Sustainable Urban Development Through the Empowering of Local Communities

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1. Introduction

The financial, economical, social and ecological crysis that violently outburst worlwide after 2008 is the result of structural challanges, such as globalization, climate changes, the pressure on resources, migrations, social exclusions, demographical changes, the ageing of population, mobility, etc., which all have a strong urban dimension, which was determined, at an international level, mainly by the "SPRAWL"-type growth (Saunders, 2005), which only encourages the economical side of the development. In order to overcome this crisis, we propose, as short, medium and long-term strategies, the analysis and the solutions that we found for the problems of the city of Timişoara (Romania). These studies take into consideration the works of C. Butters (Butters, 2004), who states that regional sustainable development cannot be achieved, and therefore neither that of each city, community or neighbourhood, without gradually improving all of the following aspects, at the same time: the social one, which brings social diversity, accessibility, identity, security, variety, involvement and sociability; the economical one, which can be achieved by cutting revenue expenditure, improving functions, diversifying activities and adjacent financial structures, services and communications, by management and flexibility; the ecologic one, through a more harmonious use of land, through biodiversity and bio-climate, by producing non-pollutant energy, re-naturalising the water cycle, recycling, adequate accessibility and by improved overall health.

The desire to exit this crysis has determined, throughout the majority of the European cities, new types of strategies, with objectives, development directions and clear measures, that are adopted, with small differences, all across the European Union, and that accentuate the importance of good governance at a European/national/regional/local level. From our point of view, however, good governance applied only to those four levels, as stated in the European documents, is not enough; we believe that the local level should be divided in a number of subunits. For the four initial levels of governance, the research methods are clearly formulated, according to the 2007 Leipzig Charta. Solving the problems regarding social exclusions, structural changes, the ageing of population, climate changes and mobility is the main theme of this European document, which hopes to lead to economic prosperity, social ballance and a healthy environment. In this document, the prosperity mentioned above depends on an increased attention paid to the subunits of the local level, which

includes "*the underpriviliged neighbourhoods, in the context of a city as a whole*" (Leipzig Charter, 2007). It is clear that this act reffers to an integrative aspect of governance, which implies a harmonious relation between the inhabitant and its physical environment. The relations between the spatial units and the corresponding social units (Lang, 1994) form a Behaviour Setting. Between these Behaviour Settings, there is a continuous competition for occupying the best position in order to solve the economical and social differences, which depend on a certain type of governance. This competition has always been tempered by cooperation relationships, which are, most of the times, not planned. The European act that completes the Leipzig Charta, namely the 2010 Toledo Declaration, supports "*a good governance, based on the principles of transparency, of participation, of responsibility, of efficiency, of subsidiarity and of coherence*" (Toledo Declaration, 2010). The proposed hierarchy, namely the European/national/regional/local hierarchy, cannot stop here because good governance should reach the level of a group of inhabitants that live in appartaments served by the same staircase of a condominium building, passing through the Behaviour Settings levels of a District, a Neighbourhood (a Territorial Unit of Reference according to the Romanian legislation), a Vicinity Unit and of a Group of Housing Units (Radoslav et al., 2010a). This implies the implementation of two contemporary administrative principles, namely subsidiarity and procesuality. The first principle refers to establishing a connection between the decision and the level upon this decision has the most important effects, while the second aspect takes into consideration the open character of the options and of the decisions regarding territorial planning. Good governance,"*a more efficient and effective use of public resources*", should be provided in order to "*increase the direct public participation of the citizens*" (Toledo Declaration, 2010). The current Romanian legislation states that 30% of the taxes cashed in by the States' Budget should remain at the disposal of the central government, 26% should go to each county's government, while 44% should go to the local governments. When Romania will be reorganised from an administrative point of view, this distribution will most likely be modified: 10% of the taxes will remain at the disposal of the central government, 20% will go to the regional governments (a new administrative form), 30% to each county's government, while 40% will go to the local governments, which represents a step forward towards descentralization. The Toledo Declaration also supports "*an implication, a taking on tasks and a responsabilization of the factors, at multiple levels and from an integrative point of view*". What we propose is that 40-45% of the money that remain at the local level be redistributed to the subunits previously mentioned through the similar appliance of the principles of subsidiarity and procesuality.

All these are attractive generic sentences, but problems appear when we try to apply this statement in everyday life. *Where*, *who* and *how* can this desiderate be applyed? *Where* means the delimitation of an area, with a certain autonomy, *who* means the delimitation of a community with a certain identity (Radoslav, 2000) that operates within that area, while *how* refers to the governance of the area and of the community that form a Behaviour Setting thus delimitated. Therefore, we can speak of the Spatial Unit named Earth, that should harmonize, within a Behaviour Setting, with the Social Unit of earthlings, Europe with Europeans, Romania with Romanians, Banat (a region in Romania) with the people who live in it, Timis (a county in Romania) with those who inhabit it, Timisoara with its citizens. It is obvious that these delimitations are the result of a continuous historical process, in which the whole procedes the parts and in which the identity is being born where only homogeneity existed before (Alexander, 1987) and that these Behaviour Settings are made

out of different parts, that function in a complex manner. In the competition between Behaviour Settings of the same level good governance plays a key role.

2. The relationship between larger Behaviour Settings (European, National, Regional and Local) and good governance

Our studies, developed within the Research Group for a Sustainable Territorial Development – "Politechnica" University of Timişoara, have concentrated on different levels of Behaviour Settings: European, Euroregional, Regional, County, Growth Pole, Municipality, District, Neighborhood, Vicinity Unit, Block or Group of Housing Units, for which we propose measures for good governance, according to the principles of the two European documents. In this chapter, parts of our studies will be presented, that justify the holistic triade – economic, social and ecological – as starting point for the transparency of information needed by all actors that operate in the area, especially by citizens, their participation in the subunits of the local level being absolutely neccessary.

2.1 The relationship between the Behavior Setting of the European Union and good governance

According to the first ESPON scenarios (when Romania was not part of the European Union), the city of Timişoara was situated outside the area of European integration with strong potential in Central Europe, which ended just after Budapest, and also outside the area of European integration with future potential, which started in Athens, passed through Sofia and ended at Bucharest. After Romania became part of the European Union, Timişoara received a very important part, according to the ESPON Cohesion based scenario for 2030 (ESPON 3.2, 2006), as hinge between the extensions of the two areas mentioned above (fig. 1). From a demographical point of view, many East-European cities have experienced decreases in population of approx. 15% in the last 20 years, percentage very close to that of Timişoara. By 2065, up to a third of the European population will be older then 65. Due to reduced fertility, high life expectancy and migration, the European Union will maintain its total population until 2050. But the structure of the population will change, because the number of youngsters and working people will decrease. According to the same ESPON study, our area is part of the regions with slow urbanization and decreased population. These phenomena, together with the mixing of population through emmigration and immigration, will lead to the possibility of loosing the identity, flexibility and diversity of an area. The decrease in population will lead to loss of usage efficiency of all types of existing infrastructure. The towns from the area can no longer ensure education, sports and health facilities, commerce, public transport, universities, etc. The implementation, through good governance, of the two principles (subsidiarity and procesuality) at all the levels of the Beahviour Settings, cannot be done without the support of the population, which should become an informed partner. Without good governance, the situation can aggravate in all sectors. A proposed measure of good governance is "polycentrism", which implies promoting some complementary and interdependant network of large cities, as well as medium and small ones that can lead to the integration of the rural environment, as alternatives to the metropolis or to the capital cities. In order to consciously accomplish this polycentrism, some common evaluation criteria of the towns (population, competitivity, connectivity, education system, innovation, etc.) are needed.
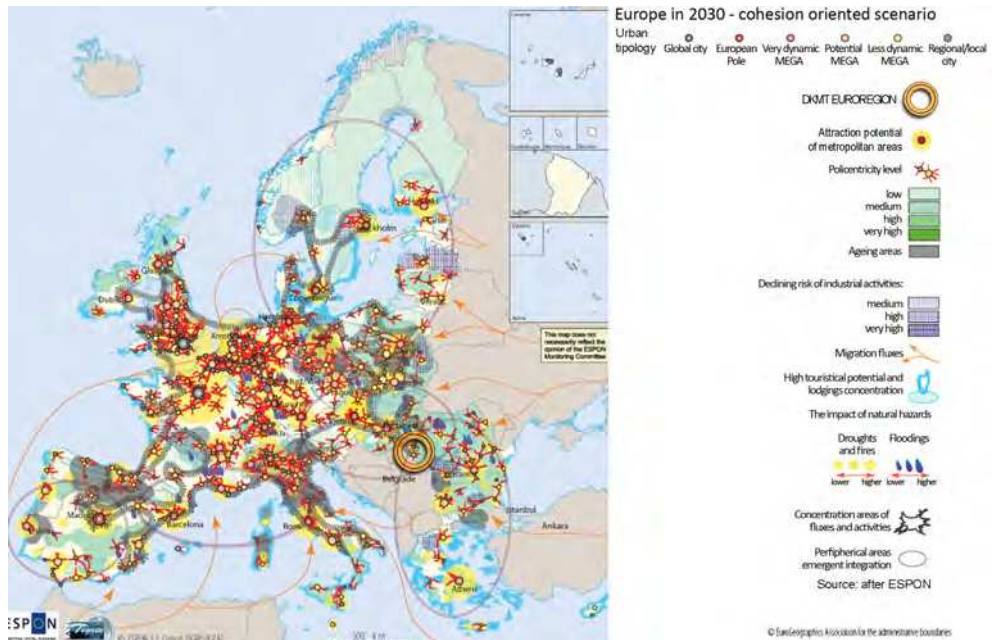
Fig. 1. The Behaviour Setting of Europe in 2030 – cohesion oriented scenario

2.2 The relationship between the Behavior Setting of the Danube-Cris-Mures-Tisa (DKMT) Euroregion and good governance

The next level of our studies refers to the good governance of the Behaviour Setting of the Danube-Cris-Mures-Tisa (DKMT) Euroregion (fig. 2), in which Timişoara plays the main role as a growth pole. The problems regarding the harmonization of the transfrontalier areas that compose this Behaviour Setting refer to the creation of equilibrium between the component regions of the European neighbourh countries. In the transfrontalier area Romania-Hungary-Serbia economical differences, as well as socio-political ones appear due to their development in the last 70 years, differences that have been accentuated by Romania's complete isolation after 1980 and by Sebia's after the 1990s. The organization of the European Union leads to the transformation of this transfrontalier area into a very important Behaviour Setting (fig. 3), whose purpose will be reached when equilibrium between the forces of the counties and regions of the three countries will be created. This is a very delicate issue, because if this situation is not fully understood, the desire to expand or to dominate the others will be very difficult to manage.

According to fig. 1, considering the attraction potential of the metropolitan areas, the Growth Pole Timişoara is closer to the atractivity of Belgrade. According to our study from 2007 (Radoslav et al., 2010b), the polycentric development of the DKMT Euroregion, composed at that time by two counties from Voivodina (Serbia), four counties from Hungary and four counties from Romania (later, the county of Hunedoara left this Euroregion), proposes a central superpole Timişoara-Arad, with more then 700.000 inhabitants, supported by Szeged and Novi Sad towards the West and by the inter-city
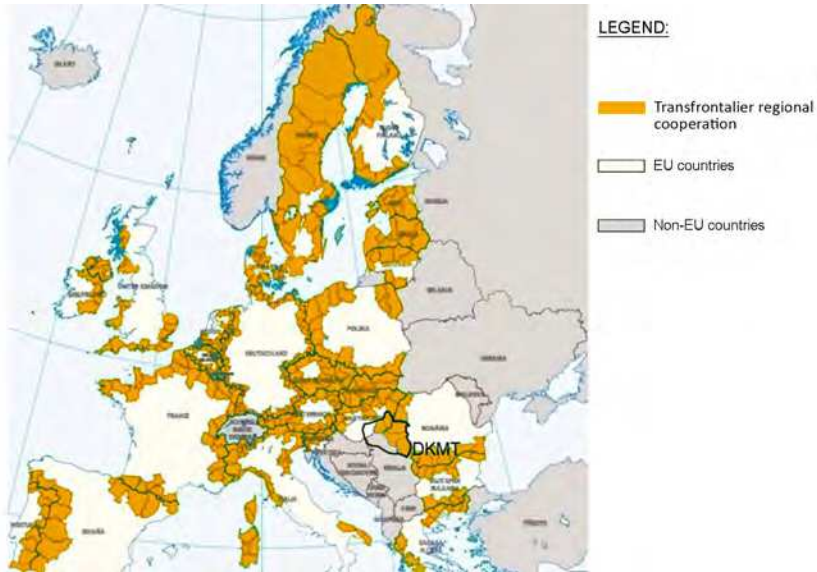
Fig. 2. The Behaviour Setting of the DKMT Euroregion and the other transfrontalier regions of cooperation in the Behaviour Setting of European Union
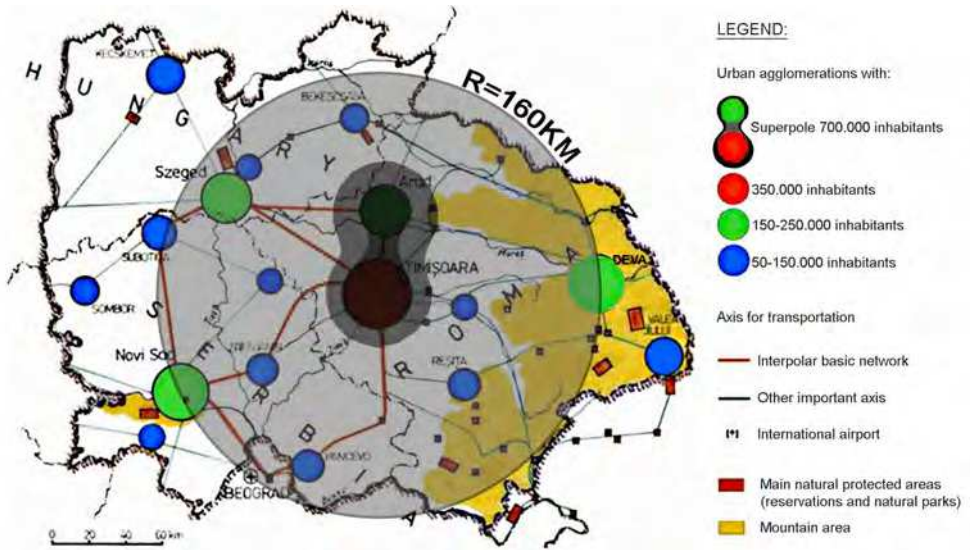

Fig. 3. The Behaviour Setting of the DKMT Euroregion

development area Deva-Hunedoara-Simeria (Radoslav et al., 2010b), named "Provincia Corvinia" towards East. The influence radius of this superpole is of approx. 5.000 km, which makes it a Euroregional pole. Each of the three supporting poles has a population between 170.000-250.000 inhabitants and gravitates at a distance of approx. 150 km from the

superpole Timişoara-Arad. The Behaviour Setting of this superpole demonstrates that the influence radius of 30 km between the Growth Pole Timişoara and the Development Pole Arad overlap near the villages Vinga and Orţişoara, which compels their cooperation (Radoslav et al., 2010b) through the creation of a logistic pole – supporting pole at middle distance between Timişoara and Arad. This is the only way to strenghten and expand the transeuropean network – with special attention paid to the reduction of travels, expansion of general interest services in the rural and peripheral areas, ecological problems, as well as to the protection of farmland. Also, transfrontalier risk management can be promoted, including the impact of climate changes, by intensifying territorial cohesion politics.

2.3 The relationship between the Behavior Setting of the Western Development Region and good governance

The next level of the study refers to the harmonization through good governance of the Behaviour Setting of the Western Development Region, Romania (the former Banat region, between 1948-1964, currently a non-administrative development unit) (fig. 4). The Western Development Region has a surface of 32.034 sqkm (13,4% of the Romania's surface), and is composed by four counties (Arad, Caraş-Severin, Hunedoara and Timiş), with 42 towns (out of which 12 are cities) and 276 communes, with a total of 318 territorial-administrative units and a large number of villages abandobed in the last 20 years. The population of the region was 1.930.458 inhabitants in 2005 (with a decrease of 14% in the last 15 years) and a density of 61,1 inhabitants/sqkm. The urbanization percentage of the region is 63,6% urban population, larger than the national average of 54,9% (The Regional Development Agency for the Western Region, 2011). From an economical point of view, the region has an
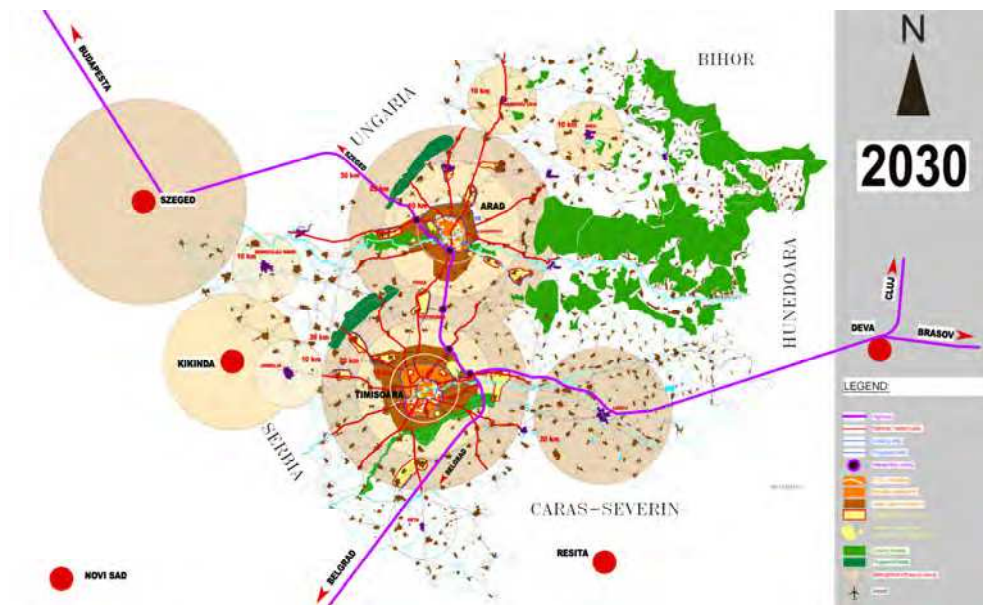

Fig. 4. The Behaviour Settings of the Growth Pole Timişoara and of the Development Pole Arad

estimated GDP for 2011 of approx. 1,3 billions euro (The Romanian National Prognosis Comitee, 2011), similar to most of the other eight Romanian development regions, but much less than regions with similar population from Europe. Considering the environment, the climate is temperate, continental and moderate. As a consequence of the global climate changes, between 1992-2002 a defficit of precipitation of 14,6 mm has been registred. The multiannual average temperature shows an increase of 0,5°C in the last 20 years. These phenomena have determined, in the last years, a series of storms and floodings, as well as warmer winters, with the resulting effects (The Regional Development Agency for the Western Region, 2011).

2.4 The relationship between the Behavior Setting of the Timiş County and good governance

The next level of the study refers to the harmonization through good governance of the Behaviour Setting of Timiş County. Considering the population, this Behaviour Setting had 658.837 inhabitants in 2005, with a decrease of 20.000 inhabitants since 2002, and a predicted decreasing trend until 2025. The structure of the population is even more interesting; 13,6% of the population is over 65, trend that will reach 17% in 2025. The average life expectancy is 71,43 years, while the active population represents 48%. This structure determines a very low unemployment rate, of only 2,3%, in comparison to the 7% national level (The Regional Development Agency for the Western Region, 2011). From an economical point of view, Timiş County is estimated to have the highest GDP of all Romanian counties in 2011, of approx. 600 millions euro, but also four times higher then the GDP of the poorest county from the Western Development Region – Caraş-Severin (The Romanian National Prognosis Comitee, 2011). From an ecological point of view, in Timiş County there has been an increase of the average temperature by 0,5°C in the last 20 years, that complicates even more the situation in the areas prone to natural hazards, especially in the areas with floods and landslides, unstable areas (situated towards East, North-East and South-East from Timişoara) and in the highly seismical area situated in the South of Timişoara (fig. 5). In the areas situated in the vicinity of villages where zootechnics was intensively developed, there
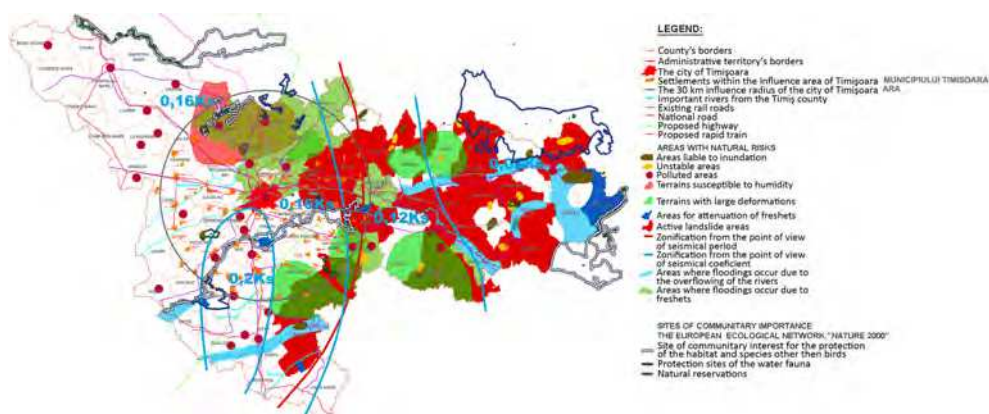

Fig. 5. The Behaviour Setting of Timiş County – areas with natural risks and sites of communitary importance

are some acute pollution problems, which imply an extension of the Growth Pole Timişoara with the exclusion of these areas. In Timiş County there also exist some protection areas. In our proposals, these areas should be amplified in order to mitigate part of the previously mentioned risks by planting a forrest belt (a green corridor).

2.5 The relationship between the Behavior Setting of the Growth Pole Timişoara and good governance

The next level of our study refers to the harmonization through good governance of the Behaviour Setting of the Growth Pole Timişoara, which is a juridical association of eight territorial administrative units around Timişoara. From the point of view of urbanization, it has been proposed a maximal growth of the built areas up to the traffic belt and afterwards only alongside the radial penetrations, in order to reduce land use and stop the uncontrolled expansion. The terrain yet unbuilt up to the traffic belt is proposed, in our studies, to be building prohibited, so that this areas become natural areas of protection. Through this act of governance, this terrain, together with the green belt, can contribute to the protection of the natural areas, landscapes, forrests, water resources, farmlands, to the promotion of the local eco-economy, as well as to the strengthening of connections between these areas and the city (fig. 6). From an environmental point of view, one of the greatest problems of the city of Timişoara is the quality of the air (The National Agency for the Protection of the Environment, 2011). The number of days in which certain areas of Timişoara are exposed to a concentration of particles in the air high above the European admitted average (PM 10, with a diameter under 10 micrometers) was 136 days in 2008. The admitted values of the pollution with the PM 10 particles is of 40 g/m3 within a year and 50 g/m3 within a day, but not more then 35 times a year. The current situation regarding the pollution in the Growth Pole of Timişoara is the result of two types of factors – interior and exterior to the city. The interior factors are caused by the investement boom, begun after the year 2000, which was based only on real estate profiteering and concentrated on the communist era industrial areas, where the buildings were demolished and the terrain kept unbuilt. Through this policy, to which the local authorities were passive, the investors hoped to obtain a constant raise in the terrain price, but after 2009, the speculative bussiness in real estate suddenly ended and, as a result, in Timişoara's city center there are now approx. 100 ha of unbuilt terrain, phenomenon that affects the quality of the air. The exterior factors take into consideration the winds that blow from the North-West (13%) and from the West (9,8%) bringing dust from the fields of Panonia. This phenomenon has been aggravated by the merging of traditional agricultural lots, which are rather long and narrow, a prerequisite of intensive agriculture, thus forming large plots in different growth stages. The green spaces ("the cities' lungs") balance temperatures and purify the air. Thus, a hectar of vegetation/forrest gives 220 kg of oxygen daily, consuming at the same time 280 kg of carbon dioxide and retaining 50% of the atmospherical dust (The National Agency for the Protection of the Environment, 2011). Following our proposals, between 2001-2009 a 100 m wide protection forrest was planted in the administrative territory of Timişoara, towards the Nort-West, occupying a surface of 50 ha. This first measure must be accompanied by a much more complex one that should concentrate on unifying the previously mentioned natural protected ares, which are situated towards North-West, by a green corridor irrespective of the auto belt (fig. 6).
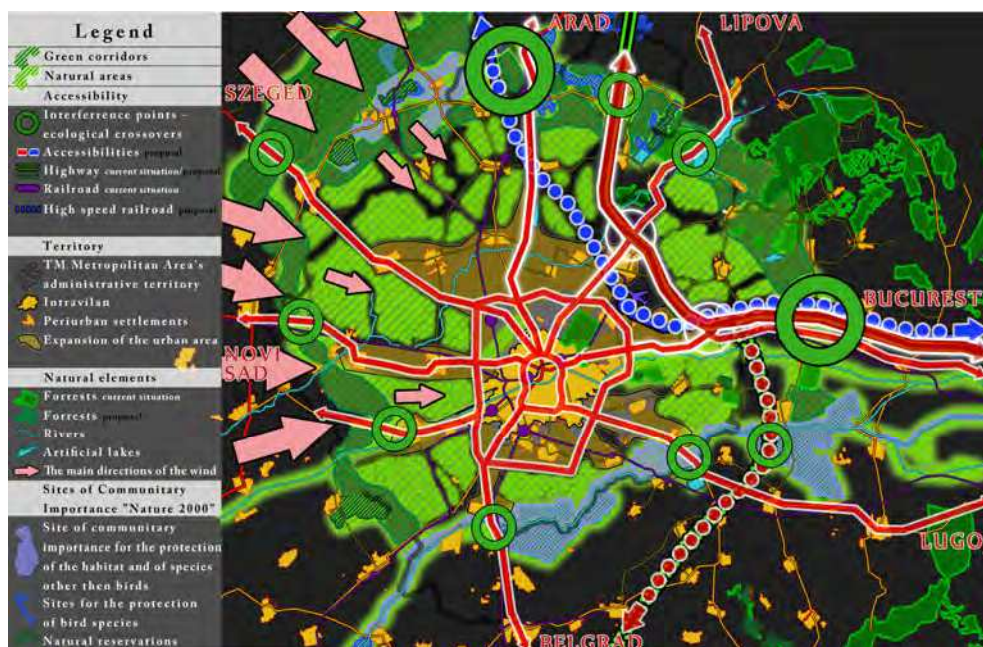
Fig. 6. The Behaviour Setting of the Growth Pole Timişoara

Only by strengthening the polycentric development and inovating the network of metropolitan areas through cooperation with rural and peripheral settlements, through new forms of governance, partnership between rural and urban areas and drafting regional and subregional development strategies can the Behaviour Setting of the Growth Pole Timişoara enter the European competition. At this level of our study, besides Timişoara's expansion towards the North, due to the attraction between Timişoara and Arad, there can also be noticed an expansion towards the East, near the Euroregional "Traian Vuia" Airport of Timişoara, which could become a multi-modal transportation hub that will allow for the optimization of urban logistics. In this hub the future urban train, that will cross Timişoara (and that can continue up to Arad) meets the airport, highway and possibly the high speed railway (300 km/h), which should, in this case, have a station in this point (fig. 7). By doing so, the central area of Timişoara can be freed from the existing railway barrier. The participation of the citizens from a Behaviour Setting to the decisional proccess implies their involvement in all stages of territorial and urban planning. This cannot be achieved whithout a prolonged democratical exercise, while currently in Romania this participation is only formal (an imposed requirement to the authorities by the European norms). As a consequence, in this transition stage towards a consolidated democracy, the position of our Research Group for Sustainable Territorial Development is concentrated on supporting of the citizens' rights to be informed by data transparency, involved and have access to justice.
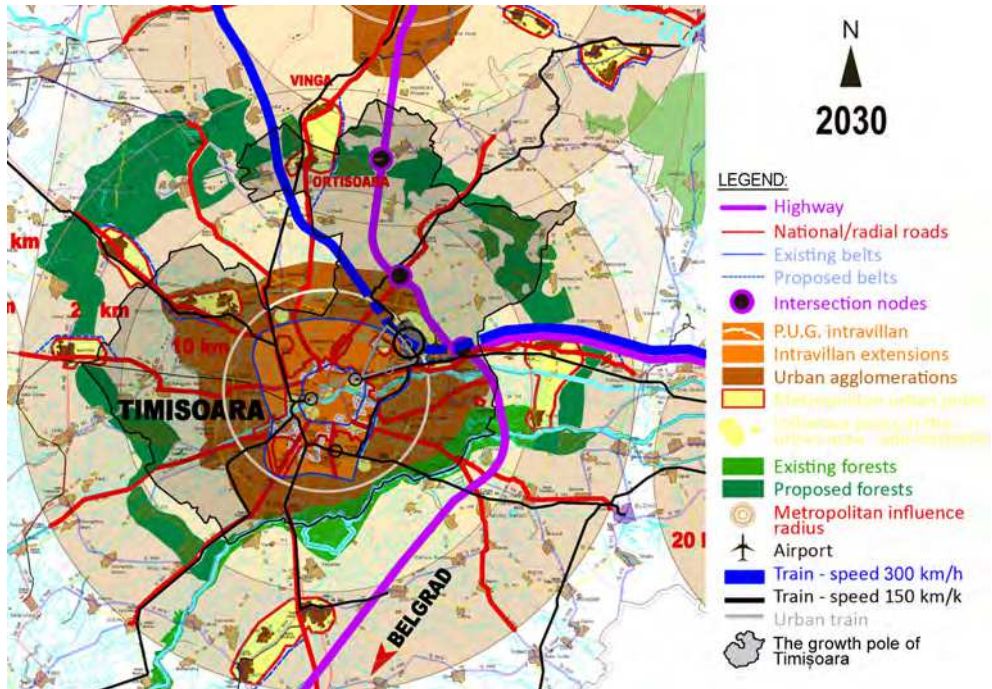
Fig. 7. The Behaviour Setting of the Growth Pole Timișoara

2.6 The relationship between the Behavior Setting of Timișoara City and good governance

The next level of our study deals with the good governance of the Behaviour Setting of Timișoara City. It has a surface of 13.003,87 ha, out of which 6870,21 ha are intravillan. The city population is 334.089 inhabitants (including 16.438 commorants, of which the majority are students), according to the 2002 census, with a decrease in population of 14% in comparison to 1990. In the residential area (2643,74 ha - 53,15% of the intravillan area), the average is 2,2 rooms/housing unit, with a density of 367,70 housing units/1.000 inhabitants. The overall density in the existing intravillan is 49,1 inhabitants/ha, while the average residential areas' density is 126,37 inhabitants/ha. The inhabitancy index is 13,1 sqm inhabitable surface/inhabitant. From the total of 122.195 housing units, 71,30% are in condominium type buildings, while 28,70% are individual housing units (fig. 8).

Hopefully, through good governance, a density of 58,22 inhabitants/ha will be reached, an aspect of whose neccesity will be further developed in our studies. This low density (fig. 9), in comparison to the densities in Europe, makes it difficult for certain facilities to survive without substantial subventions. Our study Master plan for the densification of the urban pattern in Timisoara City (Radoslav et al., 2009), presents a series of measures for each Neighbourhood, Vicinity Unit and Block, to reach a density of 25 housing units/ha in the individual housing units areas (in comparison to the existing density of 3-5 housing units/ha), and 250 housing units/ha in the condominiums areas (in comparison to the
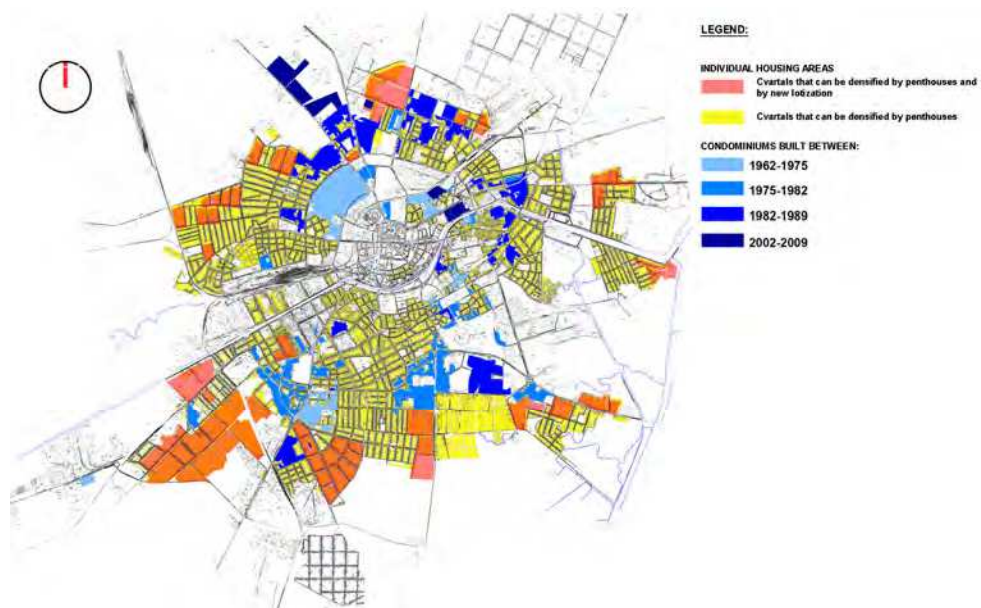
Fig. 8. Typology of housing units in the Behaviour Settings of the Vicinity Units of Timişoara City (condominium and individual housing units)

Fig. 9. The density of the population across the territory of the Behaviour Settings of the Neighbourhoods of Timişoara City

existing 300 housing units/ha), by transfroming the housing units on the ground floors into service areas. The proposed measures deal with avoiding the deepening of the social polarization and of the potential risk of social fragmentation, stimulating the labour market, reduction of school dropout rates, as well as of the risk of underpriviliged districts formation in already vulnerable areas. Timişoara green areas' surfce is 510 ha, out of which parks 117,57 ha, green squares 21,58 ha and Pădurea Verde forrest 50,7 ha. 84% of this surface is actually occupied by vegetation. Even though in 2005 the green surface represented over 16 sqm/inhabitant it was poorly distributed, as the green spaces were concentrated in the city center (fig. 10). It is therefore neccessary to create a park in the South-East part of the city. Consistent with the approved national document no. 114/2007, by the end of 2010 the green surface should have reached 20 sqm/inhabitant and should reach 26 sqm/inhabitant by 2013.
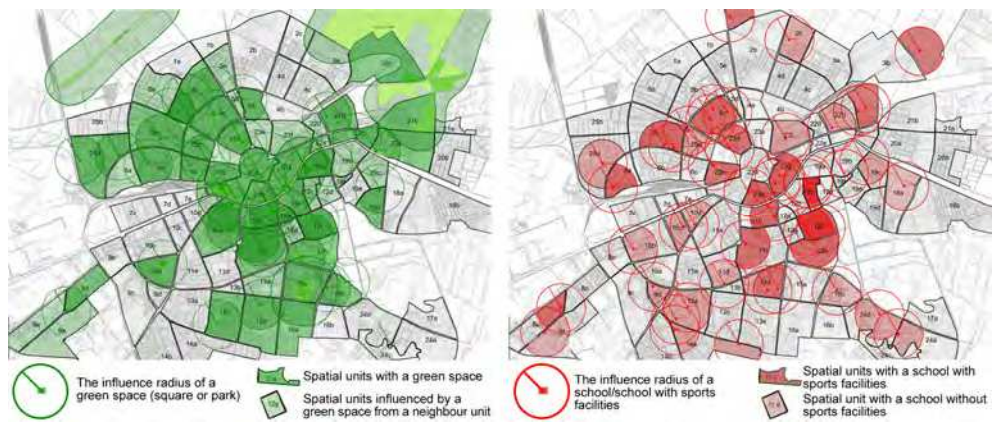

Fig. 10. The current situation of the green areas and of the schools and sports facilities in the Behaviour Settings of the Neighbourhoods of Timişoara City
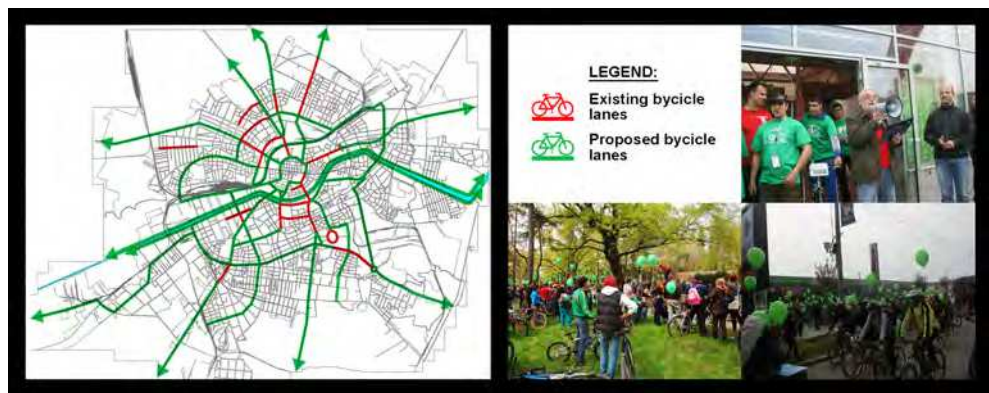

Fig. 11. The current situation and our proposal regarding bycicle lanes of the Behaviour Setting of Timişoara City, which benefits from the support of the population

In order to accomplish this basic need, the local administration should buy approx. 60 ha, out of which 30 ha for parks should be within the city (in the Romanian legislation, a park must have over 10.000 sqm). For the rest of the green spaces, such as a network of green squares in every Neighbourhood, 300-500 m at most from any housing unit, a series a measures should be provided at the level of each Behaviour Setting of the Neighbourhood. Another measure reffers to the realization of a major non-motorized transportation network (bycicle lanes, fig. 11) in order to reduce pollution, which is based on the philosophy of a system of radials up to the ring no. 2, connected through rings, as well as of a system of by-passes alongside the Bega Canal and the railroad, which will complete the current, not yet structured, network. All of these measures are currently in process of implementation, due to the pressure of the NGOs.

3. The relationship between the Behaviour Settings of the subunits and good governance

The hierarchy cannot stop here because local governance (through the previously mentioned subsidiarity and procesuality principles) must reach the level of a group of inhabitants, passing through District, Neighbourhood, Vicinity Unit, Block, Group of Housing Units and the units around a Condominium Building's Staircase. From here onward, the involvement of the citizens as an active part in the decisional process must be even stronger, so that every spatial unit will become a Behaviour Setting. This implies the existence of a District Council (a consultative non-juridical entity), in every District in the city, of an association at the level of every Neighbourhood, Vicinity Unit and Block, as well as encouraging the already existing Owners' Associations (juridical entities), at the level of every Staircase of a Condominium Building. These councils and associations should have a very important role in the decisional process regarding their spatial unit, as well as in the distribution of money from the taxes cashed in by the States' Budget (in particular, the 40-45% that form the local budget), which should be redistributed to each and every level mentioned above. Only this way can the Toledo Declaration, that supports *"an implication, a taking on tasks and a responsabilization of the factors, at multiple levels and from an integrative point of view"* be applied. Governance should now take place, on a local level, through the Decisions of the Local Council (Radoslav, 2000), which should be based on participation and support of every organization from every Behaviour Setting that is affected by that decision.

3.1 The relationship between the Behaviour Setting of a District and good governance

With the inscrease in size of some cities, a new unit, namely the Behaviour Setting of a District, with its own rules regarding governance, appeared in order to provide better administration. But this Behaviour Setting can be composed of very different spatial and social dimensions (in Bucharest, the capital city of Romania, it can have hundreds of thousands of inhabitants, in Timişoara – tens of thousands of inhabitants, while in Lugoj, a smaller city near Timişoara, the Behaviour Setting of a District can have a few thousands of inhabitants).

In Timişoara 18 such Districts Behaviour Settings function, based on the city's tradition (fig. 12). Problems become even more complicated as these districts are, most of the times, composed by more then one social community, with a certain identity, life style, human

Fig. 12. The Behaviour Settings of the Districts of Timişoara City

behaviour and different human needs, which require specific rules. The defining characteristics of a district are its accessibility to parks (green spaces larger than 10.000 sqm), the main transportation and bycicle lanes' networks, public spaces – the major public square and the district's promenade, highschools, swimming pools, the district's health and major commercial networks and the sacred places (eclesiastical buildings and cemeteries). The catholic confession has placed its churches in the historical areas of the city, the orthodox confession has positioned its churches depending on Neighbourhoods, while the neoprotestants placed their churches depending on the Vicinity Units – fig. 14). However, these Districts are not always perfectly divided into smaller units, with identifiable social units (one such subunit could belong to two different Districts), due to the interventions which influenced their development in the communist era, and this leads to the improper functioning of the Behaviour Settings of the Districts.

One of the major dysfunctionalities of these subunits is the presence of the main traffic roads inside the Behaviour Settings. This became an even bigger problem during the last years, because of the increase in the number of autovehicles that populate the streets of Timişoara. Thus, in comparison to a total number of 239.924 autovehicles in 1997, the 2011 traffic comprised 368.248 autovehicles, which indicates an increase in traffic with more then 53% during the last 14 years (Urbanistic General Plan for Timişoara, 2011). An element that can contribute to the good governance of the Behaviour Setting of the District through a stronger involvement are the District Councils, which have a consultative character and have functioned in Timişoara since 2000, but they did not always take into consideration the point of view of the associations that represent lower subunits, influenced by that decision.

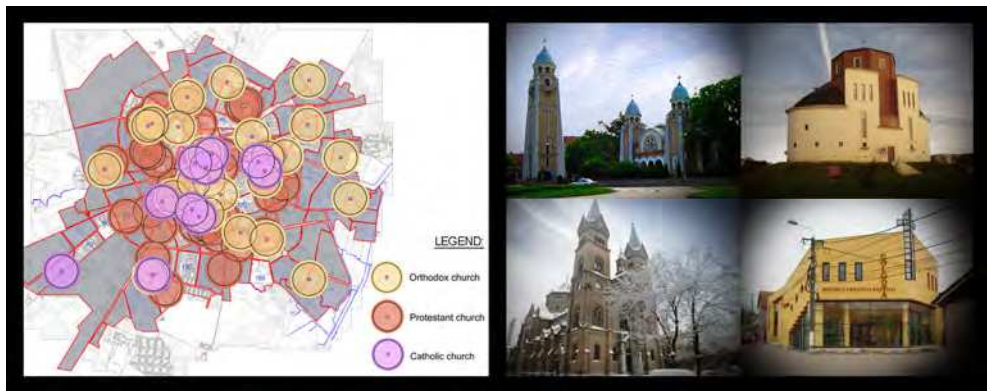Fig. 13. The main commercial network of the Behaviour Setting of Timişoara City

Fig. 14. The churches of the Behaviour Settings of the Districts of Timişoara City

3.2 The relationship between the Behaviour Setting of a Neighbourhood and good governance

Our studies have introduced new levels of governance, such as the Neighbourhood, Vicinity Unit, Block or the Group of Housing Units. We have focused on the Neighbourhood, which we consider to be a Basic Spatial Unit for a Behaviour Setting, as well as on its delimitations and on the methods that allow the introduction of the needed functions, through good governance. The Neighbourhood proposed by us has a social dimension of approx. 5.000-10.000 inhabitants (Alexander, 1977) and a physical one of approx. 350x750 m, which represents an area of approx. 7-40 ha. These Behaviour Settings have some common overall characteristics that offer them an identity, such as a landscape with similar characteristics, a representative historical evolution in a certain period of time, population with homogenous structure, similarity in the shape and areas of the lots and buildings, of occupying the terrain or a similar legislative regime of the properties, homogeneous urban rules regarding the allowed functions, etc.
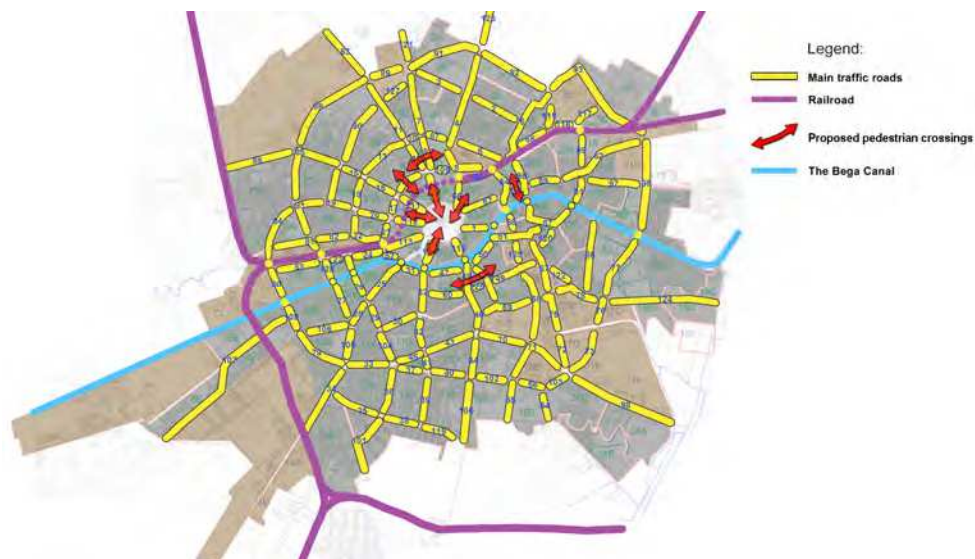
Fig. 15. The main traffic roads network which delimit the Behaviour Settings of the Neighbourhoods of Timişoara City

The delimitations between the Neighbourhoods have been determined by major natural barriers, such as the Bega River, or by built elements, such as streets with major traffic or the railroad, that currently crosses Timişoara City's central area. Thus, major traffic is not admitted within the limits of a Neighbourhood, where the speed limit is 30 km/h. In Timisoara, over 100 such Neighbourhoods have been delimitated, out of which more than 70 have as main function residential. In these particular Neighbourhoods, bicycle and pedestrian traffic have priority. If the criteria of the population number cannot be achieved, more Neighbourhoods can be connected by under and overground pedestrian crossings (fig. 15). From our studies regarding this type of situations, we present a solution proposed for the Northern part of Timişoara City, as shown in the fig. 16. The analysis of each Neighbourhood was based on many criteria, out of which we mention a Neighbourhood's connectivity to the public transportation system, as well as the network of public stations, provided with attractive functions and activities and situated no more than 300-500 m from any housing unit (fig. 17). The study of this pattern proves that there are some peripheral Neighbourhoods that do not have access to the public transport system, because their density does not reach 25 inhabitants/ha (fig. 9), minimum prerequisite for the efficiency of public transport. This leads to the inability to support a public transport which is cheap and accessible to everybody, especially in the peripheral neighbourhoods, where it should play a key role in order to diminish the physical isolation of these neighbourhoods.

Another important pattern which we analysed for these Behaviour Settings is the access to green squares (green spaces of approx. 5.000 sqm), so that no housing unit is more than 300-500 m from this facility. One can observe that more than 50% of the Behaviour Settings of Neighbourhoods of our city do not respect this criterion, but for this pattern, the citizens' participation in promoting it is very important (fig. 10). These green squares must
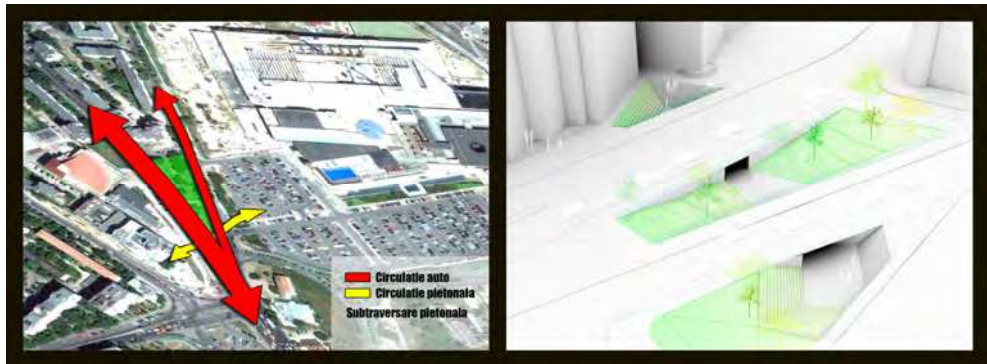
Fig. 16. Proposal for a pedetsrian underground crossing that unites the Behaviour Settings of two Neighbourhoods in the Northern part of Timișoara City

Fig. 17. The public transport network and the bus stops in the Behaviour Settings of the Neighbourhoods of Timișoara City

eventually form a green network, which should be uniform throughout the city, together with the district parks and the green riverside of the Bega Canal. Another important pattern is acces to water, that could be achieved, in the years to come, through the rehabilitation of the Bega Canal (fig. 18), thus becoming an important axis on the East-West direction. Besides this major operation, the 20 ha of water canals that exist on the outskirts of Timișoara City must also be emphasized. These proposals regarding the green and blue spaces are merely trials that sustain the closing of the metabolic urban cycles at a local level.

The need to ensure an equal opportunity for education, as well as proffesional training oriented towards maket demands and inclusion leads to the conclusion that in every Neighbourhood there should be a highschool, with sports grounds and other sports facilities, situated at no more than 300-500 m from every housing unit (fig. 10), accessible without crossing a major traffic road. Our studies show that the problems regarding this pattern are not entirely solved, especially the ones concerning the sports grounds and other sports facilities. Without good governance, this situation can lead to social fragmentation and massive school dropout rates. For this level, the participation of the population is also

Fig. 18. The riverside of the Bega Canal – current situation and proposal from disertation papers within the Master of Urbanism and Territorial Planning, coordinated by The Reseach Group for a Sustainable Territorial Development

Fig. 19. The network of education facilities, services, commerce and other public facilities in the Behaviour Setting of the traditional Fabric Neighbourhood from disertation papers within the Master of Urbanism and Territorial Planning

very important, in order to encourage the buying and afterwards the maintaining of the terrains needed for these facilities, with municipal funds and funds belonging to the Behaviour Setting of that certain Neighbourhood. Obviously the main commercial network (fig. 13), a result of the consumer society, is well represented. A very important factor in supporting the eco-products of the Growth Pole Timișoara is the creation of farmer markets in every Neighbourhood, but the local community of each Neighbourhood should provide some measures, through approved rules, that will maintain the services and commerce in the area (fig 19), which is very affected by the aggressive presence of the multi-national corporations' chains of stores. The public spaces network (Radoslav & Cosoroaba-Stanciu, 2010; fig. 20), that makes the life within a community more animanted and healthier (Gehl, 2011), is very similar to the one existing in the year 1900, when Timișoara City's population was half of what it is today.
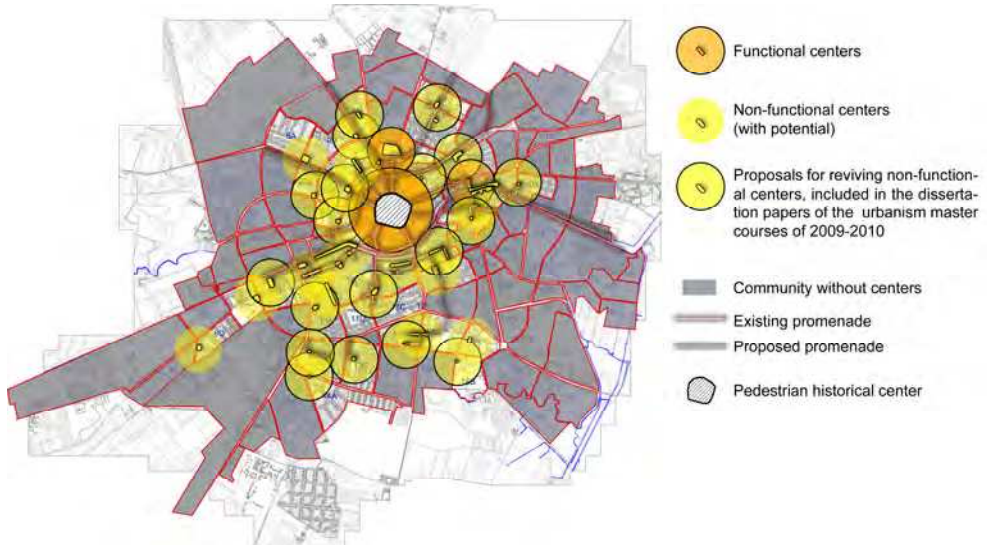
Fig. 20. The public spaces network of the Behaviour Settings of the Neighbourhoods of Timişoara City (current situation and proposal)

The disertation papers within the Master of Urbanism and Territorial Development, "Politehnica" University of Timişoara, produced 50 such proposals, out of which we present a few (fig. 21). These projects raise the attractivity of the Behaviour Setting of the Neighbourhoods, encourage inhabitants to identify with the place and the strengthening of democracy, co-existance, changes, civic progress, diversity and, last but not least, freedom, both indiviual and collective, which are key elements of the European spirit. We also mention that the studied patterns of the health network, the working community network, etc., have begun to naturally coagulate in clusters, action that must be continued through specific measures, all part of our strategies of regenerating the urban economy (fig. 19). One of the conclusions of these studies was that the Neighbourhoods that do not have a reasonable density (fig. 9) cannot sustain neither one of these functions, needed for a Behaviour Setting to function correctly, a school, sports fields, a green square, public transport, salubrity, etc., without substantial financial support from the larger whole. In Timişoara, there are some peripheral Neighbourhoods, that resulted either by the absorbtion of villages with agricultural activities over time, or by new sprawl-type developments, with a density of approx. 5-10 housing units/ha in this situation. In conclusion, these areas should urgently and compulsory go through a densification process, that should not affect the current value of the properties, nor the identity of the place (as it happened in the last few years, through insertion of multi-leveled condominium buildings in areas with a low story limit, without the neighbours consent). A second conclusion is that the Behaviour Setting of Vecinity Units in Timişoara City, together with the Behaviour Setting of every Neighbourhood, should have *"a powerful control of the available terrain and of the speculative development"* (Toledo Declaration, 2010), especially regarding lacking public facilities (green spaces, education facilities). The Master Plan for the Densification of the Urban Pattern in Timisoara (Radoslav et al., 2009) proposes the solving of these problems after having a series

of discussions with the population and only by taking into consideration the identity of the existing communities.

Fig. 21. Proposals for public spaces in the Behaviour Setting of the Neighbourhoods of Timişoara City from disertation papers within the Master of Urbanism and Territorial Planning

3.3 The relationship between the Behaviour Setting of a Vicinity Unit and good governance

The following level of the study reffers to the good governance of the Behaviour Setting of a Vicinity Unit, with a social dimension of approx. 500-1.500 inhabitants; thus, more Vicinity Units compose a Neighbourhood. In Timişoara, 248 Vicinty Units have been identified (fig. 22), for which building regulations have been established (Radoslav et al., 2009), in such a way that the identity of the place will not be destroyed and the existing value of the properties will not be diminished. These rules have been very important for the population in those areas, since it helped them get used to having access to justice, as, in their race towards profit, the developers have built, after 2005, a series of condominiums in the areas of individual housing units, often without the neighbours consent and without abiding regulations regarding the minimun distances needed for natural daylight and intimacy. The regulations regarding the allowed plot occupancy, land use and densities have been drastically ignored.

An operation that has lowered the quality of life in the Vicinity Units was the proccess of adding attics to condominium buildings in the areas with a density of over 300 housing unints/ha, which lead to even higher densities and emphasized the absence of the necessary facilities such as green spaces, kindergardens, schools, sports grounds, parking, etc. The programme presented in the Master Plan for the Densification of the Urban Pattern in Timişoara studies (Radoslav et al., 2009) was an attempt to stop these errors by establishing some rules for each Vicinity Unit that should respect the technical norms. As an example of good governance, one can observe the programme that begun in the year 2000 regarding the playgrounds for children, which is almost entirely completed (fig. 24), as well as the one concerning public water fountains, a network that is present in every Vicinity Unit (fig. 25).
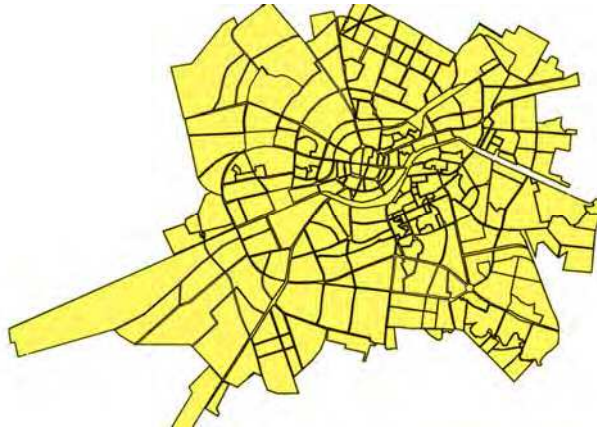
Fig. 22. The Behaviour Settings of the Vicinity Units of Timișoara City

Fig. 23. Commercial spaces, created through appartment refunctionalizing on the ground floor of condominium buildings, in the Behaviour Settings of the Vicinity Units of Timișoara City

Fig. 24. The playground network in the Behaviour Settings of the Vicinity Units of Timișoara City and examples of such playgrounds

Fig. 25. Existing public facilities in the Behaviour Settings of the Vicinity Units of Timişoara City, public fountains and water pumps, and lacking functions (planned parking spaces)

3.4 The relationship between the Behaviour Setting of a Block and good governance

The next level of the study refers to the good governance of a Block, with a social dimension of approx. 100-500 inhabitants; several Blocks can form a Vicinity Unit, and within the limits of a Block traffic is completely forbidden. Quality of life is also determined by the acceptance of the idea that people try to give the place they live in a personality of its own (Alexander, 1977; fig. 27). Unless we offer inhabitants the facilities they need, they tend to use the public terrain according to their own rules, which prevent the area from developing harmoniously – the green areas are occupied by vehicles (fig. 25). Good governance implies rules established through Decisions of the Local Council, regarding the terrain in front of the condominium buildings, which should be provided with playgrounds, sitting areas for elders or commerce (fig. 28). For each of the 1089 of Timişoara's Blocks, there have been established some measures and rules that encourage social life preventing these Blocks from becoming underprivileged areas.

Fig. 26. The Behaviour Settings of the Blocks of Timişoara City

Fig. 27. Modified balconies in the Behaviour Settings of the Blocks of Timişoara City

3.5 The relationship between the Behaviour Setting of a Group of Residential Units and good governance

The last level of the study refers to the good governance of the Behaviour Setting of a Group of Residential Units, which is divided according to the two types of residential units, namely individual housing units and collective housing units (the units around an Apartments Building's Staircase); this Behaviour Setting has a social dimension of approx. 30-100 inhabitants. The people's discontent with condominium-type projects, focused only on economical efficiency maximization, is obvious, as are their attempts to adapt these buildings to their needs by their own means. For good governance, it is compulsory to accept the rules of organic growth (Alexander, 1977) in order to maintain the health of these Behaviour Settings, thus resulting intervention methods that should take into consideration the interests of the members of the corresponding social groups. These needs can be found in our proposals, which are approved by Decisions of the Local Council, such as the need for an exterior public room in front of a condominium building, ground floor modified balconies (fig. 28), direct access from the apartments towards the green space situated in

Fig. 28. Exterior public rooms in front of condominium buildings, modified groud floor balconies, elder in the park and improvised green areas in the Behaviour Setting of a Group of Residential Units of Timişoara City

front of the building, diverse facades and balconies, added roofs, the thermic isolation of the facades, as well as other operations that imply exemption from local taxes.

4. Conclusion

"The urban regeneration" and "the integrated approach" require a new **"urban alliance"**, shared by all actors involved in the proccess of "building the city": the owners, the finances, the inhabitants, the public authorities, the experts, etc., at all the levels of Behaviour Setting mentioned above. This new "urban alliance" should be based on consensus and it should be legitimized by new forms of governance, in which the social networks play a very important role. The public financing for urban regeneration is the engine that attracts private funds, which should join the Public-Private Partnerships. Thus, the public budget, that consists of 40% of the taxes which remain at the disposal of the local authorities, should be further redistributed, according to the principles of subsidiarity and procesuality: 40% should remain at the disposal of the local authorities, 30% should go to Districts' authorities, 20% should go to the Neighbourhoods, while 10% should go to the Vicinity Units. Besides these, financial stimulents should be created, as well as tax exemption for private companies, thus raising the involvement of the private domain, financial agents and other urban actors in the urban regeneration. The purpose of this proposal is the strenghtening of good governance at every level, that should be directed towards **revalorification, recuperation** and **reinventing of the "existing city"**, thus optimizing the human, social, material, cultural and economic capital, which has developed throughout the history, as well as using these elements in order to build efficient, inovating, inteligent, more durable and socially integrated cities (Toledo Declaration, 2011). The spread of internet use from the early '90s has favoured the formation of a new society, which, at first sight, seems not to take into consideration spatial limits, in which the public-private relationship seems to be destroyed and which seems to anihilate the specificity of local communities. This situation has peaked at the begining of the 21st century, with the spreading, at global level, of the 2.0 web, or of the "web of social interaction". Social networks, such as Facebook, Twitter or hi5, as well as blogs occupy an increasing role in the private lives of the internet-users world over. Our opinion is that by facilitating access to information through these methods, the social networks strengthen the cooperation of the inhabitants for the satisfaction of the human needs (Maslow, 1987) in every Behaviour Setting, through the submination of the control of information at a central level. Thus, the Behaviour Settings are no longer enclosed, which makes living in them much more pleasent, according to the analysis on a Behaviour Setting of a Neighbourhood from Timişoara, coordinated by R. Radoslav (Isopescu et al., 2009) and presented at the 2009 Rotterdam Biennale of Architecture. This situation leads to a new type of public debate, both on a horizontal, as well as on a vertical level. This type of functioning is very much alike to the one in which Europe, the Euroregion, the Region, County, Growth Pole, City, District, Neighbourhood, Vicinity Unit and Block are organised in a network, as parts of a larger whole. In case good governance is not applied in time, the connections between the leaders and the citizens can be broken; this phenomenon is already present, with high intensity, in almost every European city, and especially in the Romanian ones. Our developing studies are currently concentrating on the qualitative evaluation (with total, partial or zero satisfaction) regarding a variety of patterns reffering to the human scale.

5. Acknowledgement

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The technological advancement of our civilization has created a consumer society expanding faster than the planet's resources allow, with our resource and energy needs rising exponentially in the past century. Securing the future of the human race will require an improved understanding of the environment as well as of technological solutions, mindsets and behaviors in line with modes of development that the ecosphere of our planet can support. Sustainable development offers an approach that would be practical to fuse with the managerial strategies and assessment tools for policy and decision makers at the regional planning level.

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