

## More Green Open Space in a Densified City

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### 1 ABSTRACT



Fig. 1: Potential for creating green open spaces in the densely built-up city fabric, e.g. along the Wienzeile, by transforming side-streets, source: Tillner & Willinger

The City of Vienna is growing rapidly by a figure of around 18,000 people a year. This steady increase in population is a positive development in the light of the many urban and rural areas in Europe where the population is declining. The growing population stimulates an increased demand for housing, social services, schools, kindergardens and open spaces. While the need for parks, squares and playgrounds is generally acknowledged, financial restrictions mean that it is fulfilled only at the minimum level required by the building code. In larger-scale newly planned districts, i.e. Seestadt Aspern, Sonnwendviertel, Karree St. Marx or Eurogate, parks are part of the masterplan and are integrated into the concepts more easily. The willingness of developers to co-finance green open spaces is greater, due to the larger economic dimensions of the developments and their investment, the percentage of the cost for urban design and landscape design, is therefore lower. But even then, the main focus of investors and architects lies on the buildings and the open spaces are often underfinanced. Furthermore, the quality of the design suffers from a lack of coordination between the different developers and architects on adjacent sites, resulting in undesigned edges and borders.

In comparison smaller projects, i.e. infill developments within the existing city fabric, face extreme difficulties in attempting to meet the need for open space on already constrained urban sites. Generally, the requirements of the building code are met at a minimum level by providing a playground for small children. Sometimes just a modestly landscaped communal courtyard with insufficient sunlight is provided.

From an urbanistic standpoint it is wise to increase the housing supply within the city area also, and not just on the outskirts. This is especially true as large new sites suitable for affordable housing have become scarce and now more remote sites with less favourable public transport access have to be chosen for development. Currently, non-profit developers planning affordable housing projects are confronted by the challenges presented by increasing land speculation and soaring property prices. As a result, private developers with no demand for public subsidies are better able to meet the expectations of higher land prices. Cost-intensive redevelopment projects within the city boundaries have a better chance of being economically feasible – leading to a “rebuilding- and renovation boom” of the building-stock from the end of the 19th century to the present. The city planning department aims for an equal distribution of the additional housing needed by building new developments on the outskirts and also increasing density.

This concentration on densification in the inner city should, ideally, be accompanied by generous open space design – but in practical terms there are no new sites for green open spaces available. The solution therefore lies in redesigning the existing spaces in-between buildings to make them into pedestrian-friendly open spaces. This strategy can only succeed by simultaneously implementing traffic calming measures resulting in a reduction of the space used by cars. Parked cars in particular require an disproportionate amount of public space on streets. By reducing car-parking and transforming side-lanes and cul-de-sacs into pocket parks, accompanied by an increase in the area of permeable surfaces, tree-planting and greening of walls, the quality of life within the city could be improved dramatically. This is a difficult undertaking due to a strong and well-organized car-lobby supported by the trade-union; currently, this conflict of interest can be observed currently in the heated discussions regarding the proposed transformation of Mariahilfer Street into a pedestrian zone.

The paper will focus on the potential for creating new open spaces by transforming existing streets and will highlight areas where this could be done in the city of Vienna, i.e. along the Ringstraße, Viennas most prestigious and well-known historic boulevard, or the Wienzeile. These streets are characterized by beautiful historic buildings, many of them famous landmarks, but the design of the space in-between the buildings still largely reflects the car-dominated traffic-planning philosophy of the 1960s. Population growth and densification should become the stimulus for rethinking the planning strategy for all public spaces in general and designing a few case-study projects in particular to showcase the enormous potential for open space supply and greening the city.

Potential sites and some examples of redesign will be presented.

## 2 POPULATION DEVELOPMENT IN THE CITY OF VIENNA

Population Projection 2013 to 2050

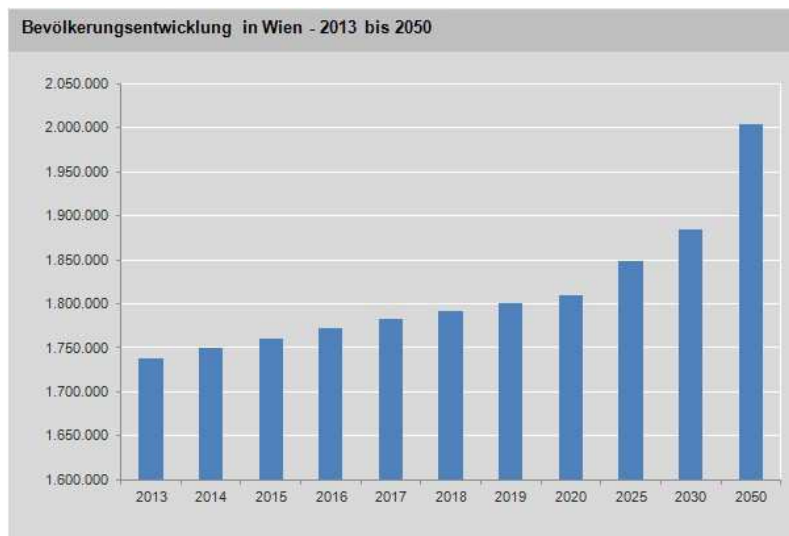


Fig. 2: Population forecast for the city of Vienna, source 1): Statistik Austria.

The transformation of the demographic structure influences the development and attractiveness of regions, their economic viability, local tax-base and the capacity of the infrastructure. In terms of function these individual factors are closely linked. The Statistik Austria bases their assumptions for the future population projection on proven demographic findings of the past. Although these projections are plausibly based on facts their validity can be affected by unpredictable migration movements. The current prognosis for the city of Vienna projects a steady intense increase in population reaching 1.88 million in 2030 and exceeding 2 million inhabitants by the year 2050. 1) Statistik Austria.

## 3 INFLUENCE OF THE POPULATION GROWTH ON PLANNING AND HOUSING

### 3.1 Impact on the housing market

Currently, in the city of Vienna, the most immediate impact of population growth on planning is an increased demand for housing, especially for affordable housing. The population growth is good news for the city of



Vienna, as it reflects a dynamic situation, increases the tax base and stimulates a building boom. This comes at a time when the land resources owned by the city of Vienna are shrinking and land prices have risen generally since the economic crisis in 2009. The housing department of the city of Vienna has therefore refocused on “smart-living” which means smaller sized apartments that become more affordable due to reduced amount square metres per room. But new housing construction is coupled with responsibilities for improving the social and technical infrastructure as well, resulting in substantial public expenditure. New kindergartens, schools, parks, and sporting facilities have to be constructed despite the scarcity of available land. The excellent public transportation system has to be further improved, subway lines extended, new tram and bus routes planned and intervals shortened.

### 3.2 Densification and creative conversions

Private developers have exploited the opportunities to build market-rate housing with a special focus on condominiums, where the prices per m<sup>2</sup> have risen continuously over the last few years, reaching a peak in 2010 2)

The potential for densification of “Gründerzeit” city blocks has been explored considerably in recent years by converting unused attic space into luxury loft condominiums and reorganizing and renovating the existing apartments, resulting either in rent increases or highly profitable sales. The positive results are obvious, too: many run-down buildings have been exquisitely renovated, even difficult cases, i.e. the long-term vacancies of 1970s office buildings, have been solved thanks to creative conversions. A good example is the Hotel Daniel, now located in a formerly vacant office building from the 1970s which was a particularly difficult case because of its status as a protected monument with a glass curtain wall glass that caused high energy loss.



Fig. 3 left: Hotel Daniel on Wiedner Gürtel in a converted 1970s office building, right: vacant office building on Schuberting soon to be converted into a further Hotel Daniel

This type of creative conversion project will become more common in the near future, as some of these vacant buildings are located in prime locations, such as the former secret service building (BVT) on Schuberting 10-12, which is soon also to be transformed into a hip hotel. From an ecological standpoint, due to the minimum of material consumption involved safeguarding existing structures and reusing them represents a viable alternative to demolitions. Mixed-use projects are more easily implemented in existing buildings. These adaptive re-use projects should be prioritized in areas where a transformation of the streetscape is possible.

## 4 THE PUBLIC REALM – EXAMPLE RINGSTRASSE

### 4.1 History – present situation

The Ringstrasse was inaugurated in 1865 by Emperor Franz Joseph I. At the time, the centre of the boulevard was reserved for faster-moving horse carriages, while the two side lanes under a double row of trees were for pedestrians. The situation was comparable to the great Haussmann boulevards in Paris, where a leisurely stroll in order to see and be seen was a favourite pastime of the bourgeoisie and led to the creation of term “flaneur” (urban stroller). Over the course of time, pedestrian areas were converted into side- and parking lanes.

Currently, the central roadway has a reasonable width of about 15 metres (50 feet): three lanes in one direction plus two streetcar lanes, one running in the opposite direction to the flow of motorised traffic.

The general organization of the street has not changed since the 1960s when more space for cars was needed and additional parking lanes were accommodated. The central street width is sufficient to accommodate the traffic flow. The two side-lanes are rarely used except for parking. While a drop-off area for taxis and guests is required in front of the hotels, all other parking is unnecessary. Except at the intersections with important streets there are few shops and cafés along the street.

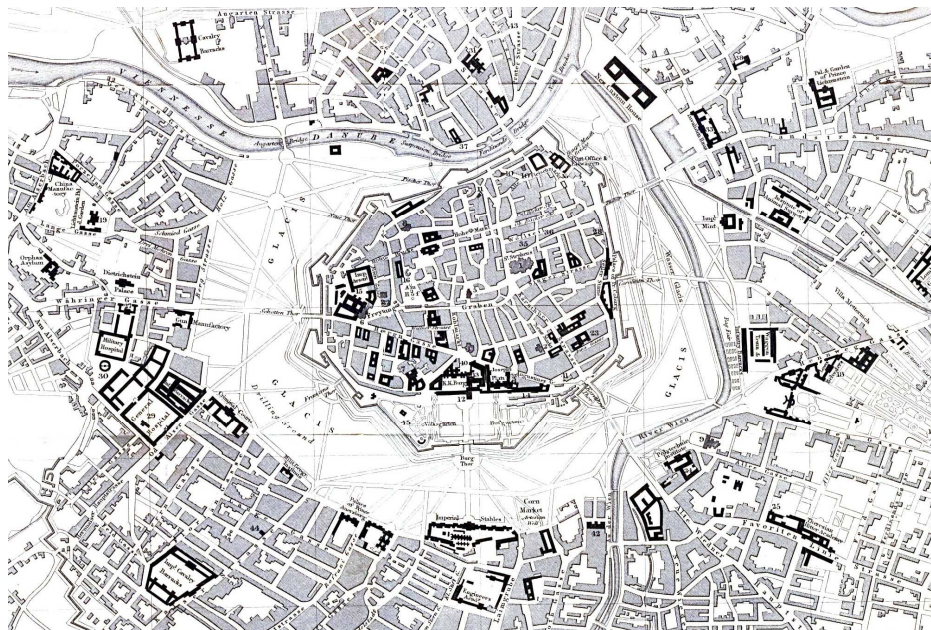


Fig. 4 the former “Glacis” surrounded the inner district as a protective zone for military purposes until the fortifications became obsolete and were demolished. A ring of monumental public buildings along the new Ringstrasse was planned in this location.  
Source: National Library Vienna

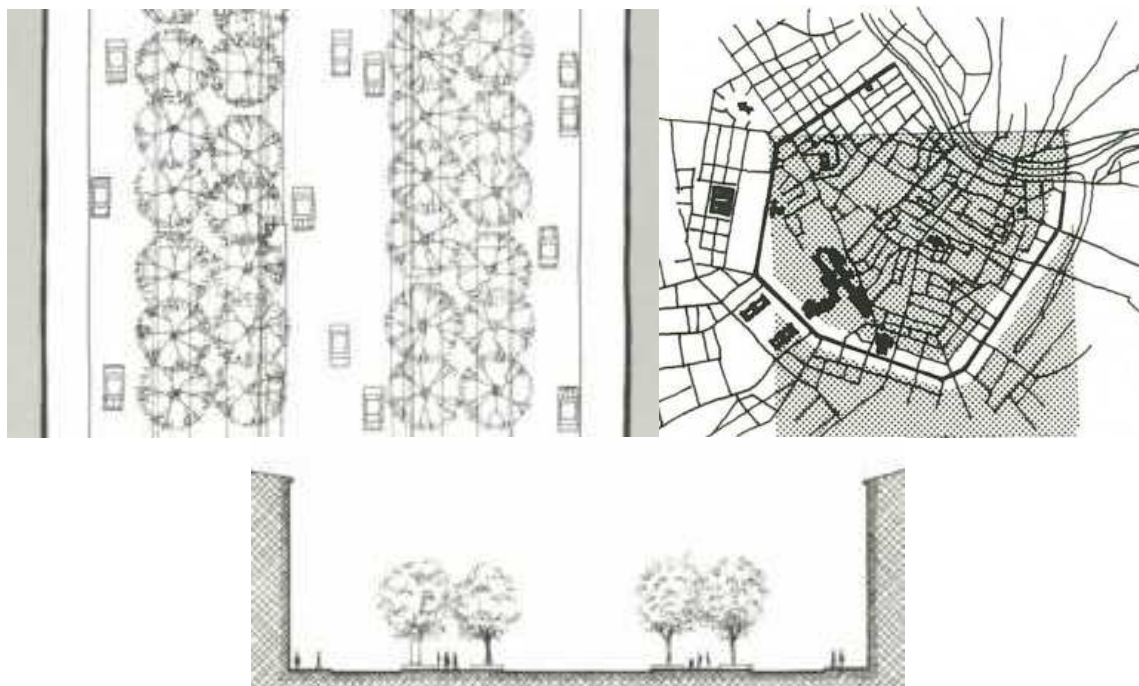


Fig. 5 right: location of the Ringstrasse within the city on the former “Glacis”, Left: plan and section showing current traffic organization, 3) Allan B. Jacobs “Great Streets”

#### 4.2 Future potential of the Ringstrasse as an open space resource

This situation offers an enormous potential as an open space resource for the future. The underutilized side-lanes could easily be reconverted into pedestrian priority streets in accordance with the original intention. This transformation would invigorate pedestrian life along the building fronts and activate ground-floor uses, especially sidewalk cafés. These cafés have become favourite outdoor facilities in European cities with



moderate climate and become even more attractive when vehicular traffic is reduced. A positive case-study that proves this point is the city centre of Copenhagen, where traffic has been reduced successfully over the last decades and pedestrian areas and pedestrian-friendly streets have been simultaneously expanded. In spite of initial fears of businesses, the number of people visiting the city centre has increased as has their spending in shops and restaurants and cafés 5). Generally, the car-free public squares invite all residents to spend time outdoors and congregate and communicate in these inviting public spaces which become a kind of communal public “living-room”.

As favourable exposure to the sun is a prerequisite for outdoor seating areas in spring and fall, the Ringstrasse has enormous potential due to its width and its curved layout. On balmy spring and fall days sunny sidewalks invite people to stop and rest, on hot summer days the mature trees offer welcoming shade. This favourable setting could be far better used for the benefit of both citizens and visitors than as car parking for just a privileged few. There should be park benches for people taking a stroll can take a rest and are not required to consume anything as well as outdoor seating in cafés – which would become more common and more affordable than today, where only luxury 5 \* hotels and two prestigious traditional cafés offer outdoor service at extremely high prices..



Fig. 6 left right: vacant 1950s office building on Schuberting 10-12 and potential open space resource in the side lanes

In front of the vacant office building on Schuberting, one finds the typical streetscape of the Ring Boulevard with side-lanes on either side of the boulevard, in front of the buildings, with two rows of parked cars. The side-walks in front of the buildings are fairly narrow, preventing side-walk seating or outdoor cafés, consequently there are very few cafés located along the Ring, despite the overall beauty of this famous street.

The proposal is to increase the amount of green open space, by reducing the number of parking spaces in the inner city and transforming the side-lanes into linear, pedestrian-friendly streets with a higher percentage of permeable surfaces and green spaces, informal seating, i.e. benches, and a considerably increased amount of space for pedestrians and cyclists. Cars could still pass through, stop and deliver, but not park.

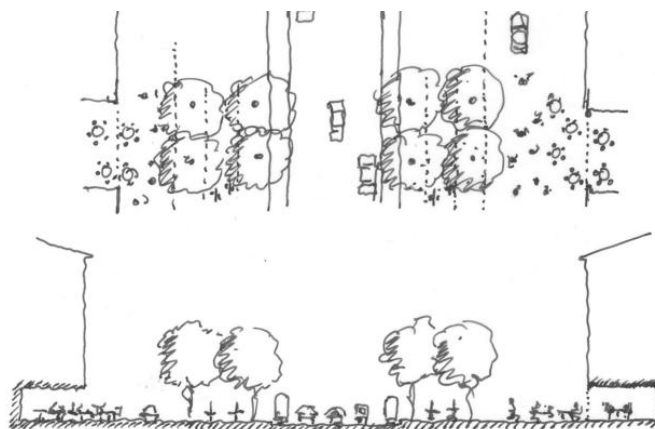


Fig. 7 sketch showing potential conversion of side lanes along the Ringstrasse into pedestrian-friendly streets with priority given to pedestrians and areas for outdoor seating, source: Tillner

Furthermore, as the map in figure 4 shows, at the intersections with crossing streets the space is widened and dominated by traffic movement. At these crossing-points and corners where the street changes direction,

there is potential for the creation of larger green spaces, i.e. small parks etc. In any case, the Ringstrasse should be reserved as an open space resource and no further building sites should be allowed.

Proposed permanent measures are e.g. the transformation of traffic-spaces into green open spaces.

Temporary measures include the closure of streets for events. The Ringstrasse is occasionally closed down for demonstrations or a marathon. While these temporary closures cause no problems at week-ends, during the week they trigger traffic jams on the only street that runs parallel to the Ring. It would be easy to close the Ringstrasse every Sunday to allow people to stroll, cycle and run without an adverse impact on traffic flow. Even in cities that are considerably more car-oriented, such as Mexico City, it has been possible to close a major thoroughfare every Sunday.

These temporary closures would also stimulate informal and spontaneous use of public spaces and contribute to communication among the citizens.

Active side-walks stimulate people to walk slower, linger, or even stop and chat. This can be observed even on busy roads: as soon as a café with an attractive outdoor-seating area opens up, there is an increase in pedestrian activity.



Fig. 8 Linke Wienzeile, a short stretch of an attractive side-walk with a café attracts people to stop and chat, despite the high volume of motorised traffic.

## 5 POTENTIAL OPEN SPACE RESOURCE IN THE CITY CENTRE

Almost all of the streets in the city of Vienna are devoted to motorised vehicles, i.e. traffic flow or car-parking. Citizens and visitors have grown used to parking their cars at comparatively low rates in the public realm. Every effort by planners or local politicians to change this established privilege and to transform street-space into open space is met with fierce resistance – mostly by local business people, but also by residents. This is the reason why the city of Vienna, in spite of its great reputation as a beautiful and attractive city and its high ranking as a place to live (e.g. Mercer Study), lags behind with regard to international trends in restricting traffic movement in city centres and converting even intensely used thoroughfares, such as Broadway in New York, into pedestrianized areas. The measures applied internationally range from temporary closures as practised in Mexico City to permanent ones as demonstrated in New York, London or Copenhagen. They are often accompanied by taxes or charges imposed on in-coming traffic, for instance in Stockholm, Paris or London.



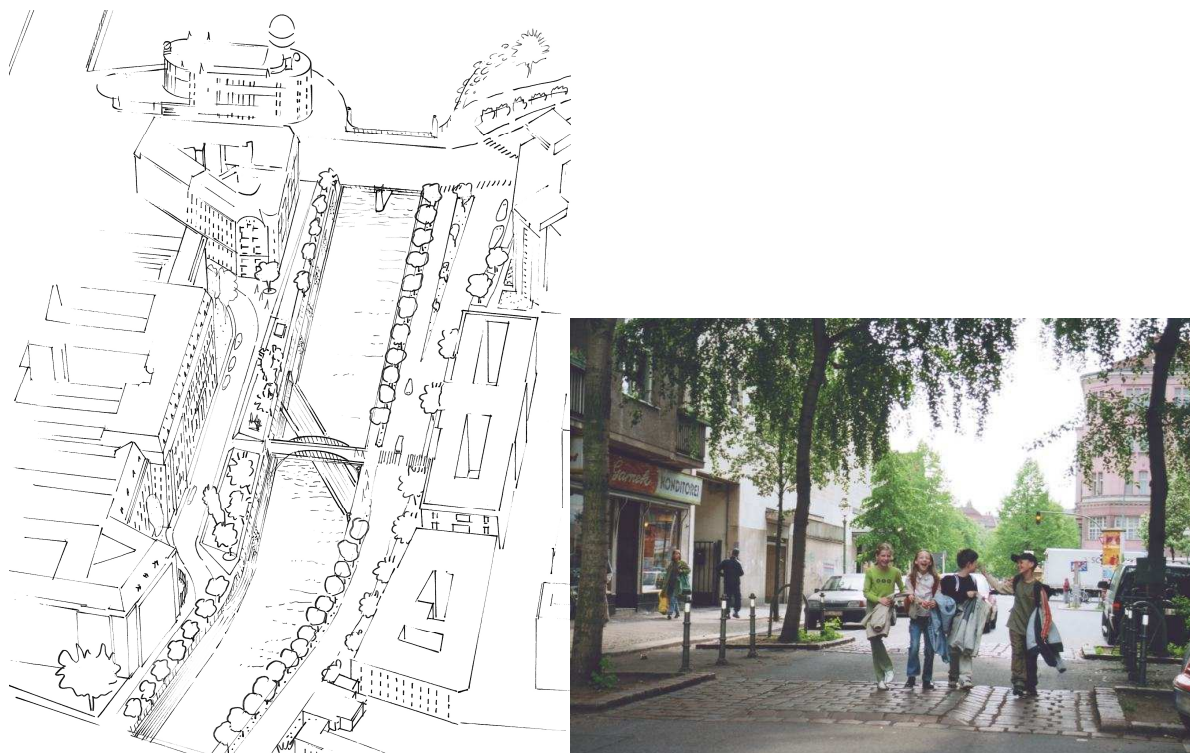


Fig. 9 left: Sketch for Schallautzer Gasse – potential for a pedestrian-friendly street or a linear park instead of a narrow street, proposal by Tillner & Willinger. Fig.10 right: example for a pedestrian-friendly street

### 5.1 Informal seating in the public realm



Fig. 11: Informal seating on objects never intended as seats and in unplanned locations, illustrating the need for more seating opportunities in the public realm; source: Tillner

While in parks benches are provided, along regular streets there are practically no seating opportunities for strollers. This proves to be quite an impediment to seniors needing to rest, shoppers, and parents with children or strollers wanting to participate in public life. The interest in watching the activities of others is one of the prime reasons for spending time outdoors in cities. In parks this opportunity is quite limited, therefore people spend time in parks when they want to rest or read quietly, while people-watching can only take place on streets. These behavioural patterns have been studied extensively by Jan Gehl. 5), 7).

### 5.2 Ground floor uses

Many side-streets in Vienna have experienced the phenomenon of vacant or underutilized ground-floor uses. Driveways, storage spaces or vacant ground-floors are a detriment to public life along the streets. Certain streets that are not vital links in the traffic network could be selected for traffic calming and transformation into usable open space with landscaping and seating opportunities. This would make the ground-floor zone more attractive and reprogram it. With green open space facing the buildings, even apartments with a combined studio space or gallery could become feasible. This kind of combination of uses is already practised successfully in the city of Amsterdam and could inspire similar transformations for quiet streets in Vienna.



Fig. 12: Vacant ground-floor uses in centrally located side-streets that could be closed to traffic, photos Tillner



Fig. 13: The interaction of active ground-floor uses with the adjacent streets and squares is illustrated in this sketch of a square in the Medina of the city of Fes Source: 8)



Fig. 14: The proposal for a square in front of the subway station instead of a street, source Tillner & Willinger 9)

## 6 TEMPORARAY ACTIVITIES IN THE PUBLIC REALM

Successful public spaces are used by people all the time for activities usually carried out indoors, such as playing an instrument or practising sports. In Asian cities with much higher densities and smaller apartments, these activities regularly take place in the public realm.



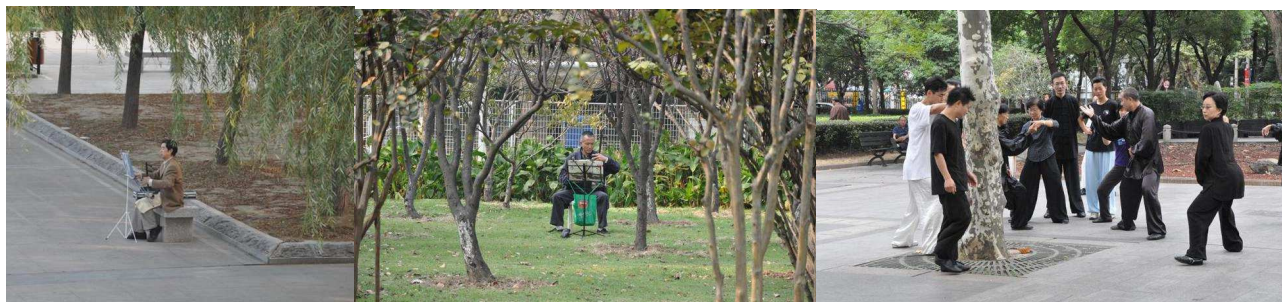


Fig. 15: Citizens playing an instrument or practising Tai-Chi in Shanghai and Wuhan, source: Tillner

As the result of increased densities and smaller apartments as well as the growing number of single households, these activities will increasingly be found outdoors where they can stimulate communication among the performers and practitioners. Temporary street closures at week-ends could stimulate such activities and offer an intermediate strategy.

## 7 CONCLUSION

In order to not only conceive but also implement long-term planning projects that improve the public realm within the built-up city fabric, the strategy chosen must take into account the various existing situations and include a certain level of flexibility to respond and react to obstacles and difficulties.

In the long-term the conversion of currently under-utilized traffic areas into pedestrian zones or pedestrian priority streets, novel connections between the districts, and the introduction of green landscaping should be the goal for the city. Small, easily implemented projects should be selected first to demonstrate the positive effects and to provide case studies. These interventions should happen in urban areas with a high population density and low amounts of existing green open space.

First of all, streets with little traffic could be closed to motorised vehicles and used as public green space then more central streets could follow.

As a result, vacant buildings or vacant or under-utilized ground-floor spaces would be used again and become livelier, communication amongst residents, visitors, vendors and workers would improve, and outdoor activities would proliferate.

## 8 REFERENCES

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