Contributions to IBA_Vienna 2022 **VOLUME 26**

HOW WILL WE LIVE TOMORROW? NEW WAYS TO SOCIAL HOUSING IN EUROPE

Online symposium with partner cities
23 and 24 September 2020

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Contributions to IBA_Vienna 2022 **VOLUME 26**

Contents

Preface

In recent years, the issue of affordable housing has become a key topic of discussion in many metropolises. While social housing, viewed from the angle of competition, is perceived as a disruptive factor that should be reduced to a minimum, it is above all cities and regions that are beginning to realise that they are lacking in tools and possibilities to meet the increasing demand for social housing. In this context, attention should not be given solely to the aspect of affordability but also to legal certainty safeguarded by long term or open-ended tenancy contracts as well as regulations and rent control.

Therefore, the International Building Exhibition Vienna (IBA_Vienna 2022), has decided to address the issue of "New Social Housing" and create a local platform for innovative approaches in this field. Because of the global and specifically european scale of the issue, IBA_Vienna aims to transcend the traditional format of a merely local building exhibition and wants to foster the exchange with other cities. The idea is to discuss key challenges and possible solutions to housing policy questions, which would enable these cities, within their different given contexts, to launch solutions and meet the demand of their inhabitants.

For this reason, a key element of the discourse is a network of partner cities that maintain close contacts, jointly define key questions and attempt to answer them through different approaches. The symposium "How Will We Live Tomorrow? New Ways to Social Housing in Europe" provided a kick-off for this co-operation and initiated the dialogue along three main themes: sustainable neighbourhood development, affordability and new ways of housing, and climate adaptation and sustainability.

The symposium was part of the interim presentation of IBA_Vienna in 2020. Originally planned as an on-site event, it was held online due to the COVID-19 pandemic. In this context, we would like to thank Urban Innovation Vienna (UIV) for the invaluable support provided. Moreover, our thanks go in particular to the participants from the partner cities for their impressive and helpful contributions as well as to the interested audience that has followed our event. We are very much looking forward to future co-operation, to the exchange of experience and to learning from each other, with the objective of better social housing for all.

Kurt Hofstetter
Coordinator of IBA_Vienna 2022

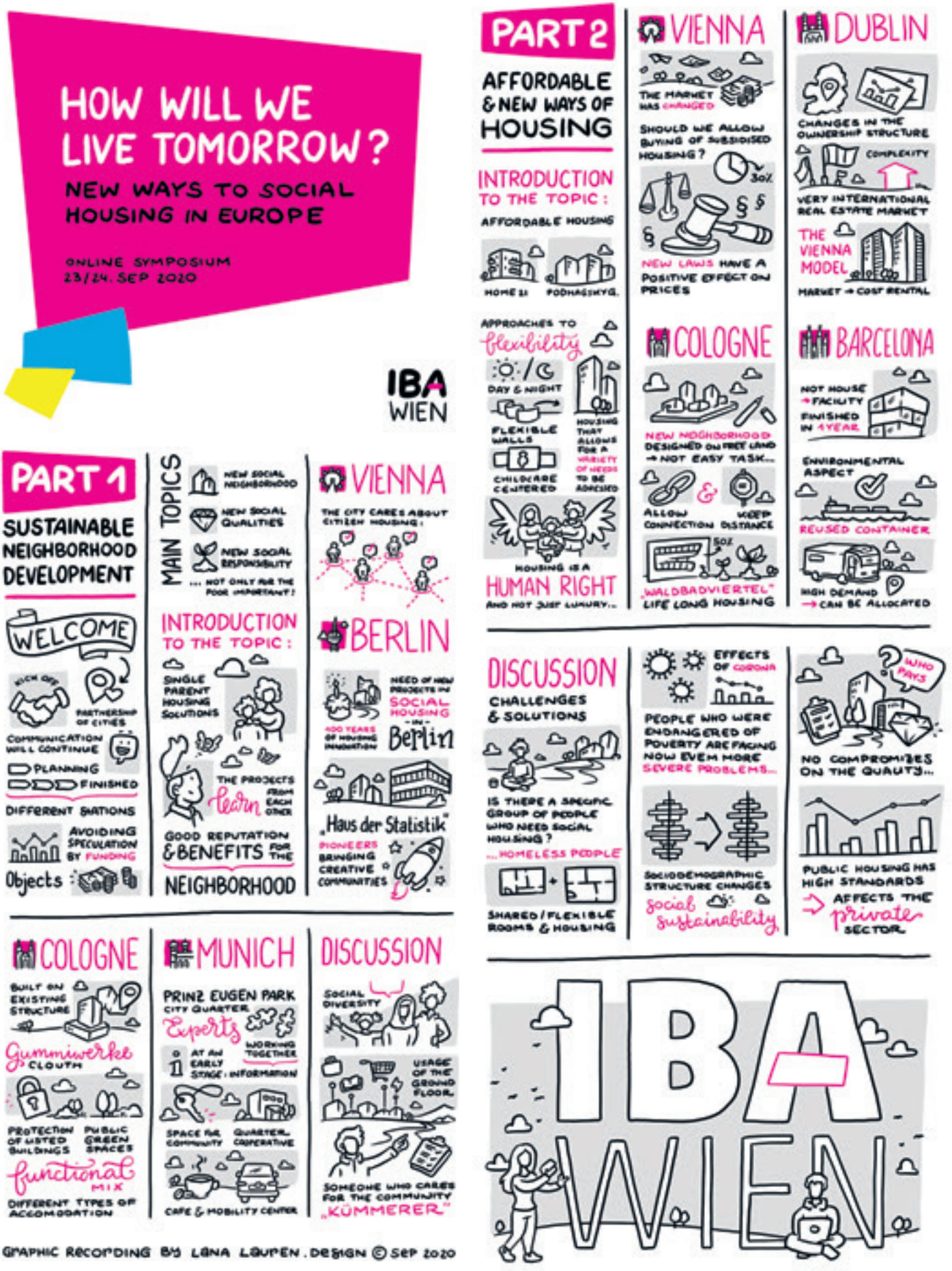
HOW WILL WE LIVE TOMORROW?
NEW WAYS TO SOCIAL HOUSING IN EUROPE
ONLINE SYMPOSIUM
23/24. SEP 2020
IBA WIEN
PART 1
SUSTAINABLE NEIGHBORHOOD DEVELOPMENT
WELCOME
PARTNERSHIP OF CITIES
COMMUNICATION WILL CONTINUE
PLANNING
FINISHED
DIFFERENT SITUATIONS
AVOIDING SPECULATION BY FUNDING
Objects
MAIN TOPICS
NEW SOCIAL NEIGHBORHOOD
NEW SOCIAL QUALITIES
NEW SOCIAL RESPONSIBILITY
... NOT ONLY FOR THE POOR IMPORTANT!
INTRODUCTION TO THE TOPIC:
SINGLE PARENT HOUSING SOLUTIONS
THE PROJECTS learn FROM EACH OTHER
GOOD REPUTATION & BENEFITS FOR THE NEIGHBORHOOD
VIENNA
THE CITY CARES ABOUT CITIZEN HOUSING!
BERLIN
NEED OF NEW PROJECTS IN SOCIAL HOUSING IN Berlin
100 YEARS OF HOUSING INNOVATION
„Haus der Statistik"
PIONEERS BRINGING CREATIVE COMMUNITIES
COLOGNE
BUILT ON EXISTING STRUCTURE
Gummiwerke CLOUTH
PROTECTION OF LISTED BUILDINGS
PUBLIC GREEN SPACES
functional MIX
DIFFERENT TYPES OF ACCOMODATION
MUNICH
PRINZ EUGEN PARK
CITY QUARTER
Experts
WORKING TOGETHER
AT AN EARLY STAGE: INFORMATION
SPACE FOR COMMUNITY
QUARTER-COOPERATIVE
CAFE & MOBILITY CENTER
DISCUSSION
SOCIAL DIVERSITY
USAGE OF THE GROUND FLOOR
SOMEONE WHO CARES FOR THE COMMUNITY „KÜMMERER"
GRAPHIC RECORDING BY LENA LAUREN . DESIGN © SEP 2020
PART 2
AFFORDABLE & NEW WAYS OF HOUSING
INTRODUCTION TO THE TOPIC:
AFFORDABLE HOUSING
HOME 21
APPROACHES TO flexibility
DAY & NIGHT
FLEXIBLE WALLS
CHILDCARE CENTERED
HOUSING THAT ALLOWS FOR A VARIETY OF NEEDS TO BE ADDRESSED
HOUSING IS A HUMAN RIGHT AND NOT JUST LUXURY...
VIENNA
THE MARKET HAS CHANGED
SHOULD WE ALLOW BUYING OF SUBSIDISED HOUSING?
30%
§ §
NEW LAWS HAVE A POSITIVE EFFECT ON PRICES
COLOGNE
NEW NEIGHBORHOOD DESIGNED ON FREE LAND → NOT EASY TASK...
&
ALLOW CONNECTION
KEEP DISTANCE
50%
„WALDBADVIERTEL"
LIFE LONG HOUSING
DUBLIN
CHANGES IN THE OWNERSHIP STRUCTURE
COMPLEXITY
VERY INTERNATIONAL REAL ESTATE MARKET
THE VIENNA MODEL
MARKET → COST RENTAL
BARCELONA
NOT HOUSE → FACILITY
FINISHED IN 1 YEAR
ENVIRONMENTAL ASPECT
REUSED CONTAINER
HIGH DEMAND → CAN BE ALLOCATED
DISCUSSION
CHALLENGES & SOLUTIONS
IS THERE A SPECIFIC GROUP OF PEOPLE WHO NEED SOCIAL HOUSING?
...HOMELESS PEOPLE
SHARED / FLEXIBLE ROOMS & HOUSING
EFFECTS OF CORONA
PEOPLE WHO WERE ENDANGERED OF POVERTY ARE FACING NOW EVEN MORE SEVERE PROBLEMS...
SOCIODEMOGRAPHIC STRUCTURE CHANGES
social sustainability
WHO PAYS
NO COMPROMISES ON THE QUALITY...
PUBLIC HOUSING HAS HIGH STANDARDS
→ AFFECTS THE private SECTOR
IBA WIEN

Fig. 1: How will we live tomorrow? An overview of impulses, conversations and discussions
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Part 1

Sustainable neighbourhood development

Introduction to the topic: Sustainable neighbourhood development – examples from IBA_Vienna

Kurt Hofstetter, Coordinator of IBA_Vienna

The International Building Exhibition IBA_Vienna "New Social Housing" not merely focuses on innovative buildings but on the critical role of social housing in sustainable neighbourhood development. The following IBA-Neighbourhoods take the varying social and geographic context of each location into account and show how social housing can improve the quality of life for both new and existing residents of a neighbourhood.

WOLFGANGGASSE

The *Wolfganggasse* neighbourhood is located on the site of a former tram depot in Vienna's 12th municipal district. The project was developed with a specific focus on single parents, a vulnerable group of society and of growing relevance. Single parents have a difficult time finding adequate housing that matches their needs and run an above-average risk of falling into poverty. The City of Vienna wants to better address the needs of this group through changes in its services and offerings, e.g. prioritising single parents in the allocation process for social housing. Additionally, this development project acts as a test bed for offerings tailored to the needs of single parents, such as flexible room layouts and shared guest apartments. Green and common spaces were designed to stimulate a socially active residential environment. About 850 of the 1,100 residential units are social housing. Construction work will be completed in 2022.

Fig. 2: Wolfganggasse © ww medien GmbH

QUARTIER AM SEEBOGEN

The first phase of *Seestadt Aspern*, a large-scale urban development project, has been completed and is now home to more than 8,000 residents and 150 businesses. The second phase, called *Quartier Am Seebogen*, will be completed in 2022. The neighbourhood will provide housing, jobs and new amenities, including cultural, recreational and educational facilities, for the residents of *Seestadt Aspern* and the surrounding area. Mixing different forms of use and developing multifunctional spaces is a key theme of the development. Efforts to create a mixed-use neighbourhood involve the provision of ground-floor spaces for commercial use and other formats that blend living and working not only on a neighbourhood scale but also within individual buildings.

Fig. 3: Quartier Am Seebogen is being built as part of Seestadt Aspern © C. Fürthner

BERRESGASSE

Both *Quartier Am Seebogen* and *Berresgasse* were developed taking the lessons from innovative projects such as the first development phase of *Seestadt Aspern* into account. After completion, *Berresgasse* will provide over 3,000 residential units, almost exclusively social dwellings. Right from the beginning, the City of Vienna and the developers co-operated closely with

local stakeholders and initiatives in order to foster trust and engagement for this relatively large development among residents of the surrounding neighbourhoods. A key role in this process was assumed by the multidisciplinary experts of the local Urban Renewal Office (Gebietsbetreuung), an established, municipally funded institution created in the 1970s that has played a central role in Vienna's "gentle" approach to urban renewal.

Fig. 4: Building site for Berresgasse © C. Fürthner

QUARTIER AN DER SCHANZE

All projects mentioned so far, as well as *Quartier An der Schanze,* resulted from co-operative developers' competitions. These dialogue-oriented competitions play a key role in preparing solutions that accommodate the needs of both existing and new residents of a neighbourhood. *Quartier An der Schanze* comprises 1,500 residential units, almost all of which are social dwellings. A lot of attention was given to green infrastructure and mobility to make the neighbourhood more resilient and sustainable. For example, the design of the new urban quarter discourages the use of private cars by offering alternatives, such as car sharing or bike sharing, at "mobility stations". The ground floors of buildings are used for social purposes to create a more vibrant neighbourhood.

Fig. 5: Building site for Quartier An der Schanze © C. Fürthner

QUARTIERSHÄUSER SONNWENDVIERTEL

Quartiershäuser Sonnwendviertel is a project located next to Vienna Main Station and was built on land that became available with the construction of this new traffic hub. In contrast to the other projects, it is dominated by non-subsidized housing. However, strong co-operation between the landowner and the City of Vienna ensures high-quality urban development and improvements for the environs. This is achieved through a focus on mixed-use, detailed buildings and attractive open-space design. The development of the *Sonnwendviertel Ost* area is characterised by an urban appeal created by the assemblage of many smaller-scale parts; this is not always the case in new development areas. Many construction sites in prominent locations were reserved for building co-operatives and a new type of development, the *Quartiershäuser*. A *Quartiershaus* can offer more than just housing. It is the sum of many multifaceted small parts and, in addition to its architectural quality, radiates a sense of urbanity into the surrounding district. In other words, such buildings do not exist just for themselves but rather offer an array of possibilities for their neighbourhoods, their surroundings and the entire city district. The idea is for the new neighbourhood to achieve both high urban quality and an elevated standard of living in the district. This is to be attained by assembling smaller-scale areas and establishing a range of different forms of use and users as well as through innovative mobility concepts and open-space design.

Fig. 6: Sonnwendviertel © C. Fürthner

PER-ALBIN-HANSSON-SIEDLUNG OST

Per-Albin-Hansson-Siedlung Ost is a municipal housing estate built in the 1970s on the outskirts of the city, with 6,000 flats providing homes for approximately 14,000 inhabitants. Due to the recent extension of the Vienna Underground line U1, *Per-Albin-Hansson-Siedlung Ost* and the surrounding neighbourhood have become more attractive. An urban transformation process was initiated in 2017 to improve the infrastructure and demographic situation of the neighbourhood. The process is led by Wiener Wohnen, a municipal enterprise responsible for the administration of 220,000 flats owned by the City of Vienna.

Initial activities focused on identifying needs and creating trust on the part of residents through dialogue and art projects. This transformation is now starting to pick up speed and is regarded as a role model for future projects of this kind.

Fig. 7: Per-Albin-Hansson-Siedlung Ost © IBA_Vienna/L. Schedl

An in-depth description of all projects can be found on the IBA website https://www.iba-wien.at/en/projekte/quartiere

Conversation on the positions of Vienna

INTERVIEW with Daniel Glaser, City of Vienna, Municipal Department 50 (MA 50) – Housing Promotion and Arbitration Board for Legal Housing Matters

Neighbourhoods form the hub of social interaction in a city and are a key theme of IBA_Vienna. What can housing contribute to neighbourhood development?

Housing in itself, with all its architectural and urban design qualities, is an important ingredient for "good" neighbourhoods – but not only in a functional way. In Vienna, we understand housing as a public service that guarantees an attractive, secure and stable environment. This is a strong message – a message that shows that the City of Vienna cares about how its inhabitants live and that housing is not only a matter of the market but rather a matter of public concern.

What are the central instruments of housing policy and quality management to ensure social neighbourhoods? Which requirements have to be fulfilled (in advance) in order to meet the expectations for "good" neighbourhoods?
First of all, neighbourhood development doesn't only start after the completion of buildings but at the very beginning of a development process. So, in order to be effective, measures have to be set up in advance.

In Vienna, we are in quite a comfortable situation, as we have many instruments of quality management at hand:

- The City of Vienna's company Wiener Wohnen holds around 220,000 affordable municipal flats located all over the city.
- wohnfonds_wien, a non-profit public fund owned by the City of Vienna, is responsible for farsighted land management and conducts developers' competitions that guarantee the quality of subsidised housing.
- Besides municipal housing, there exists a second segment of social housing, i.e. limited-profit housing associations. These associations own about 200,000 flats and are currently constructing up to 5,000–7,000 affordable units per year.
- And, last but not least, the new zoning category "Subsidised Housing" was introduced not long ago to safeguard land for affordable housing.

Impulse from Berlin
Haus der Statistik

Manfred Kühne, City of Berlin, Senate Department for Urban Development and Housing

As a rapidly growing city, Berlin is faced with the challenge of scarce affordable housing, coupled with the increasing gentrification of many neighbourhoods. The budget crisis of 2000 triggered a process of selling off public real estate and land, which further exacerbated the situation. At the same time, German reunification ushered in an increase in civil society-based self-organisation. These organisations and initiatives have evolved into important players in the field of limited-profit housing and are also gaining clout in local policy decisions. The city administration strives to integrate the experience and the development strategies gained and formulated by civil society initiatives into its own large-scale development projects.

The *Haus der Statistik* project is one of the most ambitious and innovative current ventures in Berlin and a true "testing ground". The existing architectural complex was erected in 1970 as the headquarters of the State Central Administration for Statistics of the GDR and comprised approximately 46,000 sqm of gross floorspace close to the Alexanderplatz traffic hub. It is the vision for this project to create a joint place for administration, culture, social affairs, education and housing at the heart of Berlin and, in this way, to offer a revitalising alternative to the largely monostructural areas in the immediate environs.

SPACES FOR ART, CULTURE AND SOCIAL AFFAIRS

From 2008 on, the building complex, a property of the Federal Republic, was vacant and in fact was to be sold to private investors in September 2015. To halt the planned sale, a group of architects, culture workers, artists and politicians got together to organise an art event to give visibility to this issue. Overnight, a poster styled like an official construction sign was hung from the façade, saying "This building will house spaces for art, culture and social affairs for Berlin". It was the objective of this campaign to render the discussion about the future of the complex public and to motivate the population to participate. Directly after the campaign, the Initiative *Haus der Statistik* was established as an alliance of different players from social and cultural institutions, federations, artists' collectives, foundations and associations. The initiative called on the City of Berlin to purchase the property in order to launch a co-operative development process for the site and to make it accessible to groups of society who normally would be unable to afford housing or workspace in a central location.

The demands of the initiative met with success: In late 2017, the entire area with its buildings was purchased by the Federal State of Berlin. In 2018, the Koop5 co-operation partnership was established and charged with developing the area with the involvement of the urban population at large. This co-operation partnership is composed of the Senate Department for Urban Development and Housing, the administration of the Berlin-Mitte borough, the municipal real-estate and housing administrators Berliner Immobilienmanagement and Wohnungsbaugesellschaft Berlin-Mitte and the initiative ZUsammenKUNFT Berlin, which is the legal representative of the original initiative.

Fig. 8: Haus der Statistik © Nils Koenning

Fig. 9: Location of Haus der Statistik near Alexanderplatz
© ZUsammenKunft Berlin eG

Fig. 10: Art event in "Allesandersplatz"
© ZUsammenKUNFT Berlin eG

INVOLVEMENT OF CIVIL SOCIETY INITIATIVES

It is the goal of the co-operation partnership to transform "Alexanderplatz" into "Allesandersplatz" – a pun that implies that "everything will be different" – and also into a shining example of the successful integration of civil society initiatives. For this purpose, new legal framework conditions and contracts will be developed as a next step in order to safeguard that all players involved can work as equal partners.

The integrated urban design workshop conducted from 2018 until early 2019 and the subsequent planning measures involved (and continue to involve) the widest possible public. Planning costs are assumed and shared on equal terms by the four public partners. The co-operation partners promote active participation of the public at large by offering an on-site participatory space – the "workshop" – that is freely accessible every day. Regular planning events are held in the evening and, due to the restrictions because of the pandemic, are currently organised as digital events. Low-threshold offerings, such as the monthly "KO-Markt" (an exchange and recycling market), involve the neighbourhood and create an alternative to retail outlets at the Alexanderplatz hub. This activation by pioneer users during the planning phase is to be sustained throughout the construction phase until the final phase of practical utilisation, thereby providing a centrally located place that is at the service of people who otherwise would be "squeezed out" by falling victim to gentrification.

The example of the *Haus der Statistik* project enables the Federal State of Berlin to test a new kind of joint "city making". Due to the early participation of municipal and civil society partners, the area can be planned on a co-operative basis despite constantly increasing competition between different forms of space use, while preparing its joint utilisation. This participatory approach is also to be applied in other, future projects, e.g. for the planned construction of a new town hall for the borough at this site. Towards this goal, the City of Berlin organises competitions and workshops that aim to attract citizens' initiatives right from the beginning. The conceptual approach of early, broad and sustainable participation for this site is thus put on a sound institutional basis and continued.

Fig. 11: Co-operation structure © ZUsammenKUNFT Berlin eG

Fig. 12: Inauguration of "planning workshop"
© andreas suess

Impulse from Cologne
Clouth Quartier

Eric Diversy, moderne stadt GmbH

The *Clouth Quartier* is located in the Cologne-Nippes borough, close to the Rhine and the city centre, and was developed by moderne stadt GmbH, a company with more than 50 years of experience in urban development. In its projects, moderne stadt GmbH follows the guidelines of the City of Cologne and the Urban Master Plan for Downtown Cologne prepared in 2009 by the architectural studio Speer & Partner.

The project name *Clouth Quartier* is derived from Clouth Gummiwerke, a rubber manufacturing company established in the 19th century. The company invented and manufactured pioneering industrial products made of rubber. Thus, the first overseas cable was developed at Clouth Gummiwerke as a data line connecting America and continental Europe. However, this success story ended in 2005, when Clouth Gummiwerke was shut down. What remained was an area spanning 14.5 hectares that was enclosed by a three-metre-high brick wall, completely isolating the site from its neighbourhood, and characterised by no more useful industrial buildings, industrial waste and heavily contaminated soil.

A competition was launched for the development of this industrial area; in the end, the design by the second-placed team, scheuvens + wachten with Gerber Architects, was implemented. The project held several challenges, as there were listed buildings that needed to be protected while others could be demolished. The new development builds on the existing structure and integrates the new buildings with the industrial context.

LINKAGES TO THE SURROUNDING NEIGHBOURHOOD

The aim is to prevent the *Clouth Quartier* from becoming an isolated island within the lively borough of Cologne-Nippes; rather, the new development should interlink with its immediate surroundings and the city in general. In order to achieve this, infrastructure is already in place: Motorways are just a short distance away, and tram lines connecting Cologne-Nippes with the city centre can be reached on foot in a couple of minutes. The landscape design accentuates the existing qualities of the location through the open-space design and the integration of urban greenery throughout the district; this is in particular true of Johannes-Giesberts-Park, which was cut off from the area for decades. Private and public green spaces and tree-lined streets now form the green framework for an urban district and become places of communication and gathering.

The project has a strong focus on ensuring a functional mix as well as a mix of housing typologies. An important factor for safeguarding this objective was the concept awarding procedure in which applicants and investors were able to share their creative ideas, which were then evaluated by an expert jury. As a result, *Clouth Quartier* provides around 1,240 dwellings, 500 workplaces, artist's studios with various spaces for the creative professions, cafés, restaurants and attractive open spaces. Beyond that, there is a mix of different housing types with 43 percent freehold apartments, 30 percent government-funded rental units, 8 percent affordable rental flats for low-income earners, 11 percent privately financed rental apartments and 8 percent building co-operatives. All this results in a colourful, diverse and lively district characterised by that mix of functions and different forms of living that is so important for a socially balanced neighbourhood. Moreover, *Clouth Quartier* can draw on the diversified local supply structure of the Cologne-Nippes borough, which is complemented by many traditional, local and young stores, workshops and cafés in side streets, giving the area a special charm.

Fig. 13: Clouth Quartier is well integrated into Cologne's Urban Master Plan
© moderne stadt | scheuvens + wachten

Fig. 14: Clouth Quartier and Nippes borough
© moderne stadt | Luftbildkontor Fischer

Clouth Quartier has received several awards and prizes, such as the 2020 Brownfield Award as the best municipal conversion project and the 2018 Polis Award in Silver in the "Social Neighbourhood Development" category. moderne stadt GmbH is especially proud that *Clouth Quartier* has been recognised for its social development and planning. *Clouth Quartier* is scheduled for completion in 2022.

Fig. 15: Clouth Quartier offers a mix of housing types © moderne stadt | Photo Frank Reinhold

Fig. 16: Greened open spaces are integrated throughout the district
© moderne stadt | Photo Frank Reinhold

Fig. 17: Children's playground in Clouth Quartier © moderne stadt | Photo Frank Reinhold

Impulse from Munich
Consortium-based development of Prinz Eugen Park neighbourhood

Nathalie Schaller, stattbau münchen GmbH, and Karla Schilde, City of Munich, Department of Urban Planning and Building Regulation

The former Prinz Eugen barracks in the Munich district of Bogenhausen was purchased by the Bavarian capital in 2005. Since 2017, the new urban quarter *Prinz Eugen Park* with approximately 1,800 housing units for around 4,500 inhabitants as well as the necessary social infrastructure comprising an elementary school, daycare facilities and service providers is being developed on a site extending over 30 hectares.
The first dwellings have already been taken over by residents; construction work and park design are scheduled for completion in late 2021.

The plans are rooted in an idea competition for urban and landscape design held in 2009, which was won by the Munich studio GSP Architekten and Rainer Schmidt Landscape Architects, likewise a Munich-based company. To preserve the valuable tree stock as far as possible, the winning entry provided for compact clusters of individual plots that were to accommodate different building typologies, from low-rise "carpet housing" to a seven-storey "high-rise". Altogether, the project design comprises five plots where a total of 570 dwellings were constructed using wood; this makes the *Prinz Eugen Park* project Germany's biggest timber settlement.

The individual plots were assigned according to the principles of the "Munich mix", i.e. 35 percent were allocated to municipal housing companies; 9 percent to private investors; 12 percent to built stock-holding housing developers; 14 percent to building co-operatives; and 23 percent to co-operative housing associations. The overall outcome is a mix composed of 23 percent freehold flats and 77 percent rental units, half of which are subsidised.

IMPULSES FOR NEIGHBOURHOOD BUILDING

In the spirit of the "Perspective Munich" urban development concept, the *Prinz Eugen Park* project implemented novel and innovative approaches towards settlement and housing development, in particular with regard to social objectives for community building in the neighbourhood. By creating planning prerequisites and setting predefined framework conditions and incentives, the City of Munich provided a basis that enabled developers to share these objectives and contribute to their attainment. For example, the City of Munich did not sell plots to the highest bidder but rather allocated them in the context of a concept awarding procedure that stipulated that developers

Fig. 18: Master plan for Prinz Eugen Park © GSP Architekten

Fig. 19: Timber construction for housing units © Lukas Vallentin

Fig. 20: Aerial view of Prinz Eugen Park © Stefan Schott

provide inter alia social amenities and mobility elements for the neighbourhood. By allocating more than one third of the land to self-organised building communities and co-operative projects, a large share of the residents-to-be were involved and enabled to participate at an early moment.

To make the interests of urban planning and residents' needs converge, a voluntary consortium composed of 21 developers was established and has ever since acted as a link between the various groups of players. The development objectives are summarised in a "Neighbourhood Development Charter" (excerpt):

- **Needs-based neighbourhood concepts**
  Creation of co-ordinated concepts, e.g. for space use and mobility, through exchange between developers, politicians and administrators as well as through early involvement of future residents.

- **Spaces for communities**
  Creation of spaces for small-scale social, cultural and commercial infrastructure facilities that can be used by future residents and other interested parties.

- **Collectively shaping the neighbourhood**
  Early efforts to understand and connect the new neighbourhood, promotion of independent initiatives and self-organisation of residents, including support in building neighbourhood structures.

During the implementation phase, the consortium played a decisive role in ensuring that the objectives could be implemented at a private level. Ultimately, however, it is the residents themselves who shape neighbourhood life and participate in manifold ways by taking part in workshops, contributing to the neighbourhood newspaper "Prinzenpost", planning and organising neighbourhood parties or as members of the neighbourhood council (Quartiersrat).

STRUCTURES OF SELF-ORGANISATION

The Quartiersrat is an essential element of self-organisation, defines itself as an information interface and opinion platform and also represents the residents of the entire neighbourhood externally. It is composed of elected residents from each construction project as well as from representatives of the working groups and of the neighbourhood co-operative GeQo eG. The co-operative GeQo eG, which was set up by the consortium, functions as a primary contact point, co-ordinates life within the neighbourhood and organises joint activities.

Autumn 2020 saw the inauguration of the neighbourhood centre Quartierszentrale, a place of low-threshold encounter and networking that hosts the offices and service premises of GeQo eG, a residents' café and the mobility centre of the neighbourhood. A variety of shared premises (more of which are to come), that are open to the entire neighbourhood and/or to communities of individual houses or projects, is distributed across the new urban quarter. Accordingly, different room sizes and room types were planned for this purpose, ranging from a communal kitchen or music practice room to a creativity workshop. Neighbourhood management is funded through a subsidy paid by the City of Munich to resident-oriented neighbourhood work, through a voluntary monthly administration fee paid by owners as well as through co-operatives' membership contributions.

The neighbourhood mobility concept is dedicated to improving the appeal and atmospheric quality of public space and assigns priority to pedestrians and cyclists. Short distances within the new development and easily reachable shops for everyday necessities, childcare facilities and cultural institutions make it easy to forgo car ownership. The *Prinz Eugen Park* neighbourhood offers a wide array of mobility options, such as e-bikes, cargo bikes, bike trailers and car sharing. The neighbourhood co-operative safeguards the long-term provision of these manifold offerings.

Fig. 21: Neighbourhood parties foster interpersonal communication
© Heidi Reber

Fig. 22: Cargo bikes for rent are part of a wide array of mobility options
© Heidi Reber

NEIGHBOURHOOD DEVELOPMENT AS A CONSORTIUM-BASED PROCESS

The mandate to co-ordinate and implement the joint objectives formulated by the developer consortium for stattbau münchen GmbH ended in July 2020. Neighbourhood development at resident level is now a task of the neighbourhood co-operative GeQo eG. Not all goals were fully attained; some processes are still in the pilot phase. In many areas, new ground was broken, in particular with regard to the co-ordination and fine-tuning of activities.

Developing a neighbourhood from initial idea to the practical acceptance on the part of residents in their everyday life is a time-consuming process. Objectives defined in the urban planning phase do not necessarily translate to the physical implementation of a project; neither are they necessarily recognised and appreciated by residents after project completion. However, this goal was achieved by the *Prinz Eugen Park* development in a special way by launching a consortium-based process.

Keywords of the discussion
Sustainable neighbourhood development – challenges and solutions

DISCUSSION between all partner cities with IBA_Vienna and Daniel Glaser, City of Vienna, Municipal Department 50 (MA 50) – Housing Promotion and Arbitration Board for Legal Housing Matters
Roland Krebs, superwien urbanism
Angela Salchegger, GB*Stadtteilmanagement (neighbourhood management of the Vienna Urban Renewal Offices)

How can different stakeholders be rallied behind a common goal?

- **Broad inclusion from the very beginning.** It is crucial to involve all types of stakeholders from the very beginning and to find "pioneers" that drive the development process and promote community building.
- **Working on site, with the people.** It is crucial to find a "Kümmerer" – literally, a "minder", i.e. someone who takes care and cares – to support public involvement in the long run.

Fig. 23: Guided neighbourhood tour in Berresgasse
© IBA_Vienna/J.Fetz

Such structures should best be created before the developer withdraws. Experience from the Vienna Urban Renewal Offices (Gebietsbetreuungen) shows that it is beneficial to have a local office right on site in order to live and work together with the people from the neighbourhood. The teams of the Urban Renewal Offices work on the basis of six-year contracts, thus providing support for public involvement and local initiatives on a stable long-term basis that also allows for creating linkages between new neighbourhoods and existing surrounding districts.

- **Setting up an institutional framework for co-operation.** Experience from *Haus der Statistik* (Berlin) shows that setting up an institutional framework for co-operation is crucial yet difficult. The challenge lies in finding a self-organisation model that suits the given situation. In the case of *Haus der Statistik*, the City of Berlin decided to retain ownership of the property but assigned guaranteed rights of permanent self-management to local initiatives and activist groups. As such forms of co-operation between city administration, municipally owned companies and activist groups are quite new, a legal basis for decision-making and durable, secure financing still needs to be developed.

How can it be safeguarded that additional, non-housing functions are created and sustained in the neighbourhood?

- **Activation through a management system.** Vienna has developed a new strategy for supporting the polycentric structure of the city. An important instrument in this respect is a centralised management system for the use of ground-floor premises, which was already successfully implemented in the two new urban development areas *Seestadt Aspern* and *Nordbahnhof*. Similar to the management of shopping malls, the rent levels for ground-floor space in the whole neighbourhood are centrally managed for the first stage of settlement,

Fig. 24: Sustainable neighbourhood development – an overview © IBA_Vienna/L.Lauren

defining different price categories according to site and specific use (cultural, retail, etc.) of each property.

- **Choosing the right management system for the neighbourhood.** While this model of centralised ground-floor management have proven effective in large development areas, smaller neighbourhoods might need other forms of support structures. At any rate, what can be learned from development areas like the *Sonnwendviertel* in Vienna is that there is a strong need for co-ordination and support if new, non-housing players are to be involved in development processes.

How can we plan for social diversity?

- **Creating a common history.** New districts are also made up of emotions. Therefore, it is important to create shared experiences and positive memories through joint events. Different user groups can be reached by offering a variety of activities.
- **Defining a mixed rent policy.** In Munich, the land allocation policy "Münchner Mischung" (Munich mix) defines the mix of housing and rent levels and thus guarantees socially diverse neighbourhoods. According to the Munich mix, one third of dwellings must be privately financed rentals; one third is freehold units; the last third is subsidised social housing.
- **Involving private investors in neighbourhood development.** A lack of social diversity is not only a problem of areas with low average incomes but also a challenge for middle class and upper class neighbourhoods – simply because it is boring to live in a gated community. To achieve a better mix, it is important to involve private investors broadly in neighbourhood development activities. Vacant retail floorspace in particular offers a good opportunity to get private investors on board.

Part 2

Affordability and new ways of housing

Introduction to the topic: Affordability and new forms of housing – examples from IBA_Vienna

Kurt Hofstetter, Coordinator of IBA_Vienna

The affordability of housing is a key challenge for growing cities throughout Europe. Vienna's approach to affordable housing relies on the notion of housing as a human right and combines a mix of different instruments and policies. Important aspects are the focus on "object funding" (i.e. benefits paid to buildings or projects) in order to keep speculation low, as well as the production of social housing that is also attractive for middle- and higher-income households (for more details: http://www.housing-for-all.eu/). Additionally, Vienna is also exploring new forms of housing. The following three examples focus on temporary and flexible housing.

Fig. 26: Podhagskygasse © Matthias Silveri

HOME21

Home21 is situated on former industrial land that will only temporarily be used for housing. Therefore, the building was constructed as an open-plan structure with a strong focus on adaptability and flexibility of use. It can be easily transformed and used for other purposes in the future. For now, it contains around 250 flats that provide temporary housing for a diverse group of tenants, including persons previously homeless people.

Fig. 25: Home21 © Kallingerprojekte

PODHAGSKYGASSE

In contrast to *Home21,* the *Podhagskygasse* project is exclusively intended for residential use. However, due to its modular timber structure, the building can be easily moved to another location within a short period of time. This permits its construction on land that is only temporarily available for housing or land that is still in a pre-development stage. *Podhagskygasse* contains around 100 flats.

WOLFGANGGASSE

The development project *Wolfganggasse* and its focus on the needs of single parents have already been described in the context of neighbourhood development (see p. 6). The Covid-19 pandemic has shown very dramatically that flexible living arrangements are extremely valuable, e.g. temporary space for working from home. At *Wolfganggasse*, three different approaches to flexibility at the level of individual flats are demonstrated. The day/night approach creates flexibility through a change in room use over the course of the day. The second approach creates flexibility through above-average ceiling height that allows for the use of special furniture like high bunk beds. The third approach creates flexibility through an extra room with high adaptability.

An in-depth description of the projects can be found on the IBA website https://www.iba-wien.at/en/projekte/quartiere

Conversation on the positions of Vienna

INTERVIEW with Martin Orner, EBG Gen. m. b. H. (limited-profit single- and multi-family home building co-operative)

Can you roughly outline the specific role of limited-profit building associations in the development of affordable housing in Vienna? What is their essence?

The system of limited-profit building associations does not only exist in Vienna but has a long tradition all over Austria. Not being profit-oriented means that profits stay within the company and do not go to shareholders. The three essential principles for limited-profit building associations are:

1 **(Modified) cost-coverage:** Under the provisions for rent regulation, we are only allowed to charge rents that cover our costs, plus a small amount for profit.

2 **Assets are tied up in the company:** This means that profits have to remain within the housing association and must be reinvested in social housing, except for a small portion (in a specific type of corporation), which may be distributed to shareholders.

3 **The intergenerational contract.**

Based on these principles, we can ensure affordable housing and a steady growth of the sector.

If the demand for residential construction increases, commercial property developers play a more important role in housing production. How can it be ensured that privately financed housing, too, will be of high quality and affordable?

Our first goal should be to reduce the market share of these developers. Housing is a basic human need and a human right, not a commodity or a financial product. In Vienna, subsidised housing used to have a market share of around two thirds of new housing production, but this had dwindled to 30 percent in 2018. We must do everything we can to achieve a turnaround. Of course, we also need rent regulation for the apartments built by these companies. In addition, we need a commitment from all housing companies to attain climate neutrality within the next 20 years. However, I doubt that it is possible to get these developers to pursue the same quality level as we have in social housing – they are simply not interested, and we don't have the legal framework for it.

After a certain period, it is legally possible to buy dwellings built with public subsidies. This is already happening in Vienna and even more so in other cities. Is there a danger of a "sell-out" of subsidised flats in the long term?

Yes, there is. In Vienna, around 1,000 to 1,500 flats are currently sold per year on the basis of this "right to buy", equalling about one third of the volume of new subsidised homes built annually. While this is already too much, if this rate rises further, it will lead to a reduction of the affordable housing stock.

If real-estate markets show higher expected returns than alternative forms of investment, the demand for residential real estate increases automatically. How can housing be prevented from becoming an investment product?

It already is an investment product, especially since the last financial crisis. That is the reason for the dramatic increase of housing costs over the past ten years. I think the most important thing is to pursue a much more active land policy. It should not be possible to make huge profits by buying and selling building land; the state should confiscate these profits through taxes. This measure would take a lot of pressure out of the housing sector.

Vienna has also taken a measure at the regulatory level to promote affordable housing with the new "Subsidised Housing" zoning category as an instrument of land policy. Against the background of your experience, is this a practical, functioning instrument, and if so, in which way?

I think it might be, but as far as I know there is no piece of land at the moment to which this zoning category is applicable. Still, we have already registered positive effects, since the price for a huge piece of land was calculated based on the new category – so it has already had a dampening effect on the price of undeveloped building land. On the downside, prices for developed building land are rising even faster than before. So we, too, should be much faster in applying the new instrument!

Impulse from Barcelona
APROP (Temporary Social Housing in Your Neighbourhood)

Javier Burón Cuadrado, Barcelona City Council, Housing Manager

In Barcelona and throughout Catalonia and Spain, access to housing is difficult due to the historic backlog in terms of social housing as well as due to state legislation that encourages speculation. After decades of promoting housing as an investment asset and house-buying through mortgaging, hundreds of thousands of people were evicted from their homes after the collapse of the property boom. Since then, public policies have encouraged rental instability and real-estate speculation: When the Urban Rents Act (LAU) was amended in 2013, it allowed contracts to be limited to three years without imposing any control over rent increases. As a consequence, rents have risen disproportionately in the main Spanish cities since 2014, while salaries have stagnated. Over the past decade, the Spanish central government cut investment in housing by 70 percent, down to 0.029 percent of Spain's GDP. In comparison, European countries with a long history of housing devote around 1.5 percent of their GDP to this sector. To address the growing difficulties in access to housing, reforms at state level as well as at the European level are needed to penalise speculation and prevent abusive rents.

In Barcelona, less than 2 percent of housing is public, while the average rent has increased by more than 36 percent over the past five years. While seeking to achieve reforms at state level, the Barcelona City Council promoted a battery of measures to combat evictions and expand the public rental stock. The initiative *APROP* (Allotjaments de Proximitat Provisionals – Temporary Social Housing in Your Neighbourhood) is one of them. It is a new social housing model to prevent residents from being forced out of their neighbourhoods and pursues the following goals:

- to develop a container-based housing production model in Barcelona,
- to facilitate training and job placement for people at risk of exclusion,
- to identify and involve key economic, business and social players in the development of social housing solutions.

INDUSTRIALISED CONSTRUCTION SYSTEM

The first three *APROP* container-based buildings were completed in 2019. A key characteristic of their construction is temporality. The housing containers are placed on empty sites throughout ten city districts of Barcelona. The temporary use of vacant sites allows people to live close by their usual place of residence and helps them to maintain roots in their own neighbourhoods.

With respect to construction, *APROP* aims at

- reducing construction time (including the time for administrative procedures) to one year,
- maximising windows of opportunity by developing a nomad building solution that allows for the temporary use of residential as well as non-residential plots,
- recycling and reusing elements and materials considered "waste" to reduce the environmental impact of the buildings through the logic of circular economy.

Due to their container-based nature, *APROP* units can be built within a short period of time – between three and five months –, making housing available in less time than using conventional construction methods. The industrialised system used for *APROP* allows for faster, cleaner and more sustainable construction and

Fig. 27: The first APROP unit was built in 2019 in the Gothic Quarter of Barcelona © Barcelona Municipal Institute of Housing and Renovation

guarantees quality, comfort, energy efficiency and low costs. Due to their modular design, the units can be grouped, combined and assembled in a series of customised, easily transportable pieces. The modular approach allows each project to be endowed with identity and singularity and to be individually adapted to its surroundings.

ENVIRONMENTAL AND SOCIAL SUSTAINABILITY

APROP units have an AA energy rating, leading to a reduction of energy consumption from 70 percent to 10 percent. The (re)use of "last-trip" high-cube 40-foot shipping containers permits saving (for each container) 4,000 kWh of non-renewable energy that otherwise would be used for melting the containers vs. 400 kWh of renewable energy that is used to adapt the containers to a housing solution. Measures such as green roofs, vegetable gardens or cladding with ventilated façades creating double skins lower the environmental impact of the building units even further.

Besides environmental sustainability, *APROP* places special emphasis on social sustainability, as it offers temporary housing to people who have difficulties in accessing housing or find themselves in a vulnerable situation in their current homes. To create a community and enrich the neighbourhood fabric, each *APROP* project includes various common spaces on the ground floor and on the rooftops.

In 2019, three buildings in different neighbourhoods were completed, providing a total of 94 dwellings. The project employs a workforce of 45 workers, up to 30 of which could potentially be students in training. This is a sustainable production model that is also suitable for private companies.

Fig. 28: APROP buildings take between 3 and 5 months to be constructed
© Barcelona Municipal Institute of Housing and Renovation

Fig. 29: The building provides 4 two-bedroom flats and 8 one-bedroom flats on a 186.43 sqm site
© Barcelona Municipal Institute of Housing and Renovation

Fig. 30: Works finished in November 2019 © Barcelona Municipal Institute of Housing and Renovation

Impulse from Dublin

Dublin's prototype: mixed-use residential development – cost rental and social accommodation

Dáithí Downey, Dublin City Council, Housing Policy, Research and Development

Dublin is facing a severe shortage in affordable housing. While there is an increased supply driven by an emerging build-to-rent sector, it is mainly at the very high end of rent and cost. In addition, a lot of the supply for the last years has been targeted at much-segmented elements of the market, particularly short-term rental occupancy (e.g. for students, companies, Airbnb, etc.). Hence, there remains a substantial housing cost burden and the private sector is key to solving the affordability challenge.

The City of Dublin acts within a complex strategic context including multiple strategies and action plans on different levels, operating across different timelines. Dublin has identified place-making and cost rental housing as two "strategic unifiers" for cross-cutting policy frames. Cost rental housing is an approach where the rents charged cover only the costs incurred in delivering, managing and maintaining the homes. It thus covers the landlord's actual costs of providing the accommodation but does not include net profits.

PILOT FOR THE COST RENTAL MODEL

This new model of housing provision is applied in the redevelopment of land at Emmet Road, Inchicore, Dublin 8, including the site of the former Saint Michael's Estate (social housing). The cost rental model relates to improved housing affordability for low- to middle-income earners by building on public land with low-interest financing from institutions like the European Investment Bank (EIB). It is a first-in-type initiative by Dublin City Council and, as a prototype model, it was essential that the preparation of the Development Framework Plan explored all associated contingencies in order to foster confidence in its application on this site. The Development Framework Plan for Inchicore, Dublin 8, was published and issued in 2019, and Dublin City had since appointed a multidisciplinary design team to deliver the follow-up Design Master Plan in 2020.

The site for development amounts to 3.8 hectares, a large portion of which comprises the land of the (now demolished) Saint Michael's Estate, a social housing development. Inchicore village has a collection of smaller local retailers, local services and pubs, with an intermittent spine of commercial activity. The site adjoins Richmond Park and Goldenbridge Cemetery. To the south of the cemetery is the Grand Canal greenway and pedestrian bridge over the canal, allowing access to the Drimnagh stop on the Luas Red Metro Line. To the north is a

Fig. 31: Emmet Road development in Inchicore, Dublin 8 © Dublin City Council & Ordnance Survey Ireland. Map legend: red: new housing units in cost rental scheme; pink: residential housing; salmon-pink: private dwellings; blue: community buildings; peach: commercial buildings; brown: public rental

Fig. 32: Emmet Road buildings, layout scheme © Dublin City Council

Fig. 33: Emmet Road development from a bird's eye view © Dublin City Council

primary care centre and Dublin City Council senior citizens' housing (Bulfin Court); to the west, there is access to Mercy Secondary School via Thomas Davis Street West.

The Development Framework Plan provided a set of guidelines and briefing parameters to inform a development proposal involving commercial, community and residential development with a housing mix of social housing (30 percent) and cost rental accommodation (70 percent). As key elements of the cost rental model, i.e. criteria and rules, are not yet fixed by policy and government legislation, this remains a pilot project for Dublin.

PUBLIC CONSULTATION AND INVOLVEMENT

Regarding place-making, an emphasis is put on engaging in public consultation with local residents, businesses, community groups and representatives. The local neighbourhood and surrounding locales of Inchicore are represented by the Inchicore Regeneration Consultative Forum. Its establishment was overseen by the Kilmainham Inchicore Network with the authority of Dublin City Council. The Consultative Forum supports the development of a high-quality, vibrant and mixed-use urban quarter on the site and facilitates consultation with the local community in a meaningful way.

The terms of reference for the Consultative Forum are:

- to provide a forum for the mutual exchange of information between all stakeholders associated with the Inchicore Regeneration,
- to define and agree communication processes regarding the development with Dublin City Council, contractors and other relevant stakeholders,
- to provide a platform for local stakeholders where concerns can be discussed and resolved through all phases of the development,
- to consult, co-operate and liaise with all interested parties including the local community and any relevant statutory bodies,
- to establish a community benefit clause that ensures jobs and apprenticeships are created in the local community,
- meetings to take place every two months.

The Consultative Forum will be co-ordinated by the independent chairperson from the Kilmainham Inchicore Network and a forum director. It will have a core membership of not fewer than 12 and not more than 20 members and will comprise representatives from the Kilmainham Inchicore Network, locally elected councillors, officials from Dublin City Council, representatives from local residents' associations and representatives from other local stakeholders, such as schools and An Garda Síochána (police).

MUTUAL LEARNING DIALOGUE BETWEEN DUBLIN AND VIENNA

Within the context of participation and place-making associated with the "Vienna Model" of housing development, an opportunity exists to consider how these structures, procedures and practices may compare, relate and transfer to Dublin in order to support the next steps identified by the Development Framework Plan for this public rental-housing prototype. Furthermore, the process of consultation as well as its governance, structure, procedures and resources are of key interest and concern to the Inchicore Regeneration Consultative Forum. It is envisaged that a "two-way street" of knowledge exchange and study between key stakeholders in the Consultative Forum and their equivalents in Vienna would be highly beneficial and would bolster stakeholder support for this new social housing and cost rental prototype in Dublin as well as maintain momentum and confidence in the next follow-up stages of project management and decision-making.

Impulse from Cologne
Waldbadviertel

Jochen Mauel, GAG Immobilien AG

GAG Immobilien AG is a mostly municipally owned housing company that builds affordable housing and creates neighbourhoods in Cologne, Germany. It owns about 50,000 dwellings in Cologne alone, approximately 50 percent of which are subsidised. One of the company's recent developments is *Waldbadviertel*, located on the outskirts of the city. Before GAG started the development in 2009, the building plot was an "empty" green space – a fact that also entailed advantages, as something completely new could emerge.

This former green space has been integral to city life for all kinds of leisure activities and was used as a sort of "front garden" for the area surrounding it. Initially (since the 1960s), it was planned to build a hospital there, but as this did not happen, the City of Cologne was paying for a never-used inheritable building right for almost 40 years.

Building on a formerly green space on the outskirts is always risky. The first reason to start a project at this site was GAG's inherent aim to build affordable homes and to create new neighbourhoods. The second and most important reason was that land for building a large number of affordable flats is very scarce in Cologne these days.

ESTABLISHING LINKAGES TO EXISTING SETTLEMENTS

Despite its greenfield location, the area was difficult to develop since it is surrounded on either side by highly frequented traffic routes and businesses; moreover, there was a clay pigeon shooting area with high lead contamination and a huge gas pipeline under the ground, and resistance on the part of local inhabitants and politicians was very strong. After all, the developers were proposing to build on the neighbours' "front garden" and "steal" their dog-walking area. The challenge was therefore to establish linkages to the existing settlements while at the same time preserving the amenities and designing a high-quality inner-city architectural structure. For creating an attractive neighbourhood, it was necessary to involve politics, boroughs, administrators, neighbours and social partners in the development process and in the discussions with the participating architects from the very beginning.

Fig. 34: The design preserves green spaces © Ralf Berndt

The landscape design aims to keep the distance to existing buildings as a new "front garden" and to preserve the amenities with a "green band" that flows through the new neighbourhood structure. Locating single-family and terraced houses at the outer fringes, the number of storeys increases from the outside to the inside and, similarly, from the woodland bathing pool to the existing development. This means that new separate neighbourhoods can be created without partitioning them.

To achieve differentiation within the neighbourhood, GAG engaged a larger number of architects than usual for planning the built landscape. Furthermore, GAG co-operated with the German Sport University Cologne to develop a plan for motivating the new inhabitants to join in and use bikes or walk more as well as to make them aware of all available leisure mobility opportunities (as these are arguably even more important than everyday transport mobility in people's choice of a residential area). In recent years, we have seen a major shift towards low car use, especially in the city. The *Waldbadviertel* project took these aspects into account from an early stage, together with and for the benefits of residents and neighbours.

URBAN COEXISTENCE AND SOCIAL MIX

For creating urban life, it is important to integrate different population groups. Therefore, *Waldbadviertel* offers a mix of various flat sizes, structures, types of financing and development. The proportion of subsidised housing units is about 35 percent. In North Rhine-Westphalia (the German state of which Cologne is part), it is possible to use a state-sponsored loan for social housing with reduced interest and amortisation rates, as well as an additional subsidy of 25 percent of the loan rate. In addition, renting the land at a low interest rate instead of buying the building plots is another method to keep rents and prices affordable. Combining these incentives, it is possible to charge rents that vary from € 6.80 per sqm for subsidised flats to € 11.00 per sqm for privately financed flats. Social housing rents are fixed, with a yearly 1.5-percent rent increase for 15 to 20 years. Spending all of one's life in a neighbourhood should mean that no one will have to leave his or her familiar surroundings as life circumstances change, which is why all generations were taken account of in planning. Urban coexistence also means avoiding stigmatisation. Hence, it should not be visible from the outside whether the development in question is privately financed or social housing. While the interior design or floor plan layouts may differ, the socioeconomic status of the inhabitants should not be recognisable from the postal code.

Over the years, GAG has realised that apartment floor plans in each building should be varied in order to achieve a good mix of residents for each building.

NEIGHBOURHOOD MANAGEMENT

To create a modern social neighbourhood, sustainable neighbourhood management safeguarded over decades is required – not just the usual two to five years after completion. People have to be supported and encouraged to get involved, as neighbourhood work should ultimately be taken over by the residents themselves. Therefore, in *Waldbadviertel* a social diversity project was established as a base for the partners working in the neighbourhood and the district. The integration and participation of physically and mentally disadvantaged people in a neighbourhood is a particular challenge, especially when designing buildings that are to meet the special needs of these residents. Therefore, the social diversity project was also established to integrate many different concepts under the same roof. These include residential groups for people with dementia or people with mental and physical disabilities as well as for children or young mothers. A multigenerational housing project is also part of this, with the former/future residents already involved in the planning process. Even if one of these social projects is not successful or loses its funding, there is the chance that other initiatives will pursue the idea of inclusion.

Professional neighbourhood management can only work effectively if the partners are steadily involved and facilities are financed on a long-term basis. A project developer can indeed make the first move towards this goal. However, structures can only be maintained if there are committed landlords who do not sell the property at the first opportunity but rather are willing to keep it for decades. And all partners – housing owners, social partners, resident interest groups and the municipality – need to work together to ensure that services are provided on a long-term basis. After all, this phase takes much longer than just a few first years of commitment. The key here is "to care". Only those who care about social involvement on a long-term basis can help to shape developments in a city and a neighbourhood in a sustainable manner.

Fig. 35: Waldbadviertel offers different apartment types, ensuring a good social mix © Ralf Berndt

Fig. 36: Public space as meeting place © Ralf Berndt

Keywords of the discussion
Affordability and new ways of housing – challenges and solutions

DISCUSSION between all partner cities with IBA_Vienna and Martin Orner, EBG Gen. m. b. H. (limited-profit single- and multi-family home building co-operative)
Gabu Heindl, architect and city planner
Sina Lipp, neunerhaus
Raimund Gutmann, wohnbund:consult

Fig. 37: New and affordable housing types in the IBA Neighbourhood An der Schanze © ss plus architektur

As cities are facing rent hikes and increasing demand for social housing, do we just need more social housing or new specialised housing models that address very specific target groups?

- **Lowering entrance barriers for the most vulnerable parts of society.** The question of affordable housing is closely linked to the question of how to end homelessness. Vienna has a huge social housing sector (43 percent of all housing), yet over 12,000 persons are reliant on assistance to the homeless. Rising housing costs, stagnant wages and increasing social inequality exert pressure on the housing market. While there is a lot of housing supply for the middle class, there is clearly not enough for low-income groups. In practice, this leads to the exclusion of the most vulnerable parts of society. The lack of affordable housing for the poor augments the demand for assistance services for homeless persons – a situation that is currently exacerbated by the COVID-19 pandemic. To improve the status quo, entrance barriers to the social housing market must be lowered.

- **Place-making.** Against the background of rising rents, cities have to safeguard a stable supply of affordable housing. At the same time, however, we need to invest in better "place-making". This means ensuring high housing quality and developing better-identifiable places through more attractive design. This is true for social dwellings but also for other forms of housing that often lack architectural quality. However, place-making is not only a task of developers and architects: As populations are becoming more and more diverse, we have to open up development processes for public involvement so that future inhabitants may engage in creating their neighbourhood, thus allowing for different conceptions of the city.

- **Giving room to diversity.** To create social sustainability, we must provide both adequate quantities and qualities of housing production and create mixed urbanity and resilient neighbourhoods. Affordability means balancing the qualities of architecture, urban design as well as ecological and social sustainability against costs. Giving room to different needs requires new housing typologies and greater flexibility and adaptability of housing structures, e.g. by increasing shared spaces, flex rooms and cohousing.

High-quality housing for everybody comes with high costs. Do we have to lower certain standards in order to provide (enough) social housing?

- **To achieve resilience in housing, we need decent quality.** Deviating from quality standards will lead to even higher costs in the long run, as this will entail a lot of (social) repair. Therefore, it is better to invest in good quality right away, considering that social housing cannot work without subsidies. The current efficiency and austerity discussion is not helpful for achieving resilience in housing. Even more importantly, if we use public money for housing, we should use it properly. People have a right to decent housing that meets certain quality standards, is of adequate size and comes with ceiling heights that provide more flexibility.

- **Cost-saving potentials lie in production methods.** In order to achieve high-quality housing, there is not much potential for cutting costs. A certain potential lies in construction processes: Industrialisation and standardisation of production as well as modularity are key to reducing costs.

- **High standards in public housing can influence the private market.** As in Vienna, Dublin's quality standards of public housing are higher than those of the private market, e.g. in terms of energy efficiency. Over the years, this has had a substantial effect on the private market by pushing an overall improvement of standards. However, to a certain degree, good quality and low prices always signify a trade-off and lead to the challenge of maintaining public support for the provision of high-quality social housing.

Part 3
Climate adaptation and sustainability

Introduction to the topic: Climate adaptation and sustainability – examples from IBA_Vienna

Kurt Hofstetter, Coordinator of IBA_Vienna

The effects of climate change have become much more visible in the past few years, thereby highlighting the urgency to act. For cities, a prominent threat lies in the increasing likelihood and duration of heat waves that negatively impact the health of citizens, the biosphere and the urban economy. Such threats require measures that, in addition to the radical reduction of greenhouse gas emissions, increase the resilience of cities. Selected examples from IBA_Vienna illustrate how climate adaptation can be tackled both by holistic approaches for new large-scale developments and through individual smaller projects.

BIOTOPE CITY WIENERBERG

This nearly completed development is situated on a former industrial site and comprises approximately 1,000 housing units, 60 percent of which are social housing. The initiators of the project wanted to demonstrate how high density and green infrastructure can be combined to create a green and climate-resilient neighbourhood. To ensure that these ambitions would be translated into reality, a series of measures, that have influenced project development from the very beginning, were implemented. These measures include a binding urban planning agreement, a detailed quality catalogue and simulations of the local micro-climate. The microclimate simulations were carried out by experts of *Greenpass*, a consultancy for ecologically sustainable planning, and ensured the effectiveness and cost efficiency of the green infrastructure measures. The planned measures will lead to a 2°C reduction of the air flowing through the development. Thus, *Biotope City Wienerberg* exerts a cooling effect not only on its own residential and working population but also on the surrounding neighbourhood.

QUARTIER AM SEEBOGEN

Principles tested in *Biotope City Wienerberg* (such as the sponge-city approach) have influenced newer development projects like *Quartier An der Schanze* and *Quartier Am Seebogen*, both of which were already described above on pp. 6–7 in the context of sustainable neighbourhood development. The *Quartier Am Seebogen* development project is home to a newly constructed public school that illustrates how measures to reduce the energy consumption and carbon footprint of buildings have become very attractive also from a financial perspective. The investment costs for measures like e.g. the installation of solar panels on the roof, the use of geothermal energy, component activation and others will be amortised within only five years of operation.

Fig. 38: Biotope City Wienerberg © C. Fürthner

Fig. 39: Façade greening by BeRTa initiative © IBA_Vienna/A.Ackerl

CLIMATE CHANGE ADAPTATION IN EXISTING NEIGHBOURHOODS

New urban development projects provide the possibility of incorporating measures for climate change adaptation right from the start. However, it is also necessary to gradually change the built fabric of the existing city. The City of Vienna has initiated several activities and projects to achieve this goal (see input by Jürgen Preiss, p. 28). BeRTA is such an initiative. This project facilitates façade greening by offering private companies and institutions a subsidised tailor-made package that includes all relevant steps from design to installation of the green façade modules. Similar interesting projects include the mobile demonstration container MUGLI and the living lab LiLa4Green, whose main focus is on the involvement of locals in greening projects for existing neighbourhoods.

An in-depth description of the projects can be found on the IBA website https://www.iba-wien.at/en/projekte/quartiere

Fig. 40: Mobile demonstration container MUGLI © IBA_Vienna/L. Schedl

Fig. 41: Living lab LiLa4Green © Petz-GrexIT

Conversation on the positions of Vienna

INTERVIEW with Jürgen Preiss, City of Vienna, Municipal Department 22 **(**MA 22**) – Environmental Protection**

Every subsidised residential construction project in Vienna is submitted to an interdisciplinary jury that evaluates it on the basis of a 4-pillar model comprising economic, ecological and architectural standards as well as aspects of social sustainability. The "ecology pillar" ensures high standards of energy efficiency and eco-friendly construction.

How are aspects of climate change adaptation or climate resilience considered in housing construction?

Green infrastructure like the greening of roofs and façades or unsealing measures are taken into account as part of housing subsidy schemes – all of these are very effective aspects of climate change adaptation. In addition, there are four important measures with regard to housing:

1 Support and advice through strategies (e.g. Vienna's Urban Heat Island Strategy), guidelines, integrative programmes and consultancy services.
2 Research and co-operation with external experts (e.g. "50 Green Houses"[1], "Green Resilient City"[2], "Urbania"[3]).
3 Incentives through funding (e.g. grants for private building owners as well as for districts through the extensive "Cool District" subsidy programme).
4 Adaptations of the legislative framework (e.g. the Building Code for Vienna now includes binding requirements for the greening of roofs and façades).

Is there already some evidence of the effectiveness of these measures? How do they affect the climate in the city or in neighbourhoods?

There is already plenty of knowledge regarding the effectiveness of these measures. It is important to note that there is a big difference between measures conducted in open spaces and on buildings. There are different ways for measuring the cooling effect. For green and open spaces, you can easily measure both surface and air temperatures as well as infrared radiation by means of sensors, thermal cameras, etc. Experience shows that temperatures under trees or in well-structured green spaces can be up to 3°C lower than in non-shaded areas. Comparing the temperature of shaded, green spaces with a non-shaded building's surface temperature, the difference can be up to 50°C on hot summer days.

An important measuring parameter is the physiological equivalent temperature (PET). It is a human biometeorological parameter describing the thermal perception of an individual and an important instrument, often used in simulation tools, for measuring the microclimate. The temperature that people feel or perceive depends on air temperature, radiation/shading effects, wind and humidity. The PET can be up to 13–15 degrees cooler than the temperature in comparable sealed, dark open spaces. However, the effectiveness of measures always depends on the situation (e.g. spatial properties such as width-height ratio or exposition and material properties like density or conductivity).

What are good-practice examples in Vienna?

Biotope City Wienerberg is a good example. Due to the implementation of extensive, holistic measures (such as green and blue infrastructure) and taking account of wind conditions, it was possible to achieve a difference of 2°C between inlet and outlet temperatures compared to a poor scenario (without any green infrastructure, totally sealed surfaces and low ventilation due to the building structure). When we look at the greened façade of the MA 48 building, the temperature profiles show a reduction of heat transmission by more than 50 percent on hot summer days! Of course, building physics plays an important role as well, and cooling consumes a lot of energy. Therefore, it is important to effectively reduce the cooling energy demand by means of passive-building cooling measures. Shading elements and plants can achieve a cooling effect of minus 3 to 7°C.

1 https://www.iba-wien.at/en/projekte/projekt-detail/project/50-green-houses
2 https://gruenstattgrau.at/en/
3 https://urbania.boku.ac.at/wordpress/

Impulse from Stuttgart

Climate adaptation and sustainability: impulses of the International Building Exhibition 2027 StadtRegion Stuttgart

Andreas Hofer, IBA'27 Stuttgart

How do we want to live, dwell and work in the Stuttgart Region of the future? A century after the construction of the Weissenhof Estate in 1927, the *International Building Exhibition 2027 StadtRegion Stuttgart* (IBA'27) is to render the path towards the future visible and tangible through concrete examples – innovative projects, novel infrastructure and temporary experiments. It is evident that this new path must lead to a climate-neutral urban future.

Since a significant portion of human activity today takes places in an urban setting, this impact is a decisive factor in driving climate change. The first step for urban climate protection is thus to decarbonise construction activities, mobility, production and trade and to build sustainable material and energy cycles. As the global demand for new housing is estimated at approximately two billion new units by the end of the century, this is a massive challenge in a system subject to dynamic growth.

NECESSARY ADAPTATIONS TO CLIMATE CHANGE

While decisive measures may be able to contain climate change, they will in all likelihood be unable to prevent it. Even under the best possible conditions, unavoidable climate change phenomena will become directly perceptible and impair the quality of life in cities. High temperatures, extreme rain events and rising sea levels impact the quality of life and the functioning of infrastructure; in extreme cases, they even pose a threat to habitability.

This is why cities are now being greened, with plans to give buildings green façades and to create gardens that allow urban dwellers to reconnect with nature. Currents of cool air are to flow through cities, and urban areas are to be returned to rural use. Back in the 1970s, there were already moves to resolve the conflict between urban environments and architecture on the one hand and nature on the other hand: light-filled atriums, shopping malls and community centres as places of congregation for a democratic society living in harmony with nature. The last remaining relics of that era can be seen in the empty washed-concrete troughs mounted on façades and in the plastered-up tubs now used as anti-terrorist roadblocks in pedestrian passageways.

But is this really the answer? Is not a similar fate in store for the tree- and shrub-adorned high-rise Bosco Verticale by architect Stefano Boeri in Milan? Can luxury apartments with exorbitant ancillary costs situated in an already per se problematic high-rise and necessitating additional building technologies and costly façade techniques ever be called "eco-friendly architecture"? How sustainable are buildings that have to be maintained and serviced by specialised alpinists? What happens to the sophisticated seals, sprinklers and drainage systems once the train of architecture journalists has moved on? It would take decades for the artificial greening of Bosco Verticale to even offset the CO_2 emissions created by the additional materials installed.

Fig. 42: Industry and agriculture © IBA'27 / Idea, concept, design: L2M3/ Pentagram / Illustration: Max Guther

Fig. 43: Public space © IBA'27 / Idea, concept, design: L2M3/Pentagram / Illustration: Max Guther

ADAPTATION IS MORE THAN JUST GREENING

Cities have never been green, least of all in the world's hottest regions. Historically speaking, green spaces were a luxury reserved for the ruling class, while towns and cities were overcrowded and grey and in hot climates had to rely on passive shading strategies and ingenious ventilation systems. The beauty of urban green also has to do with its preciousness and rarity; however, in view of the obvious modern-day potentials for more green and a better urban climate for squares and streets, the technocratic focus on façade greening comes across as grotesque.

In fact, the water cycle, shade and evaporation by plants play a key role in influencing the perceived ambient quality, if not the climate itself. But alas, we assign nearly half of settlement areas to traffic on black tarmac surfaces. In Stuttgart, the heat emitted by combustion engines alone is roughly the same as the entire amount of energy used to heat buildings. Apart from this, urban spaces are public spaces and, thus, can be shaped by politics. It is infinitely more difficult to encourage private investors to implement costly, high-maintenance measures for their buildings. Even if every new building were to have a green façade, it would take decades for this to have a noticeable effect. We do not have that much time.

INNOVATIVE DESIGN FOR "LEVEL ZERO"

In the coming years, the city as a collective space will have to reinvent itself at "level zero", i.e. the ground floor. The retail sector is under pressure, while our fragmented society is engaging less and less in collective shopping experiences and mass gatherings. Atmospheric quality, permeability and accessibility are key factors for the way into the future. We need to redesign public space on a large scale and to improve aesthetic quality while redeveloping infrastructure, for example allowing water to drain off or be stored locally. This must be paralleled by a strengthening of urban housing. Monofunctional office and shopping areas need to have more mixed use, with more people living in the city centre. In this way, public space would become a preferred open space, a place of encounter and a stage.

It is the task of an IBA to create exemplary places that inspire change elsewhere. In this endeavour, we should focus on the neighbourhood level: Neighbourhoods are the correct scale for designing a "good city" that can be a place for living, a factory, a leisure destination and a hub of education all rolled into one. With long-lasting, sustainably manageable buildings, mixed-use approaches and excellent liveability, they allow for efficient energy supply due to their structure with points of high density while simultaneously curbing traffic. Thus, the motto of IBA'27 is "Mut zur Stadt und zur urbanen Region!" (Have the courage to create cities and urban regions!). If a city is really allowed to be a city with high-quality density, this will not only strengthen climate protection per se but also the surrounding landscapes, water bodies and forests.

Fig. 44: Traffic modes in public space © IBA'27 / Idea, concept, design: L2M3 / Pentagram / Illustration: Max Guther

Fig. 45: Housing development © IBA'27 / Idea, concept, design: L2M3 / Pentagram / Illustration: Max Guther

Impulse from Dublin

Renovate or demolish and re-build? Exploring regeneration options for the Dominick Street West housing estate for optimal environmental and social sustainability

Ali Grehan, Dublin City Council, City Architects Division

The project explores opportunities for regeneration of the Dominick Street West housing estate constructed in the late 1960s. A key objective is to provide Dublin City Council with a decision-making tool in determining whether a vacant housing block of this typology should be renovated or demolished, particularly if situated on a potentially high-value city-centre site.

The project is set up against the background of the housing shortage Dublin is facing. According to a 2019 report by the Central Statistics Office, it is predicted that the population of Dublin could increase by up to 31.9 percent by 2036. There is an urgent need for increasing the output in residential development by both the public and private sectors while promoting environmental and social sustainability. Apart from new housing construction, the City Council is required to upgrade the existing social housing stock. The older social housing stock presents considerable challenges in maintenance and repair due to its age, condition, typology and construction methodology.

THE PILOT CASE

A recent City Architects Division review of the City Council's 22,000 homes ranked housing estates in order of priority of need, based on factors such as age, condition, suitability of accommodation, standard of external environment, social factors and opportunity for improvement and "additionality".

Fig. 46: Vacant flats at Dominick Street West © City Architects

A list of 30 priority estates was compiled. The Dominick Street West estate is listed as a priority. It will be available for renovation or demolition and new-build in 2021 once the remaining residents are re-housed in new homes on Dominick Street East.

The Dominick Street West estate is made up of three housing blocks located on a city-centre site of 0.5 hectares. Each housing block is five storeys high and contains 10 one-room flats and 20 two-storey maisonettes. The estate is well served by community and commercial facilities and public transport. However, outdoor amenities and green spaces are limited or poor, compromising liveability. A further challenge lies in the poor reputation of the Dominick Street West housing block typology. There are 55 blocks of the Dominick Street West type replicated throughout the city, comprising over 1,600 flats in all. The blocks are of significant cultural, heritage and social value. Issues of age, condition, suitability, environment, social factors, etc. have contributed to the stigmatisation of the estates. The buildings appear to be structurally sound but suffer from some maintenance problems. The flats would be considered small by the standards of today's new buildings. Within the site, environmental quality is low and the definition of private space, shared space and public space is unclear. Many areas of the estate do not feel fully secure for this reason.

CLARITY ON THE ENVIRONMENTAL COST OF RENOVATION VERSUS DEMOLITION

The project is focused on delivering an innovative solution to enhancing the existing social housing stock through a major upgrade based on sustainable design and a re-densification of place that expands the provision of affordable housing and invests in better place-making for residents. To this end, an opportunity study has been undertaken to examine different options that could improve the standard of accommodation and optimise the use of the estate. A key objective was to deliver clarity on the environmental cost of renovation versus demolition and new-build.

As the City of Dublin aspires to meet the policy objectives of the EU Climate Change Action Plan and has published a Climate Change Action Plan in 2019, a key element of the opportunity study is the assessment of embodied carbon of potential development options. This will include life cycle assessment (LCA) calculations for the existing block, refurbished block and a new-build alternative. Another aspect of the study was a

Fig. 47: Dolphin House - an example of a deep retrofit project by City Architects 2018 © Ros Kavanagh

Fig. 48: Dolphin House estate by City Architects 2018 © Ros Kavanagh

preliminary indication of cost for all options, as cost per home is a significant factor in assessing proposals for government funding. The study therefore contained a construction cost assessment with a comparative analysis of a demolition and new-build scenario versus a renovation scenario. Proposed options should also provide for flexibility in the form of individual home design, location of uses in proximity to community facilities, and should seek to protect residential amenities of nearby dwellings and any proposed private open spaces. They must also aim to improve security to adjoining exposed property boundaries and provide or improve passive supervision of isolated pockets of land or hidden corners of public space.

The first step of the opportunity study was to consider the following development options at a high level:

- **Option A: Do nothing:** Business as usual, continue to maintain and repair the buildings, no significant upgrade.
- **Option B: Minimal energy performance improvement:** No significant change to the fabric of the buildings, provide additional insulation, renew windows, renew heating system.
- **Option C: Deep renovation (retrofit):** Address the deficiencies in space standards, accessibility, thermal comfort, ventilation, energy efficiency, carbon emissions, building condition, private open spaces, external spaces. Optimise the level of intervention, balancing the target of bringing the buildings to the same standards that a new building would meet against the rule of thumb that if renovation costs more than 75 to 80 percent of the cost of demolition and new-build, it is not likely to be considered to be value for money.
- **Option D: Shell and core:** There may be an opportunity to offer for sale, either to the open market or to people who qualify for "affordable housing", dwellings in a completed building but without internal partitions, fittings or services.

Fig. 49: Dominick Street East – new apartments under construction
© Carr Cotter Naessens Architects/Denis Byrne Architects

- **Option E: Additional new-build elements, in combination with Option C:** For example, extensions to flats or blocks, additional floors, separate new buildings.

- **Option F: Demolish and new-build:** In accordance with the optimal height and density for the site.

Following review, it was decided to produce a more detailed design development of Options C (deep renovation) and E (added new-build elements), with Option D (shell and core) incorporated as a subset of both options. The study advances proposals for refurbishment of the existing structure and its conversion and extension by building new structures using a low-tech method with good-quality local materials and techniques.

While the assessments are yet to be completed, an analysis of former projects has shown that the cost of deep renovation is roughly equivalent to building anew and that tenants generally prefer new buildings. In addition, it became clear that only 10 percent of the buildings allow for deep renovation. Furthermore, it turned out that the use of a timber structure – which was considered – is impossible, as it is not allowed for safety reasons in buildings of more than four storeys.

BALANCING FINANCIAL AND CARBON COSTS

A calculation of the embodied carbon of the existing blocks as part of a life cycle assessment (LCA) is currently underway. Detailed survey information has been compiled on the 1960s buildings. This information is being modelled on an elemental basis to allow for calculation of total CO_2e of the existing building. Calculations to date indicate that each existing flat block accounts for 500,000 kg of carbon dioxide equivalent. A detailed specification and inventory of materials to be used in the renovation options is being compiled to allow for similar modelling. The results will enable the comparative assessment of the full set of options.

The other 54 blocks of the Dominick Street West typology replicated throughout Dublin share the same problems as those outlined above. The project holds the opportunity to use the lessons learned from Dominick Street West to regenerate the other estates and neighbourhoods sustainably. Considering not only financial costs but carbon costs as well is a promising approach to pursue in future decision-making.

Impulse from Berlin
Schumacher Quartier

Manfred Kühne, City of Berlin, Senate Department for Urban Development & Housing

Currently, the future use of the land occupied by the decommissioned Berlin-Tegel Airport (TXL) is the biggest and most important urban development project of the German capital. It will become the site of *Schumacher Quartier*, which together with the neighbouring projects *Cité Pasteur* and *TXL Nord* offers the most extensive contiguous inner-city potential for housing construction until 2030. As a future smart city, *Schumacher Quartier* is to implement innovative ideas for sustainable urban development in exemplary fashion while generating and maintaining concrete synergies with the adjoining industrial and research centre *Urban Tech Republic*. *Schumacher Quartier* is thus defined as an ecological-social model neighbourhood for ecological new construction, mixed-use solutions, innovative mobility concepts and buildings with exemplary energy efficiency.

Fig. 50: Master plan for Schumacher Quartier
© scheuvens + wachten plus planungsgesellschaft mbh

In a charter specifically drawn up for *Schumacher Quartier*, all partners involved in the project agreed to seven guidelines for the development of the new neighbourhood:

1 Urban living spaces
2 Housing for everyone
3 Urban green space and public areas
4 Open educational landscape
5 Climate-friendly and water-sensitive urban development
6 District with environmentally friendly mobility guaranteed
7 Communication, participation and transparency

The model function that *Schumacher Quartier* is to fulfil is exemplified by its designation as a reference project for climate-adapted and water-sensitive urban development in the urban development plan StEP Klima KONKRET (2016); in the Berlin Energy and Climate Protection Programme 2030, it is referenced as a largely climate-neutral urban quarter with demonstration projects for the development of an open low-temperature network. To safeguard its sustainable development, platinum-standard certification of the new urban quarter by the German Sustainable Building Council (DGNB) is aimed at.

SPONGE-CITY PRINCIPLE

To reduce the negative impact of urban quarter development on nature and the environment, a master plan for rainwater management and heat adaptation was formulated as a farsighted planning concept principally aimed at avoiding the introduction of precipitated rainwater into municipal infrastructure while increasing the evaporation rate. The sponge-city principle is implemented with extensive areas for rainwater evaporation and infiltration. In this context, both entire streets and individual buildings (roof/façade greening) serve key functions to improve the urban climate.

A park situated at the heart of the new neighbourhood supports the passage of air through *Schumacher Quartier* and also allows for cooling effects by generating fresh air and favouring evaporative cooling. Moreover, *Schumacher Quartier* contributes to safeguarding an adequate supply of green spaces for Berlin, thus meeting a growing demand. The design of green and open spaces as well as the selection of plants for the project will draw on the method of animal-aided design, i.e. the principle of creating a habitat and living space for humans and certain animal species alike.

Fig. 51: Neighbourhood park
© Weidinger Landschaftsarchitekten GmbH, bloomimages

Fig. 52: Path through the landscape park
© Weidinger Landschaftsarchitekten GmbH, bloomimages

SOCIAL AND FUNCTIONAL MIX

The outcome will be a lively urban quarter with a small-scale mix of functionalities, a great variety of structural typologies and a broad range of dwellings as well as open-space qualities that appeal to different population groups as well as all ages, social strata and lifestyles while taking account of demographic change. The "social mandate" lies in creating attractive housing also for persons with low incomes. Thus, half of the over 5,000 housing units of *Schumacher Quartier* will be constructed by municipal housing associations. 50 percent of the floorspace of these municipal housing estates will be rent-controlled units. Another 10 percent of the floorspace is reserved for students. The development of the remaining residential floorspace will be in the hands of co-operative housing associations, building co-operatives and other non-profit developers; these partners will also develop 30 percent of their floorspace as rent-controlled units. The clearcut structure of *Schumacher Quartier* as a whole is robust enough to absorb different forms of housing as well as different architectural "signatures". Specially designed ground-floor zones moreover permit their flexible use for housing or other purposes and offer later developers various configuration options.

In addition, *Schumacher Quartier* will also accommodate a new, integrative education campus for 1,500 schoolchildren, 200 teachers and up to 160 preschoolers on an area of approximately 3.5 hectares. It is planned to open the facilities and outdoor spaces of the education campus also to neighbourhood cultural activities and in this way to create a "public place of encounter".

ALTERNATIVE MOBILITY OFFERINGS

Moreover, this car-free urban quarter will provide for alternative types of mobility and housing. The circulation routes through *Schumacher Quartier* are based on an innovative traffic and transport concept that favours sustainable and future-oriented mobility and focuses on CO_2-free, active transport modes. This objective is supported by six differentiated mobility hubs as central elements of the system. In addition to serving as garages for the neighbourhood, they also interlink the different means of transport and, thus, make it easy and attractive to switch from motorised individual traffic to bikes and public transport. As a result, public spaces are car-free and parking space-free with just a few necessary exceptions (such as the needs of persons with restricted mobility). All streets are intended as places for residents to linger and spend time in.

Fig. 53: Neighbourhood square
© rendertaxi

Fig. 54: Timber building in Lynarstrasse
© Markus Löffelhardt Agentur für Architektur + Kunst

TIMBER BUILDING IN LYNARSTRASSE

To promote climate-resilient construction projects, the City of Berlin operates a series of programmes that include the Berlin Wood Construction Award, which honours model projects constructed with timber. These are to serve as beacons for other developers, e.g. in the Berlin-Tegel urban development area.

One of the projects singled out with this award is the building complex in Lynarstrasse (borough of Wedding) erected in 2018 as a solid-wood structure. The seven-story building is composed of three wings linked by bridges and boasts a mixed-use concept with commercial activities in the ground-floor premises and "cluster apartments" with a total of 98 units on the six storeys above. Each storey comprises differently sized cluster apartments, which are characterised by individual bathrooms and balconies as well as communal areas for cooking and day-to-day socialising. Due to its specific typology and location in the Sprengelkiez neighbourhood, the building acts as a social hub for the area. The spacious bridges and cluster apartments as well as the ground-floor facilities, which include a multicultural kindergarten, a social and welfare centre, an age-appropriate living community and a service point assisting homeless persons, all emphasise the role of this timber building as a social community project with strong links to the surrounding neighbourhood. Rents are in the lower price segment, with a 50-percent share of social housing.

This timber building was erected on a "Berlin leftover area" that posed various development problems, not least because of special requirements to be met by sound insulation and fire protection. The building boasts KfW 40 efficiency and a solar thermal system. Storeys 1 to 6 are solid timber atop a reinforced-concrete base. For its total of 6,700 sqm of housing space, approximately 3,700 cubic metres of timber were used, thereby saving roughly 3,700 tonnes of CO_2 emissions.

Keywords of the discussion
Climate adaptation and sustainability – challenges and solutions

DISCUSSION between all partner cities and IBA_Vienna

How can the overall carbon footprint of housing be reduced?

- **Life-cycle cost assessment and new models of ownership.** By building bigger units (on average), we are currently rather increasing space consumption and thus decreasing urban density. If we want to reduce the carbon footprint of housing, we need to discuss the lifespan of buildings and make use of full life-cycle cost assessments. If buildings were planned to exist for 200+ years, this would have enormous effects in terms of sustainability. Stuttgart is currently doing a lot of research on this issue. Another lever would be an innovation of ownership models. The current situation is dominated by homeownership, which makes all forms of sharing or swapping homes practically impossible (e.g. transferring to a smaller flat in the same estate when the kids have moved out). This would require much more fluid market structures.

- **Preparing the ground for informed decision-making.** What has been set up for the Dominick Street West estate in Dublin is mainly a study to create a solid basis for decision-making on whether to demolish or retrofit existing buildings. In terms of costs, renovation is almost as expensive as demolition and new-build. However, other factors, too, need to be considered: If the decision is taken to renovate a building, the goal is to achieve near-zero emission standards that are more or less equivalent to new buildings. The quality of such retrofitted social housing blocks would by far exceed what is currently available in the private sector. However, the main factor influencing this model is the question which option will entail "additionality", i.e. an additional number of homes, which are urgently needed in Dublin.

- **Promoting densification and overcoming "climate rebellions".** Generally speaking, inner-city urban living is inherently sustainable due to mobility patterns, etc. The density of urban structures is a key factor of sustainability. However, what can be seen e.g. in Berlin is that among all inhabitants those living in areas with a high share of green space and low density are most strongly opposed to densification measures. This kind of "climate rebellion" can only be addressed through broad discussion processes and by providing specific solutions, e.g. new mobility offerings to replace large-scale parking lots.

Are cities facing spatial "climate segregation"?

- **Social impacts of climate change.** Urban heat island maps often match social vulnerability maps, as the people who are already socially disadvantaged are the same who are in danger of suffering most from climate change. A recent study conducted in Dublin shows similar interrelations: Areas with high unemployment rates are frequently those with below-average quality of housing in terms of energy efficiency, which leads to an increased danger of energy poverty of vulnerable groups. However, a problem even bigger than the energy efficiency of buildings is poor access to amenities or green spaces in these neighbourhoods.

How can the findings of pilot activities be transferred to new standards of ecologically sustainable housing construction?

- **Incentives for industry innovation.** For the first time in Vienna, the IBA project Waldrebengasse made it possible to include timber construction in the criteria of a housing developers' competition. However, the problem lies in the fact that, currently, only very few companies are able to build accordingly. We need to provide incentives and support for the industry to adapt.

- **Towards a renaissance of low-tech housing production.** If we manage to establish CO_2 neutrality and sustainability as a common bottom line of housing production, we will not need a great many technology standards; rather, different strategies and construction methods can be drawn upon to attain this goal. Thus, IBA Stuttgart is working on a strategy to reintroduce low-tech construction methods based on using solid, durable materials rather than investing in high-tech solutions, which often have only a short lifespan.

Fig. 55: Sustainable construction for Waldrebengasse development, Vienna © OLN

Keynote: Housing for All

Karin Zauner-Lohmeyer, initiator and spokeswoman of the European citizens' initiative *Housing for All*

EUROPE IS FACING AN ALARMING HOUSING CRISIS

Across the European Union, people are no longer able to afford housing in cities. Around 53 million European citizens are overburdened by housing costs, which means that they spend more than 40 percent of their income on housing. At the same time, incomes and pensions are stagnating, which leads to a decrease in purchasing power. With an enormous lack of affordable housing, many people cannot afford to live in cities, among them many of those who actually keep cities running (e.g. nurses, firefighters or police officers). The increased presence of Airbnb and other short-term rental platforms further aggravates the situation, as it reduces the available housing stock. As a consequence, the number of homeless people is rising.

The reason for the housing crisis is a policy of deregulation that has led to escalating real-estate speculation. As a consequence of this deregulation policy, there is a lack of public investment in affordable and social housing – the European Commission estimates the investment gap across the EU at € 75 billion annually. To achieve a turnaround, housing must be a public responsibility, and change must come at the European level, as the European legal framework currently restricts the investment leeway of Member States and cities.

AT THE MOMENT, HOUSING IS SEEN AS A COMMODITY, BUT IT SHOULD BE A HUMAN RIGHT

Better EU legislation for more affordable, public and social housing in Europe is needed. To bring this issue forward, the European Citizen's Initiative (ECI) *Housing for All* was initiated by seven founding members from seven EU countries, amongst them Karin Zauner-Lohmeyer. An ECI has to address an issue within the legal competence of the European Union. If a minimum of one million signatures from at least seven Member States is attained, the issue must be heard and dealt with by the European Commission and the European Parliament.

Housing for All identifies a need for change in

- people's access to social and affordable housing in the EU,
- the Maastricht criteria for financing affordable and social housing,
- the EU funding regulations for public and social housing,
- the business practices of short-term rental platforms like Airbnb,
- the collection of data on the housing situation by Eurostat from a national basis to a regional and local one.

The ECI *Housing for All* concluded in February 2020 before collecting a sufficient number of signatures, as there have been changes in the regulations for European Citizens' Initiatives and due to the United Kingdom's withdrawal from the European Union. The statements of support by UK citizens would have been considered by the European Commission only if they had been reviewed and certified before 31 January 2020, the date of withdrawal.

A STRONGER ROLE FOR CITIES

However, the initiative was successful in creating public visibility and media discourse for the matter. It has shown that cities are not sufficiently involved in policy-making at the national level and has served as a "door opener" by providing the organisers with an opportunity to discuss the issue with decision-makers in Brussels. Another important outcome of the initiative was its function as a platform connecting like-minded players from the fields of politics, economy and civil society in 23 countries.

As a next step, the European Housing Awareness Network[4] has been launched. It continues to raise awareness regarding affordable, social and decent housing in Europe and pursues the aim of making the cause visible and of networking and uniting people.

4 https://housing4europe.org/

Speakers, interview partners and discussion participants

BARCELONA

Javier Burón Cuadrado is Housing Manager of the City Council of Barcelona. He has previously worked for Urbania ZH Gestión, a company dedicated to the provision of services to public-sector entities to improve the effectiveness and efficiency of public services. With a background as a lawyer and economist, he is an expert on public policy and the housing market and has worked extensively in administrative reform and new forms of public-private management. Javier Burón Cuadrado has also worked as a lawyer for the law firm Cuatrecasas Gonçalves Pereira in the field of public law. He has served as Deputy Minister for Housing and Planning Director of the Basque Government and acted as legal adviser to the economic committee of the Basque and the Spanish Parliament.

BERLIN

Manfred Kühne heads the Directorate for Urban Planning and Projects of the Senate Department for Urban Development and Housing of Berlin. He studied architecture in Kaiserslautern and Berlin, followed by work as an urban planner in a variety of positions. From 2001 to 2008, he served as the head of the Supreme Monument Protection Authority of the Senate Department for Urban Development and Housing of Berlin before being appointed to head the Directorate for Urban Planning and Projects in 2008. Moreover, he is a member of the Germany Academy for Urban and Regional Planning (DASL) and of the Association for Town, Region and State Planning (SRL).

DUBLIN

Dáithí Downey is Chief Officer of Dublin City Council's Local Community and Development Committee and Head of Housing Policy, Research and Strategy. He leads Dublin City's Housing Observatory research and analysis programme on housing, planning, economic development, inclusion and integration. He was Director of the Dublin Region Homeless Executive (DRHE) until the end of 2016, having previously been its Deputy Director and Head of Policy and Service Delivery. He was appointed a Fellow of the Royal Geographical Society in 2016 and elected to the Social Science Committee of the Royal Irish Academy in 2018.

Ali Grehan is Dublin City Architect at Dublin City Council. She leads a multidisciplinary team responsible for developing a broad urban design agenda for Dublin City, including the delivery of diverse projects in relation to housing, the public realm, community and cultural infrastructure. Ali Grehan has international experience in the private and the public sector, with a particular focus on large-scale urban regeneration. Prior to becoming City Architect in 2008, she was chief architect with Ballymun Regeneration Ltd, then the largest public regeneration project underway in Europe.

COLOGNE

Eric Diversy is Director for Board and Committee Management, Reporting and Communication with moderne stadt GmbH, the urban development company of Stadtwerke Köln GmbH and the City of Cologne. *Inter alia,* he studied marketing and communication at Chemnitz University of Technology and economics at Hagen Distance-Learning University. From 2002 to 2014, he served in various positions with RheinEnergie AG. From 2014 to 2016, he was Senior Advisor for Strategic Corporate Planning/ Investment Management as well as responsible for key managing board and supervisory board matters on behalf of Stadtwerke Köln GmbH.

Julia Klehr is Director of the Housing Construction Unit of the Department for Urban Development, Planning, Construction and Economy of the City of Cologne. She studied architecture and later worked as an urban planner for the City of Cologne. In 2011, she was appointed advisor to the Department for Economy and Real Estate of the City of Cologne and in 2014 transferred to the Urban Planning Department of the City of Düsseldorf. Since 2018, she has served as Director of the Housing Construction Unit of the Department for Urban Development, Planning, Construction and Economy of the City of Cologne, where her tasks include land mobilisation and the long-term safeguarding of potentials for housing construction.

Jochen Mauel heads the Real-Estate Division and is responsible for the operational core business at the real-estate developer GAG Immobilien AG. He studied law in Cologne and Heidelberg and in 2000 started working in housing with Grund und Boden GmbH in Cologne. After this company's merger with GAG Immobilien AG, he took charge of GAG's third-party management and residential privatisation in 2003. In 2010, he was entrusted with the entire real-estate sector, where the continued development of urban quarters is one of his key responsibilities. He is also a long-time auditor at the Cologne Chamber of Commerce and Industry.

Brigitte Scholz is Director of the Office for Urban Development and Statistics of the City of Cologne. She studied landscape and open-space planning at Leibniz University Hannover (LUH) and subsequently worked for LUH as well as for Brandenburg University of Technology (BTU) Cottbus and the International

Building Exhibition Fürst-Pückler-Land (2000–2010). More recently, she held the positions of Professor for Community-Oriented Project Development at Alanus University (Alfter/Bonn) and of Managing Director with bio innovation park Rheinland e.V. before transferring to her current post in 2017.

MUNICH

Natalie Schaller is Managing Director of stattbau münchen GmbH. She studied architecture at the Technical University of Munich and since 2014 has held the position of Managing Director of stattbau münchen GmbH, which operates mitbauzentrale münchen – a counselling centre for community-oriented housing – on behalf of the City of Munich. On behalf of the consortium for the *Prinz Eugen Park* project, she co-ordinated the neighbourhood development process for this new part of the city. A special focus of her work is on urban development for the common good and related housing projects, mobility concepts and neighbourhood building in urban quarters.

Karla Schilde is Head of the Regional Division of Urban Development Planning of the City of Munich. She studied architecture with a special focus on urban development, worked as an urban planner for Stadtplanung Zimmermann GmbH, Cologne, and passed the second state examination in architecture with a focus on urban, regional and state planning. She has been working for the City of Munich since 2008, first as a planner for the candidature of Munich for the 2018 Olympic Winter Games and later as personal advisor and press spokeswoman of the City Councillor for Urban Planning. Since 2015, she has been heading the Regional Division of Urban Development Planning.

STUTTGART

Andreas Hofer is Artistic Director of the International Building Exhibition 2027 StadtRegion Stuttgart (IBA'27). He studied architecture at ETH Zurich, was a partner at the planning and architectural studio Archipel (Zurich) and engaged in management and advisory activities for co-operative housing associations. This work resulted in the co-operatives Kraftwerk1 and mehr als wohnen. His contributions on aspects of architecture, urban planning and housing are regularly published in various media. Andreas Hofer serves as a jury member of housing development competitions and is also active as a university lecturer. Since 2018, he has been serving as Artistic Director and general manager of IBA Stuttgart and is responsible for managing the content of IBA'27.

VIENNA

Daniel Glaser works as a housing expert for the Vienna City Administration, Municipal Department 50 (MA 50) – Housing Promotion and Arbitration Board for Legal Housing Matters. He studied architecture and spatial planning at Vienna University of Technology and at the University of Zagreb and has worked for several architectural studios as well as for the Vienna Urban Renewal Office in Ottakring (16th municipal district). Since 2013, he has been active as a housing expert for the Municipal Department for Housing Promotion, where he is inter alia in charge of international relations in the field of housing, research and digitalisation projects, reporting and budget matters.

Raimund Gutmann is a freelance sociologist active in the fields of urban development, trend analysis and housing research with offices in Salzburg and Vienna (wohnbund:consult – Büro für Stadt.Raum.Entwicklung). He fulfils teaching assignments and conducts studies and projects on social neighbourhood development and community building as well as research projects on behalf of the Federal Republic, federal provinces, municipalities, the Austrian Climate and Energy Fund and housing developers. He is a consultant on social sustainability for architectural and developers' competitions and since 2017 has been a member of the Advisory Committee of IBA_Vienna – New Social Housing.

Gabu Heindl is an architect, urban planner and activist based in Vienna. Since 2007, she has been the director of the studio GABU Heindl Architektur, with a special focus on public construction projects, affordable housing, public space and collaborative construction ventures. She holds a doctoral degree in philosophy with a thesis on radical-democratic aspects of architecture and urban planning and teaches at the Academy of Fine Arts Vienna and at the AA | Architectural Association London as well as holding the position of Visiting Professor at Sheffield University. Her current research focuses are on solidary housing and social justice as a parameter of planning.

Kurt Hofstetter is Coordinator of IBA_Vienna 2022 – New Social Housing. He studied landscape planning and since 1991 has served in a variety of functions touching on urban development and neighbourhood planning on behalf of the City of Vienna, e.g. as Director of Landscape Planning. From 2003 to 2015, he played a leading role in conceiving, planning, developing and implementing the urban development area *aspern – Vienna's Urban Lakeside*. Since 2016, he has been in charge of co-ordinating IBA_Vienna, taking over its directorship in 2018.

Roland Krebs is an Austrian urbanist developing strategic action plans for cities to tackle growth and urban regeneration. He holds an MSc in urban planning from Vienna University of Technology, an MBA in strategic management from Universidad de Belgrano (Argentina) and a postgraduate degree from Universitat Oberta de Catalunya (UOC). He is a consultant for multilateral development banks and Lead Expert for the URBACT project RiConnect. Since 2011, Roland Krebs is a lecturer at the Institute of Urban Design and Landscape Architecture at Vienna University of Technology. He is a co-founder of superwien urbanism zt gmbh, an office for architecture and urbanism based in Vienna.

Sina Moussa-Lipp is Senior Specialist at the Department for Research and Innovation of neunerhaus, a social organisation for homeless people based in Vienna. She has in-depth expertise in housing policy, urban transformation and social structures. After studying social work and sociology, she worked in academia for several years and was nominated a member of the Advisory Board for the Built Environment Symposium of European Forum Alpbach. Before transferring to neunerhaus, she worked as Senior Specialist at the Department of Regional Government Policy of the Austrian Federal Chamber of Labour.

Martin Orner is Chairman and Managing Director of the limited-profit housing developer EBG Gemeinnützige Ein- und Mehrfamilienhäuser Baugenossenschaft reg. Gen. m. b. H. and also chairs the housing law committee of the Austrian Federation of Limited-Profit Housing Associations. He is a lawyer by training and in addition to his function with EBG also holds seminars and lectures and provides counselling on questions of housing law and housing policy. Previously, he was press spokesman of the Chairman of the 22nd Municipal District of Vienna (Donaustadt), youth secretary of the Vienna Social Democratic Party and legal advisor to the office of the Vienna City Councillor for Housing, Housing Construction and Urban Renewal.

Jürgen Preiss has served as Deputy Head of the Section for Spatial Development at Municipal Department 22 (MA 22) – Environmental Protection of the City of Vienna since 2007. He holds a degree in landscape planning and maintenance from the University of Natural Resources and Life Sciences, Vienna. From 1997 to 2007, he worked as project manager at the Kirchner landscape planning office, Vienna. The focus of his current work is on Vienna's Urban Heat Island Strategy and the promotion of the municipal programme for greening buildings.

Angela Salchegger is an associate partner of stadtluft gehmayr salchegger og, a Vienna-based studio for neighbourhood planning, as well as a landscape planner and neighbourhood manager. She studied landscape planning at the University of Natural Resources and Life Sciences, Vienna, and since 2002 has been active in area management in Vienna. Her work focuses on such aspects as neighbourhood management, public space, development of ground-floor zones, urban green spaces, participation, moderation, process support and the strengthening of urban competences and independent initiatives.

Karin Zauner-Lohmeyer is Head of the Social Management Section of Wiener Wohnen, an enterprise of the City of Vienna tasked with administering, rehabilitating and managing the city's municipal housing estates. In her field of work, she is mainly concerned with eviction prevention, housing quality and international developments in the housing sector. She is a trained forester, holds a degree in journalism and publishes contributions to various media. In March 2019, Karin Zauner-Lohmayer and six other founding members initiated the European Citizens' Initiative *Housing for All*, as whose spokeswoman she has since been serving.

Programme design, moderation of symposium and management of partner city network:
Bernadette Luger and **Johannes Lutter,**
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