

# Renewal and Further Development of Large Housing Estates of Industrial Mass Housing: Case of German

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05'2024 r.

Prefabricated large housing estates, constructed during the period of 1950-80s, occupy a significant share of the housing stock in Germany. This housing typology is widespread among large cities, especially in the eastern states of German, i.e.: former GDR territories, where it comprises for more than half of the overall housing stock.



**Neues Bauen movement, Garden city movement, Reformsiedlungen modernism, 1920s – 1930s**



**After-war rebuilding of German cities: 'structured and green urban landscape', 1950s – 1960s**



**'Urbanity through Density', West Germany ('Urbanität durch Dichte') mid. 1960s – 1980s**



**'Complex residential construction', East Germany 1970s – 1980s**

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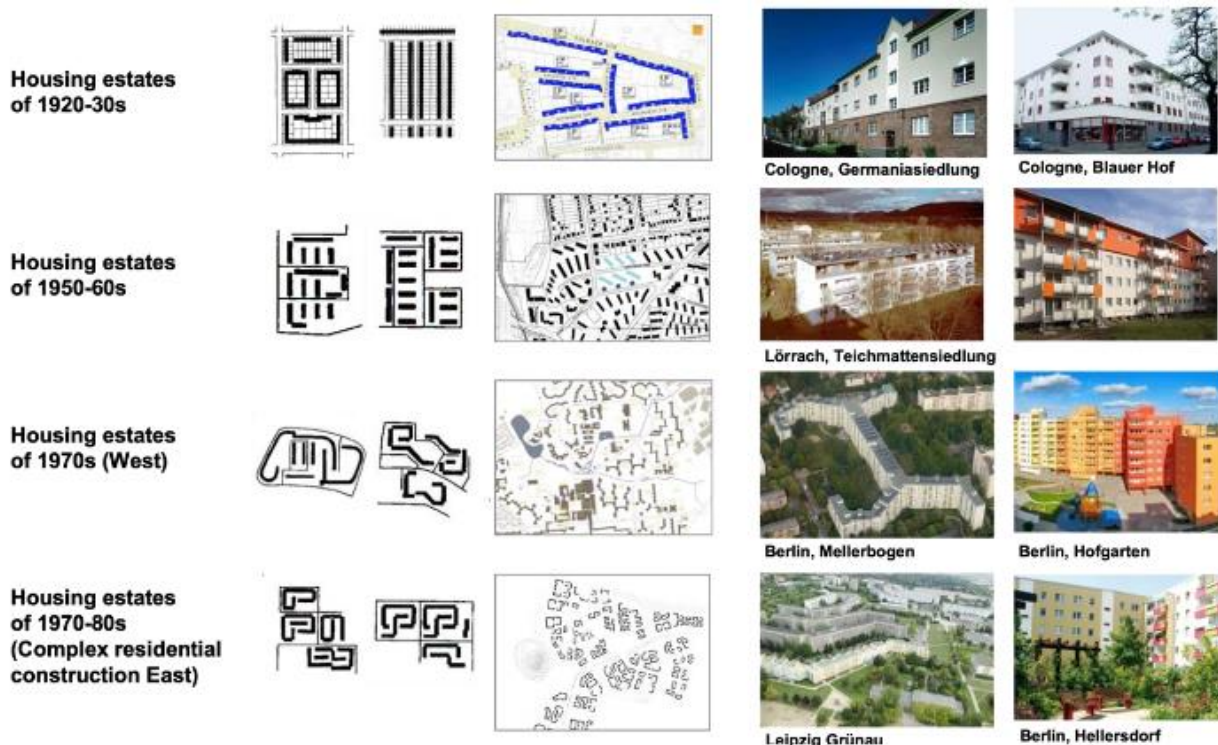
Figure 1: Typology of large residential complexes built in Germany in the period from the 1920s to the 1980s.

**An indispensable part of the housing stock.....**

Industrially constructed town districts and quarters were the answer to the drastic housing shortage after the Second World War. Industrial methods of construction allowed to build entire town districts efficiently and over a short period of time. These social and engineering achievements of our predecessors enabled the access to newly constructed apartments in the suburbs for inhabitants of overcrowded housing in cities' centres.

The Subsequent decline in the number of inhabitants and occupancy density in historical urban cores altogether have been making the implementation of revitalization programmes for these areas possible since 1980s.

Currently, further development of large housing estates poses a new challenge. Cities in Germany approach this challenge differently: while some of them became advanced in applying renovation policies, others are still on their way to meet the challenge.



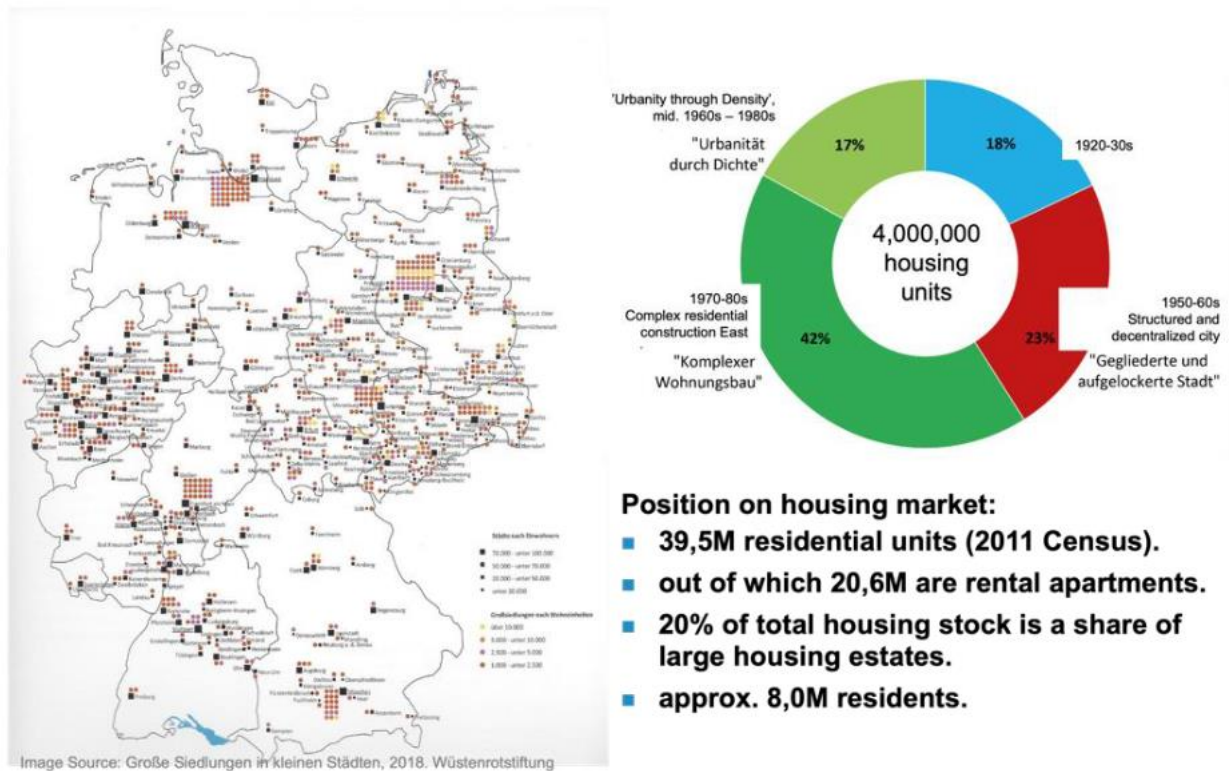
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Figure 2: Diverse morphology of large housing estates constructed in Germany between 1920s and 1980s.

**..... with affordable rent for a wide social spectrum**

Policies bear responsibility for the future of large housing estates: they are occupied by many households, wishing to live there permanently, in prosperity and security. Therefore, providing affordable rent becomes a fundamental political requirement, as there is a limited number of households, who can afford private ownership for an apartment or a house in German cities.

Dealing with renovation of homes and the renovation of public amenities (from kindergartens and schools to health centres), housing companies strive to provide such quality of housing that can be attractive not only for low-income households, but also for a wider range of inhabitants from other income groups. In the 1990s, the housing stock of large housing estates, formerly owned by the state, was transferred to large public housing companies. The housing companies modernised part of the stock and privatised it primarily among the residents of the modernised houses at affordable prices. Another part of the housing stock after modernisation is rented out to tenants who do not have enough finances for privatisation. If the tenant/family is deprived of income for any reason, the state pays extra or takes over the rent, depending on the social situation of the tenant/family.



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Figure 3: Housing stock position of large housing estates on housing market. In Germany

### Large housing estates have problems ...

Some large housing estates struggle a negative public image and must fight against stigmatisation: they are often described as too monotonous, too anonymous, lacking urbanity, etc. In the public eye, they are usually perceived as a mass of largely similar buildings. The media feeds and strengthens these ideas time and time again with repeating negative clichés. This housing is reduced simply to 'panels' as materials, what only partially describes the reality. On closer look there are differences between large housing estates: from quality of built environment to social cohesion in the neighbourhoods. Those differences depend on the quality of former planning concepts, current management and housing distribution policies.

On-site tours and publications in the media, illustrating the actual everyday life of these neighbourhoods, are powerful tools to improve public image of these areas and break down stereotypes. Positive changes in public perception can also be triggered by various activities and festivities, organised in the estates in order to attract visitors from other parts of the city, those, who do not live in large housing estates.

### ..... however, there is potential

Large housing estates have the potential to be used for renewal.

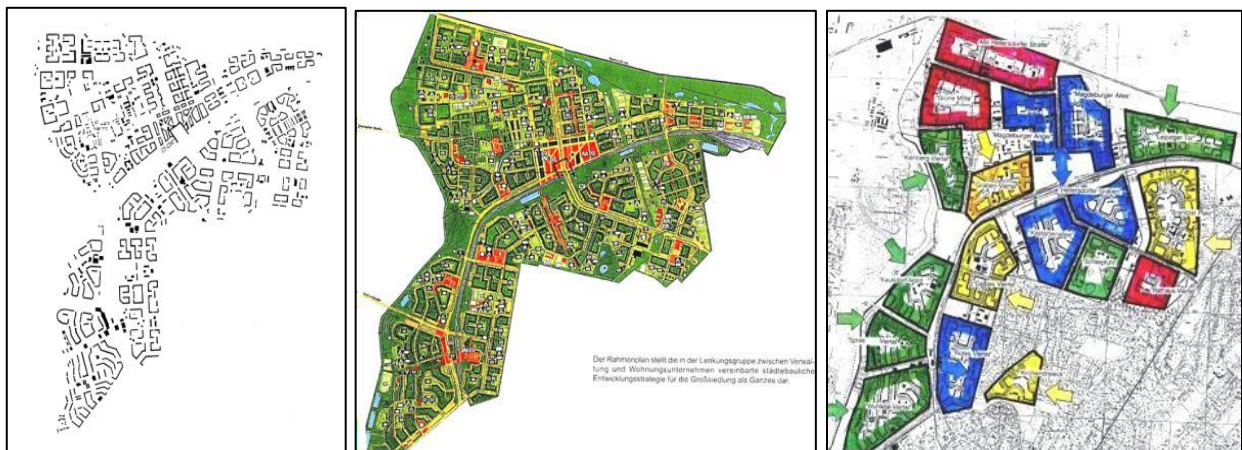
- For many people, these housing estates are their home and they stay to live there in the future. City policy should support those residents who are willing to participate in the renovation of their homes and their neighbourhood.
- These residential areas often have a good number of green areas and open spaces; how but these could be ever, they can be designed in a better way and their quality can be improved.
- In these areas, municipalities own land and infrastructure for additional construction. This makes it possible to construct buildings with individual architectural appearance to improve the appearance of the residential area, as well as to offer new types of flats to increase the diversity of the housing supply.
- Most of the flats in large housing estates in Germany are owned by communal housing companies or co-operatives, and the residents live in them as tenants. These companies have sufficient economic and organisational resources to renovate and/or rebuild apartment blocks and even entire neighbourhoods. In contrast to large housing estates, renovation processes are much more difficult to implement in

- neighbourhoods where the ownership structure is fragmented and owned by individual homeowners.
- Energy efficiency has of great economic importance: a more balanced consumption of energy can be achieved through improving the energy efficiency of housing. In case of Germany, we can see that even relatively simple measures (e.g. installation of new modern heating systems, regulation of heating systems, etc.) can reduce energy consumption of a building by up to 50 %.
- Mass modernisation of the housing stock according to standard methods with the use of industrial methods allows to reduce the cost of works due to economies of scale.

### Renewal of residential areas with large housing estates: step by step procedure

After several decades, the demand for the renovation of residential buildings is significant. Considering their future, the fundamental question is what shall be renovated, what shall be demolished and what shall be kept. The answers cannot be generalised, each case require individual decision-making depending on the existing conditions of the site in question.

In Germany, priority is given to the renovation of the existing housing stock while demolition shall be used as an exception. Namely, there are two reasons behind it: firstly, renovation is generally cheaper than demolishing; secondly, renovation does not disturb the familiar home environment for house residents. When approached cautiously, renovation of the stock can be performed without inhabitants' relocation. In that case no additional expenses on relocation process and construction of temporarily housing opportunities for relocated households is needed.



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Figure 4: Fragments of the masterplan for Hellersdorf district in Berlin demonstrate the integrated approach: the second diagram shows how the entire district is connected through green spaces, transport infrastructure and a network of centres. The third diagram shows that the individual neighbourhoods are planned with their own development principles and visual appearance

THE FIRST STEP is aimed at improving energy efficiency and renovation of technical equipment of the housing stock: insulation of roofs, cellars and facades; installation of new heating systems and windows; replacing water and sewage pipes.

THE SECOND STEP deals with improving quality of the environment and its management: establishing stakeholders' network responsible for certain areas; deciding on allocation of parking places; finding places for children to play, elderly to safely meet and so on.

THE THIRD STEP tackles renovation of social and transport infrastructure, such as day-care facilities, schools, health centres, commercial areas etc. On this stage the following questions can be addressed: What requirements and potential spaces are there in a particular residential area? What services can be provided by market economy and what require state support? Which transport connections are necessary?

We find it to be a positive experience to start the process of renewal and renovation as a step-by-step package within a complex master plan. The best results can be achieved when improvement of living environment, housing renovation and creating social support means go hand in hand.

*Berlin - Hellersdorf - an example of integrated neighbourhood planning*

The large residential neighbourhood of Hellersdorf in Berlin is now home to around 90,000 inhabitants. The renovation of the neighbourhood began in 1990 with a detailed study of the technical condition of the buildings: roofs, heating systems, facades. At the same time, a comprehensive masterplan was developed: strategies and plans for improving the urban structure, social services, transport links, design codes for the living environment and public spaces.

The urban design guidelines for the neighbourhood masterplan were developed in collaboration with residents, housing providers and other organisations working in the area. One of the recommendations was to give each of the neighbourhoods a unique identity through architecture, landscaping, and gardening as one way to improve the emotional connection of residents to their homes and to diversify the appearance of the development.



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Figure 5. Modernisation projects of large residential complexes in the Marzahn-Hellersdorf district of Berlin.

**Conclusion**

Residential areas of large housing estates created in the 20th century have a future. In the long run, they are vital for providing comfortable living space for many households. It is a great responsibility of municipalities and housing companies to renovate large housing estates step by step and further develop them for keeping good living conditions and social cohesion in many neighbourhoods.