI) effect, as well as support personal well-being.

While settlement density has increased in recent decades, the number of waterbodies in Stuttgart Süd has decreased by 2.7% in the last 10 years. Currently, only 0.2% of the district footprint are waterbodies. The area of open space per inhabitant has also decreased by 5.2% (Landeshauptstadt Stuttgart 2020).

This analysis focuses on the mapping of waterbodies and vegetation as well as their perception by local users in the vicinity of the Schoettle-Areal.

Urbane blaue und grüne Infrastruktur (BGI) bezieht sich auf die Renaturierung, Integration und Implementierung von Gewässern und Vegetation im urbanen Raum. Urban BGI ist eine Methode, um die Auswirkungen des Klimawandels und des urbane Wärmeinseleffekts (UHI) abzumildern und das Wohlbefinden der Menschen zu fördern.

Während die Siedlungsdichte in den letzten Jahrzehnten zugenommen hat, ist die Anzahl der Gewässer in Stuttgart-Süd in den letzten 10 Jahren um 2,7 % zurückgegangen. Derzeit beträgt die Gewässerfläche nur noch 0,2 % des gesamten Stadtteils. Auch die Freifläche pro Einwohner*in hat sich um 5,2 % reduziert (Landeshauptstadt Stuttgart 2020).

Im Mittelpunkt der Analyse steht die Kartierung von Gewässern und Vegetation sowie deren Wahrnehmung durch lokale Nutzer*innen im Umfeld des Schoettle-Areals.

# Historical Development

Up until 1895 the majority of development in Stuttgart Süd was concentrated in the valley area, the Nesenbachtal-- the current location of Böblinger- and Möhringer Straße. The south slope of the Hasenberg was used mostly for viticulture purposes, which was the main source of income for the Heslachers until the turn of the century.

By 1950, housing development in the Hasenberg hills saw a visible increase of houses and new streets, increasing the privatization of green spaces and street trees as private gardens. Furthermore, the Nesenbach, a Neckar-tributary, was covered and converted into a storm drainage (Fig. 2). Fortunately, endangered stone crayfish were able to survive at the inlets.

In 1997, the city council passed the climate protection plan, 'City nestled between forest and vineyard' in order to preserve its green infrastructure on hills, slopes, and in the valley. Key green and blue infrastructure around the Schoettle-Areal include urban parks like Hasenberg and Karlshöhe, public squares like Erwin-Schoettle-Platz, Bihlplatz, and Marienplatz, the Heslacher-, Dornhalden- and Fangelsbachfriedhof, and several playgrounds along the remains of the Nesenbach.

The topography clearly defines the nature of green cover: The slopes north of the Schoettle Areal have a greater green cover and an occasional forested area, whereas the majority of surfaces in the lower valley areas are sealed, and green areas are smaller and dispersed.

Fig. 2 - Heslach in 1895 (top) and 1950 (bottom).
Stadtarchiv Stuttgart

# Mapping Blue and Green Infrastructure in Heslach

The size, typology, and interconnection of green elements, as well as their relation to the surrounding built environment impact the environmental quality of urban spaces. Interconnected green infrastructure typologies have a higher potential of mitigating climate-related stressors like the urban heat island effect (UHI) and water management challenges, for example by facilitating cool air corridors and supporting increased water percolation (Sponge city principle).

Twelve types of blue-green infrastructure were identified in reference to the "UNaLab Nature-based Solutions Technical Handbook Factsheets" (Eisenberg et al. 2022). Elements within these typologies such as noise barriers, seating, and playgrounds also serve to enhance the social quality in the area (Fig. 3).

A correlation between higher levels of pollution (noise, air quality, and traffic) and areas with a high percentage of sealed surfaces became clear. This observation was later confirmed by the input of users, who expressed a desire for more usable green spaces in the valley areas and around the Schoettle-Areal.

The green and blue elements scattered through the built environment affect the accessibility of these spaces for local animals (Fig. 4). In a neighbourhood like Heslach, the fragmented green spaces remain accessible for longer-range flying animals, while ground-based and short-range fauna are limited to exist in small niches due to the human-made barriers.

- *The most common typologies are private gardens of different sizes and single-line street trees with a small vegetation bed.*
- *Slopes have a higher density of these typologies as compared to the valley areas.*
- *Some streets do not have any green infrastructure typology. The predominance of sealed surfaces reduces the quality of stay in the area and discourages social interactions.*
- *While most of the typologies are located in public areas, the typology of private gardens, which is the most common typology and contains the highest number of trees, remains inaccessible to the general public.*
- *Two water fountains were identified as the only elements of blue infrastructure in the area, though they were not in operation at the time of observation.*

Fig. 3 - Green and blue infrastructure typologies.
Authors' work

- Green corridor
- Green roof (intensive/extensive)
- Permeable vegetation bed
- Vertical greening
- Noise barrier
- Slope protection
- Boulevard
- Group of trees
- Private garden
- Single-line trees with vegetation
- Single-line trees without vegetation
- Single street trees

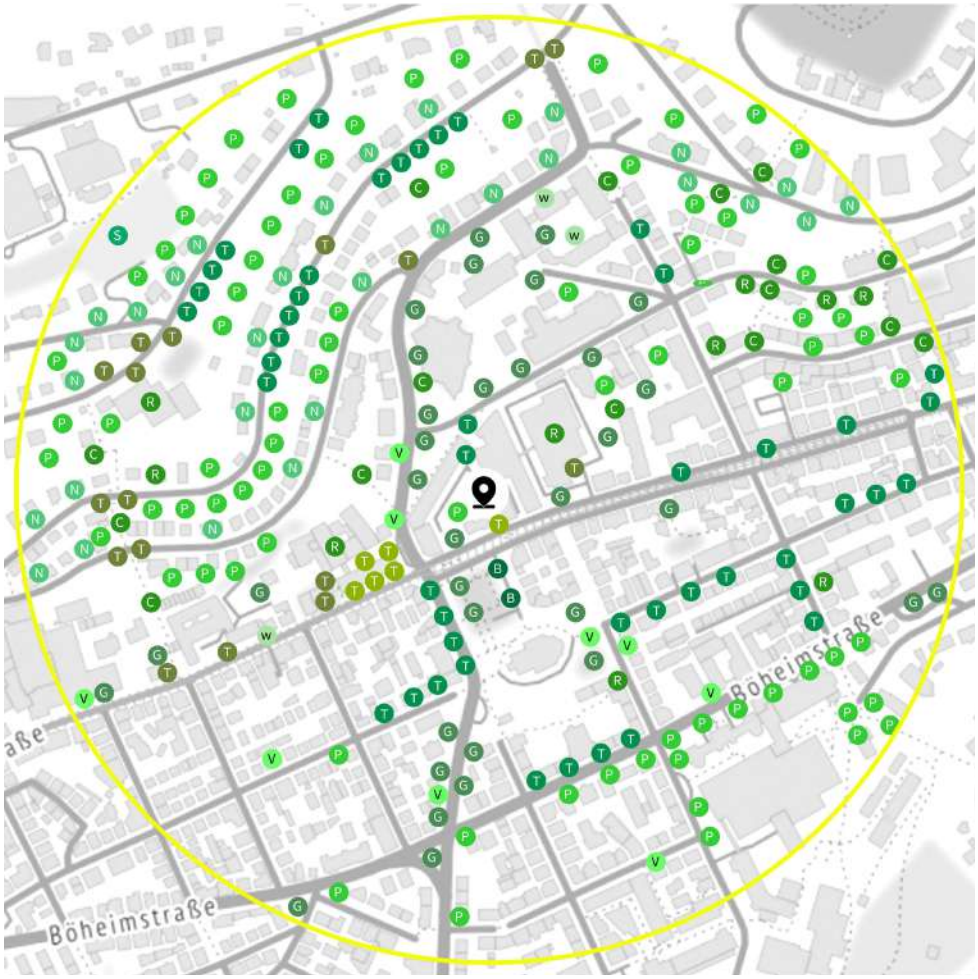
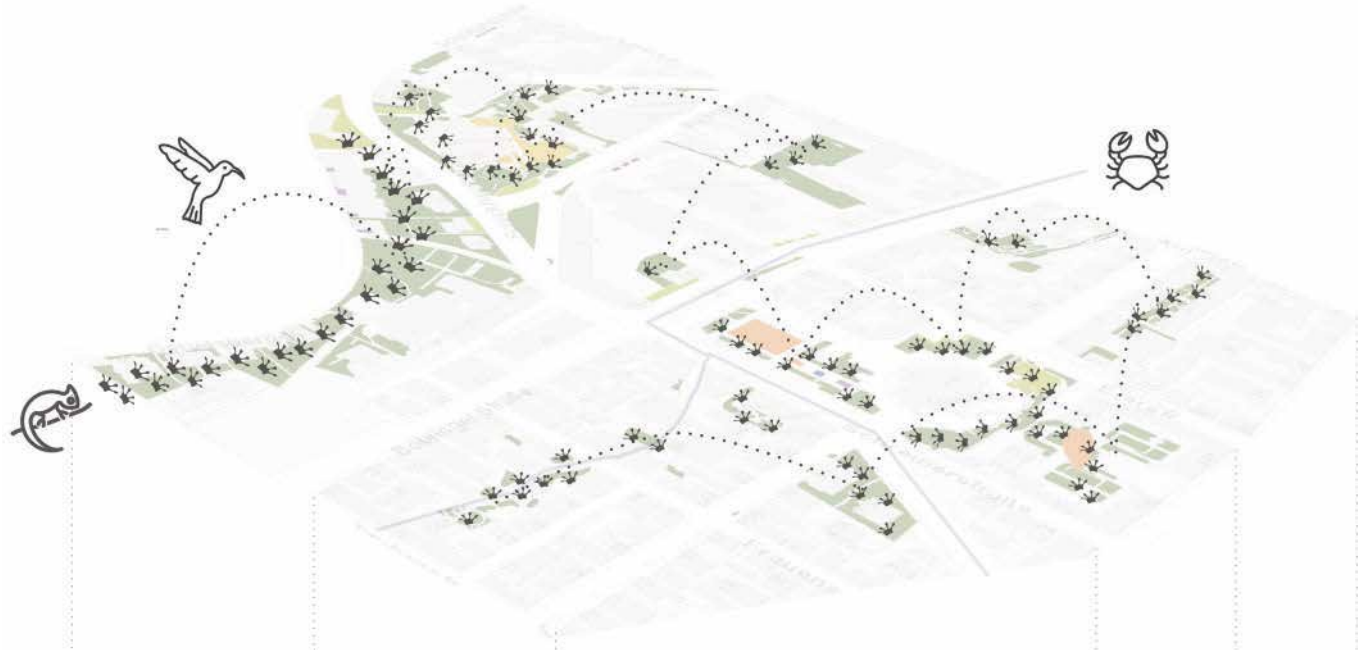



Fig. 4 - Mesoelements of blue green infrastructure and fauna accessibility.
Authors' work



# Blue and Green Infrastructure in the Schoettle-Areal

The Schoettle Areal is located at the junction of two busy streets that create a physical barrier between the nearby blocks on the south-west with the Areal: The Schickard-/Schreiberstraße with heavy car traffic and the Böblingerstraße with an U-Bahn station running several lines every couple of minutes. To the north-east the connecting streets Mörike- and Adlerstraße are quieter, serving mostly local traffic.

The Schoettle-Areal itself has a number of green typologies including: single-line trees, vegetation beds, and groups of trees (arboretums) in the parking area behind the university building in the Mörikestraße in close proximity to several group of trees near the Schickhardt-Sporthalle (Fig. 5). The buildings inside the areal physically divide the space, making it harder for fauna to move between the different areas of the complex.

An inventory of the flora on site showed approximately 30 species, some are widespread in Heslach, such as the Norway maple tree (Ahorn) and English ivy (Efeu), and other less common species like the Horse chestnut (Rosskastanien) and Common snowberry (Schneebeeren).

Green cover makes up only 7% of the areal with a predominance of sealed surfaces. An “i- Tree Canopy” analysis to the street block (Fig. 6) shows this disparity between built elements (impervious roads and buildings) and the green elements (grass, trees, and shrubs).

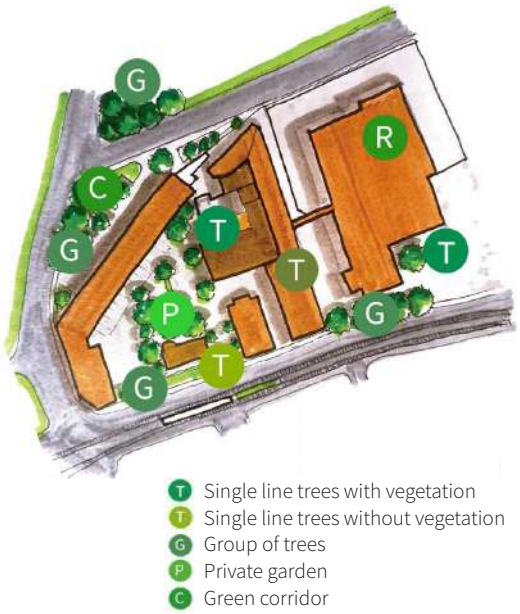



Fig. 5 - Green infrastructure in the Schoettle-Areal.
Authors’ work

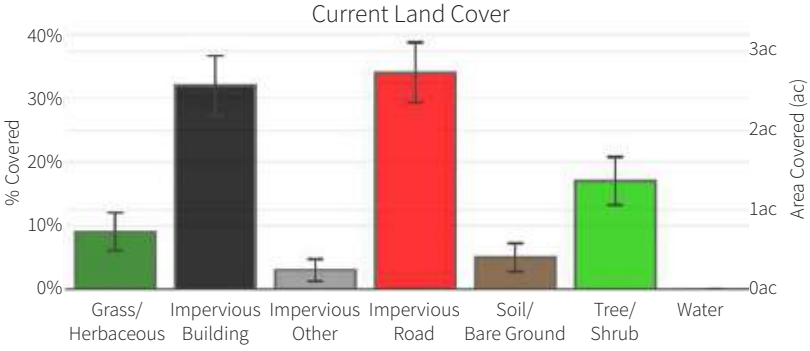
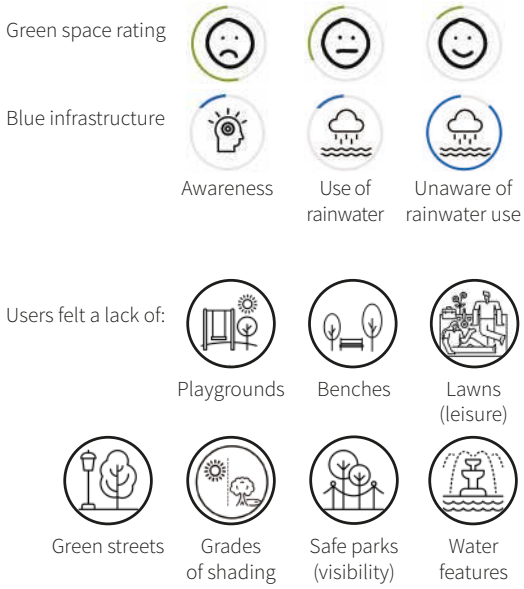



Fig. 6 - i-Tree canopy analysis of the current state of the Schoettle-Areal.
Authors’ work




# Users' Perspectives

Surveys and interviews with residents, visitors, and employees in the area helped understand their perception of green and blue elements, their environmental needs, and where they see areas for improvement: Only 10% of the interviewees rated the quantity of green spaces in the close surroundings as good. A common consensus was the need for more green spaces for socializing, driven more by personal needs and immediate improvement in quality of life than any concrete ecological background.

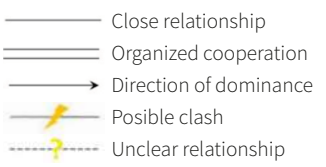
Furthermore, it was evident that the interviewees feel somewhat disconnected from the scattered greenery in the immediate area. Even though both Hasenberg to the north and Weinsteige to the south are far away for an everyday visit and difficult to access for people with reduced mobility, the interviewees felt visually connected to the forested slopes. Despite the common desire for more communal green spaces, a few users fear the loss of parking space and prioritize the individual need for more parking slots, seeing the status-quo as a necessary compromise.

# Stakeholder Analysis

The owner of both plots comprising the Schoettle-Areal is the State of Baden-Württemberg, making it a key decision maker holding political and administrative power. The district (Bezirksbeirat) and city (Gemeinderat) political levels are interested in the future development of the area also making them relevant supporters or delayers. The latest official statements (July 2022) presume an interest from the City of Stuttgart to acquire the plot of the Statistical Office from the State.

On an administrative level, the Office for Housing and Planning – planning division Süd (Amt für Stadplanung und Wohnen – 'Planungsbezirke Süd) holds the responsibility to plan new green areas. They are therefore a relevant partner for implementation. Regarding maintenance, the responsible parties are the Garden, Cemetery and Forestry Office (Garten-Friedhofs- und Forstamt) at the city level, and the Wilhelma Zoo at the state level.

The presence of some non-governmental initiatives at the neighbourhood level like the 'Naturfreunde Heslach' imply an interest in the community about public green spaces. Still, more public attention needs to be drawn towards the value of BGI and a greener neighbourhood. The momentum generated by the initiative 'Solidarische Nachbarschaft Schoettle-Areal' towards housing, can potentially introduce green initiatives driven by the community to improve the green qualities of the area.



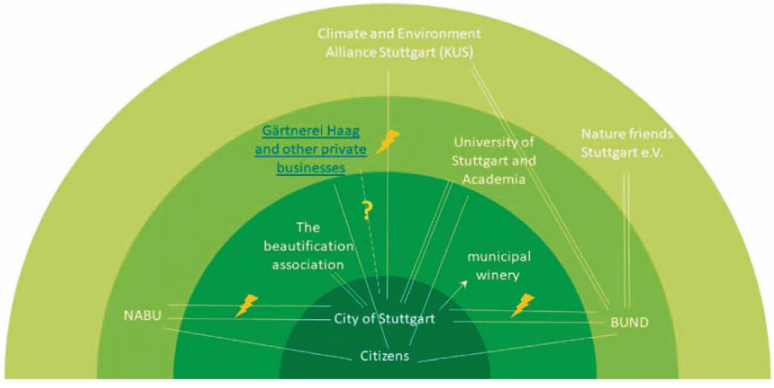




Fig. 7 - Analysis of relevant stakeholders and their relationship to one another.
Authors' work

# Conclusion and Prospects

The green and blue spaces in and around the Schoettle-Areal are scarce and are likely to decline even further. While the proximity to the green slopes of Hasenberg and Degerloch contribute to a visual connection with greenery, the analysis shows a scattered and minimal green footprint in the close surroundings. We found the need to increase the amount of green elements and improve their connectivity to improve the resilience of Heslach.

The hilly topography represents a great asset for the macro-climate of Stuttgart, creating cool-air corridors and supporting flora and fauna. However, at a local scale the topography acts as a social divider, inhibiting the accessibility of these natural areas that are primarily available to a minority people living on the slopes of the Hasenberg ("Halbhöhenlage"). This leaves the majority of the neighbourhood to deal with the impacts of the urban heat island (UHI) effect (Fig. 8), which is exacerbated by the large proportion of sealed areas and the lack of vegetation in the Nesenbachtal – today the Böblinger- and the Möhringer Straße.

The Schoettle-Areal is not significantly greener than its immediate surroundings. However, its proximity to other green areas and its size make it a relevant starting point for the development of a connected green infrastructure network. The stakeholder analysis helped reveal the various actors that should be included in the expansion of this green network, with a special focus on local voices.

Die grünen und blauen Infrastrukturen im und um das Schoettle-Areal sind knapp, und werden voraussichtlich noch weiter zurückgehen. Und obwohl die Nähe zu den grünen Hanglagen von Hasenberg und Degerloch zu einer visuellen Verbindung mit Grün beiträgt, zeigt die Analyse nur eine verstreute und minimale grüne Umgebung. Wir haben deshalb die Notwendigkeit, die Menge an grünen Elementen zu erhöhen und ihre Konnektivität zu verbessern, um die Widerstandsfähigkeit von Heslach zu verbessern, im Entwurfsstudio definiert.

Die hügelige Topografie stellt eine große Bereicherung für das Stuttgarter Stadtklima dar; es schafft Kaltluftkorridore und unterstützt Flora und Fauna. Auf lokaler Ebene wirkt die Topografie jedoch als soziale Trennlinie und behindert die Zugänglichkeit dieser Naturräume, die hauptsächlich einer an den Hängen des Hasenbergs lebenden Minderheit zur direkten Verfügung stehen („Halbhöhenlage"). Damit wird der Großteil des Quartiers mit den Auswirkungen des urbanen Wärmeinseleffekts (UHI) konfrontiert, der durch den hohen Anteil an versiegelten Flächen und die fehlende Vegetation im Nesenbachtal – der heutigen Böblinger- und Möhringer Straße – noch verstärkt wird.

Das Schoettle-Areal ist nicht wesentlich grüner als seine unmittelbare Umgebung. Seine Nähe zu anderen Grünflächen und seine Größe machen es jedoch zu einem relevanten Ausgangspunkt für die Entwicklung eines zusammenhängender grüner Infrastrukturen Netzwerks. Die Stakeholder-Analyse trug dazu bei, die verschiedenen Akteur*innen aufzuzeigen, die in den Ausbau dieses grünen Netzwerks einbezogen werden sollten. Ein besonderer Fokus wurde auf lokale Beteiligte gelegt.

## References

Bundesministerium für Verkehr und digitale Infrastruktur (2011): Masterplan zur Gestaltung nachhaltiger und emissionsfreier Mobilität. Green City Plan. Landeshauptstadt Stuttgart.

Landeshauptstadt Stuttgart (2020): Datenkompass Stadtbezirke Stuttgart - Ausgabe 2019/2020. Landeshauptstadt Stuttgart.

Dreiseitl, H.; Wanschura, B. (2016): Strengthening Blue-Green Infrastructure in Our Cities - Enhancing Blue-Green Infrastructure & Social Performance in High Density Urban Environments. Ramboll.

Eisenberg, B.; Chiesa, C.; Fischer, L.K.; Jakstis, K.; Polcher, V.; Schwarz-v. Raumer, H.G. (2022): Nature-based Solutions Technical Handbook Factsheets. UNaLab Urban Nature Labs. Institut für Landschaftsplanung und Ökologie, Universität Stuttgart. Stuttgart, 2022.

Weis, M.; Siedentop, S.; Minnich, L. (2011): Vulnerabilitätsbericht der Region Stuttgart. Verband Region Stuttgart, Institut für Raumordnung und Entwicklungsplanung Universität Stuttgart

Fig. 8 - Topographic section through the Schoettle-Areal illustrating the ecological contributions of blue and green infrastructure to environmental quality.
Authors' work

## *Negative Storytelling and Cold Zones*

## *Positive Storytelling and Hot Zones*

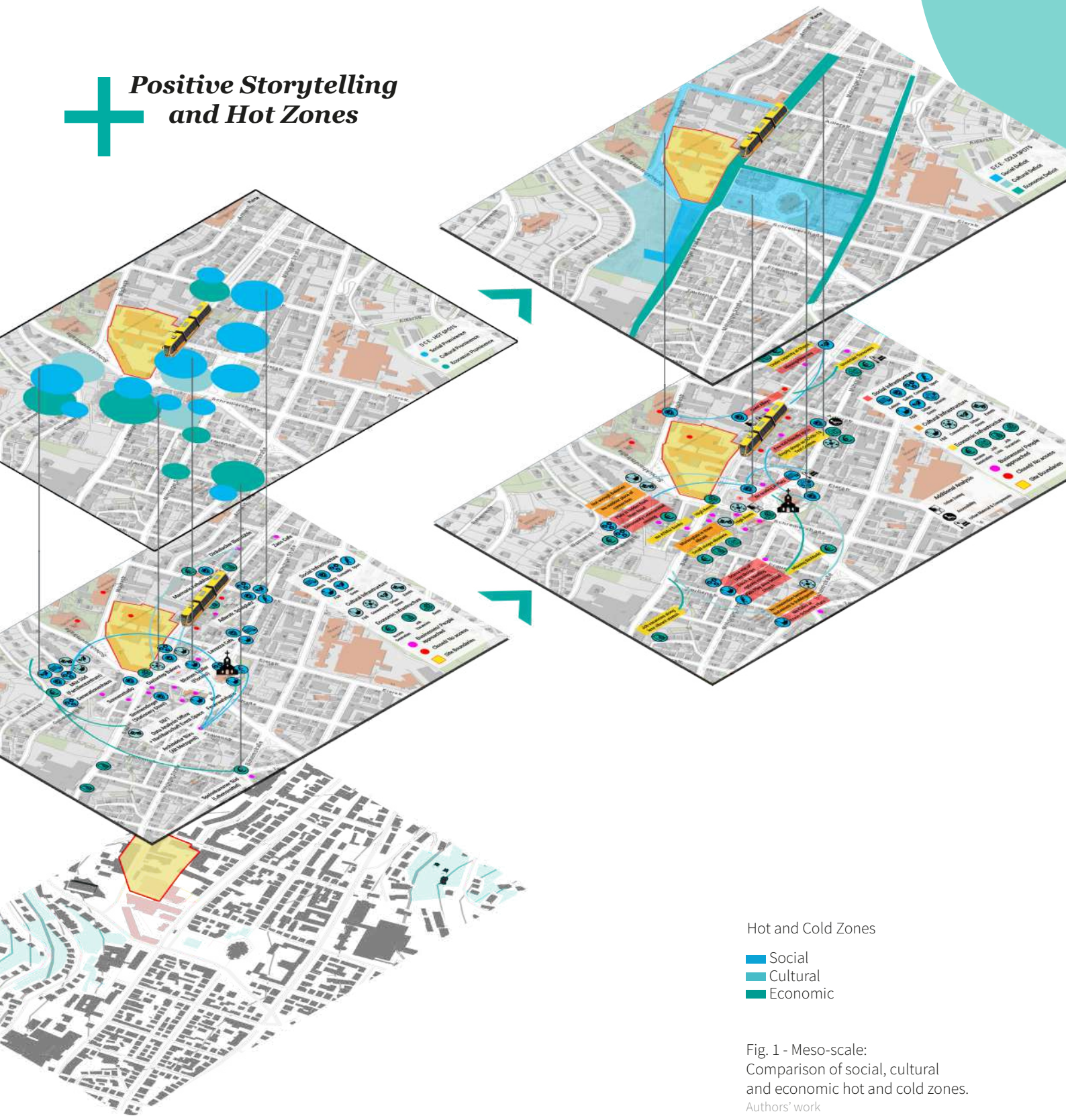



Fig. 1 - Meso-scale:
Comparison of social, cultural and economic hot and cold zones.
Authors' work

# Social, Cultural, and Economic Infrastructure

A.C. Camacho Gutierrez, A.-K. Schneider, S. Maharjan
Á. Algaba Díaz, S. Rao, Y. Al-Tubor

Infrastructure such as roads and railways, health and safety facilities, and water and electricity supply facilitates daily needs and is necessary for development. This subchapter examines the social, cultural, and economic foundations that contribute to just and resilient development.

Economic infrastructure (e.g., shops and businesses) promotes economic activities and provides various services. Social infrastructure provides healthcare, education, and space for interactions amongst neighbours in a safe environment. Cultural infrastructure contributes to a sense of belonging by reflecting the interests and needs of the neighbourhood. The resulting network of such infrastructures offers activities that have both direct and indirect effects on the quality of life.

In Heslach, an axis of four plazas are the main hubs of observation, namely: Marienplatz, Erwin-Schoettle-Platz, Bihlplatz, and Südheimer Platz.

Infrastruktur wie Straßen und Eisenbahnen, Gesundheits- und Sicherheitseinrichtungen sowie Strukturen der Wasser- und Stromversorgung erfüllen den täglichen Bedarf und sind für die Entwicklung notwendig. Dieses Unterkapitel widmet sich den sozialen, kulturellen und wirtschaftlichen Grundlagen, die zu einer gerechten und belastbaren Entwicklung beitragen.

Wirtschaftliche Infrastruktur (z. B. Geschäfte und Betriebe) fördert wirtschaftliche Aktivitäten und erbringt verschiedene Dienstleistungen. Die soziale Infrastruktur bietet Gesundheitsversorgung, Bildung und Raum für Interaktionen unter Nachbar*innen in einer sicheren Umgebung. Kulturelle Infrastruktur trägt zu einem Zugehörigkeitsgefühl bei, indem sie die Interessen und Bedürfnisse der Nachbarschaft widerspiegelt. Das daraus resultierende Netzwerk solcher Infrastrukturen bietet Aktivitäten, die sowohl direkte als auch indirekte Auswirkungen auf die Lebensqualität haben.

In Heslach bildet eine Achse aus vier Plätzen die wichtigsten Beobachtungspunkte für die Entwurfsumgebung: Marienplatz, Erwin-Schoettle-Platz, Bihlplatz und Südheimer Platz.

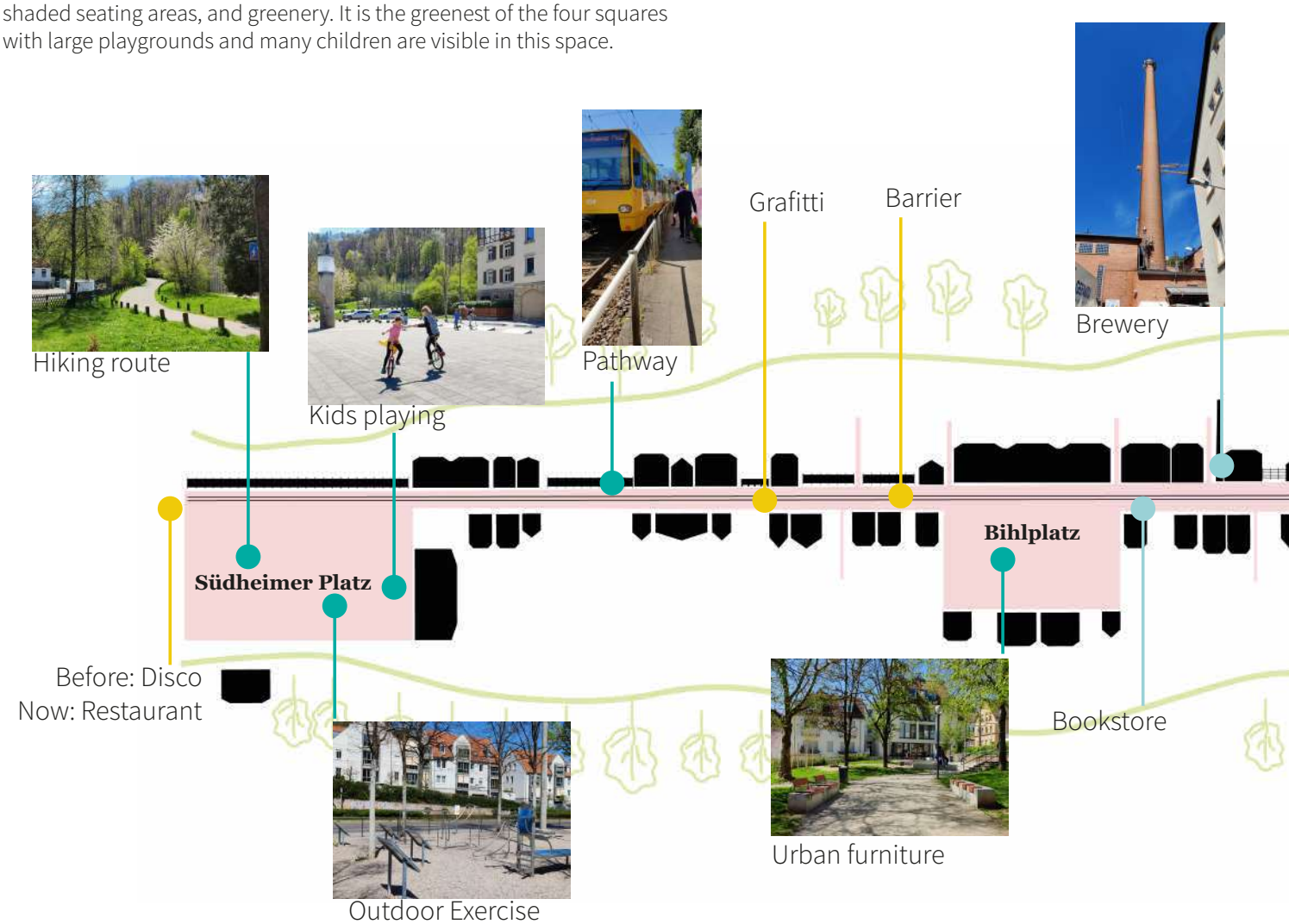
# The Four Plazas

Böblingerstraße is a flat axis that connects four public squares in Stuttgart-Süd. Marienplatz is located closest to the city centre, Erwin-Schoettle Platz, is directly adjacent to Schoettle-Areal, Bihlplatz mark the western border of Heslach, and Südheimer Platz is already in the middle of the next district Sudheim.

Marienplatz is a bustling space for meeting and leisure. Cafés, restaurants, playgrounds, supermarkets, and a city-rail line connecting the valley with the Weinsteige make it an attractive and well frequented meeting-point. Erwin-Schoettle-Platz is relatively calm and commonly used as a transit space. Mostly older people spend time in this area and only a few local shops contribute to its local atmosphere. A recent wave of communal activities like food-sharing events, boule games, and table-tennis is bringing younger people to the neighbourhood.

After Erwin-Schoettle-Platz the sidewalks of the Böblingerstraße become narrower and underused shops start appearing more often. Still, livelier places like smaller shops, bakeries, restaurants, the district library, and youth centre are dispersed along the sidewalk. Bihlplatz is a public square with a few restaurants and a small playground next to a small open space. Although activities are limited, it is a local meeting point. Südheimer Platz, crowns the axis with a livelier and spacious square with fitness equipment, shaded seating areas, and greenery. It is the greenest of the four squares with large playgrounds and many children are visible in this space.

Fig. 2 - Strollology in Stuttgart Süd, done on the 19th of April, 2022, at 9:00 AM and the 23rd of April, 2022, at 6:00 PM.
Authors' work



Aldi construction site

Restaurants

Cafe's with seating Outside

Zacke

People hanging out in Marienplatz

Eateries and supermarket

Food sharing

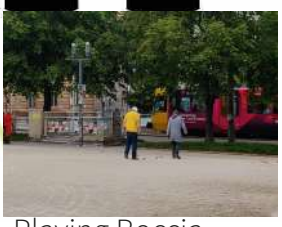
Schoettle Areal

**Erwin-Schoettle Platz**

Parked Cars

**Marienplatz**

Library



Playing Boccia

Playground

Outdoor seating of Cafés

# Social, Cultural, and Economic Networks

A mental map was created with the feedback from interviews and questionnaires that depicts hot spots for activities and important meeting points for the neighbours. The map shows the underlying fabric of social, cultural, and economic networks in the area including its obstacles.

Some inner-neighbourhood networks were identified including the Mütterzentrum (MüZe) family centre and the Mehrgenerationenhaus, which sources ingredients for its café from local stores thus supporting and attracting nearby neighbourhood residents. On the other hand, far-reaching networks attract people from outside of the neighbourhood like the Forró House and the Serbian church, which bring specific communities together from farther distances and draws attention to the multi-cultural exchanges taking place in Heslach.

A Social, Cultural and Economic (SCE) network in Heslach has formed under the name “NAdIiQ”, the -Nachbarschaftlicher Austausch der Institutionen im Quartier (Neighbourly Exchange of the Institutions in the Neighbourhood), which includes several social and cultural organizations such as the MüZe, the Generationenhaus, the youth centre (Jugendhaus Heslach), the community centre (Altes Feuerwehrhaus), and the local library (Stadtteilbibliothek-Heslach). NAdIiQ aims to recognize and condense the needs of the community and foster its development, responding in a coordinated fashion that includes regular meetings and exchanging information between different organizations and its own networks.

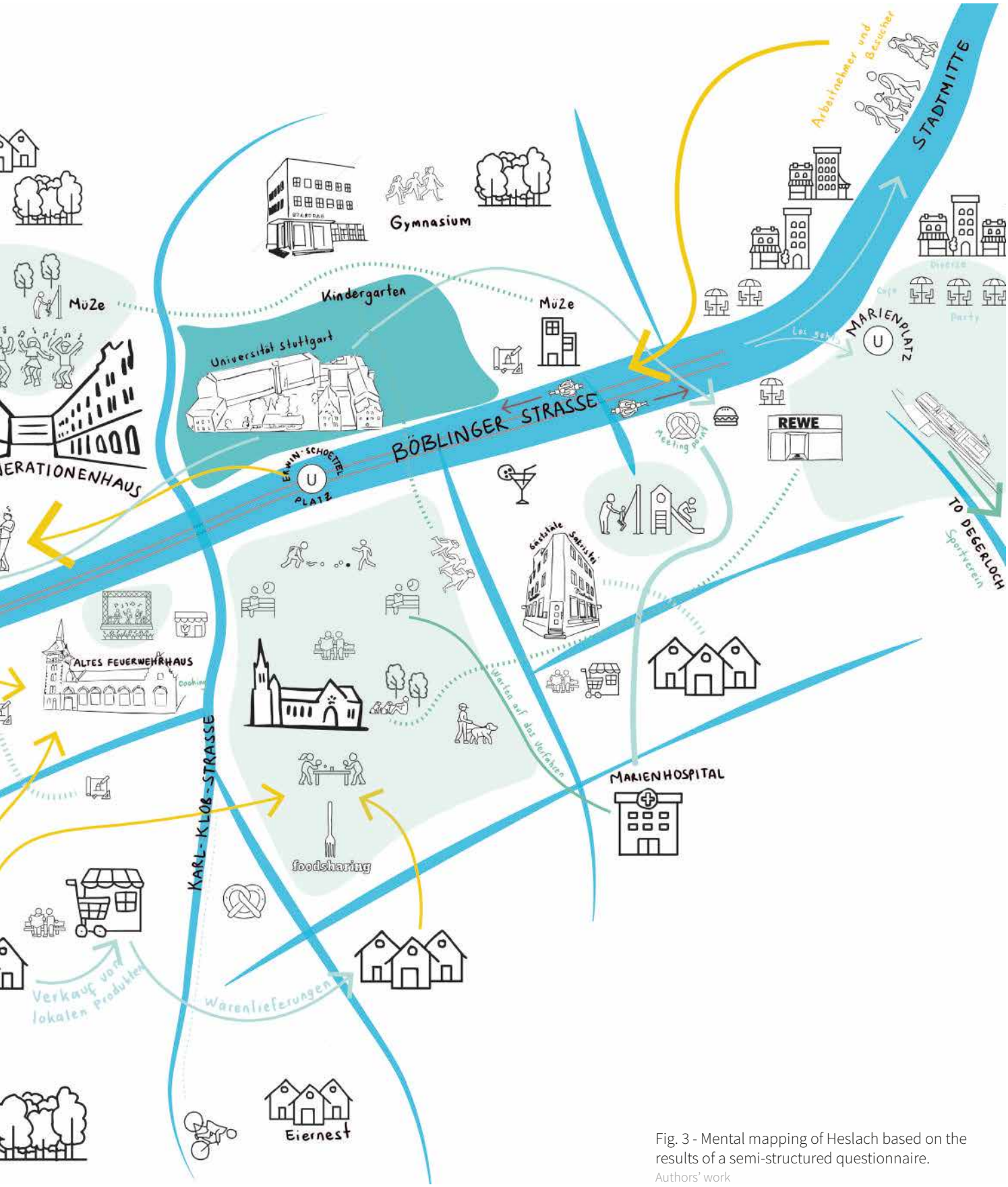



Fig. 3 - Mental mapping of Heslach based on the results of a semi-structured questionnaire.
Authors' work

# Evaluation of Spatial Usage

The topography of the area once again plays a crucial role. SCE activities are concentrated along the Böblinger- / Möhringer Straße-axis with few of the identified networks actively extending into the surrounding hills. Also the availability of recreational spaces in Heslach is severely limited (Fig. 4); compared to the city average of 21 $m^2$ per resident, Heslach only provides approximately 4 $m^2$ (Statistisches Amt Stuttgart 2020).

Thirdly, the SCE spaces of Heslach cater to a diverse group of users: Marienplatz is mostly frequented by young adults and working people mostly, Erwin-Schoettle Platz seems to be especially attractive to the elderly (Fig. 5), while children are the prominent users in Südheimerplatz. This is reflected in the cultural diversity represented along the Böblinger- / Möhringerstraße-Axis and impregnated in the SCE networks through meeting places: from cafeterias and restaurants for specific groups of people to the Stadtteilbibliothek as cultural hub in Heslach that hosts a wide range of events from small Verein's meetings to cultural and neighbourhood festivals.

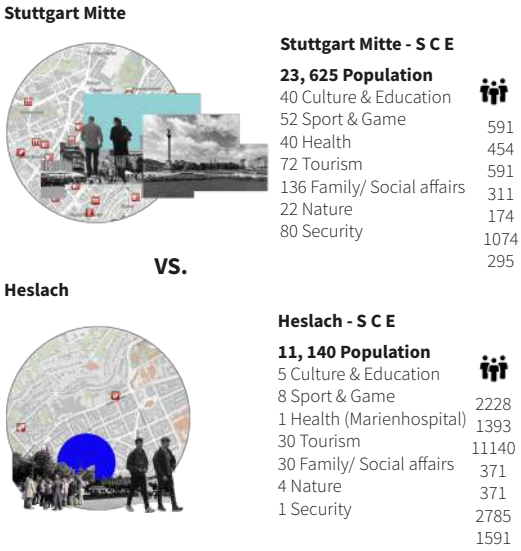



Fig. 4 - A comparison of SCE infrastructure of Heslach and Stadtmitte and its availability.
Authors' work

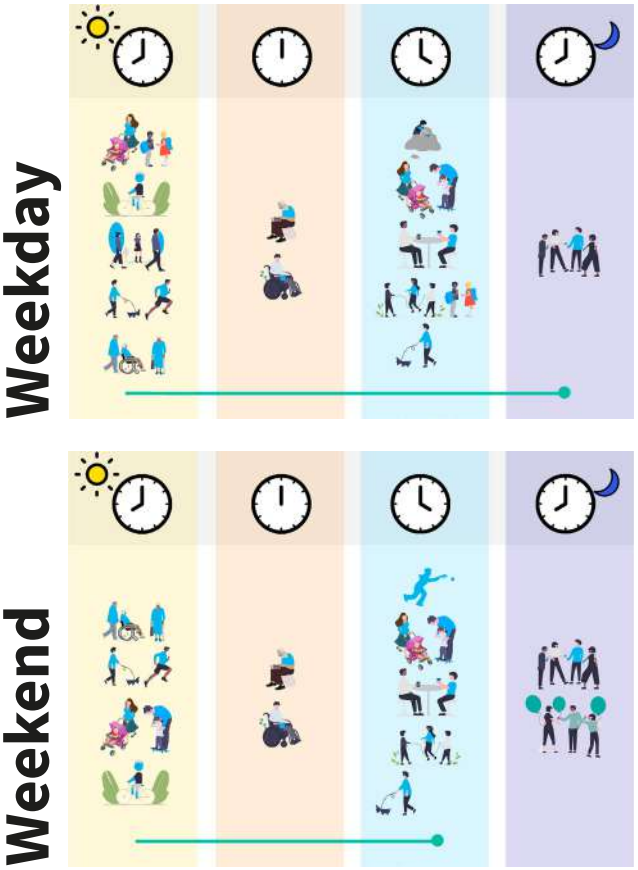
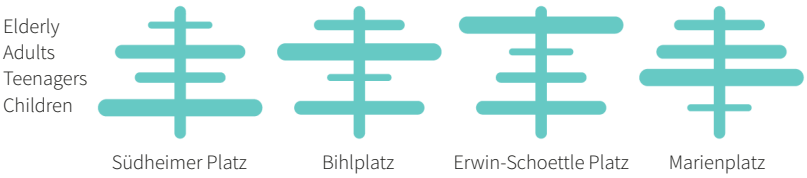



Fig. 5 - Spatial usage of the Erwin-Schoettle Platz by age group and its distribution throughout the day.
Authors' work




*Of the 29 responses to the questionaire, five expressed a positive experience regarding the safety and calmness of the neighborhood in terms of their general perceptions of the atmosphere, while two expressed a concern regarding secluded alleyways and a need for more child-friendly public spaces.*

*Themes of community generally relate to the perceived mix of user groups or the social organizations and their activities. Other prevalent themes revolve around the subjective needs regarding the local food and recreational services in the area. For instance, some concerns were raised about the disappearance of small privately-owned stores, either due to rising rents or uncertain turnovers, since many shops became COVID-19 test centers during the pandemic, resulting in empty store fronts and vacancies.*

# Conclusion and Prospects

As a result of the narrow valley created by the topography, the Böblinger- and Möhringer Straße act as the SCE-Axis for the neighbourhood. This axis physically connects the city centre with the outer neighbourhood of Südheim and Kaltental through a chain of squares that act as magnets, attracting different users with its specific offers. Although this axis helps connect different districts, it represents a difficult-to-cross physical barrier for Heslach residents, thereby reducing interaction between both sides of the neighbourhood.

Erwin-Schoettle-Platz, located across the street from the Schoettle-Areal, is the link for Heslach on the SCE-axis and therefore acts as a meeting point for the neighbourhood. Although its services make it a mobility node and a transit-dominated square, its nearby SCE offers, and open spaces make it a location for local social and cultural activities.

Nonetheless, the lack of public, open and above all consumerism-free spaces along the SCE-axis and around the Schoettle-Areal puts extra pressure on new developments. On the economic level, the few remaining businesses face pressure in the form of increasing rent prices, making them susceptible to displacement. An already multicultural Heslach needs stronger partnerships and support through programs of social and cultural organizations that can provide legitimacy to the wider community and encourage active, affordable and collaborative development.

Durch das topografisch bedingte, enge Tal bilden die Böblinger- und Möhringer Straße die SCE-Achse für das Quartier. Diese Achse verbindet räumlich die Innenstadt mit den äußeren Stadtteilen Südheim und Kaltental durch eine Kette von Plätzen, die wie Magnete wirken und mit ihren spezifischen Angeboten unterschiedliche Nutzer*innen anziehen. Obwohl diese Achse dazu beiträgt, verschiedene Stadtteile zu verbinden, stellt sie für die Einwohner*innen von Heslach eine schwer zu überwindende physische Barriere dar, wodurch die Interaktion zwischen beiden Talseiten des Stadtteils verringert wird.

Der Erwin-Schoettle-Platz, gegenüber dem Schoettle-Areal gelegen, ist das Bindeglied für Heslach auf der SCE-Achse und fungiert somit als Treffpunkt für die Nachbarschaft. Obwohl es mit seinen Dienstleistungen ein Mobilitätsknotenpunkt und ein vom Durchgangsverkehr dominierter Platz ist, ist es mit seinen nahe gelegenen SCE-Angeboten und Freiflächen ein Ort für lokale soziale und kulturelle Aktivitäten.

Der Mangel an öffentlichen, offenen und vor allem konsumfreien Räumen entlang der SCE-Achse und rund um das Schoettle-Areal erhöht jedoch den Druck auf neue Entwicklungen. Aus wirtschaftlicher Sicht stehen die wenigen verbliebenen Geschäfte vor steigenden Mietpreisen unter Druck, was sie anfällig für Verdrängung macht. Ein bereits multikulturelles Heslach braucht stärkere Partnerschaften und Unterstützung durch Programme sozialer und kultureller Organisationen, die der breiteren Gemeinschaft Legitimität verleihen und eine aktive, erschwingliche und kooperative Entwicklung fördern können.

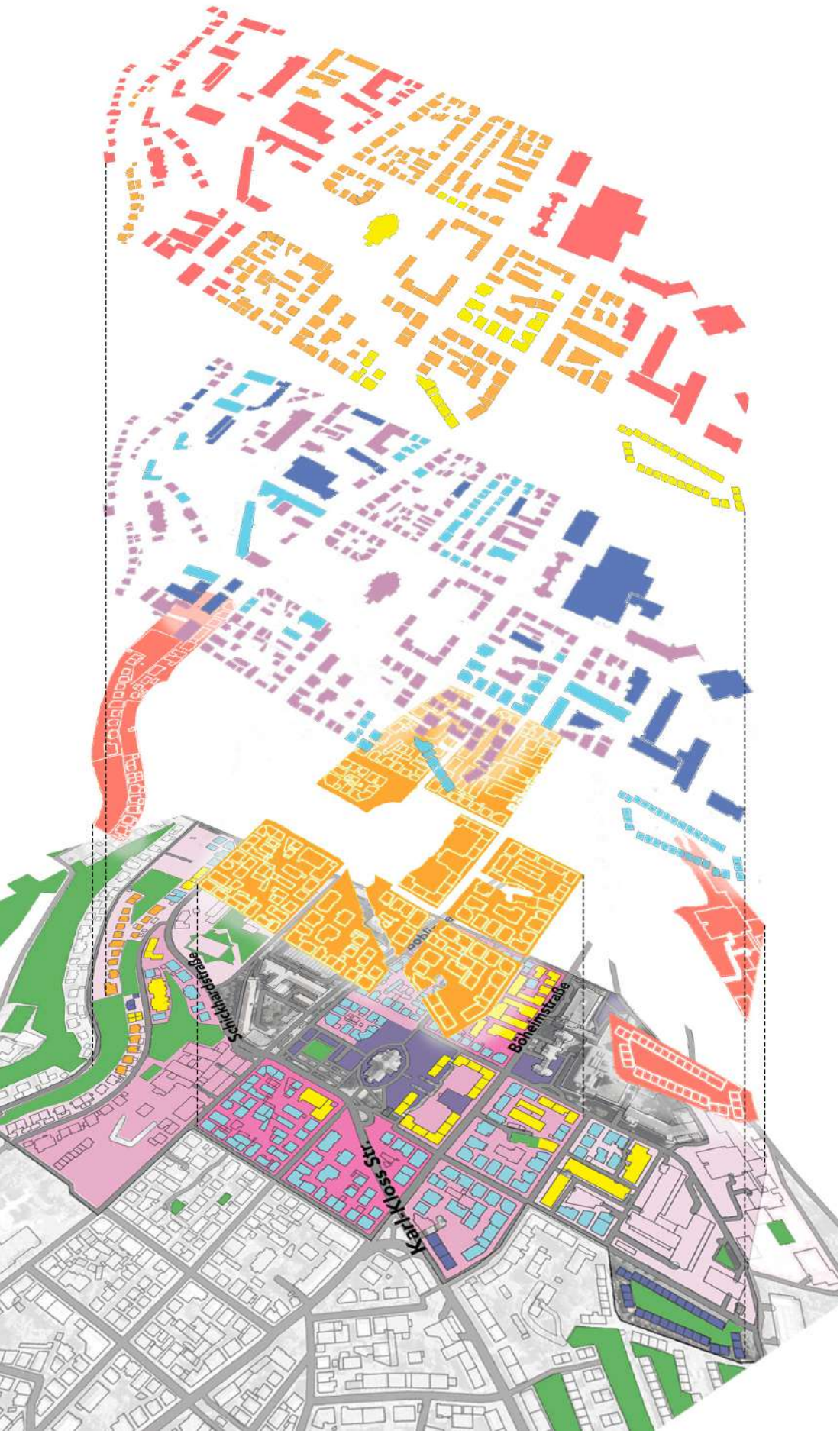
## References

Jaworek, K. (2004): History - Heslach. Accessed in April 2022, at: <https://stuttgart-sued.info/historie/heslach/>

Landeshauptstadt Stuttgart (2020): Datenkompass Stadtbezirke Stuttgart - Ausgabe 2019/2020. Landeshauptstadt Stuttgart.

Neth, S. (2018) Historical walk through Stuttgart-Heslach: The hiding place for the pregnant daughter. Accessed in April 2022, at: <https://www.stuttgarter-zeitung.de/inhalt.historischer-spaziergang-durch-stuttgart-heslach-das-versteck-fuer-die-schwangere-tochter.b273ba26-b760-45f5-ace7-2ef367932a2a.html>

Wente, B. (2022): Solidarische Nachbarschaft Schoettle-Areal. Accessed in April 2022, at <https://schoettleareal.de/>




Density Map
- 5+ storeys
- 3-4 storeys
- 1-2 storeys

Roof Typology Map
- Gable roof
- Flatroof
- Crosshipped roof

Property Ownership Map
- Rental properties
- Owned properties

Rental Prices Map
- +25 € per sqm.
- 19-25 € per sqm.
- 16-19 € per sqm.

Building Typology Map
- Detached single housing units
- Single multi-storey units
- Housing blocks
- Attached single housing units

Fig. 1 - Meso-scale:
Rental prices, property ownership, typology and density map.
Authors' work

# Housing and Built Environment

V. Ük, S. Rai, G. Machado Ferreira, V. Geiselbrechtinger,
M.P. Mejía Vanegas and L.A. Sánchez Muñoz

Adequate and affordable housing is one of the most important and basic human needs, and in cities it largely impacts social interactions.

Historically, Heslach is a working-class district with many workshops and industrial plants. As Stuttgart expanded in the last decades and its city centre became more attractive, a steady influx of people came into Heslach. This resulted in urban densification and an increase in prices for residential and commercial real estate. However, Heslach has experienced a population decline in recent years, according to official city statistics (Social Monitoring LHS, 2020).

These analyses include an examination of the residential density, rental prices, and the typologies of buildings in connection with their geographical location.

Angemessener und bezahlbarer Wohnraum ist eines der wichtigsten Grundbedürfnisse der Menschen und beeinflusst maßgeblich das soziale Miteinander in Städten.

Historisch gesehen ist Heslach ein Arbeiterviertel mit vielen Werkstätten und Industriebetrieben. Als Stuttgart in den letzten Jahrzehnten expandierte und die Innenstadt attraktiver wurde, kam ein stetiger Zuzug von Menschen nach Heslach. Dies führte zu einer Verdichtung der Stadt und einem Anstieg der Preise für Wohn- und Gewerbeimmobilien. Allerdings hat Heslach laut amtlichen Statistiken (Statistisches Amt Stuttgart 2020) in den letzten Jahren einen Bevölkerungsrückgang erlebt.

Die Analysen beinhalten eine Untersuchung der Wohndichte, der Mietpreise und der Gebäudetypologien in Verbindung mit ihrer geografischen Lage.

# General Built Environment Context

The topography of Stuttgart Süd is a defining factor for the built environment. The first settlements in the area were established in the valley and close to the Nesenbach. Industrial buildings were built here starting in the early 1800s, which led to an increase of worker's housing that eventually reached the degree of density and the predominantly closed block structure seen today. Due to the transition towards industrial production, much of the surrounding hills previously used for viticulture were gradually parcelled out and developed mainly from wealthier, private buyers.

The accessibility of the area is also heavily impacted by the topography: The flat areas of the valley are well connected due to the city railway network (Stadtbahn), with stations located along the nodes of public spaces such as the Marienplatz, Erwin-Schoettle Platz, Bihlplatz, and Südheimer Platz. This contributes to relatively high pedestrian traffic, despite car traffic remaining the dominant occupier of streetscapes. On the other hand, the hills are limited to a secondary network of bus routes. Walkways tend to be narrower, and the winding roads are only connected by occasional stairways, making these areas inaccessible for the elderly or people with limited mobility (Fig. 2).

Fig. 2 - Stairways connecting the various street levels along the slopes.
Authors' image

# Building Typology and Function

A variety of building typologies were identified in the vicinity namely, 1) free-standing single- and two family homes typical of the hilly areas of the Hasenberg ('Halbhöhenlage'), 2) dense 'urban' blocks on the flat areas of the valley, 3) terraced houses, and 4) multi-family homes towards Degerloch (Fig. 4 and 5). Noteworthy typologies include the 'Eiernest', a row-house neighborhood built in 1926 as part of a social housing programme, and the Siedlung Südheim, a block of brick houses with historically-inspired half-timbered elements built in 1904 for the working class under the initiative of Eduard Pfeiffer.

Regarding function, many mixed-use buildings were identified around Erwin-Schoettle-Platz and along the Böblingerstraße. The active ground floors are home to a variety of small businesses, cafés, and restaurants. The upper floors are predominantly occupied by residential apartments with the occasional office or clinic space. Furthermore, a range of public services are spread between Marienplatz and Bihlplatz, such as the Marienhospital, the community center in the old fire station (Altes Feuerwehrhaus Süd), a public indoor pool (Hallenbad Heslach), and the Matthäuskirche (Fig. 3). Moving away from the axis of the Böblinger- / Möhringer Straße, the function becomes purely residential with few green courtyards for private use.


Fig. 3 - Street explorations were conducted to determine the building uses and functions.
Authors' work

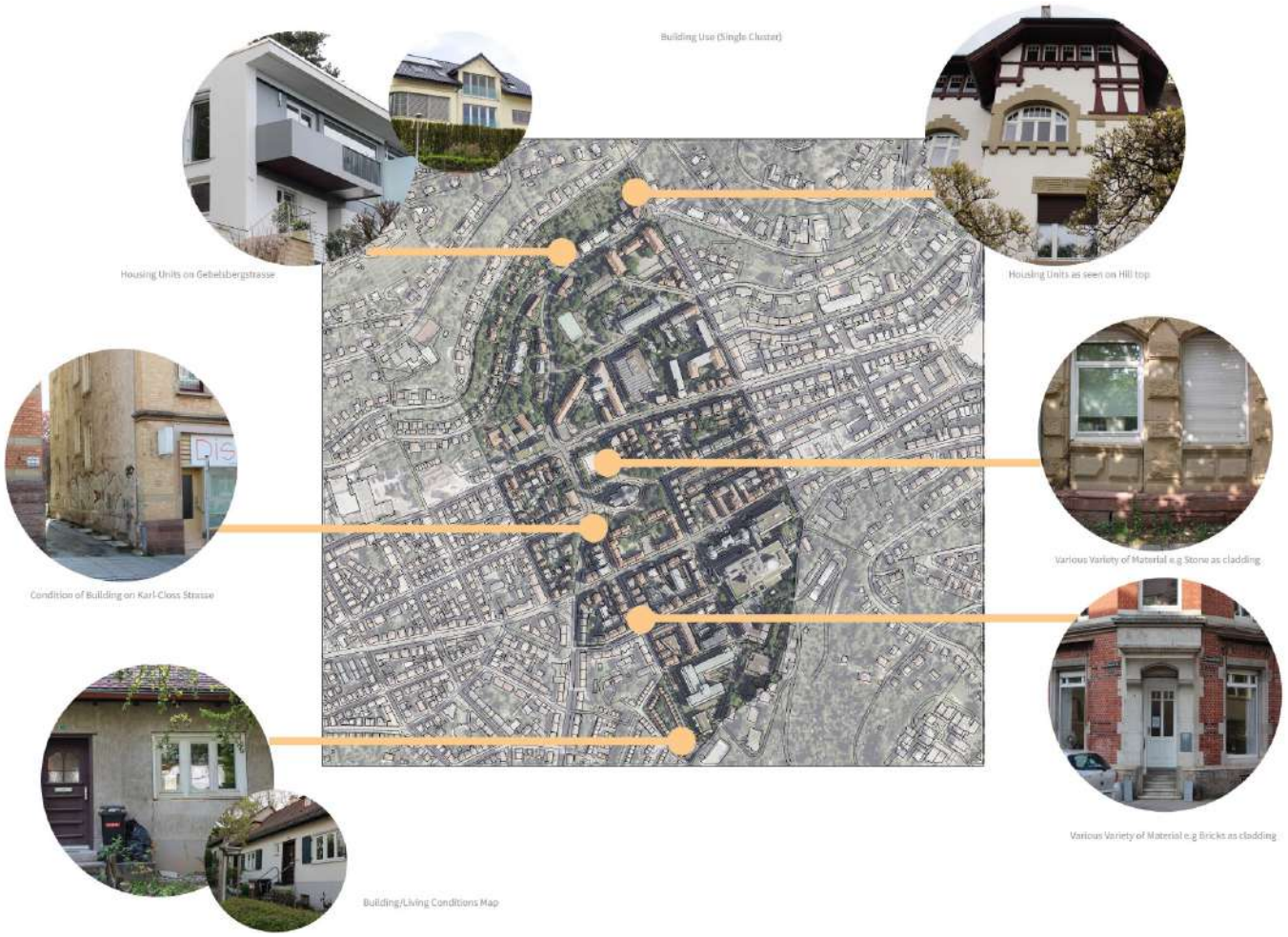



Fig. 4 - Impressions of the building typologies and conditions of the built environment.

Authors' work

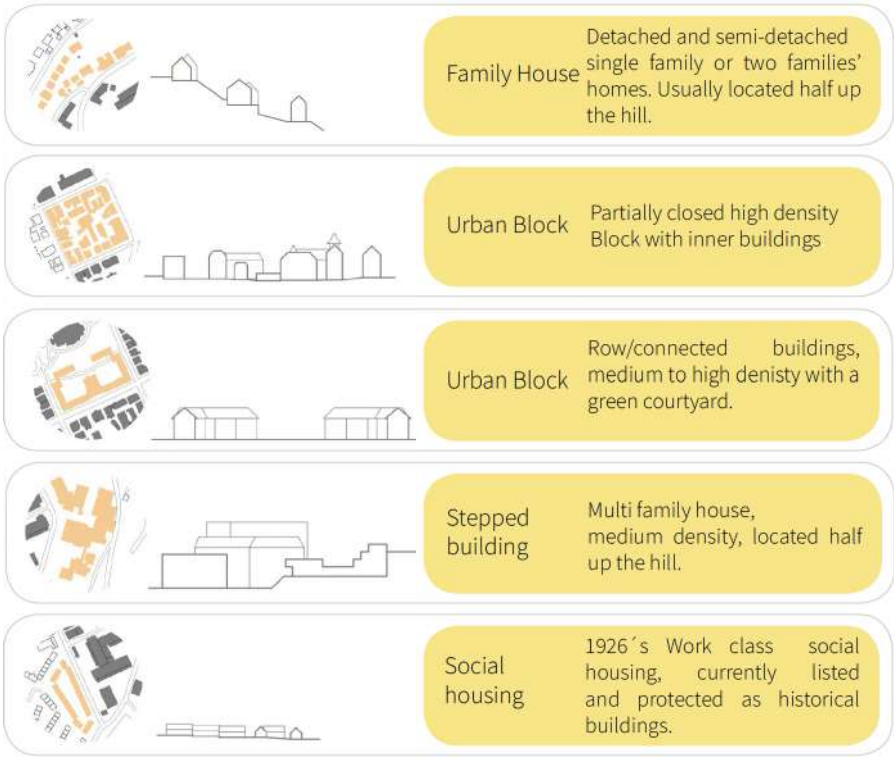



Fig. 5 - Catalogue of building typologies in the research area

Authors' work

# Housing

The majority single-family homes are located on the hills with only a small percentage of rentable rooms or apartment units. On the other hand, housing in the valley area is predominantly rental apartments. According to the local land price guidelines (Bodenrichtwerte), the land prices for the valley areas range between 2050-2800 Euros per $m^2$ . Here are apartments around 75$m^2$ typical. While those on the hills range between 1580-1840 Euros per $m^2$ for houses larger than 200$m^2$.

In a span of five years, the average rental price in Heslach rose from 11.10 Euros per $m^2$ in 2016 to 16 Euros per $m^2$ in 2021, which is well above the city average of 14.20 Euros per $m^2$. This heavy discrepancy in land and rent prices along with the topography as physical barrier creates a challenge for Heslach to remain dynamic and diverse.

Unless appropriately addressed, the combination of slower wage increases compared to rent prices will intensify dynamics of displacement where neighbours will no longer be able to afford the living costs in Heslach. The Schoettle-Areal with its physical location can play an important balancing role if offering innovative, diverse, and dynamic housing models (Fig. 6).

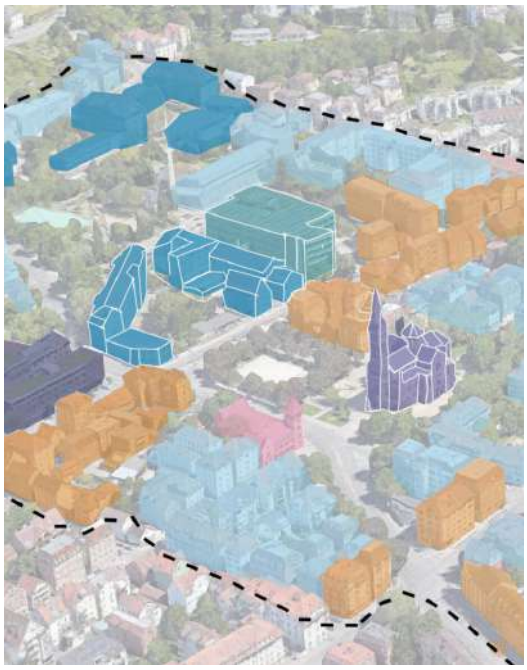



Fig. 6 - The functions of the built environment highlight the concentration of services in the valley.
Authors' work

# Users' Perspectives

To understand how users perceive the built environment, surveys and interviews were conducted with residents and visitors. The feedback from residents indicate a strong sense of belonging with the neighbourhood and concerns raised by the residents include, 1) the low accessibility and amount of public services, 2) the denser and new development of the valley area in the Möhringer- and Böblingerstraße which could further limit the amount of open- and green-spaces (Fig. 7) and at the same time drive up the already high rents and property prices.

A number of organizations both on city and local level are addressing these concerns including the coalition "Right to Housing" (Aktionsbündnis Recht auf Wohnen), which calls for a reformation with strict control of the housing market and calling for more protection for the tenants. Additionally the "Initiative solidarische Nachbarschaft Schoettle-Areal" is promoting the conversion of the Schoettle-Areal into a community-oriented, mixed-use, ecological, and affordable housing model. These civil society organizations seek to create change and balance out the interests of the state and local government, which remain the legitimate actor with an actual decision-making power on housing policies.


Fig. 7 - Managed open spaces map.
Authors' work

# Conclusion and Prospects

The topography of Heslach creates an evident physical disconnection between the valley and the hills. This displays a correlation with social factors like access to public services, healthy environments, and rent prices. This physical barrier has also become a social barrier.

The Schoettle-Areal can play an important balancing role by offering innovative, diverse, and dynamic functions that attract new residents, while remaining affordable and not displacing those already living there. This role can be strengthened by creating strategies that promote the creation and activation of public spaces to encourage social exchanges and lower physical and social barriers by improving accessibility through universal design.

A focus must be placed on the social aspects of the built environment in future developments. The current location of mixed uses should be expanded beyond the Böblinger- / Möhringer Straße axis. Current urban actors and active citizens should be empowered and understood as social promoters to reduce the identified social barriers. This can be achieved by increasing social housing offers and repurposing existing ground floors for community-oriented functions. The Schoettle-Areal, with its 15,000 $m^2$ footprint has the potential to accommodate housing, as well as economic, social, and cultural activities By placing a focus on affordability, a connected and inclusive neighbourhood can be created.

Die Topografie von Heslach schafft eine offensichtliche physische Trennung zwischen dem Kessel und den Hängen. Dies spiegelt sich in einer Korrelation mit sozialen Faktoren wie dem Zugang zu öffentlichen Dienstleistungen, einer gesunden Umwelt und den Mietpreisen wider. Diese physische Barriere ist auch zu einer sozialen Barriere geworden.

Das Schoettle-Areal kann eine wichtige ausgleichende Rolle spielen, indem es innovative, vielfältige und dynamische Funktionen bietet, die neue Bewohner*innen anziehen, gleichzeitig bezahlbar bleiben und ansässige Bewohner*innen nicht verdrängen. Diese Rolle kann durch Strategien gestärkt werden, die die Schaffung und Aktivierung öffentlicher Räume ermöglichen, um den sozialen Austausch zu fördern und physische und soziale Barrieren abzubauen, und indem die Zugänglichkeit durch universelles Design verbessert wird.

Bei zukünftigen Entwicklungen müssen die sozialen Aspekte der gebauten Umwelt in den Fokus gerückt werden. Die derzeitigen gemischten Nutzungen sollen über die Achse Böblinger- / Möhringer Straße hinaus erweitert werden. Aktuelle städtische Akteur*innen und aktive Bürger*innen sollen als soziale Förderer verstanden und befähigt werden, die identifizierten sozialen Barrieren abzubauen. Dies kann durch die Ausweitung des Angebots an Sozialwohnungen und die Umnutzung bestehender Erdgeschosse für gemeinschaftsorientierte Nutzungen erreicht werden. Das Schoettle-Areal mit seiner Grundfläche von 15.000 $m^2$ hat das Potenzial, Wohnraum sowie wirtschaftliche, soziale und kulturelle Aktivitäten zu beherbergen. Durch die Fokussierung auf Bezahlbarkeit kann ein vernetztes und inklusives Quartier geschaffen werden.

## References

Cihlar, J.; Jansen, L. (2001): From Land Cover to Land Use: a Methodology for Efficient Land Use Mapping over Large Areas. The Professional Geographer.

Daly, J.; Farahani, L.M.; Hollingsbee, T.; Ocampo, R. (2016): Measuring Human Experiences of Public Spaces: a Methodology in the Making. Concious Cities Anthology: Bridging Neuroscience, Architecture and Technology.

Statistisches Amt Stuttgart (2020): Sozialmonitoring der Landeshauptstadt Stuttgart. Accessed in April 2022, at: <https://statistik.stuttgart.de/statistiken/sozialmonitoring/atlas/Stadtteile/out/atlas.html>

# Phase II. Strategic Planning and Spatial Interactions

The second phase of the project extracted five relevant topics that dominated the discussions with the community and relevant actors during the analysis phase. These five topics are also key agenda points for the sustainable development of Stuttgart:

1. Climate-adapted and resilient neighbourhood – "Connecting through Greenery"
2. Flexible and innovative housing models – "Zuhause"
3. Support and network of local businesses – "Local Economies"
4. Public places for social cohesion – "Seedling for Social Interactions"
5. Inclusion of vulnerable groups in the design process – "Wasser für Alle!"

These topics were then further developed into individual strategies that complement each other to achieve a coherent vision for the sustainable urban transformation of the Schoettle-Areal. Each strategy focused on the creation of processes leading to spatial transformations that:

- enable new cooperations among relevant stakeholders,
- foster the creation of new (physical) connections between spaces and people, and
- produce programmes and activities that encourage a sustainable and resilient urban transformation.

The strategies were developed under a co-design principle. Through several working-sessions and interviews, local knowledge formed the backbone of the strategies and designs. A co-design aims to encourage a lasting involvement of the locals in long-term urban transformation processes by creating visions and setting goals with the locals and equipping them with design tools and arguments that strengthen their voices throughout the process.

Die zweite Phase des Projekts extrahierte fünf relevante Themen, die bei Diskussionen mit der Nachbarschaft und relevanten Akteur*innen während der Analysephase zum Vorschein kamen. Diese fünf Themen sind auch zentrale Agendapunkte für die nachhaltige Entwicklung Stuttgarts:

1. Klimaangepasste und resiliente Nachbarschaft – „Connecting through Greenery"
2. Flexible und innovative Wohnmodelle – „Zuhause"
3. Unterstützung und Vernetzung lokaler Unternehmen – „Local Economies"
4. Öffentliche Orte für sozialen Zusammenhalt – „Seedling for Social Interactions"
5. Einbeziehung vulnerablen Gruppen in den Gestaltungsprozess – „Wasser für Alle!"

Diese Themen wurden dann zu einzelnen Vorschlägen weiterentwickelt, die miteinander kommunizieren und sich ergänzen, um eine schlüssige Vision für die nachhaltige urbane Transformation des Schoettle-Areals zu erreichen. Jeder Vorschlag konzentrierte sich auf die Schaffung von Strategien und räumlichen Transformationen, die:

- neue Kooperationen zwischen relevanten Stakeholdern ermöglichen,
- der Schaffung neuer (physischer) Verbindungen zwischen Räumen und Menschen fördern, und
- Programme und Aktivitäten entwickeln, die eine nachhaltige und widerstandsfähige städtische Transformation fördern.

Die Strategien wurden nach dem Co-Design-Prinzip entwickelt. Durch mehrere Arbeitssitzungen und Interviews flossen die Kenntnisse der lokalen Akteur*innen in die Strategien und Entwürfe ein. Co-Design zielt darauf ab, eine nachhaltige Beteiligung der lokalen Akteur*innen an den langfristigen Prozessen der urbanen Transformation zu fördern, indem gemeinsam Visionen entwickelt und Ziele festgelegt werden, und sie mit Gestaltungswerkzeugen und Argumenten auszustatten, die ihre Stimme während des gesamten Prozesses stärken.

Fig. 1 - A vision of local economies taking root in the Schoettle-Areal.
Authors' work

# Connecting through Greenery

A. Altom Babiker Mohammed, A.C. Camacho Gutierrez, L.A. Sánchez Muñoz and D. Loli Teza

The valley of Heslach is a predominantly built-up and sealed area that provokes several negative effects, urban heat island (UHI) and ecosystem fragmentation among others. The urban transformation of the Schoettle-Areal presents an opportunity to introduce multifunctional blue and green elements (infrastructure), to strengthen existing and new ecological and social connections that alleviate the fragmentation of green spaces for flora and fauna (biodiversity), and also promote connections within the neighbourhood (cultural ecosystem services). To achieve this, the amount, availability, accessibility, and usability of green and blue spaces must be increased.

For this strategy, existing water bodies like the Nesenbach need to be examined as blue infrastructure to understand their potential provisioning, social, and cultural services while new green and blue elements need to be integrated in the landscape. An increase in green and blue spaces can also support local fauna through habitat provisioning and better connectivity.

The first step on this strategy is to improve the **places to circulate** and connect ecosystems and biodiversity through green corridors with the help of animal-aided-design (AAD) and climate adaptation practices. The second step is to improve the **places to stay** with greener lingering spaces, reinforcing the social connection through the provision of blue and green elements at existing social (public) spaces.

Das Heslacher Tal ist ein überwiegend bebautes und versiegeltes Gebiet, das einige negative Auswirkungen, unter anderem den Wärmeinseleffekt (UHI) und die Fragmentierung von Ökosystemen, bewirkt. Die urbane Transformation des Schoettle-Areals bietet die Chance, multifunktionale blaue und grüne Infrastrukturen einzuführen, bestehende und neue ökologische und soziale Verbindungen zu stärken, die die Fragmentierung von Grünflächen für Flora und Fauna (Biodiversität) mildern und auch Verbindungen innerhalb der Nachbarschaft (kulturelle Ökosystemleistungen) fördern. Dazu müssen Menge, Verfügbarkeit, Zugänglichkeit und Nutzbarkeit von grünen und blauen Strukturen erhöht werden.

Für diese Strategie müssen bestehende Gewässer wie der Nesenbach als blaue Infrastruktur auf ihre potenziellen Versorgungs-, Sozial- und Kulturleistungen untersucht und neue grüne und blaue Elemente in die Landschaft integriert werden. Eine Zunahme von grünen und blauen Elementen kann auch die lokale Fauna durch die Bereitstellung von Lebensräumen und eine bessere Konnektivität unterstützen.

Der erste Schritt dieser Strategie besteht darin, **Zirkulationsorte** zu verbessern, an denen Ökosysteme und Biodiversität durch grüne Korridore mit Hilfe von Animal-Aided Design (AAD) und Praktiken zur Klimaanpassung verbunden werden können. Der zweite Schritt besteht darin, **Aufenthaltsorte** durch grünere Strukturen zu verbessern und die soziale Verbindung durch die Bereitstellung von blauen und grünen Elementen an bestehenden sozialen (öffentlichen) Räumen zu stärken.

# Objectives and Scenarios

The project set objectives to measure the success of the strategy (Fig. 2):

1. Improve the connection of ecosystems and biodiversity through green corridors and biodiversity spots.
2. Reinforce social connection through the provision of accessible blue and green spaces.
3. Fortify the identity of place through the recovery of the Nesenbach-river and linkage to new blue infrastructure.

A future scenario (Fig. 3) creates a new corridor by extending the Eierstraße until the Mörikestraße between the university campus and the statistical office building, currently closed to the public, to connect the green area around the sport facilities with the neighbourhood south of the Böblingerstraße. A second corridor connects the current car-sharing parking lot (to be transformed into a rain garden) with the courtyard of the campus by opening the ground floor of the University Building B.78 allowing for wildlife crossing. By incorporating elements of animal-aided design, such as nesting sites into green façade systems and green roofs, the scenario encourages cohabitation.

Some social elements like new ground floor functions and street furniture create meeting points that active the green corridors and transform them into lingering places. Lastly, the memory essence of the Nesenbach is revived with rain gardens supplied by redirected rainwater collected from the neighbouring buildings, accompanied by green areas for leisure activities.

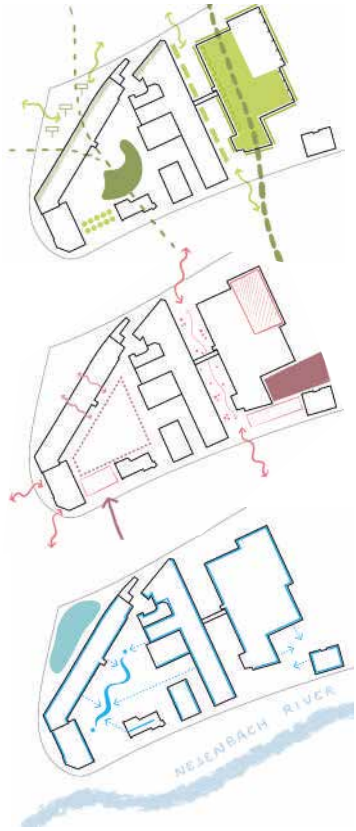
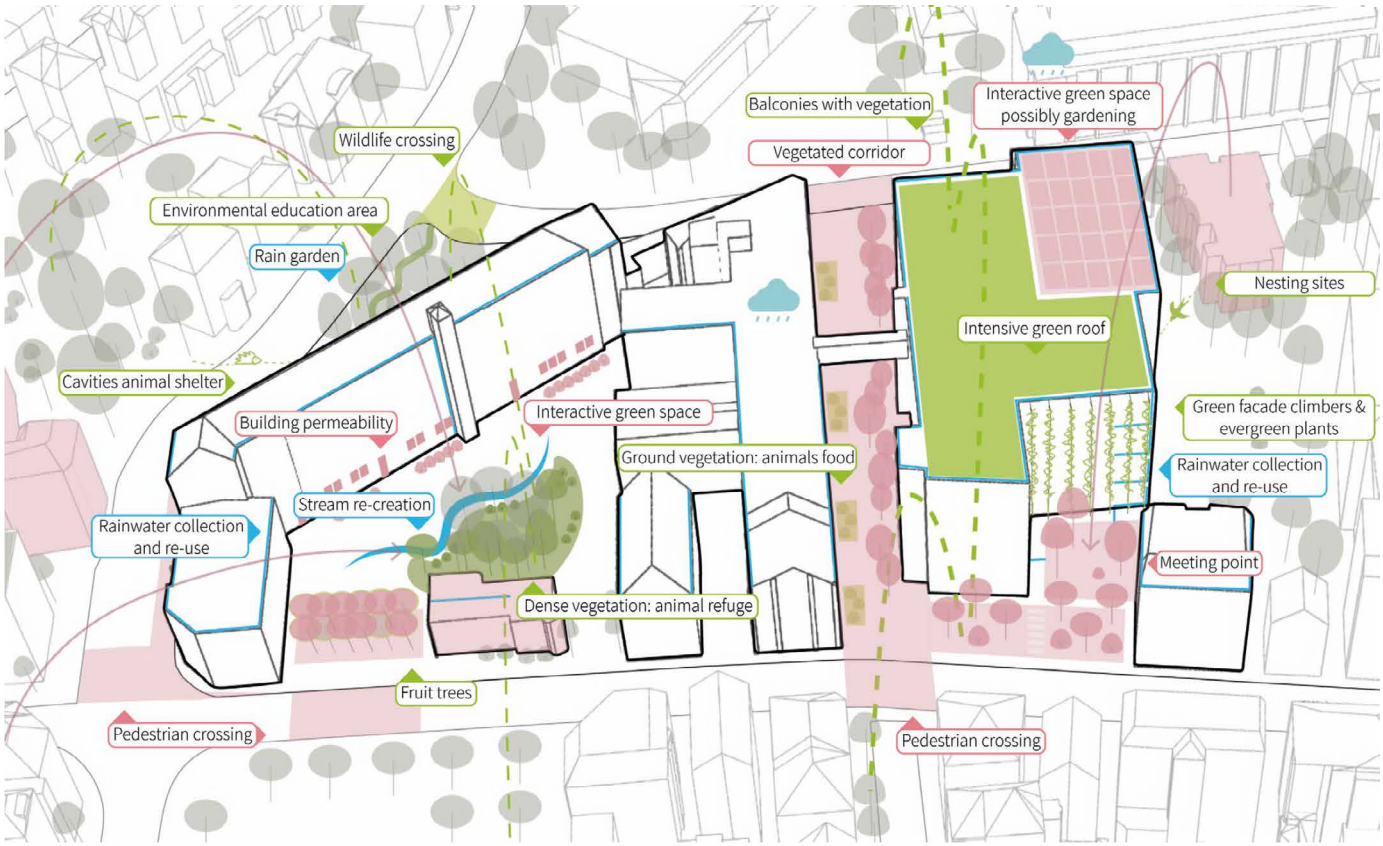



Fig. 2 - Biodiversity, social and hydrology objectives.
Authors' work

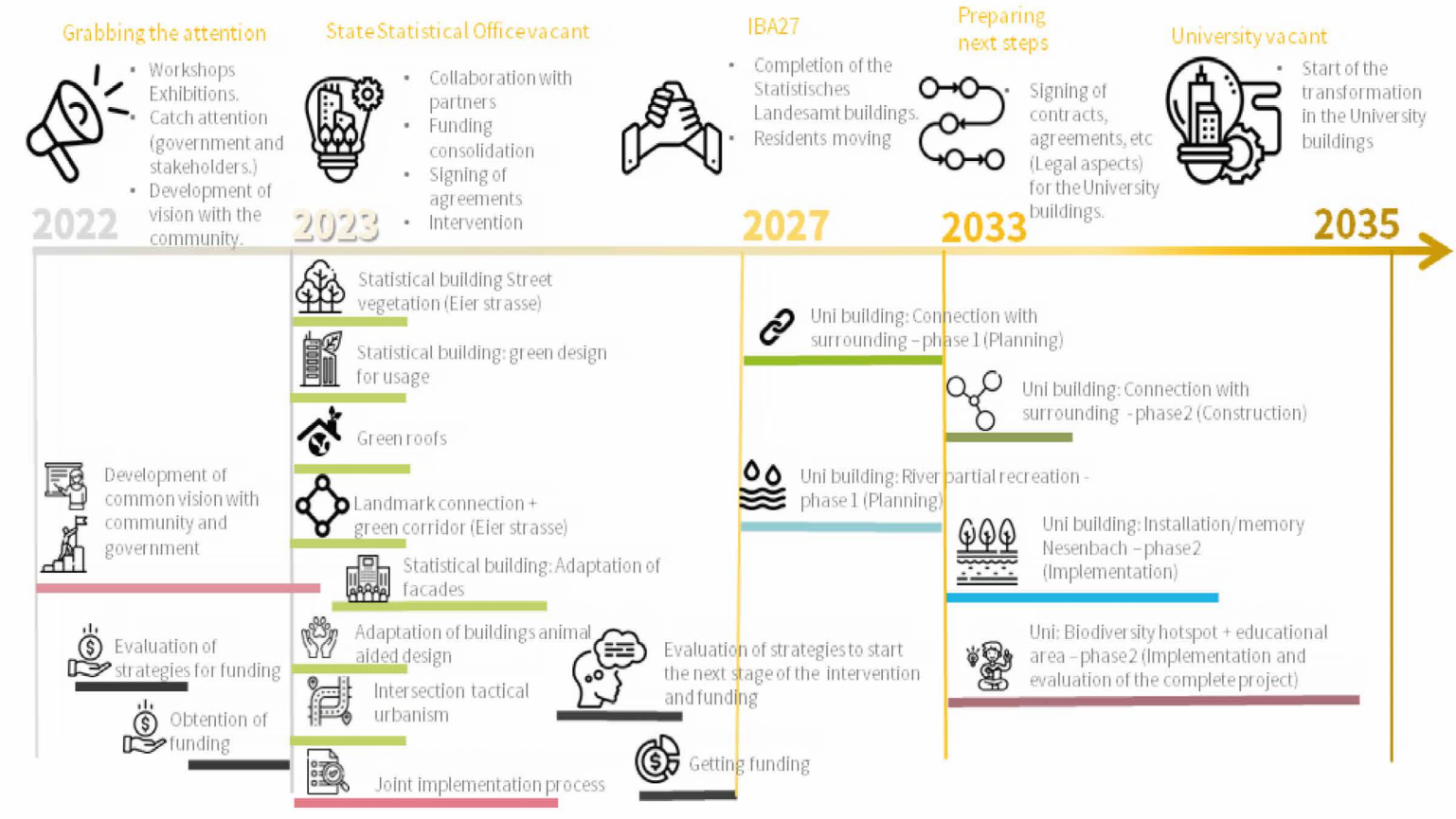
Fig. 3 - Scenario Eierstraße corridor + Nesenbach revival.
Authors' work



# Project Timeline

We dissect the strategy and its objectives into phases to set clearer milestones and better identify relevant stakeholders that could either support or delay the implementation of each objective. The scenario focuses on the further development of the Nesenbach as a key natural heritage element for Heslach. As reviving the Nesenbach through the implementation of rain gardens is a project in and of itself, the realization of this design proposal should occur in design stages, based on incremental feedback and support from the stakeholders. The first phases then should synthesize the most up-to-date technical knowledge and support the capacities of the stakeholders involved. The initial projects concerning the implementation of new public green infrastructure will start in 2023. Subsequent milestones include a possible cooperation with the IBA-Exhibition in 2027, the end of the planning phase around 2033, and the vacancy of the university campus in 2035 (Fig. 4).

Fig. 4 - Project timeline in five phases depicting various milestones, activities, relevant stakeholders, and process descriptions.
Authors' work



# Design of Spatial Interactions

The new corridor extending the Eierstraße will connect nature between the green area around the gymnasium and the housing block south of Böblinger Straße, through which neighbours and local fauna can move freely while enjoying edible fruit trees, flowering plants, shaded seating, and shrubbery of various species. A secondary opening connects the inner courtyard of the university campus with the new corridor, which will host similar green and blue interventions (Fig. 5). The new green connection not only exists at ground level, but also on building facades and roofs. With the inclusion of an extensive green façade system and a network of green roofs, we support designated and protected habitat for local fauna, thus achieving a degree of co-habitation (Fig. 6).

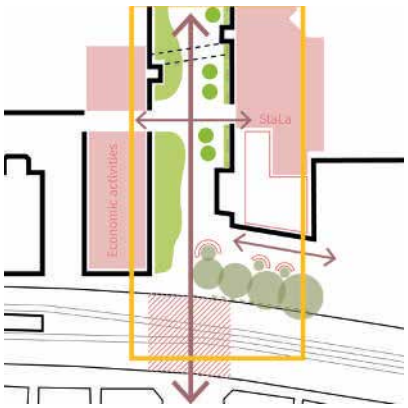



Fig. 5 - Connections of the Eierstraße.

Authors' work

The revival of the Nesenbach is part of an integrated water management strategy (Fig. 7) that fulfils the needs of both new inhabitants and nature alike, while providing ecosystem services that regulate climate events such as excessive stormwater-runoff and the urban heat island (UHI). An underground rainwater retention basin collects the runoff from the roofs and other outdoor spaces through semi-permeable pavements, which let rainwater infiltrate into the ground. A system of filters and pumps reintroduces the water into the recreated stream in the university courtyard, and can help support the green façades. To power this system, solar panels on the roof produce an electricity surplus that can also contribute to residential demands.

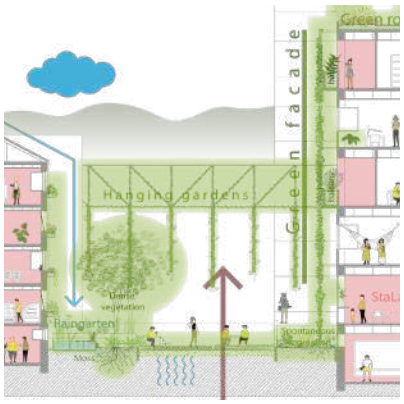



Fig. 6 - Green connection in the Eierstraße corridor.

Authors' work

Furthermore, the green and blue spaces offer opportunities for environmental education and stewardship in the community for the management of local public infrastructure (Fig. 8). For instance, innovative solutions in water management coupled with informative installations and play opportunities for children can directly contribute to learning experiences, while indirectly ensuring continued maintenance and investment through diverse channels and different stakeholders. Through varying degrees of engagement and the interests of different age groups, the Schoettle-Areal can transition into a connective key element in the social fabric of Heslach.

Fig. 7 - Schematic section of the proposed scenario.

Authors' work

Legend:
1. Underground rainwater storage
2. Pump
3. Rain garden for run-off regulation
4. Solar panels

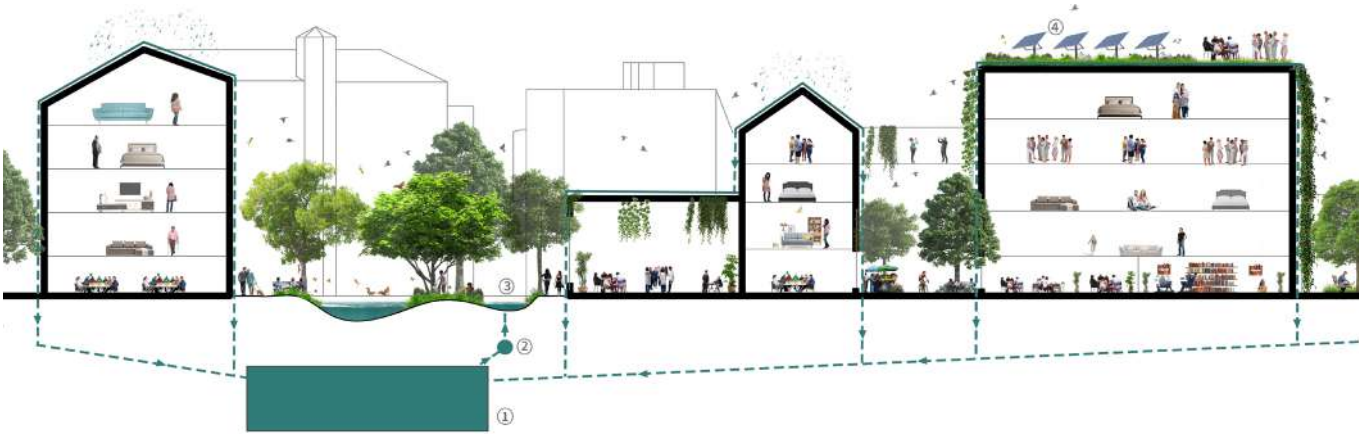


Fig. 8 - Hydrology goal applied in the Schoettle-Areal (top) and the biodiversity goal applied in the Eierstraße (bottom).
Authors' work


# Exhibition

The integrated water management strategy and new green corridors through the Schoettle-Areal for a new resilient green hotspot in Heslach, was presented for the first time to a broader community as part of an exhibition and discussion on the weekend of July 16th and 17th 2022. To capture the visitors' feedback we prepared two interactions to assess 1) the relevance of the Nesenbach for the collective mind, and 2) their relationship with the local flora and fauna (Fig. 9). For the first interaction, we built a small water stream on site to allow visitors to experience flowing water in the Schoettle-Areal. We asked the visitors about the activities they imagine doing if there were a flowing water body in the area: "Relaxing" and "putting feet in the water" were among the most frequent responses, being mentioned 12 and 7 times respectively. A majority of the responses were also oriented towards children's activities (Fig. 10).

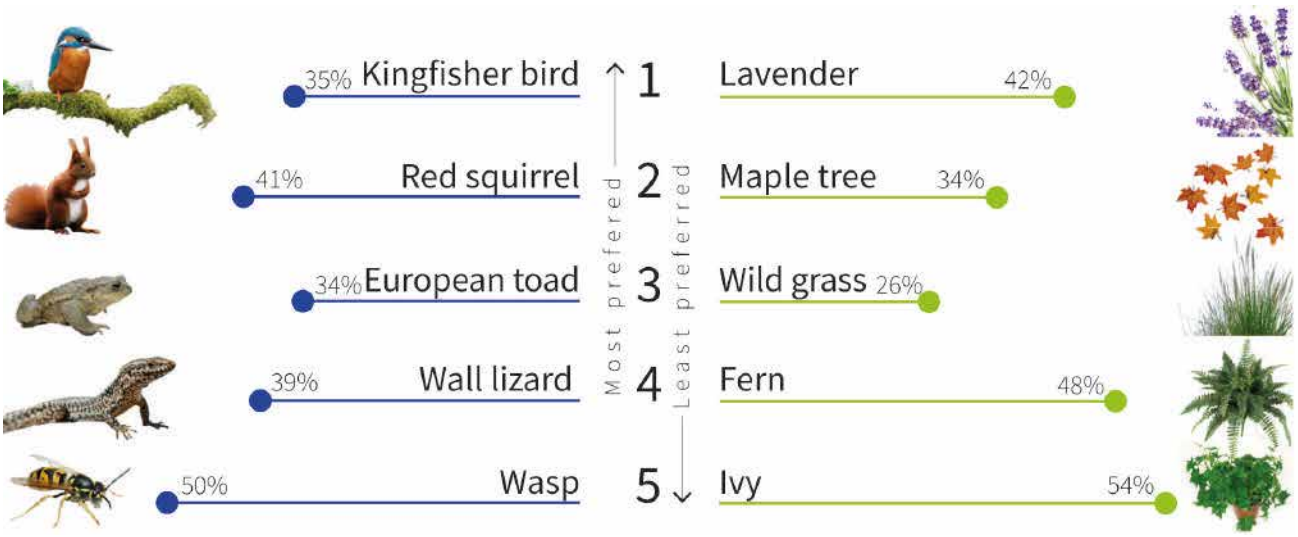
Fig. 9 - Family interaction with prototype
Authors' image

To obtain residents' perception of local flora and fauna, for the second interaction we used a sample of five animals and five plants, all of which native to Stuttgart. We asked visitors to rank the sample from their favourite to least favourite, based on the species' characteristics. They ranked eight attributes that affected their preferences. For the animal species (180 responses), the Kingfisher Bird (Eisvögel) was selected as the favourite by 35% of the respondents, while the wasp (Deutsche Wespe) was the least preferred animal, selected as least favourite by 50% of the respondents. Regarding plants (140 responses), 42% of respondents indicated lavender as their most preferred species, while 54% of the respondents chose ivy (Efeu) as their least favourite plant ( Fig. 11). The visitors were more interested in discussing animal species, often associating them with personal experiences.

Fig. 10 - Water-related activities as imagined by visitors with regards to a potential revival of the Nesenbach.
Authors' work

The preferences in animal species were mainly influenced by their 1) appearance, 2) environmental importance and 3) personal affection. The preferences for plant species were mainly influenced by their 1) native origin, 2) environmental importance, and 3) everyday usefulness. These results helped highlight the environmental awareness about the relevance of both animal and plant species in combination with aesthetic preferences.

Fig. 11 - Importance of attributes on people's preferences for plants and animals and the results of rating activity for plant and animal species in Stuttgart.
Authors' work



# Conclusion

The built-up districts of Heslach, especially the axis Böblinger- / Möhringer Straße, are mostly impervious areas that provoke several negative environmental effects. An integrated water management strategy and new green corridors through the Schoettle-Areal for a new resilient green hotspot will provide a wide range of ecosystem services for the neighborhood.

Positive climate outcomes can be amplified through the allocation of new green and blue spaces and the connection with existing ones, fostering resilience along with human and non-human wellbeing. These environmental effects can have a cascading effect on other aspects of the local community. Such aspects include: 1) an increase in social outdoor activities in connection with natural landscapes, 2) engagement with environmental issues such as water shortages and biodiversity loss by making natural cycles visible, 3) participative and co-productive planning of future public spaces, and 4) stronger and lasting collaborations between authorities and interest groups.

Furthermore, this strategy fosters cohabitation. It creates the opportunity to broaden the relationship between human and non-human inhabitants of the neighbourhood through Schoettle-Areal. The contradictory results of the flora and fauna interaction during the exhibition made evident the need for co-habitation between humans and nature: while most people are aware of the need for environmentally conscious actions, either a lack of knowledge or the weight of subjective perceptions against certain species still plays a major role in their relation to non-human species. Finding innovative ways to raise awareness of the role of flora and fauna should be a key aim in spatial and social interventions.

Die bebauten Stadtteile von Heslach, insbesondere die Achsen der Böblinger- / Möhringer Straße, sind größtenteils versiegelte Flächen, die mehrere negative Umweltauswirkungen provozieren. Eine integrierte Wasserstrategie und grüne Korridore durch das Schoettle-Areal für einen neuen resilienten grünen Hotspot werden ein breites Spektrum an Ökosystemleistungen für das Quartier bereitstellen.

Positive Umweltauswirkungen können durch die Zuweisung neuer grüner und blauer Flächen und deren Verbindung mit bestehenden Flächen verstärkt werden, wodurch die Resilienz und das menschliche und nichtmenschliche Wohlbefinden gefördert wird. Diese Veränderungen können einen positiven Kaskadeneffekt auf andere Aspekte der lokalen Nachbarschaft haben. Zu diesen Aspekten gehören 1) eine Zunahme sozialer Outdoor-Aktivitäten in Verbindung mit Naturlandschaften, 2) die Auseinandersetzung mit Umweltthemen wie Wasserknappheit und Biodiversitätsverlust durch Sichtbarmachung natürlicher Kreisläufe, 3) partizipative und koproduktive Planung öffentlicher Räume, und 4) stärkere und dauerhafte Zusammenarbeit zwischen Behörden und Interessengruppen.

Darüber hinaus fördert diese Strategie die Cohabitation. Es schafft die Möglichkeit, durch das Schoettle-Areal die Beziehung zwischen menschlichen und nichtmenschlichen Bewohnenden des Quartiers zu erweitern. Die widersprüchlichen Ergebnisse der Interaktion Flora und Fauna während der Ausstellung machten die Notwendigkeit des Zusammenlebens zwischen Mensch und Natur deutlich: Während sich die meisten Menschen der Notwendigkeit umweltbewussten Handelns bewusst sind, spielen entweder Unwissenheit oder das Gewicht subjektiver Wahrnehmungen gegenüber bestimmte Arten immer noch eine große Rolle in der Beziehung zu nichtmenschlichen Arten. Innovative Wege zu finden, um das Bewusstsein für die Rolle von Flora und Fauna zu stärken, sollte ein Hauptziel bei räumlichen und sozialen Interventionen sein.

## References

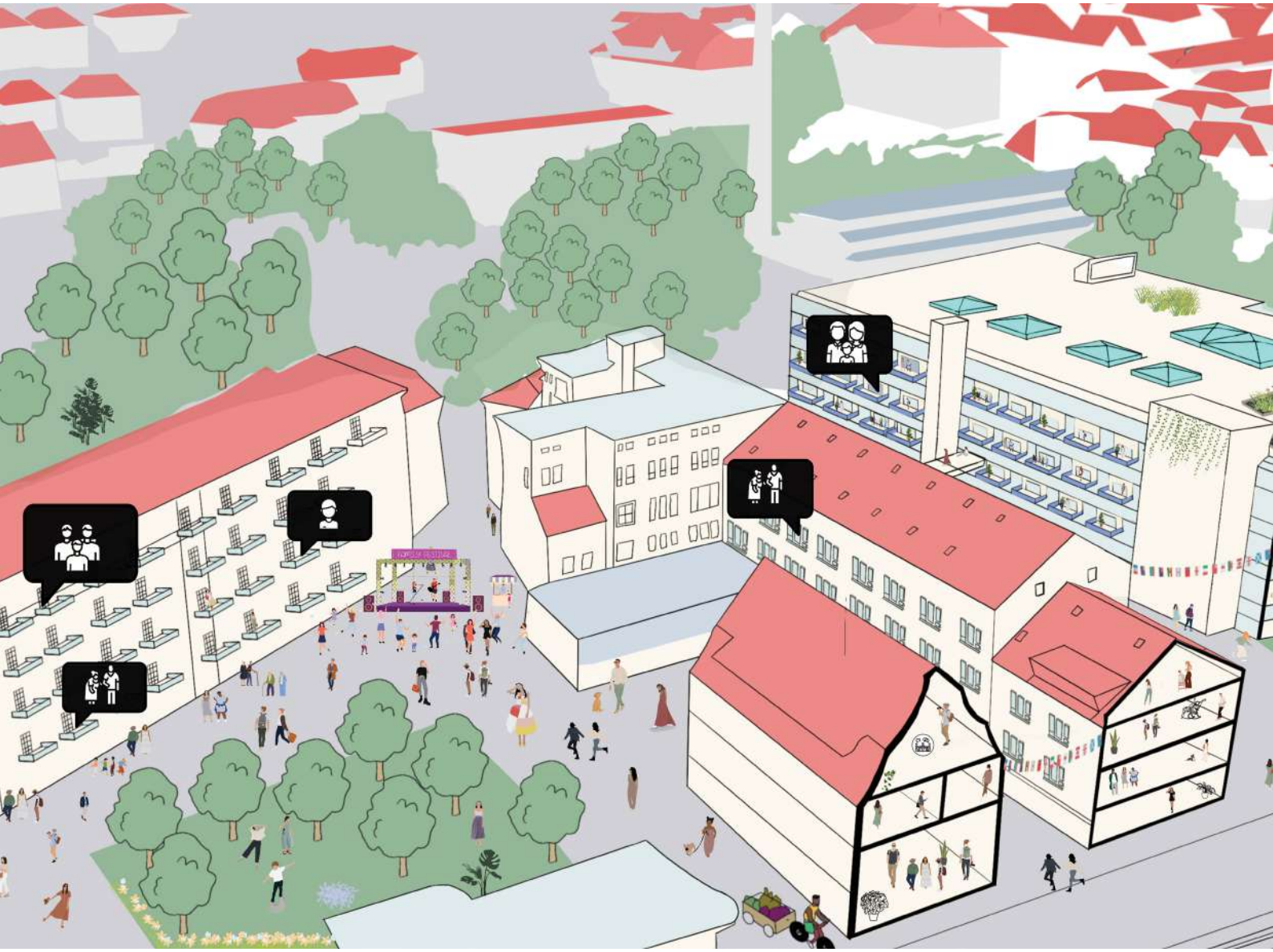
Apfelbeck, B.; Hauck, T.E.; Jakoby, C.; Piecha, J.; Rogers, R.; Schröder, A.; Weisser, W.W. (2015): Animal-Aided Design in the Living Environment. Universität Kassel, Technische Universität München, Bundesamt für Naturschutz.

Lawson, L.A.; Nguyen-Van, P (2020): Is there a peaceful cohabitation between human and natural habitats? Assessing global patterns of species loss. Global Ecology and Conservation 23.

Stotzem, H.C.(2017): Artenschutzkonzept. Amt für Umweltschutz. Landeshauptstadt Stuttgart

Fig. 1 - Perspective view of the design proposal for the Schoettle-Areal.

Authors' work



# Zuhause

M.J. Palacio Ramirez, S. Rai and Á. Algaba Díaz

Housing affordability is a global concern and Stuttgart-Süd is not exempt of this problem. By 2030, approximately 40% of the world's population will be in need of adequate housing (UN-Habitat, 2022). Since 2016 Stuttgart remains the fourth most expensive city in Germany for tenants (empirica, 2023), and the city (Stuttgart) and state (Baden-Württemberg) have not been able to provide enough social housing to cope with increasing demand. This creates a double problem for Stuttgart-Süd: from 2010 to 2019, the housing space per inhabitant has reduced in by 3.2% (Datenkompass Süd, 2020), while the rental prices per square meter have been steadily increasing.

The lack of affordable housing in Heslach is now clear: yearly demonstrations, inadequate rent-price regulation, and increasing population pushes out tenants. The Schoettle-Areal offers a chance to balance out the current insufficient offer and provides a suitable amount of space dedicated to affordable housing.

This project explores the socio-cultural diversity of Heslach, as 48% of the population have an immigration background. It also considers the megatrends 'gender shift' and 'new work' (Zukunftsinstitut 2022) to achieve flexible, affordable and dignified spaces that contribute to social interactions and foster permanence in the district while creating spaces that adapt according to spatial needs.

Die Bezahlbarkeit von Wohnraum ist ein globales Anliegen, und Stuttgart-Süd ist von diesem Problem nicht ausgenommen. Bis 2030 werden etwa 40 % der Weltbevölkerung zusätzlichen angemessenen Wohnraum benötigen (UN-Habitat, 2022). Seit 2016 ist Stuttgart die viertteuerste Stadt Deutschlands für Mieterinnen und Mieter (empirica, 2023), und sowohl Stadt (Stuttgart) als auch Land (Baden-Württemberg) konnten nicht genügend Sozialwohnungen bereitstellen, um der steigenden Nachfrage gerecht zu werden. Daraus ergibt sich für Stuttgart-Süd ein doppeltes Problem: Von 2010 bis 2019 hat sich die Wohnfläche pro Einwohner um 3,2 % verringert (Datenkompass Süd, 2020), während die Mietpreise pro Quadratmeter stetig gestiegen sind.

Der Mangel an bezahlbarem Wohnraum in Heslach ist mittlerweile deutlich geworden: jährliche Demonstrationen, eine nicht ausreichende Mietpreisregulierung und steigende Bevölkerungszahlen verdrängen immer mehr Mieter*innen. Das Schoettle-Areal bietet die Chance, das mangelnde Angebot auszugleichen und in angemessenem Umfang Flächen für bezahlbaren Wohnraum bereitzustellen.

Dieses Projekt berücksichtigt die soziokulturelle Vielfalt von Heslach, da 48% der Bevölkerung einen Migrationshintergrund haben. Es berücksichtigt auch die Megatrends des traditionellen Geschlechterwechsels und der neuen Arbeit (Zukunftsinstitut 2022), um flexible, erschwingliche und würdevolle Räume zu schaffen, die zu sozialen Interaktionen beitragen und die Resilienz im Stadtteil fördern, während Räume geschaffen werden die sich entsprechend der räumlichen Bedürfnisse anpassen.

# Spaces for the Community

The social, cultural, and economic dynamics visible in Heslach and the positive perceptions of its inhabitants to such activities served as the foundation to design affordable and flexible spaces for living accompanied with spaces for social and cultural interactions between the inhabitants. Specific actions to achieve these goals include:

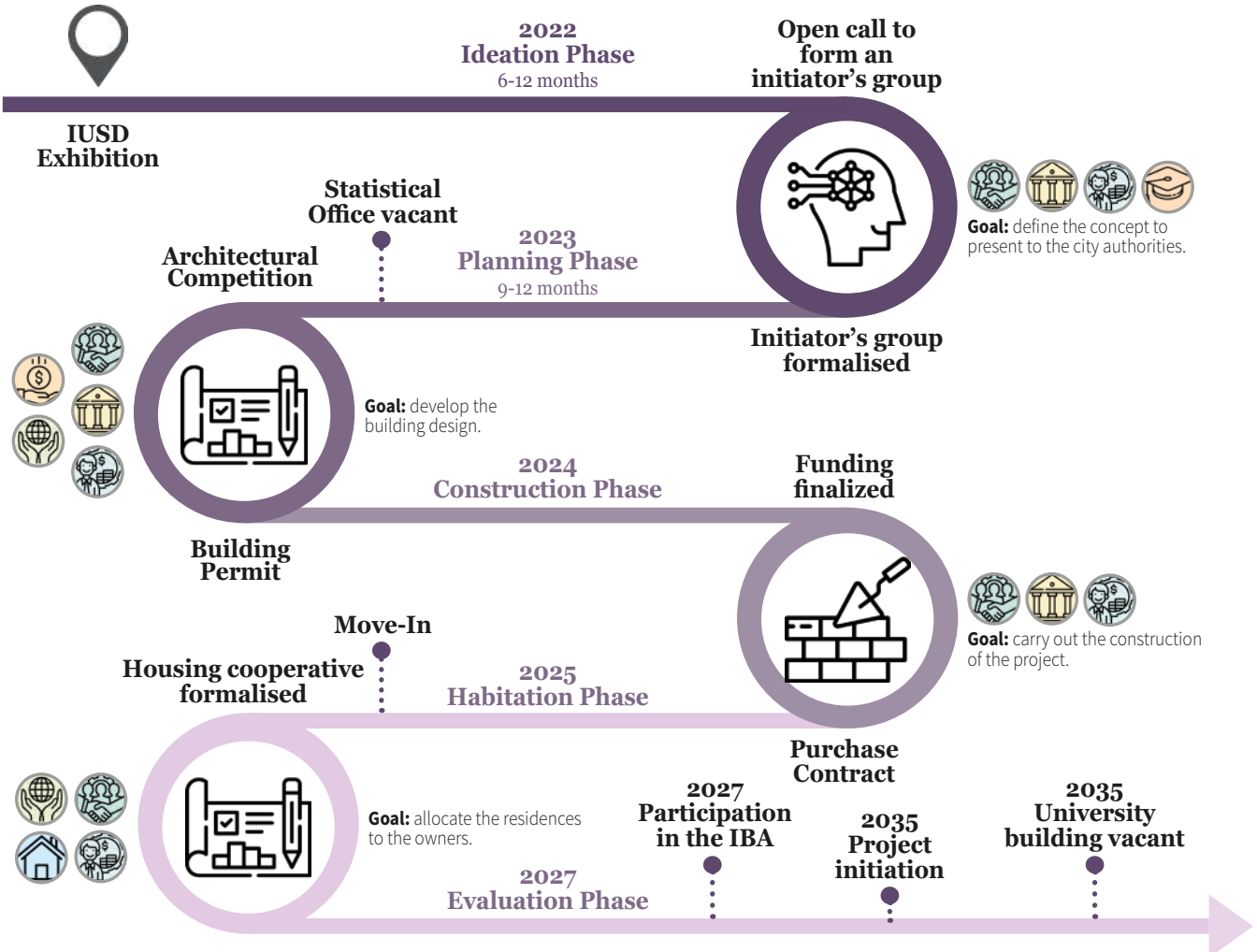
Affordability and sustainability:
- Developing a co-housing model where residents share living costs.
- Adapting the existing structure into new livable spaces.
- Distributing social functions to foster a cross-floors neighborhood life

Social and cultural interactions:
- Providing platforms for cultural expression.
- Less private and more shared spaces for common uses and social interactions.

Flexibility:
- Offering flexible housing typologies for different stages of life.
- Designing adaptable models that allow spaces to transform and change functions.

The transformation of the Schoettle-Areal into a housing complex was designed in phases. The milestones of each phase will help to achieve long-term commitments from relevant stakeholders. (Fig. 2).

Fig. 2 - Potential project timeline for interventions in the Statistical Office building and the prospective vacancy of the university building.
Authors' work



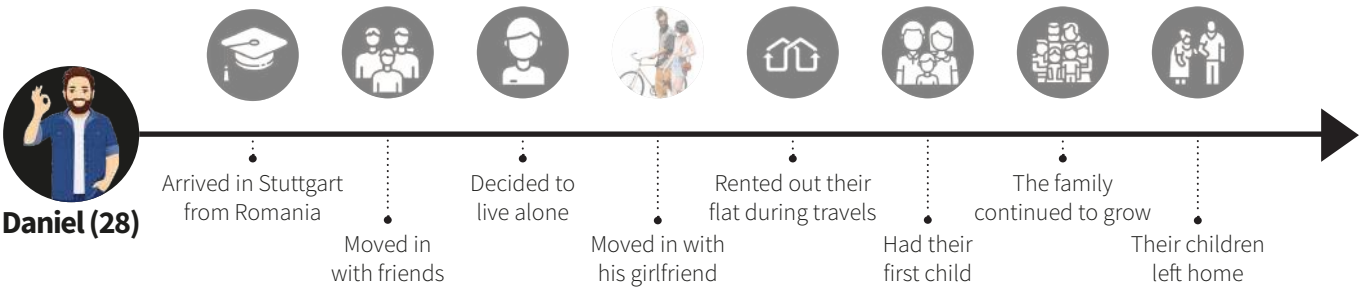



Fig. 3 - The progression of Daniel's stages in life as they correspond to his living situation and housing needs.
Authors' work

# Adaptable Spatiality

Because of the diverse demographics of Heslach, a key design decision is to consider the various needs of people with different socio-economic and cultural backgrounds. These can include evolving familial constellations, age-specific conditions, universal design, and new balance between common and private spaces.

As an example to demonstrate such aspects on a personal level, consider the case of Daniel (Fig. 3), who moved to Heslach from Romania to begin an internship in the automobile industry. As is the case for many, familial circumstances and personal relationships changed for Daniel, and he soon decided to stay in Heslach long-term and start a family. Thus changed his needs for housing, which commonly entails a relocation to more affordable neighbourhoods in search of units that can accommodate additional members of the household. This, and similar transitions, can be planned for, thereby ensuring the functional sustainability of housing projects.

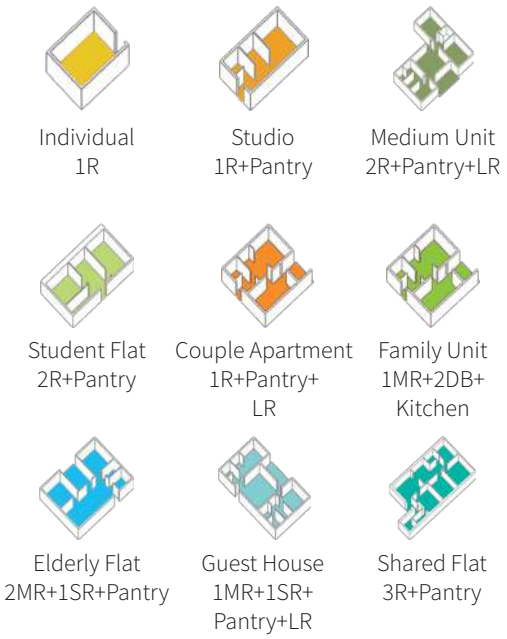



Fig. 4 - A proposed mix of housing typologies that caters to a broad range of residences according to their age group, needs, and familial constellations.
Authors' work

# Rethinking Housing Typologies

Multiculturalism and inclusiveness are present in public spaces where communities and networks gather to address and support collective needs like schools, elderly residences, social clubs, sport facilities, etc.

Expanding the boundaries of common spaces to include traditionally private components of housing units like dining areas and kitchens, can serve to reduce costs and benefit residents with lower rents while promoting social coherence amongst the users of those common spaces. Under this concept, for example, the elderly would have the opportunity to meet young students and professionals and people of different age groups in the shared spaces, thereby reducing potential dangers of social isolation while improving access to support and leisure activities. Situations like these would provide varying benefits for each social group.

The project seeks a new balance of shared and private spaces as a key aspect in communal life. Functional shared spaces developed in community are more likely to be accepted and can contribute to more engagement at the neighbourhood level. The offer is then complemented with adaptable private spaces to meet individual needs that provide retreat. To foster vertical neighbourhood-life, shared spaces with different characteristics distributed on different floors serve as nodes of interaction. The closer to the ground floor the more public character they have.

# Adaptable Apartments

An exemplary area of approximately 2000 m² on the second floor of the Statistical Office (Fig. 5) shows the possible spatial interactions on a detailed manner. Three key elements of the design are 1) the shared kitchen and dining area, 2) skylights, and 3) the adaptability of individual apartment units.

Adaptable spaces and housing typologies that transform with the residents' stages of life translate into two design strategies. First is the design of an array of typologies that cater to varied living situations and group (family) constellations as demonstrated with Daniel's example. This increases the chance of local relocations should the spatial needs of a household change, thereby fostering long-term occupancy.

The second strategy concerns the short-term flexibility of each typology to merge or include additional rooms that are strategically placed on each floor to allow for growth according to the resident's needs. This could include, for example, renting a studio for a year to start a new project, or hosting a family member for weeks. The location of such flexible-rooms on each floor will add a semi-private buffer between the social and the private spaces (Fig. 6).

# Communal Cooking and Dining

Communal cooking and dining is a cherished and common activity present in many cultures. It signifies a collective act of nurture between members of a family or community, which we translated into the context of a multi-unit housing complex. Here, residents can establish house rules and usage guidelines as well as plan communal or regular events depending on the current needs and preferences. In practical terms, a larger central kitchen with a wide range of appliances and ample dining areas allows for space- and cost reduction within the residential units, which could install basic kitchenettes as a complementary measure. In spatial terms, the communal kitchen and dining areas are located strategically on each floor and occupy 10% to 15% of the total floor area.

**Entertainment**

- Playroom
- Home Theater
- Group Lessons
- BBQ
- Open Stage

**Services**

- Tools Rooms
- Locksmith
- Deposits
- Plumbing
- Clothes Repair
- Nursing
- Laundry
- Kitchen
- Multimedia Room

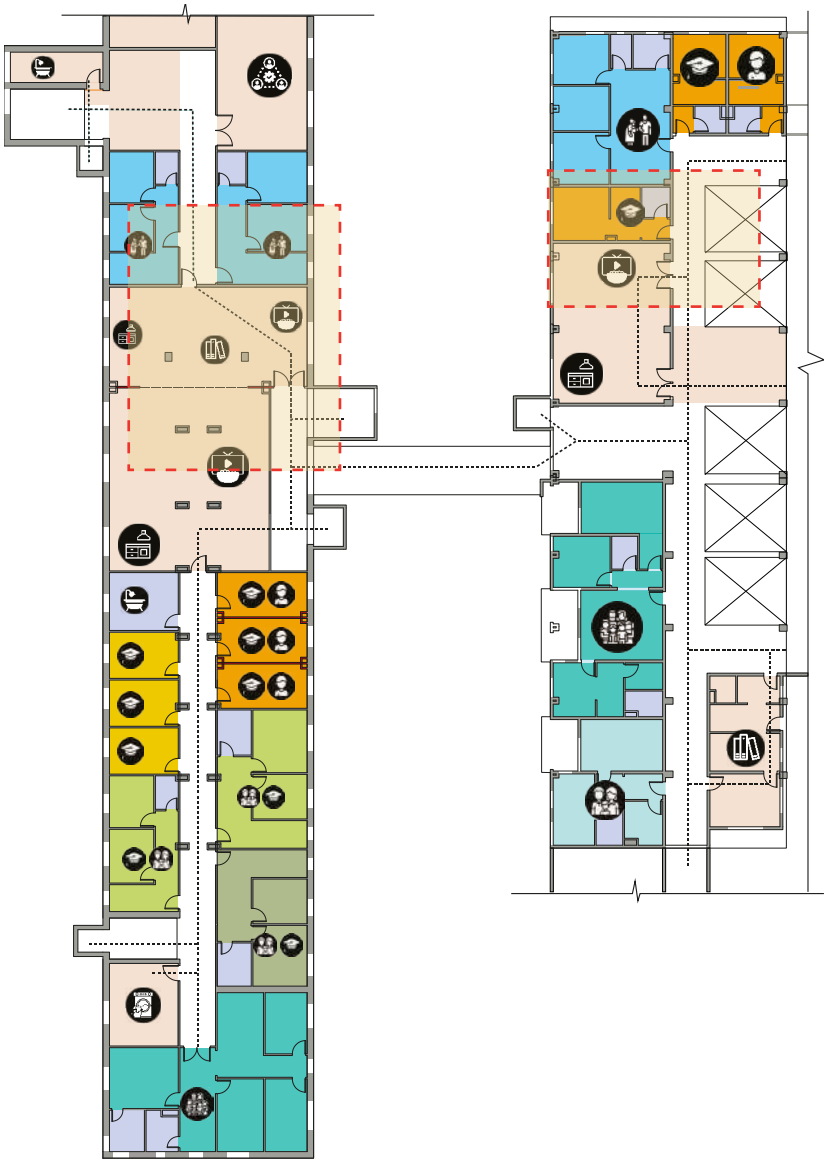
**Complementary**

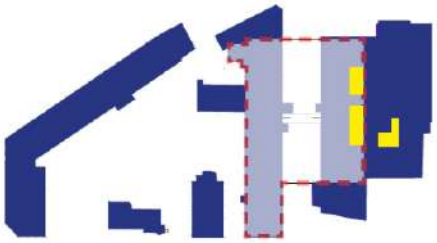
- Community Hall
- Silence Room
- Study Room
- Workshops
- Co-Working
- Zu Verschenken

**Neighbourhood**

- Gym
- Micro Library
- Work Cafe
- Daycare Centre

Fig. 5 - Detailed plan for the conversion of the Statistical Office building into affordable and sustainable housing.
Authors' work



Key Plan: location in the Schoettle-Areal

Fig. 6 - Development stages of a housing unit with the use of moveable walls and the possibility of growth by incorporating add-on rooms.
Authors' work

Stage 0: WG with 2 bedrooms + kitchen

Stage 1: WG with 3 individual rooms

Stage 2: Converted back to a large WG + kitchen

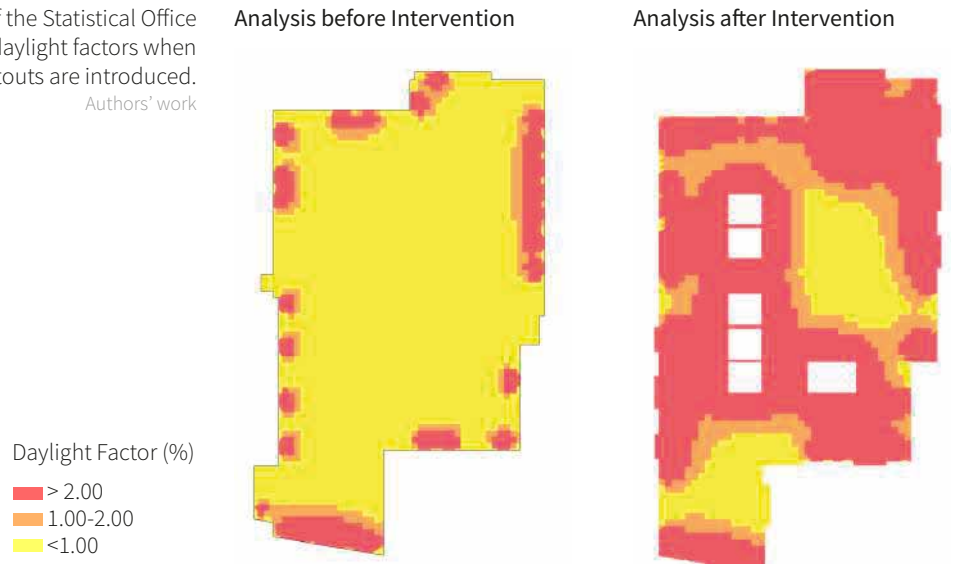
# Skylights

A key challenge for converting the building of the Statistical Office into livable housing units is providing each unit with the sufficient amount of natural light. A daylight analysis provided insights into the spatial limitations and potential solutions. The majority of the floor area receives a daylight factor lower than 1% when the optimal conditions require a daylight factor of 2%-6%. Due to the depth and height of the levels, new skylights were designed. The new openings achieve the target daylight factors for residential spaces in the EU (DIN EN 17037).

To achieve optimal daylight levels, skylights on each floor will allow natural light to pass through them. By optimizing the location and size of the skylights, the spatial quality and comfort of residents will improve. An additional daylight analysis considering the initial skylight design yielded a daylight factor over 2% for approximately 95% of the floor area (Fig. 8). Further investigations during the design process should consider external factors such as the seasonal path of the sun, which significantly influences the interior lighting conditions.

Fig. 7 - Section through the design area.
Authors' work

Fig. 8 - Daylight analysis of the Statistical Office building showing the increased daylight factors when lighting cutouts are introduced.
Authors' work




# Exhibition

The overall proposal for the transformation of the Schoettle-Areal, with focus on the Statistical Office, into flexible and affordable housing models was presented for the first time to a broader community as part of an exhibition and discussion on the weekend of July 16th and 17th 2022. The tailored strategy and design proposal received feedback from the potential future users and relevant actors in Heslach.

The feedback from the visitors and insights gathered during the exhibition weekend can serve further discussions with stakeholders with clearer design goals and contribute to a more accurate vision for the future development of the Schoettle-Areal as a housing complex. One of the main concerns that arose in topic discussions were whether people would be willing to share spaces that are currently understood as private like toilets, showers, and kitchens . Two questions obtained feedback on this issue.

**Would you be ready to share these spaces with other people?**

Visitors were asked about three spaces: the kitchen, living room, and bathroom.

Fifty responses were obtained: 35 from German citizens and 15 from foreign-born residents. Generally, there was an openness to share the three spaces (34 for, 16 against). There was no clear tendency regarding kitchens, with about a 50:50 split of respondents willing and not willing to share. However, 75% of respondents can imagine sharing a living room (13 for, 4 against), and 66% were open to sharing bathrooms.

**Which common spaces do you prefer to have? Which common spaces are not necessary?**

Visitors could choose from different common spaces: workshop, laundry room, multimedia room, study room, meditation terrace, and guest room.

Seventy responses were obtained. The common space with the most votes was the workshop / repair room in which tools for household repairs are shared among the residents. This can distribute the costs of expensive tools amongst the residents. In comparison, eleven common spaces only received one to two votes, indicating a lower level of interest. These include a: plumbing room, nursery, laundry service, multimedia room, study room, silence room, playroom, TV room, classroom, working café. Respondents made additional suggestions including a: meditation terrace, food-sharing place, and guest terrace.

With a virtual reality experience, visitors were able to visualize one shared space and get a sense of the atmosphere of living in the Statistical Office building.

Fig. 9 - A guided tour of the exhibition.
Authors' image


Fig. 10 - Visitors' responses on spaces they would readily share with other residents.
Authors' image

Fig. 11 - A visitor using the virtual reality to view one of the proposed interior spaces.
Authors' image

# Conclusion

The struggle to find affordable, long-term housing in Heslach offers a chance for an innovative housing model with a higher quality of life within fewer square meters. The development of flexible and social housing models from this project respond to that spatial scarcity and an unregulated housing market.

The project explores the potential of the Statistical Office building, to provide flexible and socially active residential spaces for the diverse and changing population of Heslach. With social spaces, the private and the public experiences of housing are transformed and offers housing security in the long-term and square meters flexibility in the short-term.

The acceptance by the exhibition's visitors of a flexible and shared housing model opens the chance for further explorations. Although there was some skepticism of the model as a whole, visitors welcomed specific aspects such as sharing a living room or bathroom. A common need for more social functions attached to the dwelling is a general takeaway from their feedback.

The spaces that residents are willing to share with their neighbours can be further researched through a temporary transformation of spaces. This can lead to new distinctions between communal spaces that promote social cohesion and functional sustainability and adaptable private spaces of retreat.

Das Ringen um bezahlbaren und dauerhaften Wohnraum in Heslach bietet die Chance, ein innovatives Wohnmodell mit höherer Lebensqualität auf weniger Quadratmetern zu entwickeln. Die Entwicklung flexibler und sozialer Wohnmodelle aus diesem Projekt reagiert auf die Platzknappheit und den spekulativen Wohnungsmarkt.

Das Projekt erkundet das Potenzial des Statistischen Landesamtgebäudes, flexible und sozial aktive Wohnräume für die vielfältige und sich verändernde Bevölkerung Heslachs bereitzustellen. Solche sozialen Räume können die privaten und öffentlichen Wohnerfahrungen verändern und tragen zur langfristigen Wohnsicherheit und kurzfristige Wohnraumflexibilität bei.

Die Akzeptanz eines flexiblen und gemeinschaftlichen Wohnmodells der Besucher*innen der Ausstellung eröffnet die Chance für weitere Erkundungen. Obwohl es eine gewisse Skepsis gegenüber dem Modell als Ganzes gab, begrüßten die Besucher*innen bestimmte Aspekte wie die gemeinsame Nutzung von Wohnzimmern und Badezimmern. Ein allgemeines Bedürfnis nach mehr sozialen Funktionen, die mit dem Wohnraum verbunden sind, ist eine allgemeine Erkenntnis aus ihrem Feedback.

Die Räume, die Bewohner*innen bereit sind, mit ihren Nachbarn*innen zu teilen, können durch die temporäre Transformation von Räumen weiter erforscht werden. Dies kann zu neuen Unterscheidungen zwischen Gemeinschaftsräumen, die den sozialen Zusammenhalt und die funktionale Nachhaltigkeit fördern, und anpassungsfähigen privaten Rückzugsräumen führen.

## References


UN-Habitat (2022): Housing. UN-Habitat Programme. Accessed in August 2022, at: <https://unhabitat.org/topic/housing>

empirica. (2023): Städte in Deutschland mit den höchsten Mietpreisen im Vergleich der Jahre 2016 und 2022* (in Euro pro Quadratmeter) [Graph]. Statista. Accessed in January 2023, at: <https://de.statista.com/statistik/daten/studie/1262479/umfrage/entwicklung-der-mieten-in-deutschlands-teuersten-staedten/>

Landeshauptstadt Stuttgart (2020): Datenkompass Stadtbezirke Stuttgart - Ausgabe 2019/2020. Landeshauptstadt Stuttgart.

Rosa Luxemburg Stiftung (2018): Housing financialization trends, actors, and processes. Brochure of the European Action Coalition for the Right to Housing and to the City. pp- 57. Brussels

Landeshauptstadt Stuttgart (2022): Sozial Monitoring der Landeshauptstadt Stuttgart. Landeshauptstadt Stuttgart. Accessed in August 2022, at: <https://statistik.stuttgart.de/statistiken/sozialmonitoring/atlas/Stadtbezirke/out/atlas.html>

housing-action-day (2022): 'Housing Action Day 2022' Press release. Accessed in January 2023, at: <https://www.housing-action-day.net/index.php/pressemeldungen/>

Fig. 1 - A vision of local economies taking root in the Schoettle-Areal.
Authors' work

# Local Economies

G. Machado Ferreira, G.A. Rivera Echavarría, M.P. Meijía Vanegas and Y. Al-Tubor

Many of the local and small business have closed in recent years. The causes include, rising rents, the prevalence of big business and franchises, the shift to online-commerce, and, most recently, the COVID-19 pandemic. We identified as consequences, the loss of local identity, reduced interpersonal and social ties, and disproportionate offers of free space open for leisure, local trade, and a sharing economy. To address this issue, we propose the transformation of the Schoettle-Areal to meet the demand for affordable, public, and flexible spaces beyond the interests of real estate investors and speculation. Once the city of Stuttgart becomes the owner of the statistical office building, these public interests and spaces can be implemented and maintained in the long-term.

The availability, distribution, and occupancy of such spaces will be a collective project that relies on the participation and engagement of neighbours, local businesses, and public and private stakeholders. This assures that the joint aim of promoting local commerce can be adapted to the evolving needs of Heslach, and that the spaces can remain affordable.

Viele der lokalen und kleinen Geschäfte mussten in den letzten Jahren schließen. Die Ursachen reichen von steigenden Mieten, der Verbreitung von Groß- und Franchiseunternehmen, der Verlagerung zum Online-Handel und zuletzt der COVID-19-Pandemie. Als Folgen identifizierten wir den Verlust der lokalen Identität, reduzierte zwischenmenschliche und soziale Bindungen und unzureichende Angebote an Freiräumen für Freizeit, lokalen Handel und eine Sharing Economy. Um dieses Problem anzugehen, schlagen wir eine Umgestaltung des Schoettle-Areals vor, die die Nachfrage nach bezahlbaren, öffentlichen und flexiblen Räumen jenseits der Interessen von Immobilieninvestoren und Spekulationen befriedigt. Wird die Stadt Stuttgart Eigentümerin des statistischen Landesamtsgebäudes, können diese öffentlichen Belange und Flächen langfristig umgesetzt und erhalten werden.

Die Verfügbarkeit, Verteilung und Belegung solcher Räume soll ein kollektives Projekt sein, das auf der Beteiligung und dem Engagement von Nachbarn*innen, lokalen Unternehmen sowie öffentlichen und privaten Interessengruppen beruht. Damit wird sichergestellt, dass das gemeinsame Ziel der Förderung des lokalen Gewerbes an die sich wandelnden Bedürfnisse Heslachs angepasst werden kann und die Flächen bezahlbar bleiben.

# Analysis and Scenarios

After our analysis, we describe the current situation as an outward-oriented economic model. We then formulated key aspects to achieve a neighbourhood-oriented model (Fig. 3). While the outward model allows and promotes investments from larger businesses, thereby enabling faster growth, the neighbourhood model would prioritize locally driven investments and co-production that keeps the model economically self-sufficient. The creation of a protection program and an informal economic zone in Heslach for local economies would mitigate gentrification by preventing the encroachment of big businesses. Gaps in funding should be filled by the city administration or through the Wirtschaftsförderung Region Stuttgart. This would result in an even 'playing field' for small businesses and provide long-term opportunities for local start-ups that operate with business practices that predicate a degree of internal formalization.

# Project Timeline

To visualize the implementation of the neighbourhood-oriented model, we planned five phases between 2022 and 2030 (Fig. 2). The first phase includes the creation of a "pre-network" of stakeholders that collectively organize to acquire land use permissions and fundraisers. The second phase sees the licensing and funding secured for local businesses, along with workshops and educational events supported by established actors. The third phase includes the implementation on-site, which will be explored through our design proposal. The fourth and fifth phases are conceptualized as open-ended monitoring and improvement phases to ensure the longevity of the model through continuous adaptation. As a step before the creation of the pre-network, a mock-up proposal attempts to conceptualize an affordable and flexible structure that can be adapted for various types of businesses.

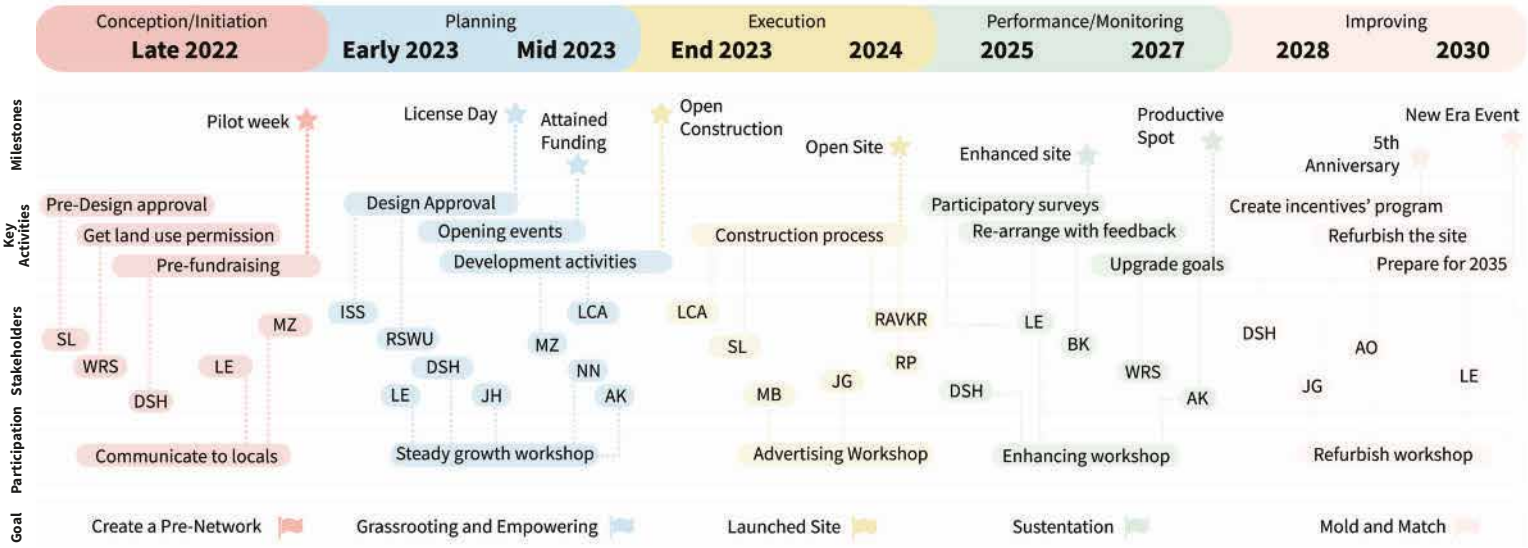



Fig. 2 - Project timeline in five phases depicting various milestones, activities, relevant stakeholders, and process descriptions.
Authors' work

SL: Statistisches Landesamt BW
WRS: Wirtschaftsförderung Region Stuttgart
RSWU: Referat Städtebau Wohnen und Umwelt
MZ: MüZe Süd
ISS: Institut für Stadtplanung und Sozialforschung
LCA: Local construction and architectural offices
JG: Joblinge Gemeinnützige AG Stuttgart
AK: Accesio Kapital
LE: Local Economies
RP: Rosspartner
NN: Neuer Norden
CS: City of Stuttgart
BK: Baukultur
JH: Jugendhaus Heslach
MB: MM Bau Ecological Construction Company
RAVKR: Referat Allegemeine Verwaltung, Kultur und Recht
AO: Amt für öffentliche Ordnung
DSH: Der Süden, Handels-Gewerbe


Fig. 3 - The guiding principle of flexible and affordable local economies as juxtaposed by the profit-oriented corporate norm.
Authors' work

Fig. 4 - Visions of the project depicting the active and collaborative atmosphere in the Schoettle-Areal.
Authors' work

# Flexible Marketplace

We opted for three-meter tall modular unit (Fig. 5) made up of flexible roof panels and frames. This mock-up is designed to be temporary, easily assembled on site, and low-cost. By joining six modules together, a freestanding structure forms and can be joined with further structures, making it spatially adaptable. The network of structures allows free circulation and visibility.

Designed as an outdoor structure, the modules are useable throughout the year, regardless of season (Fig. 6). We achieve the seasonal flexibility by exchanging the roof panels, which can close entirely to offer protection from the wind, rain, and snow or opened to allow for better air circulation during the summer. By opening the roof entirely, open plazas are created within the network of structures that cater to activities such as urban gardening, play areas, or communal events. In order for the structures to meet the individual needs of specific businesses, variations and add-ons can be attached, such as storage options, product displays, or seating incorporated into the vertical base (Fig. 7). This allows for a broad range of commercial businesses to coexist with public amenities and services.

We visualize an example proposal at the junction of the Mörikestraße and the Eierstraße, which has been extended into the Schoettle-Areal as a pedestrian zone (“Connecting through Greenery”) (Fig. 8). A cooperation of commercial spaces is reproduced in the network of structures. The activation of the ground floor of the adjacent buildings as productive spaces or permanent businesses support the informal and ever changing nature of local economies.

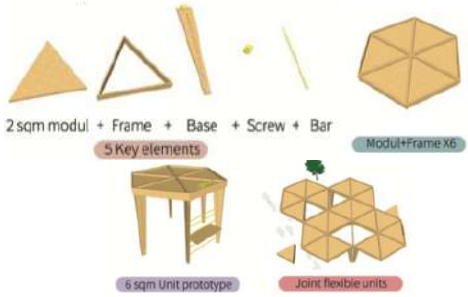



Fig. 5 - Components of singular modules and their composition into joinable units.
Authors' work

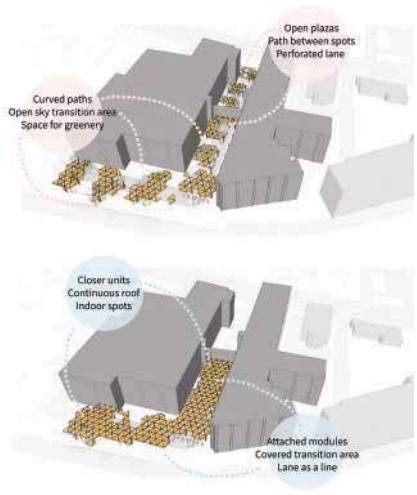



Fig. 6 - Seasonal conditions dictate the density of the modular structure.
Authors' work

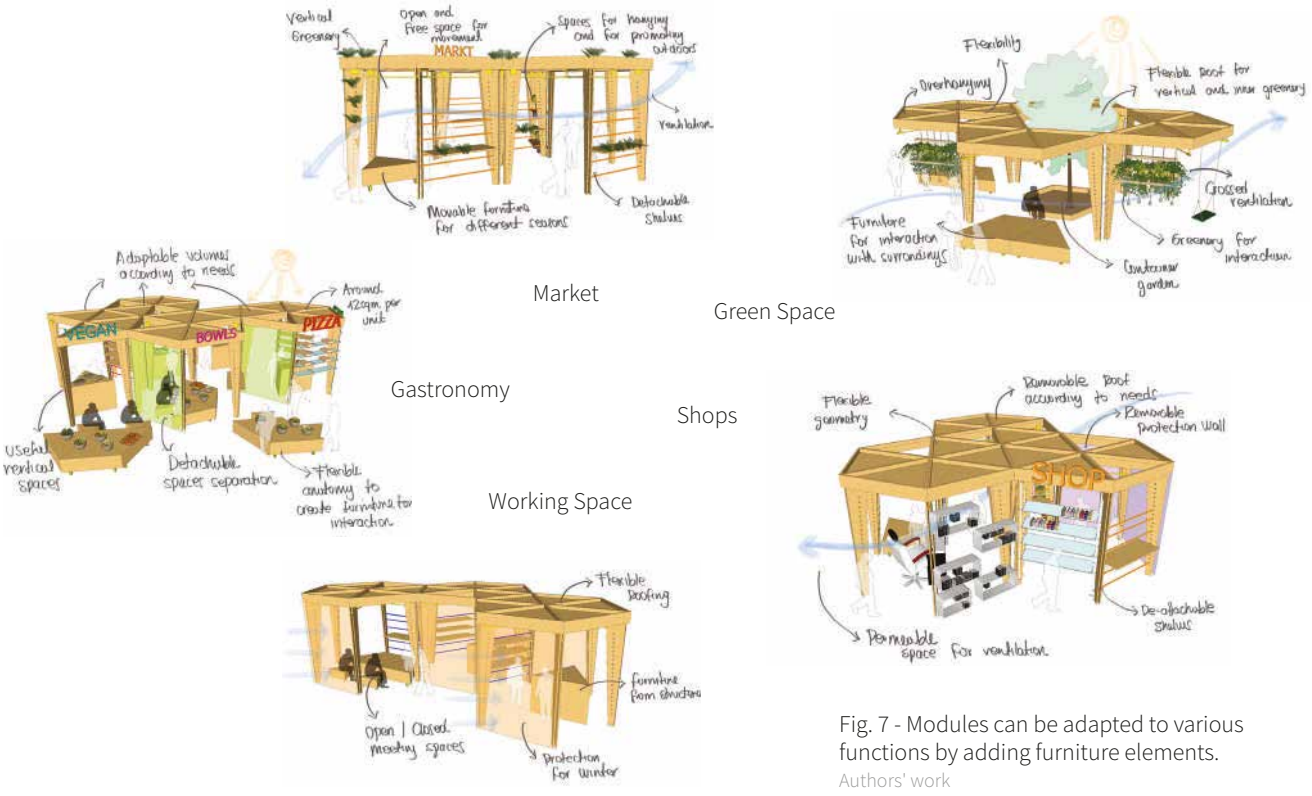



Fig. 7 - Modules can be adapted to various functions by adding furniture elements.
Authors' work

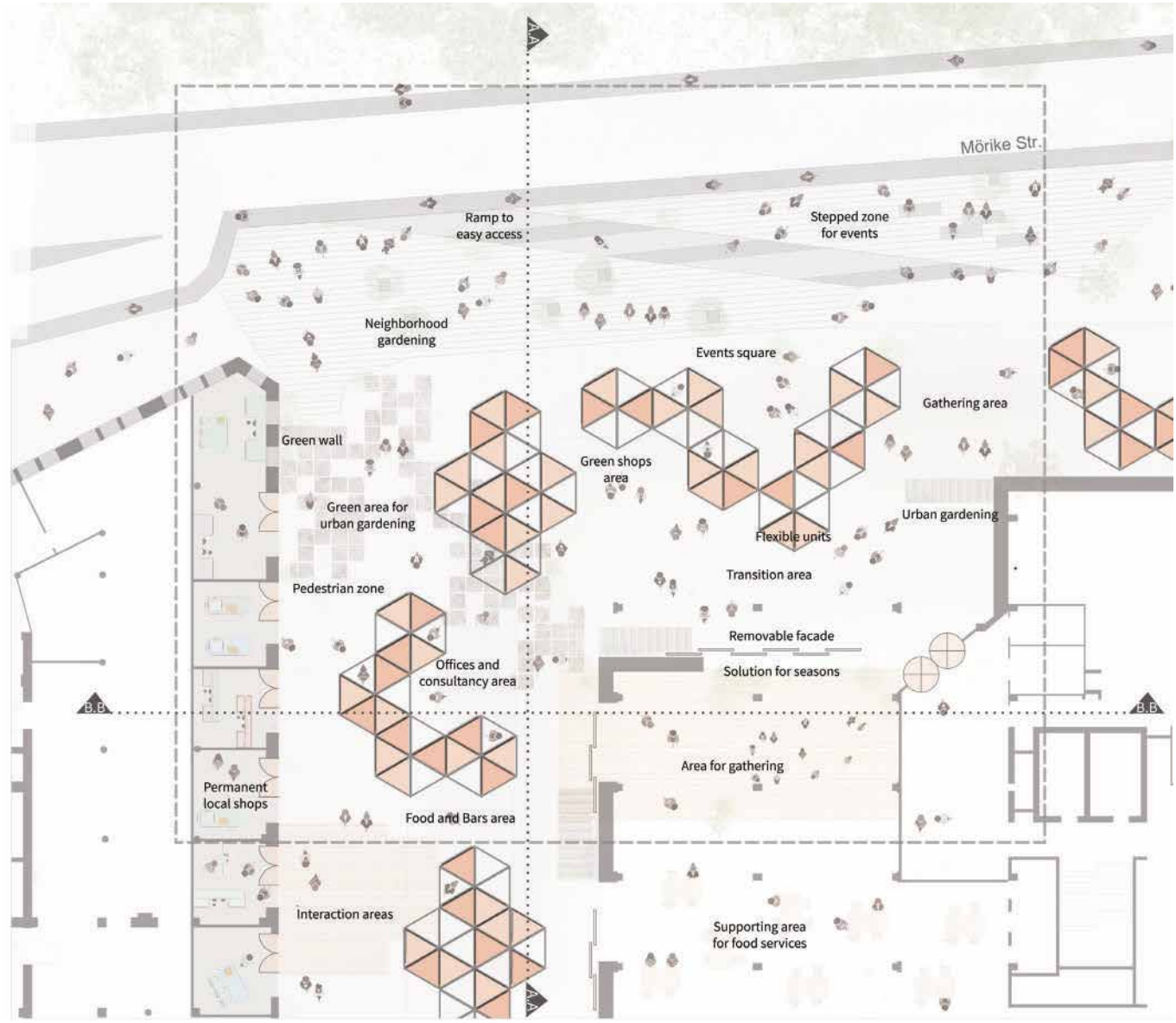
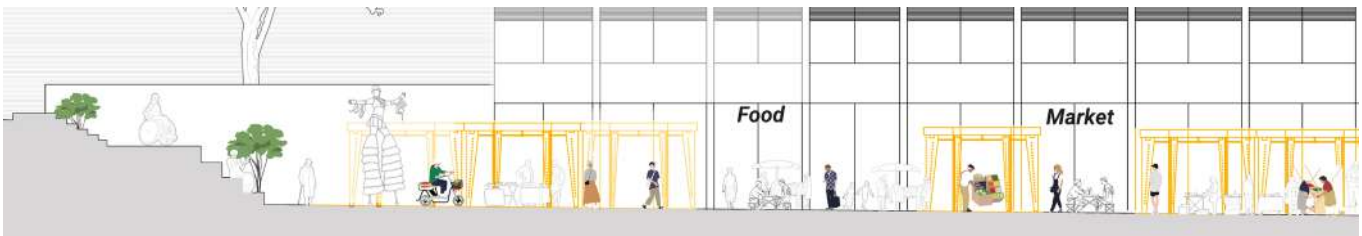



Fig. 8 - Site Plan.
Authors' work

Fig. 9 - Section A (top) and Section B (bottom).
Authors' work




# Exhibition

A 1:1 prototype of the structure was built for the exhibition and discussion on the weekend of July 16th and 17th 2022, allowing visitors to develop realistic impressions of the spaces proposed in the design. Our strategy proposal hung from the structure that demonstrated the integration of shelving and storage. We conducted surveys and interviews using the structure to collect visitors' impressions about flexible and temporary economic spaces. When the visitors were business owners themselves, we gathered feedback on how they would use such spaces for their own businesses and enterprises. We asked about the number of modules they would need and their willingness to share a space with other businesses.

Eighty-five percent of respondents were keen on using the structure to promote their businesses and share the structure with other entrepreneurs (60% would share the structure with at most three other parties). On the other hand, 75% of respondents showed concerns about services like running water and electricity in the modules. This is tied to concerns of the additional operating costs of the structure, expressed by 85% of respondents. Most of them understood the modules as a secondary venue to their main operation elsewhere.

Additionally, a virtual reality experience depicted a vibrant example of how the space can be used to its full potential (Fig. 10). A special activity for children asked them to find four characters hidden in the image of the design proposal (Fig. 11). A wall of ideas was offered towards to end of the interaction to collect further comments and suggestions (Fig. 12).

Fig. 10 - Virtual reality.
Authors' image

Fig. 11 - Presenting the vision.
Authors' image


Fig. 12 - Wall of ideas.
Authors' image

# Conclusion

To counteract the decline of small businesses in Heslach, this proposal promotes local economies through a set of flexible approaches and modular principles. The prioritisation of local small businesses and start-ups together with proper funding over investments of larger businesses can be ensured by city of Stuttgart in collaboration with other public initiatives. A network of motivated and engaged members of the community exists; further support can turn them into an organized body that sets collective goals and guidelines, while facilitating the integration of new enterprises to the network and a better distribution of funds.

Lastly, the examination of spatial concepts and architectural possibilities for local economies to operate self-sufficiently plays not only a practical role in ensuring commercial needs, but also contributes to a positive impact by increasing engagement within the community, improving human-wellbeing through the incorporation of greenery and environmental design, and conveying a new identity of the Schoettle-Areal.

Um dem Rückgang der Kleinunternehmen in Heslach entgegenzuwirken, fördert dieser Vorschlag die lokale Wirtschaft durch eine Reihe flexibler Ansätze und modularer Prinzipien. Die Priorisierung lokaler, kleiner Unternehmen und Start-ups zusammen mit einer angemessenen Finanzierung gegenüber Investitionen größerer Unternehmen könnte von der Stadt Stuttgart in Zusammenarbeit mit anderen öffentlichen Initiativen sichergestellt werden. Es existiert ein Netzwerk aus motivierten und engagierten Mitgliedern der Nachbarschaft; weitere Unterstützung könnte dies in eine organisierte Körperschaft verwandeln, die gemeinsame Ziele und Richtlinien festlegt, während sie gleichzeitig die Integration neuer Unternehmen in das Netzwerk und eine bessere Verteilung der Mittel sicherstellt.

Schließlich spielt die Prüfung räumlicher Konzepte und architektonischer Möglichkeiten für die lokale Wirtschaft selbständig zu operieren, nicht nur eine praktische Rolle bei der Sicherstellung kommerzieller Bedürfnisse, sondern trägt auch zu einer positiven Wirkung bei, indem das Engagement innerhalb der Gemeinschaft erhöht und das menschliche Wohlbefinden durch die Eingliederung von Grün- und Umweltgestaltung verbessert und eine neue Identität des Schoettle-Areals vermittelt wird.

## References

Schulz, W. (2014): Crazy Futures for Cities, Communities, and Other Human Concatenations. <https://doi.org/10.13140/2.1.1070.3682>

Waldheim, C. (2018): Forward: The Activation and Curation of Flexible Public Spaces. In: Staging Urban Landscapes. pp. 6-7. <https://doi.org/10.1515/9783035610468-006>

Reed, C. (2018): Open-Ended: Public Spaces as Complex Adaptive Systems: The Activation and Curation of Flexible Public Spaces. In: Staging Urban Landscapes. pp. 46-53. <https://doi.org/10.1515/9783035610468-046>

Norozi, S.; Javan Forouzande, A. (2021): Analyzing the aspects of participation concept in the process of public space design 10. pp. 49-62. <https://doi.org/10.34785/J011.2021.503>

Fig. 1 - A vision of social interactions driven by urban gardening.
Authors' work

# Seedling for Social Interactions

A. Shrivastava, A.-K. Schneider, S. Maharjan and V. Kumar

Spaces create the possibility of (inter)actions between users but its functions are usually pre-defined. Regardless of the design of a space, people may use it in ways unexpected by the planning team; spaces are always multi-functional and defined by the interactions of people. These interactions may change the functions over time, reflected in a physical transformation of the space.

This project defines places as spaces inhabited and transformed by groups of people through experiences and social (inter)actions, and the role of the planning team is understood as a 'planter of seedlings' for social interaction. By creating social meeting-points throughout the Schoettle-Areal with a simple pre-design framework, dimensions, and materials, further co-creative processes can be undertaken by the community. Different properties like privacy, size, location, or in- and outdoor noise-levels will render the specific character for each space, seedling a certain type of multi-functionality that ties the Schoettle-Areal together with its close surroundings.

An exemplary design portrays this concept in detail. East of the Statistical Office, a green area will be pre-designed for neighbours to create and maintain an urban garden, which also builds a new physical connection between Mörike- and Böblinger Straße. Blue infrastructure elements will provide social, regulating, and supporting ecosystem services that further frame the character of the space.

Räume schaffen die Möglichkeit für Interaktionen zwischen Nutzer*innen, aber ihre Funktionen sind normalerweise vordefiniert. Unabhängig von der Gestaltung eines Raums können Menschen ihn auf eine vom Planungsteam unerwartete Weise nutzen; Räume sind immer multifunktional und durch die Interaktionen der Menschen definiert. Diese Interaktionen können die Funktionen im Laufe der Zeit verändern, was sich in einer physischen Transformation des Raums widerspiegelt.

Dieses Projekt definiert Orte als Räume, die von Menschen durch ihre Erfahrungen und ihre sozialen Interaktionen belebt und transformiert werden. Die Rolle des Planungsteams wird als ein „Planter of Seedlings" für soziale Interaktion verstanden. Durch die Schaffung sozialer Treffpunkte im gesamten Schoettle-Areal mit vordefinierten Gestaltungsvorgaben, Dimensionen und Materialien können weitere co-kreative Prozesse von der Gemeinschaft durchgeführt werden. Unterschiedliche Kriterien wie Privatsphäre, Größe, Lage oder Innen- und Außengeräuschpegel verleihen jedem Raum seinen spezifischen Charakter und schaffen eine gewisse Multifunktionalität, die das Schoettle-Areal mit seiner unmittelbaren Umgebung verbindet.

Ein exemplarischer Entwurf stellt dieses Konzept im Detail dar. Östlich des Statistischen Landesamtes wird eine Grünfläche für die Anlage eines Stadtgartens für Nachbar*innen vorgestaltet, der auch eine neue räumliche Verbindung zwischen Mörike- und Böblinger Straße herstellt. Blaue Infrastrukturelemente werden soziale, regulierende und unterstützende Ökosystemleistungen erbringen, die den Charakter des Raums weiter prägen.

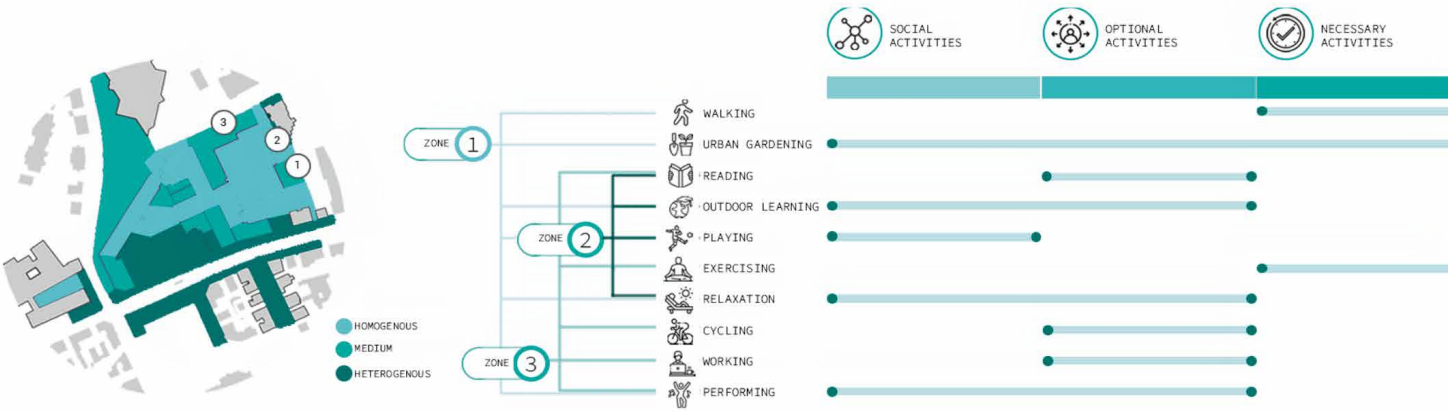
# Why Social Interactions?

In social (public) spaces, users and activities are changing during the day and over time. The systematization of spaces in terms of size, in- or outdoor, time, thermal comfort, level of privacy, and surrounding built environment reveal spatial opportunities for planning activities to have a better performance. Understanding these will not stop users from trying to adapt the space through time, but will increase the chances of longer engagement from users and space resilience. To understand the possibilities inside the Schoettle-Areal, different qualities were divided into layers such as privacy, noise, and thermal comfort levels during winter and summer (Fig. 2). With an overlay of these layers, we created zones with new qualities, turned into design proposals to either mitigate or enhance certain activities.

A further dissection according to Gehl's categorization of outdoor activities revealed three zones for social activities, optional activities, and essential activities. Urban gardening was selected as a key strategy as it offers multiple levels of these social interactions (Fig. 3).


Fig. 2 - Mapping quality of spaces.
Authors' work

Fig. 3 - Analyzing quality of spaces for activity suitability.
Authors' work

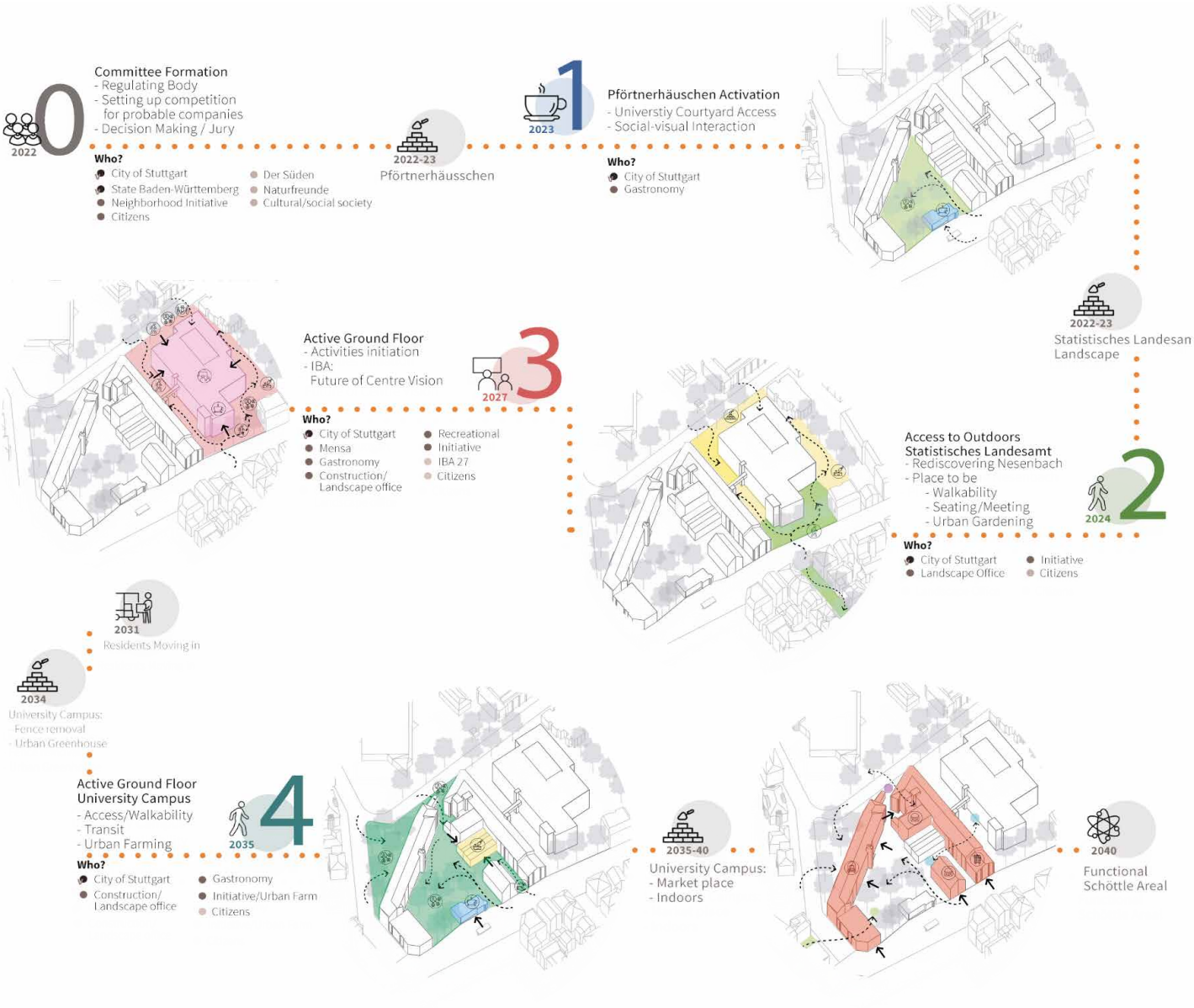


# Project Timeline

As a strategy, the project divides the objective of creating pre-designed spaces into incremental steps that test at each new phase a new and bigger space and engages key neighbours with specific spaces. The initial phase aims for the formation of committees in which those key neighbours evolve into representatives from different activities that can regulate the expected transformations and can establish design guidelines to achieve them in a consented manner.

The first physical intervention proposed is the activation of the 'Pförtnerhaus' through changes to the outdoor area to promote participation of the neighbourhood in the subsequent planning steps. For both the statistical office building and the university campus, the transformation of the surrounding outdoor space will gradually lead to the activation of the ground floors, for which a variety of public to semi-public uses such as a market hall, youth hostel, co-working spaces, and workshops are proposed. This strategy can occur with, or parallel to the IBA exhibition. The strategy also plans for a fully transformed Schoettle-Areal by 2040.

Fig. 4 - Project timeline.
Authors' work



# Urban Gardening as a Strategy

Based on the spatial qualities and on-site interviews, urban gardening is the activity that gathered the most references as an adaptable catalyst for social interactions. To conceptualize a strategy, we drew parallels between the stages of the growth of a plant and design phases: beginning with the sowing of a seed to the sprouting of a seedling (Fig. 5). From early stages, the method 'real-world experiment' is introduced to let neighbours prototype and iterate, culminating in the establishment of gardening platforms that should cooperate with the Schoettle-Areal initiative to serve as facilitators for the planning of social garden areas.

The next stage comprises the vegetative stage of a plant's growth, conceptualized as the constitution of different areas in the garden by the community, providing clear visibility of the project from the outside. Once completed, activities can 'begin to blossom', changing according to seasons needs of the users. Educational activities for youth can complement the processes of 'planting and harvesting' while leaving room for communal leisure activities like barbecues and play areas. Finally, with the vacancy of the campus, economic factors can be explored by adding on greenhouses, establishing food-sharing practices, or farmer's markets.

Fig. 5 - Urban gardening strategy.
Authors' work

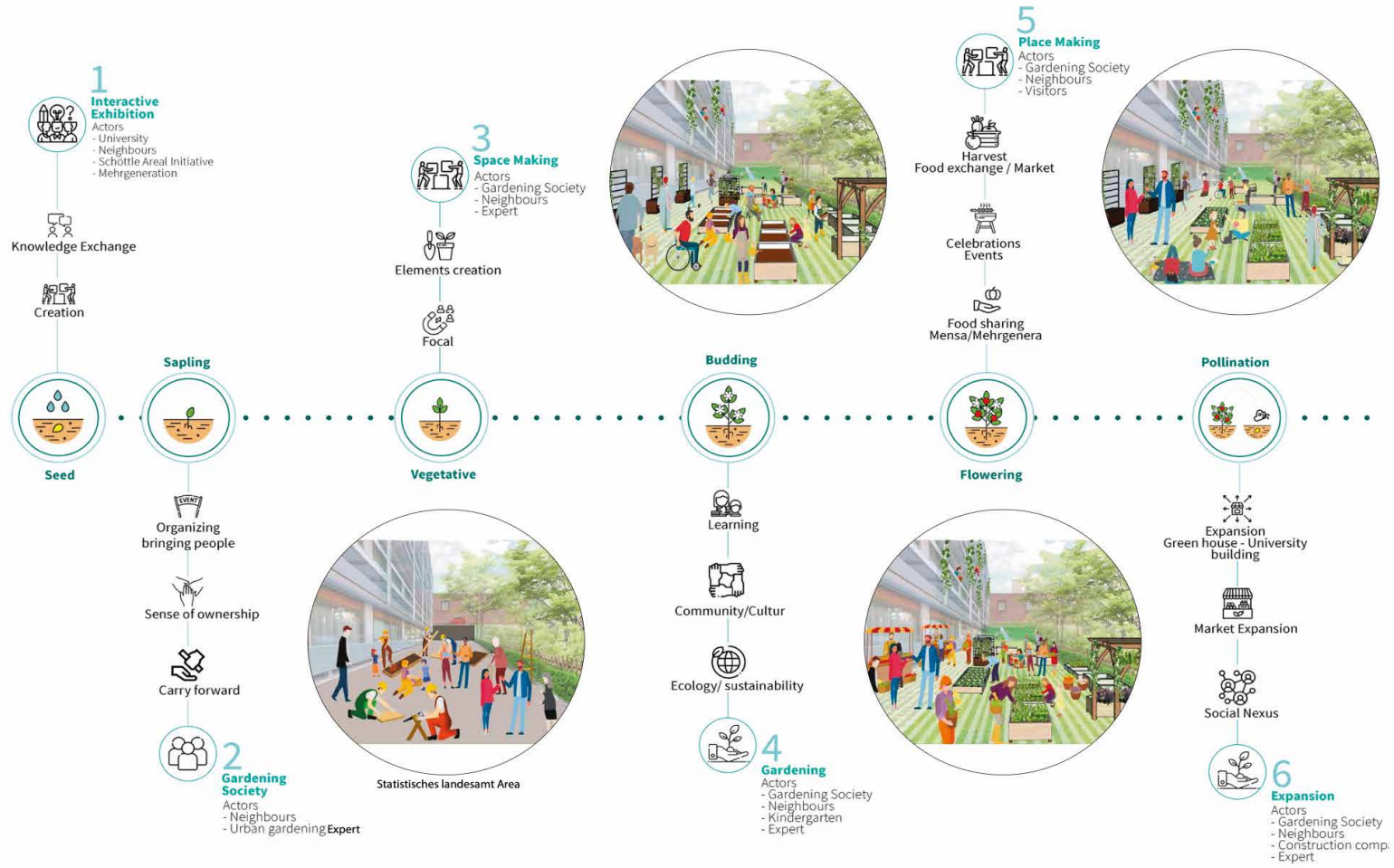
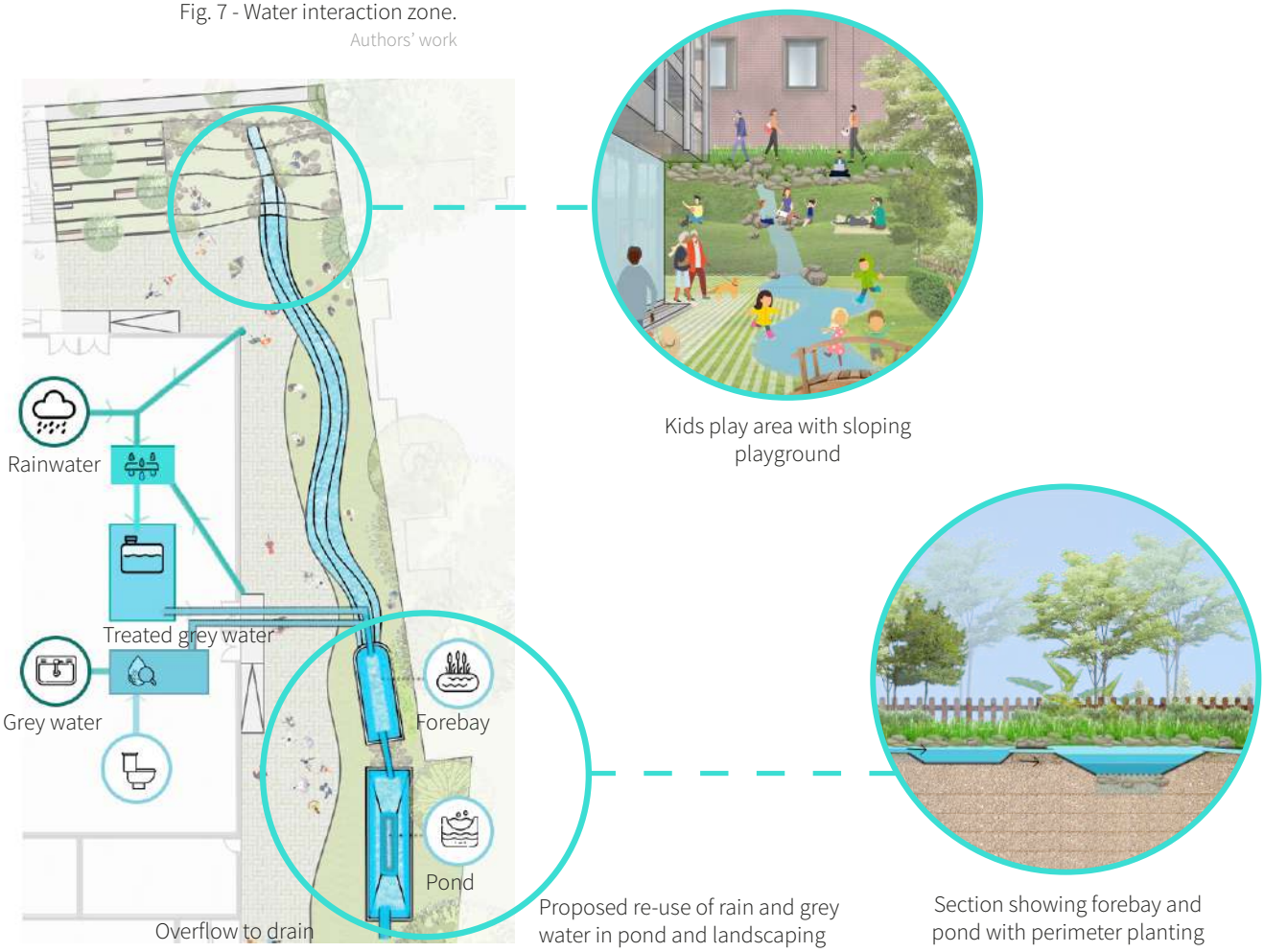



Fig. 6 - Potential activities in the recreational zone throughout the day.
Authors' work

As part of a pre-design phase, the current physical disconnection between the pedestrian entry on Mörikestraße and the outdoor area east of the statistical office is transformed into a public tribune for spatial connection, easy access, and to enable social interactions. By introducing steps to bridge the two meter height difference, further activities are offered to the surrounding neighbourhood throughout the day (Fig. 6). The water element itself serves not only as a demonstration for rainwater harvesting and grey water filtration, but also as an element for play and cooling (Fig. 7). Together, these elements contribute to a functional yet nature-based landscape that provides users of all groups many opportunities to interact with one another.

Fig. 7 - Water interaction zone.
Authors' work



# Exhibition

The overall proposal for the transformation of the Schoettle-Areal, with a focus on the outdoor area east of Statistical Office, into a pre-designed space for 'the blossom of' urban gardening was presented for the first time to a broader community, as part of an exhibition and discussion on the weekend of July 16th and 17th 2022. The strategy received feedback from the potential future users and relevant actors in Heslach.

For us the interactive exhibition was the seedling stage. We used a prototype of the first activities in the garden to present the design proposal. The structure of the exhibition followed the design phases / stages of plant growth, emphasizing the unfolding nature of the intervention. We used two methods to gather feedback. First, we offered building blocks to design a garden, with each block simulating different areas that allowed visitors to design their perfect garden area (Fig. 8). However, this method was too abstract and most visitors were unsure about their responses. Additionally, we provided seedlings for children to experience repotting.

Secondly, a pinboard collected visitor's thoughts on urban gardening (Fig. 9). Visitors responded to the following questions: 1) What experiences do you have in urban gardening?, 2) what is your favourite part about urban gardening, and 3) What resources are required to being or participate in urban gardening? Many visitors had little experience with, or little success in, cultivating their own plants, many citing a lack of time due to work or a lack of technical knowledge on plant growth. This highlights the potential of urban gardening as a collaborative learning experience.

While visitors had different interests regarding urban gardening, such as selling, cooking, or eating the harvested produce, the majority viewed the concept of "working together" as their favourite aspect. This underlines the importance of realizing urban gardening as a coproductive process (Fig. 10). The responses mentioned a number of challenges ranging from lack of resources to language barriers, pointing out the need for specific sub-strategies to address specific challenges for the community.

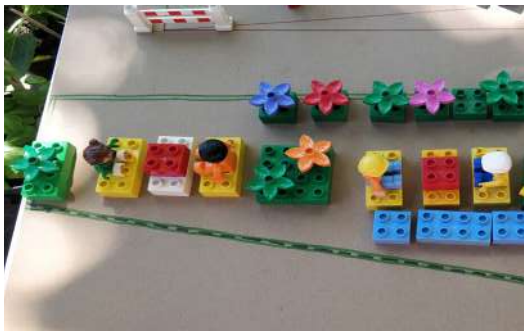


Fig. 8 - Building blocks used for visualization.
Authors' image

Fig. 9 - Pinboard to collect feedback.
Authors' image

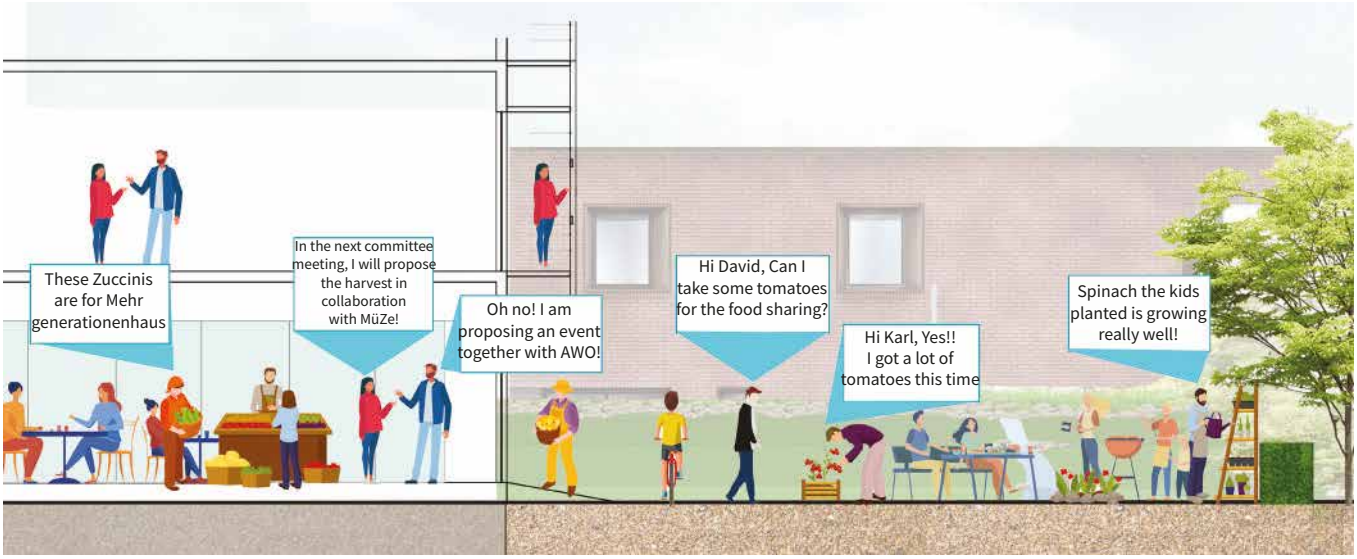



Fig. 10 - Urban gardening as a coproductive process.
Authors' work

# Conclusion

A clear dissection of spatial qualities and the possibilities they offer for social interactions coupled with a basic pre-design proposal that enhances long-lasting engagement is the basis of this proposal. The role of the design and planning teams is reduced to identifying the atmosphere of places and its potentials, leaving the expected and continuous transformation of the spaces to the users.

Identifying and strategizing activities, in this case urban gardening, as a seedling for social interactions helped understand the challenges and barriers groups of neighbours or communities will face if they organize and administer a space themselves. Carrying this understanding forward throughout the strategic development of the Schoettle-Areal is essential to foster communication, exchange, and a sense of belonging among the groups involved in the urban transformation of the Areal. This steady communication and its culture of conflict resolution will in turn ensure the resilience of a space and its community.

Eine klare Aufgliederung räumlicher Qualitäten und der Möglichkeiten, die sie für soziale Interaktionen bieten, gepaart mit einem elementaren Vorentwurf, der ein langanhaltendes Engagement fördert, ist die Grundlage dieses Entwurfs. Die Rolle des Planungsteams reduziert sich darauf, die Atmosphäre von Orten und ihre Potenziale zu identifizieren, und überlässt die zu erwartende und ständige Neugestaltung des Raumes den Benutzer*innen.

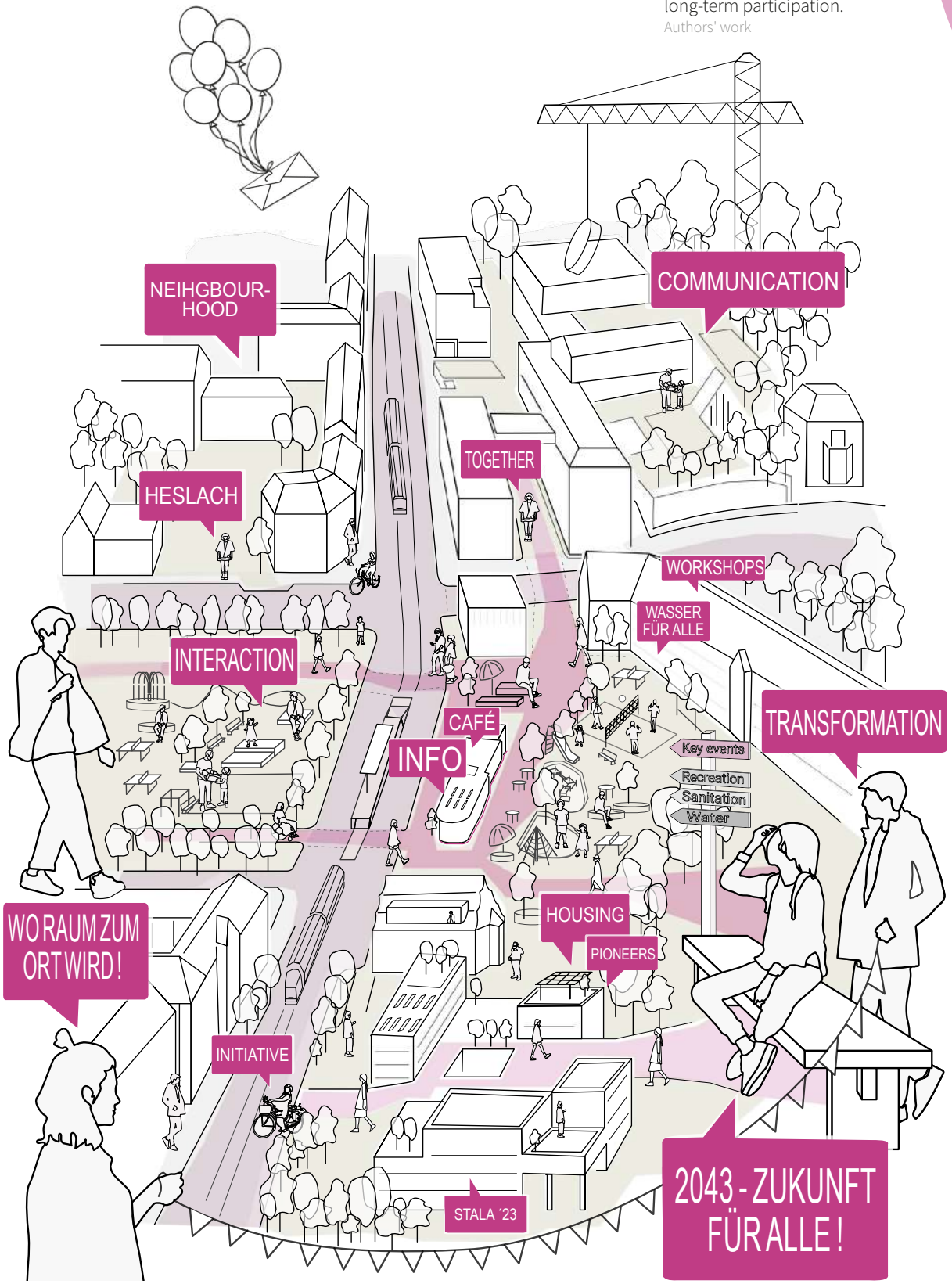
Das Identifizieren und Planung von Aktivitäten- in diesem Fall das urbane Gärtnern- als Keimzelle für soziale Interaktionen half dabei, die Herausforderungen und Hindernisse zu verstehen, denen Personen gegenüberstehen, wenn sie einen Raum selbst organisieren und verwalten. Die Fortführung dieses Verständnisses in der strategischen Entwicklung des Schoettle-Areals ist unerlässlich, um die Kommunikation, den Austausch und das Zugehörigkeitsgefühl der an der urbanen Transformation des Areals beteiligten Gruppen zu fördern. Diese stetige Kommunikation und ihre Kultur der Konfliktlösung werden wiederum die Resilienz des Raums und seiner Gemeinschaft sicherstellen.

## References

Gehl, J.; Koch, J. (1987): Life between buildings: using public space. New York, Van Nostrand Reinhold.

Hartup, W.W. (1989): Social relationships and their developmental significance. American psychologist, 44(2), p.120.

Fig. 1 - A meaningful interaction towards long-term participation.
Authors' work



# Wasser für Alle

S. Rao, V. Krimmer, V. Ük and V. Geiselbrechtinger

The importance of facilitating long-term participation and inclusion of vulnerable groups in planning processes was established from previous analyses. Applying the indicators for degrees of vulnerability, existing social groups that are subjected to multi-faceted discriminations were identified. Two of these groups, children and the homeless, provided the necessary starting points in pursuing a needs-based strategy in the development of the Schoettle-Areal. Aspects that are essential for this strategy are adaptability, flexibility, identity, safety, and addressing potential conflicts.

The goal of this project is to create opportunities and design processes that enable long-term participation and decision-making of children and homeless people. Preliminary sub-goals include: 1) spatial integration to address social segregation, 2) social and spatial flexibility that adapts over time, and 3) interactions for acceptance, awareness, and dignity.

Aus früheren Analysen ging hervor, wie wichtig es ist, eine langfristige Beteiligung und Einbeziehung vulnerabler Gruppen in Planungsprozesse zu ermöglichen. Anhand der Indikatoren für Vulnerabilitätsgrade wurden bestehende gesellschaftliche Gruppen identifiziert, die vielfältigen Diskriminierungen ausgesetzt sind. Zwei dieser Gruppen, Kinder und Obdachlose, lieferten die notwendigen Ansatzpunkte, um eine bedarfsgerechte Strategie bei der Entwicklung des Schoettle-Areals zu verfolgen. Wesentliche Aspekte dieser Strategie sind Anpassungsfähigkeit, Flexibilität, Identität, Sicherheit und der Umgang mit potenziellen Konflikten.

Ziel dieses Projektes ist es, Möglichkeiten zu schaffen und Prozesse zu gestalten, die eine langfristige Teilhabe und Entscheidungsfindung von Kindern und Obdachlosen ermöglichen. Zu den vorläufigen Teilzielen gehören: a) räumliche Integration zur Bewältigung sozialer Segregation, b) soziale und räumliche Flexibilität, die sich im Laufe der Zeit wandelt, und 3) Interaktionen für Akzeptanz, Bewusstsein und Würde.

# Scenarios for a Shared Future

Through interviews with children and homeless people, the activities (Fig. 2) and interactions (Fig. 3) of both groups were traced according to their spatial occupancies in and around Schoettle-Areal. The connecting points in each 24-hour map provided insights into potential communal activities that addresses both group's needs and led to the proposal of two scenarios.

### Scenario 1: Functional Water for Food Growing

The existing food-sharing network at Erwin-Schoettle-Platz serves as a foundation for this scenario. The participation and collaboration of children and homeless people, the addition of local food cultivation and production, and a greater involvement of existing and new actors in the area are essential factors of this scenario (Fig. 4), which aims to:

- Connect with local schools to gather parental consent.
- Educate about the benefits of food sharing and the use of water in the cultivation of food.
- Empower homeless people to be involved in the growing of food with the children.
- Ensure continuous exchange at eye-level for all parties involved.

### Scenario 2: Water as a Social Binder

The introduction of blue infrastructure to the area addresses the children's need for play. Additionally, it can provide public access to potable water, which is a necessity for homeless people, as well as a right for everybody. For the participation and collaboration of children and homeless people, the support of existing and new actors in the area are essential factors of this scenario (Fig. 5), which aims to:

- Connect with local schools to gather parental consent.
- Educate groups about the benefits of recreational areas and sustainable water consumption.
- Introduce an information centre to raise awareness on sanitation and recycling water in public spaces.
- Realize a prototype of a play area with water and sanitation facilities.
- Ensure continued maintenance and well-being of vulnerable groups.

The synergies from both proposals correspond to three focal milestones: the Statistical Office vacancy, the IBA-Exhibition in 2027, and the probable vacancy of the University Campus. Key events along the way provide opportunities for participation.

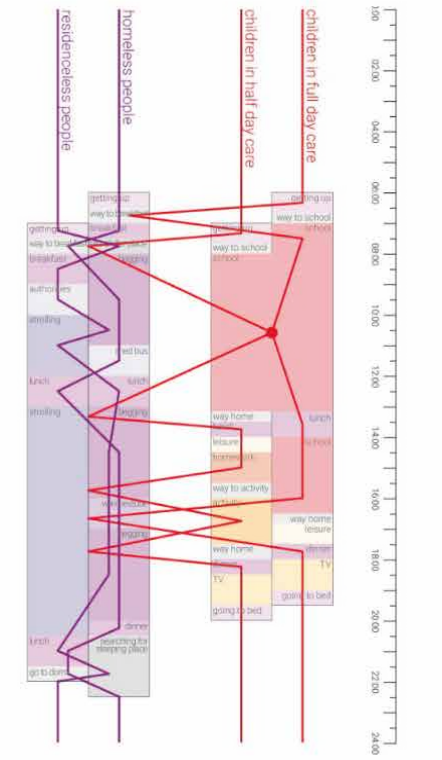



Fig. 2 - Gaps in the 24-hour map of activities of children and homeless people.
Authors' work

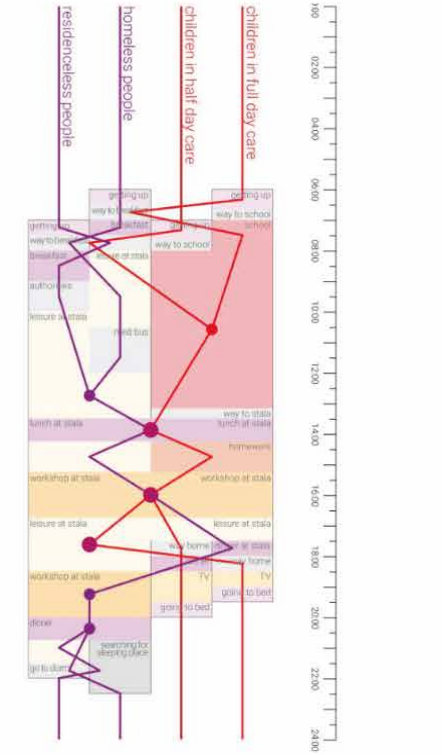



Fig. 3 - Instances of interaction in the 24-hour map of activities of children and homeless people.
Authors' work

Fig. 4 - Scenario 1: Functional Water for Food Growing

Authors' work

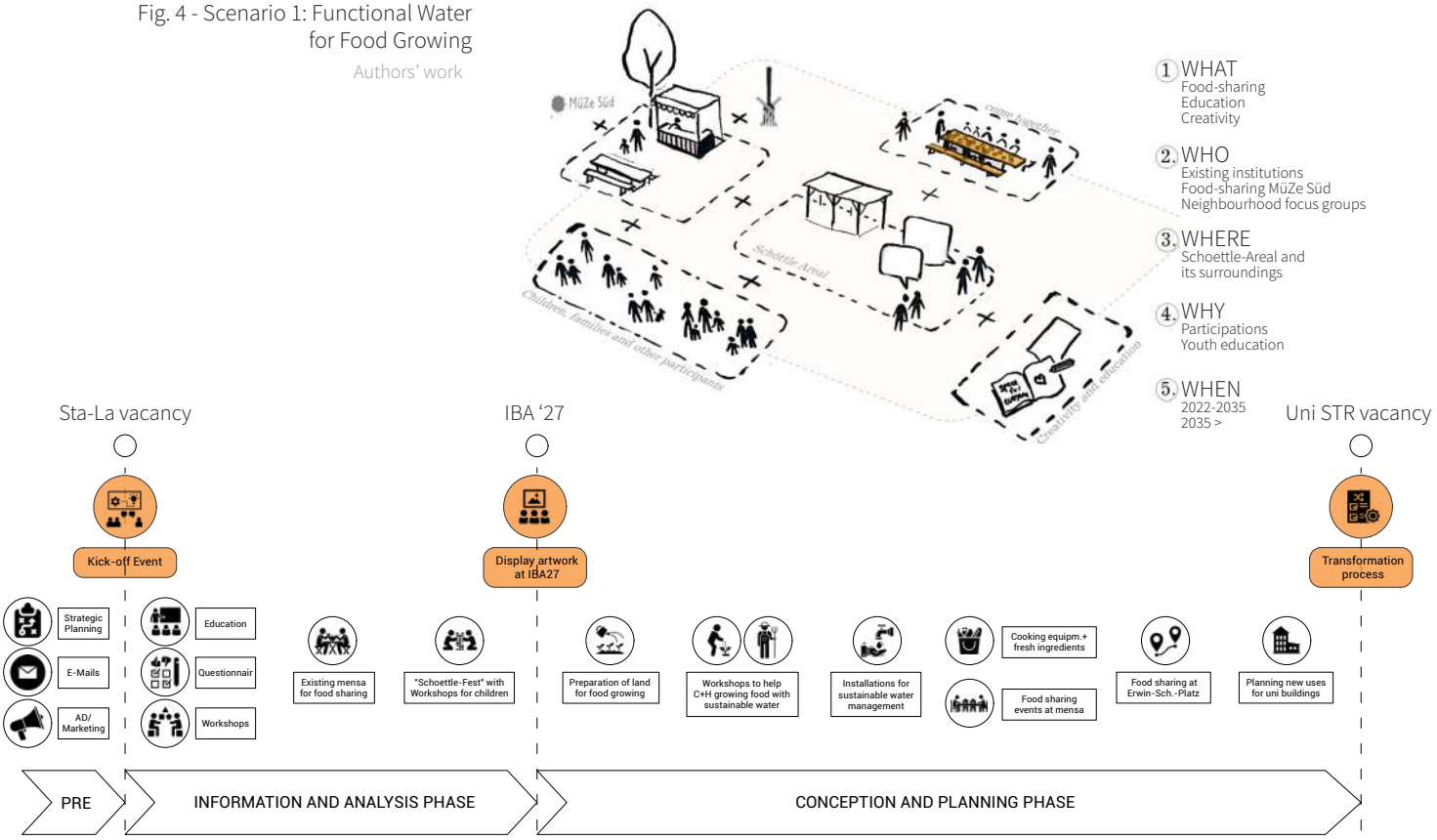
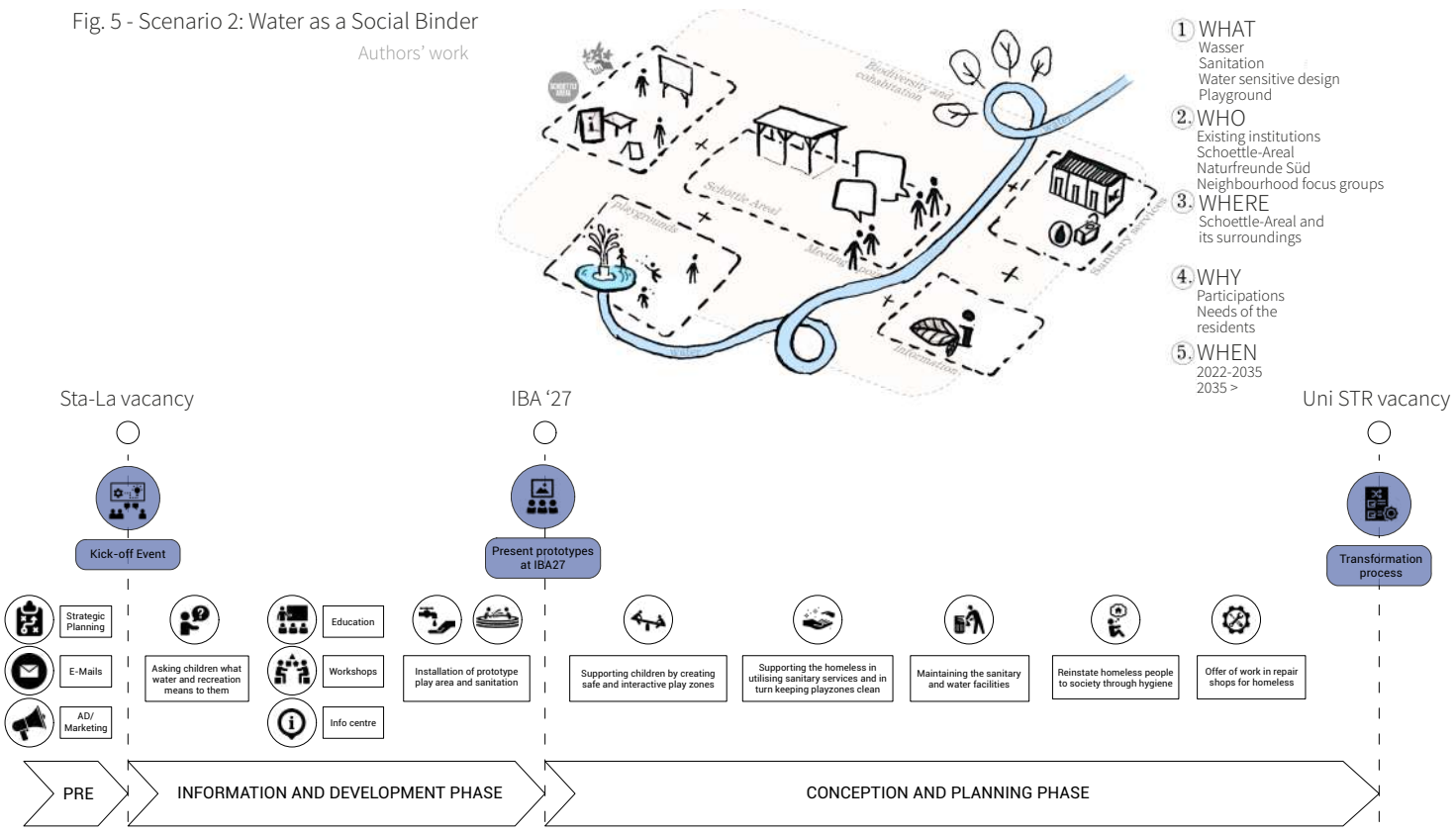



Fig. 5 - Scenario 2: Water as a Social Binder

Authors' work



# Project Timeline

Three main milestones: recreation, sanitation, and management are broken down into achievable goals, strategic phases, and action parameters. All milestones converge on the shared goal of co-creating a Schoettle-Areal for children and homeless people.

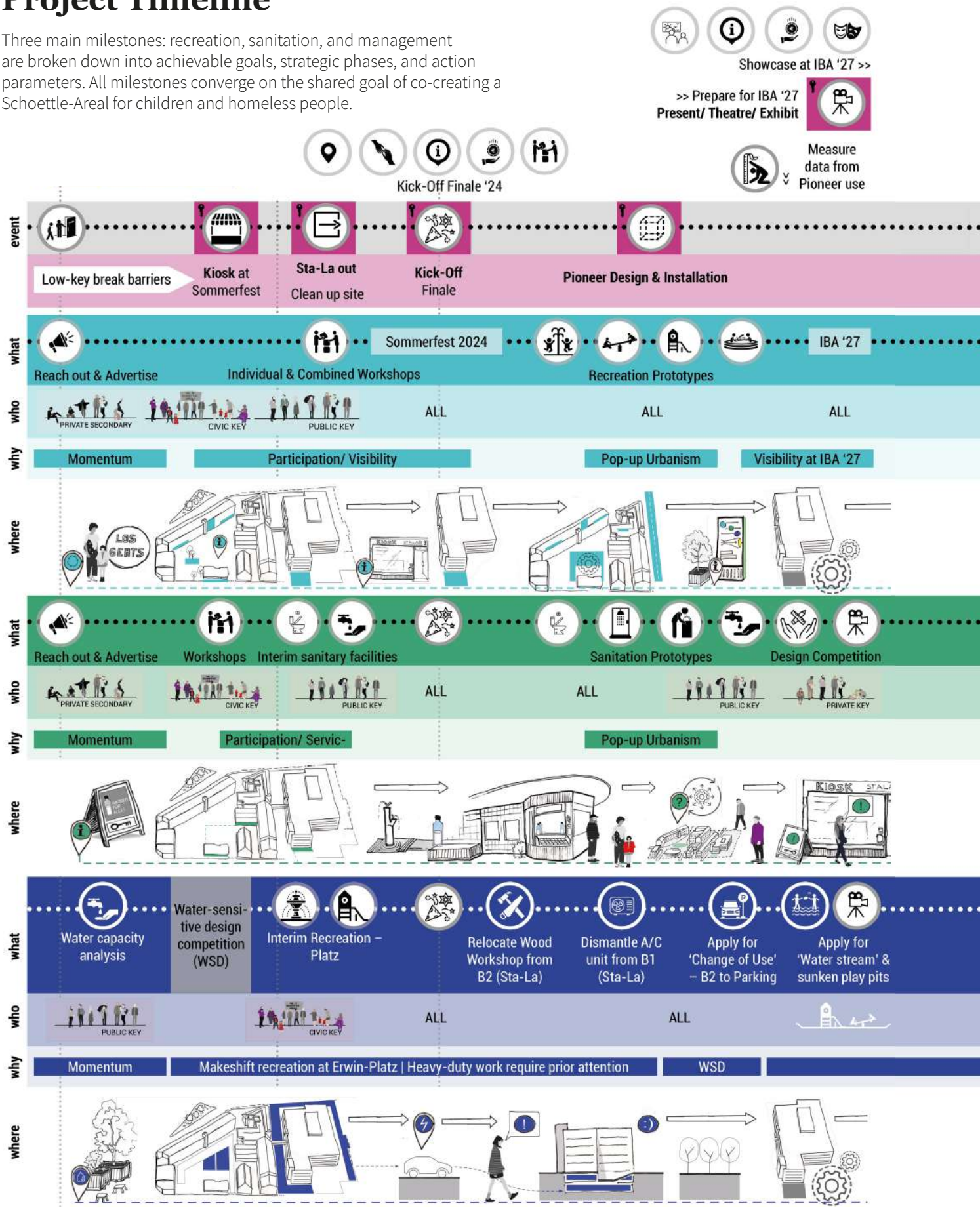
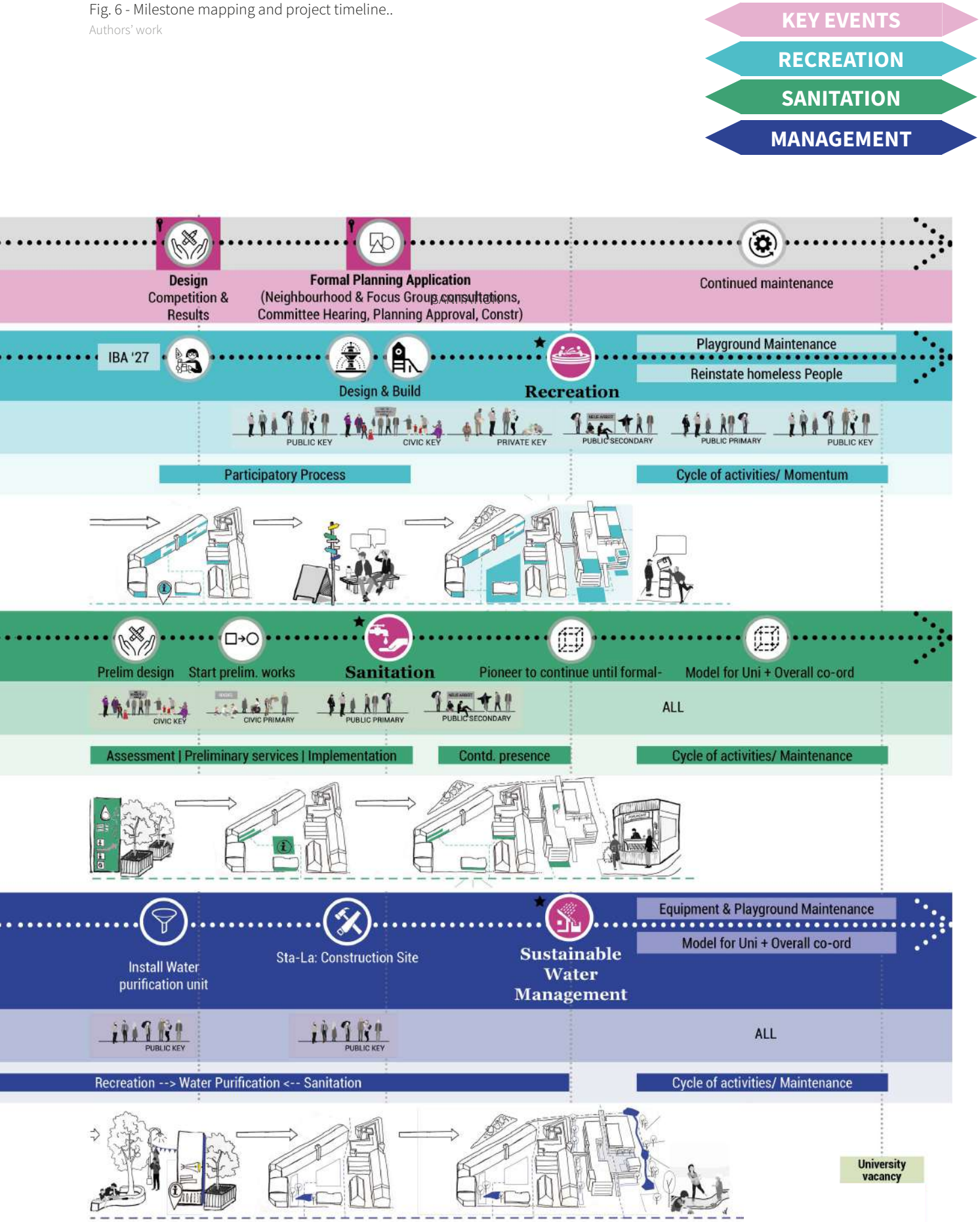


Fig. 6 - Milestone mapping and project timeline..
Authors' work

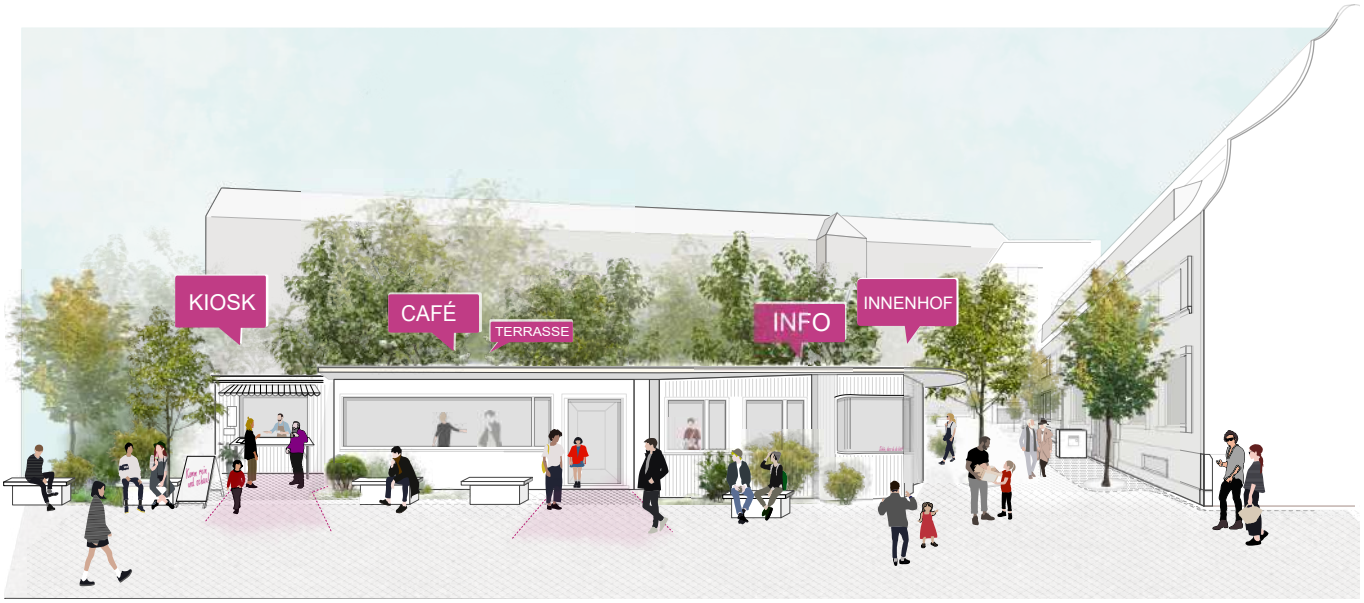


# Speak easy!

Although the concept of social coherence has always existed in theory, achieving awareness, acceptance, and a life of dignity with each other requires sensitisation and continuous dialogue. “Speak easy!” is our attempt to establish an initial consensus. The project aims to bring people together by creating an atmosphere that connects homeless people and children using trans-localism and local-based threads strategies. Through spatial designs that accommodate these groups’ needs (recreation and sanitation) in a holistic way, commonalities and diversities meet spatially.

Here, the Pförtnerhäuschen becomes a central node and gateway at the same time. Opening towards Erwin-Schoettle-Platz, it invites visitors and provides information and amenities. In the courtyard behind it, the proposed play area, water elements, and drinking stations offer a meeting point for both groups (Fig. 7).

Fig. 7 - Atmospheric collages of the Pförtner-häuschen: the functional front and the interactive back.
Authors’ work




# A Pictographic Process

To communicate this spatial transformation, a series of pictograms (Fig. 8) visualize key aspects of the proposal. Incremental pictograms show the transition of existing social, spatial, and functional barriers into design elements that project openness. Subsequently, a social-spatial strategy depicts the roles and interest of actors across a 20-year plan. Lastly, opposing design principles such as in/out, up/down, separate/shared are explored in sections that provide design cues for places of interaction and engagement.

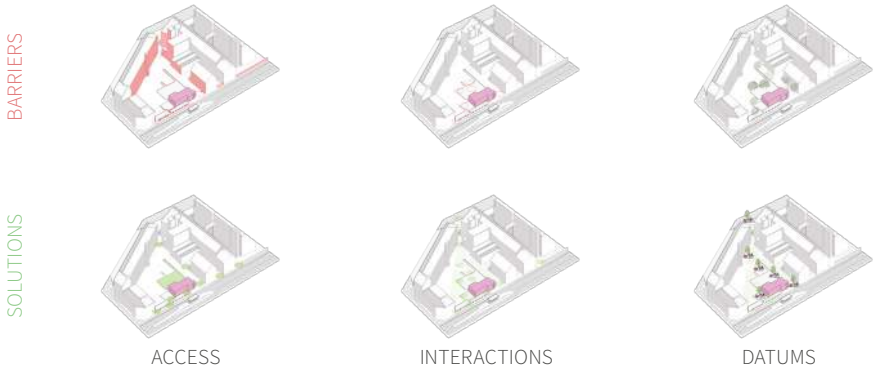
Together, aspects from the methodological approach and the pictographic process translate into spatial interactions that are part of a shared vision for the Schoettle-Areal in 2043.

Fig. 8 - Pictographic study in three parts: 3D, plan, and section.
Authors' work

**3D** / Design elements

2023 -- 2033 -- 2043

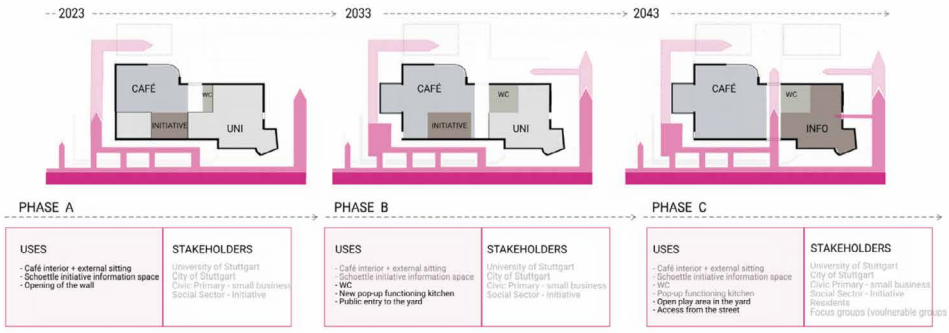
A method to spatial evolution includes identifying existing site conditions as barriers and providing achievable solutions. With 'movement', 'interactions' and repetitive 'datums', the **aim** is to instil comfort and confidence when approaching the social, social and functional boundaries of the Pförtnerhäuschen.




**Plan** / Spatial transformation

2023 -- 2033 -- 2043

The Pförtnerhäuschen experiences new functional possibilities across a 20 year strategic socio-spatial planning. Here, we explore the role of actors and their interest in the larger vision.
**Aim:** Welcome Stuttgart in.




**Section** / Tenets

Opposite design tenets describe not just the surface texture, but also visual and physical access; not only bring the sky in, but also use natural topography for a sunken play area; and offer places to engage & interact or reflect.
**Aim:** Spatial possibilities

# Design of Spatial Interactions

For the preliminary design process in 2022, the proposal is visualized in a site section (Fig. 9) and a site plan (Fig. 10). Clusters of people in the section visualize potential interactions within the site, while the circles in the site plan depict opportunities for shared spaces.

Over time, social and spatial parameters may transform to include the needs of other vulnerable social groups as well. This transformation tendency underlines the importance of accessibility and adaptability when realizing spatial interventions and the need for continuous dialogue between planners, actors, and users, which are not necessarily static or exclusive roles.

Fig. 9 - Site section
Authors' work

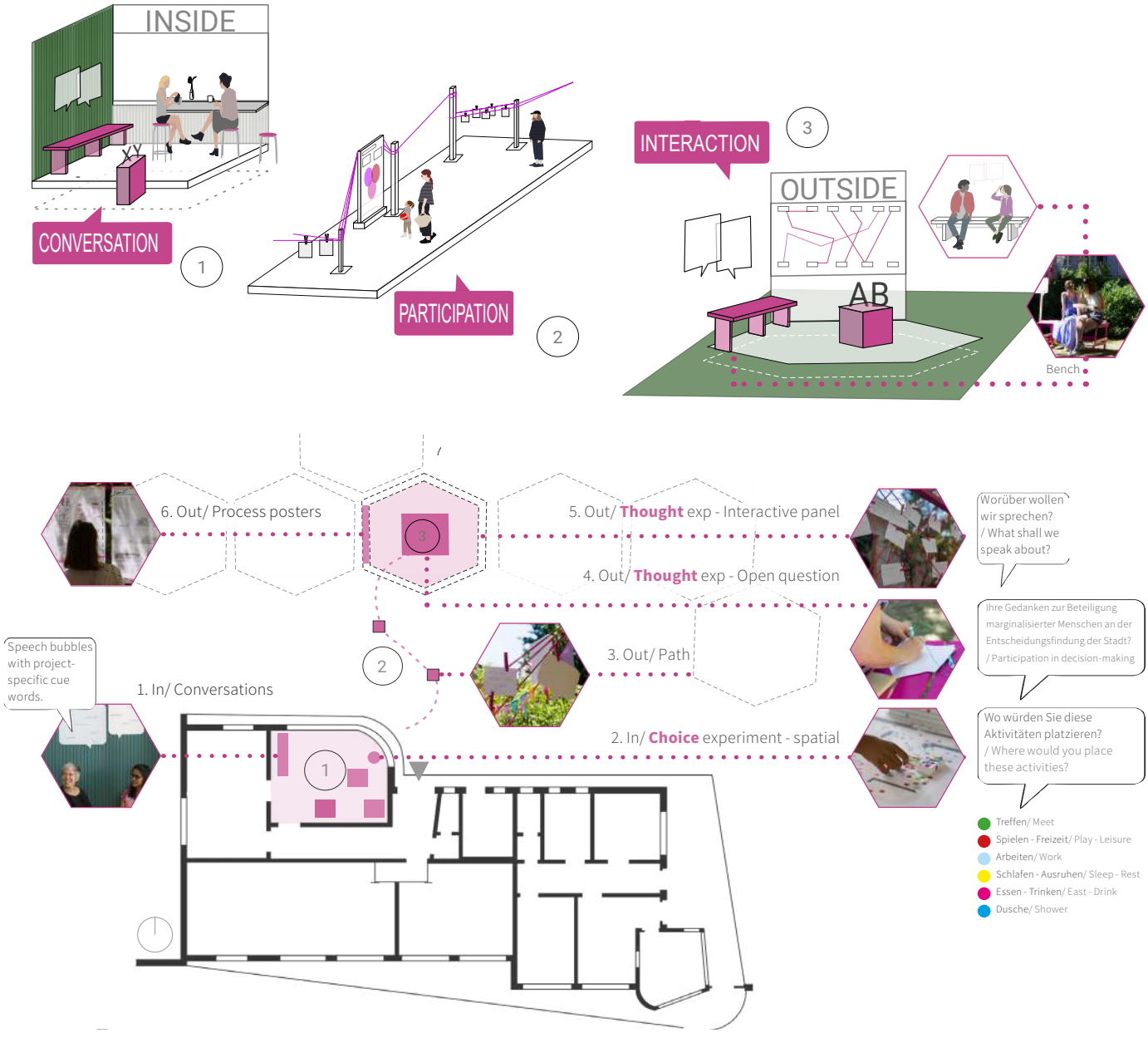
Fig. 10 - Micro site plan
Authors' work

# Design of Prototypes

An interactive prototype is a translation of the methodological approach into a design proposal. It visualizes our process and offers an easy opportunity to communicate and continuously receive feedback on the design proposal. Parallel to the actual design, the prototype takes visitors from the inside of the Pförtnerhäus to the outdoor area along a path with three curated stations (Fig. 11).

The indoor station 'Conversation' presents a choice experiment, which collects quantitative data from visitors regarding which activities they would place at which location in the Schoettle-Areal. The two outdoor stations present thought experiments, which collect qualitative data through conversations about the inclusion of vulnerable groups expressed as a word cloud 'Interaction', as well as a feedback board 'Participation' where the visitors can suggest relevant topics, brightening the scope of our approach.

Fig. 11 - Design of three experiments using interactive prototypes
Authors' work



# Exhibition

To map different activities relevant to our project with preferred places for the public we created a block model of the Schoettle-Areal on which visitors could place coloured dots signifying specific activities at their preferred place. This 'choice' experiment resulted in a majority of responses allocating private activities such as sleeping and resting towards the Mörike Straße while the more public leisure activities of and interactions were oriented towards the Böblinger Straße (Fig. 12). The first 'thought' experiment resulted in a word cloud (Fig. 13).

Twenty-two cards were pinned to the feedback board of the second thought experiment.

- Six cards expressed the need for better infrastructure, which includes play areas with integrated water elements, public internet access, private balconies, mixed uses, and fewer cars.
- Six cards expressed the desire for more greenery, open access to free spaces, and a reduction in noise pollution.
- Five cards mentioned the importance of mental well-being and suggestions for leisure activities and recreation.
- Five cards discussed socio-spatial identity and "sociocracy" – a self-governance system that was introduced by a visitor.


Fig. 12 - Interactive model survey.
Authors' image


Fig. 13 - Word cloud of qualitative ideas
Authors' work

Fig. 14 - Illustrative impression of the project.
Authors' work

# Conclusion

The insightful conversations with the visitors and their feedback emphasized the importance of social interactions with empathy, continuous dialogue, and collaborative activities for this project. This continuous exchange can contribute to achieving a vision of an inclusive, child- and homeless people-friendly Schoettle-Areal. Moreover, while there seems to be a public consensus on the importance of such a vision, an ongoing commitment on the part of all actors and stakeholders is the key missing factor. A successful transformation towards this vision requires more awareness of child- and homeless people needs.

The role of planners in facilitating dialogue, and ensuring the inclusion of vulnerable groups in participatory and co-productive efforts is a key factor for a sustainable transformation of the Shoettle-Areal. This new role must be able to address a variety of actors directly, both at a local level as well as at the level of city administration.

Die aufschlussreichen Gespräche mit den Besucher*innen und ihr Feedback bekräftigte die Bedeutung sozialer Interaktionen mit Empathie, kontinuierlichem Dialog und kollaborativen Aktivitäten für dieses Projekt. Dieser Austausch kann dazu beitragen, die Vision eines inklusiven, kinder- und obdachlosenfreundlichen Schoettle-Areals zu verwirklichen. Darüber hinaus scheint es zwar einen öffentlichen Konsens über die Bedeutung einer solchen Vision zu geben, aber ein kontinuierliches Engagement seitens aller Akteur*innen und Interessengruppen ist der entscheidende und leider noch fehlende Faktor. Eine erfolgreiche Transformation hin zu dieser Vision erfordert mehr Bewusstsein für die Bedürfnisse von Kindern und Obdachlosen.

Die Rolle der Planenden sollte darin bestehen, den Dialog und die Sicherstellung der Einbeziehung benachteiligter Gruppen in partizipative und koproduktive Bemühungen zu ermöglichen und als Schlüsselfaktor für eine nachhaltige Transformation des Schoettle-Areals zu verstehen. Diese neue Rolle muss eine Vielzahl von Akteur*innen direkt ansprechen können, sowohl auf kommunaler Ebene als auch auf Ebene der Stadtverwaltung.

## References


Schneider-Kauffmann, R. (2020): Historie-Heslach. Stuttgart Süd. Accessed in August 2022, at: <https://stuttgart-sued.info/historie/heslach/>

Zimmermann, O. (2020): Erwin Schöttle und der Widerstand gegen das Naziregime. Zeitreise bb. <https://zeitreise-bb.de/schoettle/>

Engelhardt, E. (2021): KUGEL-Kulturen gemeinsam leben. IB Süd. <https://ib-sued.de/produkte-programme/projekte-im-ib-sued/projekte-national/kugel>

Runge, A.; Bansbach, B. (2022): MüZe Familienzentrum Stuttgart e. V. <https://www.mueze-stuttgart.de/>

Wente, B. (2022): Solidarische Nachbarschaft Schoettle-Areal. <https://schoettleareal.de/>

Echanove, M.; Srivastava, R.; Mehta, G. (2022): urbz.net. <https://urbz.net>

Kramer, W.; Lang, R. (2022): Yalla Yalla! Studio. <https://www.yallayalla.studio>

Grabkowska, D. (2012): WHAT MADE ME? Behance.net. <https://www.behance.net/gallery/4419469/WHAT-MADE-ME-Interactive-Public-Installation?locale=de_DE>









WIE WICHTIG IST DAS FUR SIE?


# Impressions from the Studio “Urban Transformation: Schoettle-Areal”

## Summer term 2022

The Integrated Research and Design Studio II (IRD II) is a core element of the IUSD programme supervised by the Institut für Landschaftsplanung und Ökologie (ILPÖ) and the Chair of International Urbanism at the Institute for Urban Planning and Design (SI). It follows up on the IRD Studio I, which served as an introduction to research and design methods in the previous term. The key aim of this studio is to develop research skills and integrated approaches to urban design that are applicable to the real world context, in which local actors and stakeholders play a critical role. Through on-site analyses and interpersonal interactions, students gain insight into local circumstances, the needs and concerns of local residents, and thereby develop an impression of the challenges and potentials of urban sites.

The integration of local actors and stakeholders continued throughout the summer term in the form of guest lectures by representatives of local initiatives, workshops, and an interactive exhibition and panel discussion to close out the studio. The exhibition provided an opportunity for students to receive feedback from local residents and actors alike on their design and strategy proposals, while simultaneously bridging the gap between stakeholders during the subsequent panel discussion. Central to the design process are principles of environmental, social, and economic sustainability that aim to achieve a resilient urban environment that respects all urban inhabitants, human and non-human alike.

Das Integrated Research and Design II Studio (IRD II) ist ein Kernelement des IUSD-Programms, das vom Institut für Landschaftsplanung und Ökologie (ILPÖ) und dem Lehrstuhl Internationaler Städtebau am Städtebau-Institut (SI) durchgeführt wird. Es knüpft an das IRD I Studio an, das im vorangegangenen Semester der Einführung in Forschungs- und Gestaltungsmethoden diente. Das Hauptziel dieses Studios ist die Entwicklung von Forschungskompetenzen und integrierten Ansätzen für die Stadtplanung, die auf den Kontext der realen Welt anwendbar sind, in dem lokale Akteur*innen und Stakeholder eine entscheidende Rolle spielen. Durch Analysen vor Ort und zwischenmenschliche Interaktionen gewinnen die Studierenden Einblick in die örtlichen Gegebenheiten, die Bedürfnisse und Sorgen der Anwohner*innen und entwickeln so einen Eindruck von den Herausforderungen und Potenzialen urbaner Standorte.

Die Einbindung lokaler Akteur*innen und Stakeholder erfolgte über das ganze Sommersemester in Form von Gastvorträgen von Vertreter*innen lokaler Initiativen, Workshops und einer interaktiven Ausstellung und Podiumsdiskussion zum Abschluss des Studios. Die Ausstellung bot Studierenden die Möglichkeit, Feedback von Anwohner*innen und Akteur*innen zu ihren Entwurfs- und Strategievorschlägen zu erhalten und gleichzeitig in der anschließenden Podiumsdiskussion eine Brücke zwischen den Stakeholdern zu schlagen. Im Mittelpunkt des Entwurfprozesses standen Prinzipien der ökologischen, sozialen und wirtschaftlichen Nachhaltigkeit, die darauf abzielten, eine resiliente städtische Umwelt zu generieren, die menschliche sowie nichtmenschliche Stadtbewohner*innen gleichermaßen respektiert.

# Kick-Off Excursions


*At the beginning of the summer term, the project team took excursions to Berlin and Heidelberg to gain impressions about the different urban realities there. Through guided tours, long walks, and diverse encounters, the project team explored topics of socially and environmentally sustainable urban development. Notable locations include the Park am Gleisdreieck, Tempelhofer Feld, the projekt Haus der Statistik and the new Bahnstadt Heidelberg.*

# Exhibition: July, 2022

*Following weeks of preparation and the construction of the exhibition space by the project team, "Urban Transformation: Schoettle-Areal" took place on the 16th and 17th of July in the courtyard of the University Campus in the Böblingerstraße. The exhibition created an opportunity for dialogue between the project team and the visitors, who contributed feedback and insights about their respective needs, views, and wishes. Cultural, social, and political initiatives and their representatives along with local residents, family, and friends discussed the potentials and challenges facing the urban transformation of the Schoettle-Areal.*

# Panel Discussion

*To close out the exhibition, a panel of representatives from the city administration, IBA'27, and local initiatives publicly discussed the design proposals of the project team and how they address current and future plans for the transformation of the Schoettle-Areal. This format allowed panelists to share their concrete knowledge and views with one another, as well as with the project team and visitors, thereby giving voice to multiple perspectives that highlighted challenges and differences in an informative manner.*

# Project Team


*The project team consists of students from Intake XI of the IUSD programme and master's students in architecture and urban planning. The structure and goals of the studio allowed for a tightly knit, collegial, and collaborative atmosphere to develop between students as well as with the studio advisors M.Sc. Jesús Antonio Martínez Zárate (ILPÖ) and M.Sc. Friederike Thonke (SI).*
*Prof. Dr. Leonie Fischer (ILPÖ, right) and Prof. Dr. Astrid Ley (SI, left) jointly supervised the studio.*

M.Sc. Integrated Urbanism & Sustainable Design (IUSD)
Institut für Landschaftsplanung und Ökologie (ILPÖ)
Lehrstuhl Internationaler Städtebau (SI)

Integrated Research and Design II
Summer term 2022

**Urban Transformation: Schoettle-Areal**


Students / Studierende

Algaba Díaz, Ángel
Altom Babiker Mohammed, Aya
Al-Tubor, Yassin
Camacho Gutierrez, Angie Carolina
Kumar, Vishal
Loli Teza, Danielli
Machado Ferreira, Gabriel
Maharjan, Samjhana
Mejia Vanegas, Maria Paula
Palacio Ramirez, Maria Jose
Rai, Saksham
Rao, Shalini
Rivera Echavarría, Gustavo Adolfo
Sánchez Muñoz, Luis Alberto
Schneider, Anna-Kathrin
Shrivastava, Akriti
Krimmer, Vera
Geiselbrechtinger, Vroni
Ük, Vildan

Teachers / Lehrende

Prof. Dr. Leonie Fischer (ILPÖ)
Prof. Dr. Astrid Ley (SI)
M.Sc. Jesús Martínez Zárate (ILPÖ)
M.Sc. Friederike Thonke (SI)

Urban Transformation: Schoettle Areal

M.Sc. Integrated Urbanism & Sustainable Design

Integrated Research and Design II
Summer term 2022

Prof. Dr. Leonie Fischer
Prof. Dr. Astrid Ley
M.Sc. Jesús Martínez Zárate
M.Sc. Friederike Thonke

www.iusd.uni-stuttgart.de | www.ilpoe.uni-stuttgart.de | www.international-urbanism.de