

World on the move

Challenging the spatial aspects of relocation

Student Project Summerterm 2017

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Vienna, August 2018



Tullnerfeld, Lower Austria



Martinek Base, Baden, Lower Austria



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De Gribble
to Wilson

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Privatgrundstück
Betreten verboten!

 **PRIVAT AREA**
DO NOT ENTER!

قطعة أرض خاصة
ممنوع الدخول!

Border crossing, Spielberg



Bertha von Suttner Schulschiff, Danube island, Wien Floridsdorf,
Foto: Peter Haas 2008

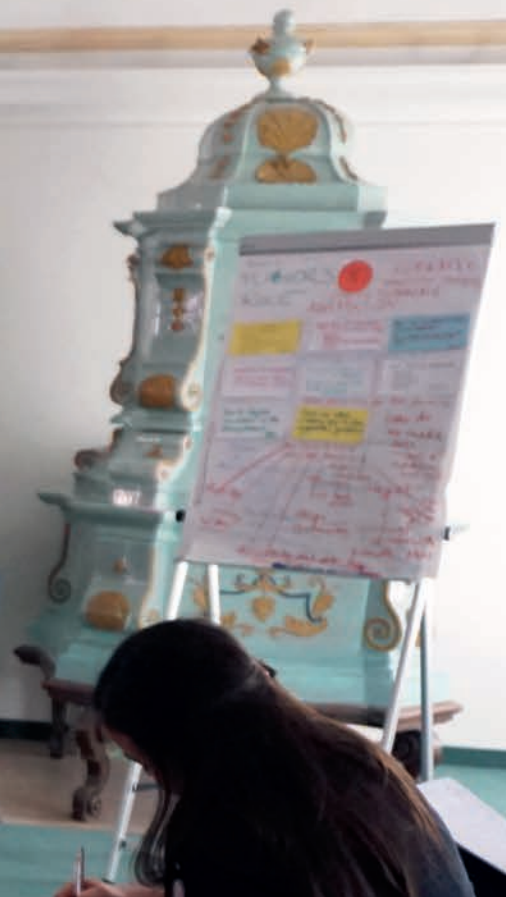
 **BMF**
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ZOLLBEAMTE**



Border crossing, Spielberg

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Final presentation, Salzburg

Our world is on the move. We have to face an enormous urbanization with already a majority of people living in dense urban settlements, and prognosis says this quota may rise up to 70% in 2050. This urbanization even accelerates by diverse kinds of migration. There are not only the refugees moving globally, but there is also a huge and growing number of employees on the regional and national levels that are forced to change their main site of being, by the simple necessity to make their living by following temporary job offers and-contracts. Both the global migration flows and the moving employees really increase the demand of flats, but also for basic infrastructure services for health, education and the local supply of daily needs.

In Vienna e.g., the past years brought an average population growth of about 25,000 people annually. Although the City administration is really among the most active cities in Europe with the construction of new flats, the gap between supply and demand is constantly growing. The problem is not only the “underdosed” number of new flats, but also the share of affordable housing, which is shrinking year by year for market and price developments.

This means that those housing demands won’t be satisfied just by new houses, but additionally it takes much more activities in re-densifying and mobilizing the existing building stock, which covers clearly more than 90% of our built environment. Disciplines like spatial planning, architecture and engineering have to immediately deal more intensively with this complex challenge in an interdisciplinary way. In terms of private services and sharing activities, we also can witness a lot of activities in

the past years. Those activities are both non-commercial NGO/ neighbourhood activities as well as commercial services as UBER, Air BnB, or shared office spaces – but all of that this is not powerful enough to foster more permanent or temporarily used flats or to mobilize vacancies for all kinds of the “Nomads” described before.

The project’s profile: Where, what and how?

The project workshop dealt with these complex issues around the transformation and mobilization of existing buildings, the re-densification potentials around public spaces, but with a lot of respect on the cooperation aspects to make the solutions stable and repeatable. To secure that, the five projects shown in this publication follow a common profile. They had to offer:

- Housing solution for about 20.000 people in the Vienna agglomeration, realizable in a rather short term period;
- site selection with a high standard of public space, embedded in the urban structure, offering high social standards and infrastructure offers, instead of disconnected, remote shelter islands;
- Master plans that can use both the transformation of existing sites and new flat units;
- A realization that is economically solid during the development and affordable for its users;
- detailed cooperation and participation process that respects both formal and informal procedures.

The 12 ects project course was held during the summer semester 2017 at the Vienna University of Technology as a cooperation between the Department for Spatial Planning (Lecturers: Petra Hirschler and Hartmut Dumke) and the Institute for Town planning (Lecturer: Michael Rieper). The interim results were presented, appreciated and discussed lively during the 52nd international SCUPAD congress (see <http://www.scupad.com/>).

Hartmut Dumke, Petra Hirschler und Michael Rieper



Temporary accommodation, Tulln/Lower Austria

Reinhard Süss

site development and settlement densification in the vienna region

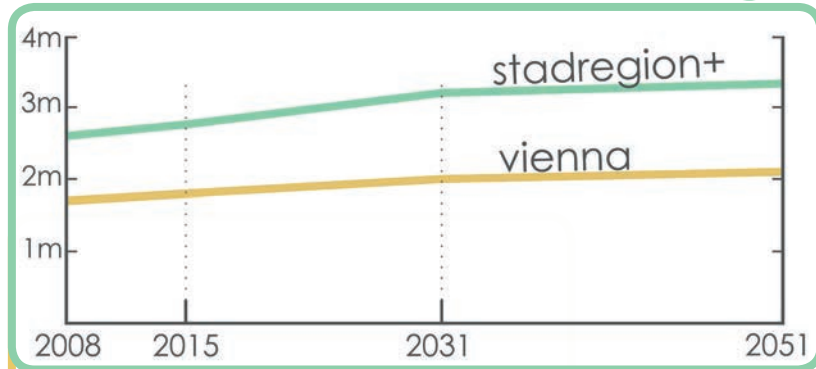
Land is a scarce resource. Yet, while the Vienna region is projected to have an enormous population growth within the next decades, land banking followed by suburban or rural sprawl appears to be common practice in the Viennese surroundings. That seems hardly surprising, considering that a majority of this region is sparsely inhabited and made up by vast and flat land. Residential buildings as well as retail parks sprawl out across the green fields causing an ever higher car dependency. However, Vienna's surroundings are widely connected to public transport e.g. railway lines. In the future, commuter traffic and everyday trips are most likely to be undertaken without a car. Therefore intensified and compact settlement development is crucial to a certain point. In order to responsibly supply housing one must think of ways not to foster land banking and sprawl, but to take on a city of short, walkable distances to basic need infrastructure and public transport stations.

The following project is to be seen as an attempt to show the potential of settlement intensification within walking distance to railways stations around Vienna. In a playful and experimental way, a non-Austrian legal frame towards land mobilization for subsidized housing is applied on a few municipalities' railway station neighbourhoods pointing out the need for a legal change based on a case study.



Fig. 1: Muckendorf-Wipfling, railway station in the Vienna Region
(Moose Geo-Explorer, 2013)

stadregion+



pop. 2.76m

vienna 1.8m

2031: + 410,000

2051: + 570,000

7,614 km²

269 municipalities

3 states | 3 legislations

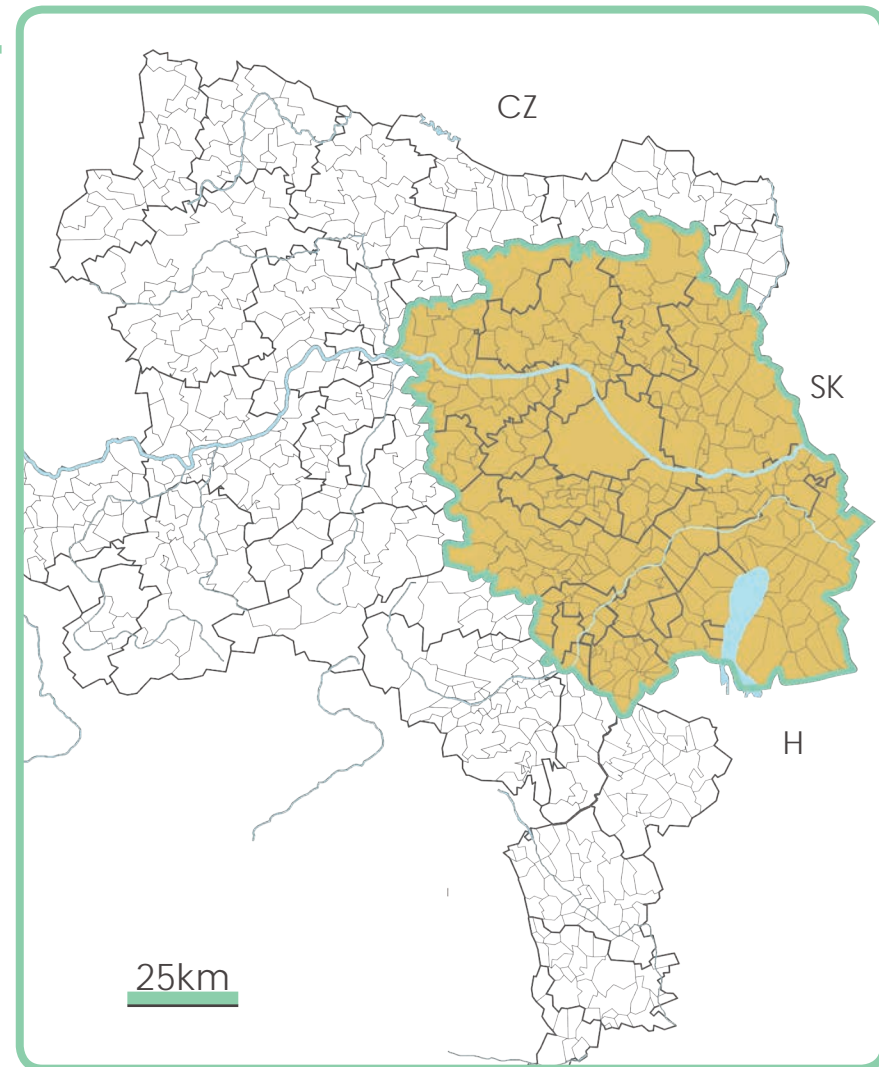


Fig. 2: population growth in the stadregion+ (PGO, 2017; own illustration)

Fig. 3, stadregion+ (PGO, 2017; own illustration)

where?

The study area is *stadtregion+*, an attempt to form a metropolitan region around Vienna suggested by *PGO* (*Planungsgemeinschaft Ost*), based on travel demand patterns and functional interdependencies to the city of Vienna. *PGO* is a planning association for the eastern states of Austria: Vienna, Lower Austria and Burgenland. *Stadtregion+* spreads across 269 municipalities with a total area of 7,614 km² (PGO, 2017). It is a spatially highly heterogeneous region. The metropolitan area *stadtregion+* contains large rural and sub-urban areas as well as rural-urban fringe, but the most dense parts are on an axis between Vienna and Wiener Neustadt.

However, the whole region referred to on the map is projected to have an extraordinary growth in population. By now, one out of three Austrians lives in greater Vienna – currently 2.76m people. By the year of 2031 the area is projected to be home to 3.2m people – more than one out of three Austrians – whereas the city of Vienna itself is to reach a population of 2m. Between 2008 and 2015 the city population increased by 10 per cent. Until the year of 2051, the population of greater Vienna is projected to grow by the number of 570,000 (Fassmann et.al., 2010, p. 11). One fourth of this population growth is assumed to apply to the area surrounding Vienna - if the municipality cannot fulfil the high

housing demand even more. Legal, political and regulative differences between the three federal authorities impede the conceptualization of trans-regional housing strategies. In the everyday life of people living within *stadtregion+* there is a blurring of these boundaries, as seen in e.g. commuter traffic. Around 260,000 people (Lebhart, 2011, p.49) travel to Vienna daily- many of them by public transport. Since it is to assume that in the future the model split is to change towards public transport, can it be a promising approach to concentrate new housing developments around the region's railway hubs?



Fig. 4, sprawl in Pedemonte (Wikimedia Commons, 2009)



Fig. 5, detached-family house (partnerimmobilien.at, 2015)



Fig. 6, retail park (Fachmarktzentrum) (graf-thun.de, 2017)

railway connectivity

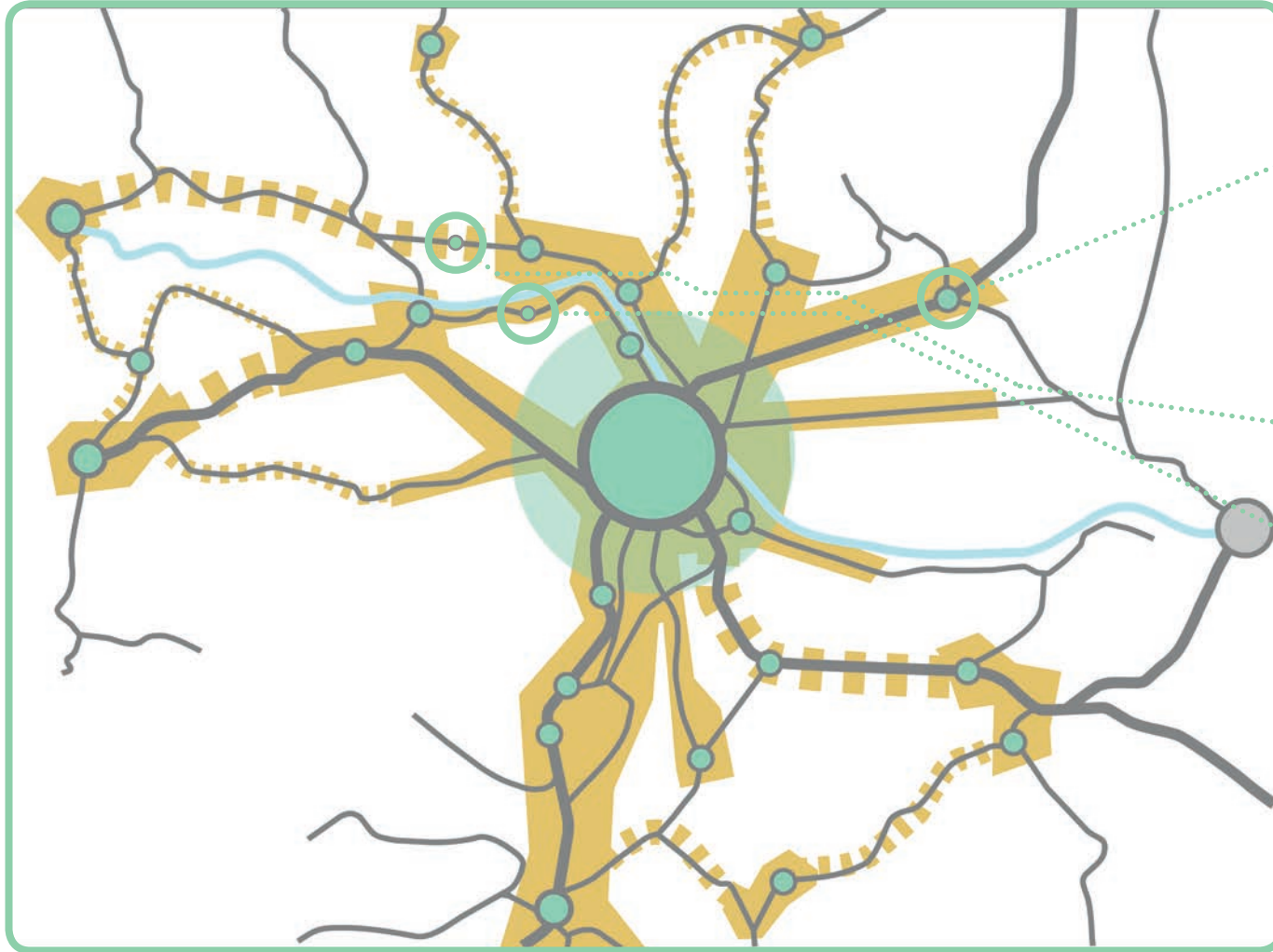


Fig. 7: railway connectivity in the vienna region (VOR, 2017; own illustration)



Fig. 8 (Wikimedia Commons, 2009)

gänserndorf



Fig. 9 (de.academic.ru, 2017)

hausleiten



Fig. 10 (Wikimedia Commons, 2010)

st.andrä-wördern

what?

This project is linked to a study for *PGO* done 2014 by University of Vienna, Department of Geography and Regional Research, that aimed to point out the potentials of settlement intensification around railway stations in the *stadregion+*. Therefore, Döringer, Görgl & Huemer 2014 analysed vacant construction plots within a walking distance of 300m to 160 railway stations in the region (p.7). The map, made before the study was consulted, is to illustrate the railway interconnectivity within greater Vienna. **The green dots represent smaller cities as well as railway hubs; the yellow areas refer to a better public accessibility within the rural/urban fringe as well as connectivity to Vienna (Fig. 7).** Considering the region's initially discussed emerging population growth, the idea was to take a look at unused building plots within walking distance to railway stations, yet here 500 m max. is considered as walking distance. By analogy with the study at hand as well as guiding principles by the three federal governments and strategic papers publicized by PGO, this project seeks to as well point out the necessity of intensified housing development near railway stations. In order to specify this question, it

focuses on only three Lower Austrian locations; one of them (Gänserndorf) being visualized as a more illustrative example. Hausleiten, St. Andrä-Wördern and Gänserndorf each differ in population size, land prices, quality of infrastructure, and connectivity to the city of Vienna. In the course of the further mapping process, all three locations on the other hand showed a high number of vacant plots within the settlement boundaries, whereas according to construction plans new plots are being zoned outside of the condensed areas. Amann et. al. (2011, p.10) discussed this phenomenon as “construction land paradox”: While enough construction land is zoned, there is shortage of available land due to land banking. Municipalities react by zoning new land on the fringe of towns, causing sprawl. Since the (Lower) Austrian legal framework seems to be lacking tools to activate construction land and to prevent land banking and urban sprawl, the project tried to apply the current South Tyrolean legislation on the test areas, making land mobilization for subsidized housing more efficient and simulating a more rigorous land zoning system. The next pages attempt to illustrate this fairly complex legislation in a playful way.

how?



If you are interested in building your new home that is subsidized by state funds you have the opportunity to form a housing cooperative with like-minded people. As soon as there is a group of e.g. 10-15 families or future households, the collective need for construction land needs to be submitted to the municipality (immoversum, 2017).



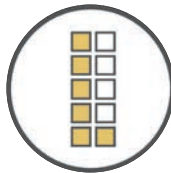
The municipality seeks for potential building land according to their compulsory zoning plans (*Bauleitpläne*), yet not necessarily for already zoned construction land: The *Bauleitpläne* determine the estimated demand for housing within the next decade; already developed building plots are taken in account as well. Undeveloped construction land is automatically zoned back to green land after certain time (3-9 yrs.) (immoversum, 2017 & Amann, 2011, p.75).



Durchführungspläne (construction plans) are a means of regulating the allocation of construction land. Soon to be zoned construction land that is not to match 70% of the required minimum building density is considered as extension areas (*Erweiterungszonen*), in which 55% of the cubic capacity is to be reserved for subsidized housing. In our case, the municipality can also issue a coherent area of different building plots, rapidly changing the ownership relationship. (Amann, 2011, p.75).



If you as a land owner want your property to be zoned as construction land, 55% or 60% of it is passed into the ownership of the municipality; depending on whether the owner or the municipality issued the *Durchführungsplan*, and reserved for subsidized housing. If the *Durchführungsplan* is issued by the municipality, the legal assignment of the 60 per cent land is expropriation. Either way, the municipality pays only half market price (immoversum, 2017, Amann, 2011, p.75 & LROG Art. 37).



The municipality can sell the land to the housing cooperative or other non-profit building developers for a quarter of the market price. The remaining 40% stays in the belongings of the initial property owner, but even there, 60 per cent of the building mass must not be “luxury apartments”, but “conventional” (*konventionierte*) apartments. Half of them need to contain at least 65m² living area (immoversum, 2017, Amann, 2011, p.75 & LROG Art. 27 & Art. 37).



1.3m³/1m² building density and utilization coefficient 0.8: The strict requirements for minimum building density for private, cooperative or public housing developments make it almost impossible to build detached single family houses. Rental apartments are also common to be built by the state: A publicly financed housing institute calculates the (social) housing demand for each municipality and also pays quarter market price for the land (immoversum, 2017, LROG Art. 35).

start

60:40 for subsidized housing

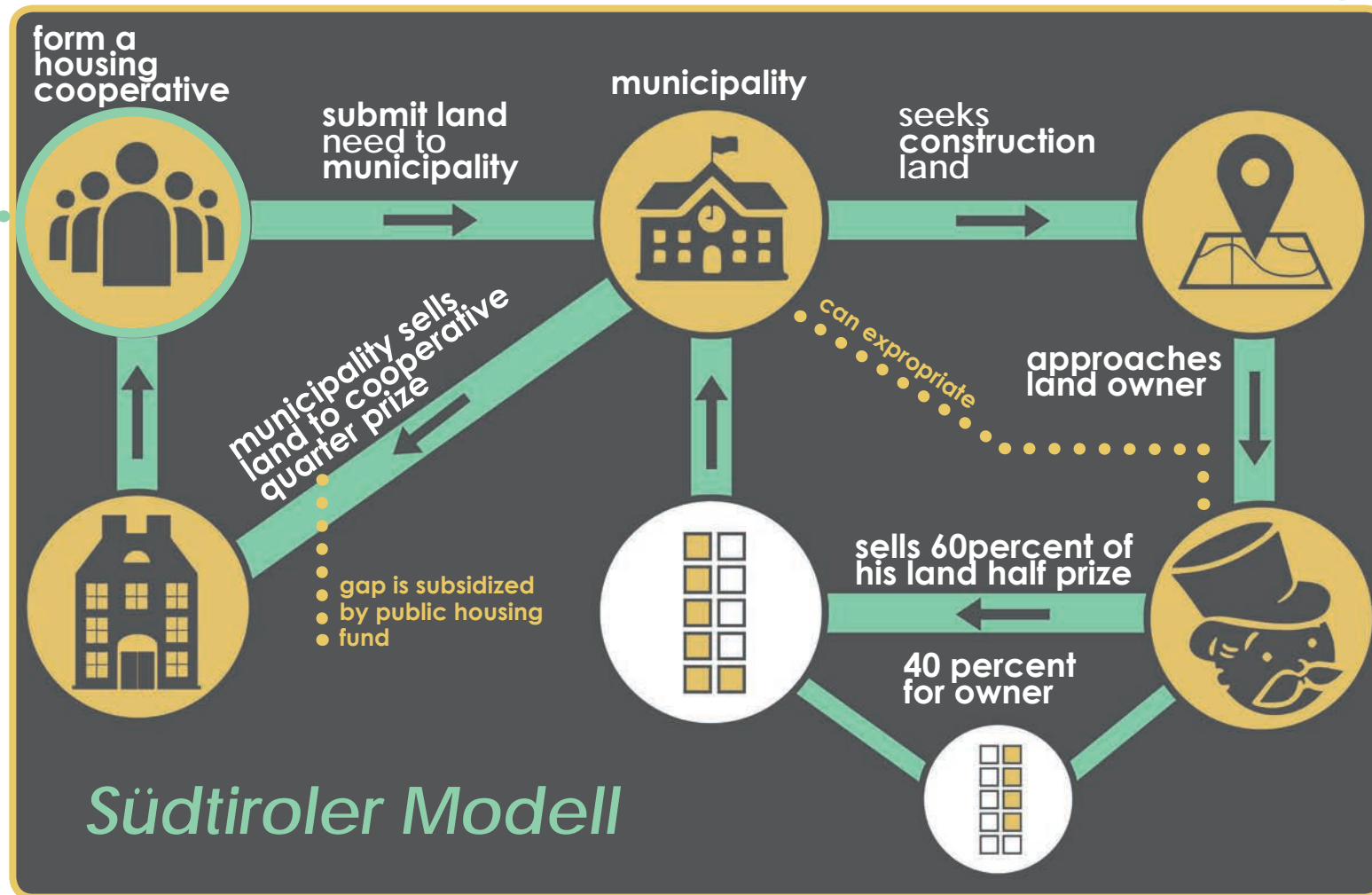


Fig. 11: Südtiroler Model (immoversum, 2017; own illustration)

case study gänserndorf

infrastructure



Fig. 12: Gänserndorf infrastructure (Google Maps, upload.wikimedia.org, atlas.noe.gv.at & openstreetmap.org, 2017; own illustration)

case study

A train ride to Gänserndorf takes you to Vienna within 16-22min three times per hour (fahrplan.oebb.at). Also due to commuter traffic convenience, it is Austria's fastest growing municipality (local council meeting protocol, January 2014). Having regard to real estate advertisements, particularly external settlements (*Gänserndorf Siedlung* or *Gänserndorf Süd*) are growing in number.

Figure 13 displays the most basic infrastructure in the actual town of Gänserndorf. The reference framework is only the centre or core of the town itself, outer parts of Gänserndorf are not taken into account. The highlighted area depicts a walking distance of less than 500m to the railways station, which is in the centre of interest for this project. The figure ground plan gives an insight into building typologies. The town centre appears to have a sealed, compact settlement structure whereas the outskirts of the town are made up by mostly detached single-family houses. Using the Lower Austrian official mapping service (atlas.noe.gv.at) containing the municipality's cadastral plan and orthophoto map, fairly wide areas already accounted for and zoned as construction plots became apparent at the edge of the settlement boundaries.



Fig. 13 & 14: available building plots (openstreetmap.org, atlas.noe.gv.at, 2017; own illustration)

Yet, these areas were not taken into account whilst mapping the available building plots stock (Fig. 14) for it would be against the principle of a sealed and compact housing development. As can be seen on the map, it illustrates available building plots within (green) and out of (yellow) 500m walking distance. The outlined, but blank areas are vacant plots without road access. Within the yellow realm, in the North West is most strikingly a bigger vacant area between the railway station and the town centre.

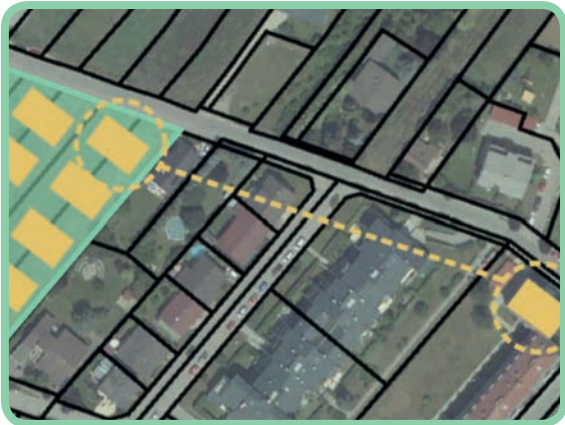
Figure 15 already builds up on the assumption, that vacant construction land can be activated when applied the South Tyrolean legislation. Therefore, the biggest coherent areas of vacant building plots ($>2,500\text{m}^2$) were selected. As can be seen on the map, in a further step 40 per cent of the areas were deducted, leaving only 60 per cent of the areas reserved for subsidized housing development. Having in mind our previous “board game”, one has to imagine, these are the areas that could have been selected by the municipality according to its *Bauleitplan*.

reference typologies

no. of flats	where?	stories	distance to station	
	Himberg 23km South of central Vienna	3-4	450m	
	Himberg 23km South of central Vienna	2-4	140m	
	Vienna 13km Northeast of central Vienna	2	300m	
	Jois 46km Southeast of central Vienna	2	300m	
	Gattendorf 56km Southeast of central Vienna	2	650m	

Fig. 16:
WGA, 2017Fig. 17:
Steinwider, 2010, p.91Fig. 18: Döringer, Görgl &
Huemer, 2014, p.123Fig. 19:
BVZ, 2017Fig. 20:
Neue Eisenstädter, 2017

Fig. 15: reference typologies (Döringer, Görgl & Huemer, 2014, p. 117-124, atlas.noe.gv.at, geodaten.bgld.gv.at, 2017; own illustration)



typologies

In order to simulate the possible outcome of the South Tyrolean law, in the course of the project, building typologies were selected. For this purpose, the selection referred to best practise examples in the PGO study. Döringer, Görgl & Huemer (2014, p.117-124) instance several existing housing projects in the stadregion+ as good examples for housing developments near railway stations. Since they particularized their samples e.g. in terms of the number of housing units as well as the year of construction, some of the building typologies were assumed for this project as well.

The selected reference typologies each differ in size, number of stories and housing units, as well as the distance to the railway station. Some of them are row house complexes; some could be described as dense low-rise houses up to a 4 storey building. For the arrangement of the sample typologies within this project's simulation the most decisive factor was compatibility with the existing structures, furthermore followed by the principle of preferably high construction density towards the railway station and major roads.

Fig. 21: referring to existing typologies (atlas.noe.gv.at, 2017; own illustration)

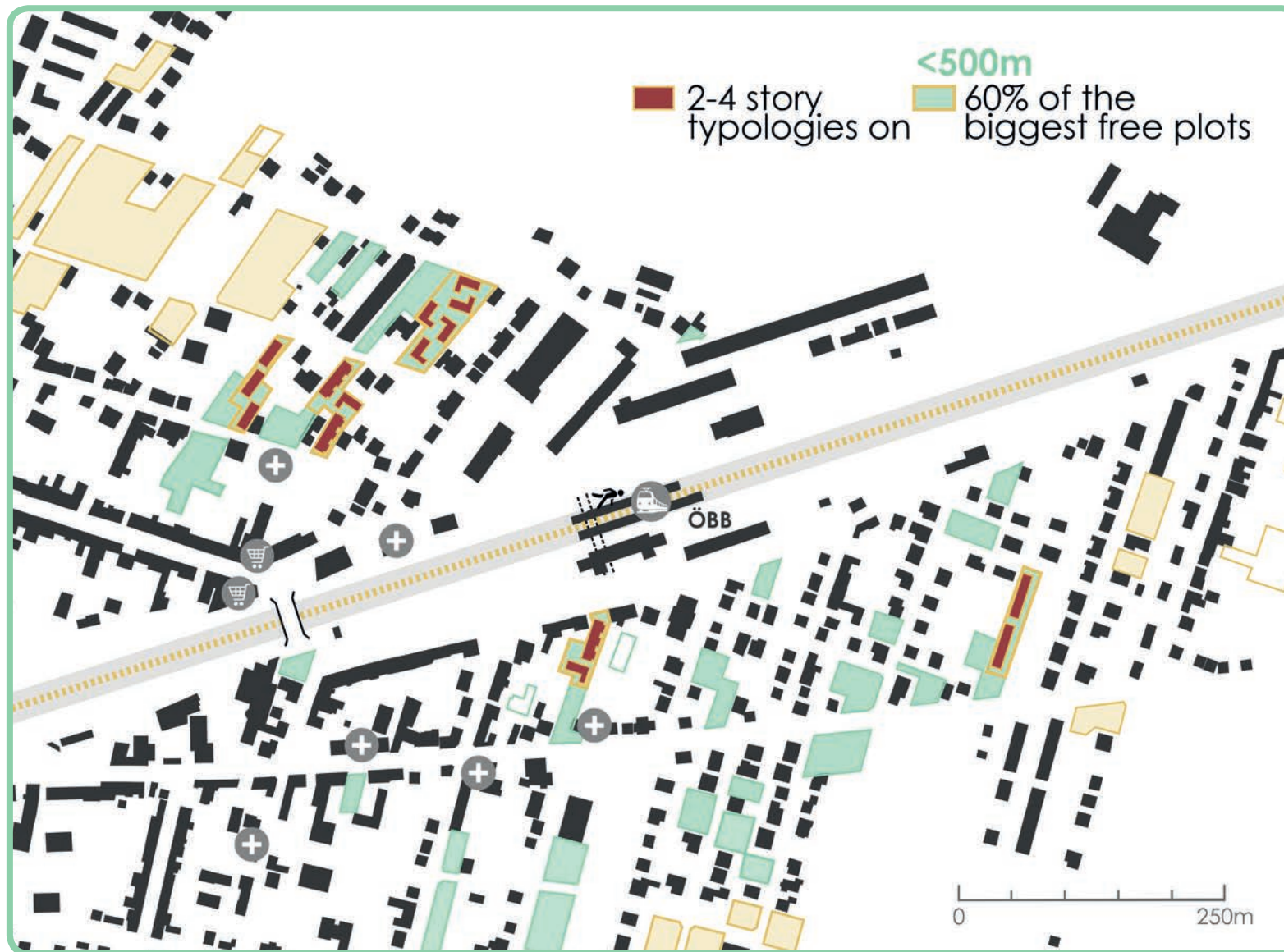


Fig. 22: 60% of biggest building plots developed (Döringer, Görgl & Huemer, 2014, p.p. 117-124, openstreetmap.org, atlas.noe.gv.at, 2017; own illustration)



Fig. 23: all vacant building plots developed (Döringer, Görgl & Huemer, 2014, p.p. 117-124, openstreetmap.org, atlas.no.e.gv.at, 2017; own illustration)

scenario <500m to stations

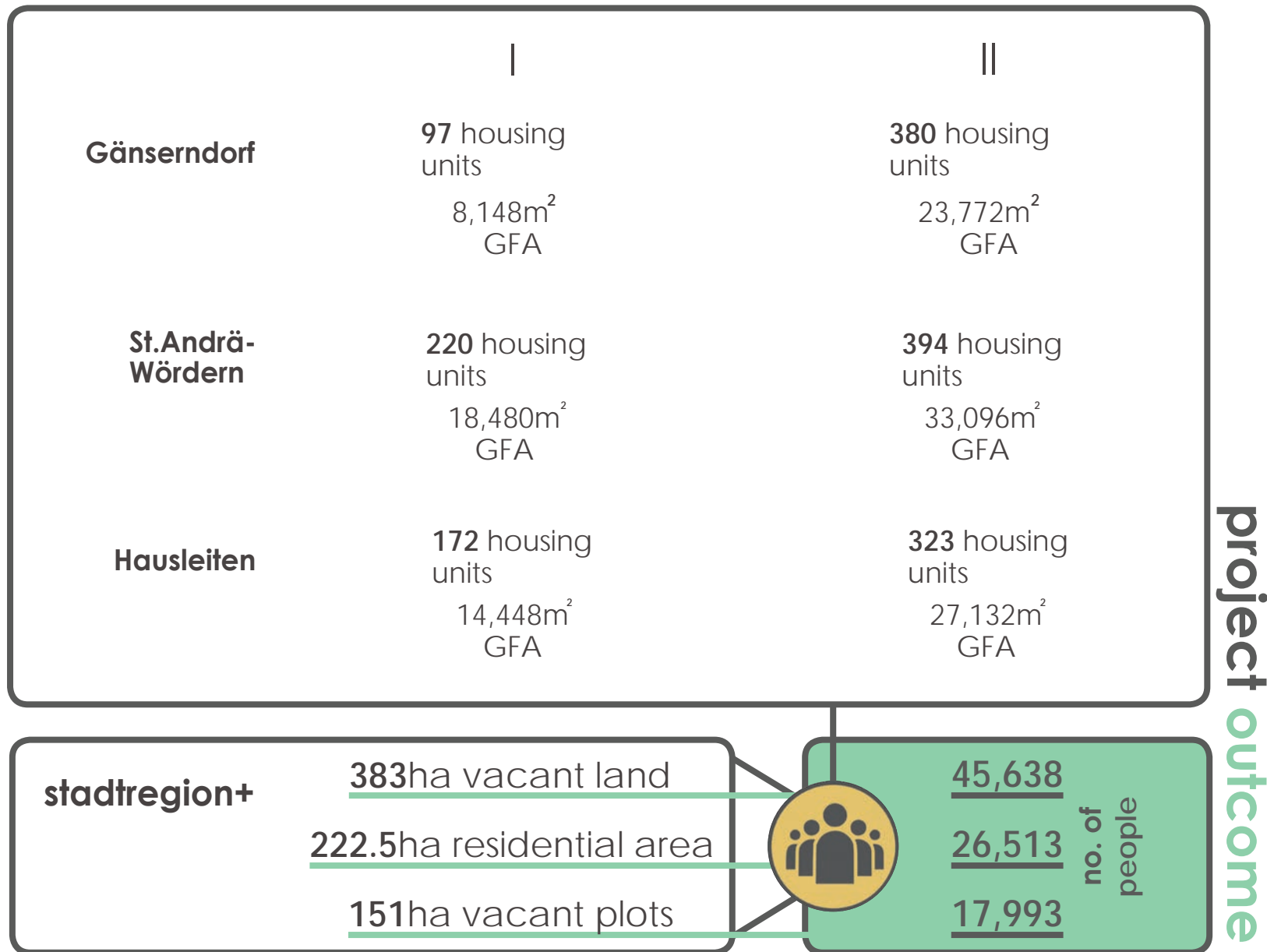


Fig. 24: project outcome (Döringer, Görgl & Huemer, 2014, p.83; own calculations & illustration)

outcome

Building up on the assumption, South Tyrolean law is applied in **Gänserndorf** and 60 per cent of the biggest coherent building plots are selected by the municipalities to pass on to housing cooperatives or other non-profit real estate developers, figure 23 mapped a possible outcome how those can be developed using the reference typologies (figure 16). In this case, **97** new housing units could be created within a walking distance of maximum 500m to the railway station. That way **220** new housing units could be created in **St. Andrä-Wördern**. In the third test area **Hausleiten** more vacant coherent building

plots are offered. Yet, due to compability with the existing lower building structures, the assumed outcome is **172** new housing units.

In a further step (see figure 24, 26 & 27) all vacant building plots are being simulated to be developed with the reference typologies using a similar construction density. This can give insight in the overall potentials of settlement intensification near the railway stations not necessarily based on South Tyrolean law application. However, the outcome would be **380** new housing units in the test area **Gänserndorf**, **394** in **St. Andrä-Wördern** and **323** in **Hausleiten**.

st.andrä-wördern

hausleiten



Fig. 25: project outcome Hausleiten (Döringer, Görgl & Huemer, 2014, p.p. 117-124, openstreetmap.org, atlas.no.e.gv.at, 2017; own illustration)



Fig. 27: project outcome St. Andrä-Wördern (Döringer, Görgl & Huemer, 2014, p. 117-124, openstreetmap.org, atlas.no.e.gv.at, 2017; own illustration)

projecting stadregion+

In order to put the possible outcome for the three test areas on the regional level of *stadregion+* the study authored by Döringer, Görgl & Huemer 2014 is once again consulted. According to this study there is in total 383ha vacant areas in a walkable distance to railway stations (p.83). 222.5ha of these areas are zoned as residential areas (ibid.), divided into two categories: *Unused*, meaning vacant plots and *underused*, meaning building plots loosely built with the potential of densification (p.71). The zoned and vacant plots make up 151ha (p.83). To roughly estimate how many people could find a new home within newly developed sites near the railway stations of *stadregion+*, the population density for the biggest coherent plots (as seen in fig. 23) of all three test areas was calculated and averaged using average Lower Austrian household size 2,3 (Statistics Austria, 2017). That way a higher population density of 198,6 inhabitants per hectare can be assumed. Applied to 60 per cent of **383ha**, the result would be new homes for **45,638** people. Taking 60 per cent of **222.5ha** into account, the result is **26,513**. Taking 60 per cent of **151ha** only zoned and vacant plots into account gets out the most likely result of **17,993** inhabitants. Considering that the areas calculated for the PGO studies refer to vacant plots within a smaller walking distance to the railway stations of 300m, the results would be higher when taken 500m distance into account as in this project.

reflection

When I started this project, I only had an abstract idea, where it is going to take me. The actual project task was to find a solution to accommodate 20,000 people within the greater Vienna region. My initial thought was to take a look on vacant buildings and building plots in Vienna. I then thought to myself that within the currently ubiquitous urban growth debate in Vienna, the surrounding region is underrepresented. As I discussed, according to the PGO, not just Vienna's housing market is challenged by a growing demand, but also its hinterland: rental prices are rising; streets, park & ride facilities and suburban trains are overcrowded by everyday travellers. While many people move to Vienna, apparently many others move from Vienna into the green. Both commuters and urban escapees cause higher traffic volume in and around the city. The fact that I myself witnessed daily commuting to Vienna had influenced my considerations. Many of the railway stations I passed seem to be located in the middle of nowhere: loosely built residential houses next to industrial or agrarian areas. The people using the railway to get to their job need to travel by car or bike to get to the railway station. Those areas, especially in rural regions seem to be neglected as residential areas; even more seem to have a bad reputation as unpopular to live due to possible noise pollution and since e. g. social housing is commonly located near railway hubs. The dream to live amongst greenery is often linked to the wish to live in a car-friendly environment. At the

same time I witnessed a significant number of vacant housing plots near railway stations next to new development sites and detached single houses far off public transport connectivity.

Considering the importance of sustainable settlement and infrastructure development, what I found most striking throughout the course of my research, was the apparently irresponsible way construction land is being handled. Obviously zoned construction land reserved for residential housing is being held back while single-family houses are sprawling out to the green field, displacing affordable housing to the edge. When I analysed possible development sites in the selected test areas, I tried to find legal ways the land can be activated; concluding that the Lower Austrian legal tool kit is lacking to prevent land banking and urban sprawl. In many municipalities, there is no supra-municipal legal basis for settlement boundaries, neither municipalities are obliged to issue a local development plan. Among the three test area municipalities, St. Andrä-Wördern was the only one I could manage to find a local development plan that issued clear settlement boundaries; also due to forest and flood protection. Gänserndorf and Hausleiten seem to have little interest in their settlement coherence. In the course of my research, I stumbled upon the legal framework currently in South Tyrol, where settlement development plans are compulsory for every municipality.

I further read media articles about the seemingly highly-praised Südtiroler Modell of construction land control. The medial perception suggested an alternative concept to those of immobile construction land causing high real estate prices and sprawl. I tried to sum up the most relevant aspects of the South Tyrolean Regional Development Act finding it fairly difficult to fully understand the concept. That seems hardly surprising, considering the fact that the legal basis for the current law goes back to 1970 and it has since then been revised around 30 times (immoversum, 2017). By reading through secondary literature as well as media articles and web blogs, I received a more simplified look at the legal frame work. That gave me the idea to visualize a very abstract and simplified image of the most crucial aspects of the legislation in the style of a board game.

I am aware, that there are only few people having full understanding of those legal matters. I cannot answer the question of how South Tyrolean practice could be implemented in (Lower) Austria. To my knowledge, a constitutional change would be necessary to adapt the law towards the one currently in South Tyrol (Amann et.al., 2010, p.9). I merely tried to point out the potentials of site development and settlement intensification around railway stations near Vienna and assumed a more rigorous legal frame in terms of settlement development being applied to the Lower Austrian test areas in order to activate seemingly immobile construction land.

South Tyrol is a very mountainous region with scarce land, whereas the Viennese surroundings consist of widely agrarian and flat land, having little reason to adapt the existing settlement legislation. Yet, in other Austrian regions, e. g. Vorarlberg and Salzburg, new legal models that help activate immobile land are currently being debated.

The way the test areas were simulated to be developed is fairly questionable. I chose to map two stages. In the first place, I assumed coherent building plots were being selected by the municipality and 60 per cent of its area is passed on to non-profit house developers or housing cooperatives; providing housing also for lower income households. However the second stage, in which all free plots are assumed to be developed, underlies no groundbreaking idea how to activate the construction land. There is not a connection to the discussed Südtiroler Modell anymore. Also the regional projection of the project's results seem to be to a certain point problematic. One problem is the key difference between the two legal frame works. In South Tyrol there are basically no zoned, but undeveloped residential areas. Undeveloped construction land is automatically re-zoned to green land after a few years; the municipality has the right to expropriate land owners in case of land banking (immoversum.at, 2017). Whereas in Lower Austria, e.g. the figures provided by Döringer, Görgl & Huemer (2014, p.83) reveal that most of the unused plots have been zoned; yet seem

to be vacant for many years.

Another problem is that the results of the PGO study refer to potential areas with a walking distance of only 300m to railway stations. However, the regional projection results help to put the idea of settlement intensification near railway stations across and make it more tangible.

Besides the fact, that my project would have needed more time and capacities to get a more detailed and profound understanding of cross-state planning law matters, I hopefully managed to communicate the key message.

Construction land is not to be a commodity of speculation. It is a scarce resource, that we need to use sustainably and responsibly. It is on the policy-makers to consider new ways to supply affordable houses for the present and the next generations. It is on us planners to keep suggesting and challenging policy-makers to make a legal change.

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Students in Salzburg, SCUPAD congress 2017



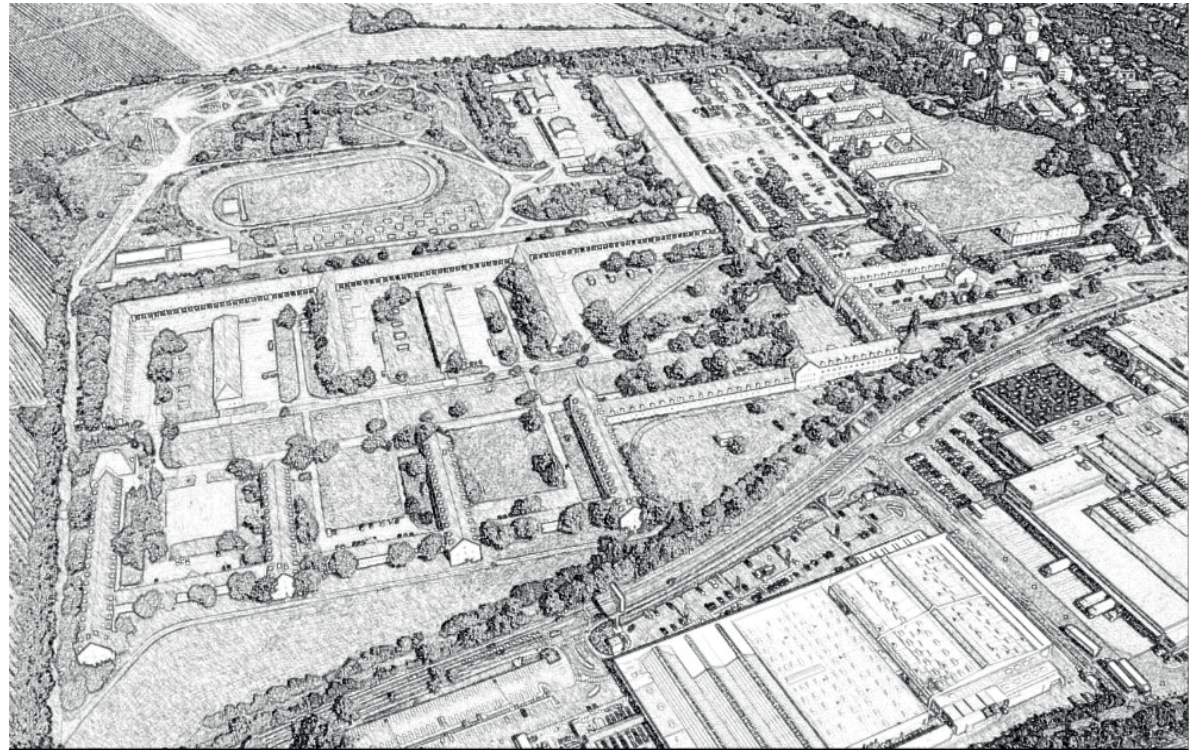
Martinek Base, Baden/Lower Austria

Aleksandra Kljajic

Transforming Military Bases to Future Neighbourhoods

Case study: Martinek Base, Baden, Lower Austria

The purpose of the work was to develop a masterplan for the 'new' district, paying attention to the future use, its spatial requirements, as well as possible adaption of already existing and construction of new buildings and public spaces. The planning area comprises in the first line the current base area, but however, the surrounding was intensively involved in the work process since the aim was not to create a isolated district, but an impulse for the entire city and region.



Analysing

Introduction

The conversion of military facilities to new civilian uses has offered one of the most demanding regional and economical challenges facing such a broad range of communities across the nation during the past two decades. Historic buildings or other treasured features of the base can serve as a focal point for redevelopment and connect the new development with the rich history of the facility. Communities around the nation could use strategies to plan growth, maintain and improve their quality of life and protect public health and the environment. These approaches often are called “smart growth” (Kay Bailey et al., 2006, p. 2).

Since 2005 more than 160 very complex army properties have been sold across Austria, with a total revenue of around 371.5 million euros. Sold facilities ranged from bases, military training grounds to the bunkers undergrounds. There have been sold small and large areas (from 74 m² - 3.7 million m²) with proceeds from 500 euros to 41 million euros. The total area of all properties sold is around 13 million square meters. This corresponds to approx. 1,810 football pitches or approx. the area of the Viennese municipalities 3 to 7 (Bundesimmobilien-gesellschaft, 2007)

Historical overview & location

The Martinek base is a former base of the Austrian Army in Baden near Vienna in Lower Austria. It was built as a FLAK base by the Deutsche Wehrmacht in the years 1938-1940, providing both extensive crew accommodation with training

infrastructure as well as storage areas for headlights and guns. In April 2013, the Federal Ministry of Defense and Sports announced the final closure of the base for the end of 2013. On 19 November 2014 the base was offered for sale for 33.1 million euros. At the beginning of 2017, the base was again put up for sale (Wikipedia, 2017)

Martinek is located about 25 km south of Vienna. The base area extends over the municipalities of Sooß and Baden. It is based on the southern outskirts of Baden on the Vöslauer Street, from which the main entrance takes place. The historic city center of Baden is around 1,5km away and can be reached directly via the Vöslauer Street.

In the Vöslauer Street there is a Baumax building market and big company of the Lower Austrian Dairy (Niederösterreichische Molkerei – NÖM). In the north there is Albrechtsgasse, which houses several family houses and a sports field. In addition, a farm and a multi-storey residential area are connected to the base. In the west and south, the area is adjacent to agricultural areas, with predominantly vineyards.

Transportation

The base is connected via the Vöslauer Street (B 212) to the center of the city of Baden and north to the towns of Sooß and Bad Vöslau. Via the Badener Street (B 210) there is a connection to the A2 Südbahn and in the following direction to Vienna, Wiener Neustadt or Bratislava and Budapest. To the west there is connection to recreational center of Wienerwald-Alland and the A1 – Westautobahn in the direction to Linz, Salzburg and Munich. There are high-level public transportation services in Baden. Regional and S-Bahn connections from

the train station in the direction of Vienna and Wr. Neustadt are also available. Regional and S-Bahn trains run through the so-called „S-Bahn-Stammstrecke“ in Vienna and thus offer a direct connection to Vienna-Meidling, Vienna-Hauptbahnhof, Wien-Mitte, Vienna-Praterstern and Vienna Floridsdorf.

Trains run every 10 - 20 minutes. In addition, there is the „Badnerbahn“ (local railway line Vienna-Baden), which connects directly to the city center of Vienna and runs from the city center of Baden (Josefsplatz). Trains run every 15 minutes and the journey time to the Vienna city center is around 1 hour.

Directly at the bases entrance on Vöslauer Street, there is currently a regional bus stop, served by lines 360, 361 and 556.

All lines run over the center of Baden or the main railway station. Buses run about every 30 minutes. In addition there are 4 city bus lines in Baden, which run in the 30 minutes interval.

Educational and job opportunities

Within the 15 km around the base there are 32 primary, 14 secondary, 18 high and 9 special schools offering enough capacity for future residents. There are approx. 60 companies with more than 100 employees each, making working place for approx. 60,000 workers 20 km around the base. 14 km from the base is located the biggest Austrian's industry site - Industry Center Lower Austria South (IZ NÖ-Süd) and 17 km from the base one of the biggest malls in Europe - Shopping City South offering job opportunities for local residents as well as for newcomers.

Industry Center Lower Austria South is Austria's largest commercial area with around 280 hectares. There are located

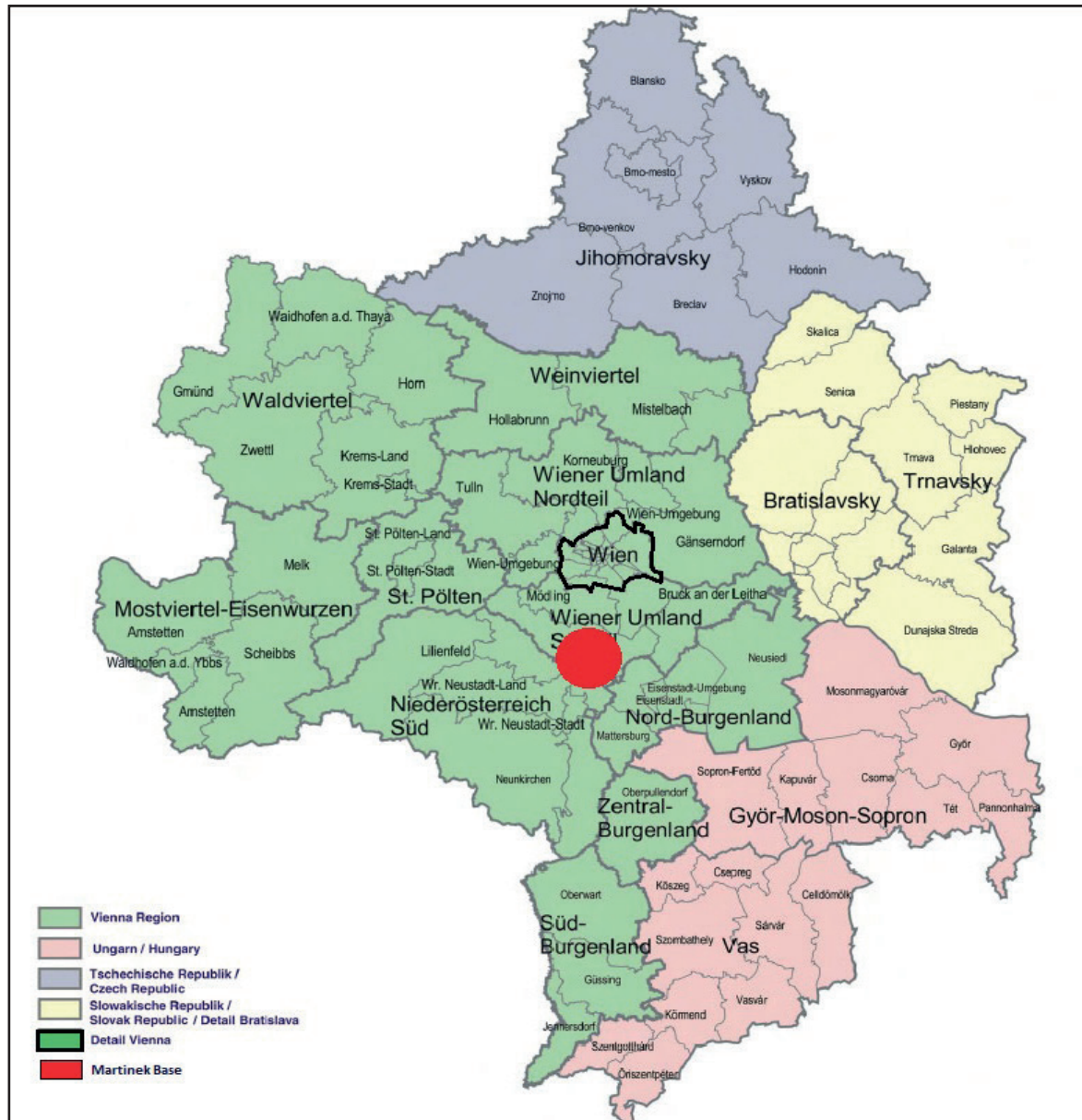


Fig. 1: Location of Martinek base (Milletich et al., 2017)

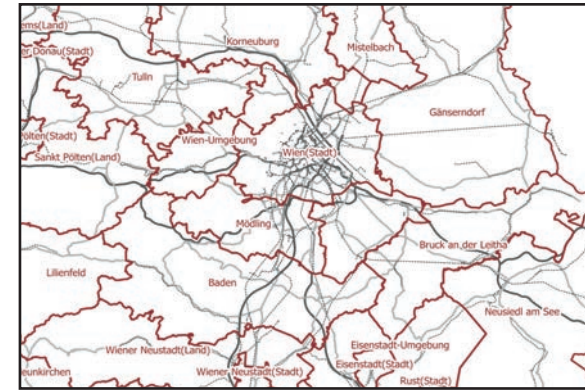


Fig. 2: Transportation map (Bundeskanzleramt, 2017)

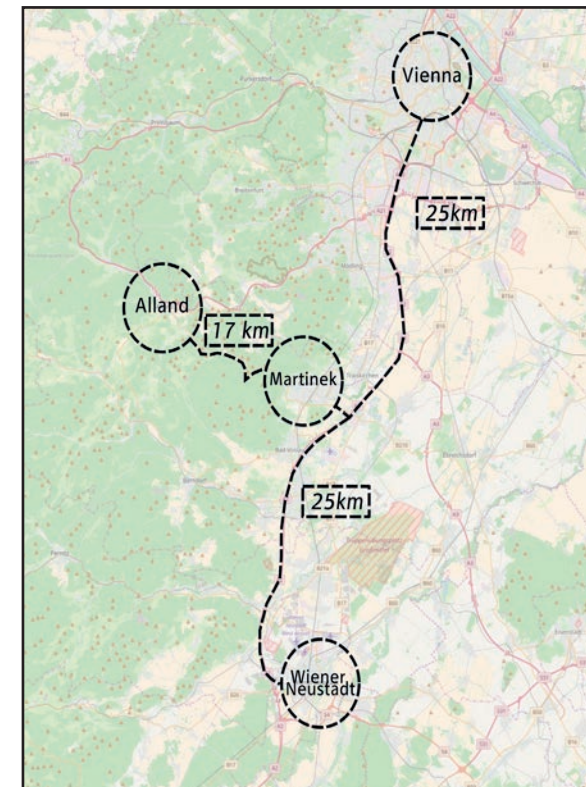


Fig. 3: Distances to cities in surrounding (openstreetmap.org, own illustration, 2017)

more than 360 national and international companies with about 11,100 employees. Good technical infrastructure, its own post office, customs office, subway / freight station, two highway exits, route guidance system and various gastronomic facilities are making this site attractive for new employees. According to statistics, one of five jobs in the district of Mödling is located in IZ NÖ-Süd. In October 2004 the Izibizi Kids Corner, a child care center for employees of the industrial center, was opened. Since May 4, 2016, this has been moved to a modern child care center (ecoplus Wirtschaftspark IZ NÖ Süd, 2017). Shopping City South with a leasable area of 270,000 square metres and it is the biggest shopping mall in Austria. It contains over 330 shops and has around 4,500 employees.

Land use and development plan

The Martinek base is currently almost entirely devoted to Building land - Special Area (Military Base). As part of a reuse of the base it is necessary to do reclassification into 'civilian' land use category. Along the Vöslauer Steet is a 15m wide strip as greenland - green belt emission protection. Cultural heritage protected ensemble includes closed building structure along the Vöslauer Street.

Construction regulations are defined as follows (Baden Bauordnungsbestimmungen, 2016):

- Number of floors: 0.5
- Maximum building height: 10 m
- Construction type: free arrangement of the buildings

Existing buildings

The total GFA (gross floor area) of all existing buildings is 84,535 m² with total GRV (gross room value) of 363,442 m³. Closed buildings structure of objects 05-28 with objects 2 and 3 are creating ensemble under monument protection with total area of 36,000 m² of GFA. The Martinek base was laid out over a large area with a structured arrangement of the buildings. The closed building from (monument protection) is beginning on the north-west at Vöslauer Street and further along the road southwards. The building contains the components/ tracts with the object numbers 05 - 28. The individual components are partly connected and partly separated from each other. On the northern part of the base, 'outside' of the closed building form, there are several individual buildings. The surfaces 'outside' of the closed building body are largely unbuilt and made up mainly of meadow. The interior areas from the entrance of the base to the south have access roads, sealed parking areas and marshalling areas in front of the dormitories and garages. In between are meadows with a separate trees with large car park. Behind the garage buildings lies the former sports ground of the base with meadow and a track. The sports ground is partly cut into the terrain, so that there is a slope on the south-west side. (SIVBEG, 2013)

Description and former usage of buildings under monument protection

Like already mentioned, objects 2 and 3 with closed building structure are under monument protection and should be remained after transformation to civilian use. The **object 2** was a

officer's casino (1,140 m² of GFA) with 2 storeys, a basement and a converted attic. The building is oriented towards the base and has a small forecourt. **Object 3** (713 m² of GFA) is a one-storey, without basement built outside of the bases area. The building was partly used by the bases management and has been empty for years. The 'Team Tract North' is part of the closed building structure of objects 5 - 28, which extends to the north of the base and further along the Vöslauer Street. The buildings comprise the **objects 5 - 11** (15,298 m² of GFA), which are connected to another buildings structure and all together is arranged as a comb. Through the arrangement of the buildings, inner courtyards are built, which are opened towards the south. The buildings **5, 7, 9 and 11** are 2-storey with converted attics and complete basement. The lecture buildings **6, 8 and 10** are identical in design, in the west-east direction, connecting the team buildings. The objects are one-storey without the basement. **Objects 12** (505 m² of GFA) and **13** (281 m² of GFA) have one-storey without basement. The object 12 is a lecture building which is accessible from the object 11. A classroom as well as several small rooms are oriented towards the south. Between object 12 and object 13, there is a passage for cars. The 'Kitchen and Dining Tract' consists of the **objects 14-17** (8,230 m² of GFA) and represents a U-shaped building whose courtyard is oriented towards the west. The objects are interconnected with fully basement.

Economics and affordability

	Vienna	Baden	Martinek Base
Renting a flat	16 €/m²	10 €/m²	7*
Buying m² of housing	5 200 €/m²	3 100 €/m²	840
Construction land	250 - 2 500 €/m²	400 - 600 €/m²	82

***estimation**

Table 1: Economics and affordability (immopreise.at, exclusive-bauen-wohnen.at, immobilienatlas.at, own illustration, 2017)

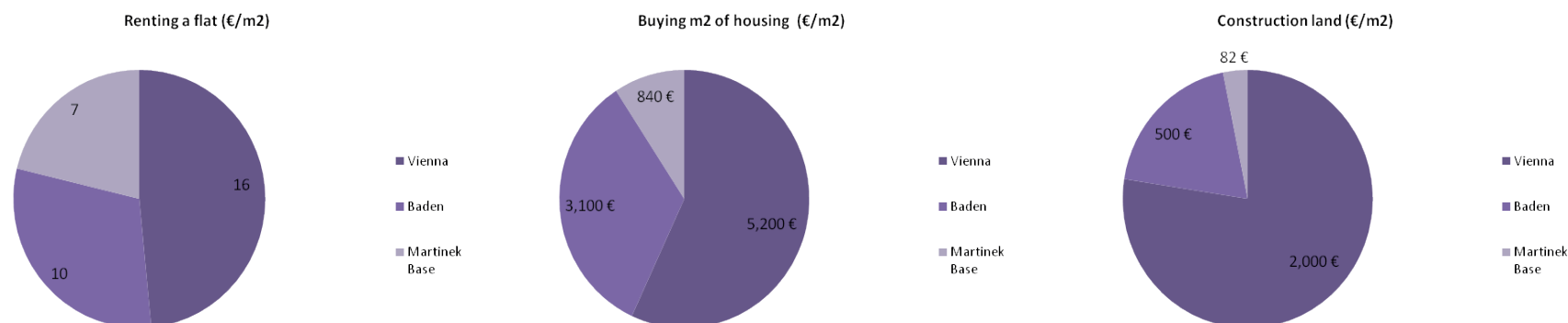


Diagram 1-3: Comparison of affordability aspects between Vienna, Baden and Martinek Base (Own illustration, 2017)

The objects 14 - 16 have one-storey and a partly developed attic. Object 17 is two storey. The command tract is L-shaped and consists of objects 18-20 (6,767 m² of GFA). The **object 18** is embossed by the large bases entrance, without a basement and has 2-storey. **Objects 19 and 20** form the „heart“ with main command tract and the heating center for the whole area. The building is a 2-storey with a loft and has 2 basement floors. On the ground floor and the upper floor were the offices of the bases command. **Object 21** (4,420 m² of GFA) have one storey with basement. On the ground floor was the military hospital. The buildings of ‚Team Tract East‘ are including the **objects 22-28** (23,503 m² of GFA), which are connected to one another and whose buildings are arranged as a comb. The team buildings **22, 24, 26 and 28** are almost identical in design and oriented in the west-east direction. The buildings have 2 storey, a converted attic and fully basement. Object 28 has a larger building head at its ‚end‘. The lecture-hall buildings **23, 25 and 27** are of the same construction, arranged in the north-south direction and connects the team buildings. The objects are one-storey and without basement. In object 23 there is a passage for cars at the transition to object 24. (SIVBEG, 2013)

State of buildings

The buildings of the Martinek base are from moderate to poor construction and maintenance conditions. In the past few years, only isolated and site-specific maintenance work was carried out. Depending on the time of the last renovation and the use of the base (for example, administration buildings and

garages vs. garages, warehouses and workshops), the state of the buildings varies. The objects are showing high moisture damage and in the cellar basements there are water entrants. On the other side, there are also vandal damage in some objects.

Planning

Cooperation workflow

The area of the Martinek base will be free for new uses in the coming years. For this reason, an urban concept should be created, which defines the mix of use, the structure of the buildings, usage and the urban quality criterias (green and public space, social infrastructure facilities, etc).

The planning process is divided into seven phases: Idea phase, feedback process with governmental representatives, planning process with the planning team, feedback process on interim results with the planning team, presentation of the masterplan, implementation and evaluation.

Throughout the process of participation, citizens will be continually informed about progress and interim results, for example through the website of the city or the local journals. The participation process should begin in October 2017 and is expected to be completed until the end of December 2018. Citizens of Baden, Soos and broader surrounding would benefit through new built public green spaces, as well as enlargement of objects of social infrastructure and residential opportunities. The area of former military base will no longer

present huge vacant buildings as barrier in space, but a new city within the already existing city with opportunities and benefits that could one city offer. At the other hand, road infrastructure and public transportation will be improved and adapt to new needs, from which could benefit not just residents of former base than all other users.

The idea phase at the beginning of the participation process will consist a few elements like ideas postcards, walk through the base site, ideas workshop and citizens' council. At the beginning of the participation process, ideas postcards would be sent to all households in Baden and Soos at the beginning of October 2017. The citizens would be able to make initial proposals for the reuse of the base. The ideas will be summarized thematically and recorded in a report. These first ideas could give a very comprehensive overview of the wishes and needs of the citizens.

At the beginning of November 2017, citizens will be able to get to know the area of the Martinek base, which had previously been closed, during a guided tour, and then to produce more concrete ideas as part of the ideas workshop.

At the end of November 2017 the citizen's council should meet. Randomly selected and invited citizens should devote themselves to the topic „Transformation of the former military base“ and develop their visions for the area.

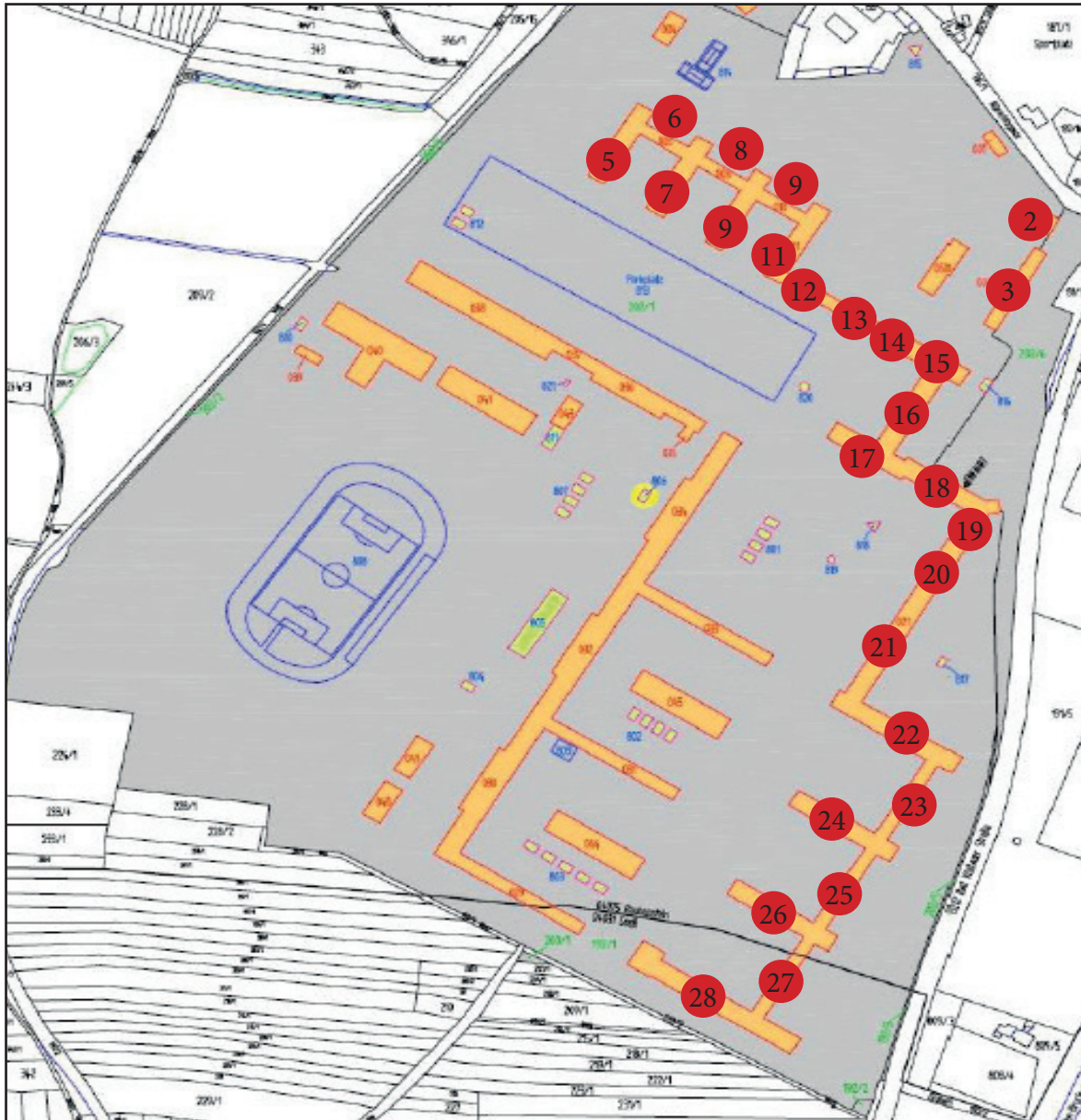


Fig. 4: Overview plan of buildings structure with number of objects (SIVBEG, 2014)

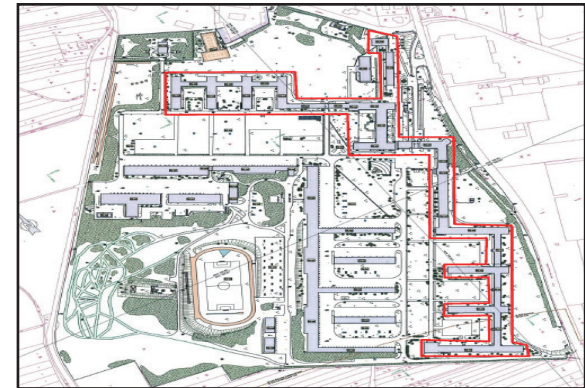


Fig. 5: Overview plan of buildings structure with monument protected ensemble (SIVBEG, 2014)

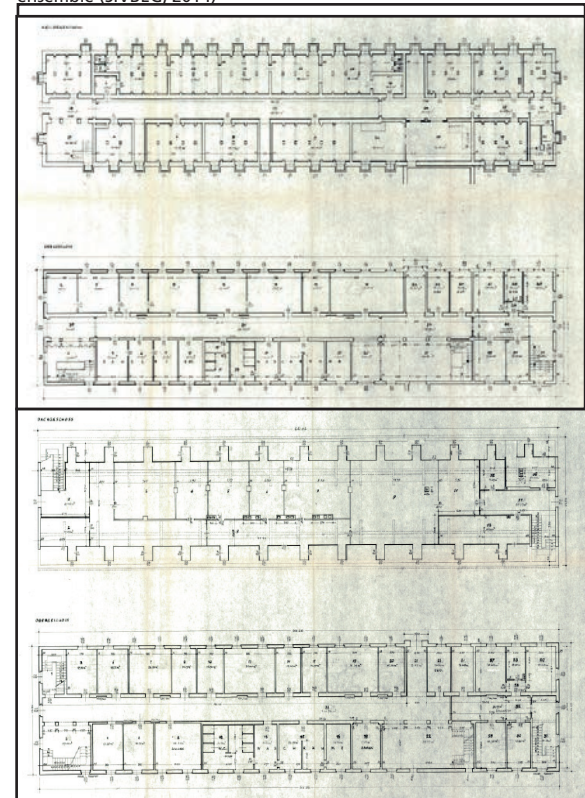


Fig. 6: Ground plan for object 5 (SIVBEG, 2014)

The idea phase of the planning process should be concluded in December 2018 and the feedback phase with the governmental representatives should start and it should be repeated every 3 months for a duration of 2 months until the end of the planning process. The aim of the feedback process with governmental representatives is to determine the requirements and objectives for the planning process phase at the political level on the basis of the collected proposals for the base area from the previous ideas phase. This should show the guideline for expert's work in the next phase. In the feedback phase, the steering group should assume a central task: the meeting of the first steering group workshop to discuss the citizen contributions from the idea phase. In this way, the municipal councils should develop guidelines for the planning team. The result of the steering group would be passed on as a recommendation to the municipal council. After preliminary consultation of the responsible committee for planning and development in the city council, the municipal councils of the municipality of Baden and Sooß will present the results of the steering group workshop, the vision, the qualities as well as the aims and proposals as an objective of the urban community for the planning process. As part of the work contract, this section outlines the main focus of the steering group and the citizens involved in the planning process.

Since March 2018, the planning team supposed to work on the basis of the results of the idea phase and the objectives and framework conditions of the municipal communities of Baden and Sooß to draw up an urban development concept for the former military area. The aim of this phase in the plan-

ning process is to inform the planning team about the results of the ideas phase and to give them inputs for the professional work of the planning team. The results should be made available in the form of the reports.

The feedback process with planning team should start in May 2018 and should be finish in 3 months. This phase will focus on the feedback of the citizens. On the basis of the interim results prepared by the planning team up to that date, it will be the possibility within the scope of participation formats to make a concrete statement and to submit further proposals: feedback events and workshop of the steering group. It will be necessary to make the first concept of the masterplan widely known and to inform the public about which citizen's inputs the planning team has been take into account. At the same time, the citizens will have the opportunity to ask questions about the raw concept, to discuss them, to take a position and to make further proposals. The task of steering group will be to discuss the development of the urban development concept throughout the planning process and to prepare the decisions for the municipal council. Within the scope of the second workshop (July 2018) of the steering group, it will be necessary to discuss the raw concept of the masterplan and the feedback of the citizens with the planning team. The aim of the workshop will be to decide which proposals should be and which should be not included in the mission statement. In addition, it should be discussed which proposals are important for the realization of the planning.

In September 2018 is foreseen the presentation of the master plan for new neighborhood located on the former military site.

Implementation (October 2018) will follow right after planning phase and it would combine the adaptation of existing buildings for a duration of approx. 6 months, as well as construction of new buildings in duration of approx. 12 months. During the whole planning and implementation process, evaluation would be present.

Masterplan

The reuse concept of Martinek base offers high mixture of population groups and generations providing above all public-mixed income housing. Young people will be attracted by affordable housing, good infrastructure and its attractive location (young couples, students). At the same time, through the establishment of appropriate concepts, attractive offers for older people will be also created. A mix of services (for example a health center) and apartments, also in the form of special housing will provide integrative co-living on the site. Also, it should be considered to develop housing for refugee families to ensure social intermixing and to have a positive effect on an open and integrative "mood" in the neighborhood. Recreational areas and pathways should be well connected inside as well as outside. At the same time, central area will be main recreational zone with buildings of social infrastructure like schools, kindergartens and community center. Through the creation of small-scale building plots, diverse building types (heights, sizes), public and semi-public green courtyards, the goal is to create accommodation and recreation areas, which will be shared by all residents of a former military site.

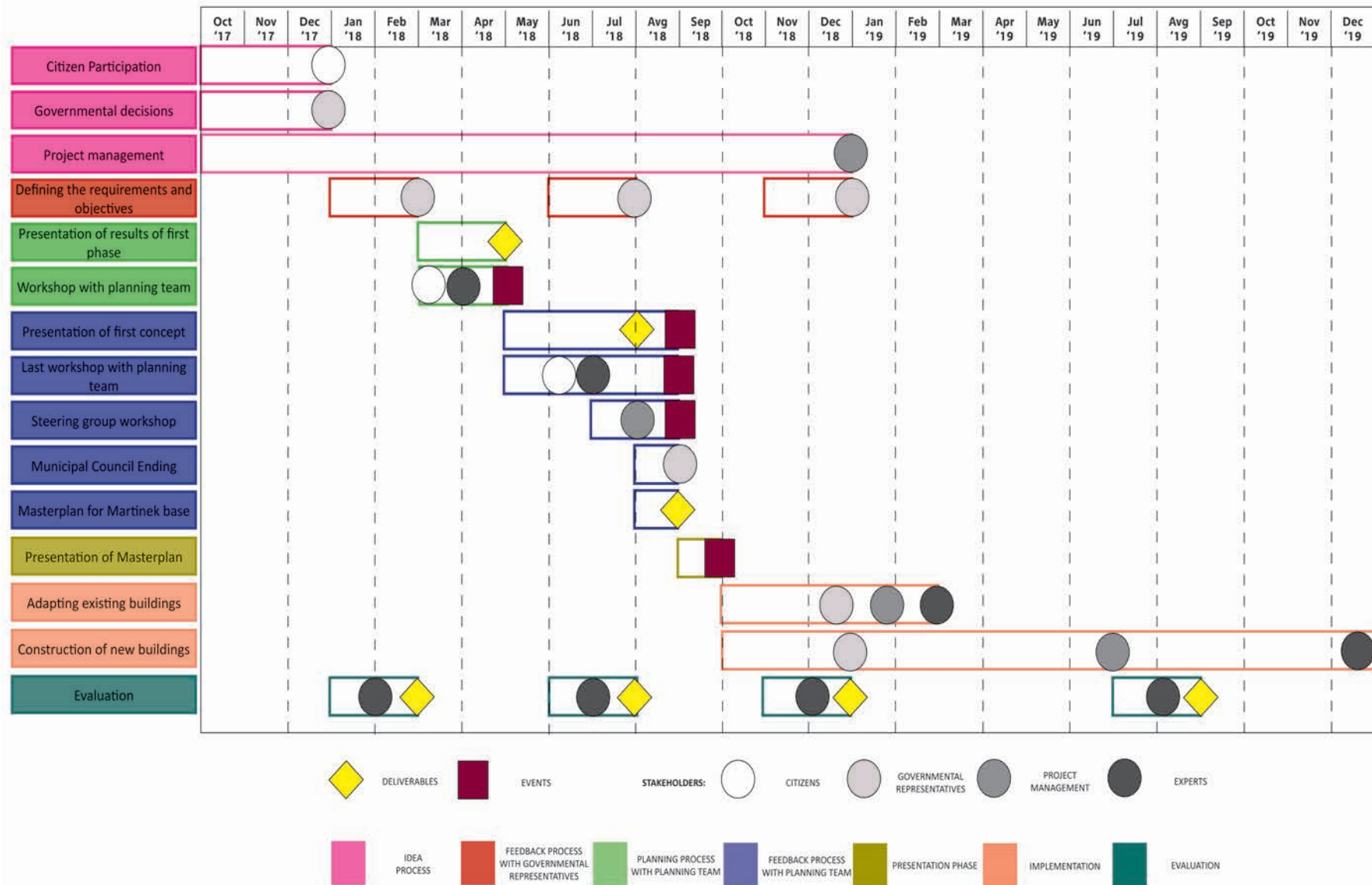


Fig. 7: Cooperation workflow (Own illustration, 2017)



Fig. 8: Masterplan (Own illustration, 2017)

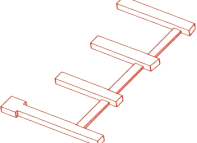

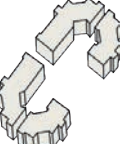

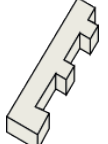

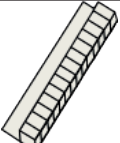

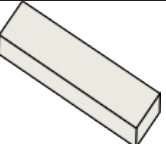



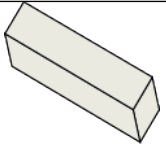

Buildings	Designation	Typology	Area	People (11,000)	Usage	Price (estimation on the basis of similar projects)	Design Suggestion
EXISTING	I		36,000 m ²	3,500	Majority residential use with unit of medical center	840 €/ m ²	
NEW	II		6,352 m ² x 4	2,930	Public mixed-income housing	1,200 - 1,400 €/ m ²	
	III		1,470 m ² x 1	150	Senior Housing	-	
	IV		1,400 m ² x 12	1,220	Row houses	1,700 - 2,000 €/ m ²	
	V		2,720 m ² x 4	1,310	Mid-rise public housing	1,200 - 1,400 €/ m ²	
	VI		1,320 m ² x 13	1,900	Garden Style Private/Public Housing	1,500- 1,900 €/ m ²	
	VII		3,400 m ² x 3	-	Services/Retail/Garages	-	

Table 2: Sample typology Own illustration, 2017)

In the case of traffic development, „slow traffic“ (pedestrian and bicycle traffic) will be clearly preferred. The area is supposed to be largely car-free. Therefore all traffic areas in the area will become pedestrian zones. Parking for the car traffic will offer the garages in north-eastern and south-western parts. Short-term parking will be provided for deliveries. Public transport can be developed by carrying out the existing regional bus lines or creating / extending the Baden city bus routes through the area.

The closed building structure (I) together with the associated green areas will be preserved and remained as a characteristic and structuring feature of the base terrain. Total area of existing buildings has more than 36,000 m² of GFA and it is completely under monument protection. Future use should be used for residential purposes providing socially-mixed income housing for younger couples and older people supporting the concept ‚Young + Old‘. Existing buildings have 2 storeys with attic and basement with one storey connections between them. Separate part of existing buildings in the north-eastern part could be used as medical center. Right across the medical center will be located the senior housing (III) offering living units for elderly with nursing facilities.

Building structure along the north-western „border“ line (II) is foreseen to be 4-storeys high building providing home for social mixed-income residents exclusively for residential purposes. Building's typology provides bigger inner public yards and pathway through whole structure avoiding the feeling of closeness inside the courtyards. Openness of courtyard would continue further more between next buildings block (IV) creating longer public space. This block has simply building structure with 4-storeys intended for public housing.

To reach high level of social and buildings typology mixture, 2 storeys row houses (V) are also planned to be part of future reuse concept. As usual the houses will have their own private courtyard with a special indication of the height of the fence that cannot exceed more than 1m. The main reason is again to avoid any way of exclusion. The average surface of one house would be between 80 and 100 m² of GFA.

Between row houses will be built 3 and 4 stories smaller building units (VI) in garden style with private and public ownership, again just for residential purposes.

The central area of future neighborhood is foreseen to be recreational area with big park and square. Right next to park will be located objects of social infrastructure like school, kindergarten and community center which would provide through diverse events and workshops integration of new neighborhood.

On the south-western and north-eastern borders would be located 5-storeys objects (VII) for different kind of services, retail and garages.

Regarding the road infrastructure, it would be necessary to build some new roads and connections inside as well as outside of the base. Already existing paths through the closed building structure should be used again in future, especially since they are making the only connection with main street. Furthermore, new bus lines and stations should be considered since the need for public transportation will be for sure increased after arrival of new residents.

The total surface of the planned buildings should be around 96,000 m² of GFA. With already existing 36,000 m² of GFA, former military site could be residential neighborhood for approximately 11,000 new comers, from which 3,500 could be

mobilized in short notice after adapting already existing buildings.

Good practice example

The French Quarter in Tübingen, Germany. The quarter has been built in a modern urban architecture on the former military base of the French Army. From the outset, the district had a model and signal character for an urban life in which traffic was pushed back into the background. According to the principle of short distances, apartments and workshops are mixed. A complete local supply and a good connection with the public transport increase the value of life. The idea of the coexistence was consistently realised. There are apartments of all groups, directly next to each other and often in the same house. In addition, together, priority is given to the public space prior to the efficient use of the modes of transport. Many building companies have common areas, for example for children's birthdays, freely accessible inner courtyards, squares and streets have their space for the people. In terms of traffic, the French Quarter is also aimed at people: all important facilities are accessible by foot for all residents. The district is connected by three bus lines to the Tübingen city center and the railway in a fixed 10-minute cycle. There is parking area in a few central locations and around the French Quarter. The car is usually not right in front of the door. This means that people are on the road on foot, even if their destination is not in the neighborhood. Large purchases or heavy items can be brought directly in front of the house. For visitors and businesses, short-term parking is also available. As a result, the French Quarter remains a quarter for the people (Das Französische Viertel, 2016)

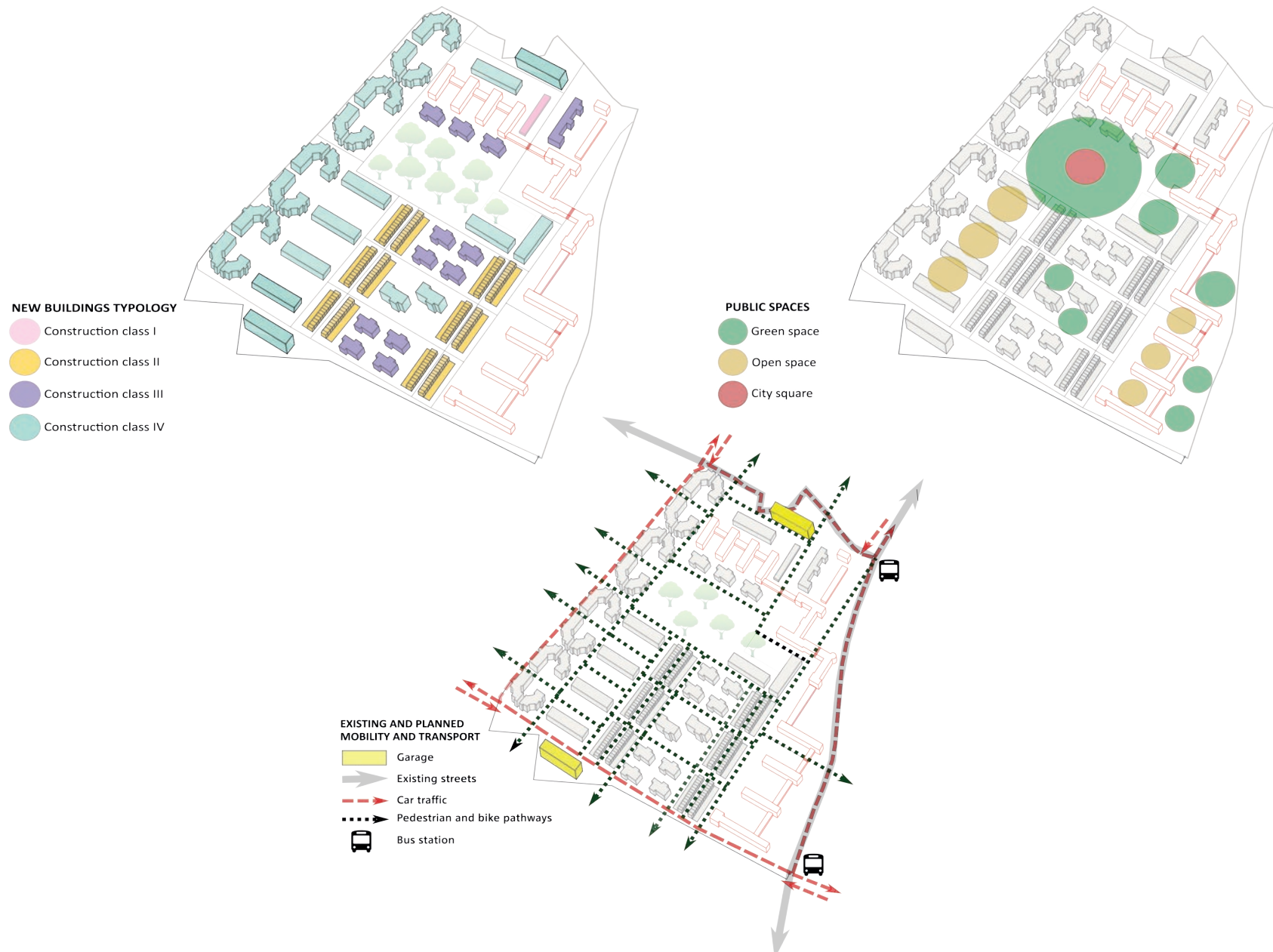


Fig. 9-11: Buildings typology, public spaces and transportation (own illustration, 2017)

Quartier Vauban in Freiburg, Germany. Covering an area of 41 hectares, Vauban was built on a former military site that was occupied by the French military up until 1991. Vauban's planning process, which scrapped design regulations in the land-use plan and provided a wide range of different plot sizes, played a particularly important role in achieving the active neighbourly relations and district we see today. The planning process created a diverse mix of individual building projects, groups of building owners, rented and owner-occupied flats, cooperative models as well as inclusive accommodation projects that promote social integration such as Genova, the Green City Hotel and VAUBANAise. Ten former base buildings have been converted into affordable housing by the City of Freiburg Student Union and the S.U.S.I.-project, or „selforganized, independent neighborhood initiative“. Thanks to the social infrastructure, it's possible to locate workplaces and housing within short distances of one another. The district boasts a community centre, nurseries, a primary school, cafés and restaurants, shops to cover day-to-day needs as well as innovative projects. As Vauban is a densely built-up district, incorporating green areas for relaxation and recreation into the planning was particularly important. This allowed most of the existing trees to be preserved and new plants to be added. Residents played a key role in planning the five green areas with different themes, which have been designed to use slope wind to help circulate air around the district. Car ownership is made redundant for many people thanks to the tram and bus links, good cycle paths and abundant numbers of car sharing vehicles, and has prompted 430 households to seize the opportunity of car-free living (Quartier Vauban, Von der Kaserne zum Stadtteil, 2014)

Ernst - Ludwig - Park in Darmstadt, Germany. With the purchase contracts in the 2000 and 2001, the City of Darmstadt acquired the largest part of the Ernst Ludwig base from the Federal Republic of Germany. The acquired areas were differentiated into areas for social housing, self-financed housing, commercial, green, forest and road surfaces. Parallel to the negotiations, a working group was set up in 1997 to prepare the conversion and development of the conversion area through the City of Darmstadt. To investigate the potential for urban development, a workshop was carried out to realise important goals. In 2002 the land development company was founded with the aim of developing and marketing the acquired land. The area of the former Ernst Ludwig base is about 11 ha. A large part of the area (about 9.7 ha) was used for this project. An area of 1.4 hectares remains available for an indefinite period for the American Theater of the US Army. On about 2.2 hectares social housing was built. A total of 270 residential units, as well as a children's and community house and retail stores were built. In addition, public green spaces and noise protection facilities were created (Ernst-Ludwig-Park, Städtebau für kostengünstige Eigenheime, 2007).

Klosterforst in Itzehoe, Germany. The „Hanseaten-Base in Itzehoe's north-west was built in 1935/36. Up to 1994, Bundeswehr soldiers had been stationed here. The situation of the community, which had already come under economical strain due to the structural change, worsened with the departure of the army from the site. In the middle of 1995, the site was taken over by a private company. Ever since then, the „Plate 6 Partner Group“ is developing the new district „Klosterforst“ in individual stages. A steering committee involved all the par-

ticipants regulates into the structural realisation. The site measures approximately 20 ha and has been largely unsealed; individual buildings have been pulled down, others were thoroughly converted and redeveloped. The new 4-storey buildings were constructed in compliance with the sustainability targets specified in the outline contract. They were created in a dense, ecological architecture (for example low energy standard, rainwater utilisation), using environment-compatible building materials (for example recycled concrete from the demolition rubble on the site) and energy-saving domestic engineering (solar facilities, district heating plant). An important objective of the development was the achievement of mixed use on a district level as well as a building level. Besides 580 residential units, 11.000 m² of office and business space are also to be created. The second aspect is the heterogeneity of the resident population. In order to address a broad range of residents, a mixture of publicly and privately financed owner-occupied and rented apartments of all sizes has been realized. The development comprises multi-storey housing, apartment buildings, town villas and terraced houses. Further elements include numerous community amenities and special child-, elderly- and disabled-compatible service offers such as assisted housing, day-care centre, janitor, garden services, a health centre with various medical specialists as well as other medical services. (Umwandlung ehemaliger Kasernen, 2014)

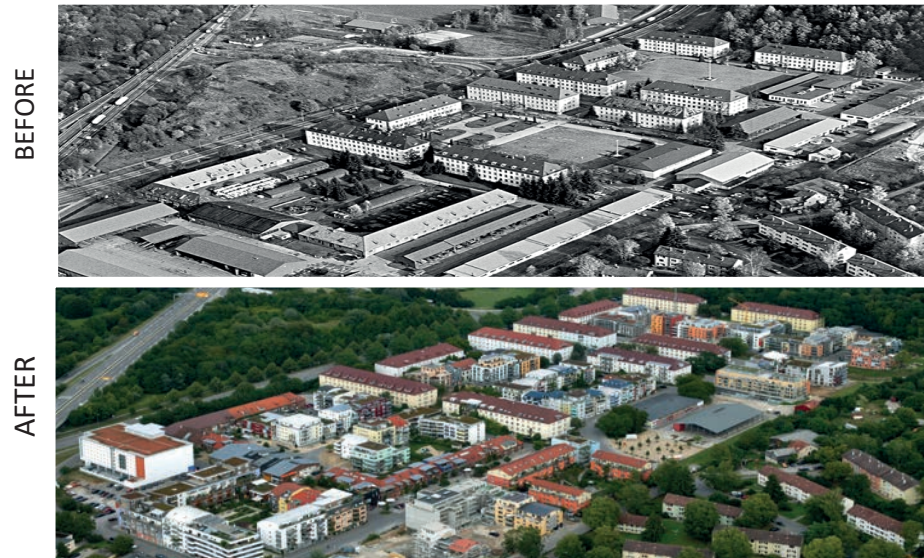


Fig. 12: French Quarter before and after the transformation (Berghof Analytik + Umweltengineering GmbH, 2017 and Grohe, 2017)

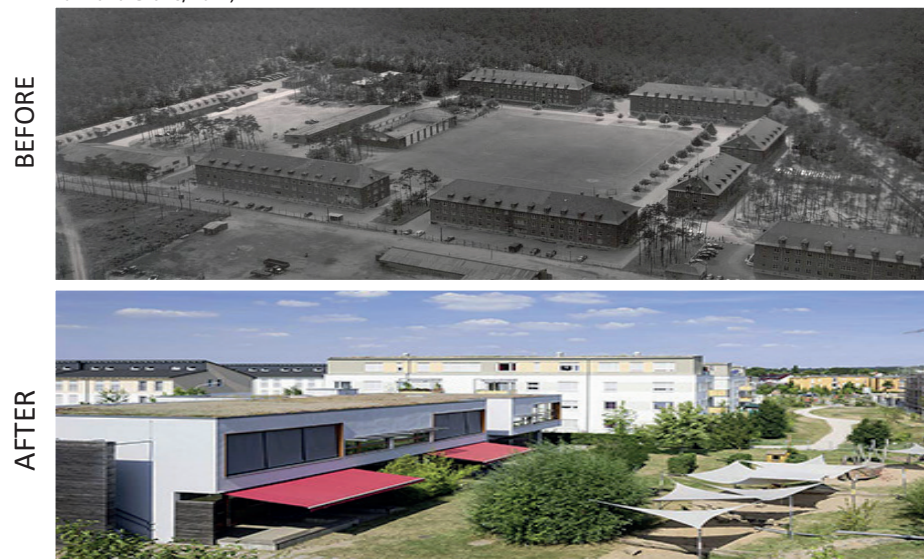


Fig. 13: Ernst-Ludwig-Park before and after the transformation (Deutsche Friedensgesellschaft-Vereinigte KriegsdienstgegnerInnen e.V., 2000 and AVENIDA Wohnbau GmbH, 2017)

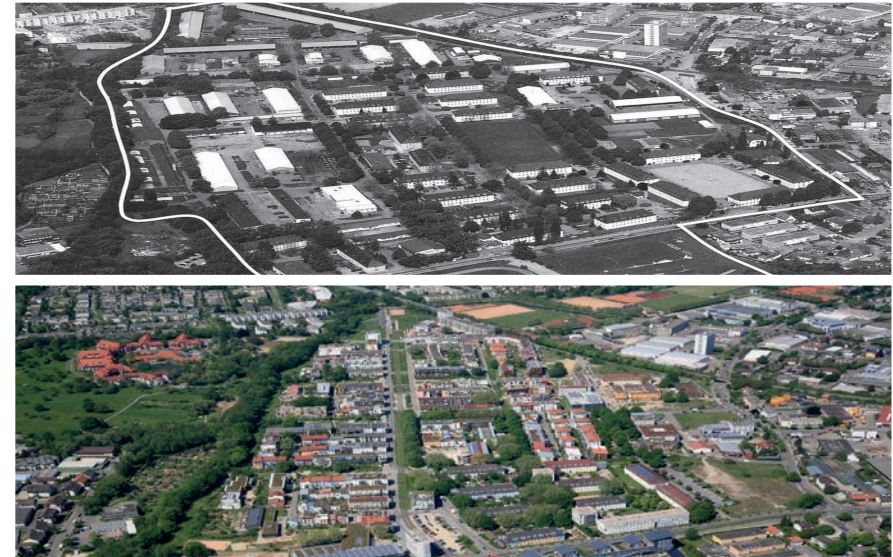


Fig. 14: Quartier Vauban before and after the transformation (Hauser, 2017 and Stadt Freiburg, 2017)

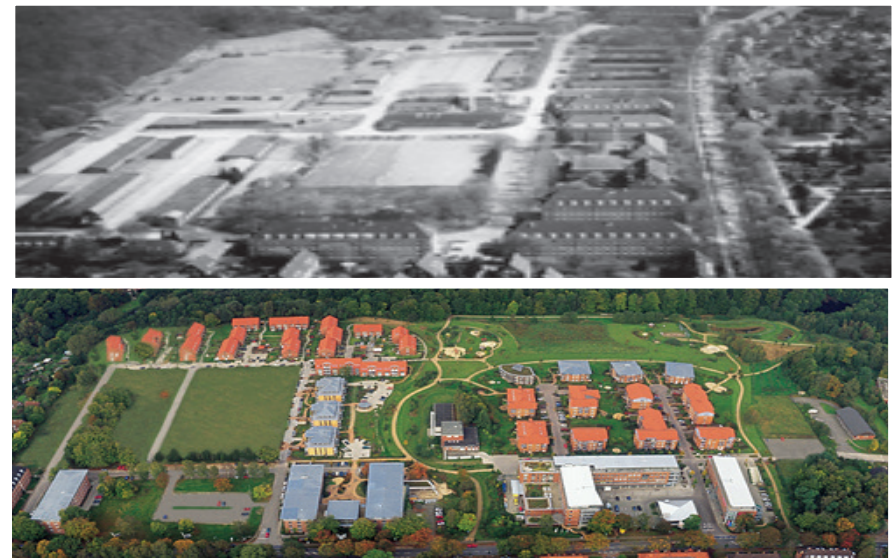


Fig. 15: Klosterfrost before and after the transformation (Uwe² oHG, 2005 and VitaVis, 2017)

Critical reflection

The aim of this project in cooperation with the SCUPAD Congress in Salzburg was to find a solution for 20,000 “people on the move”, understanding the dynamics, gaps and limitations of human displacement to cities around the world, and especially spatial impacts of displacement at the local level. The main objective was to make a concept by offering economically solid solution for the development by securing affordable housing, a detailed work and participation plan, infrastructure solutions for education, jobs, social infrastructure and daily needs for the future residents. The project topics were freely chosen accordingly to the interest of the students. For the purpose of this reflection, I decided to highlight some possibilities of projects like this one, as well as some obstacles that I had working on it.

The former military bases are representing large vacant buildings and their associated area. A very important advantage right from beginning presents clear ownership - in this case state of Austria. Projects like this one could be repeatable and implemented worldwide. A significant advantage is also the aspect of affordability. The construction land prices as well as residential units prices of already existing buildings are most of the time under average in comparison with surrounding areas. Well planned transformation of former military of this scale offers impulse for entire region, not just for surrounding. Like in every other projects, obstacles and uncertainties varied as the project progressed, but after finishing all required tasks, I was aware of some mistakes that I made and they can serve me now like lessons for future projects. At the end, I would

have to say that my main failure in this project has been to understand and consider the organizational side too late for it to be fully followed and for each decision to be taken knowingly. The concept of quality plan is now clear for me and will be implemented right at the beginning of the next project I will have to work on.

Conclusion

Developing the area of the former Martinek base as a „new neighbourhood“ with a clear framework is for sure a positive step. The reuse of former military bases often represents an unprecedented opportunity for a community to influence its future land use and development. The community base reuse planning, therefore, should focus on the long-term development of available facilities, as well as for new ones. Settling down new residents requires long and deep analysis of all necessary factors which are influencing the quality of life, like well developed public transportation network, job and educational opportunities as well as capacity of all objects of social infrastructure. One of the most important things is to involve the entire community of Baden and Soos in the conceptual design of reuse plan. Already during the preparation of the development process, it is also important to have an overview of all stakeholders and to provide them regularly informations during the ongoing process and to give them the opportunity to give feedback or to interact with the decision-makers. A total of 5,000 - 6,000 residential units are to be created in existing and new buildings in this area. It is intended to build multi-storey apartment buildings with three or four storeys,

also higher in urbanised individual cases. At least 70% of the planned housing units are to be realised as publicly subsidised housing construction. One focus of the future-oriented residential quarter is laid on family-friendly housing, individual solutions for building communities, as well as senior citizen's care and housing. The new residential quarter on the former base site could be a new piece of Baden as a green city with lots of open and shared spaces. The location of the former base is characterized by a green, almost park-like property, which offers a wide range of outdoor space. Its generous division of space calls for sensitive, urban-free planning extensions. The open space acts as a moderator between old and new, the design creates necessary connections, connects large-scale and contributes to a new quality of the neighborhood.

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Fig. 16-19: Photo documentation of Martinek base (Own research, 2017)

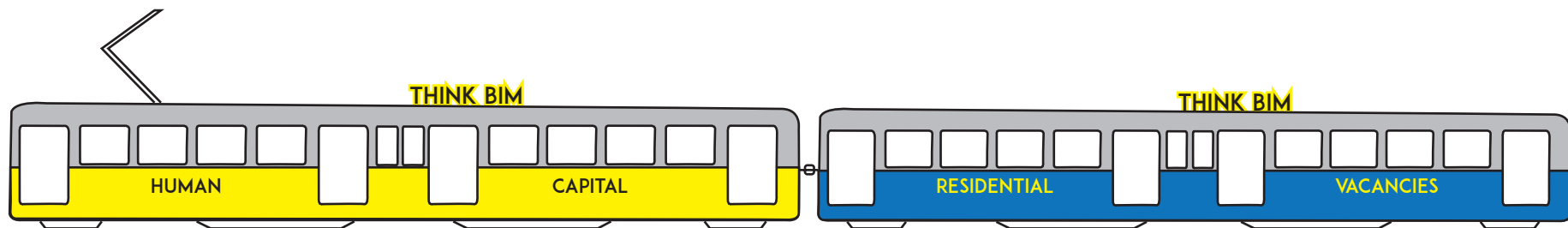


Tram, Vienna. Foto: Wiener Linien, 1988

David Schelkshorn



Research on Human & Residential Potentials



Does the city of Vienna know about the potentials of the existing housing stock? Do the Governments know about the educational attainment and the previous work experiences of refugees? The project presents two knowledge gaps which get paid little attention in the wider public and suggests possible solutions how to fill these gaps. By involving refugees and other volunteers as field researchers, data shall be collected in a collective way. The project helps to raise the awareness of the two topics in the general public. With the implementation of the designs, possible mobilisation strategies for policy makers could be formulated.

Starting Point: Unused Resources

Unused resources of a city are also a waste of resources, but what does the term „waste“ mean when it comes to housing or other issues concerning city development? In his work, the geographer Vinai Gidwani describes the verb „to waste“ as follows (Gidwani, 2013):

- to use carelessly and to no purpose
- to fail to make good use of
- to squander and damage
- to led lapse

During the research phase of the project I became aware of three dimensions of unused resources which have to be activated:

- The time of refugees or people without working permit
- Residential Vacancies
- and Human Capital of Refugees.

In two of these topics, namely residential vacancies and human capital of refugees, we have large knowledge gaps.

The overall idea of the project is to connect these three unused resources and carry out a design for two action research projects.

Action Research with and for Refugees

In general refugees are seen as “subjects” of research rather than participants (Temple et al., 2011, p. 10). Because of the recent inflows in the closer past, scholars examined increasingly the economic consequences and macroeconomic effects for the host countries in Europe (Buber-Ennsner et al., 2016, 3).

If refugees are not simply treated as subjects anymore, but become part of a research process, some voices will argue that objectivity is not ensured. Advocates of this position point out that only professionals and researchers who are not part of the social world can guarantee an objective research. The opposite side argues that research does not exist in a vacuum outside of the social world (Gouldner, 1971, in: Temple et al. 2011, 9). At that point the project will not discuss this old and extensive discussion. Participatory Action Research is nowadays generally accepted, especially if the research is aiming to examine the needs of particular groups (Temple et al., 2011, p. 9). Especially when conceptualising a survey in which several challenges can appear due to cultural diversity, the involvement of people with the same or similar ethnic backgrounds to that of respondents is crucial. In previous projects the valuable cross-cultural expertise of bi-cultural aides and translators was underlined (Kohlberger et al., 2016, 11). In many cases refugees are still seen as needy individuals. One of the project’s contributions is the detachment of this status within our society. Once the basic needs are more or less satisfied the psychological need for affection, belonging and acceptance by others, take precedence (Greenham et al., 2011, p. 114). Through participation in a research project people can lead to a sense of responsibility and self-esteem. As Temple and Moran write in their project: “By definition, this is a political act because it involves making connections between current policies towards refugees and their position within society” (Temple et al., 2011, p. 13).

There are some points which have to be mentioned right at the beginning as they are defining the frame and approach of the project that intends to actively engage the participation of refugees in a research process.

The project:

- *‘aims to address issues affecting refugee people and therefore allows input from refugees*
- *is honest with potential participants about the extent to which the researchers on the project intend to allow participants to become involved in shaping the project*
- *and therefore, specifies how it is going to ensure a meaningful participation of refugees in collecting, analysing, reporting and disseminating research data and findings*
- *prepares and supports volunteers adequately by creating regular opportunities for them to reflect on their own research activity with experienced and trustworthy colleagues and by integrating opportunities for the development of themselves through the research*
- *recognises that, whilst researchers cannot control what is done with their research once it is in the public domain, they need to be aware of the wider political context concerning refugees and responsibly think through the implications and impact of their findings’* (see also Temple et al., 2011, p. 203).

Which Resources have to be mobilised? • • • • ➤ Which knowledge gaps have to be filled? • • • • ➤ How to fill these knowledge gaps?

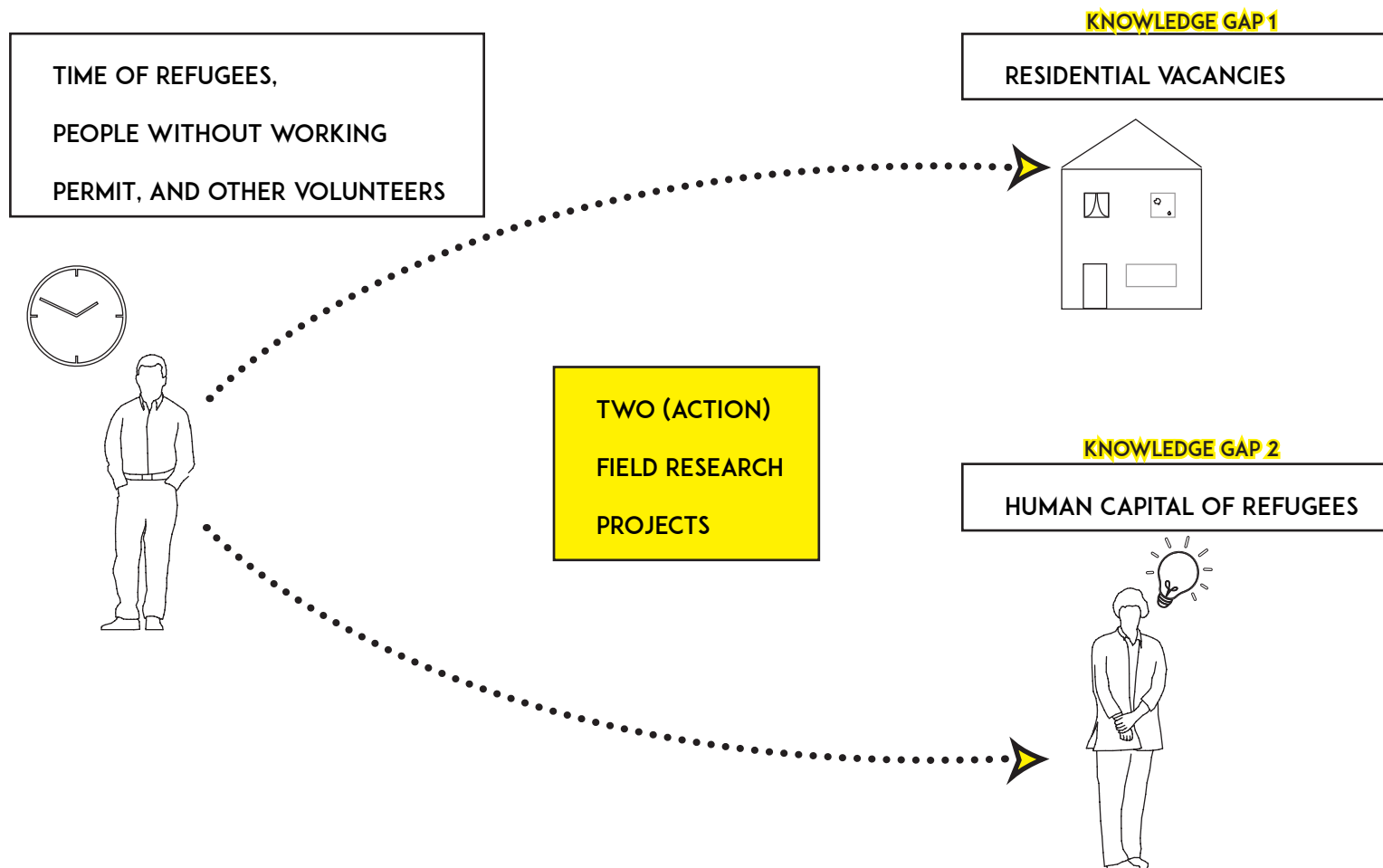


Fig. 1: Starting Point, own illustration

Concept:

The term “unused resources” becomes to U'Resource, which stands for the people who are getting involved and trained for the two field researches and help to carry them out. The starting point are the two knowledge gaps which have to be filled in a collective way. The visibility of the project is a key aspect as it catches public attention and raises awareness of the addressed topics in the wider public. As Elizabeth Mestheneos mentions in her project “[Refugees as researcher:] Bridges and fences: paths to refugee integration in the EU”: *“Research findings can be important tools for altering ideas and policies if used and promoted appropriately”* (Mestheneos, 2011, p. 21). The Think Bim as the research base and meeting point for public discussions and lectures will help to acquire that visibility in the community. The process and even more the results of the field research projects should help to formulate policy advice on how to mobilise skills of refugees and residential vacancies.



Fig. 2: Tram on scrap yard (Meinbezirk.at, 2016)

Where? - Visibility - The Think Bim

In 2025, all the old Bims (Bim = the Viennese term for tram) of Vienna will be replaced by new ones. In the past a lot of old trams were sold to eastern European countries. Today these countries also invest in new accessible mobilisation technologies and don't buy the old trams anymore. As a result, they disappear onto the scrap yard. According to a scrap dealer the components of the trams have nearly no monetary value anymore (ORF, 2016).

This fact can be seen as an opportunity to make use of one of the old “Bims” (and not “to fail to make good use of”). Once they are transformed and ready to use, the question arises where they could stand during the day without disturbing urban transport. Concerning that question it was investigated if there are possible spots where the Think Bim is not interfering with public and private transport. Some unused tram tracks were found within the city where this is realisable and would

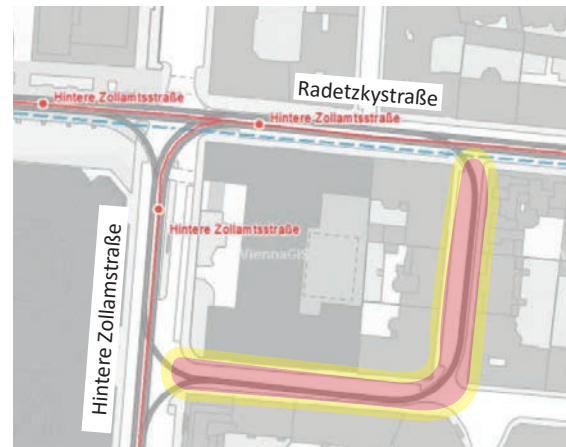


Fig. 3: Example unused tram tracks, 3rd District (Wiengv.at, 2017),

own illustration

work. Additional potential spots for the project can be found on a private website which offers a lot of information of trains and trams in Austria and Vienna (see Strommer, 2016).

The main purpose of the Think Bim is to provide the project team appropriate space for the field research and make the process visible to the public. All trainings for participants as well as interim meetings during the survey will be held in the trams. Additionally, they can serve for public lectures, language tandems and other purposes.



Fig. 4: Alternative use of a tram (Hangl. 2011)

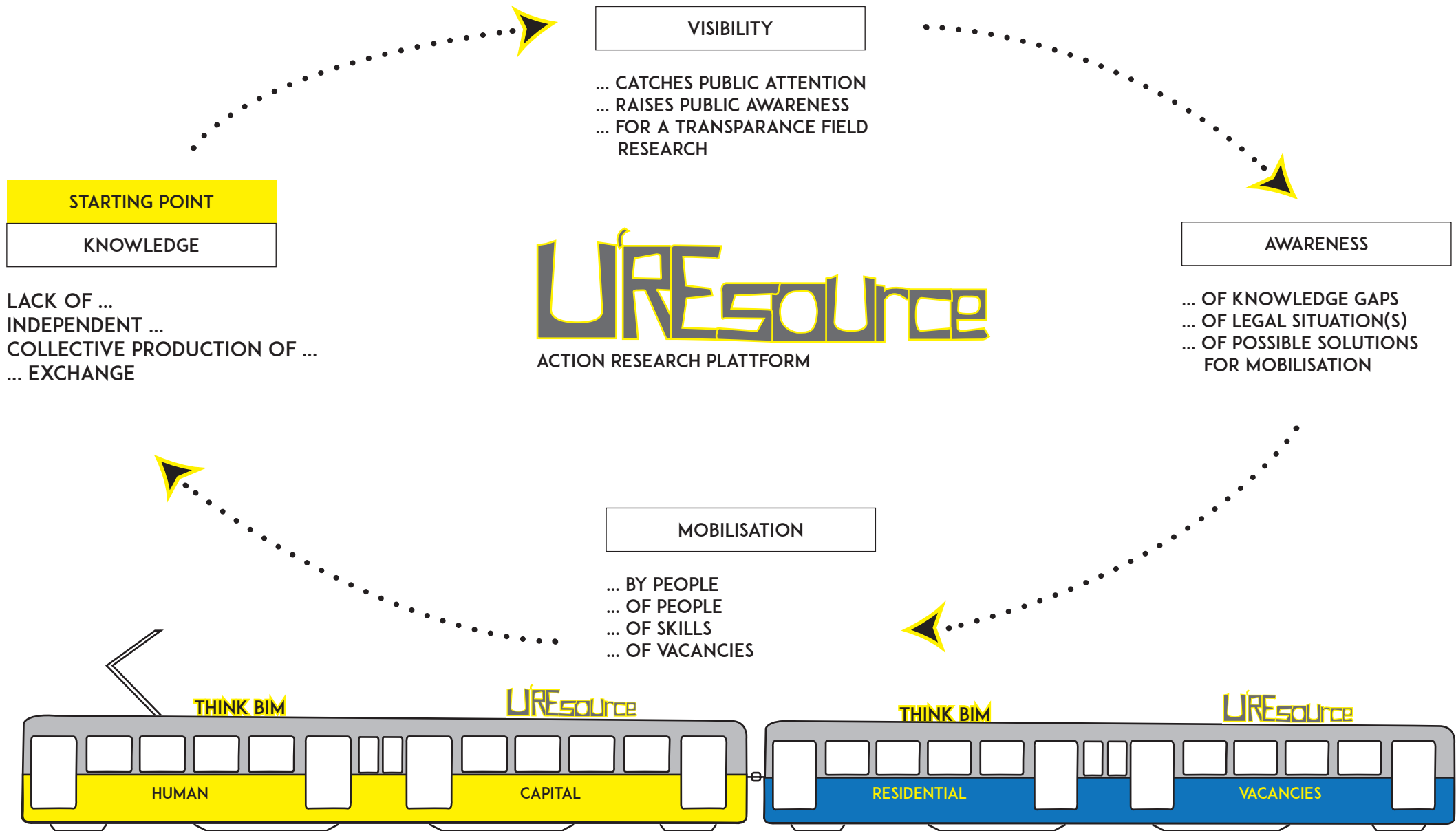


Fig. 5: Concept, own illustration

Fig. 6: Think Bim, own illustration

State of knowledge:

Human Capital of Refugees in Austria

In general, official institutions and government-related agencies collect only basic information on asylum seekers like number, sex, age and citizenship (Kohlberger et al., 2016, p. 3). In Austria, there are no official statistics available on education and other aspects of human capital of refugees (Buber-Ennser et al., 2016, p. 23). A recently published review of selected surveys of refugee populations concludes that: *“The paucity of statistics on refugees ... is striking. Even countries with a long tradition of accepting migrants and refugees and who have well established public administrations and statistical systems show a remarkable lack of published statistics on refugees based on sample surveys”* (MacDonald A., 2015, p. 1).

There are three main factors which have to be considered when conducting surveys on mobile populations (Bloch, 2004 in: Buber-Ennser et al., 2016, p. 4):

- 1: Refugees are for the purposes of research a hidden group
- 2: Refugees are not identifiable in official statistics
- 3: Government ministries will not provide researchers with information to locate refugees for reasons of confidentiality

As we can see, one big challenge in conducting surveys on mobile populations is to generate representative samples (Bloch, 2007 in: Kohlberger et al., 2016, p.3). For that reason, random-sampling techniques and the use of indirect snowball effects have been suggested as appropriate methods in quantitative research on highly mobile populations (Singh 2013 in: Buber-Ennser et al., 2016, p. 3).

Since 2015 only two surveys about the educational level of refugees have been conducted in Austria. The Employment Market Service published results of nearly 900 respondents and their educational level in January 2016 (AMS, 2016). In September 2016, the Vienna Institute of Demography presented their first results of an in-depth survey with 514 completed interviews and gathered information of about 1400 people (including partners and children in Austria and abroad). Both inquiries came to similar results.

A brief look at the results shows that refugees' levels of competence and skills may be surprising for some people. The share of highly educated people, in particular Syrian and Iraqi respondents is comparable with the Austrian working age population. Although Afghans show a lower level of education in comparison to the other groups, they are more highly educated than the working population of Afghanistan. As Figures 7 and 8 show, this tendency is true for all respondents when comparing them to the adults of their origin countries. Because of limited time and financial resources, the DiPAS survey is not representative for all refugees who recently arrived in Austria, or other European countries (Kohlberger et al. 2016, p. 11). Nevertheless, the methodological compromises will not invalidate the findings or the overall relevance of the results (Buber-Ennser et al., 2016, p. 23). It can be seen as a first step to gain a better understanding of a largely unexplored issue in Europe, which has to be more deeply examined and monitored.

The goal of U'REsource is to make use of the valuable insights

and experiences of DiPAS and to extend the knowledge about this issue in Austria and Europe under the principle: *“...not simply counting heads but also revealing what these heads contain in terms of aspirations, values, identities and skills, and what they can offer in terms of human capital and integration potential for the host country's society, in turn to better inform policymakers”* (Ibid, p. 3).

Legal Situation: Working permit of participants

The involvement of refugees in a project leads to questions about payment and compensation. It is increasingly accepted that there is an obligation to ensure that there are no cost implications for refugees if they are part of a (research) project (Temple et al., 2010, p. 15). Therefore transport, food etc. must be covered for all participants. Furthermore, monetary recognition for participants should be included in the project's cost plan. Previous projects point out the idea of paying a minimal amount for the time of refugees who take part in research (ibid).

In Austria, the status of a person seeking refuge is categorised in three levels according to the legislation on asylum. The status determines if and to what extent people are allowed to work. As monetary recognition for participants should be considered, the legal situation, in short, can be described as follows:

1: Asylum seekers:

As soon as persons have applied for asylum in Austria, the asylum procedure starts. Depending on the definitions of the

Geneva Convention applicants will be admitted for asylum or get subsidiary protection. During this period, they don't have free access to the Austrian labour market. According to the Austrian "Grundversorgungsgesetz" §7 (4), asylum seekers are allowed to work for non-profit objectives if they don't earn more than 110 EUR per month. Asylum seekers can also do

a voluntary service to extent and apply their knowledge or acquire skills (AMS, 2015). In that case participants would be allowed to work unpaid for a maximum of three months.

2: Persons with subsidiary protection status:

Have free access to the Austrian labour Market. There are no complications with payment.

3: Persons admitted for asylum:

Have free access to the Austrian labour Market. There are no complications with payment.

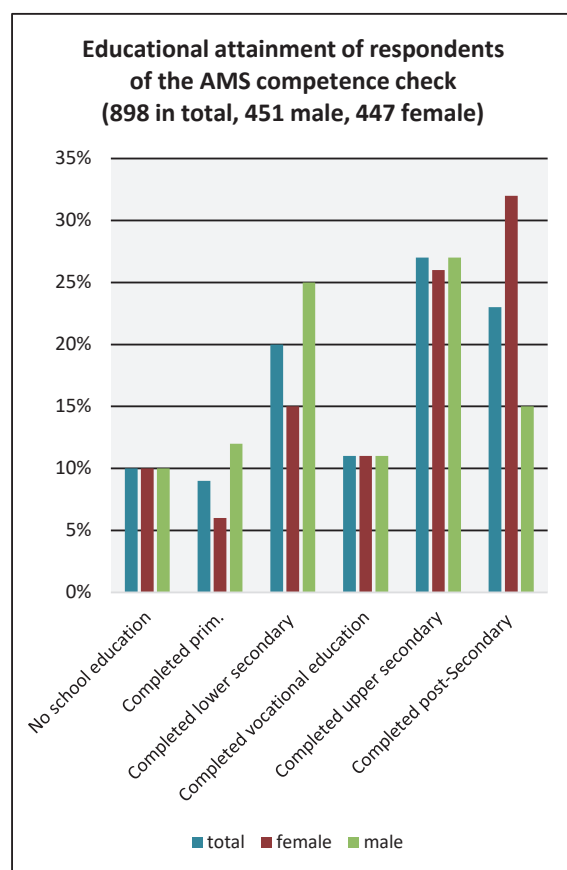


Fig. 6: Educational attainment of respondents of the AMS competence check (AMS, 2015), own illustration

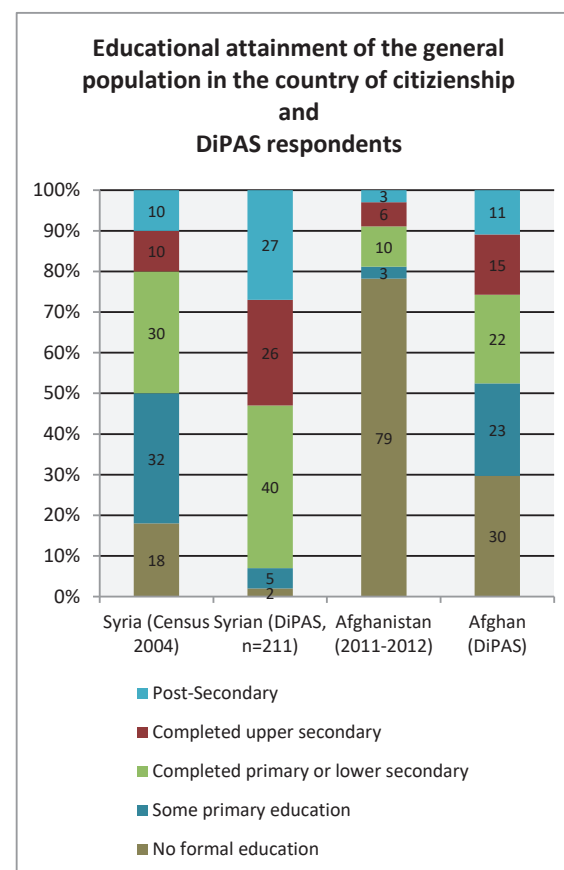


Fig. 7: Educational attainment of the general population in the country of citizenship and DiPAS respondents (Buber-Ennsner et al., 2016, p. 11), own illustration

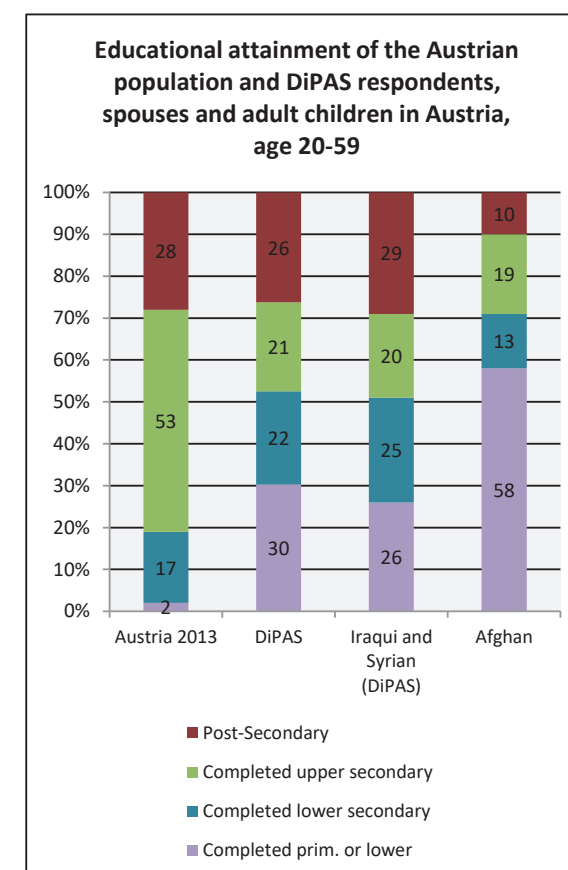


Fig. 8: Educational attainment of the Austrian population and DiPAS respondents, spouses and adult children (Buber-Ennsner et al., 2016, p. 13), own illustration

State of knowledge: Residential Vacancies

Discussing to develop a housing solution for 20,000 people, knowledge about the existing housing stock is essential. In Vienna, there was a long medial debate about the amount of vacancies of the housing stock during the last few years. Estimations of the City Council were about 30,000 vacant units which would represent the necessary percentage for a healthy housing market (Der Standard 2010). Other voices spoke from 80,000 and more vacancies (ORFa, 2014). Some newspapers published “estimations from city planners” up to 100,000 vacant flats. Some voices (e.g. the Young Generation of the Social Democrats or The Tenancy Association) even demanded a reporting obligation for landlords and subsequently a tax charge, if flats are left vacant for more than six months (SPÖ Junge Generation Wien, 2014; Die Presse, 2014). In fact, the last extensive survey was conducted in 1996 (Moser, 1996). Peter Moser, a retired scientist and leading professional in questions about the housing market (he also headed the survey about flat vacancies in 1996) mentioned in an interview that he was cited wrongly about the extent of vacant flats and that ‘his assumed estimations’ were later published in other newspapers as well (Moser, 2015). As we can see we have to critically scrutinise all the figures and estimations which are to be found in the media and that were published during the last few years. For this reason and because of the growing debate, the City Council of Vienna decided to examine this political issue. In 2015 new numbers were published, and they seem to be at a healthy level. According to the results there

are about 25,000 flats no longer than 2.5 years vacant, which is about 2.5% of the housing stock (short-term vacancies). Additional 5,000 flats are vacant for more than 2.5 years due „to restoration“ (long-term vacancies). Although announced, the results were never published in a report with an exact description of the used methodology. Through the described methods in the short press report and an interview with a staff member of ‘die Wohnbauforschung’ insights in the methodology of the survey were obtained. There are a few points which make the results questionable, especially if you compare the used methods with the ones from 1996. The most important ones are as follows:

1: The described categorisation of the length of vacancies:

The described categorisation of the length of vacancies is not comprehensible, even though this indicator is of utmost importance. Other surveys, e.g. from Berlin define a flat which remains more than 6 months unused as a long-term vacancy (Straßl et al., 2015, p. 11).

2: There was no primary data collected:

which means that all conclusions about the quality and reasons of the vacancies are fully based on assumptions. The interviewed staff member of ‘die Wohnbauforschung’ explained for example that more than one third of the housing stock of Vienna was built before 1919. For that reason, it was assumed that long-term vacancies (>2.5 years) originate due to restoration (Staff member of „die Wohnbauforschung, 2016).

3: The used data for the study:

In 2015 the results are based on the report record (Meldedatensatz) between 2008 and 2015. In fact this data distinguishes enormously from the building census data (Gebäudezählung) from Statistik Austria. The survey of 1996 focused exactly on the difference between the two data sets. The difference between ‘reported’ units and the amount of buildings based on the building census data is defined as ‘potential vacancies’. It’s important to underline that not all ‘unreported’ units are ‘unused’. All offices, vacation homes, allotment gardens (about 36.000 units) etc. are included in the potential spectrum.

In fact, the used methods can show how long flats (only the ones which occurred in the report record) stayed vacant between 2008 and 2015 but can’t give any indications or reasons why they are unoccupied (Moser, 2016). One reason why they remain ‘vacant’ could be that the house was demolished during this period, an incident which does not occur in the census report. (For additional insights about the current data situation concerning the housing market of Vienna I refer to [Moser, 2015]).



Fig. 10: Partly vacant residential building, 15th district, own photograph

Another way to investigate the potential amount of vacancies is to use data of gas and electricity meters. If a flat has less than a defined consumption of gas or electricity (e.g. less than 200 kilowatt hours per year) it can be categorized as vacant. Salzburg and other cities have applied this method to examine the amount of vacancies. The method can give an accurate picture of the current situation with comparatively little effort (Streißl et al., 2015, p. 11). According to Vienna's Wohnbauforschung this method is too costly in terms of costs and time (Staff member of "Wohnbauforschung", 2016).

The questionable results led to many questions. Why does the city put insufficient effort to achieve fundamental knowledge concerning vacant housing units? What is the 'real' potential of the existing housing stock? Should there be an independent investigation and how could this be implemented? We could discuss further and in more detail about Vienna's lack of knowledge concerning questions about the existing housing stock. This project should rather bring potential solutions to

fill these gaps or at least to make them more visible and raise the awareness among the public at large.

Legal Situation: Residential Vacancies in Austria

If we have a look on the legal situation regarding vacancies (all kind of) there are some points which should earn attention.

One essential aspect is the fiscal situation in Austria. Four aspects should be mentioned here (See Verlic, 2015, p. 48):

1: Losses on properties (loss on rent, operating costs) can be treated as tax-deductible. In that case the flat has to be on the market or under restoration. In terms of speculative vacancies tax-deductible of such losses can only be seen as a facilitation rather than a profitable determining factor.

2: Another aspect is the depreciation due to wearout of flats (Absetzung auf Abnutzung, AFA). AFA refers to the earning capacity value of a property which is based on estimations of the future incomes of a property. For vacancies, fictive rents are used to calculate the capacity value. Today the thirty-fold

of a rent is used to calculate the value. From this estimated value two percent can be deducted. In some cases, these conditions could make it more profitable to leave a (sub-standard) flat empty than to rent it. Especially for bigger real estate companies with a good portfolio, AFA can be seen as a tax facilitation and can make speculation easier.

3: Losses of rents can be included into financial accounting of companies. If a real estate company generates high profits, losses of rents can be used to reduce the total return. If this method is applied vacancies are helpful to pay less taxes in the end.

4: Credits are also based on estimations of the future incomes of a property. If a fictive rent is estimated higher companies get higher credits. According to a tax advisor this is the most likely reason for a higher profitability to leave (substandard) flats vacant than to earn low rents (Verlic, 2015, p. 48).

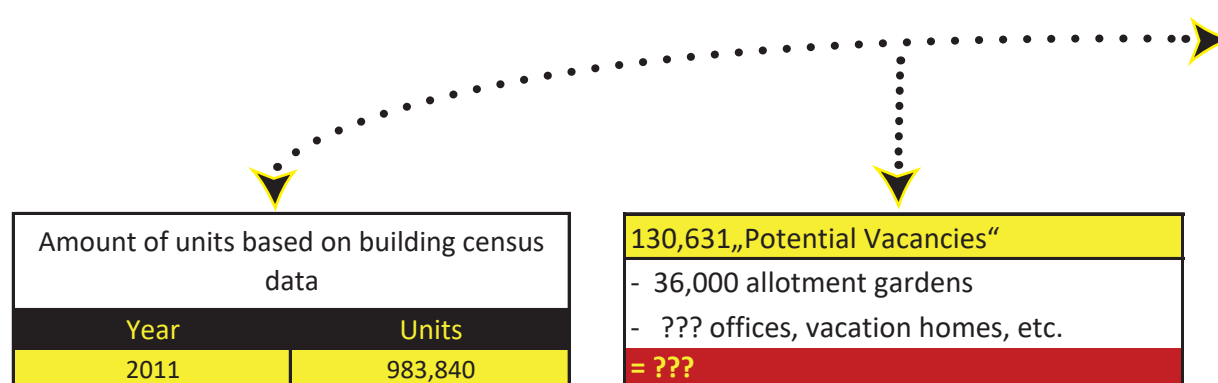


Fig. 11: Amount of units base on building census data
(Statistik Austria, 2011), own illustration

Fig. 12: Potential Vacancies, own illustration

Occupied units in Vienna 2011 -2015 (at least one principle)	
Year	Units
2011	853,209
2012	860,378
2013	870,720
2014	878,145
2015	888,462

Fig. 13: Occupied units in Vienna (Magistratsabteilung 23, 2015b),
own illustration

Key players & Intermediaries / Scientific Support:

Gatekeepers:

As government ministries will not provide researchers with information to locate refugees for reasons of confidentiality, gatekeepers are needed to find and recruit potential volunteers for the project (Bloch 2004, in: Buber-Enns et al., 2016, 4). The same is true for finding respondents concerning the field research on human capital of refugees.

During the interviews with the deputy research group leader of 'Demography of Austria' and the staff member of 'Viel mehr für alle' important and helpful community-based organisations and NGOs in Vienna which can provide access to potential participants (and respondents) were named.

Social enterprises

More than one perspective (MTO):



MTO provides inclusive training for graduated refugees to support their integration into the Austrian labour market. Alumni who attended the programme also become "integration ambassadors" to highlight new perspectives for the society.

RefugeesWork:



RefugeesWork is a social enterprise that pursues the goal of creating equal chances on the labour market for migrants. The mission is to make refugee's potential accessible to the labour market and to break down negative stereotypes towards refugees.

Charitable associations

Cartias (Vienna & Lower Austria):



Caritas provides different facilities for refugees concerning housing and education. Furthermore, the organisation promotes and supports social engagement and voluntary work. Therefore, Caritas represents one of the most important network partners.

Viel mehr für alle:



„Viel mehr für alle“ is an association which is divided in several sub-associations. Education, housing and participation for refugees are the main foci of the organisation.

(Local) Governmental and governmental-related organisations:

Rotes Kreuz:



The red cross provides a range of services for refugees. With thousands of volunteers and paid workers it is one of the most important organisations concerning integration.

AMS [Public Employment Market Service Austria]:



The AMS is an important partner as it carries out "Kompetenzchecks" of refugees and holds a growing data base of potential participants for the project.

Scientific Support

Wittgenstein Centre:



The Centre is a collaboration among the World Population Program of the International Institute for Applied Systems Analysis (IIASA), the Vienna Institute of Demography of the Austrian Academy of Sciences (VID/ÖAW), the Demography Group and the Research Institute on Human Capital and Development of the Vienna University of Economics and Business (WU). The above mentioned „Displaced Persons in Austria Survey (DiPAS): Human Capital, Values, and Attitudes of Persons Seeking Refuge in Austria in 2015“ was carried out of Wittgenstein Centre.

Vienna University of Technology, Department



of Spatial Planning:

Scientific support for the survey can also be given from TU Wien. The Department of Urban and Regional Research is dealing with questions about small scale city developments and structures and can help with data analysis on residential vacancies. The department of Sociology can give scientific support for the field research on human capital of refugees.

Fond Soziales Wien (FSW), [Vienna Social Fund]:



FSW provides basic social services for refugees. Furthermore, the following three task areas make FSW an important partner for recruitment of potential field researchers:

- Interface management between refugee facilities of the Federal Government and Vienna
- Coordination of housing and accommodation for refugees
- Supporting the exchange of ideas and networking between NGOs and private initiatives

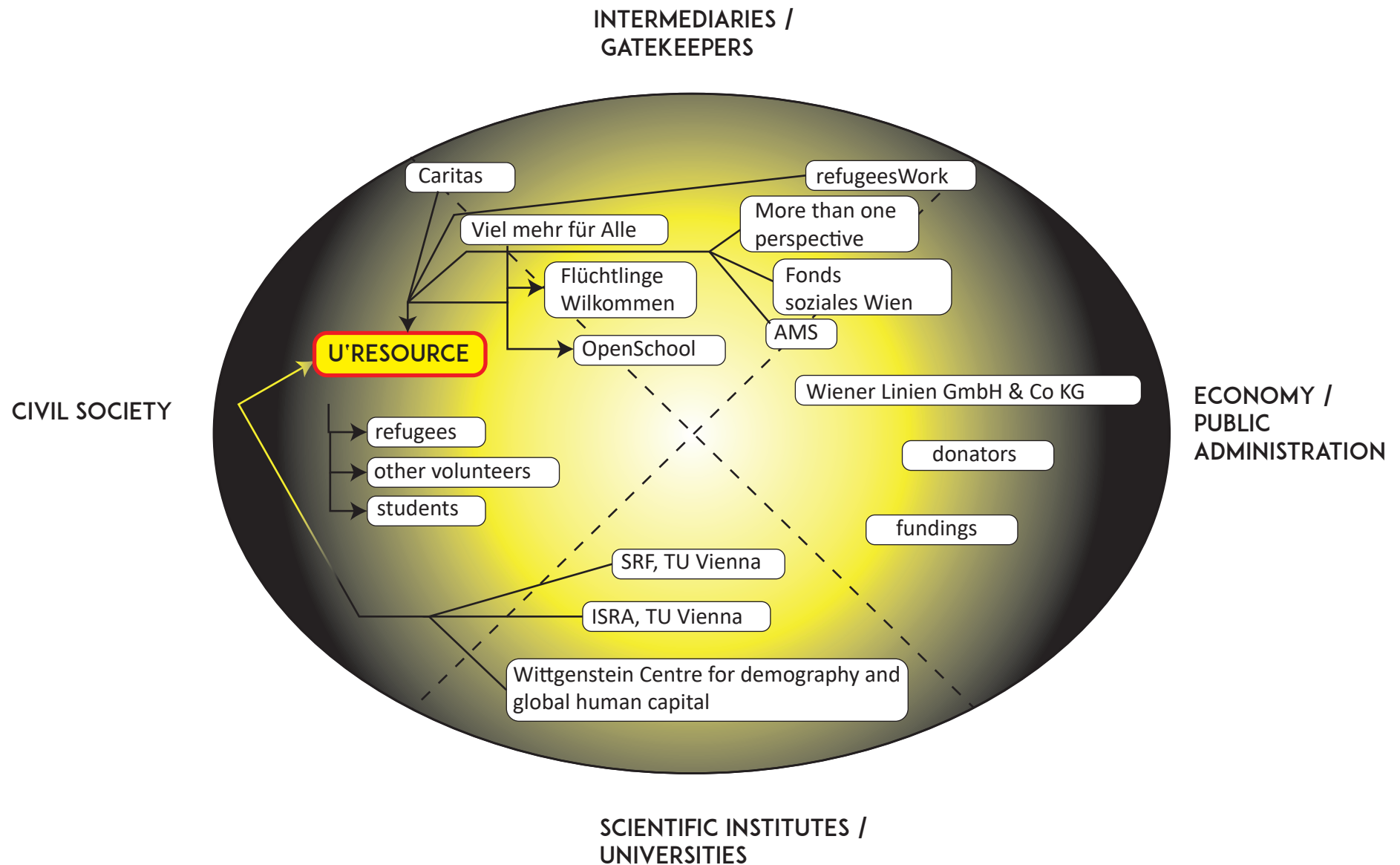


Fig. 14 Important players for the project, own illustration

Field Research Process: Human Capital of Refugees

Recruitment of participants

The first important step is the recruitment of volunteers for the field research. It was mentioned that certain gatekeepers are necessary to find potential field researchers. Simultaneously, the selection of accommodations and other facilities with access to potential respondents for the survey will be conducted. As described above (state of knowledge: human capital) the survey is based on random sampling techniques (snowballing) and relies on access to refugees through community-based organisations and NGOs. It has to be mentioned that in 2017 refugees are (thankfully) more distributed because many large temporary emergency accommodations have been closed. Therefore, recruitment of respondents could be more challenging than in 2015.

Target group/profile of volunteers

Potential field researchers should be students (who maybe had to quit their studies because they had to flee from their home countries) or maybe even graduates preferably from the fields of social science. At least 20 volunteers should be found to ensure that enough data can be collected during the field research. Additionally, some Austrian students should be recruited as volunteers. The group of participants should cover a range of different languages to guarantee that respondents of different nationalities can be addressed. It is important that the respondents are interviewed in their native language. This approach also avoids that only highly educated English speaking persons are getting interviewed. As the majority of

asylum applicants in the recent past were from Syria, Iraq and Afghanistan, the field researchers should cover the languages, namely Farsi/Dari, Pashto, Kurdish and Arabic, which are spoken in those countries.

Training phase

The next step is the training of the field researchers. The most important part of this step is to teach them different classifications, for employment and educational level, to allow comparison with the Austrian population and the countries of origin of the respondents. The following three classifications are used in the developed questionnaire and therefore will be taught during the training phase:

- ISCED (International Standard Classification of Education): to measure educational level
- ISCO (International Standard Classification of Occupations): to measure previous employment in the home country.
- NACE (nomenclature statistique des activités économiques dans la Communauté européenne): to measure economic activities.

As the U'REsource survey is limited in terms of financial resources, no CAPI (computer assisted personal interview) tool on tablets will be implemented. Therefore, all volunteers get taught basic functions of a table calculation programme to fill in the results of the hard copy questionnaires in the computer.

Although asking questions about human capital and sociodemographic characteristics marginally touched upon

traumatic experiences during the interviews of the DiPAS survey (Kohlenberger et al. 2016: 7), all field researchers will receive extensive training in order to guarantee that the data is collected in a responsible way. (According to the experiences of the DiPAS survey respondents had more the feeling that they could highlight their personal and professional achievements and potential contributions to the host country, rather than their recent, often traumatic experiences of war, persecution and flight (Kohlberger et al., 2016, p. 11) . All participants get taught:

- How to present themselves and the project: It is of utmost importance to make all respondents clear that the survey is part of an independent research project which is not related to governmental institutions and would not affect their asylum application or status. The use of native speaking field researchers helps enormously to gain the required trust of the respondents.
- Intercultural competence: To prepare the field researchers to compensate diverging cultural backgrounds which could arise between them and the respondents.

Testing phase:

Although most the questions of the questionnaire are based on the one of the DiPAS survey (Copyright: © 2016 Buber-Ennser et al. [DiPAS] is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and

reproduction in any medium, provided the original author and source are credited), a pretest phase is planned. As the U'Resource survey is focusing just on human capital (and not on values and attitudes), some of the answer choices are less aggregated.

Field research:

The DiPAS field phase took 3 weeks. During this period 30 interviewers were completed 514 interviews. In order to set a realistic time frame, the planned duration of the U'Resource field research on human capital is ten weeks. Within this period, a minimum of 1500 completed interviews should be conducted.

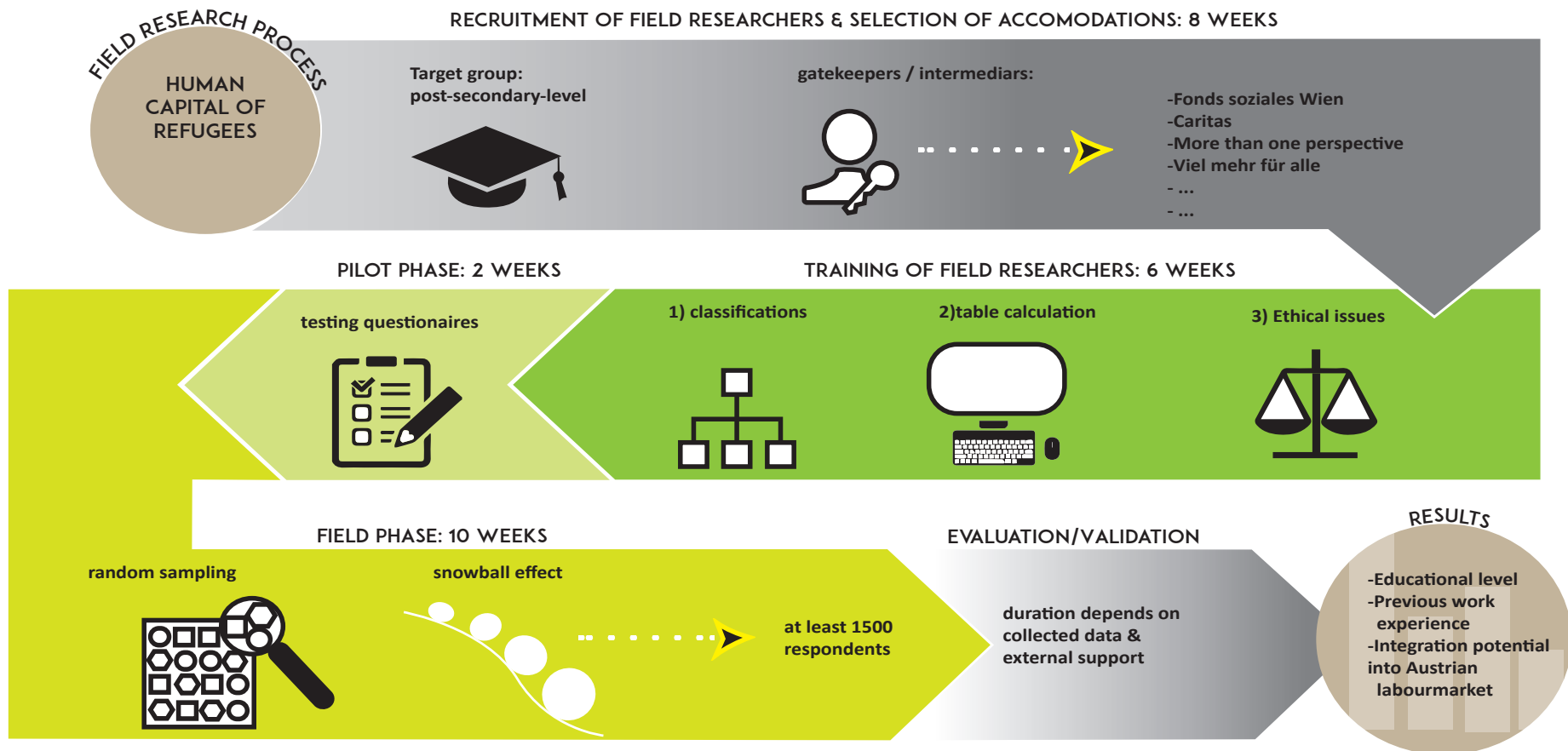


Fig. 15 Field research process: Human Capital of Refugees, own illustration

Field Research Process: Residential Vacancies

Recruitment of volunteers: Target group

As data collection is less complex than in the field research on human capital of refugees the educational level of the participants is defined to be at least upper-secondary level. The team should also invite and recruit interested locals for the project. In order to examine a representative amount of buildings, at least 50 field researchers should be recruited. As the research process will take several months, it is likely that not all field researchers will participate for the whole process for different reasons. Therefore, it must be pointed out that recruitment of additional field researchers can be necessary also during the research phase. It is also necessary that all participants are able to communicate in German, if they get asked about the purpose of the field observation. Therefore, the level of language proficiency in German should be at least A2 (for the last phase, conducting qualitative interviews, the level should be at least B1-B2).

Scope of examination areas:

Beside recruitment also the examination areas are selected. Although the built environment (typology, height of buildings etc.) in New York City differs enormously from Vienna, the number of field researchers and examined areas of the project “People without homes- and homes without people” (Dodge et al., 2010) can help to define a realistic scope for the examination areas and the required participants. About 150 RTTC-NYC (Right to the City-New York City) members and allies canvassed 245 census tracts in 9 community districts over a

period of three months (ibid, p. 2). One census tract consists of about 1000 to 2000 housing units (Census Reporter, 2016). Rough estimates lead to the assumption that with 150 participants an amount of approximately 370.000 units can be examined (units=flats, not residential buildings).

This would mean that one field researcher would cover approximately 2500 flats during the investigation. With 50 field researchers, roughly 80,000-120,000 units could be examined, which represents 8-12% of the housing stock of Vienna. If the average number of flats of a residential building is between 10 and 20, each person would examine about 120 to 250 buildings (In Vienna 37,1% of the residential buildings have between 11 and 20 flats, 34,8% have more than 21 units [Magistratsabteilung, 2015c, p. 13]. Especially in dense areas of the period of promoterism, buildings with 10 to 20 units or more are represented. The maps which show potential examination areas mainly fall in that kind urban structures.)

The geographical scope of a census tract in NYC is comparable with “Zählsprenkel” in Vienna. For the selection of the

1 field researcher	50 field researchers
2,500 units	80,000-120,000 units
120 - 250 buildings	
= 8-12% of the housing stock of Vienna	

Fig. 16: Estimations of amount of field researchers and scope for examination areas, own illustration

examination areas mainly data of registration districts (“Zählbezirke”) are used as they are available free of charge

from Statistik Austria. One registration district consists of several census tracts (in Vienna there are 1364 census tracts divided in 246 registration districts).

Training Phase:

During the training phase, the field researchers get taught about the periods of the housing architecture of Vienna and how to fill in the data of the observation sheets correctly. They also get a general introduction about the state of knowledge concerning the research topic and important aspects which relate to it. As field researchers might get asked from neighbours about the purpose of their work, they also learn how to react in such situations and how to explain the objectives of the field observation.

Field Observation:

1: Basic information

After the test phase the field observations start. The first step is collecting basic information of the buildings, like share of commercial units, floors etc. (see appendix, Questionnaires and Observations sheets). During this phase, also obvious speculative vacancies should be located. If possible the local knowledge and support of post(wo)men who are working within the areas should be envisaged.

2: Panel study

The next and longest step is the panel study. During a period of five months the share of less or unused flats are examined by observing windows without light. The technique is very simple but can bring accurate, first-hand results. An additional observation sheet was developed to collect information of

the amount of people exiting and entering buildings (would be applied for buildings which seem to be not fully occupied).

3: Qualitative interviews

After the panel study interviews with neighbours will be conducted to find out the reasons for the detected

unoccupied flats. In the chapter 'State of knowledge: Residential Vacancies' it was indicated that in 2015 all reasons for residential vacancies are based on assumptions. As there are various reasons why flats stay unoccupied (see appendix, Questionnaires and Observations sheets) this step is of high

importance to gain insights and further develop different mobilisation strategies for the vacancies. There are many different reasons why a flat could be unused.

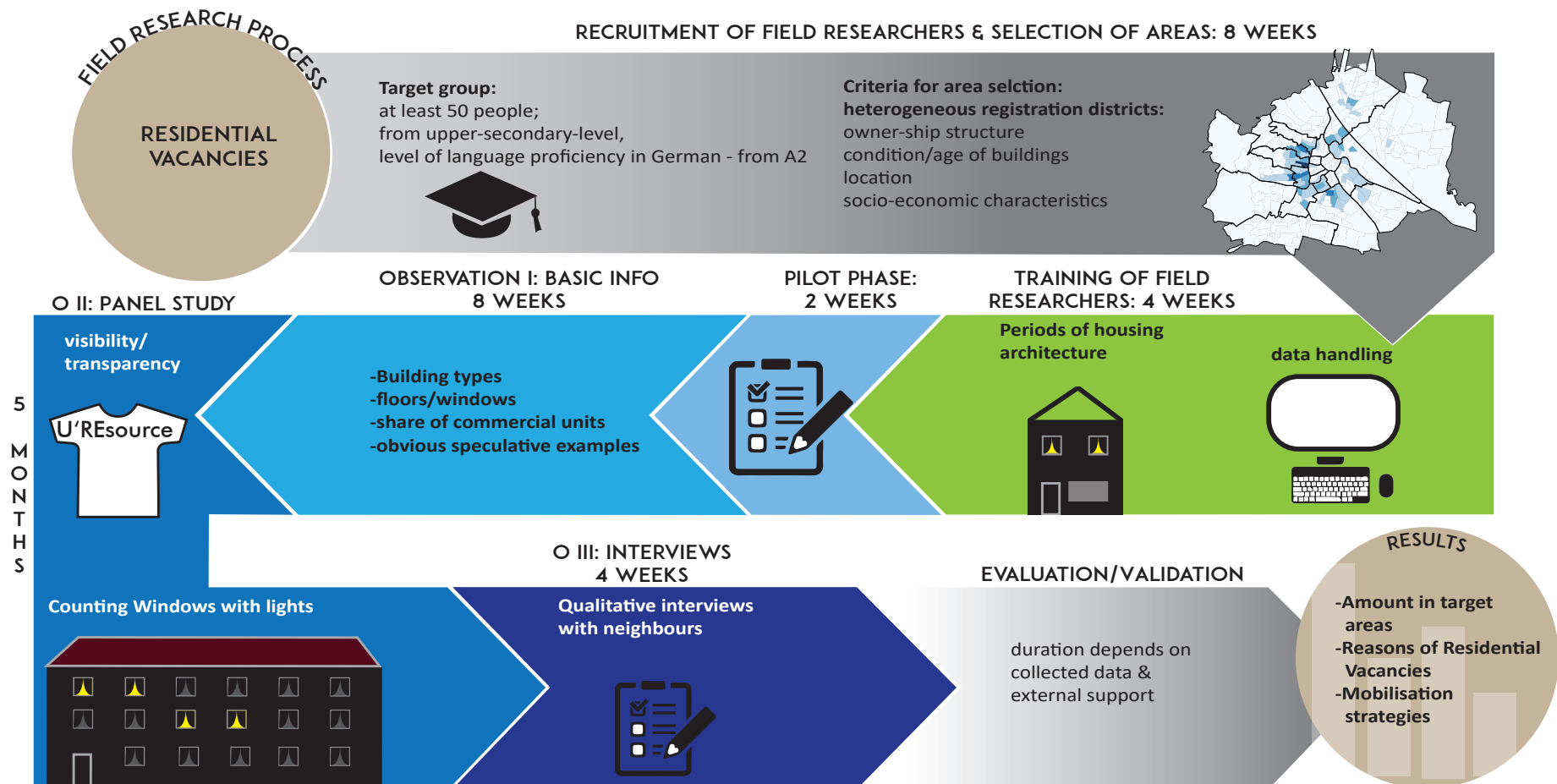


Fig. 17: Field research process: Residential Vacancies, own illustration

Simple ones are for instance that the owner is suspicious about the legal circumstances a contract with a renter brings with, or that there are legal uncertainties like for example open questions about inheritance. The former can only be solved through information and public relation (Straßl, 2015, p. 55). If it comes to speculative vacancies, properties are normally vacant until the last renter had moved out in order to invest in the property. Sometimes it takes years until all residents have moved out so that restoring or demolishing and replacement of the buildings can be realised.

There are examples that those spaces can be temporary used for cheap conditions. In Zurich, Leipzig or Amsterdam you can find associations or even companies which follow the concept of “house guardians” (not securities). Tenants are allowed to live in the flats based on contracts until the houses get restored or demolished. The idea brings three advantages for the investors of the property:

- 1: They avoid that squatters could enter their properties
- 2: They don't have to spend money on security services and/or alarm equipment.
- 3: The housing market would offer a higher share of cheap space for living.

Criteria for area selection

In general, the survey is focusing on the private housing market for different reasons. Social rental housing in Vienna consist of two different sub segments. Two thirds belong to the council housing segment and are owned by the city. The

remaining rest is owned by non-profit associations supported through public grants (Kadi, 2015, p. 5). If someone wants to move in a “non-profit flat”, a deposit has to be paid. Generally, the amount of the deposit is between 450 and 550 Euro per square meter. For that reason this sector is unreachable for people with a low income and/or those who lost everything because of war etc. For the council housing segment, one has to have the Austrian citizenship and must be registered for at least two years in Vienna.

As a conclusion, the private housing stock is the only segment where arrivals can find living space.

The pilot areas of the field research should be heterogeneous in different aspects. There are three main criteria defined which are relevant for the selection of the examination areas:

1. Owner-ship structure:

Is one of the two most important factors for residential vacancies (Moser, 1996, p. B37). The principle point of interest for the examination is the private housing market. Concerning the owner-ship structure of the old housing stock (built before 1920) two main actors are important:

- a. private persons and
- b. legal entities under civil law (e.g. real estate developers), (Gutheil-Knopp-Kirchwald, 2012, 57).

2. Building and flat structure:

Is the second main factor (ibid) and consists of

- a. Condition and age of the buildings
- b. Quality of the flat's equipment
- c. Size of the flats

3. Socio-economic characteristics:

e.g. employment status and income

As the selection of the examination areas needs more time and resources for this project were limited, the following two maps are only examples to illustrate possible examination areas and their scope. Fig. 18 shows target areas for redevelopment in Vienna. Several relevant indicators, e.g. condition and age of the building, quality of the flat's equipment, socio-economic characteristics like employment status of the residents, residential construction dynamics and more were considered to define the target areas.

Figure 19 shows registration districts with a high share of flats which have no indoor flushing toilet. These sub-standard units are especially interesting for developers and often stay vacant for speculative reasons.

Estimations for mobilisation:

Some people will ask themselves „how many potential flats could be mobilised after the survey?“. As it is a *research design*, this project doesn't want to give any estimations or figures concerning the amount of units which could be mobilised. Estimations would only and fully be based on assumptions. Therefore the project doesn't want to contribute to additional questionable conclusions and potential vacancy rates. It just points out the knowledge gap(s) (connected with the potentials of the housings stock of Vienna) and possible solutions how to fill them.

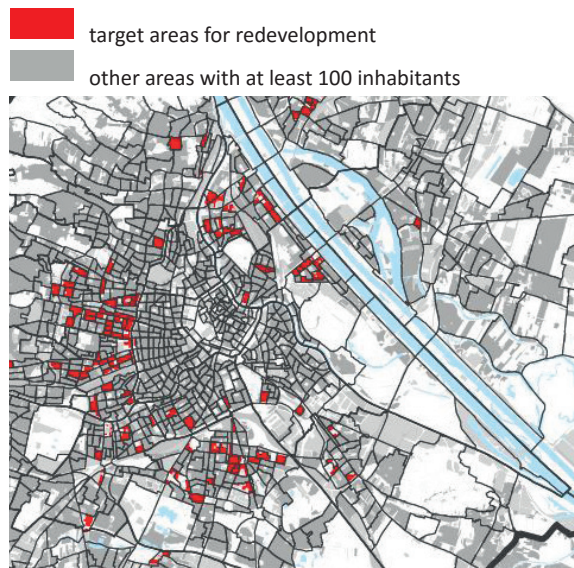


Fig. 18: Target areas for redevelopment in Vienna

[Sanierungszielgebiete] (Magistratsabteilung 18, 2016)

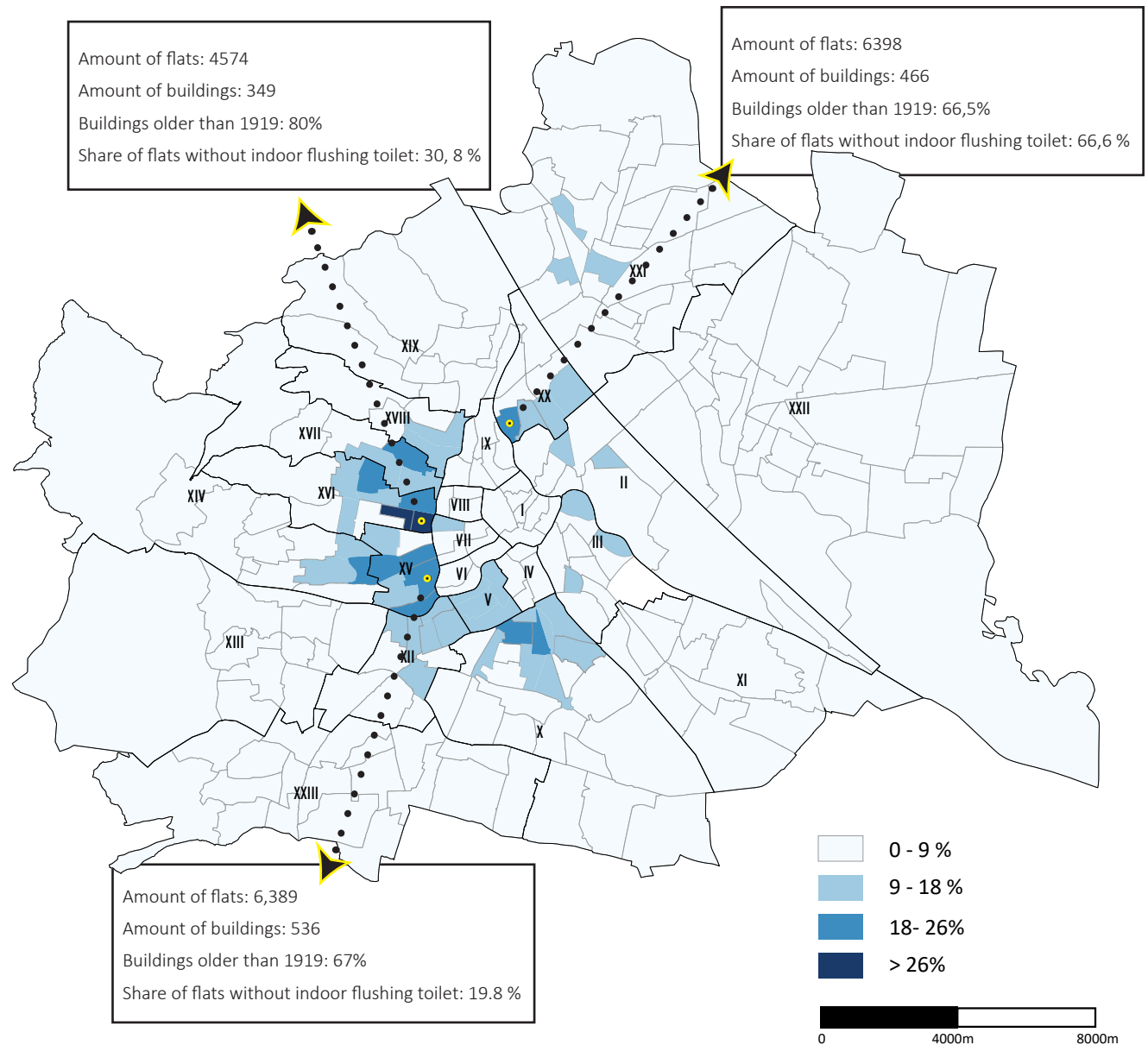


Fig. 19: Share of flats without indoor flushing toilet based on census

districts (Statistik Austria, 2011), own illustration

Process Timeline

The project time is defined for 1 ½ years. The preparation period would cover 6 months, including the transformation of the trams, preparation of the training programme, recruitment and training of the field researchers. The duration

of the vacancy field research is 10 months. Field research on Human Capital of refugees is planned to be 5 months.

All steps should be monitored and evaluated. Working papers of the training process of the field researchers and the field research phase itself are of utmost importance for follow-

up projects. Beside the results of the two conducted surveys and their supposed impact on policy, the process with all its difficulties, challenges and opportunities has to be reflected and published.

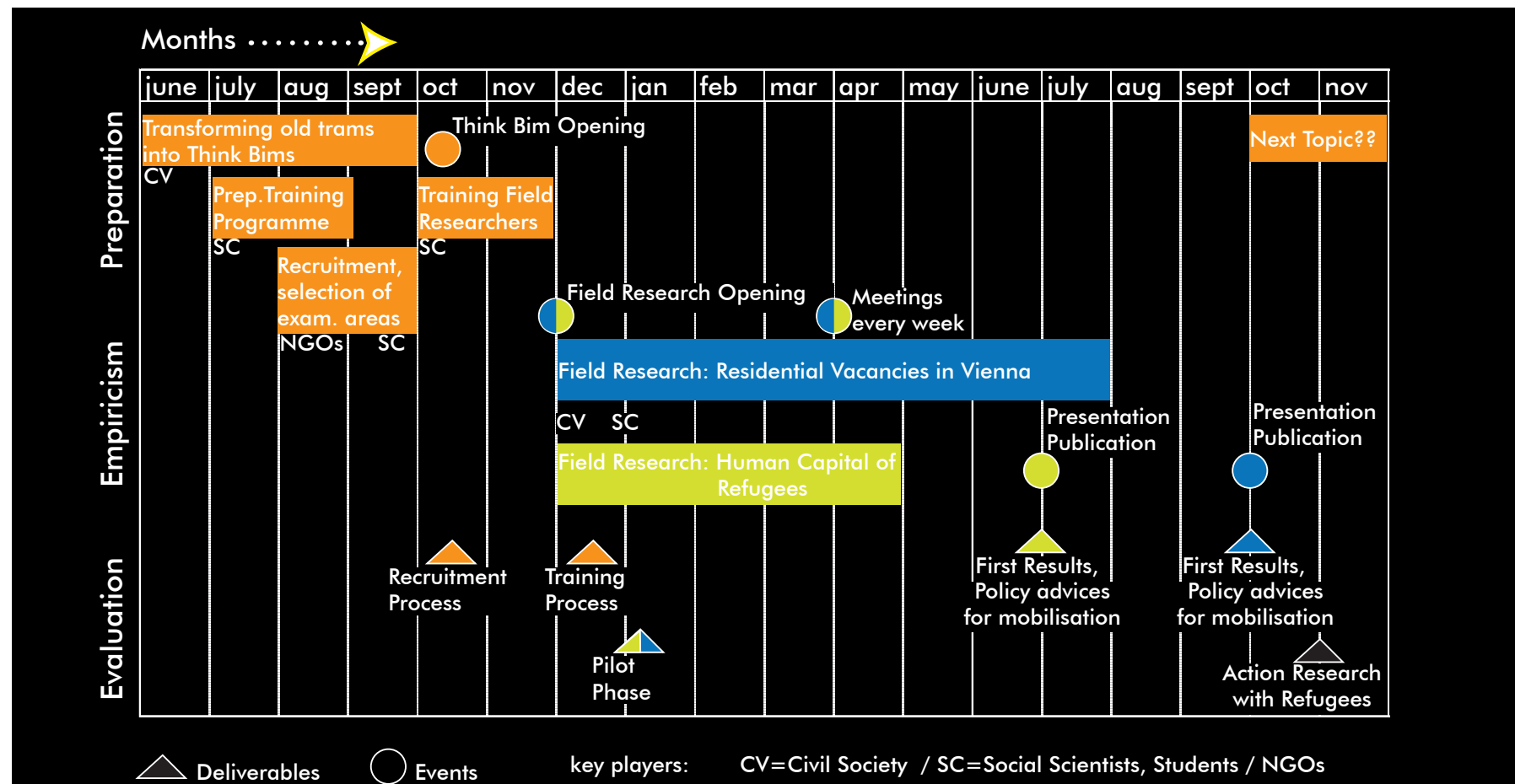


Fig. 18: Process timeline, own illustration

Replicable Research Designs

One important aspect that must be pointed out is that both research designs are easily replicable. The strengths of the project lie in the collective learning process which can help to adapt and modify the research designs. The implementation of “the first round” is for sure a demanding operation, but with the gained expertise, follow-up projects need less resources and therefore get more efficient. The designs could also be implemented in other cities or regions. Through an ongoing iterative process which fosters cooperation and exchange of experiences within and beyond the City of Vienna, the collective capabilities to fill knowledge gaps in a collective way can grow. In a long-term prospect, it would be interesting if and how the project and follow up projects impact on policy at meso- and strategic level. The two addressed research topics and designs of this project should be pursued, there is no question, but they should also be understood as initial projects for a research approach that could be modified for other issues within the society.



Fig. 19: Participatory action research with refugees in Manchester

(Temple et al. 2011, p. 72)

Reflection

Through the frame of project World on the move Challenging the spatial aspects of relocation I saw the chance to deepen my knowledge concerning transformation processes within Vienna and its surrounding area and to develop guidelines which can contribute to a sustainable and resilient city development. I welcomed it a lot that the task formulation was very open and that all lecturers left the students a large degree of freedom in developing their own ideas. Surprisingly only 5 students attended the project. Therefore, we had to reorganise and adapt the format of the seminar. As a result, there were no groups built and every student carried out a solo project. This new setting had its advantages and disadvantages. On the one hand, you have your freedom regarding time management and no compromises with fellow students were needed during the process. Within the study programme Spatial Planning it is an exception to work alone on a project, especially if it has a workload like this one. On the other hand, the task demanded a creative approach. Developing an idea all alone, was unfamiliar and a hard challenge. Even though the group planned to have knowledge exchanges, meetings and feedback rounds without the lecturers nearly never came true. It soon turned out that everybody was left on his or her own in creating an idea and formulating a concept. The support of the lecturers was important and helpful in order to put everybody's ideas into concrete terms. Nevertheless, creativeness for such a task needs more than one brain. Therefore, I also occasionally asked friends and colleagues

who work or study in related fields for input and what they think about the idea I was developing. This was important for me just to reflect and rethink different questions and issues in between the interim presentations and meetings.

Concerning vacancies, I already had a solid knowledge base. I was working in a start-up which provides vacant premises on temporary basis and wrote my bachelor thesis about residential vacancies in Vienna. In fact, these are two dimensions of vacancies which often get mixed up. Nevertheless, the topics have accompanied me for a while and I wanted to use my experience and knowledge for the project. After the first presentation, we were told that our projects do not necessarily only have deal with “housing” solutions, but can also contribute to other issues which are related to the “World on the Move”. For that reason, and as I didn’t want to solely carry out a project on vacancies, I decided to choose a second unused resource (and knowledge gap): Human capital of refugees. I already became aware of this topic before the project, but I have never examined it extensively.

The idea to involve refugees in a research process is neither new nor unrealistic. Before developing such a research design, it was important to gain insights into similar previous projects and their approach. For that reason, two semi-structured expert interviews were conducted. One with the deputy research group leader of “Demography of Austria” at the Vienna Institute of Demography of the Austrian Academy of Sciences. She led the survey DiPAS (Displaced Persons in Austria Survey), Human Capital, Values, and Attitudes of Persons

Seeking Refuge in Austria 2015. During the data collection of this survey, refugees helped as bi-cultural aids in conducting and translating interviews. The second person interviewed was a sociologist and team member of “Vielmehr für Alle”, an association which provides and carries out projects with and for refugees mainly connected with the issues housing, education and integration. Additionally, literature was examined. Especially the book “Doing Research with Refugees, Issues and Guidelines” gave very valuable insights into participatory research with refugees. It consists of a collection of projects from a two-year Economic and Social Research Council (ERSC) seminar series (2002-2004) and presents methodological issues, guidelines of involving refugees in research. Concerning action research towards residential vacancies the approach of the participatory research project People without homes & homes without people – a count of vacant condos in select NYC neighborhoods gave important insights and helped to develop a similar research design.

As my project consists of two research designs it is more abstract than the other ones here presented. One of the most challenging aspects during the project was to decide on which level of abstraction I should work. If I would have only worked on one of the two presented issues, some aspects would partially have been more concrete. Examples would be the selection of the potential examination areas, estimated costs or potential fundings for the projects which were not carried out due to time restrictions. In the end I think that the product has a good balance between theory and applied research

guidelines.

I am completely aware that both processed fields affect highly sensitive political issues. One reason why I chose these topics for the project is that they are at the same time rarely discussed in the profession and wider public. I am also aware that the approach of my project could be classified as idealistic. For me as a student a university project like “World on the Move” offers me the opportunity to make suggestions in a maybe more idealistic way than in the working world. I saw it as a chance to carry out a project which doesn’t have to match with a call or is financial restricted. I tried to implement it as realistic as possible, but as a research design can’t give results in advance the reader should not wait for mobilisation strategies of the presented knowledge gaps.

Concerning residential vacancies, I had to decide if I should concentrate only on the speculative dimension or if I should include all reasons for unoccupied units in the design. As in the wider public most of the time only the speculative examples are discussed (with certain reasons though), I didn’t want to exclude other reasons and choose to integrate them (see observation sheet xy). In fact, the goal of the project is not to just scrutinise obvious examples, but also hidden ones which would need different mobilisation strategies.

All in all, I can say that I have learned a lot during the project. Presenting at SCUPAD congress in front of an international audience was also exciting and a new experience. I would like to thank all fellow students as well as all lecturers who accompanied us for the interesting time this semester.

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Staff Member „Viel mehr für alle“ (2017), conducted on 26 of April 2017, Vienna.

Appendix:

Questionnaires and Observations sheets:

bit.ly/Questionnaires_Uresource



Final presentation and exhibition at Schloß Leopoldskron, SCUPAD congress 2017



Wiener Platz - Wikipedia

Wien

aus Wikipedia
Wiener Platz
Gemeinde
Wiener Platz
Wohnung

Inhalt

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Baubau

Die Wohn
Siebenhü
errichtet
wurden a
Grünraum
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Injoo Riehl

Mobilising Vacant Commercial Buildings

Mobilising vacant commercial buildings offers an innovative approach to explore fast, efficient and temporary housing options to ensure new comers are accommodated. Vienna is experiencing continued growth while facing a housing shortage. Exploring short- term housing options through utilising vacant underused commercial sites provides an alternative opportunity to address this housing gap.



Mega Bauman, Wien Liesing (Google Earth, 2017)

VIENNA’S CHANGING DEMOGRAPHIC
MAKE-UP

Vienna has experienced a demographic change over the past century and is today considered a rapidly growing metropolis in the German-speaking realm.

After War World II Vienna’s population stagnated or decreased, although since the 1980’s it has substantially increased. Vienna’s population by 2013 had increased by almost 200,000 people compared to 2000. Forecasts suggest that growth will continue in the coming years and by 2030, Vienna will have arrived at 2 million citizens (Rosenberger, 2014). In the past years, Vienna has averaged a population growth of approximately 25,000 people annually.

Liesing is a district undergoing change and transformation (refer to Figure 2). It is a highly diverse area comprised of residential and industrial uses.

In 2016, the population was 98,391 inhabitants, 5.4% of Vienna’s 1,840,226 inhabitants (MA 23, 2016). The average household size is 2.13 people per household and this equates to approximately 45,000 housing units in the district (Taxacher and Lebhart, 2016). Additionally in Liesing, one in every second person owns a vehicle and this can be attributed to its peripheral location (Taxacher and Lebhart, 2016).

Liesing was identified in Vienna’s Urban Development Plan known as STEP in 2005 as a target area. The target area highlights housing development and employment opportunities. Liesing is responding to housing and working challenges through

the construction of new apartments through Greenfield developments and a business neighbourhood management initiative for the industrial Liesing area.

Over the next 15 years, new projects have been planned to accommodate growth in the district and approximately 7,900 new apartments will be built, accommodating approximately 16,600 people, shown in Figure 3 and Table 1 (Collon et al., 2016). A number of developments have been completed or are presently under construction.



Fig. 1: Demographic development of Vienna from 1910 - 2025.

Source: (Own illustration, based on Rosenberger, 2014, p.15)

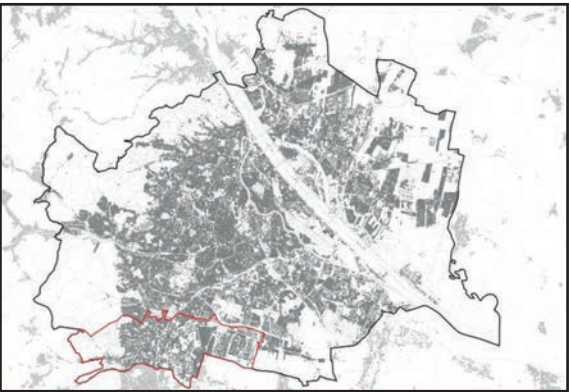


Fig. 2: Location of Liesing (Own illustration, Offene Daten Österreichs, 2017)

These new housing developments are comprised of socially funded, private and housing association arrangements.

Housing projects	Status	Number of units	Number of residents (~2.1 per household.)
A. Perfektastraße	Completed	170	357
B. IdW Süd	Completed	1,000	2,100
C. IdW Mitte & Nord	Awaiting construction	3,550	7,455
D. IdWOst/Nord, Ost/Süd	Under construction	3,000	6,300
E. Ernte Laa	Awaiting construction	180	378
Total		7,900	16,590

Table 1: Breakdown of planned green-field developments in Liesing

(Own illustration based on Collon et al., 2016)



Fig. 3: Planned green-field developments in Liesing

Source: (Own illustration, Offene Daten Österreichs, 2017)

WHAT IS TEMPORARY USE?

Temporary use identifies a potential use for a building while in transition or non-use. When buildings are no longer useful for their original purpose or have been vacant for a longer period of time, the reuse of buildings can provide an alternative

purpose such as housing or commercial uses. Temporary uses can be an effective method to avoid deterioration, vandalism and demolition through neglect while a long-term use can be reconsidered or established.

The temporary use of vacant buildings provides a quick temporary solution for the site. The objective is to exploit the pause or disruption in property processes and provide a space for alternative use rather than the building waiting empty. The adaptive approach of using vacant buildings provide social and economic gain to the local community as the space and contribute to the vitalization and regeneration of the area and/or assist the landowner while a tenant, buyer or proposed redevelopment processes are in the pipeline or brought back into commercial use again. The temporary use does not have to be constrained to buildings only. It may also be interpreted as a different use for a space for a limited period of time such as the PARK(ing) initiative that involves groups of citizens creating temporary parks on parking lots.

An alternative, short-term solution is identified for the site and the adaptive reuse or conversion enables the site to be used for a period of time. Commercial sites may include warehouses, large retail stores, workshops, factories, mills or storages facilities. The vacant building may be suitable for a wide range of temporary uses (refer to Figure 4). Temporary for this project means a short-term use. For residential activities it is meant weeks to months (max) and for commercial/community uses this could be months to years meaning temporary-permanent. In Vienna the legal basis for an intermediate use is known as

the as a 'precarity' contract (Prekariatsvertrag) which provides a special form of lending. The precarity contract may be used only for temporary use and stipulates the owner of the site offers the space free of charge. This contract could be made between the city, private persons or associations such as NGOs; however the lender and renter can terminate the contract at any time. The contract includes a free transfer of use without a minimum contract term however the city commonly offers a

period of a year. In addition, the operation and maintenance costs could be charged to the users.

The City of Bremen has developed an urban policy as a tool to transform under-used/abandoned areas. Bremen's ZwischenZeitZentrale policy works across different planning instruments to initiate temporary re-use projects and manage urban transformation projects (ZwischenZeitZentrale, 2017).



Fig. 4: Temporary uses categories (own illustration)

REUSING COMMERCIAL BUILDINGS RATIONAL

The identification of larger industrial or commercial sites provides a unique chance to temporarily use vacant places affordably. The building provides a shell or form that is the first step in providing shelter. Although building modifications will be required these costs are still lower than building structures from scratch on green-field sites.

The goal of this project is to illustrate an affordable, fast housing solution by utilising vacant space for new comers in Vienna. Mobilising vacant commercial buildings is considered a short-term option (with long term possibilities) to address the housing shortage and present an alternative approach for rethinking housing, social infrastructure and enabling people to gain employment or find ways to enter the job market through education and training. By doing so, firstly new comers are given resources and tools to have a new start and secondly, areas in the city are activated through this new impulse of intermediary or 'meanwhile' uses.

Typically, centrally located vacant sites are under strong market pressure for economic return or redevelopment. Therefore the prospect to look for appropriate sites in peripheral suburban areas was preferred. Two sites were selected to demonstrate the potential use and illustrate a temporary solution for providing housing and employment opportunities in the Liesing district (refer to Figure 5). These two examples can accommodate approximately 2- 3,000 people.

SITE SELECTION

The sites were selected based on the following criteria:

- Vacancy
 - o Within an existing urban environment
 - o Accessible to public transport
- Infrastructure
 - o Onsite solutions (waste, water, power)
- Consideration of
 - o Social infrastructure
 - o Open Space
 - o Building condition/layout

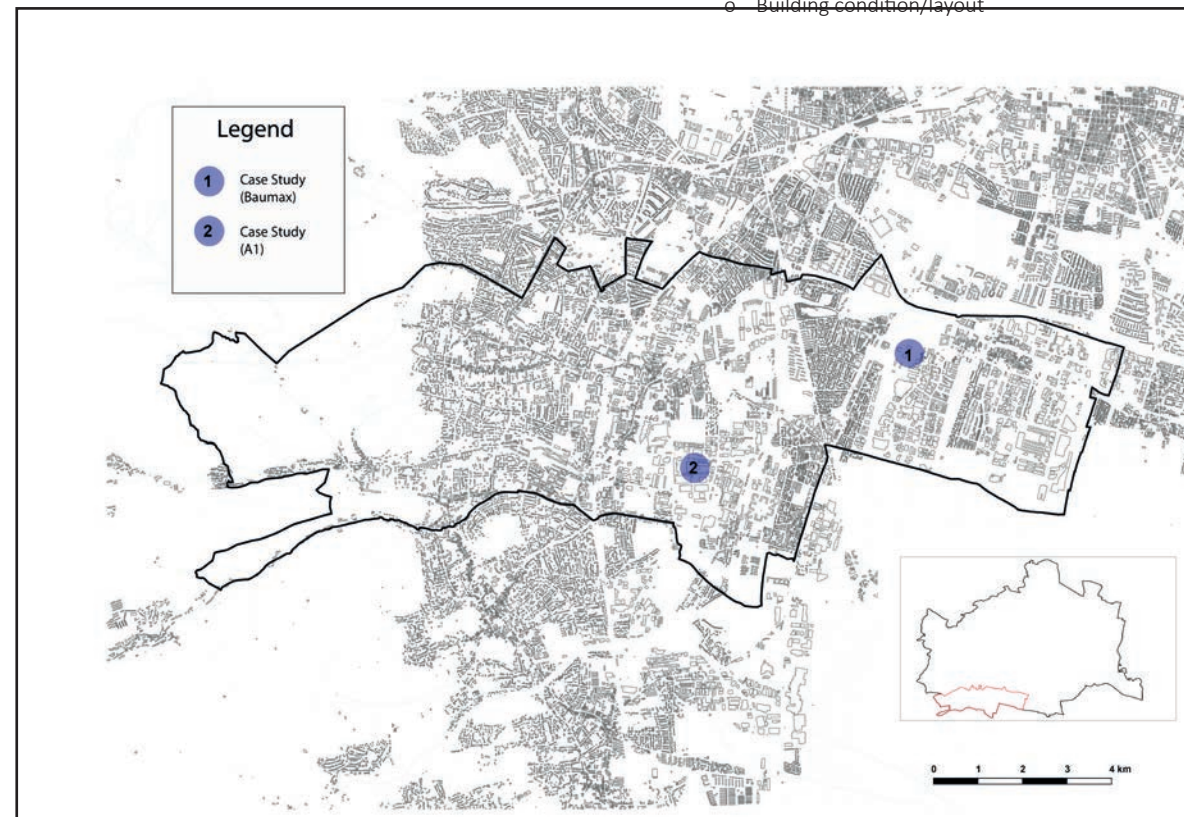


Fig. 5: Case Studies and planned green-field development in Liesing

Source: (Own illustration, Offene Daten Österreichs, 2017)

CASE STUDY 1: FORMER BAUMAX SITE

The former Baumax site was constructed in 2005 as a hardware department store. The large warehouse building is situated in a well-connected commercial area with good motorway connections. Approximately 15.5m in height, the warehouse has a gross floor area of 12,800m², property size of 15,200m², approximately 277 underground car-parks and 50 spaces to the front of the site, totalling 327 on site carparks. The building is in good condition however, has been vacant for a year and a half (since the end of 2015).

An existing infrastructure analysis of the site shows there are good connections to public transport Vienna's local rail line (Wien Inzersdorf Lokalbahn station) and buses. Basic facilities are within walking distance including a supermarket, petrol station and a park. Within 1km of the site there are a number schools, childcare facilities and employment opportunities. The physical and social infrastructure is considered sufficient for short-term temporary use.

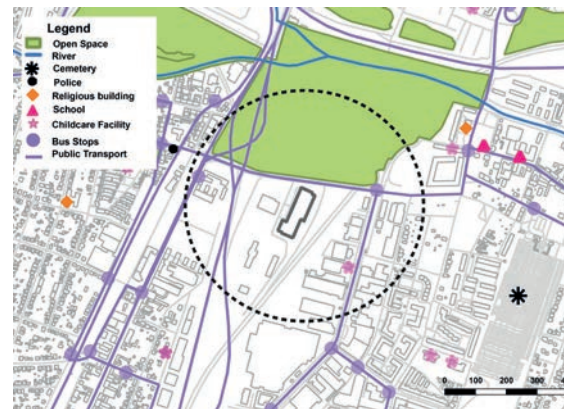


Fig. 6: Former Baumax infrastructure analysis (Own illustration, offene Daten Österreichs, 2017)

Infrastructure Points	400m Radius	1 km Radius
Community/ Civic facilities	Post box	Catholic church, cemetery, youth facility, Police Station
Public/ Green Spaces	Draschepark (playground, football & BBQ)	3 Parks: 1 with Table Tennis, skate Park, 1 with playground/ sandpit.
Public Transport	Bus: 200m to 66A Bus Stop.	Buses: 66A, 65A, 16A Taxi Stand Local Vienna light rail.
Education		5 Child-care facilities. 2 Schools: Volksschule, Gymnasium Draschestraße
Employment opportunities	Asfinag HQ VAMED (Health-care provider)	Inzersdorf commercial and industrial area (Care Richard-Straus Straße)
Daily need services	3 Supermarkets, Petrol Station	Doctors, Bank, Pharmacy

Table 2: Existing infrastructure points (own illustration)



(Google Earth, 2017)



(own image, 2017)



(own image, 2017)

SCENARIOS 1: MIXED USES

To illustrate different possibilities and alternatives three scenarios were developed. The cross section shows residential use on the first floor, mixed use on the ground, and parking and workshop space in the basement (refer to Figure 7). As the ground floor is approximately 7.4m in height a mezzanine level is envisioned which could provide live/work solutions. A range and mixture of uses, appropriate to the user needs is envisioned.

The scenarios present a mix of uses and residential typologies. According the scenarios can hold a varied number of people as shown in Figure 8.

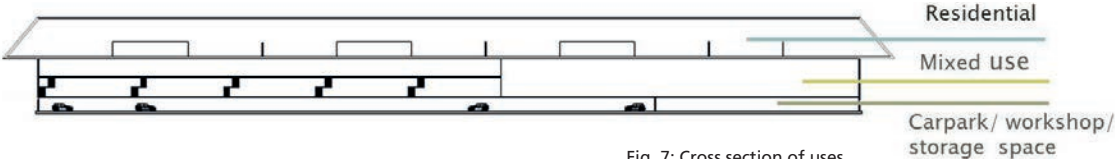
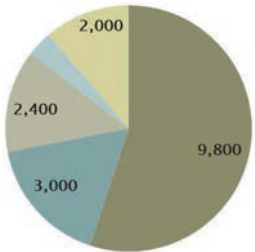


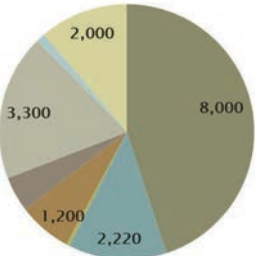
Fig. 7: Cross section of uses

(Own illustration)



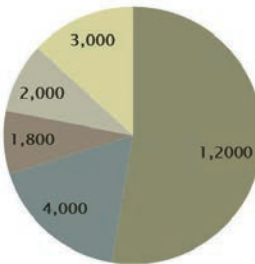
SCENARIO 1: 1,225 people accommodated

Scenario 1 contains a mix of uses on the ground floor including 4,800 m² of residential use, 3,000 m² of small retail area for businesses/services such as ethnic retail stores, hairdresser/barber, greengrocer, craft store, seamstress and travel agent for example, and 600 m² of recreation/community space.



SCENARIO 2: 904 people accommodated

Scenario 2 contains a wider mix of uses including 3,000 m² of residential uses, 2,220 m² small retail and services, 80 m² café, 1,200 m² of community services/facilities (adult learning, health/support centre; library, community room and interreligious space), 800 m² of shared office space and 200 m² for recreation space.



SCENARIO 3: 1,500 people accommodated

Scenario 3 includes an additional level of residential use. Dependent on structural stability an addition level may be added. On the ground floor a mix of uses is foreseen including 2,000 m² of residential use, 4,000 m² for a market (for example a hand-made craft and ethnic market) and 1,800 m² of office space.

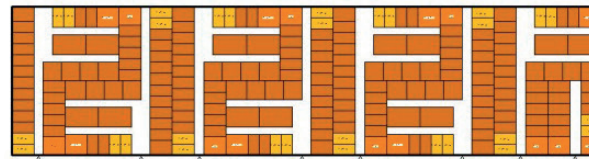
Fig. 8: Breakdown of uses in m² (own illustration)

DETAILED SCENARIO DESCRIPTION 1

The second scenario was selected to explore the layout and organisation of uses, refer to Figure 9. It is envisioned for the first floor the main use would be residential, separated into 'pods' of different sized residential units. The pods share communally kitchen, dining/living area, toilet and shower facilities. Residential use is on the first floor, mezzanine and ground floor. It is foreseen a range of room sizes will provide for different users and family arrangements (shown in Figure 10). In addition, it is intended the accommodation would be separated into quarters to provide sensitive user groups such as only female and family areas.

The ground floor contains an education/learning centre, retail space, open/shared office space and this could serve the local residents in the building as well as the surrounding neighbourhood. Workshop space located in the basement could be used for upcycling (repair, recycle and repurpose) unwanted materials/goods/furniture such as electrical goods and bikes. In total, 904 people can be accommodated in this scenario. The first floor has a range of unit sizes from 2 to 5 people. There are approximately 8 pods containing 176 units housing 464 people (refer to Figure 10 for the pod layout). The Mezzanine level contains 5 pods with 8 units with 2 people in each pod. Approximately 80 people may be accommodated in the mezzanine level. The ground floor consists of 90 residential units providing for 360 people (four people per unit). The different unit size intends to provide for different family make-ups, sizes and arrangements.

First Floor



Mezzanine



Ground Floor



Underground



Legend

- Residential Units
- Kitchen/dining
- Toilets/showers
- Office / Community Space
- Community/learning Centre
- Small Retail/ service space
- Cafe
- Workshop/storage
- Open Space
- Car parking

First Floor



Legend

- 2 People residential unit
- 4 People residential unit
- 5 People residential unit
- Kitchen/dining
- Toilets/showers

Mezzanine



Ground Floor



Figure 10: Pod layouts
(own illustration)

Fig. 9: Former Baumax proposed floor plan (own illustration)

CASE STUDY 2: FORMER A1 SITE

The former A1 Site was previously used as a former logistics Centre by A1, a telecommunication company. The site is located directly in the heart of Liesing’s industrial area. The former A1 site has four buildings located on site which equates to approximately 16,700 m² GFA, refer to Table 3. The property is 45,000 m² or 11 acres. The building footprint occupies approximately 35% of the site and the site been vacant for around two years, awaiting sale.

An existing infrastructure analysis indicates the infrastructure points in close proximity to the site. There are good connections to public transport, directly opposite the site are two supermarkets and a café. In close proximity to the site are schools and other amenities however, the surrounding environment has limited access to public open spaces.



(own image, 2017)



Fig. 11: Former A1 site infrastructure analysis (own illustration, Offene Daten Österreichs, 2017)

Infrastructure Points	400m Radius	1km Radius
Community/ Civic facilities	Post box, Public Phone	3 Cemeteries
Public / Green Spaces		4 Parks 1. with playground, 1 with Playgrounds, football, basketball, volleyball, skate park 2 Sports /recreation facilities: Skate Area Sports hall; Tennis, indoor-golf, Badminton
Public transport	Bus: 140m to 64A Bus Station	U Bahn: 800m to U6 Buses: 64A and 61A routes S- Bahn: 1600m to Liesing
Education	Private School	7 Childcare facilities. 2 Schools: Primary School Volksschule & Music Schule Alterlaa, Neue Mittelschule
Employment	Der Mann, DHL	Liesing industrial area, Mistplatz, Porsche etc.
Daily services	3 Supermarkets Bakery, 1 Doctor	1 Pharmacy, Doctors

Table 4: Existing infrastructure points (own illustration)



(Google Earth, 2017)

Building	Gross Floor Area (GFA)
Main Building	9,800 m²
Front accessory building	4,800 m²
Side accessory building	1,800 m²
Front accessory building	190 m²
TOTAL	16,590m²

Table 3: GFA Breakdown of buildings on site (Own illustration)



(own image, 2017)

SCENARIOS 2: PUBLIC SPACE

Three scenarios were developed to illustrate a combination of uses. In addition, the three scenarios projected different housing numbers dependent on the varied make-up of uses shown in Figure 12. In all three scenarios, the building located at the front boundary is foreseen as a café or eatery to activate the site.

This would in turn, open up the site and hopefully attract local workers and residents. A pocket park is also proposed for the local neighbourhood. As the site doesn't have close proximity to public space it was seen critical to provide this resource. The park could also be used multi-functionally with possibilities for urban gardening or for example displaying art and community projects.

LEGEND

- Residential
- Small retail and business space
- Cafe
- Market
- Art/exhibition space
- Education and training
- Storage/workshop space

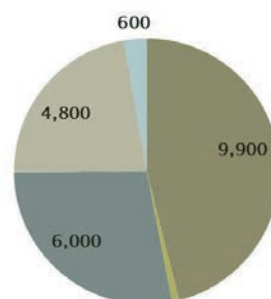
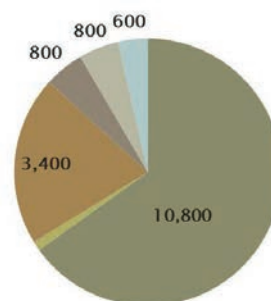
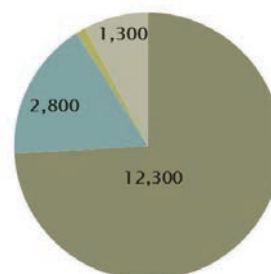


Fig. 12: Breakdown of uses in m²
(Own illustration)

SCENARIO 1: 1,538 people accommodated

Scenario 1 contains a mix of uses focusing on small retail and service businesses such as start-ups, incubator projects or pop-up stores. A market space (specialised retail or second-hand goods market) is also envisaged such as the Dong Xuan Center in Berlin-Lichtenberg or Turkish shopping mall on Stuttgart's Feuerbach's Mauserstrasse. The Dong Xuan Center has given approximately 1,000 immigrants workers (250 traders) the opportunity to start work almost immediately (Schmal, et al., 2016).

SCENARIO 2: 830 people accommodated

Scenario 2 proposes art craft studios/workshops as well as exhibition/event space. An example is the South Kilburn Studios, in Melbourne which provide studio space for creative disciplines including documentary film, music, photography & fashion (SK Studios, 2017).

SCENARIO 3: 1,240 people accommodated

Scenario 3 offers education and vocational training services with an associated workshop space. In this scenario, a day-care facility, library and adult education training centre is foreseen. Workshop space could be used for upcycling unwanted materials/goods/furniture such as in Hamburg (Billstrasse) whereby traders sell unwanted electrical appliances, cars and bikes (Schmal et al., 2016).

DETAILED SCENARIO DESCRIPTION 2



Fig. 13: Proposed layout of the former A1 site (own illustration)

The second scenario was selected to explore the layout and organisation of uses (refer to Figure 13). The proposed plan for the second option features a mix of 370 residential units catering for approximately 850 people. The main building features art studios, workshop space, small retail area and exhibition space. The accessory building will provide an education/learning facility and the building at the front of the site is envisioned to be a café. On-site the activation of public space is critical and could also serve the surrounding neighbourhood. Container development is additionally foreseen on site but not included in the population projections.

CONCEPTUAL OVERVIEW OF THE PROCESS

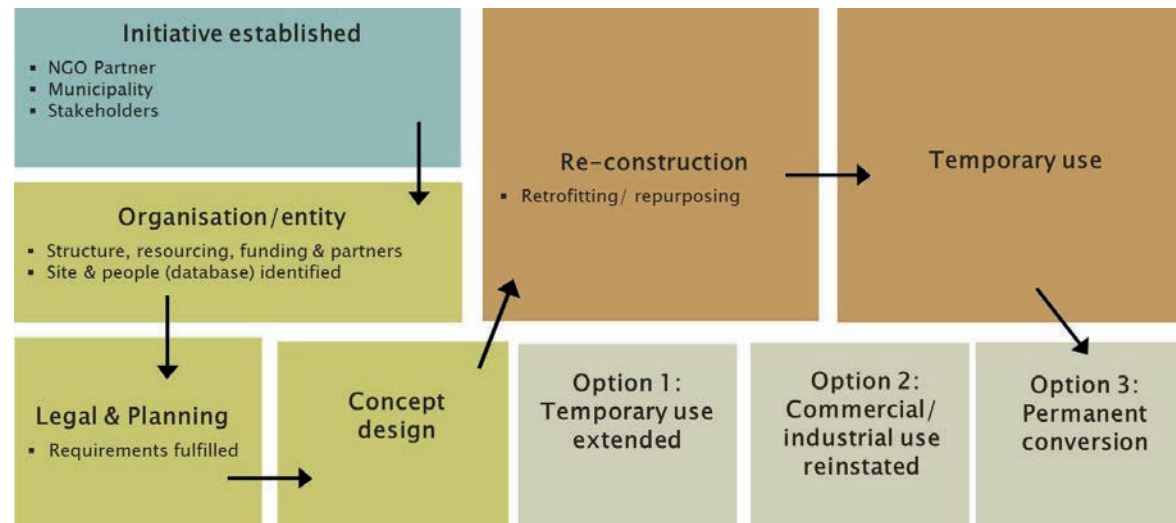


Fig. 14: Conceptual overview of the project (own illustration)

Firstly, the identification of potential public, private and NGO entities is required. Organisations should be targeted and work collaboratively to define the project scope. Finding project partners and sponsors would commence in the project initiation phase. Secondly, a working organisation structure of how the project should function needs to be investigated and formed with key stakeholders/actors. This may require a new governance model, to launch fast processes whereby the structure is flexible and adaptive to changing circumstances and engage local actors. A cartographical map together with a register or database could be established to identify viable

vacant commercial buildings and participating landowners. Building working relationships with private landowners and real estate agencies is critical to target vacant buildings. An inventory of housing candidates should be created with potential new comers including for example temporary workers, low-income earners, internal/domestic migrants, commuters, refugees, asylum-seekers, displaced and/or homeless persons. These databases should be regularly monitored and updated. There could also be structures conceived to encourage self-organisation such as sub-committees for the future residents to get more involved in

the planning and implementation processes. A structure for addressing temporary uses needs to be properly set up which also looks into the legal contract components between the user and the owner, examines financing and potential funding sources and lays out the framework of how the program should work. Thirdly, legal and planning requirements for each site need to be fulfilled such as an agreement on the terms of the contract and assessment of the building and planning requirements. The Precarity contract should be critically reviewed and assessed if it is the best tool to use or an alternative legal solution could be sought. Subsequently, professional services may be engaged to develop the concept and ensure the building and safety requirements are upheld. Collaboratively designing the function and use with future residents could facilitate better solutions.

Next the building should undergo reconstruction to retrofit or adapt the building for the temporary use. Professional services combined with local/residential man-power could be used for renovation works. Then, the building is occupied temporarily for an agreed upon timeframe. After the temporary use, there are different scenarios envisioned. For example, the use could continue permanently, alternatively the temporary use could be extended for an agreed upon timeframe or lastly a commercial use could be reinstated.

PROJECT TIMELINE AND COOPERATION WORKFLOW

Phases	Aug 17	Sept 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	On-going
Idea Development Phase													
Research (best practice examples)	○		✓										
Define target users and temporary uses	○		✓										
Engage private & public stakeholders (info evening)	○	*				*							⊙
Project management	○												○⊙
Planning Phase													
Form agency/organisation (define structure and operational procedures)			○●●		✓								
Identify vacant sites (cartography) and projects			○●●		✓								⊙
Participatory planning (involving stakeholders in workshops, meetings and walks)			○○*	*			*			*			●
Locate resources and funding sources	○		✓										⊙
Implementation													
Re-purposing/retrofitting buildings (construction)						●●	✓						●●
Implementation of temporary use projects							⊙○✓						⊙○
Monitoring/evaluation													
Evaluate achievements/funding/grants								⊙			✓		⊙

LEGEND	
○	Municipality (Government)
●	Public and NGO's
●	Private (experts/professionals)
⊙	Proposed steering/management committee
✓	Deliverable/output
*	Event (workshop/meeting)

The private sector (experts and professionals) and citizens are the key stakeholders in the implementation of the project which involves the renovation and/or retrofitting of vacant buildings. The proposed steering committee will take over the management and implementation of projects as well as monitoring and evaluation.

Fig. 15: Proposed project timeline and cooperation workflow (own illustration)

Here the proposed project timeline would start in August 2017. It is envisioned the municipality will take the lead in the idea development phase to engage private and public stakeholders. In the planning phase once partnerships have been built between different stakeholders a steering or management committee/organisation can be formed. Public participation as well as private sector involvement is critical for

the development and progression of the project. Once formal communication and reporting channels have been formed, the planning of projects will be fast and efficient. The planning phase is fundamental to the effective utilisation of vacant sites and rapid temporary housing for new arrivals.

Cooperation between citizens, the private sector and non-profit organisations such as Carita's and NEST Vacancy Management Agency together with Stadtwien (local municipality) is the key ingredient for establishing and building a network for implementing temporary uses. The building of a strong network of different actors combined with a democratic and inclusive participatory organisational structure will foster local, bottom up solutions.

PROJECT REFLECTION

The identification of larger industrial or commercial sites provides a unique chance to temporarily use vacant places affordably. Used buildings provide the first step in providing shelter and an opportunity to utilise a large number of buildings that are currently vacant or unused.

The aim of the project was to find an alternative solution to accommodate 20,000 people on the move. This project proposes the utilisation of vacant commercial buildings as meanwhile or temporary solution to provide short-term housing. This section of the report reflects on the project objectives and provides a critical reflection of the project.

Our task was to accommodate a temporary permanent solution for 20,000 people on the move. **This solution is a temporary, fast reacting and affordable solution whereby new comers would be accommodated for weeks to months while awaiting a permanent housing solution.** The examples presented provide for 2-3,000 people to be accommodated with employment learning/training and recreation opportunities. Although this project does not accommodate the full 20,000 people it was envisioned to demonstrate a model that could be used at other sites.

A host of vacant (known and to be identified) sites across the city would be required to house temporary new comers. In Vienna there are known vacant commercial buildings through

a register (Leerstandmelder) however, public pressure and political will is required to increase the uptake and utilisation of vacant buildings.

It is envisioned the vacant sites would be dispersed throughout the city to 'evenly' distribute new comers than create a concentrated 'ghetto' like area. The proposed floor layouts suggest a variety of living arrangements and room sizes to cater for different uses. By offering a variety of living arrangements this can foster social inclusion through mixing people of different family structures, sizes, age, background and economic classes. It was also foreseen to provide separate accommodation for sensitive users such as single women, families or elderly people.

Secondly, we were asked to take the provision, location and accessibility of public space into consideration. The provision of open space was taken into consideration in the site selection criteria. In the case of the former Bauman site, a large park is located directly opposite the site, which was deemed sufficient. In the case of the former A1 site, open space including parks or plazas were considered insufficient. Therefore the provision of onsite public space in the form of a pocket park was recommended.

Affordability and the economic feasibility of the proposal were also considered a key pillar of the project. Unfortunately for this project I was unable to assign a 'true' monetary figure to the project however, it is considered affordable for the following reasons. It utilises vacant buildings and existing infrastructure. In addition, if a Precarity contract is applied, the use of the building would be free of charge. If not used, perhaps alternative financial relief options could be employed such as targeting government/city owned buildings.

The project relies on a co-operational workflow based on good networks and relationships between a variety of public, private and NGO entities. In reality these relationships typically require years to form and formal channels of communication/reporting ensure processes and outputs are successfully maintained. This project relies heavily on the cooperation of many stakeholders/actors/shareholders to see value in the initiative and buy-in for the project to be started and continue into the unforeseen future. I stated the local municipality should take the lead for the project initiation phase however, a steering committee or organisation should be formed. Without accountability and a clear organisational structure the project could be consistently under threat.

Social and daily infrastructure now and in the future was also criterion to address. An existing infrastructural analysis

of the sites provided an insight into what social and physical infrastructure was located within the local neighbourhood. Social infrastructure includes education facilities, religious buildings and civic and community facilities such as the post office, police station and libraries etc. Daily infrastructure can be interpreted as infrastructure required on a regular basis such as physical infrastructure (waste, waste and power supply), supermarkets, medical services (e.g. doctor, pharmacy) and public transport infrastructure.

Commercial vacant premises present an opportunity as they are located within the urban fabric and can provide for new comers the opportunity for an easier transition and integration process. However, the site needs to meet the site selection criteria and be mindful of the environment such as ongoing commercial/industrial operations. In the case of the former A1 site for example, it is located in the heart of the industrial area. There is a fear that once residential uses are allowed into the commercial area, industrial activities will be pushed further out. The temporary use of buildings should not prevent ongoing commercial operations or deter other existing activities or create reverse sensitivity issues. In the case of the former Baumax site it is situated between the motorway and an arterial road which experiences a large volume of traffic. Concerns were raised with regards to housing people within areas that may encourage health issues as a result of poor air quality from the vehicles and noise issues.

The willingness of landowners and/or landlords to participate and enter voluntary contracts is assumed. While there are win-win solutions for both sides, the landowner still has to manage the risk of temporary occupation with costs and future prospects of the site. Therefore, to get private landowners on board and participate in the project, they have to see the real benefits for themselves. After a conversation with the Standpunkt Liesing office it was suggested to motivate some landowners in Liesing for example happy to await a few years for sale or the 'ideal' tenant. There may be an unwillingness to negotiate renting price or the decision to allow the building to remain empty for tax purposes. While utilising existing commercial buildings provide numerous benefits there are still challenges to divide the internal building layout to overcome. Partitioning a large warehouse building into smaller housing units can be challenging. However, natural light and creating privacy for residents is a high priority.

I have explored a range of methods or approaches such as the Hawi-box, Camel Architecture, Architect Shigeru Ban paper wall partitions and other temporary wall partition solutions. One solution I found good was from a New York company who has developed a universal block system which provides privacy and encourages creativity and personalisation and the temporary divisions provide a flexible, adaptive and affordable option (refer to Figure 16). The wall partitions are used to create for

example separate areas (communal or sleeping), however they should be designed in a way to avoid monotonous hallways or create a hostile unfriendly environment. It is also imperative the building receives natural light in the central places of the building as people should not be living under artificial lighting.

The project highlights the importance of providing a mixture of uses on site. This close proximity to the job market/training or learning opportunities and/or hobby or recreation will provide new comers opportunities to improve their current situation and start work immediately. The ground floors in particular have been envisioned for mixed use to encourage interaction and set up work opportunities. Requiring mixed use at the front of the site and on the ground floor will enable also residents and outside people to be encouraged to use the facilities, shop and promote more exchange.

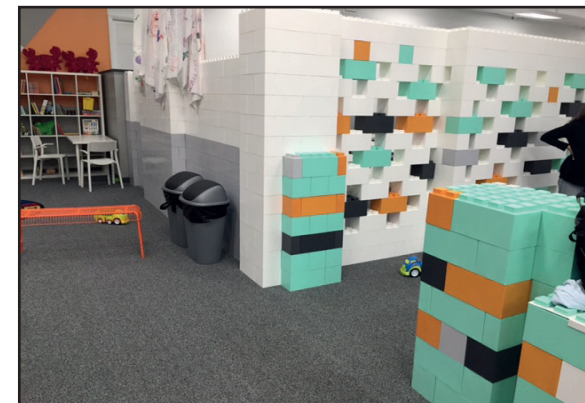


Fig. 16: Wall partition solution (Everlock Systems, 2017)

This project harnesses the opportunity to refabricate empty or vacant buildings and convert underperforming buildings into more performing, sustainable buildings. However, when the previous commercial use is being converted to a sensitive use such as residential activity there can be a number of hurdles. Firstly, residential uses to be fitted out require changes to the internal layout, electrical, plumbing, insulation and other requirements such as accessibility, fire requirements of safety issues. In addition, shared facilities including toilets, showers and kitchens will need to be installed. Adding these facilities temporarily needs to be carefully planned.

A challenge working on this project was figuring out the internal layout and floor plan. Without accurate floor plans and viewing the building internally it was difficult to precisely propose how the building should be divided into a different arrangement. The visualisations produced to illustrate the concept do not reflect true internal configuration. In addition, this work would be typically conducted by an Architect together with a team of experts. I aimed to logically create spaces such as residential pods whereby facilities such as showers, toilets and a kitchen would be shared however; these would need to be proofed. As a desktop exercise it was evident the spaces can be altered for a range of purposes and the internal building arrangement have different options.

Lastly, the temporary use of building can be a tool for urban regeneration and reactivation. Projects could assist with place making activities and from a bottom-up approach engage directly with local residents and actors.

CONCLUSION

A multi-faceted approach to tackling the housing shortage and growing population is required. The mobilisation of vacant commercial buildings highlights an alternative opportunity to provide residential and mixed uses as well as the efficient utilisation of existing resources. The temporary conversion of vacant buildings can play a valuable role in accommodating new comers to Vienna, including migrants, workers, low-income earners and the like, in need of short-term affordable housing. Through the provision of mixed use activities, jobs may be created, training and educational opportunities can be offered and the chance to attract local community interests in the project and serve as a neighbourhood level initiative explored.

A strategic approach is needed to identify vacant buildings and convert them to affordable temporary housing and mixed use opportunities. Legal instruments need to be further investigated to enable and encourage temporarily use and strong cooperative workflows and partnerships need to be developed to initiate and implement successfully projects. While there are obstacles to activate vacant buildings, they will provide numerous economic, social and environmental benefits in their local neighbourhood.

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Stadtlabor OPEN Marx, TU Wien, one of the temporary workshop areas of the students



IBA Headquater, Hamburg/Germany

Theodora-Ruxandra Gheorghe

On Rivers And Acres

New Forms Of Temporary Living

This project's topic is new forms of temporary living on non-living zoning in Vienna. Therefore, the sites of this project are located on the Danube and on acre fields, with a good connection to the public transport. This form of housing can provide affordable living space for about 20,000 people. The project shouldn't be a solution just for refugees, but a solution for cities with a strong growth of population.



Fig. 1: Container on ship (McKay, 2013)

INTRODUCTION

The world is on the move. Currently, more than 250 million people live outside their countries of birth. Of the moving masses, an estimated 6 % are refugees fleeing across borders to more favorable environments. For planning the city development, there are a few questions which have to be answered. How many people will come to Vienna? Actually, we don't really know and it cannot be said that this number is constant. But because of the development from the past we can expect about 20,000 people. Where do they come from? This is important to know because of their traditions, customs and cultural background. Therefore we know how hard it is to accommodate in Austria. Do we need to extend Vienna for these people? I say we don't have to. And this project isn't a solution just for refugees, it's a solution for everybody and the main goal is to provide affordable living space.



Fig. 2: Amount of people on the move (Puaschunder, 2016)

PROJECT IDEA

The idea of this project is to use the unused or unbuilt spaces in Vienna without living zoning. Therefore, the water area on the Danube and greenfield sites have been chosen. For both forms the sites have been defined by the availability of local infrastructure.

Danube: Living on the river is a temporary housing solution for about two years for residence or much longer. It is an easy way of construction and a mobile, flexible and reasonable re-use solution we can see in cities like Amsterdam, Berlin, Paris and in Vienna. Since 1994, so over 25 years, there is the school ship with almost 1,000 students on the Danube. It is the Cheapest School in Vienna which has been built, because there is no need to pay rent for the "landuse". So it has sustainable and economic advantages.



Fig. 3: Schoolship in Vienna (Haas, 2008)

Acre: Container Buildings offer a short-term housing solution for minimum ten years. Prefabs are affordable, removable and re-usable. It's a flexible and modular design for buildings. They have a quick construction time and a quick reconstruction time for other uses. In Austria, we have a special form of lending. The "precariat-contract" is only for temporary use and it provides living space for free. The lender and renter can claim the contract at any time, but for special uses the city gives you one year time. Furthermore, there is also the possibility of contracts between the city and private persons or associations (NGOs).



Fig. 4: Refugee camp in Freiburg (Deutsches Architekturmuseum 2015)

FACTS

Important facts for this project are the modal split and the distribution of the different areas in Vienna.

modal split: Since 1993 the public transport usage has increased by 10 %. This is the reaction of the annual ticket, which costs 365 € (1 €/ day). Compared to Amsterdam, we have a better modal split relating to the categories public transport and walking. Only in the category of cycling they are more advanced. The modal split is important for this project, because the focus is on public transport and not on the private transportation such as cars. Therefore, the locations have been selected by the accessibility of high-level public infrastructure.

Areas: Vienna's area is about 41,500 ha. Almost half of Vienna is green land in form of forest, park, acre and more. 10 % of Vienna's area is acre land and 5 % is water area. For the Container Buildings, there is a need of less than one thousandth of the acre fields. To illustrate the spatial configuration of zoned land to the numbers previously mentioned and described (refer to Figure 6).



Fig. 6: Zoning in Vienna
(Own illustration, basemap: Bundeskanzleramt, Magistrat der Stadt Wien, 2017)

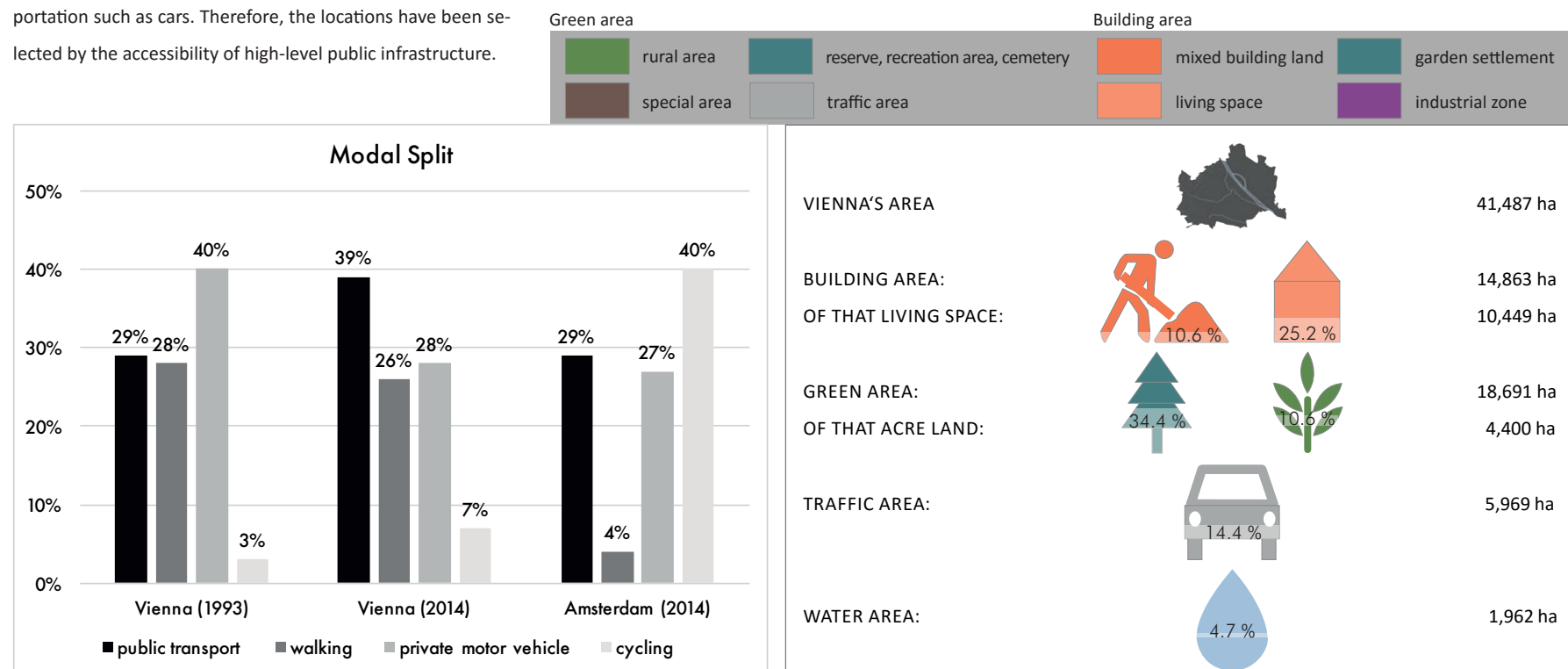


Table 1: Modal Split (Wiener Stadtwerke 2014, Wikipedia 2017)

Fig. 5: Distribution of Vienna's area (Stadt Wien, 2016)



SMART FLOATING

Vienna should be the pilot project of “smart floating”. The Danube floats through many significant countries and cities. These cities could also follow this idea. The graphic shows examples of bigger cities (more than 100,000 population) on the Danube.

Interesting cities would be Regensburg in Germany, in Austria there is also Linz, not just Vienna. Slovakia’s capital Bratislava and Hungary’s capital Budapest could also be part of this project in future. Furthermore two towns in Serbia, Novi Sad and it’s capital Belgrade, could participate. Also Bulgaria with Rus-

se and Romania with Galati could take advantages from this idea. Every city until Regensburg could have the same project with the same boats. It would be until Regensburg possible, because of the width of the locks. The ships could be produced or refurbished in the eastern European countries, to support the European economy. Once the ships are ready, they need maximum four days to be transported to Vienna.

One big advantage of this idea, is that the ships can be easily moved and reconstructed. There are many different reuse options like a hotel, student dormitory or they can provide more space for public infrastructure.

The legal situation is as follows. The competence for water in Vienna has the “bmvit” (the Federal Minister for Transport, Innovation and Technology). They have many responsibilities like waterway infrastructure, water management, ecology, environmental protection and flood protection. But for the implementation the federal company “via donau” (Österreichische Wasserstraßen-GmbH) is responsible. Their tasks are flood protection facilities (dams, barrages, etc.) and refurbishments.



Fig. 7: Danube and important cities (OpenStreetMap, 2011)



Fig. 8: Reichsbrücke (Own picture)



Fig. 9: Botel in Amsterdam (Arthur, 2015)

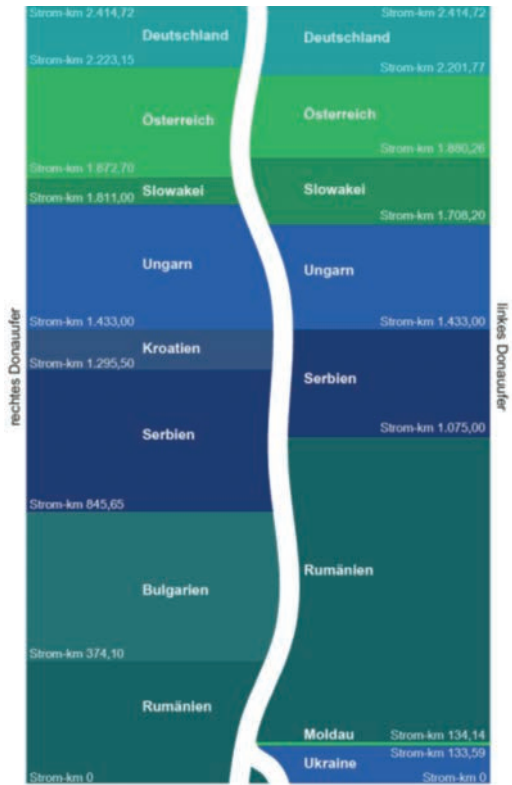


Fig. 10: Kilometre mileage of the Danube (Via Donau, 2017)



ACRE HOUSING

The entire acre land is 4,400 ha. For the buildings of the acre housing project there is only a need of 3.5 ha. This means 0.08 % of the acre field. Also this project should be everywhere practicable. The biggest advantage is the quick construction duration between two and four months. Another advantage is that it is easy and cheap to reconstruct for reuse options (for example student dormitory, subsidized housing or assisted living). Connection to water, energy, communication, etc. is provided by the customer. The containers are fully furnished and equipped. After the construction is finished you can live there directly.

Advantages of the “precariat-contract”:

- No costs for loaner (no rental tax) and no costs for renter
- It doesn't matter if the acrefields are private or public
- The contractual period is flexible, but it should be at least for ten years
- Every content of contracts can be individual
- At the handover everything should be documented
- The renter is responsible for the maintenance

As an example of contracts between the city and private persons there is the “Stadtlabor” in the third district of Vienna. The main goal of the project is to create a place, which can be used for various activities, actors and uses around the field of education and research. Furthermore, the Karlsgarten is also a project of a contract between the city and private persons.

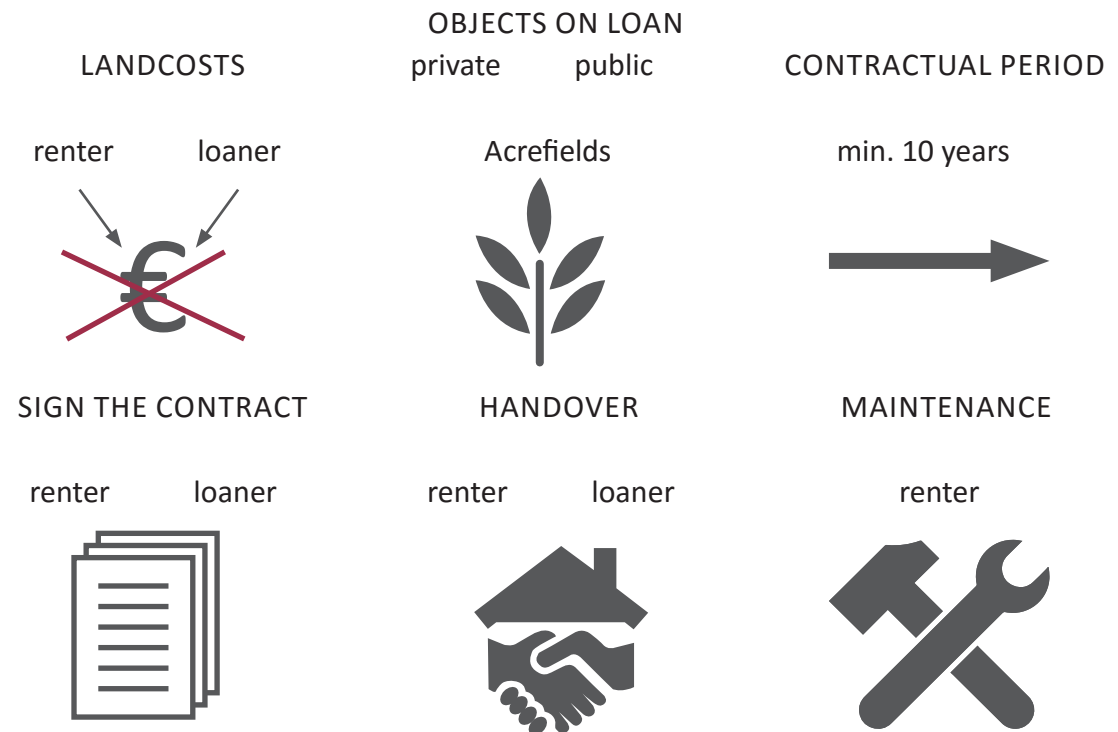


Fig. 11: Steps of a precariat-contract own illustration



Fig. 12: Stadtlabor OPEN Marx, Vienna (Kos, 2016)



Fig. 13: Karlsgarten Viennna (Fakultät für Architektur und Raumplanung, 2017)



Fig. 14: Leopoldau, Vienna (own picture)



Fig. 15: Refugee camp in Germany (Weber, 2015)



Fig.16: Villa Verde in Chile (Elemental, 2017)

Defined Sites

The graphic on the next page maps three locations which have been selected for the ships and three for the container buildings, where the integration into the city structure is given. Social and daily infrastructure is available. The most important daily infrastructure is education (school and kindergarden), public transport and the local supply. As a basic prerequisite is a nearby subway station for the selected sites.

Also important is the huge “Nordbahnhof” area, which is an urban development space. It will offer housing for 10,000 people and working space for 20,000 people until 2030. Also, the “Seestadt Aspern” is a huge urban development project of Vienna. It will also offer space of housing and working for 20,000 people. These two development projects are mentioned because they are nearby the selected sites for this project and because they are affecting the development of local infrastructure.

I have selected as many locations as possible, so there is no concentration of new people at one point of the city. Because of this, the integration should be easier.

The ship sites

The three ship sites will be located centrally and the social and daily infrastructure is already provided. Every ship unit is located at a subway station. One site is at the Subwaystation U6 “Handelskai”, one at the U1 “Reichsbrücke”, which will also be the example of this project. The last site is at the U2 Station “Donaumarina”, near to the Prater.

Each location will have five ship units (one unit includes two ships, which are connected through a bridge) and one ship for educational usage. One Ship site can offer housing for 2,040 people. All three together provide living space for about 6,120 persons.

The container sites

Although the container settlements will be located at the periphery, the infrastructure here is also available. In fall 2017 the subway’s U1 last stop will be “Oberlaa”, where one of the acre housing project will be situated in the south of Vienna. The other two sites will be also near a subway station. One at „Leopoldau“ (subway U1) and one at “Hausfeldstraße” (subway U2). The sites will have a different number of units and people, depending on the size of the area. But all sites together offer living space for 17,570 persons.

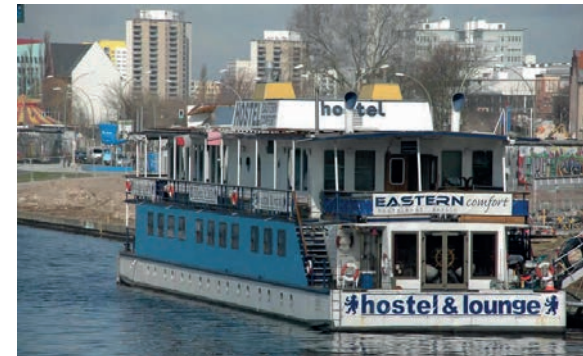


Fig. 17: Hostel in Berlin (Eastern comfort hostelboat, 2017)



Fig. 18: Refugee camp in Freiburg (Deutsches Architektur-museum, 2015)

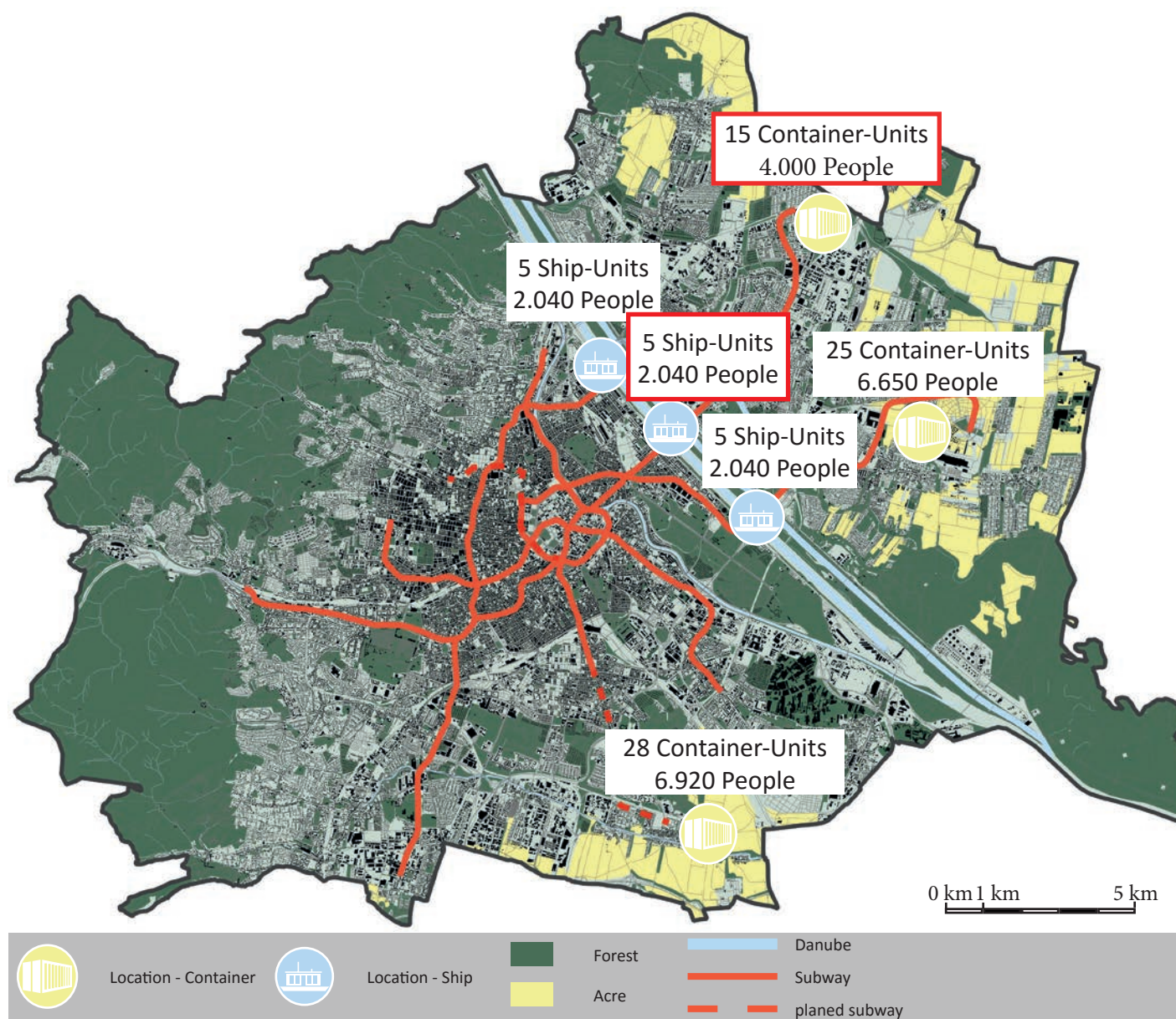


Fig. 19: Defined sites (Own illustration; basemap: Bundeskanzleramt, Magistrat der Stadt Wien, 2017)



DETAILS - REICHSBRÜCKE

The location at Reichsbrücke has been selected as an example. There are five ship units for housing with community facilities and one ship for educational usage as a new school and kindergarten planned.

Any other daily infrastructure is available and there is no need for new one. The school and kindergarden ship is necessary because all the available social infrastructure nearby is already fully occupied.

One location of five shipping units provides housing space for about 2,040 people. In the west, there is the “Nordbahnhof” area located. This city development area has and will provide new daily infrastructure.

The floor plan:

One ship unit includes two ships, which are connected through a bridge. One ship is 142 m long and 18 m wide. In total the unit is 46 m wide because of the connection.

Each ship has three floors or decks and a terrace. There are dif-

ferent room sizes (20.5 m² - 55.3 m²) for different necessities. The unit distribution is about 35 % rooms, 38 % community facilities and 27 % terrace.

The community facilities will have many different uses. For example: library, workspace, workshop room, cinema, kiosk, services, interreligious space, medical and social infrastructure and fitness room.

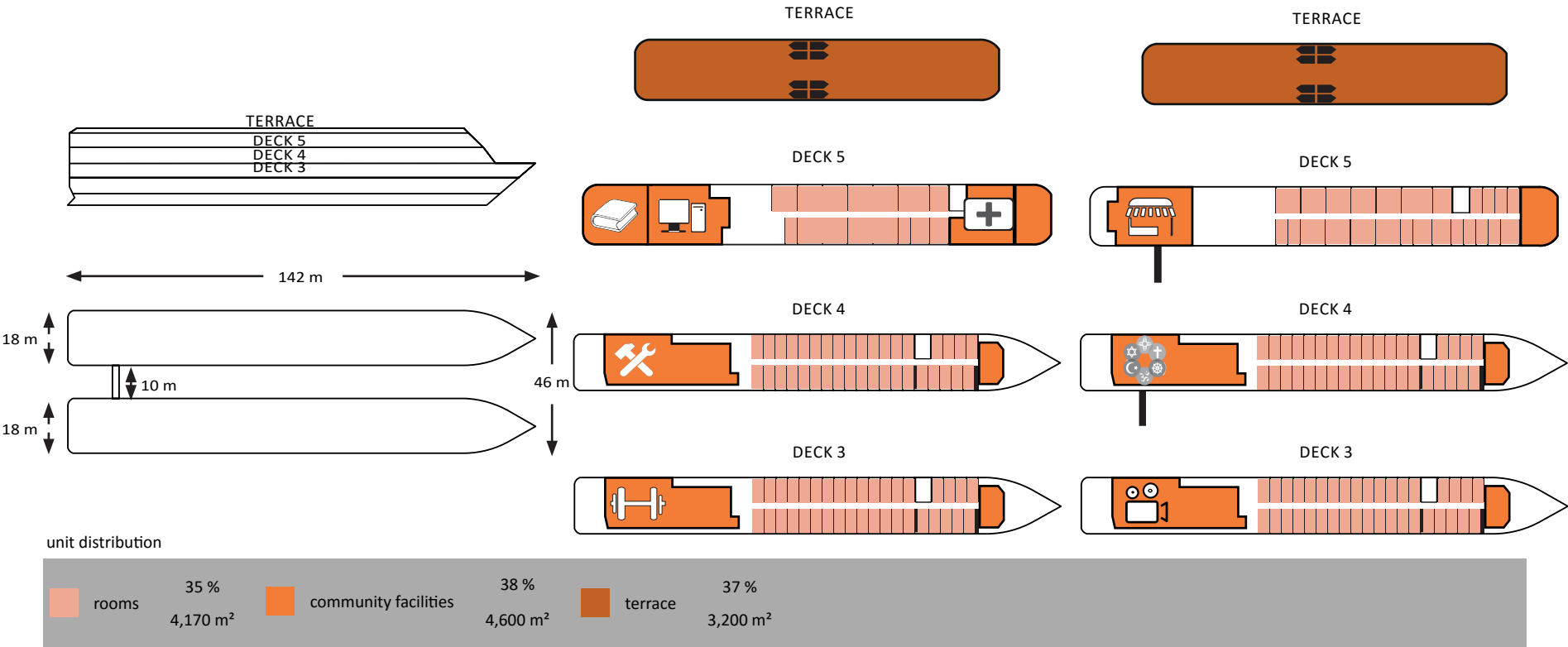


Fig. 20: Floor plan ships (own illustration; base: Compagnie du Ponant, 2017)

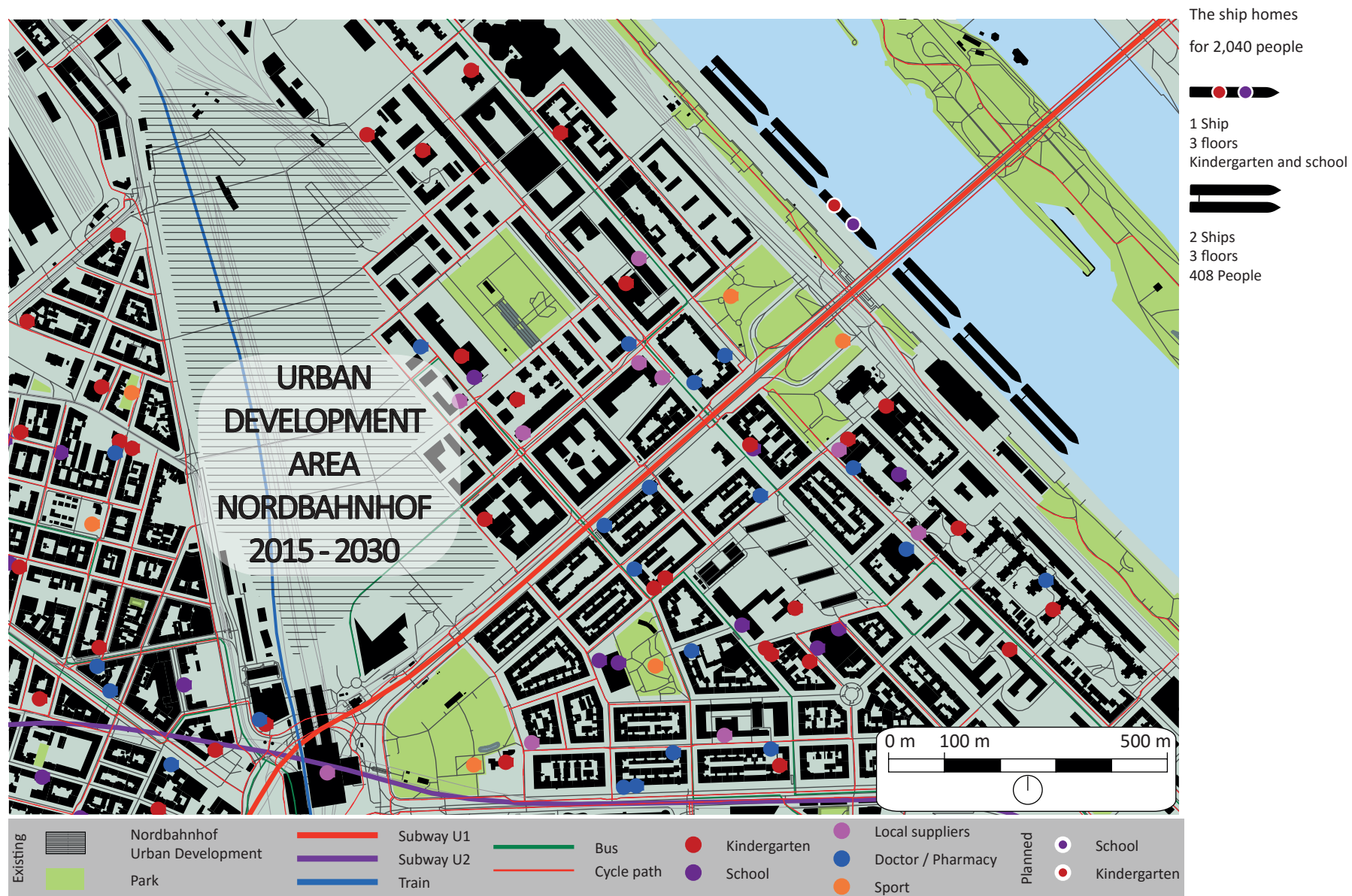


Fig. 21: Detail plan at Reichsbrücke (own illustration; basemap: Bundeskanzleramt, Magistrat der Stadt Wien, 2017)



DETAILS - LEOPOLDAU

The selected acre housing example is located in Leopoldau. This is the last stop from the U1 Subway. Here are 15 container units for housing usage and two units for community facilities designed.

In one of the two community facilities will be a school and a kindergarten and in the other one will be social and medical infrastructure.

The 15 units will be just for housing and they are distinguishable by their number of floors. Because of the city structure there are five units with five floors, five with four floors and five with three floors planned. The existing buildings in the west of the acre field have eight - nine storeys and on the east side there are family houses with two storeys. In the acre housing project at Leopoldau can live in total about 4,000 people.

Types of container:

There are five types of container with different storeys planned. The community facilities container will have two floors.

The housing container has between two and five storeys. The structure of this depends on the height because of the stability. It is important to have different structures of containers so there can be developed semi-public spaces.

Types of rooms:

The floor plan is just a proposal and has to be overworked by an architect.

There should be three different types of rooms. The only thing in common is that they all have a bathroom and a toilet, which is very important for the privacy. So they distinguish by the category with or without kitchen. The category with kitchen

is in two sizes available - in 28 m² and 30 m². The rooms without kitchen have an area of 16 m² but have the possibility to cook in a shared kitchen. This kitchen is related to a shared room, where everybody without kitchen can eat the meals they have cooked. Of course the shared room is also available for all inhabitants. Further important information, is that there is a common corridor, which is a warm interior space for all residents.

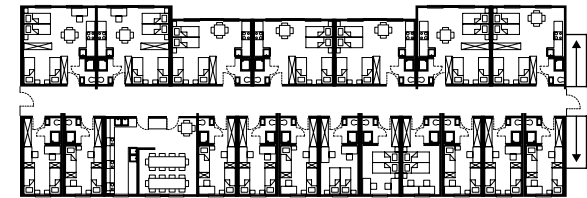


Fig. 22: Floor plan container (Own illustration; base: Module Living, 2016)

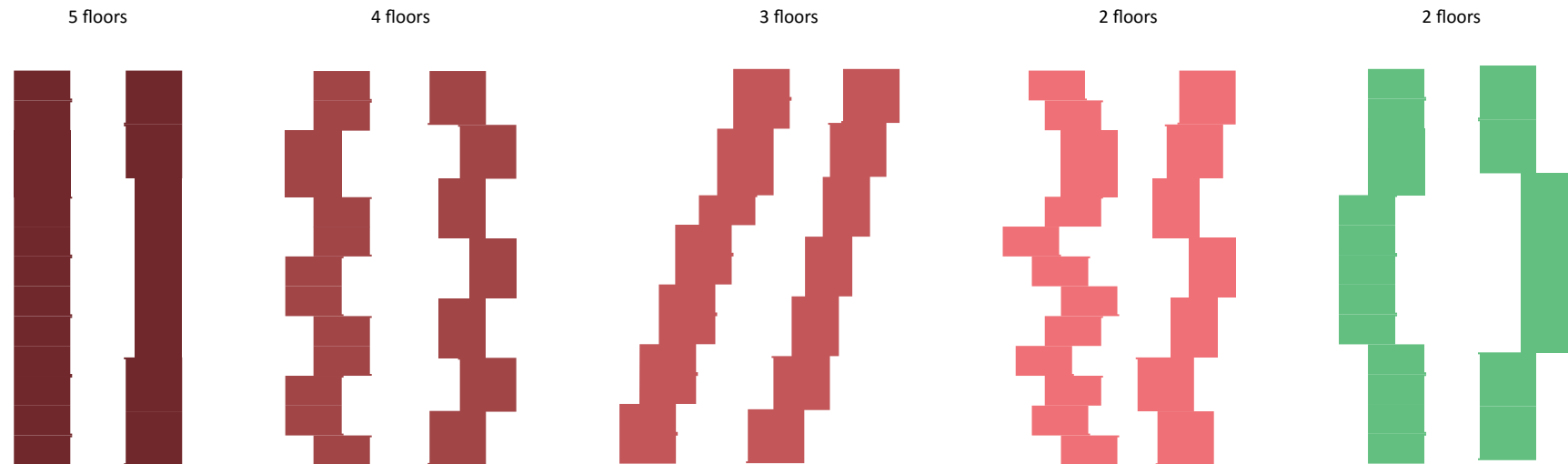


Fig. 23: Types of container (own illustration)

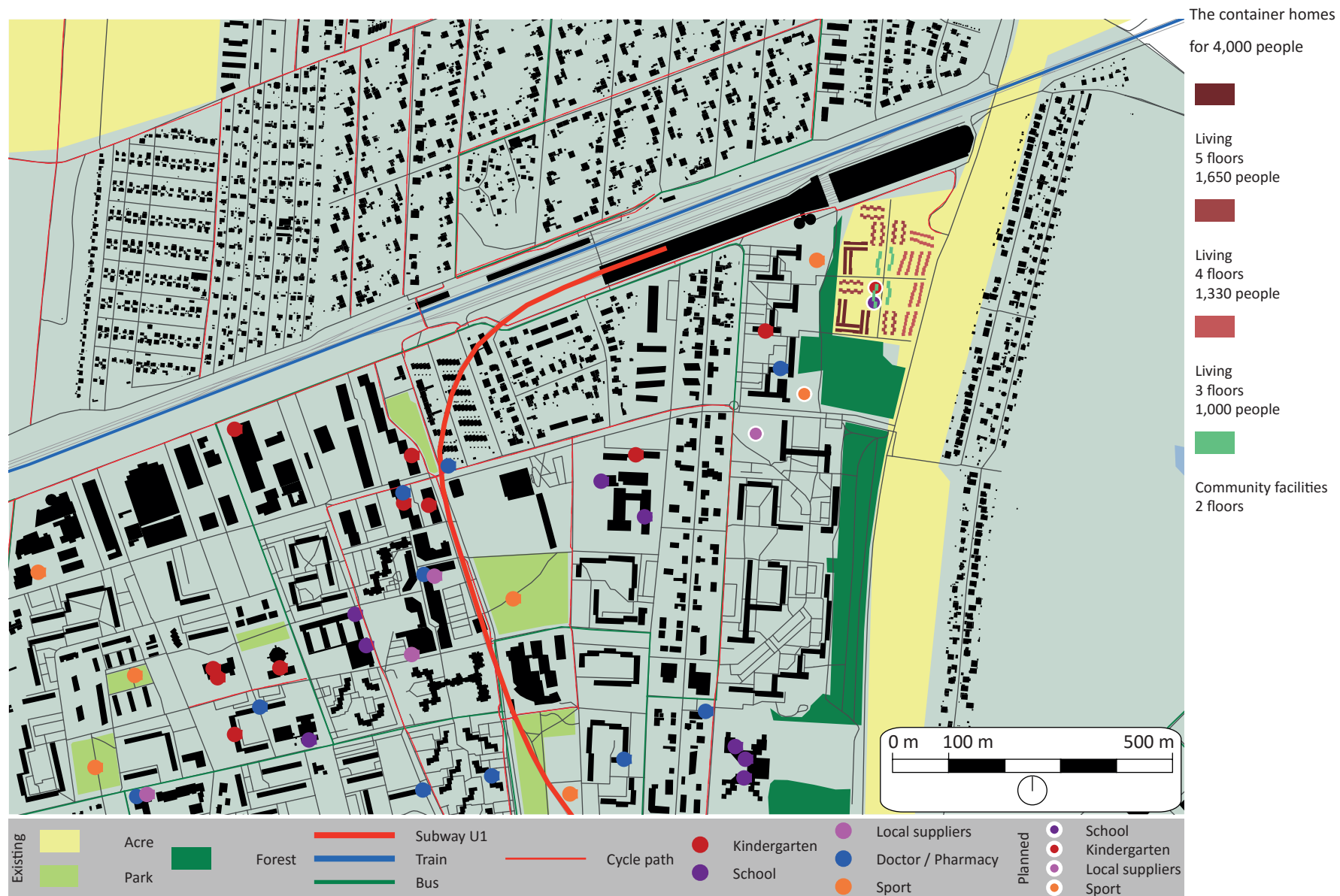


Fig. 24: Detail plan at Leopoldau (own illustration; basemap: Bundeskanzleramt, Magistrat der Stadt Wien, 2017)

COSTS

The costs are compared between ships, container and a subsidized building. The prices are compared for living space for 200 persons and per GFA, per person and in total.

One ship can cost about € 5 million which can offer space for 400 people. Therefore, the calculations were made with € 2.5 million per ship for 200 persons.



ONE SHIP

for 200 people:

- 1 ships
- 3 floors
- 7,670 m² GFA
- 2,560 m² area
- 325 € / m² GFA
- 12,500 € / Person
- total € 2,500,000

A simple container can cost about € 4,000. If you have to reconstruct them, then it won't be more than € 950 per GFA including the costs for the container.

After there is no more need for the ships and container, there is the possibility of selling them, which is the biggest advantage of this idea. Furthermore, there is no need of buying or renting the land which will be built on because of the "precarious contract" and for the water you also don't have to buy



ONE CONTAINER - € 4,000

for 200 people - 1 unit:

- 57 container
- 3 floors
- 1,545 GFA m²
- 515 m² area
- 950 € / m² GFA (incl. Container)
- 7,500 € / Person
- total € 1,500,000

or rent. Therefore, you have to pay just the buildings and the operating costs.

For a subsidized building you have to pay 1,600 € / m². Therefore, this is the most expensive solution for housing for 200 people. Besides this, the calculated costs obtain only to the building itself. If you want to get a realistic sum, you have to calculate the costs for the land too and add it to this sum.



ONE BUILDING - subsidized standard

for 200 people:

- 1 building
- 6-7 floors
- 8,500 GFA m²
- 1,280 m² area
- 1,600 € / m² GFA
- 68,000 € / Person
- total € 13,600,000

COOPERATION WORKFLOW

This type of project can start at any time but my project will start in Fall 2017. Also important to mention, is that the local population is involved in the planing process.

In the beginning there will be the idea phase, where a citizen participation in form of an excursion and workshops will take place. Furthermore, there will have to be made a SWOT analy-

sis and after that there has to be governmental decision.

For the whole duration, the project management team will have to support the project. Secondly there is the phase of the planning duration. The first step is a presentation of the results of the idea phase. Furthermore, there will be workshops with planning teams (experts and citizens). As a third step there has to be a review of the inputs in form of a presentation so that

spatial strategies can be defined. Afterwards there will take place a second workshop. After this workshop, the masterplan will be approved. Finally everything has to be presented and then start the implementation phase. The evaluation will start during the thrid phase and than again in the beginning of the implementation and will take place for over half a year.

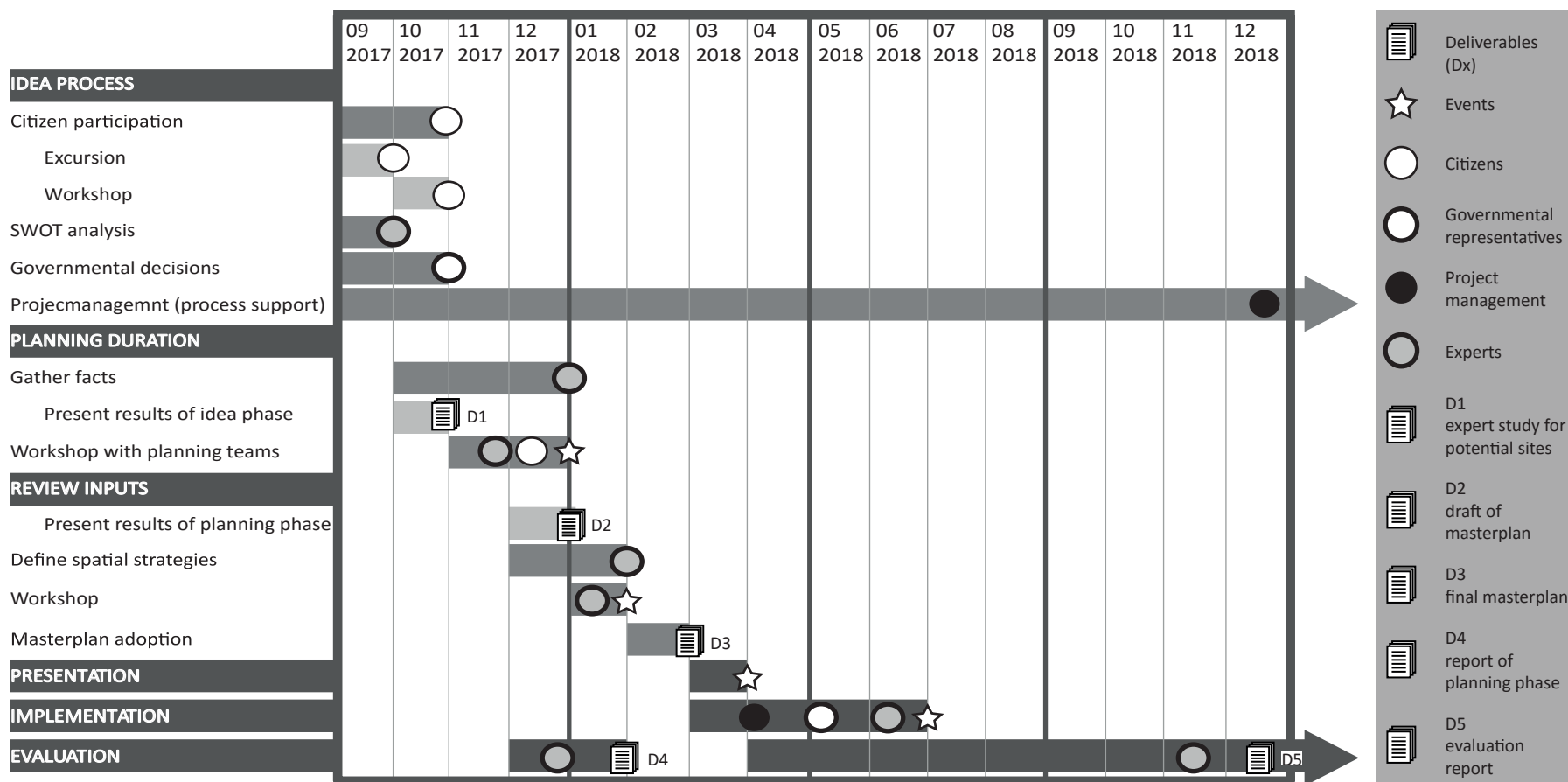


Fig. 25: Workflow (own illustration)

CONCLUSION

In this project, I am using ships and containers for housing solutions to react to people on the move.

The idea for living on rivers derives from the concept of floating cities. Because there is not so much space in Vienna for “real” floating cities, I decided to do it my own way and adapt it in a reasonable way for the city.

I think my project is easy to realize and a good solution for the problem of affordable housing in Vienna. It gives sustainable reuse options once there is no more need for the buildings and ships. Furthermore, this idea is also practicable in other fast growing cities.

CRITICAL REFLECTION

All in all, I think that my project is internally well-coordinated. I personally believe that I have considered many interfaces and all layers.

For an implementation there have to be pictures shown of the named cities regarding to the smart floating project. Furthermore, it would have been helpful if there were also renderings of the selected examples.

I also think that it would have been interesting to show how a “precariat-contract” could look like and it’s the content.

In my opinion, for realizing this project, it would be helpful to

have more sites and to plan them more in detail.

The fact that I am not an architect made the design of the floorplan complicated. Therefore, the floor plans have to be redone, but I think that for a proposal they are well thought out. I suppose that the workflow is too rough and it could use more description and explanation for putting it into practice.

But to mention also some positive aspects of my project, I would say that it can be easily to put it in practice. Furthermore, it is flexible and repeatable in the named cities. Above all, in this project, you don’t have the fight with landowner, where typically such projects fail.

This project was a very good experience for me, because I had the opportunity to learn about various topics, which I haven’t dealt with before. I have learned new things and aspects about spatial planning and got a new viewpoint on different subject matters. Furthermore I had the chance to improve my English skills.

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