

## “Spaces-In-Between” – Reweaving the City along its Inner Edges

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### 1 INTRODUCTION

The continually growing urbanisation inevitably leads to densification of the existing urban fabric in cities worldwide. Land resource for new buildings, especially residential, has become scarce, therefore risen in prices. Residents in well-established neighbourhoods usually object to densification. Higher demand for outdoor activities has increased the pressure on existing open spaces. Therefore, it is essential to locate and secure new open space resources as found in abundance along transportation corridors, due to previous generous land acquisitions in the course of building infrastructure. In the 1950s and 1960s traffic planners allocated these corridors preferably in topographically advantageous locations, i.e. valleys between hills. Today, more environmentally friendly modes of transportation further upgrade these longitudinal stretches of land, which now present an unprecedented and highly valuable resource for the residents in inner-city locations. Furthermore, the corridors should be transformed from a dividing barrier to a permeable open space. The sites should be planned with community participation in order to accommodate different needs in a changing society and increase identification with the neighborhoods. This participation process will contribute to mutual understanding of the residents' diversity in the process of re-mixing the city.

The “reweaving process” will be investigated by exploring 3 practical examples from 1994 until 2011. The design proposals were developed bottom-up with active community participation in the case of L.A., interactive and based on a thorough investigation of community needs in the two cases in Vienna.

In future, as an accompaniment to further urbanisation and densification of the existing urban fabric, more open space has to be allocated. The infrastructure corridors present a unique opportunity for this land acquisition for the benefit of the citizens. On one hand, these corridors were conceived generously with future growth in mind - which will not happen any more, as street widening projects have become highly unpopular. On the other hand, infrastructure needs and mobility concepts are currently changing rapidly: parallel train tracks are reduced in width, streets are used more efficiently and multi-modal. The space that can be gained by these future transformations should be used for the benefit of the citizens to create longitudinal corridors of green open space. A special case is traffic infrastructure adjacent to rivers which doubles the barrier effect for the neighboring communities. The generous width of these corridors present opportunities for creative solutions to rearrange the traffic flow and improve river accessibility as well as connectivity for the separated sides of the communities.

### 2 THE GLENDALE FREEWAY IN LOS ANGELES

The finely grained communities of Echo Park and Silver Lake, prominently located about a mile from downtown L.A. and graced by the natural beauty of the hilly landscape and two lakes, have been divided by the I-2 Freeway since the 1960s. This case study shows the potential of its partial removal.



Fig. 1: Echo Park and Silverlake shown on a historical aerial photo in the 1950s

This was a time when traffic planners showed little sensibility to the needs of local residents. In spite of massive protests against the necessary evictions in the path of the I-2, freeway construction continued until even CALTRANS, the California Transportation Agency, and local government could no longer ignore the community uproar. The evicted home-owners were given insufficient compensation for their lost property which did not allow them to buy new homes and often led to subsequent poverty. The remaining residents on the edge of the freeway suffered from a severe devaluation of their property due to the negative environmental impacts.



Fig. 2 left: the construction process of the Glendale Freeway Fig.3 right: Echo Park / Silverlake 2011



Fig.4 left map showing the land owned by CALTRANS adjacent to the freeway, right map shows in red the proposed section of the I-2 freeway to be removed

In the mid 1960s CALTRANS halted the I-2 Freeway construction and built an off-ramp onto Glendale Boulevard that was intended for temporary use until protests would hopefully subside. On the contrary, community groups have stayed alert until the present day and became one of the most active in all of Los Angeles.



Fig. 5: The End of the Glendale Freeway in 1990 – a steep off-ramp merges onto Glendale Boulevard towards Downtown L.A. Dangerous and unattractive underpaths are the only safe crossing passages for pedestrians.

Since traffic planners had secured much wider swaths of land than actually needed, the freeway was accompanied by now publicly owned vacant land. A visionary project, developed by the author at GSAUP-UCLA, to remove the controversial off-ramp and realign the traffic flow in order to secure open space for local benefit (community-gardens, a connecting plaza bridge ect.) was welcomed enthusiastically by the community groups. Their support eventually awakened politicians to the potential of the area and inspired them to finance further in-depth planning. As a consequence Gruen Associates and Tillner were commissioned by the LADOT (Los Angeles Department of Transportation) to develop the “Glendale Corridor Plan”, a planning document which was awarded the AIPA (American Institute of Planning) Award in 1994. The intention of the plan was to increase public transport ridership, allocate space for HOV lanes, reduce traffic lanes for individual drivers and allocate green open space.

Today, the off-ramp still exists, but some improvements were implemented on the adjacent land, since the “Space-In-Between” next to the ramp has been reused as a sports-field. Pedestrian safety has been improved by the installment of additional traffic lights to slow down through-traffic and enable pedestrians to cross the street safely. But the majority of the ambitious plans could not be implemented due to continuous conflicts of interest between CALTRANS, the advocate for individual drivers, and LADOT, the advocate for additional high capacity public transportation corridors and the community groups that favored a more radical reduction of through traffic based on the Tillner plan. Ongoing discussions in the community still consider a more visionary and environmentally ambitious solution. Currently, the Echo Park community has organized an internet forum to improve the situation and increase the safety for pedestrians. The potential to regain the right of way for public transportation and create a “green boulevard” is still intact. Hope remains, the current community efforts will lead to a rethinking at the level of transportation planning and finally to a successful redesign.



Fig. 6: The potential transformation of the last mile of the I-2 Freeway into a green boulevard

### 3 THE VIENNA GÜRTEL BOULEVARD

In the 1950s and 1960s, the popularity of automobile traffic led to an enormous increase of cars travelling on Vienna’s streets. The formerly tree-lined Gürtel Boulevard had reached capacity. Green space was reduced for the sake of street widening, asphalt replaced grass and soon the viaduct had become an isolated island in the center of an eight lane inner city highway. The increase in car traffic led to the further decay of the area: the building stock fell in disrepair and a red light-district spread along the Gürtel street and the connecting roads. The negative image of the whole Gürtel neighborhood led to further erosion and devaluation of the area and the adjacent properties. Negative press in numerous articles criticizing the traffic nightmare, environmental pollution and the social degradation of the red light district, was lamented. The Gürtel area was given up as a “hopeless” case.

#### 3.1 Situation at the beginning of the URBION project in 1995

With over 85,000 vehicles/day, the Vienna Gürtel forms the transportation backbone for an area extending six kilometers with ten municipal districts bordering its busy lanes.

Looking at Vienna’s demographic distribution, a possible concept for the western Gürtel emerged. Although the core urban structure of the city is organised along radial-concentric lines, the highest residential density is in the western Gürtel neighbourhoods. Accordingly, the Gürtel could function as a new linear urban “centre” that features a high-performance means of transport, i.e. the Stadtbahn. Instead, in 1995 the neglected western Gürtel assumed the unfavourable traits common to the urban periphery or an access/exit highway: dilapidated buildings, high traffic density, few retail shops or commercial and industrial sites. Thus, the western Gürtel found itself in the paradoxical situation of an inner-city fringe. The Stadtbahn viaduct was no longer a connecting (as in Wagner’s concept), but rather a separating element. The explosiveness of this problem was palpable if one examined the failing neighbourhood development and stunted commercial dynamics. What was happening in the western Gürtel areas was in fact a form of commercial blight, exacerbated by increasing motorisation., as seen in Fig. 9.



Fig. 7: The western part of the Vienna Gürtel, highlighted the area selected for urban intervention in the EU-URBAN program

### 3.2 The main objectives of the URBION project

After numerous and inconclusive planning projects in the 1980s that had proposed expensive infrastructure investments, i.e. tunnels and road reconstruction projects, the City decided against these plans and searched for a novel and more sensitive approach with a different focus. As a consequence, Silja Tillner, who had specialized on similar projects in Los Angeles, was commissioned by the planning department to develop a Gürtel urban design study. The city planners realized that measures taken on the basis of long-term and cost-intensive so-called “hard“ location factors, i.e. improving the urban infrastructure, are only one facet. However, measures taken on the basis of so-called “soft“ location factors are also important. This refers to the results of Tillner’s study in 1994 which included a strategy of image transposition and visual improvement of the Gürtel by means of small-scale, urbanistically active functions in the fields of culture and entertainment. Having acknowledged this, the direction given by the client, the City of Vienna, was to concentrate the planning and urban design on these “soft” factors.

### 3.3 The URBION Gürtel Financing – EU Funding

In 1994 the City of Vienna applied for EU grants from the community initiative, URBAN, which was set up to aid the improvement of living conditions in problem zones in major European cities. The “1994 Gürtel Urban Design Study” was included in the application.

In 1995 EU grants from the community initiative, URBAN, for the City of Vienna funding mechanism, "URBAN-Wien Gürtel Plus", were approved. As an area with high levels of unemployment, poverty and poor housing conditions the urban districts on either side of the Gürtel, were registered as a "problem urban area". The City of Vienna presented an improvement concept which complied with the principles of "sustainability" and "private-public partnership" and included a total of 60 projects and initiatives to improve the building fabric, attract new small businesses, promote cultural initiatives, social advice centres and improvements to the infrastructure. Silja Tillner was responsible for the URBION component.

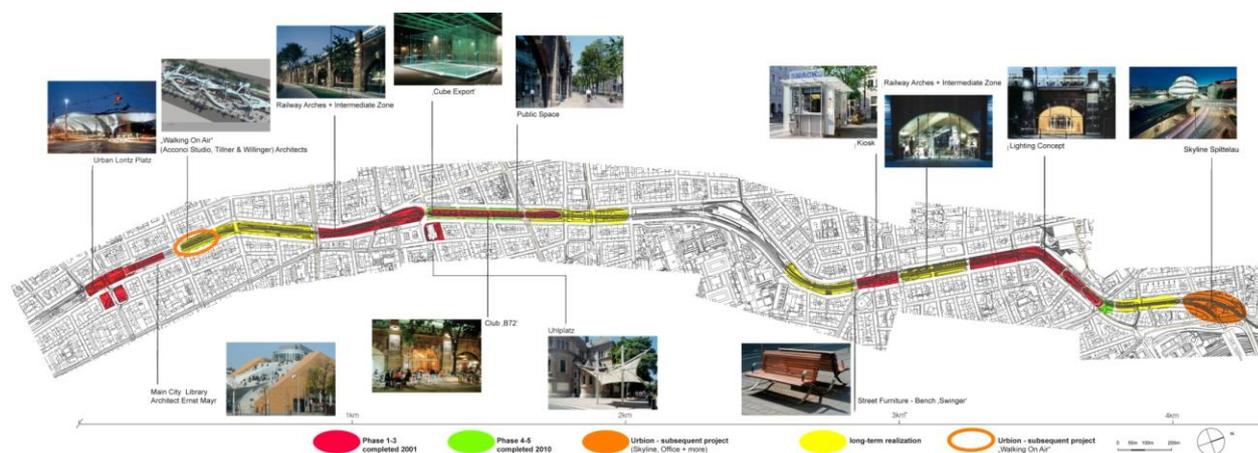


Fig. 8: The Vienna Gürtel map of phased intervention with location and image of implemented projects

### 3.4 The URBION Gürtel Planning Concept

In 1995 the Vienna Westgürtel, a 6km long and 70m wide 8-lane highway separating the inner from the outer city districts, had become a physical and social barrier. As a consequence, the neighborhoods adjacent to the Gürtel deteriorated, environmental pollution and the red-light district contributed to the negative image. A train viaduct dominated the median of the highway. The percentage of public open space per resident was the lowest in Vienna while many buildings accommodated large immigrant families in overcrowded apartments. This situation qualified the area for EU- co-financing in the URBAN program and was named “URBION“, an urban revitalization project with phased small-scale interventions that were responsive to existing conditions. The strategy was on one hand to build on existing strengths, on the other hand to utilize derelict open space and vacant arches. One key problem was the absence of safe pedestrian paths parallel to the subway line and insufficient possibilities for street-crossing. Eliminating deficits was a major goal, i.e. functional defects of the area between the arches and the Gürtel traffic lanes hampered the improvement of this zone. For example, in addition to insufficient lighting of the pedestrian paths and cycling tracks, the use of substantial parts of this zone as partly illegal parking lots massively impeded its rehabilitation as seen in Figure 9.



Fig. 9: The Vienna Gürtel in 1995 before Urban Intervention: left image shows abundance of underutilized space on the edge of the traffic artery due to paving of former streetcar tracks, photo on the right illustrates the occupation of sidewalks for illegal parking.

At the core of the URBION Gürtel concept by architect Silja Tillner was not only the question of how to deal with the architectural heritage of Otto Wagner but above all, how to address the forced co-existence of public space and high traffic loads. By opening the Gürtel median strip and endowing it with a transparent design and connective architecture, the area re-emerged as a space that once again links the outer and inner Gürtel; an area that no longer functions as a barrier, but rather as a meeting-place. An “image transposition“ strategy was undertaken to counteract prevalent negative psychological associations of the Gürtel. Fundamental to this strategy was the general improvement of the Gürtel median strip and in particular, populating the “Stadtbahn” arches with cultural and entertainment facilities, restaurants and pubs. The Gürtel Study developed a comprehensive set of measures for a new, low-cost design of the median strip that would respect existing structures and could be implemented in consecutive phases, as seen in map Figure 8.



Fig. 10: The Vienna Gürtel in 2000 after Urban Intervention: left image shows the transformation into green open space, a bike-path and promenade, photo on the right illustrates the successful reconquering of public space for pedestrians and the revitalization of the arches.

### 3.5 Redesign of the Gürtel Open Space – Planning Strategies and Implementation

Redesign of the Gürtel median strip: In certain sections of the Gürtel median strip, public space was redesigned to create attractive open spaces for the residents of the adjacent districts, many of them immigrants. Another goal was to safeguard suitable frame conditions for the commercial success of the numerous private investors in the Stadtbahn arches. Primary objectives for the redesign of these Gürtel sections included both improved pedestrian paths and cycling tracks, additional possibilities to cross the Gürtel and the wish to create attractive open-air zones (e.g. street cafés). A continuous promenade, intensively greened, was established along the Stadtbahn arches by eliminating the side-lane and prohibiting the parking spaces. The improvement of the tree stock by planting new trees and introducing a new automatic irrigation system; enlargement and rehabilitation of green spaces accompanied by a reduction of hard, non-permeable surfaces.

The improvement of pedestrian and bicycle traffic was achieved by providing continuous paths on the median strip along the Stadtbahn arches as well as more possibilities to cross the Gürtel.

An attenuation of the barrier effect of the Gürtel was a major design goal. All newly leased Stadtbahn arches were to be opened up and provided with uniformly glazed façades.

All Gürtel bridges formerly closed with storage space were to be opened up.

A coherent and unifying “look” of the Gürtel median strip was to be achieved by means of a continuous lighting system, newly glazed Stadtbahn arch façades, the installation and design of kiosks as well as urban furniture. The open space was transformed to accommodate newly designed bike paths, pedestrian areas with generous landscaping, squares and parks. The arches were filled with new activity. Image transformation was the key to the success of URBION.

### 3.6 The present situation and future vision

Today, the barrier effect has been reduced and the districts have been reconnected through the common center, the attractive open space and the active life in the Stadtbahn arches, which have become popular meeting points. Nevertheless, the task has not been completed, because connectivity has been improved only in these sections of the Gürtel that were selected for URBION. These represent only 15 % of the total length of the western Gürtel. In the other areas vacant or underutilized arches and neglected open spaces used for commuter parking dominate the appearance. These deserted open spaces are void of street-life and prevent the reweaving of the city fabric.

In the future, change in travel modes and more environmentally conscientious commuting offer opportunities for a new approach to traffic planning and an open space strategy that favours the pedestrians, cyclists and recreation of the residents over the automobile.

## 4 THE VIENNA VALLEY

### 4.1 History and present situation

The Vienna Valley, extending 14 kilometers from the western city limit from the retention basins to the east where the river “Wien” flows into the Danube Canal, offers an interesting cross section of various Viennese urban landscapes, linked by the river, accompanied by an important traffic infrastructure.

Along its length the urban context of the Wiental (River Wien Valley) shows a number of different characteristics, from the scattered development, commercial areas and extensive green spaces in the west followed by a gradual, but at places very abrupt, development to the densely developed inner city areas.

In the course of history the Wiental has developed from a natural river into a regulated urban watercourse and from the mid-20th century onwards, thanks to the intensive development of road and rail connections, it became the most important traffic artery leading into the city from the west.

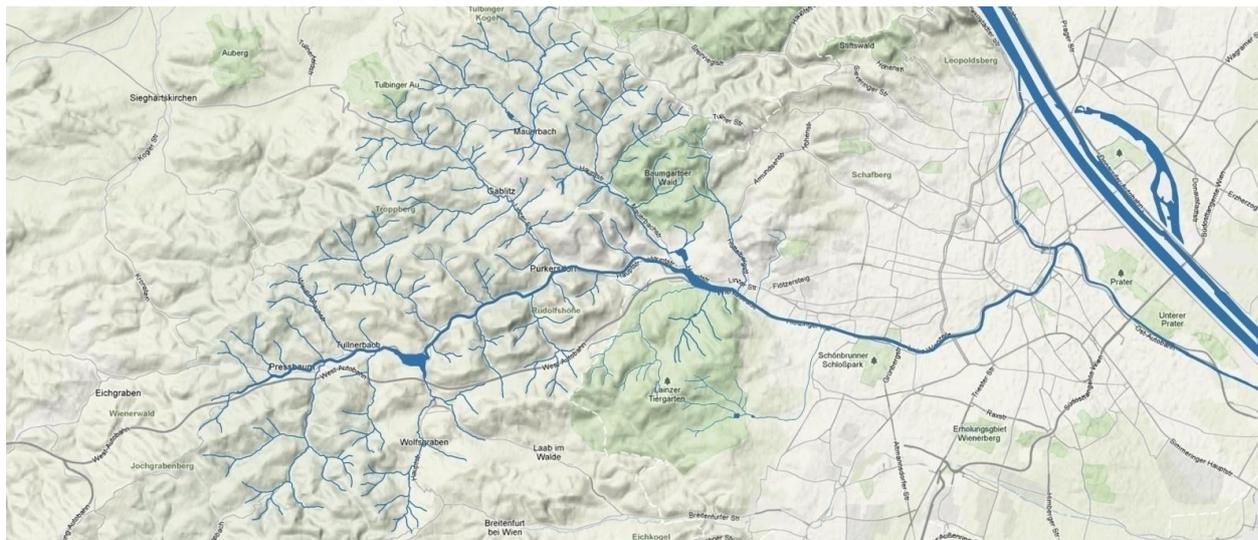


Fig. 11: The Vienna Valley with the river Vienna in its current watercourse

### 4.2 Planning Study

As part of Vienna’s urban development a structure grew up that exhibits highly diverse qualities, deficits and potentials and was identified as one of 13 target areas for urban planning within the framework of STEP05 of the Viennese Urban Development programme. A planning study was commissioned by the City of Vienna, Tillner & Willinger architects collaborated with Auböck & Karasz landscape architects to analyse the current urban situation of the Wiental and, in a comprehensive catalogue of measures, presented proposals for the design of one of the important focal points in Vienna’s future as a city.

In historical terms the transformation from a natural river to a regulated watercourse, or the planning of a monumental boulevard from Karlsplatz to Schönbrunn, which Otto Wagner carried out in part by culverting the River Wien in the area of the Naschmarkt, represent important measures that have had a lasting impact on the appearance of the city of Vienna.

Hydrology: To understand the characteristics of the River Wien within Vienna’s city boundaries it is necessary to take a regional view of the water economy, especially as regards the flooding caused by heavy rainfall. During a downpour a substantial amount of the surface water in the inner city is led into the River Wien and this can lead to the water level rising by more than a metre within minutes. This fact imposes formidable limitations on urban design, especially as regards the possibility of accessing the river bed.

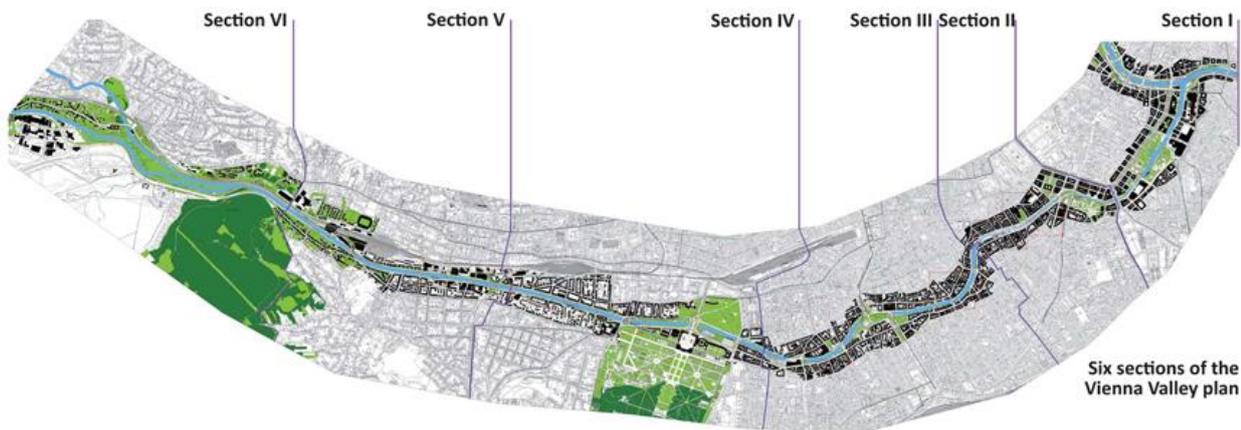


Fig. 12: The Vienna Valley in six sections

At first, a comprehensive planning analysis defined urban typologies and six characteristically similar sections of the Vienna River.

In order to define the most significant urban characteristics, the authors looked at the urban diversity and the development that increases in density towards the inner city, along with the consideration of the most important urban deficits and potential. On examination it is revealed that the urban planning deficits lie primarily in the severe separation of the northern areas of the city from the southern areas caused by the Wiental. Here the use of the Wiental as an axis for road and rail traffic plays a decisive role. The left-over areas and urban wasteland produced at many places by urban planning and the often visually unappealing transitions between individual urban components also represent a serious urban planning deficit.

The design guidelines are formulated by means of goals as well as specific measures.

Important urban design goals are strengthening the awareness of the Wiental and making its experience easier, improving its qualities as a place for recreation and leisure, creating cohesion between bordering urban districts, emphasising the linear identity of the Wiental while creating local identities within. Important measures in implementing the goals are emphasising existing attractors and urban qualities, creating connections and new green spaces, while upgrading left-over and wasteland areas and restructuring them, promoting bicycle and pedestrian traffic, increasing public safety by encouraging activity during all periods of the day.

### 4.3 Urban Planning Potential

Existing green areas or undeveloped areas that could be used as green spaces play a major role as does the network of bike and pedestrian paths which although well developed could be still further improved, or local accents and linear urban planning elements with a high level of urban quality that could be better integrated within the existing mesh of the city.

The targeted improvements to connectivity have a special focus on important routes, the connections of pedestrian and bike paths including those that need to be optimized, as well as the shortage of crossings over the River Wien.

Principal to the design concept is the general aesthetic improvement of the valley, making it more appealing for the use and recreation of the local residents, while enhancing the distinct urban identities of the different sections along the river.

Critical areas of intervention were selected: The plan identifies locations where existing public amenities can be maintained, brown-field sites regenerated, and new urban measures initiated. The project proposes the conversion of traffic areas into pedestrian zones, novel connections between the districts and the river embankments, and introduces green landscaping. The design of the edges at street level can be implemented in the short term offering a unique chance to upgrade an open space that leads right through the city and changing it from a peripheral zone to a spine. This new identity is to develop at the river banks. To make the river bed accessible flood protection measures would be necessary. On the basis of new technologies and intensive cooperation these could in the future transform this idea from a vision to reality.



13: The Vienna Valley in 2011 – potential for generating new open spaces

## 5 CONCLUSION AND FUTURE POTENTIAL

Traffic arteries have left scars in the urban grain, often creating “inner edges” that form physical and social barriers. “Space-In-Between” along streets and railways presents an opportunity to reweave the interrupted city fabric and secure urgently needed open spaces – new and environmentally conscientious uses have to be explored for these in the future: pedestrian and cyclists movement, recreation, urban farming, energy farming, ect. New modes of commuting and changing travel behaviour offer unprecedented opportunities to rethink these arteries of the cities.

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