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The distinct structure of the city: The case of Ljubljana

1. Introduction

The spatial development concept for Ljubljana [1] will soon be completed. More than one hundred experts from the local authority and contractual companies participated in its preparation. The need for producing a new concept was conditioned amongst other by social changes towards globalisation, rapid development of communication and information technology, increasing competitiveness between cities, democratisation of society, increasing ecological consciousness, new professional paradigms and changes in lifestyles and patterns. These are just some of the reasons demanding and dictating the development of new planning, design and management methods and establishing a new development concept. The concept should be responsive to quick changes and efficient in solving problems of future development and urban transformation.

However, when speaking about responsiveness to changes and enabling all kinds of innovation in cities, this doesn't mean, that everything goes. Especially not in a city like Ljubljana, that has relatively well preserved historical heritage and a determining geographical basis. In general both are physically defined by built and open urban spaces. Theoreticians of urban development argue that these places are under severe pressure of increasingly mobile capital and new urban hedonism, both leading to global uniformity of shapes and programmes. Places are becoming mutually undistinguishable, especially if urban planners don't pay due respect to distinct elements of the urban structure or recognise it's changeable parts.

Boris Podrecca would claim that robust or stabile parts of the built space, such as railway stations or airports, have ceased to be only utilitarian objects, but are changing into places of communication and culture. Vacant factory buildings and army barracks are becoming new-age temples of leisure and knowledge, while open spaces are again settings for social interactions and collective identity, from the neighbourhood to the national level. Functions are being mixed, we can argue for new hybrid urban forms and architecture, cities are changing, their distinct structures are being improved.

Rem Koolhaas would claim the contrary, open spaces of streets and squares are disappearing, space is becoming fluid and irrational, while particular architectural objects are artefacts and a substrate of urban components. The final product can only be an autistic and dysfunctional space and cities Babylonian masses of disconnected pieces. Because of such development the open space for interaction is moving away from the uncommunicational and aggressive environment of streets, squares and parks into the controlled space of the internet and gated, protected semi-public spaces of shopping malls and transport terminals.

1.1 Management of urban space

In the last fifteen years attitudes on city management and design, including open spaces, has changed significantly, especially in historical cities. As early as 1987 an international document on the protection of historical cities was adopted.[2] It brought many novelties to theory and practice of preservation of historical cities and planning their development. For the first time a document prescribed that public participation is compulsory in rehabilitation processes, preservation and rehabilitation of heritage a constituent part of urban planning and conservation programmes integrated in urban design and planning documents. Since then rehabilitation and preservation of urban heritage have also become tasks of urban planners.

The early eighties saw the simultaneous recognition of the concept of sustainable development, implying such development, that would prevent the destruction of the urban environment, maintain ambiental values for future generations and ensure the increase of living quality for all inhabitants of various social groups throughout the city.

1.2 Urban environments

With the Green paper on urban environments[3], adopted in 1990, sustainable development was given an institutionalised form. The paper demands repeated research of zoning policies and the introduction of new strategies in planning cities. The latter should promote mixed use, development of urban identity, protection of cultural heritage and nature in cities and the formulation of urban policies ensuring active public participation in urban planning and development. In the language of urban planning this means return to traditional urban forms and functions. Since the eighties, and especially the nineties, in the USA the approach was named »New urbanism«[4] and »New classicism or renaissance« in Europe[5]. Both approaches advanced from theory to practice[6]. They have been applied in different fields of urban design and architecture: urban reconstruction (e.g. Brussels[7], Paris), managing suburbs and planning new towns (e.g. England, USA[8]), reurbanisation of particular parts of cities (e.g. Paris, Berlin, London). New urbanism gained international character. The rationale is harmonised planning of urban development with classical, archetype architectural forms tested throughout history, and not monumental architectural landmarks. Thus building of cities is again becoming a comprehensive social, cultural and political process aiming at continuing and adding to the cultural tradition of Western humanistic society.[9]

Even recent post-modern theoretical approaches devised by sociologists, but also real development plans for cities in developed countries are increasingly focusing of issues of **maintaining, strengthening and transforming or even establishing completely new social-spatial urban identities**. Mutual distinction and identification between particular cities, as well as their internal differentiation, are key development demands in European integration (and wider globalisation) processes. First, because changes in lifestyles and broadened functions of living environments enabled by tele-communication technology have relatively diminished the importance of urban (mono)centrality. Second, because rapid European (global) integration processes are giving competitiveness between cities new dynamics. Preserving and creating new recognisable urban identities is actually a

response to global standardisation that is causing uniformity in urban-spatial arrangements, called non-places by certain critics (Augee, 1999, Kos, 2001).

The level of *reality* and *specificity* of a particular city is therefore lower if the quantity of elements common to all cities in it is greater or what is the level of its possible distinction from other cities. On one hand urban managers and planners have to strive for enforcing globally comparable and constantly improving universal standards for public and open spaces, since they are demanded by inhabitants, companies, institutions, but also visitors, tourists etc. On the other hand they have to ensure that by having a different, distinct, particular and unique identity, their city supports and enforces its comparative advantages, thus becoming attractive for local, regional, national and supra-national programmes. Both demands stimulate a city's global orientation, disallowing copying or accepting already known approaches.

A review of successful European cities, e.g. Barcelona, Paris, Berlin, Birmingham (Dimitrovska, 1994), shows that they are aware of the inter-dependency between economic growth (and status of European city) and planned urban environment and possibility for defining the role and identity of the city in Europe. For this reason they devised comprehensive approaches to urban planning with strategies and long-term development design visions supported by administrative, planning and financial mechanisms, above all for harmonised urban rehabilitation and development and for the protection and strengthening of the city's image and identity, as well as its typical parts. The quest for a city's identity as a whole and of its constitutive parts and its enforcement ultimately require a creative approach. A city will be more successful if three conditions are managed creatively (Kos, 2001):
– selective ties between relevant partners (private and corporate, institutional and other urban publics);
– modernisation of all aspects of urbanity in the direction of European (global) standards (learning, accepting and adapting »best foreign practices«);
– strengthening and developing distinct identities within the city and presenting a comprehensive and harmonic urban identity outwards.

1.3 Urban heritage and monument protection in Slovenia

In recent Slovenian history of urban planning on one hand and the protection of monuments on the other, the importance of morphological analysis of urban space was typically neglected. These analyses, if at all, where most often used in the process of urban planning to prove previously designed concepts of urban development and were very rarely the professionally argued basis for planning itself. Protection of monuments was always more involved with protecting particular architectural monuments, while morphological analyses were uncommon. In some cases they were prepared as expert findings for rehabilitation projects in historical city centres.[10] The protection of urban planning heritage was in practice mainly limited to medieval town cores and was almost unheard of in newer urban areas. It lacked the necessary theoretical backing and adequate instruments to affect decision making at higher levels. The Law on planning settlements and other development[11] from 1984 did in fact proscribe an analysis of created conditions

as a compulsory component of expert documents for development plans, which should include built structures, cultural and natural heritage and particular qualities of urban ambiences, but these were seen as a necessary »evil« and were generally poorly executed. If the formulation of design measures and conditions, as well as monument protection criteria was until recently somewhat difficult because of lax theoretical backing from both professions on the heritage of historical urban planning, today, when views are in many points equal, there are no reasons to leave this important field to circumstance and individual taste.

The planning profession is turning back to the traditional city in the same way as the conservation profession is formulating clear opinions on procedures and methods for protecting the historical heritage of cities. Research of urban form as a result of historical development can lead to a clearer definition of the distinct city structure and is therefore an important modern planning starting point.

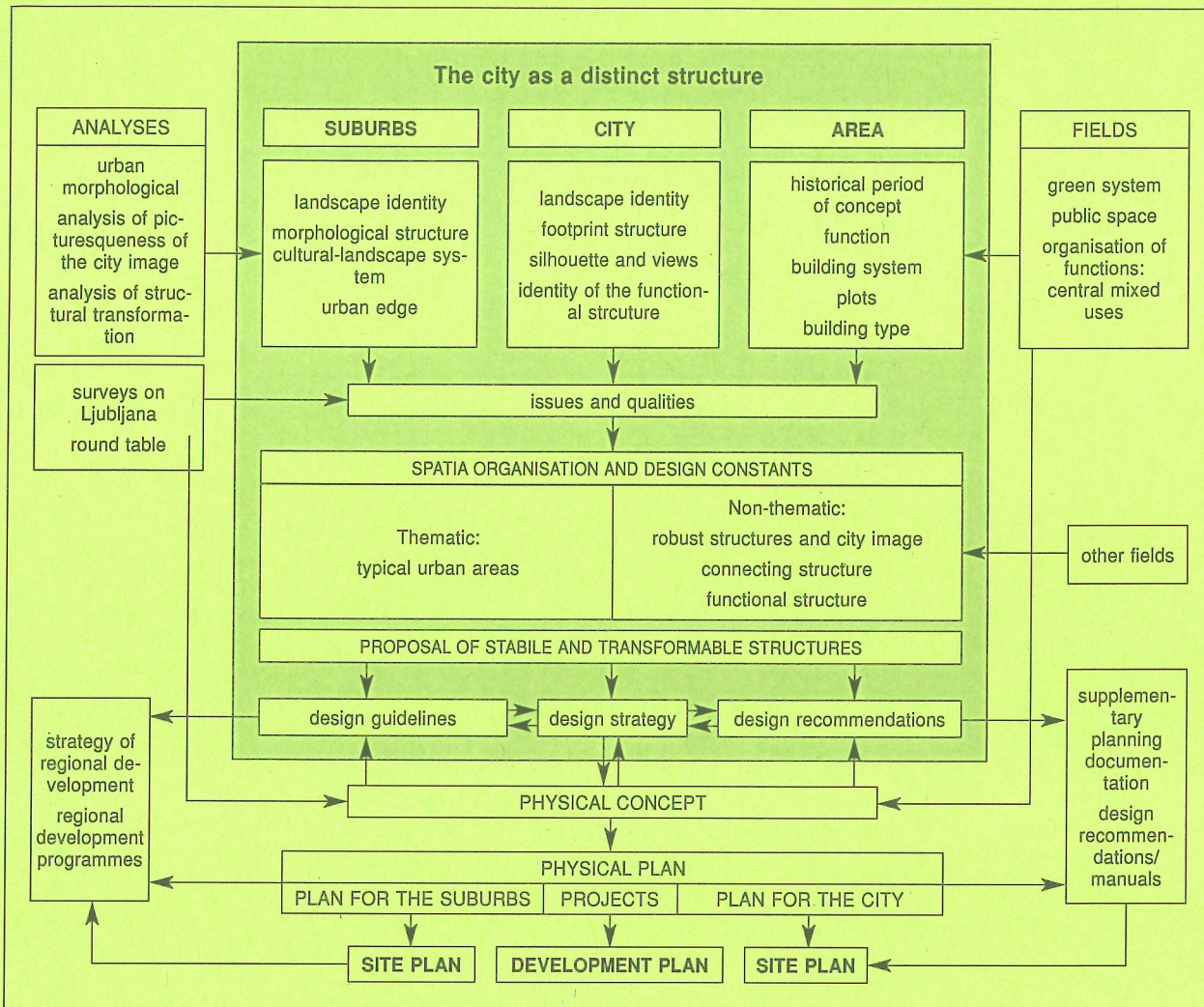## 2. Methods for recognition of the urban form

Many terms for describing urban forms can be found in literature (urban design, urban composition, design structure, urban structure, urban architecture), all tied to various professions, but essentially synonyms with very unclear differences.[12]

Urban form is perceived as a two-dimensional picture or three-dimensional spatial image. The two-dimensional image is determined by a city's footprint, i.e. relation to geographical characteristics, street network, plots texture, system of open and public spaces, ratio of built-up space to vacant space. The three-dimensional image is determined by architecture, building system and »city-scape« (silhouette).

Urban form is defined at various levels as a part relating to the higher regional or geographical level and as a whole, as well as a sum of elements at the lower level, meaning the urban tissue, city quarters, streets, squares and architecture. None of them is autonomous; none can exist alone devoid of relations to the others. Parts are always dependant of the whole and any urban form will change according to the context where it is manifested.

Context, building in context, maintaining and developing urban and architectural continuity are all important planning proscriptions, which direct the design of physical structures appropriate to characteristics of: the site (topography, landscape, city image, city-scape and views), land use and scale. The main features and qualities of traditional cities are their distinct pattern and complexity within the distinct order. Popular and attractive cities are those in which the contextual approach prevailed in development and rehabilitation (Tibbalds, 1992). Before we begin planning the development of a particular site we have to perform detailed analyses of the (present and potential) spatial context, including historical development, present image and significance, planning status, social and economic role.

A city plan should contain guidelines for particular levels of urban development, thus in continuation a methodology is presented, dealing with the identity of a city's structure at three levels: the functional region (suburbs), the city as

The city as a distinct structure

ANALYSES	SUBURBS	CITY	AREA	FIELDS
urban morphological analysis of picturesqueness of the city image analysis of structural transformation	landscape identity morphological structure cultural-landscape system urban edge	landscape identity footprint structure silhouette and views identity of the functional strcuture	historical period of concept function building system plots building type	green system public space organisation of functions: central mixed uses
surveys on Ljubljana round table				

issues and qualities

SPATIA ORGANISATION AND DESIGN CONSTANTS

Thematic: typical urban areas	Non-thematic: robust structures and city image connecting structure functional structure	other fields

PROPOSAL OF STABILE AND TRANSFORMABLE STRUCTURES

design guidelines	design strategy	design recommendations

strategy of regional development / regional development programmes

PHYSICAL CONCEPT

supplementary planning documentation / design recommendations/ manuals

PHYSICAL PLAN		
PLAN FOR THE SUBURBS	PROJECTS	PLAN FOR THE CITY
SITE PLAN	DEVELOPMENT PLAN	SITE PLAN

Scheme 1: The distinct structure of the city in the city's master plan

such and the urban tissue. The methodology deals with the urban planning aspect, social aspect and integration of the particular topic in the preparation process of the spatial development concept of Ljubljana.

Comprehensive integration of the city as a distinct structure, i.e. the city's identity in the process is illustrated in the attached scheme (scheme 1).

2.1 Urban planning levels for recognising the urban structure

A. Regional level: the city and architecture as a reflection of nature

Throughout the history of cities the truth is that human attitudes to nature have been changing. In the oldest times of settlements, humans were subordinate to nature. Proof can be found in the oldest urban settlements that were totally integrated in the geographical-topographical context. During the periods of the renaissance and baroque nature was already mastered (geometrisation of nature and landscape in large baroque parks), while the period ensuing with the in-

dustrial revolution saw its intensive exploitation. Topographical features (relief, rivers, vegetation, climate, wind), since ancient times decisive for the creation and development of a settlement, suddenly became obstacles which had to be conquered by using technological resources (e.g. the building of roads with tunnels and viaducts, changing of river courses, levelling irregularities of the terrain etc.). The consequences of such actions and relations to nature were often excessively damaging, in numerous places changing the ecological balance, thus not only damaging the physical features of nature itself, but also general living conditions although they were in fact executed to improve both.

The distinct image of the city in a region is determined by:
– landscape identity,
– morphological structure of the cultural landscape system, settlement pattern,
– relations between the built-up city structure and landscape hinterland – the city silhouette, city facade

B. Urban level: the city as an entity

The city as a whole is a system in which operate mutually interdependent social, economic, technological, political

and symbolic sub-systems. The city however when compared to architecture is a dynamic system that can exist for centuries even though it's primary concept and purpose have changed and been exhausted. Cities change constantly accepting new contents and forms, in short, they have an unlimited capacity of adapting to new circumstances. When analysing a city, as a whole, mutual relations between particular elements of a city's form, such as quarters, streets, squares, architecture, and the city, are more important than the elements themselves. After all these elements determine the form of the settlement in various topological and geometrical relations throughout history.

Ljubljana has a very clear and legible urban structure, one hand determined by its geographical position and relief and historical conditions on the other. It is manifested through the footprint of the city, bur also its three-dimensional image.

The distinct city image is determined by:
– **landscape identity**: geomorphologic and landscape characteristics (topography, hills, riverbanks), spatial structuring;
– **layout structure**: thematic structures (general urban tissue composed of homogenous urban tissue, typical for particular cultural and historical periods of development, distinguished by their plot patterns, building typology and functional characteristics, important for identification and development of typical urban areas) and non-thematic structures (durable structure of urban forms, composed of elements of nature and cultural/historical heritage and separate elements of urban physical structures that have importance for collective memory, thus providing spatial identity with it's main connecting system (public, built, green, open spaces) and cognitive or orientation system (monumental space));
– **typical silhouette and important views** (views over natural and manmade spatial landmarks);
– **identity of functional structures**: type and distribution of particular activities, i.e. social patterns and hierarchy typical for specific periods of the city's development (historical context).

C. Level of urban tissue: typical urban areas

The city form is a result of historical development. Even the modern Ljubljana, despite modernisation and planned development during the last century, still shows clear traces of urban development through history. The city is a living organism that grows and changes through lengthy time periods. Amongst all the elements of urban form the most durable are road routes that can remain unchanged for centuries (e.g. Slovenska and Dunajska Street are prehistorical) and the plots system. Therefore it is not surprising that we can still recognise plot boundaries in the city layout that are almost ancient. The most changeable structure is the building tissue, which changes correspondingly to human generation changes.

The city tissue is composed of quarters, streets, squares and architecture, i.e. elements of urban form. Gregotti[13] defines it as a part of urban form that evolved through the process of merging building types, Levy[14] as a system of physical elements composed of road network, plots, architecture, vacant space and nature, while Schulz[15] is very straightforward in describing it as quarters, streets and squares integrating various architecture as the lowest ele-

ment of urban form. City tissue is therefore the built space of architecture, joined according to principles of topography or geometry into open spaces: streets as dynamic and squares and parks as static open urban spaces.

Based on various historical and morphological scales typical urban areas that have distinct urban design and architectural qualities, can be identified in the city structure, such as:
– specific or homogenous building structures that have preserved traces of historical structures, which are important documents about specific periods of development or urban planning ideology;
– level of preservation;
– urban design and architectural qualities giving the city identity;
– cultural and aesthetic values, e.g. urban design monument, heritage or urban *ensemble*;

These areas are defined as basic distinctive structures of the city. In these areas rehabilitation should have the advantage over reconstruction and should be executed with respect to established urban design and architectural qualities (renewal of monuments, infrastructure, harmonisation with new urban planning and architectural standards etc.). For all of them it is possible to determine general conditions and measures for future planning, with reference to detailed morphological analyses and guidelines on protection of cultural heritage.

In the physical structure of Ljubljana it is easy to discern several typical urban areas whose urban design and architecture give the city identity while simultaneously disclosing historical development. They are identified according to different criteria, such as:

• **Age**
The main criterion for defining typical urban areas is the age of the urban planning layout. In the historical development of Ljubljana there were five decisive periods that gave these areas their specific character:
– 1200–1850, from the founding of the city until the construction of the railway when the city merged with the suburbs
– 1850–1918, when the city grew to the limits of the present city centre
– 1918–1945, when the city started to grow intensively across it's administrative boundaries and merged with more distant villages
– 1945–1960, the period of post-war renewal and planned economy that gave advantage to the development of industry and housing
– 1960>, the period of market economy supporting growth of central functions and stimulating more cost efficient use of municipal property.

• **Function**
According to their functions urban areas are divided into areas for housing, industry, central functions etc. In different historical periods, different functional areas can be identified. Certain functions nevertheless changed in history. For example the old city core and its suburbs were functionally mixed areas, where residential and production functions coexisted under the same roof. Zoning appeared as late as the nineteenth century. After the Second World War functions urban functions were strictly separated, however during the last decade tendencies for establishing mixed areas are gaining in impetus.

• **Plots and building system**

Plots, as units of property, are the oldest visual manifestation of human actions in space. Plots are therefore the most evident indicator of development of human settlements and simultaneously the most robust structure in a city's layout, whose lifespan often exceeds that of architecture. Owning land decisively affected the growth of urban tissue, often more significantly than building plans or urban development concepts. The building system is the method of building the city and is defined by method subdivision of plots and their sizes, method and density of building on them, the relation between built-up and vacant land, prevailing building type and horizontal and vertical parameters. The building system manifests certain historical periods of urban development. An important measure is also, whether an area was built according to a uniform urban design or architectural concept (project) or not.

1200–1850	(1a)	**Medieval city core:** within the city walls
	(1b)	**Medieval suburbs:** Šempeter, Poljane, Karlovška, Gradišče suburbs
	(1c)	**Urbanised villages:** Vodmat, Sp. Šiška, Trnovo, Krakovo
	(1d)	**Village centres:** historical villages
1850–1918	(2a)	**Compact city of the 19. century:** within the inner ring road, comprising Njegoševa, Masarykova, Prešernova and Groharjeva Streets
	(2b)	**Villa quarters:** between Tivoli and Prešernova Street, Rožna dolina, Poljane suburbs beneath the castle hill
	(2c)	**Complexes of public functions** (e.g. hospitals, army barracks and industrial areas built according to a uniform building concept): hospital on Zaloška Street, tobacco factory, infantry barracks on Tabor etc.
1918–1945	(3a)	**Organised housing estates**
		– on previously regulated plots in the city centre (e.g. Dukič housing estate, business centre between Cankarjeva and Štefanova Street)
		– on newly prepared plots outside the city ring (e.g. municipal housing colony in Bežigrad, Ilirija housing blocks in Šiška etc.)
	(3b)	**Villa quarters and organised detached housing** (co-operative colonies in Bežigrad, Vič)
		– within the present road network in Rožna dolina, Bežigrad
		– co-operative colonies in Bežigrad, Vič
		– labourers« suburbs (e.g. Zelena jama, Galjevica, organised labourers colonies in Bežigrad, Vič)
	(3c)	**Complexes of public functions** (e.g. industrial buildings, school complexes etc.)
1945–1960	(4a)	**Organised housing estates** (e.g. Litostroj estate, Savsko estate)
	(4b)	**Complexes of public functions** (e.g. Fairgrounds)
after 1960	(5a)	**Residential neighbourhoods and organised housing estates**
	(5b)	**Local centres** (e.g. Šiška, Bežigrad, Moste)
	(5c)	**Complexes of public functions** (e.g. university centre in Bežigrad, Clinical centre)

Scheme 2: Typical homogenous areas in Ljubljana

Following these criteria it was possible to identify 15 typical areas. Based on detailed morphological analysis general measures and conditions for their further planning were defined (scheme 2).

2.2 The social aspect in recognition of urban structure

The specific starting point in the sociological aspect of researching the city's identity places is the hypothesis that in Ljubljana there is a relatively large gap between spatial variety and established social identities. For this reason often problems are encountered, namely conflicts because of incompatible uses of urban space. The solution of course isn't in hindering the emergence and manifestation of different identities, but in **stimulating differentiation of primarily public urban spaces** and in more flexible management of different uses of the same place. Sociological evaluation is therefore an expert finding for those planning solutions that will enable harmonisation of social and spatial identities. The main issues are (Kos, 2001):

– under what conditions do »**identity public spaces**« emerge in the city, that can in circumstances of post-modern territorial fragmentation, de-urbanisation, dynamic urban transformation etc. develop into nodes and/or points of difference;
– how to stimulate the creation of those **representative social places** (in theory seen as urban settings – stages) that have city building potential and are a kind of anchor or support of endangered urbanity.

Put simply, sociological analyses of the vitality of selected urban areas can enable directed (planned) protection and stimulation of these city building processes in presently »endangered« parts of the city.

Suitable answers to the raised issues are simultaneously the conditions for successful development and competition between cities on the regional, national and supra-national level. Sociological analyses of urban spatial identities add expert guidelines supporting planners in the establishment of **differentiated identities within the city and integrative identities outwards** and can foster:

– **the elaboration of new methods and forms of spatial diversification within the city**, which should in practice manifest itself as dynamic rearrangement of social, functional, symbolic and other aspects of specialisation of particular urban places (e.g. quarters, estates, neighbourhoods, typical streets), enabling the establishment of specific identity settings (stages) in the city;
– **the elaboration of new methods and forms of spatial integration of the whole city**, which should in practice manifest itself as a common, comprehensive (distinct) identity in relation to other cities in Slovenia and above all, comparable cities outside the national boundary – in the European urban space.

3. Issues in the recognition of Ljubljana's structure

Based on the previously mentioned analyses, fieldwork and spatial evaluation issues with negative influences on the city's image and distinct urban structure were defined. They are:

• Bad planning solutions:
– the routes of railways, mainly from Primorska (West) – Vič–Rožna Dolina–Center

– the railway station and extensive mastering yard on Masarykova Street
– preserved functioning in old industrial zones in the inner city ring (e.g. The Union brewery, Tobacco factory, Kolinska)
– preserved old industrial zones on attractive sites (e.g. Brdo, Totra by the river)
– building on the riverbanks, poor design and accessibility (e.g. riverbanks of Ljubljanica, Gradaščica, Gruber canale, Sava)
– disrespect of development potentials of the East and West ring road
– unresponsive planning solutions for propulsive production and supply areas (i.e. 'edge cities' BTC, Koprska, Črnuče)

• Incomplete projects:
– continuation of Barjanska Street to Slovenska Street
– completion of the inner city ring
– construction of the »Masaryk Boulevard«
– changed use and renewal of industrial zones, buildings in the city centre (e.g. Rog, Electrical power station)
– changed use and reconstruction of industrial zones near the city centre (e.g. Klavnica – meat packing plant)
– planned and unfinished building on particular sites in the city centre (e.g. NUK – library, Zvezda/Knafelj passage, Šumi, Komenskega Street)

• Problems in the distinct urban structure:
– unplanned/distinct city entrances: crossroads of the ring road and main access roads
– badly designed entrances to the city core: crossroads of the inner city ring with the access roads
– unfinished, established facades around the inner city ring (e.g. Vrtača, historical city)
– poorly developed and designed local centres, mainly along the main access roads (poor legibility and orientation)
– poor facilities in local centres devoid of identity (e.g. Rožna dolina, Rudnik, Jarše, Sostro, Zalog, Vižmarje, Tacen-Šmartno-Gameljne)
– poor building structure along the main access roads (e. g. Dolenjska, Tržaška, partly Celovška, Dunajska)
– spontaneous building of the Southern city edge
– visual untidiness and diversity of neighbourhoods
– spontaneous settlement of the marsh (Barje)
– abandoned gravel pits, quarries and other degraded areas (e.g. Podutik, Stanežiče, Polje)
– poorly managed allotment gardens
– disrespect for natural and cultural heritage
– uncontrolled growth and merging of built tissues of village settlements into amorphous agglomerations
– substitute buildings destroying the built heritage
– inadequate actions in village centres
– loss of structure of open spaces and accessibility to recreation grounds because of uncontrolled development (e.g. Rožnik, Golovec, Šmarna gora)
– illegal dumping of waste, especially along the rivers Sava and Ljubljanica.

4. The concept of the city as a distinct structure in the master plan: design strategy

We can establish that economic growth of cities in Europe and in globalisation processes inherently depends on the state or quality of the urban environment and defined role and identity of the city. Cities strive to have a different, distinct and unique identity and enforce their comparative advantages thus becoming attractive places for regional, national and supra-national activities.

During the preparation of the plan it is therefore necessary to clearly define Ljubljana's comparative advantages and its role in the European urban network and network of Central European cities. These should be defined in detail in the Strategy of sustainable development and research dealing with competitive advantages of the city. The rationale for future development of Ljubljana from the aspect of physical structures is based on the concept of sustainable development, which has to »satisfy social, environmental, political and cultural needs« (Frey, 1999, Rogers, 1997). Rogers would continue and say, that a sustainable city is multi-layered: just, beautiful, creative, ecological, compact, polycentric and varied (Rogers, 1997).

According to definitions by various authors, general measures for sustainable building of a distinct structure for the city and city region are structured according to physical, environmental and ecological, social and economic and visual perception qualities (scheme 3).

Physical conditions
Satisfying physical needs of the inhabitants concerning living and work, education and training, mobility and communication, accessibility to services and facilities

– controlled development of urban land; compact city and dispersed concentration; inner city development, compacting, renewal, reconstruction, revitalisation of neighbourhoods, gentrification of the city centre;
– acceptable high population densities enabling cost-effective local services, vibrant settlements and efficient pubic transport;
– varied city, mixed-use environment concentrated around public transport nodes, accessible on foot giving a sense of community and creating vibrant places;
– adaptability to changing social and economic circumstances[17];
– access to efficient public transport, hierarchy of services and facilities, green and sports-recreation grounds.

Environmental and ecological conditions
– *security, safety and protection*
– environment free of pollution, noise, crime;
– minimising ecological effects;
– symbiotic relations between the city and suburbs.

Social and economic conditions
– *Stimulating social environment, sense of community and belonging, possibilities for creativity*
– mixed social structure;
– local autonomy, possibility for communities to establish their own administrative sub-units or neighbourhoods;
– self-sufficiency, not only in consumption, but also production of goods.

Visual perception qualities
– *aesthetically pleasant environment, place of culture*
– the comprehensive city image and distinguishable identities of particular areas, neighbourhoods, estates;
– ensuring a sense of centrality and place.

Scheme 3: General criteria for sustainable development of the distinct structure of the city and city region

5. Conclusion

The distinct city structure or elements defining it have to be established on particular levels of the structure's organisation and complemented with research results of the urban green system, public places and organisation of above all central functions (e.g. local centres and nodes of mixed uses). Thus it is possible to distinguish the key issues and qualities in the city's identity and checked by public participation processes. Clear definition ensures better coexistence in directing and controlling the growth of urban structures (mainly context and identity) in development and rehabilitation of the urban environment and continuity in designing the city's image, from the general planning level to particular sites and architecture.

According to globalisation theories all economic and information infrastructure will be concentrated in several of the largest global cities. At that time many smaller cities, such as Ljubljana, will be cleansed of all non-functional baggage and will be able to rediscover their lost (forgotten) identity, as well as insist on their uniqueness.

The proposed concept of treating the city as a distinct structure in the master plan conditions the preparation of design strategies at three levels: the suburbs, compact city and territory. Because of the specifics of the previously defined typical areas, the concept proposes one more level for actions on the level of the spatial plan, which are the planning-design units. These are areas that have to be planned comprehensively: e.g. the city centre, Lower Šiška, South Bežigrad etc. For these areas design guidelines have to be prepared, that can be later integrated in suitable detailed urban planning documents for the city, as well as the suburbs.

The presented discussion on the distinct urban structure doesn't directly apply to open spaces. Open spaces are nevertheless indirectly integral parts of any discussion on urban development as a whole and of its particular parts. An open space is not a fragment that can be dealt with separately, without considering its limits, extreme edge. It is a space of connections, built urban syntax or an intentionally left over void with its own rationale.

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Notes
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12. A review of planning documents discloses total confusion in the use of professional terminology. There are also difficulties in harmonising terminologies of particular/different professions. Therefore one of the more important tasks in the preparation of the new spatial development concept for the Municipality of Ljubljana is also the establishment of a uniform terminology when dealing with the spatial concept at all levels of government or administration.
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14. Levy, A.: Morphologie urbaine: theorie et pratique, une approvhe semiotique, Geneve, 1985.
15. Norberg–Schultz, 1980
16. Frey, 1999, Rogers, 1997, Dimitrovska Andrews, 2000.
17. An extremely important but hard to achieve criterion, since it demands prevention of difficulties for changes, growth or diminishment.

Illustrations:

Picture 1: *Historically conditioned morphological patterns in Ljubljana with emphasised spatial and ambiental identity: typical urban areas*
Picture 2: *The distinct structure of the city – morphological concept*
Picture 3: *Historically conditioned urban design strokes of the city centre in Ljubljana*