

URBAN SPACE CHECK

Manual **DRAFT VERSION**

URBAN SPACE CHECK

Evaluation System as an Incentive for the Transformation of Private Open Spaces of
Monofunctional Buildings (POPS)

Management and Research Participants

Technical University of Munich
TUM School of Engineering and Design
Professorship of Urban Design
Arcisstrasse 21
80333 Munich

Prof. Dr. Benedikt Boucsein
Mathieu Wellner, Dipl. Arch. Mediator
Matthias Faul, Dipl.-Ing. Architect
Elif Simge Fettahoğlu-Özgen, M.Sc. Architecture
Daniel Zwangslleitner, Dr. Dipl.-Ing.

Student Team URBAN SPACE CHECK

Helena Bauer, (cand. M.A. Architektur)
Hadiel Khuri, (cand. M.A. Architektur)
Jana Liszewski, (cand. M.Sc. Urbanistik)
Marlene Schreck, (cand. M.A. Architektur)
Marcel Thielitz, (cand. M.Sc. Urbanistik)

Image Credits

All infographics contained herein are attributed to students of the
Technical University of Munich.
If otherwise, they are marked as such.

Imprint

© Creating NEBourhoods Together, March 2025

DELIVERABLE NO.	D5.1
Deliverable Title	Framework for the Transformation of (Semi-)Public Space
Work package Number	WP 5
Beneficiary	TUM
Deliverable Type	OTHER
Dissemination Level	PU – Public
Due Date Month	M18
Date of resubmission	28.03.2025
Date of submission:	28.03.2024

“Creating NEBourhoods Together – designing beautiful, environmentally friendly and future-proof neighbourhoods together” is one of the six lighthouse demonstratots for the New European Bauhaus (NEB) of the European Union.

Duration: 1.10.2022–31.3.2025

Programme: Horizon Europe

Project No: 101080052

Funding by the European Union: € 5 million

Co-funding by the City of Munich: € 0.6 million

Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union.

Neither the European Union nor the granting authority can be held responsible for them.

Contact

Project Coordinator:

Dr. Sylvia Pintarits

City of Munich, Department of Urban Planning & Building
Regulations, European and International Affairs (MUC)

E NEBourhoods@muenchen.de

T 0049 89 23326997

M 0049 1525 6808634



www.NEBourhoods.de
@NEBourhoods    

NEBourhoods

“Creating NEBourhoods Together” is one of the six lighthouse demonstrators of the New European Bauhaus funded by the EU to address the great challenges of climate, environment, and health. The aim is to collaborate on the European Green deal to create more sustainable, inclusive, and beautiful living environments across the EU.

In Munich-Neuperlach (NPL), one of Europe’s largest post-war urban expansion areas, NEBourhoods is collaborating with citizens and stakeholders from culture, science, and business to implement ten actions from all fields of urban development, encompassing circular construction and redesign of residential and commercial buildings, innovative forms of mobility and energy communities, biodiversity and green space concepts and nutrition and youth culture. Encouragement of entrepreneurial thinking and action and practical implementation in co-creative processes support the formation of sustainable neighbourhoods in liveable, inclusive, and beautiful cities of the future.

Combining co-creation and entrepreneurship while putting culture and creativity at the core of the transformation process, the project will deliver accessible and empowering solutions to make the EU Green Deal beneficial for all in NPL and beyond. The district will be carefully cultivated into a resilient urban innovation landscape. Within two years, we will create NEBourhoods together and show how we can realise circular thinking and acting in society and the economy, activate the green transformation in building, mobility, energy, food and health and enhance public spaces.



WHAT IS THE URBAN SPACE CHECK METHOD?

Contents

POPS

(PROBLEM)

Page 08 – 09

Project Basis

Page 10 – 11

POPS

Page 12 – 13

Actors

Page 14 – 15

Strategy

EVALUATION

(ASSESSMENT)

Page 18 – 21

Evaluation System

Page 22 – 23

Assessment Diagram

Page 24 – 25

User Profiles

Page 24 – 25

Main Categories

Page 26 – 27

Subcategories

Page 28 – 32

Questionnaire

Page 33 – 33

Calculation System

Page 34 – 34

User Perspective

Page 34 – 34

Test Report

Page 34 – 34

Standards

Page 35 – 35

Certification

TOOLBOX

(IMPLEMENTATION)

Page 38 – 39

Network

Page 40 – 41

Directory

Page 42 – 43

Indicators

Page 44 – 119

Toolbox Categories

Page 120 – 120

Transferability

PRIVATELY OWNED PUBLIC SPACES

CHAPTER 01: PROBLEM

WHAT IS THE URBAN SPACE CHECK METHOD?

Publicly accessible spaces should provide added value to society. The URBAN SPACE CHECK offers the opportunity to evaluate and improve public space.

HOW DOES IT WORK?

From a certain property size onwards, companies are required to provide public spaces for society. Publicly accessible spaces are evaluated by PLANNERS, tools are selected together with BUSINESS OWNERS, and implemented in co-operation with STARTUPS.

THE TOOLBOX

The TOOLBOX offers a wide range of available TOOLS for implementation in urban space:

- Enhancing quality of stay
- Expanding cultural offerings
- Increasing biodiversity
- Creating social interaction spaces
- Establishing high-quality workplaces
- Ensuring barrier-free access
- Assigning new uses

THE CERTIFICATION

The evaluation of corporate areas for certification is carried out by PLANNERS. A scoring system has been developed to assess private properties. By achieving a specific number of POINTS, companies are awarded bronze, silver, or gold status. Additionally, they receive a certification and official recognition of their properties.

27 POINTS - BRONZE

45 POINTS - SILVER

63 POINTS - GOLD

PRIVATELY OWNED PUBLIC SPACES

THE PROBLEM OF POPS

Privately Owned Public Spaces (POPS) refer to publicly accessible spaces that are privately owned. These hybrid spatial structures often emerge through urban planning agreements, where private actors are obliged to create public spaces.

The core issue with POPS lies in the tension between private interests and public use. Although they are formally accessible to the public, they are often subject to restrictive regulations that control user behavior and can exclude certain groups. Security services, surveillance, and selective house rules often result in these spaces lacking the openness of publicly managed urban areas.

Furthermore, the design and functional orientation of POPS is often driven by commercial interests, meaning that accessibility and usability are determined by economic considerations. This raises the risk of privatizing the public, where democratic participation and social inclusion are sidelined in favor of profitability and control.

The growing prevalence of POPS thus presents a challenge for urban development and the right to the city. It raises fundamental questions about the governance of public spaces and requires strategies to ensure their genuine accessibility and social function.

The URBAN SPACE CHECK directly addresses the issues associated with POPS by ensuring that privately managed public spaces truly provide social value. The following sections will detail how evaluation, targeted measures, and a certification system can improve the quality and accessibility of these spaces.



ACTORS

Company:

Company-owned properties, particularly those of housing corporations, often include public spaces. With the URBAN SPACE CHECK, companies can assess the quality of these spaces and, following an evaluation, receive tailored **recommendations** for sustainable redesigns based on different budget levels.

NGO:

The existing **network** of initiatives and NGOs is responsible for implementation. These organizations benefit from the projects just as much as the property-owning companies.

URBAN SPACE CHECK e.V.:

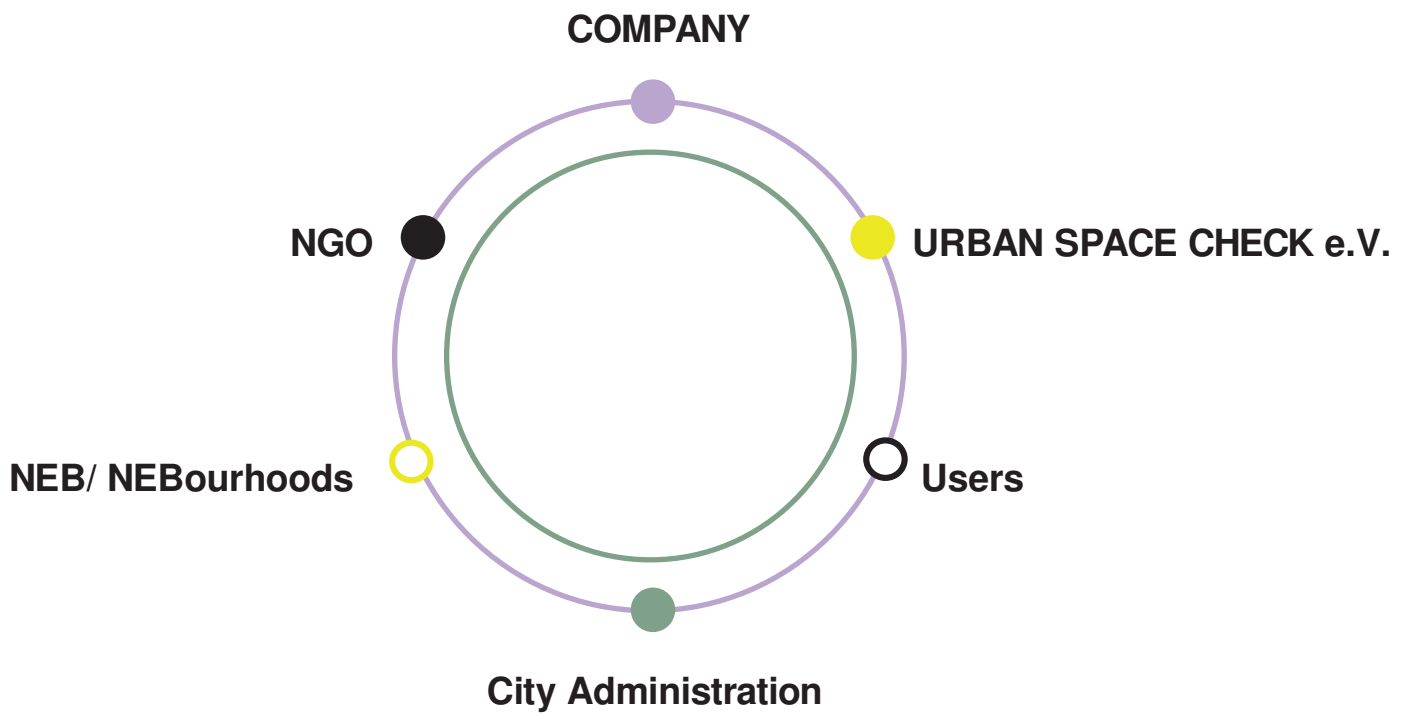
The association is responsible for conducting expert analyses and providing a standardized assessment of public spaces. Additionally, URBAN SPACE CHECK e.V. facilitates the network of initiatives involved in implementation. The association, together with the network, also manages the **certification** process, as well as ongoing maintenance and improvements, ensuring the continuous **enhancement** of public urban spaces.

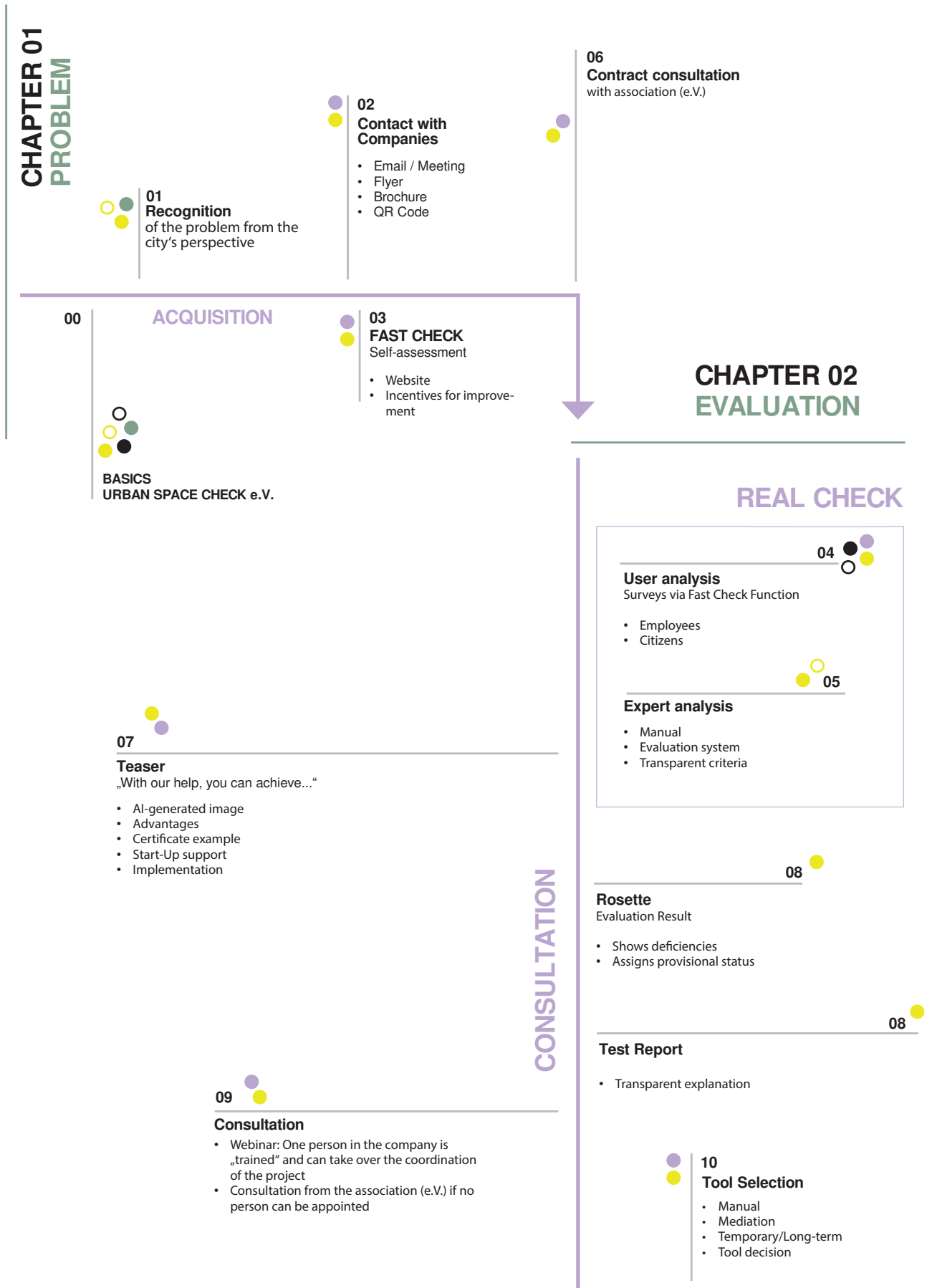
Users:

Citizens have the opportunity to actively participate in urban development. Their **user perspective** plays a crucial role in the evaluation process, allowing them to influence decision-making.

City Administration:

The city is responsible for the **legal** framework, which, ideally, would not be required to intervene.





STRATEGY

- 19
Research
- TU München
 - Neighbourhoods

- 20
Advertising campaign

CERTIFICATION

- 16
Rosette
Evaluation Result
- Final Status

FINAL CHECK

- 15
Final Evaluation
- User Analysis
 - Expert Analysis

- 13
Approval
- If it borders city property (street)
 - 5 km rule
 - Execution and approval planning

PLANNING

MAINTENANCE

- 18
Continuous monitoring
- Evaluation by the association (e.V.)
 - Facility management company
 - Maintenance by the NGO

- 17
Certificate
- Handing over with plaque
 - Advertising campaign on social media

- 14
Implementation
varies depending on the tool
- Possibly participatory redesign
 - Construction site poster for clarification
 - Announcement via district management

CHAPTER 03 IMPLEMENTATION

- 12
Contract Implementation
with NGO / Start Up

- 11
Mediation
- NGO / Start-Up

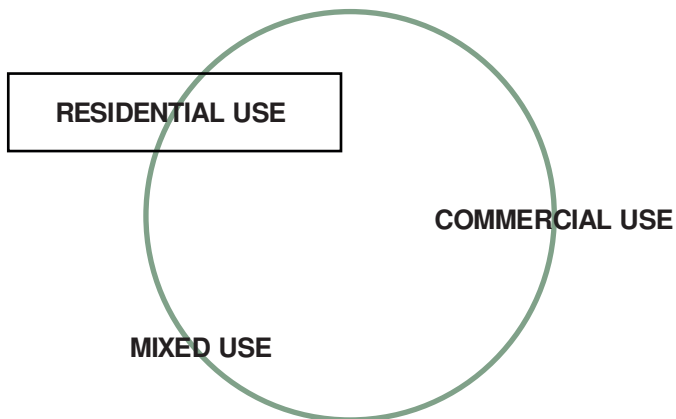
DECISION

EVALUATION

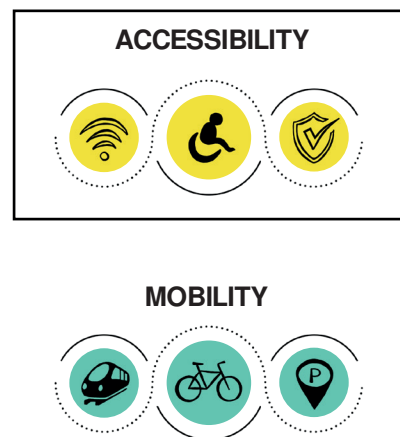
CHAPTER 02: ASSESSMENT

EVALUATION SYSTEM


USER PROFILES



PRIORITY OF MAIN CATEGORIES



ASSESSMENT OF SUBCATEGORIES WITH QUESTIONNAIRE

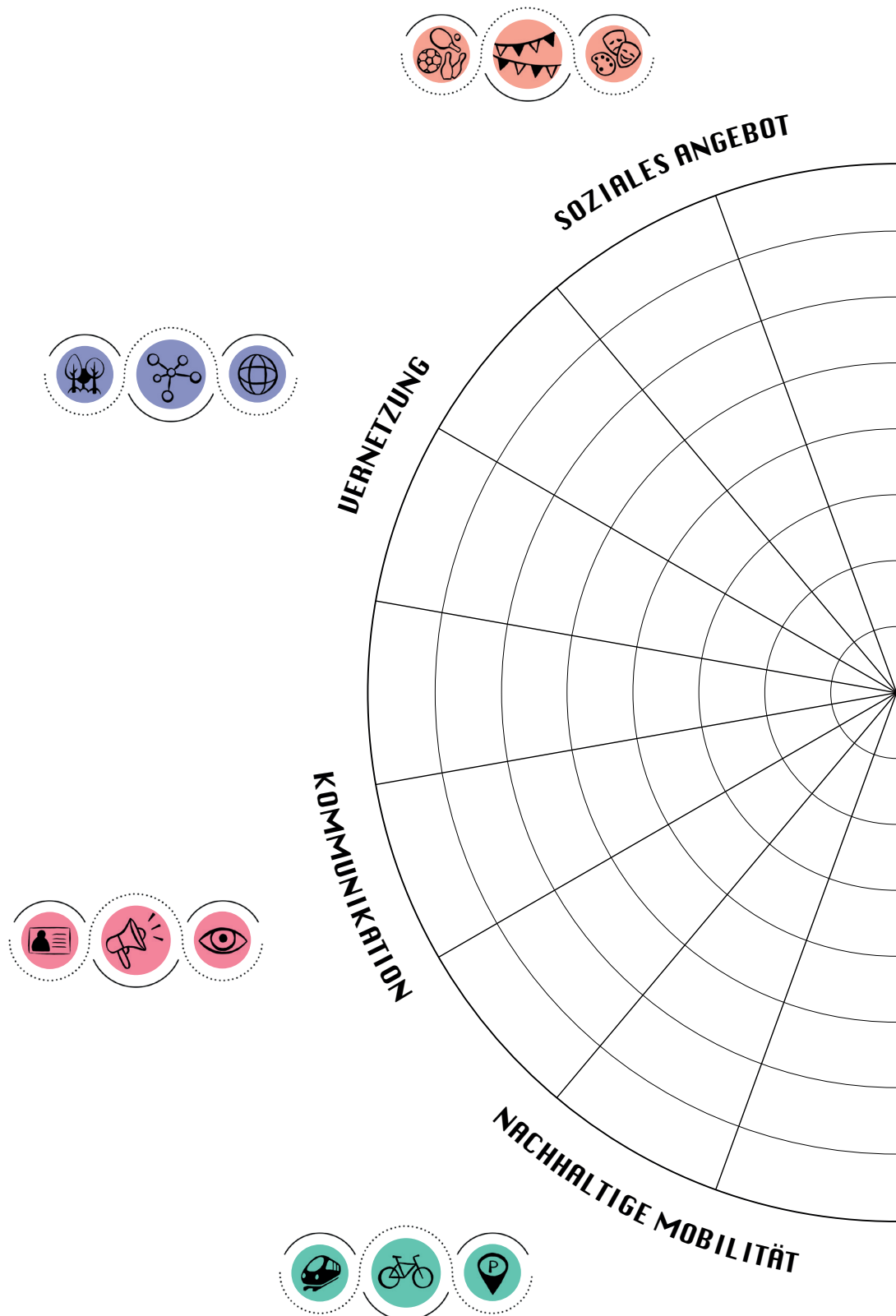


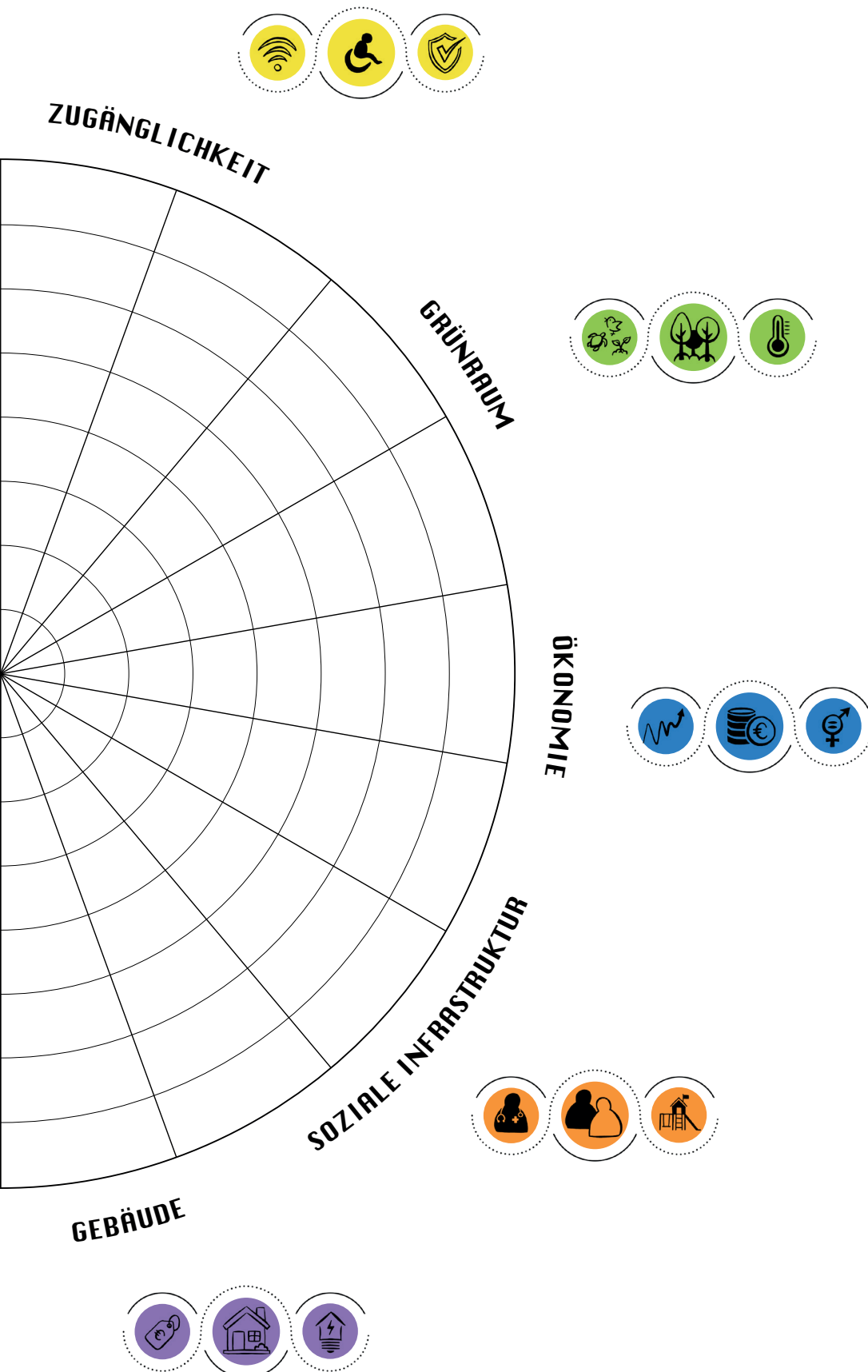
**Is this area barrier-free?
(Floor coverings, ramps, etc.)**

2-POINT SCALE

**40 Points =
BRONZE**

EVALUATION SYSTEM





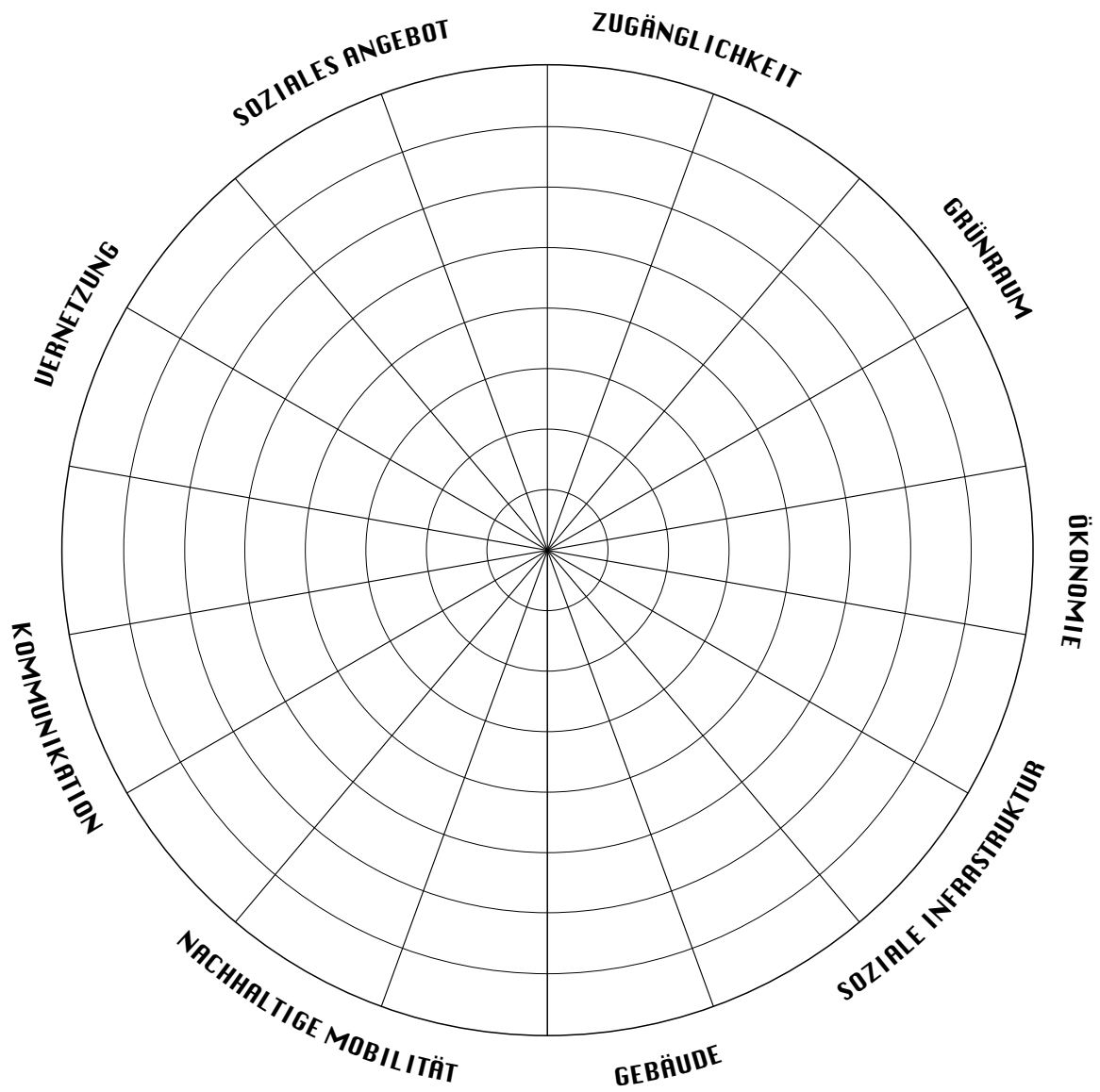
ASSESSMENT DIAGRAMM

With 9 Evaluation Categories

This radial diagram provides a way to **visually** capture and compare complex information at a glance.

The assessment diagram is based on **nine categories**, each divided into **four subcategories**. The individual categories can be weighted differently, depending on the number of **circular segments (1-3)**. This allows for a more precise adaptation to user profiles and the specific characteristics of urban space.

Using a **questionnaire**, the urban space is assessed within these categories. Depending on the score achieved, the respective circular segment is filled outward.



USER PROFILES

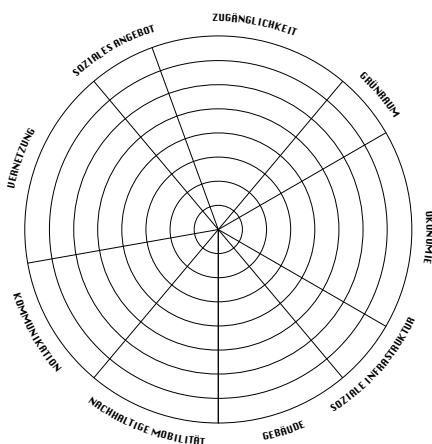
Type and Characteristics of the Property

The assessment diagram is based on **nine categories**, which can be adjusted in their weighting according to the user profile.

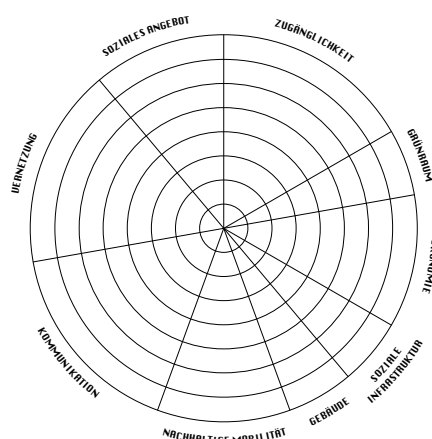
This way, the **18 segments** are distributed across the categories depending on their priority. This feature allows the diagram to be **flexibly** adapted to different urban spaces in order to identify deficiencies and potentials.

The three user profiles—**commercial use**, **mixed use**, and **residential use**—thus have different priorities for the categories, resulting in distinct diagrams for further evaluation.

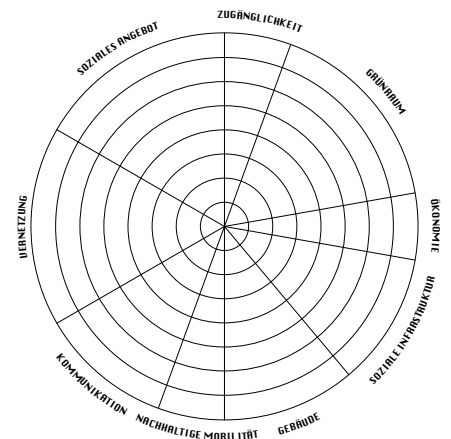
COMMERCIAL USE



MIXED USE



RESIDENTIAL USE



TYPE OF PROPERTY

COMMERCIAL USE

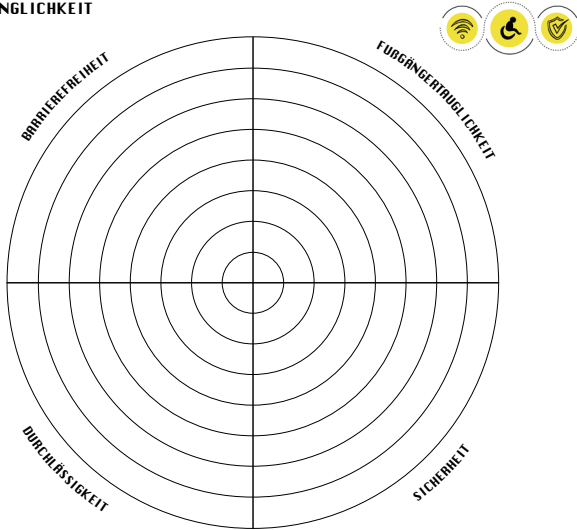
RESIDENTIAL USE

MIXED USE

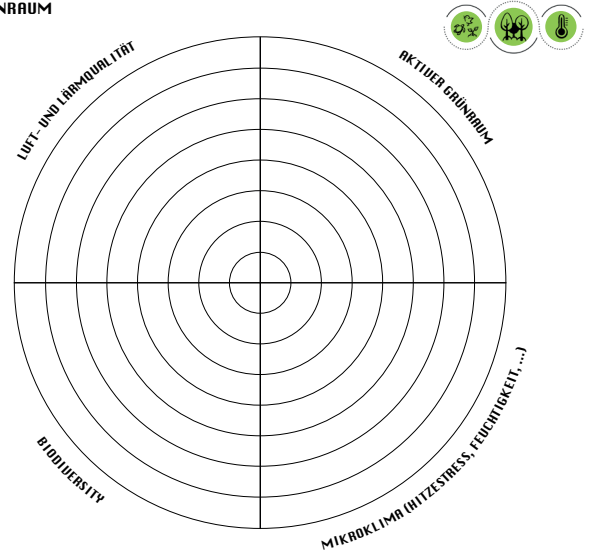
	R	M	C
ACCESSIBILITY	1	3	3
GREEN SPACE	3	1	1
ECONOMY	1	2	3
SOCIAL INFRASTRUCTURE	2	2	1
BUILDING	2	2	2
SUSTAINABLE MOBILITY	1	3	2
COMMUNICATION	2	3	2
NETWORKING	3	1	3
SOCIAL OFFERING	3	1	1

SUBCATEGORIES

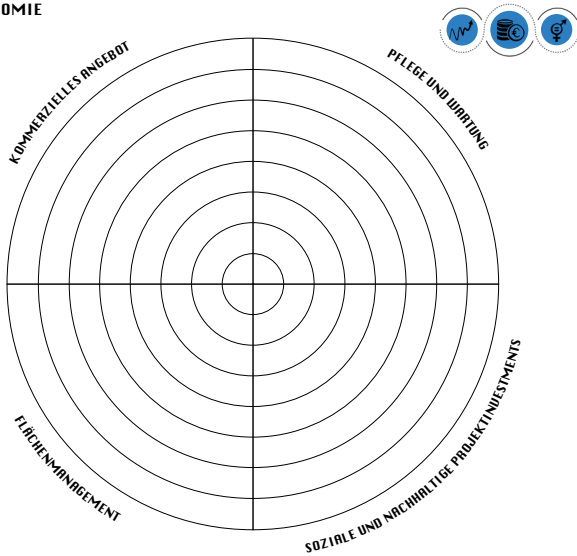
ZUGÄNGLICHKEIT



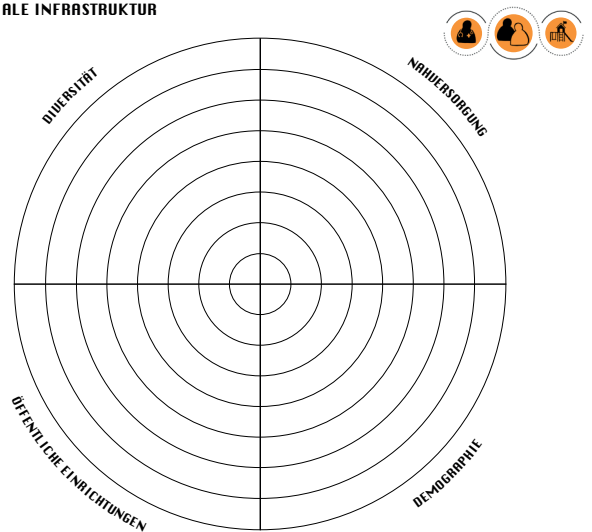
GRÜNRAUM



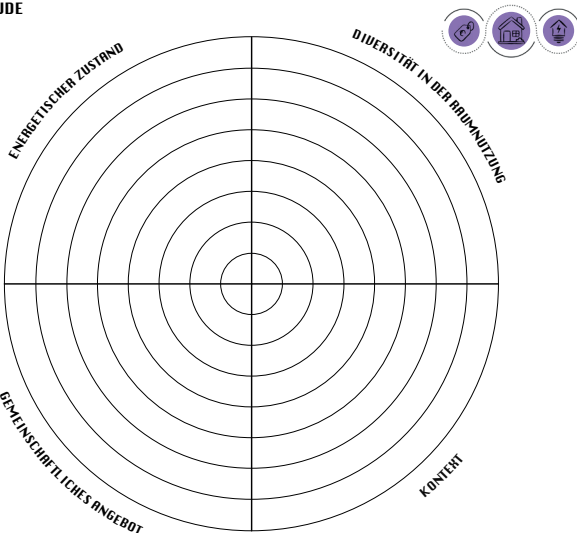
ÖKONOMIE



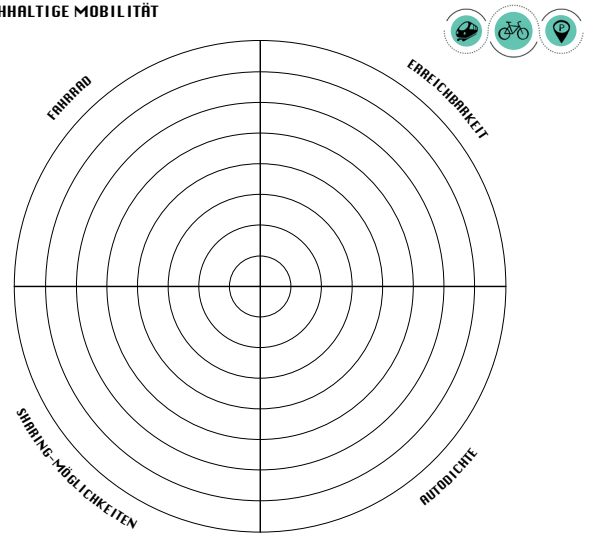
SOZIALE INFRASTRUKTUR



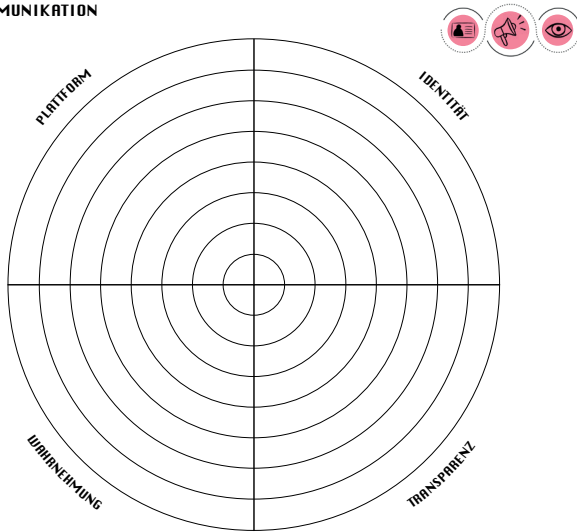
GEBÄUDE



NACHHALTIGE MOBILITÄT

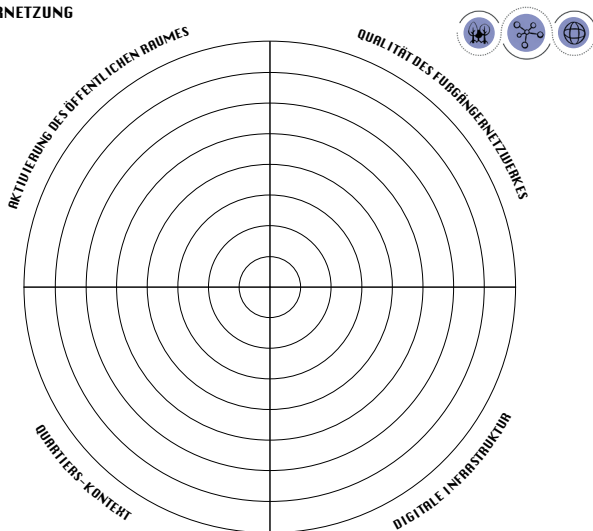


KOMMUNIKATION

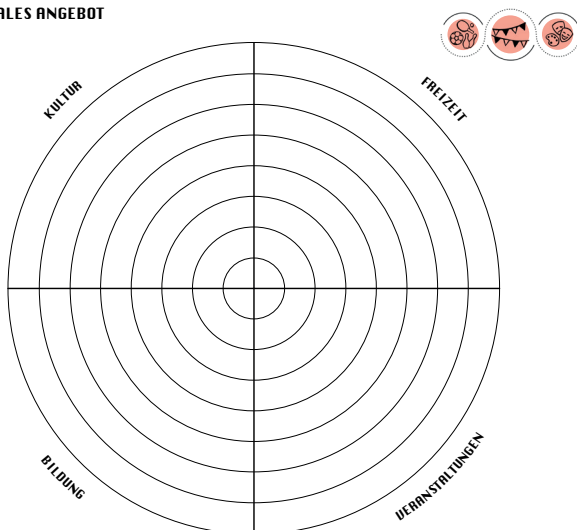


In order to enable a **unified** approach for the evaluation and analysis of the city, each of the nine categories has been further divided into a **separate diagram** with four **subcategories**. The assessment is based on a **2-point scale**. The better the evaluation, the **more rings** are filled outward. This means that a **maximum of 16 points** can be achieved per category. For each category, the **average** of the four subcategories is calculated and transferred to the main diagram. This process is applied to **all** nine categories.

VERNETZUNG



SOZIALES ANGEBOT



QUESTIONNAIRE

SUBCATEGORY

In order to make the evaluation of the subcategories and main categories understandable and transparent, a questionnaire has been developed. This also aims to contribute to the comparability of the individual properties.

ACCESSIBILITY

POINTS

Pedestrian Suitability

- Are there dangerous pedestrian crossings?
- Are there crosswalks and traffic lights in the nearby area?
- Are there well-developed bike and pedestrian paths?

Safety

- Is the area adequately lit?
- Are there fear-inducing areas?

Barrier-free Access

- Is this area barrier-free? (Floor coverings, ramps, etc.)
- How easy is it to navigate the area? (Signage, language)

Permeability

- How permeable does the property seem/feel?
- How easy is it to access the property?

QUESTIONNAIRE

MAIN CATEGORY

POINTS

GREEN SPACE

Active Green Space

- Are the green spaces publicly accessible?
- Is the green space used/actively played on? (Inventory available)

Microclimate

- What is the level of sealing?
- Are there water retention areas?
- Are there shaded areas?
- Is there green facade coverage?

Air and Noise Quality

- What is the level of air and noise pollution caused by surrounding traffic?
- Are there measures in place for noise protection?
- Is the area sufficiently greened to improve air quality?

Biodiversity

- What is the biodiversity on the property? (Meadows, shrubs, trees)
- Are there various provisions for insects, birds, and other animals on the property? (AAD)
- What is the habitat quality for flora and fauna?

ECONOMY

Social and Sustainable Project Investments

- Does the company support social projects locally?
- Does the company support ecological projects locally?
- Does the company support innovative projects locally?

Maintenance and Care

- Is there a responsible person for maintenance?
- How intensively is the space maintained?

Space Management

- Are there publicly accessible indoor and outdoor spaces?
- Is there any vacant space?
- Are there measures in place to address vacancy?

Commercial Offerings

- Are there external uses on the ground floor that benefit the work/living environment?

QUESTIONNAIRE

SUBCATEGORY

POINTS

SOCIAL INFRASTRUCTURE

Neighborhood supply

- What is the demand for neighborhood supply? (Daycare centers, etc.)
- Does the property contribute to social infrastructure?
- Are there shopping options, retail, supermarkets?
- Are there medical services and educational institutions in close proximity?

Demography

- Are there offerings for different age groups in the area?
- Are intergenerational activities offered?

Public facilities

- Are there playgrounds?
- Are there public restrooms?
- Are there drinking water stations/fountains for hot days?

Diversity

- Is the social infrastructure gender-sensitive?
- Is the social infrastructure intercultural/inclusive?

BUILDING

Diversity in space usage

- How diverse is the space offering? (Social, commercial, family-friendly, luxury use?)

Context

- How does the building appear in context?
- Does it contribute to architectural harmony or the cityscape?
- How should the building density be assessed?

Community offering

- Is there a shared space?
- What does the building offer?

Energetic condition

- Is the building in good energetic condition?
- What is the building's structural integrity?
- Is there unused potential for sustainable energy use? (Solar, district heating, geothermal?)

QUESTIONNAIRE

MAIN CATEGORY

POINTS

SUSTAINABLE MOBILITY

Accessibility

- Are public transport options within walking distance?
- Are alternative options within walking distance?
- Is the area within walking distance?

Car density

- Is there a reduced parking space ratio, with alternative options available?
- Have parking spaces been repurposed? (Parklets)
- Are parking areas being collectively combined?

Sharing Options

- Is there unused potential for sharing concepts in the area? (Car, scooter, roller, bicycle)
- (Parking spaces/charging stations/designated areas?)

Bicycle

- Are there enough bicycle parking spaces? Secure, covered, and lit?
- Is there a bike repair station?

COMMUNICATION

Identity

- Are there places for appropriation of public space?
- How actively is the public space used?

Transparency

- Are projects communicated to the public?
- Is it transparent who owns which property/building?
- Are users involved in decision-making processes?

Perception

- What is the exterior impact of the building? (Bright/dark, open/closed?)
- Does the space promote public perception? (Is there inventory?)

Platform

- Is the place designed in a way that people use it as a meeting point?
- Is there a form of media exchange with users and/or other businesses?

QUESTIONNAIRE

SUBCATEGORY

POINTS

NETWORKING

Quality of the pedestrian network

- Are pedestrian pathways accompanied by green infrastructure?
- Is the pedestrian network supported by activities? (Leisure/sport/play)

Digital infrastructure

- Are coworking spaces offered?
- Are there options for mobile charging stations?
- Is there public Wi-Fi access?

Neighborhood context

- Are they local or external users?

Activation of public space

- How far has the public space already been activated?

SOCIAL OFFERING

Leisure

- Are sports and leisure activities provided at the site? (Table tennis, climbing wall, bookshelf)

Culture

- Are cultural activities allowed at the site?
- Are there meeting points for clubs or organizations at the site?

Education

- Are there public offerings related to education?
- Is infrastructure for education provided?

Events

- Are outdoor spaces provided for events? (Farmers' markets, etc.)

QUESTIONNAIRE

MAIN CATEGORY

CALCULATION SYSTEM

We have chosen this type of radial diagram because it is a useful tool for **evaluating and analyzing** various aspects of urban design. It provides a **visual representation** that allows complex information to be captured and compared at a glance. To differentiate the significance of the 9 categories we selected, we developed a rating system that adjusts the size of each pie segment to allocate the appropriate space to the chosen **priorities**. The ranking of preferences from all groups together determines the result of the radial diagram.

USER PERSPECTIVE

The parallel analysis from the **users'** side is incorporated into the evaluation, but it is considered outside the point system. This allows for **quicker implementation** while still providing the opportunity to consider certain suggestions when answering the questions.

TEST REPORT

For **transparent evaluation** and traceable point allocation, each client receives a test report in written form, explaining the achieved score based on the rosettes for each main category. The completed questionnaire serves as a traceable explanation. The entire evaluation system has been created for the comparability of different projects. Based on the test report, **explicit deficiencies** on the property are pointed out, and a **proposal** for further implementation is formulated, which is necessary for the next step.

STANDARDS

FROM 63 P.

GOLD

FROM 45 P.

SILVER

FROM 27 P.

BRONZE

CERTIFICATION



**Die goldene
PARKBANK**

für die Aktivierung ungenutzter städtischer
Räume und die Steigerung der Raumqualität für
die Stadtgesellschaft.

Unternehmen

Landeshauptstadt
München

Europäische
Union

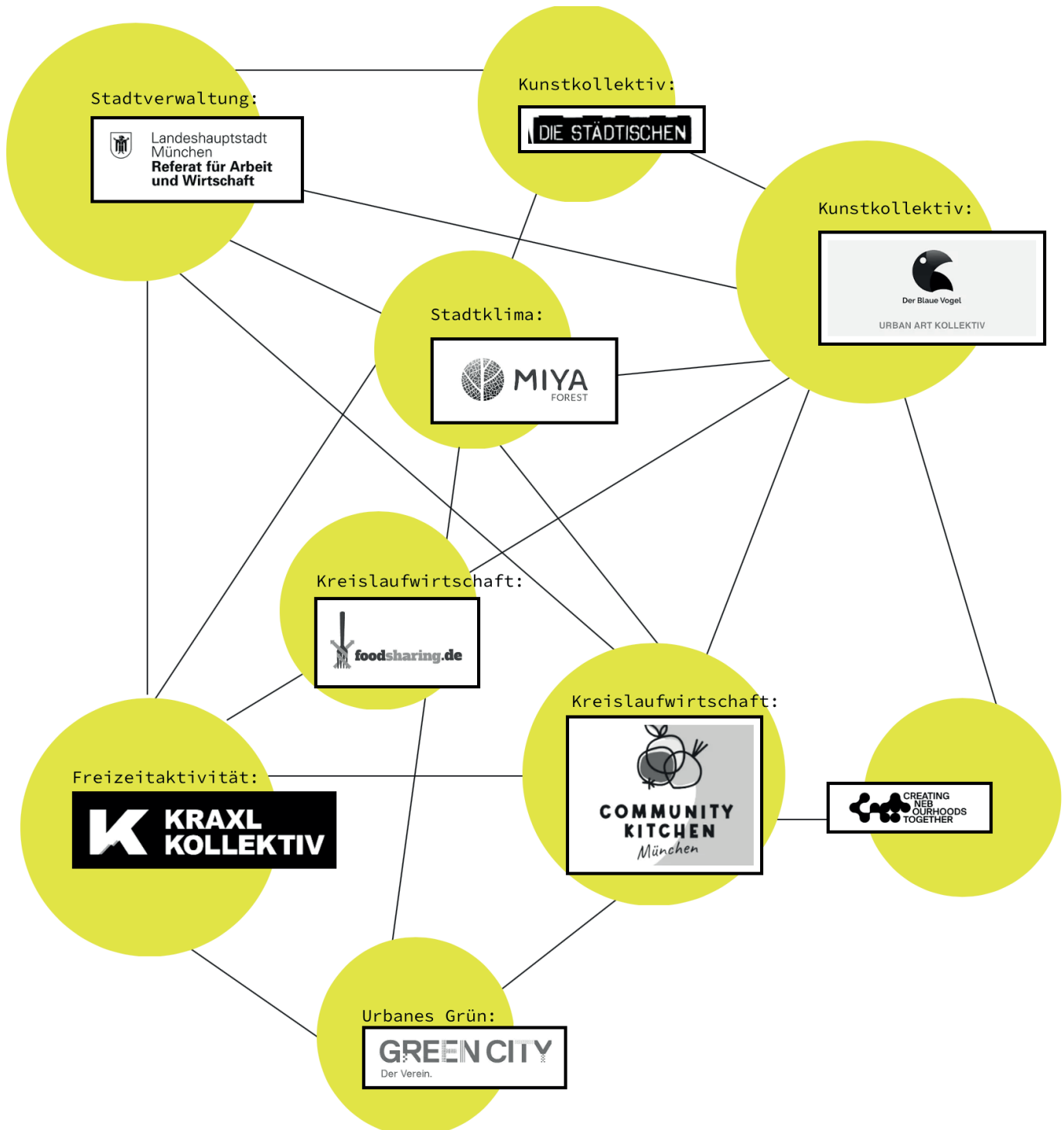
STADTRAUM-
CHECK e.V.

TOOLBOX

CHAPTER 03: IMPLEMENTATION

NETWORK

The implementation of various „**Tools**“, ranging from small to large measures that can vary depending on the **budget**, is carried out with initiatives from our network. The goal is to continuously expand the network portfolio to steadily expand the tools. The contract for implementation is concluded with one of our „partners,“ and the **URBAN SPACE CHECK e.V.** remains responsible for support and maintenance. This concept supports small associations and initiatives, which are often already active on-site, and offers both actors, namely companies and initiatives, the opportunity for a **marketing campaign**.



DIRECTORY

SUSTAINABILITY

TECHNOLOGY

MOBILITY

WEATHER PROTECTION

WALKABILITY

DENSIFICATION

FUNCTIONAL EXTENSION FOR OFFICE
COMPLEXES

NATURE IN THE CITY

SPORT

INFORMATION / INTERACTION

URBAN FURNITURE

SPARKING COMMON INTEREST

STREET ART

ACTIVATION OF THE GROUND FLOOR

HOW DO I USE THE TOOLBOX?

The **TOOLBOX** is a pool of **interventions** and measures that you can select to develop different spaces in the city. There are two different approaches to using the TOOLBOX:

- Depending on the implementation area or **budget**, you can select any suitable action—the indicators can be found within each action.
- Depending on the impact you want to achieve, you can select interventions based on the **Impact Points** and the category.

INDICATORS

REFERENCE

SIZE

BUDGET

TIME EFFORT

MAINTENANCE

TARGET GROUP

ACTOR

LOCATION

IMPACT POINTS

NAME OF REFERENCE

Keywords and location of a global reference project are listed.

S - M - L

Depending on the scale of the intervention, the scale varies between S, M, and L.



The more expensive a tool and its feasibility, the more coins are filled; the fourth stack of coins roughly marks the 10k threshold.



The more circles are filled, the longer and more time-consuming the use of the tool is.



The more circles are filled, the more important the project's monitoring is and the greater the effort to maintain it.



The icons represent the age groups: children, teenagers (up to 17 years), adults, and seniors.

NAME OF ACTOR

The person/institution responsible for the tool; the municipality, the property owner, etc.

NAME OF LOCATION

The location where the tool is to be applied.


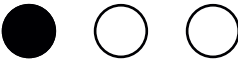






The actions have different impacts on the intervention results in space, which are differentiated into nine categories.

SUSTAINABILITY



SUSTAINABILITY




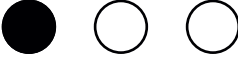



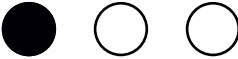
Tool	Reference	Size	Budget	Time Effort
I.I. <ul style="list-style-type: none"> solar panels on roof rainwater collection blue/green roof 	gare maritime work-space, neutelings riedijk architects + bureau bouwtechniek	(S) - M - L	 15.000 - 25.000 €	
I.II. <ul style="list-style-type: none"> renovating the buildings to save energy reducing emission of greenhouse gases 	gaîté montparnasse (îlot vandamme), mvrdiv, paris	(S) - M - L	 15.000 - 25.000 €	
I.III. <ul style="list-style-type: none"> adopting geothermal heating 	gare maritime work-space, neutelings riedijk architects + bureau bouwtechniek	(S) - M - L	 30.000 - 40.000 €	

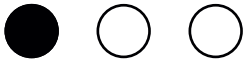







Maintenance	Target Group	Actor	Location	Impact Points
<div><div></div><div></div><div></div></div>	Not relevant	Owner of the Building	Roof	<div>green space 2 pt</div> <div>economy 1 pt</div>
<div><div></div><div></div><div></div></div>	Not relevant	Owner of the Building	Building	<div>economy 1 pt</div> <div>green space 1 pt</div> <div>housing 1 pt</div>
<div><div></div><div></div><div></div></div>	Not relevant	Owner of the Building	Building	<div>green space 1 pt</div> <div>economy 1 pt</div>

TECHNOLOGY



TECHNOLOGY









Tool	Reference	Size	Budget	Time Effort
II.I. Free Wifi <ul style="list-style-type: none"> internet accessible for everyone on the business campus 	Bayern W-Lan	(S) - M - L		
II.II. Charging stations <ul style="list-style-type: none"> install charging stations next to the public sitting areas, living room 	Implug	(S) - M - L		
II.III. Quiet zones Smart street Lighting <ul style="list-style-type: none"> noise cancelling Professorships or rooms 	Zenbooth	(S) - M - L		
II.IV. Smart street Lighting	Energie	S - (M) - L	 <p>2.500 - 4.000 €* *one street light</p>	





Maintenance	Target Group	Actor	Location	Impact Points
		<p>User of the Building Owner of the Building</p>	<p>Building</p>	<p>availability 1 pt</p> <p>economy 1 pt</p>
		<p>User of the Building Owner of the Building</p>	<p>Building POPS Public Areas</p>	<p>availability 1 pt</p>
		<p>User of the Building Owner of the Building</p>	<p>Building</p>	<p>availability 1 pt</p>
		<p>City of Munich</p>	<p>Street</p>	<p>availability 2 pt</p> <p>economy 1 pt</p>

MOBILITY











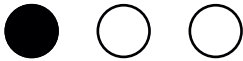







MOBILITY

Tool	Reference	Size	Budget	Time Effort
III.I. Carsharing	Miles, Mobility, Share Now	S - (M) - L		
III.II. Bikesharing	MVG Rad, Munich	S - (M) - L		
III.III. Scootersharing	Tier, Bolt, Voi	S - (M) - L		
III.IV. Bike Lanes	-	S - (M) - L		

Maintenance	Target Group	Actor	Location	Impact Points
● ● ●		City of Munich	Street Parking Lots	sustainable mobility 1 pt
● ● ●		City of Munich	Street Parking Lots	sustainable mobility 1 pt
● ● ●		City of Munich	Street Parking Lots	sustainable mobility 1 pt
● ○ ○		Owner of the Building City of Munich	Street	connectivity 2 pt sustainable mobility 1 pt

MOBILITY




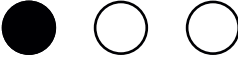
Tool	Reference	Size	Budget	Time Effort
III.V. Speed limit and adjusted vehicle traffic	Superblock, Barcelona	S - M - (L)		
III.VI. Pedestrianized Street	AQT Kolumbusstr., Munich	S - M - (L)		
III.VII. Secure street crossing - pop-up zebra crossing - elevated crossing - speed bump - coloured street - suitable for the disabled people	-	(S) - M - L		
III.VIII. Shuttle Service	-	S - (M) - L		





Maintenance	Target Group	Actor	Location	Impact Points
		City of Munich	Street	<div>connectivity 1 pt</div> <div>sustainable mobility 1 pt</div>
		Owner of the Building City of Munich	Street	<div>connectivity 2 pt</div> <div>sustainable mobility 1 pt</div>
		City of Munich	Street	<div>availability 1 pt</div> <div>connectivity 1 pt</div> <div>sustainable mobility 1 pt</div>
		Owner of the Building City of Munich	Street	<div>connectivity 2 pt</div> <div>sustainable mobility 1 pt</div>

WEATHER PROTECTION



WEATHER PROTECTION




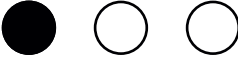
Tool	Reference	Size	Budget	Time Effort
IV.I. Creation of interior and pedestrian connection <ul style="list-style-type: none"> Protection from cold and rainy weather in winter and from direct sunlight and hot summer days. 	Valley Towers, MVRDV Amsterdam	(S) - M - L		
IV.II. Cover outside spaces for public use <ul style="list-style-type: none"> a light system external to the existing buildings. It is ventilated, carries vegetation, and allows its use at all hours of the day. 	Administration building + rooftop greenhouse, Kuehn Malvezzi, Oberhausen	(S) - M - L		

Maintenance	Target Group	Actor	Location	Impact Points
		<p>User of the Building Owner of the Building</p>	<p>PoPs</p>	<p>economy 2 pt</p> <p>connectivity 1 pt</p>
		<p>Owner of the Building</p>	<p>PoPs Roof</p>	<p>green space 2 pt</p> <p>communication 1 pt</p>

WALKABILITY



WALKABILITY









Tool	Reference	Size	Budget	Time Effort
IV.I. Creation of interior and pedestrian connection <ul style="list-style-type: none"> Public spaces are oriented and visually connected and visible to the street 	Gaîté Montparnasse (Ilot Vandamme Block), MVRDV, Paris	(S) - M - L		
IV.II. Accessible PoPs <ul style="list-style-type: none"> public spaces are located at the same elevation as the sidewalk. 	Townhouse Zwanenburg, Heren 5 Architects, Zwanenburgz, Netherlands	(S) - M - L		

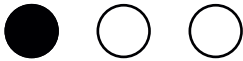







Maintenance	Target Group	Actor	Location	Impact Points
<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div>Owner of the Building City of Munich</div>	<div>PoPs</div>	<div><div>availability 1 pt</div><div>economy 1 pt</div><div>connectivity 1 pt</div></div>
<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div>Owner of the Building City of Munich</div>	<div>PoPs</div>	<div><div>availability 1 pt</div><div>economy 1 pt</div><div>connectivity 1 pt</div></div>

DENSIFICATION


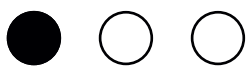






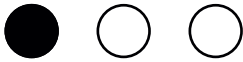





DENSIFICATION

Tool	Reference	Size	Budget	Time Effort
VI.I. Restructuring the offices to reach maximum efficiency	M Vilo Bach Architecture	(S) - M - L		
VI.II. Passage for pedestrians in the ground floor's building and creating social hubs	MVRDV Valley, Amsterdam	(S) - M - L		
VI.III. Add attractive uses on the pops	Escadinhas Footpaths, Paulo Moreira Architectures	(S) - M - L		
VI.IV. Public spaces that operate 24/7	Park (ing) Day	(S) - M - L		

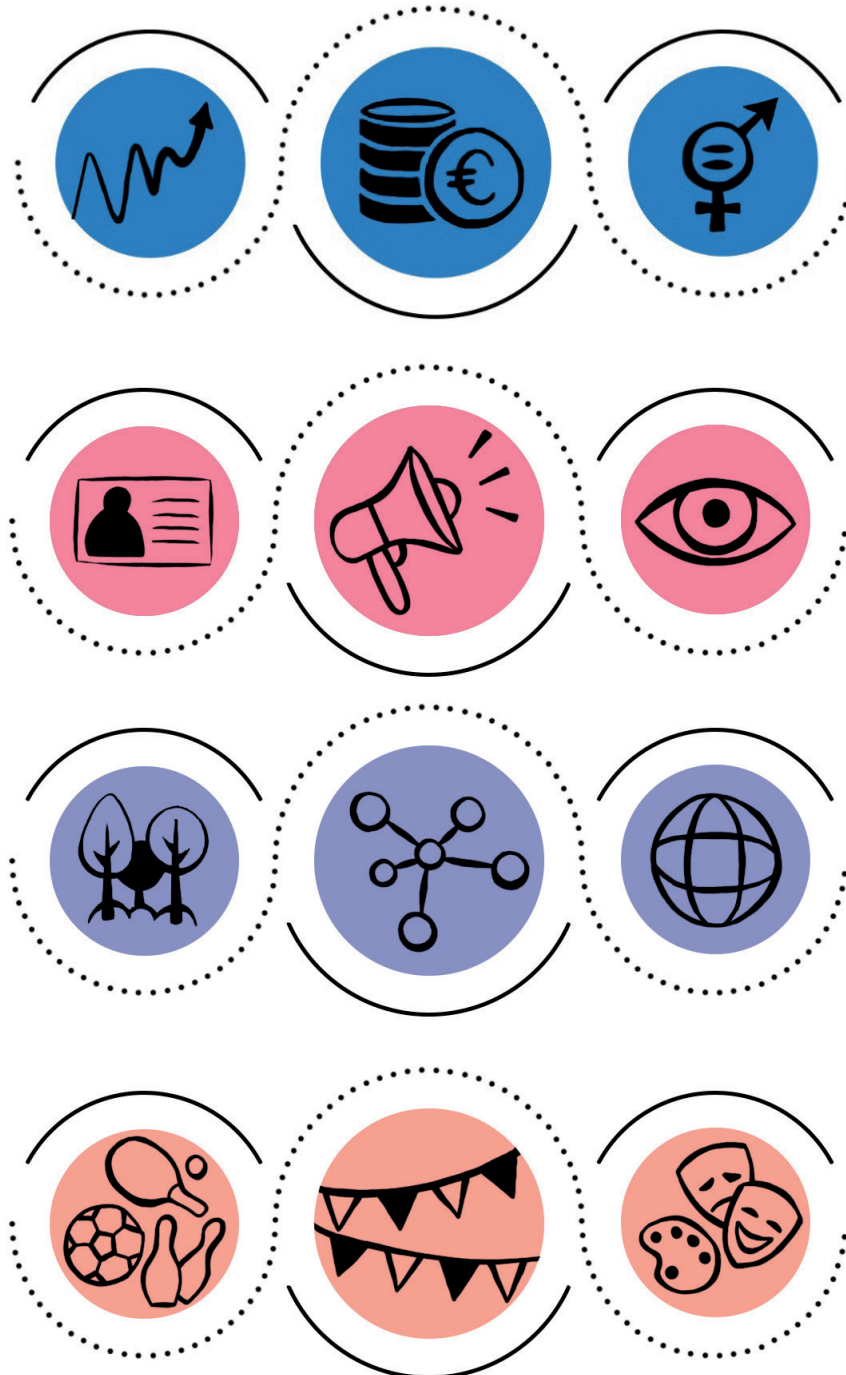
Maintenance	Target Group	Actor	Location	Impact Points
		User of the Building	Office Building	<div>economy 2 pt</div>
		User of the Building Owner of the Building	Office Building	<div>economy 1 pt</div> <div>connectivity 1 pt</div>
		User of the Building Owner of the Building	Office Pops	<div>economy 1 pt</div> <div>social infrastructure 1 pt</div> <div>connectivity 1 pt</div>
		User of the Building Owner of the Building City of Munich	Parking Lot	<div>social infrastructure 1 pt</div>

DENSIFICATION









Tool	Reference	Size	Budget	Time Effort
<p>VI.V.</p> <p>Space should harmoniously accommodate diverse activities without time conflicts</p>	<p>Park (ing) Day</p>	<p>(S) - M - L</p>		
<p>VI.VI.</p> <p>Add levels to existing buildings</p>	<p>3 Hoefe - Office and residential building, Tchoban Voss Architekten</p>	<p>(S) - M - L</p>		
<p>VI.VII.</p> <p>Creating mixed use residential buildings</p>	<p>Henning Larsen Seoul Valley</p>	<p>(S) - M - L</p>		









Maintenance	Target Group	Actor	Location	Impact Points
		<p>User of the Building Owner of the Building</p>	<p>Office Building</p>	<p>availability 2 pt</p> <p>social infrastructure 1 pt</p>
		<p>User of the Building Owner of the Building</p>	<p>Office Building</p>	<p>economy 1 pt</p> <p>housing 2 pt</p>
		<p>Land Owner New Investors</p>	<p>Parking Lot</p>	<p>economy 1 pt</p> <p>housing 2 pt</p>

FUNCTIONAL EXTENSION FOR OFFICE COMPLEXES



























FUNCTIONAL EXTENSION FOR OFFICE COMPLEXES

Tool	Reference	Size	Budget	Time Effort
VII.I. View point	Tate Modern, London	(S) - M - L		
VII.II. Commercial spaces	Transit rooftop & bar, Munich	(S) - M - L		
VII.III. Library	City library, Munich	(S) - M - L		
VII.IV. Public living room	LocHal, Tilbury	(S) - M - L		


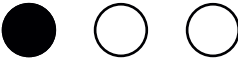

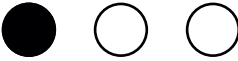
Maintenance	Target Group	Actor	Location	Impact Points
		Owner of the Building	Roof	<div>communication 1 pt</div> <div>social network 1 pt</div>
		Owner of the Building	Roof	<div>economy 3 pt</div>
		Building Owner City of Munich	Building	<div>communication 1 pt</div> <div>social network 1 pt</div>
		Building Owner City of Munich	Building	<div>communication 1 pt</div> <div>social network 1 pt</div>

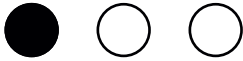



FUNCTIONAL EXTENSION FOR OFFICE COMPLEXES

Tool	Reference	Size	Budget	Time Effort
VII.V. Co-Working Space	Werksviertel, Munich	(S) - M - L		
VII.VI. Start Ups Tech-Companies	Munich Urban CoLab, Munich	(S) - M - L		
VII.VII. Spaces for events	Ecos Office Center, Munich	(S) - M - L		
VII.VIII. Cafe Restaurant Mensa	Mensa HU Nord, Berlin	(S) - M - L		

Maintenance	Target Group	Actor	Location	Impact Points
● ● ●	   	Owner of the Building Tenant	Building	<div>communication 1 pt</div> <div>social network 2 pt</div>
● ○ ○	   	Owner of the Building Tenant	Building	<div>economy 3 pt</div>
● ● ○	   	Owner of the Building Tenant	Building	<div>economy 2 pt</div>
● ● ●	   	Owner of the Building Tenant	Groundfloor	<div>communication 1 pt</div> <div>social network 1 pt</div>

FUNCTIONAL EXTENSION FOR OFFICE COMPLEXES

Tool	Reference	Size	Budget	Time Effort
VII.IX. Food trucks/ Public benches and tables	We Celebrate, Munich	(S) - M - L		
VII.X. Parklets	Parklets, Green City e.V., Munich	(S) - M - L		

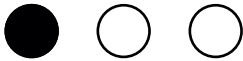

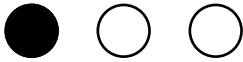





Maintenance	Target Group	Actor	Location	Impact Points
		<p>Owner of the Building Tenant</p>	<p>Street PoPs</p>	<div>communication 1 pt</div> <div>social network 1 pt</div>
		<p>Owner of the Building Tenant</p>	<p>Groundfloor</p>	<div>connectivity 1 pt</div>

NATURE IN THE CITY



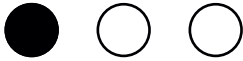







NATURE IN THE CITY

Tool	Reference	Size	Budget	Time Effort
VIII.I. Wild flower meadow <ul style="list-style-type: none"> habitats for insects natural esthetic green space 	Wild flower meadow, Hamburg Nord			
VIII.II. Community garden <ul style="list-style-type: none"> strengthening the community environmentally friendly farming cheap possibility for food 	Zak “Zusammen aktiv in Neuperlach”, Munich			
VIII.III. Modular moss walls <ul style="list-style-type: none"> filtering of air pollutants reduce traffic noise urban climate 	MoosTex			
VIII.IV. Animal aided design <ul style="list-style-type: none"> strengthening of biodiversity rising the awareness about animals 	Schumacher Quartier, Berlin			


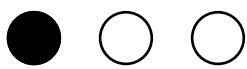


Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner City of Munich	Green Space	<div>green space 1 pt</div>
		Property Owner City of Munich	Public Space PoPs	<div>communication 1 pt</div> <div>social network 1 pt</div>
		City of Munich	Street	<div>green space 1 pt</div>
		Property Owner	Building	<div>green space 1 pt</div>

NATURE IN THE CITY

Tool	Reference	Size	Budget	Time Effort
VIII.V. Tiny forest <ul style="list-style-type: none"> filtering of air pollutants water storage habitat for birdsinsects evironmental education 	Fröbel-Horts Oderpiraten, Frankfurt	(S) - M - L		
VIII.VI. Facade greening <ul style="list-style-type: none"> reduced heating of the building filtering of air pollutants provide habitat for animals 	Desy- Forschungshalle 36, Hamburg	S - (M) - L		
VIII.VII. Roof gardening <ul style="list-style-type: none"> waste energy of the buildings can be used recirculation systems safes water and fertiliser 	inFarmin, Duisburg	S - (M) - L		
VIII.VIII. Urban forest garden- ing <ul style="list-style-type: none"> fruit for harvesting green free space environmental education 	Urbaner Waldgarten, Berlin-Britz, Berlin	S - M - (L)		

Maintenance	Target Group	Actor	Location	Impact Points
		City of Munich	Green Space Public Space	<div>green space 2 pt</div>
		Property Owner City of Munich	Building	<div>green space 1 pt</div> <div>building 1 pt</div>
		Property Owner City of Munich	Roof	<div>green space 1 pt</div> <div>building 1 pt</div>
		City of Munich	Park	<div>green space 1 pt</div> <div>social network 1 pt</div> <div>social infrastructure 1 pt</div>

NATURE IN THE CITY









Tool	Reference	Size	Budget	Time Effort
VIII.IX. Planting trees	-	(S) - M - L	 1.000 - 5.000 €* *Per Tree	
VIII.X. Urban Garden Bed	Methfesselstrasse 60, Hamburg	(S) - M - L		

















Maintenance	Target Group	Actor	Location	Impact Points
<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div>Property Owner</div> <div>City of Munich</div>	<div>Green Space</div> <div>Public Space</div>	<div>green space</div> <div>2 pt</div>
<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div>Property Owner</div> <div>City of Munich</div>	<div>Green Space</div> <div>Public Space</div>	<div>green space</div> <div>1 pt</div>

SPORT


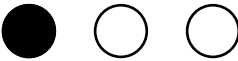






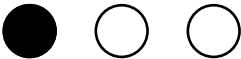

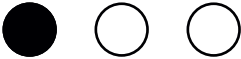



SPORT

Tool	Reference	Size	Budget	Time Effort
IX.I. Boulodrome <ul style="list-style-type: none">promotes social interaction between neighbours	Boule Devant Berlin e.V., Berlin	S - M - L		
IX.II. Outdoor fitness facilities <ul style="list-style-type: none">public, freely accessible fitness facilitiespromotes health	Zac le Croissant, Paris, Topotek1	S - M - L		
IX.III. Basketball court <ul style="list-style-type: none">publicly accessible and freepopular sport especially for young adults28 x 15 m	Sports-field on Bellevue di Monaco, Munich	S - M - L		
IX.IV. Boulder wall <ul style="list-style-type: none">publicly accessible and free boulder wallpopular sport especially for young adults	Kraxlkollektiv, Munich	S - M - L		

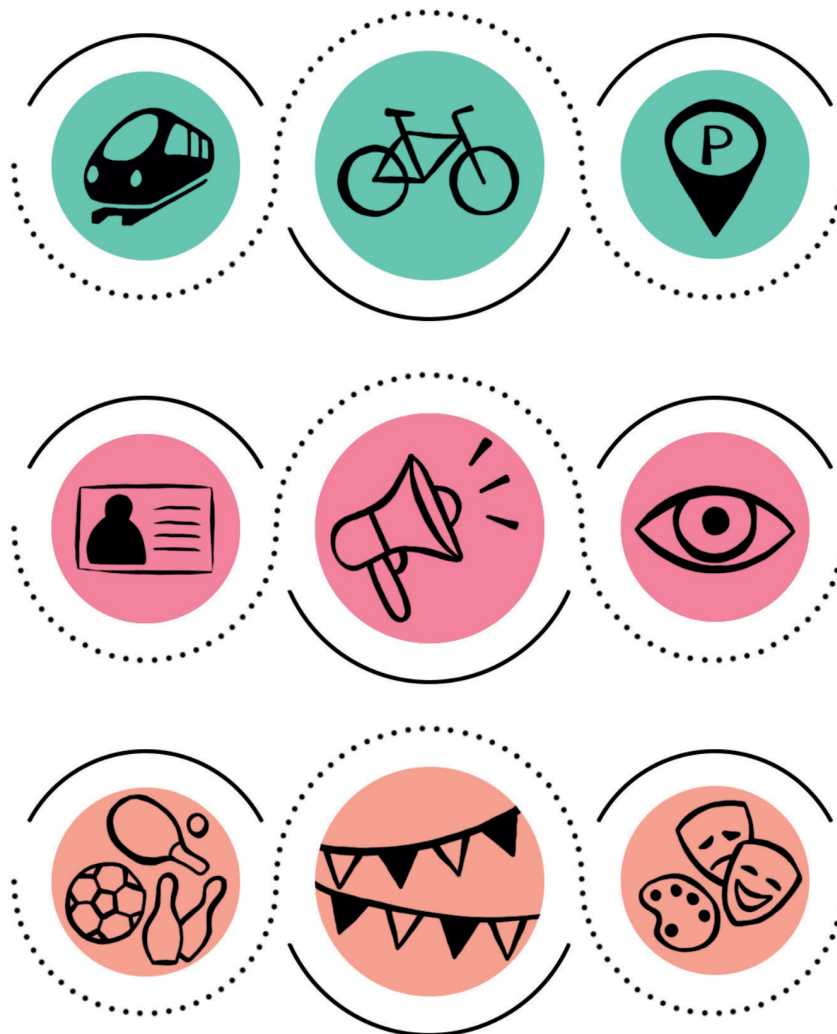
Maintenance	Target Group	Actor	Location	Impact Points
● ○ ○	   	Property Owner City of Munich	Public Space PoPs	social network 1 pt
● ○ ○	   	Property Owner City of Munich	Public Space PoPs	connectivity 1 pt social network 1 pt
● ○ ○	   	Property Owner City of Munich	Public Space PoPs	communication 1 pt social network 1 pt
● ○ ○	   	Property Owner City of Munich	Public Space PoPs	social network 1 pt

SPORT

Tool	Reference	Size	Budget	Time Effort
IX.V. Table tennis <ul style="list-style-type: none"> publicly accessible and free table tennis for all generations 	Zac le Croissant, Paris, Topotek1	(S) - M - L		
IX.VI. Freerunning / Parkour <ul style="list-style-type: none"> public, freely accessible parkour facilities meeting point for children and young adults promotes health and movement 	Rote Stadt, Olympiapark Munich	S - (M) - L		
IX.VII. Seperate Jogging Path <ul style="list-style-type: none"> ensures more safety through separation of speeds promotes health and movement 	River-Renaturation Turia, Valencia	S - M - (L)		







Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner City of Munich	Public Space PoPs	<div>social network 1 pt</div>
		Property Owner City of Munich	Public Space PoPs	<div>communication 1 pt</div> <div>social network 1 pt</div>
		Property Owner City of Munich	Public Space PoPs	<div>connectivity 1 pt</div> <div>social network 2 pt</div>

INFORMATION / INTERACTION

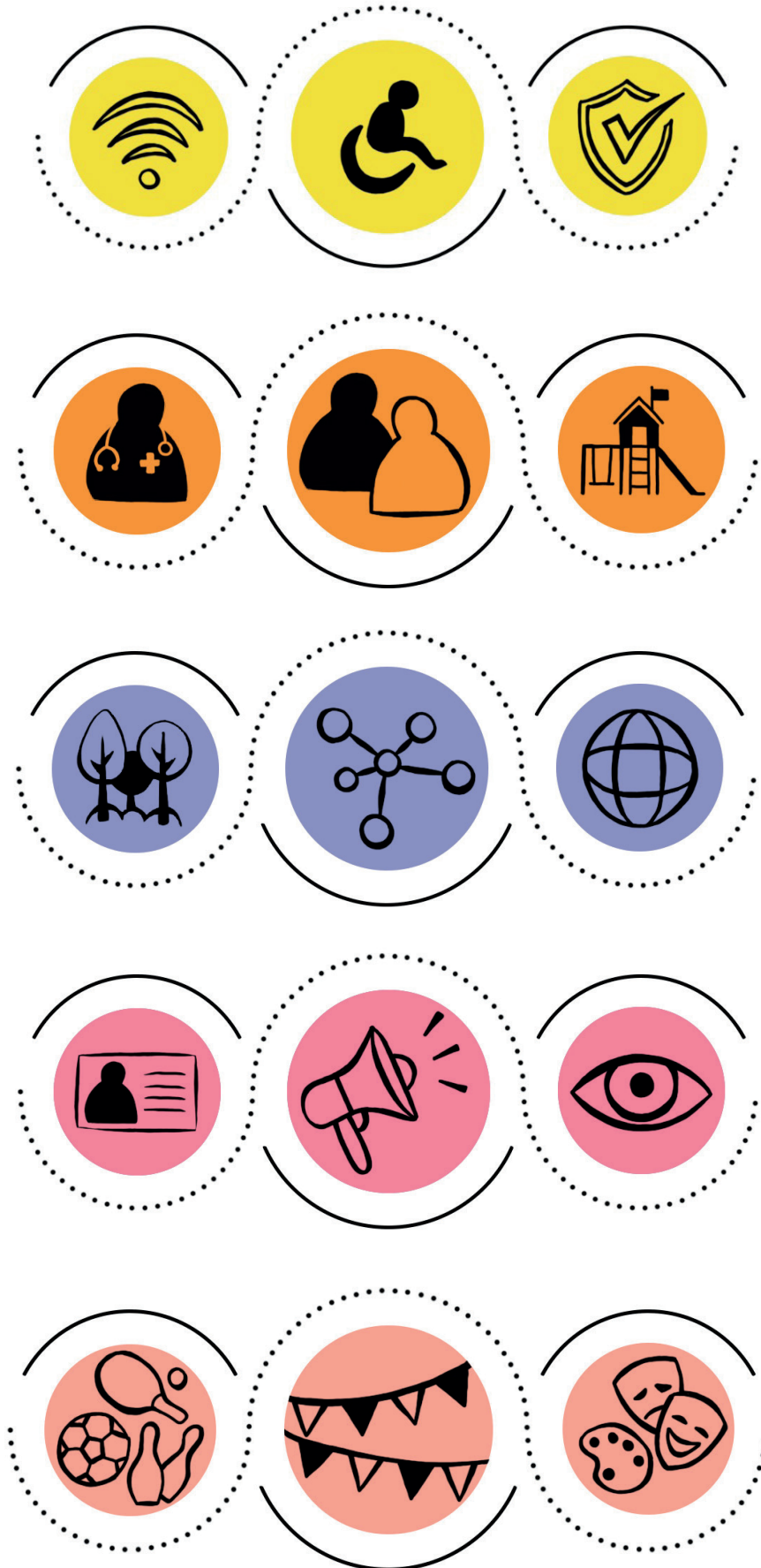


INFORMATION / INTERACTION



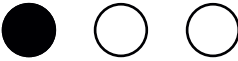





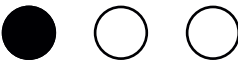
Tool	Reference	Size	Budget	Time Effort
X.I. Neighbourhood meeting place <ul style="list-style-type: none"> • for all weather conditions • offer mutual help, job offers, ... • lost + found, sell + buy • social interaction 	Perlacher Herz e.V.	S - (M) - L		
X.II. Workshop/Maker-space <ul style="list-style-type: none"> • sharing skills + knowledge • possibility to borrow tools • repair-cafe, up-cycle-workshops, second hand shop for furniture 	Radlwerkstatt ZAK e.V.	S - (M) - L		
X.III. Bike repair station <ul style="list-style-type: none"> • promotes the use of bicycles as a means of transportation • makes cycling visible in public space 	Stadtradeln Bike-Stations	(S) - M - L		

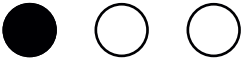





Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner	Building	<div>communication 2 pt</div> <div>social network 1 pt</div>
		Property Owner	Building	<div>communication 2 pt</div> <div>social network 1 pt</div>
		Property Owner	Street	<div>sustainable mobility 1 pt</div>

URBAN FURNITURE




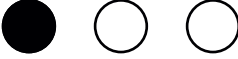










URBAN FURNITURE

Tool	Reference	Size	Budget	Time Effort
XI.I. Seating possibilities + Tables <ul style="list-style-type: none"> possibility to self-built and combine with various other functions like wifi, shading etc. benches, blocks, design objects etc. 	Urban Gatherings, Livelicity (paired with other functions), Tulip Montreal, Adhoc Architects	 - M - L		
XI.II. Outdoor chess <ul style="list-style-type: none"> exchange of knowledge between the age groups or informal fun usage neighbourhood outdoor chess games, game nights, competitions 	Chess, Leopoldstrasse, Munich	 - M - L		
XI.III. Bookshelf <ul style="list-style-type: none"> possibility to exchange goods (books) and knowledge meeting-point universal accessibility 	Bookshelf, Munich	 - M - L		

Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner City of Munich	Public Space PoPs Parking Lot	<div>communication 1 pt</div> <div>social network 1 pt</div>
		Property Owner City of Munich	Public Space PoPs	<div>communication 1 pt</div> <div>social network 1 pt</div>
		City of Munich	Public Space	<div>social network 1 pt</div>

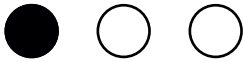

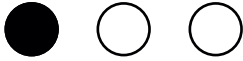

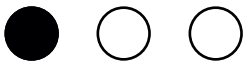

URBAN FURNITURE

Tool	Reference	Size	Budget	Time Effort
XI.IV. Water/Fountains <ul style="list-style-type: none"> • refreshment • contribution to micro-climate • “placemaking”, urban meeting point • free and universal accessibility 	Fountain, Bordeauxplatz, Munich	(S) - (M) - L		
XI.V. Collective grill/cooking <ul style="list-style-type: none"> • exchange of knowledge between the age groups • communication and cooperation while cooking and eating 	Kitchain, Lisbon, Moov + Benedetta Maxia	(S) - M - L		
XI.VI. Playground <ul style="list-style-type: none"> • crucial activity for children development and social interaction • meeting point 	Playground, Tassiloplatz, Munich	S - (M) - L		

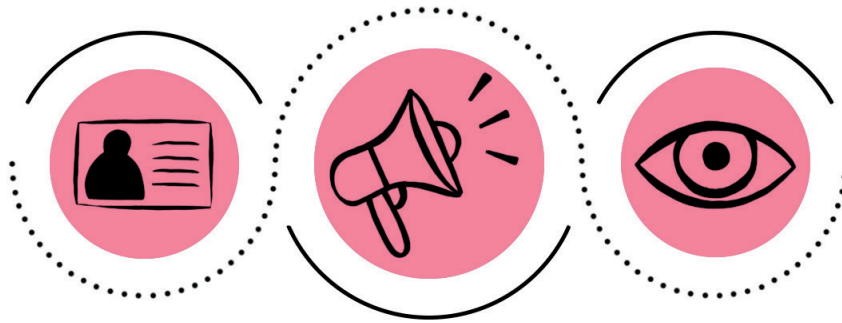
Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner City of Munich	Public Space PoPs	<div>communication 1 pt</div> <div>connectivity 1 pt</div>
		Property Owner	Public Space PoPs	<div>social network 1 pt</div>
		Property Owner City of Munich	Public Space PoPs	<div>social infrastructure 1 pt</div> <div>connectivity 1 pt</div>

URBAN FURNITURE



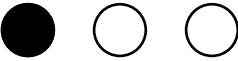





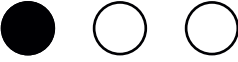



Tool	Reference	Size	Budget	Time Effort
XI.VII. Temporary play installations <ul style="list-style-type: none"> participatory installations to activate space and raise interest, educational factor 	Play kx, London, Assemble Play UK			
XI.VIII. Public lighting <ul style="list-style-type: none"> increasing safety feeling, especially for women at night energy efficient lighting concepts, e.g. smart lightning 	Zac le Croissant, Paris, Topotek1			
XI.IX. Shading roofs/pavilions <ul style="list-style-type: none"> meeting point usage change summer/winter 	The Cineroleum, Assemble UK			



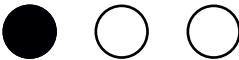



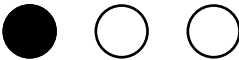

Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner City of Munich	Public Space PoPs	<div>connectivity 1 pt</div> <div>social network 1 pt</div>
		Property Owner	Public Space PoPs Street	<div>availability 3 pt</div>
		Property Owner City of Munich	Public Space PoPs	<div>communication 1 pt</div> <div>connectivity 1 pt</div>

SPARKING COMMON INTEREST



SPARKING COMMON INTEREST


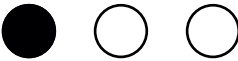




Tool	Reference	Size	Budget	Time Effort
XII.I. Urban posters <ul style="list-style-type: none"> advertisement on e.g. street furniture, metro stations, bus stops, shopping malls poster installation for visibility 	De Wreld van Witte with festival identity, Rotterdam, Studio Spass	 - M - L		
XII.II. Pillars <ul style="list-style-type: none"> commercial advertisement on pillars design integrated pillars to mark entrance, the way etc. 	Tulip Montreal, Adhoc Architects	 - M - L		
XII.III. Pop-up signs & street paintings <ul style="list-style-type: none"> highlighting the ground for better distinction 	Superkilen, Copenhagen, Topotek1	 S - M - L		
XII.IV. Social media <ul style="list-style-type: none"> advertisement and giving an idea, promoting events 	Instagram: faerberei_koesk, shaere.neuperlach, Mit Vergnügen München	 - M - L		



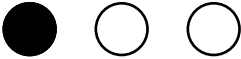



Maintenance	Target Group	Actor	Location	Impact Points
		Building Owner City of Munich Initiatives	Public Space	communication 1 pt
		Building Owner City of Munich Initiatives	Public Space	communication 1 pt
		Building Owner City of Munich Initiatives	Public Space PoPs	communication 1 pt
		Initiatives	-	communication 1 pt

STREET ART


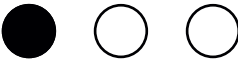








STREET ART

Tool	Reference	Size	Budget	Time Effort
XIII.I. Murals <ul style="list-style-type: none"> participatory installations to activate space and raise interest, educational factor 	Whaling Walls, Robert Wyland's Ural Project, USA	(S) - M - L		
XIII.II. Graffiti <ul style="list-style-type: none"> form of a protest and problem visibility street-art-tours, city as a brand, increasing attractiveness to visitors 	Graffiti Quarters, Latin America; Graffiti Walking Tour, Belfast, Northern Ireland	(S) - M - L		
XIII.III. Workshops collaborations communication and cooperation	Straat Museum, Workshop, The Netherlands	(S) - M - L		

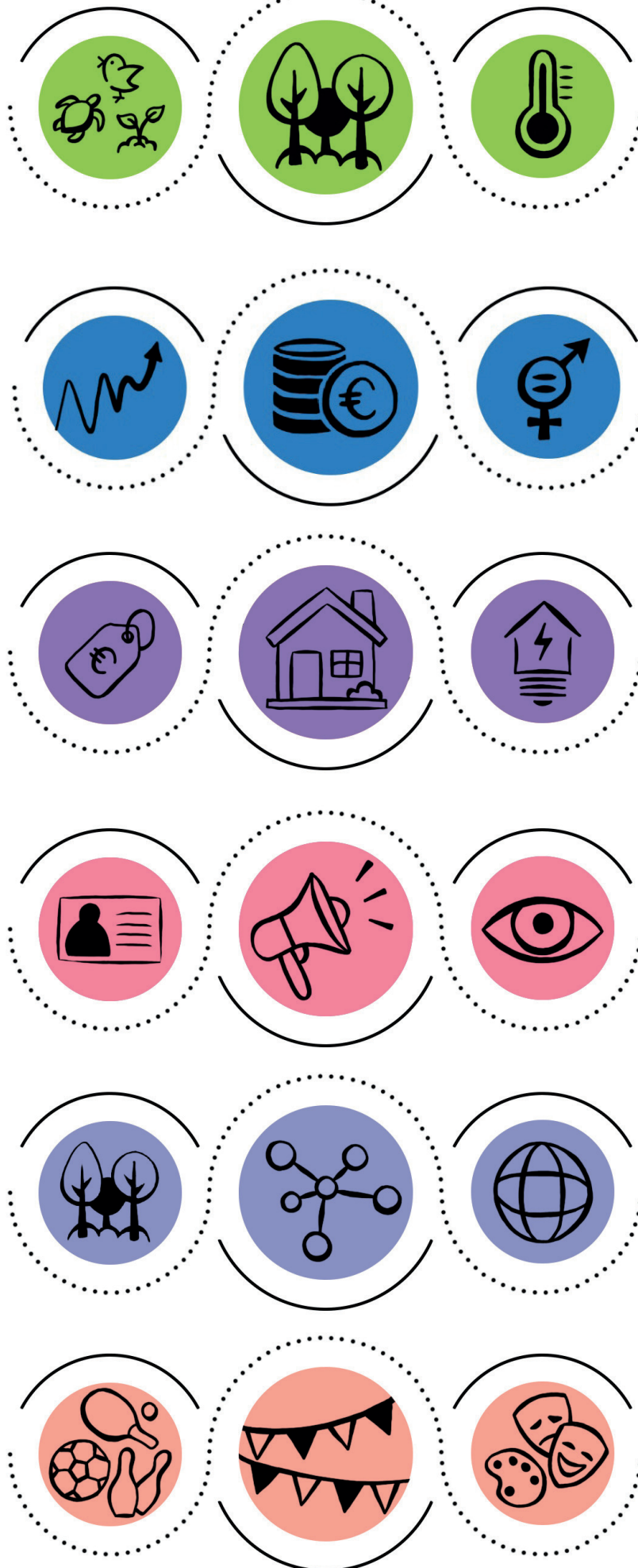
Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner City of Munich Initiatives	Building	<div>connectivity 1 pt</div> <div>social network 1 pt</div>
		Property Owner City of Munich Initiatives	Public Space Building	<div>communication 1 pt</div> <div>connectivity 1 pt</div>
		Initiatives	Public Space PoPs	<div>communication 1 pt</div> <div>social network 1 pt</div>

STREET ART




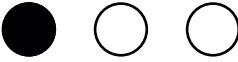


Tool	Reference	Size	Budget	Time Effort
XIII.IV. Performances <ul style="list-style-type: none"> lively atmosphere in the city access to different types of art for all groups of people possibility to express yourself 	Public Piano, Salvatorpassage - Fuenf Hoefe, Munich	(S) - M - L		
XIII.V. Fine-Art street exhibition <ul style="list-style-type: none"> place for young and unknown artists to show their work reaching wider audience 	The Museo del Prado in the streets, Tomelloso, Spain	S - (M) - L		







Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner City of Munich Initiatives	PoPs Public Space Street Park	<div>social network 1 pt</div>
		City of Munich Initiatives	Public Space Street Park	<div>communication 1 pt</div> <div>social network 1 pt</div>

ACTIVATION OF THE GROUND FLOOR



ACTIVATION OF THE GROUND FLOOR

Tool	Reference	Size	Budget	Time Effort
XIV.I. Evening mile <ul style="list-style-type: none"> gastronomy and small businesses and culture within the business district meeting point lively place outside the working hours 	Les Rambles, Barcelona, Spain	S - (M) - L		
XIV.II. Collective living room <ul style="list-style-type: none"> giving the ground-floor to the residents in self-organisation place for communication and exchange 	Kulturraum 405 e.V., Munich	(S) - M - L		
XIV.III. Opening up elevated ground floor flats to the outside <ul style="list-style-type: none"> activating front gardens possibility of conversion to maisonette flats 	Plattensiedlung, Frankfurt a.M., Stefan Forster GmbH	(S) - M - L		

Maintenance	Target Group	Actor	Location	Impact Points
		Property Owner City of Munich	Street PoPs	<div>connectivity 1 pt</div> <div>economy 1 pt</div>
		Property Owner	Building	<div>communication 1 pt</div> <div>social network 1 pt</div>
		Property Owner	Building	<div>green space 1 pt</div> <div>housing 2 pt</div>

TRANSFERABILITY

1. **Prioritize Green Spaces:** Green spaces and de-paving measures should be a central element of POPS around large office buildings. It is essential to use existing natural qualities to strengthen sustainability and resilience.
2. **Ensure Accessibility for All:** Public accessibility must remain a central goal throughout the design process. This includes promoting open and mixed-use ground floors in adjacent buildings to enable inclusivity and broader public use.
3. **Improve Connectivity:** POPS should contribute to better networking and orientation throughout the neighborhood. This can be achieved through visible signage with symbols, Braille, and multiple languages to ensure easy navigation and inclusivity for all visitors.
4. **Integrate Sustainable Mobility Hubs:** The transformation of private spaces into POPS should consider the establishment of sustainable mobility hubs to support the transition to more environmentally friendly urban transport options.
5. **Plan Context-Specific Uses:** Uses such as playgrounds, water fountains, sports facilities, or seating areas should be adapted to the specific location. These elements need to be integrated into a comprehensive planning process, such as the certification process described in this report, to ensure long-term success.
6. **Promote Inclusivity and Shared Responsibility:** The design and management of POPS should foster a culture of inclusivity, respect, and shared responsibility, creating an environment where everyone feels welcome and valued.



URBAN SPACE CHECK

Evaluation system as an incentive for the transformation of private open spaces of monofunctional buildings (POPS)

Technical University of Munich
TUM School of Engineering and Design
Professorship of Urban Design
Arcisstrasse 21
80333 Munich

Tel.: +49 89 289 22350
info.ud@ed.tum.de