

Mojca ŠAŠEK DIVJAK

## Sustainable aspects of urban renewal

### 1. Introduction

In the last decades, directives concerning the planning of urban development of European cities emphasise the comprehensive approach that demands dealing with cities in the wider, regional sense. Especially important is the sustainable approach (respect for the principles of the Agenda 21, Agenda Habitat), since activities tied to urban processes impose the greatest changes and burdens on the environment. Thus environmental protection strategies have to be tied to social, economic and other strategies (connecting economic development, environmental protection, transport, housing and planning policies etc.). Lately the term »urban renewal« has been given a new meaning; it has become an integral part of the comprehensive approach to revitalisation and reconstruction of all degraded urban areas. It has therefore extended from protected urban cores to the wider urban area.

Cities however cannot be dealt with only in the narrow context of the central built-up areas. They are in many ways connected with their hinterland and should, according to principles of sustainable development, together achieve an ecological-environmental balance. Therefore dealing with the wider functional urban region is important.

Models of regional cities oriented towards sustainability include two strategies:

#### A. Development of the built-up urban area and its historical core

Central urban places demand renewal, revitalisation and transformation of urban surfaces, especially to improve the urban tissue. Often structural changes are also needed, meaning the sub-division of cities into smaller independent territorial units (with pertaining centres). Management of the compact city should follow the following design principles:

- the model should be subdivide the city into fairly autonomous parts, »local centres« or »quarters«, that their inhabitants can experience and evaluate coherently;
- mixed use areas should be promoted, thus changing the former rigid division of urban functions into zones into mixed use zones with various activities;
- rehabilitation of extant urban structures that have to be redeveloped before new surfaces are broken to maintain open areas for agrarian, recreation or other uses;
- changed transport model with emphasis on public transport and advantages for pedestrians and cyclists;
- respect for urban ecology meaning maintaining and improving basic life supporting conditions;
- respect for urban and architectural anthropology that position mankind as the scale of the environment and stresses cultural, sociological and psychological factors.

#### B. In suburbanised and rural areas deconcentrated densening, with smaller concentration centres and good network connections between them. An important principle of the decentralised concentration model is to con-

nect regional structures of urban growth to public transport routes. The principle enables simultaneous regeneration of suburban areas in which poorly organised mainly detached residential single-family homes of low density prevail. Here economic rejuvenation is also important, since during the times of suburbanisation large areas were used to build single-family homes. In this way land was used irrationally, with massive pollution, that also decreased municipal and economic investments into these areas.

### 2. Examples of the comprehensive approach on the regional level

#### 2.1 Comprehensive approach in the development of Vienna

After several decades of stagnation in urban development, mainly because of its position on the West-European periphery and substantial emigration of its population and businesses to the neighbouring regions, in the early nineties new growth began. The population increased to 1,6 million, even employment figures grew. Because of political changes in Eastern Europe, Vienna gained an important role of a city between the West and East. Despite modest population growth it was necessary to provide possibilities for expansion of the Capital City, increasing living standards also meant increased demands for more per capita residential space. Households became smaller, businesses needed more space, more surfaces were needed for transport and parking.

Characteristics of the development plan from 1994 (STEP 94):

- the historical part of the city should remain largely unchanged, with some conservation and partial reconstruction (urban recycling project);
- the decentralised settlement model with several smaller centres should diminish the pressure on the old central part of the city;
- the city expands along densely built-up development ribbons with independent centres connected by public transport, with dividing green belts in between;
- a larger green area runs along the Danube River, green corridors reach into the old city core while the whole city is enveloped by a green belt.

To stimulate new economic growth traffic mobility had to be ensured, as well as an adequate inflow of vehicles into the city. Despite increased public transport capacities individual car use also increased causing regular traffic collapses. There were not enough parking spaces in the inner city, there were more accidents, simultaneously environmental pollution increased. The city's leadership recognised the need to change the cities functional concept and introduce new traffic policies:

- first convince the citizens about the necessity of change and create a beneficial »traffic climate«;
- publicly and clearly present the new scheme and necessary measures for implementation, planning should run from bottom-up;
- involve all possible experts in planning, not only traffic engineers, but also planners, urban designers, architects, sociologists, specialists for communicating with the publics etc.;
- the projects were presented and debated in small plenary groups; in 1993 the new traffic system was adopted by the City Council.

its basic principles are:

- all regional traffic has to run in an integral system;
- public transport is given priority (tram, bus, subway);
- private car use must decrease from the present 37 % to 25 % by 2010;
- more space has to be turned over to pedestrians and cyclists;
- traffic safety has to be ensured;
- constant monitoring and measuring indicators are needed to ensure success.

Because excessive centralisation can cause excessive traffic in the city centre, development of several fairly independent smaller centres with comprehensive supply functions was supported with mixed-use.

## 2.2 Comprehensive approach in the urban development of Strasbourg

During the last decades the whole region encountered problems because of the increase of private car use and stagnation of public transport. That is why the city of Strasbourg decided to prepare a new traffic policy for the region. Its implementation began gradually in the city itself.

In 1989 already 240.000 cars drove through Strasbourg. Out of the 1.000.000 voyages, taken daily in the city region, 74 % were carried out by car, 15 % by motorcycle and only 11 % by public transport. The city and its squares were literally covered with parked cars; traffic was often completely paralysed. The geographical position of Strasbourg and pertaining weather conditions were such, that in Winter air masses didn't move for 70 days and remained motionless and unclean above the city. Motor traffic caused a lot of noise and increased pollution of the air, soil and water, all of which had a negative effect on the peoples health, buildings and monuments were affected. Even the number of traffic accidents was increasing, the main victims being pedestrians, cyclists and children.

In 1989 the city embarked on a new traffic policy, trying to achieve three goals:

- to establish a new balance between various transport modes and thus give more space to public pedestrian surfaces and cycling;
- to introduce more public transport, various types of public transport should be interconnected (train, bus, tram);
- simultaneously prepare and execute projects that would improve the quality of life in the city, such as: new street furniture, paving of squares and pedestrian surfaces, expanding green surfaces, building pedestrian and cycling paths, improving the stations on public transport routes, adding parking for bicycles etc.

In 1992 a new traffic project was completed. One of its basic goals was the decrease of motor traffic in the city centre. Large pedestrian areas were proposed, all of which were easily accessible by the electric tram, an environmentally friendly traffic mode. Kléber square lying in the heart of the city was sometimes completely cluttered with cars, but today it is the central part of the pedestrian zone. It is 2,8 hectares large and connects two historical parts of the town and the famous gothic cathedral. Here different contents mix: cultural, catering and shopping. Similar to other squares, even this one was planted with trees, new paving was done and equipment for pedestrians installed.

Along access roads, before they enter the immediate city centre, large parking areas are provided, adjacent to tram stations. Tram stations are also located next to the railway station and several bus stations. The »bus«+»tram« combination is widely promoted, so that people can interchange from their cars or buses to trams on entering the city. There are ten such »bus«-»tram« stations. The idea was to achieve a high degree of compatibility between the two public transport systems. In places where the tramlines meet with cycling paths parking for bicycles is provided. Bicycles can be taken onboard the trams and trips continued by bicycle at a later tram station. Tickets apply to buses, trams and even parking and can be used in various combinations.

## 2.3 Comprehensive approach in the urban development of Freiburg

Freiburg is an old university town with 200.000 inhabitants and is a regional centre in Southwestern Germany. The town is a market and administrative centre for the Upper Rhineland, covering a large part of the Schwartzwald and reaching into Alsace. It is connected by the federal railway network (Intercity and Eurocity trains on the hour), the highway system and several airports in the immediate vicinity. Because of the bombing in 1944 a large part of the city, mainly the old historic core was demolished. That is why renewal was developed in three directions:

- renewal of the historical town core;
- reconstruction of demolished and other urban »grey« zones;
- new urban areas were developed in the sixties and early seventies; in 1993 activities began to expand into a new city area, Rieselfeld, that had to meet various ecological demands and be connected to the city by tram.

The »eco« city Freiburg is promoting the following sustainable principles:

- new traffic arrangements and relieving the inner city of cars; emphasis is given to public transport, cyclists and pedestrians;
- provision of open public spaces;
- mixed-use surfaces, variety of urban functions;
- respect for urban ecology.

Construction of the ring road around the old city centre in 1969 enabled the transformation of the centre into a pedestrian zone. Squares and streets that were until then occupied by car traffic and parked vehicles were given a new content. Asphalt surfaces were replaced by surfaces with imaginative paving, water surfaces with reconstructed medieval canals were recreated, and new shops, restaurants and other places were opened on the squares and streets. Mixed-use surfaces are maintained in the old city (shops, restaurants and services on the ground floor, apartments on the upper floors, parking spaces in the basement).

Emphasis on urban ecology can be felt in the city. Green surfaces are maintained and enlarged. The pedestrian connection between the city centre and the open spaces of Schwartzwald, with three bridges across the ring road is extremely important. There is a lot of greenery on the buildings, the facades and terraces. There are many glazed balconies and winter gardens.

Traffic planning follows these guidelines:

- decreasing and redirecting the quantity of cars in the city centre;

- parking underground with entrances at the edge of the city centre or parking outside the centre;
- advantage is given to »clean« transport modes, emphasis is on public transport, especially trams;
- introduction of the »environmental card« to be used on all public transport vehicles in the city of Freiburg and the possible later introduction of the »regional card«, covering the whole region.

Good connections are important, especially train-tram (at the central railway station) and bus-tram (several interchange stations). The tram has a well-developed network throughout the city and passes through the old city centre, which is otherwise closed for other motor vehicles.

#### 2.4 Comprehensive approach in the Ljubljana functional region

Ljubljana expanded from its historical core and underwent different levels of growth. The star shaped footprint typifies development of the city; most of the area within the circumferential road is compactly built-in with development extending outwards along the five access roads. In the last decades actually seven development axes have been formed. Settlements that lie around the compact city structure have in fact been formed from massively transformed villages.

Even within the framework of the Ljubljana functional region, the decentralised concentration model includes two strategies:

- developing the compact city and its historical core by renewal, revitalisation, rehabilitation and transforming extant urban surfaces to improve the urban tissue;
- decentralised concentration of settlement outside the area of the compact city.

In the suburban area construction of single-family detached homes prevails as the development type, often functioning as dormitory estates, and needing additional housing units, programmes and employment possibilities or jobs. Daily migration from the suburban space to the inner city is typical, after all, more than half of the population of the Ljubljana functional region lives in the suburban area. Increasing growth of car use is causing problems that can be solved only by introducing modern urban and suburban public transport and promoting a concept in which structural urban growth is connected to development in public transport.

In view of the sustainable aspects of urban development, the central part of the city should be alleviated of pressures from the outskirts with the decentralised concentration settlement model. The model stresses the importance of establishing several autonomous smaller centres along the public transport routes. These centres should be increased to a size enabling the growth of new jobs, services and other activities. Suburban settlement could thus be densened, communal infrastructure improved, supply strengthened and job opportunities provided.

We can establish three types of such urban units, ties to public transport stations: **Type a)** in or adjacent to extant larger settlements; **Type b)** in extant smaller settlements (mainly by traffic crossroads), **Type c)** on the edge of the immediate compact part of Ljubljana

The main characteristics of such neighbourhoods with concentration centres are:

- Development of settlements (on the regional level), tied together with public transport;
- Pedestrian distance from stations on the public transport routes to residential areas, jobs, green surfaces (parks), central areas;
- Creating a system of »pedestrian-friendly« streets, pedestrian scale or size are an important design guideline;
- Variety and diversity of architectural types and price ranges of apartments;
- social diversity;
- preservation of high quality habitats, protection of high quality open spaces;
- reconstruction of dilapidating zones;
- emphasis given to public communal spaces, that should become the central places of neighbourhoods
- stimulating renewal and development of extant settlements along public transport corridors.

Certain central programmes, above all shopping and offices, should develop in the central parts of these new neighbourhoods. Their development is possible on green sites or as additions to existing programmes in the settlements.

### 3. Conclusion

The sustainable model of the regional city includes the development of the central compact city and decentralised densening in suburban areas. One of the basic principles of the decentralised concentration model is the tying of regional urban development structures with the development of public transport. Building construction is concentrated adjacent to strategic points along the regional public transport routes. Thus smaller centres are created (with higher density) along the routes, combining various urban functions: work, residence, shopping and leisure. The central point of such a centre is the public transport station, around which all the programmes are placed. With the enforcement of the model we could reconstruct large areas with dispersed, detached residential housing, typical for suburban areas. Settlement density would be increased and neighbourhoods created with additional programmes. The model of decentralised settlement concentration can also affect diminishment of traffic in the central part of the city, thus also improving its living qualities.

As illustrated on examples of European cities, even Ljubljana should, as soon as possible, have to adopt the policy of implementing comprehensive regional urban development and introduce new traffic policies. They range from creating a responsive atmosphere to changes amongst the population to comprehensive planning with public participation and gradual fulfilment of planned changes.

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Doc. dr. Mojca Šašek Divjak, architect, Urban Planning Institute, Ljubljana  
mojca.sasek@urbinstitut.si

#### Pictures

*Picture 1: The urban development plan from 1984 (STEP 84) was the basis for the development plan in 1994 (source: Vienna 1995, 15)*

**Picture 2:** Vienna; the model of parking by area (source: Vienna 1995, 121)

**Picture 3:** Vienna; renewal of the whole block of buildings on Odeongasse with added green surfaces, maintained courtyards and calmed traffic (source: Vienna 1995, 32)

**Picture 4:** Strasbourg; comprehensive approach in the plan of Strasbourg: new organisation of traffic, parallelly run and well thought out design of squares, parks, embankments (top); expansion and »greening« of tram lines (middle); segregation of traffic for private cars meant that new surfaces were gained for pedestrians; Kleber Square with an area of 2,8 hectares, formerly cluttered with cars, became the central area of the pedestrian zone (bottom) (source: CTS 1994)

**Picture 5:** Strasbourg; trams connect the pedestrian zone where they drive at lower speeds (left); cyclists can take their bicycles with them on the trams and leave them at parking places, some of which are guarded, near the tram stations where bicycles can also be rented (top); commodity in transport also means easy access, low entry trams have a special shelf for carriages and bicycles (right) (source: CTS 1994)

**Picture 6:** Freiburg; rehabilitation of the historical town core

**Picture 7:** Freiburg; design of pedestrian surfaces (squares, roads, courtyards): interesting paving, street furniture, wells, greenery

**Picture 8:** Freiburg; connecting the historical town core with the green hinterland with pedestrian bridges

**Picture 9:** Ljubljana, model of decentralised settlement concentration in the urban area – potential sites for neighbourhoods with concentration centres tied to the long-term development of suburban public transport – suburban and urban buses, suburban and urban tramways (source of traffic scheme: PNZ, 1995)

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Živa DEU

## Renewal of built structures in contemporary urban management

(new directions and the reality in Slovenia)

### 1. Introduction

Negative changes, tightly connected to relations within the society and its operation are manifested even in the living environment of variously sized settlements. In the analysis titled *The environment in Slovenia* it is stated that more than half the national population live in urban areas (50,5 %) and that »these are the most polluted ecosystems, whereby the pollution of air, water and soil is highest« (Velkavrh, 1999). Because of the evidently degraded living conditions in cities, towns and even smaller settlements, in some cases reaching alarming extents, the international community has formulated special suggestions for the development of cities and other settlements (Istanbul declaration and Agenda Habitat, adopted at the 2. UN conference on human settlements, Istanbul, 14th July 1996). They were formulated according to adopted principles about the comprehensive spatial reality and responsible sustainable development.

In the design guidelines, future – sustainable – planning of the living environment is oriented towards improvement of the existing condition. Settlement expansion is supported only after redevelopment of the existing built structures is successfully completed.

With these new directives, renewal in all its specific types, from the renewal of cultural heritage to renewal of all, even new built structures (integral, comprehensive protection of built heritage) and the rehabilitation of degraded urban areas (reconstruction of poorly used space), has become an indelible, often even most important part of contemporary urban design of settlements.

### 2. New directions and management of the living environment in Slovenia

Renewal as the starting point in spatial management

#### 2.1 Normative and value basis

##### Normative basis

New international guidelines, coined »new« although they are older than a decade, have been integrated as general articles in various Slovenian normative documents dealing with various aspects of spatial management, development or the living environment. They are: the Constitution, laws and by-laws (Law on spatial management, Law on development of settlements and other spatial development acts, Building law, Law on environmental protection, Law on the protection of cultural heritage etc.), planning and development acts (national spatial plan, municipal – local plans, various planning documents), but also ratified international agreements, treaties and other documents.