

GROSEE

Emergence of GROwth poles NETwork in South-East of Europe

Targeted Analysis 2013/2/19

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1. The analytical approach of GROSEE

In the frame of Europe 2020 Strategy (2010) approach of smart, inclusive and sustainable development, a great number of recent reports on the territorial priorities of the EU policies -among them: Territorial Agenda 2020, (2011) and 5th Cohesion Report, (2010) emphasize the role of the metropolitan areas (and other cities) as growth poles of their immediate or more distant surrounding regions and the rest of the countries. Further on, priority is given to the integration of the metropolises outside the EU "Pentagon" into powerful urban networks which could contribute to the balance of the territorial development of the EU space.

The general aim of the project entitled "Emergence of growth poles network in South-East of Europe" (EGRONET) is to explore, by using targeted analysis, which is the input of the three cities Bucharest, Sofia and Athens on the emergence of a peripheral 'integrated zone' of the South-Eastern Europe and how they interact with the European polycentric network, as well as with the European core area and with the non-EU member states bordering the three countries.

The project follows as guidance for the subsequent key questions:

- i. What kind of cities definitions and delimitation rules could be used for comparative analysis?
- ii. What is the situation inside the three capitals (the particular issues) and what are the impacts of urban structures over the territorial development and the quality of life?
- iii. What are the main drivers for competitiveness in the three capitals? Do metropolitan areas play an important role as drivers for competitiveness in the region?
- iv. What is the level of accessibility of these cities and how can it be improved? What is the efficiency level of European transport corridors?
- v. What is the interplay of the existing policies and the planning features of the three Capitals with/ related to the cooperation among them?
- vi. What is the global role of the 3 capitals in the European polycentric network?
- vii. What are the key policies and measures that can be taken to support an emergence of a competitive area concentrated on the Bucharest - Sofia - Athens triangle?

The added value of this project is given by the fact that stakeholders as well as scientist will work together for a better understanding and management of the complex territorial processes developing in metropolitan areas. In this frame the project will provide at the end a unitary data base for different indicators at the level of the metropolitan area of Bucharest, Sofia and Athens. It represents in the same time a first cooperation based on a scientific project among different stakeholders from the central and metropolitan level and a bases in the exchange of good practises at the level of the three metropolises. Finally the project will provide essential information of the possibilities of cooperation among the three metropolises.

2. Characteristics and particularities of South Eastern Europe

The region of South Eastern Europe which includes Romania, Bulgaria and Greece represents the study area of the project. This region has changed in a very fundamental

way, under the impact of the interacting forces of integration and transition. As historical and political backgrounds, a new economic geography emerged with several open questions concerning its economic and structural characteristics.

During 1991-2001 the population of Greece grew considerably (6,8%), while the population of Bulgaria and Romania diminished (-8,3 % and -3,3% respectively) and in the period 2001-2007 the same phenomenon was registered with an increase of the Greek population (2,2%) and a slower/slight decrease in Bulgaria and Romania (ESPON FOCI). The population density is concentrated in the three capitals (Athens, Bucharest and Sofia) and the biggest cities (Thessaloniki, Patras, Kavala in Greece; Bucharest and other 6 big cities in Romania; Plovdiv and Varna in Bulgaria).

This area is identified by unfavourable structural adjustments due to the difficulties and the weakest performance but also by the market integration that has generated strong pressures and trends. During the period 1913- 1950, Romania had the worst situation regarding the GDP per capita, followed by Yugoslavia. The initial conditions were generally poorer and less developed countries, especially agricultural and dependent on products which are considered "sensitive" for Western Europe. Countries like Romania and Bulgaria inherited a very large share of nonviable enterprises from the past, enterprises that have been hardly fit for restructuring and, in the end they have been closed (Dobrinski, 2000). Also serious delays were encountered in the implementation of the elements in the reform agenda and the policy failures reflected the lack of consensus. The economic structure of these countries is characterized by an extremely high degree of concentration in the industry and business organization. The economic indicators showed that all transition countries in the Balkans have experienced a deep recession in the post-1989 period. The complexity of the privatization process is justified through the delayed industrialization and political instability as well as through the ethnic tension in the Balkan region.

Regarding the Greek enterprises, these have a particular position in this region and the systemic change appears as a good opportunity for expansion. It is noteworthy that Greek banks and financial institutions are very active in the Balkan countries, with involvements in the financing of infrastructures and of private investment. In this context, the Foreign Direct Investments (FDI) are an important element of economic restructuring and a vector of cooperation. In the field of FDI, the most important attractors in Romania and Bulgaria are the capitals, Bucharest, respectively Sofia, with about 40-50% of the total FDI value. (Rizopoulos, 2000). Greece appeared with the most developed economy, but during the crisis is facing serious problems in its economy.

In terms of transport infrastructures and networks, the general picture presents a development cleavage among the Balkans and Western Europe (few motorways), due to different interests and geopolitical restructuring through the challenge of borders (Skayannis, 2000). The air transport traffic between Greece and Romania was in 2007 much higher - 275.000 passengers - compared to those between Greece and Bulgaria - 118.000 passengers- as well as between Bulgaria and Romania: 31.000 passengers (ESPON FOCI).

According to ESPON FOCI, the economic networking has progressed very fast from the beginning of '90s and it was accelerated before and even more after the accession of Bulgaria and Romania in the EU (2007).

Overall, the fast growing territorial integration in the SEE area is guided mainly by the intensification of the networking among the three capitals and secondly (and more recently) by the intensification of the relationships among the respective regional capitals.

3. General methodological approach and the distribution of the work packages among partners

Generally speaking, territory needs a multidisciplinary approach (Davoudi et al., 2008), including ownership rights (Hagget, 2001) and has to be an expression of power and

social space (Delanay, 2009). The complexity and different characteristics of this area in comparison with the European Core could argue for the conclusion of the existence of many Europes (Agnew, 2001). In this context and by adapting some ideas of Dobrowska and Lukomska (2011), we defined the main work hypotheses that are focused on the following issues:

- *Differentiated historical evolution influences on the present-day situation of the cities and regions;*
- *Metropolis engine role on the regional growth poles at different territorial levels;*
- *Administrative function as a pushing tool for the cities growth;*
- *The internal resources as real pillars of regional and local development during a crisis period*
- *Accelerated development by networking.*

The key question is how could a new territorial efficiency and quality be promoted by keeping spatial identity (Camagny, 2010) and by using the three metropolitan regions? In this respect, the assessment of the development perspectives of each metropolis is based on the delimitation of MR and FMA and their internal structures (ESPON POLYCE 2012). Three methods defined by ESPON, Eurostat and EEA are used for delimitating the different divisions of the analysed MRs. In the same time the TPG will data provided by OECD and detailed review on the INTERREG Programmes.

In order to target the comparative analysis of the three MRs, we used the NUTS 2 and NUTS 3 as basic framework. For a more analytical analysis in the case of Bucharest we used three kinds of indicators: state, flow and accessibility at the LAU level.

The most effective method to depict the spatial evolution trends, by land use changing in the MR is Urban Atlas which gives us more land use classes as CLC. At the same time the last CLC (2006) does not cover the MR of Athens. In this case, for a comparative study between analysed MR, the base of Urban Atlas 2007 is used, but for the spatial dynamic of each one, CLC was chosen (for Bucharest and Sofia).

The relationships between the three capitals are individualised using the flight and train connections, on one side, and the number of affiliations of the same multinational firms, on the other.

To appreciate the capital role in the national urban system the most significant results are offered by Zipf relationship between the rank and cities' population. The last evolutions show a hypertrophic development of some national urban systems, accentuated by the preferential location of FDI in the capitals (Ianos, 2004). The same analysis is interesting to be applied at the entire South Eastern part of Europe, especially to depict the main trends of this European Urban Regional System.

The particular analysis includes different methods, such as: correlation, Ward's method (especially to mark the regional growth poles networking), applying questionnaires and interviews, GIS for different kind of maps.

By summarizing, the general methodology regards four main steps: defining and measuring indicators (with a huge comparative content), analysis and diagnose of the present development situation (a deep focusing on the each MR), assessment of the cooperation potential between the three capitals (between all regional growth poles) and elaboration of the strategies (Fig.1). A spatial dimension of each step is essential in order to cross the entire approach.

Table 1 Distribution of the work packages among partners

WPs	Activities - sub-activities	Case study work	General level work*	
WP1	Coordination		LP, PP2,PP3	
WP2	A1	Data collection, database and indicators	LP, PP2,PP3	
	A2	Inside the three metropolitan areas		
		A2.1	Competitiveness and innovation	LP, PP2,PP3
		A2.2	Demographic and social structure, well being	LP, PP2,PP3
		A2.3	Internal connectivity	LP, PP2,PP3
		A2.4	Environment	LP, PP2,PP3
	A2.5	Territorial and urban structures and policies	LP, PP2,PP3	
	A3	Drivers of competitiveness	LP, PP2,PP3	
	A4	Accessibility and connectivity	LP, PP2,PP3	
	A5	Existing planning and cooperation among the three Capitals	LP, PP2,PP3	
A6	Synthesis: from the local capacities of the three capitals to their global role			
A7	Policy recommendations and measures and possible projects			
WP3	Dissemination		LP, PP2,PP3	

(LP – University of Bucharest, P2 – National Technical University of Athens, P3 – Union of Architects in Bulgaria, P4 – University Al. I. Cuza from Iasi)

4. Literature review and methodologies

A1 Data collection, database and indicators

A1.1 Data collection, database, indicators, maps, typologies

This is an important step taken into consideration right from the beginning of the project. GROSEE had to define, even preliminarily, an appropriate set of indicators in order to be used for analyses at various spatial levels. To this end, the TPG has reviewed the existing indicators, data sources and data provision and concluded to a preliminary list of indicators – see in Annex I.

A large number of simple indicators will be necessary in GROSEE in order to be able to analyze a great number of specific issues – see in Table 1 of the Annex 2. During the implementation of the project, the capacity of the selected indicators to reflect the spatial phenomena will be monitored. Using such inputs, the initial list of indicators will be eventually further extended.

However, a list of relatively restricted number of “headline”, “top” or “more appropriate” indicators will be created in the next stage of the project.

These indicators are supposed to better reflect the spatial phenomena discussed in the project, because they “synthesize” different issues, for example GDP and unemployment. We will ensure the insertion of indicators in these headlines, indicators included in already established lists of indicators that express important EU strategies as “Europe 2020” or “Lisbon Strategy” -see in Tables 2 and 3 in Annex I. This will enable us to better compare the project’s findings with the respective objectives and the targets of these strategies.

In this selection, the list of “top” indicators of ESPON INTERCO (see in Table 4) that has studied territorial cohesion indicators will also be taken into account.

Finally, a number of indicators regarding GROSEE's objectives, indicators used also in the 5th Cohesion Report will also be taken into account.

Finally, all these indicators will be "feasible", meaning that there are available data for their calculation.

GROSEE should also discuss (a) territorial scales, types and data categories for the indicators (b) the design of the project database and the structure of metadata (c) territorial statistical methods which could be used in the analyses and the proposals of the project and the creation of maps. See for a detailed discussion of these issues in Annex II.

Several data sources have been taken into consideration - see in summary here and in more detail in Annex II

(i) The ESPON projects

(a) ESPON projects refer to all territorial issues and policies

ESPON 2013 Database: Apart from the indicators produced by the project itself, it has integrated indicators produced by all the ESPON 2013 projects.

ESPON 2013 INTERCO / Indicators of Territorial Cohesion: It has studied in depth an important number of indicators from the scope of "territorial cohesion. It finally proposed **32 top indicators** corresponding to the six "territorial objectives" (see in Annex I)

ESPON 2013 SIESTA / Spatial Indicators for a "Europe 2020 Strategy" Territorial Analysis: It shows how the "Europe 2020" Strategy, acts territorially, particularly on a regional scale and especially for composite indicators

(b) **ESPON projects that refer to specific territorial issues**

ESPON 2006 1.1.1 Polycentric Potentials (polycentricism indicators), **ESPON 2013 DEMIFER** (Demographic and Migratory Flows), **ESPON 2013 FOCI** (cities regarding competitiveness, social cohesion, environment and polycentricism), **ESPON TRACC 2013** (regional indicators of transport accessibility), **ESPON 2013 TERCO** (intensity of territorial cooperation), **ESPON 2013 Climate** (territorial aspects of climate change), **ESPON 2013 KIT** (territorial dimension of innovation and knowledge economy), **ESPON 2013 TEDI** (specific regions), **ESPON 2013 TIPTAP** (indicators for macro-criteria of territorial impact), **ESPON 2013 ReRisk** (vulnerabilities in regards to access to energy and energy potential), **ESPON 2013 GEOSPECS** (specific types of territories and regions), (c) ESPON projects that refer specifically to metropolitan regions **ESPON 2013 POLYCE** (indicators at metropolitan level for all territorial issues), **ESPON 2013 METROBORDER** (indic. cross-border polycentric metropolitan regions), **BEST METROPOLISES** (factors that determine specific development of metropolitan areas)

(ii) **Other sources of indicators**

- *Eurostat and other EU bodies:* (i) Indicators used in the 5th Cohesion Report, "Europe 2020" and "Regions 2020" indicators

- *Other international organizations:* ONU, OECD, World Bank etc, *national organizations* (Bulgaria, Greece, Romania).

See in more detail in Annex I

A1.2 The research area of the three Capitals

Within ESPON GROSEE we are making comparisons between the three capitals cities Bucharest, Sofia and Athens. In order to be relevant, these comparisons should be based on common definitions of the metropolitan areas which will determine common rules for their delimitation.

This delimitation has been made from the beginning of the project in order to be used in checking the availability of data for the three Capitals that enables us to select only methods of analysis for which the necessary data exist (or could be found realistically).

The methodological issues concerning the delimitation of the three metropolitan areas are detailed in the Annex II.

Several attempts have been made on metropolises definition and delimitation in ESPON, in Eurostat in collaboration with Urban Audit or elsewhere. We describe below in summary the data and methods that have been used for the delimitation as well as the

related results. In Annex II the entire work on delimitation is being analysed into more detail.

The city / metropolitan area delimitation could be made on the basis of the population size and density (Paddison 2001) or by using more complex methods which refer to the time distance or to the employees commuting to the dense urban fabric, the service provision, the extension area of the urban functions etc – see, among others, in the ESPON projects 1.1.1, 1.1.2, 1.4.1, 1.4.3, FOCl, Database etc, in Urban Audit and in CLC documents.

There are important functional differences between the different parts of the metropolitan areas. First, there is an obvious difference between a densely populated part -**the “core city” (CC)** - and **a second, less densely populated part**, containing activities and population functionally dependent on the “core city”. The total of these two interdependent parts could be named **Functional Metropolitan Area (FMA)** according to the conceptual approach and the terminology used by the ESPON POLYCE project (2012). Further on, it is well known that each FMA has a considerably high influence to a neighbouring “ring” which contains smaller settlements or even small and medium sized cities and their surrounding country-space. This zone could be named, as in ESPON POLYCE, **Outer Metropolitan Ring / OMR**. The total of the FMA and the OMR could be named **Metropolitan Region / MR**.

There are methods of delimitation of these three zones (CC, FMA, OMR) of the MRs at a very low territorial level, close to the “real” metropolitan territories: land plot (of CLC or Urban Atlas 2007) or LAU level. We present in Annex II the implementation results of such methods in the cases of Bucharest and Athens (using different criteria for each case) and the definition of Large Urban Zones of Urban Audit (urban Audit 2004).

However, only few data exist at land plot or LAU level for a great number of indicators that are to be used for the three Capitals. Much more data exist only for NUTS3 or, even more, only at NUTS2 level, which are (usually) administrative divisions. Important ranges of data exist also for the Urban Audit LUZs and the ESPON FUAs. Therefore, we should necessarily define **approximations** of the “real” territories, as well as the LUZs and the ESPON FUAs to NUTS3 and NUTS2 units.

In Annex II we first analyse the specificities of the administrative divisions of the three countries and their respective Capitals in relation to the NUTS division.

Then, we examine which NUTS units of the three Capitals correspond to the three zones (CC, FMA, OMR) of the MRs and at which extent the selected NUTS3 or NUTS2 units could “represent” satisfactorily the three zones of each Capital.

For this purpose, we discuss in detail: the definitions of ESPON FUAs and Morphological Urban Areas (MUAs), the Core areas and LUZs) provided by Urban Audit and the Urban Morphological Zones (UMZ) on the basis of CLC data for the three Capitals. We also examine the urban land use distribution of Urban Atlas (2007) and the definition of the metropolitan areas by Eurostat and DG Regio for all three cases.

See below the selected approximations of the CC, the FMA and the MR for the three Capitals with NUTS3 units

Table 2 Approximations of the CC, the FMA and the MR for the three Capitals

Capital	Core city	FMA (Functional Metropolitan Area)	MR (Metropolitan Region)
Athens	4 "regional units" (aggregates of LAU1)	GR300	GR300, 241, 242, 253, 251
Sofia	BG411	BG411, BG412	BG411, 412, 413, 414, 415
Bucharest	RO321	RO321, RO322	RO321, 322, 312, 313, 314, 315, 316

We should also stress the fact that some minor modifications of this result could be possible on the basis of the TPG work towards the Interim Report, taking also into account the stakeholders' approach of the three MRs as "planning regions". See for the references in Annex II.

A2 Inside the three metropolitan areas

A2.1 Competitiveness and innovation

Competitiveness is a very complex concept. Therefore, it is difficult to understand its underlying factors as well as to measure it. A first aspect of the concept refers to the cities competitiveness as single entities mainly on the basis of the spatial division of labour. The analysis of this aspect is made by "attribute" data, e.g. by data referred to each single city. A second aspect is the integration of cities (and respective regions) into economic networks and, further on, into urban networks (see in Castells 1996, 1999 and 2003, Moulaert - Rodriguez – Swyngedouw 2003 and Sassen 2002). In today's globalised knowledge economy, this notion of networks becomes gradually more important for the understanding of the position of cities in European and in global markets (ESPON 1.1.1, ESPON FOCI). In this sense, the level / scale is a central issue when trying to evaluate cities competitiveness. The capacity of some cities to be competitive at different territorial levels defines to a great extent their success in capturing the opportunities for economic development. Finally, given the fact that the recent crisis creates a new context for territorial development, it is important to examine the related trends (see, among others, in EU 2010).

In this sub-section we will be confined to a first evaluation of the competitiveness of the three Capitals as single entities as well as to a short analysis of the differences of competitiveness among large areas in each city (groups of sub-city districts). In other words, we will present a literature review on some basic factors of cities competitiveness. In Section 3 (drivers of competitiveness) we will examine in more depth the drivers of competitiveness of the three capitals as a key component of their role **at different territorial levels**: regional, national, transnational (SEE), European, global. Specific attention will be paid to the competitiveness of the potential single "pole" Bucharest – Sofia – Athens which is supposed to function as a development catalyst of the entire SEE.

Several studies (see, among others, the ESPON 2006 project 3.4.2 "Economy") have defined as key drivers of territorial competitiveness the human resources, the accessibility, the economic structure / specialisation, the innovation, the institutional / governance factors etc. ESPON 2006 projects on cities in relation to polycentricity (ESPON 1.1.1, 1.1.2 and 1.4.3) as well as other ESPON projects on regional performance have considered similar factors to the above ones as being of key importance. The most recent relevant ESPON projects as FOCI (in its section on competitiveness) (2011) and ATTREG (2011) have adopted more or less, the same line of analysis. Specific attention has been paid by the literature on cities' competitiveness to the analysis of cities' potential of Advanced Producer Services (APS) and HT (High Technology) activities (see in Goebel - Thierstein - Lüthi 2007 and Thierstein - Droß 2008 as well as the respective analysis of ESPON space FUAs in FOCI – Section on polycentric integration (Angelidis et al).

Another interesting part of literature includes EU reports discussing both the most recent changes in the factors that impact competitiveness and the recent EU policy objectives on competitiveness as for example the priority given by "Europe 2020" (2010) to a specific approach of competitiveness and innovation as the basis for "smart development".

At the specific intra urban scale **-urban level-**, the economic structure of the cities will be analysed according to the economic specialization of the cities. Further on, using economic and network indicators, we will be able to distinguish for European cities their specialized integration into globalization and their diversity by economic sectors. During

its first stage, the project will use a list of “most appropriate” indicators established by specific ESPON reports, as INTERCO, SIESTA, POLYCE, METROBORDER etc. An important number is used in the recent 5th Cohesion Report (2010) or they are “Europe 2020” or “Lisbon strategy” indicators. This list will be complemented during the project mainly by composite indicators enabling to analyse relationships among the different factors of competitiveness, for example GDP and employment; even more, multi-factor indicators will be created in the models frame that are supposed to approach competitiveness more globally.

We give below the initial list of indicators (per competitiveness components).

(a) GDP, income, productivity, innovation etc: GDP change per capita in PPS or Euro, GDP in percentage of the EU average per capita, Dispersion in GDP per head, GDP per activity sectors, FDI, Real growth rate of regional GVA, Turnover for enterprises by activity sectors, Disposable household income (b) Labour market: Employment rate change by sex and age, Employed persons in all NACE, Unemployment rate change per sex and age, Labour force replacement ratio, Labour productivity (GDP as PPP per person employed), Labour productivity in industry and services, Productivity growth through employment shifts between sectors (c) Human capital: Share of tertiary educated people aged 25-64 in %, Early school leavers aged 18-24, Healthy life expectancy (d) Innovation and Technological readiness: GERD (Gross domestic expenditure on research and development), Human Resources in Science and Technology (in % of active population), Employment in knowledge – intensive services, Enterprises with technological innovation, Granted and published patents, % of households having broadband access, Households with access to the Internet at home.

For all there are data at NUTS-2 level; for some of them, there are data at NUTS-3 level. For some of these indicators there are data for the three Capitals at LAU level and / or data from Urban Audit (for “Core city” and LUZ levels) and / or data from FUAs datasets.

Factors of competitiveness related to economic, human and territorial resources (innovation, human potential, social capital, cultural background...) will be analysed using specific statistical methods as, for example, the principal component analysis. Appropriate composite indicators and territorial typologies will be put in relation with economic performances (evolution of GDP and employment) through multivariate analysis, including performances in relation to regional or national averages.

A2.2 Demographic and social structure, well- being

Interactions between humans create societies. They are the heart of the European Union and the European Union through the Treaty of Lisbon is promoting democratic values and the interests of each citizen. People are in the spotlight when it is said that the “Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities ...” (Treaty of Lisbon, 2007)

The present economic challenges drew attention on the human capital. European debates on territorial development discuss, without specifying directly, that the challenges for territorial development are caused also by demographic challenges (DEMIFER, Final Report). For example, one of the European 2020 Strategy aim is to make full use of the labour market (p. 17) by reducing unemployment, facilitate a greater involvement of women, older workers and migrating workforce, vouching for a high skilled population and reducing the rate of poverty. Any how these targets can be more challenging for some regions than for others (SIESTA, Final Draft Report), leading to an increase of disparities across European regional (DEMIFER, Final Report).

Metropolitan regions do have an important role in territorial development and the dynamics of the human capital. Pressured by globalisation and the move towards a knowledge-based economy, metropolises face increasing changes in the demographic and social structure (Project Proposal, 2011). The importance exercised by the demographic behaviour on the settlement structures and vice versa, and so on the territorial development is frequently argued (Champion A., 2001; Knox P. and Pinch S.,

2000). In the same context others sustain a “second demographic transition” (van de Kaa, 1987) or “demographic revolution” (McLoughlin, 1991) as a result of shifting demographics and social structures.

Influenced by several external factors (economic climate, life standards and educational and cultural aspirations, a.o.) the demographic and social figures can reveal important aspects of the territorial disparities. To be able to reduce these disparities and to achieve the European Union goals for 2020 a first step is of a proper place based study with the aim to point out major challenges and future trends for a better place based cohesion policy adoption (Green Paper of Territorial Cohesion, 2008).

By using a carefully selected list of relevant indicators, including some of those mentioned in the Fifth Cohesion Report, ESPON DEMIFER, POLYCE, INTERCO, the TPG will examine at the level of the three case study areas, these features divided into: demographic data, population dynamics, social data and well being. The classic formulas (as **natural population development** $Npd = (B - D) + (I - E)$; where B = total number of births, D = total number of deaths, I = immigrants, E = emigrants; **birth rate** $Br = (B/Avp) \times 1000$ where Avp = Average population; **fertility rate** $Fr = (B/Fp \text{ age group}) \times 1000$ where Fp = Female population; **mortality rate** $Dr = (D/Avp) \times 1000$; **poverty rate** $(Pr = P/Tp \times 100)$ where P = people at risk of poverty, Tp = Total population; **demographic rate** $(P_{>14} + P_{<65})/P_{15-64} \times 1000$, **economic dependence** $(Uep/Aepp \times 1000)$, **demographic aging** $(P_{>65}/P_{<14} \times 100)$ are only some of the equations that will be used to analyze important features of great interest in the future territorial development of Europe as labour force, poverty, demographic aging, migration, etc. (see also EU 2020 Strategy, 5th Cohesion Report, Green Paper on Territorial Cohesion).

A2.3 Internal connectivity

Intra-urban connectivity and accessibility are of major importance for the improvement of territorial cohesion and reducing inequalities inside a city. It includes aspects such as: accessibility to services of public interest (health care, education, public transport, etc), accessibility to work, accessibility to leisure activities (theatres, cinemas etc), access to green areas, connectivity of different areas inside the city, Internet access etc.

Within this framework, we shall also examine how the local authorities solved the critical points/issues concerning the intra-urban traffic flows fluency. Among others, the study will reveal the existing daily tensions between centre and periphery, between residential and industrial/services areas, between peripheral areas and suburban ones.

This sub-activity examines the current infrastructures of the three capital cities in respect of transportation and road network, the level of accessibility to public services, the connectivity to airports, motorways and railway stations but also the connectivity through broadband and Internet access. All these are of high importance for GROSEE which aims to propose policies and specific projects improving among others, the attractiveness of the three capitals for investment together with the improvement of the quality of citizens' life and of the urban environment.

The relevant recent literature as well as EU policies focus on sustainable urban mobility, improvement of the public transport, better coordination of urban and transport planning, improvement of the access to services through transport means as well as improvement of the connectivity through broadband and Internet access. See indicatively: EC, *Green Paper - Towards a new culture for urban mobility* {SEC(2007) 1209}/ COM/2007/0551 final and EC, Commission staff working paper, SEC(2006) 1432, 8.11, EC, 2007, *Sustainable Urban Transport Plans*, Preparatory Document in relation to the follow-up of the Thematic Strategy on the Urban Environment, Technical Report.

Numerous appropriate indicators for the above issues have been developed. We refer in next indicatively to some indicators for a great number of which there are data at Large Urban Zone (LUZ) of Urban Audit (see also in POLYCE project): Access to compulsory school, to hospitals, to grocery services, to university, Public transport network per inhabitant, Journey to work by public transport, Park and ride parking spaces, Satisfaction with public transport, Travel to work using public transport in percentages,

Inbound/outbound commuters, Journey to work by car in CC (Core City) and LUZ, Registered cars in CC and LUZ, Road accidents, Actual use of the transport infrastructure networks and services, Satisfaction with public internet access, Firms access to fibre backbones.

A2.4 Environment

According to the authors of ESPON Climate project the aggregated impact of potential climatic changes is medium negative for all three capitals under study in GROSSE. Even if the impact is moderate, and the perspectives related to climate changes are negative in all of the three metropolitan areas, the capacity of adjustment to climatic changes is recorded as lowest in Bucharest and low for Sofia and Athens. The mitigate capacity is also low, as all of the three cities record significant quantities of greenhouse gases emission.

A classification applied by the authors of ESPON ReRisk to the entire European area frames the metropolitan areas of Athens, Bucharest and Sofia into Type 1 – with problems and potential (*Type 1b – Well-of, with trouble ahead* characterizing industrialised regions, including most of the harbour areas and the Pentagon. They present a reduced wind and photovoltaic potential. Their competitiveness is affected by increases in energy prices, sustained efforts being necessary for increasing the efficiency of industrial activities and transportation). The South Muntenia Development Region, including areas from the Bucharest Metropolitan Region is included in the Type 2 – where social cohesion represents an element conferring vulnerability to the region (*Type II - Struggling, looking for jobs and a brighter future* contains the most vulnerable regions regarding the social cohesion, located in Eastern Europe, with high expenses for both cooling and heating. Although the wind and photovoltaic potential is significant, it suffers from a deficient usage).

Taking into consideration the available data, scientific literature and other ESPON projects, the TPG will analyze and synthesize the environment issues from Athens, Sofia and Bucharest and their metropolitan regions.

A2.5 Territorial and urban structures and policies

An individualized study on each of the three urban structures is necessary as it reveals territorial strengths and weaknesses. In more detail, this sub-activity will examine: (a) The urban development patterns in the three metropolitan areas and their surroundings: territorial structure of the industrial / business areas and service provision centres, built areas expansion inside and outside the metropolitan areas in relation to the real estate market, urban sprawl in relation to the transport and other infrastructures, land use patterns (built and green areas) in relation to urban planning arrangements (b) The links of the strategic national sectoral and spatial plans with the metropolitan planning, the metropolitan planning strategies, objectives and measures and the implementation of the latter. Specific attention will be given to the specific negative impacts of the recent crisis on the three cities; the crisis will considerably influence the proposals of GROSEE for detailed policy measures and infrastructure projects (see for this issue in EU, 2010, URBACT Cities facing the crisis: impact and responses).

These issues are also linked to development, social and environmental structures inside cities (activities A2.1, A2.2, A.2.4) as well as internal connectivity (connectivity inside cities), but also with territorial planning arrangements examined in A5.

The Romanian, Bulgarian and Greek literature on territorial and urban structures and policies is substantial. Some examples of analysed publications include various aspects: territorial structures of industrial metropolitan areas (Cepoiu A. L., 2009), environmental consequences of restructured urban areas (Peptenatu D. et al., 2010), development of urban structures (Ianos, 2004; Vossen J., 2004), urban planning arrangements (Angelidis M., 2005; Thornley A., 1993).

An examination of the main business and/or technological poles as well as on urban tourism and higher education facilities by using specific indicators will provide

supplementary information on the dynamics of the territorial and urban structure of each growth pole. Some starting indicators (regarding this intra-urban scale) are: (a) Business, firms: Number of headquarters of transnational firms, New businesses registered, Companies gone bankrupt, Companies with HQ in the city quoted on stock market (b) Urban tourism: Arrivals of tourists by type of accommodation, Nights spent in tourist accommodation establishments, Existing touristic accommodation capacity by type (c) Education, culture : Number of students by age, sex and region, Number of congresses held in the region (d) Polycentricity (inside each FMA): Polycentricity index. Apart from the data at NUTS 3, LUZ and FUA levels, we will use data at intra-city level: LAU data, Urban Audit data on city-districts etc.

Important instruments to measure urban structures dynamics and especially urban sprawl have been developed at the European Level: Corine Land Cover (CLC), Urban Atlas (2007 data with more urban land use classes than CLC) and LUCAS – see in Section A1.1. Study of the land use trends from 2000 to 2006 using CLC 2000 and 2006 is possible for Bucharest and Sofia; it is not possible for Athens because there is not CLC data for 2006 for Greece. An attempt to compare Urban Atlas data for 2007 with CLC data for 2000 will be done for the case of Athens.

European territorial policy documents aim to promote a polycentric territorial development, to encourage cross-border cooperation, ensuring in the same time global competitiveness, to improve territorial connectivity and a proper environment (Territorial Agenda 2020, 2011). The European Union seeks for a better “*integrated urban development policy*” (Leipzig Charta, 2007) and as hubs of a polycentric development, metropolitan areas and their hinterland “*will play a key role in improving spatial balance in Europe*” (ESDP, 1999).

In the light of these guidelines, this Section will examine the implementation of territorial planning in the three metropolises (strategies, objectives and measures) in relation with the strategic national sectoral and spatial plans.

A3 Drivers of competitiveness

This Section examines in depth the drivers of competitiveness of the three capitals in relation to their role at different territorial levels: their region, their countries, SEE, Europe and the world. Therefore, analyses of the drivers of competitiveness per level and according to different kinds of synergies should be made. Based on the results of the Section A2.1 on competitiveness and innovation inside each Capital, we will further discuss the drivers of competitiveness of the three Capitals *according to the contexts they are embedded in* - regional, national, transnational (SEE), European, global. Especially for the articulation of the local leadership with global competition in the case of big cities, see in PwC Big Cities Network 2005. For the global context, ESPON TIGER (2012) provided evidence about the spatially unequal participation of European territories in the global economy.

We will also relate this competitiveness to the underlying territorial factors of competitiveness: networks, economic structure, human resources and social capital as well as, in a more qualitative way, governance structures.

We will specifically examine the following three issues which are interrelated: (1) We will pass from the conclusions on the drivers of competitiveness for each one of the three FMAs to *their role in the growth of their wider regions* (the “Outer Metropolitan Ring” / OMR) (2) Then, we will compare the competitiveness of the three Capitals with the one of other European FUAs and we will examine the network / interdependence relationships of the three Capitals with their national urban systems and the European urban system (3) Finally, we will examine the three Capitals as drivers of competitiveness *in the overall SEE, in the European and the global context*.

The related literature identifies primarily the following territorial factors of cities’ competitiveness at higher levels, from regional to international (see, among others, in ESPON FOCI), in a knowledge-based economy: innovation, social capital and sectoral

structures. Governance and institutional structures could reinforce or not the general tendencies.

Further on, networking and clustering become more and more important. However, while ESPON 2006 projects (see, for instance in ESPON 1.1.1, 1.1.3 and 1.4.3) emphasized the need to implement the approach of new economic and urban networking, they did not exploit it enough in practice. They primarily took into account the proximity networking and less than needed the networking at distance. The latter had been approached in depth, among others, by the pivotal researches of the GAWC working group on the links among the multinational companies subsidiaries located at European and international importance cities nodes (Taylor 2003). In a similar line, other researches had proposed different typologies of the networking at distance (Rozenblat - Pumain 2004 and 2007) or have assessed the international competitiveness of cities using indicators on cities networking through cooperation in research on advanced technology sectors. An important step in this direction has been made in the frame of ESPON 2013, primarily with ESPON FOCI (2011) which has analysed the networking of firms located in European FUAs, using the ORBIS database data, and research networking, using the CORDIS database data on the EU founded research projects. FOCI has studied also in depth the capacity of transport/ communication infrastructures (the existing ones and mainly those which are included in the TEN-T) and the intensity of transport/ communication flows between European cities in addition to the accessibility indicator (see in outside ESPON literature: Amiel - Mélançon – Rozenblat 2005).

Concerning the role of the FMAs (as defined in GROSEE -see previously in A1.2) in the growth of their surrounding regions (OMR and beyond), several theories indicate that the development of a FMA tends to increase disparities with the surrounding regions, however several case studies have shown that if the surroundings are well related to the development of the FMAs, the latter could have a positive effect on them. According to the respective literature and the recent research of FOCI on the issue, the most important factors affecting the relationship between a FMA and its surroundings are the economic structures (intra-sectoral and inter-sectoral relations), the social structures, the labour market conditions and accessibility. As the basic orientation of GROSEE is to promote polycentric integration among Bucharest, Sofia and Athens in the frame of their respective urban networks, research experience in other polycentric integration areas including FMAs is useful. See in Hall – Pain 2006, Otgaar - Van Den Ber - Van Der Meer 2008 and Gabi - Thierstein - Kruse - Glanzmann 2005. See especially for the synergies and complementarities in polycentric urban networks and the questions raised regarding the competitiveness of the network in Meijers 2006 and 2009.

In GROSEE, the above methodologies will be further developed and implemented (eg specific statistical analyses of the links among the companies' subsidiaries located in different European cities with emphasis on the links of the three Capitals and SEE with the European cities). We will also take into account the physical – geographical and historical factors impacting on the competitiveness of the three study areas (Bucharest, Sofia and Athens). Further on, as the drivers of competitiveness of the three single FMAs differ substantially, it is necessary to detect the comparatively strong and weak factors of competitiveness in each case, in order, among others, to proceed to an evaluation of the possible synergies and complementarities among them. GROSEE will emphasise the synergy of factors to increase multi-cooperation between the three capitals.

Statistical and geo-statistical methods will be used to study the existing relationship between the three FMAs and their surrounding regions –the OMRs and beyond- , the mechanisms of transmission / diffusion of growth and the final impact of the FMAs towards their surrounding regions. We will emphasise the aspects of economic structures and cooperation, innovation and networking, the spatial configuration of the labour market, connectivity and accessibility, provision of various services and supplies. The majority of the respective simple indicators are already presented in section A2.1. Appropriate simple and composite Indicators and territorial analysis models on cities networking and the impact of the three FMAs on the competitiveness of their surrounding

regions, the respective countries, SEE and Europe will also be used. While the methods to be used here regarding the different territorial levels are similar, they will be adjusted per level FMA / MR / regional level, country, transnational and ESPON space levels. Emphasis will be given on methods examining the existing and potential competitiveness synergies among the three capitals and finally, the potential role of the “emerging pole” in the entire SEE. Specific indicators will be created in order to measure existing “competitiveness distance” of the SEE from the “Pentagon area” and other more developed mega-regions of Europe. Finally, we will do SWOT analyses regarding (i) the potential synergies, complementarities and integration among the three capitals (ii) the decrease of the “competitiveness distance” of the “emerging pole” (and the entire SEE) from the ‘Pentagon area” and the rest of Europe.

Finally, we should mention that in FOCI section for the case study for the SEE (Angelidis et al 2011) specific analyses on the firms, research and transport links among the SEE cities have been made. The research highlighted the primary role of Athens and the secondary, but increasing role of Bucharest and Sofia in these relationships. The method used will be enriched in GROSEE and more recent data will be used in order to specify the respective actual trends and perspectives.

A4 Accessibility and connectivity

Accessibility has become a key term in development policies and strategies at local, regional, national or EU scale. Its overuse or sometimes improper use deprives it from significance or from its instrumental purpose. The level of accessibility “to” or “of” places may often be a push or a pull factor in their development. Increasing accessibility should be constantly seen as a mean of urban competitiveness and growth and not as a purpose in itself.

The SEE main growth poles – Bucharest, Sofia and Athens - have been identified in ESPON 2.4.2.Project (2005) as forming a Future Potential European Integration Zone. Thus, the GROSEE project envisages a deeper geographical understanding of the position of these SEE main growth poles in the context of South-Eastern Europe and in respect to the European Core. Studying the different indicators orbiting around the concept of accessibility of GROSEE cities will also be performed in different territorial structural contexts such as the European polycentric urban networks, European Transport corridors or within metropolitan areas.

Accessibility of urban areas, poles or transport networks has been widely targeted in previous ESPON projects, which calls for a unitary approach. In this respect valuable information was given by projects as: ESPON 2006 1.2.1., ESPON 2006 2.4.2., ESPON 2013 FOCI, ESPON 2013 TRACC, ESPON 2013 ADES.

A series of studies on accessibility as key concept revealing the performance of transport networks or transport systems have been intensively carried out in the early 2000's by the former CESA Lab – actual Polytechnique de Tours, France around the team lead by Prof. Philippe Mathis: Hervé Baptiste, Christophe Decoupigny, Alain l'Hostis, Laurent Chapelon etc. which also participated in ESPON 1.2.1. action. (Mathis et al. (2003) – *Graphes et réseaux*, Paris PUF, then L'Hostis, A. (1997). [...] *La déformation de l'espace par les réseaux de transport rapide* or Chapelon, L. (1997). *Offre de transport et aménagement du territoire*, both PhD Works at École Polytechnique de Tours, France etc.) Their academic work provide a wide series of accessibility indicators of places, going from geographical accessibility, accessibility of functions, interaction potential etc. to characteristics of networks connecting places such as morphology, density, connectivity or minimal paths. The team at Urban and Regional Research lead by Spiekermann and Wegener has also lead important work on how to effectively use accessibility indicators or how to forecast possible influences of changes in territorial accessibility upon territorial cohesion. Their work is accessible on ESPON publications and often presented at European meetings (S&W – (2007). *Update of Selected Potential Accessibility Indicators*. ESPON publications, Spiekermann, K., Wegener, M. (2008): *The*

shrinking continent: accessibility, competitiveness and cohesion in Faludi, A. (Ed.): European Spatial Research and Planning. Cambridge etc.)

Our research will fully take into consideration the principles of the European Spatial Development Perspective as well as 2020 Europe's Growth Strategy.

The necessary data for Activity A.4 will be related not only to the 3 capitals, but also to the SEE territory, as well as to the European core.

We will use existing accessibility indicators and statistic data from the ESPON Database, Urban Audit and from EUROSTAT, as well as indicators used in previous ESPON projects that have studied the context of SEE, especially FOCI. Some data are available for time series, others just for one year. The challenge is to overcome the disparities between countries in this regard and to use only those indicators that are available for all countries at the same spatial scale and for the same timeframe in order to produce relevant results.

The Activity A4 consists of two sub- activities: A4.1 Current situation and A4.2 Impacts of the "new structure of the European Transport network"

For the first sub activity it is necessary to further specify the existing analyses on accessibility and connectivity for the entire EU space regarding the role of Bucharest, Sofia and Athens (and the entire SEE area) in the existing EU transport links, focusing on those that connect this area to the core area of Europe. Thus, there is a need to assess alternatives to overcome the long distances to the core as well as the rest of the EU space.

Specifically, the project will assess the quality of the current transportation links between (a) the three Capital cities and the SEE, (b) the three Capital cities and the European core, as those links are key factors for the support for economic development and spatial cohesion for the cities.

In order to achieve this objective, we will assess first the transport infrastructure (road and rail networks, number of airports) in the SEE the area and then the connections between the three Capitals and the rest of the territory (daily links). The same will apply for the analysis of the links between the said Capitals and the European core. We will also take into account indicators like potential accessibility by air, train and road, as well as multimodal potential accessibility, already available in the ESPON database for 2006 at NUTS 3 level.

The analysis of connectivity based on a single day business trip between MEGAs and Urban Audit cities delivered by FOCI emphasised the low level of connectivity within the SEE and compared to the European core. However, we would like to use again this indicator, among others, based on more recent timetables and network data. This will enable us to explore the current situation of the area and provide a more in-depth image of the connectivity and its potential support for a balanced economic development.

The new perspectives for improvement of the EU TEN-T are of great importance for the project. Specifically relevant are the perspectives for the development of the transport corridors linking the Balkans to Central Europe and the funding opportunities in relation to the "Budget for Europe 2020 - Part II: Policy fiches" (2011) proposed by the EC and in particular the "Preliminary list of European Mobility Corridors and Transport Core Network Projects and Sections" to be financed until 2020 - the transport axes linking Athens, Sofia, Bucharest, Belgrade and Budapest and the Hamburg — Rostock — Constanta — Burgas — Piraeus — Lefkosia Corridor. We will review the segments of these axes and propose how they will be better exploited in the polycentric development of the SEE based on the triangle Bucharest – Sofia – Athens.

First we will analyse the position of the three Capitals and the SEE area in the frame of the new structure of the TEN-T network. Then, we will examine the opportunity for implementing transport infrastructure projects on secondary transport segments / nodes converging to the new two major axes referred to the SEE, by taking into account the existing national strategic transport infrastructure plans of the three countries as well.

The indicators to be used for this analysis are related to the volume of passengers and goods, connections, speed, population in service areas etc. We will also create

appropriate transport digital models in order to compare the current primary transport network to the new network including the new structure of the TEN-T, based on indicators such: the highest speed on railway sections according to timetables, improved rail accessibility due to existing infrastructure as compared to a low speed scenario for TEN-T, improved rail accessibility due to a high speed scenario for TEN-T as compared to the current situation, isochrones surface reporting to population.

A5 Existing planning and cooperation among the three Capitals

The recent history of the spatial planning of the Bucharest city and its area of influence is strongly correlated with the post-communist process of revising the planning process and instruments and adapting it to the new political and socio-economic system. In the early '90s the first attempts to reconsider the role and development strategies of the capital were related to the preparatory studies for the national territorial development plan – section IV concerning the human settlements network. The definition of an area of influence and its strategy was the subject of a detailed research initiated by the City Hall in 1994, under the name of "Directions, senses and development intensities of the Municipality of Bucharest", which identified and delineated, on the basis of a multi-criteria analysis, an area of influence and support which was seen as a potential metropolitan area of the capital. The study was approved by the General City Council in 1999 but had no juridical effects. During this interval (2000-2010) plans at larger territorial scales were elaborated: a Zonal Territorial Plan for the Metropolitan Area of Bucharest, including a development strategy in 2005 that was correlated with the Territorial Plan for the Ilfov County, finalized one year before. The mid of the decade and its second part is related to first significant attempts to set up an institutional framework for the development of the metropolitan area, an association of the administrative units of the metropolitan area. First attempts to set up a special law for the Bucharest Metropolitan Area have been made too. It is also important to mention that during this decade a regional development policy has been implemented in Romania and a legal and institutional framework have been set up. The development region Bucharest – Ilfov became one of the 8 regions defined initially in 1998 (law 151) and than in 2004 (law 315). At the level of the region a development agency and a regional council have been set up and regional development plans and strategies were elaborated since 1999. At national level a strategic development concept was prepared in 2008 as a basis for a national spatial development strategy. The issue of the capital city and its metropolitan area was an important topic for the concept.

The present stage (since 2011) is one of revisions, updates and preparations of medium and long term strategies more correlated to the EU principles, trends and directions. At the level of the municipality the elaboration of a new general plan is going to start soon. To prepare it, the municipality ordered the elaboration of a general development strategy which referred to the metropolitan area too. At regional level a new regional development plan is under preparation for the next programming period 2014-2020. Finally at national level the elaboration of the national spatial planning strategy is also supposed to start in the near future. There have been also significant debates during the last two years in relation to a process of an administrative reform with a special focus on the capital area too. At this moment there is obviously a much more complexity of the planning process related to the metropolitan area of the Romanian capital city.

The authors of FOCl project identified in a very clear manner the main types of cooperation:

-The first type is the cooperation regarding elementary physical infrastructure and basic community services. This kind of cooperation (for big infrastructure projects) is hard to be put into practice between the three SEE metropolises (high-speed railways and high-ways construction for 1100 km needing some serious funding).

-The second type of cooperation concerns strategic planning for the development of a bigger area (like a metropolitan area).

-The third type of cooperation covers and integrated territorial development proposing solutions of governance and managing problems of interregional matters.

Also the FOCl project reveals the mechanisms through which city cooperation networks are established. These city networks are created through firm links (commercial and trade relations and also by multinational subsidiaries), through research links (creation of research consortiums) and through transport (by air, by road, by rail, and by water). Athens is a long way ahead no matter what criteria is taken into consideration for city cooperation clusters or networks. Athens is the main source (among the three capitals) of FDIs in Sofia and Bucharest, while FDIs coming from Sofia and Bucharest are negligible. This role of leader is reinforced also by the role played by Athens in research consortiums and as a transport hub. The flows of financial capital, of knowledge, and of mobility are attracted and redistributed in this part of EU by Athens.

The recent development of the spatial planning in Athens metropolitan area is defined by two kinds of Plans – Programs. (a) Regional programs: The NSRF (National Strategic Reference Framework) 2007-2013 and the ROP (Regional Operational Program) of Athens / Attica 2007-2013 (2008). (b) Spatial Plans: the Greek General Framework of Spatial Planning and Sustainable Development (GFSPSD) and the (proposed) Strategic Plan for Athens (SPA) 2021.

The NSRF 2007–2013 of Greece has defined the following development objective for Attica over the period 2007-2013 (NSRF 2009): “Strengthen the international role of the Region of Attiki, as a European metropolis in the area of South-Eastern Europe and the Mediterranean”. In this frame, NSRF proposes establishing the Region as an International Business Centre, improving the extroversion of the local production system and facilitating the attraction of foreign investments by encouraging innovation, entrepreneurship, research and technology and improving the infrastructure of the Region (upgrading – expending the urban transport infrastructure with priority to the public transport means). To boost the competitiveness of the Region’s economy, the strategy focus on promoting integrated R&D interventions, while, regarding the environment protection, attention is paid on liquid and solid waste management infrastructure as well as reduce the risk entailed by natural disasters. In addition, emphasis will be placed on reducing social disparities inside the Region and on interventions targeting the transformation of the urban landscape, by revitalizing specific areas, implementing extensive recreation projects and highlighting the cultural heritage.

The GFSPSD for Greece (2008) included similar objectives with the NSRF. However, it proposes geographical configurations of these objectives for the different economic sectors as well as for the national urban system and the transport and other infrastructures. We should highlight that GFSPSD considers the metropolitan centres of Athens and Thessaloniki as the main urban poles - gates at international level. For Athens, the particular objectives are: Strengthening and consolidating its role as a trans-national metropolitan pole in EU, Promoting the role of Athens as a business centre linking the EU to the South-Eastern Mediterranean, the Middle East, the Balkans and the Black Sea countries, Identification and strengthening activities of international scope, concentration of modern business activities, the emergence as an international node of transport and trade, a centre for research and technological development, global cultural metropolis, a tourist pole at international level, a centre of provision of health services and major sports events destination, enhancement of the role of Athens as pole of diffusion of development dynamics throughout the national space.

The development strategy of the ROP of Attica 2007-2013 specifies the directions of the Greek NSRF.

Territorial development in Athens / Attica is regulated since 1985 by a so called “Regulatory Plan of Athens” (or Master Plan, “Rythmistiko Sxedio” in Greek). A new strategic territorial plan for Attica is obviously necessary, because very important changes have been made in the Athens metropolitan area,. In addition, the administrative reform of “Kallikratis” should be taken into account in the territorial strategy for the region. So, several attempts to create such a Plan have been made from the

beginning of the decade of 2000. On 2011, a new proposal of “Strategic Plan for Athens (SPA) 2021” has been created and has recently been submitted for comments to stakeholders. The SPA 2021 strategic objectives are similar to those of the Greek GFSPSD. SPA gives emphasis in the cooperation and networking of Athens / Attica with metropolises integrated in the axis to the developmental core of EU as well as the axis to the Balkans, Central and Eastern Europe. It also promotes the following principles of territorial development: polycentricity, complementarity, networking, competitiveness, environmental sustainability, balanced development, social cohesion. In the relatively recent Greek Spatial Plans and Programmes for Tourism, Industry, Renewable sources of Energy and Transport infrastructure, the role of Athens is crucial, mainly as node of redistribution and diffusion of the development at national and trans-national level. Specifically, these Plans give emphasis to the links of the national networks of transport and energy with the respective TENs through the SE Europe area.

A6 Synthesis: from the local capacities of the three capitals to their global role

The analysis of the current development state of Athens, Bucharest and Sofia, and its territorial influences, shows an increasing potential at national level, especially in the case of the last one. The huge demographic potential, the quality of the labour force, the domination of the high qualified people, a good accessibility by air, and the openness of the municipalities for cooperation are the basic elements for appreciating the local capacities. Nevertheless the restructuring of urban economy in the Bucharest and Sofia case it was a contradictory one due to the fact that over 55% of the national volume of FDI were attracted in these capitals. Their regional potential for the next development stage could push over-national influences.

The passageway to the global role is, implicitly, to be found into EU 2020 Strategy. This strategy should have positive effects on urban economic restructuring by accentuating the competitiveness, by developing the IT and TC sectors, the creative industries and by using the local resources, especially high skill labour in a smart way. As we already mentioned, Athens has an important Balkan role from the financial sector point of view; many Greek banks have an important role in Romania and Bulgaria. Other functions such as cultural, scientific, or TC sector give to Athens an important over-national role for the entire area.

A good source to increase the role in SEE of the three capitals is the cooperation between them through valorising the complementarities. The urban systems networking with the increasing role of some cities as Thessaloniki, Varna, Burgas, Timisoara and Constanta, could push the connection with other urban systems centred on Istanbul, Belgrade, Skopje or Tirana. A big and functional urban network in this area will have more chance to generate a sub-continental synergy for the future development.

The main actual challenges for the three capitals are to resist better at the direct and indirect effects coming from the crisis and, after that, to find the global niche for a better position in the world's hierarchy. For instant, it's clear that the unpredictable evolution of the global economic crisis could facilitate a more connected economy to an endogenous regional development. This means more stability and safety from a social and economic point of view, taking into account the big and unexpected changes in the politics of the multinational firms.

A7 Policy recommendations and measures and possible projects

The strategic recommendations will be based on identified factors influencing metropolitan development and providing future development opportunities. They will be identified on the basis of findings from previous analyses of characteristics, potentials and assets. In order to identify the best policy recommendations the documents and strategies for the three capitals will be examined: what strategic documents exist, have the strategic documents a long-term perspective, and are there competing / contradictory strategic documents, do the strategic documents address housing, transport and governance?

In the upcoming period stakeholders will be involved in qualitative studies (in-depth interviews) aimed at governance related problems. The interviews will be conducted to identify approaches to metropolitan development and perception of development problems.

Interviews will serve as a tool to identify and assess perceived spatial characteristics of each city. The target group are the stakeholders and local actors in each of the three metropolises. Approximately 20 to 30 interviews will be conducted in each capital.

Among topics covered by qualitative studies are: relations between central city of metropolis and surrounding area, drivers and dynamics of metropolitan development, current paths of metropolitan development and their social, economic and spatial consequences, formulation and implementation of development policies, governance and day-to-day management, institutional options concerning organization of the system of metropolitan governance (a detailed methodology in ESPON Best Metropolises).

The aim of the interviews will be providing context knowledge with regard to the documents to be analyzed and key issues of the three capitals.

The interviews should be complemented by the workshops and questionnaires (using Delphi method) to creating cooperation and consensus among actors and the strategy building process. The Delphi method will be organised in the form of an online questionnaire and "is based on a structured process for collecting and synthesising knowledge from a group of experts by means of a series of questionnaires accompanied by controlled opinion feedback" (Evalsed 2008).

The participants will be invited by email, indicating a webpage offering an online survey. Non-responding addressees will be re-contacted via email and by telephone to ensure a high response rate.

In the end, the analysis and synthesis phase will comprise the statistical tools and some qualitative tools regarding the comments. All feedbacks will represent the background for policy recommendations in defining and identifying subjects for possible projects.

5. Further proceedings toward the Interim Report

The core analysis of the three capital cities and their metropolitan areas, the comparison between those and their relation to the South-Eastern Europe polycentric network and the Pentagon will be conducted in the period of time separating the Inception Report from the Interim Report. It is therefore the most intensive work phase of the project.

Next steps:

- i. Ongoing literature review and documentation;
- ii. Finalization of the list of indicators and data collection;
- iii. Accomplishment of the activities A2.1 Competitiveness and innovation, A2.2 Demographic and social structure, well being, A2.3 Intra-urban connectivity and accessibility, A2.4 Environment; A3.1 Drivers of competitiveness by Capital and their role in the growth of their regions, A3.2 Comparison of the competitiveness of the three Capitals with other European FUAs, network / interdependence relationships; A4 Accessibility and connectivity;
- iv. Results on A2.5 Territorial urban structures and policies; A3.3 Capitals as drivers of competitiveness in the SEE, the European and the global context;
- v. Outlining the brochures thematic for the workshops;
- vi. Attending the ESPON Open Seminar (5-6 DEC. 2012)
- vii. Elaborating the Interim Report.

5.1 Deliverables and outputs

- i. Reports

In the framework of GROSEE, project progress reports have to be delivered.

The present document, representing the revised **Inception Report** focuses on the analytical framework and the research approach of the project. It also defines the case study area and gives a first glance on the use of existing ESPON results relevant for this project. The revised Inception Report was elaborated in accordance with the comments of the CU and Stakeholders on the first Inception Report. (28 September 2012)

The **Interim Report** shall present the intermediate project results based on the comparative analysis of the capital cities (Bucharest, Sofia and Athens) and their role and perspectives at South-Eastern Europe and Core Europe level. At this stage the project has to provide an insight on how the project is expected to formulate policy recommendations. (30 January 2013)

Within the **Draft Final Report** relevant conclusions and recommendations based on the final results are to be delivered. Policy measures and major projects will be identified that can contribute to the improved economic development of these city/metropolitan regions, to the emergence of cooperation relationships among them, enhancing their connection with the core of Europe. (30 May 2013)

The **Final Report** represents a document integrating both the project results and the comments and suggestions from the stakeholders and end users, the ESPON Monitoring Committee, the European Commission and the ESPON Coordination Unit. (15 September 2013)

ii. Workshops and Seminars

During the lifetime of the project the TPG will organise and participate to several workshops and seminars. The three workshops organized in the capital cities will aim to present the project and receive a constructive feedback from a wide range of interested parties. For a better understanding of the entire concept of polycentricity in South-Eastern Europe thematic brochures will be distributed during the workshops. To summarise the findings of the research a Final Conference will be held in Bucharest. (see Table 3)

iii. Project visibility

The GROSEE project makes use of several methods to increase the project visibility and presentation of the results. The TPG aims to **publish 8 scientific papers**, two for each partner. **Reports will be issued in 120 copies** (40 for each case study city) in order to be distributed to central and local authorities in each partner country and during the final conference. For an efficient dissemination, a **project website** dedicated to information and spreading the GROSEE results will be set up. On the website **electronic newsletters** will be published to present the project progress and intermediate results. In the same time an **informative mailing list** will be created including at the first official stakeholders from the three countries, ESPON MC and MA, EC, DG Regio, and then policy-makers and practitioners. A final action is the **Transnational Networking Activity** where partners foresee to participate in at least three international conferences, presenting, discussing and promoting the project results.

A news letter informing about the new GROSEE project was published on the webpage of the Ministry of Regional Development and Tourism in Romania: <http://www.esponromania.ro/newsletter/id4/c1/>

The LP – University of Bucharest participated at the International Scientific Conference: III. Danube-region Cohesion held in Dunaujvarosi on the 5-6th September 2012. In the frame of this conference first project results were presented: *The dynamics of socio-demographic structures in the metropolitan area of a great growth pole in South-Eastern Europe: Bucharest and Bucharest-Sofia-Athens axis and cohesion increasing of the*

South-East European Urban System. As well the LP participated at the Second Romanian – Bulgarian – Serbian – Hungarian Conference held in Eger (Hungary) between the 20th – 23rd of September 2012 presenting: “*European Territorial Cohesion, between Reality and Desire*”.

Table 3 GROSEE Calendar

	What?	Where?	When?	Who?
	Starting data of the project	-	8 FEB 2012	LP/TPG + LS/GSH + CU
M	Kick-off + 1 st Steering Committee	Luxembourg (LU)	28 MAR 2012	LP/TPG + LS/GSH + CU
E	ESPON Seminar (open)	Aalborg (DK)	14-15 JUN 2012	LSH + LP + CU
R	Inception Report	-	28 JUN 2012	LP (+TPG)
M	2 nd Steering Committee	Bucharest (RO)	25 JUL 2012	GSH + LP/TPG + CU
R	Revised Inception Report	-	28 SEPT 2012	LP (+TPG)
E	ESPON Seminar (internal)	Paphos (CY)	5-6 DEC 2012	LSH + LP + CU
E	Local workshops	Bucharest Sofia Athens	To be decided	TPG + GSH
R	Interim Report	-	31 JAN 2013	LP (+TPG)
M	3 rd Steering Committee	Sofia	to be decided	GSH + LP/TPG + CU
R	Draft Final Report	-	30 MAY 2013	LP (+TPG)
M	4 th Steering Committee	Athens	week 24-28 JUN 2013	GSH + LP/TPG + CU
E	ESPON Seminar (open)	To be decided (IE)	xx JUN 2013	LSH + LP + CU
R	Final Report	-	15 SEPT 2013	LP (+TPG)
E	Joint workshop	To be decided	To be decided	GSH + TPG
E	Final Conference	Bucharest	To be decided	GSH + TPG + CU
E	National dissemination events	Bucharest Sofia Athens	To be decided	GSH + TPG
	Closure of the administrative duties	-	15 DEC 2013	LP/TPG + CU

E = Event
M = Meeting
R = Report
LSH = Lead Stakeholder (Ministry of Regional Development and Tourism Romania, Directorate General for Territorial Development)
GSH = Group of Stakeholders
LP = Lead Partner (University of Bucharest)
TPG = Transnational Project Group (Research Consortium)
CU = ESPON Coordination Unit

5.2 Dialogue with the Stakeholder

The nature of a Targeted Analysis is for the researchers to present information on the large territorial context based on the stakeholders needs. Therefore the GROSEE Project is structured in such a manner to ensure a close cooperation with the stakeholders. In this respect, the LP will maintain a permanent communication with the Lead Stakeholder (Romanian Ministry of Regional Development and Tourism) to ensure the fully understanding of the stakeholders' requirements and needs, and in the same time each partner will stay in close contact with the related stakeholder (The Greek Ministry for Development, Competitiveness and Shipping and the Bulgarian Ministry of Regional Development and Public Works). During the entire lifetime of the project meetings and workshops will be organized so that the stakeholders, decision makers and practitioners can fully benefit from the results of the ESPON project and on the other hand for the TPG to receive a constructive feedback (see Tab. 3). The stakeholders will not be consulted only in terms of policy recommendation, but will be involved in the projects outcomes during the entire lifetime of the project, providing also (whenever possible) support in terms of data collection.

5.3 Likely Barriers for the Project Implementation

Even though the project is planned in detail, with an accurate time schedule and properly distributed tasks among the partners, technical and logistic related barriers to the project implementation can be faced.

The main concern is due to possible **data shortcoming**. The analytical part of the project is based on a reach quantity and good quality indicators and data sets. In this aspect some risks are foreseen as: data availability at metropolitan region, data quality and harmonization of data, data collection by using surveys. The Stakeholders support in facilitating the collection of statistical data, alternative data sets and assumption based on official documents and complementary researches are responses to the above issues.

The **withdrawal of P2** – University of Architecture, Civil Engineering and Geodesies represents a huge risk in the continuation of the project and caused a delay in all project activities. The TPG has in perspective the inclusion of the Union of Architects in Bulgaria to our team and with joint efforts to overcome the difficulties.

Risk related to project **logistics and management** could slow down the implementation of the project. The tight schedule and the overlapping of several activities could cause a delay in the completion of the project within the framework decided. In the same time this delay could also be caused by a poor communication and coordination among partners. Solutions to these barriers are foreseen, some of them already initiated: creating a common e-Mail address: egronet.espon@gmail.com, frequent and bilateral meetings (first TPG meeting took place on the 30th of April 2012), project website.

However the above described contingent barriers should not stay in the way of achieving a successful end of the project.

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