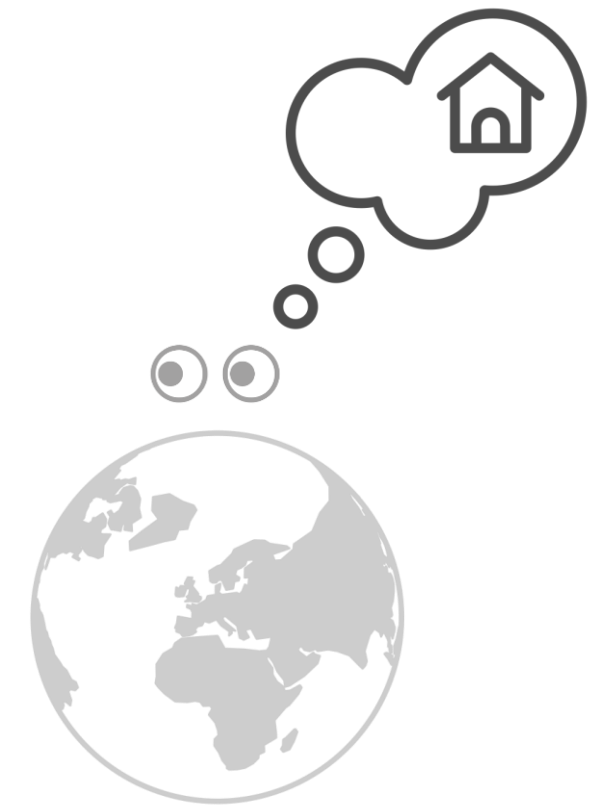


Making Room

Exploring the relationship of Housing and Urbanism



Masters Thesis Report
Kritika Singhal
SUDes 2018-2020

Master Thesis Report

SUDes

Sustainable Urban Design

Completion: September 2020

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Thank you to all the colleagues from SUDes family and my professional friends who enabled me to grow in this journey.

And finally a big thanks to my family and all my friends outside of school for their unconditional support and motivation boosts in these extreme times of a global pandemic- COVID 19.

**Abstract
Personal Motivation**



**Chapter 01
Global Perspective**
Rental Housing- focus
on India, Sweden, and
Germany



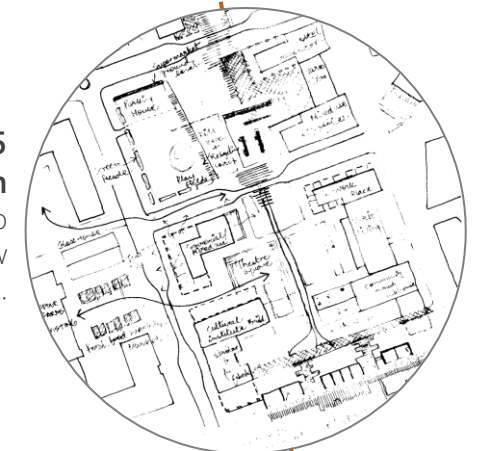
**Chapter 02
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**Chapter 03
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Although the this thesis project report has been divided into these five chapters, the process has been a constant back and forth. Its inspired from the idea of a red thread that weaves together the research, analysis and design interventions. Answering the question of WHAT, WHY and HOW at every stage of the project.

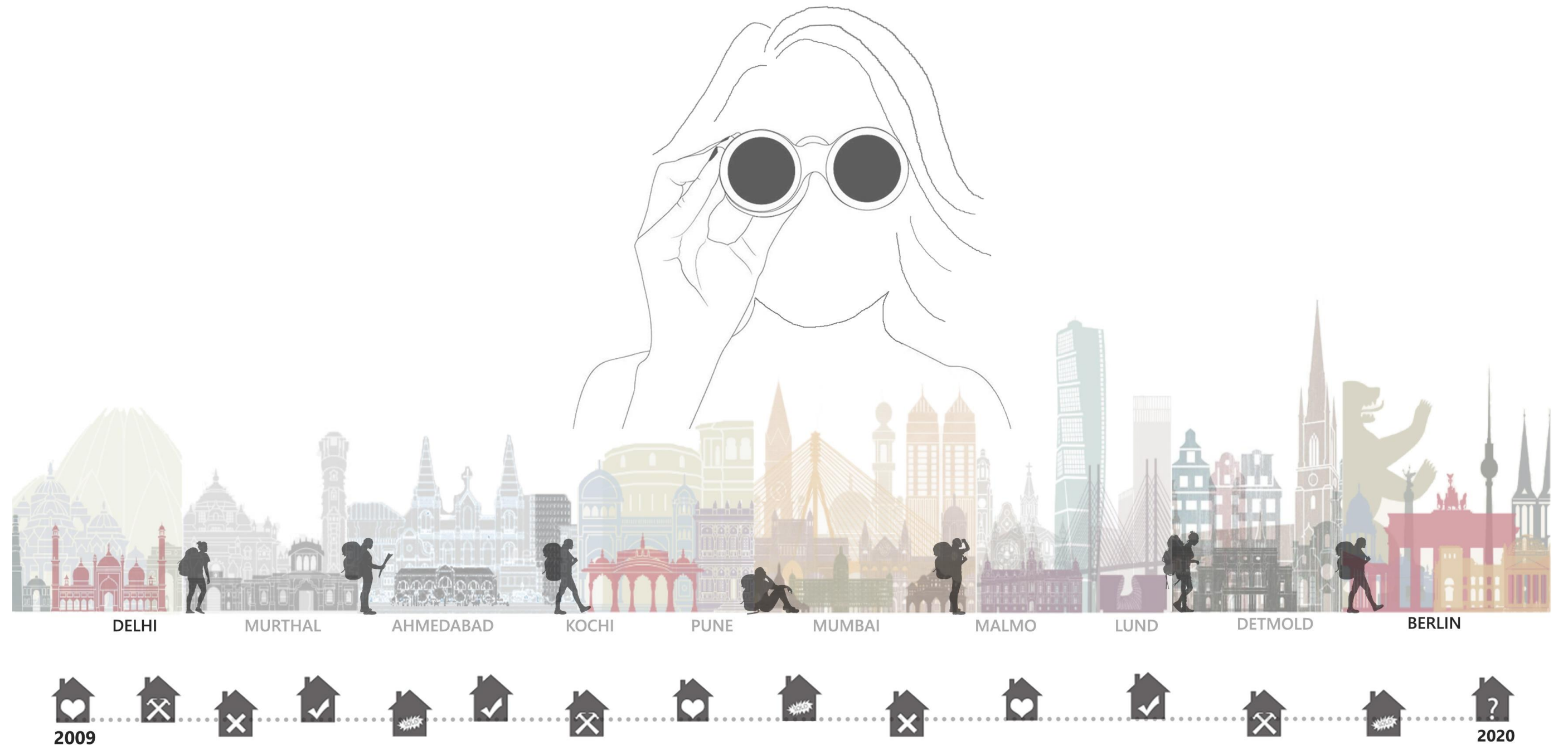
Abstract

This project is inspired by my own journey of house hunting in 10 cities across 3 countries in last 10 years and the search continues. These experiences have made me curious to explore the urban dynamics of this never-ending housing demand in cities across the globe.

The thesis examines the parameters associated with rental housing deficiency in Berlin- a city that offers diversity and opportunity at both national and global level. The question raised is, how can it house more talent and yet remains affordable?

The research is comprehended with an urban renewal proposal for one of the historic centres in south of Berlin- Tempelhof. It intends to broaden the vision of the existing re-development plans for Neue Mitte Tempelhof. For it to reach its full potential a mixed-use community-based development is proposed that makes room for more liveable spaces in the area.

The graphic on the right describes my personal journey of house hunting across various cities I have lived in last 10-11 years of my life. As an architecture student, intern, fresh graduate to a master student and so on.



CHAPTER 01

Housing and Urbanism

This chapter the research & analyse are documented to throw some light on the root causes of the never ending housing crisis across the globe. It gives an overview of housing affordability crisis and argues how rental housing can ease the housing demands. The case of India, Sweden and Germany are compared in particular, as these are the three countries I have personally lived.

Further, this chapter states the upcoming changes in the housing sector & societies. The way we live now or would live in the future is changing drastically. Thus rethinking the urban "Home" is a must.



Reference: www.theguardian.com | A March for Homes in London, with campaigners calling on politicians to address the lack of affordable homes in the capital. Year 2015 | Photograph: Mark Kerrison/Demotix/Corbis

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Global Perspective

Cities around the world are more economically powerful and essential than ever. This creates tremendous demand for their land, leading to escalating housing costs and competition. So, housing crisis actually reflects a fundamental paradox of contemporary capitalism.

The unprecedented rate of urbanization across the world has led to increased demand for good, affordable housing. A recent survey conducted by the Lincoln Institute of Land Policy revealed that of **200 cities polled around the globe, 90% were considered unaffordable** when applying the widely-used standard of average house prices being more than three-times median income.

Affordability is not just about the ability to buy or rent a home, but also about being able to afford to live in it. This definition of affordability goes beyond meeting expenses related to operations and maintenance, taking into consideration transport, infrastructure and services. If a home is economical enough to buy and maintain but located too far from work or school, it cannot be said to be affordable.

Why cities are so unaffordable ?

The factors contributing to a lack of affordability vary from city-to-city, but broadly include housing costs rising faster than incomes, the supply of houses not keeping up with demand, scarcity of land, and demographic changes such as population growth, ageing and shifts in household composition. However, housing has been financialized and turned into an investment vehicle, which has caused an oversupply of luxury housing and a lack of affordable housing in many cities across the world. The global housing crisis is defined by a chronic shortage of housing for the least advantaged, and in many cases, for the working and middle classes as well.



Scarce, unaffordable housing is not a local problem in a few places, but is baked into the 21st century global city.



What are the major consequences?

Land and housing assets are a source of wealth inequality, have an important impact on **spatial inequality**, and could potentially determine the degree of intergenerational mobility within a society.

It's quite evident that the **young people and newcomers** to cities are especially affected, while older generations owning homes in prime locations have benefited from the rise in the value of these assets.

The various studies conducted in last few years suggest that **countries with high rates of homeownership also have higher aggregate unemployment rates**. At the household level, the lack of mobility can affect household welfare if unemployed workers cannot easily relocate for their job search. This may have been manifested through tenure-specific mobility rates, given that homeowners on average move less frequently than renters. The high transaction costs and the consequent lower propensity of homeowners to move provides a basis for linking unemployment to housing tenure.

How can rental Housing ease the demand?

Across the income spectrum, rental housing is an important foothold into a city for new arrivals, until they are able to, or choose to, purchase their own homes.

Tying the issue of housing with impediments to migration and economic activity, the analysis observes that rental housing is important for both horizontal and vertical mobility as it allows people to access suitable housing without actually having to buy it.



Lack of mobility also hinders the overall development of a city. It affects household welfare, if unemployed workers cannot easily relocate for their job search.



Rental housing is important for both horizontal and vertical mobility

Personal Experience

Since 2009, when I started my studies in the field of architecture until this day, I have changed and moved across cities in search of better opportunities or higher education.

To write this thesis, I began to recall all good and bad experiences of housing in these years. The total number of houses I lived or moved was quite a big surprise to me as well, i.e. 18 houses in 10 years. The average comes down to approximately 6 months per house. Although there have been instances where I had to move out or change even earlier.

There have been several reasons of why I had to move in – out so often, as every city/ place had its own complexity. However its very interesting to note, no matter which city or country it is- rental housing shortage is no news. Also, there are some common issues listed here:

1. Its very hard to navigate in a new city with no clear system of house hunting. Else there is a long waiting time to secure a place.
2. The house rent is a burden as a young individual with low budget.
3. Its often a case that the house location you can afford is far away from the place of work.
4. The owner has more power and decides to kick you out for no specific reason or just cultural biases.

With prices and rents rising rapidly across much of the world, vast numbers of people - particularly the young - are struggling to find enough money for a decent home.



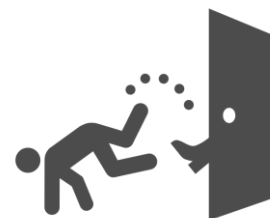
Difficult find a place



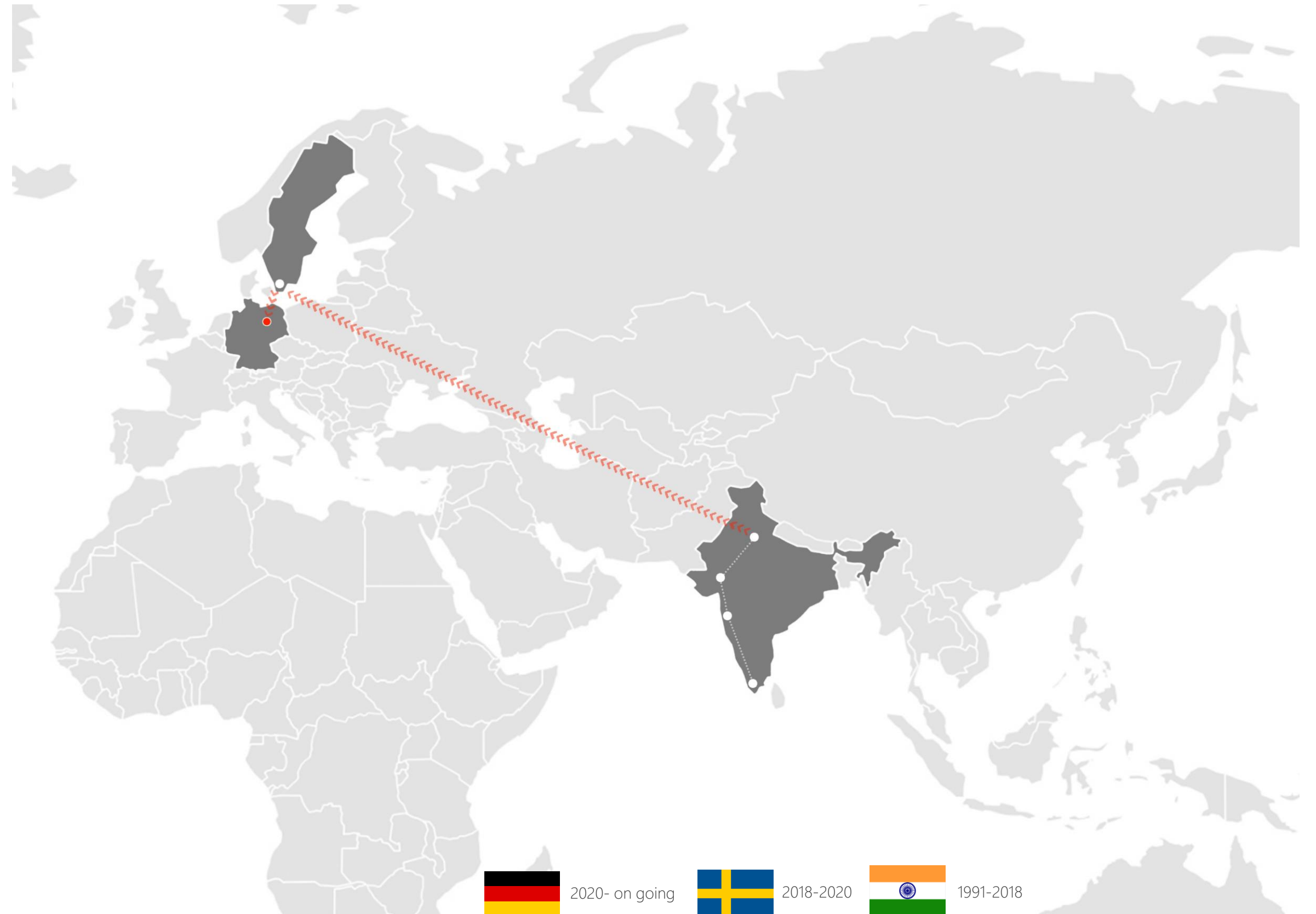
Rent is a big load



Far away from work



Owner Kick's you out



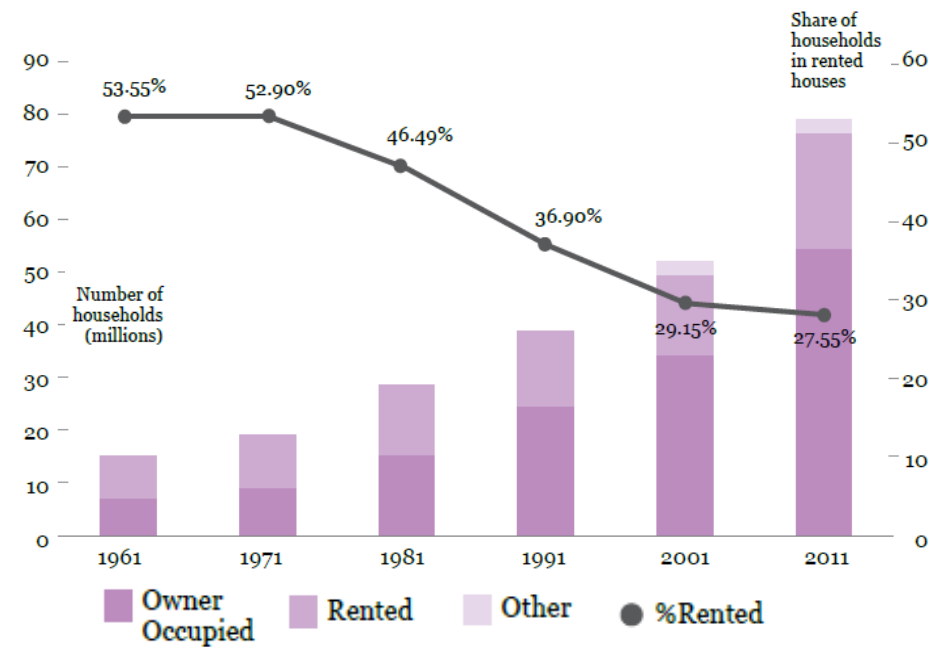
Case of India

The population of India is over 1 billion and accounts for one sixth of the entire world's population. The complexity of the housing challenge in India can be gauged from three compelling statistics. Around 18.8 million urban households face a housing shortage, while 11.1 million houses lie vacant in cities, and central government schemes have managed to construct less than 1.8 million houses. The shortage, high vacancy rate and the government's limited capacity to build enough new housing, are a consequence of multiple, interconnected issues.

The Government of India estimated that nearly 18.8 million urban households, i.e. 23% of all households in cities, faced a housing shortage in 2012. **Approximately 95% of this shortage was among the Economically Weaker Sections (EWS) and Lower-Income Groups (LIG).** This scarcity has resulted in unaffordable housing in most Indian cities.

While India is in the middle of a "Housing for All" mission, which aims to build 3 million houses in urban areas alone, the survey flags the cost of **over-reliance on house ownership** at the expense of other models of dwelling.

According to the survey's analysis of census figures, 12% of the total housing stock in urban India remains vacant. Mumbai has 500,000 vacant houses, followed by Delhi which has 300,000 vacant houses. Clearly, there are deep systemic problems in the rental market and addressing them is important for solving India's enormous housing challenge, the analysis pointed out.



Share of urban households living in owned vs rented houses. The graph shows the decline in rental housing in Indian cities has been steadily declining from 54% in 1961 to 28% in 2011.



Housing is seen as an investment

Besides the social and cultural reasons that drive home-ownership, one of the key economic reasons for buying a house is the potential for increase in the value of the asset.



A socio-economic divide

As the government policies favour the home-ownership model. This results into a major imbalance in wealth distribution in the society. The rich becomes richer and poor, poorer.

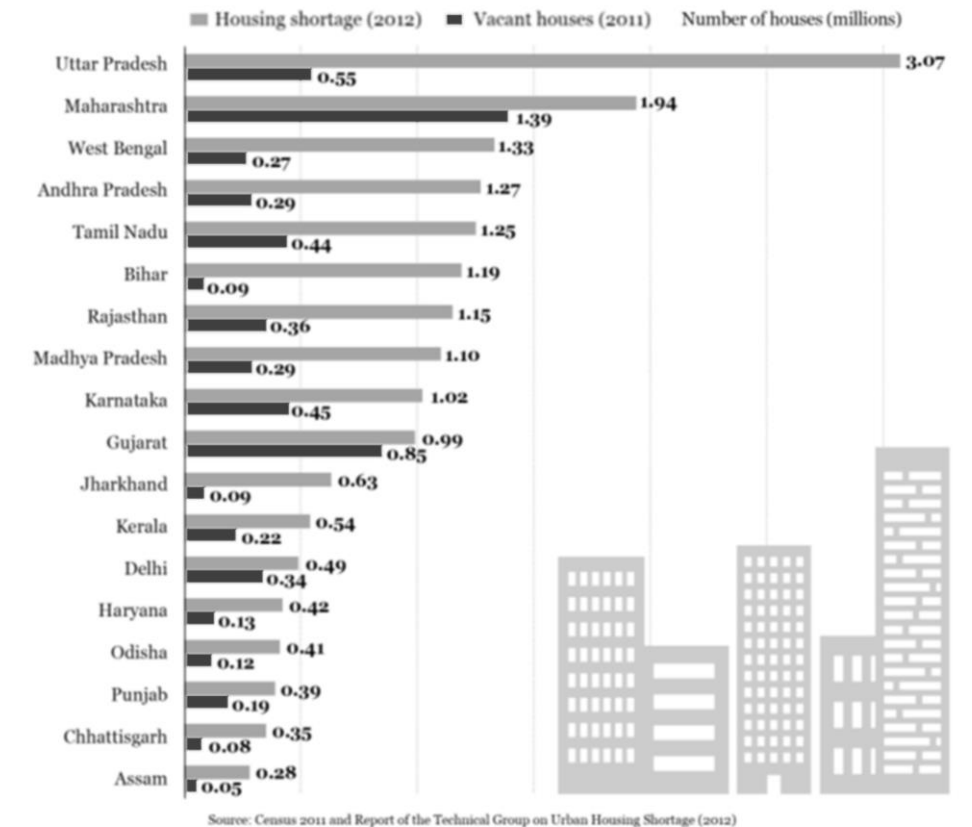
Today, a mere 28% of India's city dwellers live in a rented house, which is a steep decline from the scenario in 1961 when a majority of them (54%) used to live in a rented house instead of owning one, according to a longitudinal analysis of India's housing pattern undertaken by the Economic Survey 2017-18.

Rental housing has received little attention in Indian housing policy. Government efforts have continued to focus almost entirely on home-ownership. A combination of policy neglect and market distortions created by Rent Control Acts (RCAs) have pushed the rental market into decline and informality. Data from the Census of India shows a sharp drop in the share of urban rental housing from 54% in 1961 to 28% in 2011.

Many countries have prioritised home-ownership under the assumption that it confers greater social benefits. Thus it has been encouraged in various countries through a mix of subsidies and tax breaks.

The statistics on the right shows the Urban house shortage vs houses vacant across states in India. Housing is unaffordable in metropolitan centres because the construction of new homes has not kept up with demand.

After the sub-prime loan crisis of the United States and the perceived failure of the government's attempts to provide affordable ownership housing, **the nation-wide attention has started to shift towards rentals.**



Source: Census 2011 and Report of the Technical Group on Urban Housing Shortage (2012)



Single person- multiple houses

real estate development has been a tool of black money circulation in the country.



Vacant ghost townships

While reliance on renting as a practice has declined, there has been a dramatic rise in the number of houses lying vacant in cities across the country.

Case of Sweden

The Million Project

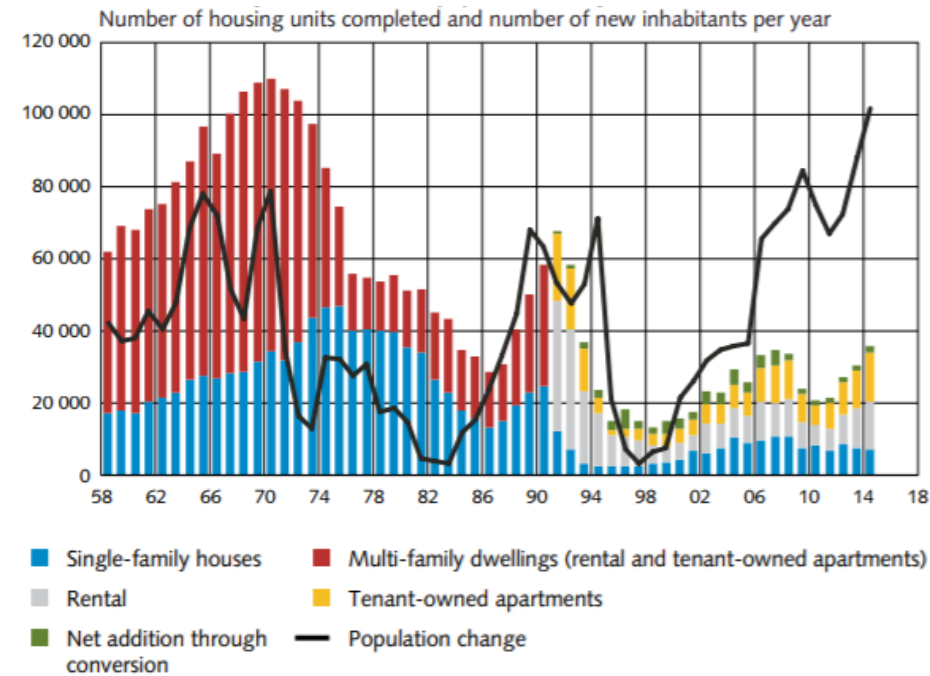
It was initiated in 1965 to provide affordable housing. 1.4 million housing units were built (Bengtsson, 2006) (Figure 1). The housing problem of Sweden was solved for the time being. Between 1975 and 1991, rental housing was subsidised and private investment in rental housing was welcomed. Rent control was also there (Nedavaska, 2011). The 1985-89 Real Estate Bubble in Sweden and the Recession in Sweden. In 1985, there was huge credit expansion due to the financial deregulation and liberalization of the country. The credit expansion led to increased asset prices. The bubble burst soon enough, leading to mass bankruptcy, damaging the real sector of the economy.

The Recession changed policies

The experience of the recession had changed opinions regarding the housing market. **Subsidies that benefitted public housing companies were gradually abandoned (since they were perceived to have resulted in over-production) resulting in increase of cost of properties along with rent in the long run.**

The Swedish housing market operates under some of the world's most pro-tenant rent control laws. Apartment rents are typically determined through once-a-year negotiations between landlords and tenant representatives, usually the Swedish Union of Tenants. Negotiations revolve around two points of emphasis: the utility value of the apartments and the changes to the cost of building management. There was a marked change in the understanding of "welfare". Gradually, welfare was understood to be a short-term goal which would pave the way for a free-market, instead of an integral part of the society.

Although "welfare" increasingly became tied to **employments benefits**, making it hard for people without a job to pay rent.



Housing Production Relative to Population Change

Note: Prior to 1991, it is possible to distinguish between different forms of occupancy in apartment buildings. Number of buildings constructed between 1940 and 2009. The peak between 1965 to 75 is due to the Million Project. The decrease after 1991 signifies the removal of tax subsidies. Source: Statistics Sweden and the Riksbank



A welfare State

Sweden's attempt to make affordable housing available were undertaken in 1903, in the forms of loans and rent subsidies.



Million Project

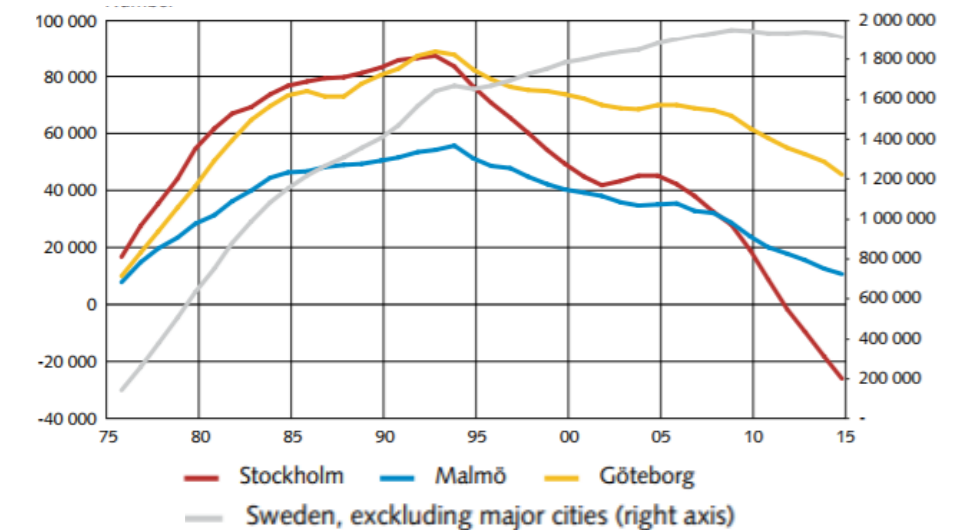
1.4 million affordable housing units were built from 1965 onwards. The housing problem was solved for time being.

Supply shortages

Household and population growth rates have accelerated in recent years while production has stagnated, leading to the absorption of excess supply produced during the Million Dwellings Programme of the 1960s and 1970s. The country's urban region, especially Stockholm and increasingly Malmö, now face a cumulative deficit of beds relative to population (see right graph). Stockholm's population increased by 1% in 2016. Also a large portion of immigrants who entered Sweden in 2016- settled in Sweden's three largest cities. Moreover, there is a **fundamental mismatch between where much of supply is located and where the demand is concentrating.** Much of the public housing stock is in small towns with high vacancies, while the country continues to urbanize rapidly with limited new production in larger cities.

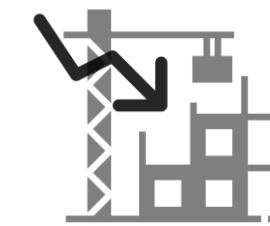
The housing bubble in the late eighties proves the fallacy of uncontrolled real estate markets. Sweden's experience in mass building by the state proved that it can eliminate the problem of homelessness to a large extent. However, **uncontrolled state subsidy for luxury housing can give rise to a housing bubble** (an allegation for the recession of 1991). Finally, in Sweden we see that Welfare can function in two ways: the first, a more socialist way, where all the housing is subsidised and regulated by the state, which if not managed properly, may lead to housing bubble. The second way is that a secondary market is run by the state where it provides for the poorest of the poor. The second way fails to eliminate the segregation in the society; however, it manages to provide for the basic needs of most.

Thus, renewal in the rental policies is much needed in the case of Sweden to bring about the reform in housing market.



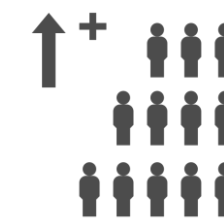
Cumulative deficit and surplus of beds

Note: The number of beds is based on the assumption of how many people live in the different sized homes. An apartment is assumed to contain 1-3 people, while a dedicated house is assumed to contain 1-5 people. Source: Statistics Sweden and the Riksbank. Emanuelsson, "Supply of housing in Sweden."



Decline in New Construction

With a lack of new construction since the 1990s, the Swedish housing market is facing a severe housing shortage.



Population Influx

In EU nations, Sweden has been among the most welcoming to asylum seekers and skilled migrant workers which created a sudden rise in overall population of the country.

Case of Germany

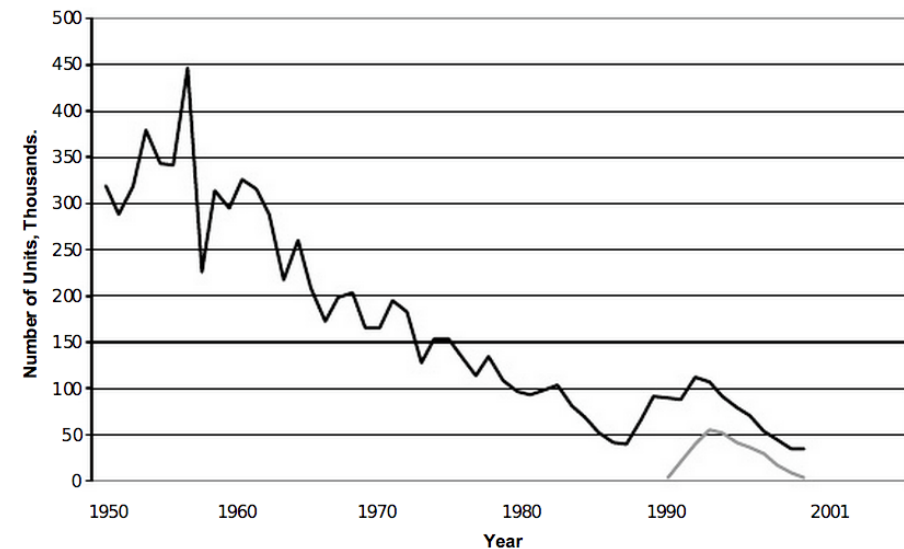
Housing policy in Germany is of great interest to economists and policymakers for two main reasons. The first one is that Germany has a larger share of rental accommodation than homeownership. The second one is that the German housing market is almost entirely local, with little connection with the global market. It also combines declining real estate price with a burgeoning economy.

After the Second World War, there was extreme shortage of housing: only 40% of the housing stock remained undamaged. To address this, in the 1950s and 60s, Germany started massive rebuilding programs, mostly in the rental sector. The German government stimulated the supply side by giving loans without interests or with low interest: private developers could access social development funds. This resulted in high-quality rental housing for the middle and lower classes. The 1960s were marked by gradual movement away from public ownership. Rental contracts were modified so that rents for new leases could be freely negotiable, following market trends. However, tenure security was not taken away. In 1982, the Increase Supply of Rental Housing Act 1982 introduced the Mietspiegel ("Rent Mirror") which is a document published by the local government specifying the comparative local rent.

The Rental System in Germany

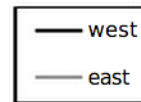
The 2001 Tenancy Reform Act (Mietrechtsreformgesetz) aimed to simplify the existing tenancy law. German law has a very expansive concept of a tenancy, where the tenant's position is very close to a property right (Fitzsimons, 2014). Some salient points are listed below (Source: Fitzsimons, 2014):

1) Succession of Contract: If the leased land is sold to a third party, then the buyer takes the place of the landlord in the rights and obligations arising from the original lease. Spouses or descendants replace



Number of units created in social Housing programme

Note: The decrease after 1991 signifies the removal of tax subsidies. Source: Federal Statistical Office of Germany



Most Germans don't buy homes, they Rent!

The country's homeownership rate ranks among the lowest in the developed world, and nearly dead last in Europe, though the Swiss rent even more.



Post war housing reforms

In the 1950s and 60s, Germany started massive rebuilding programs, mostly in the rental sector. Although similar to Sweden, Germany has also downplayed its social housing policies after the year 2000.

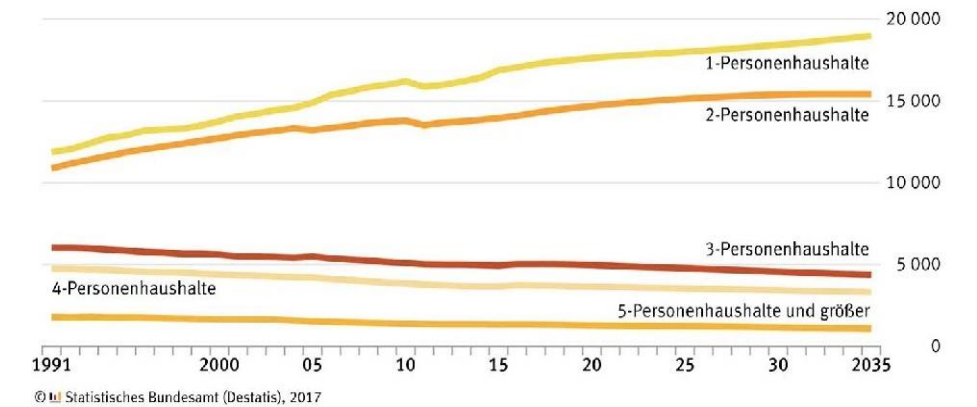
the tenant at his death (§1922 BGB i.e. The German Civil Code). We can see elements of tenure security here. The landlord can evict the tenants only when the contract period expires; or when he requires the premises for his own family's use, for an employee's use, or for the intention of changing the building considerably (§575 BGB).

2) Prohibition of Alienation: There are laws to stop the alienation of housing premises, such as the Prohibition of Misappropriation Act, where landlords would be fined if they demolished or leave dwellings derelict. Under these conditions, leasing buildings would be a rational and profitable option.

3) Freedom of entering into a contract: If the landowner has received building subsidies or grants, he might be expected by law to lease out to low-income groups. Otherwise, there is freedom to enter into a contract by free choice.

4) Rent: The rent is usually guided by the "Rent Mirror", a document published by the local authorities which enumerates the existing comparable rent. The landowner and tenant are free to fix the rent for new leases. However, the landowner cannot set the rent for more than 20% of the existing rent.

One important conclusion from the German Housing System is that fixing of limit of rent is associated with wider access to housing market. A majority-rental system coupled with a regulated mortgage market and absence of securitisation market prevents housing bubbles. **Subsidised rental market could be an approach to providing affordable housing.** It is also seen that the government can enter into partnership with private players to provide affordable housing, when the private market is not totally deregulated.



Private households by Household size by 2035

From 2016 results of the budget forecast (Trend variant) in 1,000. Source: Federal Statistical Office of Germany, 2017



Strong rental system

The 2001 Tenancy Reform Act aimed to simplify the existing tenancy law. German law has a very expansive concept of a tenancy, where the tenant's position is very close to a property right (Fitzsimons, 2014).



Current Issue- single household

It is predicted based on the recent research that there is a gradual rise in single household apartments, which will soon be a major crisis.

An Upcoming Approach

As we see, many cities in Europe are currently finding solution for extreme demand of rental/ affordable housing. And this demand might change its parameters in terms of serving diverse age groups or generations. In this regard, Germany is running an innovation program- **Zukunft Bau**. This is carried out on behalf of the BMI by the Federal Institute for Building, **Urban and Spatial Research (BBSR)** in the Federal Office for Building and Spatial Planning (BBR). Apart from all other reform measures, it aims to promote **sustainable development** in the building sector as a whole. Early this year, I got the opportunity to work as an assistant researcher on the following project in association with TH-OWL, Detmold school of Architecture & Design.

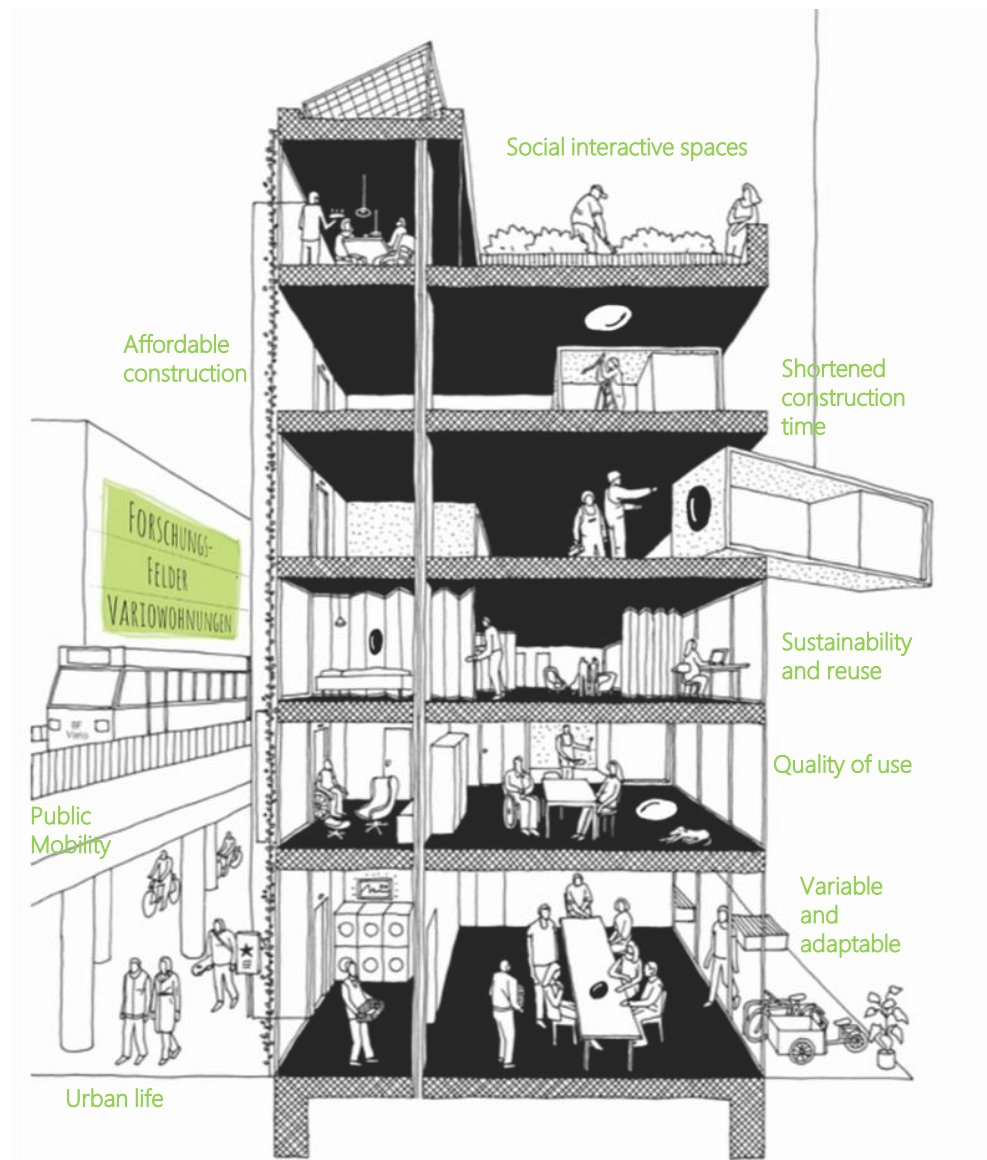
Vario Wohnungen/ Variable Apartments :

The aim of the research project is to find out prototype buildings/ projects that promote Variable living concepts. These model projects show how the creation of adaptable urban housing can work in the face of an ageing and changing society.

The research program includes 19 projects across Germany. In addition to new construction projects, there are numerous projects that implement conversions and new ideas in existing buildings.

The research is to find typologies for the apartments that show how, given the aging and changing society, the creation of adaptable, urban living space can work together.

The research funding is to provide the basis for the further development and sustainable use of vario apartments through research. Scientific support is carried out on two levels: on the one hand, each model project is scientifically accompanied by a research institution designated in the application (individual evaluation).



The illustration is translated in English and can be found more in details under the Drawing Reference: 03

In addition, an accompanying research team commissioned by the BBSR is performing a cross-project evaluation of all model projects. It compares the projects with each other as well as with realized comparable projects and develops transferable recommendations for action from the results of the overarching research questions.

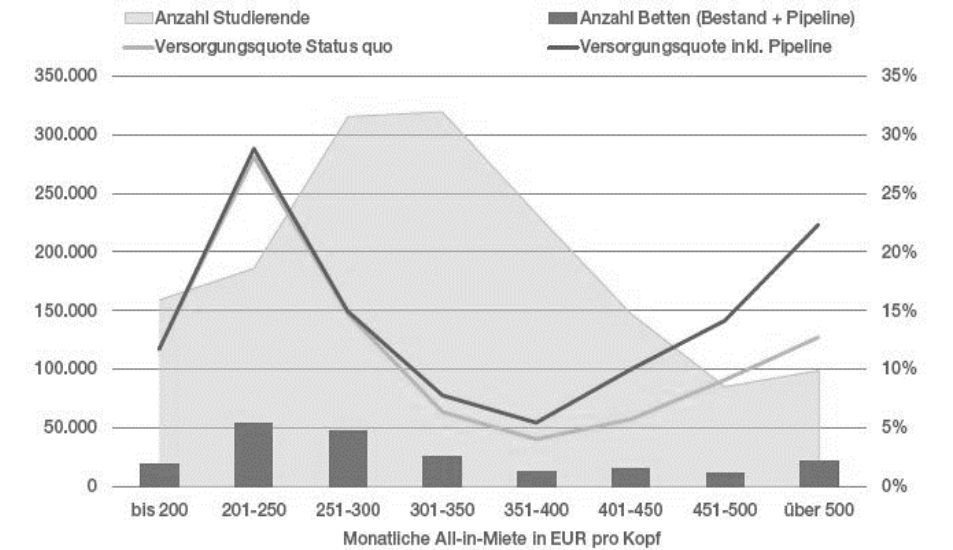
Questions from the funding programme and their ability to implement them in practice are to be answered: **is it possible to produce high-quality, attractive and long-term usable housing with a tight budget and a minimized demand for space?** Can it be used to generate economically viable concepts from the client's point of view? The results of the funded research will be freely used by anyone.

Student Living: Respecting Legacy, Building for the Future

From the initial research, it was concluded that the student housing is one of the most critical aspect of the Vario apartment concept. Providing affordable housing for student was realised to be an urgent task in Germany- that has a legacy of being the most student friendly country. Germany continues to be a top choice for international and domestic students, with high-quality education and low fees. Meanwhile, the tense housing market puts pressure on students in need of accommodation during studies and beyond. This research project explores the current reality and future opportunities for student living in German university cities.

Major aspects of evaluating a model project:

- Site & Context of the Building
- Fast track construction methods
- Low Energy consumption
- Affordability as design measures
- Adaptability Factors
- Spatial & social qualities



Supply-Demand Ratio for Student Housing

Undersupply is and remains the greatest in the middle price segment. Source: Federal Statistical Office of Germany.

The Model Projects

The research programme includes 18 projects from all over the Federal Republic. In addition to new construction projects, there are numerous projects that implement conversions and new ideas in the existing building.



International Benchmarking

My role as an Intern assistant in this research was to find the best practices in student housing development across the globe. The intention is to provide a broader perspective to all the stake holders involved in resolving & improving the student living conditions in Germany. In this regard, firstly the university campuses with high student housing demands were spotted across many countries (with major focus on EU/ EEA nations). **About 10 countries including US and Japan were examined and it was interesting to see how they treat student housing in the overall development plans for the university.** In total 30 projects were found as highly innovative approach of shared accommodations. Then, based on the preliminary analysis and several internal discussions a set of 12 projects were shortlisted. These projects were found to be contextually relevant and aligned to Vario parameters. Later, the architects or housing agencies were contacted to collect the precise information and design details.

Some of key aspects considered while evaluating these projects are divided into four categories. The questions raised here are- How we live, build, collaborate and finance housing; the answers to which are explained as below:

- 1. New Model of living:** Micro-living, co- housing, communal living, or intergenerational living.
- 2. Alternative construction & Design:** Adaptive reuse, Flexible design, Time involved in construction, pre-fabrication, or Low energy consumptions.
- 3. Re-imagine communities:** Bridging the social-cultural gaps in the neighbourhood, mixed- use hybrid, or participatory design approaches.
- 4. New notions of Affordability:** Purpose built rentals, Non-profit housing cooperatives, Brownfield transformation, or Community land trusts.

This was then used as an evaluation tool to draw parallels with the 19 model-Vario projects across Germany.



Béton House- Park Hill
Sheffield , UK



Somerville College Housing
Oxford, UK



Aurora
TU e- student housing



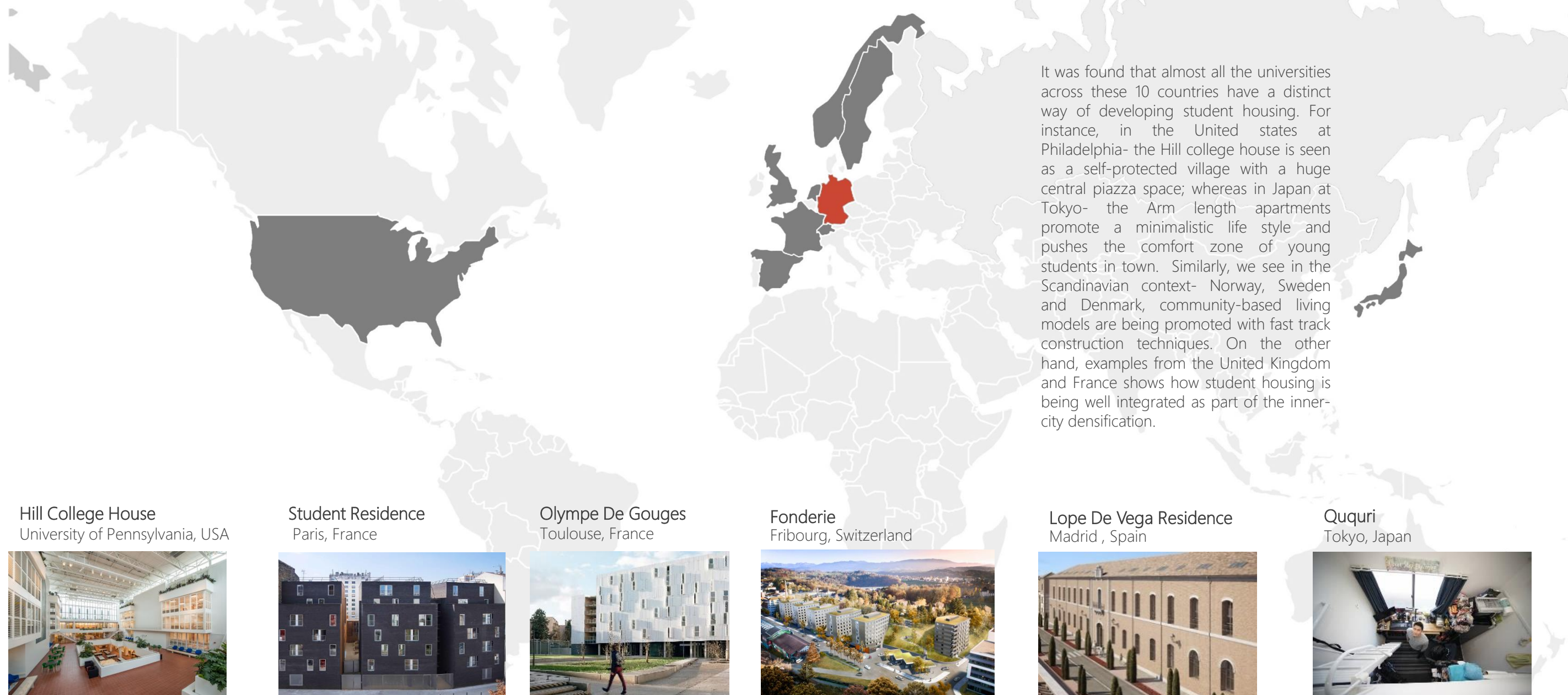
CPH Village
København, Denmark



Grønneviksøren Student Apartments
Bergen, Norway

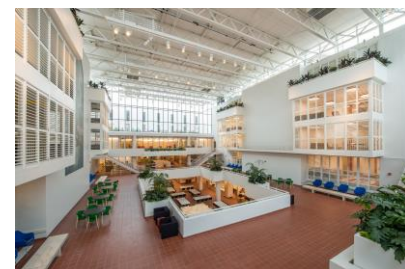


HSB Living Lab
Göteborg, Sweden



It was found that almost all the universities across these 10 countries have a distinct way of developing student housing. For instance, in the United states at Philadelphia- the Hill college house is seen as a self-protected village with a huge central piazza space; whereas in Japan at Tokyo- the Arm length apartments promote a minimalistic life style and pushes the comfort zone of young students in town. Similarly, we see in the Scandinavian context- Norway, Sweden and Denmark, community-based living models are being promoted with fast track construction techniques. On the other hand, examples from the United Kingdom and France shows how student housing is being well integrated as part of the inner-city densification.

Hill College House
University of Pennsylvania, USA



Student Residence
Paris, France



Olympe De Gouges
Toulouse, France



Fonderie
Fribourg, Switzerland



Lope De Vega Residence
Madrid , Spain



Ququri
Tokyo, Japan



Signals of CHANGE!

Based on all the research and especially during the current times of lockdown; when the world is fighting a pandemic. It was all over more important to understand the new challenges that are or will come up in the housing development sector. Availability and affordability of decent housing has become an important economic and social concern across many mega cities around the globe. We need to also observe the changing patterns in the society and set the stage for a new vision of housing innovation, and demand that we reconsider how we live, build, and finance dwellings for people in our city. This framework ensures that a broad range of "signals of change" are considered when looking towards future. [Ref:

Adding Value

With an increasing emphasis on wellness, residents will expect their homes to facilitate better physical, social and emotional health. Also there is a high demand to improve the welfare impact of housing policies and regulations.

Social Integration

Building units will need to be increasingly adaptable in order to meet the needs of older and more diverse households. The sharing economy will continue to blur the line between public and private space. Residents in apartments will expect to be more integrated into the community as a whole, with spaces that can have multiple uses and be shared for neighbourhood needs.

Greener Technologies

Technological disruption will shape the way people shop and get around in cities. Drone delivery will become ubiquitous. The rideshare industry will continue to thrive. This will decrease reliance on personal vehicles, de-prioritizing parking needs and leaving millions of square feet of parking space empty.



Re-evaluating Values

homes to facilitate better physical, social and emotional health.



Diversity is essential

Intergenerational and cultural diversity have to be attained for social sustainability



Clean & Green Industries

Innovations such as drone delivery, rideshare etc will change the way we use space.

Environmental Impacts

Climate change will have significant impacts on the built environment, health and energy. Rising global temperatures will impact the frequency and severity of extreme weather events; buildings will be increasingly susceptible to storm damage and flooding. Energy demand will be greater, and brownouts and blackouts will occur more often. We need to plan accordingly.

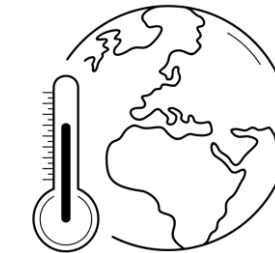
Economical

How people work will change the way people live and how they access housing. The "gig economy" (freelance and contract work) and that number will only increase. This will change how, when and where people expect to work.

Developers will need to consider how innovative retail models can be best integrated into new builds.

Policies and Politicians

Political uncertainty & division will be the environment in which developers must find support for their projects. Rising interest rates and falling house prices will lead to a pullback in the pace of consumer spending. Global trade war fears will continue to persist. The rise of populist leaders in many countries across the globe will increase political and social discord.



Climate change is Real

Innovations such as drone delivery, rideshare etc will change the way we use space.



Gig Economy

Big change in how, when and where people expect to work. Less resources- more efficient.



Political reforms

Global trade war fears will continue to persist. Local Housing solutions have to be set up for welfare of all.

Putting Together-the Housing Puzzle

In today's urban centres, housing has become a complex problem with multiple, and often uncoordinated interest groups involved in its management, development and profit. It has become increasingly clear to urban planners and city administrators that well-designed cities need to provide for a variety of flexible housing options for their inhabitants.

In addition to key roles played by urban planners and legislators, real estate developers and financial institutions in housing development and community planning, there is a place for community voice to add much-needed value in balancing community goals with profits and risk. Engaging a diversity of stakeholders, end users and community members in the consultation process and creating a stronger systems approach to planning and development can lead to innovative, community-oriented and potentially more affordable and sustainable housing strategies.

We now more clearly realize that social segregation, commuter travel, and economic marginalization can create undesirable urban environments.

The provision of the essential amenities and social supports including places for education, culture, community; access to food and health services; and efficient and accessible transportation, are all essential to supporting thriving and **sustainable urban communities**.

Creating options for reducing commuting times by providing for ample and affordable housing near commercial and business districts, supporting and promoting remote working options, and providing social supports such as childcare, are goals for any present-day community and are central to why urban cores are most desired as **places to live, work and play**.

As the value of homes in the city rise sharply and **available rental units** are limited in space, it has become increasingly difficult for families to **afford urban living**. As younger or larger families retreat to the suburbs, city centres are starting to see a shift in demographics, as only singles or double-wage earning couples with few or no children can afford to live in the city due to costly real estate creating communities that are polarized by social and economic status.

As urban demographics change, so does the notion of the single-family home. We must look for new ways of re-using existing housing stock, conceive of new models of ownerships, re-design homes to house multiple families or individuals and create new forms of community that truly reflect the current population. This is especially important and urgent in cities where the rising housing prices and low rental vacancy rates have led to the partitioning of homes into multi-unit dwelling to cater to the growing demand, and often at the sake of fire and life safety. Instead, housing, through policy and design, should anticipate demographic shifts and adapt to current and future population conditions.

It is important to understand all these dynamics and complexities of bring the much needed- meaningful changes in the housing development. So, here is an illustration that tries to simplify the intentions & goals that shall be kept in mind as an urban designer-architects, while proposing housing development anywhere across the globe.



The big housing puzzle- Putting the pieces together.
(An illustration to show the complexity and set up future goals for housing development.)

CHAPTER 02

City of Berlin

The reason of exploring the case of Berlin is also because I was currently living and working in the city. Based on the general survey while searching a rental contract in the city- I came across that affordability crisis is rising rapidly in Berlin as well.

This chapter explains the various strategies of densification that have historically taken place in Berlin. Then understanding how the city is currently growing and what is the senate planning to do in order to resolve the housing demands.



Reference: schwarzplan_bestand_2010_und_plw_innere_stadt_5000pix

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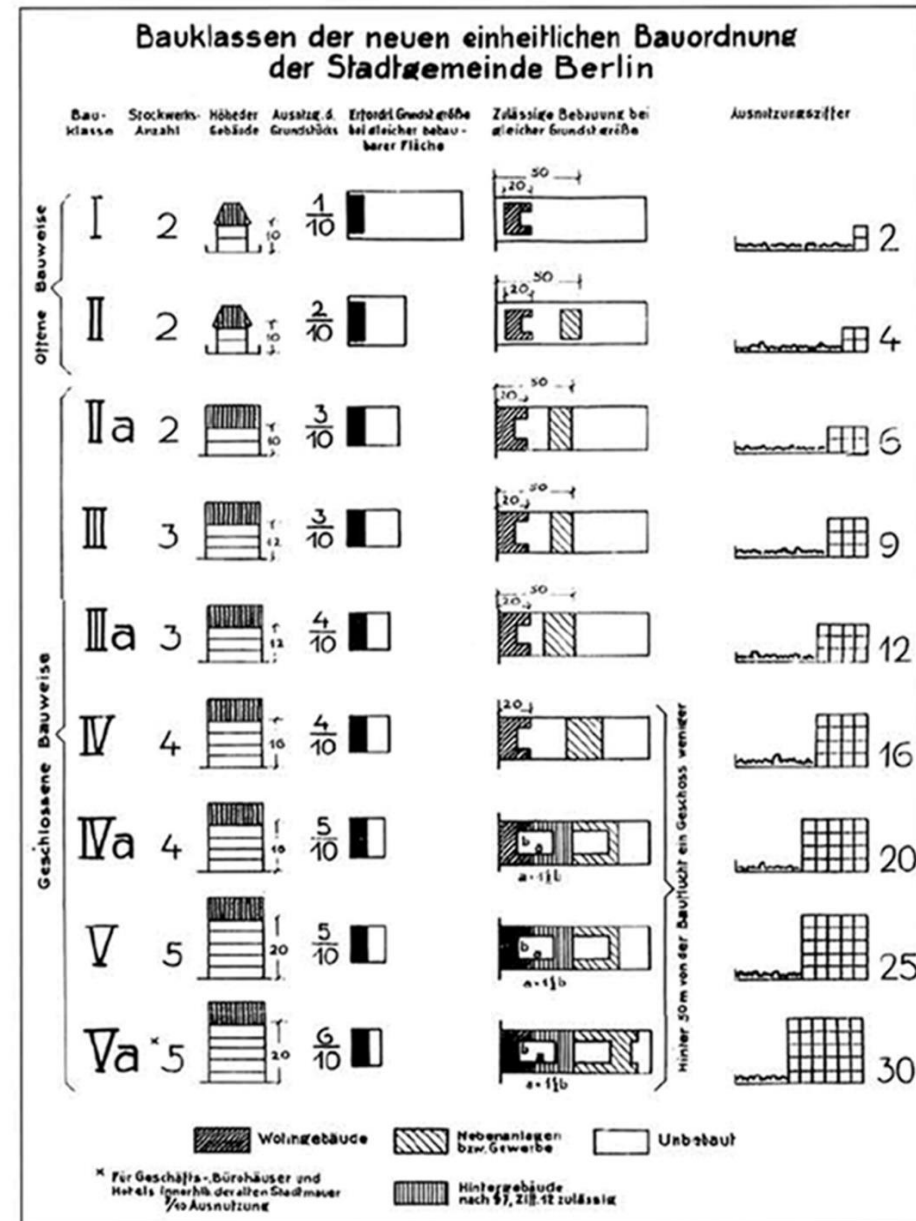
Development and Densification

Development Plan 1862:

As early as the Industrial Revolution in the 1830s/40s, Berlin was transformed from a residential and administrative city into an industrial metropolis. This was due in part to the rapidly expanding rail network – from 185 km in 1840, to 1,424 km in 1847.

This drove the settlement and founding of large companies in heavy industry which indeed attracted a huge population to migrate to Berlin. This sudden growth was taken care of by densification of the existing city. As you can see in the diagram on the right which describes how the same size of the plot was used for both horizontal and vertical densification.

Later Berlin developed into Germany's largest industrial centre at the beginning of the 20th century. This upswing was also reflected in the number of jobs. In 1936, the city had 574,000 employees in the manufacturing sector – more than in Württemberg, Baden or Thuringia. In 1911 a special purpose association was founded whose first task was to coordinate civil engineering and development plans.



Prenzlauer Berg: Prenzlauer Allee, Immanuel Church and surroundings. Before and after 1900 5-storey Rental apartment building were built along the streets as a closed construction. The side wings and rear buildings adjoin the inside of the block at the same height; in some cases they delimit very narrow rear courtyards. Inside the blocks there are also commercial buildings, which can be distinguished from the rental apartment buildings here in the picture by the larger windows. (Aerial photo 1991, Lands archive Berlin).



The map shows the basic structure of the district on a scale of 1: 5,000. The section of the oblique aerial photograph is shown by the lines drawn. The older Bantzen (e.g. on Heinrich-Roller-Straße) close particularly narrow inner courtyards. (Excerpt from the map of Berlin 1: 5,000. Sheet 423 B, SenBauWohn V).

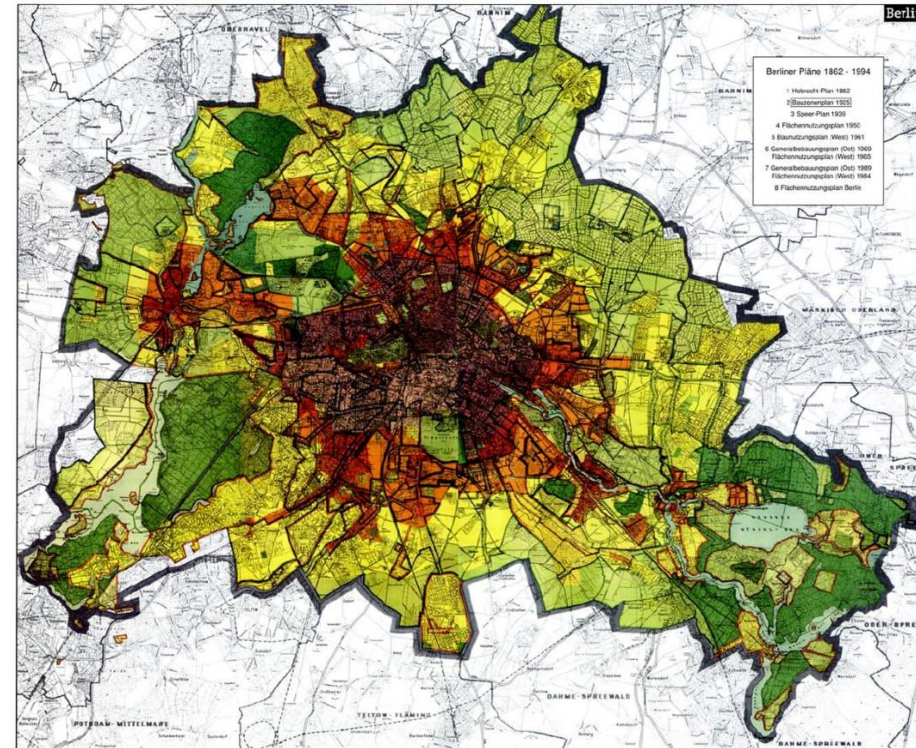


Greater Berlin

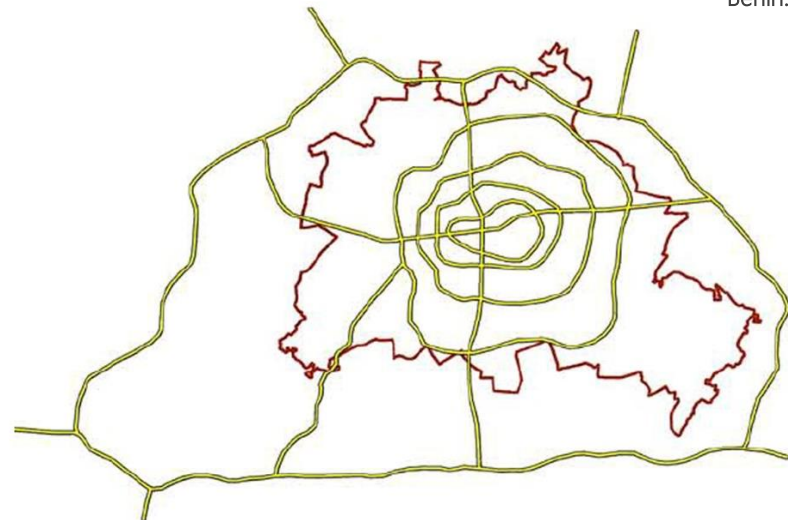
Post World War I : Development in 1920's

On the basis of the building regulations and the building zone plan of 1925, cooperative housing construction was continued in the twenties, mainly on contiguous areas on the outskirts of the city. Construction activity were shaped by the thinking of the twenties (garden city, Bauhaus, separation of functions). Local public transport is being expanded. In 1928 the Ringbahn and Stadtbahn were certified. The subway network was expanded considerably (two north-south lines in 1930) and the tram system was supplemented by bus lines. It looks after underground trains, trams and buses and combines them in a uniform tariff. In 1936 Berlin hosted the Olympic Games. A functioning metropolis is to be demonstrated to foreign visitors. In addition to the construction of the sports facilities, important traffic connections in the city are improved or new ones created. The rapid transit network (S-Bahn) receives an underground north-south connection. In this context, the street Unter den Linden will be re-profiled and the adjoining east-west axis leading to the Olympic site will be expanded. The Kurfürsten damm and other streets as well as a number of squares like Opernplatz, Lustgarten, Gendarmen market and Wilhelm platz are being redesigned. The zoo S and long-distance train station is being rebuilt in a spacious design.

Speer Plan 1939, main roads (draft Aust after Schinz 1964, p. 194). Four ring roads are planned around the city center and a motorway ring further away outside the City area. Due to the design of the axis cross, only four main feeders to the motorway ring are planned. The illustration shows the axles, the four ring roads and the motorway ring (yellow). The current boundaries of Berlin are shown for orientation (red). They illustrate the spatial dimension of Speer's plans.



Berlin: 1925

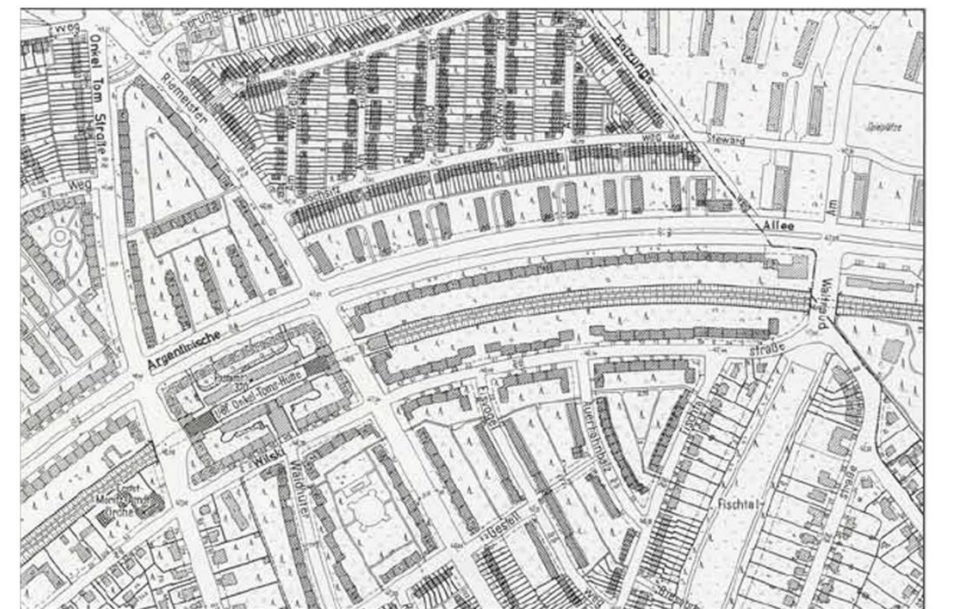


Spree Plan: 1939

Siemens City: Quellweg and Goebel straÙe. In the course of the marginal migration of industry, the Siemens company acquired extensive areas between Nonnendamm at the end of the 19th century and Spree. Since the company housing was not enough, the Siemens city housing estate was built on the Jungfernheide forest area at the end of the twenties. The aim was to conserve the trees and air & sun were to be ensured for the apartments. There were 4 storeys row housing with relatively small apartment buildings (54 m). Curved streets enhance the green effect of the trees. (Aufnahme 2002, B. Aust)



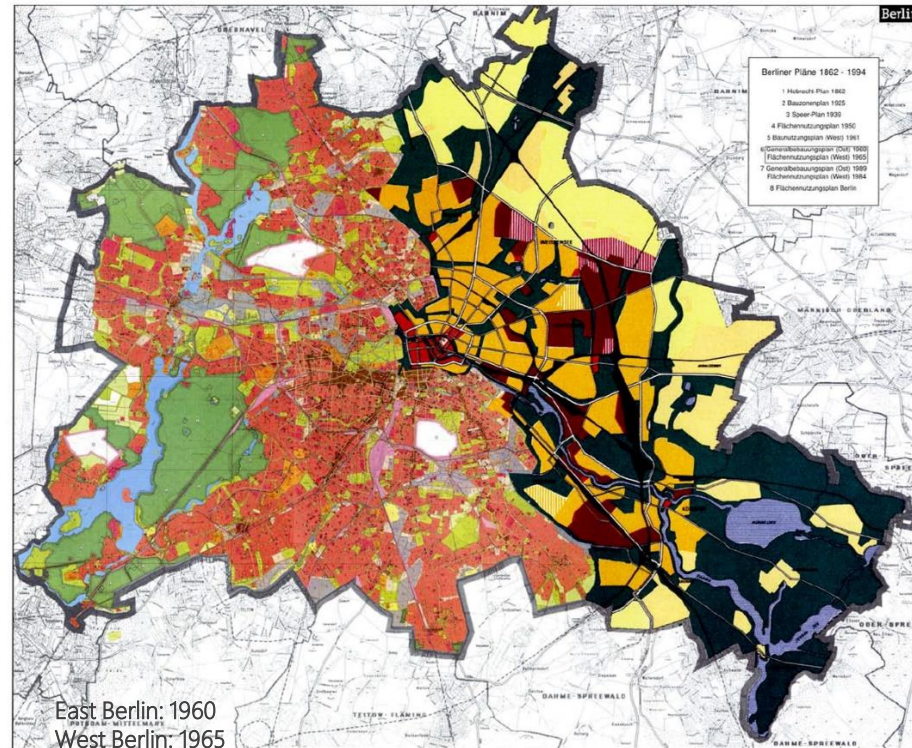
Zehlendorf: Onkel-Toms-Hütte settlement. With the building zone plan, a uniform building code applied in Berlin from 1925. As part of the socially oriented cooperative housing, exemplary settlements emerged in the twenties, including the Zehlendorf forest settlement. In between, the U-Bahn route runs in full. To the outside, there were areas with single-family terraced houses. The Onkel-Toms-Hütte underground stations were combined with rows of shops forming the supply centre. The subway connected the settlement directly with Berlin's inner city. (Excerpt from the map of Berlin 1: 4.000, Blatt 4048, Sen-BauWohn V).



East and West Berlin

Post Second World War: Development 1960's

The war brought the development progress to an abrupt end. It led to a mass relocation of production operations to West Germany, which often meant a change of company headquarters. Both Siemens and Knorr-Bremse AG, a braking system manufacturer based in Berlin moved their headquarters to Munich. As a result, the number of jobs for industrial workers in Berlin plunged to 150,000 by 1950. This trend could only be reversed with huge subsidies. By 1961, the number of jobs reached 315,000, but the Berlin Wall unfortunately brought this progress to a sudden stop – despite further increases in subsidies.



Berlin Mitte: Fischerinsel, Nikolai viertel and Alexanderplatz. The **GBP 69** pursued the concept of the "compact city". The starting point was the representative centre to be designed, whereby living in central locations of the city was also planned on the Alt-Herliner side. The Nikolai viertel, largely reconstructed in 1987 in prefabricated construction, the red town hall, the square with the television tower and Marienkirche as well as the buildings on Alexanderplatz. The extra-wide developed route of Gertraudenstrasse and Grunerstrasse runs right through the picture. 1991. Landes archiv Berlin).



Charlottenburg: City motorway and AVUS with ICC and exhibition centre. The traffic concept intended to provide an efficient road network and subways. The result of this conception is the construction of the city motorway, which here links the AVUS (top right) and other important roads via numerous connections. In the middle of the picture is the radio tower with the exhibition halls on the right and the International Congress Centre ICC, which was built in 1973-79 and connected to it for cars, on the left. Its location symbolizes the large-scale functional relocation to the centre of West Berlin. (Aerial photo 1991, Berlin State Archives)



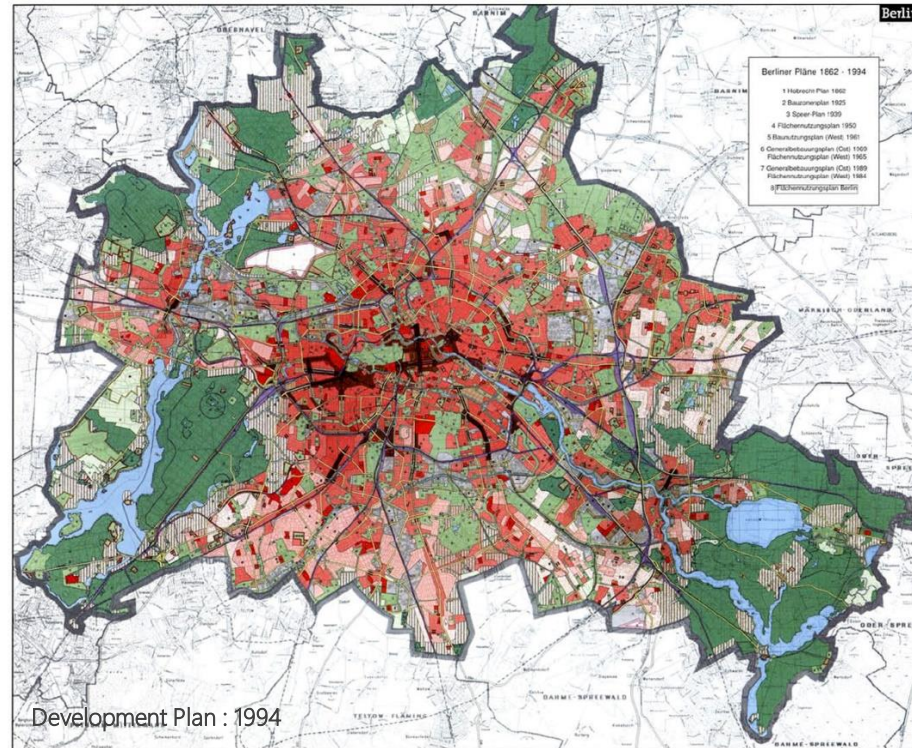
Hellersdorf: Weißenfelser Strasse and U-Bahnhof Lonis-Lewin-Strasse. On Rieselfeldem near Hellersdorf, the construction of a large housing estate with 42,000 apartments and today 110,000 inhabitants began and was not completed until after 1990. Here, mostly 5 to 6 storey buildings were erected. New for East Berlin was the developed by the U-Bahn, which leads through the Hellersdorfer Graben and formed the main axis. Improvements to the residential environment and the construction of a district centre was highly required at that time. Here in the picture the underground station Louis-Lewin-Straße and behind it the 6-storey perimeter block development on Weißenfelser Straße. (Photo 2002, B. Aust).



Reunified Berlin

The fall of the Iron Curtain (Berlin wall) in 1989 and the reunification of the two German states in 1990, marked a new beginning for development in Berlin. The politicians were faced with enormous challenges when combining two economic systems. In order to stop this large-scale emigration, politicians promised a fast process of convergence in standards of living between eastern and western parts of the city. Several instruments were implemented in the early 1990s, especially in the housing and construction sector to enhance the standard of living and to boost private investment. To overcome the scarcity of living space resulting from GDR housing policy numerous subsidies were introduced to stimulate construction of new homes and refurbishment of the existing housing stock. During the years from 1993 to 1996 construction kept booming while prices started to fall in 1995. This phase is characterized by overshooting construction.

Potsdamer Platz and the surrounding area. The area around Potsdamer Platz belongs to the city centre of the city, the land use plan here provides mixed construction areas with high usage density (MI). Retail concentrations and to the north of it to a larger extent special building areas for main stadium functions (H). In the picture in front the new Potsdamer Straße, which arches into Leipziger Straße. It delimits the State Library, which was partly built in 1967-76 along the route of the old Potsdamer Strasse. Example of a location for West Berlin based on the whole of Berlin. On the left the Sony Center with the "Fuji-Yama roof", on the right next to it the Daimler-Chrysler-Center with the integrated remainder of the old Potsdamer Street. (Lufiaufnahme 2001. P4. Pariner for Berlin)



Pankow: Karow-Nord, Ballonplatz. The concept of inner-city development and urban renewal has been increasingly practiced since the mid-1990s. Larger areas are only made available to a limited extent for residential construction, especially in the north-east. The largest project is Karow-Nord and numerous green and open spaces illustrate the move away from the large-scale line-up of East Berlin Gropwolz settlements and the residential buildings in the balloon field. (Aufnahme 2002, B. Aust).



Charlottenburg: Paul-Herrz-Siedlung. Bernhard-Lichtenberg-Strasse. The maximum of the economical ongoing with the surface is continued. Inner-city reserves were to be exhausted and uses were redistributed in order to be able to preserve open spaces. The roof in the old buildings from the imperial era creates new floor. In the Paul-Hertz-Siedlung, the four-storey residential areas from the 1960s were renovated from 1995-97 and an additional upper storey was added. Here in the picture such a building on Bernhard-Lichtenberg-Straße. (Photo 2002. B. Aust).



Berlin Today

Berlin is growing with great momentum. 2010 and 2011 had shown signs of new population growth in Berlin after long years of stagnation. From 2011 to 2016, Berlin grew by around 245,000 people. Since then, the population has increased annually by the size of a medium-sized town. According to the **current forecast, the population by 2030 will increase by 220,000 persons to be 4 million Berliners.** The ongoing influx shows—Berlin is an attractive city for many and it harbours opportunities. As the city keeps getting younger and more international, it profits tremendously from the new Berliners. They contribute a great deal: entrepreneurial spirit and plenty of new ideas. Berlin's economy also benefits since it is seeking more skilled workers. **Representing openness, diversity and freedom, the city attracts more creative minds.** They drive innovation and progress with bold new business ideas. This makes the city attractive for new investments and results in gains and benefits for Berlin's job market and urban society.

Berlin's growth is an opportunity and a challenge in one. In recent years, people from different countries have moved to Berlin - for studies, work or to experience its diverse cultural lifestyle. In addition, the number of refugees/ displaced people continues to come, which indeed adds another layer of urban complexities to the city's development. Housing has become a central topic of discussion in the city, all over again. Also the integration of these new residents- is an extremely important task.

For the Senate, growth is a major design task. The city is growing bigger and denser. This is associated with numerous challenges. Residential units, child care spaces, schools and many other things are needed. Police, fire brigades, hospitals, the Berliner traffic experts, cultural organisations and sports facilities are adjusting to more Berliners. **The Senate is expanding and redesigning the urban infrastructure.**



Population growth in Berlin (2011-2016)
+ 248,828

Photo credits: Jonas Tebbe _ Unsplash

Growth versus Demands

Berlin is Germany's start-up leader

According to the German start-up monitor 2017 of the Bundesverband Deutsche Start-ups e.v., Berlin is Germany's leading start-up hot spot. Young tech companies and start-ups find good founding conditions and growth opportunities in Berlin. The competitive capital market and well-trained employees in the digital field make the capital city attractive. **Companies from across Germany are drawn to Berlin to collaborate with local start-ups.**

Germany's largest hubs for finance technology and the Internet of things (IoT) are developing here. The effect of networking between start-ups, science, SME's and large enterprises radiates far beyond Berlin, attracting talents and players from all over the world. New business areas are being created through digitisation. They are of crucial importance for future production structures in particular-keywords industry 4.0 Berlin's Industry.

Providing affordable housing is a particularly urgent task: More Social Housing construction. In residential development projects that require a development plan, social housing has to account for 30 percent of the living space. These and numerous other measures ensure that Berlin will remain an affordable city. Aim is to attract and retain talent by **innovating rental housing and building mixed use communities.**

The most important measure of all: the Senate is dedicated to the construction of more housing in Berlin. 6000 residential units are to be built by the SIZ urban residential development companies each year, half of them as Social Housing. Berlin is increasing its residential development subsidisation, with a total of 5000 subsidised residential units annually over the medium term.

More information can be found under Appendix 01 on page 173-74.



Photo credits: Author

The World is Watching.
How Will Berlin **House Talent?**

The Rent Cap- 2020

It's an exciting time to be a Berliner, with the city about to embark on the most radical experiment in housing policy in the world. **Residential rent prices are to be frozen at their current level for five years, and may even be reduced.** Landlords could face fines of up to €500,000 if they are caught overcharging. The free market for rented property could be over. The revolution has arrived in Berlin, at least temporarily.

By employing numerous tenant protection measures, such as designating social conservation areas, utilising the right of pre-emption and its own cooperation agreement concluded with the state owned residential development companies, the Senate is also ensuring that the composition of tenants is maintained in all boroughs. Berlin's social and urban development preservation bylaws also protect the urban structure that has developed over centuries and the city's building culture heritage from destruction.

During the previous long stagnation phase, housing construction took place at a very low level. As a result, he was nowhere near able to respond to the tumultuous population that began in 2011. Initially, the growth was offset by the relatively high vacancy rate. By 2016, however, there had been a backlog of around 80,000 apartments. The consequences are evident everywhere. **Apartments have become a scarce commodity; Real estate prices and rents are rising rapidly.** Meanwhile, almost a third of all households have less than 1,300 euros a month - despite an increase in average income. The gross cold rent occupancy rate averages almost 30 percent.



Berlin city council has proposed a **five year ban on rent hikes**

Photo credits: Author

Berlin Strategy 2.0

Vision 2030

As Berlin is growing so strongly, at least 15,000 -20,000 apartments and corresponding infrastructure must be created in the city every year. The infrastructure already developed in Berlin It is imperative that sustainability be used for the densification of residential buildings. Particularly if these are in a well-integrated city location with grown neighbourhoods, excessive land use and commuter flows can be avoided.

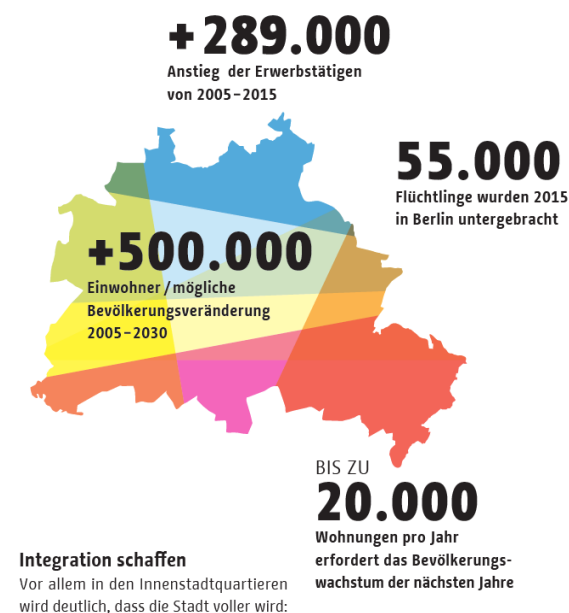
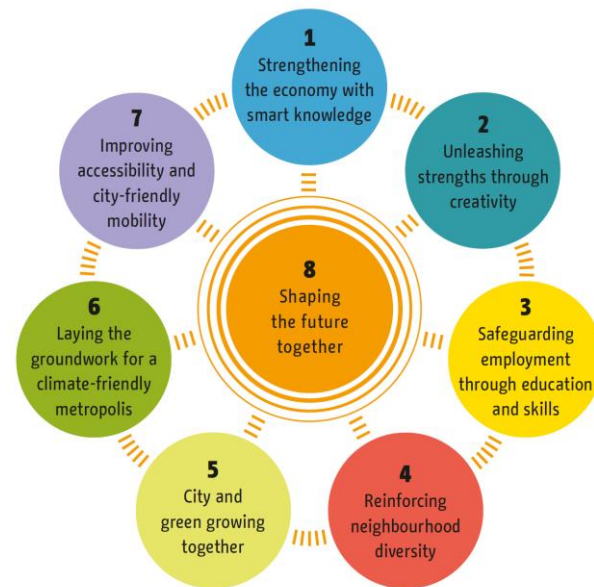
The aim is to achieve a differentiated social mix, a mix of uses and an orientation towards sustainable forms of mobility. At the same time must be able to meet current and future requirements in terms of architectural and urban development quality. A task will also be the urban integration of accommodation for refugees.

Create integration

Especially in the inner city quarters it is clear that the city is getting fuller: streets, sidewalks and bicycle paths, the public local traffic, green spaces and Places are used more intensively, social and Retail trade structures in the quarters are changing. Traditionally through Inner city quarters shaped by migrants are undergoing a change. It must be ensured, also here the conditions for Integration and an open urban society to maintain and improve.

Reinforcing neighbourhood diversity

The legendary 'Berlin mix' will provide the foundations for a strong city, which has learned to shape growth fairly, responsibly and together. Berlin is known as the city of neighbourhoods. A home for all. Its an example for an international city that sustain people from all walks of life with their unique social, multi-ethnic and multi-functional mix.



Reference: SenStadtUm_BerlinStrategie2.0 @ www.berlin.de/2030

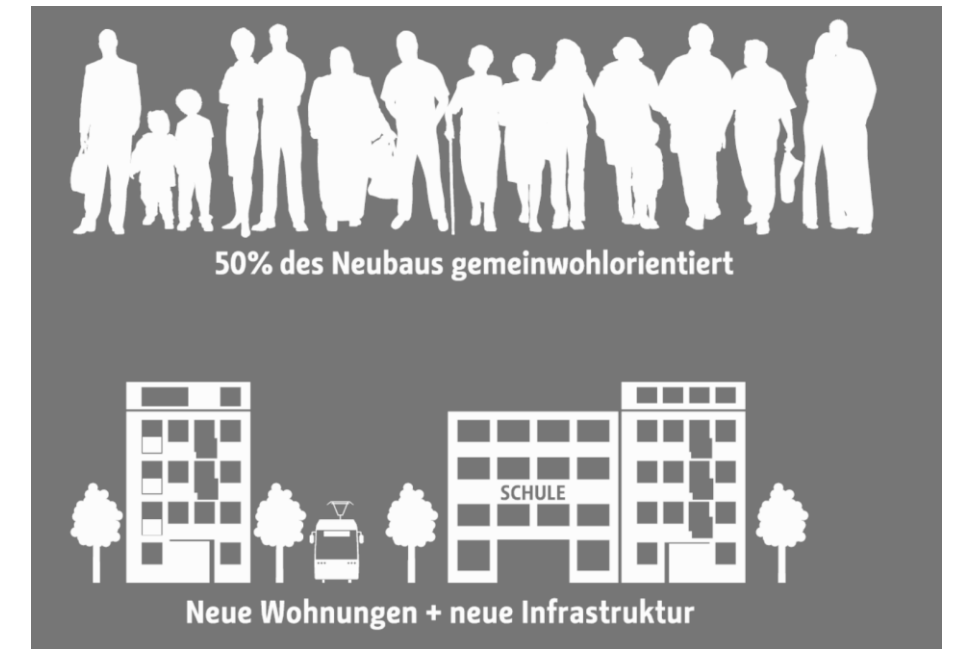
Developing the Outer City

In the course of growth, the outer city moves into the focus of attention: brownfields, former railway areas, housing estates or diffuse urban situations along the arterial roads are to be developed, condensed with a sense of proportion and qualitatively upgraded. Social and functional diversity is to be expanded, measures for climate protection and adaptation to climate change implemented and public spaces made more attractive.

Allow more city within a city

Berlin is hoping to consolidate the existing city. storey extensions by increases, roof and compaction is completed, the housing stock. Check-storey supermarket or retail warehouses or oversized traffic areas advertising to more intensive use. Berlin creates new urban qualities and identities, increasingly, in the outer city without obtaining or creating quality-negligible full freedom. In existing areas agreed with the city, such as in major centres or in the vicinity of the holding and hub of local public transport, will be deepened by further planning concepts to what extent higher structural factors densities or specific to urban environments accents such as high-rise buildings are meaningful.

More information can be found under the Appendix 02 on page number 175-76.



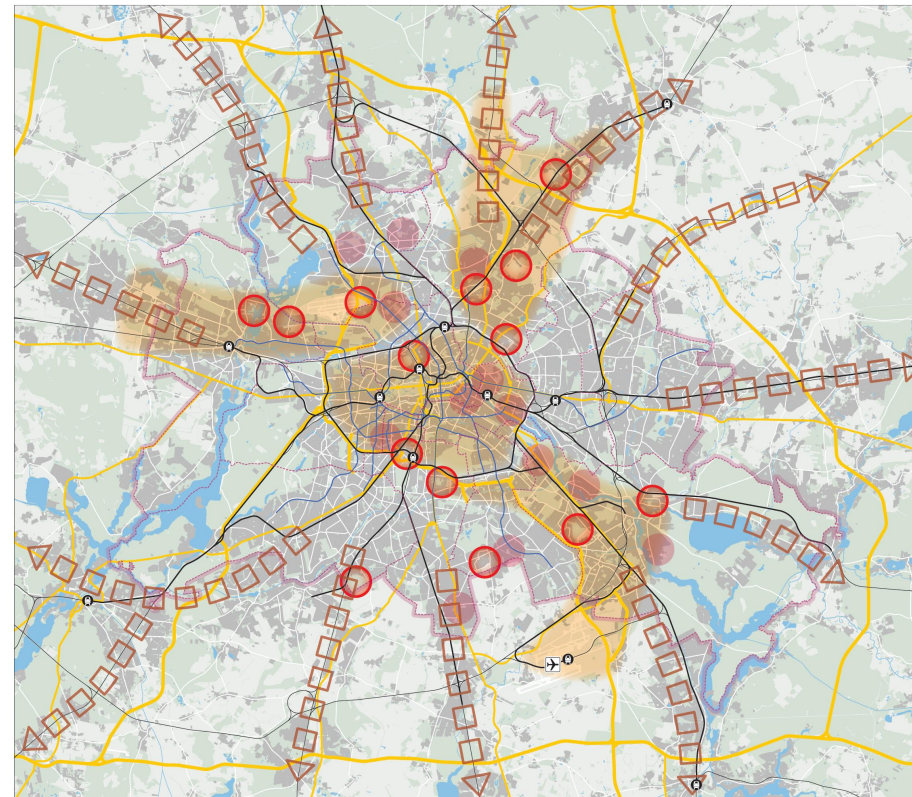
Room for Transformation

Urban Development Plan Housing 2030 (Spatial model)

This represents the priority areas for the development of residential construction in Berlin. This is divided into a structural model, which is committed to the principles of the **compact European city**. This model provides for a star-shaped settlement development oriented on the existing buildings together with the surrounding area (Fig. on the right hand).

The central aspects of the spatial model Living 2030 are :

1. Model of the European city: **social and functional mixture** in a compact settlement body, internal development before external development, but moderate City expansion.
2. Spatial development in and around Berlin to the existing settlement structure. It **forms a star along radially running railroad lines**. The states of Berlin and Brandenburg have jointly defined this settlement star as "Gestaltungsraum Siedlung" for further development.
3. Green wedges between the development axes extend on the one hand as **recreation areas**, fresh air and climate paths from the landscape area into the inner city.
4. As good a connection as possible to local public rail traffic, **limitation of motorized individual traffic**
5. Urban distribution of the new residential building with focus on **four large development areas**:
 - City centre (within the S-Bahn ring)
 - The southeast from the inner city
 - The west with large conversion sites: Subsequent use of Tegel Airport, Siemens campus, etc.
 - The northeast via Michelangelo Straße, former marshalling yard Pankow, Blankenburger south and Buch.



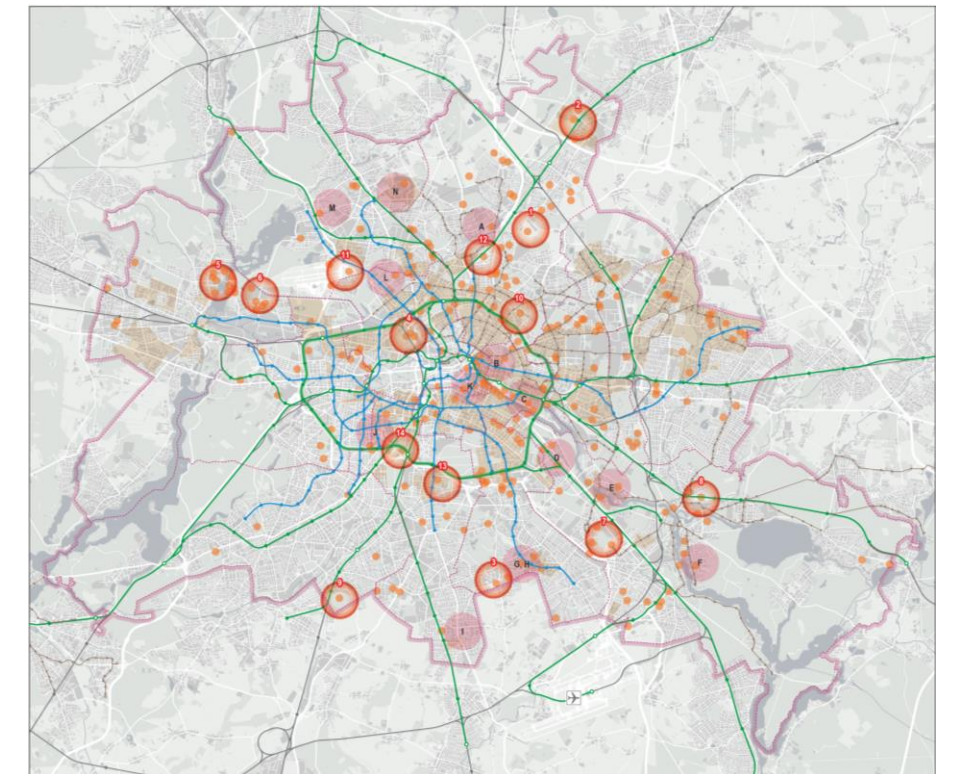
The StEP Housing 2030 represents the priority areas of new housing construction and neighbourhood-related portfolio development. Central elements are:

1. The 14 new city quarters,
2. the housing new building potentials starting from 200 housing units,
3. 30 post-war settlements, which are particularly suitable for structural and functional development,
4. Urban development areas and social conservation areas

14 new city quarters are the most important residential construction projects in the city. In principle, they belong to the category of "new housing locations from 200 apartments", but because of their importance they are presented as a separate category. The sites are largely located in the four development areas. Most of them are inner-city conversion sites that have fallen into disuse. However, a few also occupy contiguous undeveloped areas on the outskirts of the city. The 14 new city quarters comprise about 20 percent of the total new building potential. The proportion of state-owned land is high at all 14 locations.

What should happen: Lively neighbourhoods with a social and functional mix are to be created. This means integrating commercial, social and cultural uses, creating green spaces and infrastructure, and ensuring efficient public transport connections, personal identity and a close relationship with the surrounding urban area. The new and expanded offers of social infrastructure and local supply and innovative mobility concepts should include the special urban and geographical conditions.

Further Densification with equal or more importance to diversification.



Analysing the Diverse Nodes

Based on the preliminary analysis of the Urban development plans for Berlin and as mentioned previously, the overall densification is divided into four zones in the city. Firstly, it was important to analyse these zones to understand the spatial characterises of the area and identified new city quarters.

Then, based on this analyses, a set of four New city quarter were selected very thoughtfully. Each of these quarters fall into the four major zones of development. Point of interest for each location varies but revolves around the idea of social integration and housing affordability.

The intention with selecting these four quarters was to study & examine in depth the development plans for each site and see what the city is planning in order to meet the housing demands. Location 4, 12 & 13 are new proposed centres whereas C are areas for urban renewal.

4: Europa City

12: Rangier bahnhof Pankow

13: Neue Mitte Tempelhof

C: Stralauer Allee

Considering these areas as the diverse nodes in Berlin. I conducted a further research for these sites that interested me the most with a prospects of variable housing development proposal.

I will hereby explain the current condition of these sites and go briefly into the development proposals for each one of them. Also the personal experience based on the physical survey.

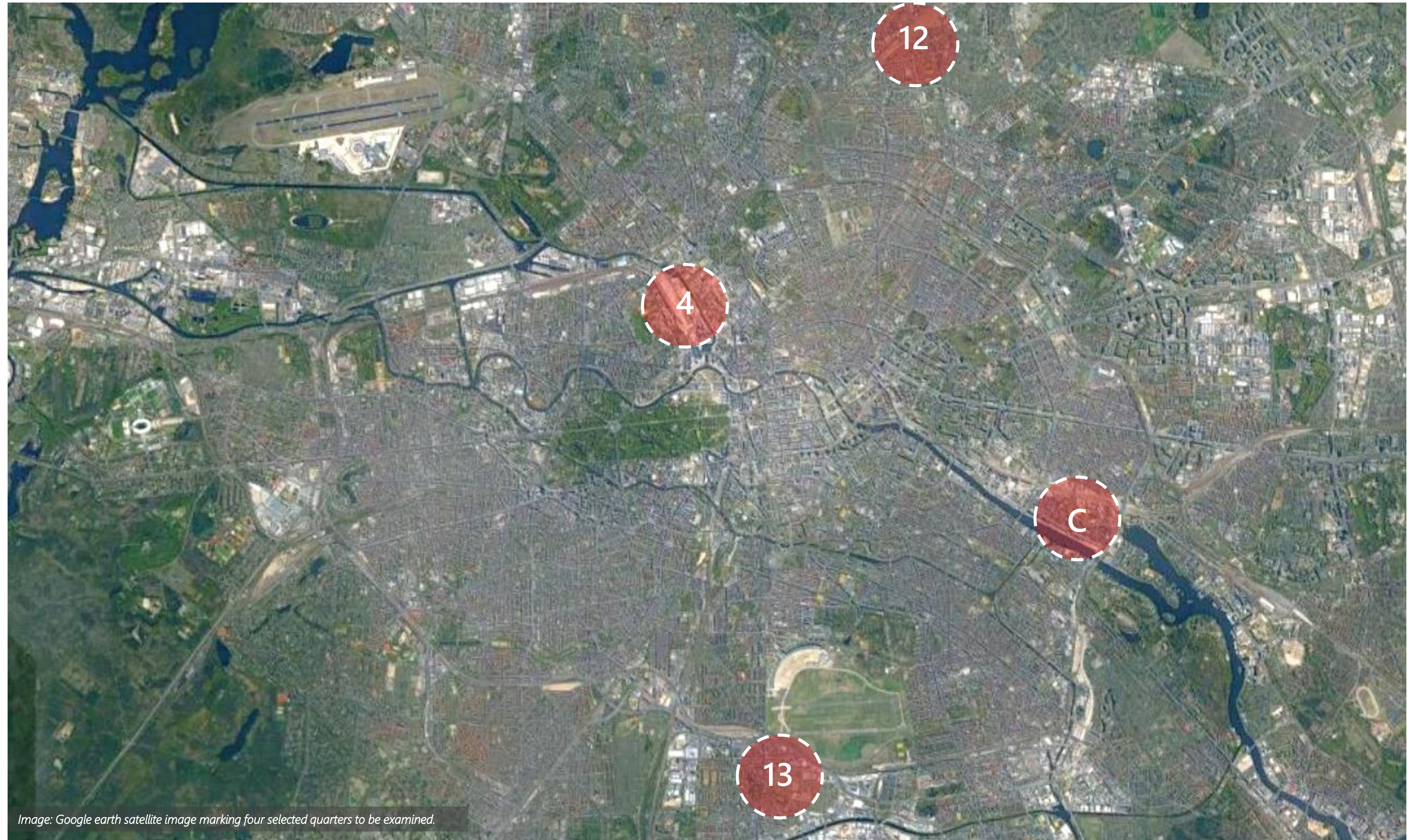


Image: Google earth satellite image marking four selected quarters to be examined.

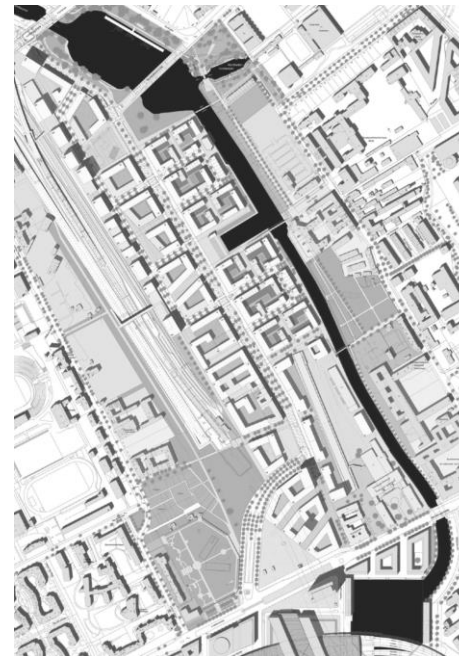
[4] Europa city

Area size: approx. 40 ha
Ownership: Mainly private
Number of residential units: About 3,000
Start of construction: 2015
Land use plan: mixed building areas
Development plan procedure: Seven development plans were established for the period 2010-2016.

Urban Development Objectives and Qualities: The area north of Berlin's central station lost its railway function after the war and functioned as an underused commercial area until the 2010s. The conversion area offered Berlin the opportunity to realise a new city quarter and to carry out an urban reorganisation. With Europacity, a highly dense inner-city quarter with mixed-use structures will be created by around 2023.

In addition to the public construction projects, i.e. the development of the quarter, a new riverside promenade, two city squares and a pedestrian bridge over the shipping canal and the railway tracks, the more than 40 private construction projects will create approx. 3,000 residential units and 360,000 sqm of office and commercial space. To the south, towards Berlin's main railway station, the highest level of density is being created with four high-rise buildings. To the north-west to the Perleberger Brücke (Perleberg Bridge), the density will also be higher. In order to cover the needs of the social infrastructure, three day-care centres and a primary school will be built on a state-owned plot of land in the adjacent Chausseestrasse / Boyenstrasse quarter.

Housing policy goals: With the realisation of the Europacity 3,000 new apartments are to be built on the 40 ha area. Of this, a total of 215 housing units with social support and 24 housing units price damped. Exclusively private development agencies and development agencies realize Both rental apartments and condominiums. The share of rental apartments predominates. The development plans were mainly before the introduction of the Berlin Model for the cooperative development of building land.



Reference: Exposé Neue Stadt quartiere 4 Europacity (Mitte – Moabit), Senatsverwaltung für Stadtentwicklung und Wohnen Referat II A (03.04.2019).

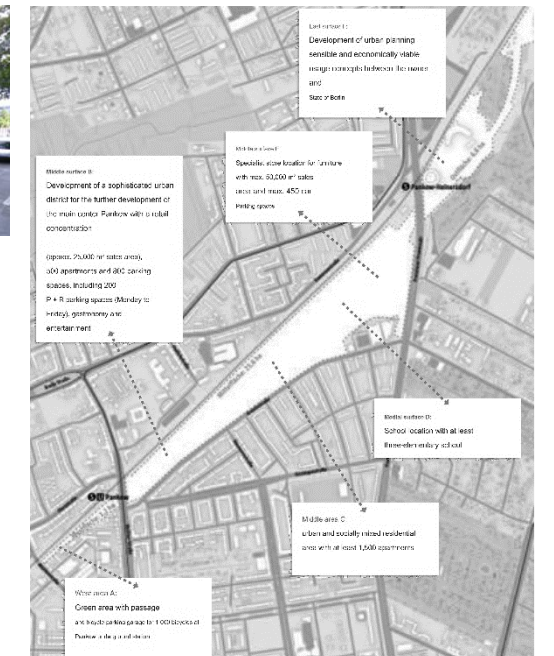
[12] Ehem, Rangier bahnhof Pankow

Area size: approx. 38 ha
Ownership: private, Deutsche Bahn
Number of residential units: 1,500 to approx. 2,000
Start of construction: approx. 2022
Land use plan: Railway area; FNP amendment procedure "Nachnutzung ehem. Rangierbahnhof Pankow, Lfd.Nr. 5/16, Stand 10.16 early participation - continuation of the procedure from spring 2020
Development plan procedure: Pankow District

Urban Development Objectives & Qualities: The area is to be reused and linked to the neighbouring urban areas. As part of an orderly urban development, it is planned to use the previously unusable space for inner-city housing construction, to strengthen the main Pankow centre as a location for specialist markets and to integrate it into the network of public spaces in the city. The necessary school and traffic infrastructure should be developed, the green areas and access areas should be developed or qualified.

Due to its size and central location within the Pankow district, the former railway site is particularly important for the further development of the urban structure in the northeast of Berlin. The aim is to create an intermixed urban quarter based on the Berlin model of cooperative development of building land, and an urban quality connection between the Pankow areas north and south of the remaining railway line and an overall gain in importance for the main Pankow centre.

Housing policy goals: The project serves to mobilize residential construction areas in inner-city locations and meets the planning objective of giving priority to inner-city development. A mixed urban quarter with approx. 1,500 to 2,000 residential units and a retail concentration at the Pankow S+U station is to be created. The residential construction potential of the Pankow marshalling yard will be developed within the framework of the "Berlin Model of Cooperative Land Development".



Reference: Exposé Neue Stadt quartiere-12 - Ehem. Rangierbahnhof Pankow. Pankower Tor-Development of a new city quarter on the site of the former Pankow marshalling yard

[13] Neue Mitte Tempelhof- NMT

Area size: approx. 62 ha

Ownership: national (core area)

Number of residential units: approx. 500

Start of construction: approx. 2027

Land use plan: Commercial and mixed building areas, residential building area, green areas

Development plan procedure: Area of exceptional urban political importance (responsibility SenStadtWohn)

Urban Development objectives & Qualities: The aim is to strengthen the centrality of the area due to its importance for the Tempelhof district, to renew the public building stock and to create space especially for subsidized housing. This applies above all to the core area (around 10 hectares) between Götz strasse and Albrecht strasse with the public functions of the Rathaus Tempelhof, police, Stadtbad Tempelhof and district central library (BZB). In addition, path connections for pedestrians and cyclists are to be improved and the crossing of the Tempelhofer Damm at the new town square in front of the town hall / library should become more attractive.

The aim is to ecologically upgrade the existing open spaces in the area of open space planning and to qualify and network them for recreational use. In September 2018, the Berlin Senate defined an urban redevelopment area in accordance with §171b BauGB for the implementation, as well as for the urban upgrading and strengthening of the entire area. The urban development-functional development concept includes 20 implementation projects, some of which are to be (co) financed through urban redevelopment

Housing policy goals: After the replacement buildings for the public functions (police, library, city pool) have been built, around 500 new residential units (approx. 50,000 m² gross floor area) can be built on the state owned areas. The goal is to realize affordable housing through the use of social housing funding in connection with the "Berlin model of cooperative building land development



Reference: Exposé Neue Stadtquartiere- 13 - Neue Mitte Tempelhof (Schöneberg – Tempelhof)

[C] Stralauer Allee

Area size: approx. 108 ha

Ownership: Mainly private

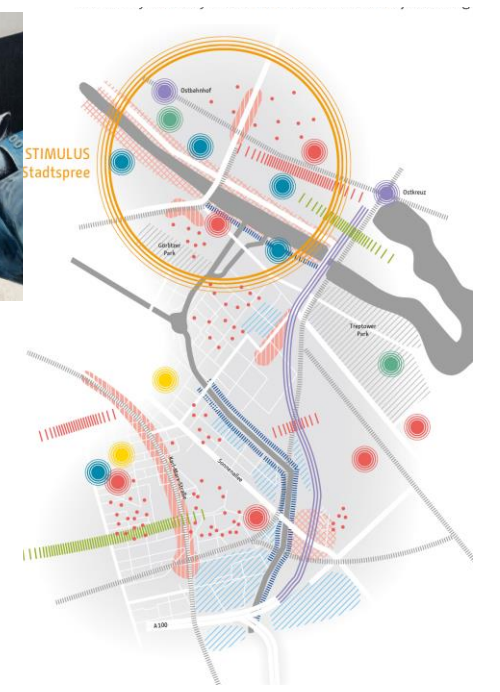
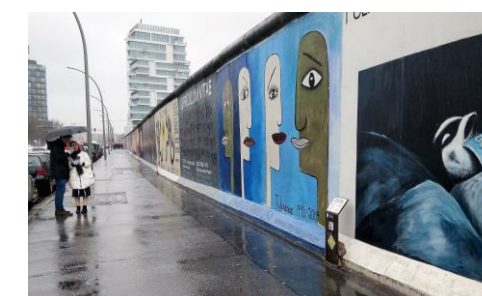
Population: 7200 inhabitants (as 2017)

Land use plan: Mixed use building areas, prime office location and tourist attraction

Urban Development objectives & Qualities:

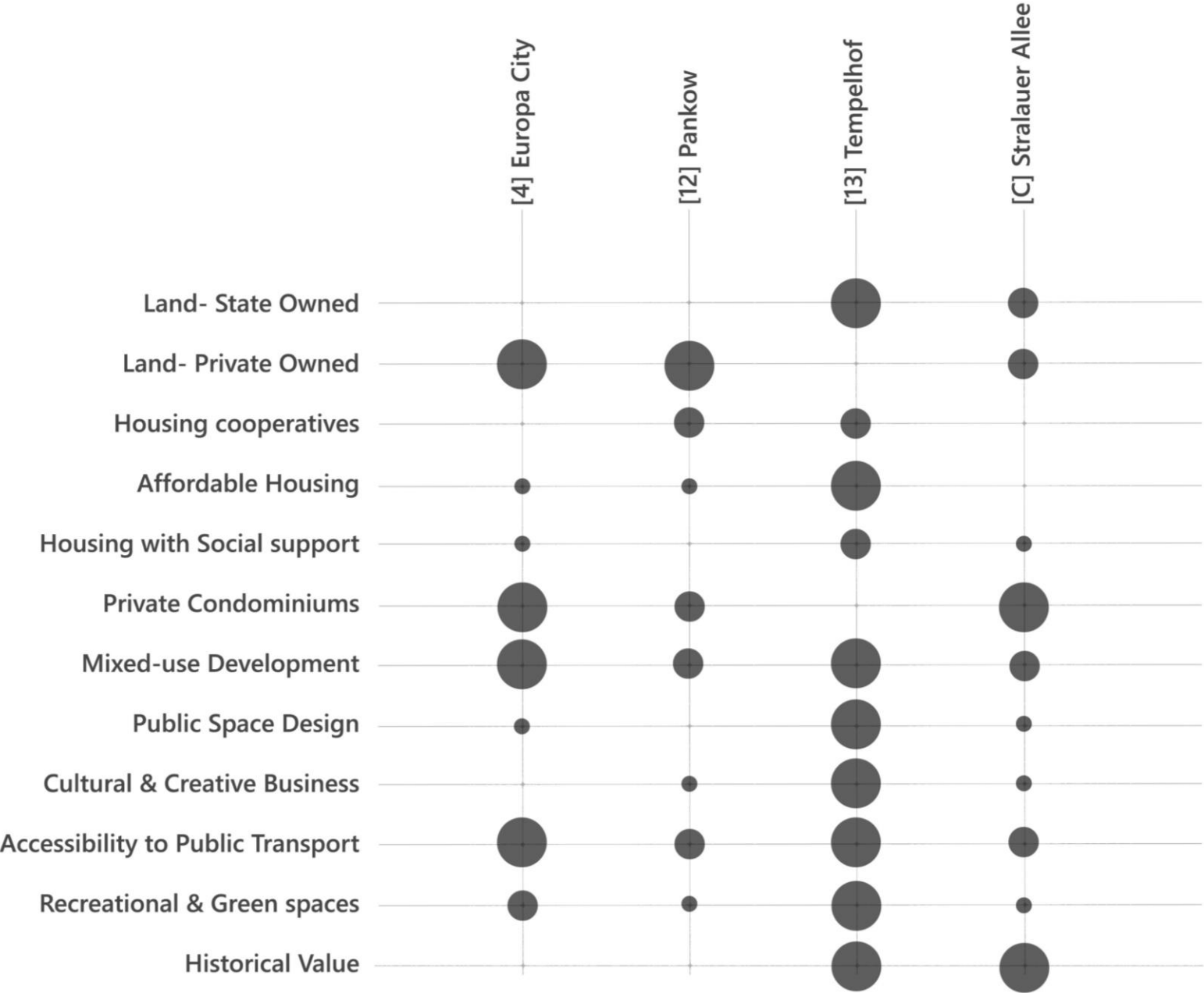
The intersection of Warschauer Strasse, Stralauer Allee, Muhlenstrasse and Oberbaumbrücke is an important urban crystallization point. The special genius loci can be traced back to the listed Oberbaum Bridge, the world-famous East Side Gallery and the Germany-wide well-known Line 1 of the subway, which runs here in high elevation. The Spree, the former border line between East and West Berlin, also attracts countless visitors. For decades the entrance to the Friedrichshain district was completely inhospitable. The only way to get to the Spree from Friedrichshain was via a large and busy intersection with unstructured areas that were unattractive for pedestrians. Today a new bank staircase leads from the park on the banks of the Spree to a green town square in the southwest of the intersection. In the northern area opposite, a small existing green area was upgraded to a pocket park. In the sidewalk area of Warschauer Straße, newly set street trees provide shade for pedestrians and guests of the local restaurants. The 'Green Gate', which was created in conjunction with the small-scale measures, corresponds to the May-Ayim-Ufer on the Kreuzberg side of the Spree, which was upgraded as part of the Urban Redevelopment West program.

The Stralauer Kiex is important because of its island location between the tram route and the spree. It is a very decent quarter yet due to the poor connections and less affordability, its not gaining popularity. In terms of urban planning, unlike the entire densely built-up north of the program area there are larger available contiguous open spaces, which are under utilized or are just kept as parking facilities.



Reference: Berlin Friedrichshain-Kreuzberg 15 Jahre Stadumbau Ostkreuz Broschuere: 4.4 Stralauer Vorstadt

Evaluating the Four Quarters



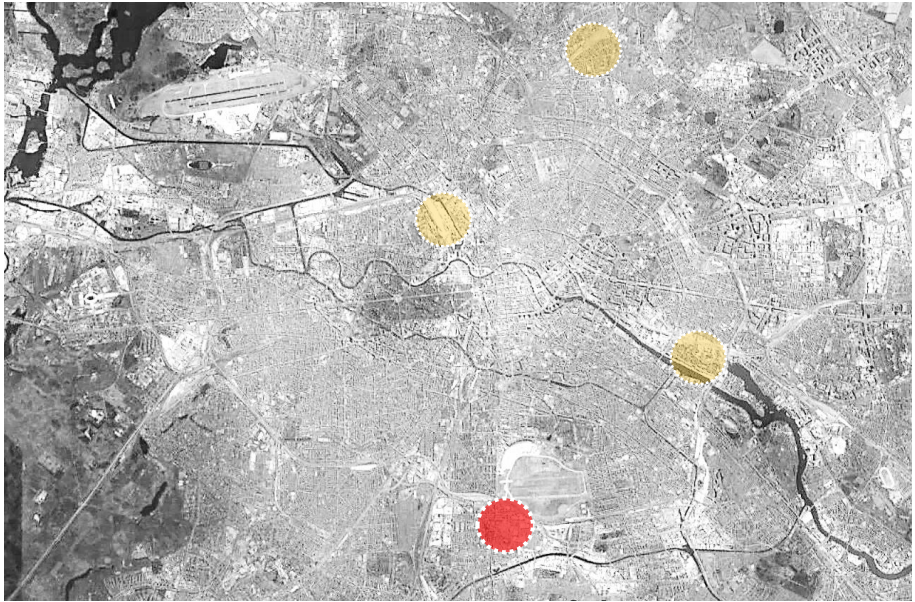
The evaluation matrix on the left, is based on the preliminary site study and analysing the development plans for the area.

In general, all the site have more or less a Mixed-use development and a good connection to the public transport system. The intentions are clearly to re-use the waste land or earmark unused public lands for housing development. The redevelopment of existing structures is also encouraged by permitting higher floorspace ratios, loosening height restrictions, or allowing greater density in specific target zones.

However, it is interesting to note that despite of the good intentions of urban transformation, three out of the four chosen sites reflect the idea of profit driven housing development rather solving the problem of affordability in these new defined nodes for Berlin.

Also, the land ownership makes a huge difference in the development plans. The land owned by the state has a much higher possibility for developing affordable / rental Housing.

Based on this study, I chose to go further with the site 13- The Neue Mitte Tempelhof. The reasons are evident in the matrix and its more interesting to see what the state/city municipality proposing in a place of high value.



CHAPTER 03

Tempelhof District Centre

This chapter comprises of the context analysis, understanding the history of the place and the present day conditions of Tempelhof District Centre at Berlin.

Further, this helps to examine the area based of the parameters of **SWOT analyses**: Strengths, Weakness, Opportunities and Threats in the area.

On the right hand you see the figure ground map of the area, this helps to understand specifically the densification possibilities and various typologies that co-exist in this part of the city.



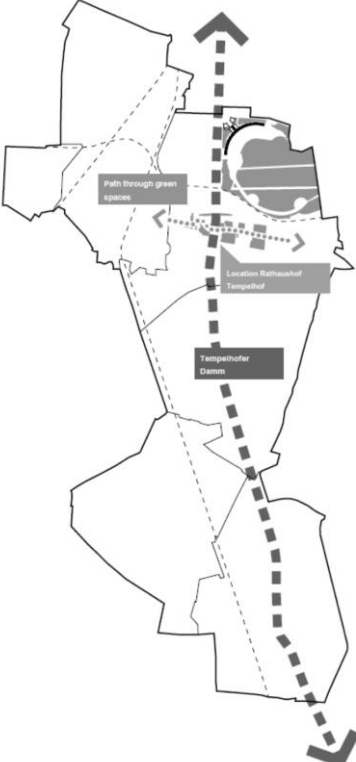
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Tempelhof District Centre



The area is located in the center of Tempelhof. © ff-Architekten PartG mbB with Andreas Schwarz architect



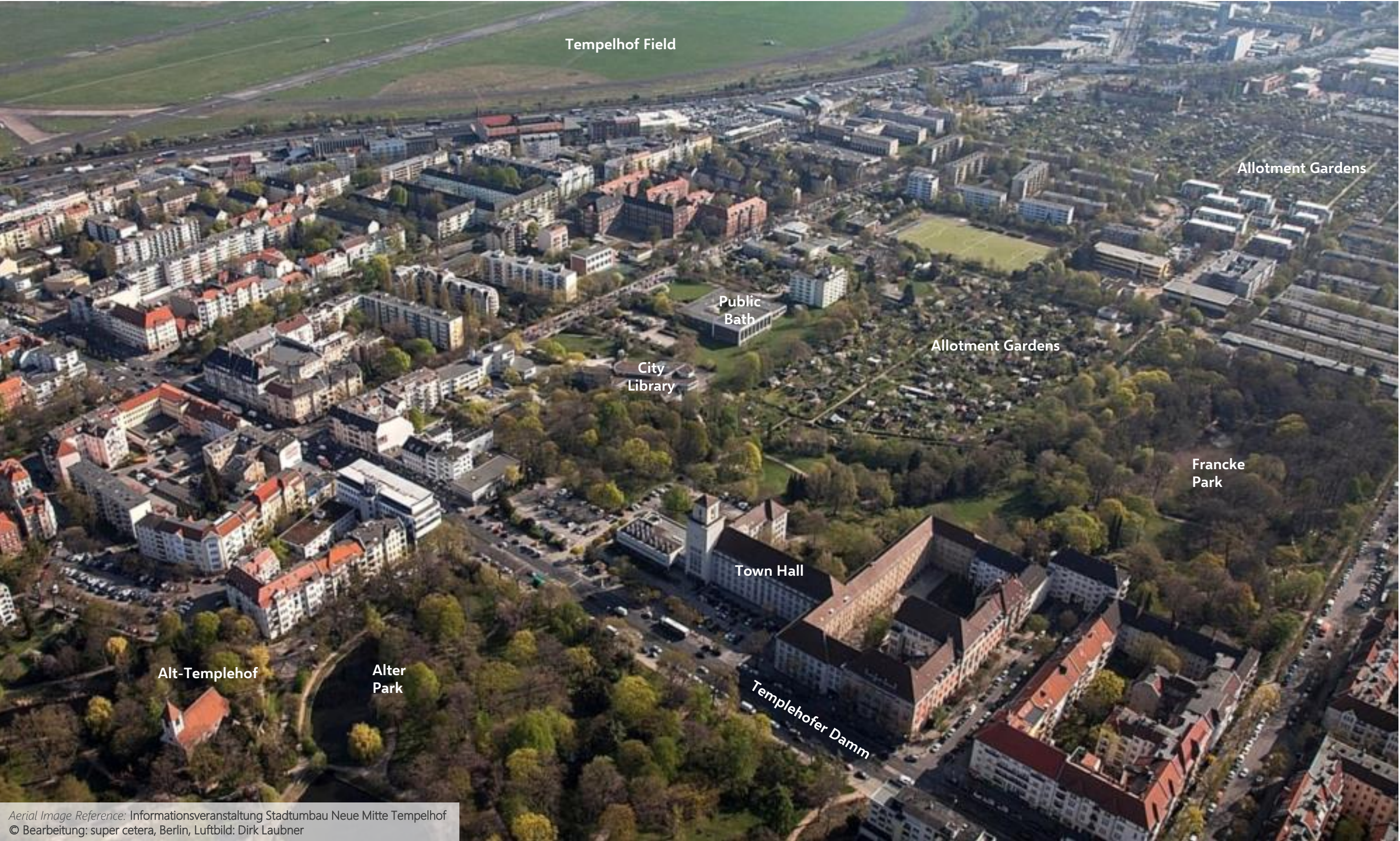
Location of the entire area in relation to Tempelhofer Freiheit and Tempelhofer Damm © Treibhaus Landschaftsarchitekten, Bearbeitung: ff-Architekten PartG mbB



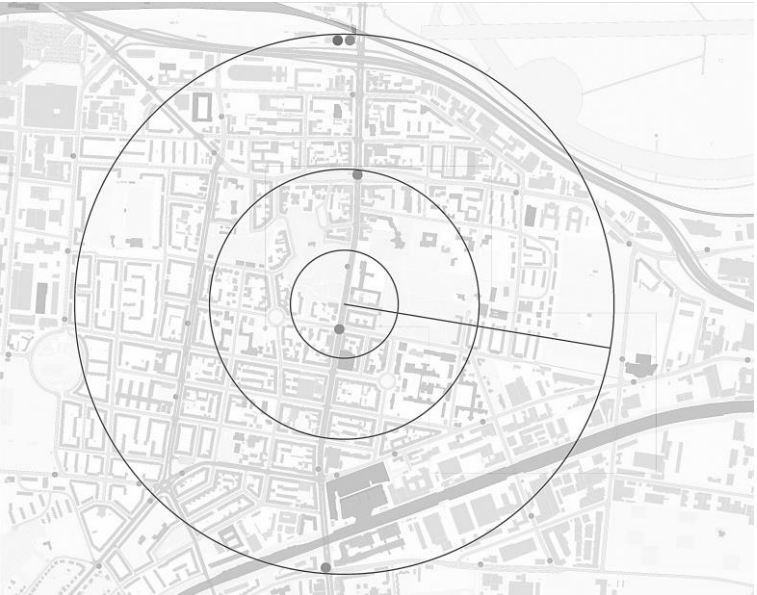
Aerial Image Reference: Unlizenzierte Musteransicht Bild ID 159591 © euroluftbild.de/Robert Grahn

Alt- Tempelhof

Listed parks with a historic village church, a library, a swimming pool, a police station, allotments – the Tempelhof centre around the town hall is diverse, easily accessible, urban and at the same time green. This combination makes up the special character of the area and explains its popularity with Tempelhof residents. However, the area is getting old and does not do justice to the importance of a functional centre for Tempelhof. The public buildings are in need of renovation and are no longer up to date. There is a lack of living space, art and culture, and at the same time open spaces are underused. The shopping situation on Tempelhofer Damm is also inadequate and the traffic loads high.



Aerial Image Reference: Informationsveranstaltung Stadtumbau Neue Mitte Tempelhof
 © Bearbeitung: super cetera, Berlin, Luftbild: Dirk Laubner



This diagram shows a 1 km, 500 m and a 250m distance ring, which highlights the central location and connection with public transport system.

Understanding the Context

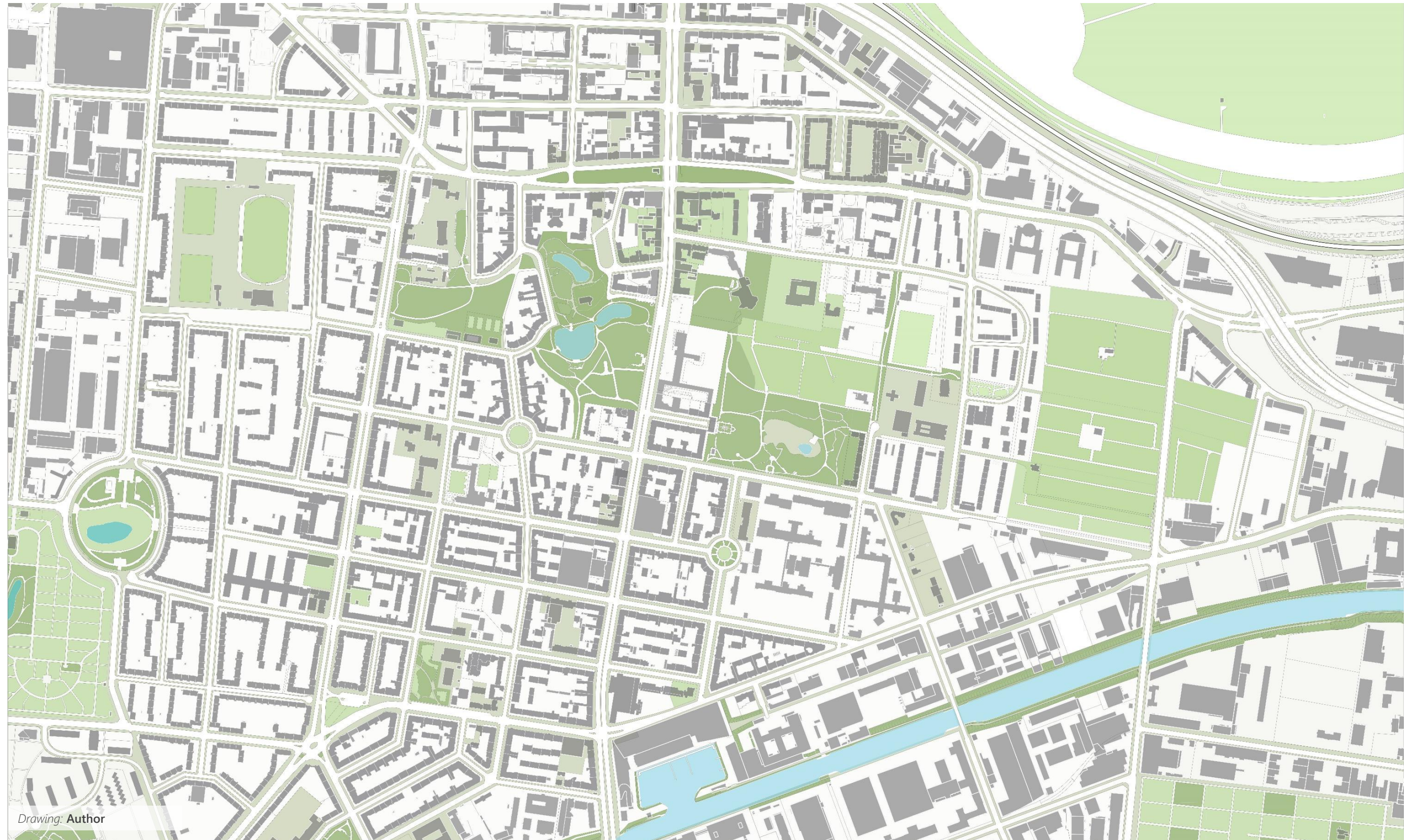
The area is composed of several layers of history and various housing typologies that have been discussed in the earlier chapter.

The single house plot typology to the tight dense blocks from the early 1900's to the open plan with more sun n air of 1950's. Heritage parks and allotment gardens also form an integral part of the area.

This drawing was prepared to understand these layers of history and the coexistence of varied typologies. Also one can clearly observe the strong green and blue structure in the area.

It is very evident that the area offers a variety of spaces both private and public in nature. However as this has been greatly ignored for development, the area is quiet old and needs an broader outlook for future development.

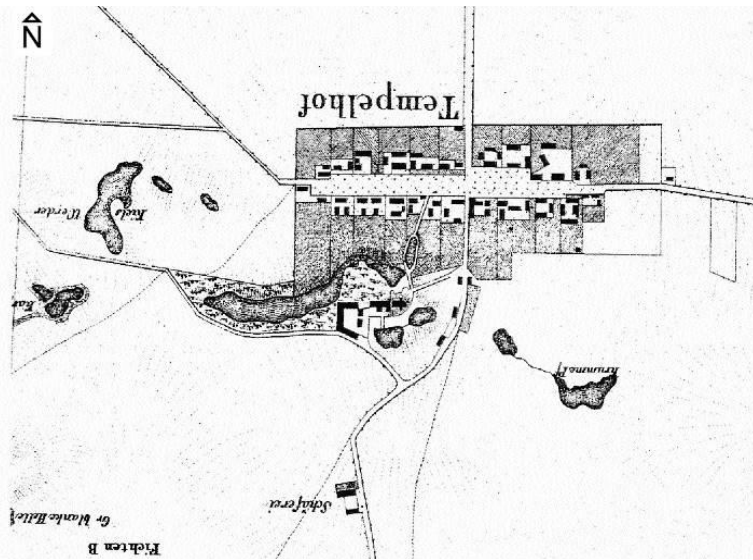
Moreover, while surveying the site and talking a walk in the area greatly helped me to understand the context. Also, it is very surprising to know that not many Berliners (the friends or colleagues who accompanied me) were familiar with this neighbourhood. For many it is still considered an outskirts.



Historical Overview

The centre of Alt-Tempelhof is one of the oldest settlements in the area of what is now Berlin: in the early 13th century, the Knights Templar was established. Evidence from this period also exists for the village church to the east of the courtyard and the neighbouring Angerdorf Tempelhof. On the Anger, paths cross to Berlin / Cölln or Lichtenrade, Schöneberg and Rixdorf.

For centuries, the rural structure and use of the adjacent areas for agriculture remained unchanged. From 1435 to 1717, the estate, the village and the lands belong to the twin city of Berlin / Cölln bordering on the north. Then the ownership changes within different noble families. Friedrich Wilhelm I (reg. 1713-1740) had the Tempelhof fields used as a training ground for the Berlin garrison. Military use will continue for the next 100 years or so. Hardly usable for agriculture, the military treasury bought the land in 1826.



The centre of Tempelhof in 1834. The plan is inverted to keep north up, the scale shown is in approximation 1: 10,000. Reference: (Donatz, M.; Schulz, G. and Hofmann, M.: Monuments in Berlin, District Office Tempelhof- Schöneberg, districts Tempelhof, Mariendorf, Marienfelde and Lichtenrade. LDA (Ed.). Petersberg 2007)



Image Reference: Village church Alt-Tempelhof on the Klarensee in the Old Park with first spring green - Photo: tsz

From 1836 to 1838 the Chaussee was expanded to Cottbus and Dresden (today's Tempelhofer Damm). Among other things, this brings excursion guests to Tempelhofer bars. Later, in the year 1863 marked a further turning point: the Disconto-Gesellschaft acquired the estate with the aim of abandoning agricultural use in favour of parcelling for development. This is due to the proximity to Berlin and the onset of industrialization.

In 1864, Friedrich Hitzig drew up a development plan for the areas west of Tempelhofer Damm for the construction of a villa colony. However, this plan has hardly received any response from the middle-class buyer groups it addresses, the area remains undeveloped.

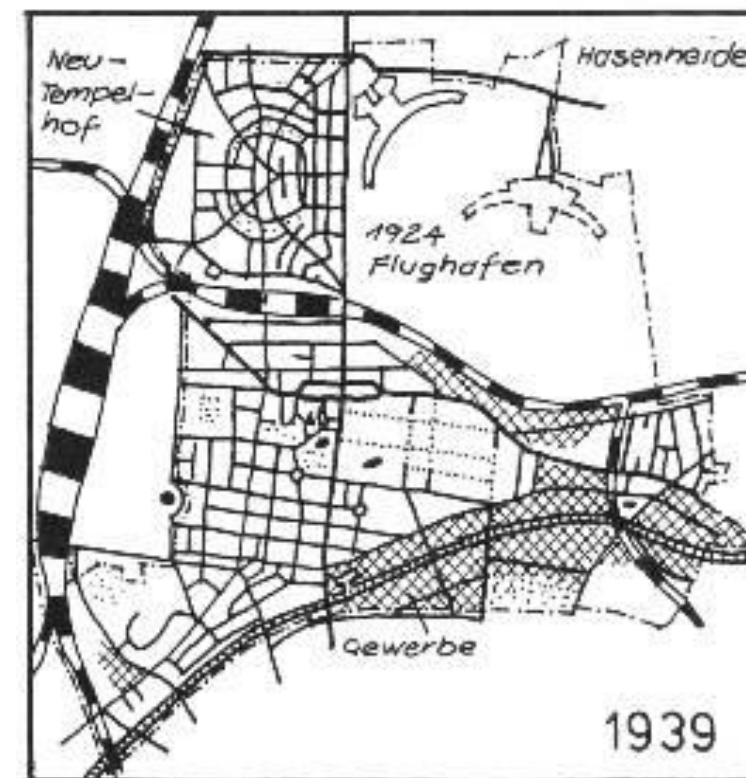
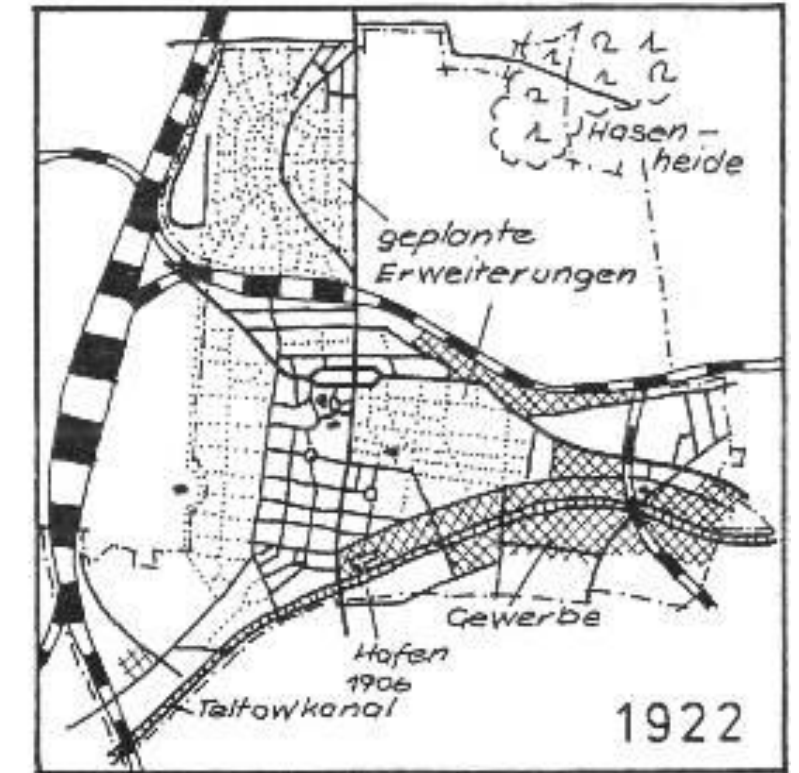
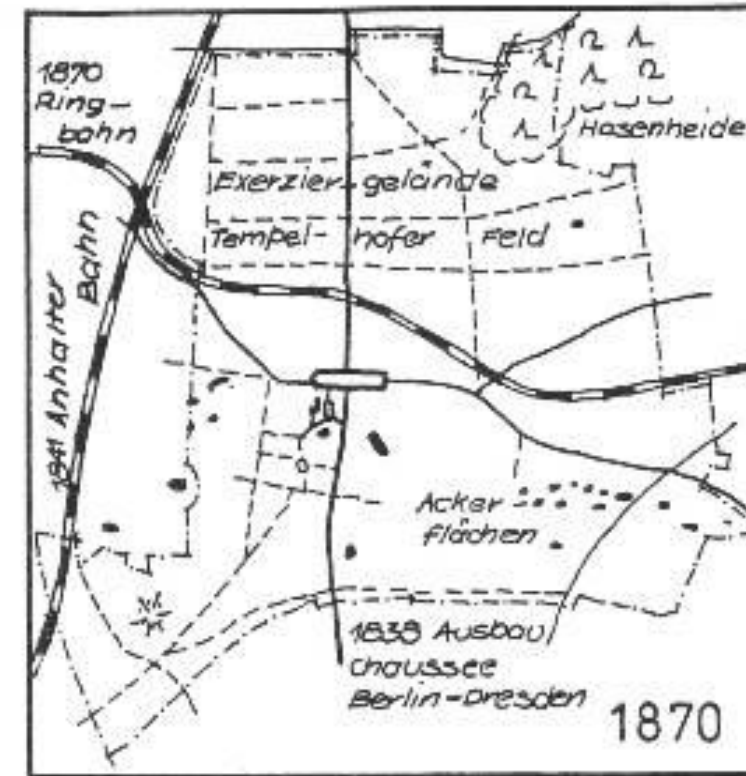
In 1865, the manufacturer Theodor Francke acquired areas east of today's Tempelhofer Damm for an ivory cutting establishment. Here he had the present-day Francke Park created on the site of an earlier tree nursery in 1875/76. The park still exists today – in 1925-28 (after being taken over by the city of Berlin) and redesigned or partially overhauled after 1945.

After the takeover of the Disconto-Gesellschaft by a British company, the planning for the development for the areas east of the Tempelhofer Damm is continued. A development plan was drawn up in 1872 for all areas up to the southern district boundary. Parcelling is also being prepared north of the old village centre. The ring line was partially opened in 1871 and fully opened in 1877, offering starting points for the settlement of industrial and military sites in Tempelhof.

Today's Wenckebach Clinic was built as a military hospital south of the Francke Park. Nevertheless, the structural development in today's study area remains rather subdued. Poor soil conditions and the topography (height differences of up to 10 m) may have been the cause. With the installation of the Teltow Canal (opened in 1906) new industrial areas are opened up on a large scale. This leads to drainage, i.e. improvement of the subsoil of the area, whereby the existing pools are silted up or filled up (e.g. Reinhardtplatz today). A town hall planned in 1911 in place of today's town hall was built after the formation of Greater Berlin and the establishment of the Nazi dictatorship in 1937-38.

In the interwar period, the constructional development continued; now the current study area is moving into the focus of development. 1925-26 the residential group "Am Franckepark" (designed by Mebes & Emmerich) and 1926-28 the residential complex on Germaniastraße / Götzstraße of the civil servants' association (also Mebes & Emmerich). The "Märkische Scholle" (1929-31) settlement, designed by Erwin Gutkind, is the first row-type settlement in the Tempelhof district. Damage caused during the war was repaired after 1950. The nursery areas north of the Francke Park, prepared by planned roads before 1914, remain free of development. They have been used for gardening since the First World War and have been prepared accordingly as allotment gardens.

On the right: Historical development at a glance 1870-1983 (BEP Tempelhof 1, 1984)
Reference: Planergemeinschaft für Stadt und Raum eG/ page 26.



Strengths: Historical Significance

Up until the **First World War**, extensive building work was carried out, mainly in the form of **2- to 4-story residential construction for civil housing** needs, which concentrated on the areas close to the east and west of Tempelhofer Damm. Public infrastructure such as the Luise-Henriette-Gymnasium and the Imperial Post Office also emerged. The parks to the west of today's Tempelhofer Damm are being built.

Today's Tempelhofer Damm becomes the local center for retail and services. The area of the preparatory examinations east of the Tempelhofer Damm is being prepared for the development by defining various street alignment lines in north-south and east-west directions through the block.



Alt- Tempelhof: Picture taken to show the Historic remains of the old Tempelhof village. The slope roof house and so on.



Alter Park Image: Author

Alter & Francke Park

Just a few steps from the Tempelhofer Damm, the most beautiful spring atmosphere unfolds in the Alte Park am Klarenssee. Few people know the names of **the two ponds that have been collecting rainwater here since the 12th century north and south of the village church of Alt-Tempelhof**. The Klarenssee has double kidney shape, and is crossed by a small picturesque bridge. North of the village church is the smaller Wilhelmsteich. Both ponds were created after the last ice age, and most likely originated from dead ice blocks.

Trees and shrubs develop their greenery in the first half of April. The sun-drenched moments of the April weather provide a beautiful light atmosphere. Delicate, still rain-soaked leaves show particularly intense colours – the photographers appreciate as postcard motifs.

It has always been on the periphery of the medieval village foundation Tempelhof. The original building was built in the second third of the 13th century. The present building was renovated after war destruction with a modified tower shape. With 235 square meters, the village church Tempelhof is the largest of all village churches in Berlin.

The Tempelhofer Hafen : Public Harbour

There is a recent developed public harbour which offers some commercial activities along the Tempelhofer Damm. It has a great potential to be connected to the new development plans for the area. It has important architecture and history in the surrounding context.

These important landmarks are a big advantage for future development and housing densification in this area.



Francke Park Image: Author



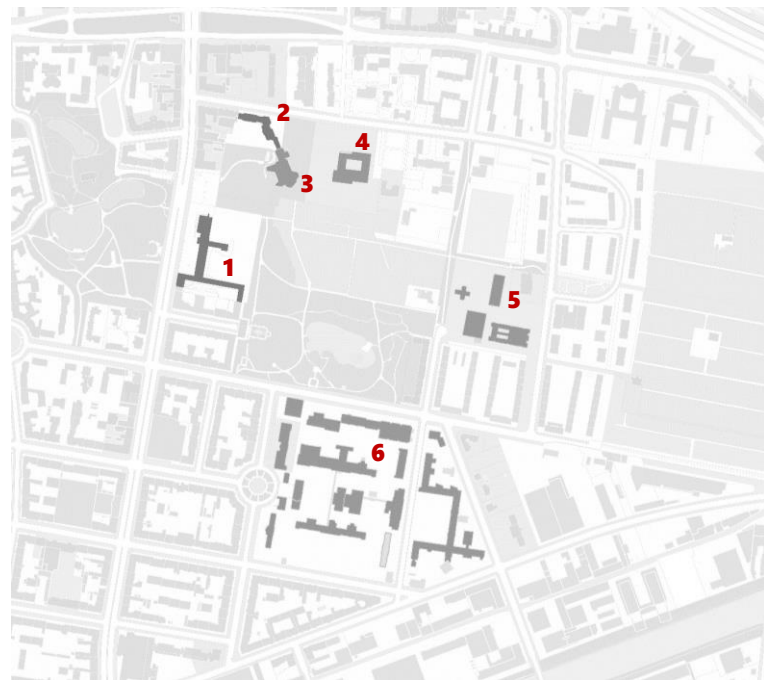
Tempelhofer Hafen Image: Author

Strengths: Political Significance

In addition, the historical settlement center with the village green in the street Alt-Tempelhof is to be emphasized as a special urban and settlement structure in the area. On the whole, the settlement structure is heterogeneous, ranging from dense perimeter block development of the Wilhelminian period in the north-eastern part of the study area, to row development of the 1920s - 1930s and 1950s, to the block construction of the 1960s (public facilities).

After the Second World War, the development continued east of Tempelhofer Damm on areas previously used by allotments. Apartment buildings in row construction are being built on Felixstrasse.

The town hall, Tempelhofer Damm and Götzstraße were designed to serve the public in the 1960s through the district. Willy Kreuer, who is also responsible for the Kreuzberg Town Hall or the America Memorial Library, designed a bourgeois hall and a modern extension for administration as a high-rise building in the mid-1950s.



The hall for the district assembly (BVV) as an important addition to democratic institutions at the town hall of the Nazi era was realized in 1969 according to another design by Kreuer. Design for the city hall extension W. Kreuer around 1955 - not realized (district office Tempelhof Schöneberg, department city planning)

Along the public administration buildings, especially on the side facing the allotment garden settlement Feldblume, large open spaces were created due to the building structure of the 1960s.

Police Administration: The police station at Götzstraße 6 and the district central library at Götzstraße 8-12 were built in 1978 by the architect Bodo Fleischer as a building ensemble. The building has a high need for repair and renovation. At the same time there is a requirement to accommodate additional personnel.

Central Library: According to an assessment by the BIM, the technical building equipment has to be renewed in large parts. For the implementation of the extensive structural measures, the building must be cleared.

Public Bath: Indoor swimming facility. The building has now been in operation for over 50 years and has a considerable backlog of renovation and maintenance work.

Kindergarden & Primary School (5) The building is in use and has no urgent need of renovation.

Vivantes Wenckebach-Klinikum/ Hospital (6): It was originally built as a military hospital south of the Francke Park. Nevertheless, the structural development in today's study area remains rather subdued.

Even though all these public buildings are old and need renovation or repair; the important point to note that these are owned by the state. This makes it a big strength for urban development.



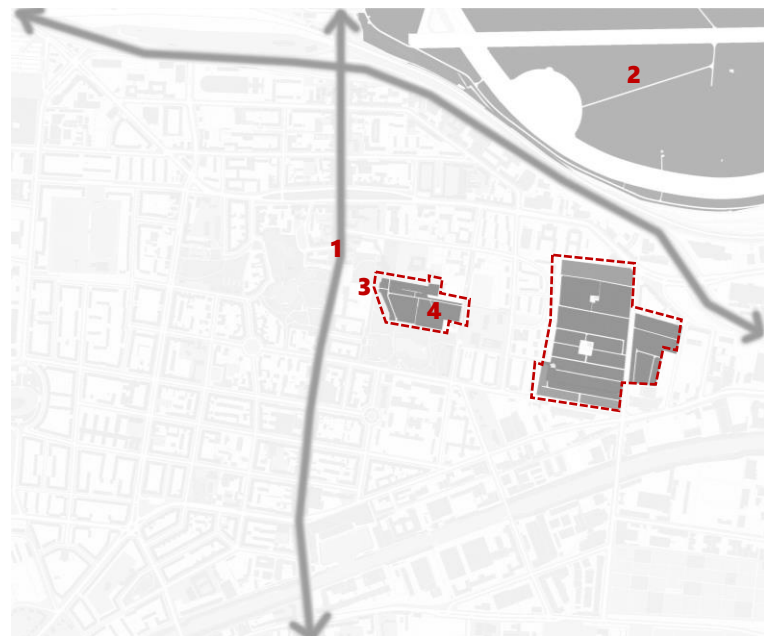
Weakness

Despite of the strong north south axis road. The traffic on the Tempelhofer Damm passes almost carelessly by this gem. Located directly opposite the old town hall Tempelhof, the Alte Park forms a quiet zone and city oasis.

- Missing connection
- Heavy Traffic speed roads
- Allotment gardens- Too private

The Map below shows the two high speed traffic roads which act as barriers in the area. Also to note that they cause a lot of noise pollution, which makes the near by areas unlikely to be occupied for residential use.

The green marked with red boundaries are the allotment gardens with partially restricted entries.



Aerial Image Reference: Unlizenzierte Musteransicht Bild ID 257228 ©
euroluftbild.de/Robert Grahn

Weakness

Missing pedestrian connections

Critical surroundings and missing connections. Despite of the strong North south and public transport network. The area lacks in pedestrian walkways, bicycle lanes and restricted care lane for ease of walkability in the area.

The reform of these areas can lead to a sustainable development proposal for this new city centre.



The Tempelhofer Feld

The context and surrounding form an important part in how this new planned neighbourhood could be utilised. The Tempelhofer field, is currently a very active public place and attracts a huge amount of Berliners. In fact it is considered to be the largest public park in Germany. This is highly valuable landmark both in terms of economic and social actors on the site.

Although this is not well connected to the existing Tempelhof neighbourhood and thus doesn't attract many to live in this area.



Allotment gardens

A further superordinate structural element of the study area is the allotment garden colony Feldblume as Landscape and settlement typical green space. This also have a long history; they came into existence as a reflection to the tight dense blocks in the early 1900's. When people didn't have enough green spaces in the adjacent neighbourhood, this was a social welfare solution.

The site has a lot of these allotment garden which were once considered to be on the outskirts of the city and now are the central part of the area.



Private or Public?

The allotment gardens acquire a huge amount of land in this area. In my opinion as per a short survey with Berliners, these shall be kept intact as they add value to the environment and social fabric of this place. Although at the moment, these are perceived as too private and doesn't invite general public functions or interactions.

Opening them up to a larger public or opening them to the larger streets can be an added advantage to this area.

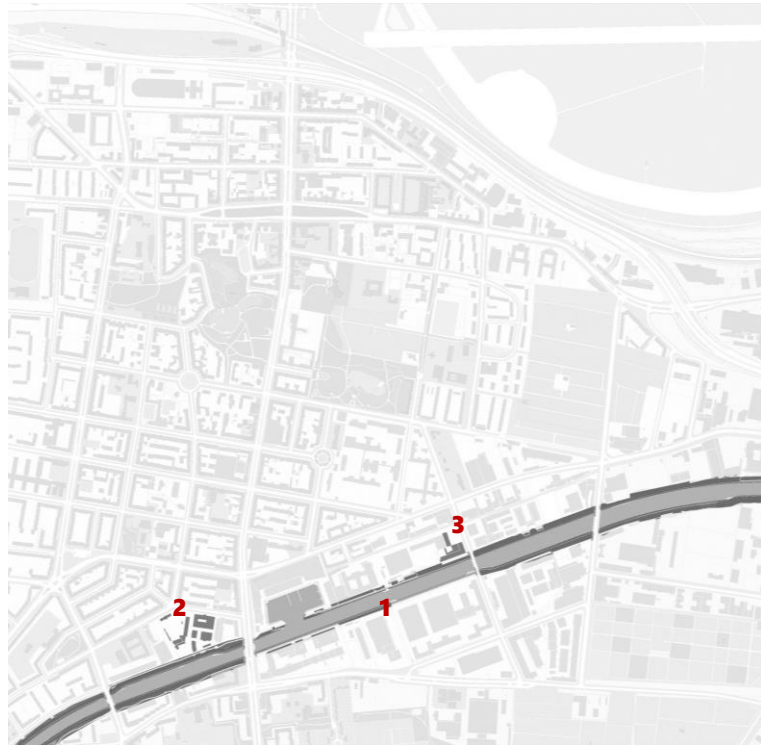


Opportunities

Teltow canal

The canal edge are at the moment not utilised or planned to be made as a public accessible water front. It has a great potential to be connected to the new development/new centre proposal. This can add a lot more importance to the new city centre, that is, planned by the municipality. Also, the skyline is decorated with beautiful old brick building , forming a landmark for the area.

- oWater edge
- oCreative business



Teltow Canal Image: Author

1

Opportunities

Creative Ventures

The Ufa Fabrik- New life to old film factory

The sustainable oasis of culture- Its an innovation centre and a place of international cultural significance .

For decades, dreams were captured on celluloid on the premises of AFIFA and the UFA film Kopierwerke in the south of Berlin, until the plant closed in the 1970,s. Shortly before the planned demolition of the buildings began in 1979 " the second life of Ufa", a life and work project that is still unique in Europe today, the UfaFabrik Berlin.

For 39 years now, around 35 people lived on the 18,566 sqm site and together with over 200 employees they work tirelessly to combine different social areas such as living, working, culture, creativity and social life.

The great vision of this group of creative craftsmen, artists and scientists is to create a model of living and working together in the greatest possible harmony with nature:

- Ecological pilot projects and energetic building renovation
- Innovation, participative cultural experience
- Social networks for people from 0 to 99 for families and neighbourhoods,
- Peaceful coexistence for all people over Berlin and the world.



source: ufafabrik- New life in an old film studio



Green Ventures

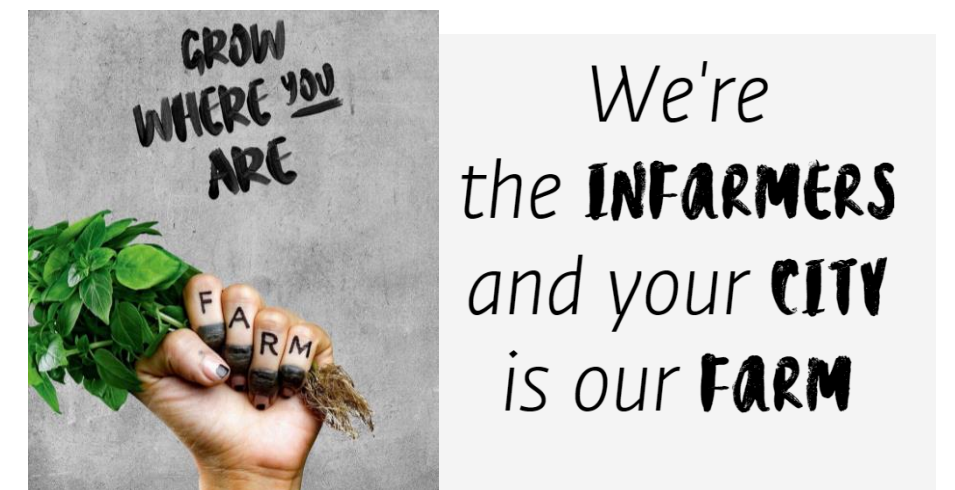
Infarm (Indoor Urban Farming GmbH) is a start-up company founded in Berlin in 2013 that has established organically produced herbs and vegetables directly in restaurants or in retail facilities with the concept of vertical farming and markets them there.

Infarm is shaping the future of farming with smart modular farming system that grows fresh produce right inside the grocery stores people shop in.

With a mix of equity and debt financing, the fresh capital infusion brings Infarm's total funding to date to more than \$300 million, underscoring consumer and retailer appetite for Infarm's innovative approach to fresh, sustainable and local food production in the wake of this year's pandemic.

By 2025, Infarm's farming network is expected to reach more than 5,000,000 square feet to become the largest distributed farming network in the world as it builds towards helping cities become self-sufficient in their food production. [source: Infarm raises \$170M during pandemic to grow largest urban vertical farming network in the world]

These two existing cases are just examples of how this laidback industrial area could be transformed in the future - with more green technologies, such as these. There are many opportunities to readapt the existing infrastructure in this area.



Threats

As you can note from the google earth image on the right, it is quite shocking the amount of surface car parking. This is very strange and shocking when a rough analysis of area dedicated to these car parks. The land priorities should be reconsidered here.

Following are the major threats of this area:

- Parks versus Parking
- Streets for CAR Parks??
- Industrial backyards
- Gated communities

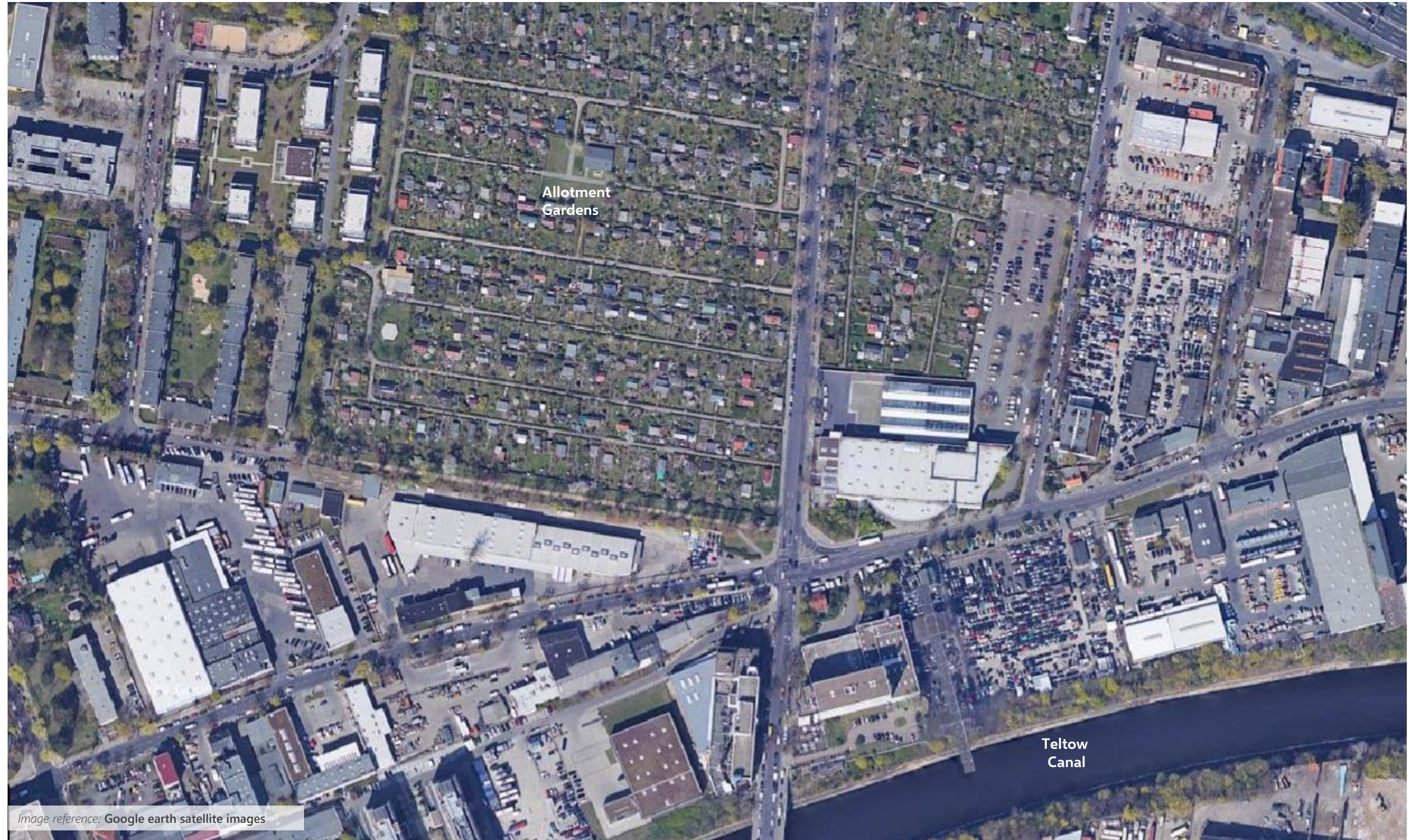
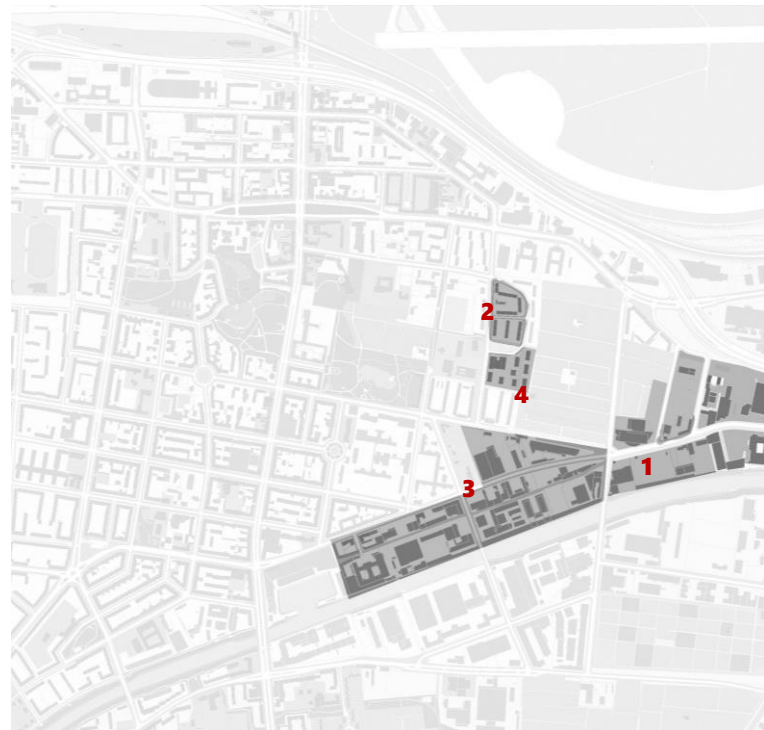


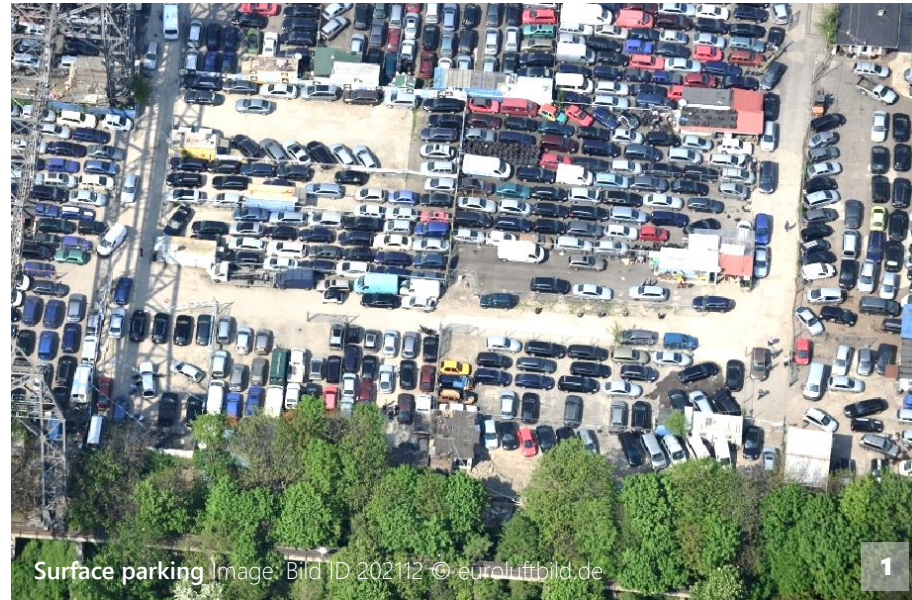
Image reference: Google earth satellite images

Threats

Parks versus Parking

Surface parking is a big issue in Berlin and many other parts of the country as Germany is a very car driven society. But this area particularly has been quite a shock for me to accept the amount of surface area dedicated to cars, car repair services, Bus parking, Bus repair, storage of good etc.

As mentioned in the history of this area, the land quality was very poor due to the iron/ chemical factories and thus resulted in ignorance of development. This is probably the reason why it got dedicated as parking land.



The Industrial backyards

Apart from the huge surface parking zones in the area, it is also highly restricted for public movement.

In my understanding the condition of these building and the type of industry is this prime location is not adding potential value. This will hinder the development of the area to a large extend.



Streets or CAR Parks?

This is a problem across many cities in Germany and particularly I have noticed it a big problem in Berlin.

Everyone has this habit of parking on the street. It feels as if the streets are devoted to car parks. In my opinion, this is a big problem that needs to be tackled in the new development plans.



The Gated Communities

The area is surrounded by various gated or restricted housing complex. This is probably a result of the assumed threat from the under developed surroundings.

This is an indication of this neighbourhood is very private and disconnected, unlike the other places in Berlin.



★ 👎 💡 🚫
S W O T Analysis

This site has a great potential to become a sustainable urban model for many such upcoming centres in Berlin. Its political and historic significance is certainly a big asset. The integration of housing in this area can offers a great opportunity for state-owned and public interest-oriented societies. Having affordable housing in such an attractive- green location would be a dream come true. However, the critical surrounding pointed out as threat shall also be considered for a more holistic transformation of this quarter.



CHAPTER 04

Neue Mitte Tempelhof

Before moving to the design proposal, it was very important and interesting to see what the city council already have in mind for this urban renewal.

This chapter, states the latest proposals from the city authorities and analyses of the feasibility studies that have been conducted over last few years.

Finally the chapter concludes with the overall planning strategies for transforming the Tempelhof District centre into a **New City Centre for Berlin**.



Image Reference: © **luchterhandt**. Informationsveranstaltung Stadtumbau Neue Mitte Tempelhof am 15. August 2019. 5. Kooperatives städtebauliches Werkstattverfahren

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Public participation and workshops

Public participation has been tried to be addressed and various workshops have been conducted to receive the feedback from all the stockholders in and around in Tempelhof.

Due the COVID-19 situation, I was unable to personally conduct interviews with people but I have access to the minutes of the meetings from the various workshops that were conducted in last 1 year.

Here I will briefly mention about some of the most relevant comments

As the new city quarter for the new apartment building, the Neue Mitte Tempelhof contributes to a city and socially acceptable Internal development significantly. The area is particularly interesting because such residential property potential is only available to a limited extent in state ownership. Here, qualitative requirements are easier to implement, such as creating living space that is oriented towards the common good. The new residential area on Götzstrasse also provides a major impetus for better networking and upgrading the entire area - the existing buildings, paths, squares, open spaces and social facilities.

The numerous challenges would not be solved by renovating the public buildings. The current requirements and the growth of the city and district can only be met if the entire area is reorganized.

The "Neue Mitte Tempelhof" concept shows a new, overarching development perspective for the area of around 62 hectares.



Image reference: **Fotos der Infoveranstaltung alle © S.T.E.R.N GmbH.** Informationsveranstaltung Stadtumbau Neue Mitte Tempelhof am 15. August 2019

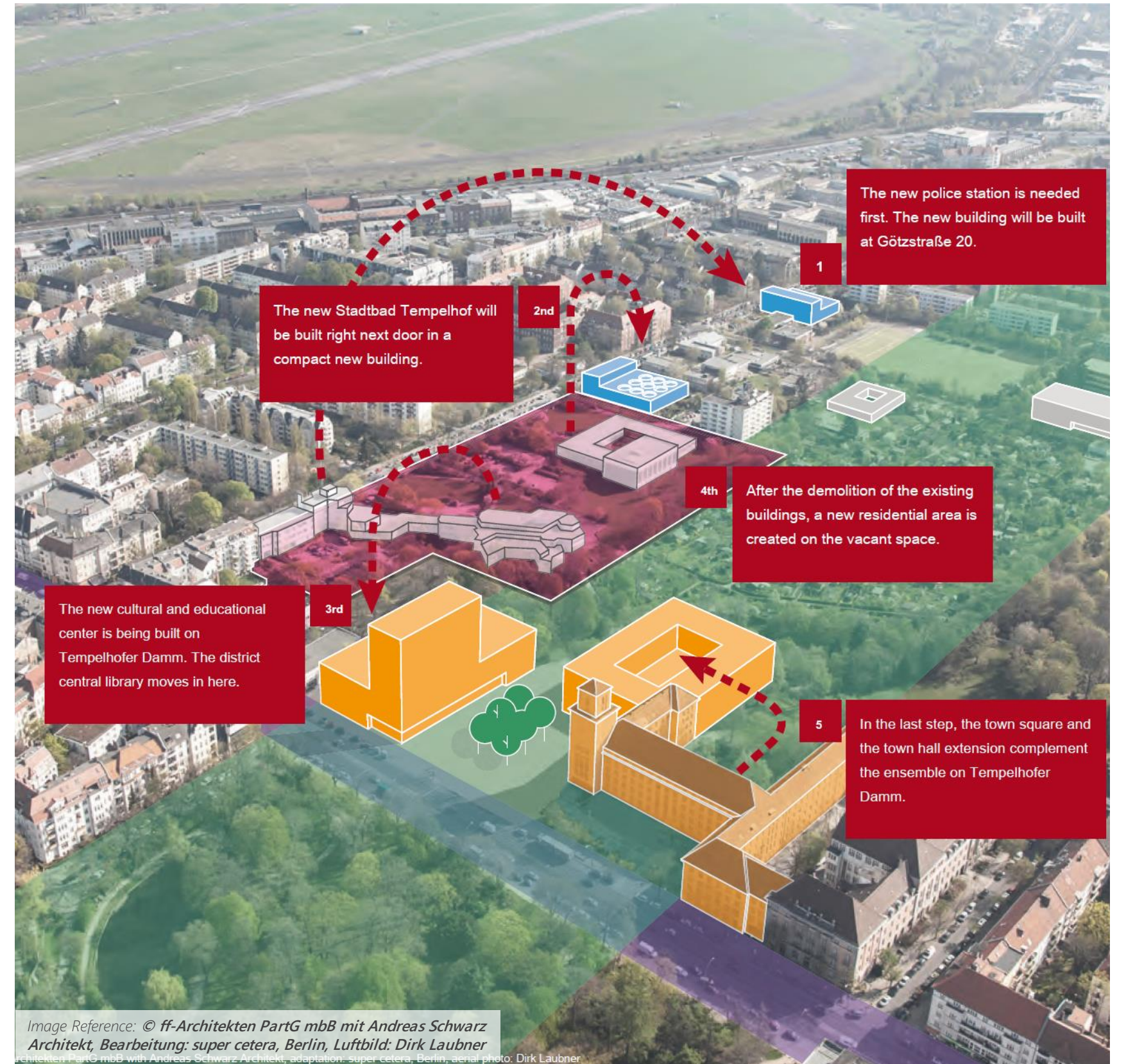


Image Reference: © ff-Architekten PartG mbB mit Andreas Schwarz Architekt, Bearbeitung: super cetera, Berlin, Luftbild: Dirk Laubner
ff-Architekten PartG mbB mit Andreas Schwarz Architekt, adaptation: super cetera, Berlin, aerial photo: Dirk Laubner

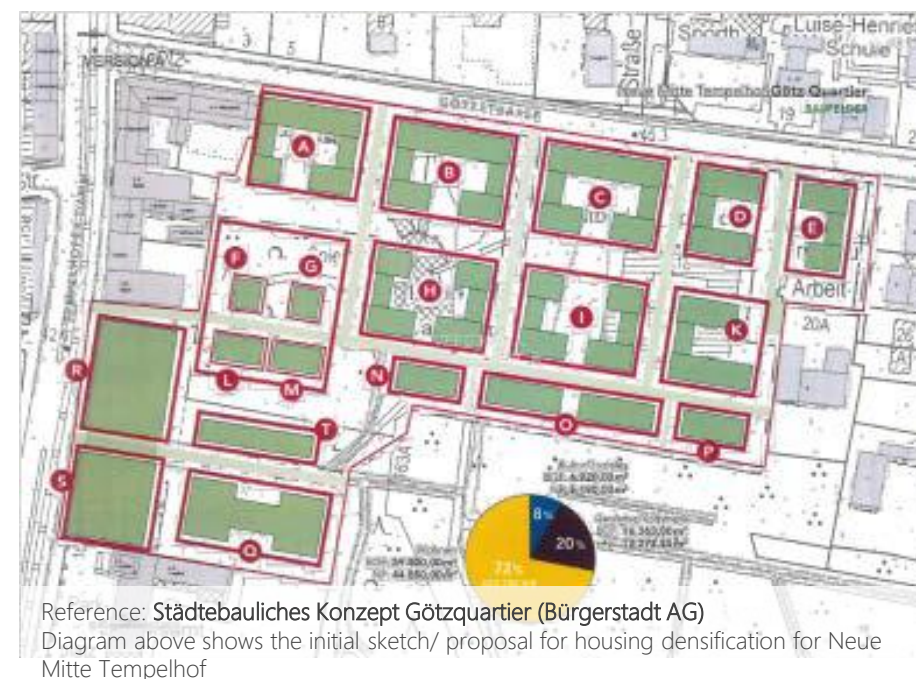
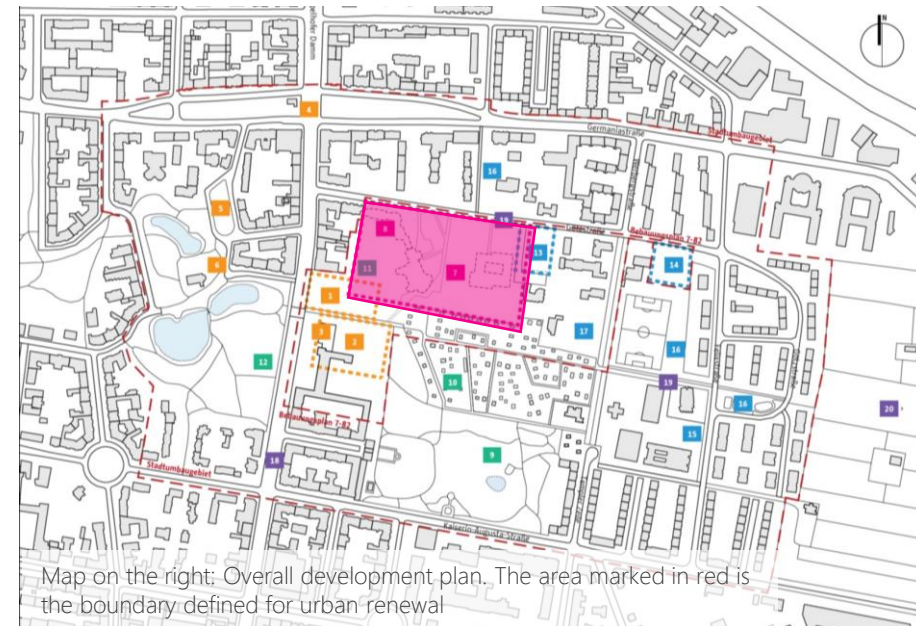
Current Proposals for Housing Densification

This is from the feasibility plan for housing densification in the area. As this part of the site is owned by the state. The municipality plans to built a dense neighbourhood.

In 2015 a private planning group, with the participation of a state-owned housing company, a detailed urban development- functional Concept was planned for the eastern side of the town hall. The most important components were:- "Creation of a concise location appropriate to the location identity and a high attractiveness of use".- Reorganization and concentration of social infrastructure facilities, "Expansion of the municipal centre function".- "Stabilization of the local transport function of the Tempelhof Damm"

- "Creation of living space" in the subsidized and free segment, i.e. for different strata of the population (**400-600 apartments**)
- Innovative Urbanistic concept.
- Better networking for **pedestrians and cyclists** in the quarter.
- Step-by-step implementation process involving different Building owners (municipal companies, cooperatives, assemblies, developer for commercial use).

In the joint opinion of the head office and the district, the initiative of the planning group was basically considered positive. As a prerequisite for an assessment of the basic development capability of such a project scope, a detailed determination of these and renovation needs of the public facilities as well as a profitability analysis were considered necessary. In order to bring together and examine all planning and interests, in summer 2016 decided to initiate preparatory investigations according to §141 BauGB.



Good to Note: Fact 01

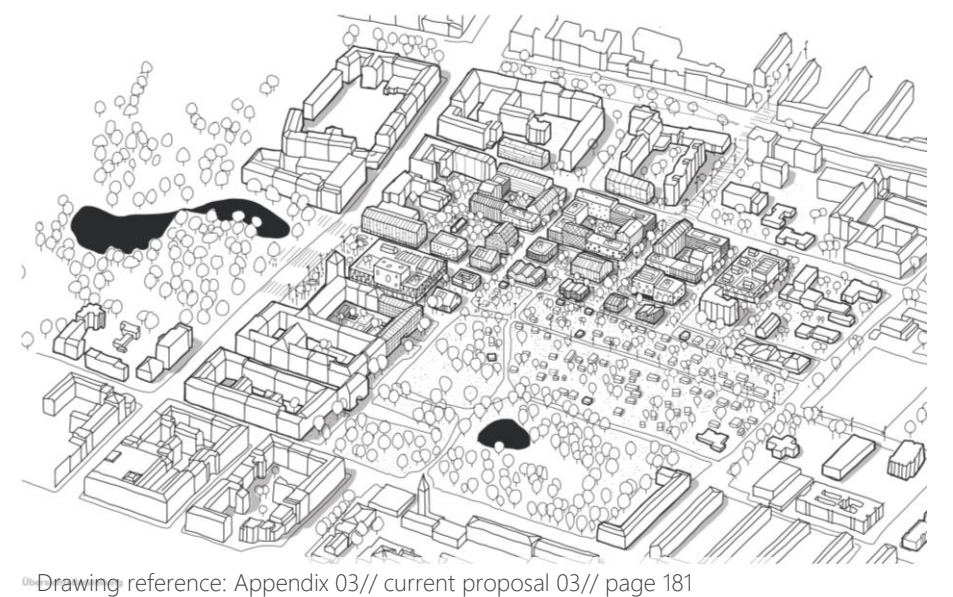
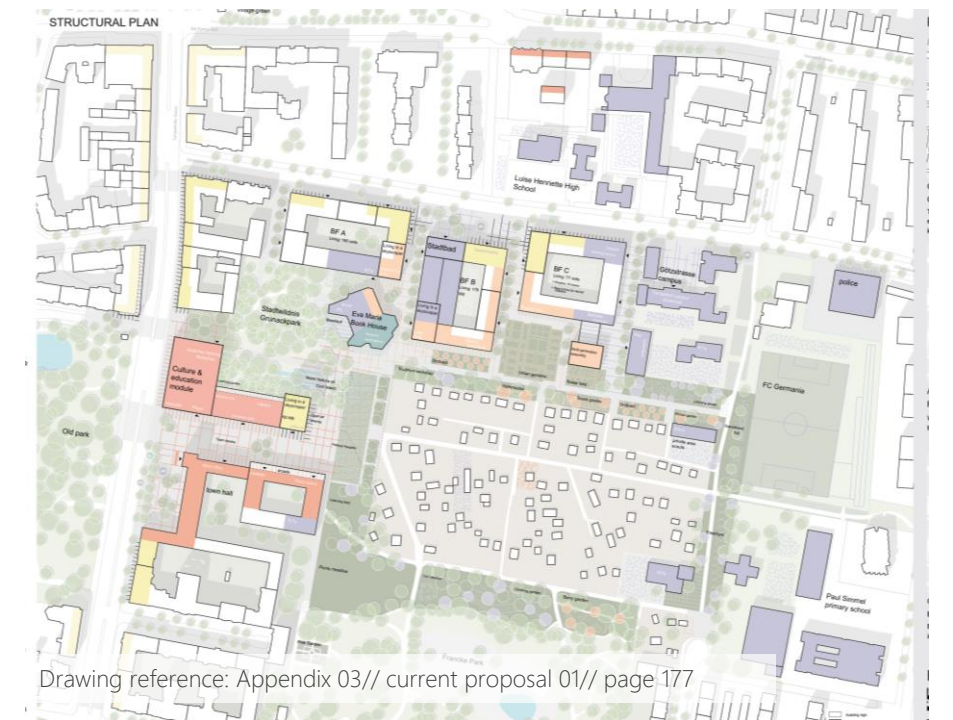
Competition entries

In 2016, preparatory studies for the area were launched and an integrated urban development concept was developed. With the decisions of the District Office Tempelhof-Schöneberg and the Senate of Berlin in 2018, the foundation stone was laid for the future development of the "New Center Templehof". If it is defined as an urban redevelopment area, funding can be used to reorganize the area. The project offers a unique opportunity to create a new identity for Tempelhof by being able to completely redesign an integrated city district and rebuilding the social, cultural and sporting infrastructure.

"The integration of housing in this new centre district offers a great opportunity for state-owned and public interest-oriented societies to create affordable housing in a very attractive location."

In this regard, four best urban design and landscape proposals were shortlisted out of the pool of various design suggestions. The glimpse of these are put up here for an quick overview. These proposal sheets is added in the appendix for your reference.

The detail information on these four concept proposals can be found under the Appendix section 03- Current proposal//page: 177-184



Good to Note Fact: 02

Landscape & Ecological assessments

The topography of the area is formed as a part of the melted glaciers, thus forming dramatic sunk which are have been used as rain water reserves in the area. The channel can still be traced today, although it is covered by buildings in many places. Starting in 1945, buildings of the social infrastructure and administrative buildings were gradually built over the valley. The connection between the Old Park and Franckepark was largely lost due to the extension of the town hall and the parking lots.

The core area of the study area is significantly characterized by its open spaces. The buildings are located in a flowing green urban landscape, which, on closer inspection, however, is very complex and differentiated.

The northern engraving of the Ice Age gutter was partially covered by the library. The kindergarten and school today mark the eastern end of the Ice Age gutter. The deep depression in Franckepark is still prominent today, and is a major feature of the park. Until 1906 one of the dead ice holes was located there as "Krummer Pfuhl". Before 1860 it was possible to bathe here. Then the groundwater level sank due to the construction of the Teltow Canal and the depression fell largely dry, except for a small pond within the game reserve, the extensive Francketeich natural monument. Since 1954, the depression has been part of the game reserve.

This is from the landscape feasibility report for the area. The proposed site boundary by the municipality is shown in the map. One can clearly notice the missing links between the flood level described in the drawing. Therefore, this shall be definitely considered in the new development proposal with the help of a landscape strategy.

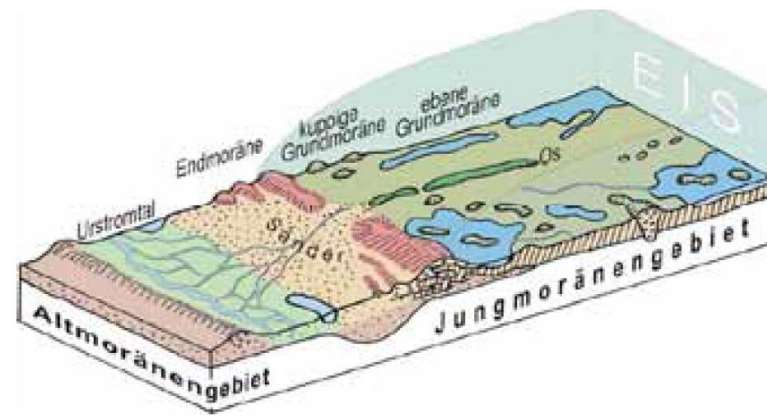


Diagram above shows: Topography of the glacier areas, Geoportal Berlin.



Map on the right: Geological map 1874-1939 Geoportal Berlin (adapted bgmr)

Good to Note Fact: 03

Land Use Plan 1997

Area development planning Tempelhof 1997- utilization concept (District Office Tempelhof-Schöneberg, FB Stadtplanung)

In the BEP for Tempelhof, Tempelhofer Damm plays a central role as a shopping street. Its image enhancement and strengthening in its function as a supra-district supply center is considered necessary. The improvement of the public outdoor space, an increase in the range of services and the further development of the social infrastructure in the area in question are also named as important goals.



Current Land use plan Proposal

Planwerk Südostrum (Geoportal Berlin).

According to the assessment of the plan, it is necessary to examine further development possibilities in order to achieve a permanent strengthening of the Tempelhofer Centrum at this point. The urban structure east of the Tempelhofer Dam is presented as "slightly compact". However, the supply and infrastructure are well connected in the entire area and "form suitable conditions for urban living and compatible working". A development and re-densification of the area east of the Tempelhofer Dam is accordingly considered possible and advocated to strengthen the "immediate catchment area for the centre".



Vision for Urban Transformation

As we conclude from the development proposals and facts about this quarter, It is quiet evident that although there is a high potential for it to transformed into a new Berlin centre. The area demarked by the city council seems to be very reserved.

Thus, this thesis intends push out the defined boundaries in order to reach the full potential of the site and for it to be called a new city centre.

This can be possible only by reforming certain areas to make room for the new. So the following four strategies are intended to create more space for the people and their activities.

Creating more space for Living (Housing) in the areas. The increased density of people in this area will mean- utilization and optimisation of land value.

Alternate mobility plan is intended to minimise the car dependency. This would help to provide more space for bicyclers, pedestrians and thus encourage walkability in the area.

Recreation places for all age groups and genders highly important and shall be given more weightage in the development plans.

Place for working is also important and should relate to the cultural identity of the city as well as Tempelhof region. So the intention is to create new nodes of interest in the area for future socio-economic benefits.

Key questions asked:

What can attract more people to live in here?

How to make it more liveable?

What can be done to reduce Car use?

How the self- financing & affordability models can be implemented here?



The UN Sustainability Development goals that were specifically taken into consideration while formulating the planning strategies for the area.

Development Strategies

DIVERSIFICATION

- Creative ventures
- Cultural Identity
- Local income generators
- New nodes of interest & Investment

LIVING

- Housing Densification
- Variable living
- Housing Cooperatives
- Affordability & Diversity

RECREATION

- Public Realm
- Ecological Connections
- Community gardens
- Water front development

WALKING

- Accessibility to all areas
- Walking ease to Public Transportation
- Bicycles & Pedestrians
- Parking Houses

Current Area of Development

The municipality intends to improve the public buildings and basic infrastructure in the zone marked below. Which seems more of an missed opportunity, as this area definitely has much higher potential of development and densification. In my opinion this shall be considered just as Phase 01.



Proposed Area of Development

The thesis proposes to focus on this larger context, marked below. This can greatly benefits this area to reach its full potential in order to serve as aa to be the New City Centre Berlin. A sustainable approach that encourages recycling of the brownfields can indeed connect the loose ends thereafter improving the land quality.



Current Land use Diagram: The boundary marked (in black) is the one proposed by the municipality. One can note the clear difference in the Housing density and development of the eastern to west side in the area. Despite of the Heritage parks and allotment gardens, there is still land that can be utilised for housing densification in the area.



Diversification

Proposed land Use Plan: The intention is to propose a diverse densification in the area. So the existing industrial backyards and parking zones .are proposed to be intervened in order to have a better mix of activities and people around in this area. Further north and south (lighter shaded marked areas) shall be considered as Phase 03 development.



- Housing
- Institutional Use
- Commercial & Mixed Use

Housing Potential Site



Exiting Housing



Urban Renewal zone defined by Municipality



Current Housing Densification Site: As per the Urban Housing development plan 2030, the housing density to be achieved in this area is minimum 200 Apartments. Although the site actually permits to further raise the bar as it has been highlighted that many areas around the proposed site have potential to be developed into housing or mixed use functions.



Living

Proposed Potential Sites for Housing Densification: The areas for functional transformation into housing are highlighted in yellow here. Divided into 2 phases, as follows: Phase 01, is the already identity site by the municipality as mentioned earlier. Phase 02, is currently the industrial backyards and is mostly under utilised land. This strategy will help in making room for a higher density of apartments.



Disconnected Green assets: This shows the missing links in the area that need to be connected, improved and redeveloped. Preserving the heritage parks. Already there is a preservation going on for the frencke parken Budolfi Square's current function as a parking space will be rebuilt so that all parking takes place underground while the citizens occupy the new green urban space on top.



- Heritage Parks ■
- Allotment Gardens ■
- Other Greens ■
- Teltow Canal ■

Recreation

Proposed Ecological Corridors: New industrial areas, attractive homes and inviting urban spaces in green, lush surroundings will set the framework for the new activity-filled city square and the surrounding areas will always be buzzing with life.



Current Condition: Good Public transport but missing street network. Identified here are the missing links in the area that need to be connected, improved and redeveloped. The pink dots are the bus station, the bright blue are the U-Bahn station (Subway line) the green is the metro (S-bahn) service in close proximity.



Walking

Potential Pedestrian Accessibility Plan : The intention is to reduce car dependency in this new centre. Restricted vehicular lane as well as pure pedestrian street network must be created in this area to promote walkability. This can also be a test bed in comparison to all the other development proposals.



CHAPTER 05

Making Room

In this chapter the Design interventions are documented. It proposing is transform the **Industrial backyards into Liveable Neighbourhood**. This is comprehended by the idea of creating room for “new” habitable spaces with the strategic planning towards **greenification** and **densification** of the area.

Further the chapter explains how this development model can be made affordable to people from various walks of life. The new models of living such as variable apartments are a part of this **urban renewal proposal**.



As highlighted here, this pocket in the quarter is chosen to be explored for this thesis- design proposal. The reason are as concluded in the previous chapter (04). This part of the Tempelhof district centre has been ignored from development plans and have remained under- utilised for many years. This urban transformation proposal can greatly benefit the **Neue Mitte Tempelhof**.

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Tempelhof
Field

Allotment
Gardens

Animal Burial
Tempelhof

PROPOSED SITE OF
INTERVENTION

Teltow
Canal

Tempelhof
Hafen

Aerial Image Reference: Unlizenzierte Musteransicht Bild ID 159593 ©
euroluftbild.de/Robert Grahn

Current



Aerial Image Reference: Unlizenzierte Musteransicht Bild ID 98359 © euroluftbild.de/Robert Grahn

Concept



Image: Proposal for the urban transformation

Reuse and refurbish the brownfields



Surface Parking




As explained in the site analysis in chapter 03, the biggest threat in this area is unregulated surface parking. The industrial backyards are not only privatised but also harming the ground/ soil conditions in the area. It is identified that a multi-level car parking houses in the area can ease the problem and also free this land for redevelopment.

Existing Businesses

Currently the majority of businesses that exist on this site are related to Car repair/ service/ spare parts or Bus parking facilities and some storage houses for tile manufactures (Image on the right as one of the examples). It was noticed that the quality of the architecture and building material is not very relevant to the rich historic context of this site.

Potential for refurbishment

As marked in the drawing on the left and also in the image on the right hand. Low density is observed in the area, even with the new office or industries in the area. The design proposed to use the roof of these buildings as a part of densification strategy. This will allow opportunities for shared cost and benefits

-  Surface parking
-  Businesses proposed to be moved
-  Buildings with potential to be refurbished



Retaining the existing qualities



Protected Buildings

As you can see in the image on the right hand. The residential buildings from the times of reunification of Berlin. As mentioned earlier the sloping roof from 1960's were transformed into additional floor. These form a very important context to the site with high historical value and thus shall be preserved.

The image on the bottom right highlights wide central green that has a high potential to be connected and opened up for an active urban life.




On the left the building complexes marked with 'H' is the former military hospital which is now an actively used public Hospital facility. This complex are also of high historic value and an added advantage to the future residents in the area.

Commercial building in good condition

There are some newly refurbished and other existing commercial buildings (majorly office spaces). Some of them also form a significant landmark of the area. These shall be preserved and adapted according to the overall Land use proposed for this area.

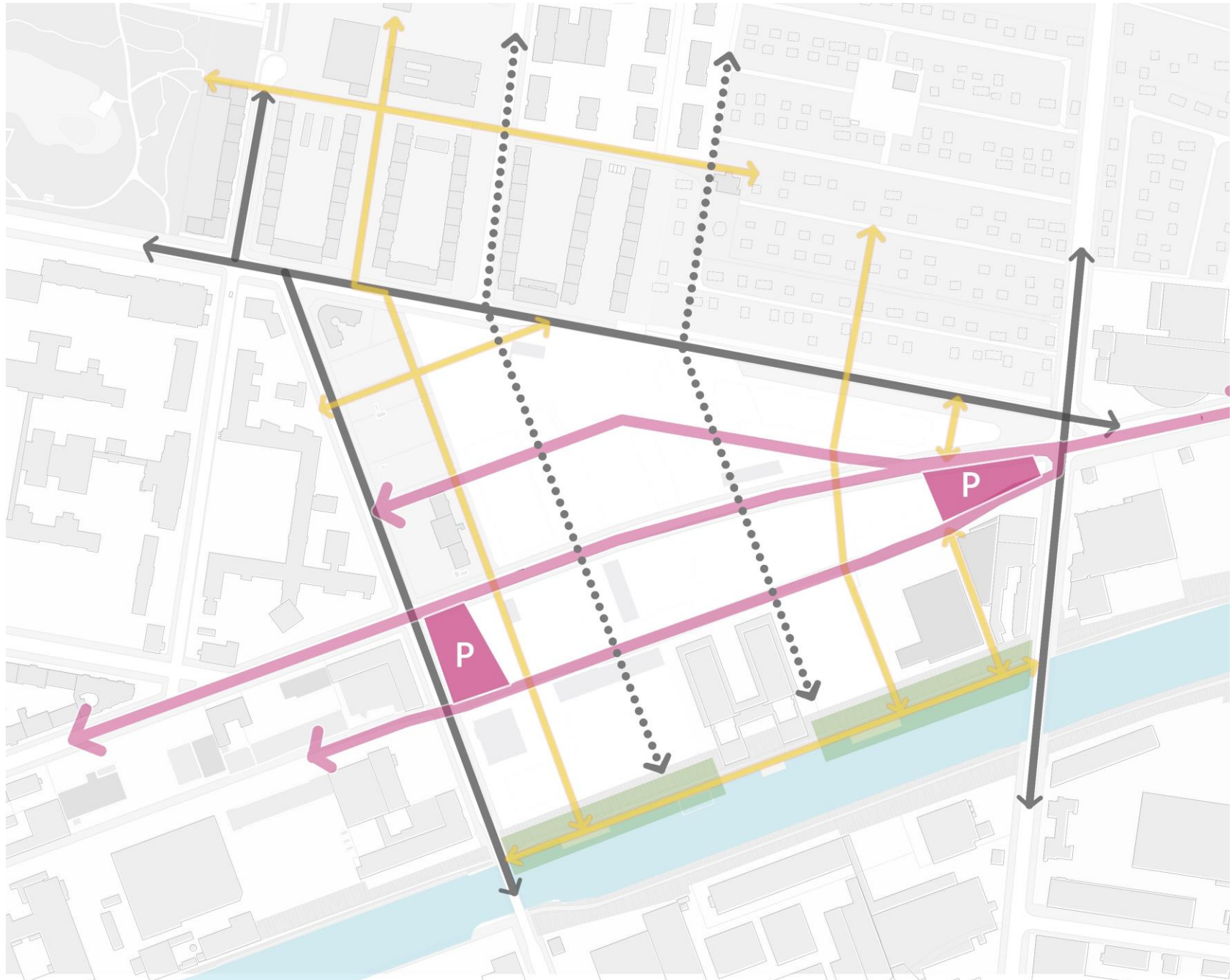
Buildings to be relocated

As mentioned earlier the poor industrial buildings are proposed to be relocated to another suitable location in the city.

-  Buildings marked as protected/ Historical importance.
-  Good commercial buildings
-  Poor industrial conditions



Accessibility and Integration



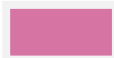




The various missing connections are mend to make room for people to walk, bike and roam freely. Re-imagining the street section for a typical car oriented street to a slow moving traffic or restricted vehicular lanes is a very important strategy for the urban renewal of this area.

Bicycle & Pedestrian Network

The diagram on the left shows how this strategy can encourage the walkable and bikeable lanes in the area. The image on the right is from Vallstad by Okidoki architects, as an inspiration these pedestrian connections proposed in the area.

Parking Houses that offer more

This is proposed as an alternative to the surface and on street parking in the area. But also at the same time these parking houses shall be seen as integral part of the neighbourhood. So, the ground can be used for supermarkets and other stores, whereas the roof becomes as public park. This concept is derived from the Nordhavn in Copenhagen by JAJA Architects (as shown in the image on bottom right).

-  Multi level parking house
-  Vehicular streets
-  Restricted vehicular streets
-  Active streets with slow moving traffic
-  Only Pedestrian movement allowed



Redefining the Land use






Dedicating 40% of land use for Housing

The focus is on low-cost high-quality homes based on standardised elements, of housing, gardens and public spaces. Whether it be students or the elderly; individualists or large families. The intention is to bring in diversity in the area and, unlike in most residential area, gentrification or community isolation shall be avoided. This development can invite group of people that are in vulnerable conditions with ongoing gentrification of many neighbourhoods in Berlin.

Making room for creative minds

Remodelling the old industrial backyards into new nodes of interest and investment. The intention with this proposal is to re-invent this area to be suited for creative ventures, artist and small scale green businesses leading to a sense of community in the area. This will also help to integrate well with Berlin identity as Cultural capital of Germany.

-  Housing- Living Use
-  Mixed- use (mostly work related places)
-  Commercial Use



MVDRV's partnered with Traumhaus- Housing project at Funari, one of five districts in a major re-development of the Benjamin Franklin barracks in Mannheim, Germany.



Life to Industrial backyards NDSM, Amsterdam.

Green and Blue Structure



Participatory Horticulture

The intention is to create a strong sense of community in the area. Currently its quiet separated with disconnected and narrow streets. The aim is to bring children and adults closer to the topics of ecology, sustainability and healthy nutrition, which is why we plan and implement farm gardens for educational institutions, social institutions or housing associations in and around Berlin.

For us, participatory horticulture means the joint planning and design of the garden area, taking into account all future user groups. Together we want to create gardens that are individually adapted to the wishes and needs of the respective gardeners' group.



Community gardens- Himmelbeet Cafe, Wedding, Berlin

Life along Teltow canal

The water front at the Teltow canal edge is proposed to be opened up as public realm. This can draw people and various activities to this new neighbourhood. Its seen as a diverse, mixed city with room for everyone. In order to understand the culture and use of such industrial canal edge in Berlin, some of the similar cases were closely observed for inspiration. One such example is **Club der Visionare**- is a rustic and understated spot between Kreuzberg and Treptower Park. It has a small brick building, with offices upstairs and a dance floor downstairs. Most attendees spend their time standing on the wooden deck outside, or sitting beneath the weeping willow that hangs over part of the club.

Another example taken into consideration is the water front development at **Nordhavn in Copenhagen**. Its a harbour area with free port status now converted into a city with independent neighbourhoods, islets and canals.



Club der Visionare, Treptow, Berlin

Affordability & Diversity



Shared ownerships




There are businesses in the area that can benefit from the new development proposal. Certain buildings can be refurbished or have a huge flat roof that can be built-upon. The intention is to benefit both the current and future users. So a shared ownership concept can help in improving the current situation. Also these will be mixed use functions which can promote co-work or co-living culture in the area. One such upcoming examples is on right.

Housing cooperatives

Living self-organised- acting in solidarity! Community financed or self-organised house projects that intend to be removed from the real estate market. This is actively practised in Germany and can be useful model to make this development affordable for many. One such housing cooperatives is mentioned on the bottom right.

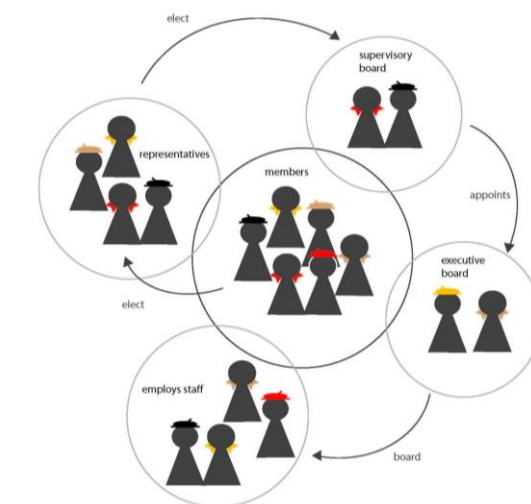
Purpose built rentals

The aim is to make this urban renewal is also to serve the demand of rental housing in the city. The intention is to not develop this area with purely profit driven development. In order to do so, there are certain housing that shall be built with rental purpose. Such as, student housing, Housing for Elderly- encouraging the concept of Variable Apartments.

-  Shared ownership
-  Housing cooperatives
-  Purpose built rentals

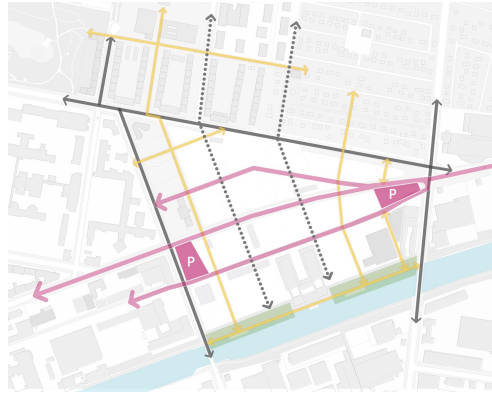


German retailer Aldi set to build 2,000 homes above its Berlin stores
Amid intense rivalry in the grocery business, Aldi Nord says it wants to put apartments above some of its supermarkets. Real estate in the German capital is at peak demand, amid high immigration and a lack of new homes.



One such Housing cooperatives in Germany

Accessibility & Integration



Redefining the Land use



Green and Blue Structure



Affordability & Diversity



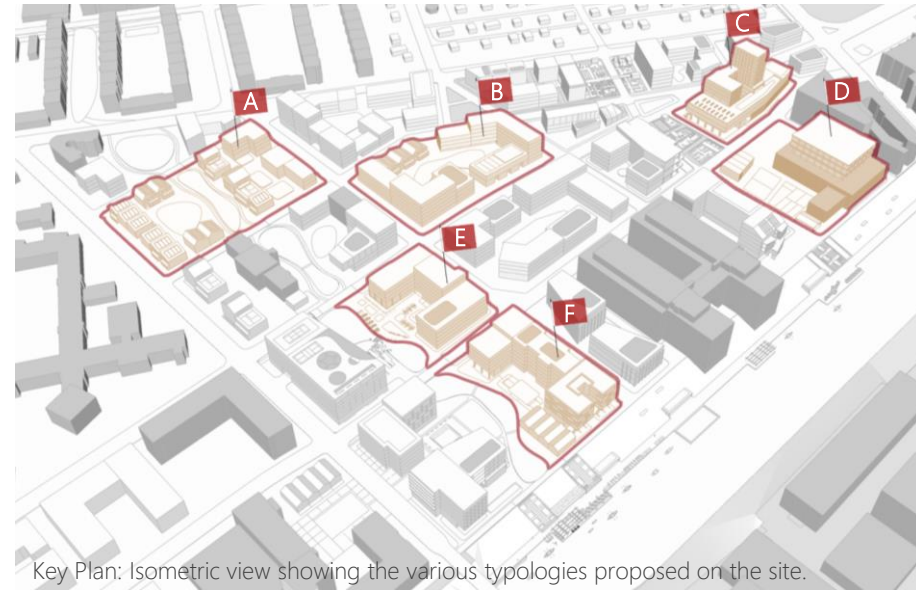
Typologies



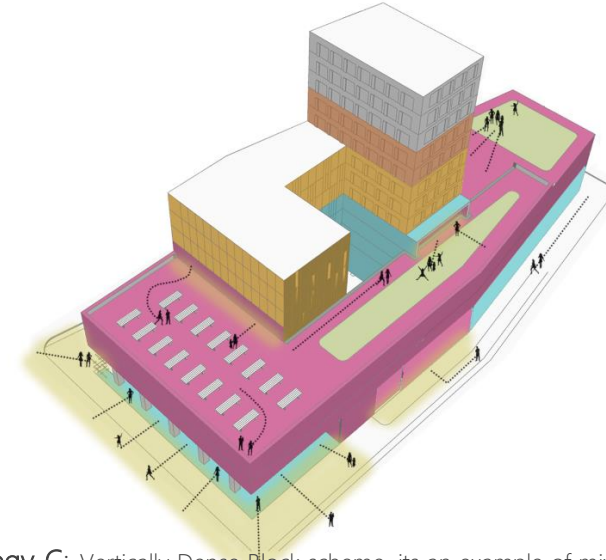
This ties back to the idea of a housing puzzle, as explained in chapter 01. How these overlaps are used in the design proposal is shown here, in these diagrams.

The site is composed of various typologies that intend to achieve social and economic sustainability to the neighbourhood. The idea is to bring together people from various walks of life & economic background to live in harmony.

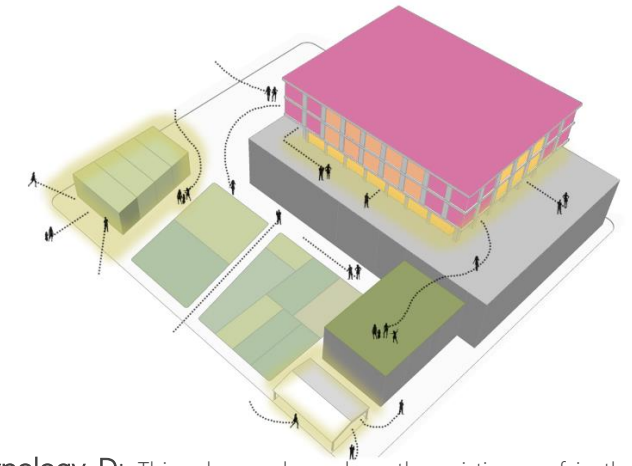
These typology diagrams highlight the inter- relation of ownership with the public functions. It is considered that the various public space, parks, common green shall be kept accessible for all. The idea of privatisation and profit building is challenged with the help of varied ownerships of the land/ plots as well as individual building blocks. This approach addresses the upcoming trends in urban living homes- to bring the much needed reform in our society.



Key Plan: Isometric view showing the various typologies proposed on the site.



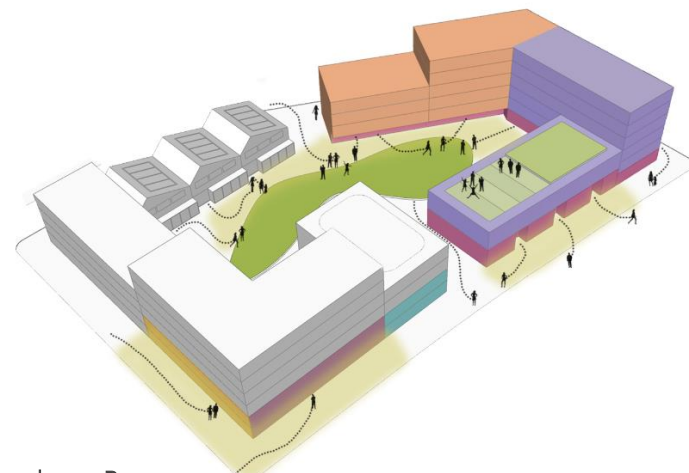
Typology C: Vertically Dense Block scheme, its an example of mixed land use where the podium offers public functions and the varied height towers offer place to work & live. Also east side of the block is planned as a multi-level car park with an active public roof.



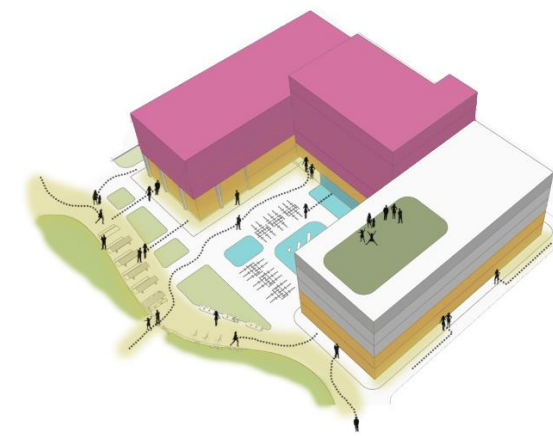
Typology D: This scheme shows how the existing roof in the area can be made vertically dense. At the same time, these new top up blocks can offers exciting perspective to the public spaces. Shared ownership can make this happen for real.



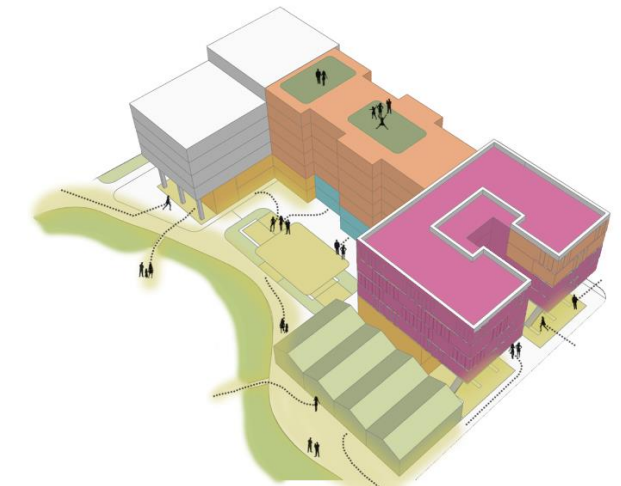
Typology A: This courtyard scheme that mixes the private residential blocks with housing cooperatives and rental apartment block. The central green becomes a semiprivate areas and thus prevents the privatisation of public space.



Typology B: Courtyard scheme where different ownerships come together with the central common space. Also the outer edges of these blocks shall be made as public functions or services to keep the streets and corners active.



Typology E: Open block scheme that promote the variable living apartments. The ground floors become active public functions, such as co-work spaces and restaurants or even Day care centres. The shared ownership of these block allows economic sustainability.



Typology F: This complex dense scheme is located at the canal edge. Thus to make it affordable, certain floors shall be reserved for social housing. This is only possible with shared land ownership, where the expensive apartment owners bear the common maintenance expenses.

Site Section AA



Intention is to show, how the housing diversity shall overlap with the in-between spaces/ public functions. The colour coding is based on the housing puzzle which has been described before in the chapter.

The proposal explores the possibilities of variable apartments in the area. For instance, some floors which are marked as affordable can be made possible if shared ownership, rental systems are promoted. This can allow different generations to live together in the same building. Diverse income group people can also help this area to become affordable for those who are not that privileged or too young to buy an apartment. Housing cooperatives shall be equally given importance in the area to bring in a strong sense of community.

Moreover, the ground floors shall be kept for public functions such as co-work spaces, day care centres, etc.



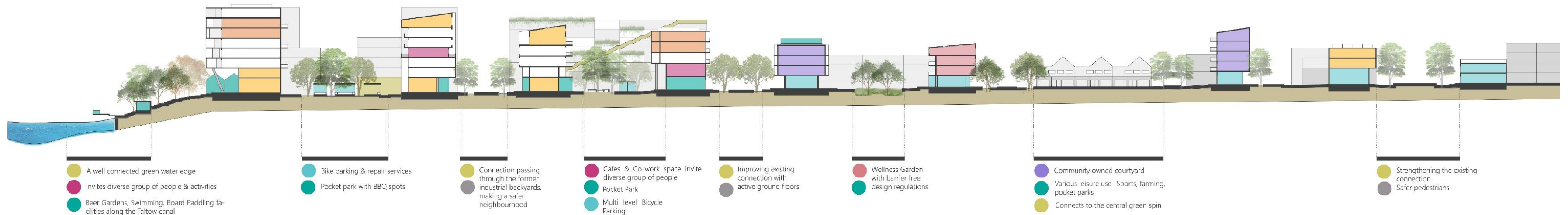
Dinkies, Singles and New retired.
A variable living concept to cater diverse needs



Newly Retired, Young family with Kids and Elderly & Handicapped.
Live together as members of a housing cooperation.



A traditional family rents to young creative couple.
They collaborate to setup a local business.



Site Section BB



Intention is to show, how the housing diversity shall overlap with the in-between spaces/ public functions. The colour coding is based on the housing puzzle which has been described before in the chapter.

This section particularly shows how the existing buildings are made a part of the new development proposal. This can be made possible with promoting shared ownerships. Certain building can be vertically densified and the main land owner can have a profit margin in the construction above.

This can significantly reduce the living cost of the apartments and allow this prime location to be affordable.

Also to note is the heights of the buildings along the water edge are proposed in coherence to the existing context.



Key Plan



Affordable for Young individuals & couples



Invites Urban Farmers



Eco-Families supported by Housing cooperatives



Ex-pats & higher income tax payers compensating the Land prices



Rental Student Dormitories at prime location



Design Details 01

Zoom in plan explaining the central green spine and how the ground floors of the neighbouring buildings will help in creating an active public space. Pocket parks, bicycle parking and outdoor gym are some of the key highlights in the area. Also to note the small rooms within the central green are made with a purpose of having varied choices and perspectives in terms of how public space can be utilised.

The section below intends to show the mix use of a parking house. Where the ground floor can be used as supermarket or recycling centre, one floor level dedicated for bicycle and car-share parking. The roof becomes accessible as public park. On the other hand the building has a co-working space on the ground level and living spaces above.



Detail Section CC





CURRENT : Poor Ground Conditions

As this area have been majorly used for industrial purpose and parking facilities. The ground condition is very poor and adulterated. This also becomes an issue in heavy rain events.



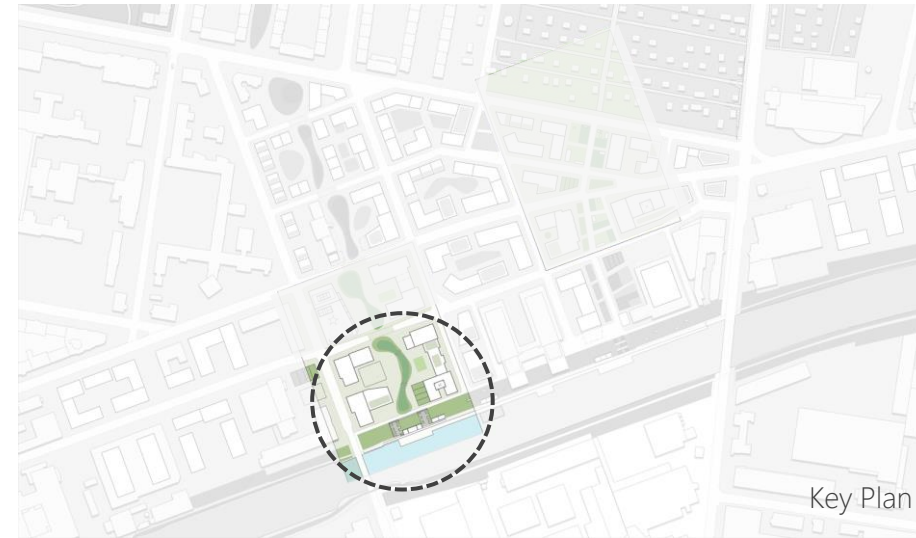
PROPOSED : Central Green Spine

The central dense green spine in the area is proposed for multiple reasons. First: The sponge areas are created to improve the ground quality and to complete the missing link in the natural water drainage of the site. Secondly it will invite diverse group of people and activities in the area.

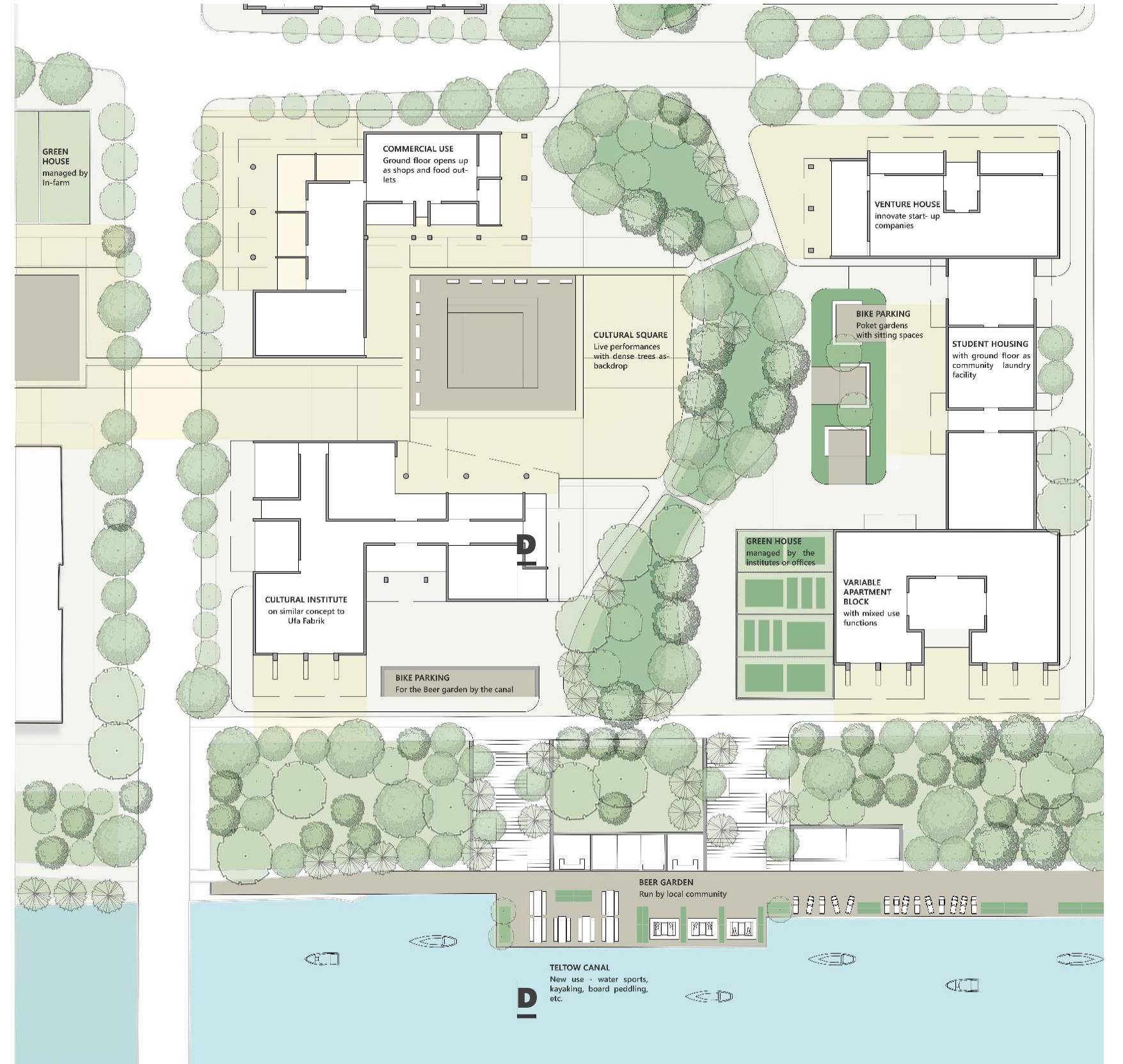
Design Details 02

The zoom in plan here explains how the water edge can be made accessible for public use. The central spine here forms a backdrop for various cultural activities and gathering in the square. The idea is to connect the existing creative ventures in the area to this new development. This will enhance and flourish the green-tech industries in the area, such as- Indoor Farms.

The section below highlights the stairway that lead down to the water edge and connects to the boards walk. The idea is to make a way through the dense green and thus even the building edges are proposed 10 meters away from the green belt along the canal.



Detail Section DD





CURRENT : Retaining walls & services

The water edge is inaccessible and offers nothing for the public use. The retaining walls were recently built to protect the area from water level rise.



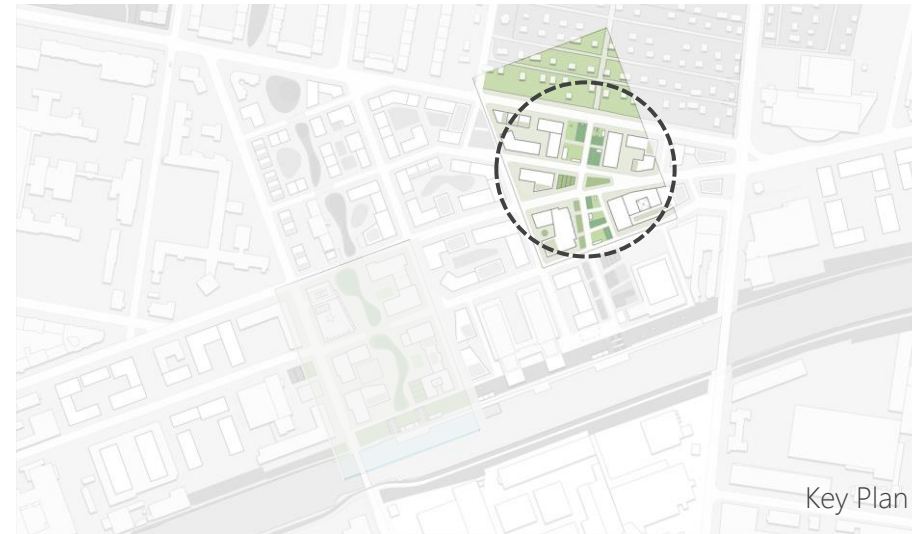
PROPOSED : Access to water edge

The water edge is activated with mix of commercial and leisure facilities- Board walk, Beer gardens & Water sports. This can help to boost the local economy of the neighbourhood and give it a new identity.

Design Details 03

The zoom in plan here shows the restricted vehicular connection between the existing allotment gardens and the new proposed development. The intention is to open up this area for participatory horticulture activities, which add both ecological and social values to the neighbourhood. The ground floors of the surrounding buildings are such that they support this urban farms.

The section below shows how these participatory urban farms can activate the public space and street culture. The podium roofs and ground floors of the buildings also offer relative functions such as cafeterias, organic food restaurant and supermarket. Also the raw ground can help in ground water recharge as well as improve the soil quality in this area.



Key Plan



Detail Section EE





CURRENT: Restricted Entries

The Allotment garden are centrally located in the area and yet very disconnected for public use. Even though they add ecological & social values to the neighbourhood, the high/dense fences makes them to be perceived as private gardens.



PROPOSED : Participatory Horticulture Track

This invites larger group of people and forms a sense of community in the area. The intention is to connect this with the main and secondary streets network. It also promotes walkability & biking ease in the area. The inner courtyards opens up to this track and the adjacent buildings can be support functions such as storage places, cafes and restaurants which promote vegetarian diets.



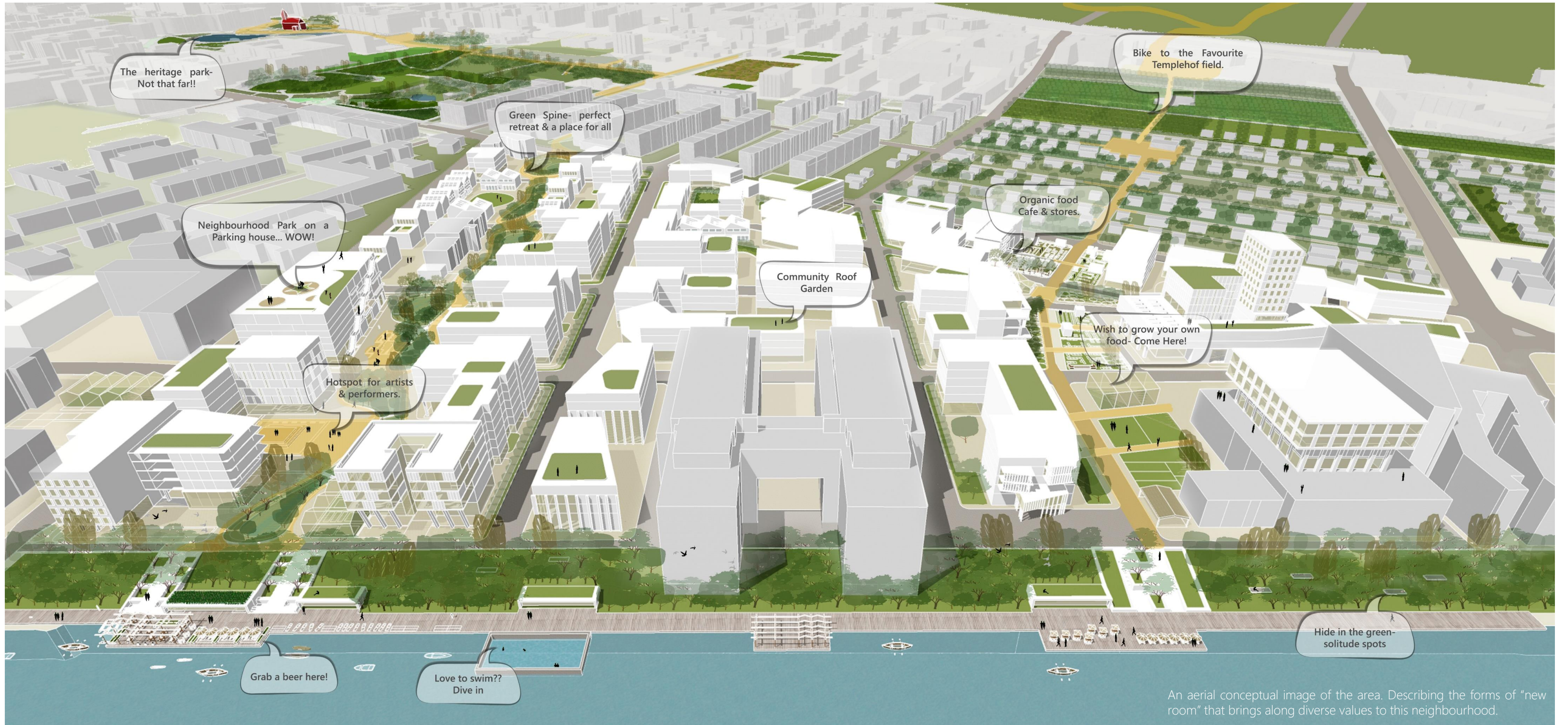
CURRENT : Abundant Water Edge

The Teltow canal-edge is currently inactive in this stretch and is blocked by the industrial backyards. Currently this route is rarely used by private boats.



PROPOSED : The Active Water Edge

The bank of Teltow canal is proposed to be accessible and active with a mix of leisure facilities, such as- Beer garden, water sports and spa. A place for both local and visitors to experience the relaxed & creative culture at Berlin. The water quality shall also be improved and monitored regularly.



An aerial conceptual image of the area. Describing the forms of "new room" that brings along diverse values to this neighbourhood.

Conclusion

This thesis project was initiated with my personal motivation to find rental housing at a good location and reasonable price in Berlin. And of course during the time of COVID- pandemic, a lot of things have drastically changed in the way we live or preserve a “home” especially the hard hit mega cities. Today, my house is an office desk, a window in my room is my peaceful corner, the common room is the entertainment centre, the shared kitchen is my social space and my suitcase is my wardrobe. Question is- how we preserve the space-what’s more to the less we see? It is quite evident that the more minimalist lifestyle we choose to live, the less harm we cause to our environment and humanity as a whole. This design proposal have been greatly influenced by my own journey, thoughts as well as desire of bring the sense of solidarity in our society.

I believe, we need to bring the much needed change in the way we use space and resources in all respects. The urban development shall not only be concerned about meeting the endless capitalist demands but also to revive the sense of co-existence in the way we design or conceive urban spaces. We need to develop new strategies with sense of gratitude rather than capitalist notions of monetary benefits.

This proposal, even though is a site specific design but the solutions stated here in terms of affordability, shared ownerships, rental housing systems and variable apartments are applicable to various communities and cities across the globe. The idea of bring people together, no matter what economical or social status shall be the driving tool in any such neighbourhood development. The concept of ‘making room’ comes from these value systems of adjustments, acceptability and adaptability of space & resources- in all spheres of life.

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Appendix

Important Notes and documents that support the research and design proposal.

01 Berlin Facts (173-74)

02 Urbanism & Housing (175-76)

03 Current Proposals (177-84)

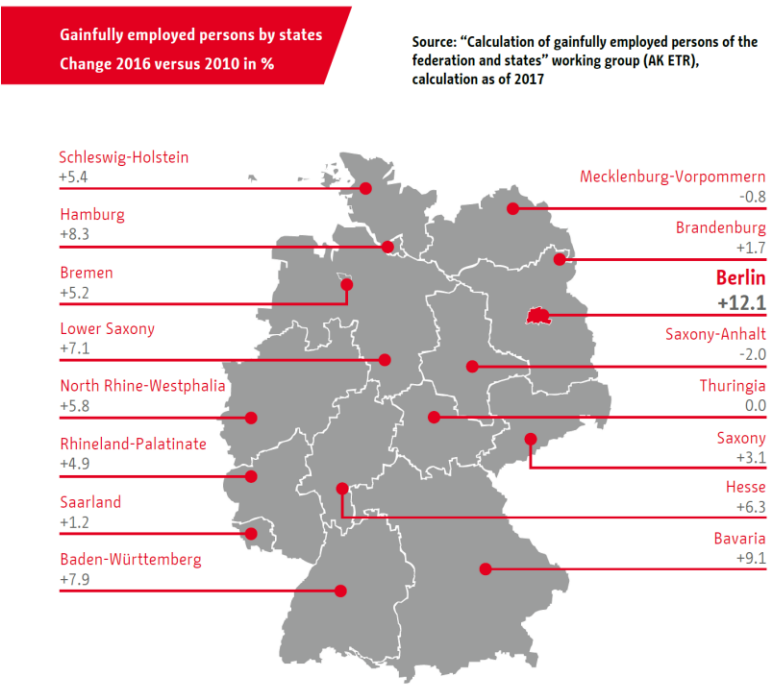
04 Planning Process (185-86)

05 Urban Design process (187-88)

06 Design Development (189-90)

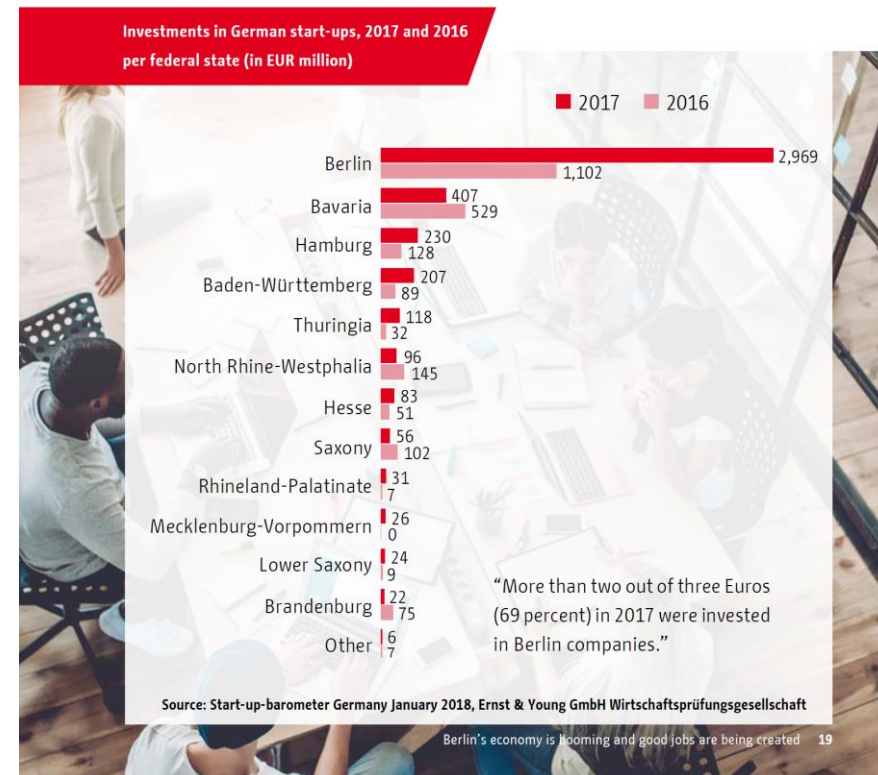
07 Final Presentation (191-94)

Extracts from the Berlin Senate Brochure, August 2018. This brochure is part of the public relations work of the federal state of Berlin. Available at: presse-information@senatskanzlei.berlin.de, www.berlin.de



which is proving itself as a stable and future-proof sector against the background of the ongoing digitalisation processes, acts as an important multiplier for the economy as a whole. That is why revising the industry master plan is an especially high priority. A key aspect here among others is the future availability of industrial real estate, an essential prerequisite for Berlin as a growing business location.

Berlin as a start-up leader counts on future industries: energy management, healthcare, mobility, and digitalisation. They harbour a great deal of potential for value creation – but also for a greening of Berlin's economy.



Berlin is Germany's start-up leader

According to the German start-up monitor 2017 of the Bundesverband Deutsche Startups e.V., Berlin is Germany's leading start-up hot spot. Young tech companies and start-ups find good founding conditions and growth opportunities in Berlin. The competitive capital market and well-trained employees in the digital field make the capital city attractive. Companies from across Germany are drawn to Berlin to collaborate with local start-ups.

Germany's largest hubs for finance technology (FinTech) and the Internet of Things (IoT) are developing here. The effect of networking between start-ups, science, SMEs and large enterprises radiates far beyond Berlin, attracting talent and players from all over the world. New business areas are being created through digitalisation. They are of crucial importance for future production structures in particular – keyword Industry 4.0. Berlin's industry,

WHAT SETS BERLIN APART

Strong economic growth: At more than three percent growth per year, Berlin ranks at the top of the federal states. ("State Macroeconomic Accounting" working group)

Germany's hot spot for start-ups: More than 500 start-ups are founded in Berlin each year – approximately one every 20 hours. (Berlin Business Location Centre – Start-Up Metropolis, businesslocationcenter.de)

Europe's greenest capital city: Berlin features extensive forests and lakes, nature conservation areas, parks, garden plots and urban gardening projects. Berlin holds a leading position among European cities with 438,000 trees along its streets. (Senate Department for the Environment, Transport and Climate Protection)

Germany's number 1 city break destination: In 2017, around 13 million visitors came to the city. They stayed for 31 million nights. (visitBerlin, 2017 tourism statistics)

Space for creative minds: The creative industry is among the fastest-growing sectors. With nearly 140 companies and over 2,000 employees, the games industry is the leader across Germany. (Study of the computer and video game industry in Germany conducted by the Research and Competence Centre Audiovisual Production at the Hamburg Media School, 2018)

Outstanding networking: The public transit network covers a total route length of more than 2,600 kilometres – approximately equal to the distance from Berlin to Lisbon.

Berliner Verkehrsbetriebe counts more than a billion passenger trips per year. (Senate Department for the Environment, Transport and Climate Protection, Berliner Verkehrsbetriebe (BVG) 2018 figures)

Attractive study and research location: Berlin is high up in the QS Best Student Cities 2018 top 100 ranking with 7th place. No other location in Germany attracts more international students and researchers. (DAAD overall subsidy ranking, Alexander von Humboldt Foundation subsidy ranking)

Intelligent urban development: Berlin takes 13th place among the 100 smartest cities in the world, and 1st place among German cities ahead of Hamburg and Munich. (Smart Cities Index 2017, EasyPark Group)

Culinary diversity: Berlin has the most star-rated restaurants in German-speaking regions – 28 stars awarded to 21 restaurants. It also has more donair shops than Istanbul, around 1,600 in total. (Guide Michelin 2018 Germany, visitBerlin, Berlin in numbers)

Good quality of life: Berlin is among the world's most liveable cities, taking 13th place (out of 231) – ahead of Paris, London and New York. Political, social, economic, environmental, health and education-oriented aspects were evaluated among others. (Mercer Quality of Living Ranking 2018)

Future-oriented: Berlin is among the five most future-proof metropolises in Germany. Its dynamics, internationality and accessibility are convincing. (HWWI/Berenberg City Ranking 2017)

Economy (Economic), **Capital city**, **Dynamic**, **Liveable**, **Sports**, **Home**, **Start-ups** (Smart), **Popular** (Development), **City of culture** (Digital), **Growth** (Important), **Investments**, **Science**

Extracts from the Stadtentwicklungsplan Wohnen 2030 KOMPAKT : December 2019. The Senate approved the Urban Development Plan Housing 2030. This brochure makes its core contents accessible to a broader public. Available at : www.stadtentwicklung.berlin.de

Introduction and key statements

Why a new Urban Development Plan for Housing?

Berlin is growing rapidly. Housing has been a central theme in the city for years. In 2010 and 2011, after many years of stagnation, there were signs of new population growth in Berlin. In 2012, therefore, work began on the Urban Development Plan for Housing 2025 (Stadtentwicklungsplan Wohnen 2025, in short: STEP Wohnen 2025). On 8 July 2014, it was passed by the Berlin Senate. Since then, growth has continued to accelerate and its momentum has stabilised at a very high level.

From 2011 to 2016, Berlin grew by around 245,000 people. This corresponds to the population of a large city like Kiel. Since then, the population has continued to grow by the size of a medium-sized town every year.

During the long period of stagnation that preceded this, residential construction only took place at a very low level. It was therefore not in a favourable position to react to the sudden population growth that began in 2011. Initially, the increase was offset by the relatively high vacancy rate. By 2016, however, a backlog of around 80,000 apartments had built up. The consequences are apparent everywhere. Apartments have become a scarce commodity; real estate prices and rents are rising rapidly. Meanwhile, almost a third of all households have less than 1,300 euros per month – despite increased average incomes. The gross cold rent burden rate is almost 30 percent on average.

The real population development has thus clearly exceeded the growth assumptions of STEP Wohnen 2025 (in spite of the fact that some had criticised them as being too optimistic). It has become indispensable to adapt STEP Wohnen to the new population dynamics.



What is the role of the Urban Development Plan?

The task of the Urban Development Plan for Housing (STEP Wohnen) is to determine how high the demand for housing is, how much new construction is necessary to meet this demand, and where there is suitable potential for it. The aim is to provide sufficient space for the construction of new housing in line with demand in the entire urban area by 2030. STEP Wohnen 2030 names the main focus areas in the city. Development should take place in these focus areas as a matter of priority because conditions here are favourable and urban development policy criteria are particularly relevant. In addition, the plan assesses when the developments are likely to be realised and identifies suitable instruments and measures to implement the necessary housing construction in line with urban development policy objectives.

STEP Wohnen is an impulse generator and, at the same time, a precise description of the state of a continuous development. STEP Wohnen will be reviewed and adapted at appropriate intervals in accordance with the dynamics of the development.

The process of developing STEP Wohnen 2030 was supported by a monitoring committee of around 30 people from the housing industry, science, politics, administration, Berlin boroughs and urban social initiatives. Together with the Senate Department for Urban Development and Housing, the monitoring committee drew up the guidelines and accompanied the further procedure critically and constructively.

What are the key statements?

Berlin is growing and needs almost 200,000 new dwellings.

- An additional 194,000 dwellings will be needed by 2030. Over the next few years, the demand for new housing will be as high as 20,000 apartments each year. Only from the middle of the next decade will the momentum start to slow down.
- In order to ease the quantitative strain and dampen prices on the housing market, a prerequisite is to build additional housing in all parts of the city. This housing should be built as far as possible with a focus on public welfare.

Berlin has enough room for 200,000 apartments.

- STEP Wohnen 2030 identifies potential building space for around 200,000 apartments in a variety of locations, sufficient to cover the demand for new buildings up to 2030. About a quarter of these plots are owned by the state of Berlin.
- The starting point for determining potential is the Housing Construction Space Information System (WoFIS), which is based on the areas designated for housing in the Land Use Plan (FNP).
- The potential areas in the inner city are becoming scarcer. The outer city is thus gaining in importance as a settlement area.

- The Senate has designated 14 new urban quarters. Vibrant, socially and functionally mixed neighbourhoods closely interwoven with their surroundings are to be developed here. They require efficient transport connections, especially by public transport, and good infrastructure, including above all social and educational institutions, retail trade and services, and green spaces.
- In addition, many sites of housing potential of varying size distributed across the whole city contribute in considerable measure to new housing construction. The spectrum ranges from large transport and industrial wastelands to the further development of existing housing complexes and the development of attics in existing buildings. Thus, the focus is not only on fallow or vacant properties.



Key task: Activating housing construction potential

- The key task lies in activating the areas. This requires a joint effort by all those involved in housing construction: the private, municipal and cooperative housing sectors, the construction industry, public administration, policymakers and urban society.
- In order to activate the areas, STEP Wohnen 2030 sets spatial and temporal priorities for two types of development: the new housing construction to be carried out in the 14 new urban quarters, and the development of the housing stock in residential quarters that already exist. These are a group of around 30 housing estates slated for further development in two priority stages. In addition, all potentials for new residential construction are classified according to whether they can be realised in the short, medium or long term. Furthermore, the potential for public interest housing construction is highlighted.
- Various criteria must be used to further prioritise implementation. These include urbanistic integration into existing settlement structures, existing development, accessibility by public transport, a significant quantitative contribution to housing construction in the city, the significance of the housing construction to the common good, the state of planning preparation, the willingness of the owners to cooperate, aspects of the urban economy, environmental aspects, a balanced spatial distribution and others.

Housing should remain affordable.

- The construction of new dwellings in the public interest is a decisive prerequisite for affordable rents. Half of the new buildings required in Berlin are intended to be built as public-interest housing projects (around 100,000 apartments by 2030).
- The main partners in this undertaking are the municipal housing associations and building cooperatives. In addition, there are social and charitable institutions and private individuals who build housing that is oriented toward the common good. In order to support these actors, the Senate is further expanding its housing promotion programme.
- Nearly 80,000 dwellings of the intended 100,000 public-interest housing apartments are currently identified (46,000 through concrete projects by municipal housing associations or housing cooperatives and a further 33,000 on state-owned land).
- In addition to this reliably quantifiable potential, there are other publicly subsidised dwellings. Apartments built in areas subject to special urban planning legislation or within the framework of the Berlin model of cooperative building site development as rent- and occupancy-controlled apartments can also be included here. Their number is currently estimated at around 10,000 dwellings.
- In order to secure affordable housing in Berlin in the long term, the existing low-cost housing stock must also remain affordable, as it will still account for the largest part of the total stock in 2030. It must therefore be qualified and made fit for the future in such a way as to guarantee its affordability.
- An independent housing requirements report specifies which requirements exist in each segment.

The special importance of state-owned land

- State-owned land is decisive for the construction of housing for the common good. It is only these plots of land that the state of Berlin can use without restrictions and in a targeted manner so that public-interest housing is created along with the necessary infrastructure. This allows effective price-dampening impulses to be set. The scarce land owned by the state is thus gaining considerably more importance than in the last 20 years. Its activation is an essential key.

Inner-city development and moderate outer development

- STEP Wohnen is committed to the Leipzig Charter and thus to the principles of the compact European city and to the priority of inner development. Berlin's urban development is oriented towards traffic-reducing settlement structures with mixed use and attractive open spaces and towards equal opportunities, i.e. the possibility of social participation.
- At the same time, population growth also requires moderate external development, i.e. urban expansion on previously undeveloped areas in peripheral urban locations.

Quality living in the city needs variety, density, participation.

- Increasingly scarce areas of housing development potential and the focus on economical land use and cost-intensive infrastructural development make it even more important to use the areas efficiently through mixed use and higher density. This places special demands on the quality of urban planning and open spaces.
- Planning and building sustainable neighbourhoods requires sustainable urbanistic, functional, structural, ecological and design quality. Interdisciplinary urban planning competitions or cooperative procedures, design statutes and other measures are suitable for securing this quality. Above all, open spaces relevant to the urban climate must be maintained and qualified in their function.

NMT Current Proposal _ 01

Urban planning cooperative workshop procedure for Neue Mitte Tempelhof. This is one of the shortlisted proposal from various workshops and competition entries conducted by the municipality in last few years.

NEUE MITTE TEMPELHOF

URBAN COOPERATIVE WORKSHOP PROCEDURE
WORKSHOP # 1

IN THE MIDDLE OF TEMPELHOF

Tempelhof gets a new core - with clear edges and an open, lively center. Based on a holistic and site-specific view, all future uses are precisely coordinated. The edges on Tempelhofer Damm and Glöckstraße (five new blocks) are compact and form a clear, urban framework that is highly permeable due to new path connections. A diverse, green center is created within this frame. Differentiated new open spaces create a lot of space for public life, which is complemented by the new uses in the EC zone and underlines the central function of the New Center. On the Tempelhofer Damm, the educational building block and the town hall extension opened another urban square, which underlines the representative character of this place. The differentiated height development additionally emphasizes the center functions and serves as a guide. The EC zone is predominantly productive, with a variety of cultural, social, community and administrative uses.

The development of these center functions requires, in addition to the spatial-urban structure, a coordination of structural, functional and organizational specifications. We therefore differentiate between hardware, software and orgware and formulate rules that must be observed in the development of the new center in the sense of an integrated development process.

1 | HARDWARE

PRINCIPLES

QUARTERLY EDGE DEFINES FREE CENTER
The continuation of the Berlin block edge defines a clear edge to Glöckstraße and creates the green center to be kept free.

GREEN RING FORMS QUARTERLY BACKBONE
The Green Ring not only functions as a buffer zone, but also as an activation area for clubs and residents.

AREA COMPENSATION OFFERS NEW POSSIBILITIES
We reorganize the proposed casting of different uses and thereby create new development opportunities.

DYNAMIC DENSITY CREATES CENTERS
Centrality is formed through the superposition of different densities of uses and activities.

WAY FREE FOR GREEN MOBILITY
Pedestrian and bicycle traffic are given top priorities. A bicycle highway and new coverings of the Tempelhofer Damm represent important interventions.

QUARTER INSTEAD OF SETTLEMENT THROUGH CITY BASE ZONE
Balancing different commercial and non-commercial uses in the EC zone activates the neighborhood.

BLACK PLAN

STRUCTURAL PLAN

2 | SOFTWARE

The software relates to the question of what uses and functions will be located in the Neue Mitte Tempelhof. The cultural and administrative uses in the town hall and the new cultural and educational building block will be supplemented with commercial uses on Glöckstraße and productive, social and community uses in the new residential area. A special feature is the club house in the former library, which is made available to the existing and future clubs in addition to the neighborhood management and thus forms an identity-creating neighborhood center.

3 | ORGWARE

The orgware relates to the organization and administration of the new district. For the use of the active base zone and the public space with added value for the neighborhood, we propose an organizational and financing model that strengthens the networking of the different stakeholder groups and the initiative of the residents and promotes the implementation of their innovative usage ideas.

NEUE MITTE TEMPELHOF

URBAN COOPERATIVE WORKSHOP PROCEDURE
WORKSHOP # 1

2 | SOFTWARE

ACTIVATION BY PLACEMAKING

The "Tempelhof Tool" accompanies the change of the district and creates identity with new things. It is a mobile and flexible planning module that takes on the shape of an apartment house (e.g. in a converted container). It reaches through the neighborhood and always settles where new things are created and changes take place. The goal is to provide low-threshold access to current information about the development process. It acts as a contact point for (future) residents and interested citizens and is intended to stimulate discussions. The "Tempelhof Tool" is organized and operated by the district management, which is active from the start of the development process (see Orgware).

PROMOTE YOUR OWN INITIATIVE

There is one pre-construction site in the new residential area. Common areas provided in the EC zone, the use of which is determined by the residents. The rooms are intended for non-commercial, social occasions and offers, as a kind of extended shared living room for the residents. The neighborhood group of the construction field can submit their usage ideas for the common area to the neighborhood management in order to receive funding from the neighborhood fund (see Orgware).

CLUB HOUSE CREATES IDENTITY

The Eva-Maria-Bath house is used after the relocation of the library in a collaborative process involving the clubs in the neighborhood and the immediate neighborhood. It serves as the headquarters and location of the new youth leisure facility for district management. An immediate offer for everyone is created in the club house.

3 | ORGWARE

NETWORKING OF THE QUARTER

The District management (DM) accompanies the development process of the new center from the beginning and is essential for the networking of the different actors. The creation of synergies between the cultural, social, commercial and community activities represents a great added value for the neighborhood. The tasks of the neighborhood management include: a) providing information about current events, by operating the Tempelhof Tool (see below); b) Advice to residents; c) Abandonment of activation areas to clubs or residents; d) Organization of activation procedures for the three common areas in neighborhood groups, etc.

The District groups are initiated in the residential phase and each consist of approx. 5 to 10 residents who are responsible for operating the common areas.

FAIR FINANCING

The best compensation model regulates the uses and rental prices of the EC zone right from the start. A differentiated price model should enable non-profit uses that would have no chance of survival below market prices. A distribution is made between 3 rental categories: a) Market price - the local rental price for a shared pub for e.g. commercial use (approx. 12 euros/m²); b) Abator - a greatly reduced market price for profit-oriented businesses and uses (approx. 5 to 8 euros/m²), which are important for the neighborhood because they create a certain identity; and c) social - is a very affordable rental price for workshops, cultural initiatives and artists, non-governmental organizations, etc.

The District fund is a tool to promote activities in the fields of culture, sports and leisure. The financial resources result from the use fund from contributions from the property developer (e.g. one time fee of 500 euros per living unit), as well as from alternative current sources of income (e.g. income from renting the EC zone). In addition, excess income can be obtained from the rental of single flats to external users. Not only income and the use of common areas are made possible, but also activity fees, which are given to the discharging of a function of the unit.

TUNED DEVELOPMENT PROCESS

After the existing core has been reconstructed and renovated, the construction of the new center begins. The new residential area is not built, but first used during the construction phase of the new residential area and then as a club house. Construction of the new club house can be started earlier than planned because it will be built on a currently vacant area and initially as a stand-alone building. The integration into the new residential area starts about three years later, as soon as the existing city grid has been demolished. The Bathhouse home will initially be expanded in the existing building and integrated into the building area C after completion of the new residential area. In the long term, the service domicile is to be built on an assembly with a focus on multi-generational living by replacing. The new residential area is built in two phases. The first phase (BP 1 & 2) starts in 2024 on the existing city grid and prior use from 2024 and the participatory planning phase has been completed. The second section (BP 3) follows the relocation of the district management on Glöckstraße. The entire development process is done by one District management ecosystem, which receives a fixed location in the club house.

NMT Current Proposal _ 02

Urban planning cooperative workshop procedure. This is one of the shortlisted proposal from various workshops and competition entries conducted by the municipality in last few years.

GRÜNE MITTE TEMPELHOF Städtebauliches kooperatives Werkstattverfahren

Entwurfsleitende Idee
Das Tempelhof ist eine urbane Insel zwischen Altstadtbahn, A102 und Felber Kanal. Auf Teile des Tempelhofer Platzes sollen der alte Park und der Fließkanal beibehalten werden. Der Tempelhofer Damm soll eine große Einkaufszone durch bessere Verknüpfung und angrenzende Zugangsachsen kaputt gehen. Die grüne Mitte für Park und Spiel soll entstehen.

Städtebauliche Konzeption
Die städtebauliche Struktur soll von einem Konzentrat aus vier verschiedenen Bebauungsformen und einem großen Park umgeben sein. Die Konzeption soll die grüne Mitte als zentralen Punkt im Stadtteil etablieren. Einmal, Aktivität und Kommunikation fördert und gleichzeitig für ein gutes Stadtklima sorgt.

Freiraumkonzept
Das Konzept Grüne Mitte Tempelhof soll die Erhalt und die Qualität von bestehenden Freizeitanlagen sowie die Schaffung von neuen Freizeitanlagen in der Mitte des Stadtteils beinhalten. Nicht die neue Bebauung im Rathaus oder an der Götzstraße sind die neuen Freizeitanlagen, sondern die grüne Mitte. Die grüne Mitte soll aus einem heterogenen Freizeitanlagenangebot aus dem historischen Park auf der Westseite, dem historischen Park auf der Ostseite und einem zentralen, öffentlichen Park in der Mitte bestehen. Der zentrale Park soll ein öffentliches Gelände Teil des Parks. Die zentralen Freizeitanlagen werden von einem zentralen, öffentlichen Gelände Teil des Parks. Die zentralen Freizeitanlagen werden von einem zentralen, öffentlichen Gelände Teil des Parks. Die zentralen Freizeitanlagen werden von einem zentralen, öffentlichen Gelände Teil des Parks.

Nachhaltigkeit
Ziel der Planung ist es möglichst wenige Flächen zu versiegeln und viel Fläche für Park und Grünflächen nutzbar zu machen. Dieser Ziel soll durch eine hohe bauliche Dichte und Nutzung einer vorrangigen konstanten Struktur erreicht werden. Grün wird durch die Integration bestehender und Schaffung neuer, ökologisch wertvoller Strukturen (Grünflächen, Wasserflächen, Parkbänke) hohe Bedeutung bekommen. Dabei können die bestehenden Grünflächen als Ort der urbanen sozialen Lebensentwicklung eine wichtige Funktion übernehmen. Zum Nachhaltigkeitskonzept gehören auch die Erzeugung heutiger Parkanlagen und die Neubeauung der historischen grünen Dachflächen. Zur Optimierung im Verkehrsnetz wird bei der Planung der Entwicklung des Fuß- und Radverkehrs Vorrang gegeben.

Bürgerwünsche
Im Sinne einer hohen Akzeptanz und Nutzbarkeit für alle Tempelhof und ein Maximum an Grünraum erhalten und zu einem zusammenhängenden großen Park erweitert. Um den neuen Kulturbau für alle Bürgergruppen attraktiv und zu einem integralen Bestandteil zu machen, wird das Programm gefördert und mit weiteren Angeboten erweitert: Sport, Schwimmbad, Kino, Gastronomie. Die einseitige Orientierung der Wohnbebauung soll durch ein reiches Angebot an Grünraum (z.B. Läden, Grünflächen, Café, Antiquariat, Kleintier) und öffentlichen Grünflächen (z.B. Spielplätze, Sportplätze, Skatepark) im Park ergänzt werden. Die einseitige Orientierung der Wohnbebauung soll durch ein reiches Angebot an Grünraum (z.B. Läden, Grünflächen, Café, Antiquariat, Kleintier) und öffentlichen Grünflächen (z.B. Spielplätze, Sportplätze, Skatepark) im Park ergänzt werden.

Typologien
Typologien sind schematische Darstellungen von Gebäudeformen, die in einem Stadtteil vorkommen können. Sie dienen dazu, die Vielfalt der Gebäudeformen zu verdeutlichen und die Integration von verschiedenen Typologien in einen Stadtteil zu planen. Die Typologien sind in verschiedene Kategorien unterteilt, wie z.B. Wohnen, Gewerbe, Kultur, etc. Die Typologien sind in verschiedene Kategorien unterteilt, wie z.B. Wohnen, Gewerbe, Kultur, etc.

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Freiraum- und Nachhaltigkeitskonzept
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Schwarzplan Grüne Mitte Tempelhof 1:2000

Kultur- und Bildungsbaustein
Der Kultur- und Bildungsbaustein ist in der großen Verbindung positioniert. Er nimmt einen zentralen Teil des Tempelhofes ein und ist mit dem Rathaus und dem Tempelhofer Damm verbunden. Der Kultur- und Bildungsbaustein ist in der großen Verbindung positioniert. Er nimmt einen zentralen Teil des Tempelhofes ein und ist mit dem Rathaus und dem Tempelhofer Damm verbunden.

Konzeptprogramm
Das Konzeptprogramm ist ein Dokument, das die Ziele und die Inhalte des Projekts darstellt. Es dient als Grundlage für die Planung und die Umsetzung des Projekts. Das Konzeptprogramm ist ein Dokument, das die Ziele und die Inhalte des Projekts darstellt. Es dient als Grundlage für die Planung und die Umsetzung des Projekts.

Konzeptschicht
Die Konzeptschicht ist eine Ebene der Planung, die die räumliche Anordnung der Gebäude und die Gestaltung der Grünflächen darstellt. Sie dient als Grundlage für die weitere Planung und die Umsetzung des Projekts. Die Konzeptschicht ist eine Ebene der Planung, die die räumliche Anordnung der Gebäude und die Gestaltung der Grünflächen darstellt. Sie dient als Grundlage für die weitere Planung und die Umsetzung des Projekts.

Grünes Erdgeschoss 1:500
Das Grüne Erdgeschoss ist ein Konzept, das die Gestaltung der Grünflächen im Erdgeschoss darstellt. Es dient als Grundlage für die Planung und die Umsetzung des Projekts. Das Grüne Erdgeschoss ist ein Konzept, das die Gestaltung der Grünflächen im Erdgeschoss darstellt. Es dient als Grundlage für die Planung und die Umsetzung des Projekts.

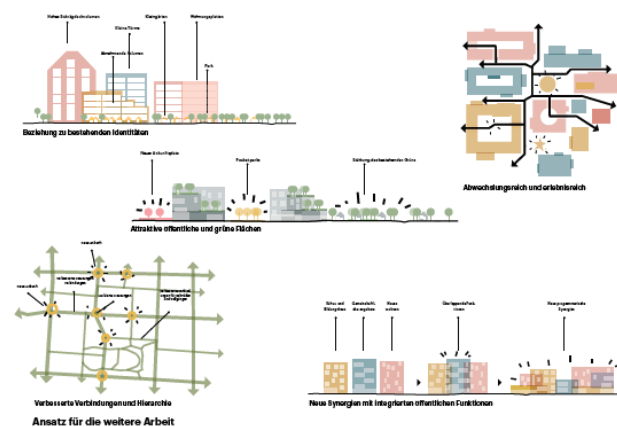
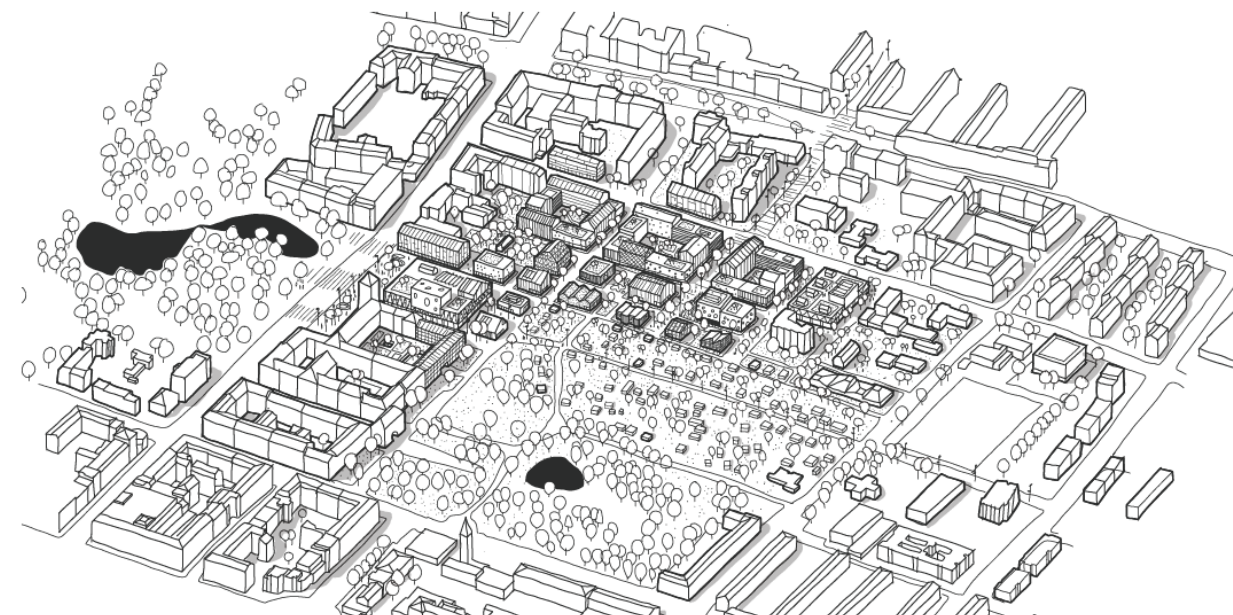
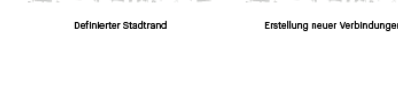
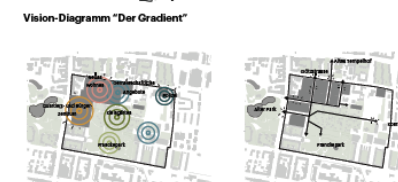
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Axonometrie Grüne Mitte Tempelhof 1:500

NMT Current Proposal _ 03

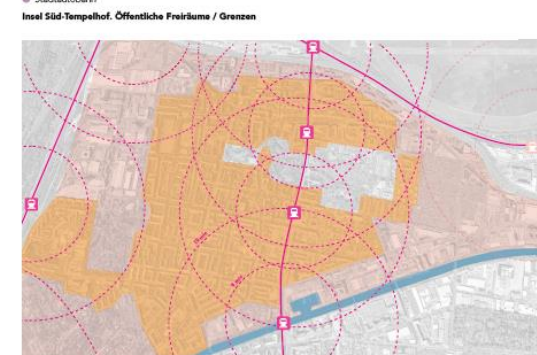
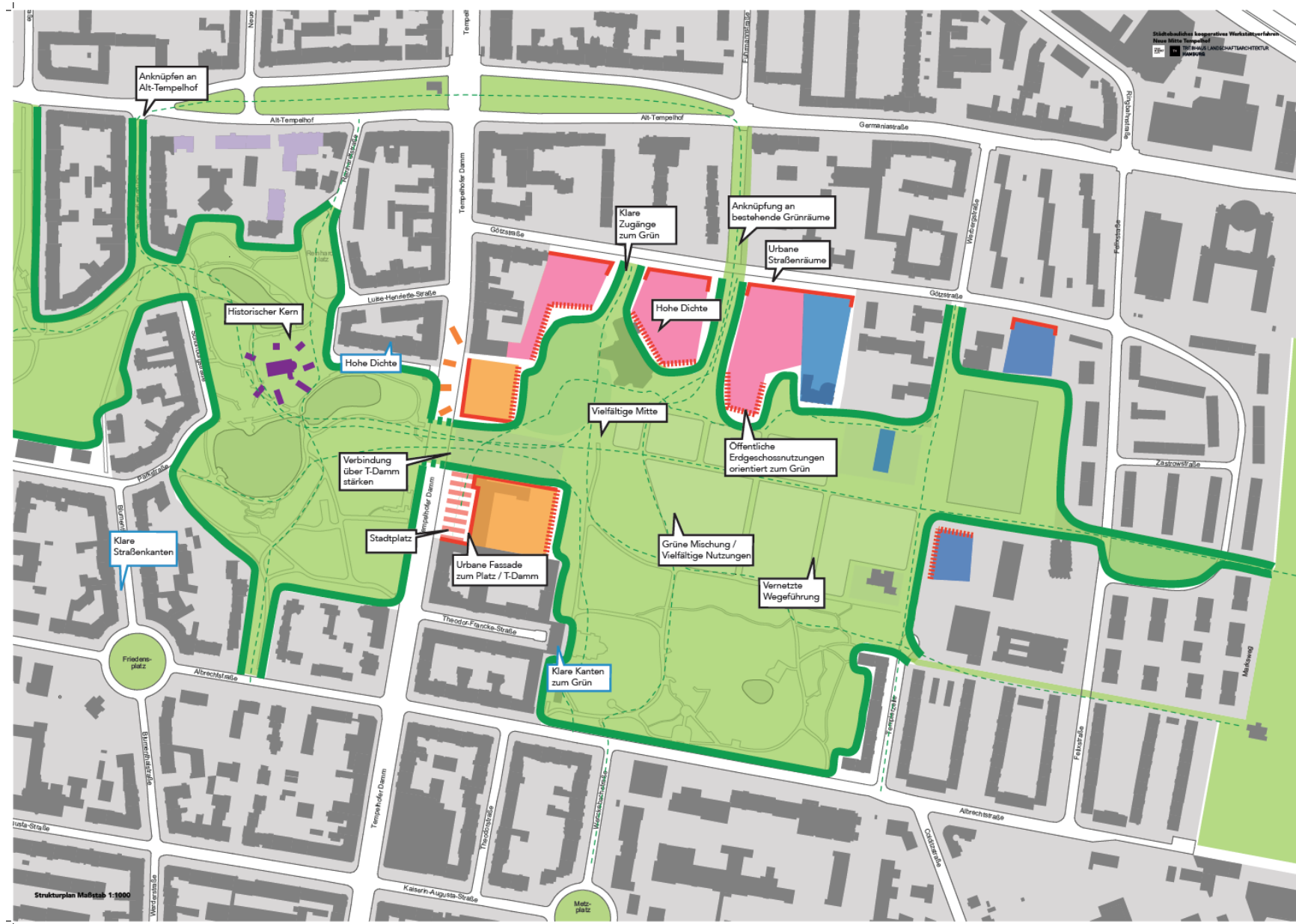
Urban planning cooperative workshop procedure. This is one of the shortlisted proposal from various workshops and competition entries conducted by the municipality in last few years.

“DER GRADIENT” Neue Mitte Tempelhof



NMT Current Proposal _ 04

Urban planning cooperative workshop procedure. This is one of the shortlisted proposal from various workshops and competition entries conducted by the municipality in last few years.



Grüne Mitte Tempelhof neu denken



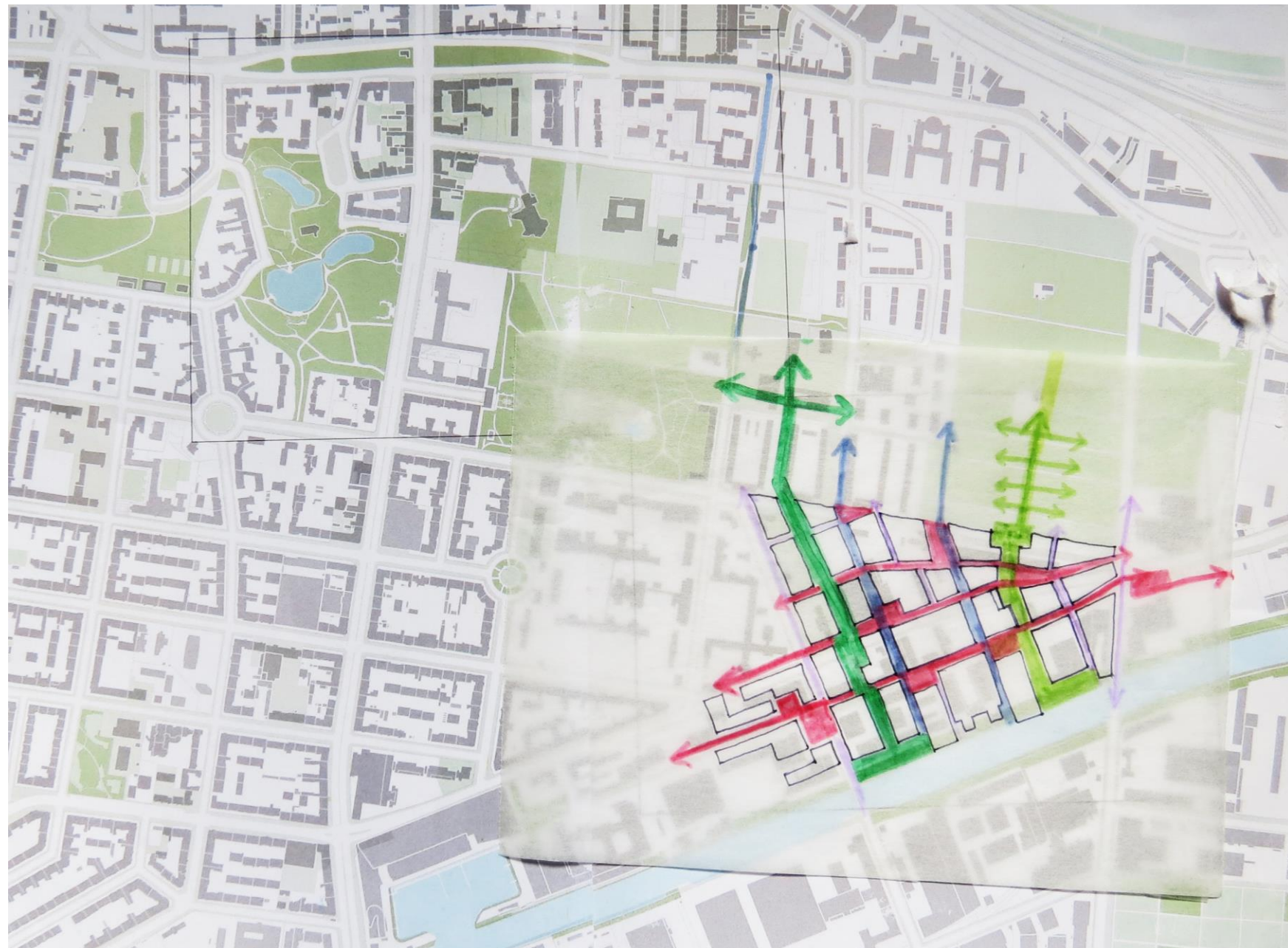
Schwarzplan Maßstab 1:2000



Historischer Kern um 1924 / Luftbild heute, Kante zwischen Siedlung und Park

- Räume der Kommunikation
 - Mehrwert für Alle
 - Kontraste
 - Orte für Alle
 - Nebeneinander/Miteinander
 - Urbanität
 - Gemischte Quartiere
 - Gesichter zur Stadt
 - Teilhabe
 - klimatische Aspekte
 - Starke Ränder
 - Vernetzung
 - Gesichter zum Grün
 - Naturraum
 - Erholung
- GRÜNE MITTE TEMPELHOF**
- Was kann die neue Mitte leisten

Initial Sketches & Design Process



Urban Design Process

These sketches describe the design and planning process for the urban transformation of selected site. The intention to keep them as a record of design thinking & development process. The description below will help you to understand the sketches :



01 Figuring out the Plot sizes as per the street network pattern.

02 Plots overlapped with land use description. The red indicates commercial, yellow indicates mixed use and rest is dedicated to housing.



03 The green spine and horticulture track, both stretching down to the Teltow canal. Also to activate the water edge.



04 Major Active connections that intersect with the urban greens forming squares and public spaces for interaction in the area.



05 Building blocks while thinking about different courtyard typologies and private and public buildings in the area.



06 Deciding the vertical density. Height variations keeping in mind the immediate surroundings/ context.

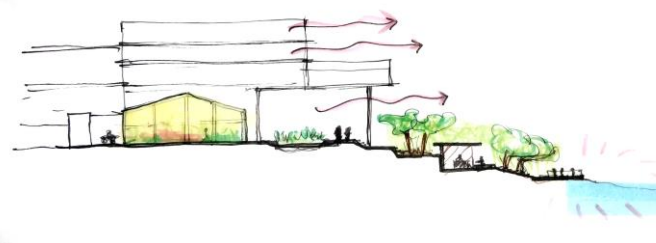


Design Details_ Sketch 01

This sketch describes the design thinking & development process. The intention was to understand how the building blocks will interact with the outdoor spaces. So the functions of the ground floors are mentioned here, along with the description of the public space functions.

The overlap of the interior and exterior was explored here. The way the smaller spaces connect with the larger green spine and the hierarchy of public functions creates interactive spaces in this area.

The section below describes how the water edge was conceptualised and how the architecture will invite the outdoors inside to the building.

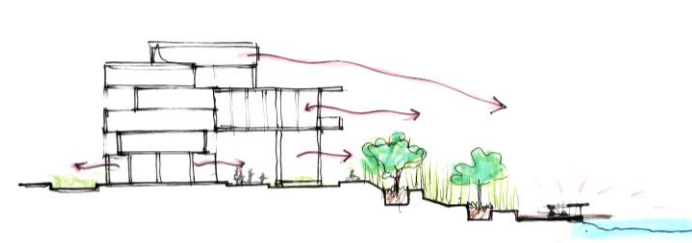


Design Details_ Sketch 02

This sketch describes the design thinking & development process. The intention was to understand how the building blocks will interact with the outdoor spaces. So the functions of the ground floors are mentioned here, along with the description of the public space functions.

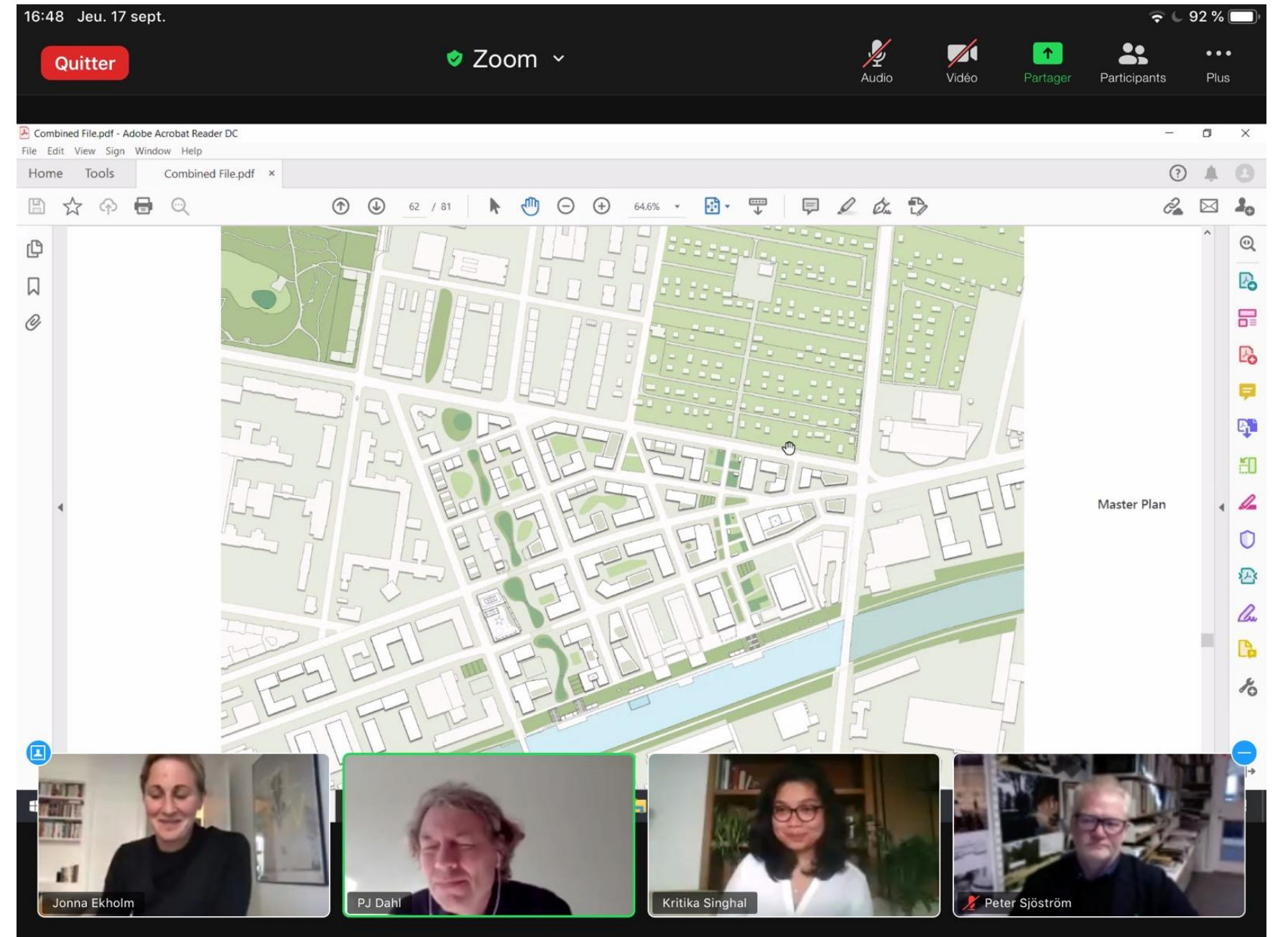
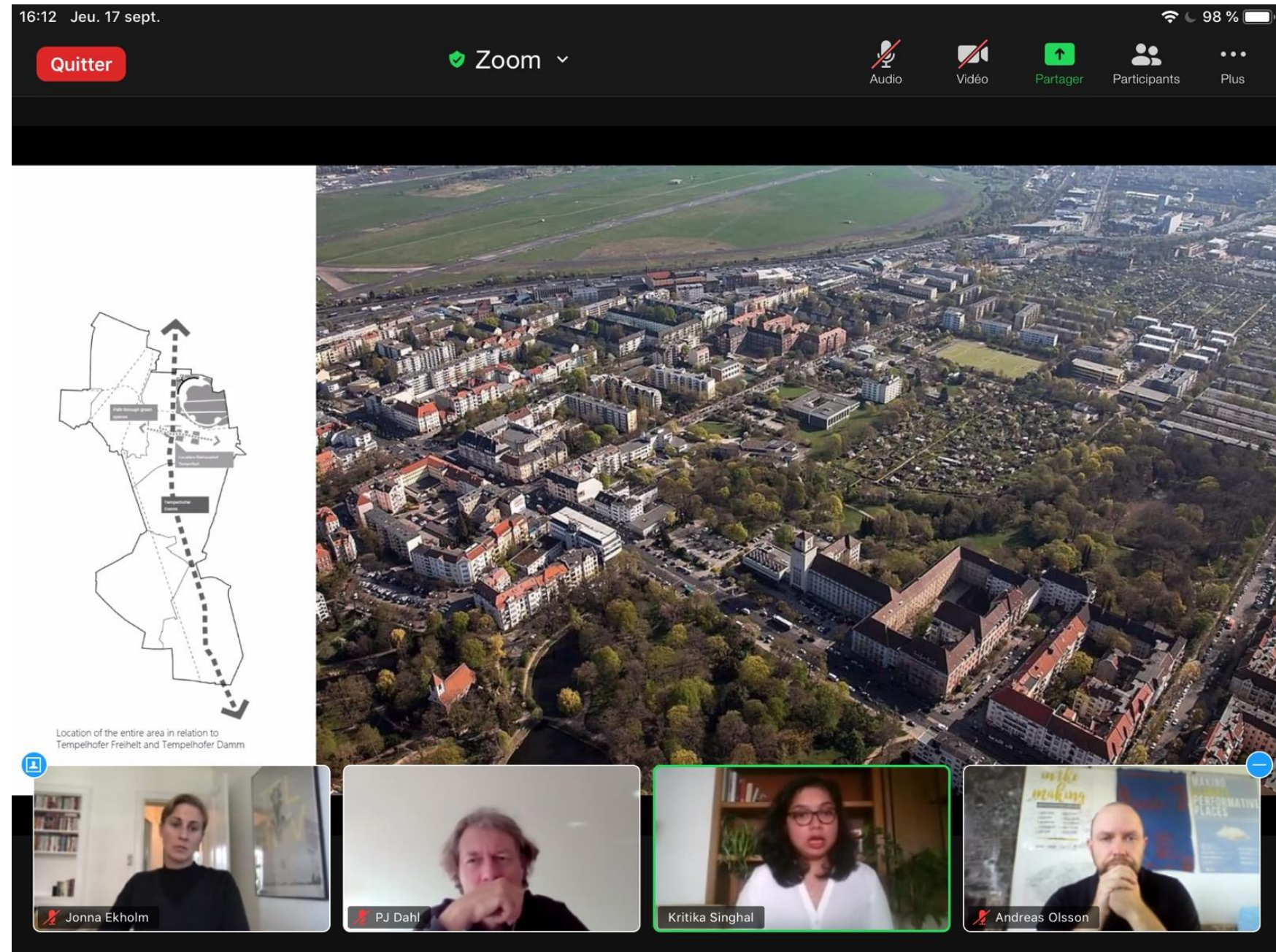
The overlap of the interior and exterior was explored. The way the smaller courtyards opens up to the participatory horticulture track. This invites various possibilities and different activities into this neighbourhood.

The section below describes how the water edge was conceptualised and how the architecture will invite the outdoors inside to the building.



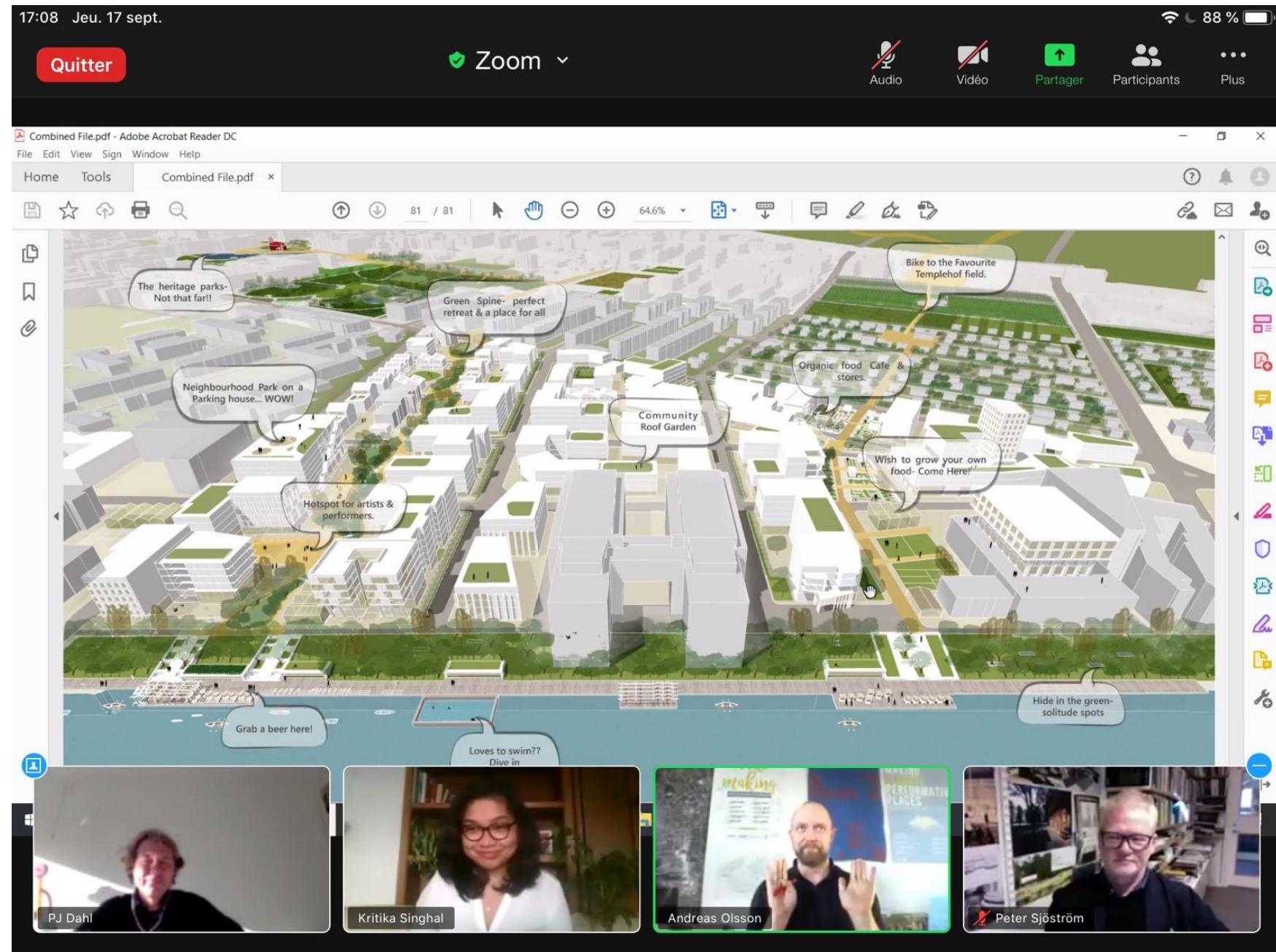
Online over ZOOM

Some screenshots from the final day of thesis presentation- 17th September 2020. The intention is to keep this as a memory of how a final thesis jury was successfully conducted in the difficult times of COVID pandemic.



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