



University of Zagreb
Faculty of Architecture

Dashnor Kadiri

CRITERIA FOR CITY NEIGHBOURHOODS' PLANNING AND DESIGNING IN THE CONTEXT OF THE SMART CITY PLATFORM

DOCTORAL DISSERTATION
Book II - Appendix

Supervisor:
Prof.dr.sc. Bojan Baletić, dia

Zagreb, 2025



Sveučilište u Zagrebu
Arhitektonski Fakultet

Dashnor Kadiri

KRITERIJI ZA PLANIRANJE I PROJEKTIRANJE GRADSKIH SUSJEDSTVA U KONTEKSTU SMART CITY PLATFORME

DOKTORSKI RAD
Knjiga II - Prilozi

Mentor:
Prof.dr.sc. Bojan Baletić, dia

Zagreb, 2025



Photograph 1
Aerial view of Janis Joplin Promenade, Sonnwendviertel Aspern, Vienna, Austria.
Author: (Stadt Wien / C. Fürthner.).

Content Overview of the Doctoral Dissertation

BOOK I – DOCTORAL DISSERTATION

CRITERIA FOR CITY NEIGHBOURHOODS' PLANNING AND DESIGNING IN THE CONTEXT OF THE SMART CITY PLATFORM

1. THEORITICAL RESEARCH SECTION

2. CONTEXT ANALYSIS

3. SMART CITY CONCEPT

4. SMART CITY STRATEGIES – TOP-DOWN APPROACH

5. SMART CITY CRITERIA

6. PROJECTS, NEIGHBOURHOODS – BOTTOM-UP APPROACH

7. CRITERIA REVISED

8. CONTRIBUTIONS - CATALOG ANALYSIS OF THE RESEARCHED MATERIAL, TABULAR REPRESENTATIONS OF THE RESEARCH

9. CONCLUSIONS AS THE SYNTHESIS OF THE ESTABLISHED RESEARCH CRITERIA

Contents Overview of the Doctoral Dissertation

BOOK II – APPENDIX - RESEARCH CATALOGUES

CRITERIA FOR CITY NEIGHBOURHOODS’ PLANNING AND DESIGNING IN THE CONTEXT OF THE SMART CITY PLATFORM

1. CATALOGUE 1

SMART CITY STRATEGIES – TOP-DOWN APPROACH

(Book I – Chapter 4, Smart City Strategies – Top-Down Approach)

2. CATALOGUE 2

SMART CITY CRITERIA – EU & EIB Association

(Book I – Chapter 5, Smart City Criteria)

3. CATALOGUE 3

PROJECTS/NEIGHBOURHOODS – BOTTOM-UP APPROACH

(Book I – Chapter 6, Smart City Neighbourhoods – Bottom-up Approach)

4. CATALOGUE 4 - RESEACH CASES

PROJECTS/NEIGHBOURHOODS – BOTTOM-UP APPROACH

(Book I – Chapter 6, Research Cases)

BOOK II – DOCTORAL DISSERTATION

Table of Contents

Contents Overview of the Doctoral Dissertation	
BOOK I – DOCTORAL DISSERTATION.....	i
BOOK II – APPENDIX - RESEARCH CATALOGUES.....	ii
Table of Contents.....	iii

1. CATALOGUE 1

SMAT CITY STRATEGIES – TOP-DOWN APPROACH

Criteria groups by Urban and Architecture relation characters (Book I – Chapter 3, Smart City Strategies – Top-Down Approach)	2
--	---

Selection methodology.....	3
----------------------------	---

Research catalogue 1.A / Large sized cities

Paris.....	4
London.....	6
Barcelona.....	8
Milan.....	10
Vienna	12

Research catalogue 1.B / Medium sized cities

Amsterdam.....	14
Copenhagen.....	22
Zagreb.....	24

Research catalogue 1.C / Small sized cities

Zurich.....	26
Luxembourg.....	28
Gothenburg.....	30
Ljubljana.....	31

2. CATALOGUE 2

SMAT CITY CRITERIA – EU & EIB Association

Criteria groups by EU Smart Cities and EIB (European Investment Bank)

(Book I – Chapter 4, Smart City Criteria).....	35
1. Methodology overview.....	36
2. Smart City characteristics.....	37
3. Research catalogue 2.A / EU medium sized smart cities	
a. Cities with the best performance in Smart Environment	
i. Umeaa, Sweden.....	40
ii. Joenköping, Sweden.....	41
iii. Eskilstuna, Sweden.....	42
iv. Montperllier, France.....	43
v. Jyväskylä, Finland.....	44
b. Cities with the best performance in Smart People:	
i. Eskilstuna, Sweden.....	45
ii. Tampere, Finland.....	46
iii. Aarhus, Denmark.....	47
iv. Oulu, Finland.....	48
v. Umeaa, Sweden.....	49
c. Cities with the best performance in Smart Living	
i. Salzburg, Austria.....	50
ii. Graz, Austria.....	51
iii. Innsbruck, Austria.....	52
iv. Luxembourg, Luxembourg.....	53
v. Brugge, Belgium.....	54
4. Comparative diagram of 15 cities with their performance in SP, SE, SL.....	55
5. Research catalogue 2.B	
Comparative table of 3 cities with their best performance in SP, SE, SL, adding Zagreb and Ljubljana.....	56
6. Research catalogue 2.C / Representative Research Cases	
a. Zagreb, Croatia.....	57
b. Ljubljana, Slovenia.....	58
c. Umeaa, Sweden.....	59
d. Salzburg, Austria.....	60
e. Eskilstuna, Sweden.....	61

3. CATALOGUE 3

PROJECTS/NEIGHBOURHOODS – BOTTOM-UP APPROACH

(Book I – Chapter 5, Smart City Neighbourhoods – Bottom-up Approach)

1. Methodology overview.....	64
2. Research catalogue 3.A	
Findings - List of more than 200 Neighbourhoods.....	65
3. Research catalogue 3.B	
Research focus – List of 100 Neighbourhoods in a period of time 2015-2023 / Chronologically.....	73
4. EU map with selected Neighbourhoods.....	78
5. Research catalogue 3.C	
20 Neighbourhoods pictures, chronological (2005-2023)	79
6. 20 Neighbourhoods location within city maps.....	80
7. 20 Neighbourhoods within urban context maps	81
8. 20 Neighbourhoods development satellite maps.....	82
9. General info about 20 neighbourhoods (2005-2023)	83
10. Research catalogue 3.D / Analysis of 20 Neighbourhoods	
- Aspern Seestadt (Vienna, Austria)	86
- Nordhavn (Copenhagen, Denmark)	90
- Merwede (Utrecht, Netherland)	94
- Nieuw Zuid (Antwerpen, Belgium)	98
- Clichy-Batignolles (Paris, France)	102
- Schumacher Quarter (Berlin, Germany)	106
- Milano Innovation District (Milan, Italy)	110
- Brainport (Eindhoven, Netherland).....	114
- Überseeinsel (Bremen, Germany).....	118
- Bajes Kwartier (Amsterdam, Netherland)	122
- Knoop XI (Eindhoven, Netherland)	126
- Freiham North (München, Germany)	130
- Tirana Riverside (Tirana, Albania)	134
- Oberbillwerder (Hamburg, Germany)	138
- Gredelj (Zagreb, Croatia)	142
- Smíchov City (Prague, Czech Republic)	146
- Am Sandhaus (Berlin-Buch, Germany).....	150
- Jägersro (Malmö, Sweden).....	154
- Pihlajaniemi (Turku, Finland).....	158
- Nuevo Norte (Madrid, Spain)	162

4. CATALOGUE 4 - RESEACH CASES

REVISED CRITERIA FOR CITY NEIGHBOURHOODS' PLANNING AND DESIGNING IN THE CONTEXT OF THE SMART CITY PLATFORM.

(Book I – Chapter 6, Smart City Neighbourhoods – Bottom-up Approach)

1. RESEARCH CATALOGUE

- Aspern Seestadt (Vienna, Austria)246
- Brainport (Eindhoven, Netherland)254
- Nordhavn (Copenhagen, Denmark)263
- Schumacher Quarter (Berlin, Germany)269
- Gredelj (Zagreb, Croatia)276

2. COMPARATIVE ANALYSIS OF CASE STUDIES NEIGHBOURHOODS

- Comparison table of Urban Planning, smart program and critical
evolution of research case studies281
- Smart City Evaluation Matrix – Symbolic Overview.....282
- Negative Impact of Digital Layer in Smart Neighbourhoods283
- Health-Related Negative Impact of Technology on People284

List of tables	302
List of photographs.....	306
List of figures.....	307



Photograph 2
Eindhoven Smart District, Eindhoven
Author: UNStudio

1. CATALOGUE 1

SMART CITY STRATEGIES – TOP-DOWN APPROACH

(Book I – Chapter 4, Smart City Strategies – Top-Down Approach)

SMART-CITY STRATEGIES: THE TOP-DOWN APPROACH

METHODOLOGY OF SELECTING CITIES

First catalogue selects European smart cities step-by-step. Multiple filters are used to locate and compare smart city ideas across city sizes. Start by selecting 240 EU cities with over 100,000 residents. These cities are the core dataset for final decisions. This diversity helps encompass various urban regions that may desire to become smart cities. These standards are based on smart city criteria including using ICT, eco-friendly city planning, and data-based infrastructure projects. This technique helps examine smart city policies in 12 identified cities. Three population-based groupings were created to comprehend smart city plans in different-sized cities. This grouping shows how smart city approaches vary by city size and complexity. Here are the groups:

- **Large Cities (5-LSC):** Five large cities were picked that went through a selection process, with the population over than 1,000,000. These cities have more than a million people living in them, which means they represent big metropolitan areas with strong infrastructure and complex technology challenges. Cities like London, Paris, Barcelona, Vienna and Milan are usually leading the way in smart city projects because of their size and reach.
- **Medium-Sized Cities (3-MSC):** Three medium-sized cities were selected with the populations between 700,000 and 1,000,000. Unlike the big cities, Amsterdam show how medium-sized cities can use smart technology to solve their own specific problems, such as limited resources and challenges related to scale.
- **Small-Sized Cities (4-SSC):** Four small cities were chosen with populations ranging from 100,000 to 700,000. Examples include Luxembourg and Gothenburg, and they offer a different perspective on how smart solutions can be creatively used in smaller urban areas, even when there are fewer financial or infrastructure resources available.

Selection methodology

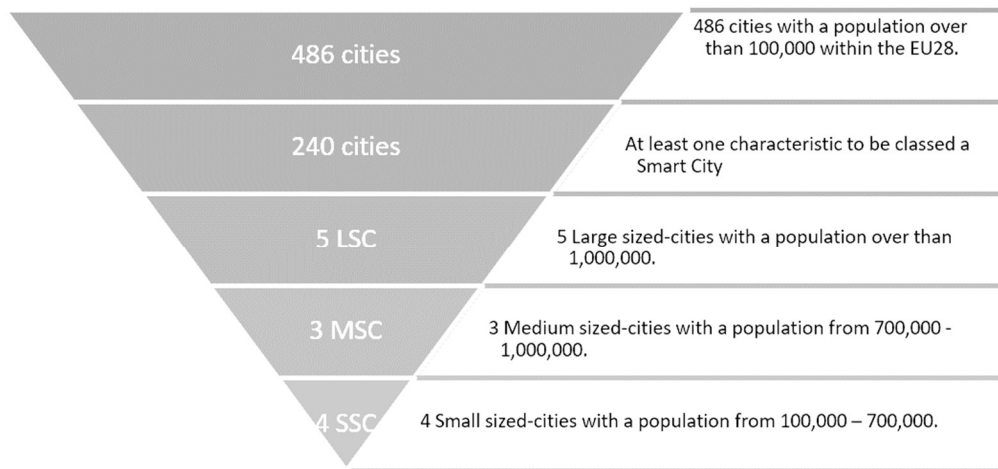


Fig.1. Selection process, derived from database on Functional Urban areas from Epson 1.1.1 (Nordregio et al, 2004)

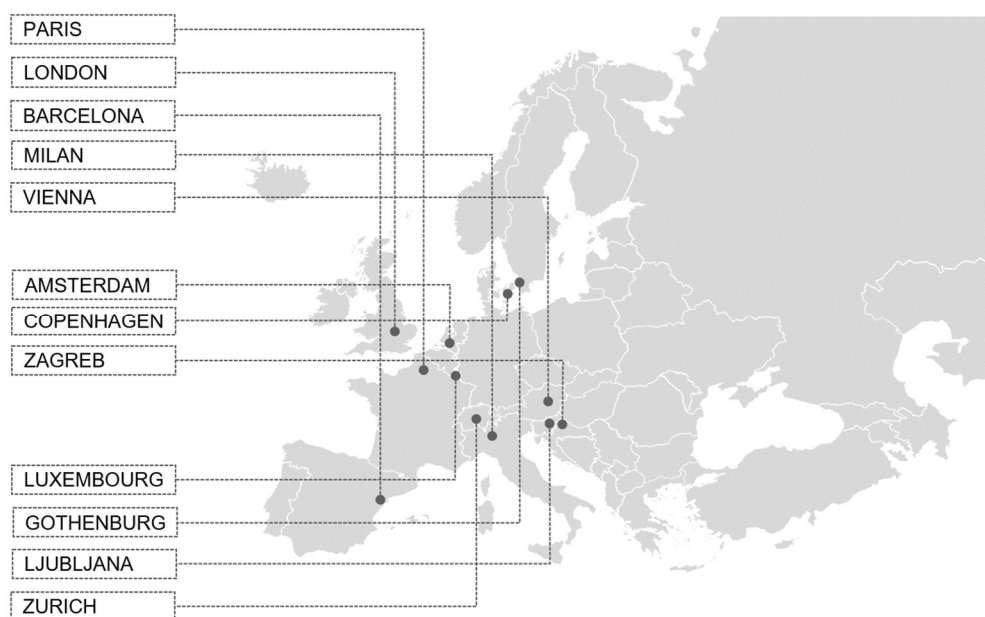


Fig.2. Map of the twelve selected cities across Europe, grouped by population size: large-sized cities (Paris, London, Barcelona, Vienna, Milan), medium-sized cities (Amsterdam, Copenhagen, Zagreb), and small-sized cities (Luxembourg, Zurich, Gothenburg, Ljubljana). Source: Author, December 2024¹.

¹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

Research catalogue 1.A / Large sized cities

Overview of selected Smart cities

1. PARIS, FRANCE²

LARGE SIZED CITIES

Location (city, state)	Paris, France
Number of residents (projected)	11,277,000 ³
Goals	Its ambitious research and development project '2050 Paris Smart City' aims to integrate high-rise buildings and energy power, in order to reduce greenhouse gas emissions by up to 75%. ⁴
PROJECTS	
Stimulating citizen participation and collaborative projects:	<ul style="list-style-type: none"> - Citizen participation, - Co-creation with innovation stakeholders.
Exchanging, sharing, and co-creating with French and international researchers, scientists, and academics:	<ul style="list-style-type: none"> - A constant drive for science, research and innovation, - Strengthening the Parisian innovation ecosystem, - Encouraging research projects, innovation and disseminating scientific culture.
Strengthening the Parisian innovation ecosystem:	<ul style="list-style-type: none"> - A stronger support policy for incubators and start-ups, - Paris: an urban living lab, - The innovation ecosystem: animation, attractiveness and internationalization, - Paris: a city of makers.
Promoting public innovation:	<ul style="list-style-type: none"> - Open government, - Co-creating a city of Paris innovation laboratory, - "City start-up".
Developing support infrastructure for digital services:	<ul style="list-style-type: none"> - Paris benefits from essential assets in terms of infrastructure, - The emergence of the internet of things, - Infrastructure for data storage, pooling and processing.
Offering new public-interest services:	-Developing an offer of high-quality digital public services.
Using data to optimize public action:	<ul style="list-style-type: none"> -Act ii of the open data policy and data governance, - Big data, data analysis and new urban uses.
Ensuring large-scale access to digital services and developing and promoting its uses:	-Facilitating access and developing new uses.
Carrying out Paris's energy transition and co-constructing smart networks and systems:	<ul style="list-style-type: none"> -Mobilization of stakeholders in energy transition, -Renewable and recovery energies in urban development projects, -Equipping buildings to retrieve data and analyze usage behaviors, -Implementation of guidelines, -Governance.
Sustainably develop the Paris metropolitan area:	<ul style="list-style-type: none"> -Reinventing Paris, -Temporary urbanism, -Eco districts, -Digitalization and development, -Health and development.
Strengthening the role of nature in the city:	<ul style="list-style-type: none"> -Biodiversity plan, -Parisculteurs,

² Available at: [\(Smart city. press\)](#) (Accessed: 09 April 2025)

³ Available at: [Paris, France Metro Area Population 1950-2024 | MacroTrends](#) (Accessed: 09 April 2025)

⁴ Available at: [Top 10 Smart Cities and their Projects \(nexusintegra.io\)](#) (Accessed: 09 April 2025)

	<ul style="list-style-type: none"> -Greening by Parisian residents and the city, -Training and cooperation.
Making mobility environmentally friendly:	<ul style="list-style-type: none"> -Encourage sustainable mobility and facilitate the use of multiple transportation modes, -Parking and traffic optimization, -Fostering sustainable urban logistics initiatives.
Responsible recycling and consumption	<ul style="list-style-type: none"> -Networking among circular economy stakeholders, -Sustainable development and combatting against food waste, -Definition and implementation of a zero-waste approach that will expand actions in favor of reducing, reusing and recycling waste, -Circular economy in construction and urban development.
Making a more resilient city:	<ul style="list-style-type: none"> -Launch of a regional resilience assessment, -Paris resilience commission.

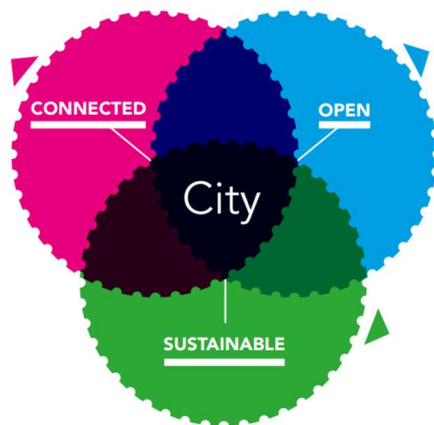


Fig.3. Smart City Paris Goals⁵

⁵ Available at: [Using data wisely to make smart\(er\) cities more sustainable - The Choice by ESCP](#) (Accessed: 09 April 2025)

Overview of selected Smart cities

2. LONDON, ENGLAND

LARGE SIZED CITIES

Location (city, state)	London, England
Number of residents (projected)	9,748,033 ⁶
Goals	The Smart London Plan aims to make London a more sustainable and resilient city by 2050. This includes reducing CO2 emissions, building 1.5 million new homes, creating new school places, and increasing public transport capacity by 70%. The plan will leverage data and digital technology to inform and meet these goals. ⁷

PROJECTS

Barclays Cycle Hire	Citizens can access information on where they can use city bikes, availability and use of bikes
Care connects (NHS)	A Customer Relationship Management system to ensure effective management and tracking of requests, supported by a moderation and case handling service
Free WIFI in public spaces	Free WIFI in public spaces
iCity Programme	EU funded project to develop an urban platform based on data from public and private sources
Silo Busting in administration	Aim is to use technology to work in a more integrated way, with joint projects and collaboration across Boroughs, and service providers
Legible London	Integrated way finding system helping people move around the capital with over 1250 signs now installed
Level 39/ Catapult/ Urban Innovation Centre	Accelerator space for finance, retail and future cities startups; examining options for smart city funding.
Listen London Platform	Listen London is a bespoke tool used to listen to social media talk about London related issues
London Datastore	Public availability of various datasets on London
London Schools Atlas	An interactive online map of London schools, patterns of attendance and future demand for school places.
London's Dashboard	A public reporting tool on how city is performing and what City Hall and London boroughs are doing about it.
Love Clean London	Use of apps and mobile phones to report quality issues in cleanliness of London streets and parks.
Plate recognition	Car plates are digitally recognized, and people get taxed based on car usage in London city center.
Smart grid technologies	Virtualize city infrastructure to better manage supply and demand (e.g., water, energy, road infrastructure, underground assets) across London.
Queen Elisabeth Olympic Park	Test bed and demonstrator area for smart technology
Reducing white van deliveries project	IT trials, incentives for collaborative business models, and load sharing and customer communication
Smart London Borough Partnership	Focused on shared open data store between GLA and Boroughs
Smart London Innovation Challenge	Series of initiatives to mobilize entrepreneurs, researchers, businesses and citizens to develop solutions

⁶ Available at: [London, United Kingdom Population 2024 \(worldpopulationreview.com\)](https://worldpopulationreview.com/country-rankings/london-population) (Accessed: 09 April 2025)

⁷ Available at: [smart_london_plan.pdf](#) (Accessed: 09 April 2025)

Smart London innovation Network	A network to link London's entrepreneurs and innovators with the organizations already delivering and financing London's new infrastructure and services.
Smart London Investment Day	an event to attract the global finance that will help emerging solutions to be more rapidly commercialized
Smart London Platform for feedback	An online platform to enable Londoners to feedback, rate and shape the type of experience they want to have
Talk London	An online research community between Londoners and City Hall including polls, discussions, live Q&A, surveys, and focus groups
Team London - Micro-volunteering and work platform	An online marketplace for flexible volunteering and working, to increase the employability of young people (aged 16-24)
Tech City Institute	Centre and meeting space for citizens to discuss and learn how new technologies impact different parts of society
Tech City Stars / Technology apprenticeships	Digital apprenticeships for young locals to address digital skills gaps
Transport for London - Innovation Portal	An online too that encourages users to submit innovative technological ideas to help address London's core transport challenges

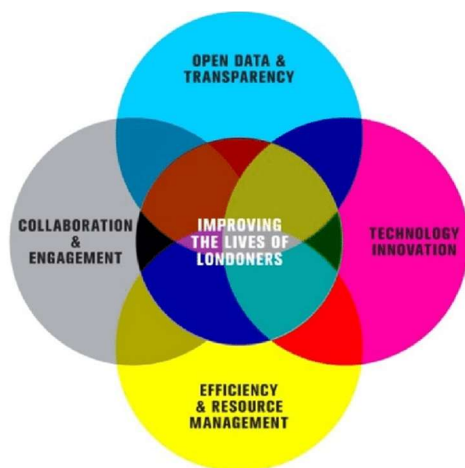


Fig.4. The-strategic-approach-of-the-Smart-London-Plan-of-2013-Greater-London-Authority⁸

⁸ Available at: [smart_london_plan.pdf](#) (Accessed: 09 April 2025)

Overview of selected Smart cities

3. BARCELONA, SPAIN

LARGE SIZED CITIES

Location (city, state)	Barcelona, Spain
Number of residents (projected)	5,711,917 ⁹
Goals	Barcelona's smart city strategy aims to promote sustainable city growth through initiatives like smart lighting and efficient mobility.
PROJECTS	
Free & open-source software: FLOSS Barcelona	70% of the budget allocated to digital development is free and open-source software, which allow cost saving, offer more security and independence and also allow the city to interact with and develop alongside the ICT sector.
Open Budget	Barcelona City Council created an Open Budget tool to make city budgets more transparent and understandable for citizens.
Transparency Mailbox	A secure and anonymous two-way channel promoting collaboration between the City Council and city residents in order to foster ethical values in public management through participation.
Progressive web applications	A commitment to open standards and interoperable technologies.
City OS	Using City OS, the City Council is able to distribute municipal resources more efficiently and offer new data driven services suited to the needs of city residents, making better decisions based on real data.
Sentilo	With 19,000 active sensors spread across the city, it compiles and shares the data in real time.
Bicing	This year, we have launched electric bikes and there are more than 200 km of special bicycle lanes for users.
Superblocks	The aim of superblocks is to give streets back to residents, fight climate change, and transform public spaces into citizens' areas with much more greenery and turn them into spaces of leisure, exchange, recreation and culture. Barcelona has involved neighbourhood groups, planners, architects, designers and students in a large scale participatory urban planning process.
KIC Urban Mobility	Is there room for private cars on our streets? Does having a personal car make sense? Which means of public transport pollute the least? Can they connect all the areas of the city? Will ride sharing through apps become the norm?
Municipal Data Office	Thanks to all the technological infrastructure and sensors spread across the city, we generate, collect, receive, catalogue, process or share lots of data that has high intrinsic value.
Municipal Management Dashboard	The Municipal Management Dashboard: a data-visualization tool developed by the Municipal Manager's Office that explains the state of the city in real time. It facilitates monitoring and follow-up of how public policies are being carried out in the city.
Big data for public policies	Big data serves, for example, to monitor the gentrification of the city, through the Barcelona Metropolitan Housing Observatory (OHB).
Open Data BCN	Barcelona City Council has a repository of open data that now includes more than 450 datasets on the population, health, economy and education, among many others, which can be found in formats that can be reused and downloaded.

⁹ Available at: [Barcelona, Spain Population 2024 \(worldpopulationreview.com\)](https://worldpopulationreview.com/country-rankings/barcelona-population) (Accessed: 09 April 2025)

Growing the city's digital innovation ecosystem	Barcelona has established itself as an international digital hub with a powerful ecosystem of innovation and entrepreneurial spirit in the city and with renowned events, such as the Mobile World Congress or the Smart City Expo World Congress.
5G Barcelona	This pioneering project will create an experimental, open environment that promises to turn the city into a metropolitan laboratory of 5G technology.
MediaTIC Incubator	The main aim of implementing this new incubator, which complements Barcelona Activa's network of other incubators, is to promote and support the creation and growth of companies with high technological impact, that contribute to economic development and to generating qualified jobs.
Digital Social Innovation fund	5 M€ invested in the Impulsem el que fas fun 500.000 € dedicated to digital social innovation invested in 16 projects.
Maker Faire Barcelona	Barcelona is a pioneer in the field of industry 4.0 and advanced manufacturing, as well as in the promotion of social and local economies. The Maker Faire wants to move from industrial chimneys to digital production and innovation.
laboratories of sustainable and social urban innovation	The i.lab wants to respond to challenges such as access to more affordable housing, the role of women in the technology industry or how to make mobility more sustainable through the use of data and in collaboration with universities, third sector companies, research institutes and entrepreneurs, and also with other cities.
Empowering Women in tech	Barcelona City Council incorporates the gender perspective in everything it does. Seeking gender equality in participation in international events, such as the Mobile World Congress or the Smart City Expo, is an example of this.

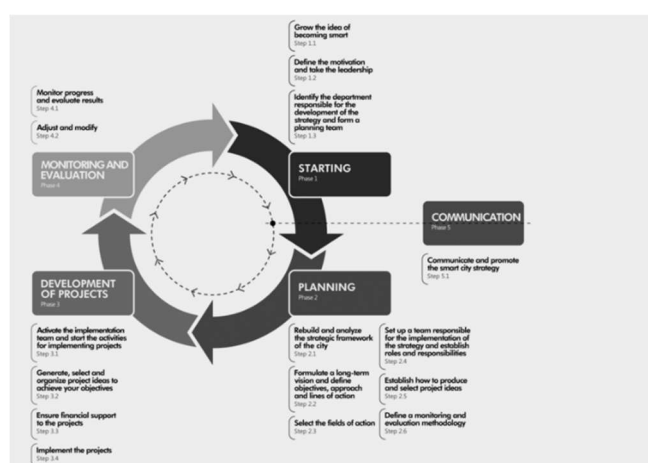


Fig.5. The development process of the Barcelona smart city strategy¹⁰

¹⁰ Available at: [The development process of the Barcelona smart city strategy](https://www.researchgate.net/publication/354444444) | Download Scientific Diagram (researchgate.net) (Accessed: 09 April 2025)

Overview of selected Smart cities	
4. MILAN, ITALY	
LARGE SIZED CITIES	
Location (city, state)	Milan, Italy
Number of residents (projected)	3,160,631 ¹¹
Goals	Smart city for Milan covers smart mobility, a smart environment, smart inclusion and citizenship. This sets out a bold agenda, which sees the re-orientation of demand for transport services; the standardisation of payment technologies and methods; and the adoption of a range of energy efficiency solutions. ¹²
PROJECTS	
Project “Strade Aperte” and extended cycle network	Creating a network of pedestrian and cycle paths using signage only, with reduced costs and construction times, starting from some of the main routes, such as San Babila - B.Aires - V.le Monza - Sesto Marelli.
MILAN LUISS HUB for Makers & Students	Opened in 2017 710 square meters redeveloped 547.000 contribution from the Municipality of Milan 2.500.000 private investor contribution 3 education center with about 60 seats total 1 Fablab 1 Business accelerator with 80 workstations.
FABLAB	12 Fablab financed 12 Fablab enrolled in the Qualified Register 100% of the financed spaces still open.
MANUFACTURE IN MILAN (metropolitan area)	36.000 manufacturing companies 330.000 jobs 13.000 craftsmen employed in manufacturing 25% of overall city sale revenues.
Digital City projects	EnergieCc Efficiency ESCO Digital Islands; TickeCng & Payment Through Nfc GuidaMi -Car Sharing BikeMi -Bike sharing Semplifica-Mi, Open WiFi, Open Data
Smart projects	Smart Public Lighting, Traffic light preferences Virtual Information Booth Accessible City
Funded projects	EU-GUGLE SMART SPACES CITY MOBILE Water cicle: SWaRM Net Waste management Ci6es Wise Net Smart Grid: SCUOLA Waste management: E-WASTE MYNEIGHBOURHOOD Tecnology Welfare and inclusion Education GIOCOSO Inclusion ABILITY

¹¹ Available at: [Milan, Italy Population 2024 \(worldpopulationreview.com\)](https://worldpopulationreview.com/country-rankings/milan-italy-population-2024) (Accessed: 09 April 2025)

¹² Available at: [Milan - Sharing Cities](#) (Accessed: 09 April 2025)

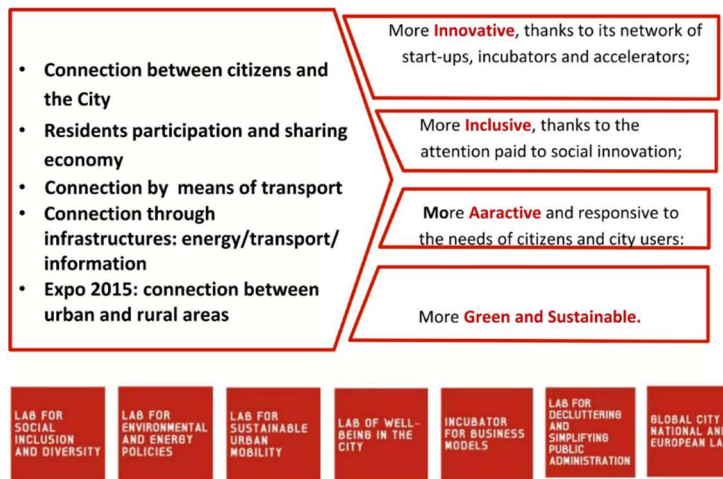


Fig.6. Smart City Milan Principles¹³

¹³ Available at: [Smart City Milano | PPT](#) (Accessed: 09 April 2025)

Overview of selected Smart cities	
5. VIENNA, AUSTRIA	
LARGE SIZED CITIES	
Location (city, state)	Vienna, Austria
Number of residents (projected)	1,990,000 ¹⁴
Goals	
PROJECTS	
Brise	A digital building permit system for the smart city.
Deep Demonstration – A test bed for new ideas	Cities collaborate to accelerate climate action.
Expansion of Photovoltaic capacity	Austria's biggest photovoltaic plant under construction in Vienna.
RemiHub	Climate-friendly package delivery with cargo bikes.
Repair not Replace	Vienna repair network promotes the circular economy.
Werkstadt Junges Wien	Giving youngsters a voice
Wieneu+	A new era of smart urban renewal
Digital findet Stadt	Platform for digital innovation in the construction industry.
Digital School	Fit for the future through digital skills
Senior citizens go digital	AALbin project provides support with devices and workshops.
Eco buses for Wiener Linien	Competence centre for electric and hydrogen-fuelled vehicles.
Waste2Value	Green fuel from residual waste.
City nature	Strengthening biodiversity in Vienna
PlaceCity	Placemaking in public space in Floridsdorf
A warm place to sleep	Digital assistance for homeless people
Electric powered waste collection vehicle	Austria's first fully electro-powered waste collection vehicle
Smart traffic lights	Reduced wasting time for pedestrians and improved traffic lights.
Smart Inspection	Drone maintenance of technical infrastructure.
Greening the city with Planter tubs	Cost-effective greening of facades.
E-mobility scenario 2030	e-mobility in field test.
Aspern.mobil LAB	New mobility solutions made in Seestadt.
Neighbourhood Oasis	Co-shaping the public space.
Cool streets	Cooling arches and trees enhance quality of life.
Smarter together	Smart urban renewal in Simmering.
energie-führerschein	An educational scheme to promote energy literacy.
WAALTeR	Viennese Active & assisted living test region.
Wien gibt Raum	Optimizing shared use of public space.
Power-2-Heat	Surplus green electricity supplies Vienna's district heating grid.
Blockchain in the energy sector	Wien energie as a pioneer in the energy sector.
Aspern Smart City Research (ASCR)	Developing solutions for everyday urban life.
Ask the WienBot	The city of Vienna's chatbot app.
Citizen science project to map the common swift	Protecting vienna's swifts.
Data on soil resistance reduces CO2 emissions	Joint research project by the city of Vienna and TU Wien

¹⁴ [Vienna, Austria Metro Area Population 1950-2024 | MacroTrends](#) (Accessed: 09 April 2025)

ThinkPORT Vienna	Developing and testing smart city logistics
Brake Energy	Clean energy from biking trains
Sag's Wien app	Reporting problems to the municipal administration
Vienna's dual infiltration model	Sustainable rainwater management for the Smart City
DigitalCity.Wien	Vienna as a people-centered digital capital
LED it shines	Environment – friendly street lighting
Drinking water power stations	Green electricity from Vienna's spring water mains
Technology Centre Seestadt	Austria's first commercially used plus-energy building.
E_OS	Renewable energy from sewage sludge
Open government data for a Smart City	Open access to a wide range of municipal data
Citizen's power plants	Community-funded solar energy

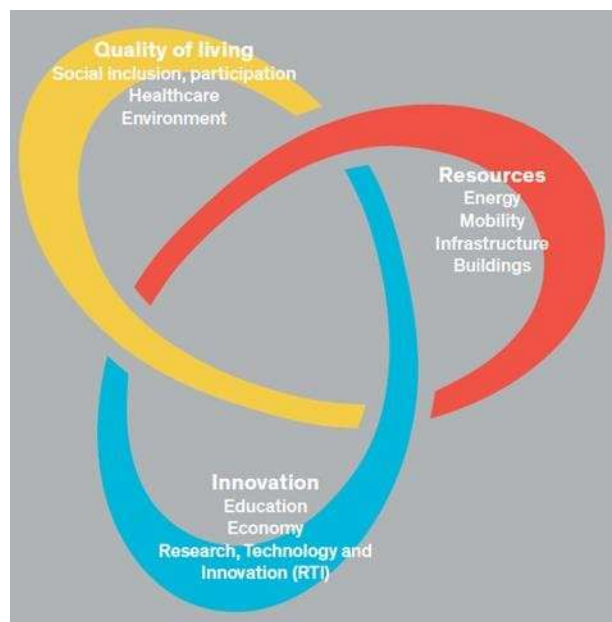


Fig.7. Smart City Wien Principles¹⁵

¹⁵ Available at: [\[PDF\] Smart City Wien Framework Strategy | Semantic Scholar](#) (Accessed: 09 April 2025)

Research catalogue 1.B / Medium sized cities

Overview of selected Smart cities	
6. AMSTERDAM, NETHERLANDS ¹⁶	
MEDIUM SIZED CITIES	
Location (city, state)	Amsterdam, Netherlands
Number of residents (projected)	1,182,000 ¹⁷
Goals	Amsterdam Smart City is an open innovation platform that brings together innovation professionals from governments, companies, knowledge institutions and civil society organizations to shape the city and region of the future.
PROJECTS	
Equinox	The open-source platform supporting green public procurement enters the EU Datathon 22 competition phase
CleanMobilEnergy	A Smart Energy Management System integrating renewable energy and electric vehicles.
Open Database of Bicycle Infrastructure Manuals	500+ cycling infrastructure documents from all over the world, and growing. Cycling infrastructure design manuals, strategy guides and more all curated in one easy-to-use database.
User-Centered Cycling Methods Open Toolkit	Free, open access toolkit of people-centered methods for urban planners, designers, and advocates to make cycling inclusive and accessible to all.
Building a shared vision of the city - with LEGO!	Building the largest interactive LEGO model of the future city ever!
Intelligent Transportation System – Best Option for Smart Cities.	Growing population, aging infrastructure, lack of mobility-related resources, and inefficient transport networks are leading to higher traffic congestion, road safety, and supply of mobility services in urban areas.
Code the Streets	Creating innovative solutions for sustainable, inclusive and safe mobility.
Simple Sensors for responsible sensing	City officials require sensor data to optimize operations, plan projects, or measure effects of interventions. Citizens often do not notice the sensors deployed by the city in public space. Also, the benefit for the public is not directly obvious to city residents or immediately shown by the sensing systems in place. Namely, in many cases only <i>after</i> data is processed, it informs an action that affects citizens.
Shuttercams for a responsible smart city	Shuttercam is a project by Responsible Sensing Lab (RSL), a collaboration between the City of Amsterdam and AMS Institute. In essence, RSL is a testbed for conducting research and experiments on how smart sensing technologies in public space – like cameras – can be designed in a way that makes the digital city 'responsible'.
Local Inclusive Future Energy (LIFE) City platform.	Amsterdam Zuidoost will build a large number of new homes in the near future. This will demand more capacity from the electricity network. With an increasing demand the energy network either needs investments to expand the capacity of the network, or we can explore smart solutions in the field of energy management.
Observatory of ideas	Solidary, Creative Economy, for Communities and With Communities! Thousands of other initiatives around the world!

¹⁶ Available at: [Home - Amsterdam Smart City](#) (Accessed: 26 August 2024)

¹⁷ Available at: [Amsterdam, Netherlands Metro Area Population 1950-2024 | MacroTrends](#) (Accessed: 26 August 2024)

CINDERELA living lab	<p>From urine to plant 'food'</p> <p>CINDERELA is a demonstration plant that transforms urine into nutrient-rich fertilizer. The plant is located at Marineterrein Amsterdam Living Lab (MALL), and consists of a refurbished shipping container – containing a laboratory and two urine-diverting toilets – and an adjacent greenhouse which also serves as a meeting space.</p>
The 100 Intelligent Cities Challenge	<p>The 100 Intelligent Cities Challenge (ICC) is a European Commission initiative that supports 136 cities in using cutting-edge technologies to lead the intelligent, green and socially responsible recovery. The ICC cities and their local ecosystems will be engines for the recovery of their local economy, create new jobs, and strengthen citizen participation and wellbeing.</p>
LEVIS: Advanced Light materials for sustainable Electrical Vehicles by Integration of eco-design and circular economy Strategies	<p>The automotive sector is the second largest contributor to CO2 emissions globally. Even though car manufacturers push forward the development of electric vehicles (EVs), the current market penetration is still relatively low. Developing lightweight materials is an essential step to increase EV adaptation since a reduced weight results in improved vehicle efficiency and increased range.</p>
Space for Food: Space technology for sustainable food systems on Earth	<p>A big part of innovation in space technology revolves around finding smart, efficient and circular ways to establish a life support system for the astronauts going on the trip. Since it's simply impossible to bring an end a smaller number of resources on board, how do you make sure the astronauts can eat, drink and breath?</p>
Responsible Sensing Lab	<p>Smart city systems can help solve urban challenges. But when collecting data, what public values are involved? The Responsible Sensing Lab explores how to integrate social values such as autonomy, privacy, transparency, inclusiveness and empowerment in the design of sensing systems in public space.</p>
Communication Alliance for a Circular Region (CACR)	<p>The task force Communication Alliance for a Circular Region (CACR) wants to accelerate the circular economy in the Amsterdam Metropolitan Area with practical stories for and about entrepreneurs and companies.</p>
Operational Mobility Center (OMC)	<p>In the future, we will have to move through the city differently. Due to the increasing crowds and the sustainability challenge, we will have to become less dependent on our private car. This means more cycling, more public transport and more use of new forms of transport such as shared mobility.</p>
Wicked Problems	<p>We are all working on urgent, complex, societal challenges. Issues that seem almost insoluble, surrounded by dilemmas and paradoxes, not yet clear how to do it. It is clear that it has to be, that we need each other and that we need to start NOW. To use the words of Jan Rotmans; we do not live in an era of change but in a change of era. And this includes a new toolbox.</p>
3-CYCLE	<p>We are 3-CYCLE, a new upcycling project by Erik Fakkeldij (The Botfactory) and Joost Bosker (Oerz). We joint forces in 2019 to create new products from used pieces of plastics and metal. And... to make this a true dutch innovation, we use a setup with a bike to do the first steps of the upcycling process!</p>
Unravelau	<p>Unravelau is a high-end fashion brand established in 2017 by the designer Laura Meijering who believes that you don't have to sacrifice style in order to make conscious choices. While each collection is unique, they are all designed with care for the planet. Our garments are</p>

	handcrafted in The Netherlands and made of natural and upcycled materials only. At Unravelau, we believe that every little step count - together with you, we unravel the fashion industry. One garment at a time.
Transition from Smart to Inclusive city	The primary objective of this research project is to enhance an understanding of the concept of inclusion and its criteria in Smart city discourse. The research ambition is applying the result as a tool for benchmarking inclusive smart cities, which can assess and improve them. To apply the result, we aim to work with cities like Amsterdam, The Hague, and Rotterdam.
Classifying Pathways for Smart City Development: Comparing Design, Governance and Implementation in Amsterdam, Barcelona, Dubai, and Abu Dhabi	The emergence of the Internet of Things (IoT) as the new paradigm of Information and Communication Technology (ICT) and rapid changes in technology and urban needs urge cities around the world towards formulating smart city policies. Nevertheless, policy makers, city planners, and practitioners appear to have quite different expectations from what smart cities can offer them. This has led to the emergence of different types of smart cities and pathways of development.
Input-Output Modelling for Smart City Development	While many national and local governments in the world these days are placing their bets on smart city development in countering challenges, few know exactly how to develop them in practice. A high and rising number of publications has appeared addressing the concept of 'smart city', but not many addresses implementation issues.
Oceanic Face shields	Personal protection products made with high plastic recycling content (all green parts) Other parts still work in progress
OCEAN (and EAR) SAVERS	Product made with 100% recycled plastics from the maritime industry (obsolete fishing gear and ropes)
Solar Decathlon Europe	The Call for Cities for the Solar Decathlon Europe 2023 has been published. This would be a huge opportunity for Amsterdam to host this event to raise energy literacy.
EC-Link Platform	You would like to connect with Urban Environmental Sustainability practitioners and researchers in China and exchange your approaches to green transport, clean energy, compact urban development, water and solid waste management, green buildings and municipal finance?
CityFlows	The project tests and evaluates various innovative crowd monitoring techniques in real-life settings where large crowds meet, such as mass events, tourist spaces and transfer hubs.
Parksharing: for local collaboration and sharing between businesses	The importance of working together locally, sharing together, and matching supply and demand between companies is increasing. More than ever, we see local entrepreneurs helping each other and purchasing products or services from one another. Working together from the catering industry to healthcare pays off. Parksharing enables entrepreneurs, businesses and organizations to take concrete steps towards local cooperation and sustainable entrepreneurship.
Globaliser Sustainable Solutions	The Globaliser is a ten-week programme for the international growth of Sustainable Solutions scale-ups.
Urbact Civic eState and the Amsterdam Whole Commons Catalog	In the Urbact Civic eState project Amsterdam works together with several European cities to locally adopt progressive policies on the urban commons. As a first step the Amsterdam Foundation Onschatbare Waarde ('invaluable value'), together with Amsterdam commons initiatives, made the beautiful catalog Heel de Stad, Heel de Aarde (the whole city, the whole earth) during the past 6 months. A

	guide with all kinds of tips and tools, ideas and projects, people and books for everyone who is or wants to work collectively.
Blue Force Tracking	Testing medical certified body sensors to detect unexpected behaviour, triggering an alert, which allows the command & control room to act and better support their fellow officers in the field.
Schijnerg Group	Creating the next-generation renewable energy digital platform, focusing on machine learning-based consulting and sustainable community. Additionally, it provides engineering consultancy which is 100% digital through machine learning optimization. Furthermore, it also transforms the data to solve unique to our client need and it embarks a lifelong companion for clients to grow from installation to decommissioning.
Bees Digital Farm	Bees Digital Farm is an upcoming research start-up that focuses on new technologies and innovative techniques in the agriculture domains, the primary audience is over the developing countries.
Marineterrein Amsterdam Living Lab	Like cities worldwide, Marineterrein Amsterdam faces major challenges. For example, in mobility, circularity, and (ethical) digitization. To come up with innovative solutions, there is a need for physical location, knowledge and collaboration. Marinetterrein Amsterdam Living Lab (MALL) is a place where this happens.
5G-Blueprint	The main research objective within the 5G-Blueprint project is to realise the cross-border 5G connectivity, which is crucial for crossborder real-time data exchanges to and from vehicles. The role of Eurofiber within the project is to research how public networks - such as those of the Directorate-General for Public Works and Water Management of the Netherlands and the Flemish government - can be used for a 5G application.
Developing Pilot Project in Petaling Jaya, Malaysia	Looking for the experts behind Circle Scan, Amsterdam on mapping material flows in the city. Applying the “Circle Scan” methodology meant identifying the top contributing sectors in terms of environmental and economic impact and mapping the material flows of such sectors in the city. That is, organizing the information about the inputs used (energy, water, etc) and the outputs generated (types of waste, where they end up, etc).
Johnny Cashew	Be a superhero! Our cashew travel 12.500 km less than the cashew you will find in your local supermarket and they are better for the farmer, the environment and you.
Circular Economy Course - UvA	The Circular Economy course for bachelor’s students at the UvA challenged students to reflect on the way we organize our current economic system and its consequences for material flows. The circular economy, its barriers and opportunities for implementation, its impact and possible unintended consequences were studied.
enerGQmobility	Founded in 2014, enerGQmobility develops and markets low-cost self-learning energy management systems to the full range of organizations from households to multinationals in all sectors of the market. Our aim is to contribute to “stop the global warming” within 5 years by licensing the technology to partners. It uses the low cost and energy saving technology to assess the performance and provide improvements in the areas of aviation, maritime, rail, and road transport.
Digital Society School	Digital Society School is an energetic training ground where creative solutions are being developed, tested and prototyped to address business and societal challenges.

Urban Nature Amsterdam	Amsterdam is much more than a collection of streets, buildings, culture and economic activity. The purpose of this city map is to show that we live in the midst of parks, (indoor) gardens, public gardens, nature playgrounds, green roofs, lakes, canals, rivers, polders and forests. A unique green and blue urban landscape that we share unnoticed with more than 10,000 species of flora and fauna.
Conscious Cities	How might we automate access to a public digital ecosystem for citizens and machines in order to grow a conscious city? How might we incentivize all citizens and companies to interact with the public digital ecosystem of the city in order to improve livability, democratic representation and societal engagement?
CEDaCI – Circular Economy for the Data Center Industry	The CEDaCI project will build a Circular Economy for the Data Center Industry to increase reclamation and reuse of Critical Raw Materials in the sector, extend product life through equipment reuse and remanufacture, reduce use of virgin materials, waste and environmental impact arising from the growth in redundant equipment and develop a secure and economically viable CRM supply chain for the sector.
RESILIO - Amsterdam Blue Green Roofs	The EU-UIA funded the programme RESILIO, a project that aims to realize 10.000 square meters of blue-green roofs in four city districts in Amsterdam. The consortium of both public and private partners aims to build an interconnected network of smart roofs, in which sensors and state-of-the-art equipment enable micro-water management on rooftops. This contributes to urban climate adaption and resilience, and can potentially evolve into a scalable solution for water management on rooftops.
EMPOWER2.0	The project aims to demonstrate and accelerate the empowerment of citizens to become active energy citizens - and to create local energy communities via existing civil society structures - through development of new solutions (e.g., organisational) and adoption of new, emerging and existing solutions for energy ownership.
Program Smart Mobility Amsterdam 2019 - 2025	An accessible, liveable and less polluted city: this is what we'd like to achieve for residents, visitors and businesses in Amsterdam today and for future generations. Smarter and cleaner mobility can help us realise these aims. As a city, we want to offer Amsterdammers, commuters and visitors alternatives to the present forms of mobility, providing a door-to-door solution and contributing to our aims. This includes shared electric transport, from cars to bikes, in 'Neighbourhood eHubs' (eBuurthubs) established in cooperation with local residents. That way, we can use clean modes of transport and create more space in the city by sharing. We can then use this extra space to improve liveability.
Nature4Cities	Nature4Cities is a H2020 EU-funded project, creating a comprehensive reference Platform for Nature Based Solutions (NBS), offering technical solutions, methods and tools to empower urban planning decision making. This will help addressing the contemporary environmental, social and economic challenges that face European Cities.
SHERPA Smart Cities Case Research	The SHERPA project, a European Commission Horizon 2020 grant project will feature Amsterdam City as a part of our case research on Smart Cities. We are currently looking for other cities to be involved, but are very excited for this collaboration. The SHERPA project will investigate, analyze and synthesize our

	understanding of the ways in which Smart Information Systems impact ethics and human rights issues.
ClairCity: Citizen-led air pollution reduction in cities	ClairCity is an innovative project involving thousands of people in cities across Europe, enabling us all to decide the best local options for a future with clean air and lower carbon emissions. ClairCity is funded by the European Union. ClairCity is a four-year project (2016-2020)
HEAT	HEAT is the number one solution to the prolonged decision-making processes typically involved in energy issues. HEAT allows parties to co-design and develop a heating grid.
Urban Street Forest	Together with schoolchildren in Amsterdam we create vertical forests by planting trees on balconies.
MyCleanCity	The app offers users a simple, yet effective way to manage their household waste more efficiently, as well as making sure the surrounding areas of their neighbourhood comply with waste management regulations too.
Self-sustaining Aruba	The Soluxio solar street light developed by FlexSol Solutions will light the streets of the Smart Community Aruba: an experimental residential area where the latest sustainable innovations are demonstrated.
Smart City-ready solar street lights in Tilburg.	In the night of October 3rd, city councillor Mario Jacobs officially revealed two very special street lights in the city of Tilburg, the Netherlands. The two Soluxio solar light posts are the first off-grid solar light poles in Tilburg: a city that's one step closer to the future of smart cities.
Smart Grid Optimization	Houses with solar panels with different outputs must be linked to batteries, all placed on a grid, with minimal wiring cost. In a later stage, alternative locations for batteries might also be obtained.
Roadmap Circular Land Tendering	With the Roadmap Circular Land Tendering, Amsterdam developed an instrument with which a contractor can secure circular building. The municipality will use the roadmap this year and early next year for the issue of residential building plots and a non-residential building plot.
Energy Storage System	Development and implementation of an Energy Storage System with different applications in a stadium that uses 'second life' batteries of Nissan Leaf cars, that generates revenue, cost savings and CO2 reduction.
Herman's Smart Grids	Herman can switch energy produced by solar panels to a specific household connected to it. Herman's Smart Grid enables it to distribute energy to a connected storage device as well. And Herman's Smart Grid can switch on or off or even manage household appliances to balance energy produced and energy used. And it can do so several times a day.
Marketplace. City	Marketplace. City is a platform to connect government innovators to new technology companies and solutions. The platform simplifies the process to find, validate and implement technology making it easier to business in the growing, but fragmented, smart cities space.
Tada - Data Disclosed	Designing a digital city is a team effort: companies, government, urban communities and citizens. We take action together, we benefit together. That is why we have set the following shared principles and agreements. We want to be a leading example in this for all other digital cities spread across the globe.
AI and Big Data City Council Trial	Citibeats is a start-up based in Barcelona and we have been awarded funding to launch a proof-of-concept (lasting one month) with a limited number of cities - at no cost to the city organization.

Decrease incorrect invoices by postmen	At the end of each year. The accounts of Waternet will be updated with the most recent water consumption status. If consumers fail or forget to pass through this status. They will get a incorrect invoice which leads to a correction and a big loss of time. PostNL helped 35% of the individuals who did not pass the water consumption status in zip codes 1091 to 1095 by letting the postman register it.
Urban Street Forest	Educate children about the importance of a cleaner city by planting a vertical forest on balconies.
Global Tech City	An innovative and intuitive platform made for streamlining and forging meaningful connections between like-minded, influential, and invested partners in order to efficiently make real progress towards achieving the United Nations' 17 Sustainable Development Goals for a better world.
CO2 Smart Grid	CO2 is a raw material in for instance the horticulture and the chemical industry. This is a business case with growth potential.
100.000 Energy Neutral Homes	How do we get from the current situation, with badly insulated houses, to a future with homes without fossile fuels?
Amsterdam Circular Challenge	Amsterdam wants to be the circular capital of the world. And we're already halfway to make this vision come true. Companies, governmental organizations, universities & scientists, they all come to Amsterdam to participate in the growing Amsterdam circular movement.
First Zero Waste Lab in Netherlands	The Zero Waste Lab is an initiative of De Gezonde Stad (the Healthy City) and is supported by partners Stadsdeel Oost, Icova, Cities Foundation, de Regenboog Groep, Ymere and EY. Besides, the Dapper Market, local entrepreneurs, the Dapper School and residents join.
Amsterdam Tech City => Global Tech City	An innovative and intuitive platform made for streamlining and forging meaningful connections between like-minded, influential, and invested partners in order to efficiently make real progress towards achieving the United Nations' 17 Sustainable Development Goals for a better world.
Amsterdam Smart Citizens Lab	The Smart Citizens Lab helps people to explore tools and applications to map the world around us. Along with citizens, scientists, and designers, we deal with themes ranging from air quality to the conditions of bathing water to noise pollution.
The Green Living Lab	The Green Living Lab is a living lab in a nature where education & research into healthy urban living takes place. We believe that every city could have a Green Living Lab, a place in nature where local universities, students & the public connect with entrepreneurs & pioneers in sustainable living to explore, experiment & to invest in a healthy sustainable society.
Transformcity	Transform city is the online platform for collaborative urban development, aimed at growing a sustainable and inclusive local community of co-owners. Transform city is currently being implemented in two of Amsterdam's largest transformation areas.
Rooftop Revolution	Rooftop Revolution is an independent foundation and supports in sustainable roof projects.
Smart Citizen Kit	The Kit measures the humidity, noise levels, temperature, CO, NO2 and light intensity of the neighbourhood.
Smart Entrepreneurial Lab	Contribute to a smart city where urban stakeholders learn to innovate together, co-creating solutions that enhance urban quality of life and generate new business opportunities.

IoT Living Lab

Smart Citizens are making Smart Cities by working together in solving challenges their communities are facing. The IoT Living Lab promotes IoT interactivity in public spaces to encourage citizens and cities in testing and prototyping innovations. The new project 'the City Innovation Exchange Lab' extends this effective bottom-up approach globally.

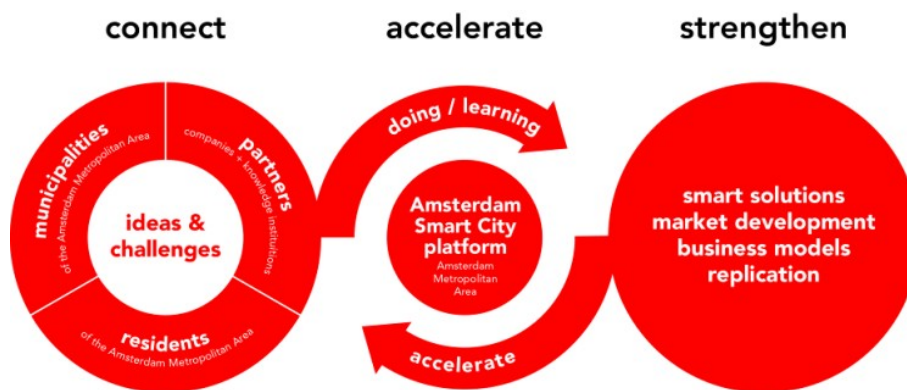


Fig.8. Smart City Amsterdam strategy¹⁸

¹⁸ Available at: [The Amsterdam Smart City platform \[15\] | Download Scientific Diagram \(researchgate.net\)](#) (Accessed: 09 April 2025)

Overview of selected Smart cities

7. COPENHAGEN, DENMARK¹⁹

MEDIUM SIZED CITIES

Location (city, state)	Copenhagen, Denmark
Number of residents (projected)	1,391,000 ²⁰
Goals	Copenhagen has three main goals as part of its smart city strategy: achieving carbon neutrality by 2025, creating a greener, more sustainable capital city, and supporting economic growth. ²¹
PROJECTS	
People and Flows	Knowledge of how citizens and visitors use the city with focus on movement patterns and needs
<u>Open Data DK</u>	Copenhagen Open Data is the city's portal for data about Copenhagen
Select for Cities	Select for Cities is an EU program that aimed to create a new and innovative IoT platform for cities
City Data Exchange	A collaboration to examine the possibilities of private/public data exchange
Digital Services	Availability of city services via digital solutions for citizens and visitors
Data-driven Operation and Supervision	Digital tools and collection of new data to support workflows in the city
Environment and Climate	Detailed knowledge of the city's environment and climate for planning and prioritizing efforts
Air quality	Use of air quality data to create smart urban solutions that reduce citizens' exposure to air pollution
BEE	By easily integrating into a building and combining its data with external sources, their solution automatically derives an optimal control to minimize energy usage and shift consumption to renewables.
C.in-City	Their solution provides cities with a near real-time live carbon emission monitoring solution, articulated around 5 services that empower all stakeholders with actionable insights regarding the emissions in all sectors.
Enerbrain	Their Plug & Play IoT solution smartly interconnects all energy stakeholders and controls any type of building in an automated and optimized manner.
Heroes	The solution that they propose aims at reducing energy consumption of public buildings by using AI, IoT & Cloud technologies.
Holoni	Their vision is to provide smart city ecosystems an intelligent and decentralized peer-to-peer energy marketplace platform.
IBM Danmark	Their Flex Planner Tool dramatically reduces the time to assess, plan and promote investments for energy flexibility and efficiency in buildings.
Loopfront	They are an AI collaboration platform made to empower building owners and the construction industry, removing barriers, and creating a structure for circular activities.

¹⁹ Available at: [Copenhagen Solutions Lab is the City of Copenhagen's incubator for smart city initiatives. We work cross-departmental with the City's administration and in ... | Copenhagen Solutions Lab \(cphsolutionslab.dk\)](#) (Accessed: 09 April 2025)

²⁰ Available at: [Copenhagen, Denmark Metro Area Population 1950-2024 | MacroTrends](#) (Accessed: 09 April 2025)

²¹ Available at: [City Portrait: Smart City Copenhagen \(beesmart.city\)](#) (Accessed: 09 April 2025)

Rebase	They are working on an open-source platform for setting up local energy markets and smart agents for energy management and trading.
Symvio	Their solution uses automated data analytics and machine learning methods to supervise building systems such as heating, ventilation, and air conditioning systems.
The Predictive Company	Their solution is a predictive energy management system supported by AI, that learns the energy profile of a building infrastructure, to forecast its real energy demand.
Street Lab	In Street Lab, innovative solutions are tested in the 1:1 scale in the urban environment
Nordic Smart City Network	A collaboration project between 20 nordic cities with a common goal: to explore the Nordic way to create livable and sustainable cities
AI4Cities	How can artificial intelligence support cities in achieving their ambitious climate goals?
Smart Cities Accelerator +	The project SCA+, building on the former project Smart Cities Accelerator, will develop and test new methods for planning, coordinating and realization of new intelligent energy systems, that on the long run can reduce carbon emissions.
Viadukten	Viadukten is tomorrow's production workshop, where traditional crafts are combined with modern digital production technologies.



Fig.9. Copenhagen Smart city principles²²

²² Available at: [Claus Bjørn Billehøj - Copenhagen Smart City | PPT \(slideshare.net\)](#) (Accessed: 09 April 2025)

Overview of selected Smart cities

8. ZAGREB, CROATIA

MEDIUM SIZED CITIES

Location (city, state)	Zagreb, Croatia
Number of residents (projected)	684,000 ²³
Goals	The underlying objective is to become a better/smarter city within the next 10 years in all key areas of living – from education, economy, transport, energy and governance – all interconnected and linked through a common ICT infrastructure which will enable to make use of the most recent technologies and smart solutions such as Big Data, IoT and others. ²⁴
PROJECTS	
EU PROJECTS: i-SCOPE (ICT PSP project)	solar maps, dynamic noise maps, improved mobility for the elderly and disabled
CITYkeys (Horizon2020)	validated, holistic performance measurement framework for monitoring and comparing the implementation of Smart City solutions
URBAN LEARNING (Horizon2020)	exchange and work on improving governance structures for integrative energy planning in urban areas
URBAN - e	Electromobility in Urban nodes in cohesion region
Ele.C.Tra (IEE project)	setting grounds for the usage of electric scooters
ZagEE (IEE MLEI project)	refurbishment of public buildings and public lighting
EURONET 50/50 (IEE project)	saving energy in schools
E2STORMED (MED project)	implementation of sustainable urban drainage systems
EnVision	energy vision of SEE cities
GEOPORTAL	Central place for finding, reviewing and using information about the City of Zagreb; m – ZIPP – mobile version Data about: Public administration, Services - education, health, environment, communal, sports, masterplan uses, maps.... For public, professional & city administration use
CITY OF ZAGREB ENERGY INFORMATION SYSTEM	Buildings owned by the City of Zagreb (cca. 1000) Monitoring energy and water consumptione
Zagreb Innovative City	Citizens can give, comment and evaluate the ideas that City and Zagreb Holding will consider for realisation. This ensures the transparency, efficiency and effectiveness of the City Administration and the Zagreb Holding Company in the service of citizens.
Tecnology Park Zagreb	Zagreb Fair/ 7500 m2 400+ work spaces (120 offices, coworking accelerator), 120 event seats, labs
i - Scope	Three types of services: -Improve the mobility of older citizens and citizens with reduced mobility through the personal guidance of the route of movement. -Optimization of energy consumption through service of accurate solar energy assessment and energy loss in buildings. -Real-time mapping noise by engaging citizens who take the role of sensors by measuring the noise level through the application on their mobile
MOJ ZAGREB	central place for submitting, reviewing and using information about the City communal issues

²³ Available at: [Zagreb, Croatia Metro Area Population 1950-2024 | MacroTrends](#) (Accessed: 09 April 2025)

²⁴ Available at: [Zagreb Smart City Strategy - Fedarene](#) (Accessed: 09 April 2025)

Energy Information System of the City of Zagreb	Buildings owned by the City of Zagreb (950) Monitoring energy and water consumption
Zagreb Crafts	Online platform for crafts promotion
Applications for visitors and tourists	Zagreb Places Zagreb be there Time Out Zagreb Voice Guide Zagreb Zagreb360
DRAFTING A STRATEGY - Zagreb Smart City	Working Group for the development and implementation of smart city projects - Zagreb Smart City
Gredelj	The Gredelj area on 45 hectares is only a 15-minute walk from the center, and the development of this area is an opportunity to solve one of Zagreb's biggest urban planning problems.

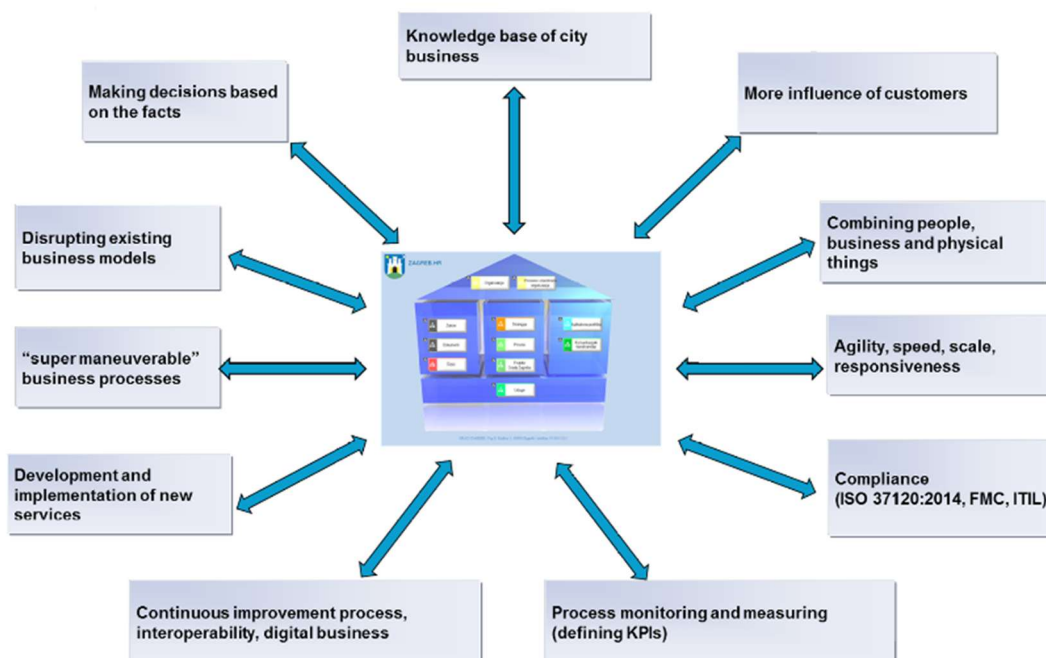


Fig.10. Smart city Zagreb strategy²⁵

²⁵ Available at: [PowerPoint Presentation \(majorcities.eu\)](http://PowerPoint Presentation (majorcities.eu)) (Accessed: 09 April 2025)

Research catalogue 1.C / Small sized cities

Overview of selected Smart cities	
9. ZÜRICH, SWITZERLAND ²⁶	
SMALL SIZED CITIES	
Location (city, state)	Zürich, Switzerland
Number of residents (projected)	1,443,000 ²⁷
Goals	Smart City stands for a holistic, forward-looking development concept that aims to make our cities more efficient, technologically advanced, greener and socially more socially inclusive.
PROJECTS	
Pikmi	With Pikmi, an on-demand service will be integrated into public transport in Zurich for the first time. The Pikmi vehicles run on demand when booked via a smartphone. The system automatically bundles travel requests with similar destinations ("pooling") and combines them in the same vehicle. The system continuously calculates the best lines for efficient vehicle use in order to bring as many people as possible to their destination with as few vehicles as possible.
Street space 3D	In order to enable more efficient planning in public streets, its digital image will be available to employees of the City of Zurich in the future.
Altstetten Energy Network	In Zurich-Altstetten and parts of Höngg, a sustainable energy network is being created that uses the purified wastewater from the Werdhölzli sewage treatment plant and the waste heat from sewage sludge recycling as an energy source for heating and cooling properties. In the final expansion, around 30,000 households with heat that generates at least 75% CO ₂ -neutral, be supplied.
ZüriMobil	Networking of offers for seamless urban mobility
LoRa Network	In cooperation with Organisation und Informatik Zürich (OIZ), ewz operates a Long-Range Wide Area Network (LoRaWAN). The LoRaWAN is characterized by low power consumption and is therefore an energy-efficient wireless network that is particularly suitable for IoT sensors
Digital Twin	Platform for visualization and collaboration
EnerGIS	With EnerGIS, the City of Zurich supports homeownerships in their transition to renewable energies by linking energy and building data
My Account	Central access to the online services of the City of Zurich
HoloPlanning	With augmented reality glasses, the city administration brings the digital and real city together
Autonomous driving	Testing self-driving vehicles for the public transport of the future
PRECOBS	Analysis of burglary data to increase the security of the city of Zurich
Crowd Management	Increased security at major events thanks to the event app
Zürich as new	Active participation of the people of Zurich in urban processes.
Urban Geoportal	The pipeline cadastre, the zone plan or the reference data of the official surveying are essential basics when it comes to planning and project planning in building and civil engineering.
Electromobility in public transport	Public transport in Zurich is to be largely electrified by 2030.

²⁶ Available at: [Projects - City of Zurich \(stadt-zuerich.ch\)](https://stadt-zuerich.ch/projects) (Accessed: 09 April 2025)

²⁷ Available at: [Zurich - Wikipedia](https://en.wikipedia.org/wiki/Zurich) (Accessed: 09 April 2025)

Züri Velo	Bike sharing for needs-based and sustainable mobility
Metamorphosis	Participation for child-friendly urban mobility
Piazza Pop-up	Experimental design of public space with feedback function for a more livable urban space
Smarter Medicine	Smart does not necessarily mean technologically networked. Smarter Medicine is an example of how interdisciplinary discourse and collaboration can help ensure meaningful, reasonable and future-oriented medical care and treatment
eCityplan	Thanks to the integrated touchscreen and real-time updates, the interactive city maps of the city of Zurich offer a wide range of possibilities for the population and tourism

Strategies Zurich 2035 basis for a Smart City Strategy



Fig.11. Smart city Zürich strategy²⁸

²⁸ Available at: [Smart City Zürich and Open Data Zürich | PPT \(slideshare.net\)](#) (Accessed: 09 April 2025)

Overview of selected Smart cities

10. LUXEMBOURG, LUXEMBOURG²⁹

SMALL SIZED CITIES

Location (city, state)	Luxembourg
Number of residents (projected)	661,594 ³⁰
Goals	To be successful, a nation must provide its citizens with a stable and sustainable living environment, a strong economy, security, education and mobility, as well as show a strong commitment to its citizens. ³¹

PROJECTS

Octopus Lab	Octopus Lab offers innovative indoor air quality prediction software solutions for the design and operation of healthy buildings.
SYSTNAPS	For 15 years, Systnaps has been accelerating the "Data & AI" projects of companies and local authorities thanks to its Data Governance and Lifecycle Management software solution.
CITOPIA	Citopia's goal is to help communities strengthen their relationships with citizens through digital tools.
VESTACK	Vestack designs and builds low-carbon buildings, in the form of modules assembled off-site from bio-based materials.
ATLANTIS	Atlantis is the European leader in the digital management of lost and found objects. It publishes an international, innovative and collaborative platform for the digital management of Lost & Found objects.
ARIA Technologies	ARIA Technologies is a company specialized in air modeling, both indoors and outdoors. Design office, software publisher and developer of innovative dedicated solutions.
FULLRAMA	Our company develops tools and applications in the field of Smart City, Smart Building and Seveso surveillance.
Neo-Eco	Neo-Eco offers an innovative deconstruction reconstruction approach that makes it possible to recover used deconstruction materials (buildings, excavated material, etc.) into eco-materials.
Advizeo by setec	Advizeo designs solutions that improve the energy performance and comfort of buildings by placing users and field actors at the center of everything.
SOLAR COM	Solar Com offers solar charging stations for mobile phones that can be permanently installed outdoors on public land.
Siradel	Smart city solutions provider: smart city approach, 3D digital twin, 3D visualization and simulation softwareDesign of 5G, fiber, CCTV, lighting, energy, transport infrastructures.
namR	namR creates, transforms and enhances the data of territories, buildings and the environment to meet the challenges of the ecological transition.
Oze-energies	Oze-Energies offers an innovative solution that achieves 25% energy savings, improves the thermal comfort of occupants and indoor air quality by optimization without work.
VERTUO	How to perpetuate nature in the city? Greening urban areas is not easy when you do not have access to open ground, VERTUO provides an innovative solution to recreate nature in the city.

²⁹ Available at: [Smart city directory \(banquedesterritoires.fr\)](https://banquedesterritoires.fr) (Accessed: 09 April 2025)

³⁰ Available at: [Luxembourg Population 1950-2024 | MacroTrends](#) (Accessed: 09 April 2025)

³¹ Available at: [Luxembourg towards a smart nation | Deloitte Luxembourg | Public services](#) (Accessed: 09 April 2025)

CampoSPHERE	CampoSPHERE is developing an innovative and collaborative solution aimed at limiting destruction and promoting the reuse of modular buildings (Algeco type).
Urban Picking	Cueillette Urbaine is a company specialized in the development of urban agriculture and its benefits in the city.

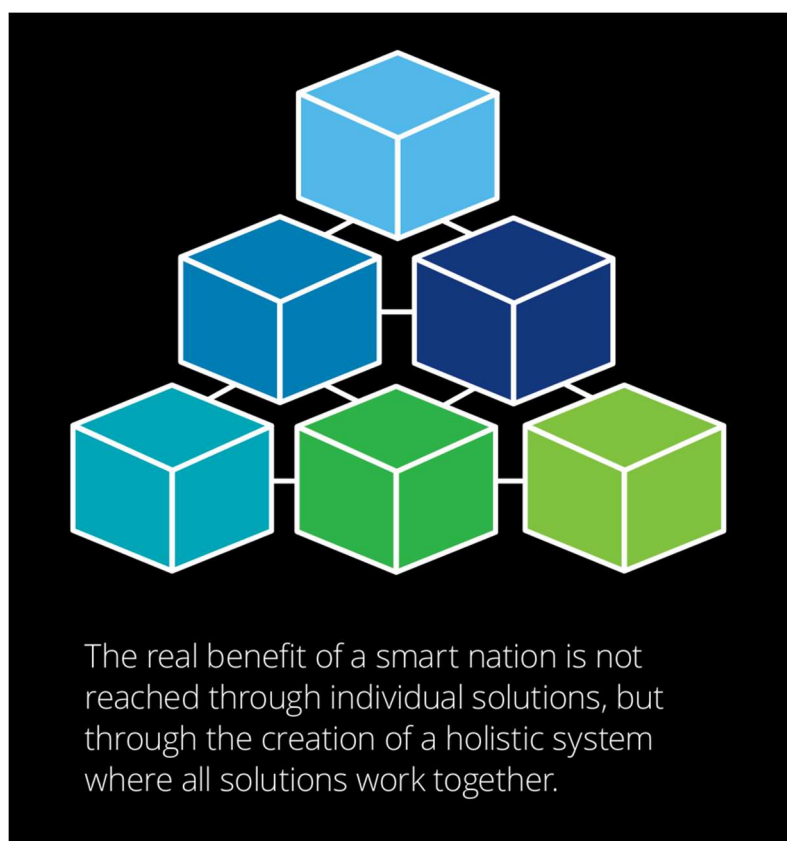


Fig.12. Smart city Luxembourg strategy³²

³² Available at: [Luxembourg towards a smart nation | Deloitte Luxembourg | Public services](#) (Accessed: 09 April 2025)

Overview of selected Smart cities

11. GOTHENBURG, SWEDEN³³

SMALL SIZED CITIES

Location (city, state)	Gothenburg, Sweden
Number of residents (projected)	638,000 ³⁴
Goals	The aim is to create solutions that enable a positive energy balance in districts and create an attractive, social inclusive campus and neighbourhood. ³⁵
PROJECTS	
District Heating Systems Thinking	Gothenburg bases 60% of its district heating on waste/recycled heat. In Gothenburg, 90% of all buildings are heated using district heating, while the corresponding figure for the EU is 12%
IRIS Smart City	IRIS is a Lighthouse project which consists of three European cities: Utrecht, Nice and Gothenburg. The focus is on energy-positive areas, smart energy management, smart e-mobility, an innovation platform for digital cities, residents' involvement and co-creation.
Smarta Kartan	The recently released Smart Map encourages citizen engagement by gathering all the places you can rent, exchange, borrow, share, give and get in Gothenburg.
Open Data	Open data accelerates the development of Smart Cities by connecting the people most capable of creating Smart City solutions with the data needed to generate and support them.
Digital Twin of Gothenburg	Min Stad is a 3D city model which can be used by developers, architects and planners to host public consultations, anticipate the impact of future development and make better-informed decisions.

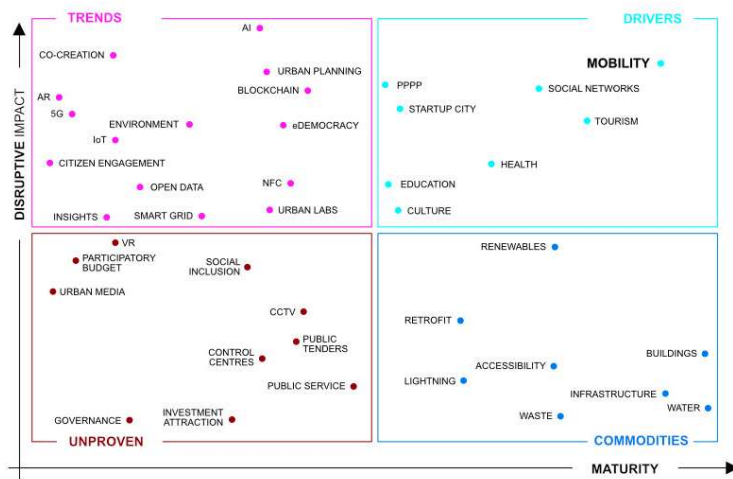


Fig.13. Smart city Gothenburg strategy³⁶

³³ Available at: [Pulse | Smart City | This is Gothenburg](#) (Accessed: 09 April 2025)

³⁴ Available at: [Goteborg, Sweden Metro Area Population 1950-2024 | MacroTrends](#) (Accessed: 09 April 2025)

³⁵ Available at: [Independent Guide 2023 | Gothenburg the Smart City | This is Gothenburg](#) (Accessed: 09 April 2025)

³⁶ Available at: [Independent Guide 2023 | Gothenburg the Smart City | This is Gothenburg](#) (Accessed: 09 April 2025)

Overview of selected Smart cities
12. LJUBLJANA, SLOVENIA³⁷

SMALL SIZED CITIES

Location (city, state)	Ljubljana, Slovenia
Number of residents (projected)	289,746 ³⁸
Goals	Ljubljana promotes the regeneration of derelict areas, encourages development along main access routes, and actively protects its natural resources and green space. The city's website claims “green innovations are part of the city's DNA.” ³⁹

PROJECTS

The multipurpose ‘Urbana’ smart city card	The introduction of a multipurpose ‘Urbana’ smart city card has facilitated payments for many services, including rides on city buses (users are able to switch buses free of charge within 90 minutes of the first validation), parking in public car parks, the funicular to Ljubljana Castle and even the services of the Ljubljana City Library.
Green areas getting closer to the city centre every day	One of the most visible measures aimed at establishing a good-quality public area in the city centre is the transformation of part of the main traffic artery of ‘Slovenska Street’ into a more attractive area for pedestrians, cyclists and users of city buses.
Material utilisation or recycling	Public companies towards circular economy The public energy company Energetika Ljubljana collects the waste ash from coal combustion as raw material – it can be used as a construction composite, as a base in building roads and for closing mine shafts
(Co-)production of energy	The public energy company Energetika Ljubljana simultaneously produces heat and electricity from one unit of fuel. Heat created in the production of electricity is highly efficiently used to heat the water in the district heating system.
Restoring used car tires	In the public passenger transport company Ljubljanski potniški promet used tires are checked and depending on their state a decision is made whether they are suitable for tire tread restoration, that is, they are taken to a certified company for further treatment. With the tire tread replacement procedure, the tire can be reused which extends its lifetime at least once.
Street cleaning with recycled water and rainwater	The public waste management company Snaga is cleaning the city pavements in Ljubljana with machines which recycle water and they are using a biodegradable detergent. The machine has five floating brushes for wet cleaning which vacuum up the cleaning water. For street rinsing Snaga uses mostly rainwater collected on the roofs of its building complex at Barje.
Against plastic bags at Ljubljana’s markets	In 2016, we launched a campaign against plastic bags under the slogan »I’m not lasting, but therefore less annoying. I’m a biodegradable bag. « With the aim of reducing the use of plastic bags which are very harmful to the environment.
Against plastic bags in Ljubljana	As the City of Ljubljana is striving to reduce the use of plastic bags, we presented our cooperation with retailers and hospitality service providers in the city center of Ljubljana on World Oceans Day 2018. Many of them are already offering paper shopping bags, which we

³⁷ Available at: [City of Ljubljana](#) (Accessed: 09 April 2025)

³⁸ Available at: [Ljubljana, Slovenia Population 2024 \(worldpopulationreview.com\)](#) (Accessed: 09 April 2025)

³⁹ Available at: [Ljubljana: A Smart, Green, and Sustainable City \(beesmart.city\)](#) (Accessed: 09 April 2025)

	appreciate and support, and that is why we are encouraging others who have still not adopted this behaviour to do so.
Project APPLAUSE	The project addresses unsolved questions with regard to invasive alien plant species in terms of the zero-waste approach and circular economy.
Bicycle sharing – BicikeLJ	The bicycles in the system can be rented by registering the multipurpose city card Urbana.
SI_industry 4.0 - Smart Factories	Industry 4.0 - integrated solutions enabling companies to build competent value-chains including production optimisation, (distributed) production management and control, quality assurance, regulation and data processing;
Smart Cities and Communities	Manufacturing of electric and electronic components and equipment, ICT systems, components and systems for district heating and the heating, ventilation and air-conditioning (HVAC) systems.
Sustainable Food Production	Research and Innovation activities supporting sustainable production of high-quality food in relation to business model that integrates knowledge institutions with manufacturers and economic entities along the entire value chains, including the development of new marketing models.
Networks for the Transition to Circular Economy	Research and Innovation activities related to medical applications and quality of life. The activities include new substances and technologies in biomedicine combined with smart healthcare, personalized healthcare for vulnerable population, including high quality food and clean environment.
Sustainable Tourism and Creative Cultural and Heritage based Services	Research and Innovation activities focusing social innovation based on rich cultural heritage and local creativity promoting activities and services centred around sustainable use of natural resources and innovative well-being programmes.
Development of Materials as Products	Focusing on materials' production technologies and processing, and material sciences - metallurgy, foundry and production of multicomponent non-homogeneous materials / components combined in different ways.
Smart buildings and homes	Energy refurbishment of buildings, interfaces between smart buildings and smart grids, integrated management systems for buildings, homes and the working environment of the future, and smart appliances for energy efficiency and self-sufficiency of buildings.
Smart Mobility	Developing high value-added, demanding, complex, energy-efficient products consistent with the new EU transport emission standards (EURO 6c, EURO 7) and security standards (EURO NCAP).

- **energy systems** (decarbonisation of energy products, construction of an incinerator, production of green energy, sustainable electricity grid, increase in energy efficiency, improvement of energy management, negative emissions, etc.);
- **mobility and transport** (improvement of public transport, improvement of green mobility and accessibility management, decarbonisation of road and other motor vehicles, improvement of cycling and pedestrian infrastructure, etc.);
- **waste and the circular economy** (reducing the amount of waste, comprehensive and sustainable waste management, etc.);
- **green infrastructure and greening** (sustainable urban planning and construction, urban greening and green and blue infrastructure, forest management, sustainable agriculture, nature-based solutions, etc.);
- **digitization** (urban digital platform, smart digital solutions, digital tools for management, planning and implementation of city policies, single information and communication point for citizens, administration and economy, etc.);
- **built environment** (land management, energy renovation of buildings, intended use of space, etc.);
- **inclusion of the population.**⁴⁰

⁴⁰ Available at: [Ljubljana received the title of Climate-Neutral and Smart City » City of Ljubljana](#) (Accessed: 09 April 2025)

2. CATALOGUE 2

SMART CITY CRITERIA – EU & EIB Association

(Book I – Chapter 5, Smart City Criteria)

METHODOLOGY OVERVIEW

This research adopts six dimensions in the smart city framework by its figure, such as Smart governance, Smart Economy, Smart People, Smart Mobility, Smart Living, and a Smart Environment.

However, as the research is focused specifically on architecture and urban design, it analyzes the three dimensions: Smart Environment, Smart People and Smart Living. They are most considered with spatial planning and sustainability, quality of life and citizen engagement, which coincide with the objectives of architectural innovation and urban development. Assessment of cities had been realized on the basis of initiatives and characteristics present in these three areas.

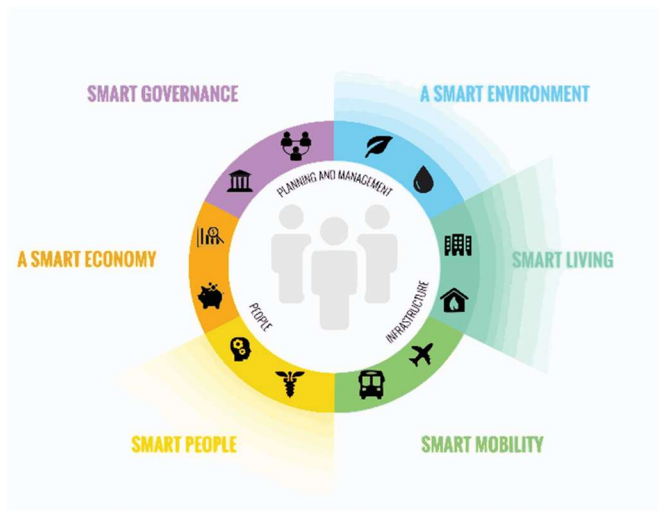


Fig.14. European Smart city characteristics and our Smart city focus (Smart Environment, Smart People, Smart Living). Source: (IBM, 2025).

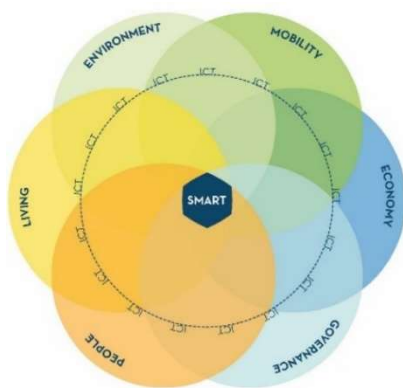


Fig.15. Smart city characteristics from European Investment Bank (EIB). Source: (Monzon, 2015)

Since this research is focused on urban planning and neighbourhood level, our comparison focuses on the three dimensions that connects most directly to physical changes of real-life outcomes: Smart Environment (Sen), Smart Living (Sli) and Smart People (Spe). (See Book I, Table 10.0. EU & EIB characteristics for Smart Environment, Smart People, and Smart Living derived from database of EU8 smart cities program and EIB9 (European Investment Bank)).

Table 1.0. EU five cities with best performance in Smart Environment. Source: EU smart cities, 2014⁴¹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Umeaa	1	13	5	34	24	2	3
2.	Sweden	Joenkoeping	2	26	13	11	32	3	6
3.	Sweden	Eskilstuna	3	41	1	24	21	7	4
4.	France	Montpellier	4	30	20	16	29	16	19
5.	Finland	Jyväskylä	5	25	8	47	23	1	8

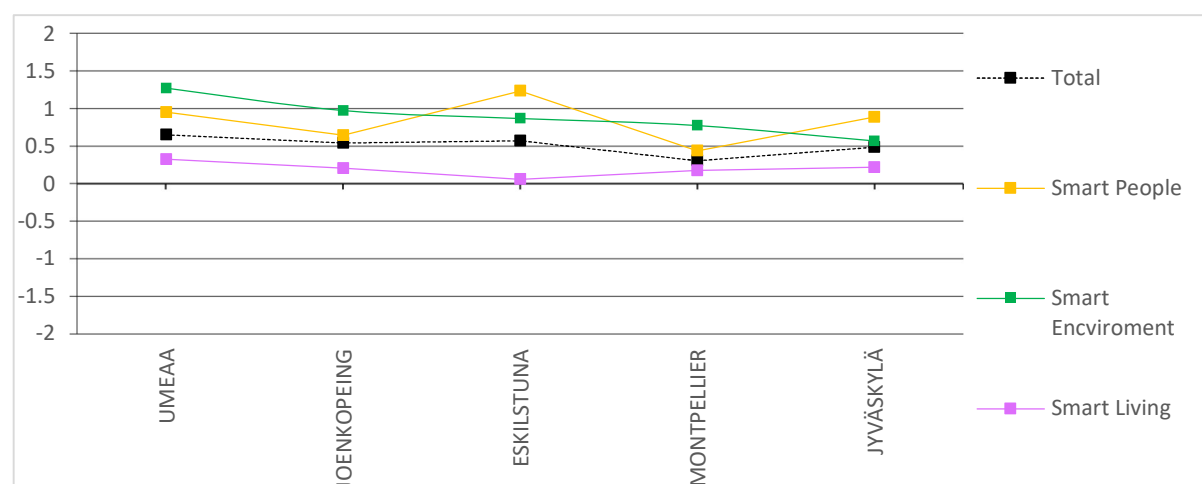


Fig.16. Diagram of performance for the three of our focus domains. Source: EU smart cities, 2014⁴².

Table 2.0. EU five cities with best performance in Smart People. Source: EU smart cities, 2014⁴³.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	24	21	7	3
2.	Finland	Tampere	12	14	2	31	16	15	6
3.	Denmark	Aarhus	19	27	3	2	6	3	4
4.	Finland	Oulu	13	35	4	39	14	9	19
5.	Sweden	Umeaa	1	13	5	34	24	2	8

⁴¹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁴² Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁴³ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

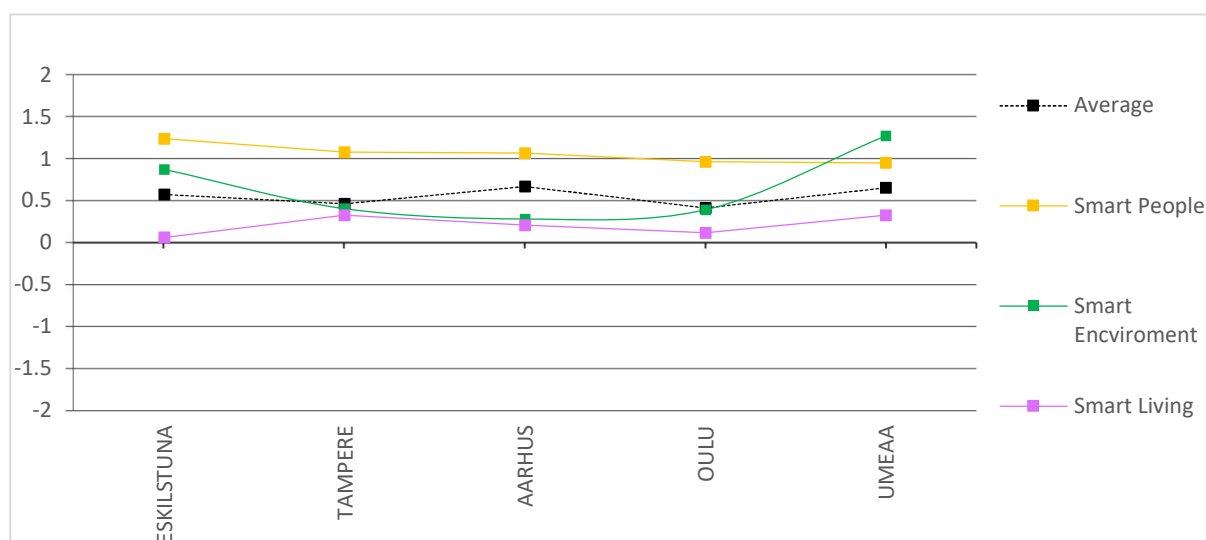


Fig.17. Diagram of performance for the three of our focus domains. Source: EU smart cities, 2014⁴⁴.

Table 3.0. EU five cities with best performance in Smart Living. Source: EU smart cities, 2014⁴⁵.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Austria	Salzburg	27	1	24	2	27	29	3
2.	Austria	Graz	28	2	21	9	26	33	6
3.	Austria	Innsbruck	6	3	27	12	35	26	4
4.	Luxembourg	Luxembourg	16	4	18	4	1	56	19
5.	Belgium	Brugge	52	5	52	27	39	22	8

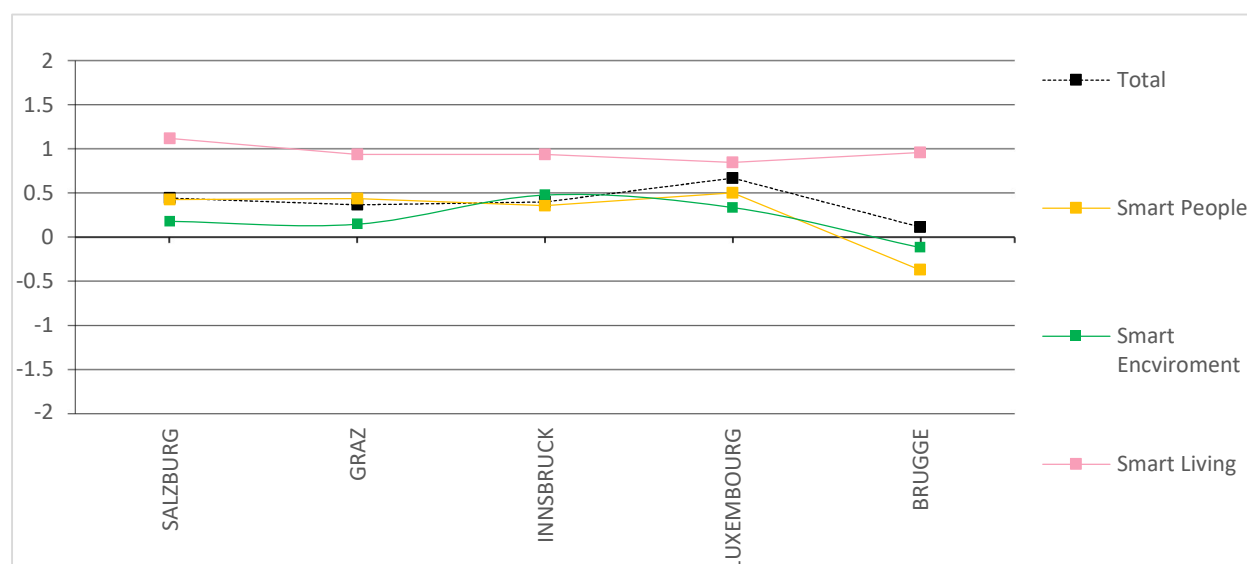


Fig.18. Diagram of performance for the three of our focus domains. Source: EU smart cities, 2014⁴⁶.

⁴⁴ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁴⁵ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁴⁶ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

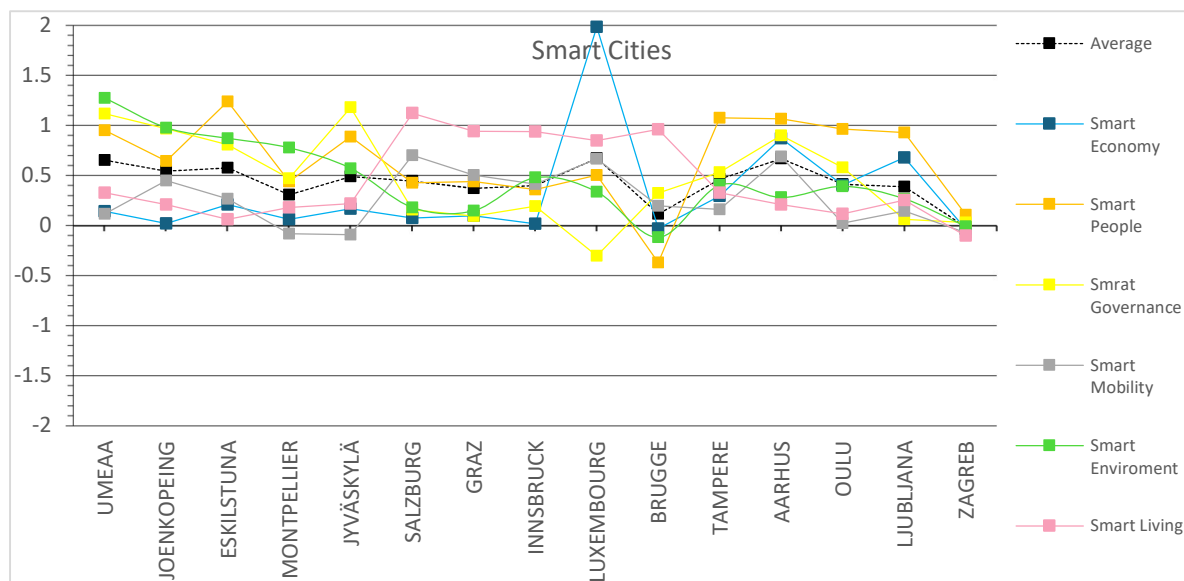


Fig.19. Diagram of performance for the six smart city domains, add Zagreb and Ljubljana as our interests as well.
Source: EU smart cities, 2014⁴⁷.

⁴⁷ Available at: [european smart cities 3.0 \(2014\)](https://ec.europa.eu/eu-smart-cities/eu-smart-cities-3-0) (Accessed: 24 April 2025)

Umeaa, Sweden

Table 4.0. Umeaa, Sweden as first city with best performance in Smart Environment. Source: EU smart cities, 2014⁴⁸.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Umeaa	1	13	5	34	24	2	3
2.	Sweden	Joensuu	2	26	13	11	32	3	6
3.	Sweden	Eskilstuna	3	41	1	24	21	7	4
4.	France	Montpellier	4	30	20	16	29	16	19
5.	Finland	Jyväskylä	5	25	8	47	23	1	8

Table 5.0. Umeaa, Sweden. Smart Environment criteria. Source: EU smart cities, 2014⁴⁹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Umeaa	1	13	5	3
	CRITERIA	Environmental conditions	1.424			
		Air quality (no pollution)	0.592			
		Ecological awareness	1.816			
		Average	1.277			

Table 6.0. Umeaa, Sweden. Smart Living criteria. Source: EU smart cities, 2014⁵⁰.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Umeaa	1	13	5	3
	CRITERIA	Cultural Facilities		-0.189		
		Health conditions		0.697		
		Individual security		0.18		
		Housing quality		1.28		
		Education facilities		0.235		
		Touristic attractiveness		-0.572		
		Economic welfare		0.655		
		Average		0.327		

Table 7.0. Umeaa, Sweden. Smart People criteria. Source: EU smart cities, 2014⁵¹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Umeaa	1	13	5	3
	CRITERIA	Level of qualification			-0.682	
		Lifelong learning			0.307	
		Ethnic plurality			2.402	
		Open-mindedness			-0.318	
		Average			0.427	

⁴⁸ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁴⁹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁵⁰ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁵¹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Joensuu, Sweden

Table 8.0. Joensuu, Sweden as second city with best performance in Smart Environment. Source: EU smart cities, 2014⁵².

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Umeaa	1	13	5	34	24	2	3
2.	Sweden	Joensuu	2	26	13	11	32	3	6
3.	Sweden	Eskilstuna	3	41	1	24	21	7	4
4.	France	Montpellier	4	30	20	16	29	16	19
5.	Finland	Jyväskylä	5	25	8	47	23	1	8

Table 9.0. Joensuu, Sweden. Smart Environment criteria. Source: EU smart cities, 2014⁵³.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Joensuu	2	26	13	6
	CRITERIA	Environmental conditions	1.011			
		Air quality (no pollution)	0.11			
		Ecological awareness	1.816			
		Average	0.979			

Table 10.0. Joensuu, Sweden. Smart Living criteria. Source: EU smart cities, 2014⁵⁴.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Joensuu	2	26	13	6
	CRITERIA	Cultural Facilities		-0.35		
		Health conditions		0.481		
		Individual security		-0.07		
		Housing quality		1.319		
		Education facilities		0.014		
		Touristic attractiveness		-0.572		
		Economic welfare		0.641		
		Average		0.209		

Table 11.0. Joensuu, Sweden. Smart People criteria. Source: EU smart cities, 2014⁵⁵.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Joensuu	2	26	13	6
	CRITERIA	Level of qualification			-0.168	
		Lifelong learning			1.614	
		Ethnic plurality			0.464	
		Open-mindedness			0.673	
		Average			0.646	

⁵² Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁵³ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁵⁴ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁵⁵ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Eskilstuna, Sweden

Table 12.0. Eskilstuna, Sweden as third city with best performance in Smart Environment. Source: EU smart cities, 2014⁵⁶.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Umeaa	1	13	5	34	24	2	3
2.	Sweden	Joenkoeping	2	26	13	11	32	3	6
3.	Sweden	Eskilstuna	3	41	1	24	21	7	4
4.	France	Montpellier	4	30	20	16	29	16	19
5.	Finland	Jyväskylä	5	25	8	47	23	1	8

Table 13.0. Eskilstuna, Sweden. Smart Environment criteria. Source: EU smart cities, 2014⁵⁷.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	4
CRITERIA		Environmental conditions	0.606			
		Air quality (no pollution)	0.441			
		Ecological awareness	1.816			
		Average	0.874			

Table 14.0. Eskilstuna, Sweden. Smart Living criteria. Source: EU smart cities, 2014⁵⁸.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	4
CRITERIA		Cultural Facilities		-0.55		
		Health conditions		0.2		
		Individual security		-0.831		
		Housing quality		1.328		
		Education facilities		0.372		
		Touristic attractiveness		-1.034		
		Economic welfare		0.938		
		Average		0.061		

Table 15.0. Eskilstuna, Sweden. Smart People criteria. Source: EU smart cities, 2014⁵⁹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	4
CRITERIA		Level of qualification			-0.628	
		Lifelong learning			1.603	
		Ethnic plurality			3.32	
		Open-mindedness			0.673	
		Average			1.242	

⁵⁶ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁵⁷ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁵⁸ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁵⁹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Montpellier, France

Table 16.0. Montpellier, France as fourth city with best performance in Smart Environment. Source: EU smart cities, 2014⁶⁰.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Umeaa	1	13	5	34	24	2	3
2.	Sweden	Joenkoeping	2	26	13	11	32	3	6
3.	Sweden	Eskilstuna	3	41	1	24	21	7	4
4.	France	Montpellier	4	30	20	16	29	16	19
5.	Finland	Jyväskylä	5	25	8	47	23	1	8

Table 17.0. Montpellier, France. Smart Environment criteria. Source: EU smart cities, 2014⁶¹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	France	Montpellier	4	30	20	19
	CRITERIA	Environmental conditions	1.343			
		Air quality (no pollution)	0.435			
		Ecological awareness	0.66			
		Average	0.779			

Table 18.0. Montpellier, France. Smart Living criteria. Source: EU smart cities, 2014⁶².

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	France	Montpellier	4	30	20	19
	CRITERIA	Cultural Facilities		0.437		
		Health conditions		0.344		
		Individual security		-1.138		
		Housing quality		0.098		
		Education facilities		0.571		
		Touristic attractiveness		1.043		
		Economic welfare		-0.101		
		Average		0.179		

Table 19.0. Montpellier, France. Smart People criteria. Source: EU smart cities, 2014⁶³.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	France	Montpellier	4	30	20	19
	CRITERIA	Level of qualification			0.905	
		Lifelong learning			-0.396	
		Ethnic plurality			1.373	
		Open-mindedness			-0.117	
		Average			0.441	

⁶⁰ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁶¹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁶² Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁶³ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Jyväskylä, Finland

Table 20.0. Jyväskylä, Finland as fifth city with best performance in Smart Environment. Source: EU smart cities, 2014⁶⁴.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Umeaa	1	13	5	34	24	2	3
2.	Sweden	Joenkoeping	2	26	13	11	32	3	6
3.	Sweden	Eskilstuna	3	41	1	24	21	7	4
4.	France	Montpellier	4	30	20	16	29	16	19
5.	Finland	Jyväskylä	5	25	8	47	23	1	8

Table 21.0. Jyväskylä, Finland. Smart Environment criteria. Source: EU smart cities, 2014⁶⁵.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Finland	Jyväskylä	5	25	8	19
	CRITERIA	Environmental conditions	1.193			
		Air quality (no pollution)	0.843			
		Ecological awareness	-0.378			
		Average	0.572			

Table 22.0. Jyväskylä, Finland. Smart Living criteria. Source: EU smart cities, 2014⁶⁶.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Finland	Jyväskylä	5	25	8	19
	CRITERIA	Cultural Facilities		-0.349		
		Health conditions		0.331		
		Individual security		0.488		
		Housing quality		0.425		
		Education facilities		0.8		
		Touristic attractiveness		-1.034		
		Economic welfare		0.869		
		Average		0.219		

Table 23.0. Jyväskylä, Finland. Smart People criteria. Source: EU smart cities, 2014⁶⁷.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Finland	Jyväskylä	5	25	8	19
	CRITERIA	Level of qualification			1.209	
		Lifelong learning			1.947	
		Ethnic plurality			-0.575	
		Open-mindedness			0.978	
		Average			0.890	

⁶⁴ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁶⁵ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁶⁶ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁶⁷ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Eskilstuna, Sweden

Table 24.0. Eskilstuna, Sweden as first city with best performance in Smart People. Source: EU smart cities, 2014⁶⁸.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	24	21	7	3
2.	Finland	Tampere	12	14	2	31	16	15	6
3.	Denmark	Aarhus	19	27	3	2	6	3	4
4.	Finland	Oulu	13	35	4	39	14	9	19
5.	Sweden	Umeaa	1	13	5	34	24	2	8

Table 25.0. Eskilstuna, Sweden. Smart Environment criteria. Source: EU smart cities, 2014⁶⁹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	3
	CRITERIA	Environmental conditions	0.606			
		Air quality (no pollution)	0.441			
		Ecological awareness	1.816			
		Average	0.874			

Table 26.0. Eskilstuna, Sweden. Smart Living criteria. Source: EU smart cities, 2014⁷⁰.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	3
	CRITERIA	Cultural Facilities		-0.55		
		Health conditions		0.2		
		Individual security		-0.831		
		Housing quality		1.328		
		Education facilities		0.372		
		Touristic attractiveness		-1.034		
		Economic welfare		0.938		
		Average		0.061		

Table 27.0. Eskilstuna, Sweden. Smart People criteria. Source: EU smart cities, 2014⁷¹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	3
	CRITERIA	Level of qualification			-0.628	
		Lifelong learning			1.603	
		Ethnic plurality			3.32	
		Open-mindedness			0.673	
		Average			1.242	

⁶⁸ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁶⁹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁷⁰ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁷¹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Tampere, Finland

Table 28.0. Tampere, Finland as second city with best performance in Smart People. Source: EU smart cities, 2014⁷².

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	24	21	7	3
2.	Finland	Tampere	12	14	2	31	16	15	6
3.	Denmark	Aarhus	19	27	3	2	6	3	4
4.	Finland	Oulu	13	35	4	39	14	9	19
5.	Sweden	Umeaa	1	13	5	34	24	2	8

Table 29.0. Tampere, Finland. Smart Environment criteria. Source: EU smart cities, 2014⁷³.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Finland	Tampere	12	14	2	6
CRITERIA	Environmental conditions		0.577			
	Air quality (no pollution)		0.797			
	Ecological awareness		-0.378			
	Average		0.406			

Table 30.0. Tampere, Finland. Smart Living criteria. Source: EU smart cities, 2014⁷⁴.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Finland	Tampere	12	14	2	6
CRITERIA	Cultural Facilities			0.856		
	Health conditions			0.176		
	Individual security			0.22		
	Housing quality			0.252		
	Education facilities			0.32		
	Touristic attractiveness			-0.572		
	Economic welfare			1.027		
	Average			0.326		

Table 31.0. Tampere, Finland. Smart Living People. Source: EU smart cities, 2014⁷⁵.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Finland	Tampere	12	14	2	6
CRITERIA	Level of qualification				1.895	
	Lifelong learning				2.065	
	Ethnic plurality				-0.622	
	Open-mindedness				0.978	
	Average				1.079	

⁷² Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁷³ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁷⁴ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁷⁵ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Aarhus, Denmark

Table 32.0. Aarhus, Denmark as third city with best performance in Smart People. Source: EU smart cities, 2014⁷⁶.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	24	21	7	3
2.	Finland	Tampere	12	14	2	31	16	15	6
3.	Denmark	Aarhus	19	27	3	2	6	3	4
4.	Finland	Oulu	13	35	4	39	14	9	19
5.	Sweden	Umeaa	1	13	5	34	24	2	8

Table 33.0 Aarhus, Denmark. Smart Environment criteria. Source: EU smart cities, 2014⁷⁷.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Denmark	Aarhus	19	27	3	4
CRITERIA		Environmental conditions	0.577			
		Air quality (no pollution)	0.797			
		Ecological awareness	-0.378			
		Average	0.406			

Table 34.0. Aarhus, Denmark. Smart Living criteria. Source: EU smart cities, 2014⁷⁸.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Denmark	Aarhus	19	27	3	4
CRITERIA		Cultural Facilities		0.856		
		Health conditions		0.176		
		Individual security		0.22		
		Housing quality		0.252		
		Education facilities		0.32		
		Touristic attractiveness		-0.572		
		Economic welfare		1.027		
		Average		0.326		

Table 35.0. Aarhus, Denmark. Smart People criteria. Source: EU smart cities, 2014⁷⁹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Denmark	Aarhus	19	27	3	4
CRITERIA		Level of qualification			1.895	
		Lifelong learning			2.065	
		Ethnic plurality			-0.622	
		Open-mindedness			0.978	
		Average			1.079	

⁷⁶ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁷⁷ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁷⁸ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁷⁹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Oulu, Finland

Table 36.0. Oulu, Finland as fourth city with best performance in Smart People. Source: EU smart cities, 2014⁸⁰.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	24	21	7	3
2.	Finland	Tampere	12	14	2	31	16	15	6
3.	Denmark	Aarhus	19	27	3	2	6	3	4
4.	Finland	Oulu	13	35	4	39	14	9	19
5.	Sweden	Umeaa	1	13	5	34	24	2	8

Table 37.0. Oulu, Finland. Smart Environment criteria. Source: EU smart cities, 2014⁸¹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Denmark	Aarhus	19	27	3	4
	CRITERIA	Environmental conditions	0.729			
		Air quality (no pollution)	0.829			
		Ecological awareness	-0.378			
		Average	0.393			

Table 38.0. Oulu, Finland. Smart Living criteria. Source: EU smart cities, 2014⁸².

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Denmark	Aarhus	19	27	3	4
	CRITERIA	Cultural Facilities		-0.465		
		Health conditions		0.44		
		Individual security		-0.045		
		Housing quality		0.357		
		Education facilities		0.337		
		Touristic attractiveness		-0.803		
		Economic welfare		0.983		
		Average		0.115		

Table 39.0. Oulu, Finland. Smart People criteria. Source: EU smart cities, 2014⁸³.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Denmark	Aarhus	19	27	3	4
	CRITERIA	Level of qualification			1.653	
		Lifelong learning			2.021	
		Ethnic plurality			0.788	
		Open-mindedness			0.978	
		Average			0.966	

⁸⁰ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁸¹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁸² Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁸³ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Umeaa, Sweden

Table 40.0. Umeaa, Sweden as fifth city with best performance in Smart People. Source: EU smart cities, 2014⁸⁴.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Sweden	Eskilstuna	3	41	1	24	21	7	3
2.	Finland	Tampere	12	14	2	31	16	15	6
3.	Denmark	Aarhus	19	27	3	2	6	3	4
4.	Finland	Oulu	13	35	4	39	14	9	19
5.	Sweden	Umeaa	1	13	5	34	24	2	8

Table 41.0. Umeaa, Sweden. Smart Environment criteria. Source: EU smart cities, 2014⁸⁵.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Umeaa	1	13	5	34
CRITERIA		Environmental conditions	1.424			
		Air quality (no pollution)	0.592			
		Ecological awareness	1.816			
		Average	1.277			

Table 42.0. Umeaa, Sweden. Smart Living criteria. Source: EU smart cities, 2014⁸⁶.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Umeaa	1	13	5	34
CRITERIA		Cultural Facilities		-0.189		
		Health conditions		0.697		
		Individual security		0.18		
		Housing quality		1.28		
		Education facilities		0.235		
		Touristic attractiveness		-0.572		
		Economic welfare		0.655		
		Average		0.372		

Table 43.0. Umeaa, Sweden. Smart People criteria. Source: EU smart cities, 2014⁸⁷.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Sweden	Umeaa	1	13	5	34
CRITERIA		Level of qualification			1.549	
		Lifelong learning			1.771	
		Ethnic plurality			-0.176	
		Open-mindedness			0.673	
		Average			0.954	

⁸⁴ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁸⁵ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁸⁶ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁸⁷ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Salzburg, Austria

Table 44.0. Salzburg, Austria as first city with best performance in Smart Living. Source: EU smart cities, 2014⁸⁸.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Austria	Salzburg	27	1	24	2	27	29	3
2.	Austria	Graz	28	2	21	9	26	33	6
3.	Austria	Innsbruck	6	3	27	12	35	26	4
4.	Luxembourg	Luxembourg	16	4	18	4	1	56	19
5.	Belgium	Brugge	52	5	52	27	39	22	8

Table 45.0. Salzburg, Austria. Smart Environment criteria. Source: EU smart cities, 2014⁸⁹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Salzburg	27	1	24	3
CRITERIA		Environmental conditions	-0.415			
		Air quality (no pollution)	0.376			
		Ecological awareness	0.121			
		Average	0.180			

Table 46.0. Salzburg, Austria. Smart Living criteria. Source: EU smart cities, 2014⁹⁰.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Salzburg	27	1	24	3
CRITERIA		Cultural Facilities		2.285		
		Health conditions		1.407		
		Individual security		-0.024		
		Housing quality		1.051		
		Education facilities		0.376		
		Touristic attractiveness		1.966		
		Economic welfare		0.816		
		Average		1.125		

Table 47.0. Salzburg, Austria. Smart People criteria. Source: EU smart cities, 2014⁹¹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Salzburg	27	1	24	3
CRITERIA		Level of qualification			-0.682	
		Lifelong learning			0.307	
		Ethnic plurality			2.402	
		Open-mindedness			-0.318	
		Average			0.427	

⁸⁸ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁸⁹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁹⁰ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁹¹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Graz, Austria

Table 48.0 Graz, Austria as second city with best performance in Smart Living. Source: EU smart cities, 2014⁹².

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Austria	Salzburg	27	1	24	2	27	29	3
2.	Austria	Graz	28	2	21	9	26	33	6
3.	Austria	Innsbruck	6	3	27	12	35	26	4
4.	Luxembourg	Luxembourg	16	4	18	4	1	56	19
5.	Belgium	Brugge	52	5	52	27	39	22	8

Table 49.0. Graz, Austria. Smart Environment criteria. Source: EU smart cities, 2014⁹³.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Graz	28	2	21	6
CRITERIA	Environmental conditions		0.07			
	Air quality (no pollution)		-0.079			
	Ecological awareness		0.121			
	Average		0.485			

Table 50.0. Graz, Austria. Smart Living criteria. Source: EU smart cities, 2014⁹⁴.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Graz	28	2	21	6
CRITERIA	Cultural Facilities			0.003		
	Health conditions			1.028		
	Individual security			0.1		
	Housing quality			0.764		
	Education facilities			2.067		
	Touristic attractiveness			1.919		
	Economic welfare			0.726		
	Average			0.944		

Table 51.0. Graz, Austria. Smart People criteria. Source: EU smart cities, 2014⁹⁵.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Graz	28	2	21	6
CRITERIA	Level of qualification				0.639	
	Lifelong learning				0.063	
	Ethnic plurality				1.372	
	Open-mindedness				-0.318	
	Average				0.439	

⁹² Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁹³ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁹⁴ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁹⁵ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Innsbruck, Austria

Table 52.0. Innsbruck, Austria as third city with best performance in Smart Living. Source: EU smart cities, 2014⁹⁶.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Austria	Salzburg	27	1	24	2	27	29	3
2.	Austria	Graz	28	2	21	9	26	33	6
3.	Austria	Innsbruck	6	3	27	12	35	26	4
4.	Luxembourg	Luxembourg	16	4	18	4	1	56	19
5.	Belgium	Brugge	52	5	52	27	39	22	8

Table 53.0. Innsbruck, Austria. Smart Environment criteria. Source: EU smart cities, 2014⁹⁷.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Innsbruck	6	3	27	4
CRITERIA	Environmental conditions		0.766			
	Air quality (no pollution)		0.428			
	Ecological awareness		0.121			
	Average		0.481			

Table 54.0. Innsbruck, Austria. Smart Living criteria. Source: EU smart cities, 2014⁹⁸.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Innsbruck	6	3	27	4
CRITERIA	Cultural Facilities			1.266		
	Health conditions			1.834		
	Individual security			-0.274		
	Housing quality			1.051		
	Education facilities			0.787		
	Touristic attractiveness			1.227		
	Economic welfare			0.7		
	Average			0.941		

Table 55.0. Innsbruck, Austria. Smart People criteria. Source: EU smart cities, 2014⁹⁹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Austria	Innsbruck	6	3	27	4
CRITERIA	Level of qualification				0.104	
	Lifelong learning				0.308	
	Ethnic plurality				1.339	
	Open-mindedness				-0.318	
	Average				0.358	

⁹⁶ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁹⁷ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁹⁸ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

⁹⁹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Luxembourg, Luxembourg

Table 56.0. Luxembourg, Luxembourg as fourth city with best performance in Smart Living. Source: EU smart cities, 2014¹⁰⁰.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Austria	Salzburg	27	1	24	2	27	29	3
2.	Austria	Graz	28	2	21	9	26	33	6
3.	Austria	Innsbruck	6	3	27	12	35	26	4
4.	Luxembourg	Luxembourg	16	4	18	4	1	56	19
5.	Belgium	Brugge	52	5	52	27	39	22	8

Table 57.0. Luxembourg, Luxembourg. Smart Environment criteria. Source: EU smart cities, 2014¹⁰¹.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Luxembourg	Luxembourg	16	4	18	19
	CRITERIA	Environmental conditions	-0.448			
		Air quality (no pollution)	-0.795			
		Ecological awareness	2.099			
		Average	0.338			

Table 58.0. Luxembourg, Luxembourg. Smart Living criteria. Source: EU smart cities, 2014¹⁰².

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Luxembourg	Luxembourg	16	4	18	19
	CRITERIA	Cultural Facilities		1.258		
		Health conditions		0.893		
		Individual security		0.1		
		Housing quality		1.05		
		Education facilities		0.1		
		Touristic attractiveness		1.32		
		Economic welfare		1.239		
		Average		0.851		

Table 59.0. Luxembourg, Luxembourg. Smart People criteria. Source: EU smart cities, 2014¹⁰³.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Luxembourg	Luxembourg	16	4	18	19
	CRITERIA	Level of qualification			0.396	
		Lifelong learning			-0.388	
		Ethnic plurality			0.194	
		Open-mindedness			1.818	
		Average			0.505	

¹⁰⁰ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

¹⁰¹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

¹⁰² Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

¹⁰³ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Brugge, Belgium

Table 60.0. Brugge, Belgium as fifth city with best performance in Smart Living. Source: EU smart cities, 2014¹⁰⁴.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Smart Mobility	Smart Economy	Smart Governance	Total Ranking
1.	Austria	Salzburg	27	1	24	2	27	29	3
2.	Austria	Graz	28	2	21	9	26	33	6
3.	Austria	Innsbruck	6	3	27	12	35	26	4
4.	Luxembourg	Luxembourg	16	4	18	4	1	56	19
5.	Belgium	Brugge	52	5	52	27	39	22	8

Table 61.0. Brugge, Belgium. Smart Environment criteria. Source: EU smart cities, 2014¹⁰⁵.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Belgium	Brugge	52	5	52	8
	CRITERIA	Environmental conditions	-0.662			
		Air quality (no pollution)	-0.445			
		Ecological awareness	0.145			
		Average	-0.117			

Table 62.0. Brugge, Belgium. Smart Living criteria. Source: EU smart cities, 2014¹⁰⁶.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Belgium	Brugge	52	5	52	8
	CRITERIA	Cultural Facilities		1.765		
		Health conditions		0.861		
		Individual security		-0.042		
		Housing quality		0.002		
		Education facilities		-0.017		
		Touristic attractiveness		1.919		
		Economic welfare		0.363		
		Average		0.693		

Table 63. Brugge, Belgium. Smart People criteria. Source: EU smart cities, 2014¹⁰⁷.

Nr.	State	City	Smart Environment	Smart Living	Smart People	Total Ranking
1.	Belgium	Brugge	52	5	52	8
	CRITERIA	Level of qualification			-0.628	
		Lifelong learning			-0.544	
		Ethnic plurality			-0.678	
		Open-mindedness			0.366	
		Average			-0.371	

¹⁰⁴ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

¹⁰⁵ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

¹⁰⁶ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

¹⁰⁷ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

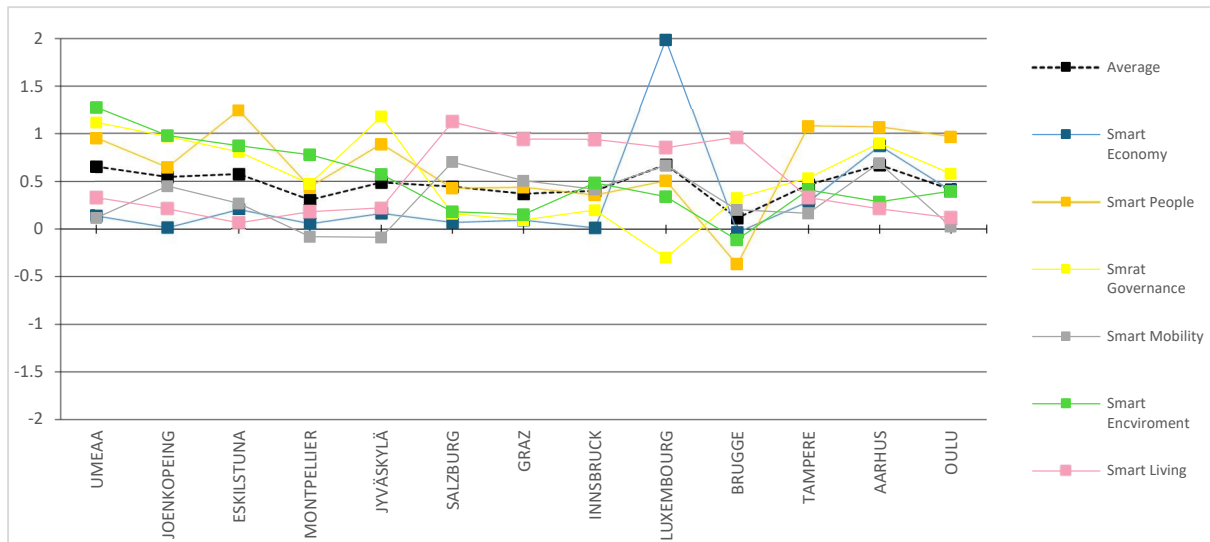


Fig.20. Comparative diagram of 13 cities with their performance in SP, SE, SL. Source: EU smart cities, 2014¹⁰⁸.



Fig.21. Comparative diagram of 13 cities with their performance in SP, SE, SL, + Zagreb and Ljubljana. Source: EU smart cities, 2014¹⁰⁹.

¹⁰⁸ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

¹⁰⁹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 64. Cities with their best performance in three domains adding here Zagreb and Ljubljana for comparison.
Source: EU smart cities, 2014¹¹⁰.

NR	CC	CITY	SMART ENVIRONMENT	SMART LIVING	SMART PEOPLE	TOTAL RANKING
1	SWEDEN	UMEAA	1	13	5	3
2	AUSTRIA	SALZBURG	27	1	24	10
3	SWEDEN	ESKILSTUNA	3	41	1	4
4	SLOVENIA	LJUBLJANA	21	21	7	15
5	CROATIA	ZAGREB	36	42	24	35

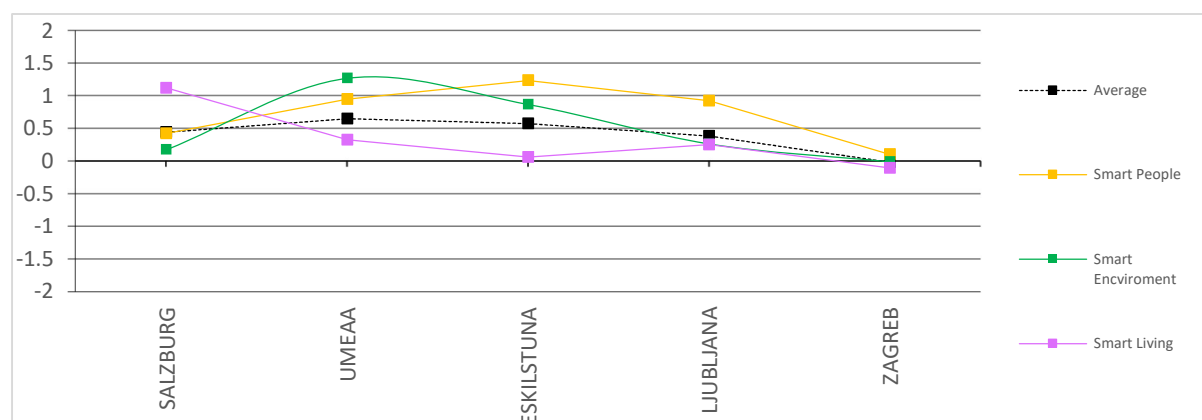


Fig. 22. Cities with their best performance in three domains adding here Zagreb and Ljubljana for comparison.
Source: EU smart cities, 2014¹¹¹.

The next part shows a list of chosen European Smart Cities that show different sizes and situations of urban growth. Each city has been looked at in three areas: Smart Environment, Smart Living, and Smart People - to show the various projects, actions, and plans they have used to move forward with their smart city goals. These examples show how cities of different sizes are dealing with issues like sustainability, new ideas, and involving citizens. They also give a way to compare the focus and methods each city uses.

¹¹⁰ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

¹¹¹ Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

CITY ZAGREB, CROATIA ^{112,113}	
Domains	Projects
Smart environment	<ol style="list-style-type: none"> 1. Energy efficient renovation of public lighting in the city of Zagreb 2. Energy renovation of public findings 3. Energy atlas 4. “Zagreb for innovation” startup factory- phase ii 5. Installation of solar power plants 6. Urban learning 7. E2stormed 8. Zagee - Zagreb energy efficient city 9. Integrated and innovative actions for sustainable urban mobility upgrade – tribute
Smart living	<ol style="list-style-type: none"> 1. Interoperable smart city services through an open platform for urban ecosystems (i-scope) 2. Strategic noise map of the city of Zagreb and noise management action plan 3. Catalog of public and social locations 4. Capital investments in facilities for social activities 5. Development of zipp geoportal 6. Spatial and statistical analysis for the purpose of city planning and management 7. Digitalization of culture - cultural digitalization
Smart people	<ol style="list-style-type: none"> 1. E-zagreb 2. E-zagreb- eextract from the collection of purchase prices 3. E-zagreb- ebebe 4. E- zagreb – efinancial operations 5. E- zagreb- epermits 6. E- zagreb – eorder 7. E- zagreb – ecommunal fees 8. E- zagreb – ecommunal contribution 9. E- zagreb- project cycle management 10. E- zagreb – eremarks 11. E-zagreb – eregen 12. E-zagreb – online marketplaces – virtual marketplace e-Zagreb 13. E- zagreb- moje sljeme 14. E-zagreb – špica 15. E-zagreb – i have an initiative 16. E-zagreb – activities 17. E-zagreb – e-scholarships 18. Urbact iii – smart impact - local impact from smart city planning 19. Digitalization of Zagreb holding - development of a unique platform 20. City keys
Total number of projects	36

¹¹² Available at: [Zagreb Smart City \(arcgis.com\)](https://arcgis.com) (Accessed. 12 April, 2025)

¹¹³ Available at: <https://eko.zagreb.hr/primjeri-smart-city-projekata-grada-zagreba/5488> (Accessed. 12 April, 2025)

CITY LJUBLJANA, SLOVENIA ^{114,115,116,117,118}	
Domains	Projects
Smart environment	<ol style="list-style-type: none"> 1. Innovative paper 2. Cyanometer 3. Ljubljana sound point 4. Rcero Ljubljana 5. Wastewater drainage and treatment of the Ljubljansko polje aquifer area 6. New plastics economy global commitment. 7. European circular cities declaration 8. A 100-percent electric carsharing project 9. Tap water Ljubljana 10. The ankara boulevard project 11. The european green capital project- 12. A city with a green pulse 13. A universe of bio-diversity 14. The clean for your project 15. Zero waste strategy 16. Eco-reading badge 17. Get used to reuse 18. Raise your voice against food waste 19. Kabiné serinjon
Smart living	<ol style="list-style-type: none"> 20. Odpiralni časi (open hours) 21. Applause
Smart people	<ol style="list-style-type: none"> 22. Urbana bicikelj spotted by locals Ljubljana 23. Ljubljana by wheelchair next to Ljubljana airport tonight 24. The wisdom of castle wine
Total number of projects	24

¹¹⁴ Available at: [useful mobile apps » visit Ljubljana](#) (Accessed. 12 April, 2025)

¹¹⁵ Available at: <https://www.ljubljanaforum.org/data/2011.pdf> (Accessed. 12 April, 2025)

¹¹⁶ Available at: <https://www.ljubljanaforum.org/data/2015.pdf> (Accessed. 12 April, 2025)

¹¹⁷ Available at: <https://www.ljubljana.si/assets/uploads/ljubljana.for-you.pdf> (Accessed. 12 April, 2025)

¹¹⁸ Available at: https://ec.europa.eu/environment/pdf/europeangreencapital/ljubljana_european_green_capital_2016.pdf (Accessed. 12 April, 2025)

CITY UMEÅ, SWEDEN ^{119,120,121}	
Domains	Projects
Smart environment	<ol style="list-style-type: none"> 1. Smart Thermal Grid 2. Thermal Energy Distribution 3. Thermal Energy Storage 4. Renewable Energy Storage 5. 100% Renewable Energy Business Model 6. Smart Electricity Grid and E-Mobility 7. Demand-Side Management 8. Green Parking 9. Intelligent Street Lighting 10. E-Charging Infrastructures 11. Energy Management and ICT 12. Electric Buses
Smart living	<ol style="list-style-type: none"> 13. Smart Healthcare Services 14. Digital Home Energy Monitoring 15. Assisted Living Technologies 16. Walkable & Bike-Friendly Infrastructure 17. Real-Time Public Transport Info Systems
Smart people	<ol style="list-style-type: none"> 18. Smart Open Data Platform 19. Energy Data Management 20. Citizen Co-Creation Workshops 21. Digital Literacy Programs 22. Open Innovation Labs 23. University-City Collaboration
Total number of projects	23

¹¹⁹ Available at: [RUGGEDISED - Smart city lighthouse project | UMEÅ](#) (Accessed. 12 April, 2025)

¹²⁰ Available at: [Smart Living Lab: Innovation Hub Helping Make Umeå a Smart City | News - Smart City Sweden](#) (Accessed. 12 April, 2025)

¹²¹ Available at: [Umeå | Smart Cities Marketplace \(europa.eu\)](#) (Accessed. 12 April, 2025)

CITY	
SALZBURG, AUSTRIA ^{122,123,124}	
Domains	Projects
Smart environment ¹²⁵	<ol style="list-style-type: none"> 1. Smart Grids & Renewable Energy 2. District Heating Optimization 3. Climate-Neutral Buildings 4. Solar Energy Initiatives 5. Energy-Optimized Renovation 6. Smart Waste & Resource Management
Smart living	<ol style="list-style-type: none"> 7. E-Mobility & Public Transport 8. Mobility Hubs (Haltestelle 4.0) 9. Smart District Development 10. Active Mobility Focus 11. E-Mobility Charging Infrastructure
Smart people	<ol style="list-style-type: none"> 12. Smart City Vision 2050 13. Research & Development 14. Digital Nudging for Sustainable Mobility 15. Digital Skills Programs 16. Citizen Participation Platforms
Total number of projects	16

¹²² Available at: [City of Salzburg - Smart City Salzburg \(stadt-salzburg.at\)](https://stadt-salzburg.at) (Accessed. 12 April, 2025)

¹²³ Available at: [Endbericht-K11NE2F00017-Salzburg-kurz-dt-engl-v1.0-5.pdf \(smartcities.at\)](https://smartcities.at) (Accessed. 12 April, 2025)

¹²⁴ Available at: [City of Salzburg - Smart City Projects of the past years \(stadt-salzburg.at\)](https://stadt-salzburg.at) (Accessed. 12 April, 2025)

¹²⁵ Available at: [Smart City Salzburg - Smart Cities Initiative](https://smartcities.at) (Accessed. 12 April, 2025)

CITY		ESKILSTUNA, SWEDEN ^{126,127}
Domains	Projects	
Smart environment	<ol style="list-style-type: none"> 1. Energy Evolution Center 2. Climate-Neutral Eskilstuna 2030 3. Smart Grids and Renewable Energy Integration 4. Biogas Production from Waste 5. Smart Waste Sorting & Recycling Systems 6. Green Urban Infrastructure Initiatives 	
Smart living	<ol style="list-style-type: none"> 7. ReTuna Recycling Mall 8. Fossil-Free Public Transport 9. Smart City Projects Participation 10. Smart Home Pilot Projects 11. Digital Twin for Urban Planning 12. Smart Mobility Infrastructure 	
Smart people	<ol style="list-style-type: none"> 13. Energy Staircase Program 14. Collaborative Arena Klimatevolution 15. Mälardalen University Collaboration 16. Youth Sustainability Labs 17. Green Job Training Programs 18. Digital Citizen Dialogue Tools 	
Total number of projects	18	

¹²⁶ Available at: [Eskilstuna, a model for energy-efficient cities! | Eskilstuna Energi och Miljö AB \(mynewsdesk.com\)](#) (Accessed. 12 April, 2025)

¹²⁷ Available at: [Eskilstuna - the world leader in recycling \(themayor.eu\)](#) (Accessed. 12 April, 2025)



Photograph 3
Stockholm wood city, the largest wooden urban construction project.
Author: Henning Larsen, 2023.

3. CATALOGUE 3

PROJECTS/NEIGHBOURHOODS – BOTTOM-UP APPROACH

(Book I – Chapter 6, Smart City Neighbourhoods – Bottom-up Approach)

1.0. CRITERIA AND PROCESS FOR SELECTING NEIGHBOURHOODS

A careful, meticulous analysis selected 20 smart communities from 200. This strategy used modern data and information to cover varied urban landscapes and smart urbanism concerns. The research focused on the most relevant smart neighbourhood examples. This period saw the rise of smart city and smart neighbourhoods, especially in Europe. This approach helped identify intelligent urban planning initiatives that showed upcoming trends and technology. Projects started before 2005 or in planning were eliminated to focus on comparable projects started after 2005. After applying this criterion, about 100 communities met the criteria. In summary, this detailed process of choosing the 20 neighbourhoods ensures they are a broad and diverse example of smart urban development across Europe. These areas can be properly researched because there is enough recent data available. Our approach follows standard methods for qualitative research. We used a mix of criterion sampling, which means we set clear rules for including areas based on time and data quality, and purposeful maximum variation sampling, which helps cover different situations and topics.

This research involves many case studies. Five of twenty European smart neighbourhoods were selected using a two-step purposeful approach that combines criterion sampling (based on data, maturity, and coverage) with maximum variation sampling (geography, size, decision-making, and main topics). Neighbourhoods without public information or modest projects were excluded. Similar situations were deleted to avoid redundancy. The final five scenarios discuss smart city development methods.

In conclusion, this meticulous selection procedure of the five neighbourhoods guarantees a comprehensive and varied representation of smart urbanization throughout Europe. These places are advantageous for investigation due to the abundance of recent and accessible data. Our methodology adheres to established protocols in qualitative research. The research employed a combination of criterion sampling, establishing explicit guidelines for data collection, and deliberate maximum variation sampling, which facilitates the inclusion of diverse contexts and perspectives.

Table.65. List of more than 200 Neighbourhoods in the EU.

Nr.	Neighbourhood	City, State	Status / Chronological	Source: Available at:
1.	GWL Terrein	Amsterdam, Netherland	1989-1998	visitors - GWL Terrein (gwl-terrein.nl) GWL Terrain: Amsterdam's first car-free neighborhood - Sustainable Amsterdam
2.	Hammarby Sjostad	Stockholm, Sweden	1990-2015	Hammarby Sjöstad – HSEF
3.	Kronsberg	Hannover, Germany	1992-2020	Kronsberg - Visit Hannover (visit-hannover.com)
4.	Vauban	Freiburg, Germany	1993-2012	Vauban Infrastructure Partners (vauban-ip.com)
5.	Langerak	Utrecht, netherlands	1995-2002	Langerak, Utrecht - KCAP
6.	Bo01	Malmo, Sweden	1997-2015	Bo01, Malmö, Sweden Urban Green-blue Grids (urbangreenbluegrids.com)
7.	Müllerpier	Rotterdam, Netherlands	1998-2003	Müllerpier, Rotterdam - KCAP
8.	Augustenborg	Malmo, Sweden	1998-2024	Competence centre blue-green solutions and green roofs/facades
9.	Harbour City	Oslo, Norway	2000-2030	Oslo Fjord City: The Harbour Walk in Oslo, Norway - Life in Norway
10.	HafenCity	Hamburg, Germany	2001-2025	hafencitycom - Hafencity
11.	Strijp -S	Eindhoven, Netherland	2002-2025	morgen - Strijp-S
12.	Munkehagen	Grønlikaia, Oslo	2003-2023	R21 ARKITEKTER AS - Munkehagen, Grønlikaia
13.	Milano Santa Giulia	Milan, Italy	2004-2026	Santa Giulia Masterplan, Milan - Norman Foster Arquitectura Viva
14.	Zac De Bonne	Grenoble, France	2004-2014	ZAC de Bonne (21stcenturydevelopment.org)
15.	Aspern Seestadt	Vienna, Austria	2005-2028	https://www.aspern-seestadt.at/en
16.	Hunziker Areal	Zurich, Switzerland	2007-2017	Home - MORE THAN LIVING (mehralswohnen.ch)
17.	Hoef Urban Quarter	Amersfoort, Netherlands	2007- ongoing	Hoef Urban Quarter - Karres en Brands
18.	Offenbach Harbor	Offenbach, Germany	2007-2024	Offenbach Harbour Henning Larsen
19.	Barkarbystaden	Järfälla, Stockholm, Sweden	2007-2030	Welcome to Barkarby - Barkarby
20.	Nordhavn	Copenhagen, Denmark	2008-2037	Nordhavn: The smart urban area of the future (stateofgreen.com)
21.	CeresByen	Aarhus, Denmark	2008-2018	CeresByen, masterplan and area plan - Projects - C.F. Møller (cfmoller.com)
22.	Kalasatama	Helsinki, Finland	2009-2035	Smart Kalasatama - (fiksukalasatama.fi)
23.	Merwede	Utrecht, Netherlands	2010-2040	Merwede, the Dutch neighbourhood where there will be one shared car for every 3 households – Tomorrow.City – The biggest platform about urban innovation
24.	Reininghaus	Graz, Austria	2010-2030	Reininghausgründe - Graz relies on you (xn--reininghausgrnde-vzb.at)
25.	Royal Seaport	Stockholm, Sweden	2010-2030	Sustainable Urban Development Stockholm Royal Seaport 2030 (norradjurgardsstaden2030.se)
26.	Entwicklungsplan Freiham Nord	Munich, Germany	2010-2040	2011 Freiham Nord, Freiham North 2011 Germany — Topotek 1

27.	Zaankwartier	Wormerveer, Netherlands	2010- ongoing	Zaankwartier (mecanoo.nl)
28.	MORE	Leiden, Netherlands	2010-2026	MORE - VenhoevenCS architecture+urbanism
29.	Koege Coast	Koege, Denmark	2010- (competition)	Koege Coast - ADEPT
30.	Skeppsbron	Göteborg, Sweden	2010-ongoing	Skeppsbron LINK Arkitektur
31.	Årstafältet	Stockholm, Sweden	2010-2030	Årstafältet - White Arkitekter
32.	H+	Helsingborg, Sweden	2010- (competition) 2nd prize	Koege Coast - ADEPT
33.	Carnisse district	Rotterdam, Netherlands	2010- ongoing	Who Dares de Architecten Cie.
34.	Aeschbachquartier Aarau	Zurich, Switzerland	2011-2020	Aeschbach Quarter, Aarau - KCAP
35.	Kanalbyen	Fredericia, Denmark	2011- ongoing	Kanalbyen, Fredericia - KCAP
36.	Nieuw Zuid	Antwerpen, Belgium	2012-2028	Nieuw Zuid: home in the neighbourhood of the future (nieuwzuid-antwerpen.be)
37.	Clichy-Batignolles	Paris, France	2012-2020	Clichy-Batignolles (Paris 17th) Paris & Métropole Aménagement (paris-metropole-amenagement.fr)
38.	North-south axis Wilhelmsburg	Hamburg, Germany	2013- (competition)	SMAQ - architecture Urbanism research North-South Axis Wilhelmsburg - Hamburg
39.	Stadtquartier Süd district	City of Neu-Isenburg, Germany	2013- ongoing	Stadtquartier Süd district - AS+P (as-p.com)
40.	Kiruna	Kiruna, Sweden	2013-2033	Kiruna masterplan - the Arctic city of Kiruna has to move White Arkitekter
41.	Vinge	Copenhagen, Denmark	2013-ongoing	Vinge (effekt.dk)
42.	Nya Eriksberg	Eriksberg, Sweden	2013- ongoing	Nya Eriksberg Kjellander Sjöberg Arkitektkontor (kjellandersjoberg.se)
43.	Urban Oasis	Bratislava, Slovakia	2014- ongoing	Urban Oasis Bratislava Stefano Boeri Architetti
44.	Kolkajen	Stockholm, Sweden	2014-ongoing	Kolkajen Kjellander Sjöberg Architects (kjellandersjoberg.se)
45.	Parklife Trnava	Trnava, Slovakia	2014- ongoing	Parklife Trnava (mandaworks.com)
46.	Harbourfront	Vannes, France	2014- ongoing	Harbourfront, Vannes - KCAP
47.	Kalvebod Fælled Green neighbourhood	Copenhagen, Denmark	2014- (competition)	nordarchitects.dk/projects/kalvebod-faelled-masterplan/
48.	Milano Innovation District	Milan, Italy	2015-2032	MIND - Milano Innovation District (mindmilano.it)
49.	Christiansholm	Copenhagen, Denmark	2015-ongoing	Christiansholm Masterplan / Cobe ArchDaily
50.	Rotterdam-Zuid	Feyenoord, Netherlands	2015- ongoing	Feyenoord City (oma.com)
51.	Cruquius Island	Amsterdam, Netherlands	2015-2023	Cruquius Island, Amsterdam - KCAP
52.	The New Garden Field	Berlin, Germany	2015-2027	The New Garden Field - UTB (utb-berlin.de)
53.	Carlsberg City	Copenhagen, Denmark	2015-2017	Carlsberg City, masterplan - Projects - C.F. Møller (cfmoller.com)
54.	Schumacher Quarter	Berlin, Germany	2016-2027	Schumacher Quartier - Berlin TXL (schumacher-quartier.de)
55.	Budapart	Budapest, Hungary	2016- ongoing	Budapart - ADEPT

56.	Helsing Garden City	Helsing, Denmark	2016- ongoing	Helsing Garden City - Karres en Brands
57.	Elbinselquartier Wilhelmsburg	Hamburg, Germany	2016-now	Elbinselquartier Wilhelmsburg - Hosoya Schaefer Architects
58.	Open Neighbourhoods	Monheim am Rhein, Germany	2016- (competition)	Projects - Cityförster (cityfoerster.net)
59.	Kurt-Schumacher-Quarter "Open Wild Tegel"	Berlin, Germany	2016- (competition)	Projects - Cityförster (cityfoerster.net)
60.	Wisselspoor	Utrecht, Netherlands	2016-2022	Wisselspoor - studioninedots
61.	Blankenburg South	Berlin, Germany	2016-2030	Blankenburg South - Berlin.de
62.	Hogekwartier	Amersfoort, Netherlands	2016- ongoing	Hogekwartier, Amersfoort - KCAP
63.	Nature Urbaine,	Montpellier, France	2016-2025	Nature Urbaine, Montpellier - KCAP
64.	Frihamnen	Göteborg, Sweden	2016- (competition)	Frihamnen Gothenburg NG architects
65.	Paper Island	Copenhagen, Denmark	2016-2024	Cobe - Paper Island
66.	Deutzer Hafen	Cologne, Germany	2016- ongoing	Cobe - Deutzer Hafen
67.	Brainport Smart District (BSD)	Eindhoven, Netherlands	2017-2030	Home - Brainport Smart District
68.	Nærheden	Hedehusene, Denmark	2017-2027	Nærheden - Karres en Brands
69.	Überseeinsel	Bremen, Germany	2017-2040	ÜBERSEEINSEL Bremen (ueberseeinsel.de)
70.	Taphede new Urban Quarter	Viborg, Denmark	2017-ongoing	Taphede new Urban Quarter - Projects - C.F. Møller (cfmoller.com)
71.	MWKZ	Utrecht, Netherlands	2017- ongoing	MWKZ, Utrecht - KCAP
72.	Bijlmer Bajes	Amsterdam, Netherlands	2017- (competition)	MASTERPLAN BIJLMER BAJES - Barcode (barcodearchitects.com)
73.	De Caai	Eindhoven, Netherlands	2017-2021	De Caai - studioninedots
74.	Lune Delta°	Bremerhaven, Germany	2017- ongoing	Projects - Cityförster (cityfoerster.net)
75.	Fleetpark Leidschendam	Leidschendam, Netherlands	2017 – (competition)	MASTERPLAN FLEETPARK LEIDSCHENDAM - Barcode (barcodearchitects.com)
76.	Söderhov	Söderstaden-Globen area, Stockholm	2017- ongoing	Söderhov Kjellander Sjöberg Architects (kjellandersjoberg.se)
77.	Dalum Paper Mill	Odense, Denmark	2017-ongoing	Dalum Paper Mill, Masterplan - Projects - C.F. Møller (cfmoller.com)
78.	Railway Quarter - Aarhus Central Station	Aarhus, Denmark	2017-ongoing	Railway Quarter - Aarhus Central Station - Projects - C.F. Møller (cfmoller.com)
79.	Cobercokwartier	Arnhem, Netherlands	2017-2023	Cobercokwartier - studioninedots
80.	St. Fiden-Heiligkreuz	St. Gallen, Switzerland	2017- ongoing	St. Fiden-Heiligkreuz, St. Gallen - KCAP
81.	Gardencity 21	Bremen, Germany	2017- (competition)	Projects - Cityförster (cityfoerster.net)
82.	Community for Life	Odense, Denmark	2017- (competition)	nordarchitects.dk/projects/community-for-life/

83.	Bajes Kwartier	Amsterdam, Netherlands	2018-2030	Bajeskwartier Amsterdam - City life reinvented - Bajeskwartier
84.	Storøya	Fornebu, Norway	2018-ongoing	Storøya - lundhagem
85.	Knoop XL	Eindhoven, Netherlands	2018-2042	KnoopXL - Eindhoven Internationale Knoop XL
86.	Blankenburger Süden - Circular City	Berlin, Germany	2018-2026	Projects - Cityförster (cityfoerster.net)
87.	Fjordbyen Lier og Drammen	Lier & Drammen, Norway	2018-2030	Fjordbyen Lier og Drammen LINK Arkitektur
88.	Unfold Rosenstein	Stuttgart, Germany	2018- (competition)	Projects - Cityförster (cityfoerster.net)
89.	Hart van de Waalsprong	Nijmegen, The Netherlands	2018- ongoing	Hart van de Waalsprong, Nijmegen — DE URBANISTEN
90.	Valkenhorst	Valkenburg, Netherlands	2018- ongoing	Valkenhorst, Valkenburg - KCAP
91.	Noise Barrier Duisburg Wedau	Duisburg, Germany	2018- ongoing	Noise Barrier Duisburg Wedau, Duisburg - LAND (landsrl.com)
92.	New Neighbourhood Hilligenwöhren	Hanover, Germany	2018- (competition) 2 nd place	Projects - Cityförster (cityfoerster.net)
93.	Freiham North	München, Germany	2018-2040	Freiham North Masterplan - West 8
94.	Trelleborg	Trelleborg, Sweden	2018- (competition)	nordarchitects.dk/projects/trelleborg/
95.	Dietenbach	Freiburg im Breisgau, Germany	2018- ongoing	Projects - Cityförster (cityfoerster.net)
96.	AMST	Amstelstation, Amsterdam	2018-2023	AMST - VenhoevenCS architecture+urbanism
97.	Oberbillwerder neighborhood	Hamburg, Germany	2018- (competition)	Oberbillwerder neighborhood - Projects - gmp Architekten
98.	Stadshavens	Groningen, Netherlands	2018- ongoing	Stadshavens, Groningen - KCAP
99.	Sandvika seaside	Bærum, Norway	2018-2030	Sandvika seaside LINK Arkitektur
100.	Tirana Riverside	Tirana, Albania	2019-2040	Tirana Riverside Albania Stefano Boeri Architetti
101.	Oberbillwerder	Hamburg, Germany	2019-2025	Home - Oberbillwerder (oberbillwerder-hamburg.de)
102.	The new SIMAC	Svendborg, Denmark	2019-ongoing	The new SIMAC, Masterplan - Projects - C.F. Møller (cfmoller.com)
103.	Kartoni Quartier	Glarus, Switzerland	2019-ongoing	Kartoni Quartier (effekt.dk)
104.	The new SIMAC	Svendborg, Denmark	2019-ongoing	The new SIMAC Masterplan (effekt.dk)
105.	Svartskog	Oppegård, Norway	2019-ongoing	Svartskog - lundhagem
106.	Jåttåvågen 2	Stavanger, Norway	2019-ongoing	Jåttåvågen 2 - lundhagem
107.	"Silkeborg 360"	Silkeborg, Denmark	2019-ongoing	Silkeborg (effekt.dk)
108.	Munich North-East	München, Germany	2019- (competition) 2 nd place	Projects - Cityförster (cityfoerster.net)
109.	Ronquoz 21	Sion, Switzerland	2019- ongoing	519 Ronquoz 21 – Herzog & de Meuron (herzogdemeuron.com)
110.	Grasbrook	Hamburg, Germany	2019- (competition)	Grasbrook neighborhood - Projects - gmp Architekten

111.	Fælledby	Copenhagen, Denmark	2019-2031	Fælledby Henning Larsen
112.	Home City of Volkswagen	Wolfsburg, Germany	2019-now	Henning Larsen Designs New Masterplan for Wolfsburg, Germany, Home City of Volkswagen ArchDaily
113.	Leangen	Trondheim, Norway	2019-ongoing	Leangen - lundhagem
114.	Faaborg	Faaborg, Denmark	2019- ongoing	Faaborg Kjellander Sjöberg Architects (kjellandersjoberg.se)
115.	Aviapolis Core	Vantaa, Finland	2019-ongoing	Aviapolis Core - Projects - C.F. Møller (cfmoller.com)
116.	River City Randers - City to the Water	Randers, Denmark	2019-2021	River City Randers - City to the Water (Development Plan) - Projects - C.F. Møller (cfmoller.com)
117.	Oksenøya Bruk	Fornebu, Norway	2019-2025	Oksenøya Bruk - lundhagem
118.	Ny Rosborg	Vejle, Denmark	2019-ongoing	Ny Rosborg (aart.dk)
119.	Von Bergedorf zu BergeDörfern	Hamburg, Germany	2019- (competition)	Projects - Cityförster (cityfoerster.net)
120.	Bystævneparken	Bystævneparken, Copenhagen, Denmark	2019- ongoing	Bystævneparken Masterplan (vilhelmlauritzen.com)
121.	Eco Village	Hannover, Germany	2019-ongoing	nordarchitects.dk/projects/eco-village/
122.	Dortmund Hafenquartier	Dortmund, Germany	2019- ongoing	Cobe - Dortmund Hafenquartier
123.	Gredelj	Zagreb, Croatia	2020- (competition)	Study of the urban revitalization of the former Gredelj factory zone • Neighbourhood Index
124.	Haunstetten - The Learning City	Augsburg, Germany	2020- ongoing	Haunstetten - The Learning City - Karres en Brands
125.	Jättåvågen 1	Stavanger, Norway	2020-ongoing	Jättåvågen 1 - lundhagem
126.	Poort van Hoorn	Hoorn, Netherlands	2020- ongoing	Poort van Hoorn - Karres en Brands
127.	Smíchov City	Prague, Czech Republic	2020-2032	Smichov City – Sever haas cook zemmrich STUDIO2050
128.	Kennispark Twente	Enschede, Netherlands	2020- ongoing	Kennispark Twente - Karres en Brands
129.	De Houttuin	Woerden, Netherlands	2020- ongoing	De Houttuin - Karres en Brands
130.	Kolkajen-Ropsten	Stockholm, Sweden	2020-2040	Kolkajen-Ropsten - ADEPT
131.	Grasbrook	Hafen City, Germany	2020- (competition) 3rd prize	Grasbrook - ADEPT
132.	Kolkajen-Ropsten	Stockholm, Sweden	2020-2040	Kolkajen-Ropsten - ADEPT
133.	Ecovillage Hanover	Hanover, Germany	2020- ongoing	Projects - Cityförster (cityfoerster.net)
134.	Buckower Felder	Berlin, Germany	2020- ongoing	Project – Bürgerstadt AG (buergerstadt.de)
135.	Cartesius Triangle	Utrecht, Netherlands	2020-2030	Phase 2 Begins: Cartesius Utrecht Transformed into a Sustainable Urban Oasis > Mecanoo
136.	Grasbrook	Hamburg, Germany	2020- ongoing	531 Grasbrook – Herzog & de Meuron (herzogdemeuron.com)
137.	Bremerhaven	Bremen, Germany	2020-ongoing	Cobe - Werftquartier Bremerhaven
138.	Pihlajaniemi	Turku, Finland	2022-2040	Turku, Pihlajaniemi - Senate (senaatti.fi)
139.	Oslo Science City	Oslo, Norway	2020-2045	Oslo Science City BIG Bjarke Ingels Group

140.	"Skovbyen" - The Forest Village	Albertslund, Denmark	2020-ongoing	Vridsløselille Masterplan - SHL
141.	Spoorzone Dordrecht	Dordrecht, Netherlands	2020- (competition)	Spoorzone Dordrecht (mecanoo.nl)
142.	Tilburg Noord	Tilburg, Netherlands	2020- ongoing	Tilburg Noord - GROUP A
143.	AM Sandhaus	Berlin-Buch, Germany	2021-2040	Buch – Am Sandhaus - Berlin.de
144.	Jägersro	Malmö, Sweden	2021-2042	How we want to develop Jägersro – Project Jägersro (projektjagersro.se)
145.	Kieler Kante	Kiel, Germany	2021- (competition)	Die Kieler Kante - Karres en Brands
146.	Vrijlandt garden village	Rotterdam, Netherlands	2021- ongoing	Vrijlandt garden village - Karres en Brands
147.	Zanders	Bergisch Gladbach, Germany	2021- ongoing	Zanders - Karres en Brands
148.	Jernbanebyen	Copenhagen, Denmark	2021- ongoing	Cobe - Jernbanebyen
149.	Maria Hilf Terraces	Mönchengladbach, Germany	2021- ongoing	Maria Hilf Terraces - Karres en Brands
150.	De Staalmeester	Schermerweg 33, Alkmaar (NL)	2021- ongoing	De Staalmeester - VenhoevenCS architecture+urbanism
151.	Reese - barracks, Augsburg	Augsburg, Bavaria	2021- ongoing	Quartiersentwicklung Reese-Kaserne Ost in Augsburg bodensteiner fest Architects BDA Urban Planners PartGmbB Munich (bodensteiner-fest.de)
152.	Closed loop quarters. Between Frankfurt and Taunus	Frankfurt, Germany	2021- ongoing	Projects - Cityförster (cityfoerster.net)
153.	Closed loop quarters	Frankfurt, Germany	2021- ongoing	Projects - Cityförster (cityfoerster.net)
154.	Holtenau-Ost	Kiel-Holtenau, Germany	2021- (competition)	Projects - Cityförster (cityfoerster.net)
155.	Padua	Padua, Italy	2021- (competition)	Masterplan Padua Stefano Boeri Architetti
156.	Bergviertel Krampnitz	Potsdam, Deutschland	2021- ongoing	Projects - Cityförster (cityfoerster.net)
157.	Am Schlaatz	Potsdam, Germany	2021- (competition)	Am Schlaatz — SCALA+MANA
158.	Green Zipper Heidelberg	Heidelberg, Germany	2021- ongoing	Projects - Cityförster (cityfoerster.net)
159.	Glasfabriek Schiedam	Schiedam, Netherlands	2021- ongoing	MASTERPLAN GLASFABRIEK SCHIEDAM - Barcode (barcodearchitects.com)
160.	Future quarters at Ostpark	Paderborn, Germany	2021- (competition)	Projects - Cityförster (cityfoerster.net)
161.	Porta Romana	Milan, Italy	2021- ongoing	Coima - Porta Romana Railway Yard: the team led by OUTCOMIST with the Parco Romana project wins the tender for the preliminary urban regeneration masterplan
162.	Bochum Gerthe-West	Bochum, Germany	2021- ongoing	Projects - Cityförster (cityfoerster.net)

163.	Green Zipper Heidelberg	Heidelberg, Germany	2021- ongoing	Projects - Cityförster (cityfoerster.net)
164.	Guldborgsund Harbour City	Nykøbing Falster, Denmark	2021-ongoing	Guldborgsund Harbour City - Projects - C.F. Møller (cfmoller.com)
165.	WoodHood Kreuzfeld	Cologne, Germany	2021-2024	WoodHood Kreuzfeld - ADEPT
166.	Nuevo Norte	Madrid, Spain	2022-2045	Madrid Nuevo Norte: Transforming Urban Living with Sustainable Innovation (creamadridnuevonorte.com)
167.	Quarter of the Dancing Couples	Zurich, Switzerland	2022- ongoing	Quarter of the Dancing Couples, Zürich - KCAP
168.	Odense Inner Harbor	Odense, Denmark	2022-ongoing	Odense Inner Harbour (effekt.dk)
169.	DR Byen	Copenhagen, Denmark	2022- ongoing	Cobe - New neighborhood by DR Byen
170.	Marktkwartier Amsterdam	Amsterdam, Netherlands	2022-2026	Masterplan Marktkwartier Amsterdam (mecanoo.nl)
171.	Köpenicker Gleislandschaften	Köpenick, Berlin, Germany	2022- (competition)	Projects - Cityförster (cityfoerster.net)
172.	Schönefeld Nord	Schönefeld, Germany	2022- (competition)	Projects - Cityförster (cityfoerster.net)
173.	Lübeck Campus	Lübeck, Germany	2022 – (competition)	MASTERPLAN LÜBECK CAMPUS - Barcode (barcodearchitects.com)
174.	ZOË Amsterdam	Kavel 4A, Sluisbuurt Amsterdam (NL)	2022- ongoing	ZOË Amsterdam - VenhoevenCS architecture+urbanism
175.	Campuswelten Lübeck	Lübeck, Germany	2022- ongoing	Projects - Cityförster (cityfoerster.net)
176.	Climate Quarter Wolfsburg Fuhrenkamp	Wolfsburg, Germany	2022- (competition)	Projects - Cityförster (cityfoerster.net)
177.	Klimaquartier Würselen	Würselen-Broichweiden	2022- (competition)	Projects - Cityförster (cityfoerster.net)
178.	Klima-Mosaik	Fehmarn, Germany	2022- (competition) 2 nd place	Projects - Cityförster (cityfoerster.net)
179.	Quarter at the Hirschberg	Biberach, Germany	2022- (concept)	Projects - Cityförster (cityfoerster.net)
180.	Railway District	Braunschweig, Germany	2022- (competition)	Projects - Cityförster (cityfoerster.net)
181.	Vollsmose Å	Vollsmose, Odense, Denmark	2022-2030	Vollsmose Å – a natural part of the city District plan for the Vollsmose of tomorrow Arkitema
182.	Backer+Rueb	Breda, Netherlands	2023- ongoing	Backer+Rueb - Karres en Brands
183.	Max-Becker-Areal	Ehrenfeld, Cologne, Germany	2023- ongoing	Projects - Cityförster (cityfoerster.net)
184.	Wilhelmsburger Rathausviertel	Hamburg, Germany	2023-2027	Behnisch Architekten / CIRCulT - Circular Economy in Wilhelmsburger Rathausviertel
185.	Ponte Roma Quartier	Bolzano, Italy	2023-2028	Ponte Roma Quartier Henning Larsen
186.	Wood City	Stockholm, Sweden	2023-2027	Wood City Stockholm Henning Larsen

187.	Urban Decarb	Copenhagen, Denmark	2023-now	Urban Decarb Henning Larsen
188.	Europa quartier	Stuttgart, Germany	2023- (competition)	Stuttgart Rosenstein Europaquartier (rosenstein-stuttgart.de)
189.	Green Valley	Bratislava, Slovakia	2023- (competition)	Green Valley, Bratislava - KCAP
190.	Münster-Hiltrup Ost	Münster, Germany	2023- (competition) 2 nd place	Projects - Cityförster (cityfoerster.net)
191.	Nové Dolíky	Slany, Czech Republic	2023- ongoing	Projects - Cityförster (cityfoerster.net)
192.	Bremen Könecke Areal	Bremen, Germany	2023- (competition) 3 rd place	Projects - Cityförster (cityfoerster.net)
193.	Marienburger Strasse	Munich, Germany	2023- (competition) 3 rd place	Projects - Cityförster (cityfoerster.net)
194.	Ludwigsfeld München	Ludwigsfeld, München	2023- (competition)	Projects - Cityförster (cityfoerster.net)
195.	Waldstadt Jüchen	Jüchen, Rheinisches Revier, Germany	2023- (competition)	Projects - Cityförster (cityfoerster.net)
196.	WHO comes together	Tübingen, Germany	2023- (competition)	Projects - Cityförster (cityfoerster.net)
197.	Blautal-Center Ulm	Ulm, Germany	2023- (competition) 2 nd place	Blautal-Center Ulm - ADEPT
199.	Köpenicker Rails	Berlin, Germany	2023-ongoing	Köpenicker Rails - ADEPT
200.	Straume New Urban Centre	Straume, Norway	2023-ongoing	nordarchitects.dk/projects/straume-new-urban-centre/
201.	Gronlikaia	Oslo, Norway	2023-ongoing	Gronlikaia - ADEPT
202.	Fornebu Sør	Fornebu, Bærum, Norway	2023-ongoing	Fornebu Sør - lundhagem
203.	Galeonen	Malmö, Sweden	2023- (competition)	Galeonen Climate protection without barriers in Malmö Arkitema
204.	The Waterside	Feyenoord, Netherlands	2023-ongoing	Feyenoord City Waterside (oma.com)
	Kurfürstendamm 231	Berlin, Germany	2023-ongoing	Kurfürstendamm 231, Designed by Henning Larsen, Has Won an Urban Design Contest in Berlin - Arch2O.com
205.	Lok-Viertel	Osnabrück, Germany	2024- ongoing	Lok-Viertel - Karres en Brands
206.	Sandakerveien 121	Oslo, Norway	2024-ongoing	Sandakerveien 121 — Reiulf Ramstad Arkitekter

Table.66. List of more than 100 selected Neighbourhoods chronologically. Source: Author, 2025.

Nr.	Neighbourhood	City, State	Status / Chronological	Source
1.	Aspern Seestadt	Vienna, Austria	2005-2028	https://www.aspern-seestadt.at/en
2.	Barkarbystaden	Järfälla, Stockholm, Sweden	2007-2030	Welcome to Barkarby - Barkarby
3.	Nordhavn	Copenhagen, Denmark	2008-2037	Nordhavn: The smart urban area of the future (stateofgreen.com)
4.	CeresByen	Aarhus, Denmark	2008-2018	CeresByen, masterplan and area plan - Projects - C.F. Møller (cfmoller.com)
5.	Kalasatama	Helsinki, Finland	2009-2035	Smart Kalasatama - (fiksukalasatama.fi)
6.	Merwede	Utrecht, Netherlands	2010-2040	Merwede, the Dutch neighbourhood where there will be one shared car for every 3 households – Tomorrow.City – The biggest platform about urban innovation
7.	Reininghaus	Graz, Austria	2010-2030	Reininghausgründe - Graz relies on you (xn--reininghausgrunde-vzb.at)
8.	Royal Seaport	Stockholm, Sweden	2010-2030	Sustainable Urban Development Stockholm Royal Seaport 2030 (norradjurgardsstaden2030.se)
9.	Entwicklungsplan Freiham Nord	Munich, Germany	2010-2040	2011 Freiham Nord, Freiham North 2011 Germany — Topotek 1
10.	MORE	Leiden, Netherlands	2010-2026	MORE - VenhoevenCS architecture+urbanism
11.	Årstafältet	Stockholm, Sweden	2010-2030	Årstafältet - White Arkitekter
12.	Carnisse district	Rotterdam, Netherlands	2010- ongoing	Who Dares de Architekten Cie.
13.	Aeschbachquartie Aarau	Zurich, Switzerland	2011-2020	Aeschbach Quarter, Aarau - KCAP
14.	Kanalbyen	Fredericia, Denmark	2011- ongoing	Kanalbyen, Fredericia - KCAP
15.	Nieuw Zuid	Antwerpen, Belgium	2012-2028	Nieuw Zuid: home in the neighbourhood of the future (nieuwzuid-antwerpen.be)
16.	Clichy-Batignolles	Paris, France	2012-2020	Clichy-Batignolles (Paris 17th) Paris & Métropole Aménagement (paris-et-metropole-amenagement.fr)
17.	Vinge	Copenhagen, Denmark	2013-ongoing	Vinge (effekt.dk)
18.	Nya Eriksberg	Eriksberg, Sweden	2013- ongoing	Nya Eriksberg Kjellander Sjöberg Arkitektkontor (kjellandersjoberg.se)
19.	Kolkajen	Stockholm, Sweden	2014-ongoing	Kolkajen Kjellander Sjöberg Architects (kjellandersjoberg.se)
20.	Parklife Trnava	Trnava, Slovakia	2014- ongoing	Parklife Trnava (mandaworks.com)
21.	Harbourfront	Vannes, France	2014- ongoing	Harbourfront, Vannes - KCAP
22.	Milano Innovation District	Milan, Italy	2015-2032	MIND - Milano Innovation District (mindmilano.it)
23.	Cruquius Island	Amsterdam, Netherlands	2015-2023	Cruquius Island, Amsterdam - KCAP
24.	The New Garden Field	Berlin, Germany	2015-2027	The New Garden Field - UTB (utb-berlin.de)

25.	Carlsberg City	Copenhagen, Denmark	2015-2017	Carlsberg City, masterplan - Projects - C.F. Møller (cfmoller.com)
26.	Schumacher Quarter	Berlin, Germany	2016-2027	Schumacher Quartier - Berlin TXL (schumacher-quartier.de)
27.	Budapart	Budapest, Hungary	2016- ongoing	Budapart - ADEPT
28.	Helsing Garden City	Helsing, Denmark	2016- ongoing	Helsing Garden City - Karres en Brands
29.	Elbinselquartier Wilhelmsburg	Hamburg, Germany	2016-ongoing	Elbinselquartier Wilhelmsburg - Hosoya Schaefer Architects
30.	Wisselspoor	Utrecht, Netherlands	2016-2022	Wisselspoor - studioninedots
31.	Blankenburg South	Berlin, Germany	2016-2030	Blankenburg South - Berlin.de
32.	Hogekwartier	Amersfoort, Netherland	2016- ongoing	Hogekwartier, Amersfoort - KCAP
33.	Nature Urbaine,	Montpellier, France	2016-2025	Nature Urbaine, Montpellier - KCAP
34.	Paper Island	Copenhagen, Denmark	2016-2024	Cobe - Paper Island
35.	Deutzer Hafen	Cologne, Germany	2016- ongoing	Cobe - Deutzer Hafen
36.	Brainport Smart District (BSD)	Eindhoven, Netherlands	2017-2030	Home - Brainport Smart District
37.	Nærheden	Hedehusene, Denmark	2017-2027	Nærheden - Karres en Brands
38.	Überseeinsel	Bremen, Germany	2017-2040	ÜBERSEEINSEL Bremen (ueberseeinsel.de)
39.	Taphede new Urban Quarter	Viborg, Denmark	2017-ongoing	Taphede new Urban Quarter - Projects - C.F. Møller (cfmoller.com)
40.	MWKZ	Utrecht, Netherlands	2017- ongoing	MWKZ, Utrecht - KCAP
41.	De Caai	Eindhoven, Netherlands	2017-2021	De Caai - studioninedots
42.	Lune Delta°	Bremerhaven, Germany	2017- ongoing	Projects - Cityförster (cityfoerster.net)
43.	Söderhov	Söderstaden-Globen area, Stockholm	2017- ongoing	Söderhov Kjellander Sjöberg Architects (kjellandersjoberg.se)
44.	Dalum Paper Mill	Odense, Denmark	2017-ongoing	Dalum Paper Mill, Masterplan - Projects - C.F. Møller (cfmoller.com)
45.	Railway Quarter - Aarhus Central Station	Aarhus, Denmark	2017-ongoing	Railway Quarter - Aarhus Central Station - Projects - C.F. Møller (cfmoller.com)
46.	Cobercokwartier	Arnhem, Netherlands	2017-2023	Cobercokwartier - studioninedots
47.	St. Fiden-Heiligkreuz	St. Gallen, Switzerland	2017- ongoing	St. Fiden-Heiligkreuz, St. Gallen - KCAP
48.	Bajes Kwartier	Amsterdam, Netherlands	2018-2030	Bajeskwartier Amsterdam - City life reinvented - Bajeskwartier
49.	Storøya	Fornebu, Norway	2018-ongoing	Storøya - lundhagem
50.	Knoop XL	Eindhoven, Netherland	2018-2042	KnoopXL - Eindhoven Internationale Knoop XL
51.	Fjordbyen Lier og Drammen	Lier & Drammen, Norway	2018-2030	Fjordbyen Lier og Drammen LINK Arkitektur
52.	Hart van de Waalsprong	Nijmegen, The Netherlands	2018- ongoing	Hart van de Waalsprong, Nijmegen — DE URBANISTEN
53.	Valkenhorst	Valkenburg, Netherlands	2018- ongoing	Valkenhorst, Valkenburg - KCAP
54.	Noise Barrier Duisburg Wedau	Duisburg, Germany	2018- ongoing	Noise Barrier Duisburg Wedau, Duisburg - LAND (landsrl.com)
55.	Freiham North	München, Germany	2018-2040	Freiham North Masterplan - West 8

56.	Dietenbach	Freiburg im Breisgau, Germany	2018- ongoing	Projects - Cityförster (cityfoerster.net)
57.	AMST	Amstelstation, Amsterdam	2018-2023	AMST - VenhoevenCS architecture+urbanism
58.	Stadshavens	Groningen, Netherlands	2018- ongoing	Stadshavens, Groningen - KCAP
59.	Sandvika seaside	Bærum, Norway	2018-2030	Sandvika seaside LINK Arkitektur
60.	Tirana Riverside	Tirana, Albania	2019-2040	Tirana Riverside Albania Stefano Boeri Architetti
61.	Oberbillwerder	Hamburg, Germany	2019-2025	Home - Oberbillwerder (oberbillwerder-hamburg.de)
62.	The new SIMAC	Svendborg, Denmark	2019-ongoing	The new SIMAC, Masterplan - Projects - C.F. Møller (cfmoller.com)
63.	Kartoni Quartier	Glarus, Switzerland	2019-ongoing	Kartoni Quartier (effekt.dk)
64.	The new SIMAC	Svendborg, Denmark	2019-ongoing	The new SIMAC Masterplan (effekt.dk)
65.	Svartskog	Oppegård, Norway	2019-ongoing	Svartskog - lundhagem
66.	Jåttåvågen 2	Stavanger, Norway	2019-ongoing	Jåttåvågen 2 - lundhagem
67.	"Silkeborg 360"	Silkeborg, Denmark	2019-ongoing	Silkeborg (effekt.dk)
68.	Ronquoz 21	Sion, Switzerland	2019- ongoing	519 Ronquoz 21 – Herzog & de Meuron (herzogdemeuron.com)
69.	Fælledby	Copenhagen, Denmark	2019-2031	Fælledby Henning Larsen
70.	Home City of Volkswagen	Wolfsburg, Germany	2019-ongoing	Henning Larsen Designs New Masterplan for Wolfsburg, Germany, Home City of Volkswagen ArchDaily
71.	Leangen	Trondheim, Norway	2019-ongoing	Leangen - lundhagem
72.	Faaborg	Faaborg, Denmark	2019- ongoing	Faaborg Kjellander Sjöberg Architects (kjellandersjoberg.se)
73.	Aviapolis Core	Vantaa, Finland	2019-ongoing	Aviapolis Core - Projects - C.F. Møller (cfmoller.com)
74.	River City Randers - City to the Water	Randers, Denmark	2019-2021	River City Randers - City to the Water (Development Plan) - Projects - C.F. Møller (cfmoller.com)
75.	Oksenøya Bruk	Fornebu, Norway	2019-2025	Oksenøya Bruk - lundhagem
76.	Ny Rosborg	Vejle, Denmark	2019-ongoing	Ny Rosborg (aart.dk)
77.	Bystævneparken	Bystævneparken, Copenhagen, Denmark	2019- ongoing	Bystævneparken Masterplan (vilhelmlauritzen.com)
78.	Dortmund Hafenquartier	Dortmund, Germany	2019- ongoing	Cobe - Dortmund Hafenquartier
79.	Haunstetten - The Learning City	Augsburg, Germany	2020- ongoing	Haunstetten - The Learning City - Karres en Brands
80.	Smíchov City	Prague, Czech Republic	2020-2032	Smichov City – Sever haas cook zemmrich STUDIO2050
81.	Kennispark Twente	Enschede, Netherlands	2020- ongoing	Kennispark Twente - Karres en Brands
82.	De Houttuin	Woerden, Netherlands	2020- ongoing	De Houttuin - Karres en Brands
83.	Kolkajen-Ropsten	Stockholm, Sweden	2020-2040	Kolkajen-Ropsten - ADEPT
84.	Ecovillage Hanover	Hanover, Germany	2020- ongoing	Projects - Cityförster (cityfoerster.net)
85.	Buckower Felder	Berlin, Germany	2020- ongoing	Project – Bürgerstadt AG (buergerstadt.de)

86.	Cartesius Triangle	Utrecht, Netherlands	2020-2030	Phase 2 Begins: Cartesius Utrecht Transformed into a Sustainable Urban Oasis > Mecanoo
87.	Grasbrook	Hamburg, Germany	2020- ongoing	531 Grasbrook – Herzog & de Meuron (herzogdemeuron.com)
88.	Bremerhaven	Bremen, Germany	2020-ongoing	Cobe - Werftquartier Bremerhaven
89.	Pihlajaniemi	Turku, Finland	2022-2040	Turku, Pihlajaniemi - Senate (senaatti.fi)
90.	Oslo Science City	Oslo, Norway	2020-2045	Oslo Science City BIG Bjarke Ingels Group
91.	"Skovbyen" - The Forest Village	Albertslund, Denmark	2020-ongoing	Vridsløselille Masterplan - SHL
92.	Tilburg Noord	Tilburg, Netherlands	2020- ongoing	Tilburg Noord - GROUP A
93.	AM Sandhaus	Berlin-Buch, Germany	2021-2040	Buch – Am Sandhaus - Berlin.de
94.	Jägersro	Malmö, Sweden	2021-2042	How we want to develop Jägersro – Project Jägersro (projektjagersro.se)
95.	Vrijlandt garden village	Rotterdam, Netherlands	2021- ongoing	Vrijlandt garden village - Karres en Brands
96.	Zanders	Bergisch Gladbach, Germany	2021- ongoing	Zanders - Karres en Brands
97.	Jernbanebyen	Copenhagen, Denmark	2021- ongoing	Cobe - Jernbanebyen
98.	Maria Hilf Terraces	Mönchengladbach, Germany	2021- ongoing	Maria Hilf Terraces - Karres en Brands
99.	De Staalmeester	Schermerweg 33, Alkmaar (NL)	2021- ongoing	De Staalmeester - VenhoevenCS architecture+urbanism
100.	Reese - barracks, Augsburg	Augsburg, Bavaria	2021- ongoing	Quartiersentwicklung Reese-Kaserne Ost in Augsburg bodensteiner fest Architects BDA Urban Planners PartGmbH Munich (bodensteiner-fest.de)
101.	Closed loop quarters. Between Frankfurt and Taunus	Frankfurt, Germany	2021- ongoing	Projects - Cityförster (cityfoerster.net)
102.	Green Zipper Heidelberg	Heidelberg, Germany	2021- ongoing	Projects - Cityförster (cityfoerster.net)
103.	Glasfabriek Schiedam	Schiedam, Netherlands	2021- ongoing	MASTERPLAN GLASFABRIEK SCHIEDAM - Barcode (barcodearchitects.com)
104.	Green Zipper Heidelberg	Heidelberg, Germany	2021- ongoing	Projects - Cityförster (cityfoerster.net)
105.	Guldborgsund Harbour City	Nykøbing Falster, Denmark	2021-ongoing	Guldborgsund Harbour City - Projects - C.F. Møller (cfmoller.com)
106.	WoodHood Kreuzfeld	Cologne, Germany	2021-2024	WoodHood Kreuzfeld - ADEPT
107.	Nuevo Norte	Madrid, Spain	2022-2045	Madrid Nuevo Norte: Transforming Urban Living with Sustainable Innovation (creamadridnuevonorte.com)
108.	Odense Inner Harbor	Odense, Denmark	2022-ongoing	Odense Inner Harbour (effekt.dk)
109.	DR Byen	Copenhagen, Denmark	2022- ongoing	Cobe - New neighborhood by DR Byen
110.	Marktkwartier Amsterdam	Amsterdam, Netherlands	2022-2026	Masterplan Marktkwartier Amsterdam (mecanoo.nl)

111.	Campuswelten Lübeck	Lübeck, Germany	2022- ongoing	Projects - Cityförster (cityfoerster.net)
112.	Vollsmose Å	Vollsmose, Odense, Denmark	2022-2030	Vollsmose Å – a natural part of the city District plan for the Vollsmose of tomorrow Arkitema
113.	Backer+Rueb	Breda, Netherlands	2023- ongoing	Backer+Rueb - Karres en Brands
114.	Max-Becker-Areal	Ehrenfeld, Cologne, Germany	2023- ongoing	Projects - Cityförster (cityfoerster.net)
115.	Ponte Roma Quartier	Bolzano, Italy	2023-2028	Ponte Roma Quartier Henning Larsen
116.	Wood City	Stockholm, Sweden	2023-2027	Wood City Stockholm Henning Larsen
117.	Urban Decarb	Copenhagen, Denmark	2023-now	Urban Decarb Henning Larsen
118.	Köpenicker Rails	Berlin, Germany	2023-ongoing	Köpenicker Rails - ADEPT
119.	Straume New Urban Centre	Straume, Norway	2023-ongoing	nordarchitects.dk/projects/straume-new-urban-centre/
120.	Gronlikaia	Oslo, Norway	2023-ongoing	Gronlikaia - ADEPT
121.	Fornebu Sør	Fornebu, Bærum, Norway	2023-ongoing	Fornebu Sør - lundhagem
122.	The Waterside	Feyenoord, Netherlands	2023-ongoing	Feyenoord City Waterside (oma.com)
123.	Lok-Viertel	Osnabrück, Germany	2024- ongoing	Lok-Viertel - Karres en Brands
124.	Sandakerveien 121	Oslo, Norway	2024-ongoing	Sandakerveien 121 — Reiulf Ramstad Arkitekter

Table.67. List of 20 selected Neighbourhoods chronologically. Source: Author, December 2024.

Nr.	Year	Neighbourhood	City, State
1.	2005	Aspern Seestadt	Vienna, Austria
2.	2008	Nordhavn	Copenhague, Denmark
3.	2010	Merwede	Utrecht, Netherland
4.	2012	Nieuw Zuid	Antwerpen, Belgium
5.	2012	Clichy-Batignolles	Paris, France
6.	2016	Schumacher Quartier	Berlin, Germany
7.	2017	Milano Innovation District	Milan, Italy
8.	2017	Brainport	Eindhoven, Netherland
9.	2017	Überseeinsel	Bremen, Germany
10.	2018	Bajes	Amsterdam, Netherland
11.	2018	Knopp XI	Eindhoven, Netherland
12.	2018	Freiham North	München, Germany
13.	2019	Tirana Riverside	Tirana, Albania
14.	2019	Oberbillwerder	Hamburg, Germany
15.	2020	Gredelj	Zagreb, Croatia
16.	2020	Smíchov City	Prague, Czech Republic
17.	2021	Am Sandhaus	Berlin-Buch, Germany
18.	2021	Kolkajen	Stockholm, Sweden
19.	2022	Philajaniemi	Turku, Finland
20.	2022	Nuevo Norte	Madrid, Spain



Fig.25. Map of 20 selected Neighbourhoods for further analysis: Author, November 2024¹.

¹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

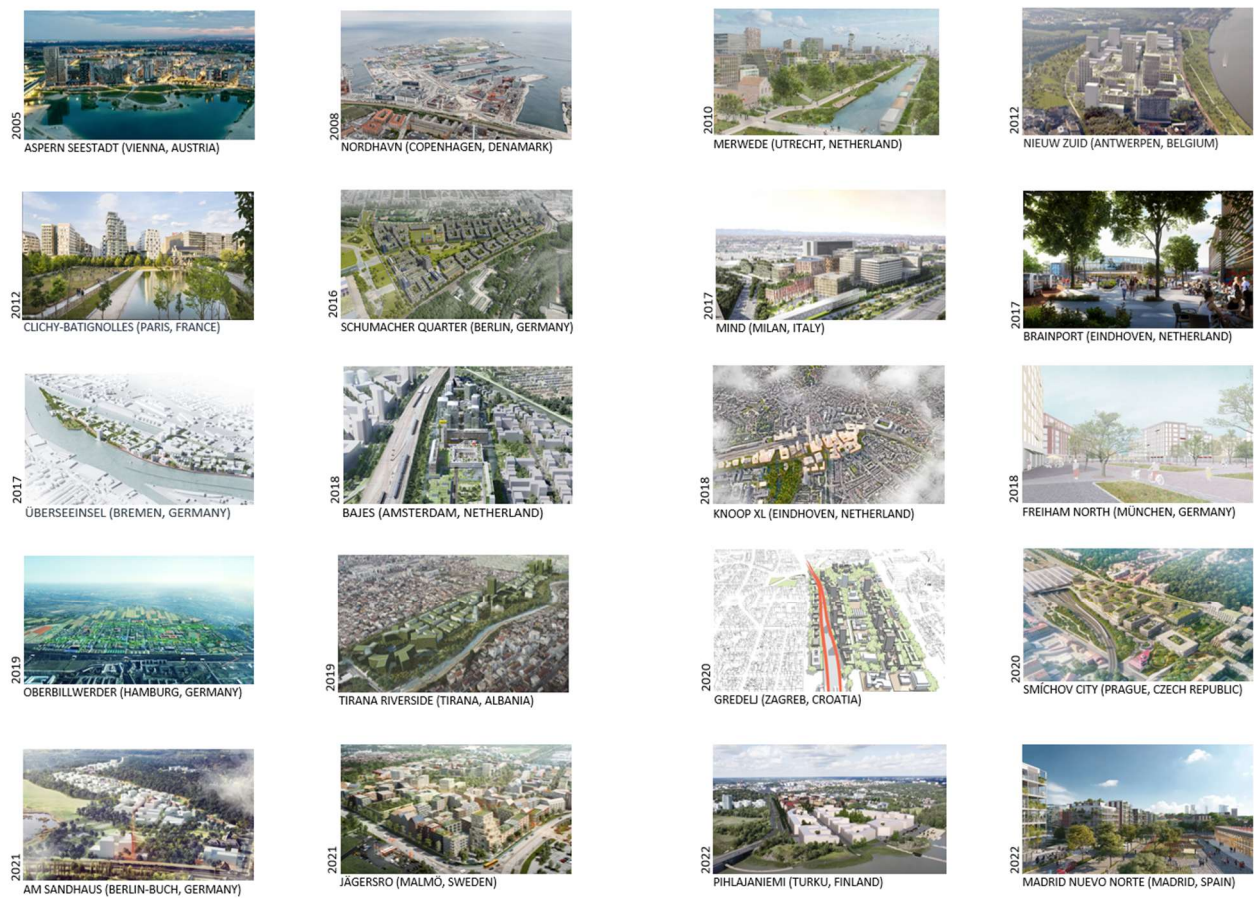


Fig.26. 20 selected Smart Neighbourhoods, chronologically (2005-2023). Source: Author, December 2024².

² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

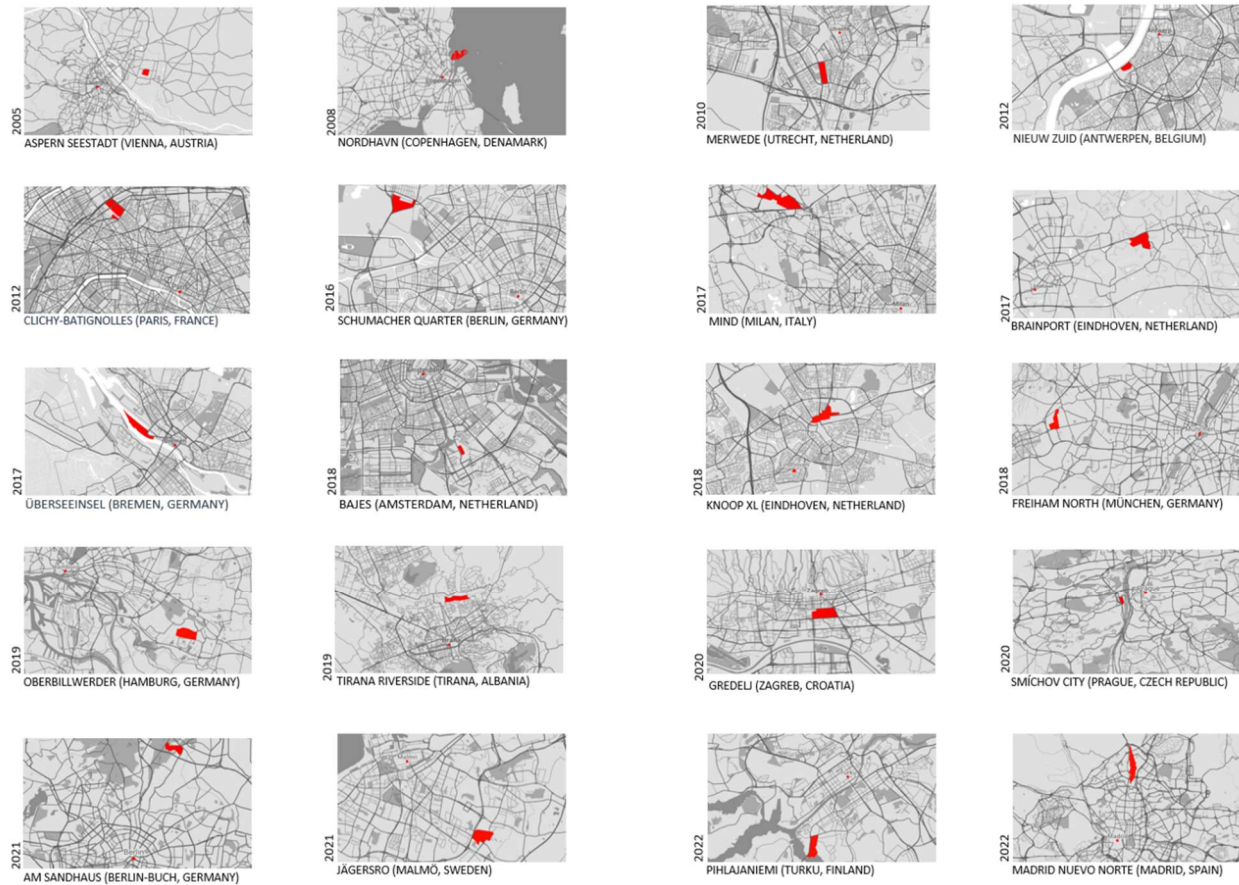


Fig.27. 20 selected Smart Neighbourhoods location within city maps, chronologically (2005-2023). Source: Author, December 2024³.

³ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

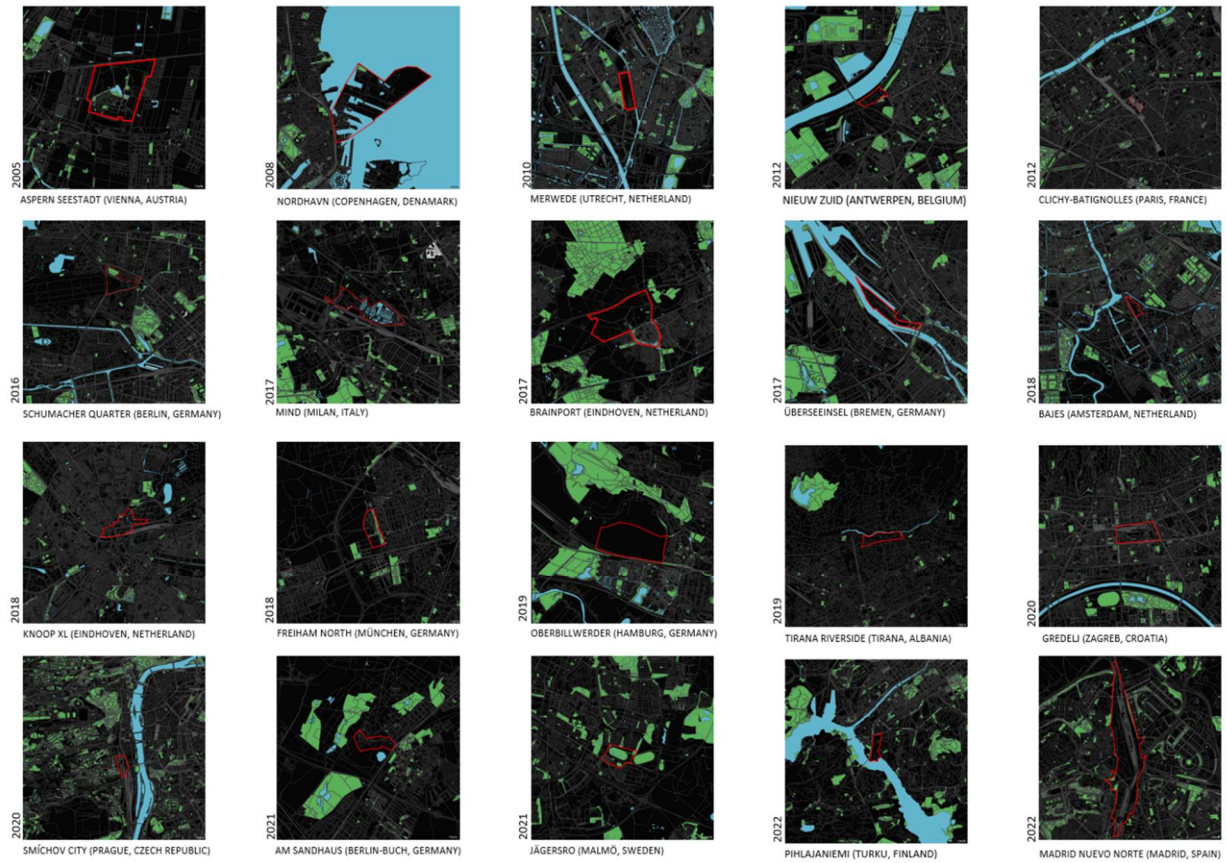


Fig.28. 20 selected Smart Neighbourhoods location within urban contexts map, chronologically (2005-2023). Source: Author, December 2024⁴.

⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

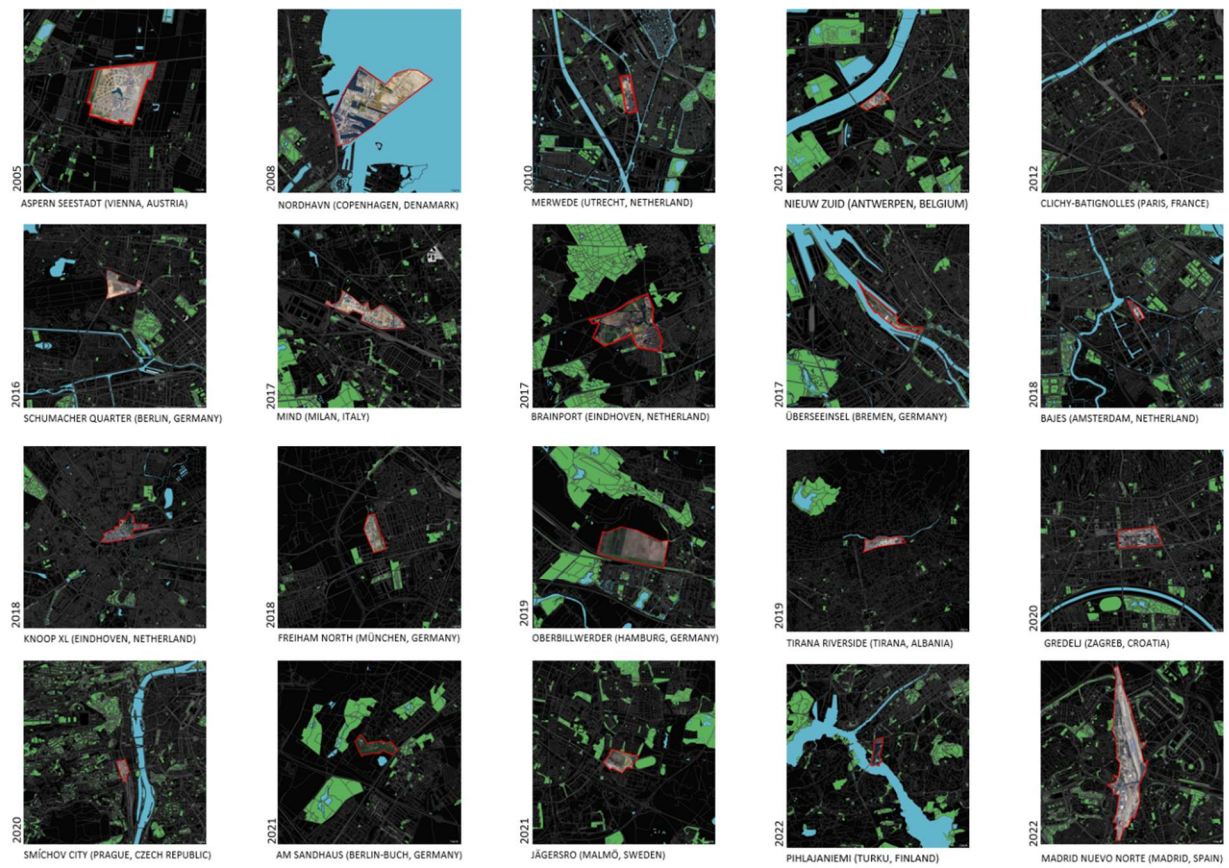


Fig.29. 20 selected Smart Neighbourhoods development map, chronologically (2005-2023). Source: Author, December 2024⁵.

⁵ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

NR.	NEIGHBOURHOODS	YEAR TIMELINE	POPULATION PROJECTED	SIZE ≥10K=L ≥5-10K=M ≥1-5K=S	SIZE HECTARE S	TOTAL INVESTMENT
1.	ASPERN SEESTADT (VIENNA, AUSTRIA)	2005 - 2028	20.000	L	240 ha	5.0 billion €
2.	NORDHAVN (COPENHAGEN, DENAMARK)	2008-2037	40.000	L	200 ha	10.0 billion €
3.	MERWEDE (UTRECHT, NETHERLAND)	2010-2040	12.000	L	24.3 ha	4.8 billion €
4.	NIEUW ZUID (ANTWERPEN, BELGIUM)	2012-2028	5.000	M	15.0 ha	3.2 billion €
5.	CLICHY-BATIGNOLLES (PARIS, FRANCE)	2012-2020	6.500	M	54 ha	505.7 million €
6.	SCHUMACHER QUARTER (BERLIN, GERMANY)	2016-2027	10.000	L	200.0 ha	8.0 billion €
7.	MILANO INNOVATION DISTRICT (MILAN, ITALY)	2015-2032	60.000	L	110.0 ha	3.0 billion €
8.	BRAINPORT (EINDHOVEN, NETHERLAND)	2017-2030	4.500	S	150.0 ha	2.4 billion €
9.	ÜBERSEEINSEL (BREMEN, GERMANY)	2017-2040	4.200	S	41.5 ha	No info
10.	BAJES KWARTIER (AMSTERDAM, NETHERLAND)	2018-2030	No info	L	7.5 ha	No info
11.	KNOOP XL (EINDHOVEN, NETHERLAND)	2018-2042	15.000	S	55.0 ha	No info
12.	FREIHAM NORTH (MÜNCHEN, GERMANY)	2018-2040	20.000	L	57.0 ha	No info
13.	TIRANA RIVERSIDE (TIRANA, ALBANIA)	2019-2040	12.000	L	29.0 ha	No info
14.	OBERBILLWERDER (HAMBURG, GERMANY)	2019-2025	7.000	M	118.0 ha	5 billion €
15.	GREDELJ (ZAGREB, CROATIA)	2020-?	17.000	L	40.0 ha	1.6 billion €
16.	SMÍCHOV CITY (PRAGUE, CZECH REPUBLIC)	2020-2032	12.000	L	20.0 ha	20.0 billion €
17.	AM SANDHAUS (BERLIN-BUCH, GERMANY)	2021-2040	6.000	M	57.0 ha	6.0 billion €
18.	JÄGERSRO (MALMÖ, SWEDEN)	2021-2042	8.000	M	46.0 ha	10.0 billion €
19.	PIHLAJANIEMI (TURKU, FINLAND)	2022-2040	5.000	M	29.0 ha	4.0 billion €
20.	NUEVO NORTE (MADRID, SPAIN)	2022-2045	25.000	L	329.0 ha	17.4 billion €

Table.68. List of 20 selected Neighbourhoods information. Source: Author, December 2025.

PREVIOUS USE	TYPE (Brownfield, Greenfield, Suburb, Rural, Mixed-use, Historic or Preservation Districts.)	DEVELOPMENT (Modernization of old, Re-use of old, new.)
<i>Airfield-Aspern- the Seestadt of Vienna</i>	<i>Suburb</i>	<i>New.</i>
<i>Former industrial harbour area</i>	<i>Waterfront.</i>	<i>Modernization of old, Re-use of old and new.</i>
<i>Light industry; logistics/distribution; offices</i>	<i>Brownfield</i>	<i>Modernization of old, new.</i>
<i>The brown-field site to the south of the historic center of Antwerp, on the quays of the River Scheldt.</i>	<i>Brownfield</i>	<i>Redevelopment of a former port area into a mixed urban district and Smart City District.</i>
<i>Formerly used by the railways, one of the last large available spaces within central Paris.</i>	<i>Brownfield</i>	<i>Modernization of old, new.</i>
<i>Shuttered Berlin airport</i>	<i>Mixed-use, Greenfield.</i>	<i>New, eco city.</i>
<i>Former Milan 2015 EXPO</i>	<i>Mixed-use 'urban regeneration' project .</i>	<i>New, innovation district.</i>
<i>An industrial town with significant socio-economic problems.</i>	<i>"Living Lab" Mixed-use innovation district.</i>	<i>New, "the smartest district in the world".</i>
<i>Industrial port area</i>	<i>Socially and functionally mixed neighbourhood</i>	<i>Re-use of old, and new.</i>
<i>The Bijlmerbajes prison</i>	<i>Mixed-use, Historic or Preservation Districts.</i>	<i>Re-use of old, and new.</i>
<i>Railway zone.</i>	<i>A mixed inner-city district with a multimodal transport hub, including a new bus station.</i>	<i>A car-free area with lots of greenery, Modernization of old, and new.</i>
<i>A large, consistent plot of land located within the ring road surrounding the city of München.</i>	<i>Mixed-use, Greenfield.</i>	<i>New.</i>
<i>Low residential.</i>	<i>Mixed-use, Greenfield.</i>	<i>Modernization of old, new.</i>
<i>Small separated urban islands.</i>	<i>Mixed-use neighborhood, Greenfield.</i>	<i>"The connected city", new.</i>
<i>Railway station / Industrial area</i>	<i>Mixed-use neighbourhood.</i>	<i>New.</i>
<i>The former freight railway station in smichov.</i>	<i>Brownfield.</i>	<i>New.</i>
<i>Low residential.</i>	<i>Mixed-use neighbourhood.</i>	<i>New.</i>
<i>Low residential.</i>	<i>Housing-focused neighbourhood</i>	<i>'The balanced city' , new.</i>
<i>Industrial area.</i>	<i>Mixed-use neighbourhood.</i>	<i>New.</i>
<i>Previously known as operación chamartin</i>	<i>Mixed-use neighbourhood</i>	<i>Redevelopment of a former port area into a mixed urban district and Smart City District.</i>

Table.69. List of 20 selected Neighbourhoods information. Source: Author, December 2025.

RESEARCH CATALOGUE 3 - ANALYSIS OF 20 NEIGHBOURHOODS

Overview of selected Neighbourhoods	
1. ASPERN SEESTADT - VIENNA, AUSTRIA ^{6,7,8}	
FACTS AND FIGURES	
Location (city, state)	Vienna, Austria
Previous use	Airfield–Aspern– the Seestadt of Vienna
Total land area	2.6 million m ² / Gross floor area
Green and open space	50%
Lake	50,000 m ²
New Buildings	2.6 million m ²
Residential units	>11,500
Number of residents (projected)	>25,000
Number of residents (currently)	>11,000
Workplaces (potential)	>20.000
Workplaces (currently)	>5,000
Year of Master plan	2005 master plan was unanimously approved by Vienna City Council
Author of the project	Johannes Tovatt, master planner for aspern Seestadt
Goals	aspern Seestadt as an urban lab
ACTORS INVOLVED	
The City of Vienna	One of our most important partners is the City of Vienna and its institutions.
Wien 3420 Aspern	The site owners
Vienna Housing Fund	Responsible for managing the city's social housing programme.
Vienna Business Agency	Its aim is to strengthen the city's economy and its potential for innovation, sustainably modernizing Vienna as a business location and developing its capacity to compete internationally.
Vienna insurance group	The VIENNA INSURANCE GROUP (VIG) is the leading insurance specialist in Austria as well as in Central and Eastern Europe.
The building society of the Austrian savings bank group österreichische Sparkassen AG	The building society s-Bausparkasse is a modern service provider offering a broad spectrum of services to help clients realise their dream of owning their own home.
BIG	BIG is the central manager of publicly owned buildings and land in the Republic of Austria.
Technology providers	As the aspiration is to make Aspern Seestadt a "smart city", tech companies and startups are involved in integrating cutting-edge technologies into the infrastructure and operations of the district.
Research institutions	The development has a strong focus on innovation and sustainability. Several institutions, like the Aspern Smart City Research (ASCR) company, work on various research projects on-site.
The City of Vienna	One of our most important partners is the City of Vienna and its institutions.
Wien 3420 Aspern	The site owners

⁶ Available at [Vienna's Seestadt | aspern Vienna's Seestadt \(aspern-seestadt.at\)](https://www.aspern-seestadt.at/) (Accessed: 25 March 2025)

⁷ Available at [Planning + Reality | aspern Die Seestadt Wiens \(aspern-seestadt.at\)](https://www.aspern-seestadt.at/) (Accessed: 25 March 2025)

⁸ Available at [aspern_SmartCityWien_Eng_issuu_2018-02-19_1102404.pdf \(aspern-seestadt.at\)](https://www.aspern-seestadt.at/) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

1. ASPERN SEESTADT - VIENNA, AUSTRIA^{9,10}

HISTORY TIMELINE

1912	Aspern Airfield was inaugurated. It remained the center of Austrian civil and military aviation until World War II.
1954	After the war, it was used by <u>Soviet</u> occupation forces. Replaced by Vienna International Airport.
1977	Was closed in 1977
1982	An engine and transmission plant for Opel Wien was constructed on part of the former airfield.
2003	Formation of a project team by the City of Vienna with representatives of the site owners to elaborate the basic planning framework for the development of “Aspern Airfield”. Completion of the Strategic Environmental Assessment for the Northeast of Vienna (SUPerNOW).
2004	Public consultations and appointment of “on-site experts” to provide active input throughout the process of drawing up the master plan. Launch of competition to draw up a master plan for the former airfield.
2005	Adoption of 2005 urban development plan (STEP 05) incorporating the development zone “U2 Donaustadt – Aspern Airfield”
2007	Unanimous approval of Johannes Tovatt’s master plan by Vienna City Council Opening of the Info Point on the future construction site First temporary uses (Frühes Grün – the planting of trees and flowers)
2008	Asperner Flugfeld Süd Entwicklungs- und Verwertungs-AG is renamed Wien 3420 Aspern Development AG Unveiling of the aspern Seestadt brand Competition for the public space planning concept (winner: Gehl architects, DK)
2009	Work starts on dismantling the former runways
2010	Approval of EIA for the southern section of Aspern Seestadt, land use and zoning plan for development phase 1 Ground-breaking ceremony for the lake Launch of competition for the design of Lakeside Park The Aspern Advisory Board takes up its mandate
2011	Construction work starts on sewer mains and road infrastructure Launch of the planning process for residential quarter Aspern Seestadt project management team set up to coordinate activities on behalf of the City of Vienna
2012	Launch of competition for the design of school campus Opening of technology center aspern IQ Revision of the master plan for Seestadt North and acknowledgment by the Commission for Urban Development
2013	Opening of underground stations Aspern Nord and Seestadt Construction logistics center goes into operation
2014	Completion of Lakeside Park Opening of 9,500 sqm of shopping space incl.
2015	Austria’s first managed shopping parade Opening of City of Vienna school campus Land use and zoning plan for northern section launches next phase of development
2016	Opening of new regional HQ of mechanical engineering group HOERBIGER Opening of Wien Work campus Construction work starts on Lakeside Park Quarter
2017	Over 6,000 people already live at Seestadt Around 1,500 people work at Seestadt More than 120 companies have set up on the site
2018	Completion of the EIA for the urban design and road infrastructure in the northern section of Seestadt
2019	Building work starts on first construction projects in the Lakeside Crescent Quarter
2021	First residents move into the Lakeside Crescent Quarter, which will be home to some 2,500 people by 2023.

⁹ Available at [Vienna's Seestadt | aspern Vienna's Seestadt \(aspern-seestadt.at\)](https://vienna.at/en/aspern-seestadt) (Accessed: 25 March 2025)

¹⁰ Available at [Seestadt Aspern - Wikipedia](https://en.wikipedia.org/wiki/Seestadt_Asperrn) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

1. ASPERN SEESTADT - VIENNA, AUSTRIA

LOCATION



Fig. 30. Location of Aspern, Seestadt within Vienna.
Author: Dashnor Kadiri, 2024¹¹



Fig. 31. Aerial view of airfield area before development.¹²

URBAN CONTEXT MAP

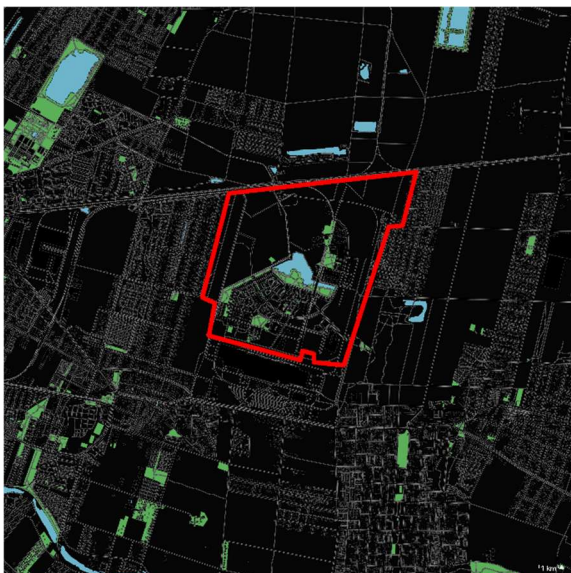


Fig. 32. Urban context map of Aspern, Vienna, Austria.
Author: Dashnor Kadiri, 2024¹³

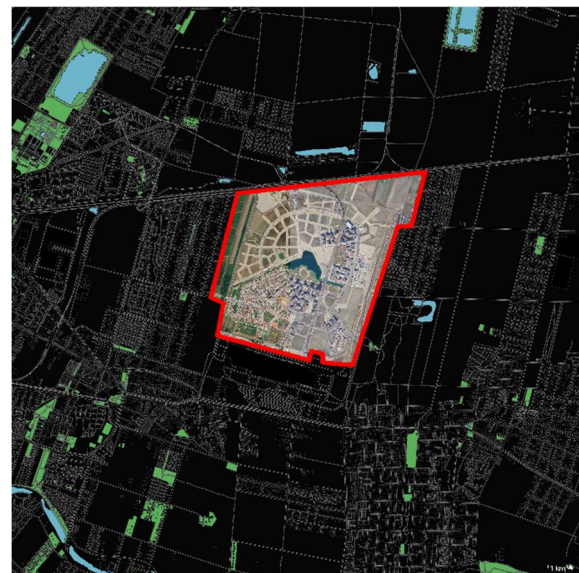


Fig. 33. Development progress map of Aspern.
Author: Dashnor Kadiri, 2024¹⁴

¹¹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹² Available at: [File: Flugfeld Aspern.jpg - Wikimedia Commons](#) (Accessed: 25 March 2025)

¹³ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

1. ASPERN SEESTADT - VIENNA, AUSTRIA

CURRENT SITUATION



Fig. 34. Aerial view of Aspern Seestadt, Vienna, Austria.¹⁵



Fig. 35. Aerial view of Janis Joplin Promenade.¹⁶



Fig. 36. Urban hiking, Aspern.¹⁷



Fig. 37. Urban Park, Seestadt within Vienna.¹⁸



Fig. 38. Aerial view of Janis Joplin Promenade.¹⁹



Fig. 39. View of the courtyard of residential apartments.²⁰

¹⁵ Available at [Seestadt – FeelGood Apartments \(feelgood-apartments.at\)](https://www.seestadt.at/en/feelgood-apartments) (Accessed: 25 March 2025)

¹⁶ Available at https://www.aspern-seestadt.at/en/business_hub/planning_reality/public_spaces (Accessed: 25 March 2025)

¹⁷ Available at [Seestadt \(graetzeltours.at\)](https://www.graetzeltours.at) (Accessed: 25 March 2025)

¹⁸ Available at [Seestadt Aspern – Sweco Sweden](https://www.seestadt.at/en/sweco-sweden) (Accessed: 25 March 2025)

¹⁹ Available at [Lake-City Aspern \(Aspern Seestadt\) - Vienna-Solutions](https://www.lake-city.aspern.at) (Accessed: 25 March 2025)

²⁰ Available at [Lake-City Aspern \(Aspern Seestadt\) - Vienna-Solutions](https://www.lake-city.aspern.at) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods	
2. NORDHAVN - COPENHAGEN, DENMARK ^{21,22,23,24}	
FACTS AND FIGURES	
Location (city, state)	Copenhagen, Denmark
Previous use	Former industrial harbour area
Total land area	3.6 million m ²
Green and open space / Public area	27.000 m ²
Facilities for passengers	5.400 m ²
Parking area	22.000 m ²
Lake	Canals
Commercial	400.000 m ²
Residential units	4000
Number of residents (projected)	40,000
Number of residents (currently)	>2,500
Workplaces (potential)	40.000
Workplaces (currently)	>2,000
Year of Master plan	2008
Author of the project	COBE, Sleth, Polyferm, Kronløbsøen Projekt P/S, Vilhelm Lauritzen Architects, STED City & Landscape
Client	CPH City & Port Development
Construction time	2008 – under construction (it's all due to be completed by 2050)
Total investment volume	€ 10b total investment
Goal	EnergyLab Nordhavn: a living urban laboratory
ACTORS INVOLVED	
City of Copenhagen	One of our most important partners is the City of Copenhagen and its institutions.
CPH City & Port Development	This entity is the driving force behind the development of Nordhavn. They manage the transformation of the port areas into sustainable urban zones.
EnergyLab Nordhavn	EnergyLab Nordhavn has a total budget of DKK 143 million. (EUR 19 million), hereof DKK 84 million (EUR 11 million) was funded in two rounds by the Danish Energy Technology Development and Demonstration Programme (EUDP)
Partenrs	HOFOR, RADIUS, ABB, DANFOSS, NERVE SMART SYSTEMS, GLEN DIMPLEX, METRO THERM, POWERLABDK, DTU., BY&HAVN, CLEAN CHARGE, ENGINEERING TOMORROW, BALSLEV, RADIUS
COWI	COWI has taken over as project partner from Balslev A/S following the employment of 9 engineers previously working for Balslev.
EUDP	The project is supported by EUDP (Energy Technology Development and Demonstration Programme).
City of Copenhagen	One of our most important partners is the City of Copenhagen and its institutions.
CPH City & Port Development	This entity is the driving force behind the development of Nordhavn. They manage the transformation of the port areas into sustainable urban zones.
EnergyLab Nordhavn	EnergyLab Nordhavn has a total budget of DKK 143 million. (EUR 19 million), hereof DKK 84 million (EUR 11 million) was funded in two rounds by the Danish Energy Technology Development and Demonstration Programme (EUDP)

²¹ Available at [Nordhavn: The smart urban area of the future \(stateofgreen.com\)](https://stateofgreen.com) (Accessed: 25 March 2025)

²² Available at [Cobe – Nordhavn](https://cobe.com) (Accessed: 25 March 2025)

²³ Available at <https://urbannext.net/nordhavn/> (Accessed: 25 March 2025)

²⁴ Available at [The transformation of Nordhavn, Copenhagen - PORTUS \(portusonline.org\)](https://portusonline.org) (Accessed: 25 March 2025)

2. NORDHAVN - COPENHAGEN, DENMARK^{25,26,27}**HISTORY TIMELINE**

1880	The first part of Nordhavnen dates back to the 1880s
1970	Industry and specialised harbour functions gradually vanished from the harbour area.
1980	City planners, politicians, and the general public began to realize the harbour's vast potential for a renewal of the city in line with the post-industrial agenda.
1990	The CPH CITY & PORT DEVELOPMENT started in the middle of 1990's a general development of Harbour areas inside the city.
2000	The City of Copenhagen, the state, and the port authorities founded the BY&HAVN – CPH CITY & PORT DEVELOPMENT in order to redevelop the harbour areas in the city.
2007	The legal basis for the urban development of Nordhavn has been officially recognized.
2008	CPH CITY & PORT DEVELOPMENT launched an open international ideas competition for a structural plan for the whole of Nordhavn as well as a development plan for phase one (inner Nordhavn) of the urban development project.
2009	The competition for the future of Nordhavn closes.
2010	The working out of a local plan for the inner Nordhavn.
2011	The municipality adopted the local plan for inner Nordhavn and expect to start working by 2012.
2012	Buildings can start in the Arhusgade quarter.
2025	The Arhusgade quarter is finished.
2060	Buildings constructed on the last sites in Nordhavn.

²⁵ Available at [Nordhavn, Copenhagen - Wikipedia](#) (Accessed: 25 March 2025)²⁶ Available at [Engineering Tomorrow | Danfoss](#) (Accessed: 25 March 2025)²⁷ Available at [The official guide to Copenhagen | Visit Copenhagen](#) (Accessed: 25 March 2025)

2. NORDHAVN - COPENHAGEN, DENMARK

LOCATION

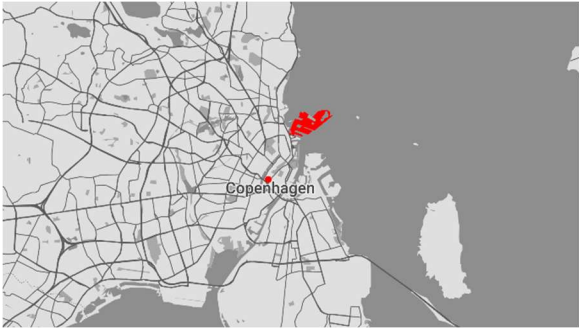


Fig. 40. Location of Nordhavn within Copenhagen.
Author: Dashnor Kadiri, 2024²⁸



Fig. 41. The Free Port in 1904.²⁹

URBAN CONTEXT MAP



Fig. 42. Urban context map of Nordhavn.
Author: Dashnor Kadiri, 2024³⁰



Fig. 43. Development progress map of Nordhavn.
Author: Dashnor Kadiri, 2024³¹

²⁸ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁹ Available at [Cobe - Nordhavn](#) (Accessed: 25 March 2025)

³⁰ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

³¹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

2. NORDHAVN – COPENHAGEN, DENMARK

CURRENT SITUATION



Fig. 44. Aerial view of Nordhavn, Copenhagen.³²



Fig. 45. Nordhavn Promenade.³³



Fig. 46. Promenade of Nordhavn, Copenhagen.³⁴



Fig. 47. View from sea.³⁵

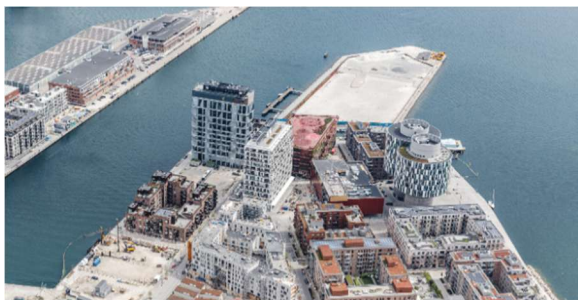


Fig. 48. Aerial view of Nordhavn.³⁶



Fig. 49. Nordhavn Promenade.³⁷

³² Available at [Cobe - Nordhavn](#) (Accessed: 25 March 2025)

³³ Available at [Cobe - Nordhavn](#) (Accessed: 25 March 2025)

³⁴ Available at [Cobe - Nordhavn](#) (Accessed: 25 March 2025)

³⁵ Available at [Cobe - Nordhavn](#) (Accessed: 25 March 2025)

³⁶ Available at [Cobe - Nordhavn](#) (Accessed: 25 March 2025)

³⁷ Available at [Cobe - Nordhavn](#) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods	
3. MERWEDE - UTRECHT, NETHERLANDS ^{38,39}	
FACTS AND FIGURES	
Location (city, state)	Utrecht, Netherlands
Previous use	Industrial area
Total land area	242.811 m ² (60 acre)
Green and open space	35%
Lake	No Lake
New Buildings	200 buildings
Residential units	>10,000
Number of residents (projected)	>12,000 (100.000 by 2040)
Number of residents (currently)	(2024 first residents to move in)
Workplaces (potential)	>20.000
Workplaces (currently)	(2024 first residents to move in)
Year of Master plan	2010 by Marco. Broekman
Author of the project	Marco.Broekman
Construction time	2016 – ongoing
Total investment volume	€ No info
Goal	one of the largest car-free city districts
ACTORS INVOLVED	
The City of Utrecht	As the governing body, the municipality would be deeply involved in planning, regulatory decisions, infrastructure development, and more.
Urban Developers & Property Owners	In the Merwede area, multiple property owners and developers collaborate on the shared vision for the district.
Architectural and Urban Planning Firms	These entities bring expertise in designing spaces that align with the project's sustainable, inclusive, and community-driven objectives.
Utility Providers	Local utility companies would be essential partners, especially when integrating sustainable energy, waste management, and water solutions.
Transportation Authorities	Given the emphasis on creating a car-free neighborhood, public transport agencies and mobility solution providers play a pivotal role.
Environmental and Sustainability Experts	These could be from academic institutions, consultancies, or NGOs. They provide insights and recommendations to ensure the project's sustainability goals are achieved.
Local Residents and Community Groups	Engaging with current residents, businesses, and community groups is essential to ensure the project meets the needs and aspirations of those who live and work in the area.
Financial Institutions	Banks or other financial institutions might provide funding or financing solutions, especially for significant infrastructural or development projects.
Technology and Infrastructure Companies	Companies specializing in smart city technologies, sustainable construction methods, and green infrastructure would be vital partners in realizing the project's vision.

³⁸ Available at [One of the largest car-free city districts – BURA](#) (Accessed: 25 March 2025)

³⁹ Available at [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](#) (Accessed: 25 March 2025)

3. MERWEDE- UTRECHT, NETHERLANDS^{40,41}**HISTORY TIMELINE**

Pre-2000s	Merwede, for much of its history, was dominated by industrial and business activities. Its large area hosted various companies and warehouses.
Early 2000s	Urban transformation trends began to recognize areas like Merwede for potential redevelopment. Preliminary discussions on how the district could be repurposed started, considering its strategic location and sizable area.
2010s	The idea of turning Merwede into a sustainable urban district started to gain traction. Multiple stakeholders, including city officials, property owners, urban planners, and the general public, engaged in dialogues. This collective engagement was crucial in shaping the early vision for the district.
2004	Initial plans for the redevelopment of the Merwede canal zone are presented, envisioning a transformation from an industrial area into a mixed-use urban district.
2007-2008	The global financial crisis delays the development plans. However, the concept of Merwede as a sustainable, car-free district begins to take shape
2015	The local government of Utrecht embraces the concept of 'healthy urban living,' incorporating sustainability and livability into the Merwede development plans
2016	Detailed urban planning for Merwede begins, focusing on a green, car-free environment. The district is designed to house 12,000 residents and provide numerous amenities within walking or cycling distance
Mid-2010s	As stakeholder discussions progressed, the comprehensive masterplan for Merwede's transformation began to be outlined. The masterplan focused on key principles: sustainability, reducing car dependence, providing ample green spaces, fostering mixed-use developments, and incorporating smart technologies.
Late 2010s	With the masterplan as the guiding document, the implementation phase started. Infrastructure development, construction activities, and retrofitting of existing buildings took place. The area began its journey from an industrial zone to a sustainable urban district.
2020s	By this time, parts of the Merwede district began reflecting the masterplan's vision. Residential areas, green spaces, and shared facilities started to emerge. Efforts were made to integrate advanced technologies, create sustainable energy solutions, and develop effective waste management systems
2021 and beyond	The evolution of Merwede as a smart neighborhood continued, with further refinements, adjustments based on feedback, and ongoing construction to complete the transformation.

⁴⁰ Available at [Merwede Utrecht: District of the future | Marc Koehler Architects](#) (Accessed: 25 March 2025)

⁴¹ Available at [Home - BURA](#) (Accessed: 25 March 2025)

3. MERWEDE - UTRECHT, NETHERLANDS

LOCATION



Fig. 50. Location of Merwede within Utrecht.
Author: Dashnor Kadiri, 2024⁴²



Fig. 51. Aerial view of the site before development.⁴³

URBAN CONTEXT MAP



Fig. 52. Urban context map of Merwede.
Author: Dashnor Kadiri, 2024⁴⁴



Fig. 53. Development progress map of Merwede.
Author: Dashnor Kadiri, 2024⁴⁵

⁴² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁴³ Available at [20220922-Bram-van-Toor-kanaalweg-0003-1125x750.jpg \(1125x750\) \(imgix.net\)](#) (Accessed: 25 March 2025)

⁴⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁴⁵ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

3. MERWEDE – UTRECHT, NETHERLANDS

EXPECTED APPEARANCE



Fig. 54. Aerial view of Merwede, Utrecht.⁴⁶



Fig. 55. Lake view of Merwede, Utrecht.⁴⁷



Fig. 56. View from the Park.⁴⁸



Fig. 57. View inside residential area.⁴⁹



Fig. 58. Inside Neighbourhood.⁵⁰



Fig. 59. Merwede main square/park.⁵¹

⁴⁶ Available at [Diversity | Divercity : Explore the cities \(divercitymag.be\)](https://divercitymag.be/) (Accessed: 25 March 2025)

⁴⁷ Available at [Plan for new city district of Merwede approved | Marc Koehler Architects](https://www.marc-koehler.com/) (Accessed: 25 March 2025)

⁴⁸ Available at [Gallery of Merwedekanaal zone \(NL\) | OKRA | Medien - 4 \(archello.com\)](https://www.okra.nl/en/merwedekanaal-zone) (Accessed: 25 March 2025)

⁴⁹ Available at [Gallery of Merwedekanaal zone \(NL\) | OKRA | Medien - 2 \(archello.com\)](https://www.okra.nl/en/merwedekanaal-zone) (Accessed: 25 March 2025)

⁵⁰ Available at [Gallery of Merwedekanaal zone \(NL\) | OKRA | Medien - 4 \(archello.com\)](https://www.okra.nl/en/merwedekanaal-zone) (Accessed: 25 March 2025)

⁵¹ Available at [Gallery of Merwedekanaal zone \(NL\) | OKRA | Medien - 4 \(archello.com\)](https://www.okra.nl/en/merwedekanaal-zone) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

4. NIEUW ZUID - ANTWERPEN, BELGIUM^{52,53,54,55}

FACTS AND FIGURES

Location (city, state)	Antwerpen Flanders, Belgium
Previous use	an industrial area and wasteland
Total land area	16 hectares
Green and open space	60%
Lake	/
New Buildings	residential towers, office buildings, and mixed-use developments.
Residential units	2,000 residential units.
Number of residents (projected)	>5000
Number of residents (currently)	/
Workplaces (potential)	>6000
Workplaces (currently)	/
Year of Master plan	2010
Author of the project	Secchi-Viganò.
Construction time	2010-2030
Total investment volume	€ 2 billion total investment
Goal	Redevelopment of a former port area into a mixed urban district and Smart City District

ACTORS INVOLVED

Developer	Triple Living is the main developer responsible for the Nieuw Zuid project.
Architects and Urban Planners	Secchi-Viganò: The architecture firm responsible for the master plan. Other notable architects involved include Stefano Boeri, David Chipperfield, and Vincent Van Duysen, who have designed specific buildings within the project.
Construction Companies	Various local and international construction companies are involved in the construction of the residential and commercial buildings.
Government and Municipal Authorities	City of Antwerp: Provides support and regulatory oversight. Flanders State Government: Offers financial and administrative support for sustainable urban development.
Investors	The project is backed by both private and public investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on green spaces, energy efficiency, and water management.
Local Community and Stakeholders	The residents and local businesses of Antwerp play a role in shaping the development through consultations and public engagement initiatives.

⁵² Available at [Nieuw Zuid: home in the neighbourhood of the future \(niewwzuid-antwerpen.be\)](https://niewwzuid-antwerpen.be) (Accessed: 25 March 2025)

⁵³ Available at [Het masterplan van Nieuw Zuid by Studio Secchi-Viganò \(niewwzuid-antwerpen.be\)](https://niewwzuid-antwerpen.be) (Accessed: 25 March 2025)

⁵⁴ Available at [Our vision - Triple Living \(triple-living.be\)](https://triple-living.be) (Accessed: 25 March 2025)

⁵⁵ Available at [Nieuw Zuid: Extraordinary urban development by the river Scheldt | VILLAS Decoration](https://villas-decor.com) (Accessed: 25 March 2025)

4. NIEUW ZUID - ANTWERPEN, BELGIUM^{56,57}**HISTORY TIMELINE**

1960s-1990s	Industrial Area: The area now known as Nieuw Zuid was predominantly used for industrial purposes, including warehouses and factories.
2000	Initial Proposals: Early discussions and proposals for redeveloping the area began, focusing on transforming it from an industrial zone to a residential and commercial neighborhood.
2010	Master Plan Development: The architecture and urban planning firm Secchi-Viganò was commissioned to create the master plan for Nieuw Zuid, emphasizing sustainability, green spaces, and mixed-use development.
2011-2012	Public Consultation and Approval: The master plan underwent public consultations and received approval from the city authorities of Antwerp.
2013	Initial Construction Begins: Preparatory work started, including land clearing and infrastructure development, marking the beginning of the Nieuw Zuid project.
2014	First Building Projects: The construction of the initial residential and commercial buildings began.
2016	Completion of Initial Buildings: The first residential units and commercial spaces were completed, and early residents began moving into the neighborhood.
2017	Opening of Public Amenities: The first public amenities, including parks and green spaces, were opened to the public, enhancing the livability of the area.
2018-2020	Ongoing Development: Continued construction and expansion of residential, commercial, and office buildings. Green spaces and sustainable infrastructure were further developed.
2021	Significant Milestones: Major milestones were reached with the completion of several key buildings and the establishment of new businesses and workplaces.
2022	Community Growth: The neighborhood continued to grow with an increasing number of residents and businesses, contributing to a vibrant community atmosphere.
2023-Present	Ongoing Construction: The development of Nieuw Zuid continues, with more residential and commercial projects underway. The focus remains on creating a sustainable and green urban environment.
Future Projections	Completion by Mid-2030s: The entire Nieuw Zuid project is expected to be fully completed by the mid-2030s, housing around 5,000 residents and providing approximately 6,000 workplaces.

⁵⁶ Available at [Antwerp - Wikipedia](#) (Accessed: 25 March 2025)⁵⁷ Available at [Nieuw Zuid: home in the neighbourhood of the future \(nieuwzuid-antwerpen.be\)](#) (Accessed: 25 March 2025)

4. NIEUW ZUID - ANTWERPEN, BELGIUM

LOCATION

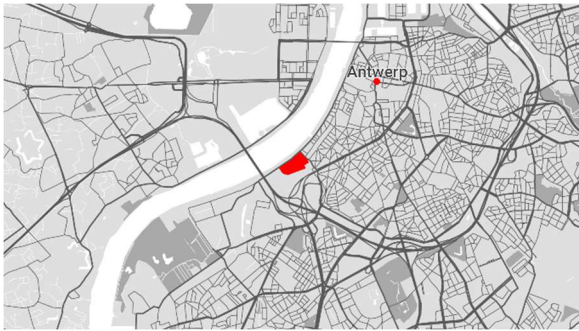


Fig. 60. Location of Nieuw Zuid within Antwerpen.
Author: Dashnor Kadiri, 2024⁵⁸



Fig. 61. Aerial view of the site before development.⁵⁹

URBAN CONTEXT MAP

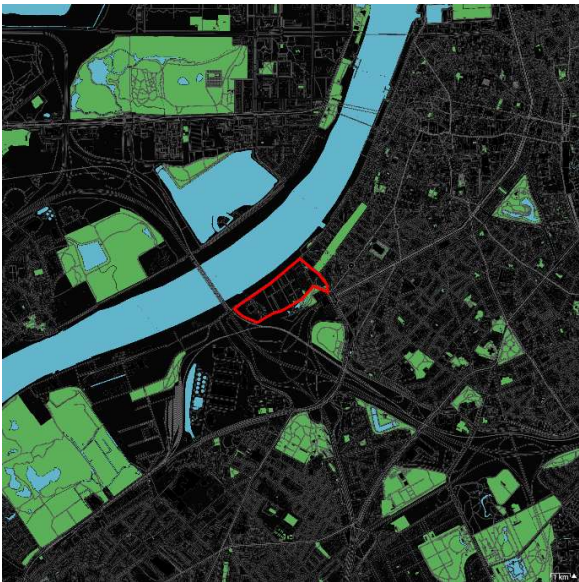


Fig. 62. Urban context map of Nieuw Zuid.
Author: Dashnor Kadiri, 2024⁶⁰



Fig. 63. Development progress map of Nieuw Zuid.
Author: Dashnor Kadiri, 2024⁶¹

⁵⁸ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁵⁹ Available at [Search Images \(bing.com\)](#) (Accessed: 25 March 2025)

⁶⁰ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁶¹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

4. NIEUW ZUID - ANTWERPEN, BELGIUM

EXPECTED APPEARANCE AND PROGRESS



Fig. 64. Aerial view of Nieuw Zuid, Antwerpen.⁶²



Fig. 65. Aerial view of Nieuw Zuid, Antwerpen.⁶³



Fig. 66. View from the Park.⁶⁴



Fig. 67. View inside the Neighbourhood.⁶⁵



Fig. 68. Inside Neighbourhood.⁶⁶



Fig. 69. Life inside the Neighbourhood area.⁶⁷

⁶² Available at [ANTWERPEN | NIEUW ZUID | Page 132 | SkyscraperCity Forum](#) (Accessed: 25 March 2025)

⁶³ Available at [ANTWERPEN | NIEUW ZUID | Page 132 | SkyscraperCity Forum](#) (Accessed: 25 March 2025)

⁶⁴ Available at [Get to know Nieuw Zuid! \(nieuwzuid-antwerpen.be\)](#) (Accessed: 25 March 2025)

⁶⁵ Available at [Get to know Nieuw Zuid! \(nieuwzuid-antwerpen.be\)](#) (Accessed: 25 March 2025)

⁶⁶ Available at [Get to know Nieuw Zuid! \(nieuwzuid-antwerpen.be\)](#) (Accessed: 25 March 2025)

⁶⁷ Available at [Get to know Nieuw Zuid! \(nieuwzuid-antwerpen.be\)](#) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

5. CLICHY BATIGNOLLES - PARIS, FRANCE^{68,69,70}

FACTS AND FIGURES

Location (city, state)	Paris, France
Previous use	The area was primarily used for railway operations and industrial purposes, including warehouses and maintenance facilities for the railway network.
Total land area	54 hectares
Green and open space	The project includes extensive green spaces, highlighted by the Martin Luther King Park, which covers about 10 hectares.
Lake	/
New Buildings	The project features a mix of residential, commercial, and public buildings, including new offices, retail spaces, schools, and cultural facilities.
Residential units	3,400 residential units.
Number of residents (projected)	>7,500
Number of residents (currently)	/
Workplaces (potential)	>12,700
Workplaces (currently)	/
Year of Master plan	2012
Author of the project	TVK (Trévelo & Viger-Kohler) in collaboration with François Grether.
Construction time	2012-2025
Total investment volume	€ 3 billion total investment
Goal	Clichy-Batignolles, the future carbon-neutral city

ACTORS INVOLVED

Developers	Paris & Métropole Aménagement (P&MA): The public agency responsible for the development and coordination of the project.
Architects and Urban Planners	TVK (Trévelo & Viger-Kohler): The architectural firm responsible for the master plan. François Grether: Collaborated on the project's urban planning.
Construction Companies	Bouygues Construction and Vinci Construction, among others, handling different phases and aspects of the development.
Government and Municipal Authorities	City of Paris: Provides regulatory oversight and support for the project.
Investors	The project is financed by a mix of public and private investments.
Environmental and Sustainability Consultants	Specialized consultants and firms ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Paris are involved in shaping the development through consultations and public engagement initiatives.

⁶⁸ Available at [Privacy error \(clichy-batignolles.fr\)](https://www.clichy-batignolles.fr) (Accessed: 25 March 2025)

⁶⁹ Available at www.tvk.fr (Accessed: 25 March 2025)

⁷⁰ Available at [Paris.fr, official website of the City of Paris](https://paris.fr) (Accessed: 25 March 2025)

5. CLICHY BATIGNOLLES - PARIS, FRANCE ⁷¹**HISTORY TIMELINE**

1960s-1990s	Industrial Use: Continued industrial and railway-related use. The area became increasingly underutilized towards the end of the 20th century as industrial activities declined.
2001	Project Inception: The City of Paris initiated plans to transform the underutilized railway and industrial area into a new urban neighborhood.
2002	Master Plan Development: The architectural firm TVK (Trévelo & Viger-Kohler), in collaboration with François Grether, was commissioned to develop the master plan for the Clichy-Batignolles project. The master plan focused on sustainability, green spaces, and mixed-use development.
2004	Public Consultation and Approval: The master plan underwent public consultations and received approval from the city authorities.
2007	Creation of Paris & Métropole Aménagement (P&MA): A public agency was established to manage the development and coordination of the project.
2009	Construction Begins: Initial construction phases began, including infrastructure development, land clearing, and the beginning of residential and commercial building projects.
2012	Opening of Martin Luther King Park: The first phase of the Martin Luther King Park, a central green space in the development, was opened to the public.
2013-2015	First Residential and Commercial Buildings Completed: Early residential units and commercial spaces were completed, with the first residents and businesses moving in.
2016-2018	Expansion and Development: Continued construction of additional residential, commercial, and office buildings. Further development of green spaces and public amenities.
2019	Completion of Judicial City: The new Paris Judicial City (Cité judiciaire de Paris) was completed, housing the Paris Regional Court and other judicial services.
2020-2021	Ongoing Development: Continued progress with more residential units, office spaces, and public facilities being developed and completed.
2022	Significant Milestones: Major milestones reached with the completion of several key buildings and the establishment of new businesses and workplaces.
2023-Present	Current Development: The development of Clichy-Batignolles continues with more projects underway. Focus remains on sustainability and green urban living.
Future Projections	Completion by 2025: The entire project is expected to be fully completed by 2025, creating a vibrant, sustainable urban neighborhood with approximately 7,500 residents and 12,700 workplaces.

⁷¹ Available at [Clichy-Batignolles - Wikipedia](#) (Accessed: 25 March 2025)

5. CLICHY BATIGNOLLES - PARIS, FRANCE

LOCATION



Fig. 70. Location of Clichy Batignolles within Paris.
Author: Dashnor Kadiri, 2024⁷²



Fig. 71. Aerial view of the site before development.⁷³

URBAN CONTEXT MAP



Fig. 72. Urban context map of Clichy Batignolles.
Author: Dashnor Kadiri, 2024⁷⁴



Fig. 73. Development progress map of Clichy Batignolles.
Author: Dashnor Kadiri, 2024⁷⁵

⁷² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁷³ Available at [District Martin Luther-King in Les Batignolles \(didierfavre.com\)](#) (Accessed: 25 March 2025)

⁷⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁷⁵ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

5. CLICHY BATIGNOLLES - PARIS, FRANCE

CURRENT SITUATION



Fig. 74. Aerial view of Clichy Batignolles, Paris.⁷⁶



Fig. 75. Aerial view of Clichy Batignolles, Paris.⁷⁷



Fig. 76. View from the Park.⁷⁸



Fig. 77. View inside the Neighbourhood.⁷⁹



Fig. 78. Inside Neighbourhood.⁸⁰



Fig. 79. Life inside the Neighbourhood area.⁸¹

⁷⁶ Available at parisnetmetropole-amenagement.fr (Accessed: 25 March 2025)

⁷⁷ Available at Osty et associés paysage urbanisme (Accessed: 25 March 2025)

⁷⁸ Available at Construction & Smart Building | Choose Paris Region (Accessed: 25 March 2025)

⁷⁹ Available at Construction & Smart Building | Choose Paris Region (Accessed: 25 March 2025)

⁸⁰ Available at ArchDaily (Accessed: 25 March 2025)

⁸¹ Available at ArchDaily (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

6. SCHUMACHER QUARTER - BERLIN, GERMANY^{82,83,84}

FACTS AND FIGURES

Location (city, state)	Berlin, Germany
Previous use	The area was previously part of the Tegel Airport (Flughafen Tegel), which ceased operations in 2020.
Total land area	48 hectares
Green and open space	50%
Lake	/
New Buildings	The project plans to construct a variety of new buildings, including residential, commercial, and public facilities.
Residential units	5,000 residential units.
Number of residents (projected)	>10,000
Number of residents (currently)	/
Workplaces (potential)	>10,000
Workplaces (currently)	/
Year of Master plan	2019
Author of the project	The project master plan was developed by Tegel Projekt GmbH, an organization specifically established for the redevelopment of the former Tegel Airport site.
Construction time	2021-2030
Total investment volume	€ 3 billion total investment
Goal	The first district to be a single entity

ACTORS INVOLVED

Developers	Tegel Projekt GmbH: The primary agency responsible for managing and coordinating the redevelopment of the former Tegel Airport site.
Architects and Urban Planners	Various architectural firms and urban planners are involved, including renowned firms such as Herzog & de Meuron.
Construction Companies	Multiple construction companies are involved in different phases of the project, including both local and international firms.
Government and Municipal Authorities	City of Berlin: Provides regulatory oversight and support for the project. Berlin Senate Department for Urban Development and Housing: Plays a key role in planning and supporting the project.
Investors	The project is funded through a mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.

⁸² Available at [Tegel Projekt GmbH](#) (Accessed: 25 March 2025)

⁸³ Available at [Senate Department for Urban Development, Building and Housing - Berlin.de](#) (Accessed: 25 March 2025)

⁸⁴ Available at [Schumacher Quartier - Berlin TXL \(schumacher-quartier.de\)](#) (Accessed: 25 March 2025)

6. SCHUMACHER QUARTER - BERLIN, GERMANY⁸⁵**HISTORY TIMELINE**

1990s	Operational Years: Tegel Airport (Flughafen Tegel) was one of the primary airports serving Berlin, especially significant during the Cold War and after the reunification of Germany.
2000s	Planning for Future Closure: With the plans to construct the new Berlin Brandenburg Airport (BER), discussions and initial planning began for the eventual closure of Tegel Airport and the redevelopment of its site.
2010	Decision to Close Tegel Airport: Official plans to close Tegel Airport were set in motion, tied to the opening of Berlin Brandenburg Airport (BER). The future of the Tegel site was envisioned as a major urban redevelopment project.
2011	Establishment of Tegel Projekt GmbH: Tegel Projekt GmbH was established as the agency responsible for the redevelopment of the Tegel Airport site.
2012	Master Planning Begins: Initial master planning efforts for the redevelopment of Tegel Airport began, focusing on creating a sustainable urban district.
2015	Public Consultation: Public consultations and stakeholder engagement processes were initiated to gather input and refine the master plan for the redevelopment project.
2019	Final Master Plan Development: The architectural firm Herzog & de Meuron, in collaboration with Tegel Projekt GmbH, finalized the master plan for Schumacher Quarter, focusing on sustainability and mixed-use development.
2020	Tegel Airport Closure: Tegel Airport officially ceased operations on November 8, 2020, after the opening of Berlin Brandenburg Airport (BER).
2021	Construction Begins: Initial construction phases began, including land clearing and infrastructure development. The first residential and commercial building projects commenced.
2022	Infrastructure Development: Significant progress was made in developing infrastructure, including roads, utilities, and green spaces. Early phases of residential construction continued.
2023	Ongoing Development: Continued construction of residential units, commercial spaces, and public amenities. Focus remains on sustainability and creating a vibrant, mixed-use urban district.

⁸⁵ Available at [Berlin Tegel Airport - Wikipedia](#) (Accessed: 25 March 2025)

6. SCHUMACHER QUARTER - BERLIN, GERMANY

LOCATION



Fig. 80. Location of Schumacher Quarter within Berlin.
Author: Dashnor Kadiri, 2024⁸⁶



Fig. 81. Aerial view of the site before development.⁸⁷

URBAN CONTEXT MAP



Fig. 82. Urban context map of Schumacher Quarter.
Author: Dashnor Kadiri, 2024⁸⁸

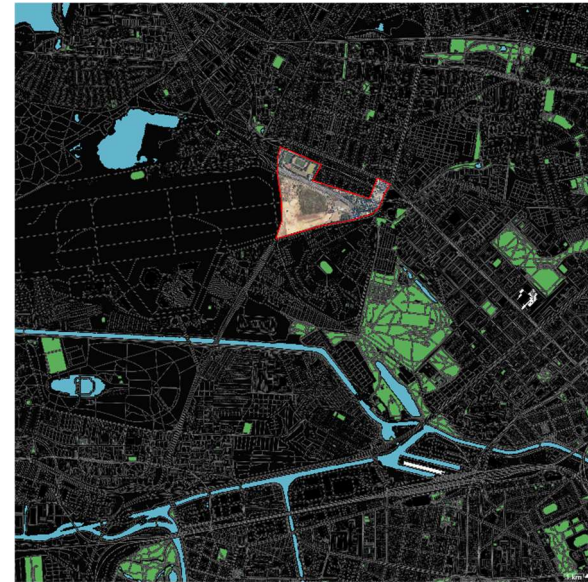


Fig. 83. Development progress map of Schumacher Quarter.
Author: Dashnor Kadiri, 2024⁸⁹

⁸⁶ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁸⁷ Available at ([schindler.de](#)) (Accessed: 25 March 2025)

⁸⁸ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁸⁹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

6. SCHUMACHER QUARTER - BERLIN, GERMANY

EXPECTED APPEARANCE



Fig. 84. Aerial view of Schumacher Quarter, Berlin.⁹⁰



Fig. 85. Aerial view of Schumacher Quarter, Berlin.⁹¹



Fig. 86. View from the Park.⁹²



Fig. 87. View inside the Neighbourhood.⁹³



Fig. 88. Inside Neighbourhood.⁹⁴



Fig. 89. Aerial view of Schumacher Quarter, Berlin.⁹⁵

⁹⁰ Available at [Schumacher Quartier in Berlin: \(schindler.de\)](https://schindler.de) (Accessed: 25 March 2025)

⁹¹ Available at [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 25 March 2025)

⁹² Available at [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 25 March 2025)

⁹³ Available at [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 25 March 2025)

⁹⁴ Available at [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 25 March 2025)

⁹⁵ Available at [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

7. MILANO INNOVATION DISTRICT – MILAN, ITALY^{96,97,98,99}

FACTS AND FIGURES

Location (city, state)	Milan, Italy
Previous use	The area was previously the site of Expo 2015, which focused on food and sustainability.
Total land area	100 hectares
Green and open space	50%, parks, gardens, and public spaces.
Lake	/
New Buildings	Research facilities, office spaces, residential units, educational institutions, and cultural venues.
Residential units	/
Number of residents (projected)	>10,000
Number of residents (currently)	/
Workplaces (potential)	>20,000
Workplaces (currently)	/
Year of Master plan	2018
Author of the project	The project master plan was developed by Tegel Projekt GmbH, an organization specifically established for the redevelopment of the former Tegel Airport site.
Construction time	2018-2030
Total investment volume	€ 2 billion total investment
Goal	A combination of innovation and multidisciplinary skills for the city of the future

ACTORS INVOLVED

Developers	Arexpo: The public company responsible for the management and redevelopment of the former Expo 2015 site. Lendlease: The international property and infrastructure group leading the development.
Architects and Urban Planners	Carlo Ratti Associati: One of the key architectural firms involved in designing the master plan.
Construction Companies	Various local and international construction companies are involved in different phases of the project.
Government and Municipal Authorities	City of Milan: Provides regulatory oversight and support for the project. Berlin Senate Department for Lombardy Region: Supports the project financially and administratively.
Investors	The project is funded through a mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.

⁹⁶ Available at [MIND - Milano Innovation District \(mindmilano.it\)](https://mindmilano.it) (Accessed: 25 March 2025)

⁹⁷ Available at [Home - Arexpo](https://home-arexpo.com) (Accessed: 25 March 2025)

⁹⁸ Available at [Australia Home | Lendlease](https://australiahome.lendlease.com) (Accessed: 25 March 2025)

⁹⁹ Available at [MIND - Milan Innovation District — SLA](https://mindmilano.it) (Accessed: 25 March 2025)

7. MILANO INNOVATION DISTRICT – MILAN, ITALY^{100,101}**HISTORY TIMELINE**

1990s	Industrial Use: The area that would later become the Expo 2015 site and subsequently the Milano Innovation District was used for industrial purposes, including factories and warehouses.
2000s	Initial Plans for Expo 2015: Milan began its bid to host the World Expo in 2015. The area was identified as the potential site for the exposition.
2008	Milan Wins Expo 2015 Bid: Milan was selected to host Expo 2015, with the theme "Feeding the Planet, Energy for Life."
2009-2014	Preparation for Expo 2015: Extensive planning and construction took place to prepare the site for Expo 2015. This included building pavilions, infrastructure, and public spaces.
2015	Expo 2015: The Expo 2015 was held from May 1 to October 31, 2015. The event attracted over 20 million visitors and focused on themes of sustainability, food security, and innovation.
2016	Post-Expo Planning: Following the conclusion of Expo 2015, discussions and planning began for the redevelopment of the site into the Milano Innovation District (MIND).
2017	Master Plan Development: The master plan for the Milano Innovation District was developed by Carlo Ratti Associati and other international firms. The plan focused on creating a sustainable, mixed-use urban district.
2018	Construction Begins: Initial construction phases began, including land preparation and infrastructure development. Arexpo and Lendlease were key players in driving the redevelopment.
2019	Early Development: Construction of the first buildings commenced, focusing on research facilities and office spaces. The aim was to attract businesses and institutions to the district.
2020	Ongoing Development: Continued progress on residential units, public spaces, and additional office buildings. The focus was on integrating green spaces and sustainable practices.
2021	Opening of Initial Facilities: Some initial research and educational facilities opened, attracting businesses, research institutions, and residents to the area.
2022	Expansion and Development: Ongoing construction and development of additional residential, commercial, and public buildings. The district continued to grow as more facilities were completed.
2023	Current Status: The Milano Innovation District continues to develop, with many projects still under construction. The district is increasingly attracting businesses, residents, and visitors, contributing to Milan's reputation as a hub for innovation and sustainability.
Future Projections	Completion by 2030: The entire Milano Innovation District is expected to be fully completed by 2030, creating a vibrant, sustainable urban neighborhood with approximately 10,000 residents and 20,000 workplaces.

¹⁰⁰ Available at [Expo 2015 - Wikipedia](#) (Accessed: 25 March 2025)¹⁰¹ Available at [Milan Innovation District - Wikipedia](#) (Accessed: 25 March 2025)

7. MILANO INNOVATION DISTRICT (MIND)– MILAN, ITALY

LOCATION



Fig. 90. Location of MIND within Milan.
Author: Dashnor Kadiri, 2024¹⁰²



Fig. 91. Aerial view of the site before development.¹⁰³

URBAN CONTEXT MAP



Fig. 92. Urban context map of MIND.
Author: Dashnor Kadiri, 2024¹⁰⁴

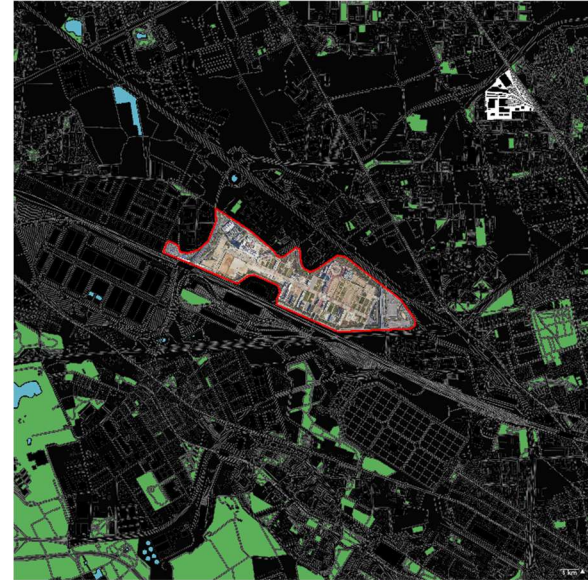


Fig. 93. Development progress map of MIND.
Author: Dashnor Kadiri, 2024¹⁰⁵

¹⁰² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁰³ Available at [MIND - Milan Innovation District — SLA](#) (Accessed: 25 March 2025)

¹⁰⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁰⁵ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

7. MILANO INNOVATION DISTRICT (MIND)– MILAN, ITALY

EXPECTED APPEARANCE



Fig. 94. Aerial view of MIND, Milan.¹⁰⁶



Fig. 95. Aerial view of MIND, Milan.¹⁰⁷



Fig. 96. View from the Park.¹⁰⁸



Fig. 97. View inside the Neighbourhood.¹⁰⁹



Fig. 98. Inside Neighbourhood.¹¹⁰



Fig. 99. Life inside the Neighbourhood.¹¹¹

¹⁰⁶ Available at [The Challenges - MIND \(mindmilano.it\)](https://www.mindmilano.it) (Accessed: 25 March 2025)

¹⁰⁷ Available at [The Challenges - MIND \(mindmilano.it\)](https://www.mindmilano.it) (Accessed: 25 March 2025)

¹⁰⁸ Available at [The Challenges - MIND \(mindmilano.it\)](https://www.mindmilano.it) (Accessed: 25 March 2025)

¹⁰⁹ Available at [The Challenges - MIND \(mindmilano.it\) rdt.ac](https://www.mindmilano.it) (Accessed: 25 March 2025)

¹¹⁰ Available at [The Challenges - MIND \(mindmilano.it\) rdt.ac](https://www.mindmilano.it) (Accessed: 25 March 2025)

¹¹¹ Available at [S MIND | YesMilano](https://www.mindmilano.it) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

8. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND^{112,113}

FACTS AND FIGURES

Location (city, state)	Helmond Brandevoort, The Netherlands
Previous use	An industrial town with significant socio-economic problems
Neighbourhood type	“Living Lab” Mixed-use innovation district
Total land area	1.5 million m ²
Green and open space	120, 000m ²
Growing food (high-tech agriculture)	80,000 m ²
Business premises	120.000 m ²
Residential units	2,100 permanent + 500 temporary homes
Number of residents (projected)	4,500
Number of residents (currently)	No info
Workplaces (potential)	No info
Workplaces (currently)	No info
Year of Master plan	2017
Author of the project	UNStudio, Landscape and ecology design: Felixx Landscape architects and planners
Client	Brainport and Helmond Municipality
Construction time	2018 – under construction
Total investment volume	Not determined
Goal	A Community of Innovators

ACTORS INVOLVED

Municipality of Helmond	Municipality of Helmond and its institutions.
The Province of Noord-Brabant	The provincial administration of Brabant is primarily concerned with: Spatial development, Accessibility and mobility for the region, Regional economic policy, Culture and regional identity
Brainport Development	As an independent and demand-driven organization, Brainport Development develops the regional economic strategy, develops and realizes projects, offers business advice and innovative business premises and promotes Brainport Eindhoven in the Netherlands and abroad.
Eindhoven University of Technology	The Eindhoven University of Technology, abbr. TU/e, is a public technical university in the Netherlands, situated at Eindhoven.
Tilburg University	Tilburg University is a public research university specializing in the social and behavioral sciences, economics, law, business sciences, theology and humanities, located in Tilburg in the southern part of the Netherlands.
Brainport Smart District Foundation	a partnership among the municipality of Helmond, Eindhoven University of Technology, Brainport Development, the Province of North Brabant and Tilburg University.
Architectural and Planning Firms	UNStudio: This architectural firm was selected to create the urban vision of BSD. Felixx Landscape Architects & Planners: They collaborated with UNStudio to design the urban vision and landscape for the district.
Residents and Local Communities	An essential aspect of the BSD project is co-creation, where future residents and local community members are involved in the decision-making and design process, ensuring that the solutions are tailored to the actual needs of the people living there.

¹¹² [Assessment criteria - Brainport Smart District](#) (Accessed: 25 March 2025)

¹¹³ [220218_BSD_BKP_SMP-1.1_UNStudio_res-gecomprimeerd.pdf \(brainportsmartdistrict.nl\)](#) (Accessed: 25 March 2025)

8. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND^{114,115,116}**HISTORY TIMELINE**

2016-2017	<p>Founding and Vision Formation</p> <p>The idea of Brainport Smart District started forming around this time.</p> <p>The vision was to build the "Smartest Neighborhood in the World" that would integrate cutting-edge technology into the built environment.</p>
2018	<p>Launch and Planning</p> <p>The official launch of the project took place.</p> <p>UNStudio was selected to create the urban vision of the BSD.</p> <p>Key stakeholders, including businesses, research institutions, and local government, started collaborating on the project.</p>
2019	<p>Development of Urban Designs and Initial Implementations</p> <p>UNStudio and Felixx Landscape Architects & Planners released the urban vision for the project.</p> <p>The design included flexible plots, which residents and businesses could develop according to their preferences, guided by the sustainable principles of the district.</p> <p>Initial implementations and pilot projects may have been started in areas such as sustainable housing and energy.</p>
2020-2023	<p>Further Development and Growth</p> <p>The district continued to evolve and develop with more projects initiated and proposed.</p> <p>Some houses may have started to be built, and various technological implementations would have been piloted or integrated.</p> <p>The project likely drew interest from various parts of the world due to its unique and innovative approach.</p>

¹¹⁴ Available at [Brainport Smart District - UNStudio](#) (Accessed: 25 March 2025)

¹¹⁵ Available at [UNStudio Designs 'World's Smartest Neighborhood' in the Netherlands | ArchDaily](#) (Accessed: 25 March 2025)

¹¹⁶ Available at [Felixx - Realizing happy environments](#) (Accessed: 01 August 2024)

8. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND

LOCATION



Fig. 100. Location of Brainport within Eindhoven.
Author: Dashnor Kadiri, 2024¹¹⁷



Fig. 101. Aerial view of the site before development.¹¹⁸

URBAN CONTEXT MAP

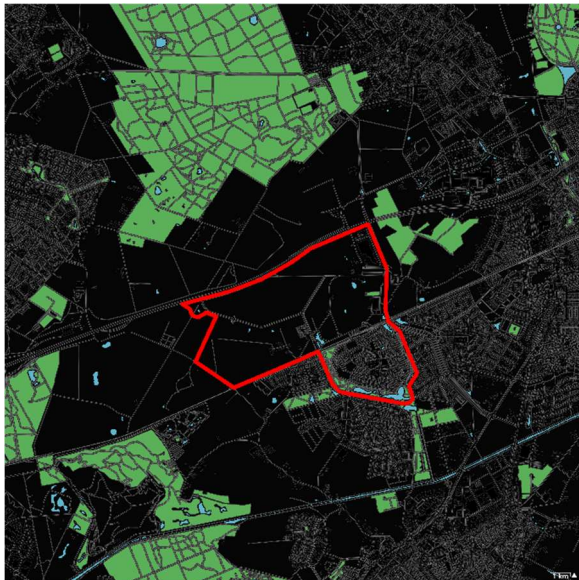


Fig. 102. Urban context map of Brainport.
Author: Dashnor Kadiri, 2024¹¹⁹

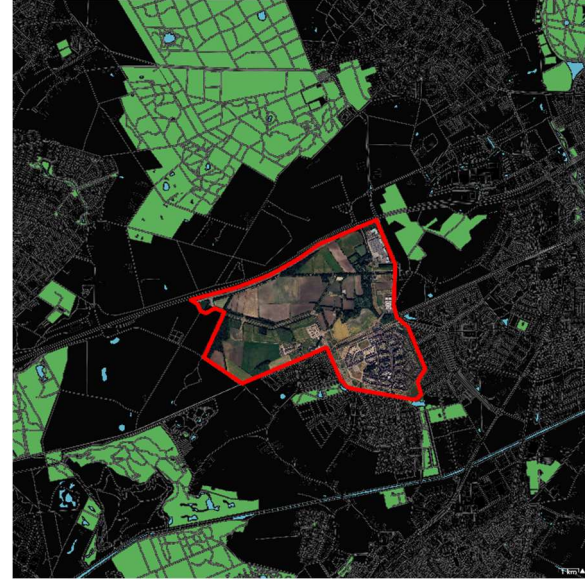


Fig. 103. Development progress map of Brainport.
Author: Dashnor Kadiri, 2024¹²⁰

¹¹⁷ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹¹⁸ Available at <https://mhome.nu/funderingswerkzaamheden-leggen-de-basis-van-telkesveld/> (Accessed: 25 March 2025)

¹¹⁹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹²⁰ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

8. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND

EXPECTED APPEARANCE



Fig. 104. Aerial view of Brainport smart district.¹²¹



Fig. 105. Lake view of Brainport smart district.¹²²



Fig. 106. View from the Park.¹²³



Fig. 107. View inside residential area.¹²⁴



Fig. 108. Inside Neighbourhood.¹²⁵



Fig. 109. Brainport main square.¹²⁶

¹²¹ Available at [Brainport Smart District - UNStudio](#) (Accessed: 25 March 2025)

¹²² Available at [Brainport Smart District - UNStudio](#) (Accessed: 25 March 2025)

¹²³ Available at [Brainport Smart District - UNStudio](#) (Accessed: 25 March 2025)

¹²⁴ Available at [Brainport Smart District - UNStudio](#) (Accessed: 01 August 2024)

¹²⁵ Available at [Brainport Smart District - UNStudio](#) (Accessed: 25 March 2025)

¹²⁶ Available at [Brainport Smart District - UNStudio](#) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods	
9. ÜBERSEEINSEL - BREMEN, GERMANY ^{127,128,129,130,131}	
FACTS AND FIGURES	
Location (city, state)	Bremen, Germany
Previous use	Part of the Bremen industrial port, primarily for logistics and maritime activities.
Total land area	41 hectares
Green and open space	The project includes significant green and open spaces, featuring parks, gardens, and promenades along the waterfront.
Lake	/
New Buildings	New buildings such as residential units, office spaces, retail areas, and cultural facilities.
Residential units	2,500
Number of residents (projected)	>5,000
Number of residents (currently)	/
Workplaces (potential)	>4,500
Workplaces (currently)	/
Year of Master plan	2018
Author of the project	The project master plan was developed by Westphal Architekten in collaboration with various international firms.
Construction time	2018-2030
Total investment volume	€ 1 billion total investment
Goal	an economical residential greenhouse
ACTORS INVOLVED	
Developers	Überseeinsel GmbH
Architects and Urban Planners	Westphal Architekten: The architectural firm responsible for the master plan.
Construction Companies	Multiple construction companies are involved in different phases of the project, including both local and international firms.
Government and Municipal Authorities	City of Bremen: Provides regulatory oversight and support for the project. Bremen Senate Department for Urban Development and Housing: Plays a key role in planning and supporting the project.
Investors	Mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Bremen are involved in shaping the development through consultations and public engagement initiatives.

¹²⁷ Available at [ÜBERSEEINSEL Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 25 March 2025)

¹²⁸ Available at [“By 2040”](#) (Accessed: 25 March 2025)

¹²⁹ Available at [Ueberseeinsel Broschuere zweite Auflage 01.pdf](#) (Accessed: 25 March 2025)

¹³⁰ Available at [Important location factors at a glance \(ueberseestadt-bremen.de\)](#) (Accessed: 25 March 2025)

¹³¹ Available at [SMAQ - architecture | urbanism | research Ueberseeinsel – Bremen, Germany](#) (Accessed: 25 March 2025)

HISTORY TIMELINE

1990s	Industrial Use: The area was used for logistics and maritime activities as part of the Bremen industrial port.
2000s	Decline in Industrial Use: The area saw a decline in industrial activities, leading to underutilization and discussions on redevelopment.
2015	Initial Planning: The City of Bremen began exploring options for redeveloping the underutilized port area into a new urban neighborhood.
2018	Master Plan Development: Westphal Architekten, in collaboration with various international firms, developed the master plan for Überseeinsel, focusing on sustainability and mixed-use development.
2019	Public Consultation and Approval: The master plan underwent public consultations and received approval from the city authorities.
2020	Construction Begins: Initial construction phases began, including land preparation and infrastructure development.
2021	Early Development: Construction of the first residential and commercial buildings commenced.
2022	Ongoing Development: Continued progress on residential units, public spaces, and additional office buildings.
2023	Current Status: The development of Überseeinsel continues, with ongoing construction and increasing interest from businesses and residents.
Future Projections	Completion by 2030: The entire Überseeinsel project is expected to be fully completed by 2030, creating a vibrant, sustainable urban neighborhood with approximately 5,000 residents and 4,500 workplaces.

¹³² Available at [OVERSEAS ISLAND Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 25 March 2025)

¹³³ Available at [Überseeinsel - Wikipedia, the free encyclopedia](https://en.wikipedia.org/wiki/Überseeinsel) (Accessed: 25 March 2025)

9. ÜBERSEEINSEL - BREMEN, GERMANY

LOCATION



Fig. 109. Location of Überseeinsel within Bremen.
Author: Dashnor Kadiri, 2024¹³⁴



Fig. 110. Aerial view of the site before development.¹³⁵

URBAN CONTEXT MAP

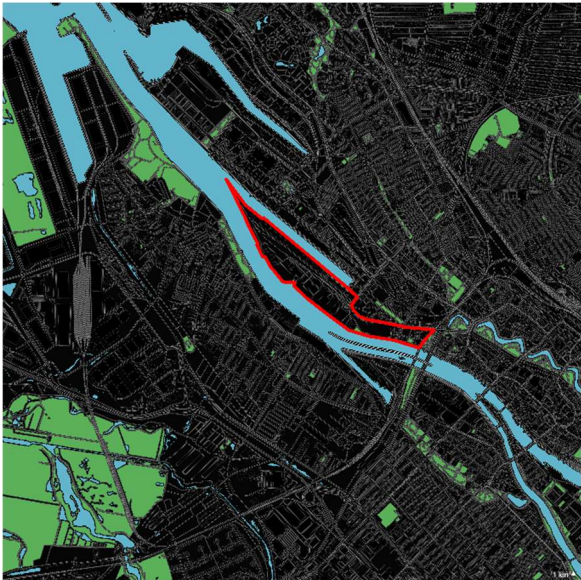


Fig. 111. Urban context map of Überseeinsel.
Author: Dashnor Kadiri, 2024¹³⁶

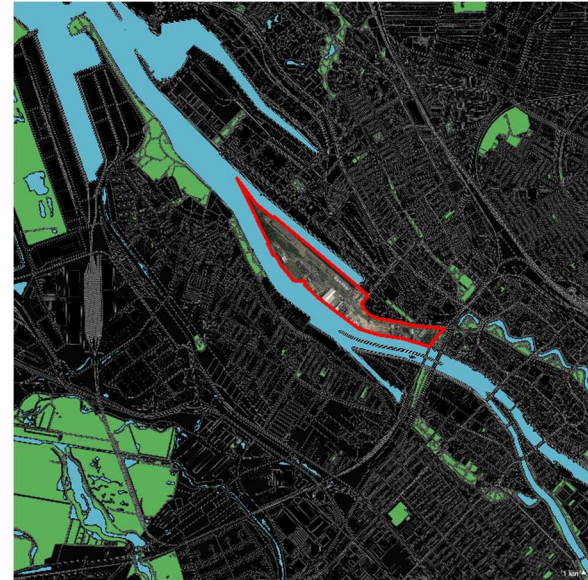


Fig. 112. Development progress map of Überseeinsel.
Author: Dashnor Kadiri, 2024¹³⁷

¹³⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹³⁵ Available at [Conversion of the former Kellogg's grounds in Bremen \(ueberseestadt-bremen.de\)](#) (Accessed: 25 March 2025)

¹³⁶ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹³⁷ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

9. ÜBERSEEINSEL - BREMEN, GERMANY

EXPECTED APPEARANCE



Fig. 113. Aerial view of Überseeinsel, Bremen.¹³⁸



Fig. 114. Aerial view of Überseeinsel, Bremen.¹³⁹



Fig. 115. View from the River.¹⁴⁰



Fig. 116. Park of Überseeinsel.¹⁴¹



Fig. 117. Inside Neighbourhood.¹⁴²



Fig. 118. Life inside the Neighbourhood.¹⁴³

¹³⁸ Available at [SMAQ - architecture | urbanism | research Ueberseeinsel – Bremen, Germany](#) (Accessed: 25 March 2025)

¹³⁹ Available at [SMAQ - architecture | urbanism | research Ueberseeinsel – Bremen, Germany](#) (Accessed: 25 March 2025)

¹⁴⁰ Available at [SMAQ - architecture | urbanism | research Ueberseeinsel – Bremen, Germany](#) (Accessed: 25 March 2025)

¹⁴¹ Available at [SMAQ - architecture | urbanism | research Ueberseeinsel – Bremen, Germany](#) (Accessed: 25 March 2025)

¹⁴² Available at [SMAQ - architecture | urbanism | research Ueberseeinsel – Bremen, Germany](#) (Accessed: 25 March 2025)

¹⁴³ Available at [SMAQ - architecture | urbanism | research Ueberseeinsel – Bremen, Germany](#) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

10. BAJES KWARTIER - AMSTERDAM, NETHERLANDS^{144,145,146}

FACTS AND FIGURES

Location (city, state)	Amsterdam, Netherland
Previous use	The Bijlmerbajes prison
Total land area	80.000 m ²
Green and open space	75% of area is public
Lake	No lake
New Buildings	135.000 m ² mixed-use development, with 30 percent set aside for affordable housing
Residential units	>1,350
Number of residents (projected)	/
Number of residents (currently)	/
Workplaces (potential)	/
Workplaces (currently)	/
Year of Master plan	2018
Author of the project	OMA, LOLA, FABRICATIONS, Arons en Gelauff, Atelier Kempethill, Barcode Architects, BDG Architecten, Civic Architects, Mh1 Architecten, Moke Architecten
Construction time	2018 - ongoing
Total investment volume	€ /
Goal	a nature-inclusive stepping stone in the ecological structure of Amsterdam

ACTORS INVOLVED

The City of Amsterdam	As the local governing body, the municipality was crucial in the decision-making process for the redevelopment of the prison. The city provided necessary approvals, set guidelines, and played a significant role in the entire process.
AM, AT Capital, and Cairn	These were the primary members of the development consortium chosen to lead the transformation of the prison into Bajes Kwartier. They won the bid with their vision of the new district and were entrusted with turning that vision into a reality.
Architects and Designers	Various architects and urban planners were engaged to design the new district, preserving parts of the old prison's heritage while ensuring a modern, sustainable design. Firms and individuals in this category might have evolved over time, so checking the latest collaborations would be essential.
Local Community	Residents and businesses in and around the Bajes Kwartier area are also important stakeholders. Their feedback, needs, and aspirations are considered in the development process to ensure community integration.
Tech Companies or Consultants	If there's a specific "smart district" initiative, technology companies or consultants specializing in smart city solutions, such as sensors, data analytics, connectivity, and automation, would be involved.
Community Organizations	These could be involved in ensuring that local residents' needs and aspirations are considered and integrated into the development.
Sustainability Experts	Given the project's strong emphasis on sustainability, experts in green building, urban agriculture, waste management, and renewable energy were likely consulted to make Bajes Kwartier a model for sustainable urban living.
Contractors and Construction Companies	They play a critical role in the actual building and development of the district.

¹⁴⁴ Available at [Bajes Kwartier \(oma.com\)](https://oma.com) (Accessed: 25 March 2025)

¹⁴⁵ Available at [Bajeskwartier Amsterdam – LOLA](https://bajeskwartieramsterdam.com) (Accessed: 25 March 2025)

¹⁴⁶ Available at [THE ROBIN AMSTERDAM - Barcode \(barcodearchitects.com\)](https://barcodearchitects.com) (Accessed: 25 March 2025)

HISTORY TIMELINE

1970	Bijlmerbajes Construction: The Bijlmerbajes prison, originally known as the Amsterdam Bijlmerbajes, was built in the 1970s. It consisted of six towers and was known for its modernist architecture.
1978	The Bijlmerbajes, a prison complex designed by architect Jacoba Pot-Keegstra, opens in Overamstel, Amsterdam. The complex comprises six towers connected by a long corridor, nicknamed 'de Kalverstraat'. It was initially intended to be a humane institution focused on rehabilitation rather than punishment.
Late 20th Century	Over time, the Bijlmerbajes undergoes several changes. The prison becomes more secure due to numerous escapes, leading to a shift towards a traditional prison model with increased restrictions and security measures.
Early 21st Century	The Bijlmerbajes closes. The Dutch government, through Rijksvastgoedbedrijf, initiates a tender process to redevelop the site into a new urban district.
2016	Prison Closure and Sale: The Dutch government closed the prison and subsequently decided to put the site up for sale. The decision to sell and repurpose the site was driven by various factors, including changes in penal policy, resulting in reduced prison populations.
2017	Selection of Redevelopment Plan: The city of Amsterdam announced a redevelopment competition for the site. A consortium named "AM, AT Capital, and Cairn" won with their vision to turn the former prison into a new, vibrant urban district called Bajes Kwartier. Their plan emphasized sustainability, community integration, and green, car-free living.
2018	onwards - Redevelopment Initiatives: Key principles were outlined for the redevelopment: Sustainability: The project would be a leading example of sustainable urban living. This included reusing 98% of the materials from the prison in the new construction. Car-Free Environment: The new district would prioritize walking, cycling, and public transportation, minimizing car usage. Diverse Housing: A range of housing options, from affordable units to luxury apartments, was planned. Green Spaces: Plans to integrate parks, gardens, and green spaces were outlined. Preservation of Heritage: Some of the original structures, like guard towers, would be retained and integrated creatively.
2020	Ongoing Construction: Development continues with the creation of around 1,350 homes, including a mix of social housing, rentals, and luxury apartments. Public spaces are designed to promote healthy living with features like community gardens, sports facilities, and pedestrian and cycling paths. The area integrates historical elements from the prison, such as reused building materials and repurposed prison bars.
2023	The Bajes Kwartier had seen significant development work by this time, but the completion of all phases might still be ongoing.

¹⁴⁷ Available at [Bajeskwartier Amsterdam - Stadsleven opnieuw uitgevonden - Bajeskwartier](#) (Accessed: 25 March 2025)¹⁴⁸ Available at [ArchDaily | Broadcasting Architecture Worldwide](#) (Accessed: 25 March 2025)¹⁴⁹ Available at [LOLA Landscape Architects - LOLA](#) (Accessed: 25 March 2025)

10. BAJES KWARTIER - AMSTERDAM, NETHERLAND

LOCATION



Fig. 119. Location of Bajes Kwartier within Amsterdam.
Author: Dashnor Kadiri, 2024¹⁵⁰



Fig. 120. Aerial view of the site before development.¹⁵¹

URBAN CONTEXT MAP



Fig. 121. Urban context map of Bajes Kwartier.
Author: Dashnor Kadiri, 2024¹⁵²

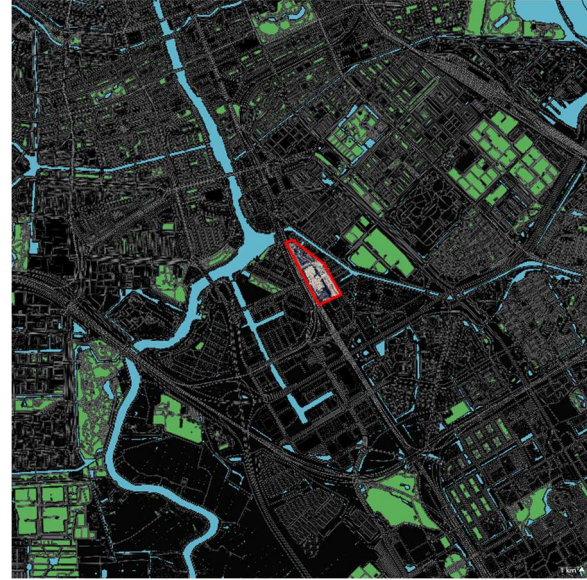


Fig. 122. Development progress map of Bajes Kwartier.
Author: Dashnor Kadiri, 2024¹⁵³

¹⁵⁰ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁵¹ Available at [Bajes Kwartier \(oma.com\)](#) (Accessed: 25 March 2025)

¹⁵² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁵³ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

10. BAJES KWARTIER – AMSTERDAM, NETHERLANDS

EXPECTED APPEARANCE



Fig. 123. Aerial view of Bajes Kwartier, Amsterdam.¹⁵⁴



Fig. 124. View of Bajes Kwartier, Amsterdam.¹⁵⁵



Fig. 125. View from the Park.¹⁵⁶



Fig. 126. View inside the Neighbourhood.¹⁵⁷



Fig. 127. Inside Neighbourhood.¹⁵⁸



Fig. 128. Life inside the Neighbourhood area.¹⁵⁹

¹⁵⁴ Available at [Bajes Kwartier \(oma.com\)](https://bajeskwartier.oma.com) (Accessed: 25 March 2025)

¹⁵⁵ Available at [Bajes Kwartier \(oma.com\)](https://bajeskwartier.oma.com) (Accessed: 25 March 2025)

¹⁵⁶ Available at [Bajes Kwartier \(oma.com\)](https://bajeskwartier.oma.com) (Accessed: 25 March 2025)

¹⁵⁷ Available at [Bajes Kwartier \(oma.com\)](https://bajeskwartier.oma.com) (Accessed: 25 March 2025)

¹⁵⁸ Available at [Bajes Kwartier \(oma.com\)](https://bajeskwartier.oma.com) (Accessed: 25 March 2025)

¹⁵⁹ Available at [Bajes Kwartier \(oma.com\)](https://bajeskwartier.oma.com) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods	
11. KNOOP XL - EINDHOVEN, NETHERLAND ^{160,161,162,163}	
FACTS AND FIGURES	
Location (city, state)	Eindhoven, Netherlands
Previous use	Previously used for industrial purposes and as a transportation hub.
Total land area	55 hectares
Green and open space	The project includes significant green and open spaces, focusing on parks, urban gardens, and public plazas.
Lake	/
New Buildings	The development includes a variety of new buildings such as residential units, office spaces, retail areas, and cultural facilities.
Residential units	2,000
Number of residents (projected)	>4,000
Number of residents (currently)	/
Workplaces (potential)	>5,000
Workplaces (currently)	/
Year of Master plan	2017
Author of the project	KCAP
Construction time	2019-2028
Total investment volume	€ 1,5 billion total investment
Goal	What used to be a single-purpose neighbourhood is being transformed into a versatile motor of urban progress.
ACTORS INVOLVED	
Developers	Knoop XL Consortium: A collaboration of various public and private sector partners managing and coordinating the redevelopment.
Architects and Urban Planners	KCAP: The architectural firm responsible for the master plan.
Construction Companies	Multiple construction companies are involved in different phases of the project, including both local and international firms.
Government and Municipal Authorities	City of Eindhoven: Provides regulatory oversight and support for the project. North Brabant Province: Supports the project financially and administratively.
Investors	Mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Bremen are involved in shaping the development through consultations and public engagement initiatives.

¹⁶⁰ Available at [KCAP Design Fellenoord/International Knoop XL, in Eindhoven | KCAP](#) (Accessed: 25 March 2025)

¹⁶¹ Available at [Fellenoord/Internationale Knoop XL Eindhoven by KCAP \(archiscene.net\)](#) (Accessed: 25 March 2025)

¹⁶² Available at [KnoopXL - Eindhoven Internationale Knoop XL](#) (Accessed: 25 March 2025)

¹⁶³ Available at [Visualizing Knoop XL, Eindhoven | KCAP](#) (Accessed: 25 March 2025)

11. KNOOP XL - EINDHOVEN, NETHERLAND**HISTORY TIMELINE**

1990s	Industrial and Transportation Hub: The area was used for industrial purposes and as a significant transportation hub in Eindhoven.
2000s	Decline in Industrial Use: The area saw a decline in industrial activities, leading to underutilization and discussions on redevelopment.
2010	Initial Planning: The City of Eindhoven began exploring options for redeveloping the underutilized area into a new urban neighborhood.
2017	Master Plan Development: KCAP, a renowned architectural and urban planning firm, developed the master plan for Knoop XL, focusing on sustainability and mixed-use development.
2018	Public Consultation and Approval: The master plan underwent public consultations and received approval from the city authorities.
2019	Construction Begins: Initial construction phases began, including land preparation and infrastructure development.
2020	Early Development: Construction of the first residential and commercial buildings commenced.
2021	Ongoing Development: Continued progress on residential units, public spaces, and additional office buildings.
2022	Expansion and Development: Ongoing construction and development of additional residential, commercial, and public buildings. Focus remains on sustainability and innovation.
2023	Current Status: The development of Knoop XL continues, with ongoing construction and increasing interest from businesses and residents.
	Completion by 2028: The entire Knoop XL project is expected to be fully completed by 2028, creating a vibrant, sustainable urban neighborhood with approximately 4,000 residents and 5,000 workplaces.

11. KNOOP XL - EINDHOVEN, NETHERLAND

LOCATION

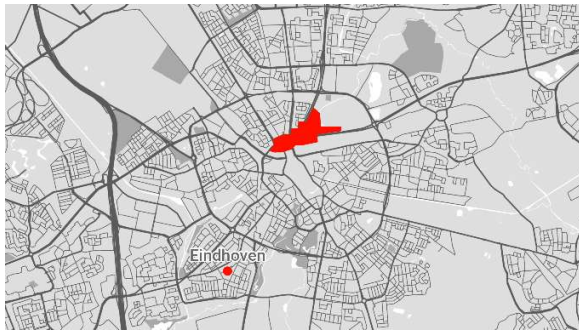


Fig. 129. Location of Knoop XL within Eindhoven.
Author: Dashnor Kadiri, 2024¹⁶⁴



Fig. 130. Aerial view of the site before development.¹⁶⁵

URBAN CONTEXT MAP

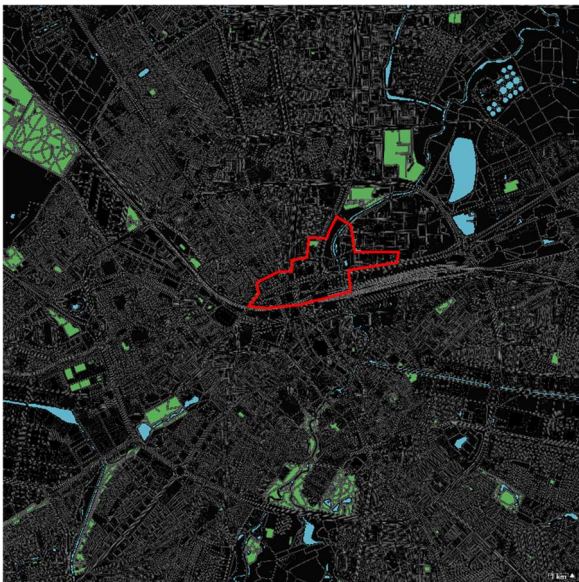


Fig. 131. Urban context map of Knoop XL, Eindhoven.
Author: Dashnor Kadiri, 2024¹⁶⁶

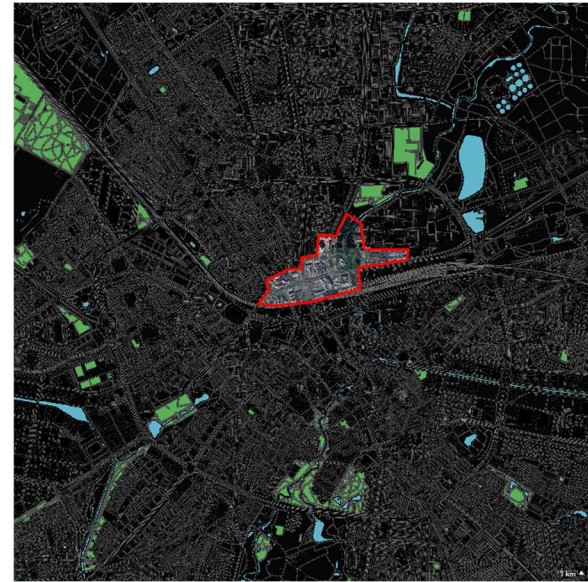


Fig. 132. Development progress map of Knoop XL.
Author: Dashnor Kadiri, 2024¹⁶⁷

¹⁶⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁶⁵ Available at [Conversion of the former Kellogg's grounds in Bremen \(ueberseestadt-bremen.de\)](#) (Accessed: 25 March 2025)

¹⁶⁶ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁶⁷ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

11. KNOOP XL - EINDHOVEN, NETHERLAND

EXPECTED APPEARANCE



Fig. 133. Aerial view of Knoop XL within Eindhoven.¹⁶⁸



Fig. 134. Aerial view of Knoop XL within Eindhoven.¹⁶⁹



Fig. 135. View from the River.¹⁷⁰



Fig. 136. Park of Knoop XL within Eindhoven.¹⁷¹



Fig. 137. Inside Neighbourhood.¹⁷²



Fig. 138. Life inside the Neighbourhood.¹⁷³

¹⁶⁸ Available at [Fellenoord, Eindhoven - KCAP](#) (Accessed: 03 August 2024)

¹⁶⁹ Available at [KnoopXL - Eindhoven Internationale Knoop XL](#) (Accessed: 25 March 2025)

¹⁷⁰ Available at [Fellenoord, Eindhoven - KCAP](#) (Accessed: 03 August 2024)

¹⁷¹ Available at [Fellenoord, Eindhoven - KCAP](#) (Accessed: 03 August 2024)

¹⁷² Available at [Fellenoord, Eindhoven - KCAP](#) (Accessed: 03 August 2024)

¹⁷³ Available at [Fellenoord, Eindhoven - KCAP](#) (Accessed: 03 August 2024)

Overview of selected Neighbourhoods

12. FREIHAM NORD - MÜNCHEN, GERMANY^{174,175,176,177,178}

FACTS AND FIGURES

Location (city, state)	München, Germany
Previous use	The area was primarily agricultural land before being earmarked for urban development.
Total land area	40 hectares
Green and open space	About 60% of the area is dedicated to green spaces and recreational areas.
Lake	The development includes water features and sustainable water management systems, but no large natural lake.
New Buildings	The project includes a mix of residential, commercial, educational, and cultural buildings.
Residential units	10,000
Number of residents (projected)	>25,000
Number of residents (currently)	/
Workplaces (potential)	>15,000
Workplaces (currently)	/
Year of Master plan	2013
Author of the project	WEST 8
Construction time	2016-2040
Total investment volume	€ /
Goal	The new district in the west of Munich

ACTORS INVOLVED

Developers	City of Munich: The primary entity responsible for planning and overseeing the development of Freiam North.
Architects and Urban Planners	WEST 8.
Construction Companies	A consortium of local and international construction companies are involved in different phases of the project, ensuring diverse expertise in building and infrastructure development.
Government and Municipal Authorities	City of Munich Urban Development Department: Provides regulatory oversight and support for the project. Bavaria State Government: Supports the project financially and administratively.
Investors	The project is funded through a mix of public and private investments, including municipal funds, real estate investment firms, and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants and firms ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Munich are actively involved in shaping the development through consultations and public engagement initiatives.

¹⁷⁴ Available at [Freiham Nord, Munich - West 8 | Arquitectura Viva](#) (Accessed: 25 March 2025)

¹⁷⁵ Available at [Freiham North Masterplan - West 8](#) (Accessed: 25 March 2025)

¹⁷⁶ Available at [2017 Sustainable Freiham.pdf \(muenchen.de\)](#) (Accessed: 25 March 2025)

¹⁷⁷ Available at [Freiham Nord | Munich Germany | WEST 8 \(worldlandscapearchitect.com\)](#) (Accessed: 25 March 2025)

¹⁷⁸ Available at [West 8 Winner of Freiham Nord Urban and Landscape Planning Competition, Munich - West 8](#) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

12. FREIHAM NORD - MÜNCHEN, GERMANY

HISTORY TIMELINE

1990s	The Freiham Nord area was predominantly used for agriculture, with open fields and farmland.
2000s	Early discussions and feasibility studies were conducted by the City of Munich to explore the potential for urban development in the Freiham Nord area.
2006	The City of Munich began strategic planning initiatives to transform Freiham Nord into a new urban district, aligning with the city's long-term growth and development.
2013	The master plan for Freiham Nord was developed, focusing on sustainable urban development, mixed-use buildings, and extensive green spaces. The plan was a collaboration between the City of Munich and several architectural and urban planning firms.
2014	The master plan underwent public consultations, and after extensive feedback and revisions, it was approved by the city authorities.
2016	Initial construction phases began, including infrastructure development, land clearing, and the start of residential and commercial building projects.
2017	The first residential units were completed, and the initial residents moved in, marking the beginning of community formation in Freiham Nord.
2018-2020	Continued construction and expansion of residential, commercial, and public buildings. Development of green spaces and public amenities, such as parks and playgrounds, progressed.
2021	Major milestones were reached with the completion of key infrastructure projects, including roads, public transportation links, and essential services.
2022	The neighborhood continued to grow with an increasing number of residents and businesses. Public facilities, including schools and community centers, were established to support the growing community.
2023	The development of Freiham Nord continues, with ongoing construction of additional residential units, commercial spaces, and public amenities. Focus remains on sustainability and creating a vibrant, mixed-use urban district.
Future Projections	The entire Freiham Nord project is expected to be fully completed by 2040, providing a sustainable, well-integrated urban neighborhood with approximately 25,000 residents and 15,000 workplaces.

12. FREIHAM NORD - MÜNCHEN, GERMANY

LOCATION



Fig. 139. Location of Freiam North within München.
Author: Dashnor Kadiri, 2024¹⁷⁹



Fig. 140. Aerial view of the site before development.
Author: Dashnor Kadiri, 2024¹⁸⁰

URBAN CONTEXT MAP

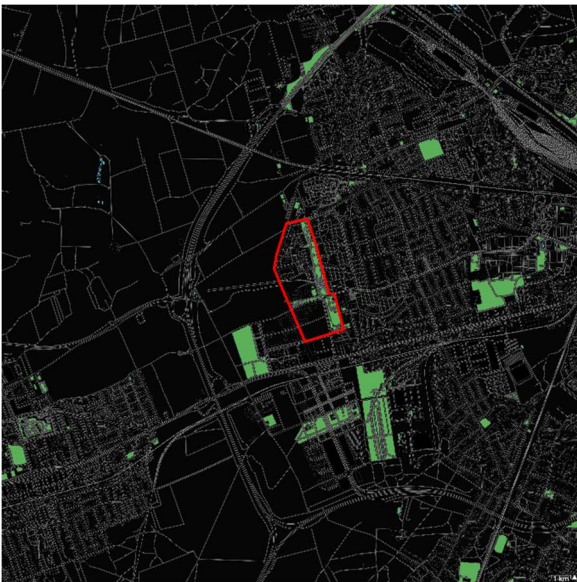


Fig. 141. Urban context map of Freiam North, München.
Author: Dashnor Kadiri, 2024¹⁸¹

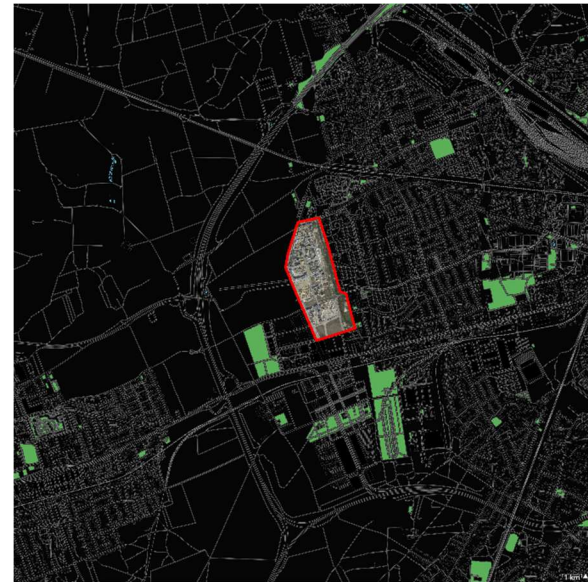


Fig. 142. Development progress map of Freiam North.
Author: Dashnor Kadiri, 2024¹⁸²

¹⁷⁹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁸⁰ Available at [Freiam North Masterplan - West 8](#) (Accessed: 25 March 2025)

¹⁸¹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁸² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

12. FREIHAM NORD - MÜNCHEN, GERMANY

EXPECTED APPEARANCE



Fig. 143. Aerial view of Freiham Nord masterplan.¹⁸³

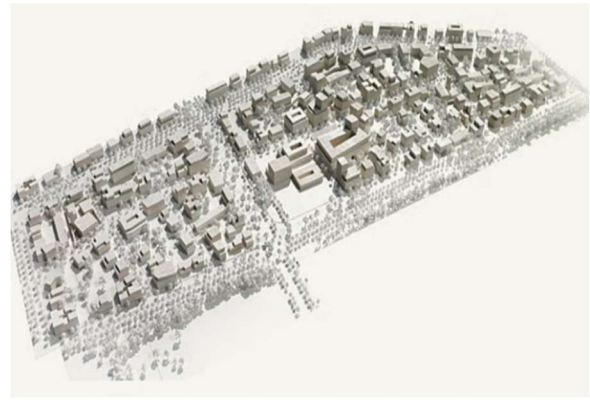


Fig. 144. Aerial view of Freiham Nord Masterplan.¹⁸⁴

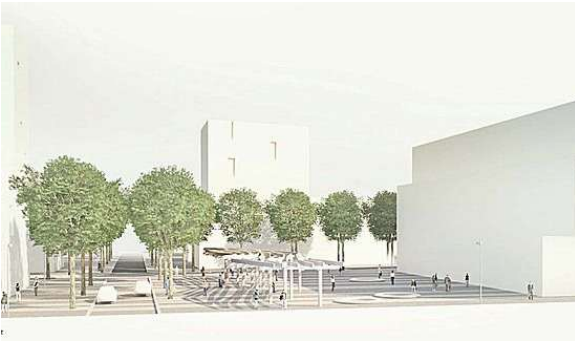


Fig. 145. Inside Neighbourhood.¹⁸⁵



Fig. 146. Park of Freiham Nord.¹⁸⁶



Fig. 147. Park of Freiham Nord.¹⁸⁷



Fig. 148. Street section.¹⁸⁸

¹⁸³ Available at (bustler.net) (Accessed: 25 March 2025)

¹⁸⁴ Available at (bustler.net) (Accessed: 25 March 2025)

¹⁸⁵ Available at (bustler.net) (Accessed: 25 March 2025)

¹⁸⁶ Available at (bustler.net) (Accessed: 25 March 2025)

¹⁸⁷ Available at (bustler.net) (Accessed: 25 March 2025)

¹⁸⁸ Available at (bustler.net) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods	
13. TIRANA RIVERSIDE - TIRANA, ALBANIA ^{189,190,191}	
FACTS AND FIGURES	
Location (city, state)	Tirana, Albania
Previous use	Low residential
Total land area	290.000 m ²
Green and open space	50%
Lake	50,000 m ²
New Buildings	/
Residential units	/
Number of residents (projected)	>12,000
Number of residents (currently)	/
Workplaces (potential)	>12,000
Workplaces (currently)	/
Year of Master plan	2019
Author of the project	Stefano Boeri Architetti, SON-Group
Construction time	2020 - ongoing
Total investment volume	€ /
Goal	Tirana's New Eco-Village Designed to Respond to 21st Century Challenges
ACTORS INVOLVED	
Stefano Boeri Architetti	The firm, led by Stefano Boeri, focuses on integrating sustainability and smart city technologies into the development. Partners and key figures include Francesca Cesa Bianchi, Carlotta Capobianco, and Corrado Longa.
SON-Group	A local partner that collaborates closely with Stefano Boeri Architetti to ensure the integration of local expertise and production capabilities. They play a significant role in the project's implementation and alignment with regional needs.
Municipality of Tirana	The primary client and stakeholder overseeing the project, ensuring it meets the city's urban planning and sustainability objectives.
Transsolar Energietechnik	Provides sustainability consultancy, focusing on energy-efficient solutions and climate-responsive designs.
Mobility in Chain	Responsible for mobility planning, ensuring efficient and sustainable transportation solutions within the neighbourhood.
Studio Laura Gatti	Agronomist consultants focusing on the integration of greenery and landscaping within the urban environment
SCE Project	Offers structural engineering services, contributing to the safe and resilient design of the buildings.
ESA Engineering	Provides MEP (Mechanical, Electrical, and Plumbing) engineering expertise to ensure the infrastructure supports the neighbourhood's sustainable goals.

¹⁸⁹ Available at [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)

¹⁹⁰ Available at [Plan directeur Tirana 2030 Riverside | Transsolar | KlimaEngineering](#) (Accessed: 25 March 2025)

¹⁹¹ Available at [GLOBAL-VIRTUAL-WORKSHOP-SESSION-1-TIRANA.pdf \(urbanresiliencehub.org\)](#) (Accessed: 25 March 2025)

HISTORY TIMELINE

1990s	Urban Decline: Throughout the 1990s, Tirana, like many cities in Albania, experiences significant urban challenges due to economic transition and political instability. Urban infrastructure begins to deteriorate, and there is a pressing need for urban regeneration.
2000s	Initial Urban Regeneration Efforts: The early 2000s see the first steps towards urban redevelopment in Tirana, focusing on improving public spaces and infrastructure. These efforts lay the groundwork for more ambitious projects in the future.
2010s	Urban Planning and Development Initiatives: During the 2010s, Tirana's municipal government embarks on various urban planning initiatives to revitalize the city. The focus shifts towards sustainable development and enhancing urban livability.
2017	Conceptualization of Tirana Riverside: The idea for Tirana Riverside begins to take shape. Urban planners and city officials start envisioning a sustainable, mixed-use neighbourhood to address the city's growing needs and enhance resilience.
2019	Post-Earthquake Planning: After the 2019 earthquake, the need for resilient housing becomes more urgent. The Tirana Riverside project gains momentum as part of the recovery efforts, aiming to provide safe and sustainable housing solutions for displaced families.
2020	Project Announcement: Stefano Boeri Architetti, in collaboration with SON-Group, announces the Tirana Riverside master plan. The project is designed to be a self-sufficient, zero-emission neighbourhood, incorporating smart city technologies and extensive green spaces.
2021	Design and Planning: Detailed planning continues with an emphasis on integrating sustainable technologies like solar power, geothermal energy, and green architecture. The project aims to accommodate 12,000 residents and plant 12,000 trees to promote biodiversity and sustainability.
2022	Construction Begins: Initial construction phases start, focusing on developing infrastructure and the first residential units. Prefabricated structures are used to ensure rapid and sustainable building processes.
2023	Ongoing Development: Development continues with the construction of residential buildings, public amenities, and green spaces. The neighbourhood integrates features like vertical gardens, communal green areas, and co-working spaces to support a vibrant community life.
2024	Further Development and Planning: As the project progresses, further development focuses on expanding residential areas, public services, and green infrastructure. The neighbourhood continues to evolve towards its goal of being a model for sustainable urban living.
2024-2030	Full Implementation: The project is expected to be fully operational by 2030, providing a sustainable and vibrant urban environment. The neighbourhood will include educational institutions, retail spaces, and extensive recreational areas, setting a benchmark for urban regeneration in Europe.

¹⁹² Available at [Home | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)¹⁹³ Available at [Tirana - Wikipedia](#) (Accessed: 25 March 2025)¹⁹⁴ Available at [Tirana Riverside - The Index Project](#) (Accessed: 25 March 2025)

13. TIRANA RIVERSIDE - TIRANA, ALBANIA

LOCATION



Fig. 149. Location of Tirana Riverside within Tirana.
Author: Dashnor Kadiri, 2024¹⁹⁵



Fig. 150. Aerial view of the site before development.¹⁹⁶

URBAN CONTEXT MAP



Fig. 151. Urban context map of Tirana Riverside.
Author: Dashnor Kadiri, 2024¹⁹⁷



Fig. 152. Development progress map of Tirana Riverside.
Author: Dashnor Kadiri, 2024¹⁹⁸

¹⁹⁵ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁹⁶ Available at [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)

¹⁹⁷ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁹⁸ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

13. TIRANA RIVERSIDE – TIRANA, ALBANIA

EXPECTED APPEARANCE



Fig. 153. Aerial view of Tirana Riverside, Tirana.¹⁹⁹



Fig. 154. Aerial view of Tirana Riverside, Tirana.²⁰⁰



Fig. 155. View from the Park.²⁰¹



Fig. 156. View inside the Neighbourhood.²⁰²



Fig. 157. Inside Neighbourhood.²⁰³

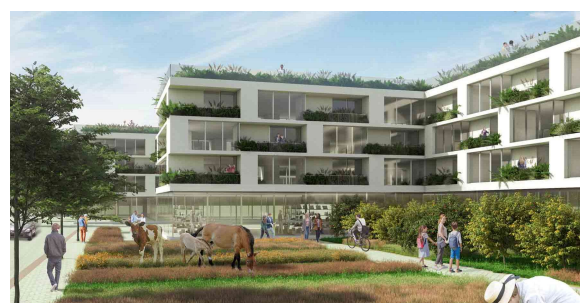


Fig. 158. Life inside the Neighbourhood area.²⁰⁴

¹⁹⁹ Available at [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)

²⁰⁰ Available at [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)

²⁰¹ Available at [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)

²⁰² Available at [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)

²⁰³ Available at [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)

²⁰⁴ Available at [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods

14. OBERBILLWERDER - HAMBURG, GERMANY^{205,206,207,208,209}

FACTS AND FIGURES

Location (city, state)	Hamburg, Germany
Previous use	The area was primarily agricultural land and partially undeveloped open space.
Total land area	118 hectares
Green and open space	Aiming for about 60% of the area to be dedicated to parks, gardens, water bodies, and public spaces.
Lake	/
New Buildings	The project plans to construct a variety of new buildings, including residential units, commercial spaces, educational facilities, and cultural venues.
Residential units	7,000
Number of residents (projected)	>15,000
Number of residents (currently)	/
Workplaces (potential)	>5,000
Workplaces (currently)	/
Year of Master plan	2018
Author of the project	The project master plan was developed by the architecture and urban planning firm ADEPT, in collaboration with Karres en Brands.
Construction time	2021-2035
Total investment volume	€ 2,5 billion total investment
Goal	Oberbillwerder is the largest one-off development in Germany since Hafen City

ACTORS INVOLVED

Developers	IBA Hamburg GmbH
Architects and Urban Planners	ADEPT: The primary architectural firm responsible for the master plan. Karres en Brands: Collaborated on the urban planning and landscape architecture.
Construction Companies	Various local and international construction companies are involved in different phases of the project.
Government and Municipal Authorities	City of Hamburg: Provides regulatory oversight and support for the project.
Investors	Mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Hamburg are involved in shaping the development through consultations and public engagement initiatives.

²⁰⁵ Available at [Home - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://www.iba-hamburg.de/home) (Accessed: 25 March 2025)

²⁰⁶ Available at [Masterplans | ArchDaily](https://www.archdaily.com/masterplans) (Accessed: 25 March 2025)

²⁰⁷ Available at [Broschuere-Oberbillwerder EN Stand-2023.pdf \(iba-hamburg.de\)](https://www.broschuere-oberbillwerder.de/EN/Stand-2023.pdf) (Accessed: 25 March 2025)

²⁰⁸ Available at [Oberbillwerder - The Connected City \(stateofgreen.com\)](https://www.stateofgreen.com/oberbillwerder-the-connected-city) (Accessed: 25 March 2025)

²⁰⁹ Available at [The Connected City - Karres en Brands](https://www.karresenbrands.com/the-connected-city) (Accessed: 25 March 2025)

HISTORY TIMELINE

1990s	The area was primarily used for agriculture and was largely undeveloped open space.
2000s	The City of Hamburg began considering the potential for urban development in the Oberbillwerder area as part of its long-term urban planning strategy.
2010	Initial strategic planning initiatives were undertaken by the City of Hamburg to explore the feasibility of transforming Oberbillwerder into a new urban district.
2016	Detailed concept development and feasibility studies were conducted, focusing on sustainable urban development, mixed-use buildings, and green spaces.
2017	The City of Hamburg engaged in public consultations to gather feedback and input from residents and stakeholders.
2018	The master plan for Oberbillwerder was finalized by ADEPT in collaboration with Karres en Brands. The plan emphasized sustainability, green spaces, and a mix of residential, commercial, and public buildings.
2019	The master plan received approval from city authorities, and preparations for construction, including land acquisition and infrastructure planning, began.
2020	Initial infrastructure development commenced, including roadworks, utilities, and preliminary groundwork.
2021	The first phases of construction started, focusing on residential and commercial buildings.
2022	Continued construction of residential units, public spaces, and initial commercial buildings. Development of parks and green spaces also began.
2023	The development of Oberbillwerder is ongoing, with significant progress in residential construction and public amenities. The community is gradually taking shape with new residents and businesses moving in.
Future Projections	The entire Oberbillwerder project is expected to be fully completed by 2035, providing a sustainable, well-integrated urban neighborhood with approximately 15,000 residents and 5,000 workplaces.

14. OBERBILLWERDER - HAMBURG, GERMANY

LOCATION



Fig. 159. Location of Oberbillwerder within Hamburg.
Author: Dashnor Kadiri, 2024²¹⁰



Fig. 160. Aerial view of the site before development.²¹¹

URBAN CONTEXT MAP

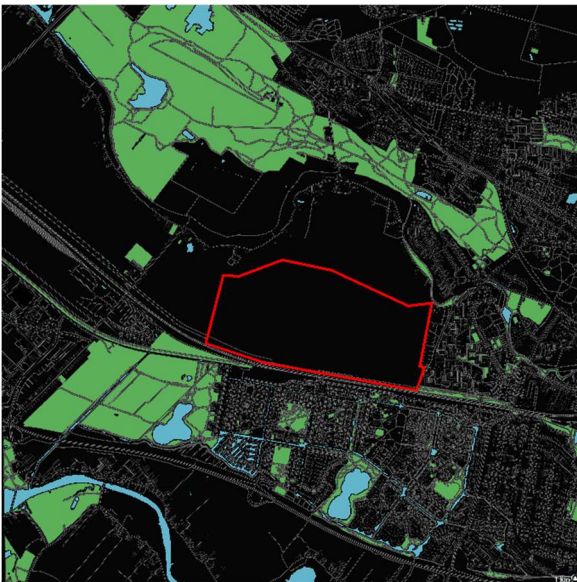


Fig. 161. Urban context map of Oberbillwerder.
Author: Dashnor Kadiri, 2024²¹²



Fig. 162. Development progress map of Oberbillwerder.
Author: Dashnor Kadiri, 2024²¹³

²¹⁰ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²¹¹ Available at [karres+brands through to the next round for Oberbillwerder, Hamburg - Karres en Brands](#) (Accessed: 25 March 2025)

²¹² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²¹³ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

14. OBERBILLWERDER - HAMBURG, GERMANY

EXPECTED APPEARANCE



Fig. 163. Aerial view of Knoop XL within Eindhoven.²¹⁴



Fig. 164. View from the park.²¹⁵



Fig. 165. View from the canal.²¹⁶



Fig. 166. Residential area view.²¹⁷



Fig. 167. Inside Neighbourhood.²¹⁸



Fig. 168. Life inside the Neighbourhood.²¹⁹

²¹⁴ Available at [The Connected City - Karres en Brands](#) (Accessed: 25 March 2025)

²¹⁵ Available at [The Connected City - Karres en Brands](#) (Accessed: 25 March 2025)

²¹⁶ Available at [The Connected City - Karres en Brands](#) (Accessed: 25 March 2025)

²¹⁷ Available at [The Connected City - Karres en Brands](#) (Accessed: 25 March 2025)

²¹⁸ Available at [The Connected City - Karres en Brands](#) (Accessed: 25 March 2025)

²¹⁹ Available at [The Connected City - Karres en Brands](#) (Accessed: 25 March 2025)

Overview of selected Neighbourhoods	
15. GREDELJ - ZAGREB, CROATIA ^{220,221,222}	
FACTS AND FIGURES	
Location (city, state)	Zagreb, Croatia
Previous use	Railway station / Industrial area
Total land area	400.000 m ²
Green and open space	50%
Lake	No lake
New Buildings	1.021.241 m ²
Residential units	>5,721
Number of residents (projected)	>17.000
Number of residents (currently)	/
Workplaces (potential)	>20.000
Workplaces (currently)	/
Year of Master plan	2020
Author of the project	IGH, Oliver Kumrić, Dubravka Dujmović, Stjepan Kralj, Slobodan Kljajić de Architekten Cie., Branimir Medić, Sunčana Rapačić 3LHD, Marko Dabrović, Zoran Šuša, Goran Mraović, Ida Ister HDC, Zoran Kasum, Ružica Herceg Colliers International, Vedrana Likan, Klara Matić, Filip Dumbović MS Partners, Andrej Šoš Maceljski, Nikola Berović
Construction time	/
Total investment volume	€ 1.563.226.131 € total investment
Goal	Urban revitalization of the zone of the former Gredelj factory
ACTORS INVOLVED	
The City of Zagreb	One of our most important partners is the City of Zagreb and its institutions.
3LHD	This Croatian architectural firm leads the urban design and master planning for the Gredelj project. They focus on integrating modern architecture with the preservation of industrial heritage.
de Architekten Cie.	A Dutch architectural firm collaborating on the project, contributing to urban planning and architectural design.
PwC (PricewaterhouseCoopers)	Provides strategic consulting, including financial planning and market analysis.
Colliers International	Responsible for market research and real estate consulting, ensuring that the development meets market demands and economic viability.
TATRAVAGÓNKA a.s	Slovak investor in Gredelj.
M&S Partners	Legal consulting.
Institut IGH	A Croatian institute providing expertise in traffic and infrastructure planning, ensuring the new neighbourhood is well-integrated with existing transport networks
European Bank for Reconstruction and Development (EBRD)	Provides financial support and investments to facilitate the redevelopment project.

²²⁰ Available at [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 26 March 2025)

²²¹ Available at [\(total-croatia- news.com\)](#) (Accessed: 26 March 2025)

²²² Available at [3LHD](#) (Accessed: 26 March 2025)

HISTORY TIMELINE

1960s-1980s	The Gredelj site expands significantly, becoming a major industrial hub in Zagreb. The factory's production capabilities grow to include various types of railway vehicles, such as trams, electric and diesel locomotives, and freight wagons. This period marks the peak of Gredelj's industrial activity, with extensive facilities covering a large area near the city's center.
1990s	Following the breakup of Yugoslavia, the Gredelj site continues to operate, though it faces the challenges of transitioning from a state-run enterprise to operating in a market economy. The site remains a key industrial area in Zagreb.
2000s	The global financial crisis impacts Gredelj's operations. The company faces reduced demand for its products, leading to financial difficulties. Despite these challenges, the site continues to function, though with reduced activity.
2001	The factory experiences significant financial strain due to a lack of orders from Croatian Railways (HŽ), a major client. This situation leads to severe financial instability for the company.
2012	Gredelj declares bankruptcy but continues limited production under bankruptcy conditions. During this period, the factory's operations are relocated from the central Zagreb site to a new location in Vukomerec. The original site, now vacated, becomes available for redevelopment.
2018	An urban revitalization plan is proposed for the former Gredelj site. The plan aims to transform the area into a mixed-use urban district, integrating residential, commercial, and cultural spaces while preserving elements of its industrial heritage.
2021	Planning for the redevelopment of the original Gredelj site progresses, involving multiple stakeholders and consultants.
2022	Initial phases of construction begin, focusing on infrastructure and preparation of the site for new developments. The project includes plans for green spaces, public amenities, and modern residential buildings.
2023	The redevelopment of the Gredelj site continues with the construction of new buildings and the integration of modern urban design principles. The project aims to create a vibrant, sustainable urban neighborhood that enhances connectivity and quality of life for residents.
2024	The Gredelj site continues to evolve, with further development of residential, commercial, and cultural spaces. The project is expected to significantly impact the urban landscape of Zagreb, providing a model for sustainable urban redevelopment.

²²³ Available at [FOTO U centru Zagreba ruši se 14 zgrada: Priprema se veliko parkiralište, pogledajte radove | Večernji.hr](https://fotoucentruzagreba.ruhi.se/14-zgrada-priprema-se-veliko-parkiralište-pogledajte-radove-vecernji.hr) (vecernji.hr) (Accessed: 26 March 2025)

²²⁴ Available at [3LHD](https://3lhd.hr) (Accessed: 26 March 2025)

²²⁵ Available at [TŽV Gredelj - Wikipedia](https://trzvgredelj-wikipedia) (Accessed: 26 March 2025)

15. GREDELJ - ZAGREB, CROATIA

LOCATION

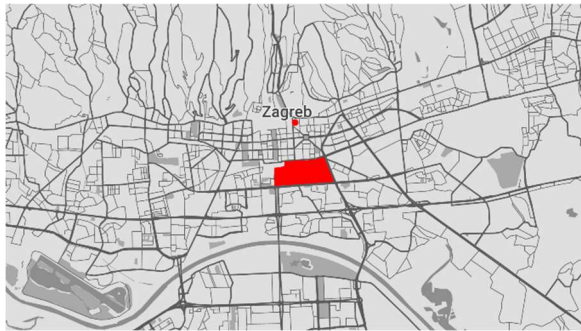


Fig. 169. Location of Gredelj within Zagreb.
Author: Dashnor Kadiri, 2024²²⁶



Fig. 170. Aerial view of the site before development.²²⁷

URBAN CONTEXT MAP



Fig. 171. Urban context map of Gredelj.
Author: Dashnor Kadiri, 2024²²⁸



Fig. 172. Development progress map of Gredelj.
Author: Dashnor Kadiri, 2024²²⁹

²²⁶ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²²⁷ Available at [TŽV Gredelj izlazi iz stečaja \(lidermedia.hr\)](#) (Accessed: 26 March 2025)

²²⁸ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²²⁹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

15. GREDELJ – ZAGREB, CROATIA

EXPECTED APPEARANCE



Fig. 173. Aerial view of Gredelj, Zagreb.²³⁰

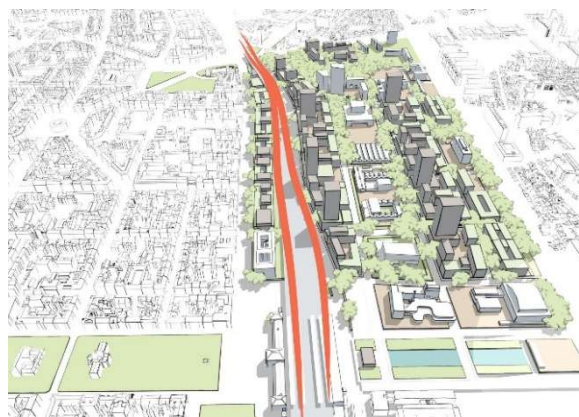


Fig. 174. Aerial view of Gredelj.²³¹



Fig. 175. View from the Park.²³²



Fig. 176. View inside the Neighbourhood.²³³



Fig. 177. Inside Neighbourhood.²³⁴



Fig. 178. Life inside the Neighbourhood area.²³⁵

²³⁰ Available at [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 26 March 2025)

²³¹ Available at [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 26 March 2025)

²³² Available at [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 26 March 2025)

²³³ Available at [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 26 March 2025)

²³⁴ Available at [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 26 March 2025)

²³⁵ Available at [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 26 March 2025)

Overview of selected Neighbourhoods

16. SMÍCHOV CITY - PRAGUE, CZECH REPUBLIC^{236,237,238,239,240,241}

FACTS AND FIGURES

Location (city, state)	Prague, Czech Republic
Previous use	The area was previously used for industrial purposes, including a railway station and various industrial facilities.
Total land area	20 hectares
Green and open space	25%
Lake	/
New Buildings	The development includes a variety of new buildings such as residential units, office spaces, retail areas, and cultural facilities.
Residential units	3,500
Number of residents (projected)	>4,800
Number of residents (currently)	/
Workplaces (potential)	>9,000
Workplaces (currently)	/
Year of Master plan	2016
Author of the project	A69 – Architekti
Construction time	2019-2032
Total investment volume	€ 600 million
Goal	To transform the Smíchov district, an area traditionally associated with industry and transportation, into a vibrant, modern, and sustainable urban neighborhood.

ACTORS INVOLVED

Developers	Sekyra Group
Architects and Urban Planners	A69 – Architekti: The architectural firm responsible for the master plan.
Construction Companies	Multiple construction companies are involved in different phases of the project, including both local and international firms.
Government and Municipal Authorities	City of Prague: Provides regulatory oversight and support for the project. Czech Government: Supports the project financially and administratively.
Investors	The project is funded through a mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants and firms ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Prague are involved in shaping the development through consultations and public engagement initiatives.

²³⁶ Available at [Smíchov City – North | Sekyra Group](#) (Accessed: 26 March 2025)

²³⁷ Available at [IPR Praha: Smíchov City](#) (Accessed: 26 March 2025)

²³⁸ Available at [O projektu Smíchov City – Smíchov City \(praha5.cz\)](#) (Accessed: 26 March 2025)

²³⁹ Available at [Realizace komplet angl.pdf \(iprpraha.cz\)](#) (Accessed: 26 March 2025)

²⁴⁰ Available at [Smíchov City - North | a69 architekti](#) (Accessed: 26 March 2025)

²⁴¹ Available at [Development projects Prague | Sekyra Group](#) (Accessed: 26 March 2025)

15. SMÍCHOV CITY - PRAGUE, CZECH REPUBLIC**HISTORY TIMELINE**

1990s	The Smíchov area was predominantly used for industrial purposes, including a railway station, factories, and warehouses.
2000s	Industrial activities in the area began to decline, leading to underutilization and the city considering redevelopment options.
2010	The City of Prague began exploring options for redeveloping the underutilized industrial area into a new urban neighborhood.
2016	The master plan for Smíchov City was developed by A69 – Architekti, focusing on sustainable urban development, mixed-use buildings, and extensive green spaces.
2017	The master plan underwent public consultations and received approval from the city authorities.
2018	Preparations for construction, including land acquisition and infrastructure planning, began.
2019	Initial construction phases began, including infrastructure development, land clearing, and the start of residential and commercial building projects.
2020	Construction of the first residential and commercial buildings commenced, focusing on creating a vibrant mixed-use urban area.
2021	Key infrastructure projects, such as roads and utilities, were completed. Development of parks and public spaces also began.
2022	Continued construction and expansion of residential, commercial, and public buildings. Development of green spaces and public amenities progressed.
2023	The development of Smíchov City continues, with ongoing construction of additional residential units, commercial spaces, and public amenities. The community is gradually taking shape with new residents and businesses moving in.
Future Projections	The entire Smíchov City project is expected to be fully completed by 2032, creating a vibrant, sustainable urban neighborhood with approximately 8,000 residents and 9,000 workplaces.

Overview of selected Neighbourhoods

16. SMÍCHOV CITY - PRAGUE, CZECH REPUBLIC

LOCATION



Fig. 179. Location of Smíchov City within Praga.
Author: Dashnor Kadiri, 2024²⁴²



Fig. 180. Aerial view of the site before development.²⁴³

URBAN CONTEXT MAP

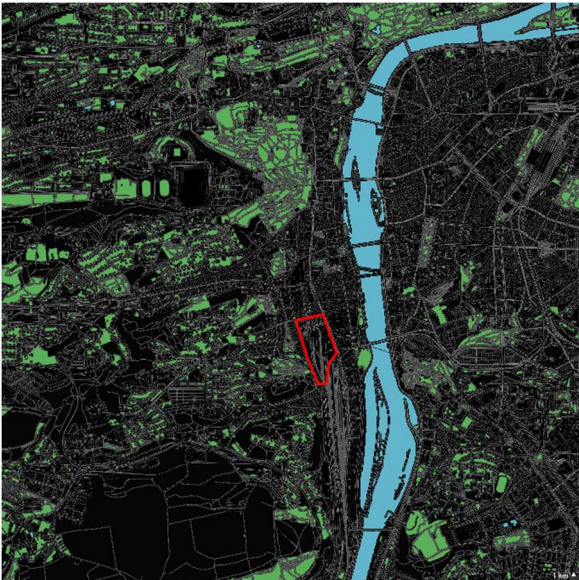


Fig. 181. Urban context map of Smíchov City.
Author: Dashnor Kadiri, 2024²⁴⁴

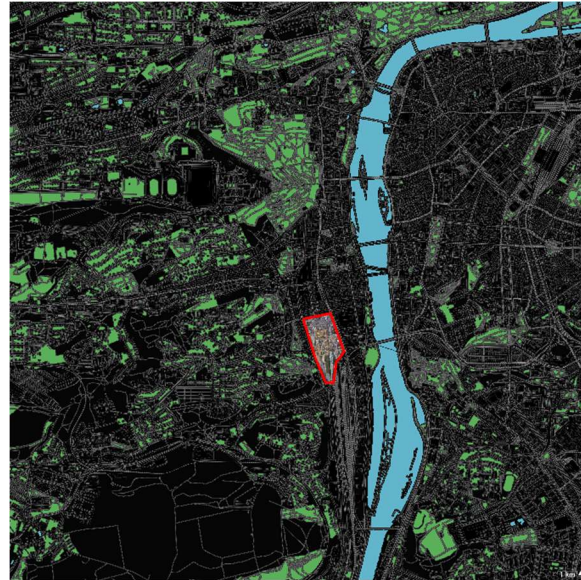


Fig. 182. Development progress map of Smíchov City.
Author: Dashnor Kadiri, 2024²⁴⁵

²⁴² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁴³ Available at [Prague's Smíchov district was once its own city - Prague, Czech Republic \(expats.cz\)](#) (Accessed: 26 March 2025)

²⁴⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁴⁵ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

16. SMÍCHOV CITY - PRAGUE, CZECH REPUBLIC

EXPECTED APPEARANCE



Fig. 183. Aerial view of Smíchov City within Praga.²⁴⁶



Fig. 184. Aerial View of Smíchov City.²⁴⁷



Fig. 185. Street views.²⁴⁸



Fig. 186. Residential area view.²⁴⁹



Fig. 187. Inside Neighbourhood.²⁵⁰



Fig. 188. Life inside the Neighbourhood.²⁵¹

²⁴⁶ Available at [Smíchov City – North | Sekyra Group](#) (Accessed: 26 March 2025)

²⁴⁷ Available at [Smíchov City – North | Sekyra Group](#) (Accessed: 26 March 2025)

²⁴⁸ Available at [Smíchov City – North | Sekyra Group](#) (Accessed: 26 March 2025)

²⁴⁹ Available at [Smíchov City – North | Sekyra Group](#) (Accessed: 26 March 2025)

²⁵⁰ Available at [Smíchov City – North | Sekyra Group](#) (Accessed: 26 March 2025)

²⁵¹ Available at [Smíchov City – North | Sekyra Group](#) (Accessed: 26 March 2025)

Overview of selected Neighbourhoods

17. AM SANDHAUS - BERLIN-BUCH, GERMANY^{252,253,254}

FACTS AND FIGURES

Location (city, state)	Berlin, Germany
Previous use	The area was primarily used for agricultural purposes and as open space.
Total land area	57 hectares
Green and open space	50%
Lake	/
New Buildings	The project plans to construct a variety of new buildings, including residential units, commercial spaces, educational facilities, and public amenities.
Residential units	2,500
Number of residents (projected)	>6,000
Number of residents (currently)	/
Workplaces (potential)	>1,500
Workplaces (currently)	/
Year of Master plan	2019
Author of the project	Grieger Harzer with Studio Wessendorf
Construction time	2019-2031
Total investment volume	€ 800 million
Goal	Sustainable, diverse, community-focused development.

ACTORS INVOLVED

Developers	Gewobag: The primary developer responsible for managing and coordinating the redevelopment of Am Sandhaus.
Architects and Urban Planners	Grieger Harzer with Studio Wessendorf
Construction Companies	Multiple construction companies are involved in different phases of the project, ensuring diverse expertise in building and infrastructure development.
Government and Municipal Authorities	City of Berlin: Provides regulatory oversight and support for the project. Berlin Senate Department for Urban Development and Housing: Plays a key role in planning and supporting the project.
Investors	The project is funded through a mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants and firms ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Berlin-Buch are actively involved in shaping the development through consultations and public engagement initiatives.

²⁵² Available at [Buch – Am Sandhaus - Berlin.de](https://buch-am-sandhaus-berlin.de) (Accessed: 26 March 2025)

²⁵³ Available at [Grieger Harzer gewinnen Wettbewerb zum Stadtquartier Buch – Am Sandhaus \(garten-landschaft.de\)](https://grieger-harzer-gewinnen-wettbewerb-zum-stadtquartier-buch-am-sandhaus-garten-landschaft.de) (Accessed: 26 March 2025)

²⁵⁴ Available at [Urban planning expert procedure Buch-Am Sandhaus — meinBerlin](https://urban-planning-expert-procedure-buch-am-sandhaus-meinberlin.de) (Accessed: 26 March 2025)

16. AM SANDHAUS - BERLIN-BUCH, GERMANY**HISTORY TIMELINE**

1990s	The Am Sandhaus area was predominantly used for agriculture, with open fields and natural landscapes.
2000s	Early discussions and feasibility studies were conducted by the City of Berlin to explore the potential for urban development in the Am Sandhaus area.
2010	The City of Berlin began strategic planning initiatives to transform Am Sandhaus into a new urban district, aligning with the city's long-term growth and development goals.
2016	Detailed concept development and feasibility studies were conducted, focusing on sustainable urban development, mixed-use buildings, and green spaces.
2017	The City of Berlin engaged in public consultations to gather feedback and input from residents and stakeholders.
2019	The master plan for Am Sandhaus was finalized by Machleidt GmbH in collaboration with other architectural firms. The plan emphasized sustainability, green spaces, and a mix of residential, commercial, and public buildings.
2020	The master plan received approval from city authorities, and preparations for construction, including land acquisition and infrastructure planning, began.
2021	Initial construction phases began, including infrastructure development, land clearing, and the start of residential and commercial building projects.
2022	Construction of the first residential and commercial buildings commenced, focusing on creating a vibrant mixed-use urban area.
2023	The development of Am Sandhaus continues, with significant progress in residential construction and public amenities. The community is gradually taking shape with new residents and businesses moving in.
Future Projections	The entire Am Sandhaus project is expected to be fully completed by 2030, providing a sustainable, well-integrated urban neighborhood with approximately 6,000 residents and 1,500 workplaces.

Overview of selected Neighbourhoods
17. AM SANDHAUS - BERLIN-BUCH, GERMANY

LOCATION



Fig. 189. Location of AM Sandhaus within Berlin.
 Author: Dashnor Kadiri, 2024²⁵⁵



Fig. 190. Aerial view of the site before development.²⁵⁶

URBAN CONTEXT MAP



Fig. 191. Urban context map of AM Sandhaus.
 Author: Dashnor Kadiri, 2024²⁵⁷



Fig. 192. Development progress map of AM Sandhaus.
 Author: Dashnor Kadiri, 2024²⁵⁸

²⁵⁵ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁵⁶ Available at [Buch – Am Sandhaus - Berlin.de](#) (Accessed: 26 March 2025)

²⁵⁷ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁵⁸ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

17. AM SANDHAUS - BERLIN-BUCH, GERMANY

EXPECTED APPEARANCE



Fig. 193. Aerial view of AM Sandhaus within Berlin.²⁵⁹



Fig. 194. Aerial View of AM Sandhaus within Berlin.²⁶⁰



Fig. 195. Street views.²⁶¹



Fig. 196. Residential area view.²⁶²



Fig. 197. Inside Neighbourhood.²⁶³



Fig. 198. Life inside the Neighbourhood.²⁶⁴

²⁵⁹ Available at (garten-landschaft.de) (Accessed: 26 March 2025)

²⁶⁰ Available at (garten-landschaft.de) (Accessed: 26 March 2025)

²⁶¹ Available at (garten-landschaft.de) (Accessed: 26 March 2025)

²⁶² Available at (garten-landschaft.de) (Accessed: 26 March 2025)

²⁶³ Available at Urban planning expert procedure Buch-Am Sandhaus — meinBerlin (Accessed: 26 March 2025)

²⁶⁴ Available at Urban planning expert procedure Buch-Am Sandhaus — meinBerlin (Accessed: 26 March 2025)

Overview of selected Neighbourhoods	
18. KOLKAJEN – STOCKHOLM, SWEDEN ^{265,266,267}	
FACTS AND FIGURES	
Location (city, state)	Stockholm, Sweden
Previous use	The area was primarily used for industrial and port-related activities.
Total land area	15 hectares
Green and open space	30%
Lake	Kolkajen is situated along the waterfront, integrating water features and sustainable water management systems, though there is no large natural lake.
New Buildings	The development plans include a variety of new buildings such as residential units, office spaces, retail areas, and cultural facilities.
Residential units	2,000
Number of residents (projected)	>3,500
Number of residents (currently)	/
Workplaces (potential)	>3,000
Workplaces (currently)	/
Year of Master plan	2018
Author of the project	Grieger Harzerv with Studio Wessendorf
Construction time	2020-2030
Total investment volume	€ 900 million
Goal	To create a sustainable, waterfront residential community.
ACTORS INVOLVED	
Developers	Stockholms Stad (City of Stockholm): The primary entity responsible for planning and overseeing the development of Kolkajen. Atrium Ljungberg: One of the key developers involved in the project.
Architects and Urban Planners	Mandaworks & ADEPT Architects
Construction Companies	Multiple construction companies are involved in different phases of the project, ensuring diverse expertise in building and infrastructure development.
Government and Municipal Authorities	City of Stockholm: Provides regulatory oversight and support for the project. Stockholm County Administrative Board: Supports the project financially and administratively.
Investors	Mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants and firms ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Stockholm are involved in shaping the development through consultations and public engagement initiatives.

²⁶⁵ Available at [ADEPT and Mandaworks Design Masterplan for Stockholm's Royal Seaport | ArchDaily](#) (Accessed: 26 March 2025)

²⁶⁶ Available at [Kolkajen-Ropsten by ADEPT - Architizer](#) (Accessed: 26 March 2025)

²⁶⁷ Available at [Kolkajen \(mandaworks.com\)](#) (Accessed: 26 March 2025)

17. KOLKAJEN – STOCKHOLM, SWEDEN**HISTORY TIMELINE**

1990s	The Kolkajen area was predominantly used for industrial and port-related activities, including warehouses and shipping facilities.
2000s	Industrial activities in the area began to decline, leading to underutilization and the city considering redevelopment options.
2010	The City of Stockholm began exploring options for redeveloping the underutilized industrial area into a new urban neighborhood.
2015	Detailed strategic planning initiatives were undertaken to transform Kolkajen into a vibrant urban district, aligning with Stockholm's long-term growth and development goals.
2017	Concept development and feasibility studies were conducted, focusing on sustainable urban development, mixed-use buildings, and green spaces.
2018	The master plan for Kolkajen was finalized by White Arkitekter in collaboration with the City of Stockholm. The plan emphasized sustainability, green spaces, and a mix of residential, commercial, and public buildings.
2019	The master plan underwent public consultations and received approval from city authorities.
2020	Initial construction phases began, including infrastructure development, land clearing, and the start of residential and commercial building projects.
2021	Construction of the first residential and commercial buildings commenced, focusing on creating a vibrant mixed-use urban area.
2022	Key infrastructure projects, such as roads and utilities, were completed. Development of parks and public spaces also began.
2023	The development of Kolkajen continues, with significant progress in residential construction and public amenities. The community is gradually taking shape with new residents and businesses moving in.
Future Projections	The entire Kolkajen project is expected to be fully completed by 2030, providing a sustainable, well-integrated urban neighborhood with approximately 3,500 residents and 3,000 workplaces.

18. KOLKAJEN – STOCKHOLM, SWEDEN

LOCATION



Fig. 199. Location of Kolkajen within Stockholm.
Author: Dashnor Kadiri, 2024²⁶⁸



Fig. 200. Aerial view of the site before development.²⁶⁹

URBAN CONTEXT MAP



Fig. 201. Urban context map of Kolkajen.
Author: Dashnor Kadiri, 2024²⁷⁰



Fig. 202. Development progress map of Kolkajen.
Author: Dashnor Kadiri, 2024²⁷¹

²⁶⁸ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁶⁹ Available at [Kolkajen \(mandaworks.com\)](#) (Accessed: 26 March 2025)

²⁷⁰ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁷¹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

18. KOLKAJEN – STOCKHOLM, SWEDEN

EXPECTED APPEARANCE



Fig. 203. Aerial view of Kolkajen within Stockholm.²⁷²



Fig. 204. Aerial view of Kolkajen within Stockholm.²⁷³



Fig. 205. Street views.²⁷⁴



Fig. 206. Residential area view.²⁷⁵



Fig. 207. Inside Neighbourhood.²⁷⁶



Fig. 208. Life inside the Neighbourhood.²⁷⁷

²⁷² Available at [Kolkajen \(mandaworks.com\)](https://www.mandaworks.com/kolkajen) (Accessed: 26 March 2025)

²⁷³ Available at [archdaily.com](https://www.archdaily.com) (Accessed: 26 March 2025)

²⁷⁴ Available at [archdaily.com](https://www.archdaily.com) (Accessed: 26 March 2025)

²⁷⁵ Available at [archdaily.com](https://www.archdaily.com) (Accessed: 26 March 2025)

²⁷⁶ Available at [archdaily.com](https://www.archdaily.com) (Accessed: 26 March 2025)

²⁷⁷ Available at [archdaily.com](https://www.archdaily.com) (Accessed: 26 March 2025)

Overview of selected Neighbourhoods	
19. PIHLAJANIEMI, TURKU, FINLAND ^{278,279,280,281}	
FACTS AND FIGURES	
Location (city, state)	Turku, Finland
Previous use	The area was primarily used for industrial purposes and as open space.
Total land area	30 hectares
Green and open space	40%
Lake	The development integrates water features and sustainable water management systems, as it is situated along the Aura River, but there is no large natural lake.
New Buildings	The project plans to construct a variety of new buildings, including residential units, commercial spaces, educational facilities, and public amenities.
Residential units	2,000
Number of residents (projected)	>5,000
Number of residents (currently)	/
Workplaces (potential)	>3,000
Workplaces (currently)	/
Year of Master plan	2018
Author of the project	AJAK Architects, Urbanity, Gehl Architects
Construction time	2026-/-
Total investment volume	€ 600 million
Goal	To create a sustainable, nature-integrated residential area that fosters community living and enhances the local environment.
ACTORS INVOLVED	
Developers	City of Turku: The primary entity responsible for planning and overseeing the development of Pihlajaniemi.
Architects and Urban Planners	AJAK Architects, Urbanity, Gehl Architects
Construction Companies	Multiple construction companies are involved in different phases of the project, ensuring diverse expertise in building and infrastructure development.
Government and Municipal Authorities	City of Turku: Provides regulatory oversight and support for the project. Southwest Finland Regional Council
Investors	The project is funded through a mix of public and private investments, including municipal funds, real estate investment firms, and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	The residents and local businesses of Turku are involved in shaping the development through consultations and public engagement initiatives.

²⁷⁸ Available at [Turku, Pihlajaniemi - Senaatti](#) (Accessed: 26 March 2025)

²⁷⁹ Available at [New Districts – How are Finnish cities being densified and infilled right now? | ark](#) (Accessed: 26 March 2025)

²⁸⁰ Available at [Turun Pihlajaniemen pohjoisosan suunnitelmat loppusuoralla - Senaatti](#) (Accessed: 26 March 2025)

²⁸¹ Available at [Plans for the northern part of Pihlajaniemi in the final stretch – construction of the first houses is estimated to begin in 2022 - Pihlajaniemi - Turun Sanomat \(ts.fi\)](#) (Accessed: 26 March 2025)

Overview of selected Neighbourhoods

18. PIHLAJANIEMI, TURKU, FINLAND

HISTORY TIMELINE

1990s	The Pihlajaniemi area was predominantly used for industrial purposes, including warehouses and factories.
2000s	Industrial activities in the area began to decline, leading to underutilization and the city considering redevelopment options.
2010	The City of Turku began exploring options for redeveloping the underutilized industrial area into a new urban neighborhood.
2015	Detailed strategic planning initiatives were undertaken to transform Pihlajaniemi into a vibrant urban district, aligning with Turku's long-term growth and development goals.
2017	Concept development and feasibility studies were conducted, focusing on sustainable urban development, mixed-use buildings, and green spaces.
2018	Master Plan presented by AJAK Architects, Urbanity, Gehl Architects. The plan emphasized sustainability, green spaces, and a mix of residential, commercial, and public buildings.
2019	The master plan underwent public consultations and received approval from city authorities.
2020	Initial construction phases began, including infrastructure development, land clearing, and the start of residential and commercial building projects.
2021	Construction of the first residential and commercial buildings commenced, focusing on creating a vibrant mixed-use urban area.
2022	Key infrastructure projects, such as roads and utilities, were completed. Development of parks and public spaces also began.
2023	The development of Pihlajaniemi continues, with significant progress in residential construction and public amenities. The community is gradually taking shape with new residents and businesses moving in.
Future Projections	The entire Pihlajaniemi project is expected to be fully completed by 2030, providing a sustainable, well-integrated urban neighborhood with approximately 5,000 residents and 3,000 workplaces.

19. PIHLAJANIEMI, TURKU, FINLAND

LOCATION



Fig. 209. Location of Pihlajaniemi within Turku.
Author: Dashnor Kadiri, 2024²⁸²



Fig. 210. Aerial view of the site before development.²⁸³

URBAN CONTEXT MAP



Fig. 211. Urban context map of Pihlajaniemi within Turku.
Author: Dashnor Kadiri, 2024²⁸⁴



Fig. 212. Development progress map of Pihlajaniemi.
Author: Dashnor Kadiri, 2024²⁸⁵

²⁸² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁸³ Available at [Turku, Pihlajaniemi - Senaatti](#) (Accessed: 26 March 2025)

²⁸⁴ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁸⁵ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

19. PIHLAJANIEMI, TURKU, FINLAND

EXPECTED APPEARANCE



Fig. 213. Top view of Pihlajaniemi within Turku.²⁸⁶



Fig. 214. Aerial view of Pihlajaniemi within Turku.²⁸⁷



Fig. 215. Park view.²⁸⁸



Fig. 216. Residential area view.²⁸⁹



Fig. 217. Inside Neighbourhood.²⁹⁰



Fig. 218. Life inside the Neighbourhood.²⁹¹

²⁸⁶ Available at [New Districts – How are Finnish cities being densified and infilled right now? | ark](#) (Accessed: 26 March 2025)

²⁸⁷ Available at [Turku's Pihlajaniemi detailed plan enters into force - Senate \(senaatti.fi\)](#) (Accessed: 26 March 2025)

²⁸⁸ Available at [Turku's Pihlajaniemi detailed plan enters into force - Senate \(senaatti.fi\)](#) (Accessed: 26 March 2025)

²⁸⁹ Available at [Turku's Pihlajaniemi detailed plan enters into force - Senate \(senaatti.fi\)](#) (Accessed: 26 March 2025)

²⁹⁰ Available at [Turku's Pihlajaniemi detailed plan enters into force - Senate \(senaatti.fi\)](#) (Accessed: 26 March 2025)

²⁹¹ Available at [Turku's Pihlajaniemi detailed plan enters into force - Senate \(senaatti.fi\)](#) (Accessed: 26 March 2025)

Overview of selected Neighbourhoods	
20. NUEVO NORTE - MADRID, SPAIN ^{292,293,294,295,296}	
FACTS AND FIGURES	
Location (city, state)	Madrid, Spain
Previous use	The area was primarily used for railway operations and industrial activities.
Total land area	230 hectares
Green and open space	20%
Lake	The development integrates water features and sustainable water management systems, though there is no large natural lake.
New Buildings	The project plans to construct a variety of new buildings, including residential units, commercial spaces, office buildings, and cultural facilities.
Residential units	10,500
Number of residents (projected)	>27,000
Number of residents (currently)	/
Workplaces (potential)	>130,000
Workplaces (currently)	/
Year of Master plan	2015
Author of the project	(Rogers Stirk Harbour + Partners)
Construction time	2021-2040
Total investment volume	€ 6 billion
Goal	To develop a modern, sustainable, and well-connected urban area that revitalizes the northern part of the city, providing high-quality residential spaces, improved infrastructure, and enhanced public transport links.
ACTORS INVOLVED	
Developers	Distrito Castellana Norte (DCN): ADIF (Administrador de Infraestructuras Ferroviarias)
Architects and Urban Planners	Rogers Stirk Harbour + Partners
Construction Companies	Multiple construction companies are involved in different phases of the project, ensuring diverse expertise in building and infrastructure development.
Government and Municipal Authorities	City of Madrid: Provides regulatory oversight and support for the project.
Investors	The project is funded through a mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.
Local Community and Stakeholders	Various public and cultural institutions, including schools, community centers, and cultural facilities, are integrated into the project to enhance its social and cultural value.

²⁹² Available at [Madrid Norte \(creamadridnuevonorte.com\)](https://creamadridnuevonorte.com) (Accessed: 26 March 2025)

²⁹³ Available at [Sustainability and mobility strategies in Madrid Nuevo Norte – Arup](#) (Accessed: 26 March 2025)

²⁹⁴ Available at [Folleto MNN PREVIEW ENG v3 \(grupo-sanjose.com\)](#) (Accessed: 26 March 2025)

²⁹⁵ Available at [Madrid Nuevo Norte, the largest urban development project in Europe, kicks off \(larazon.es\)](#) (Accessed: 26 March 2025)

²⁹⁶ Available at [Madrid Nuevo Norte, MNN – Masterplanning – Projects – RSHP](#) (Accessed: 26 March 2025)

19. NUEVO NORTE - MADRID, SPAIN**HISTORY TIMELINE**

1990s	The Nuevo Norte area was predominantly used for railway operations and industrial activities, including maintenance facilities and warehouses.
2000s	Industrial activities in the area began to decline, leading to underutilization and the city considering redevelopment options.
2010	The City of Madrid began exploring options for redeveloping the underutilized railway and industrial area into a new urban neighborhood.
2013	Detailed strategic planning initiatives were undertaken to transform Nuevo Norte into a vibrant urban district, aligning with Madrid's long-term growth and development goals.
2015	The master plan for Nuevo Norte was developed by Rogers Stirk Harbour + Partners in collaboration with local firms and the City of Madrid. The plan emphasized sustainability, green spaces, and a mix of residential, commercial, and public buildings.
2016	The master plan underwent public consultations and received approval from city authorities.
2018	Preparations for construction, including land acquisition and infrastructure planning, began.
2021	Initial construction phases began, including infrastructure development, land clearing, and the start of residential and commercial building projects.
2022	Construction of the first residential and commercial buildings commenced, focusing on creating a vibrant mixed-use urban area.
2023	Key infrastructure projects, such as roads and utilities, were completed. Development of parks and public spaces also began.
Future Projections	The entire Nuevo Norte project is expected to be fully completed by 2040, providing a sustainable, well-integrated urban neighborhood with approximately 27,000 residents and 130,000 workplaces.

20. NUEVO NORTE - MADRID, SPAIN

LOCATION



Fig. 219. Location of Nuevo Norte within Madrid.
Author: Dashnor Kadiri, 2024²⁹⁷



Fig. 220. Aerial view of the site before development.
Author: Dashnor Kadiri, 2024²⁹⁸

URBAN CONTEXT MAP

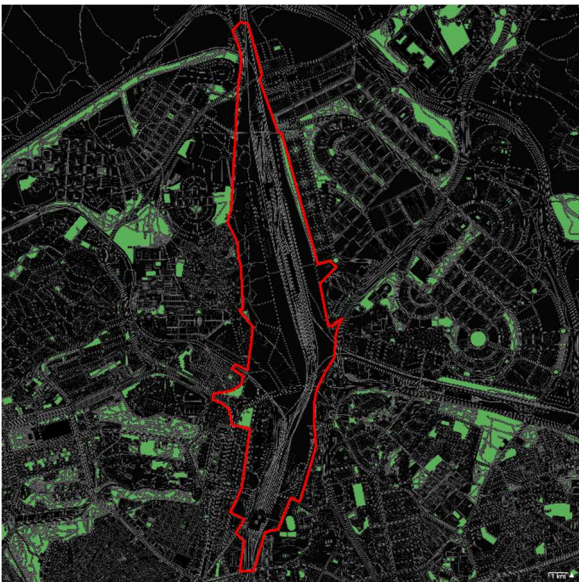


Fig. 221. Urban context map of Nuevo Norte within Madrid. Author: Dashnor Kadiri, 2024²⁹⁹

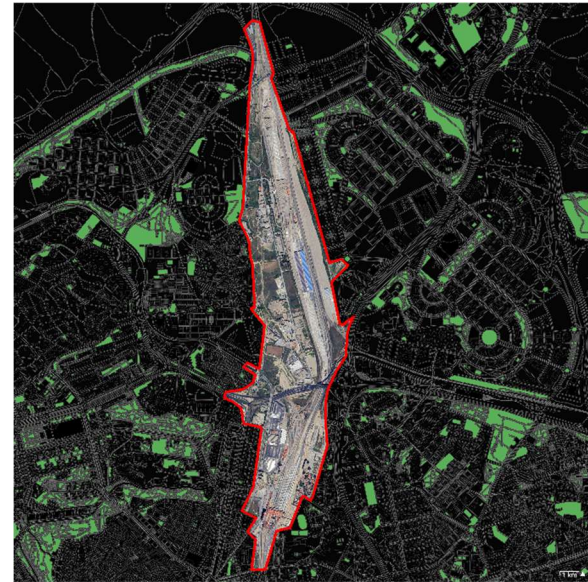


Fig. 222. Development progress map of Nuevo Norte within Madrid. Author: Dashnor Kadiri, 2024³⁰⁰

²⁹⁷ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

²⁹⁸ Available at [The 'Madrid, new north' project that replaces 'Operation Chamartín' will finally have 11,000 homes \(lasexta.com\)](#) (Accessed: 26 March 2025)

²⁹⁹ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

³⁰⁰ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

20. NUEVO NORTE - MADRID, SPAIN

EXPECTED APPEARANCE



Fig. 223. Aerial view of Nuevo Norte within Madrid.³⁰¹

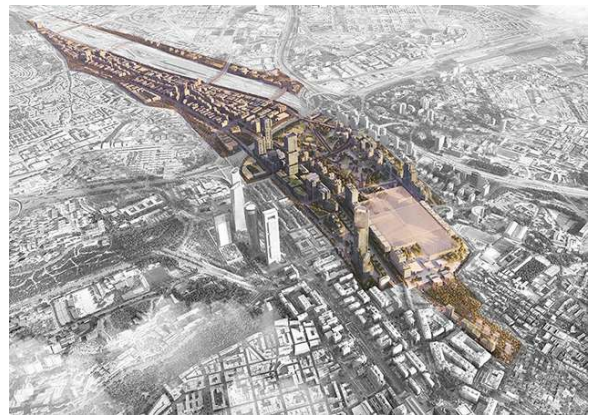


Fig. 224. Aerial view of Nuevo Norte within Madrid.³⁰²



Fig. 225. Park view.³⁰³



Fig. 226. Residential area view.³⁰⁴



Fig. 227. Inside Neighbourhood.³⁰⁵



Fig. 228. Top view of Nuevo Norte Neighbourhood.³⁰⁶

³⁰¹ Available at [Torre Madrid Nuevo Norte 1 - The Skyscraper Center](#) (Accessed: 26 March 2025)

³⁰² Available at [Madrid Nuevo Norte, MNN – Masterplanning – Projects – RSHP](#) (Accessed: 26 March 2025)

³⁰³ Available at [Madrid Nuevo Norte, MNN – Masterplanning – Projects – RSHP](#) (Accessed: 26 March 2025)

³⁰⁴ Available at [Madrid Nuevo Norte, MNN – Masterplanning – Projects – RSHP](#) (Accessed: 26 March 2025)

³⁰⁵ Available at [Madrid Nuevo Norte, MNN – Masterplanning – Projects – RSHP](#) (Accessed: 26 March 2025)

³⁰⁶ Available at [Madrid Nuevo Norte, MNN – Masterplanning – Projects – RSHP](#) (Accessed: 26 March 2025)

URBAN PLANNING CRITERIA

Overview of selected Neighbourhoods

1. ASPERN SEESTADT - VIENNA, AUSTRIA

Urban Planning criteria

MOBILITY¹

Mobility Concept + Modal Split:

- 40% cycling and walking,
- 40% public transport and just,
- 20% car traffic is the envisaged modal split for local traffic within Seestadt.

Excellent transport links:

- Communal underground garages provide convenient, safe parking at Seestadt.
- All of the street-level parking is short stay only, ensuring more room in the public space for pedestrians and cyclists.

Parking:

- All of the street-level parking is short stay only, ensuring more room in the public space for pedestrians and cyclists.

Mobility fund:

- The innovative mobility ideas are financed from the charges levied for garage construction and operation at seestadt.

Innovative hire schemes:

- e-bikes, conventional bikes, electric cargo bikes.

Underground + Bus:

- The U2 underground link is the ideal way of getting to and from Seestadt, bringing you swiftly to Vienna city center with perfect onward connections to the regional underground and rail networks.

asperm + mobile:

- The innovative mobility concept asperm mobil is all about sustainability.
- The aim: a mobility mixes that conserves resources and contributes to a superlative quality of life.

Short Distances + Clear Objectives:

- Seestadt is a city of short distances. The local shopping concept asperm shopping is designed to ensure just that:
- at Seestadt you can easily do all your shopping on foot or by bike.

Laid-back Pace + Space for Living:

- Getting from A to B as quickly and energy-efficiently as possible while providing ample space to linger and enjoy life – those are the principles behind asperm mobile.

25 minutes to city center.

56 bikes for hire in the Seestadt FLOTTE fleet.

8 communal underground garages for cars.

FUNCTIONAL DIVERSITY²

Housing + Jobs:

- This functional mix accommodates all generations and a multiplicity of lifestyles – and is thus a key business factor.

Local Amenities + Social Infrastructure:

- A lively mix of housing, workspace, local services and amenities, leisure and education facilities are the basis for a vibrant city-within-a-city.

Flexibility + Equal Opportunities:

- The growing diversity of lifestyles is a key challenge of modern urban development. Buildings designed for a single, pre-defined use – such as pure residential or office blocks – no longer meet contemporary needs.

Austria's 1st managed shopping parade:

- Seestadt's local shopping facilities were in place right from the outset – with its unique shopping parade concept the city of short distances leaves nothing to chance when it comes to local amenities.

Shopping + Neighbourhood Vibe:

- At Seestadt, all the amenities are in your local neighbourhood.

On Foot + By Cargo Bike:

- All the shops and eateries are situated at the heart of the residential quarters, just a short walk from home.

Managed + Personal Touch:

- And Seestadt is also home to plenty of independent cafés, shops and service providers: from fashion boutique to ceramics workshop to dog-grooming salon, there's something for everyone.

WELL-PLANNED PUBLIC SPACES³

¹ Available at: [Mobility Offers + Concept | asperm Die Seestadt Wiens \(asperm-seestadt.at\)](https://asperm.at/en/mobility-offers-concept) (Accessed: 24 April 2025)

² Available at: [Functional diversity | asperm Die Seestadt Wiens \(asperm-seestadt.at\)](https://asperm.at/en/functional-diversity) (Accessed: 24 April 2025)

³ Available at: [Public spaces | asperm Die Seestadt Wiens \(asperm-seestadt.at\)](https://asperm.at/en/public-spaces) (Accessed: 24 April 2025)

Central Park,
Lake,
Shopping streets,
University square,
Green spaces,
Industrial zones,
50% lake, 50% public space, 4 strings in the "Score for Public Space".

Feel-good Factor + Outdoor Space:

-A city's feel-good factor originates in the spaces between the buildings: in its streets, squares and parks.

High Standards + Careful Planning

-Outdoor space forms the backbone of Seestadt, making it a top location for companies for whom an attractive environment is important. As a Smart City, Seestadt sets itself high standards that allow unique projects to be realized.

Strong Women + Street Names:

-The actual effect on the gender balance in the naming of Vienna's thoroughfares may well be a small one, yet with this policy Seestadt is setting an important example.

Working + Taking a Break:

-Roads, footpaths, cycleways, parks and green spaces together account for 50 per cent of the total site area. Workplaces at Seestadt are in green surroundings yet in the midst of a vibrant city with all the amenities of urban life.

INNOVATION + QUALITY⁴

Research Hub + Business Magnet:

-asperm Seestadt is both a showcase project and a "living lab" for cutting-edge technologies.

Quality + Sustainability:

-A series of quality management tools is in place to ensure that this exceptional combination of business hub and living environment can be sustained in the long term, despite the constantly changing external framework.

Urban Lab:

- Energy research for future needs,
 - Whole system research,
 - Three smart buildings,
 - Users in focus.
-

Industry 4.0:

-Seestadt provides the perfect setting for production-led companies and promotes production-related research.

Quality management:

-Excellent quality management guarantees that the high standards of quality and sustainability will be complied with over the entire 20-year development horizon.

Production + Innovation:

-Production + innovation are the key drivers of the companies found in Southern Seestadt's commercial zone. It is home to leading companies such as HOERBIGER, global champion in the field of valve technology, as well as to innovative artisanal food production, represented by the gelato manufactory of the renowned ice cream parlour Schwedenplatz.

ENTERPRISE + INVESTMENT⁵

A massive catchment area with vast purchasing power and a huge workforce:

- Live + Enjoy,
 - New homes + Attractive jobs,
 - Work + Everything besides.
-

Ample space for large companies and manufacturing enterprises:

- Major Players + Modern Production,
 - Retail + Services,
 - Start-ups + R&D.
-

High feel-good factor, with 50% of the site set aside for public open spaces extensive parks, attractively designed streets and squares and a 50,000 sqm lake:

- Feel-good Factor + Outdoor Space,
 - High Standards + Careful Planning,
 - Strong Women + Street Names,
 - Working + Taking a Break.
-

Excellent local, regional and international transport links:

- Underground + Bus,
-

⁴ Available at: [Innovation + Quality | asperm Die Seestadt Wiens \(asperm-seestadt.at\)](#) (Accessed: 24 April 2025)

⁵ Available at: [Enterprise + Investment | asperm Die Seestadt Wiens \(asperm-seestadt.at\)](#) (Accessed: 24 April 2025)

- asperm + mobil,
- Short Distances + Clear Objectives,
- Laid-back Pace + Space for Living.

An attractive environment thanks to the intelligent urban design concept:

- Housing + Jobs,
- Local Amenities + Social Infrastructure,
- Austria's 1st managed shopping parade,
- Flexibility + Equal Opportunities.

Superlative local amenities including an attractive shopping parade and vibrant ground-floor zones:

- Shopping + Neighbourhood Vibe,
- On Foot + By Cargo Bike,
- Managed + Personal Touch.

Office space + commercial premises:

- From starter offices, tiny offices and co-working spaces to combined home & office solutions and large-scale office suites, the Lakeside quarter and Lakeside crescent quarter reflect the full diversity of modern workplaces. Ground-floor units with retail space are also available on request.

QUARTERS + DEVELOPMENT⁶

Startups + Global corporations:

- Around 300 businesses have already taken the decision to locate at Seestadt: the spectrum ranges from one-person companies to Austria's first 4.0 pilot plant for industry 4.0 and the producers of high-tech augmented reality glasses viewpointsystems, from Vienna's biggest non-profit training enterprise, Wien Work, to global technology group HOERBIGER.

Today + Tomorrow:

- To date, one third of the total site area has been completed. The business hub will gain additional momentum in the coming years with the development of further neighbourhoods to the north. With its clear focus on office and commercial space, the Lakeside Park wuartier directly adjacent to Seestadt U2 station will be the business hotspot of southern Seestadt.

Flying start + Fast growth:

- Seestadt is the ideal location for investors, business development agencies, property developers and discerning companies with high expectations. Excellent transport links, superb facilities, plenty of open space and freedom of scope for major corporations, large-scale projects and innovative start-ups.

Lakeside Park quarter:

- The current focus of development, sale and letting activities is on the quarter south of the lake. Tens of thousands of square meters of office, commercial and retail space are available here for companies from a diverse range of sectors.

Food makers corner:

- In the FOODMAKERS' CORNER, food producers will not only find a new home but also have the opportunity to showcase their craft to others as a culinary visitor attraction.

"Lakeside Crescent" Quarter:

- The first neighbourhood north of the lake combines housing and jobs in close proximity: as well as attractive, affordable apartments, it provides innovative office space and ample space for shops and service providers and is home to the "crafts hub" of the Vienna Business Agency as well as the Campus of Religions.

Lakeside Terraces Quarter:

- The fourth quarter at Seestadt boasts shops, cafés and restaurants, arcaded loggias along the waterfront and residential projects with the wow factor overlooking the lake and the skyline of the southern shore.

Location + Surroundings:

- Situated in north-east Vienna, asperm Seestadt boasts excellent transport links and a smart mobility concept.

Wien 3420 AG:

- Wien 3420 asperm development AG is the agency responsible for the development of asperm Seestadt and the sale and letting of building land on the site.

EDUCATION + CULTURE⁷

0 + 99 Years of Age:

- Not only is Seestadt the perfect place to live and work – it offers something for all spheres of life. There are great facilities for your youngsters, from nursery right through to sixth form. And for adults, too, there's always something to learn and experience: at Seestadt you'll find a broad range of arts and cultural offerings right on your doorstep

Education + Childcare:

⁶ Available at: [Quarters + Development | asperm Die Seestadt Wiens \(asperm-seestadt.at\)](#) (Accessed: 24 April 2025)

⁷ Available at: [Education + Culture | asperm Die Seestadt Wiens \(asperm-seestadt.at\)](#) (Accessed: 24 April 2025)

-The Seestadt school campus is currently one of Vienna's largest, housing a nursery, a full-day primary school and a school for children with special physical needs under one roof.

Culture + Events:

-From dances to open-air cinema to major concerts – there's always something happening at Seestadt. Diverse pop-up uses and activities are an integral part of the programme, spanning the spectrum from cultural offerings and join-in sessions put on by the Neighbourhood management team to neighbourhood events organised by Seestadt residents on their own initiative.

HEALTH + LEISURE⁸

Countryside + Recreation:

-Beautiful parks, playgrounds, green spaces and, of course, the lake itself are perfect for a few hours enjoying the sunshine.

Healthy Lifestyle + Top-class Healthcare:

-Seestadt is a place where it's easy to live a healthy lifestyle. Plenty of green space, a laid-back pace and a wide range of exercise options all play their part.

1.3 million bathtubs of water would fit into the lake.

98,765 deckchairs would fit into Seestadt's parks.

30 medical practitioners and therapists at your service.

⁸ Available at: [Health + Leisure | aspern Die Seestadt Wiens \(aspern-seestadt.at\)](https://www.aspern-seestadt.at/en/health-leisure) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods

2. NORDHAVN - COPENHAGEN, DENMARK

Urban Planning criteria

A HUB FOR DESIGN AND ARCHITECTURE⁹

Portland towers:

-Portland towers were the first building to be finished in the new neighbourhood århusgadekvarteret in nordhavn. With their 52 meters' height, the towers are some of the tallest buildings in nordhavn, but what's really interesting about them is their shape.

The silo:

-From grain silo to dramatic steel tower. In the old industrial harbour area nordhavn, or north harbour, an upcoming neighbourhood is taking form. Modern architecture is growing out of former industry buildings, and one of these new attractions is the silo.

UN city:

-The UN city campus 1 on marmormøllen opened in July 2013. Today, the building houses 11 UN organisations and 1,500 staff members from 100 nations.

Paustian nordhavn:

-Simple and functional seem to be the red thread inside the paustian furniture and design house - located on kalkbrønderiløbskaj in nordhavn and designed by the danish world famous architect jørn utozon.

Energy-efficient buildings:

New constructions in Nordhavn adhere to strict energy efficiency standards, utilizing materials and technologies that lower energy consumption and minimize waste, in line with circular economy goals.

Audo Copenhagen:

-MENU is not only an interior design brand specializing in craft furniture, lighting, and interior accessories, but also a space for designers, manufacturers, and customers to share their ideas and inform the design process.

GUBI showroom copenhagen:

-GUBI is one of the biggest danish design successes in modern times, and their furniture can be seen in places like the museum of modern art (moma) in new york. GUBI has also furnished copenhagen's designer hostel danhostel copenhagen. The colourful, yet minimalistic style is the hallmark of GUBI.

BLUE & GREEN CITY¹⁰

Green

-The green structure in Nordhavn is laid out as an uninterrupted belt that is interwoven with the blue structure. These are smooth transitions between the different types of natural landscapes and special places and new opportunities for special experiences are created.

Blue

-Along with the green harbor fronts, new canals will be dug to enhance access and proximity to the water. The planning of blue and green city qualities precedes the planning of buildings.

Strips of Green and Blue

-The strips of green & blue running east-west draw the natural landscape and water across the district. People going through the area will therefore see the varied urban spaces, landscape, and water areas as strips of different experiences.

Urban green spaces

-Parks, waterfront areas, and green roofs provide residents with access to nature, contributing to overall well-being and fostering a sense of community while supporting local biodiversity and ecosystem services.

Islets and canals

-Intensify the experience of close contact with water in the city district.

Provide good conditions for rowing, sailing, and busy activity on the quays.

Introduce intimate water spaces that provide a pleasant contrast to the wide harbour basins.

Serve as a structuring element from a point of view of urban planning.

Create complete units and prevent scattered urban sprawl.

Can both unite and divide city districts.

Create identity and special character.

Create well-designed neighbourhoods with individual identities.

FIVE-MINUTE NEIGHBOURHOOD¹¹

⁹ Available at: [Why the new nordhavn area is a hub for design and architecture | visitcopenhagen](#) (Accessed: 24 April 2025)

¹⁰ Available at: [Nordhavnen Urban Strategy by CPH City & Port Development - Issuu](#) (Accessed: 24 April 2025)

¹¹ Available at: [Nordhavnen Urban Strategy by CPH City & Port Development - Issuu](#) (Accessed: 24 April 2025)

The Green loop:

- The green loop is highly unifying and identifies an element in Nordhavn and a key element in the five-minute strategy.
- An efficient, environmentally friendly connection for cyclists and public transport,
- A green, vibrant urban space,
- A sequence of varied urban spaces and landscapes,
- A distinctive, easily recognizable structure running throughout city district.

Public transport:

- The intelligent grid makes room for multiple mixed functions within a given area. The grid can adapt to changes over time and gives the plan a great deal of controlled flexibility. The variation of lots makes for a diverse city.

Bicycles:

- The five-minute city makes it possible to reach basic shops, institutions, workplaces and cultural facilities within 5 minutes' walk. Or within 5 minutes' walk to a public transport mode leading to the destination.

Cars.

CO2 FRIENDLY¹²

Heating,
District Heating,
Solar Heating,
Hot seasonal thermal store,
Geothermal energy.

Electricity,
Power plant,
Wind power,
Solar cells.

Cooling,
Cooling by electricity,
Ground water cooling,
Cool seasonal thermal store,
Sea water cooling.

SUSTAINABLE TRANSPORT¹³

Autonomous minibuses,
Shared and Electrical Autonomous car.

Heavy transport,
Green shipping.

Green Transportation,
Nordhavn's infrastructure promotes low-carbon mobility options like cycling, walking, and public transportation, reducing traffic congestion and air pollution while encouraging resource conservation.

Power grid operation,
Giant battery to power Nordhavn.

Fuel-shift components,
Storage flexibility,
Integrated markets and control centers,
Smart charging infrastructure,
Showroom and visualization,
Measurements and data warehouse.

Metro line:

Cityringen is an underground rail link forming a "ring" around the center of Copenhagen: two 15.5 km long tunnels, built at an average depth of 30 metres below surface level and connecting with existing lines. The line has 17 stops and trains arrive at peak frequency every 80-100 seconds from each other. This fast pace will allow the infrastructure to transport 72 million people a year.

INTELLIGENT GRID¹⁴

Existing structure.

Designation of free zones and loop,
That is sufficiently open to adapt to future influences without weakening the main structure.

Basis grid setup,

¹² Available at: [Nordhavnen Urban Strategy by CPH City & Port Development - Issuu](#) (Accessed: 24 April 2025)

¹³ Available at: [Circular Economy Cities](#) (Accessed: 24 April 2025)

¹⁴ Available at: [Nordhavnen Urban Strategy by CPH City & Port Development - Issuu](#) (Accessed: 24 April 2025)

That is sufficiently robust to create a firm framework for urban development.

Adjustment of the grid to avoid wind tunnels,

That is developed under market conditions without being controlled by them.

Staggered grid design creates public spaces,

That communicates the visions behind the project and makes them operational.

Building zones may change, shape function and size,

That takes processes other than physical planning into account.

IDENTITY AND HISTORY¹⁵

Existing cultural heritage

The traces of culture already found in this area must be developed and become active parts of the new city district.

Existing Buildings and environments

The current buildings at the site are representative of the idiom of harbors: high silos mixed with warehouses and industrial buildings.

Existing Grid and leased premises

The future road structure will to a great extent be based on the re-use of current roads.

EDUCATION + CULTURE¹⁶

Childcare services 0-6 years.

Copenhagen International School Nordhavn,

Internationalizing and Promoting Science and Health.

Energy Lab Nordhavn,

New European innovation hub in Nordhavn, Copenhagen to become epicenter for tomorrow's energy technologies.

Culture and activities,

Networking activities, events.

¹⁵ Available at: [Nordhavnen Urban Strategy by CPH City & Port Development - Issuu](#) (Accessed: 24 April 2025)

¹⁶ Available at: [Nordhavnen Urban Strategy by CPH City & Port Development - Issuu](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
3. MERWEDE - UTRECHT, NETHERLAND
Urban Planning criteria
MOBILE MERWEDE ¹⁷
Walking:
-Allowing residents of Merwede to move freely without their own car.
Cycling:
-A close-knit network for cyclists and hikers.
Public transport.
Car-free Neighbourhood.
Ambitious parking strategy:
-A car parking strategy that encourages walking and cycling
Mobility Hub:
-Mobility hub for encouraging shared mobility
Logistics traffic bundled:
-Bundling where possible, allowing where necessary
HEALTHY AND SUSTAINABLE ¹⁸
Water,
Vision on waste processing,
Intrinsically sustainable neighborhood,
Focus on walking and cycling,
Climate-proof district,
Healthy urban life,
Solid socio-economic structures.
ADAPTIVE PLAN ¹⁹
An adaptive plan:
-Phasing
-Interim
-Area exploitation
Flanking projects:
-Park Transwijk
-Europalaan and Wilhelminalaan
-Tour of Stadseiland
-Neighborhood approach Rivierenwijk and Transwijk
Branding and placemaking:
-Making a city together
-Website and newsletter
-Conversations
GREEN DOMAIN ²⁰
Gardens,
Ecology,
Water and greenery connected,
Solar panels rooftops,
Material and furnishings,
Play, sport and exercise,
Inner areas,
Part of the city,
City avenues,
Merwede Park,
Cycling streets,
Neighborhood squares,

¹⁷ Available at: [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](https://www.utrecht.nl/stedenbouwkundig-plan-merwede) (Accessed: 24 April 2025)

¹⁸ Available at: [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](https://www.utrecht.nl/stedenbouwkundig-plan-merwede) (Accessed: 24 April 2025)

¹⁹ Available at: [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](https://www.utrecht.nl/stedenbouwkundig-plan-merwede) (Accessed: 24 April 2025)

²⁰ Available at: [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](https://www.utrecht.nl/stedenbouwkundig-plan-merwede) (Accessed: 24 April 2025)

Green roofs,

Biodiversity,

Cool down,

Water collection.

COULISSE CITY²¹

Urban planning principles:

-Backstage city

-Unity in diversity

-Composite and property-wise

-Descending density and height

-Light and air

-Framed and accessible

-City at eye level

Rules of the game:

-Rule 1: the maximum building volume for Merwede is 700,000 m²

-Rule 2: the maximum building volume for a building block has been determined

-Rule 3: the position of the building lines is given

-Rule 4: the buildings are largely on the building line

-Rule 5: the building blocks are not completely closed

-Rule 6: every home has the right to a (collective) outdoor space, every street has a right on size trees.

-Rule 7: the gutter height is visibly varied, with a maximum of 5 to 7 floors

-Rule 8: the 'maximum roof height' is visibly varied, with a maximum of 8 to 12 floors

-Rule 9: Tall buildings visibly differ in shape and building height, with a maximum of 10 to 18 floors.

-Rule 10: a building block consists of sufficient architectural buildings

-Rule 11: architectural buildings visibly differ in width and height

-Rule 12: Buildings on the street side are made as lively as possible programming of the baseboard

-Rule 13: The courtyards are green, collectively offering sufficient space meeting, (informal) games for small children, are public at least during the day connected to the network of streets, squares and parks and an extension of the Merwede biotope.

Microclimate:

-A pleasant living environment

-Sound

-Bezonning

-Wind

ENERGY²²

Geothermal energy:

-Almost energy neutral district.

Sustainable use of Merwedekanaal:

-Merwede assumes more reduction of energy needs than the current standard.

Green power:

-New construction in the Merwedekanaal zone is natural gas-free

Merwede lab:

-All new construction is suitable for a low-temperature heat supply.

SERVICES²³

Social facilities

Secondary school

Sports hall

Primary school incl. BSO and gymnasium (2x)

Childcare (KDV) (2x)

Community center and youth living room

Community room (2x)

Health center (2x)

Overflow and contingency

²¹ Available at: [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](https://www.stedenbouwkundigplanmerwede.nl) (Accessed: 24 April 2025)

²² Available at: [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](https://www.stedenbouwkundigplanmerwede.nl) (Accessed: 24 April 2025)

²³ Available at: [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](https://www.stedenbouwkundigplanmerwede.nl) (Accessed: 24 April 2025)

Activity center

Neighborhood culture house

Elderly center

Time Out

MIXED CITY DISTRICT²⁴

Healthy urban life,

Mixed and surprising,

Car-free and easily accessible,

Green unless and biodiverse,

For all Utrecht residents and not for the happy few,

In the middle of the city and healthy,

Large-scale and secure,

Thoughtful and spontaneous,

Flexible and future-proof,

Inspiring and creative,

Lively and quiet to visit the city district.

²⁴ Available at: [Stedenbouwkundig Plan Merwede \(utrecht.nl\)](https://stedenbouwkundig.plan.merwede.nl) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
4. NIEUW ZUID - ANTWERPEN, BELGIUM
Urban Planning criteria
MOBILITY²⁵
Centralized Management, Parking management, Micro mobility management, Digital permits.
Car-free space: -Promoting alternative modes of transport such as cycling, walking and public transport to reduce dependence on cars.
Shared cargo bikes: -Shared cargo bikes, also known as cargo bike-sharing systems, are an innovative urban mobility solution that allows for the transportation of larger loads without relying on cars.
Cycling.
Public transport.
SUSTAINABLE ELECTRICITY PRODUCTION²⁶
Solar panels
Energy cooperative, Greening and expansion of a smart heat network.
CIRCULAR ZUID²⁷
Innovative solar panels and neighborhood energy cooperative, Smart consumption with the Circular Zuid app, Circuit, experience center about circularity, Less waste, Community gardens and composting, Water management.
GREEN DOMAIN²⁸
Public spaces, Parks, Squares, Cafes, Green areas.
SMART CITIES²⁹
Waste campaigns, Latest technologies and innovations to improve the efficiency of urban services and to be future-proof, Smart ICT – Home intelligence, Smart meters, Energy consumption, Nudging campaigns.
SPECIFIC QUALITY ASPECTS³⁰
Water management, Density and living quality, High-rise buildings, Offer of public space, Traffic structure, Waste management, Power management, Acoustics and air quality, Specific additional design research,

²⁵ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 24 April 2025)

²⁶ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 24 April 2025)

²⁷ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 24 April 2025)

²⁸ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 24 April 2025)

²⁹ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 24 April 2025)

³⁰ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 24 April 2025)

Thematic motivation for parking options within the plan area,

Parking options on the Scheldt quays,

Parking options at the Palace of Justice and the Jan Van Gentstraat building block: general,

Parking options at the Palace of Justice and the Jan van Gentstraat building block: alternatives research,

Parking options at the Palace of Justice and the Jan van Gentstraat building block: realistic parking needs.

ENERGY & CLIMATE³¹

Sustainable electricity production,

Greening and expansion of a smart heat network,

Improving air quality,

Heating network,

Sustainable urbanism,

Sustainable building,

Acoustic measures.

³¹ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](https://nieuwzuid.vlaanderen.be) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
5. CLICHY-BATIGNOLLES - PARIS, FRANCE
Urban Planning criteria
SUSTAINABLE DISTRICT³²
Economy of Resources,
Geothermal Heat,
Solar Photovoltaic Electricity,
Co-Responsibility in District Energy Efficiency & Sustainability,
Strong commitment to protect the environment,
High-energy saving standards,
Large scale use of renewable energies,
Innovative and green waste collection,
A significant contribution to the protection of biodiversity,
Rainwater recovered,
Health-friendly materials and natural resources,
A constant and rigorous monitoring results.
A REFERENCE IN CONTEMPORARY DEVELOPMENT³³
An alliance of the city and rail,
An exceptional foot of civil engineering,
An architectural design attentive to the urban setting and usage,
Shared roads and continuation of the park atmosphere,
A historic heritage showcased.
AN ACCENT ON MIXED-DEVELOPMENT³⁴
Multiple solutions to satisfy a strong, diverse demand for housing,
An exceptional offering bordering the central business district,
A place for living, working and playing,
Shops,
Services,
Restaurants,
Offices.
A NEW URBAN HUB³⁵
At the heart of a modernized 17 th district,
Diversity of close-grained activities and people, activated at different times,
Open space that is activated by supporting spaces,
A strategic and dynamic part of the city,
Streetscapes that are conducive to sidewalks and pedestrian activity,
Effect on the quality of urban fabric,
Well-connected district,
A transit system soon to be greatly improved.
REMAKING A CITY AROUND MARTIN LUTHER KING PARK AND THE PARIS COURTHOUSE³⁶
Creating urban links and activity,
The unbeatable advantage of a big park in the city,
A context-specific project,
An emblematic metropolitan facility,
A new metropolitan hub,
A site for innovation.
GREEN SPACE WITH MULTIPLE FUNCTIONS³⁷
Martin Luther King Park,

³² Available at: [Eco-District: A Model of Energy Efficiency and Sustainable Urban \(planete-energies.com\)](https://planete-energies.com/) (Accessed: 24 April 2025)

³³ Available at: [CLICHY-BATIGNOLLES \(parisnetmetropole-amenagement.fr\)](https://parisnetmetropole-amenagement.fr/) (Accessed: 24 April 2025)

³⁴ Available at: [CLICHY-BATIGNOLLES \(parisnetmetropole-amenagement.fr\)](https://parisnetmetropole-amenagement.fr/) (Accessed: 24 April 2025)

³⁵ Available at: [CEU White Paper on Three Paris Projects.pdf \(sustasis.net\)](https://sustasis.net/) (Accessed: 24 April 2025)

³⁶ Available at: [CLICHY-BATIGNOLLES \(parisnetmetropole-amenagement.fr\)](https://parisnetmetropole-amenagement.fr/) (Accessed: 24 April 2025)

³⁷ Available at: [CLICHY-BATIGNOLLES \(parisnetmetropole-amenagement.fr\)](https://parisnetmetropole-amenagement.fr/) (Accessed: 24 April 2025)

Private green spaces,
Green roofs,
Opportunity for outdoor recreation,
Wildlife habitat,
Cooling and rainwater infiltration,
Two community gardens give residents places to grow their own food and compost food waste.
DEMONSTRATED CAPABILITIES ³⁸
Very ambitious,
A flagship project for sustainability,
Carbon-neutral Neighbourhood,
Green building technologies.

³⁸ Available at: [Paris is building the eco-community of the future right now. Here's how. | by Ensia | Ensia | Medium](#)
(Accessed: 24 April 2025)

Overview of selected Neighbourhoods
6. SCHUMACHER QUARTER - BERLIN, GERMANY
Urban Planning criteria
FURT HUB ³⁹
Apps,
Development partnership,
Showroom,
Lab,
The Center of Excellence for Urban Data,
Offers of extracurricular youth work,
Schumacher Quartier educational campus,
Visualize Data = Gain Insights,
Environmental education measures,
Integration and participation,
The heart of the FUTR HUB: the data platform,
Data protection & Participation.
SUSTAINABLE ⁴⁰
The energy marketplace,
Recycling,
Materials,
Better air quality,
Low energy costs.
GREEN AND OPEN SPACES ⁴¹
Green and open spaces shape the identity of the district,
Street space as a lounge,
Busy ground floors,
Playgrounds,
Squares,
Urban living areas,
Participatory design and use of public spaces by the residents.
URBAN TIMBER CONSTRUCTION ⁴²
Cluster for innovative construction with wood,
The city as a CO2 storage space,
Industrial-digital value creation chain:
-Forestry, Manufacturing, Logistics, Assembly, Housing construction, Urban planning, Materials recycling.
Digitalization in timber construction,
Reducing costs in production.
Interconnected stakeholders,
Building the future together,
Model district for urban timber construction in cities,
An efficient and safe construction material,
Increasing interest in timber construction.
WATER USE ⁴³
Answers to climate change: the sponge city principle,
Water-retaining structures,
Multiple use of open spaces,
The sponge city principle in the Schumacher Quartier improves the micro-climate and enhances the quality of life
reduces drainage costs supports biodiversity through spacious and open areas that are rich in species,
Protects Berlin's stretches of waters against inputs of oxygen-depleting nutrients, since waste water from the drainage
system during heavy rains overflows less frequently and flows into natural bodies of water,

³⁹ Available at: [FUTR HUB - Urban Tech Republic](#) (Accessed: 24 April 2025)

⁴⁰ Available at: [Building & Living - Schumacher Quartier \(schumacher-quartier.de\)](#) (Accessed: 24 April 2025)

⁴¹ Available at: [Building & Living - Schumacher Quartier \(schumacher-quartier.de\)](#) (Accessed: 24 April 2025)

⁴² Available at: [221123_Holzbau_EN.pdf](#) (Accessed: 24 April 2025)

⁴³ Available at: [221123_Schwammstadt_EN.pdf](#) (Accessed: 24 April 2025)

Master Plan for Rainwater and Adaptation to Heat,
Water management according to the cascade model,
Heat adaptation through greening and wellness locations,
Rural space as a source of fresh air.
MOBILITY⁴⁴
Local public transportation,
Priority for CO2-free mobility,
Private transport,
Wide bicycle lanes and bicycle fast lanes,
Mobility hubs whet the appetite for living without a car,
Routes open to future technology for local transportation,
Embedding into the transportation network of the capital,
Connection to the Berlin-Copenhagen Cycle Route.
BIODIVERSITY⁴⁵
Animal life cycles as the main focus
Avoiding possible conflicts from the outset
Important findings for science
COMMUNICATION, PARTICIPATION AND TRANSPARENCY⁴⁶
Establishment of a neighborhood society right from the start that encourages resident participation takes on the following tasks in the new district,
Organization of comprehensive and constant communication between all parties involved,
Ensuring broad citizen participation at all times Planning and implementation process,
Development of suitable formats for step-by-step, both temporary and sustainable and user-oriented acquisition of suitable areas Strengthening the identification of residents with their neighborhood.

⁴⁴ Available at: [191210_ChartaSchumacherQuartier_Web_neu \(4\).pdf](#) (Accessed: 24 April 2025)

⁴⁵ Available at: [Biodiversity - Schumacher Quartier \(schumacher-quartier.de\)](#) (Accessed: 24 April 2025)

⁴⁶ Available at: [191210_ChartaSchumacherQuartier_Web_neu \(4\).pdf](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods

7. MILANO INNOVATION DISTRICT – MILAN, ITALY

Urban Planning criteria

SLOW MOBILITY AND SUSTAINABILITY⁴⁷

Almost entirely car-free,
As a new paradigm of urban space that gives precedence to pedestrians,
Bicycles and slow movement,
Seeking to dissolve the boundary between indoor and outdoor spaces,
LEED certification,
Principles based on dfma (design for manufacture and assembly),
Control and assessment of the carbon and CO2 emissions,
All the buildings will be LEED BD+C and WELL AP certified,
Public transport and high walkability.

PASSIVE STRATEGIES⁴⁸

Evaporative cooling of water bodies,
Evapotranspiration of plants and shading through trees,
Wind permeability,
Shading through building massing,
Park,
Square,
Water square.

THE FUNCTIONAL MIX⁴⁹

The Park for healthy eating,
The Sports and Entertainment Park,
New rho-arise park,
The Galeazzi hospital,
The human technopole,
The new university of Milan,
The Fondazione Triulza,
Offices,
Laboratories,
The light industrial spaces that contain the federated innovation center,
Built-to-rent residential accommodation,
Student halls of residence,
Residential care homes.

A DISTRICT FOR WELL-BEING⁵⁰

Mind as a human-centric place,
Health is at the heart of the project's entire mission,
To create a great, pleasant environment that is beneficial to the people who live it,
Healthy food,
Agile mobility,
Sports facilities,
Medical care,
A network of active social relationships,
The engine of opportunity.

A DISTRICT FOR SOCIAL IMPACT⁵¹

Mind as an active community,
As a shared platform,
A space of inclusion creates social value through involvement:

⁴⁷ Available at: [Mario Cucinella Architects \(mcarchitects.it\)](https://mario.cucinella.architects.it/) (Accessed: 24 April 2025)

⁴⁸ Available at: [Mario Cucinella Architects \(mcarchitects.it\)](https://mario.cucinella.architects.it/) (Accessed: 24 April 2025)

⁴⁹ Available at: [MIND - MIND \(mindmilano.it\)](https://mind-milano.it/) (Accessed: 24 April 2025)

⁵⁰ Available at: [MIND - MIND \(mindmilano.it\)](https://mind-milano.it/) (Accessed: 24 April 2025)

⁵¹ Available at: [MIND - MIND \(mindmilano.it\)](https://mind-milano.it/) (Accessed: 24 April 2025)

-The participative process is carried out to involve people from all over society in imagining together the future of MIND, and thus grow the community of the place.
Social innovation academy:
-The space for meeting and collaboration, social innovation, and sustainability, aimed at the third sector and civil economy. Promoted by fondazione triulza.
MIND EDUCATION⁵²
Primary school,
Secondary school,
High school,
Learning together,
Science Campus of the University of Milan,
Human Technopole,
The Hive, a start-up-friendly "beehive",
IRCCS Galeazzi,
Fondazione Triulza.
GREEN AREAS⁵³
Decumano Linear Park
Blue green park
Food and health park
Sports and entertainment park
A DISTRICT FOR THE ENVIRONMENT⁵⁴
Mind as a zero-carbon district,
Renewing construction techniques, optimizing resources,
Making room for nature and its vitality,
A model experience that raises the international standards of regeneration.
INNOVATION⁵⁵
Focus to succeed,
Build on excellence and Diversity,
Embrace self-Governance,
Foster Collaboration & Prioritize cross-sector innovation,
Engage in advanced networking,
Cross-pollinate to invent,
Protect to Exploit,
Promote fairs and open community.
GREEN DISTRICT⁵⁶
290.000 sqm of green and water areas,
Decumanus, one of the largest linear parks in Europe,
A 100% renewable energy district,
Innovative and sustainable mobility.
IMMERSIVE NEIGHBOURHOOD⁵⁷
1 million sqm District,
400.000 sqm of public spaces,
Cultural, Artistic, and sporting events,
Retail & Food & Beverage.
CREATIVE DISTRICT⁵⁸
Offices, Coworking, innovative laboratories
Spaces dedicated to collaborations
University of Milan
Human Technopole

⁵² Available at: [MIND - MIND \(mindmilano.it\)](https://mindmilano.it) (Accessed: 24 April 2025)

⁵³ Available at: [MIND - MIND \(mindmilano.it\)](https://mindmilano.it) (Accessed: 24 April 2025)

⁵⁴ Available at: [The Challenges - MIND \(mindmilano.it\)](https://mindmilano.it) (Accessed: 24 April 2025)

⁵⁵ Available at: [FEDERATED INNOVATION™@MIND \(federatedinnovation-mind.com\)](https://federatedinnovation-mind.com) (Accessed: 24 April 2025)

⁵⁶ Available at: [MIND Village - Become a Minder and develop your idea of the future here](https://mindmilano.it) (Accessed: 24 April 2025)

⁵⁷ Available at: [MIND Village - Become a Minder and develop your idea of the future here](https://mindmilano.it) (Accessed: 24 April 2025)

⁵⁸ Available at: [MIND Village - Become a Minder and develop your idea of the future here](https://mindmilano.it) (Accessed: 24 April 2025)

INCLUSIVE NEIGHBOURHOOD⁵⁹

Residential and Hospitality offer,

Proximity services for the community and families,

IRCCS Galeazzi,

Triulza Foundation.

⁵⁹ Available at: [MIND Village - Become a Minder and develop your idea of the future here](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
8. BRAINPORT - EINDHOVEN, NETHERLAND
Urban Planning criteria
HOUSING AND ACCESSIBILITY⁶⁰
Realizing homes and improving accessibility,
Accommodating the growth of student housing,
Ensuring the basics are in order: preserving, accommodating and strengthening liveability and amenities,
Continuously planning for economic work locations,
Accelerating solutions for the energy network and nitrogen capacity.
TALENT⁶¹
Increase participation rate through a public-private approach,
Increase the influx of students and the number of graduates in technical education,
Retain talent in the field of technology,
Enhance growth of labour productivity,
Actively attract international talent and increase the stay rate.
INTERNATIONAL VALUE CHAINS⁶²
Align with national missions and ministries,
Develop value chains around technologies and growth markets,
Enhance and sustain facilities,
Utilize and solidify innovation campuses,
Establish a future-proof high-tech manufacturing industry,
Engage in international innovation, trade, and collaboration.
ENERGY TRANSITION⁶³
Connect SME:
-Brainport Smart District is one of the six living labs in the Netherlands and Flanders that participate in ConnectSME. The aim is to stimulate innovation trajectories of SMEs to bring their innovations to the market faster and thus maximize CO2 reductions.
The greenhouse houses of CC-Studio:
-KasCo is a circular residential area where food, energy and housing go hand in hand. Here you live in an energy-efficient home in a greenhouse with fresh fruit and vegetables right next to the front door.
Plenty of innovation in social housing:
-CASA 1.0 is the first building to be built and completed in The Neighbourhood of the Future (2021). The complex consists of three innovative and social rental apartments. CASA stands for Comfortable, Affordable, Sustainable Alternative and was developed by a team of students from Eindhoven University of Technology (TU/e).
LotLAB:
-In the fall of 2018, we started looking for our first residents by making a call for self-build plot pioneers. In this first living lab, 31 households are currently co-creating the first neighbourhood of BSD.
Plus-on-the-meter homes:
-Plus-Op-de-Meter Living is based on a self-sufficient residential area.
BUILDING INDUSTRY 4.0⁶⁴
Social / Affordable Housing,
Social / Accessible Housing,
Social / Adequate Housing,
Social / Healthy Housing,
Environmental / Reduce Co2 Emissions,
Environmental / Reduce Land Use and Material Use,
Environmental / Close Material Loops,
Environmental / Reduce Energy Consumption in Production,
Environmental / Reduce Energy / Resource Consumption in Households.

⁶⁰ Available at: [2-Strategische agenda Brainport ENG DEF.pdf \(brainporteindhoven.com\)](#) (Accessed: 24 April 2025)

⁶¹ Available at: [2-Strategische agenda Brainport ENG DEF.pdf \(brainporteindhoven.com\)](#) (Accessed: 24 April 2025)

⁶² Available at: [2-Strategische agenda Brainport ENG DEF.pdf \(brainporteindhoven.com\)](#) (Accessed: 24 April 2025)

⁶³ Available at: [Neighbourhood with energy - Brainport Smart District](#) (Accessed: 24 April 2025)

⁶⁴ Available at: [Bijlage 4 - UDI Building Industry 4.0 LR.pdf \(brainporteindhoven.com\)](#) (Accessed: 24 April 2025)

DIGITAL CITY⁶⁵
Responsible use of data within Brainport Smart District, Project Data Governance, Residents are not part of a tech company's, Principles and agreements in a Data Manifesto, Moral compass, Ethics Team and Data Advisory Team.
AN ON-DEMAND DISTRICT⁶⁶
Both urban development areas and nature areas are perceived as productive spaces, where a mix of living, working and leisure is facilitated. A shared-owned central park forms the active social heart of the district where all residents share healthy activities and cultural programs.
A COMMUNITY OF INNOVATORS⁶⁷
Catering to new local and international users, the BSD hopes to attract early adopters of new ways of living and working. Residents are encouraged to adopt communal resource schemes such as shared energy generation and land cultivation, while businesses will primarily be those that focus on innovative research fields. The productive urban environment and landscape will generate a local economy that is specifically 'made in BSD'.
AN AREA INVITING CHANGE⁶⁸
UNStudio's vision translates BSD's high ambitions regarding climate adaptation and circularity into a framework that ensures that ecological, social and economic sustainability are within reach.
A PLACE WHERE TECHNOLOGY MAKES A POSITIVE IMPACT⁶⁹
Bsd's technology universe is introduced as a framework for sharing data and information in order to enrich the efficiency of the landscapes, buildings and public spaces, while offering seamless connectivity.
CIRCULAR DISTRICT⁷⁰
Modular and sustainable homes at Telkesveld, Connect SME: Cross-border collaboration, Circularly mixed sustainable neighbourhood, Plenty of innovation in social housing.
DISTRICT WITH WATER⁷¹
Water is an important element for energy, food and climate, among other things. In Brainport Smart District, a circular and climate-adaptive water system is being designed that is resistant to drought and extreme precipitation. In this way, the system counteracts heat stress.
MOBILITY⁷²
Self-driving minibus, Makers of the future.
LANDSCAPE STRATEGY⁷³
Historical layout for a future landscape, Mosaic landscape, Productive landscape, Social landscape, Connected landscape.
PARTICIPATION⁷⁴
Participation as a means to achieve a supported result that is in line with the wishes, needs and living environment of the future residents and/or users, Organize participation in the whole or parts where participation actually has an influence can have on the result. This requires us to have an open attitude during participation moments for insights from other perspectives, Develop collaboration in quadruple helix so that we complement each other from different perspectives and disciplines and thus strengthen development,

⁶⁵ Available at: [Data Governance - Brainport Smart District](#) (Accessed: 24 April 2025)

⁶⁶ Available at: [Neighbourhood with water - Brainport Smart District](#) (Accessed: 24 April 2025)

⁶⁷ Available at: [Neighbourhood with water - Brainport Smart District](#) (Accessed: 24 April 2025)

⁶⁸ Available at: [2-Strategische agenda Brainport ENG_DEF.pdf \(brainporteindhoven.com\)](#) (Accessed: 24 April 2025)

⁶⁹ Available at: [2-Strategische agenda Brainport ENG_DEF.pdf \(brainporteindhoven.com\)](#) (Accessed: 24 April 2025)

⁷⁰ Available at: [Circular district - Brainport Smart District](#) (Accessed: 24 April 2025)

⁷¹ Available at: [Neighbourhood with water - Brainport Smart District](#) (Accessed: 24 April 2025)

⁷² Available at: [Brainport Smart District Helmond - Felixx](#) (Accessed: 24 April 2025)

⁷³ Available at: [Brainport Smart District Helmond - Felixx](#) (Accessed: 24 April 2025)

⁷⁴ Available at: [Participation - Brainport Smart District](#) (Accessed: 24 April 2025)

Pay special attention to involving (future) residents/users a way that makes participation in development enjoyable and accessible for them. We take into account accessibility needs to participate; this may mean that there are: multiple participation methods are needed to involve a diverse group,

Ensure that the participation process and development process go hand in hand, so that there is sufficient space and time is for participation, to collect input and feedback, and to process this in the result,

Aware of the different levels of participation that are possible inform to ownership, and consciously choose which level applies to which part and at what stage of development,

Communicate about the participation process so that it is clear to everyone that they can do to expect,

Aware that participation requires time and energy from those involved and we do so with respect deal with. We are aware of the benefits of participation and that effort is required.

SOCIAL AND SAFE NEIGHBOURHOOD⁷⁵

Mix of residents, of all ages,

Backgrounds,

Incomes,

Lifestyle.

HEALTHY NEIGHBOURHOOD⁷⁶

Well-being and health can be stimulated by helping each other on the one hand and by creating a clean, green and attractive outdoor space in the new part of Brandevoort that invites people to move and meet.

⁷⁵ Available at: [Social and safe neighborhood - Brainport Smart District](#) (Accessed: 24 April 2025)

⁷⁶ Available at: [Healthy neighbourhood - Brainport Smart District](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods

9. ÜBERSEEINSEL - BREMEN, GERMANY

Urban Planning criteria

THE MIX OF THE OVERSEAS ISLAND⁷⁷

The Überseeinsel is divided into different quarters, each with its own distinctive character. Together, they are organized according to the principle of the "productive city". A city in which new synergies are constantly emerging thanks to a mixture of small trades and productions, food crafts, gastronomy, health care, education and sports, open spaces, living space for a wide variety of target groups as well as leisure and work opportunities. In this way, the Überseeinsel becomes a lively, livable place in its own right.

THE ENERGY CONCEPT⁷⁸

Water,

Sun,

Earth,

Wind,

Water,

Sun,

Earth.

THE TRAFFIC CONCEPT⁷⁹

Cycling,

Public transport season tickets,

Car-sharing,

Communication,

Bicycle spaces / workshop,

Cargo bikes / mode of transport,

Bike sharing / charging infrastructure,

Packing station,

Strolling,

Walking.

GREEN CONCEPT⁸⁰

Lots of freedom for people

LIGHTING CONCEPT⁸¹

Integrate a large part of the lighting into the buildings. This reduces the unused radiation (light pollution), paths, but not the facades, are illuminated and we save many obstacles in the form of masts.

Use an LED system that allows us to flexibly adapt the light color and intensity to the outside and time conditions, consume little electricity and prevent insects from being disturbed in their orientation by the light and thus damaged.

WASTE DISPOSAL⁸²

Underfloor system

TIMBER BUILDING IN MODULAR CONSTRUCTION⁸³

The building consists of three components: a block of flats in timber construction, a greenhouse above and a connecting pergola. The house consists of prefabricated wooden modules, which are only assembled on site.

SPORT AND HEALTH⁸⁴

Ice skating rink, which is used in summer for paddle tennis and other sports,

And a 2,500 m long running circuit in the neighborhood,

In the Stephanitorhöfe you will find a health center with the most important medical disciplines, therapeutic facilities, a 1,000 m²,

Fitness studio and the swimming pool with six 25 m lanes,

Two multi-purpose halls that are used by the schools during the day and then be available for ball sports,

⁷⁷ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

⁷⁸ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

⁷⁹ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

⁸⁰ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

⁸¹ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

⁸² Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

⁸³ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

⁸⁴ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

A fencing hall, an archery range, a large room for e-sports, 800 m2,
children's movement center, 200 m2 crawling hall, CrossFit box, a climbing parkour with indoor and Outdoor elements, a hall of mirrors for dancing, squash courts, and much more,
Ice skating rink, which is used in summer for paddle tennis and other sports,
And a 2,500 m long running circuit in the neighborhood.
EXPERIENCE, EAT AND ENJOY ⁸⁵
Zio Manu di Napoli (already on site today, in future in the rice warehouse),
Space for culture (Open spaces for cultural events between Weser and Alter Werft),
Bremen brewery (already on site today, in future in the rice warehouse),
Old shipyard (party and event location),
Facade climbing (on the facade of John & Will,
Ice skating rink (which becomes a paddle tennis court in summer).
COOPERATIVE ⁸⁶
Clay,
Stones,
Shards.

⁸⁵ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

⁸⁶ Available at: [Guiding Principles - ÜBERSEEINSEL \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
10. BAJES KWARTIER – AMSTERDAM, NETHERLANDS
Urban Planning criteria
MOBILITY⁸⁷
Entirely Car-free housing district,
Electrical car,
Bicycles,
Scooters.
HEALTH AND WELL-BEING⁸⁸
A health center in Bajes Kwartier with a variety of functions,
A care center for children from company,
Spaces for sports and fitness.
LEARNING AND RESEARCH⁸⁹
Living Lab,
The secondary school,
Educational programs in the green tower,
Cultural programming also give substance to the theme of 'learning' within Bajes Kwartier.
GREEN⁹⁰
Green Tower,
The gardens of Bajes Kwartier,
Maximum reuse of heritage,
Green Rooftops.
DESIGN⁹¹
Loft-like offices,
Green studios,
A new wooden office building,
An exciting monumental church ,
The green tower.
CULTURE⁹²
Exhibitions,
Event or theatre spaces,
Innovation,
Sustainability,
Learning and inspiration.
CATERING⁹³
Vision on nutrition,
Healthy food,
Hospitality,
Coffee shops,
Star restaurants.
WORKSPACE AND STUDIOS⁹⁴
No standard office units,
Inviting and deviating spaces such as studios,
Loft-like units,
Green studios.
GAS-FREE AND ENERGY-SAVING⁹⁵

⁸⁷ Available at: [Space to grow - Bajeskwartier](#) (Accessed: 24 April 2025)

⁸⁸ Available at: [Space to grow - Bajeskwartier](#) (Accessed: 24 April 2025)

⁸⁹ Available at: [Space to grow - Bajeskwartier](#) (Accessed: 24 April 2025)

⁹⁰ Available at: [Bajeskwartier Amsterdam - LOLA](#) (Accessed: 24 April 2025)

⁹¹ Available at: [Space to grow - Bajeskwartier](#) (Accessed: 24 April 2025)

⁹² Available at: [Space to grow - Bajeskwartier](#) (Accessed: 24 April 2025)

⁹³ Available at: [Space to grow - Bajeskwartier](#) (Accessed: 24 April 2025)

⁹⁴ Available at: [Space to grow - Bajeskwartier](#) (Accessed: 24 April 2025)

⁹⁵ Available at: [Home - Bajeskwartier](#) (Accessed: 24 April 2025)

Gas-Free Development:

- Transition to Renewable Energy.

Energy-Saving Measures:

- Energy-Efficient Buildings,
- Smart Energy Management,
- District Heating.

Renewable Energy Integration:

- Solar Panels,
- Geothermal Energy,

Benefits of Gas-Free and Energy-Saving Strategies in Bajes Kwartier:

- Environmental Impact,
- Cost Savings,
- Enhanced Quality of Life.

ENVIRONMENTALLY CONSCIOUS, SUSTAINABLE AND CIRCULAR⁹⁶

Environmentally Conscious Development:

- Green Spaces and Biodiversity,
- Pollution Reduction,

Sustainable Development Practices:

- Energy Efficiency,
- Water Management,

Circular Economy Principles:

- Circular Construction,
- Waste Management,
- Shared Resources.

⁹⁶ Available at: [Home - Bajeskwartier](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods

11. KNOOP XL - EINDHOVEN, NETHERLAND

Urban Planning criteria

REDUCE CONSUMPTION⁹⁷

Minimize (sustainable) energy demand through insulation, passive house standard,

Minimal use of materials during construction,

Avoid, reduce and reuse waste.

FOCUSING ON SYNERGY⁹⁸

Link between Technology, Design and Knowledge (proximity to TU/e, design academy),

Local exchange of residual flows (building materials, rainwater),

Synergy of supply and demand of (sustainable) energy at district and city level: exchange, storage and marketing of flexibility,

Flexible design of buildings and public space in terms of construction, materials and climate resistance (underground space),

Multimodal mobility hub: (H)OV connections, cycling and walking routes and connections with the Brainport region provide an emission-free, efficient transfer machine.

SWITCH BETWEEN BUILDING, AREA AND THE REST OF THE CITY⁹⁹

Close at building level,

Material use: insight into the urban mine,

Passive and modular construction, high-quality insulation,

Close at area level,

Transport is shared and becomes emission-free,

Energy supply and sustainable energy, heat supply (WKO, heat networks),

Waste management: waste separation and logistics,

Close at regional level,

Connect green structures to the main structure,

Valuing residual flows,

See how different areas can have synergy. To exchange building materials, for example.

MAKING CLIMATE RESILIENCE VISIBLE¹⁰⁰

Green as a pleasant experience and distinctive character,

Climate resilience as a business card (in parks, facades, roofs),

Greening and combating paving (reduction of infrastructure),

Integrate biodiversity into the area,

Multifunctional adaptive green and blue (e.g., city gardens).

A SUSTAINABLE AND CIRCULAR AREA¹⁰¹

Materials are continuously recycled in a high-quality manner,

All energy comes from renewable sources,

Water is extracted in a sustainable manner and concrete recovery is maximized,

Biodiversity is structurally supported and strengthened,

Society and culture are preserved,

Health and well-being of people and nature are structurally supported,

The value of human activities is expressed in broader terms than financial.

MATERIALS / CIRCULAR ECONOMY¹⁰²

Primary raw materials,

Waste reduction,

Built environment,

Socially responsible purchasing (SRI),

100% circular.

⁹⁷ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

⁹⁸ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

⁹⁹ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰⁰ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰¹ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰² Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

ENERGY ¹⁰³
Renewable energy,
CO2 reduction,
Municipal organization,
Natural gas free,
Energy neutral.
GREEN ENVIRONMENT ¹⁰⁴
Greening,
Green-blue interventions,
Landscape as a location factor,
Biodiversity.
CLIMATE ADAPTION ¹⁰⁵
100% climate-proof,
Green-blue interventions.
INFRASTRUCTURE & MOBILITY ¹⁰⁶
Focus on active transport,
Growth in share of public transport and bicycle,
Sustainable car mobility,
Public transport,
Charging infrastructure,
Modality Button XL,
Compaction.
SOCIETY AND CULTURE ¹⁰⁷
Social cohesion,
Culture,
Cooperation,
Participation,
Stimulate circularity.
HEALTH & WELLBEING ¹⁰⁸
Quality of life,
Loneliness,
Safety.
ECONOMY AND INNOVATION ¹⁰⁹
Circular jobs,
Stimulate circularity,
Cooperation,
Business climate,
Innovation ecosystem.

¹⁰³ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰⁴ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰⁵ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰⁶ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰⁷ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰⁸ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

¹⁰⁹ Available at: [Circulaire Gebiedsontwikkeling: Internationale Knoop XL - Metabolic](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
12. FREIHAM NORTH - MÜNCHEN, GERMANY
Urban Planning criteria
URBAN PLANNING, OPEN LANDSCAPE, ARCHITECTURE, AND BUILDING CULTURE ¹¹⁰
The concept for urban planning and open areas within town,
Public green and open spaces,
Private open spaces,
Mixture of utilization,
Social and cultural infrastructure,
Technical infrastructure,
Infrastructure for the local economy,
Types of housing,
Universal Design,
Security.
MOBILITY BEING MOBILE AT FREIHAM ¹¹¹
Integrative concept of traffic,
Network of footpaths,
Network of cycle tracks,
Electro-mobility, systems to rent bicycles,
Network of the public local traffic,
Stops and timetabling,
Road networks,
Car-Sharing, electro-mobility and parking places.
WATER & SOIL ¹¹²
Water balance,
Management of heavy rain storms,
Protection of ground water,
Saving of land and avoiding sealing the ground,
Management of ground that needs removing and handling brownfield deposits.
BIOLOGICAL DIVERSITY ¹¹³
Biosphere,
Species,
Rules of interference,
New structures of biotopes and habitats,
Link between green and open areas.
EMISSIONS AND IMMISSIONS ¹¹⁴
Air pollution by emissions within the new district of the town,
Air pollution by immissions within the new part of the town,
Illumination of public areas,
Sound pollution within the town,
Sound immissions within the town,
Electro-magnetic radiation.
URBAN CLIMATE ¹¹⁵
Tracks where air may drift and exchange,
Heat islands within town and ventilation,
Thermal comfort and irritation,
Ventilation and wind.
ENERGY ¹¹⁶

¹¹⁰ Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

¹¹¹ Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

¹¹² Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

¹¹³ Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

¹¹⁴ Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

¹¹⁵ Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

¹¹⁶ Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

Framework of urban development,
Energy demand of building,
Induced energy demand,
Network of supply of energy,
Supply of energy for building,
Network.
ECONOMY ¹¹⁷
Expenses for acquisition, production, and use,
Public budget security,
Promotion programs,
Analysis of the specific market and of target groups,
Concept for the local economy,
Active marketing.
PROCESS ¹¹⁸
Determine the demand,
Types of procedures,
Project control,
Integral planning,
Participation of citizens,
Public presentation,
Instruments to assess the quality of the process.

¹¹⁷ Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

¹¹⁸ Available at: [2017_Sustainable_Freiham.pdf \(muenchen.de\)](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
13. TIRANA RIVERSIDE - TIRANA, ALBANIA
Urban Planning criteria
GREEN DISTRICT ¹¹⁹
Distributed in common areas,
River Park,
A refuge and biological habitat for non-domestic species,
Promoting the creation of microclimates useful for the surrounding civic well-being,
Vertical surfaces,
Roofs gardens,
Pedestrian bridges,
Private gardens,
Urban gardens,
The river parks,
Trees and inhabitants in equal numbers,
Smart growth principles (compact, walkable, and bike-friendly neighbourhoods),
New urbanism concepts that emphasise human-scaled urban design.
HEALTH AND SAFETY FACILITIES ¹²⁰
Health care centers,
Emergency services,
Wellness program,
Green spaces,
Safe pedestrian and cycling paths,
Water and sanitation systems,
Climate resilient infrastructure,
Sustainable energy services.
ENERGY ¹²¹
Solar panels on the roofs,
Energy efficient buildings,
Electric vehicle charging.
SERVICES ¹²²
The proximity ones – intended as reachable within a five-minute walk – include public squares,
Play areas dedicated to children,
Retail spaces,
Cafes,
Restaurants,
Offices,
Emergency medical centers,
University campuses,
The river parks,
Fab labs,
Larger offices,
A portion of public ministries.
SOFT MOBILITY ¹²³
A central spine dedicated to soft mobility,
Bike lines,
Sidewalks,
Car-free areas,
Commercial ground floors,

¹¹⁹ Available at: [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 24 April 2025)

¹²⁰ Available at: [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 24 April 2025)

¹²¹ Available at: [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 24 April 2025)

¹²² Available at: [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 24 April 2025)

¹²³ Available at: [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 24 April 2025)

Access to residential buildings,
Sport and workspaces,
Reducing carbon emissions by avoiding fossil fuel vehicles,
Encouraging physical activity, which can lead to better health outcomes,
Decreasing traffic volume, which results in fewer traffic jams and increased safety.
URBAN FOREST ¹²⁴
The economic and social advantages of the massive presence of trees intended as an Urban Forest,
Decreasing the “heat island” effect increase the real estate value of buildings,
Make Tirana riverside a contemporary landscape that mixes nature and technology,
To favor the welfare of citizens who live there temporarily or permanently.

¹²⁴ Available at: [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
14. OBERBILLWERDER - HAMBURG, GERMANY
Urban Planning criteria
CONNECTED CITY ¹²⁵
Integrated into the surrounding area.
Creates a variety of connections to the neighboring districts.
At the same time keeping a respectful distance from the village of Billwerder.
Open space is the connecting element.
The centerpiece is the Green Loop.
DIVERSE URBAN SPACES ¹²⁶
Blue Quarter,
Garden Quarter,
Park Quarter,
Green Quarter,
Station Quarter.
LEAFY AND OPEN SPACES ¹²⁷
Mobility hub roads: Collector Road, Ring Road, Residential Road, Residential path (accessible by cars, cycleways, footpaths), Express bike line, Path in the green loop, Scenic path, Squares and central axes,
Alternative forms of mobility: Environmentally friendly, more convenient, Faster and cheaper,
Not car-free, but as free as possible from parked cars in public spaces,
Bus and S-Bahn are right outside the door and provide good connections to Bergedorf and Hamburg city center,
In the Mobility Hubs, the parking spaces for residents and guests are concentrated,
You can park your own car here and switch to other means of transport (bicycle, e-bike, public transport, or in the future small, autonomous shuttle buses),
Residential and play streets remain largely traffic-free and become public spaces.
THE WAY TO THE MASTERPLAN ¹²⁸
Collecting and informing,
Developing ideas,
Making plans,
Shaping the future.
ACTIVE CITY ¹²⁹
Sport and exercise are seen as an integral part of everyday life,
Diverse,
Largely barrier-free,
The large activity parks,
Daily journeys can be safely covered on foot or by bike.
TOWN PLANNING ¹³⁰
The green loop connects the five quarters that together form Oberbillwerder,
Readable,
Independent identities create manageable,
Varied urban spaces,
The central public spaces are supplemented by a network of smaller neighbourhood squares in the quarters, each of which is home to a mobility hub,
In the center of the new district is the BahnQuartier, which is characterized by denser development and a greater mix of uses compared to the other quarters,
To the west is the Blue Quarter, where the focus is on life on and with the water,
To the north, the GartenQuartier forms the end of the agricultural cultural landscape,

¹²⁵ Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.hamburg.de) (Accessed: 24 April 2025)

¹²⁶ Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.hamburg.de) (Accessed: 24 April 2025)

¹²⁷ Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.hamburg.de) (Accessed: 24 April 2025)

¹²⁸ Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.hamburg.de) (Accessed: 24 April 2025)

¹²⁹ Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.hamburg.de) (Accessed: 24 April 2025)

¹³⁰ Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.hamburg.de) (Accessed: 24 April 2025)

To the east of the BahnQuartier is the Green Quarter,
Further to the east, the ParkQuartier establishes a link with Bergedorf-West with allotment gardens and newly interpreted urban forms.
DWELL ¹³¹
People with different incomes,
Origins,
Ages,
Special forms of housing for senior citizens,
Students,
Young families,
Trainees,
People with inclusion needs and other target groups.
FREEDOM ¹³²
Open space is the connecting element between regional and local, public and private spaces,
The heart of the new district is the green loop,
Safe and popular path connections,
Central facilities,
Schools,
Daycare centers,
Swimming pools,
Stimulating exercise opportunities for young and old,
High quality of stay for rest and relaxation.
DRAINAGE ¹³³
The planned drainage concept improves the current situation for the adjacent areas to the north, which are still used for agriculture.
The water produced there is channeled into the northern edge ditch and further into a planted retention area with a purification function in the north-west of the district.
The treated water feeds the canals in the Blue Quarter.
Partial areas of the Green Loop are used for drainage and thus contribute to heavy rain prevention contributes to increasing water evaporation, an important measure for adapting to climate change.
The green loop is the central drainage element, as rainwater from public and, to some extent, private areas is collected and forwarded here.

¹³¹ Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.de) (Accessed: 24 April 2025)

¹³² Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.de) (Accessed: 24 April 2025)

¹³³ Available at: [Masterplan - Oberbillwerder \(oberbillwerder-hamburg.de\)](https://masterplan-oberbillwerder.de) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
15. GREDELJ – ZAGREB, CROATIA
Urban Planning criteria
STRATEGIC DEVELOPMENT ¹³⁴
Create a sense of community, Include different social groups,
Recognition. Keep parts of the existing identity,
Diversity of public content. Various types of jobs and services,
Phases,
Areas without cars,
Adaptation of existing spaces.
INTEREST OF CITIZENS AND SPACE USERS ¹³⁵
The future city library City of Zagreb Paromlin,
New city center - public space,
Walkable as priority,
Flexibility,
Use throughout the year.
COMPATIBILITY WITH THE SURROUNDING URBAN FABRIC ¹³⁶
Contextual Design:
- Respecting Historical Context,
- Architectural Cohesion.
Integration with Existing Infrastructure:
- Transport Connectivity,
- Public Spaces and Amenities.
Sociocultural Integration:
- Community Involvement,
- Cultural and Social Facilities,
Environmental Harmony:
- Green Infrastructure,
- Sustainable Development.
BUILDINGS ¹³⁷
Defining urban rules for every single one of the positioning high-rise buildings about on the horizon and sunset.
The plan does not define architecture rather than plan mass and the rules that can be freely interpret.
Architectural and urbanistic the contests are being conducted for individual cassettes.
Genesis of Gredelj blocks.
Closed blocks.
Perforation of pedestrian zones to the main and secondary street connections.
Adjustment of position and the size of communication in view of context (removing parts of the houses if is required).
Positioning of the tower in view of the main city axes.
Maximizing sun-exposure within Blocks.
Different ambiances within Block: fertilization, square, terraces, children's playground, dog park.
Walkability" - max. 110 m facade
INFRASTRUCTURAL EQUIPMENT / DEVELOPMENT OF KEY INFRASTRUCTURE ¹³⁸
Location Gredelj is situated at the junction of Donjeg and Trnja,
The location in question is a part valuable industrial legacy, as well as very potent space for the future development of the city,
15 minutes to the main square 1 5 minutes to Trg Bana Jelačića.
HISTORICAL IMAGE AND IMPORTANCE OF CULTURAL PROTECTION ¹³⁹
Integrated cultural property and space memory,

¹³⁴ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹³⁵ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹³⁶ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹³⁷ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹³⁸ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹³⁹ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

Cultural heritage Construction complex.
SUSTAINABILITY OF DEVELOPMENT¹⁴⁰
Creating a healthy microclimate landscape biodiversity.
THE BASIS OF THE MASTERPLAN¹⁴¹
Use throughout the day,
Residents and visitors,
Walk purchase,
Cultural Events,
Recreational sports,
Work meetings,
Restaurants,
Students,
Concerts, clubs,
Mixed purpose:
-Catering, trade, Residential, Business, Faculty, Culture, Sport, Parking,
Buildings / heavy industry, soil pollution, metals and oils,
Converted into a park without prior,
Converted into a park with previous remediation,
Remediation (decontamination) soil code excavation for underground garages,
Underground garages,
The earth is fully usable for parks, zones agriculture, and agriculture,
Block sizes,
Pedestrians,
In addition to the main ones, the existence of the narrow streets that allow discovering,
Smaller, more intimate squares.
ADAPTABILITY OF SPACE FOR VARIOUS PURPOSES¹⁴²
Blending into city tissue,
Walkable paths,
Incorporated into the existing city tissue,
New city center and traffic hub with integrated,
Cultural heritage and memory of that space,
Opportunities for quality life and work,
Residents of all ages and social status.
THE CONCEPT OF A SMART CITY¹⁴³
Implementation of modern technologies,
Good fit into the city fabric,
Connected to different types of transportation,
Branding,
Creating a Healthy Microclimate Landscape Biodiversity,
The street as a quality public space.
MOBILITY¹⁴⁴
Pedestrian zone.
Minimizing the car inside covers.
Traffic HUB.
New intermodal terminal in the main city axis.
Integrated railway Bus (intercity and city) traffic.

¹⁴⁰ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹⁴¹ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹⁴² Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹⁴³ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

¹⁴⁴ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
16. SMÍCHOV CITY - PRAGUE, CZECH REPUBLIC
Urban Planning criteria
TRADITION AND FUTURE¹⁴⁵
The design is grounded in the principles of a traditional city based on high-quality public space in the form of streets, parks, and squares bordered by city blocks,
Intended to be lively, safe, and beneficial multifunctional,
Smíchov is a traditional Prague district with a rich history,
At its heart is the important transport hub of Praha–Smíchov railway station.
DIVERSE AND NATURAL¹⁴⁶
Modern housing,
Buildings with their own gardens,
Representing major stages of earth's history.
SHORT DISTANCES¹⁴⁷
Connection with the station,
Accessibility, gastronomy, services,
Everything within reach,
The new pedestrian boulevard connects Na Knížecí Square and the transport terminal of the Smíchov railway station,
Two new parks and public playgrounds,
New modern school for 500 pupils with playground and running track (200 m),
A quiet neighborhood connecting parts of Smíchov that have been intersected for years by a fence and railway tracks.
AMPHITHEATRE, SPORTS AND GREENERY
Pedestrian boulevard, Pedestrian zones, Delivery areas and cycle paths,
Both adjacent parks differ in their focus. The Park adjacent to the school building will be used for sports activities.
The second park will be used for relaxation. Altogether the two parks and the boulevard will provide 21,000 m ² of greenery,
A natural amphitheater with tiered seating, suitable for theatrical performances and social events or an open-air cinema, will be built,
Public spaces 60%,
Greenery,
Public (parks, streets),
Private (courtyards).
FUNCTIONAL MIX¹⁴⁸
With apartment buildings have smaller and medium-sized shops,
Restaurants,
School,
Kindergarten,
Shops,
Parks,
Public spaces,
Cafes,
Other civic amenities on the ground floor,
The ground floors of the office buildings will be designed similarly, offering residents a number of new job opportunities,
The central pedestrian boulevard will become the main axis of the new area.
MOBILITY¹⁴⁹
The district is conceived as a so-called city of short distances (smart cities agenda), where everything is within walking distance or within comfortable reach of public transport,
A new bicycle connection from the railway bridge to radlická street and a quiet cycle path within the new boulevard.
Modernization of adjacent tram lines and a new bus stop inside the district,

¹⁴⁵ Available at: [About the Smíchov City – Smíchov City project \(praha5.cz\)](#) (Accessed: 24 April 2025)

¹⁴⁶ Available at: [About the Smíchov City – Smíchov City project \(praha5.cz\)](#) (Accessed: 24 April 2025)

¹⁴⁷ Available at: [About the Smíchov City – Smíchov City project \(praha5.cz\)](#) (Accessed: 24 April 2025)

¹⁴⁸ Available at: [About the Smíchov City – Smíchov City project \(praha5.cz\)](#) (Accessed: 24 April 2025)

¹⁴⁹ Available at: [About the Smíchov City – Smíchov City project \(praha5.cz\)](#) (Accessed: 24 April 2025)

A new transport terminal at the level of the Smíchov railway station and Dobříšská Street,

With a bus station, with a P+R car park for up to 900 cars – connected on several levels to the train station, metro and trams – will allow you to capture suburban transit and direct residents to public transport,

It is designed in cooperation with the future corridor train modernization praha hl.N.-Praha-smíchov with a tunnel relocation of the high-speed line – the cancellation of the smíchov northern platform will enable the connection of trains from hostivice from the so-called "prague semmering" to the smíchov railway station and will enable a full-fledged connection to the main line with a transfer to public transport.

ACCESSIBILITY, GASTRONOMY, SERVICES¹⁵⁰

Easily accessible by car and public transport.

It is planned that bus services will be relocated from Na knížecí and the station forecourt and that a P+R parking facility will be built, increasing the use of the transport hub to 100,000 people a day.

A hotel and a unique gastronomic zone will therefore be built in the immediate vicinity of the transport terminal, offering new catering options, which are currently completely absent.

Due to the suitable location adjacent to the ground floor of the hotel building in the busiest, southernmost tip of the area, with direct links to train platforms, metro and the planned bus station, and P+R car park, the zone can operate until into the night and is intended to become a welcome destination, and not just for residents in the immediate vicinity.

¹⁵⁰ Available at: [About the Smíchov City – Smíchov City project \(praha5.cz\)](https://praha5.cz) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
17. AM SANDHAUS - BERLIN-BUCH, GERMANY
Urban Planning criteria
IMPLEMENTATION MORE SUSTAINABLE MOBILITY ¹⁵¹
For the entire area there will be green areas and roads a speed of max. 30 km/h is specified,
The Accessibility of the Angers (the street Am Sandhaus) is restricted by the installation of modal filters, and is buses, supply/disposal and rescue services as well,
Necessary delivery vehicles (e.g., catering for school students) are permitted,
Kleine Wiltbergstrasse will be closed to private motor vehicles and will be used as a Bicycle Road marked, which provides a quick connection to the higher-level cycle path connections direction Secures the city center,
The cycling facilities are being expanded along Wiltbergstrasse,
East of the railway line at the level of the southern exit is after examining various location alternatives,
Construction of a bicycle parking garage including a mobility station is planned,
There are also new cycle and footpath connections create and qualify existing ones (for example Walking and cycle path connection to Buch Mitte/-South),
The concept for qualifying the pedestrian and cycle path network of the Pankow district.
CLOSE CONNECTION WITH NEIGHBORING AREAS ¹⁵²
Former government hospital,
S-Bahnhof Buch,
Grosse Moorlinse,
Street Am Sandhaus,
Former hospital the state security,
Hobrechtsfelder Chaussee.
GREEN NEIGHBORHOOD WITH LOW SOIL SEALING AND HIGH GREEN CONTENT ¹⁵³
Reduced Soil Sealing,
Permeable Surfaces,
Extensive Green Spaces,
Integration with Natural Landscapes,
Green Roofs and Facades,
Community Gardens and Urban Farming,
Water Management,
Biodiversity,
Improved Air Quality,
Climate Resilience.
STATE-OWNED AREAS THROUGH MUNICIPAL HOUSING COMPANIES, COOPERATIVES, AND OTHER PROPERTY DEVELOPERS ORIENTED TOWARDS THE COMMON GOOD; SUPPORT FOR INNOVATIVE, COMMUNAL, AND CROSS-GENERATIONAL FORMS OF LIVING ¹⁵⁴
Municipal Housing Companies,
Cooperatives,
Property Developers for the Common Good,
Communal Living,
Cross-Generational Housing,
Innovative Housing Concepts,
Affordability,
Community Building,
Sustainability.
SIMULTANEOUS DEPLOYMENT THE NECESSARY SOCIAL INFRASTRUCTURE ¹⁵⁵
Healthcare Facilities - Immediate Availability,
Educational Institutions - Schools and Daycare,
Recreational and Cultural Spaces - Parks and Sports Facilities, Community Centers,

¹⁵¹ Available at: [Framework plan and urban development master plan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁵² Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁵³ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁵⁴ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁵⁵ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

Retail and Commercial Services - Shops and Markets, Local Businesses,
Transportation Infrastructure - Public Transport Links, Pedestrian and Bicycle Paths,
Enhanced Livability,
Community Well-being,
Sustainable Development.
BUILDING WITH SPACE AND ENERGY SAVINGS SUSTAINABLE BUILDING MATERIALS AND INTEGRATION INNOVATIVE ENERGY AND WATER MANAGEMENT CONCEPTS¹⁵⁶
Space and Energy Efficiency - Compact Building Design, Energy-Efficient Technologies,
Sustainable Building Materials - Eco-Friendly Materials, Low-Emission Materials,
Innovative Energy Management - Renewable Energy Integration, Smart Energy Systems,
Innovative Water Management - Water Conservation Technologies, Green Infrastructure,
Integration with Natural Environment - Harmonious Design, Climate-Responsive Design,
Environmental Impact,
Cost Savings,
Resilience.
LANDSCAPE INTEGRATION AND OPEN SPACE DEVELOPMENT¹⁵⁷
Landscape Integration - Natural Landscape Preservation, Harmonious Design, Green Corridors,
Open Space Development - Public Parks and Gardens, Playgrounds and Sports Facilities, Community Spaces,
Sustainable Water Management - Rain Gardens and Bioswales, Natural Water Bodies,
Accessibility and Connectivity - Pedestrian and Bicycle Paths, Inclusive Design,
Enhanced Quality of Life,
Biodiversity,
Climate Adaptation.
THE BASIS OF THE MASTERPLAN¹⁵⁸
Sustainability,
Landscape Integration,
Mixed-Use Development,
Community Focus,
Connectivity and Mobility,
Innovation in Housing and Infrastructure,
Resilience and Adaptation,
Public Participation and Inclusivity,
Efficient Land Use.
ADAPTABILITY OF SPACE FOR VARIOUS PURPOSES¹⁵⁹
Flexible Building Design: Modular Construction, Multi-Functional Spaces,
Mixed-Use Development: Zoning Flexibility, Adaptive Reuse,
Public and Green Spaces: Reconfigurable Open Spaces, Temporary Installations,
Community-Centric Design: Shared Spaces, Intergenerational Use,
Infrastructure for Future Technologies: Smart Infrastructure, Energy and Water Management Systems,
Long-Term Viability,
Community Resilience,
Efficient Use of Resources,
PHASES¹⁶⁰
Phase 1: Planning and Initial Infrastructure (2020-2021):
-Framework Planning,
-Preliminary Infrastructure.
Phase 2: Core Residential and Public Space Development (2022-2024):
-Residential Construction,
-Public Spaces and Green Areas,
-Social Infrastructure.
Phase 3: Expansion and Community Services (2025-2027):

¹⁵⁶ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁵⁷ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁵⁸ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁵⁹ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁶⁰ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

- Additional Housing Units,
- Commercial and Retail Development,
- Enhanced Public Transport.

Phase 4: Final Development and Integration (2028-2030):

- Final Public Spaces and Green Infrastructure,
- Final Infrastructure and Services,
- Neighborhood Integration.

Phase 5: Ongoing Maintenance and Community Building (Post-2030):

- Maintenance and Upgrades,
- Community Engagement,
- Environmental Stewardship.

CREATING OF NEW JOBS¹⁶¹

Mixed-Use Development: Commercial and Retail Spaces, Local Business Support,
Construction and Development Jobs: During Development Phases, Sustainable Construction,
Public and Social Services: Healthcare and Education, Community Services,
Green and Environmental Jobs: Maintenance of Green Spaces, Sustainability Initiatives,
Innovation and Technology: Smart City Solutions, Research and Development,
Support for Creative Industries: Cultural and Creative Spaces,
Long-Term Economic Impact: Economic Diversification, Attraction of New Residents.

THE CONCEPT OF A SMART CITY¹⁶²

Smart Infrastructure,
Digital Connectivity,
Sustainable Urban Planning,
Public Safety and Security,
Citizen Engagement,
Environmental Monitoring,
Smart Energy Systems,
Connected Infrastructure,
Environmental Monitoring,
Digital Services for Residents,
Efficiency,
Quality of Life,
Sustainability,
Economic Growth.

MOBILITY¹⁶³

Public Transportation Integration,
Pedestrian-Friendly Design,
Cycling Infrastructure,
Sustainable Mobility Solutions,
Mobility Hubs,
Smart Mobility Solutions,
Accessibility,
Reduced Traffic Congestion,
Environmental Sustainability,
Improved Quality of Life,
Economic Efficiency.

¹⁶¹ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁶² Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

¹⁶³ Available at: [Rahmenplan und städtebaulicher Masterplan - Berlin.de](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
18. KOLKAJEN – STOCKHOLM, SWEDEN
Urban Planning criteria
SUSTAINABLE URBAN DESIGN ¹⁶⁴
Waterfront Integration,
Green Building Standards.
SMART MOBILITY ¹⁶⁵
Public Transportation Access,
Bicycle-Friendly Infrastructure,
Humane streets,
Green streets,
Cycle-friendly.
FIVE STRATEGIES FOR SUSTAINABILITY ¹⁶⁶
Prosperous Neighbourhood,
Performative Buildings,
Ecological Infrastructure,
Mobility 3.0,
Social Capital focus the plan's qualities and innovations in the key areas for the future.
ENERGY ¹⁶⁷
Renewable Energy Sources,
District Heating and Cooling,
Microclimate: Street,
Microclimate: Block,
Microclimate: Space,
Mastering Microclimate,
Loop.
ENVIRONMENTAL SUSTAINABILITY ¹⁶⁸
Biodiversity and Green Spaces,
Climate Resilience.
COMMUNITY AND SOCIAL INNOVATION ¹⁶⁹
Shared Spaces and Co-Living,
Inclusive Design.
CITIZEN ENGAGEMENT ¹⁷⁰
Community Engagement Platforms.

¹⁶⁴ Available at: [Kolkajen-Ropsten - ADEPT](#) (Accessed: 24 April 2025)

¹⁶⁵ Available at: [Kolkajen \(mandaworks.com\)](#) (Accessed: 24 April 2025)

¹⁶⁶ Available at: [Kolkajen \(mandaworks.com\)](#) (Accessed: 24 April 2025)

¹⁶⁷ Available at: [Kolkajen-Ropsten - ADEPT](#) (Accessed: 24 April 2025)

¹⁶⁸ Available at: [Kolkajen-Ropsten - ADEPT](#) (Accessed: 24 April 2025)

¹⁶⁹ Available at: [Kolkajen-Ropsten - ADEPT](#) (Accessed: 24 April 2025)

¹⁷⁰ Available at: [Kolkajen \(mandaworks.com\)](#) (Accessed: 24 April 2025)

Overview of selected Neighbourhoods
19. PIHLAJANIEMI (TURKU, FINLAND)
Urban Planning criteria
LIVING ¹⁷¹
Housing health,
Waste management,
Districts,
Urban Farming,
Water supply,
Anticipating and preparing for ageing housing.
FAUNA ¹⁷²
Animal protection,
Dog parks,
Pet burial,
Shelter animals,
Animal clinic.
URBAN PLANNING ¹⁷³
Town Planning,
Traffic and street planning,
Nomenclature and addresses,
Green area planning,
Zoning.
TRAFFIC ¹⁷⁴
Public transport,
Street maintenance,
Sustainable mobility,
Walking,
Transport safety,
Parking,
Cycling,
Waterway transport,
Shared transport.
CONSTRUCTION ¹⁷⁵
Property deliveries,
Advice and assistance,
Construction permits,
Construction's instructions and forms,
Construction supervision,
Plots.
ENVIRONMENT ¹⁷⁶
Environmental permits and supervision,
Nature and nature conversation,
Climate,
Environmental health and control,
Publications and guides.
PROJECTS ¹⁷⁷
Large-scaled urban development projects.

¹⁷¹ Available at: [Turku, Pihlajaniemi - Senaatti](#) (Accessed: 24 April 2025)

¹⁷² Available at: [Turku, Pihlajaniemi - Senaatti](#) (Accessed: 24 April 2025)

¹⁷³ Available at: [Turku, Pihlajaniemi - Senaatti](#) (Accessed: 24 April 2025)

¹⁷⁴ Available at: [Turku, Pihlajaniemi - Senaatti](#) (Accessed: 24 April 2025)

¹⁷⁵ Available at: [Rakentaminen | Turku.fi](#) (Accessed: 24 April 2025)

¹⁷⁶ Available at: [Environment | Turku.fi](#) (Accessed: 24 April 2025)

¹⁷⁷ Available at: [Projects and projects | Turku.fi](#) (Accessed: 24 April 2025)

Projects related to zoning.

Construction related projects.

Environment related projects.

Farm projects under preparation and ongoing.

Documents guiding urban planning and development.

Overview of selected Neighbourhoods
20. NUEVO NORTE - MADRID, SPAIN
Urban Planning criteria
SUSTAINABILITY ¹⁷⁸
A sustainable city in which 80% of travel will be on foot, by bike, or on public transport,
In which housing, businesses, offices, and green areas create the ideal environment for living, working, and enjoying free time.
URBAN MODEL ¹⁷⁹
A dense,
Compact people-centered Neighbourhood,
Public spaces,
Sustainable mobility,
A Neighbourhood model that takes everyone into account and was designed through participative processes that made it possible to listen to citizens and understand their different needs and ways of using their city.
RAILWAY STATION AND PUBLIC TRANSPORT ¹⁸⁰
Transport hubs and nodes,
Chamartín hub,
La Paz intermodal area,
Above-ground hub areas (nodes),
One new underground line with three stations. (CBD / South Fuencarral / North Fuencarral),
One new commuter train station in the south of Fuencarral,
One completely renewed commuter train station (Fuencarral),
One new Bus Rapid Transit (BRT) line with high capacity, reserved platforms and traffic light priority.
STREETS AND CONNECTIONS ¹⁸¹
Agustín de Foxá street will be the main artery of the project,
La Castellana won't be extended. Instead, one of its arteries will rise over the M-30 ring road and become a large green walkway leading up to the hills of El Pardo,
Agustín de Foxá will be the main artery for the North-South project. Meanwhile, Calle Bambú will extend down to Antonio de Cabezón. Both arteries will have bridges, which will cross over the M-30, and the current Mauricio Legendre bridge will be widened,
South of the M-30, the railway sidings will be covered. Avenida de San Luis will be extended to join up with Calle Viejas,
Two streets will surround Chamartín Station on the north and the south, and they will link up to Sinesio Delgado, Monforte de Lemos and Pío XII. Three bridges, a road traffic tunnel, a pedestrian footbridge, and cycleway will be built to the north of the M-30.
GREEN AREAS ¹⁸²
Parque Central is the new unique green space that will be created on top of the Chamartín railway covering. With a 13-hectare area, this will become one of the city's iconic spaces. In addition to boasting a special design and landscaped garden, its location, surrounded by the Business District and next to the new Chamartín Station, will give it a unique character.
Another hugely important element is the green artery, made up of a network of parks that connect to each other and to the existing parks in the neighbourhoods. This is the continuation of the city's main artery (Prado - Recoletos - Castellana) and will be the city's natural connection to the hills of el Pardo.
Public facilities for current and future residents:
-Educational,
-Sporting,
-Cultural.
Health,
3rd age Residents,
Civic-social,

¹⁷⁸ Available at: [Madrid Norte \(creamadridnuevonorte.com\)](https://creamadridnuevonorte.com) (Accessed: 24 April 2025)

¹⁷⁹ Available at: [Madrid Norte \(creamadridnuevonorte.com\)](https://creamadridnuevonorte.com) (Accessed: 24 April 2025)

¹⁸⁰ Available at: [Madrid Norte \(creamadridnuevonorte.com\)](https://creamadridnuevonorte.com) (Accessed: 24 April 2025)

¹⁸¹ Available at: [Madrid Norte \(creamadridnuevonorte.com\)](https://creamadridnuevonorte.com) (Accessed: 24 April 2025)

¹⁸² Available at: [Folleto_MNN_PREVIEW_ENG_v3 \(grupo-sanjose.com\)](https://grupo-sanjose.com) (Accessed: 24 April 2025)

Other public allocations and services.

HOUSING¹⁸³

20% of all the houses in Madrid Nuevo Norte (2,100), proportionately spread over the three domains, will be affordable housing,

Around 10,500 houses will fulfil the residential needs of the north of Madrid, an in-demand area that has historically had a deficit of new houses,

A stock of high quality and well-designed houses with maximum energy efficiency will exist alongside complementary uses, such as offices, facilities and local shops.

CENTRAL BUSINESS DISTRICT¹⁸⁴

To compete on the global stage, Madrid needs a next-generation Central Business District with a range of quality offices that can meet the needs of large corporations and perform the role that our capital should in the world,

Creating this CBD will be the key to creating quality jobs, attracting international talent, as well as the talent Spain has exported over recent years. The project is expected to generate over 150,000 jobs,

Madrid Nuevo Norte Skyline,

A next-generation Central Business District that will generate thousands of jobs.

CONSENSUS¹⁸⁵

Madrid Nuevo Norte is a consensus-based project stemming from the dialogue between all stakeholders involved,

This enables Madrid Nuevo Norte to enjoy the greatest consensus that an urban development project in Madrid has ever achieved,

A legacy for new generations, for a city that is more sustainable, more modern and with more opportunities.

USES OF THE LAND¹⁸⁶

Public uses 76.56%,

Private uses 23.44%,

Green spaces 18.86 %,

Facilities 13.30 %,

Urban road system 33.51 %,

Commercial 10.81%,

Residential 12.60 %,

Private facilities 0.03 %,

Railway infrastructure 10.89%.

¹⁸³ Available at: [Folleto MNN PREVIEW ENG v3 \(grupo-sanjose.com\)](#) (Accessed: 24 April 2025)

¹⁸⁴ Available at: [Folleto MNN PREVIEW ENG v3 \(grupo-sanjose.com\)](#) (Accessed: 24 April 2025)

¹⁸⁵ Available at: [Folleto MNN PREVIEW ENG v3 \(grupo-sanjose.com\)](#) (Accessed: 24 April 2025)

¹⁸⁶ Available at: [Folleto MNN PREVIEW ENG v3 \(grupo-sanjose.com\)](#) (Accessed: 24 April 2025)

SMART PROGRAM

Overview of selected Neighbourhoods
1. ASPERN SEESTADT - VIENNA, AUSTRIA
Smart Program
SMART ICT¹
Networked research,
Intelligent data,
Open for all domains of an energy system.
SMART GRID²
Energy of the future: Reliable, green, clever,
Transparent distribution networks,
Improved grid infrastructure planning,
Reliable supply,
Testing the overall system in real time,
Digitalization cuts costs,
Scalable and compatible customer solutions,
Intelligent data processing,
Open for all domains of an energy system.
SMART USER³
People oriented technology,
Using real data for real added value,
Incentives for reducing consumption.
SMART BUILDING⁴
Smart buildings communicating with each other,
Communal electricity production in energy districts,
Digital twin technology for full transparency.
MOBILITY SOLUTIONS⁵
Incorporation of smart transportation solutions, such as electric vehicle charging stations, bike-sharing programs, and intelligent traffic management systems.
DIGITAL INFRASTRUCTURE⁶
High-speed broadband and connectivity infrastructure to support the integration of various smart technologies and enhance communication between devices.
WASTE MANAGEMENT⁷
Implementation of smart waste management systems to optimize waste collection schedules, reduce environmental impact, and encourage recycling.
SMART STREET LIGHTING⁸
Energy-efficient and sensor-equipped street lighting systems that adjust based on real-time conditions, contributing to energy savings.

¹ Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://ascr.at) (Accessed: 21 April 2025)

² Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://ascr.at) (Accessed: 21 April 2025)

³ Available at: [brochure-seestadt-aspern-english-web.pdf \(siemens.com\)](https://www.siemens.com/brochures/seestadt-aspern-english-web.pdf) (Accessed: 21 April 2025)

⁴ Available at: [brochure-seestadt-aspern-english-web.pdf \(siemens.com\)](https://www.siemens.com/brochures/seestadt-aspern-english-web.pdf) (Accessed: 21 April 2025)

⁵ Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://ascr.at) (Accessed: 21 April 2025)

⁶ Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://ascr.at) (Accessed: 21 April 2025)

⁷ Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://ascr.at) (Accessed: 21 April 2025)

⁸ Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://ascr.at) (Accessed: 21 April 2025)

COMMUNITY ENGAGEMENT PLATFORMS⁹

Digital platforms and mobile applications to engage residents in community activities, share information, and gather feedback on neighborhood initiatives.

SMART HOME SOLUTIONS¹⁰

Adoption of smart home technologies that allow residents to monitor and control various aspects of their homes remotely for increased comfort and energy efficiency.

SECURITY AND SURVEILLANCE¹¹

Implementation of smart security systems, including video surveillance and access control, to enhance safety in public spaces and residential areas.

⁹ Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://www.ascr.at/) (Accessed: 21 April 2025)

¹⁰ Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://www.ascr.at/) (Accessed: 21 April 2025)

¹¹ Available at: [Homepage - Aspern Smart City Research \(ascr.at\)](https://www.ascr.at/) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
2. NORDHAVN - COPENHAGEN, DENMARK
Smart program
DEVELOPMENT OF A COHERENT FLEXIBLE ENERGY SYSTEM ¹²
With novel technical solutions like energy storage by variable district heating temperatures, buildings providing flexibility and more integrated markets where infrastructures are closely interconnected and operationally co-optimized.
RE-THINKING ENERGY INFRASTRUCTURE DESIGN AND DIMENSIONING METHODS ¹³
New low-heat demanding buildings, new dynamic patterns from responsive prosumers, and technologies to shift between the use of electricity and district heating.
DEVELOPMENT OF ENERGY TECHNOLOGIES ¹⁴
Providing grid services by smart cost-effective controllers and associated new business models and user interactions.
STRUCTURE OF THE ENERGY LAB NORDHAVN PROJECT ¹⁵
1. WP1 Project Management (DTU),
2. WP2 Data and Measurements (ABB),
3. WP3 Smart Energy Buildings (Balslev),
4. WP4 Smart Network Services (DTU),
5. WP5 Thermal Infrastructure (HOFOR),
6. WP6 Electricity infrastructure (Dong Energy Distribution),
7. WP7 Electric Transportation Infrastructure (Clean Charge Solutions),
8. WP8 Multi-carrier Energy Systems Operation and Markets (ABB),
9. WP9 Visibility and Stakeholder Engagement (By og Havn),
10. WP10 Smart components in integrated energy systems (Danfoss).
THE PROJECT INCLUDES THE FOLLOWING EXPERIMENTAL ACTIVITIES (NUMBER OF UNITS IN BRACKETS) EMBEDDED IN THE TEN WORK PACKAGES ¹⁶
1. User behavior and demand response with home management systems,
2. Technology for adaptive use of low temperature district heating and electricity,
3. Grid services by electric water heaters in private homes,
4. Smart energy-flexible building management system in commercial buildings,
5. Controller for optimal operation of large heat pump,
6. Smart charging EV infrastructure,
7. Electric battery storage in the power grid,
8. Low-temperature district heating supply solutions,
9. Islanding heating system supply,
10. Integrated heat and electricity market and control centers,
ENERGYLAB NORDHAVN ENACTS POLITICAL AMBITIONS AND STRATEGIES ¹⁷
On a national basis the project addresses explicitly national strategies for the development of intelligent energy systems. The ‘Danish energy policy 2012-20’ (2012) states a number of initiatives to transform the energy system into a smart system.

¹² Available at: [EnergyLab Nordhavn fremtidens integrerede energi system - EnergyLab Nordhavn](#) (Accessed: 21 April 2025)

¹³ Available at: [EnergyLab Nordhavn fremtidens integrerede energi system - EnergyLab Nordhavn](#) (Accessed: 21 April 2025)

¹⁴ Available at: [EnergyLab Nordhavn fremtidens integrerede energi system - EnergyLab Nordhavn](#) (Accessed: 21 April 2025)

¹⁵ Available at: [EnergyLab Nordhavn fremtidens integrerede energi system - EnergyLab Nordhavn](#) (Accessed: 21 April 2025)

¹⁶ Available at: [EnergyLab Nordhavn fremtidens integrerede energi system - EnergyLab Nordhavn](#) (Accessed: 21 April 2025)

¹⁷ Available at: [Page not found | State of Green](#) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
3. MERWEDE - UTRECHT, NETHERLAND
Smart Program
SMART INFRASTRUCTURE ¹⁸
Smart Grids
IoT Integration
Energy-Efficient Buildings
IoT SENSORS ¹⁹
Energy Management
Waste Management
Traffic and Mobility
Environmental Monitoring
SMART BUILDINGS ²⁰
Energy Efficiency
Automated Systems
Sustainable Materials
Renewable Energy Integration
Smart Water Management
RENEWABLE ENERGY ²¹
Solar Power
Wind Energy
Energy Storage
Smart Grids
Community Energy Initiatives
SMART MOBILITY ²²
Automated
Connected
Electric
Shared
New
Data as a raw material
DIGITAL CONNECTIVITY ²³
High-Speed Internet
Public Wi-Fi Access
Smart City Applications
Data-Driven Urban Management
Support for Remote Work and Education

¹⁸ Available at: [Merwede \(eon.com\)](https://merwede.eon.com) (Accessed: 21 April 2025)

¹⁹ Available at: [Merwede \(eon.com\)](https://merwede.eon.com) (Accessed: 21 April 2025)

²⁰ Available at: [SUPERBLOCK: Merwede Utrecht, the district of the future | Marc Koehler Associates](https://superblock.nl/merwede-utrecht-the-district-of-the-future) (Accessed: 21 April 2025)

²¹ Available at: [Merwede \(eon.com\)](https://merwede.eon.com) (Accessed: 21 April 2025)

²² Available at: [New mobility 2.0.pdf \(goudappel.nl\)](https://newmobility2025.nl) (Accessed: 21 April 2025)

²³ Available at: [Merwede \(eon.com\)](https://merwede.eon.com) (Accessed: 21 April 2025)

DATA ANALYTICS²⁴

Urban Planning and Development

Energy Management

Traffic and Mobility Management

Public Safety and Security

Environmental Monitoring

SMART USER PLATFORMS²⁵

Energy Management Platforms

Mobility Platforms

Community Engagement

Public Services Access

²⁴ Available at: [Merwede \(eon.com\)](#) (Accessed: 21 April 2025)

²⁵ Available at: [Merwede \(eon.com\)](#) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods

4. NIEUW ZUID - ANTWERPEN, BELGIUM

Smart Program

LOCAL AND SUPRA-LOCAL AWARENESS-RAISING²⁶

Community Workshops and Events,

Digital Platforms for Awareness,

Partnerships with Educational Institutions,

Public Art and Installations,

Global Knowledge Sharing.

SMART ICT – HOME INTELLIGENCE

Home Automation Systems,

Smart Energy Management,

Security and Surveillance,

Health and Wellness Monitoring,

Connectivity and Integration,

User-Friendly Interfaces.

GREENING AND EXPANSION OF A SMART HEAT NETWORK²⁷

Integration of Renewable Energy Sources,

Network Expansion,

Advanced Heat Distribution,

User Engagement and Control,

Energy Storage Solutions,

Sustainability and Environmental Impact.

SUSTAINABLE ELECTRICITY PRODUCTION²⁸

Solar Energy Integration,

Wind Energy,

Biomass Energy Production,

Smart Grids,

Energy Storage,

Community Energy Initiative.

SUSTAINABLE MOBILITY²⁹

Cycling Infrastructure,

Pedestrian-Friendly Design,

Public Transportation,

Electric Vehicles (EVs),

Car-Sharing Program,

Mobility as a Service (MaaS),

Smart Traffic Management.

IMPROVING AIR QUALITY³⁰

²⁶ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 21 April 2025)

²⁷ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 21 April 2025)

²⁸ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 21 April 2025)

²⁹ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 21 April 2025)

³⁰ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 21 April 2025)

Promotion of Green Transportation,

Green Spaces and Urban Vegetation,

Smart Air Quality Monitoring,

Low Emission Zones,

Public Awareness Campaigns,

Energy-Efficient Buildings.

SUSTAINABLE WATER MANAGEMENT AND GREYWATER RECOVERY³¹

Integrated Water Management System,

Greywater Recovery Systems,

Rainwater Harvesting,

Permeable Surfaces and Green Infrastructure,

Smart Water Monitoring,

Public Awareness and Education.

³¹ Available at: [Nieuw Zuid - Smart City District | Vlaanderen.be](#) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
5. CLICHY-BATIGNOLLES - PARIS, FRANCE
Smart program
SMART GRID IMPEMETATION³²
The program features the first smart grid in Paris, known as the CoRDEES project, which aims to enhance energy efficiency and reduce carbon emissions.
Integration of Renewable Energy
Real-Time Monitoring and Management
Energy Efficiency and Reduction of Carbon Emissions
Co-Responsibility Model
Enhanced Grid Reliability and Resilience
Innovation and Future Scalability
SUSTAINABLE URBAN DEVELOPMENT IN CLICHY-BATIGNOLLES³³
Integration of Green Spaces:
- Martin Luther King Park,
-Green Corridors and Roofs.
Energy-Efficient Buildings:
- High Standards of Energy Efficiency,
- Smart Building Technologies.
Modern Infrastructure:
- Sustainable Transportation,
- Advanced Waste Management.
Water Management:
- Stormwater Management,
- Greywater Recycling.
Community Engagement and Social Sustainability:
- Public Participation,
- Affordable Housing,
Innovation and Replicability:
- Model for Future Developments.
Zero Carbon Goal in Clichy-Batignolles³⁴
Renewable Energy Integration:
-Solar and Geothermal Energy,
-Smart Energy Grids.
Energy-Efficient Buildings:
-Low-Energy Buildings (BBC Standards),
-Zero-Energy Buildings.
Carbon Offset Initiatives:
-Green Spaces and Urban Forestry,
-Carbon Sequestration.
Sustainable Transportation:
-Promotion of Low-Emission Transport,
-Car-Free Zones.
Waste Management and Circular Economy:
-Waste-to-Energy Conversion,
-Recycling and Composting.
Community Engagement and Behavioral Change:
-Resident Participation,
-Behavioral Incentives.
Innovation and Continuous Improvement:
-Research and Development,
-Monitoring and Reporting.

³² Available at: [Smart Grids in Paris and Greater Paris : Think Smartgrids](#) (Accessed: 21 April 2025)

³³ Available at: [BD_CB_DossierPress_En_060317.pdf\(paris-metropole-amenagement.fr\)](#) (Accessed: 21 April 2025)

³⁴ Available at: [Smart Grids in Paris and Greater Paris : Think Smartgrids](#) (Accessed: 21 April 2025)

Smart Mobility Solutions in Clichy-Batignolles³⁵

Promotion of Public Transport:

- Enhanced Public Transit Accessibility,
 - Real-Time Transit Information,
 - Low-Emission Public Transit.
-

Cycling Infrastructure:

- Extensive Cycle Paths,
 - Bike-Sharing Programs,
 - Bicycle Parking Facilities.
-

Pedestrian-Friendly Design:

- Walkable Streets,
 - Safe and Accessible Public Spaces.
-

Electric Vehicles (EVs) and Charging Infrastructure:

- EV Charging Stations,
 - Incentives for EV Use.
-

Car-Sharing Programs:

- Shared Mobility Services,
 - Integration with Public Transit.
-

Reduction of Car Dependency:

- Car-Free Zones,
- Parking Management.

³⁵ Available at: [Clichy-Batignolles \(Paris 17th\) | Paris & Métropole Aménagement \(paris-metropole-amenagement.fr\)](https://parisbatignolles.paris.fr/en/Smart-Mobility-Solutions-in-Clichy-Batignolles)
(Accessed: 21 April 2025)

6. SCHUMACHER QUARTER - BERLIN, GERMANY

Smart program

TRAFFIC TECHNOLOGY AND MOBILITY³⁶

Vay Technologies – leading driverless mobility company,

EasyMile – autonomous transport solutions,

HH2E – green hydrogen and electricity production,

Motor AI – software for autonomous driving.

ENERGY AND ENVIRONMENTAL TECHNOLOGY³⁷

EnerKite – wind turbines for renewable power generation,

Green Urban Energy – sustainable heating and cooling systems,

Solyco Solar – solar systems and modules,

WINT Design Lab – design laboratory for sustainable and innovative products.

IT AND AUTOMATION³⁸

Maschinenfabrik Reinhausen – components and systems for power distribution networks.

Smart Building Management:

- Automated Energy Management,
- Building Automation Systems (BAS),
- IoT Integration,

Smart City Infrastructure:

- Digital Connectivity,
- Automated Public Services,
- Real-Time Monitoring and Management.

Automated Mobility Solutions:

- Intelligent Traffic Management,
- Autonomous Vehicles (AVs),
- Mobility as a Service (MaaS).

Sustainable Resource Management:

- Smart Water Management,
- Energy Storage and Distribution.

Resident Engagement and Smart Living:

- Smart Home Systems,
- Resident Portals.

Data-Driven Urban Management:

- Big Data Analytics,
- Predictive Maintenance.

MICROSYSTEMS AND MATERIALS³⁹

Microsystems Integration:

- Environmental Sensors,
- Smart Building Controls,
- Water Management Sensors.

Advanced materials in construction:

- High-Performance Insulation,
- Self-Healing Materials,
- Low-Carbon Concrete.

Energy-Harvesting Materials:

- Photovoltaic Materials,
- Piezoelectric Materials.

Smart Materials in Public Infrastructure:

- Adaptive Facades,
- Phase-Change Materials (PCMs).

³⁶ Available at: [Ready For Take-Off: The Urban Tech Republic | Reason-Why.Berlin](#) (Accessed: 21 April 2025)

³⁷ Available at: [Ready For Take-Off: The Urban Tech Republic | Reason-Why.Berlin](#) (Accessed: 21 April 2025)

³⁸ Available at: [Ready For Take-Off: The Urban Tech Republic | Reason-Why.Berlin](#) (Accessed: 21 April 2025)

³⁹ Available at: [Our overall concept - Schumacher Quartier \(schumacher-quartier.de\)](#) (Accessed: 21 April 2025)

Sustainable and Recyclable Materials:

- Biodegradable and Recyclable Materials,
- Green Concrete and Eco-Friendly Asphalt.

Innovative Waste Management Materials:

- Smart Waste Bins,
- Composting and Biodegradable Waste Containers.

SUSTAINABILITY⁴⁰

Energy Sustainability:

- Renewable Energy Integration,
- Energy-Efficient Buildings,
- Smart Grid Technology,
- Sustainable Mobility,
- Electric Vehicles and Charging Infrastructure,
- Car-Free Zones.

Water Sustainability:

- Efficient Water Management,
- Green Infrastructure for Stormwater Management,
- Smart Water Monitoring.

Waste Reduction and Circular Economy:

- Comprehensive Waste Management,
- Circular Economy Principles,
- Organic Waste Composting.

Green Spaces and Biodiversity:

- Urban Green Spaces,
- Biodiversity Enhancement,
- Community Gardens.

Climate Resilience:

- Adaptation to Climate Change,
- Resilient Infrastructure.

DIGITAL SERVICES⁴¹

Smart Home Systems:

- Integrated Home Automation,
- Energy Monitoring and Management.

Smart City Services:

- Digital Public Services,
- Real-Time Information and Alerts,
- Digital Health Services.

SMART INFRASTRUCTURE

Smart Energy Systems:

- Renewable Energy Integration,
- Smart Grids,
- Energy Storage.

Advanced Transportation Infrastructure:

- Smart Mobility Solutions,
- Electric Vehicle (EV) Charging Network,
- Autonomous and Connected Vehicles.

Smart Water Management:

- Automated Water Distribution,
- Stormwater Management.

Waste Management and Recycling:

- Smart Waste Collection,
- Recycling and Composting.

Sustainable Building Infrastructure:

- Green Building Design,
 - Smart Building Systems.
-

⁴⁰ Available at: [Our overall concept - Schumacher Quartier \(schumacher-quartier.de\)](https://www.schumacher-quartier.de) (Accessed: 21 April 2025)

⁴¹ Available at: [Our overall concept - Schumacher Quartier \(schumacher-quartier.de\)](https://www.schumacher-quartier.de) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods

7. MILANO INNOVATION DISTRICT – MILAN, ITALY

Smart program

SMART BUILDINGS⁴²

Energy efficiency,

Automation,

Sustainable materials,

Smart sensors.

GREEN ENERGY⁴³

Solar panels,

Wind turbines,

Energy storage,

Smart Grids.

ADVANCED MOBILITY⁴⁴

Electric Vehicles (EVs),

Autonomous Shuttles,

Bike-sharing Programs,

Smart Traffic Management.

DIGITAL INFRASTRUCTURE⁴⁵

High-speed Internet,

IoT Devices,

Data Analytics,

Cybersecurity.

SUSTAINABLE PRACTICES⁴⁶

Recycling Programs,

Water Conservation,

Green Spaces,

Sustainable Transport.

COMMUNITY ENGAGEMENT⁴⁷

Public Workshops,

Feedback Systems,

Educational Programs,

Collaborative Projects.

INNOVATION HUBS⁴⁸

Co-working Spaces,

Research Facilities,

Incubators and Accelerators,

Networking Events.

⁴² Available at: [MIND - Milano Innovation District \(mindmilano.it\)](https://mindmilano.it) (Accessed: 21 April 2025)

⁴³ Available at: [MIND - Milano Innovation District \(mindmilano.it\)](https://mindmilano.it) (Accessed: 21 April 2025)

⁴⁴ Available at: [MIND - Milano Innovation District \(mindmilano.it\)](https://mindmilano.it) (Accessed: 21 April 2025)

⁴⁵ Available at: [MIND - Milano Innovation District \(mindmilano.it\)](https://mindmilano.it) (Accessed: 21 April 2025)

⁴⁶ Available at: [MIND - Milano Innovation District \(mindmilano.it\)](https://mindmilano.it) (Accessed: 21 April 2025)

⁴⁷ Available at: [MIND - Milano Innovation District \(mindmilano.it\)](https://mindmilano.it) (Accessed: 21 April 2025)

⁴⁸ Available at: [MIND - Milano Innovation District \(mindmilano.it\)](https://mindmilano.it) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
8. BRAINPORT - EINDHOVEN, NETHERLAND
Smart program
SMART SYSTEM ⁴⁹
Energy Management,
Mobility and Transportation,
Waste Management,
Healthcare,
Safety and Security,
Environmental Monitoring,
Community Engagement,
Home Automation.
SUSTAINABLE AND SMART LIVING ENVIRONMENT ⁵⁰
Sustainability and Circularity,
Health and Well-Being,
Data and Mobility,
Energy,
Community and Social Innovation.
CIRCULAR WATER SYSTEM ⁵¹
Water reuse,
Rainwater Harvesting,
Green Infrastructure,
Smart Monitoring,
Climate Adaptation,
Community Involvement.
SMART MONITORING SYSTEM ⁵²
Real-Time Data Collection,
Data Integration and Analysis,
Automated Responses,
User Engagement,
Predictive Maintenance,
Security and Privacy.
COMMUNITY ENGAGEMENT ⁵³
Participatory Design,
Digital Platforms,
Community Spaces,
Workshops and Events,
Social Innovation Projects
Feedback Mechanisms
Inclusive Policies
LIVING LAB INITIATIVE ⁵⁴
Community-Driven Development,
Shared Resources,
Health and Well-being,
Educational Programs,
Digital Platforms,
Experimental Spaces.

⁴⁹ Available at: [Home - Brainport Smart District](#) (Accessed: 21 April 2025)

⁵⁰ Available at: [Home - Brainport Smart District](#) (Accessed: 21 April 2025)

⁵¹ Available at: [Home - Brainport Smart District](#) (Accessed: 21 April 2025)

⁵² Available at: [Brainport Smart District - UNStudio](#) (Accessed: 21 April 2025)

⁵³ Available at: [Home - Brainport Smart District](#) (Accessed: 21 April 2025)

⁵⁴ Available at: [UNStudio Designs 'World's Smartest Neighborhood' in the Netherlands | ArchDaily](#) (Accessed: 21 April 2025)

INNOVATIVE SOCIAL PROJECTS⁵⁵

Energy Sharing Initiatives,
Urban Farming,
Mobility as a Service (MaaS),
Health and Well-being Programs,
Circular Economy Projects,
Educational and Cultural Activities.

SMART MOBILITY SOLUTIONS⁵⁶

Electric Vehicle (EV) Infrastructure,
Bike-Sharing Programs,
Autonomous Public Transport,
Intelligent Traffic Management,
Mobility as a Service (MaaS),
Intelligent Speed Adaptation (ISA),
Zero-Emission Zones.

⁵⁵ Available at: [Home - Brainport Smart District](#) (Accessed: 21 April 2025)

⁵⁶ Available at: [VIDEO: In Brainport Smart District, residents will own their data - Smart Cities World](#) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
9. ÜBERSEEINSEL - BREMEN, GERMANY
Smart program
SMART TECHNOLOGIES ⁵⁷
Smart Energy Management,
Intelligent Transportation,
Smart Home Systems,
Waste Management,
Water Management,
Public Spaces.
GREEN BUILDING TECHNOLOGIES ⁵⁸
Energy-Efficient Materials,
Smart Home Systems,
Renewable Energy Integration,
Water Conservation,
Green Roofs and Walls,
Waste Management.
SMART HOME SYSTEMS ⁵⁹
Automated Climate Control,
Smart Lighting,
Energy Monitoring,
Security Systems,
Appliance Control,
Voice Assistants,
Water Management.
WASTE MANAGEMENT ⁶⁰
Smart Waste Bins,
Recycling Programs,
Composting,
Waste Reduction Initiatives,
Digital Platforms,
Energy Recovery.
RECYCLING PROGRAMS ⁶¹
Separation of Waste,
Smart Waste Bins,
Composting,
Educational Programs,
Digital Platforms,
Recycling Centers,
SUSTAINABILITY AND LIVABILITY ⁶²
Smart Grid Integration,
IoT Sensors,
Smart Parking,
Community Apps,
Public Wi-Fi,
Sustainable Landscaping,
Emergency Response Systems.
INNOVATIVE ENERGY ⁶³

⁵⁷ Available at: [OVERSEAS ISLAND Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 21 April 2025)

⁵⁸ Available at: [OVERSEAS ISLAND Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 21 April 2025)

⁵⁹ Available at: [OVERSEAS ISLAND Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 21 April 2025)

⁶⁰ Available at: [OVERSEAS ISLAND Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 21 April 2025)

⁶¹ Available at: [Home – The Bremen City Cleaning Service \(die-bremer-stadtreinigung.de\)](https://die-bremer-stadtreinigung.de) (Accessed: 21 April 2025)

⁶² Available at: [ÜBERSEEINSEL Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 21 April 2025)

⁶³ Available at: [OVERSEAS ISLAND Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 21 April 2025)

Renewable Energy Sources,
Smart Grids,
Energy Storage Systems,
Energy-Efficient Buildings,
District Heating,
Community Engagement,
SMART USER ⁶⁴
Tech-Savvy,
Sustainability Advocates,
Community Engagement,
Lifelong Learners,
Health and Wellness Focus,
Innovative and Creative,
Social Responsibility.
SMART BUILDING ⁶⁵
renewable energy integration in buildings,
Smart Home Systems,
Energy Efficiency,
Water Management,
Green Roofs and Walls,
Waste Management,
Connectivity.

⁶⁴ Available at: [OVERSEAS ISLAND Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 21 April 2025)

⁶⁵ Available at: [ÜBERSEEINSEL Bremen \(ueberseeinsel.de\)](https://ueberseeinsel.de) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods

10. BAJES KWARTIER – AMSTERDAM, NETHERLANDS

Smart program

ENERGY-NEUTRAL NEIGHBORHOOD⁶⁶

Integration of renewable energy sources like solar panels and wind turbines,
Use of smart grids and energy storage systems to balance supply and demand.

GREEN TOWER LIVING LAB⁶⁷

Transformation of an old prison tower into the Green Tower.
Housing of sustainable systems such as smart grids, ATES, and waste hubs.
Educational route to showcase sustainable systems to residents and visitors.

CLOSED WASTE CYCLE⁶⁸

Focus on bio-waste reuse and recycling,
Implementation of smart waste management systems for efficient collection and processing.

CIRCULAR MATERIAL USE⁶⁹

Promotion of circular materials in construction and daily operations,
Reduction of waste and support for a sustainable lifecycle of materials.

HEALTHY URBAN LIVING⁷⁰

Design to promote a healthy lifestyle with green spaces and themed gardens,
Facilities for physical activity and community engagement.

LOW-TRAFFIC NEIGHBORHOOD⁷¹

Inclusion of smart transportation solutions like electric vehicle charging stations and bike-sharing programs,
Pedestrian-friendly pathways to minimize traffic and emissions.

RAINPROOF DESIGN⁷²

Incorporation of rainproof design principles to manage stormwater,
Use of green roofs, permeable surfaces, and water retention systems to prevent flooding.

WASTE MANAGEMENT⁷³

Smart Waste Bins,
Closed Waste Cycle,
Recycling Programs,
Energy Recovery,
Digital Platforms,
Community Engagement.

GREEN BUILDING TECHNOLOGIES

Energy-Efficient Materials, Smart Home Systems, Renewable Energy Integration, Water Conservation, Green Roofs and Walls,
Waste Management.

⁶⁶ Available at: [AMS Institute - Bajes Kwartier in Amsterdam gets Green Tower Living Lab gets a test bed for sustainable innovation \(ams-institute.org\)](https://ams-institute.org/) (Accessed: 21 April 2025)

⁶⁷ Available at: [AMS Institute - Bajes Kwartier in Amsterdam gets Green Tower Living Lab gets a test bed for sustainable innovation \(ams-institute.org\)](https://ams-institute.org/) (Accessed: 21 April 2025)

⁶⁸ Available at: [AMS Institute - Bajes Kwartier in Amsterdam gets Green Tower Living Lab gets a test bed for sustainable innovation \(ams-institute.org\)](https://ams-institute.org/) (Accessed: 21 April 2025)

⁶⁹ Available at: [AMS Institute - Bajes Kwartier in Amsterdam gets Green Tower Living Lab gets a test bed for sustainable innovation \(ams-institute.org\)](https://ams-institute.org/) (Accessed: 21 April 2025)

⁷⁰ Available at: [AMS Institute - Bajes Kwartier in Amsterdam gets Green Tower Living Lab gets a test bed for sustainable innovation \(ams-institute.org\)](https://ams-institute.org/) (Accessed: 21 April 2025)

⁷¹ Available at: [AMS Institute - Bajes Kwartier in Amsterdam gets Green Tower Living Lab gets a test bed for sustainable innovation \(ams-institute.org\)](https://ams-institute.org/) (Accessed: 21 April 2025)

⁷² Available at: [AMS Institute - Bajes Kwartier in Amsterdam gets Green Tower Living Lab gets a test bed for sustainable innovation \(ams-institute.org\)](https://ams-institute.org/) (Accessed: 21 April 2025)

⁷³ Available at: [606800 \(wur.nl\)](https://wur.nl/) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
11. KNOOP XL - EINDHOVEN, NETHERLAND
Smart program
ENERGY TRANSITION ⁷⁴
Renewable Energy Integration, Smart Grids.
DIGITAL TWIN TECHNOLOGY ⁷⁵
Urban Planning, Real-Time Data.
MULTIMODAL TRANSPORT HUB ⁷⁶
Integrated Transport Smart Transportation Solutions
SUSTAINABLE BUILDING PRACTICES ⁷⁷
Energy-Efficient Buildings, Green Roofs and Walls.
COMMUNITY ENGAGEMENT ⁷⁸
Citizen Participation, Educational Programs
INNOVATION DISTRICT ⁷⁹
Technology and Design Hub, Collaboration with Institutions.
CIRCULAR ECONOMY ⁸⁰
Material Reuse, Waste-to-Resource Initiatives.
CLIMATE RESILIENCE ⁸¹
Green Infrastructure, Water Management.
MOBILITY AND ACCESSIBILITY ⁸²
Car-Free Zones, Multimodal Transport Hub.
DIGITAL INNOVATION
Smart City Platforms, IoT Integration.
COMMUNITY AND SOCIAL INCLUSION
Public Participation, Affordable Housing.
HEALTH & WELLBEING
Active Lifestyle Promotion, Air Quality Monitoring.

⁷⁴ Available at: [Digital twinning is SimCity with real cities \(tue.nl\)](#) (Accessed: 21 April 2025)

⁷⁵ Available at: [Digital twinning is SimCity with real cities \(tue.nl\)](#) (Accessed: 21 April 2025)

⁷⁶ Available at: [Fellenoord/Internationale Knoop XL, Eindhoven - e-architect](#) (Accessed: 21 April 2025)

⁷⁷ Available at: [Digital twinning is SimCity with real cities \(tue.nl\)](#) (Accessed: 21 April 2025)

⁷⁸ Available at: [Digital twinning is SimCity with real cities \(tue.nl\)](#) (Accessed: 21 April 2025)

⁷⁹ Available at: [Fellenoord/Internationale Knoop XL, Eindhoven - e-architect](#) (Accessed: 21 April 2025)

⁸⁰ Available at: [Eindhoven Internationale Knoop XL: Circular area development \(metabolic.nl\)](#) (Accessed: 21 April 2025)

⁸¹ Available at: [Eindhoven Internationale Knoop XL: Circular area development \(metabolic.nl\)](#) (Accessed: 21 April 2025)

⁸² Available at: [Eindhoven Internationale Knoop XL: Circular area development \(metabolic.nl\)](#) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
12. FREIHAM NORTH - MÜNCHEN, GERMANY
Smart program
SMART ENERGY ⁸³
Renewable Energy Integration:
-Solar panels,
-Wind turbines.
Smart Grids:
- Efficient Energy Management,
- Real-Time Monitoring.
Energy Storage Systems:
- Battery Storage,
- Grid Stability.
Energy-Efficient Buildings:
- Insulation and Materials,
- Smart Home Systems.
District Heating:
- Centralized Heating,
- Efficiency.
Community Engagement:
- Energy-Saving Initiatives,
- Educational Programs.
SMART ICT ⁸⁴
High-Speed Internet,
IoT Sensors,
Smart Grids,
Digital Platforms,
Public Wi-Fi,
Smart Parking,
Interactive Information Kiosks.
INNOVATIVE TECHNOLOGIES ⁸⁵
Smart Energy-Efficient Street Lighting,
Smart Lamp Posts,
Smart Urban Data Platform,
Smart City App,
E-Mobility Solutions.
INNOVATIVE MOBILITY ⁸⁶
E-Mobility Stations,
Public Transport Connectivity,
Mobility Hubs,
Neighbourhood Sharing Boxes,
Smart Traffic Management.
COMMUNITY AND HOUSING DEVELOPMENT
Diverse Housing Options,
Energy-Efficient Buildings,
Community Spaces,
Green Spaces,
Educational and Sports Facilities,
Sustainable Infrastructure.

⁸³ Available at: [Freiham North Masterplan - West 8](#) (Accessed: 21 April 2025)

⁸⁴ Available at: [Smarter Together Site Munich | Smart Cities Marketplace \(europa.eu\)](#) (Accessed: 21 April 2025)

⁸⁵ Available at: [Smart city Munich - Energy Cities \(energy-cities.eu\)](#) (Accessed: 21 April 2025)

⁸⁶ Available at: [Smarter Together Munich | Climate Chance \(climate-chance.org\)](#) (Accessed: 21 April 2025)

PUBLIC TRANSPORT NETWORK⁸⁷
Suburban Train Stations,
Bus Lines,
Tram services,
Park and ride facilities,
Bike and ride facilities,
Integrated motility hubs.
SMART BUILDING PROGRAM⁸⁸
Energy-Efficient Buildings,
Renewable Energy Integration,
Smart Home Technologies,
Green Building Standards,
Water Management Systems,
Community Involvement.
IMPACT OF SMART HOME TECHNOLOGIES⁸⁹
Reduced Energy Usage,
Lower Utility Bills,
Increased Use of Renewable Energy,
Enhanced Comfort and Convenience,
Environmental Benefits.
LOCAL BUSINESSES AND STARTUPS⁹⁰
Innovation and Development,
Collaboration with Government and Institutions,
Customization and Adaptation,
Job Creation and Economic Growth,
Community Engagement,
Sustainability Initiatives,
Pilot Projects and Testing.

⁸⁷ Available at: [Freiham North Masterplan - West 8](#) (Accessed: 21 April 2025)

⁸⁸ Available at: [2017_Sustainable Freiham.pdf \(muenchen.de\)](#) (Accessed: 21 April 2025)

⁸⁹ Available at: [Freiham North Masterplan - West 8](#) (Accessed: 21 April 2025)

⁹⁰ Available at: [Freiham North Masterplan - West 8](#) (Accessed: 21 April 2025)

13. TIRANA RIVERSIDE - TIRANA, ALBANIA**Smart program****SMART ICT⁹¹**

Smart Energy Management,
Decentralized Energy Production,
Energy Storage Systems,
Smart Grid Technology,
Energy Management Systems,
Integration with IoT Devices,
Community Benefits.

IOT AND SENSOR NETWORKS⁹²

Environmental Monitoring,
Energy Management,
Water Management,
Waste Management,
Smart Mobility,
Public Safety and Security,
Community Engagement.

SMART MOBILITY⁹³

Electric Vehicle Charging Stations,
Bike-Sharing Systems,
Pedestrian-Friendly Pathways,
Autonomous Vehicles,
Real-Time Traffic Monitoring,
Adaptive Public Spaces.

DIGITAL INFRASTRUCTURE⁹⁴

High-Speed Internet,
Advanced Communication Networks,
IoT Integration,
Smart Home Technologies,
Digital Platforms for Community Engagement,
Public Wi-Fi,
Data Security and Privacy.

SMART ENERGY⁹⁵

Decentralized Energy Production,
Energy Storage Systems,
Smart Grid Technology,
Energy Management Systems,
Integration with IoT Devices,
Community Benefits.

SMART USER⁹⁶

Energy Efficiency,
Sustainable Living,
Smart Mobility,
Community Engagement,
Health and Safety,
Digital Literacy.

⁹¹ Available at: [Tirana Riverside: a sustainable and green district designed by Boeri](#) (Accessed: 21 April 2025)

⁹² Available at: [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 21 April 2025)

⁹³ Available at: [Plan directeur Tirana 2030 Riverside | Transsolar | KlimaEngineering](#) (Accessed: 21 April 2025)

⁹⁴ Available at: [ad | tirana riverside | Stefano Boeri Architetti](#) (Accessed: 21 April 2025)

⁹⁵ Available at: [Plan directeur Tirana 2030 Riverside | Transsolar | KlimaEngineering](#) (Accessed: 21 April 2025)

⁹⁶ Available at: [Tirana Riverside | Albania | Stefano Boeri Architetti](#) (Accessed: 21 April 2025)

SMART HEALTH⁹⁷

Smart Health Devices,
Telemedicine Services,
Health Monitoring Systems,
Community Health Programs,
Air Quality Monitoring,
Emergency Response Systems.

URBAN FORESTRY⁹⁸

Extensive Green Spaces,
Urban Forest,
River Park,
Vertical and Rooftop Greenery,
Microclimates,
Community Involvement

SMART LIGHTING⁹⁹

Adaptive Lighting,
Motion Sensors,
Remote Control and Monitoring,
Energy-Efficient LED Lights,
Integration with Other Smart Systems.

WASTE MANAGEMENT¹⁰⁰

Smart Waste Bins,
Recycling and Composting,
Waste-to-Energy Solutions,
Public Awareness and Education,
Integration with Smart City Infrastructure

WASTE-TO-ENERGY SOLUTIONS¹⁰¹

Energy Recovery,
Anaerobic Digestion,
Gasification and Pyrolysis,
Integration with Smart Grid,
Environmental Benefits.

⁹⁷ Available at: [Q&A: Tirana's New Eco-Village Designed to Respond to 21st Century Challenges - ArchiExpo e-Magazine](#) (Accessed: 21 April 2025)

⁹⁸ Available at: [Tirana Riverside, the Urban Forest by Stefano Boeri in Tirana \(matrix4design.com\)](#) (Accessed: 21 April 2025)

⁹⁹ Available at: [Tirana Riverside: a sustainable and green district designed by Boeri | SmartGreen Post |](#) (Accessed: 21 April 2025)

¹⁰⁰ Available at: [Tirana Riverside: a sustainable and green district designed by Boeri](#) (Accessed: 21 April 2025)

¹⁰¹ Available at: [Plan directeur Tirana 2030 Riverside | Transsolar | KlimaEngineering](#) (Accessed: 21 April 2025)

14. OBERBILLWERDER - HAMBURG, GERMANY**Smart program****SMART GRID TECHNOLOGY¹⁰²**

Decentralized Energy Production,

Energy Storage Solutions,

Real-Time Monitoring and Management,

Demand Response,

Integration with Smart Home Technologies,

Environmental Benefits.

SMART MOBILITY¹⁰³

Mobility Hubs,

Bike-Sharing Systems,

Electric and Autonomous Vehicles,

Pedestrian-Friendly Pathways,

Real-Time Traffic Monitoring,

Integration with Public Transport.

ENERGY EFFICIENCY¹⁰⁴

High-Efficiency Buildings,

Renewable Energy Sources,

Smart Grid Technology,

Energy Storage Solutions,

Passive Design Strategies,

District Heating and Cooling.

SMART ICT¹⁰⁵

High-Speed Internet,

Smart Grid Technology,

IoT Integration,

Smart Mobility Solutions,

Public Services and Safety,

Community Engagement Platforms.

DIGITAL INFRASTRUCTURE & INNOVATION

High-Speed Internet,

Smart Buildings,

Data-Driven Decision Making.

SUSTAINABLE URBAN PLANNING

Resilience and Nature-Based Solutions,

Circular Economy,

Sustainable Transport,

Energy Efficiency,

Waste management,

Community Engagement.

¹⁰² Available at: [Broschuere-Oberbillwerder_EN_Stand-2023.pdf \(iba-hamburg.de\)](#) (Accessed: 21 April 2025)¹⁰³ Available at: [Oberbillwerder - ADEPT](#) (Accessed: 21 April 2025)¹⁰⁴ Available at: [Oberbillwerder - ADEPT](#) (Accessed: 21 April 2025)¹⁰⁵ Available at: [Oberbillwerder | Hamburg DE | ADEPT | Urban Design Lab 2024](#) (Accessed: 21 April 2025)

15. GREDELJ – ZAGREB, CROATIA**Smart Program****SMART ENERGY¹⁰⁶**

Real-Time Monitoring and Data Analytics,
Renewable Energy Integration,
Energy Efficiency,
Energy Storage Solutions,
Smart Energy Management Systems,
Community Engagement.

CITIZEN ENGAGEMENT PLATFORMS¹⁰⁷

Climate Neutral Greening Hub,
Online Portals and Mobile Apps,
Workshops and Training Programs,
Public Participation Platforms,
Community Events and Forums.

SMART ICT¹⁰⁸

IoT Sensors,
Smart Grids
Data Analytics and AI,
Real-Time Data Processing,
Artificial Intelligence,
Connectivity and Communication,
High-Speed Internet,
5G Networks,

SUSTAINABLE URBAN DEVELOPMENT¹⁰⁹

Environmental Sustainability,
Efficient Resource Management,

ENHANCED MOBILITY¹¹⁰

Smart Mobility Solutions,
Electric Vehicle Infrastructure.

DIGITAL TRANSFORMATION¹¹¹

High-Speed Connectivity,
Smart Infrastructure.

COMMUNITY ENGAGEMENT¹¹²

Citizen Participation,
Public Spaces.

IMPROVED QUALITY OF LIFE¹¹³

Comfort and Convenience,
Safety and Security.

ECONOMIC GROWTH¹¹⁴

Innovation and Entrepreneurship,
Job Creation.

RESILIENCE AND ADAPTABILITY¹¹⁵

Climate Resilience,

¹⁰⁶ Available at: [Zagreb's smart energy solutions for citizens - European Commission \(europa.eu\)](https://european-commission.europa.eu) (Accessed: 21 April 2025)

¹⁰⁷ Available at: [Zagreb's Pilot City Activity: Activating Green Courtyards for Climate Neutrality \(AGC-CN\) - NetZeroCities](https://zagreb-pilot-city-activity.netzero-cities) (Accessed: 21 April 2025)

¹⁰⁸ Available at: [Zagreb's Pilot City Activity: Activating Green Courtyards for Climate Neutrality \(AGC-CN\) - NetZeroCities](https://zagreb-pilot-city-activity.netzero-cities) (Accessed: 21 April 2025)

¹⁰⁹ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](https://urban-revitalization-of-the-former-gredelj-factory-zone-3lhd) (Accessed: 21 April 2025)

¹¹⁰ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](https://urban-revitalization-of-the-former-gredelj-factory-zone-3lhd) (Accessed: 21 April 2025)

¹¹¹ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](https://urban-revitalization-of-the-former-gredelj-factory-zone-3lhd) (Accessed: 21 April 2025)

¹¹² Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](https://urban-revitalization-of-the-former-gredelj-factory-zone-3lhd) (Accessed: 21 April 2025)

¹¹³ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](https://urban-revitalization-of-the-former-gredelj-factory-zone-3lhd) (Accessed: 21 April 2025)

¹¹⁴ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](https://urban-revitalization-of-the-former-gredelj-factory-zone-3lhd) (Accessed: 21 April 2025)

¹¹⁵ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](https://urban-revitalization-of-the-former-gredelj-factory-zone-3lhd) (Accessed: 21 April 2025)

Adaptable Infrastructure.

CULTURAL AND HISTORICAL PRESERVATION¹¹⁶

Heritage Integration,

Cultural Spaces.

Overview of selected Neighbourhoods

16. SMÍCHOV CITY - PRAGUE, CZECH REPUBLIC

Smart program

SMART INFRASTRUCTURE¹¹⁷

IoT Sensors,

Smart Grids,

Artificial Intelligence,

Connectivity and Communication,

Smart Mobility Solutions,

Citizen Engagement Platforms,

Security and Privacy.

SMART USER¹¹⁸

Active Participation,

Efficient Energy Use,

Sustainable Mobility,

Enhanced Connectivity,

Safety and Security,

Environmental Awareness.

WASTE MANAGEMENT¹¹⁹

Smart Waste Collection,

IoT Sensors,

Underground Containers,

Optimized Collection Routes,

Data-Driven Decisions,

Fire and Clogging Detection

Public Engagement and Education,

Environmental Impact.

SMART MOBILITY¹²⁰

Intermodal route planner,

MaaS APP – Unified One-Spot Mobility Services Registration and Payment,

Intelligent Traffic Analysis,

Data integration of the parking lots in the Prague catchment area,

Charging Infrastructure Development in The Capital City of Prague till 2030 District Plan,

Multichannel Check-In System for CTS,

Autonomous Mobility in the Capital City of Prague (a Technical-Economic Study),

Standard OppCharge for Electro Buses.

SMART BUILDING AND ENERGY¹²¹

Smart Grid Set Up in The Pražská Premises,

Building Energies Consumption Management,

¹¹⁶ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 21 April 2025)

¹¹⁷ Available at: [Projects | Smart Prague](#) (Accessed: 21 April 2025)

¹¹⁸ Available at: [People and the Urban Environment | Smart Prague](#) (Accessed: 21 April 2025)

¹¹⁹ Available at: [Projects | Smart Prague](#) (Accessed: 21 April 2025)

¹²⁰ Available at: [Mobility of the Future | Smart Prague](#) (Accessed: 21 April 2025)

¹²¹ Available at: [Smart Buildings and Energy | Smart Prague](#) (Accessed: 21 April 2025)

Energy Consumption Measurement Digitization,
Virtual Power Plant,
Low-Carbon Municipal Parts Program,
Schools and Kindergartens Energy Management,
Modelling and Testing System for Optimising Energy at Gutovka Sports Centre,
Analysis of energy measures suitability.

PEOPLE AND THE URBAN ENVIRONMENT¹²²

Monitoring of microclimatic parameters of the urban environment,
Cycling Traffic Intensity Tracking – Bicycle Counters,
Public Space Pedestrian Traffic Intensity,
" My Prague" Mobile application,
Interactive Mobiliary Testing,
Innovative Technology for Managing Traffic Signs,
Metropolitan Emergency and Health Care System,
Interior navigation for citizens on the premises of the Škoda Palace.

¹²² Available at: [People and the Urban Environment | Smart Prague](#) (Accessed: 21 April 2025)

17. AM SANDHAUS - BERLIN-BUCH, GERMANY

Smart program

SMART BUILDINGS AND ENERGY¹²³

Energy-Efficient Design:

- Passive House Standards,
- Insulation and Glazing.

Renewable Energy Integration:

- Solar Panels,
- Heat pumps.

Smart Building Technologies:

- Building Automation Systems,
- Smart Meters.

Sustainable Materials:

- Eco-Friendly Construction Materials.

Water Management:

- Rainwater Harvesting,
- Efficient Plumbing Fixtures.

Green Spaces:

- Green Roofs and Walls,
- Community Gardens.

A ZERO-WASTE CITY¹²⁴

Zero-Waste Agency:

- Germany's First Zero-Waste Agency.

Circular Economy:

- Re-Use Berlin Initiative.

Waste Management Concept 2020-2030:

- Comprehensive Strategy.

Community Engagement:

- Public Awareness Campaigns,
- Second-Hand Shops and Eco-Markets.

Innovative Waste Solutions:

- Zero-Waste Supermarkets,
- Resource Recovery.

PEOPLE AND THE URBAN ENVIRONMENT¹²⁵¹²⁶

Community-Centric Design:

- Public Involvement,
- Participatory Budgeting.

Smart Infrastructure:

- Smart Water Management,
- Energy-Efficient Buildings.

Green and Sustainable Urban Design:

- Green Spaces,
- Sustainable Landscaping.

Mobility Solutions:

- Low-Car-Use Neighborhood,
- Electric Vehicle Infrastructure.

Digital and Technological Integration:

- Smart City Governance,

¹²³ Available at: [Planning for housing project in Berlin-Buch one step further – Berlin.de](#) (Accessed: 21 April 2025)

¹²⁴ Available at: [Germany's First Zero-Waste Supermarket Set to Launch in Berlin | Food and Drink Digital \(fooddigital.com\)](#) (Accessed: 21 April 2025)

¹²⁵ Available at: [Am Sandhaus | AEX \(architecture-exhibitions.com\) Smart City Berlin - Projects \(smart-city-berlin.de\)](#) (Accessed: 21 April 2025)

¹²⁶ Available at: [Smart City Berlin - Projects \(smart-city-berlin.de\)](#) (Accessed: 21 April 2025)

- Public Wi-Fi and Connectivity.

SMART MOBILITY¹²⁷

Mobility as a Service (MaaS):

-Integrated Platforms.

Electric and Autonomous Vehicles:

-Electric Vehicle (EV) Charging Stations,

-Autonomous Shuttles.

Public Transport Innovations:

-Real-Time Information Systems,

-Enhanced Public Transit

Micro mobility Solutions:

-Bike and Scooter Sharing,

-Dedicated Lanes.

Intelligent Traffic Management:

-Smart Traffic Lights,

-Traffic Monitoring Systems.

Sustainable Travel Behavior:

-Incentives for Green Travel,

-Awareness Campaigns.

DATA AREA¹²⁸

Urban Planning and Development:

-Data-Driven Decision Making,

-Public Participation.

Smart Infrastructure:

-Energy Management,

-Water Management.

Mobility Solutions:

-Traffic Management,

-Public Transport.

Environmental Monitoring:

-Air Quality Sensors,

-Waste Management.

Community Services:

-E-Government Services,

-Public Safety.

¹²⁷ Available at: [Smart City Berlin - Projects \(smart-city-berlin.de\)](https://smart-city-berlin.de) (Accessed: 21 April 2025)

¹²⁸ Available at: [2.700 Wohnungen: Baustart für Projekt "Am Sandhaus" ab 2026 | entwicklungsstadt berlin](#) (Accessed: 21 April 2025)

18. KOLKAJEN – STOCKHOLM, SWEDEN

Smart program

SMART PEOPLE AND THE URBAN ENVIRONMENT¹²⁹

Community Engagement and Participation:

- Public Involvement,
- Participatory Platforms.

Smart Infrastructure:

- Energy Management,
- Water Management.

Green and Sustainable Urban Design:

- Green Spaces,
- Sustainable Landscaping.

Mobility Solutions:

- Pedestrian and Bicycle Priority,
- Public Transport Connectivity.

Cultural and Social Amenities:

- Community Centers,
- Educational Facilities.

Digital and Technological Integration:

- Smart City Governance,
- Public Wi-Fi and Connectivity.

SMART BUILDINGS AND ENERGY EFFICIENT BUILDINGS¹³⁰

Energy-Efficient Design:

- Passive House Standards,
- Insulation and Glazing.

Renewable Energy Integration:

- Solar Panels,
- Geothermal Energy.

Smart Building Technologies:

- Smart Meters,
- Building Automation Systems.

Sustainable Materials:

- Eco-Friendly Construction Materials.

Water Management:

- Rainwater Harvesting,
- Efficient Plumbing Fixtures.

Green Spaces:

- Green Roofs and Walls,
- Community Gardens.

SMART MOBILITY¹³¹

Sustainable Transportation Modes:

- Pedestrian and Bicycle Priority,
- Public Transport Connectivity.

Electric and Autonomous Vehicles:

- EV Charging Infrastructure,
- Autonomous Shuttles.

Mobility as a Service (MaaS):

- Integrated Mobility Platforms.

Smart Traffic Management:

- Real-Time Traffic Data,

¹²⁹ Available at: [Kolkajen | Kjellander Sjöberg Arkitektkontor \(kjellandersjoberg.se\)](https://www.kjellandersjoberg.se) (Accessed: 21 April 2025)

¹³⁰ Available at: [Kolkajen \(mandaworks.com\)](https://www.kolkajen.com) (Accessed: 21 April 2025)

¹³¹ Available at: [Kolkajen development plan in Stockholm Royal Seaport | Interreg Europe - Sharing solutions for better policy](https://www.kolkajen.com) (Accessed: 21 April 2025)

-Traffic Monitoring Systems.

Micro mobility Solutions:

-Bike and Scooter Sharing,

-Dedicated Lanes.

SMART WASTE MANAGEMENT¹³²

Sensor-Enabled Waste Bins,

Automated Waste Sorting,

Eco-Friendly Products,

Comprehensive Waste Reduction,

Circular Economy,

Biogas Production,

Recycling Education.

¹³² Available at: [Kolkajen development plan in Stockholm Royal Seaport | Interreg Europe - Sharing solutions for better policy](#) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
19. PIHLAJANIEMI (TURKU, FINLAND)
Smart program
SMART ENERGY ¹³³
Future Flexible Energy Systems,
Sundom Smart Grid (Vaasa), a unique pilot,
Wirepas, connectivity solutions,
SenCity project,
Tehomet Lightning solutions,
Greenled Lightning solutions,
Valopää Lightning solutions,
Solixi, energy storage,
Neo-Carbon Energy.
SMART TRANSPORT ¹³⁴
PayIQ - Mobile payment for public transport,
Sito,
Finnish Engineering Company,
Mobility as a Service (MaaS).
SMART BUILDING & ICT ¹³⁵
Power Balance Management,
Future Dialog Mobile application between cities and communities,
A-Insinöörit, Planning Company,
Terrasolid, Point cloud processing, analysis and visualization software solutions,
Citynomadi Map based information on city areas,
Vincit, Software development expert.
RESEARCH PROJECTS ¹³⁶
Living Lab Bus (LLB) – environment,
Neo-Carbon Energy,
DRUMBEAT.
MOBILITY ¹³⁷
Mobility as a Service,
Diverse electric mobility,
Public security and safety,
Living Lab Bus (LLB) – environment.
SMART USER ¹³⁸
Public Involvement,
Participatory Platforms,
Access to Technology,
Healthy Living Programs,
Public Transport Use,
Recycling Programs.

¹³³ Available at: [smart-solutions-from-finland_barcelona-2016.pdf \(businessfinland.fi\)](#) (Accessed: 21 April 2025)

¹³⁴ Available at: [smart-solutions-from-finland_barcelona-2016.pdf \(businessfinland.fi\)](#) (Accessed: 21 April 2025)

¹³⁵ Available at: [smart-solutions-from-finland_barcelona-2016.pdf \(businessfinland.fi\)](#) (Accessed: 21 April 2025)

¹³⁶ Available at: [smart-solutions-from-finland_barcelona-2016.pdf \(businessfinland.fi\)](#) (Accessed: 21 April 2025)

¹³⁷ Available at: [smart-solutions-from-finland_barcelona-2016.pdf \(businessfinland.fi\)](#) (Accessed: 21 April 2025)

¹³⁸ Available at: [New Districts – How are Finnish cities being densified and infilled right now? | ark](#) (Accessed: 21 April 2025)

Overview of selected Neighbourhoods
20. NUEVO NORTE - MADRID, SPAIN
Smart program
SMART AND SUSTAINABLE URBAN DEVELOPMENT ¹³⁹
Energy-Efficient Buildings:
- Positive Energy Buildings,
- High-Quality Insulation and Glazing.
Renewable Energy Integration:
- Solar Panels,
- Geothermal Energy.
Smart Building Technologies:
- Building Automation Systems,
- Smart Meters.
Water Management:
- Rainwater Harvesting,
-Efficient Plumbing Fixtures.
Green Spaces:
- Green Roofs and Walls.
SMART MOBILITY ¹⁴⁰
Sustainable Transportation,
Environmental Impact,
Urban Design,
Technological Innovation,
Economic and Social Benefits.
SMART AND ENERGY-EFFICIENT URBAN DEVELOPMENT ¹⁴¹
Positive Energy Buildings,
Sustainability Certifications,
Smart Energy Management,
Zero-Emission Goals,
Innovative Building Materials,
Autonomous Energy Communities.
WASTE-FREE NEIGHBOURHOOD
Circular Economy,
Material Reuse,
Zero-Emission Goals,
Green Spaces,
Sustainable Construction.
PEOPLE AND THE URBAN ENVIRONMENT
Mixed-Use Development,
Green Spaces,
Public Transport,
Community Focus,
Sustainable Living,
Economic Opportunities.

¹³⁹ Available at: [Madrid plans to build Europe's largest zero-emission neighbourhood | TheMayor.EU](#) (Accessed: 21 April 2025)

¹⁴⁰ Available at: [Revolutionizing Madrid's Mobility for a Greener Tomorrow | CREAMNN \(creamadridnuevonorte.com\)](#) (Accessed: 21 April 2025)

¹⁴¹ Available at: [City model | Crea Madrid Nuevo Norte](#) (Accessed: 21 April 2025)



Photograph 4
Nordhavn promenade
Author: Cobe, 2020.

4. CATALOGUE 4 - RESEARCH CASES
PROJECTS/NEIGHBOURHOODS – BOTTOM-UP APPROACH
(Book I – Chapter 6, Research Cases)

Representative research cases

1. ASPERN SEESTADT - VIENNA, AUSTRIA¹

FACTS AND FIGURES

Location (city, state)	Vienna, Austria
Previous use	Airfield–Aspern– the Seestadt of Vienna
Total land area	2.6 million m ²
Green and open space	50%
Lake	50,000 m ²
Number of residents (projected)	>25,000
Number of residents (currently)	>11,000
Workplaces (potential)	>20,000
Workplaces (currently)	>5,000
Year of Master plan	2005 master plan was unanimously approved by Vienna City Council
Author of the project	Johannes Tovatt, master planner for aspern Seestadt
Goals	aspern Seestadt as an urban lab

PRINCIPLES OF HIGH-QUALITY URBAN DESIGN

Well – designed public space,	A dense network of public streets and squares where the placement of buildings and open areas reflects the human scale serves as the foundation and point of departure for this design.
Lively ground - floor zones	To increase the appeal of the nearby public area, all projects must give careful consideration to how the ground floor zone is treated, making sure it is of the highest caliber.
Functional mix and innovation	The timely opening of childcare centres and schools will support Seestadt's ongoing development. In order to create an urban community with a focal place function, all project partners are collaborating to bring public institutions and landmark projects to Seestadt. Seestadt presents itself as a centre for advancement, innovation, and research as well as a location for trailblazers and transient interventions.
Range of mobility options	Efforts to encourage urban mobility alternatives encompass a variety of strategies, including the establishment of a robust tram and bus network to augment the U2 underground line, carefully planned connections to the network of cycling routes, and additional services like bike rental and car-sharing.
Small – scale and diverse	Several stakeholder groups should collaborate to create Seestadt's built environment with the goal of producing a wide range of projects for varied lifestyles and types of employment. Building sites are divided up to provide a variety of architectural and functional styles
Multipurpose “town houses”	Projects that support the spatial and typological integration of housing and workspace are prioritised. Buildings and places with multiple uses provide future reusability, diversity of use, and long-term quality of life in neighbourhoods.
Preventing and adjusting to climate change.	In order to enhance the urban atmosphere, outdoor space use and facade design must be combined in all projects. These strategies in the public domain include carefully planned green roofs, strategic tree planting to produce shade, and rain-water management. Planning for the prudent use of resources is a prerequisite for all above-ground construction projects as well as those in public areas.

¹ Available at: [Vienna's Seestadt | aspern Vienna's Seestadt \(aspern-seestadt.at\)](https://www.aspern-seestadt.at) (Accessed:27 March 2025)

Overview of selected Neighbourhoods
1. ASPERN SEESTADT - VIENNA, AUSTRIA

LOCATION



Fig. 229. Location of Aspern, Seestadt within Vienna.
Author: Dashnor Kadiri, 2024²



Fig. 230. Aerial view of airfield area before development.³

PHASES OF DEVELOPMENT

The size of this urban area is 240 ha and realization of it is planned in three stages.

- The first major phase of construction (2010-2017) comprises of a mixed-use neighborhood with at least 2,600 housing units (260 student units) as well as offices, retail units, service providers and research and development institutions.
- In the second phase (2017-2022), the rail station and efficient road link to the A 23 motorway and the S 1 Regional Ring Road will be completed. Further housing and mixed-purpose buildings are planned to be developed along with the quarter around the rail station and the office quarter.
- The third phase (2022-2028), the areas adjacent to the rail station, the shopping street and the underground/metro line will be densified and the mix of use optimized. (Aspern Seestadt, 2015)

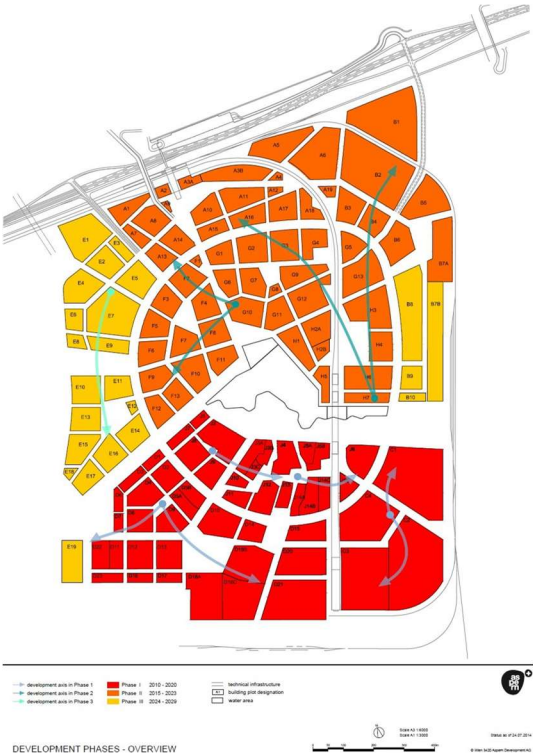


Fig. 231. Aspern development phases - overview (Source: Wien 3420 AG)

² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

³ Available at: [Seestadt Aspern Vienna – Networking for Urban Vitality](#) (Accessed: 01 August 2025)

1. ASPERN SEESTADT - VIENNA, AUSTRIA

MASTER PLAN

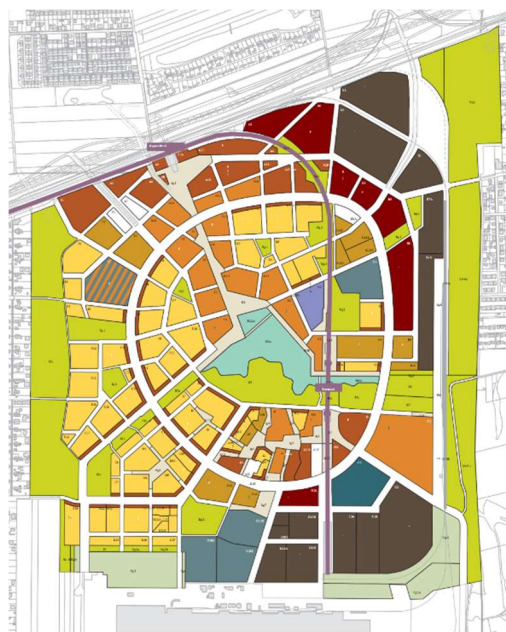


- building plots
- green space
- urban outdoor spaces
- green corridors
- bodies of water
- U2 underground line
- Eastern rail link - Marchegg branch
- major roads
- settlement areas
- surrounding green belt

The Dominant Elements of the Master Plan:

- The Lake
- Lakeside Park and Lakeside Promenade
- Seeplatz (Lakeside Square)
- The underground line
- Network of green and open spaces

Fig. 232. Aspern Dominant Elements of the Master Plan - overview (Source: Wien 3420 AG)



- residential only
- residential, flexible use on ground floor
- mainly residential, flexible use on all floors
- manufacturing industry
- all types of use except commercial and residential
- all types of use except commercial
- all types of use except residential
- research and development
- social infrastructure
- culture
- urban outdoor spaces
- water
- buffer zone
- green space

Diversity of uses

- A balanced mix of uses
- Urban structure and distribution of uses

Fig. 233. Aspern Diversity of use - overview (Source: Wien 3420 AG)

1. ASPERN SEESTADT - VIENNA, AUSTRIA

MASTER PLAN

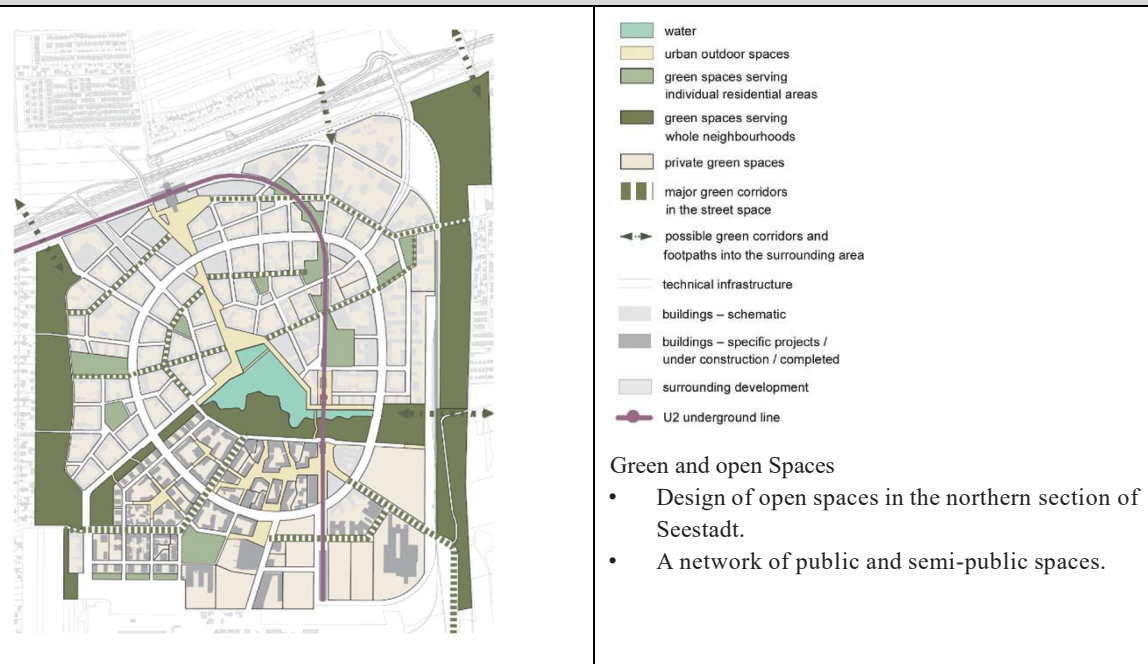


Fig. 234. Green and Open Spaces - overview (Source: Wien 3420 AG)

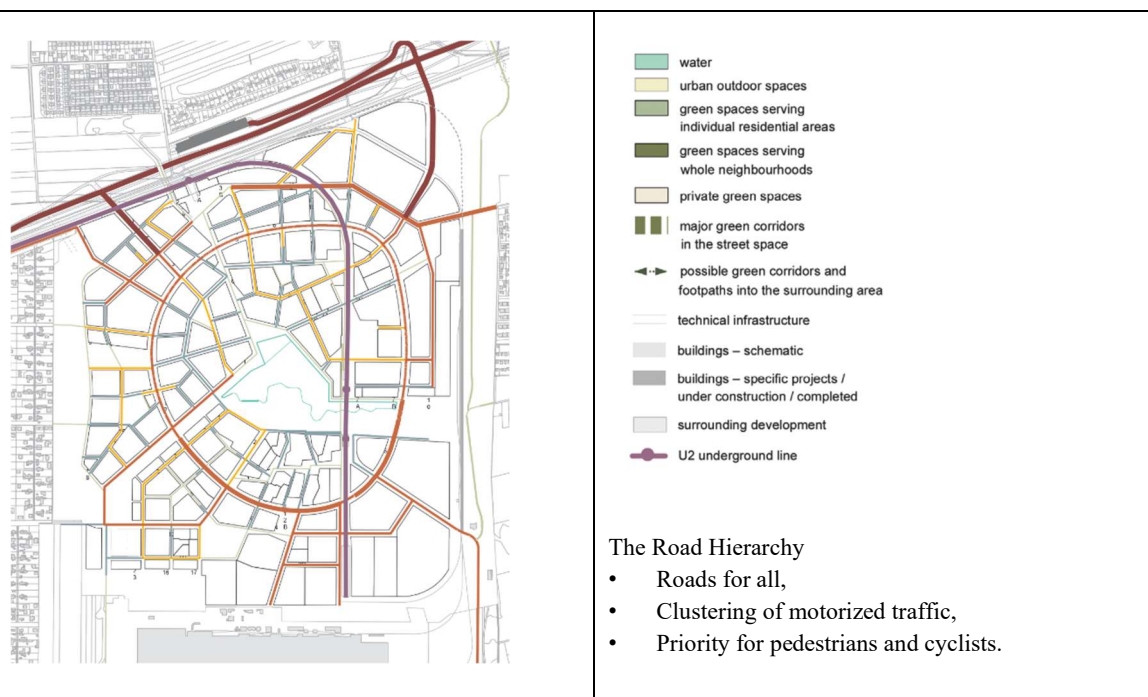
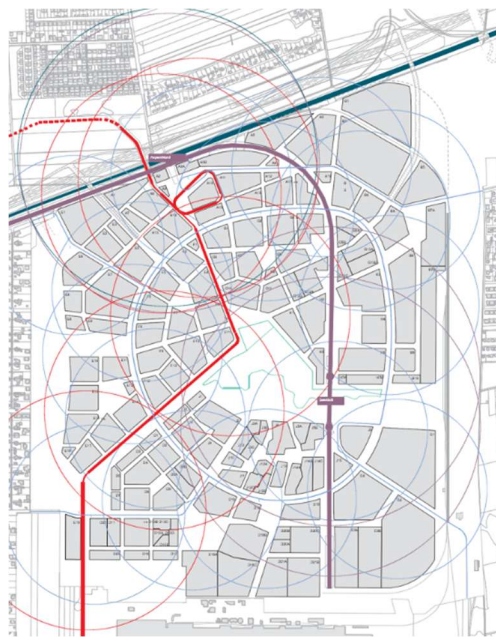


Fig. 235. Roads Hierarchy - overview (Source: Wien 3420 AG)

1. ASPERN SEESTADT - VIENNA, AUSTRIA

MASTER PLAN



- bus (incl. stop)
- tram (incl. stop)
- U2 underground line (incl. station)
- Austrian Federal Railways (ÖBB)
eastern network (incl. station)

stop and station catchment areas

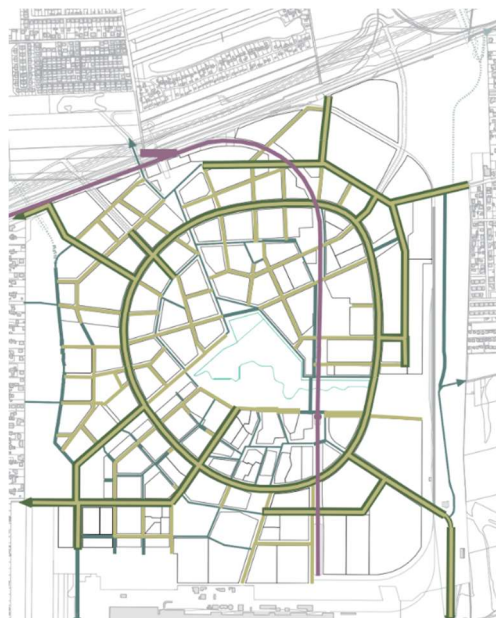


- technical infrastructure
- water
- building plots surrounding
- development

Public Transport links:

- Underground line,
- Tram routes,
- Bus services,
- Aspern Nord Transport Interchange.

Fig. 236. Public Transport links- overview (Source: Wien 3420 AG)



- road network with cycling infrastructure
- traffic-calmed roads
- attractive routes with no
motorised individual traffic
- planned thoroughfares
- connections to major cycle
route network
- P bike parking facilities
- B bike hire system
- A1 name of building plot
- surrounding development
- water
- technical infrastructure
- U2 underground line

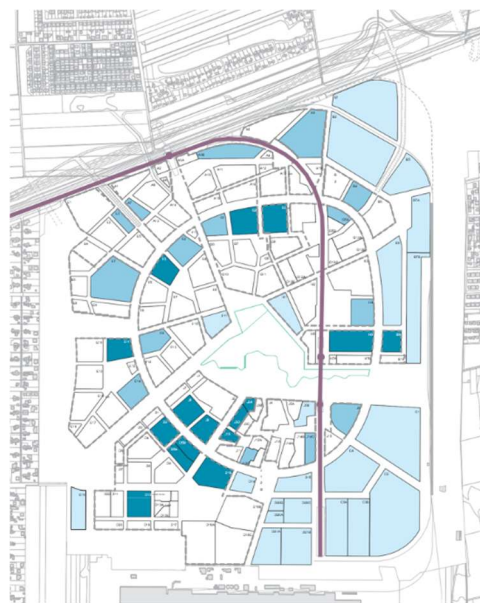
Cycle Traffic

- Attractive thoroughfares,
- District-wide network of cycle paths,
- Secure, convenient bike parking facilities,
- Bike hire system.

Fig. 237. Cycle Traffic - overview (Source: Wien 3420 AG)

1. ASPERN SEESTADT - VIENNA, AUSTRIA

MASTER PLAN



building plots with communal car parks

underground car park

multi-storey car park

building plots with car parks /
parking spaces for own use

catchment areas of communal car parks

technical infrastructure

water

A1 name of building plot

surrounding development

Parking at Seestadt:

- Communal/neighbourhood car parks,
- Mandatory parking provision.

Fig. 238. Parking at Seestadt- overview (Source: Wien 3420 AG)



2.5 to 12 m

9 to 16 m

12 to 21 m

16 to 26 m

26 to 35 m

36 to 45 m

46 to 75 m

76 to 90 m

technical infrastructure

water

A1 name of building plot

surrounding development

U2 underground line

Arrangement of Building Heights:

- High-rises to mark key points,
- Bridging function and identity-building signal effect.

Fig. 239. Arrangement of Building Heights - overview (Source: Wien 3420 AG)

1. ASPERN SEESTADT - VIENNA, AUSTRIA

CURRENT SITUATION



Fig. 240. Seepark at Seestadt (Source: Architectural Tours Vienna⁴)



Fig. 241. Aspern, Seestadt (Source: Architectural Tours Vienna⁵)



Fig. 242. Aspern, Seestadt (Source: Architectural Tours Vienna⁶)



Fig. 243. Aspern, Seestadt (Source: Architectural Tours Vienna⁷)

⁴ Available at: [aspern Seestadt Vienna - Location Portfolio | SES](#) (Accessed: 26 March 2025)

⁵ Available at: [aspern Seestadt Vienna - Location Portfolio | SES](#) (Accessed: 26 March 2025)

⁶ Available at: [aspern Seestadt Vienna - Location Portfolio | SES](#) (Accessed: 26 March 2025)

⁷ Available at: [aspern Seestadt Vienna - Location Portfolio | SES](#) (Accessed: 26 March 2025)

1. ASPERN SEESTADT - VIENNA, AUSTRIA

CURRENT SITUATION



Fig. 244. Seepark at Seestadt (Source: Architectural Tours Vienna⁸)



Fig. 245. Aspern, Seestadt (Source: Architectural Tours Vienna⁹)



Fig. 246. Aspern, Seestadt (Source: Architectural Tours Vienna¹⁰)



Fig. 247. Aspern, Seestadt (Source: Architectural Tours Vienna¹¹)

⁸ Available at: [aspern Seestadt Vienna - Location Portfolio | SES](#) (Accessed: 26 March 2025)

⁹ Available at: [aspern Seestadt Vienna - Location Portfolio | SES](#) (Accessed: 26 March 2025)

¹⁰ Available at: [aspern Seestadt Vienna - Location Portfolio | SES](#) (Accessed: 26 March 2025)

¹¹ Available at: [aspern Seestadt Vienna - Location Portfolio | SES](#) (Accessed: 26 March 2025)

Overview of selected Neighbourhoods

2. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND^{12,13}

FACTS AND FIGURES

Location (city, state)	Helmond Brandevoort, The Netherlands
Previous use	An industrial town with significant socio-economic problems
Neighbourhood type	“Living Lab” Mixed-use innovation district
Total land area	1.5 million m ²
Green and open space	120, 000m ²
Growing food (high-tech agriculture)	80,000 m ²
Business premises	120.000 m ²
Residential units	2,100 permanent + 500 temporary homes
Number of residents (projected)	4,500
Number of residents (currently)	No info
Workplaces (potential)	No info
Workplaces (currently)	No info
Year of Master plan	2017
Author of the project	UNStudio, Landscape and ecology design: Felixx Landscape architects and planners
Client	Brainport and Helmond Municipality
Construction time	2018 – under construction
Total investment volume	Not determined
Goal	A Community of Innovators

ACTORS INVOLVED

Municipality of Helmond	Municipality of Helmond and its institutions.
The Province of Noord-Brabant	The provincial administration of Brabant is primarily concerned with: Spatial development, Accessibility and mobility for the region, Regional economic policy, Culture and regional identity
Brainport Development	As an independent and demand-driven organization, Brainport Development develops the regional economic strategy, develops and realizes projects, offers business advice and innovative business premises and promotes Brainport Eindhoven in the Netherlands and abroad.
Eindhoven University of Technology	The Eindhoven University of Technology, abbr. TU/e, is a public technical university in the Netherlands, situated at Eindhoven.
Tilburg University	Tilburg University is a public research university specializing in the social and behavioral sciences, economics, law, business sciences, theology and humanities, located in Tilburg in the southern part of the Netherlands.
Brainport Smart District Foundation	a partnership among the municipality of Helmond, Eindhoven University of Technology, Brainport Development, the Province of North Brabant and Tilburg University.
Architectural and Planning Firms	UNStudio: This architectural firm was selected to create the urban vision of BSD. Felixx Landscape Architects & Planners: They collaborated with UNStudio to design the urban vision and landscape for the district.
Residents and Local Communities	An essential aspect of the BSD project is co-creation, where future residents and local community members are involved in the decision-making and design process, ensuring that the solutions are tailored to the actual needs of the people living there.

¹² Available at: [Assessment criteria - Brainport Smart District](#) (Accessed: 27 March 2025)

¹³ Available at: [220218_BSD_BKP_SMP-1.1_UNStudio_res-gecomprimeerd.pdf \(brainportsmartdistrict.nl\)](#) (Accessed: 27 March 2025)

2. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND^{14,15,16}**HISTORY TIMELINE**

2016-2017	<p>Founding and Vision Formation</p> <p>The idea of Brainport Smart District started forming around this time.</p> <p>The vision was to build the "Smartest Neighborhood in the World" that would integrate cutting-edge technology into the built environment.</p>
2018	<p>Launch and Planning</p> <p>The official launch of the project took place.</p> <p>UNStudio was selected to create the urban vision of the BSD.</p> <p>Key stakeholders, including businesses, research institutions, and local government, started collaborating on the project.</p>
2019	<p>Development of Urban Designs and Initial Implementations</p> <p>UNStudio and Felixx Landscape Architects & Planners released the urban vision for the project.</p> <p>The design included flexible plots, which residents and businesses could develop according to their preferences, guided by the sustainable principles of the district.</p> <p>Initial implementations and pilot projects may have been started in areas such as sustainable housing and energy.</p>
2020-2023	<p>Further Development and Growth</p> <p>The district continued to evolve and develop with more projects initiated and proposed.</p> <p>Some houses may have started to be built, and various technological implementations would have been piloted or integrated.</p> <p>The project likely drew interest from various parts of the world due to its unique and innovative approach.</p>

¹⁴ Available at: [Brainport Smart District - UNStudio](#) (Accessed: 27 March 2025)

¹⁵ Available at: [UNStudio Designs 'World's Smartest Neighborhood' in the Netherlands | ArchDaily](#) (Accessed: 27 March 2025)

¹⁶ Available at: [Felixx - Realizing happy environments](#) (Accessed: 27 March 2025)

2. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND

LOCATION

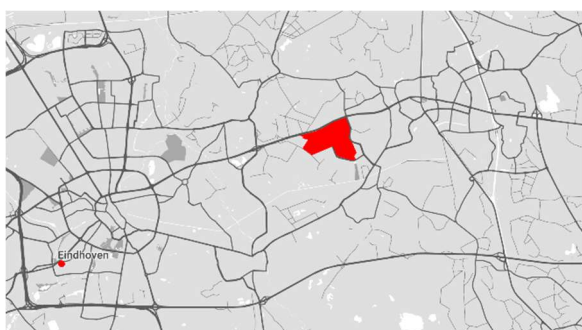


Fig. 248. Location of Brainport Smart District within Eindhoven. Author: Dashnor Kadiri, 2024¹⁷



Fig. 249. Aerial view of area before development.¹⁸

PHASES OF DEVELOPMENT

The size of this urban area is 240 ha and realization of it is planned in three stages.

- The first major phase of construction (2010-2017) comprises of a mixed-use neighborhood with at least 2,600 housing units (260 student units) as well as offices, retail units, service providers and research and development institutions.
- In the second phase (2017-2022), the rail station and efficient road link to the A 23 motorway and the S 1 Regional Ring Road will be completed. Further housing and mixed-purpose buildings are planned to be developed along with the quarter around the rail station and the office quarter.
- The third phase (2022-2028), the areas adjacent to the rail station, the shopping street and the underground/metro line will be densified and the mix of use optimized. (Aspern Seestadt, 2015)



Fig. 250. Brainport Smart District Masterplan.¹⁹

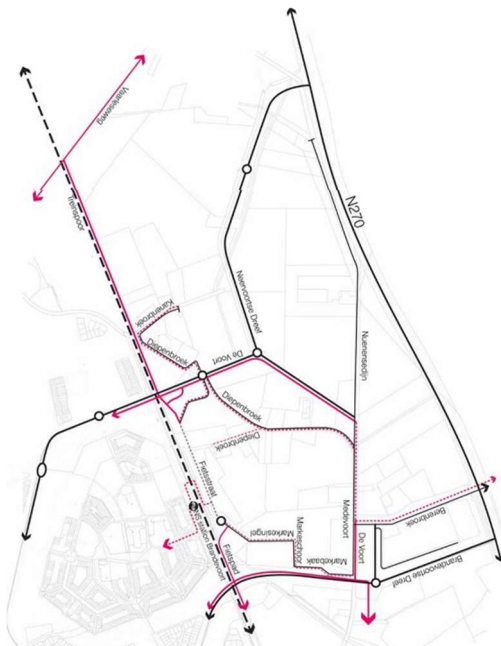
¹⁷ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

¹⁸ Available at: [Foundation work lays the foundation of Telkesveld | mHome](#) (Accessed: 27 March 2025)

¹⁹ Available at: [Brainport Smart District Helmond - Felixx](#) (Accessed: 27 March 2025)

2. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND

MASTER PLAN



LEGENDA

- Auto
- Fietspad
- Fietstraat
- Fietsen op straat
- Trein

- EXISTING infrastructure BSD is bordered by the N270 in the north, the Brandevoortse Dreef on the east side, the railway line on the south side and the Mierlosedijk/Vaarleseweg on the west side.
- Measures are being taken to limit traffic disruption from the north and south sides. In addition, various access roads run through the area: the Neervoortse Dreef, the Voort and part of the Medevoort. The historic lines such as Kranenbroek, Diepenbroek and Diepenbroeksingel will soon function as a slow-traffic route in BSD.

Fig. 251. Brainport Smart District infrastructure.²⁰



LEGENDA

- Projectgrens
- Auto
- Fietspad
- Fietstraat
- Fietsen op straat
- Fietstroute wenselijk
- Trein
- NS station
- Ring
- 10% Oriëntatie (ring + ribben)
- Ribben
- Park
- Productielandschap
- Lage dichtheid; max 3 bouwlagen
- Hoge dichtheid; max 5 bouwlagen
- Groene zoom met parkeer-hubs
- Wonen/werken/voorzieningen
- Bedrijven
- Bouwvelden
- Belangrijke entree

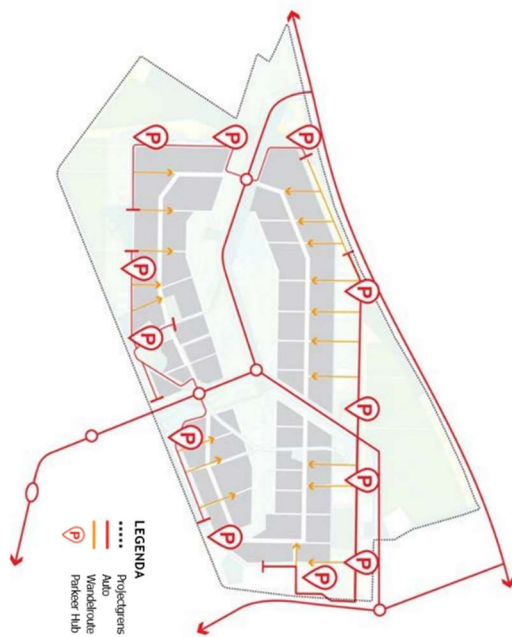
Fig. 252. Brainport Smart District Urban Masterplan.²¹

²⁰ Available at: [masterplan en beeldkwaliteitsplan BSD voor website.pdf](#) (Accessed: 27 March 2025)

²¹ Available at: [masterplan en beeldkwaliteitsplan BSD voor website.pdf](#) (Accessed: 27 March 2025)

2. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND

MASTER PLAN



LEGENDA

- Projectgrens
- Auto
- Wandelroute
- P Parkeer Hub

- Parking standard
Within the district, there will be a limited (low) parking standard of 0.2 parking spaces per home and 0.2 parking spaces per 100 m² of commercial space. This means that the residents cannot all have one or more cars in their possession. For the area around the station (phase 1) and for the temporary homes, an additional parking standard of 0.3 extra parking spaces will temporarily apply. This gives a total of 0.5 parking spaces per home and 0.5 parking spaces per 100 m² of commercial space in the temporary situation. This parking standard will be to the desirable parking standard of 0.2. This is achieved when there are sufficient alternative forms of transport (shared mobility, last mile variations).

Fig. 253. Brainport Smart District infrastructure.²²



Principles:

- It is subdued, very carefully applied and with respect for the landscape
- Vandalism-resistant
- Old aging Innovative,
- playful and educational Could generate a placemaking

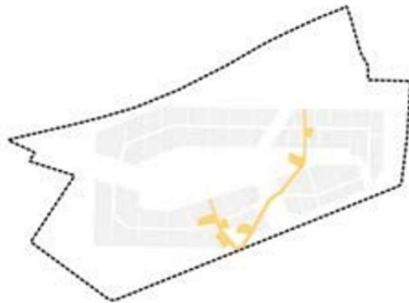
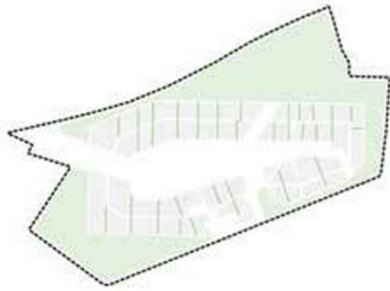
Fig. 254. Brainport Smart District Urban Masterplan.²³

²² [masterplan en beeldkwaliteitsplan BSD voor website.pdf](#) (Accessed: 27 March 2025)

²³ [masterplan en beeldkwaliteitsplan BSD voor website.pdf](#) (Accessed: 27 March 2025)

2. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND

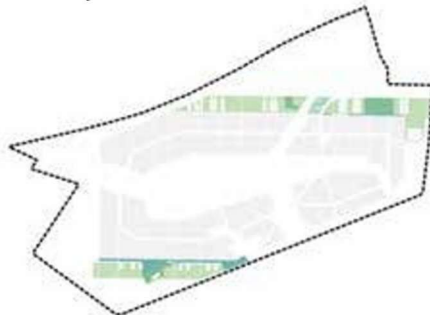
MASTER PLAN



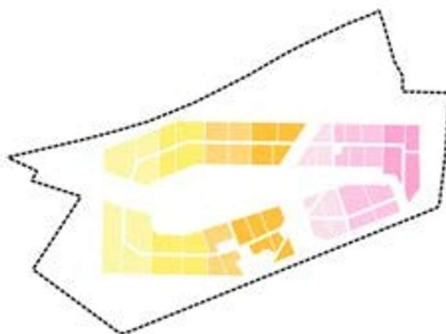
Historisch lijnen

- The ribs/ historical lines
These continuous urban elements connect the ecological zones, the productive landscape, the green edge, the building fields and the park in continuous routes. Informal routes that form landscape transitions and separate the building fields from each other.
- The ribs/ historical lines
These continuous urban elements connect the ecological zones, the productive landscape, the green edge, the building fields and the park in continuous routes. Informal routes that form landscape transitions and separate the building fields from each other.

Fig. 255. Brainport Smart District infrastructure.²⁴



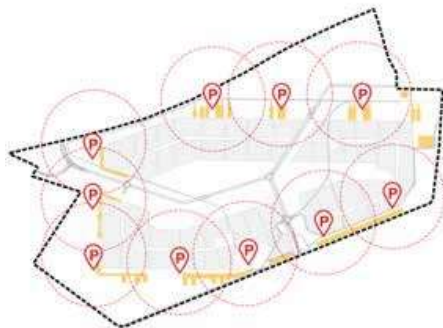
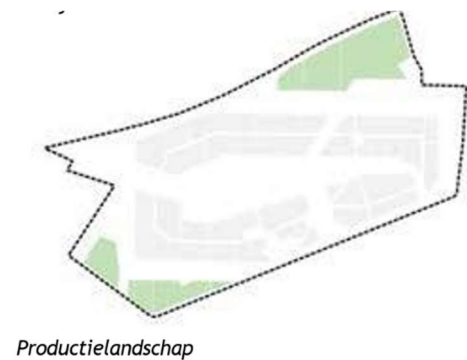
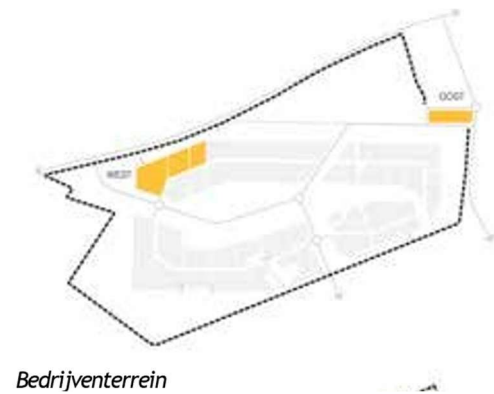
Groene zoom



Bouwvelden

- Green border
This is the area between the building fields and the production landscape. Various landscape facilities will be placed in the Groene Zoom, such as mobility hubs and a water storage facility. It is also the first run-off area for the residents and functions as the transition zone between buildings and landscape.
- Building fields,
The starting point is that the spatial interpretation within the building fields is left to the future residents as much as possible. This also stimulates a sense of ownership among the residents, which strengthens the involvement for the area.

²⁴ Available at: [masterplan en beeldkwaliteitsplan BSD voor website.pdf](#) (Accessed: 27 March 2025)



- Business Park
Here too, the starting point is that the spatial interpretation within the building fields of the business parks is left to the future companies as much as possible. This stimulates a sense of ownership among the companies, which strengthens the commitment to the area.
- Production landscape
The production landscape is the connection between the people in the BSD hamlets and the food on their plates.
- Hubs shorter walking distances

Fig. 256. Brainport Smart Disctrict Urban Masterplan.²⁵

²⁵ Available at: [masterplan en beeldkwaliteitsplan BSD voor website.pdf](#) (Accessed: 27 March 2025)

2. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND

EXPECTED APPEARANCE



Fig. 257. Aerial view of Brainport smart district.²⁶



Fig. 258. Lake view of Brainport smart district.²⁷



Fig. 259. View from the Park.²⁸



Fig. 260. View inside residential area.²⁹



Fig. 261. Inside Neighbourhood.³⁰



Fig. 262. Brainport main square.³¹

²⁶ Available at: [Brainport Smart District - UNStudio](#) (Accessed: 27 March 2025)

²⁷ Available at: [Brainport Smart District - UNStudio](#) (Accessed: 27 March 2025)

²⁸ Available at: [Brainport Smart District - UNStudio](#) (Accessed: 27 March 2025)

²⁹ Available at: [Brainport Smart District - UNStudio](#) (Accessed: 27 March 2025)

³⁰ Available at: [Brainport Smart District - UNStudio](#) (Accessed: 27 March 2025)

³¹ Available at: [Brainport Smart District - UNStudio](#) (Accessed: 27 March 2025)

2. BRAINPORT SMART DISTRICT - HELMOND, EINDHOVEN, NETHERLAND

EXPECTED APPEARANCE

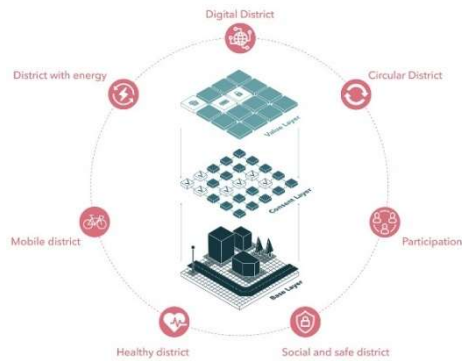


Fig. 263. Aerial view of Brainport smart district.³²

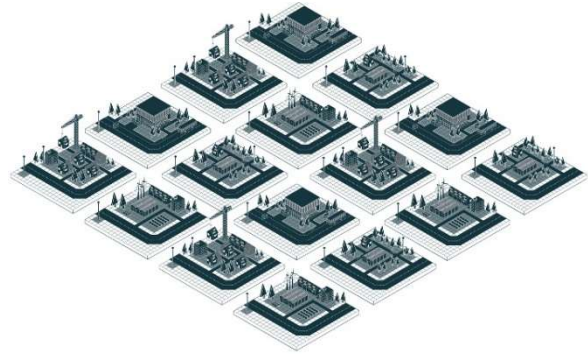


Fig. 264. Lake view of Brainport smart district.³³

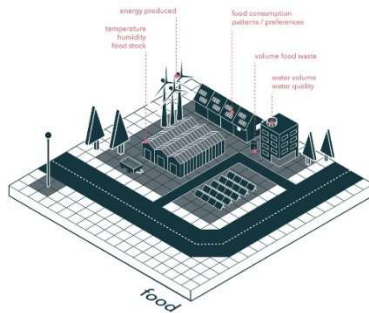


Fig. 265. View from the Park.³⁴

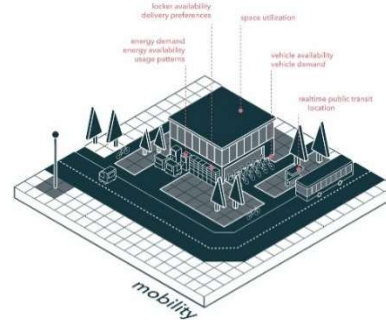


Fig. 266. View inside residential area.³⁵

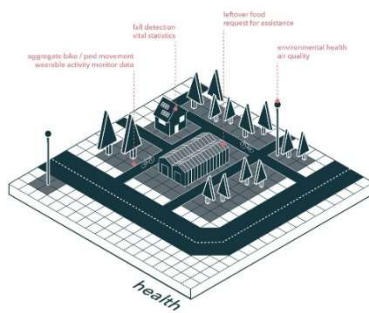


Fig. 267. Inside Neighbourhood.³⁶

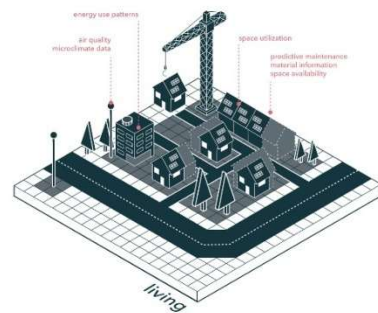


Fig. 268. Brainport main square.³⁷

³² Available at: [ArchDaily](#) (Accessed: 27 March 2025)

³³ Available at: [ArchDaily](#) (Accessed: 27 March 2025)

³⁴ Available at: [ArchDaily](#) (Accessed: 27 March 2025)

³⁵ Available at: [ArchDaily](#) (Accessed: 27 March 2025)

³⁶ Available at: [ArchDaily](#) (Accessed: 01 August 2024)

³⁷ Available at: [ArchDaily](#) (Accessed: 01 August 2024)

Overview of selected Neighbourhoods

3. NORDHAVN - COPENHAGEN, DENMARK^{38,39,40,41}

FACTS AND FIGURES

Location (city, state)	Copenhagen, Denmark
Previous use	Former industrial harbour area
Total land area	3.6 million m ²
Green and open space / Public area	27.000 m ²
Facilities for passengers	5.400 m ²
Parking area	22.000 m ²
Lake	Canals
Commercial	400.000 m ²
Residential units	4000
Number of residents (projected)	40,000
Number of residents (currently)	>2,500
Workplaces (potential)	40.000
Workplaces (currently)	>2,000
Year of Master plan	2008
Author of the project	COBE, Sleth, Polyferm, Kronløbsøen Projekt P/S, Vilhelm Lauritzen Architects, STED City & Landscape
Client	CPH City & Port Development
Construction time	2008 – under construction (it's all due to be completed by 2050)
Total investment volume	€ 10b total investment
Goal	EnergyLab Nordhavn: a living urban laboratory

ACTORS INVOLVED

City of Copenhagen	One of our most important partners is the City of Copenhagen and its institutions.
CPH City & Port Development	This entity is the driving force behind the development of Nordhavn. They manage the transformation of the port areas into sustainable urban zones.
EnergyLab Nordhavn	EnergyLab Nordhavn has a total budget of DKK 143 million. (EUR 19 million), hereof DKK 84 million (EUR 11 million) was funded in two rounds by the Danish Energy Technology Development and Demonstration Programme (EUDP)
Partenrs	HOFOR, RADIUS, ABB, DANFOSS, NERVE SMART SYSTEMS, GLEN DIMPLEX, METRO THERM, POWERLABDK, DTU., BY&HAVN, CLEAN CHARGE, ENGINEERING TOMORROW, BALSLEV, RADIUS
COWI	COWI has taken over as project partner from Balslev A/S following the employment of 9 engineers previously working for Balslev.
EUDP	The project is supported by EUDP (Energy Technology Development and Demonstration Programme).
City of Copenhagen	One of our most important partners is the City of Copenhagen and its institutions.
CPH City & Port Development	This entity is the driving force behind the development of Nordhavn. They manage the transformation of the port areas into sustainable urban zones.
EnergyLab Nordhavn	EnergyLab Nordhavn has a total budget of DKK 143 million. (EUR 19 million), hereof DKK 84 million (EUR 11 million) was funded in two rounds by the Danish Energy Technology Development and Demonstration Programme (EUDP)

³⁸ Available at: [Nordhavn: The smart urban area of the future \(stateofgreen.com\)](https://stateofgreen.com/nordhavn/) (Accessed: 27 March 2025)

³⁹ Available at: [Cobe – Nordhavn](https://cobe.com/nordhavn/) (Accessed: 27 March 2025)

⁴⁰ Available at: <https://urbannext.net/nordhavn/> (Accessed: 27 March 2025)

⁴¹ Available at: [The transformation of Nordhavn, Copenhagen - PORTUS \(portusonline.org\)](https://portusonline.org/nordhavn/) (Accessed: 27 March 2025)

Overview of selected Neighbourhoods

3. NORDHAVN - COPENHAGEN, DENMARK

LOCATION



Fig. 269. Location of Nordhavn within Copenhagen.
Author: Dashnor Kadiri, 2024⁴²



Fig. 270. The Free Port in 1904.⁴³

PHASES OF DEVELOPMENT

- 2010–2015: Master plan finalization and initial infrastructure planning. Start of redevelopment in Århusgadekvarteret neighborhood.
- 2016–2020: Major residential and mixed-use developments in Århusgadekvarteret. Opening of Nordhavn and Orientkaj Metro stations (2020).
- 2021–2030: Continued expansion of residential and commercial developments. Infrastructure extensions, including new Metro stations (Levantkaj and Nordhavn C expected around 2030). Land reclamation and redevelopment of northern areas.
- 2031–2040: Completion of major public spaces, cultural hubs, and significant residential and commercial expansions. Increased population density and new business districts.
- 2041–2050: Final phases, integrating sustainability goals, parks, green corridors, and full urbanization of the district. Completion of infrastructure and transportation networks.



Fig. 271. Nordhavn, Copenhagen master plan.⁴⁴

⁴² Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁴³ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁴⁴ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

Overview of selected Neighbourhoods
3. NORDHAVN - COPENHAGEN, DENMARK

MASTER PLAN



Fig. 272. Islets and neighbourhoods.⁴⁵

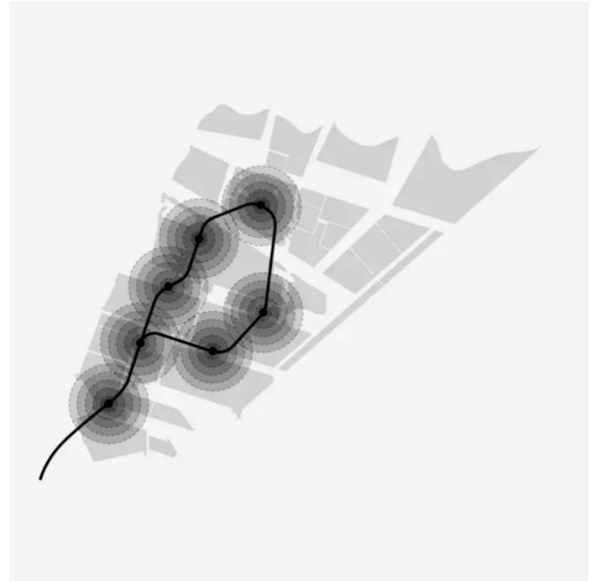


Fig. 273. The Green Loop – five-minute city.⁴⁶

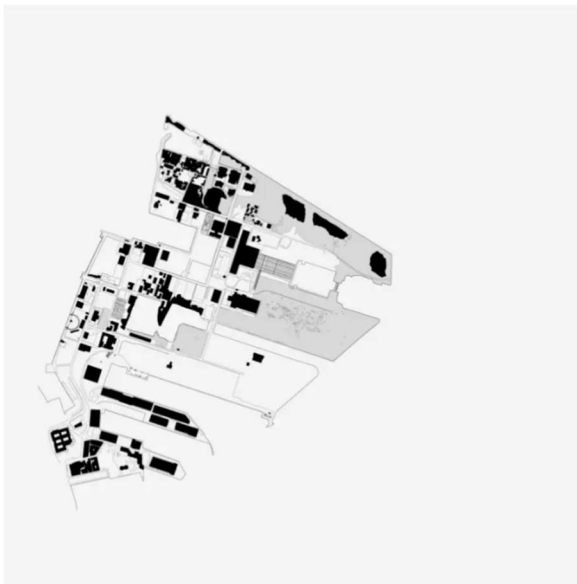


Fig. 274. The Harbour and cultural heritage.⁴⁷



Fig. 275. The city on the water.⁴⁸

⁴⁵ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁴⁶ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁴⁷ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁴⁸ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

Overview of selected Neighbourhoods
3. NORDHAVN - COPENHAGEN, DENMARK

MASTER PLAN



Fig. 276. The urban green.⁴⁹



Fig. 277. The intelligent grid.⁵⁰

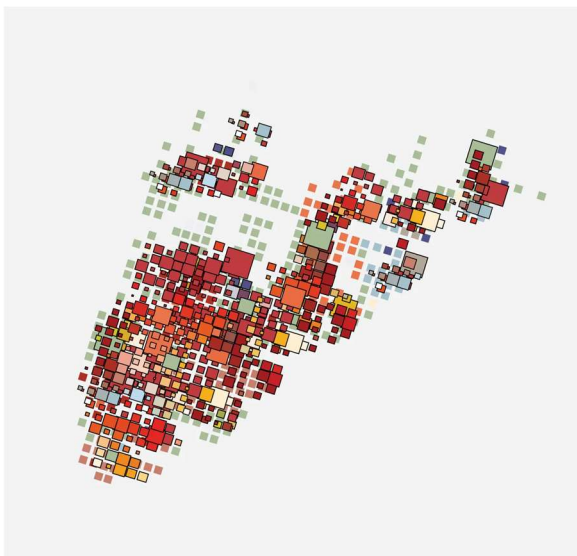


Fig. 278. A dynamic principle of development.⁵¹

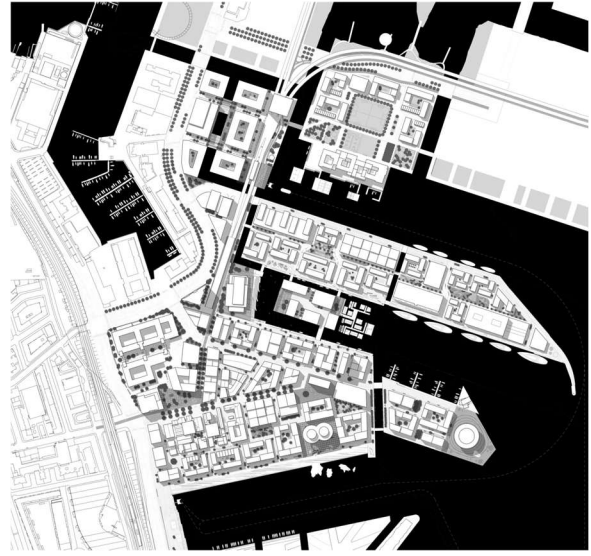


Fig. 279. Building plots, Nordhavn-Copenhagen.⁵²

⁴⁹ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁵⁰ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁵¹ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁵² Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

3. NORDHAVN – COPENHAGEN, DENMARK

CURRENT SITUATION



Fig. 280. Aerial view of Nordhavn, Copenhagen.⁵³



Fig. 281. Nordhavn Promenade.⁵⁴



Fig. 282. Promenade of Nordhavn, Copenhagen.⁵⁵



Fig. 283. View from sea.⁵⁶



Fig. 284. Aerial view of Nordhavn.⁵⁷



Fig. 285. Nordhavn Promenade.⁵⁸

⁵³ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁵⁴ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁵⁵ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁵⁶ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁵⁷ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁵⁸ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

3. NORDHAVN – COPENHAGEN, DENMARK

CURRENT SITUATION



Fig. 286. Aerial view of Nordhavn, Copenhagen.⁵⁹



Fig. 287. Silo, residential building.⁶⁰



Fig. 288. Aerial view.⁶¹



Fig. 289. Aerial view



Fig. 290. Aerial view of Nordhavn.⁶²



Fig. 291. Nordhavn Promenade.⁶³

⁵⁹ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁶⁰ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁶¹ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁶² Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

⁶³ Available at: [Cobe - Nordhavn](#) (Accessed: 27 March 2025)

4. SCHUMACHER QUARTER - BERLIN, GERMANY^{64,65,66}**FACTS AND FIGURES**

Location (city, state)	Berlin, Germany
Previous use	The area was previously part of the Tegel Airport (Flughafen Tegel), which ceased operations in 2020.
Total land area	48 hectares
Green and open space	50%
Lake	/
New Buildings	The project plans to construct a variety of new buildings, including residential, commercial, and public facilities.
Residential units	5,000 residential units.
Number of residents (projected)	>10,000
Number of residents (currently)	/
Workplaces (potential)	>10,000
Workplaces (currently)	/
Year of Master plan	2019
Author of the project	The project master plan was developed by Tegel Projekt GmbH, an organization specifically established for the redevelopment of the former Tegel Airport site.
Construction time	2021-2030
Total investment volume	€ 3 billion total investment
Goal	The first district to be a single entity

ACTORS INVOLVED

Developers	Tegel Projekt GmbH: The primary agency responsible for managing and coordinating the redevelopment of the former Tegel Airport site.
Architects and Urban Planners	Various architectural firms and urban planners are involved, including renowned firms such as Herzog & de Meuron.
Construction Companies	Multiple construction companies are involved in different phases of the project, including both local and international firms.
Government and Municipal Authorities	City of Berlin: Provides regulatory oversight and support for the project. Berlin Senate Department for Urban Development and Housing: Plays a key role in planning and supporting the project.
Investors	The project is funded through a mix of public and private investments, including real estate investment firms and financial institutions.
Environmental and Sustainability Consultants	Specialized consultants ensure the project meets high sustainability standards, focusing on energy efficiency, green spaces, and water management.

⁶⁴ Available at: [Tegel Projekt GmbH](#) (Accessed: 27 March 2025)⁶⁵ Available at: [Senate Department for Urban Development, Building and Housing - Berlin.de](#) (Accessed: 27 March 2025)⁶⁶ Available at: [Schumacher Quartier - Berlin TXL \(schumacher-quartier.de\)](#) (Accessed: 27 March 2025)

4. SCHUMACHER QUARTER - BERLIN, GERMANY

LOCATION



Fig. 292.0. Location of Schumacher Quarter within Berlin.

Author: Dashnor Kadiri, 2024⁶⁷



Fig. 293.0. Aerial view of the site before development.⁶⁸

PHASES OF DEVELOPMENT

- In August 2021, the site was officially handed over to Tegel Projekt GmbH, the state-owned company responsible for managing the redevelopment.
- Preparatory actions, including excavation and restructuring work, began in 2022
- First Construction Phase (Completion Target: 2027):
The first phase focuses on developing the initial residential units and infrastructure. Schumacher Quartier A key feature is the emphasis on urban timber construction, with at least 50% of the buildings in this phase utilizing wood, a sustainable and environmentally friendly material.
- The completion of this phase, along with significant building refurbishments, is planned for 2027.



Fig. 294.0. Master plan of Schumacher Quarter.⁶⁹

⁶⁷ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁶⁸ Available at: [\(schindler.de\)](#) (Accessed: 27 March 2025)

⁶⁹ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](#) (Accessed: 27 March 2025)

Overview of selected Neighbourhoods

4. SCHUMACHER QUARTER - BERLIN, GERMANY

MASTER PLAN



Figure 295.0 Schumacher Dominant Elements of the Master Plan⁷⁰

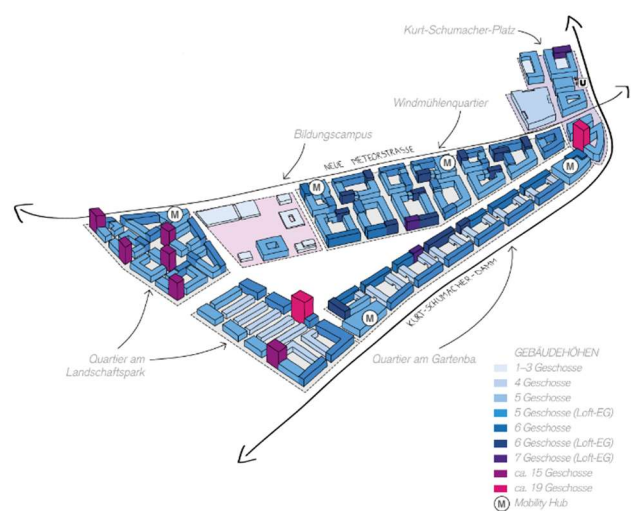


Figure 296.0 Schumacher Dominant Elements of the Master Plan⁷¹

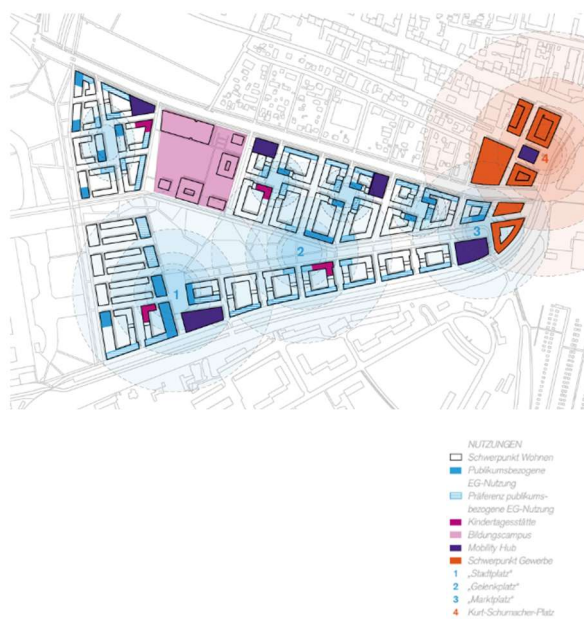


Figure 297.0 Schumacher Diversity of use - overview⁷²

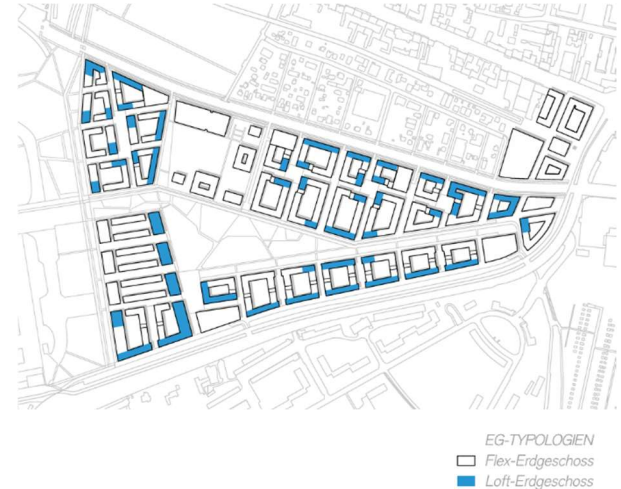


Figure 298.0 Schumacher Diversity of use - overview⁷³

⁷⁰ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://www.schindler.de) (Accessed: 27 March 2025)

⁷¹ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://www.schindler.de) (Accessed: 27 March 2025)

⁷² Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://www.schindler.de) (Accessed: 27 March 2025)

⁷³ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://www.schindler.de) (Accessed: 27 March 2025)

4. SCHUMACHER QUARTER - BERLIN, GERMANY

MASTER PLAN



Figure 299.0 Schumacher Dominant Elements of the Master Plan⁷⁴



Figure 300.0 Schumacher Dominant Elements of the Master Plan⁷⁵

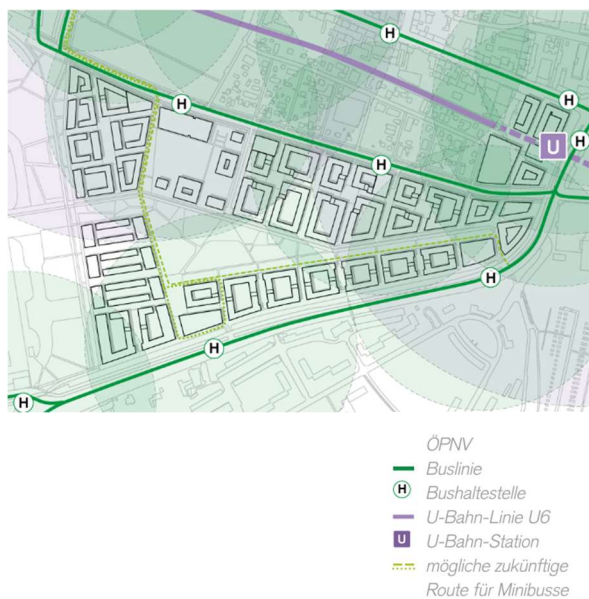


Figure 301.0 Schumacher roads - overview⁷⁶

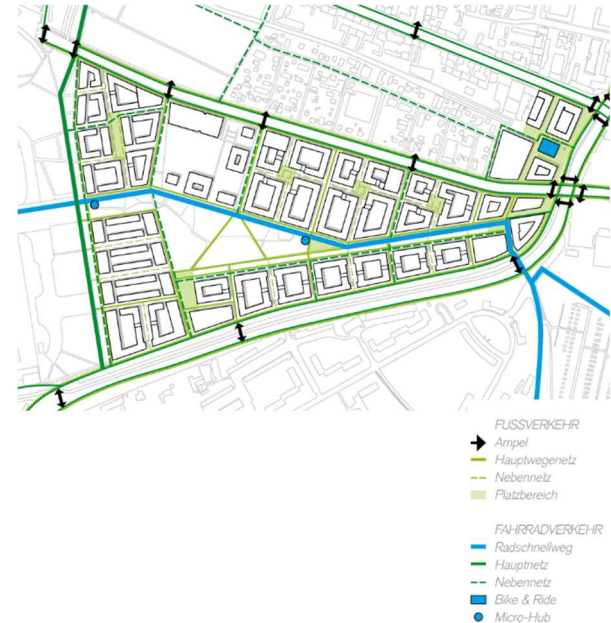


Figure 302.0 Schumacher connections - overview⁷⁷

⁷⁴ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://schindler.de) (Accessed: 27 March 2025)

⁷⁵ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://schindler.de) (Accessed: 27 March 2025)

⁷⁶ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://schindler.de) (Accessed: 27 March 2025)

⁷⁷ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://schindler.de) (Accessed: 27 March 2025)

4. SCHUMACHER QUARTER - BERLIN, GERMANY

EXPECTED APPEARANCE



Fig. 303. Aerial view of Schumacher Quarter, Berlin.⁷⁸



Fig. 304. Aerial view of Schumacher Quarter, Berlin.⁷⁹



Fig. 305 View from the Park.⁸⁰



Fig. 306. View inside the Neighbourhood.⁸¹



Fig. 307.0 Inside Neighbourhood.⁸²



Fig. 308.0. Aerial view of Schumacher Quarter, Berlin.⁸³

⁷⁸ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://schindler.de) (Accessed: 27 March 2025)

⁷⁹ Available at: [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 27 March 2025)

⁸⁰ Available at: [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 27 March 2025)

⁸¹ Available at: [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 27 March 2025)

⁸² Available at: [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 27 March 2025)

⁸³ Available at: [Schumacher Quartier Berlin - rendertaxi \(rdt.ac\)](https://rendertaxi.com) (Accessed: 27 March 2025)

4. SCHUMACHER QUARTER – BERLIN, GERMANY

EXPECTED APPEARANCE



Fig. 309.0 Aerial view of Schumacher Quarter, Berlin.⁸⁴



Fig. 310.0 Aerial view of Schumacher Quarter, Berlin.⁸⁵



Fig. 311.0 View from the Park.⁸⁶

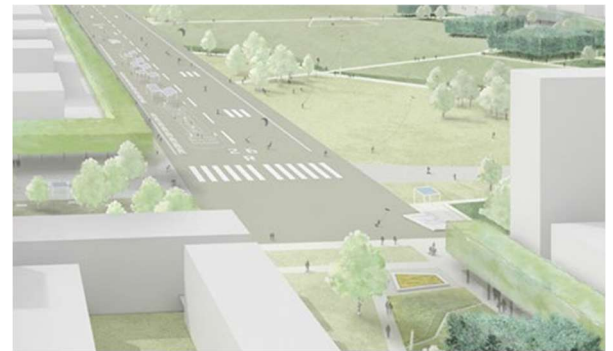


Fig. 312.0 View inside the Neighbourhood.⁸⁷



Fig. 313.0 Inside Neighbourhood.⁸⁸



Fig. 314.0 Aerial view of Schumacher Quarter, Berlin.⁸⁹

⁸⁴ Available at: [Schumacher Quartier in Berlin: \(schindler.de\)](https://schindler.de) (Accessed: 27 March 2025)

⁸⁵ Available at: [Building & Living - Schumacher Quartier](#) (Accessed: 27 March 2025)

⁸⁶ Available at: [Building & Living - Schumacher Quartier](#) (Accessed: 27 March 2025)

⁸⁷ Available at: [Building & Living - Schumacher Quartier](#) (Accessed: 27 March 2025)

⁸⁸ Available at: [Building & Living - Schumacher Quartier](#) (Accessed: 27 March 2025)

⁸⁹ Available at: [Building & Living - Schumacher Quartier](#) (Accessed: 27 March 2025)

5. GREDELJ - ZAGREB, CROATIA⁹⁰⁹¹⁹²

FACTS AND FIGURES

Location (city, state)	Zagreb, Croatia
Previous use	Railway station / Industrial area
Total land area	400.000 m ²
Green and open space	50%
Lake	No lake
New Buildings	1.021.241 m ²
Residential units	>5,721
Number of residents (projected)	>17.000
Number of residents (currently)	/
Workplaces (potential)	>20.000
Workplaces (currently)	/
Year of Master plan	2020
Author of the project	IGH, Oliver Kumrić, Dubravka Dujmović, Stjepan Kralj, Slobodan Kljajić de Arhitekten Cie., Branimir Medić, Sunčana Rapačić 3LHD, Marko Dabrović, Zoran Šuša, Goran Mraović, Ida Ister HDC, Zoran Kasum, Ružica Herceg Colliers International, Vedrana Likan, Klara Matić, Filip Dumbović MS Partners, Andrej Šoš Maceljiski, Nikola Berović
Construction time	/
Total investment volume	€ 1.563.226.131 € total investment
Goal	Urban revitalization of the zone of the former Gredelj factory

ACTORS INVOLVED

The City of Zagreb	One of our most important partners is the City of Zagreb and its institutions.
3LHD	This Croatian architectural firm leads the urban design and master planning for the Gredelj project. They focus on integrating modern architecture with the preservation of industrial heritage.
de Arhitekten Cie.	A Dutch architectural firm collaborating on the project, contributing to urban planning and architectural design.
PwC (PricewaterhouseCoopers)	Provides strategic consulting, including financial planning and market analysis.
Colliers International	Responsible for market research and real estate consulting, ensuring that the development meets market demands and economic viability.
TATRAVAGÓNKA a.s	Slovak investor in Gredelj.
M&S Partners	Legal consulting.
Institut IGH	A Croatian institute providing expertise in traffic and infrastructure planning, ensuring the new neighbourhood is well-integrated with existing transport networks
European Bank for Reconstruction and Development (EBRD)	Provides financial support and investments to facilitate the redevelopment project.

⁹⁰ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 26 March 2025)⁹¹ Available at: [\(total-croatia- news.com\)](#) (Accessed: 26 March 2025)⁹² Available at: [3LHD](#) (Accessed: 26 March 2025)

5. GREDELJ - ZAGREB, CROATIA

LOCATION



Fig. 315.0. Location of Gredelj within Zagreb.
Author: Dashnor Kadiri, 2024⁹³



Fig. 316.0. Aerial view of the site before development.⁹⁴

URBAN CONTEXT MAP

- **Preservation and Adaptive Reuse:**
The redevelopment emphasizes retaining valuable elements of the former Gredelj factory's industrial heritage. Historic structures will be preserved and repurposed, blending modern architectural designs with the site's historical character.
- **Public Spaces and Cultural Amenities:**
Green Areas and Squares: The plan envisions creating public spaces, including parks, green areas, and squares.
- **Educational and Administrative Buildings:**
Community Infrastructure: The development includes constructing schools, colleges, and public administration buildings, supporting the educational and civic needs of residents.
- **Transportation Hub Development:**
A significant innovation involves moving the existing bus station. This relocation aims to create a centralized transportation hub south of the railway station, improving connectivity and reducing surface traffic congestion.

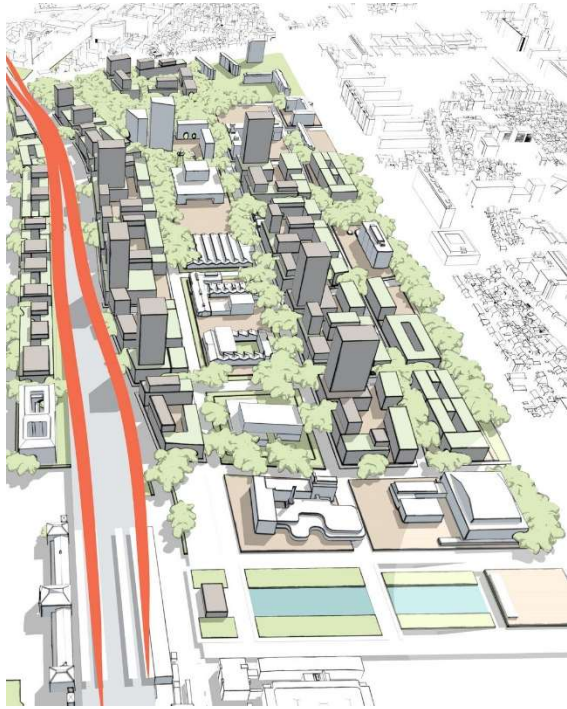


Fig. 317.0. Aerial view of Gredelj.⁹⁵

⁹³ Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

⁹⁴ Available at: [TŽV Gredelj izlazi iz stečaja \(lidermedia.hr\)](#) (Accessed: 26 March 2025)

⁹⁵ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

Overview of selected Neighbourhoods
5. GREDELJ - ZAGREB, CROATIA

MASTER PLAN

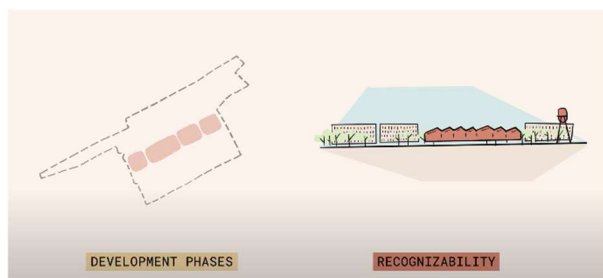


Figure 318.0 Gredelj Development phases Master Plan⁹⁶

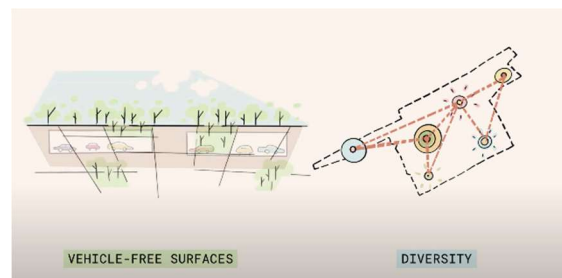


Figure 319.0 Gredelj Diversity Plan⁹⁷



Figure 320.0 Gredelj Public services and Education Plan⁹⁸

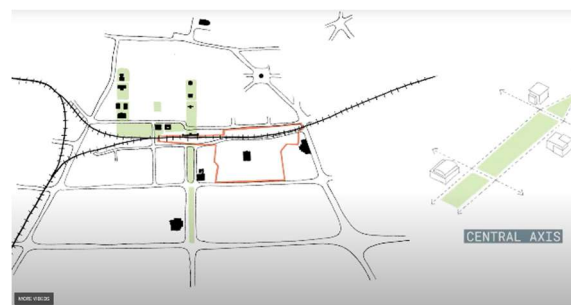


Figure 321.0 Gredelj connection plan⁹⁹

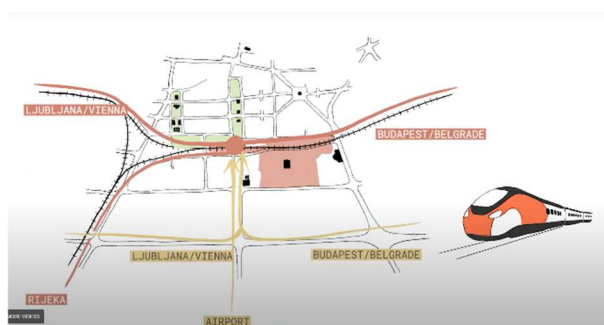


Figure 322.0 Gredelj railway connection plan¹⁰⁰

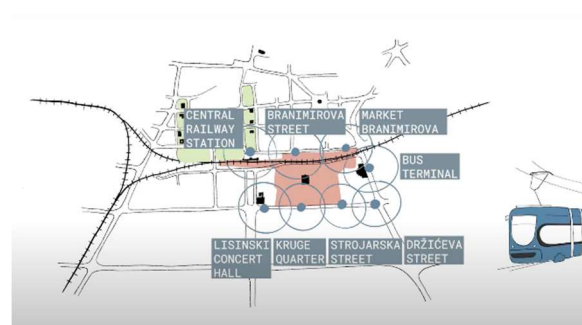


Figure 323.0 Gredelj connection plan¹⁰¹

⁹⁶ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

⁹⁷ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

⁹⁸ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

⁹⁹ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹⁰⁰ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹⁰¹ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

Overview of selected Neighbourhoods
5. GREDELJ - ZAGREB, CROATIA

MASTER PLAN

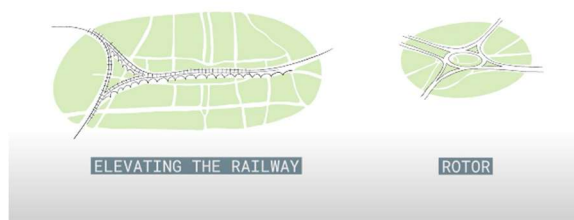


Figure 324.0 Gredelj railway connection plan¹⁰²

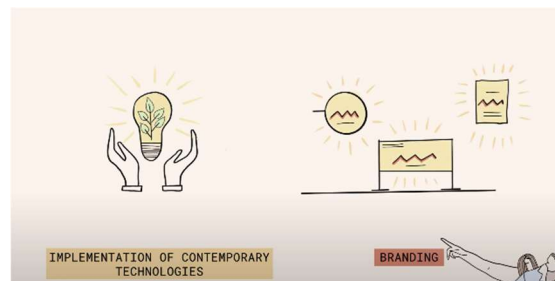


Figure 425.0 Gredelj Technology plan¹⁰³



Figure 326.0 Gredelj environment plan



Figure 327.0 Gredelj connection axis¹⁰⁴



Figure 328.0 Gredelj Public spaces¹⁰⁵



Figure 329.0 Gredelj public spaces¹⁰⁶

¹⁰² Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹⁰³ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹⁰⁴ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹⁰⁵ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹⁰⁶ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

5. GREDELJ – ZAGREB, CROATIA

EXPECTED APPEARANCE



Fig. 330.0 Aerial view of Gredelj, Tirana.¹⁰⁷

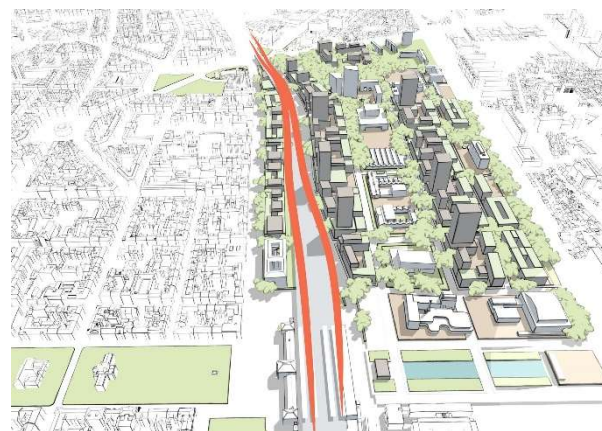


Fig. 331.0 Aerial view of Gredelj.¹⁰⁸



Fig. 332.0 View from the Park.¹⁰⁹



Fig. 333.0 View inside the Neighbourhood.¹¹⁰



Fig. 334.0 Inside Neighbourhood.¹¹¹



Fig. 335.0 Life inside the Neighbourhood area.¹¹²

¹⁰⁷ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹⁰⁸ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹⁰⁹ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹¹⁰ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹¹¹ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹¹² Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

5. GREDELJ – ZAGREB, CROATIA

EXPECTED APPEARANCE



Fig. 336.0. Aerial view of Gredelj, Zagreb.¹¹³



Fig. 337.0. Aerial view of Gredelj, Zagreb¹¹⁴



Fig. 338.0. View from the Park.¹¹⁵



Fig. 339.0. View inside the Neighbourhood.¹¹⁶



Fig. 340.0. Inside Neighbourhood.¹¹⁷



Fig. 341.0. Life inside the Neighbourhood area.¹¹⁸

¹¹³ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹¹⁴ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹¹⁵ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹¹⁶ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹¹⁷ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

¹¹⁸ Available at: [Urban revitalization of the former Gredelj factory zone | 3LHD](#) (Accessed: 27 March 2025)

Table. 69. Comparison table of Urban Planning, smart program and critical evolution of research case studies

Criteria	Aspern	Brainport	Nordhavn	Schumacher Quartier	Gredelj
Architectural and Urban Planning Criteria	Strong TOD, car-free, walkability	Modular lab, flexible design	5-min city, reuse of industry	Compact & connected	Heritage integration, evolving
Mixed-Use Developments and Adaptability	Ground floor flexibility	Strong mix: residential & food	High-density mixed-use	Multi-programmed hubs	Mixed-use proposal
Green Infrastructure and Public Spaces	50% green space, lake	Productive landscapes	Canals, green loop	Sponge city, plazas	Ecological parks, corridors
Sustainable Architecture and Resilience	Passive, solar, district heating	Circular, energy-neutral	Flood-resilient, green roofs	Timber, LowEx grid	Passive, early-stage
Digital Infrastructure & Data-Driven Services	IoT, no clear ICT governance	AI, wearables, smart grid	EnergyLab, limited governance	Digital twin, app fatigue	Weak ICT strategy
Smart Environment	Energy + stormwater systems	AI waste, sensors	Geothermal, smart waste	E-mobility, real-time monitoring	Proposed, early-phase
Smart People	Co-creation, basic tech training	Co-design, ethics board	Inclusive tools, moderate uptake	Innovation labs, digital campus	Minimal engagement yet
Smart Living	Smart homes, e-services	Health apps, logistics apps	E-health, connected homes	Real-time building feedback	Planned IoT homes
Critical Evaluation (Strengths & Limitations)	Strong form, green, mobility – weak ICT, cohesion	Innovation, circularity – weak fatigue, tech literacy	Resilience, reuse – weak privacy, burnout	Participation, circularity – weak tech overload	Vision, reuse – weak immature digital system

Legend for Compact Matrix

+: Strong presence of feature / well-developed

+/-: Partially implemented / with known limitations

-: Weak or missing implementation / critical challenges

✓ / ✗: Strengths and limitations noted together (refer to detailed comparison)

Table .70. Smart City Evaluation Matrix – Symbolic Overview

Criteria	Aspern	Brainport	Nordhavn	Schumacher Quartier	Gredelj
Architectural and Urban Planning Criteria	+	+	+	+	+
Mixed-Use Developments and Adaptability	+	+	+	+	+
Green Infrastructure and Public Spaces	+	+	+	+	+
Sustainable Architecture and Resilience	+	+	+	+	+/-
Digital Infrastructure & Data-Driven Services	-	+/-	+/-	+/-	-
Smart Environment	+	+	+	+	+/-
Smart People	+/-	+	+/-	+	-
Smart Living	+	+	+/-	+	+/-
Critical Evaluation (Strengths & Limitations)	✓ / ✗	✓ / ✗	✓ / ✗	✓ / ✗	✓ / ✗

Legend

+: Strong presence of feature / well-developed

+/-: Partially implemented / with known limitations

-: Weak or missing implementation / critical challenges

✓ / ✗: Strengths and limitations noted together (refer to detailed comparison)

This table presents the specific negative impacts of the digital layer in five smart neighbourhoods, structured by common areas of concern. References are provided for each case to support academic research.

Table. 71. Negative Impact of Digital Layer in Smart Neighbourhoods – Case Study Comparison

Concern	Aspern Seestadt	Brainport	Nordhavn	Schumacher Quartier	Gredelj
Data Privacy and Security	Lacks ICT governance; privacy unclear with IoT sensors (ASCR, 2020)	AI and wearables may risk misuse of sensitive data (ComputerWeekly, 2022)	No strong policies for data ethics and use transparency (EnergyLab Nordhavn, 2020)	Real-time sensors risk over-surveillance (Schumacher-Quartier.de, 2025)	Digital platform plans exist, but no published data policy (Studija Gredelj, 2020)
Digital Divide	Tech illiteracy among older residents; risk of exclusion (Smart City Wien, 2022)	High reliance on co-created digital tools risks exclusion (Matec Conferences, 2022)	Digital feedback tools underused by certain groups (European Smart Cities Forum, 2023)	Digital systems may overburden low-literacy groups (Metalocus, 2022)	Limited community readiness for full tech integration (Neighbourhood Index, 2023)
Environmental Impact	IoT & sensor networks require energy; no solar mandate (ASCR, 2020)	E-waste risk from experimental tech devices (ComputerWeekly, 2022)	High energy demand from smart water/light systems (EnergyLab, 2020)	Tech manufacturing + data center loads unclear (FUTR Hub, 2024)	IoT implementation not monitored for carbon footprint (Studija Gredelj, 2020)
Social and Psychological Effects	Overconnectivity causes digital fatigue, weakens community bonding (Smart City Wien, 2022)	Surveillance anxiety from health tracking wearables (ComputerWeekly, 2022)	Reduced agency due to automation in housing and mobility (Earth.org, 2023)	Behavioral resistance to always-on tech environment (Schumacher-Quartier.de, 2025)	Stress risk due to rapid digital shift, low familiarity (Neighbourhood Index, 2023)
Economic Disparities	Smart systems cost may price out low-income groups (ASCR, 2020)	Participation bias toward tech-savvy users (Matec Conferences, 2022)	Limited access to smart home upgrades in affordable units (EnergyLab, 2020)	Jobs at risk from automation in energy and mobility sectors (Metalocus, 2022)	Tech rollout may benefit private investors over citizens (Studija Gredelj, 2020)

This table highlights key health-related risks associated with digital technologies implemented in smart neighbourhoods, as observed in five leading European case studies. These risks span from privacy issues to mental and occupational health.

Table. 72. Health-Related Negative Impact of Technology on People in Smart Neighbourhoods

Concern	Aspern Seestadt	Brainport	Nordhavn	Schumacher Quartier	Gredelj
Health Data Privacy	No clear regulation of health data collected via smart homes (ASCR, 2020)	Wearables and health apps risk unauthorized data access (ComputerWeekly, 2022)	Real-time health data from sensors may lack encryption (EnergyLab, 2020)	Connected healthcare platforms unclear on privacy compliance (FUTR Hub, 2024)	Planned digital health not matched by regulatory framework (Studija Gredelj, 2020)
Digital Health Divide	Older users struggle with health tech integration (Smart City Wien, 2022)	Unequal participation in e-health among migrants and elderly (Matec Conferences, 2022)	Smart health tools underused in lower-income units (Earth.org, 2023)	High-tech systems may alienate those with disabilities (Metalocus, 2022)	Digital medical services not yet aligned with public health equity (Neighbourhood Index, 2023)
Environmental Health Impact	Network infrastructure contributes to EMF exposure, unstudied (ASCR, 2020)	E-waste from test tech and sensors increases long-term toxicity (ComputerWeekly, 2022)	Energy-intensive systems may contribute to localized pollution (EnergyLab, 2020)	Smart equipment lifecycle impact not tracked (Schumacher-Quartier.de, 2025)	E-waste management not yet designed (Studija Gredelj, 2020)
Mental Health	Overuse of connected systems leads to digital fatigue (Smart City Wien, 2022)	Surveillance and biofeedback stress from wearables (ComputerWeekly, 2022)	Loss of control due to automation may elevate anxiety (Earth.org, 2023)	Tech overload creates risk of social withdrawal (Schumacher-Quartier.de, 2025)	Digital shift outpaces user comfort, raising stress levels (Neighbourhood Index, 2023)
Job-related Health Issues	Automation in services may cause job insecurity stress (ASCR, 2020)	Tech replaces manual roles in food logistics (Matec Conferences, 2022)	Digital management reduces service roles (EnergyLab, 2020)	Smart mobility risks replacing transport jobs (FUTR Hub, 2024)	Job creation limited to high-skill tech areas (Studija Gredelj, 2020)



Photograph 5
Brainport Smart District
Author: UN Studio, 2021.

RESEARCH TABLES

List of Tables

Table 1. EU five cities with best performance in Smart Environment.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 2. EU five cities with best performance in Smart People.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 3. EU five cities with best performance in Smart Living.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 4. Umeaa, Sweden as first city with best performance in Smart Environment.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 5. Umeaa, Sweden. Smart Environment criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 6. Umeaa, Sweden. Smart Living criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 7. Umeaa, Sweden. Smart People criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 8. Joenkoeping, Sweden as second city with best performance in Smart Environment.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 9. Joenkoeping, Sweden. Smart Environment criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 10. Joenkoeping, Sweden. Smart Living criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 11. Joenkoeping, Sweden. Smart People criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 12. Eskilstuna, Sweden as third city with best performance in Smart Environment.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 13. Eskilstuna, Sweden. Smart Environment criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 14. Eskilstuna, Sweden. Smart Living criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 15. Eskilstuna, Sweden. Smart People criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 16. Montpellier, France as fourth city with best performance in Smart Environment.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 17. Montpellier, France. Smart Environment criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 18. Montpellier, France. Smart Living criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 19. Montpellier, France. Smart People criteria.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 20. Jyväskylä, Finland as fifth city with best performance in Smart Environment.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 21. Jyväskylä, Finland. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 22. Jyväskylä, Finland. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 23. Jyväskylä, Finland. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 24. Eskilstuna, Sweden as first city with best performance in Smart People.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 25. Eskilstuna, Sweden. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 26. Eskilstuna, Sweden. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 27. Eskilstuna, Sweden. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 28. Tampere, Finland as second city with best performance in Smart People.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 29. Tampere, Finland. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 30. Tampere, Finland. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 31.0. Tampere, Finland. Smart Living People.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 32.0. Aarhus, Denmark as third city with best performance in Smart People.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 33.0 Aarhus, Denmark. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 34.0. Aarhus, Denmark. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 35.0. Aarhus, Denmark. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 36.0. Oulu, Finland as fourth city with best performance in Smart People.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 37.0. Oulu, Finland. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 38.0. Oulu, Finland. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 39.0. Oulu, Finland. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 40.0. Umeaa, Sweden as fifth city with best performance in Smart People.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 41.0. Umeaa, Sweden. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 42.0. Umeaa, Sweden. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 43.0. Umeaa, Sweden. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 44.0. Salzburg, Austria as first city with best performance in Smart Living.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 45.0. Salzburg, Austria. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 46.0. Salzburg, Austria. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 47.0. Salzburg, Austria. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 48.0. Graz, Austria as second city with best performance in Smart Living.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 49.0. Graz, Austria. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 50.0. Graz, Austria. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 51.0. Graz, Austria. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 52.0. Innsbruck, Austria as third city with best performance in Smart Living.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 53.0. Innsbruck, Austria. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 54.0. Innsbruck, Austria. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 55.0. Innsbruck, Austria. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 56.0. Luxembourg, Luxembourg as fourth city with best performance in Smart Living.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 57.0. Luxembourg, Luxembourg. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 58.0. Luxembourg, Luxembourg. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 59.0. Luxembourg, Luxembourg. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 60.0. Brugge, Belgium as fifth city with best performance in Smart Living.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 61.0. Brugge, Belgium. Smart Environment criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 62.0. Brugge, Belgium. Smart Living criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 63. Brugge, Belgium. Smart People criteria.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table 64. Cities with their best performance in three domains adding here Zagreb and Ljubljana for comparison.
Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Table.65. List of more than 200 Neighbourhoods. Source: Author, 2025.

Table.66. List of more than 100 selected Neighbourhoods chronologically. Source: Author, 2025.

Table.67. List of 20 selected Neighbourhoods chronologically. Source: Author, 2025.

Table.68. List of 20 selected Neighbourhood's information. Source: Author, December 2025.

Table. 69. Comparison table of Urban Planning, smart program and critical evolution of research case studies.
Source: Author, 2025.

Table .70. Smart City Evaluation Matrix – Symbolic Overview. Source: Author, 2025.

Table. 71. Negative Impact of Digital Layer in Smart Neighbourhoods – Case Study Comparison. Source: Author, 2025.

Table. 72. Health-Related Negative Impact of Technology on People in Smart Neighbourhoods. Source: Author, 2025.

List of Photographs

Photograph 1 Aerial view of Janis Joplin Promenade, Sonnwendviertel Aspern, Vienna, Austria.
Author: (Stadt Wien / C. Fürthner.).

Photograph 2 Brainport Smart District, Eindhoven. Author: UNStudio

Photograph 3 Stockholm wood city, the largest wooden urban construction project.
Author: Henning Larsen, 2023.

Photograph 4 Nordhavn promenade. Author: Cobe, 2020

Photograph 5 Brainport Smart District. Author: UN Studio, 2021

Photograph 6 Aspern, Seestadt. Author: Robert Fritz, 2022.

List of Figures

Fig.1. Selection process

Available at: [Microsoft Word - espon 111- TIR_chapter1.doc](#) (Accessed: 09 April 2025)

Fig.2. Map of the twelve selected cities across Europe

Source: Author, December 2024.

Base map source: [Create | CADMAPPER](#) (Accessed: 25 March 2025)

Fig.3. Smart City Paris Goals

Available at: [Using data wisely to make smart\(er\) cities more sustainable - The Choice by ESCP](#) (Accessed: 09 April 2025)

Fig.4. The-strategic-approach-of-the-Smart-London-Plan-of-2013-Greater-London-Authority

Available at: [smart_london_plan.pdf](#) (Accessed: 09 April 2025)

Fig.5. The development process of the Barcelona smart city strategy

Available at: [The development process of the Barcelona smart city strategy | Download Scientific Diagram \(researchgate.net\)](#) (Accessed: 09 April 2025)

Fig.6. Smart City Milan Principles

Available at: [Smart City Milano | PPT](#) (Accessed: 09 April 2025)

Fig.7. Smart City Wien Principles

Available at: [\[PDF\] Smart City Wien Framework Strategy | Semantic Scholar](#) (Accessed: 09 April 2025)

Fig.8. Smart City Amsterdam strategy

Available at: [The Amsterdam Smart City platform \[15\] | Download Scientific Diagram \(researchgate.net\)](#) (Accessed: 09 April 2025)

Fig.9. Copenhagen Smart city principles

Available at: [Claus Bjørn Billehøj - Copenhagen Smart City | PPT \(slideshare.net\)](#) (Accessed: 09 April 2025)

Fig.10. Smart city Zagreb strategy

Available at: [PowerPoint Presentation \(majorcities.eu\)](#) (Accessed: 09 April 2025)

Fig.11. Smart city Zürich strategy

Available at: [Smart City Zürich and Open Data Zürich | PPT \(slideshare.net\)](#) (Accessed: 09 April 2025)

Fig.12. Smart city Luxembourg strategy

Available at: [Luxembourg towards a smart nation | Deloitte Luxembourg | Public services](#) (Accessed: 09 April 2025)

Fig.13. Smart city Gothenburg strategy

Available at: [Independent Guide 2023 | Gothenburg the Smart City | This is Gothenburg](#) (Accessed: 09 April 2025)

Fig.14. European Smart city characteristics and our Smart city focus (Smart Environment, Smart People, Smart Living)

Available at: [IBM SMARTER CITIES | Data Model Prototype](#) (Accessed: 09 April 2025)

Fig.15. Smart city characteristics from European Investment Bank (EIB).

Available at: [From "Developing" to "Smart" a scalable integration of the change in city's dimensions.](#) (Accessed: 09 April 2025)

Fig.16. Diagram of performance for the three of our focus domains.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Fig.17. Diagram of performance for the three of our focus domains.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Fig.18. Diagram of performance for the three of our focus domains.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Fig.19. Diagram of performance for the six smart city domains, add Zagreb and Ljubljana as our interests as well.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Fig.20. Comparative diagram of 13 cities with their performance in SP, SE, SL.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Fig.21. Comparative diagram of 13 cities with their performance in SP, SE, SL, + Zagreb and Ljubljana.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)

Fig. 22. Cities with their best performance in three domains adding here Zagreb and Ljubljana for comparison.

Available at: [european smart cities 3.0 \(2014\)](#) (Accessed: 24 April 2025)



Photograph 6
Aspern, Seestadt
Author: Robert Fritz, 2022.

