ID 1377 | URBAN REHABILITATION AND SUSTAINABLE MOBILITY OPTIONS FOR RESIDENTS - AN EXAMPLE FROM SOCIAL HOUSING IN VIENNA

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1 INTRODUCTION

The City of Vienna, a very important owner of social housing complexes built from the 1920ies onwards, has for some years carried out several renovation projects with a focus on thermal-energetic redevelopment measures. Presently the renovation and modernization of social housing blocks originating from the 1950ies to 1970ies is a challenging task for Vienna, as for many other European metropolises, too.

Considering the expected population increase, technological progress and lifestyle changes, and responding to ecological goals it will be necessary to adapt municipal housing rehabilitation procedures and to exploit potentials unused until now. A recent co-operative exploratory project (Smart City im Gemeindebau, 2016), aiming at the initialization of a smart modernization process, dealt with a wide range of themes: How to provide high-quality and affordable living conditions? How to integrate the residents in planning procedures? How to consider new accommodation needs due to demographic and societal changes? How to make use of new technologies? How to improve the residents' mobility options, the traffic situation and the quality of the urban environment?

Although mobility and traffic are important topics for the concept of smart and sustainable cities, until now they have scarcely been considered in social housing rehabilitation projects in Vienna. During such projects people living in social housing complexes could be supported with various measures to improve their daily mobility. This paper presents selected results from the above-mentioned project, concerning mobility and traffic themes.

2 FACTS ABOUT MUNICIPAL HOUSING ("GEMEINDEBAU")

Vienna municipal housing has a long tradition since the 1920ies and is internationally often considered best practice for social housing. Unlike other forms of social housing, the municipal flats in Vienna are owned, rented, administered and renovated by the city itself. Vienna always kept up the policy not to sell municipal flats, and presently the municipality-owned company "Wiener Wohnen" (Vienna Housing) administrates about 220.000 rented apartments housing approximately 500.000 persons. The allocation of municipal flats to new tenants is bound to criteria such as housing needs, income limits and a minimum period of residing in Vienna.

While many of the residential complexes built in the 1920ies and 1930ies have already been renovated and modernized, the task is still impending for the bigger parts of the large stock of after-war flats built until the 1970ies. About 40 residential complexes are being rehabilitated per year. With the aim of reducing heating costs and improving the fabric of the buildings as well as the comfort for the inhabitants, standard rehabilitation procedures consist of various measures, the most substantial of which is thermal insulation.

Due to the wide spread of the sites of municipal complexes, which is demonstrated by Figure 1, municipal housing rehabilitation is an important factor for urban development, quality of life and building trade in Vienna.

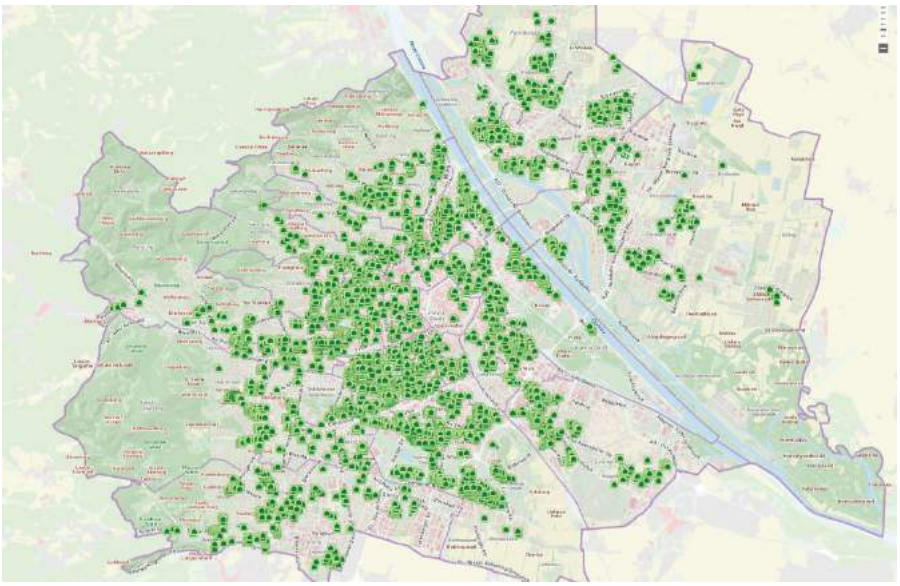

Figure 1 – Dispersal of municipal housing complexes in Vienna
Source: Stadtplan Wien, https://www.wien.gv.at/stadtplan/ (10.05.2017)

However, the common municipal housing rehabilitation practice still offers a high potential for better implementing urban development and mobility policies.

3 URBAN DEVELOPMENT STRATEGIES IN VIENNA

The Smart City Vienna Framework Strategy (Magistrat der Stadt Wien, 2014) declares three main goals which have to be implemented by developing the sectors energy, mobility, buildings and infrastructures: (1) strict preservation of natural resources, (2) high and socially balanced quality of life, (3) development and productive use of innovations and new technologies. Unlike other smart city approaches focusing on the technology dimension, the Vienna strategy considers also the social dimension of innovation. Among others, the strategy highlights that organizing mobility in a resource-efficient and socially compatible way is a core subject of smart cities, and formulates goals concerning mobility: By 2030 a high share of motorized individual traffic will be shifted to public transport and to bicycle and pedestrian traffic, and new propulsion technologies such as e-mobility will be established.

We conclude that if, according to the ambitious goals of the Vienna strategy, existing urban areas are to be transformed, municipal housing rehabilitation requirements must go beyond the state of the common practices. Among others, it would be necessary to systematically deal with the refurbishment of public and semi-public spaces, the improvement of the traffic situation in the surroundings of the housing blocks, and the improvement of mobility options for the residents.

The Vienna mobility concept (Magistrat der Stadt Wien, 2015) describes the realistic steps for influencing the traffic system and achieving the smart city goals relating to mobility. The mobility concept describes several fields of action, e. g. fair distribution of public spaces, mobility management, car-sharing and bike-sharing concepts.

The urban development plan STEP 2025 (Magistrat der Stadt Wien, 2014) postulates that customized concepts for architectural and functional improvement of residential areas dating from the period of the 1950ies to 1970ies should be elaborated, based on analyses and assessments of the sites. According to the presently observed population increase in Vienna, the development plan highlights the question of how to exploit potentials for re-densification of the buildings.

4 INNOVATIVE SOLUTIONS FOR HOUSING AND MOBILITY

The way how residential buildings are integrated into the urban structures, the design of infrastructures for walking and cycling and the number and situation of parking lots strongly influences the mobility behavior of the residents.

The parking regulation introduced in the 1960ies in Vienna, obliging developers by law to construct as many parking lots as apartments, doubtlessly contributed to a steady increase of car traffic for the next decades. Coming along with policy changes towards the goal of a sustainable traffic system, the legal obligation to construct parking lots has been lowered some years ago; presently a parking lot must be provided per 100 m² habitable surface, and for specific cases the authority may lower the ratio.

From innovative mobility solutions related to housing, the concepts of car-free or car-reduced residential areas is best-known and has successfully been executed in diverse European countries for nearly twenty years. Car-free and car-reduced residential areas usually offer good bicycle parking and cycling infrastructures, sometimes also car-sharing and bike-sharing facilities. Several examples are presented on the website “Plattform autofrei / autoarm wohnen” from Switzerland. In Vienna a car-free housing site with 250 apartments has been established in 1999. Since the tenants and owners of flats are bound by contract not to possess a private car, the Vienna car-free housing site, like several others, addresses ecology-minded citizens above all.

For the last years, several innovative mobility services have become more user-friendly by new technologies, e. g. by giving easy access to shared vehicles or carpooling, by comfortable reserving and billing facilities. These new possibilities are increasingly used for mobility services within new buildings or new urban development areas. The City of Vienna supports the provision of “mobility points” with several sharing services in urban development areas such as the new quarter “Seestadt Aspern”, and recently has also opened new ways of financing such investment: As presented by the website of the City of Vienna “Fonds für umweltfreundliche Mobilität”, a new municipal mobility fund, supplied by contributions from developers and investors, aims at providing environmentally sound mobility solutions in urban development areas.

But even if innovative mobility solutions may be applied for new urban quarters or new buildings, this is not the case for already existing quarters and for urban rehabilitation projects. Practical examples are missing of how sustainable mobility can be enhanced through social housing rehabilitation projects.

5 CASE STUDY KROTTENBACHSTRASSE 40-46

The above-mentioned research project (Smart City im Gemeindebau, 2016) highlighted several options for action that might be implemented in accordance with a social housing rehabilitation project, by the example of a municipal housing complex in Vienna.

While working on the traffic and mobility part of the project we interviewed the inhabitants about their mobility, thoroughly analyzed the traffic situation of the block and the adjacent streets, and observed the way people used the semi-public inner courtyard and the public spaces around. On this basis finally we defined options for action.

5.1 CHARACTERIZATION OF THE STUDY AREA

The perimeter block at the fringe of the densely built urban area was constructed between 1958 and 1970, and has 150 apartments, a post office and two small shops. The five-storey building is made accessible by 12 staircases, all of them opening to the inner courtyard. There are 28 parking lots rented to tenants, 12 of them located in the inner courtyard and 16 outside, in an adjacent parking area. The photos in Figure 2 give an impression of the housing complex.

Figure 2 – The case study complex: View from Krottenbachstrasse (1), inner courtyard (2 and 3)
Photos: Andrea Weninger

As shown in Figure 3, the residential area north of Krottenbachstrasse dating from the period before 1914 is characterized by its grid-like road network, but also by several municipal housing complexes built after 1955. South of Krottenbachstrasse the character of the area changes significantly: the terrain rises, and some recreational facilities and residential buildings are situated on the hillside. The housing complex under study is quite well-supplied with nearby shopping opportunities and health, education and recreational facilities. Many destinations can be reached by foot within short time.

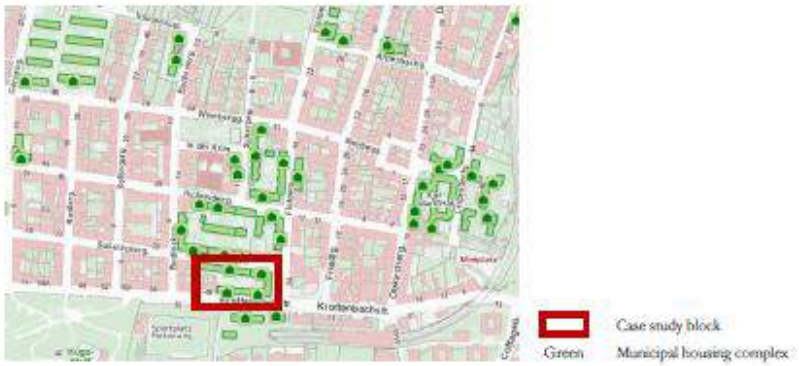

Figure 3 – The surroundings of the case study block
Source: Stadtplan Wien, https://www.wien.gv.at/stadtplan/ (10.05.2017)

5.2 INTERVIEWS WITH INHABITANTS

The interviews were carried out in November and December 2015 by "wohnpartner“, an organization who attends to the communication within municipal housing complexes on behalf of the City of Vienna. The extensive personal interviews aimed at gaining information and at detecting potentials for a “smart” rehabilitation project. They were based on a questionnaire which, among others, also contained questions about the mobility behavior, the traffic situation and the urban environment, as well as about related needs and wishes of the inhabitants.

A third of the households were reached, and detailed interviews with 50 inhabitants and two shopkeepers took place. Among the 50 questioned inhabitants there are 32 women. All age groups are represented – from “20-30” to “over 80”; the strongest age group is the 51-60 years olds. Two thirds of the interviewed persons are living in one- or two-persons-households, nearly one third in households with children. About half of the interview partners are retired – some of them because of disability or illness, a quarter are employed, and 9 persons are out of work.

As regards mobility behavior, walking by foot and traveling by public transport are most important, a large majority of the interviewees doing so frequently, followed by riding in a car driven by someone else. In contrast, the options of driving a car oneself or riding a bicycle are used only by a minority of the interviewees. Accordingly, 30 persons dispose of an annual ticket of Vienna public transport. 28 persons (more than half of the interviewees!) do not possess a car, and still 20 persons live in a household where nobody holds a driving license. From the 22 car owners 13 are parking in the public streets, and 9 on a rented parking lot of the housing complex. Only 14 persons have a bicycle, most of them keep it in their own cellar compartment. None of the inhabitants has an electric car or an e-bike. Although cycling

presently is not a common mode of transport, two thirds of the interviewees consider that providing bicycle parking facilities when renovating the housing complex would be a good thing. Altogether, the questioned inhabitants are rather satisfied with their living conditions and urban environment. But more than a third of the interviewees consider that road safety is “poor” or “very poor”.

The major problem is that pedestrians feel uneasy when crossing the adjacent highly frequented road (Krottenbachstrasse).

5.3 ANALYSIS OF THE TRAFFIC SITUATION AND OF PUBLIC SPACES

The public transport connection, ensured by a bus line in the adjacent main road, with a bus stop directly in front of the block, and a nearby urban railway line, is rather satisfactory. Anyway, the intervals during off-peak-hours are rather long, and the nearby bus stop is lacking comfort and has no waiting time display.

The conditions for pedestrian traffic in the surroundings are quite good, but still offer a lot of room for improvement. Foot paths leading through the council housing complexes supplement the grid-like road network north of Krottenbachstrasse. People use the semi-public spaces of the inner courtyard of the case study block for passing through, but rarely for staying. In the study area many destinations can be reached within walking distance. But the street layout favoring parked cars makes the sidewalks often very narrow. The Krottenbachstrasse can be crossed on a crosswalk (without traffic lights) in front of the apartment complex. But due to its high traffic volume and the increased risk of accidents, the Krottenbachstrasse is a considerable barrier to pedestrians. The rising terrain opposite the investigated apartment complex can be accessed by a public staircase leading to some recreational facilities, but it has no ramps and cannot be used by people with mobility limitations.

Since there is no cycling infrastructure in the study area, cycling is not an attractive option for residents. However, the 30 km/h zone north of Krottenbachstrasse allows biking in mixed traffic with cars, but bicycle traffic is bound to the one-way system of this zone and cannot profit from exceptions which are common in other districts of Vienna. The Krottenbachstrasse is unattractive for cycling and even rather dangerous, due to the high traffic volume and the high speed, the bus traffic and the one-sided cross parking. Correspondingly, the number of cyclists on Krottenbachstrasse currently is low. The area south of Krottenbachstrasse cannot be reached easily due to its steep slope. In the vicinity of the apartment complex, there are almost no parking facilities for bicycles in the public space.

The number of car parking spaces within the public streets is high, with a very high level of capacity utilization. Unlike other similar quarters of Vienna, in the study area the public parking space can be used free of charges. In the 30 km/h zone cars are usually parked lengthwise on one side, and angular on the other. The remaining space for walking and cycling is severely restricted. The narrowness of many sidewalks punctually is even reinforced by waste collection containers or other street furniture.

Within the examined housing complex 28 car parking lots are available and leased to tenants. Compared to the high capacity utilization of the public parking spaces, the personally reserved in-house parking spaces seem underused.

The photos in Figure 4 illustrate the analyzed conditions of the neighborhood, such as the narrowness of sidewalks, the lack of cycling infrastructures, the reserved parking lots, a semi-public passage through the case study block, the public staircase and the crosswalk across Krottenbachstrasse.

Figure 4 – Infrastructures for parking, cycling and walking in the neighborhood
Photos: Andrea Weninger

From the baseline study we conclude that there is a high potential for improvement. In a first phase of collecting need for action the space for ideas stayed wide open:

- Making pedestrian crossings in Krottenbachstrasse safer
- Redesign of the inner courtyard, maintaining and re-designing the public pedestrian passages, taking into account the requirements of barrier-free accessibility
- Securing and further improving the dense pedestrian network in the study quarter, including the much-used routes through the municipal housing complexes, which constitute a special quality of the study area
- Safeguarding sidewalks of 2 meters minimum, by changing road design in favor of pedestrians
- Increasing the usability of public space for people with mobility limitations by providing stairs with ramps or elevators in steep terrain
- Providing high quality bicycle parking facilities in the housing complex, well integrated into the redesign of the inner courtyard
- Improving the cycling infrastructure in adjacent streets, in particular in the Krottenbachstrasse
- Finding solutions for the establishment of collective garages for several blocks, replacing the parking lots assigned to the case study complex, and using the potentials for high quality design of the inner courtyard and the public space.
- Providing car-sharing and other mobility services like rental of an e-bike or a bike trailer for the residents (“mobility station”)
- Providing traffic and mobility information for the residents, e. g. by installing a digital bulletin board which can also be used for reservation of mobility services
- Rebuilding street furniture with high quality design (waste bins, bus stop)

5.4 CONCLUSIONS FROM THE CASE STUDY

The above list of potential for improvement contains three different types of measures:

A. Edificial measures within the municipal housing complex. Responsibility for implementation: Owner and property management organization (“Wiener Wohnen”)
   - Re-construction measures within buildings and open spaces
   - Utilization changes for existing spaces
   - Furnishings for common rooms and open spaces

B. Accompanying participatory, activation and organisation measures Responsibility for implementation: There are various options – the responsible organisations must be commissioned by “Wiener Wohnen” or the City of Vienna
   - Participation procedures for accompanying re-design measures, e. g. for the inner courtyard

- Activation and motivation of inhabitants, support for self-organization
- Business models for (commercial or self-organized) mobility services
- Traffic information and mobility management measures

C. Traffic measures, street design measures and edificial measures concerning the surroundings of the housing complex Responsibility for the implementation of measures: Diverse municipal departments, district authority and other organisations (transportation-company, property developer etc.)
   - Traffic measures, safety measures
   - Design of the public space, street design and re-allocation of functions
   - Public transport measures
   - Development and construction measures on nearby properties (collective garages)

It is evident that many of the above-mentioned measures are strongly interdependent. For example, if convenient bicycle parking facilities for the residents of the case study block are constructed, they will be more appreciated and asked for, if at the same time a bicycle route in the adjacent main road is provided, and maybe even more if additionally, residents can run a self-organized bicycle repair shop.

However, the approved procedures of municipal housing renovation projects presently do not include aspects of the urban environment, and residents' participation in renovation is not carried out systematically. Taking this into consideration, the above-mentioned project (Smart City im Gemeindebau, 2016) was finished by developing practical guidelines for measures that might be implemented by the property managers themselves, especially the construction of bicycle parking facilities.

6 SUSTAINABLE MOBILITY OPTIONS

With the aim of stimulating sustainable mobility, people living in municipal housing complexes could be supported with various measures that might be carried out during renovation projects. The residents should be able to cover their daily journeys in an efficient, cost-effective and environmentally friendly manner. They should have more individual choices and should be able to use technological and social innovations for their mobility, for instance by using a car now and then without possessing an own car. Such innovative mobility solutions might make people more satisfied with their residential situation.

Independent from the above-mentioned case study, in a more general way, and taking into account current literature on housing and mobility (Raum & Kommunikation, 2014; Arbeitsgemeinschaft Fussverkehr Schweiz, 2014; VCÖ, 2015), several options for action, that might be implemented in accordance with municipal housing renovation projects can be identified.

CREATE GOOD CONDITIONS FOR CYCLING:

The construction of sufficient convenient bicycle parking facilities during a renovation project may be a strong factor for motivating the residents of municipal housing complexes to increase the use of this efficient, healthy and environment-friendly mean of transport. Bicycle parking stands may be situated in the open space of the housing complex or in under-used ground floor rooms or, if lift transport is possible, even in upper floors near to the apartments. It is important to guarantee a good practical usability by implementing quality criteria like direct access from the street, short distance to the stairway entries, protection from weather conditions and from theft. For the access and locking system smart technological solutions may be used. In Vienna, housing companies can obtain public funding for raising bicycle parking stands.

PROVIDE MOBILITY SERVICES AND RENTAL:

The residents will find cycling even more attractive, if they can rent an e-bike, a bike trailer or other equipment, and if a compressed air pump and a toolkit for repair are available nearby. For implementing such services in municipal housing complexes there are still some open questions to be answered: What is the adequate organization form – commercial service or self-organization, what is the best size of the

service provider? Is the target group limited to residents of the complex, or is there open access? What is the adequate reservation system?

PROVIDE ACCESS TO CAR-SHARING FOR RESIDENTS:

If the tenants of municipal flats get used to car-sharing they can increase their options for their everyday mobility and maybe they can more easily do without an own car.

There are several possibilities of how to support car-sharing among the residents: The housing company or a commissioned organization may limit itself to inform the residents about existing car-sharing systems, or it may try to get a car-sharing station within or in front of the housing complex by negotiating with the car-haring companies. The creation of an own municipal housing car-sharing system all over Vienna would be most ambitious; a detailed business model would be needed.

IMPROVE THE FOOTPATH NETWORK:

Many municipal housing complexes offer the possibility to pass through, and thus are significant parts of the quarter's footpath network. When securing and improving theses passages the municipal housing companies can contribute to supporting the active and healthy mobility form of walking. Especially the attractive design of the entrances as interfaces between public and semi-public spaces, including lighting, is important. For the redesign of the inner courtyards and other open spaces of the housing complexes a participation procedure for the residents is recommended. Possible conflicts between the openness to passing through and residents' wishes to close the complexes for security reasons must be discussed during such participation procedures.

RELOCATE PARKING LOTS INTO COLLECTIVE GARAGES:

One of the most ambitious aims of the Vienna Mobility Strategy is the aspired redesign of public streets in favour of walking and cycling. The relocation of parking space to collective garages would open up the scope of action not only for the public streets but also for the renovation of municipal housing complexes. In our case study example the inner courtyard which presently offers 12 parking lots (with a weak degree of capacity utilization) could be redesigned in favor of a resting place or a small children playground – facilities that were missed by the questioned residents.

7 CONCLUSIONS

The implementation of measures in the fields of action set out above requires a lot of coordination and cooperation between different departments and organizations. While the responsibility for construction activities within the housing complex clearly lies with "Wiener Wohnen", the responsibility for the implementation of accompanying, activating participatory action has yet to be determined. The residents' participation and mobilization for self-organization from the beginning would be necessary for the implementation of measures. Furthermore, for really improving the residents' mobility situation a combination of measures, both within the housing complex as well as in the surroundings will be adequate.

This approach would require focused cooperation between the housing organization and municipal departments responsible for traffic and urban space, as well as private companies and organizations. Suitable cooperation mechanisms presently are lacking and should be established.

We have to be conscious of the fact that municipal housing complexes are widespread over Vienna's territory and that adapted procedures for municipal housing renovation have the potential not only to improve the quality of living for the resident, but also to contribute to the ambitious mobility goals of a sustainable city.

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ID 1382 | ROLE OF THE RUMORS DURING THE URBAN TRANSFORMATION PROCESS IN ISTANBUL GECEKONDU SETTLEMENTS

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1 INTRODUCTION

This paper is a product of the PhD thesis focusing on the urban transformation process into gecekondu[1] neighbourhoods (the special name for informally, DIY-constructed building groups constructed only in Turkey) in Istanbul and focuses on the rumours flowing mouth to mouth before and after the urban transformation project.

This paper is endorsed on Deleuze and Guattari’s arguments about flows, assemblages, and machines. Urban transformation is taken as a machine and the information is the key element of this machine. Rather than the rules, procedures or laws about the urban transformation process, words are moving faster. We always watch on TV or see in the newspapers advertisements about new transformation projects, or professionals’ comments about the necessity of the processes. In addition to this, urban transformation in gecekondu does not only happen by the law or by the projects called urban transformation projects. Any kind of luxury residence projects, big shopping malls or big transportation projects can initiate the urban transformation process. This is not an operation that is determined step by step. Communication and negotiation with the inhabitants one by one are very important and at this point, rumours come into the

[1] Gecekondu is an informally constructed house which is built autonomously by the people who uses it. Gecekondu houses come together and make big neighborhoods. For further details: (Karpat, 1976), (Erman, 1997, 2004), (Ergün, 2008). For a Deleuzean Perspective on informal settlements: (Co Villanueva, 2012)