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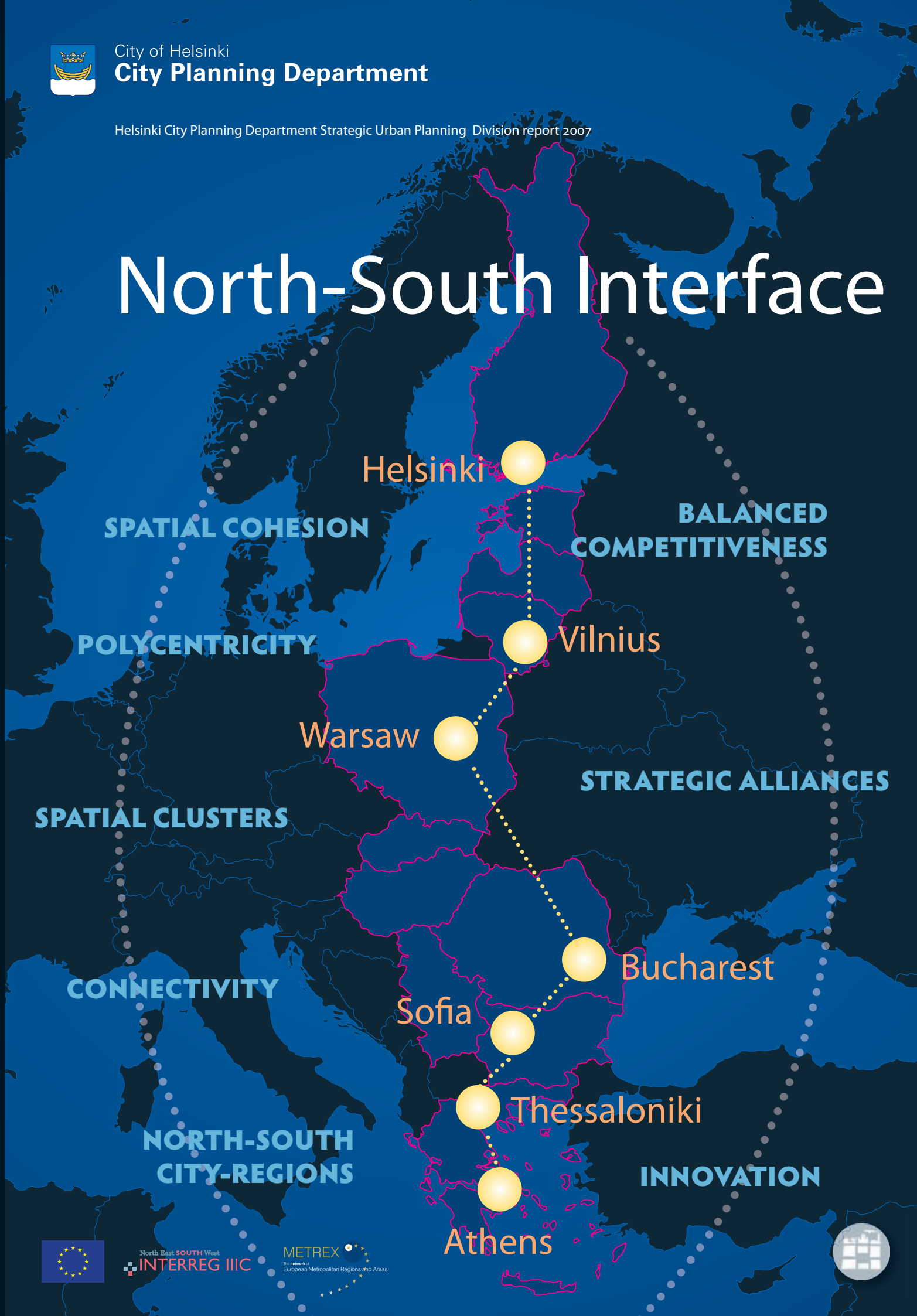
City Planning Department

Helsinki City Planning Department Strategic Urban Planning Division report 2007

North-South Interface



North East SOUTH West
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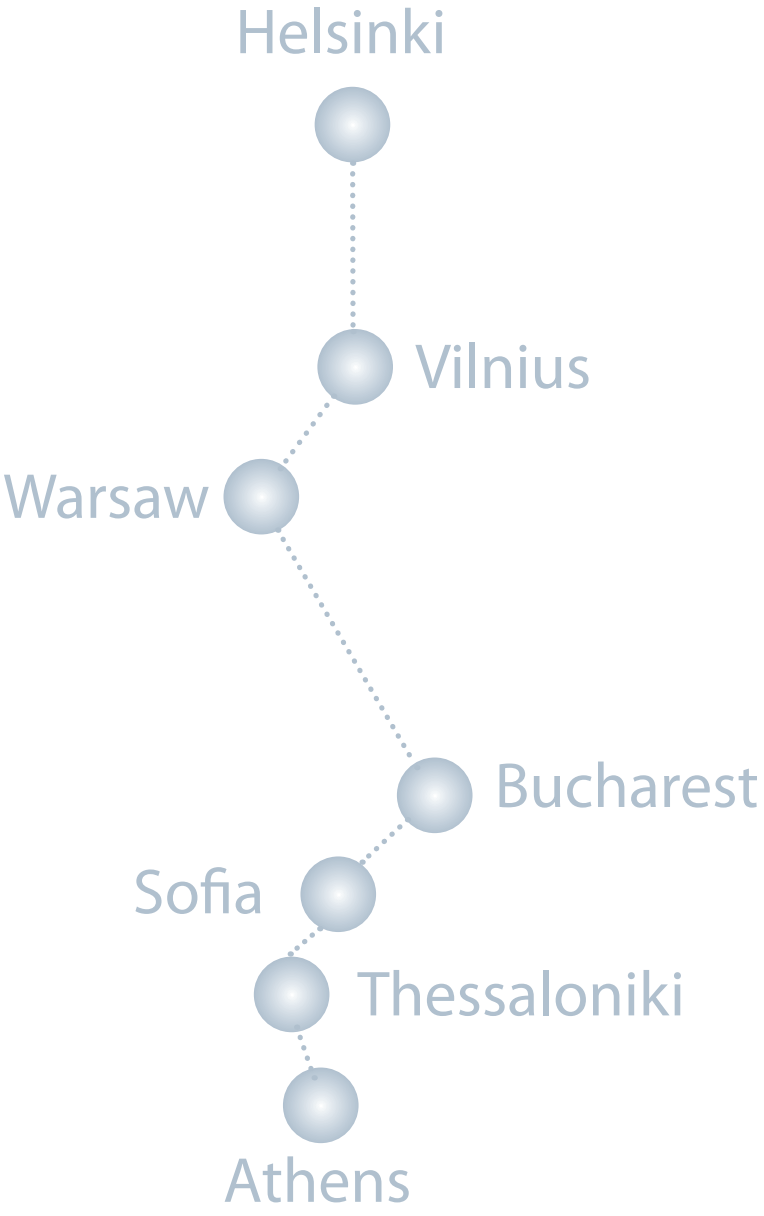
METREX
The network of European Metropolitan Regions and Areas

PolyMETREXplus RINA

North-South Interface



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PolyMETREXplus RINA

North-South Interface

Edited by
Douglas Gordon

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Polymetrex North-South Interface

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Introduction

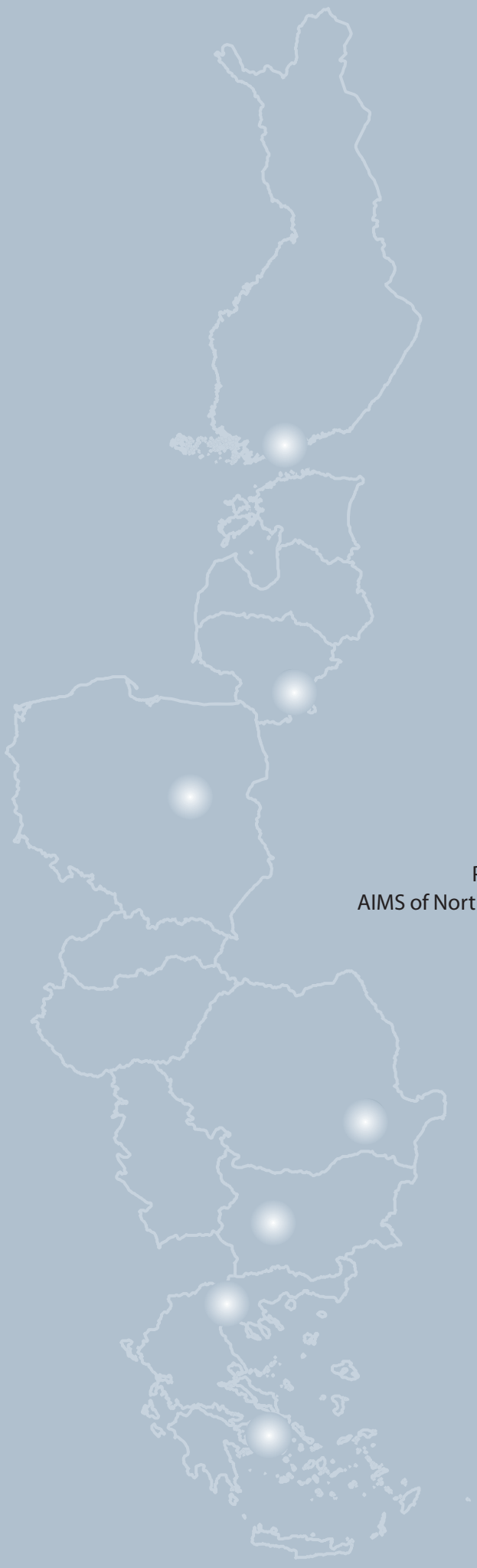
PolyMetrexplus is an EU funded project promoted by Metrex, the Network of European Metropolitan Regions and Areas.

PolyMetrexplus aims to contribute to the effective polycentric metropolitan relationships based on complementarity and cooperation in respect of the European Union's European Spatial Development Perspective (ESDP) and its Territorial Agenda.

PolyMetrexplus is an Interreg IIIC project to improve the effectiveness of policies and instruments for regional development and cohesion.

The working approach of PolyMetrexplus produced a Framework for a Polycentric Metropolitan Europe. It created an Action Plan and a Polycentric Practice Benchmark derived from a programme of Representative Interregional Networking Activities (RINAS). The RINAS test the scope for additional polycentric clusters and visions within PolyMetrexplus.

This North-South Interface RINA represents part of the PolyMetrexplus Action Plan. It forms one of a series of RINAS in the 'Outcomes and Output' practice component element of PolyMetrexplus.



PolyMETREX RINA
AIMS of North-South Interface

Aims

Aims

PolyMETREX RINA
AIMS of North-South Interface

- to exchange practical knowledge and experiences of spatial planning between the North-South city-regions
- to cooperate between the city-regions in the North-South interface with the aim to create spatially, polycentric regions in the future
- to identify the key challenges and opportunities for the interface and translate these into policy options
- to develop a spatial vision for the North-South and prepare a joint statement action plan for the Interface.

Why the North-South interface RINA?

The North-South structure of the EU, from Helsinki in the northern most part of EU and Athens in the south, is recognized as one of the **poorest** connected areas of Europe. North-South represents the **EU periphery**, bordering as it does with Russia, the Ukraine, and Belorussia. At the same time, North-South represents possibly the key development **POTENTIAL** for the Future EU.

These 3 key challenges – to upgrade the quality of life, to create better transnational connectivity and to realise the potential that the Interface offers makes for the North-South uniqueness in the EU today.

North-South and the Pentagon

The concept of the Pentagon GIZ (global integration zone), bounded by London, Paris, Milan, München and Hamburg, has sometimes been taken as being synonymous with the EU's GIZ. It would clearly be impossible for the rest of Europe to achieve balance with such an extensive view of the European core. A strategic emphasis, however, on improved European connectivity North/South, East/West and peripherally, to link Europe's main transnational areas to each other and to the core, could be a way to achieve better urban balance throughout Europe. So, within transnational areas outside the core, the identification and promotion of polycentric city-regions is essential in order to create a long term vision of better territorial balance with the core.

Identity of the North-South interface

In the south component, the countries and cities of Southern Europe (i.e Athens, Thessaloniki, Sofia, Bucharest, Belgrade and even Budapest) have a long history of dense relations either cooperative or competitive. The same holds for the north Baltic component of Helsinki, Tallinn, Riga, Vilnius and Warsaw, as well as the central area of Budapest and Warsaw.

The North-South RINA is the interface of the EU to Eastern Europe and Asia countries with whom the participating countries have a long history of transnational relations.

North-South has a combined population of 109 million people. Population trends show decline with all except Helsinki, which has a high positive rate.

13 Major Cities of more than 1 million. The GDP per capita is weak overall. Only Helsinki and Athens have high GDP's. Four out of five city-regions in the RINA have less than 50% of Helsinki's GDP.

TEN priorities

The European Commission has long recognised the imperative of improving transport infrastructure between the Union and Central Europe. The Trans European transport network (TEN) is a programme of priority projects which will support better territorial balance. An augmented TEN-T programme would assist the North-South interface considerably. The current rail corridor network requires to be significantly upgraded. This centres upon more investment being laid in the form of high-speed rail networks.

Connectivity of the future North-South will not only depend upon implementing TEN but re-assessing the future potential for upgrading North-South as a key priority in achieving better territorial balance and cohesion within the EU. A further key issue is how this could be achieved in a carbon light way to reduce greenhouse emissions.

Transnational dimension

An important feature of the North-South RINA will be the transnational connection. All the capital city-regions involved will have future relationships with adjoining regions and countries within the RINA. Equally important may be the viability of linking up to the eastern borders with Russia, Ukraine and Belarus. Helsinki, for example, has St.Petersburg close by – it is only 375 kilometres away – which views Helsinki as its key window of opportunity to the EU. Tallinn to the south in Estonia, is only 80 kilometres by sea from Helsinki. Vilnius is only 35 kilometres from Belarus and 170 kilometres from Minsk. It is the same for the relative nearness of Thessaloniki to Sofia, and Sofia to Bucharest. Each in turn could open up markets of tens of millions of people. Such possibilities create the necessary conditions transnationally for the development of a linked polycentric mega-city-regional structure across national divides. The exchange of information

The EU TEN's programme.

flows and business interchange could quicken the pace of development North-South and have major positive knock-on effects for the centre of the EU and in particular, the Pentagon.

Spatial Vision

An essential key component of the North-South interface is the creation of an agreed vision. The vision sets out the strategic ideas that can help create a modern competitive economic space within the North-South interface of Europe. This in turn can provide higher quality of living for its citizens, support a widening business culture, and design a matrix of connectivity to give accessibility and maintain environmental standards.

What are the Future Challenges and Actions of the North-South RINA?

- to tackle the social deprivation, population decline, under-developed economic dimension, and lack of adequate public transport that exists within many parts of the North-South interface, and by doing so, giving recognition that the North-South periphery of the EU requires to be given priority in funding
- the exchange of knowledge and experience throughout the North-South in terms of spatial planning that will help build a better understanding of how the organisation of space can help to improve competitiveness and the quality of life
- the need to implement a clean, efficient, affordable and effective high-speed transnational public transport system in order to improve connectivity between the city-regions as a starting point for developing the economies
- City-Regions will be the drivers of economic development in the future EU. In order for the North- South interface to ensure its position as a European dynamic network of urban metropoles, Helsinki-Athens by 2040 will need to introduce Governance through single authorities or regional tiers of governance.
- the North-South city-regions will, from a spatial planning perspective, produce a joint statement of intent to improve city-regional competitiveness, create regional clusters of cooperation, and ultimately achieve polycentric regions.

Methodology

The North-South RINA made a series of practical workshop meetings.

The kick-off meeting was held in Athens, in July 2006. Each meeting was structured around a framework of the host City-region presenting a spatial analysis of today and tomorrow. Each workshop had a specific theme to work to, with Athens describing the **City-level** of today and how the city intends to meet the development challenges of the future. The participating cities had been provided with a Core Framework by the Lead Partner Helsinki, in order to present their own city's development scenario. The second day of the workshop tended to focus on reaching base-line conclusions, achieving a consensus on the key issues, followed by a Management meeting to discuss work programme, timetable and finances. The concluding part of the workshop involved a study tour by bus around each city-region examining the future development potential of new major projects and how these would fit into the future city-regional structure.

An important part of the RINA was the getting together in the evenings, usually funded by the hosting city, to participate in further discussion of the key issues of the North-South project.

Since Athens concentrated on the City-level, the next meeting in Sofia (April 2007) steered the workshop to understand the relationship between the City and its region (the **City-region**). The third level, the Transnational-level, was held in Thessaloniki (June 2007). Helsinki (September 2007) hosted the initial **FINAL Report-level**, placing the main emphasis on building a joint statement of intent for the RINA. A meeting in Bucharest (November 2007) aimed at producing the final outcome and adopting the **Joint Statement of Intent**.

Initial Summary of the AIMS

There is an unbalanced distribution of competitiveness between the North-South city-regions and with the core (Pentagon GIZ); there is also a need to strengthen urban networking to create strong clusters of innovative activities. Strategic cooperation between city-regions can take place by means of shared advanced infrastructures and access to the provision of services. In addition, North-South cities need to work together on environmental pressures, examine the links in transport and traffic and ICT, energy networks, and the challenges ahead for trans-European risk management. All in all, this Polymetrex project identifies how we can each better manage the specific spatial development potentials in a more effective and integrated way.

The project employs the urban planning organisations of some of the key city-regions from the farthest capital in the North, Helsinki, to Europe's most southern capital, Athens, in order to develop a common spatial vision and strategic ideas that can help create a more competitive and balanced Europe.

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Helsinki

Helsinki: CITY

Final Report

1
Capital on the margins of Europe

Douglas Gordon
architect
City Planning
City of Helsinki

Introduction

The experiences of Helsinki are relevant in respect of City Planning and the way forward for EU territorial cohesion. Finland's capital has been one of the main economic power houses of the European Union in the past twenty years and is now experiencing the most dramatic changes to its city structure since the Empire City was built in the 1820's. The changes occurring to Helsinki offer an insight into how a city can manage growth and still maintain a high quality living environment. Because the city is a relatively unknown quantity within the EU it is even more important that its current sea change is understood for others to consider what to do in similar circumstances.

There are three key subject areas: the first is looking at spatial cohesion and the need for good and strong urban planning in order to have a successful city. It is about how urban planning can manage the growth of a city and in particular how Helsinki has managed to successfully control the city structure in a sustainable manner as the city grows during periods of extreme change.

Secondly, to examine what has happened to Helsinki in practice using this planning process. What do the new areas of change look like on the ground, and does the city continue to function at a high level? Have house prices risen dramatically, or are there huge increases in congestion? And what of social exclusion? Has there been a rapid increase in exclusion, recognised through social disparity? In doing so, issues such as land use development, land management, the types of mixed use developments will be described.

And thirdly, the final part examines the reasons behind Helsinki's ability to accommodate and manage the resultant growth within its city structure without displaying the normal disadvantages associate with rapid growth such as traffic chaos, London-style rise in house prices, growing segregation spatially, or huge changes in social disparity between the 'haves' and 'have-nots'.

Living on the Margins

Helsinki sits on the very northern periphery of the EU. In standard economic theory Helsinki's position being furthest away from the economic centre of the EU should, in practice, make it more difficult to achieve success. Yet Helsinki has demonstrated that one can be successful both economically and spatially even though the city is literally on the margins of Europe.

In terms of spatial planning, the population of Helsinki is 565,000. This is expected to grow by a further 27,000 in the next 30 years. The city is 186 km². It is a compact, reasonably dense city, based round a high quality public transport network, primarily rail: metro, commuter rail, and trams.

Helsinki has built its city concentrating on domestic internal investment. Helsinki's growth has largely been about Finns coming from other parts of the country. Few residents are from outside Finland, and until very recently, immigration has been rather low. That is beginning to change. In comparison to the number of residents born outside of their respective countries in other parts of Scandinavian, then the differences are striking. Oslo has 22%, Stockholm 23% and Copenhagen 18%. Helsinki's numbers are marginal, so far.

Spatial Cohesion and City Planning

A spatially cohesive city structure is an essential part of managing the city. Helsinki is a city of two extremes: It is a Summer city as well as a Winter city, and both of these elements have to be taken into account in the design and building processes. Overall, Helsinki is a highly planned city. It is also a modern city, a garden city and a maritime city. Helsinki is a city that's developed significantly since the Second World War. In the past twenty-five years the city has doubled in volume, not in terms of expanding outwards, but in terms of the actual amount of building that has taken place. And despite that, 35% of the city is still green. So in relative terms it's very much a garden city and yet it is also a maritime city, being that water surrounds it on three sides by the Gulf of Finland. Indeed, Helsinki has 220 kilometres of shoreline.

Planning hierarchy

In terms of the planning hierarchy the Regional Plan (2006) is a structure plan, which is a legal statutory

Regional Plan.

plan that sets out the green areas and the transport corridors. There is, therefore, a working hierarchy whereby all other plans should broadly complement the regional plan. The City Master Plan 2002 is a land-use plan. It is not a statutory plan, but is City Council approved. There is also a 'city structure plan' that shows all the new areas of change defined in red. This demonstrates where the major changes will take place in the city over the next 25 years. There are some 15 major development projects taking place within the City, the smallest being the 'Arabia Waterfront' project for 7,000 people and a major commercial centre, and the largest situated in Vuosaari for 40,000 residents. This 'red' map therefore clearly shows where new investment is directed. In historical terms, these structural changes represent the greatest spatial development taking place since the early nineteenth century.

The City of Helsinki is managing these massive structural shifts in spatial terms to the existing city structure without eating into the green areas, without creating massive traffic congestion, or without letting house prices soar. All new development is concentrated into brownfield areas (areas of degradation or industrial land surplus to requirements), thereby keeping the use of greenfield sites to almost a negligible level. The City pays attention to social exclusion and generally, achieves 50% minimum of social housing in each major scheme. The ability to do so is two-fold: the public sector owns the vast majority of land, nearly 80%, enabling a virtual monopoly of planning, and secondly,

this allows for a plan-led system to operate effectively and efficiently. Hence, spatial planning has been capable of taking into account the huge growth that has been taking place over the past 25 years precisely because a plan-led system married to a land management strategy ensures a smoother transformation of wide-scale change within the city.

In doing so, Helsinki and the metropolitan region aim towards a more polycentric structure. A polycentric structure consists of a lively city centre and a balanced number of district centres in the outlying neighbourhoods. This is replacing the old monocentric model, where nearly all activities are concentrated in the city centre whilst the suburbs are at a major disadvantage by comparison. What Helsinki has tried to do to overcome the disadvantages of living on the periphery has been to build major district centres to the east and to the north of the city, but still within the city boundaries. So, there are no edge cities or out-of-town centres. The new centres are meant to achieve a better balance within the city structure whilst at the same time not to undermine the importance of the downtown area. In Helsinki's new strategic plan for 2040 the comprehensive idea is to strengthen the city centre at the core whilst creating a balance with the suburbs in terms of social and health services, recreation, culture and shopping. By this strategy, Helsinki aims to have a well-structured form of spatial cohesion within its boundaries. A further aim is to repeat this strategy on a regional basis. The future aim is for a unified Greater Helsinki.

Helsinki promotes a plan-led system. In most cities, planning is developer-led, meaning, the developer will submit the plans to a city for planning permission to build. A plan-led system in Helsinki ensures that the plans are made in the City Planning department for new development areas, whereby private investment then follows-on by adopting these plans for implementation. This enables land-use planning to be integrated with land management and with traffic and transport. That is why all the major project areas are being built around the main transport interchanges of metro, rail or the tram network. If that is not possible, then the metro, rail and tram networks are extended into the new areas. Helsinki City Planning, therefore, acts as the coordinator for making sure the new areas are 'urbanised' through new tram or metro routes into the heart of each development, all paid for by the City. Indeed, in many of these areas, the argument has been that trams and metro must be a part of the considered planning options in order that the areas become identified as urban quarters with their own trademark identity.

Master Plan 2002 – the key changes

The overall strategy of Helsinki's Master Plan is to create a vision and set of planning actions for the future. Indeed, the new strategic advisory plan for 2040 offers three alternative visions of the future for discussion.

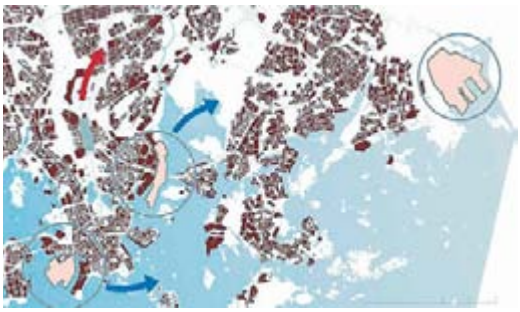
The key to the Helsinki master plan is where the new areas of change are to be located and how they must fit neatly into the existing city structure. The existing harbours to the south west and eastern border of the city centre are being transferred 14 kilometres to the east to a new high-tech goods harbour in Vuosaari. There will be a new railroad and a new connection to the ring-roads from the harbour.

The resultant freeing-up of the brownfield sites in the city centre offer major redevelopment poten-

tial to build new residential neighbourhoods. The key aim will be to supplement and support the city centre and public services, making the latter more viable and better value for money. An additional 25,000 population is expected to the south-west area in the Western Harbour, and a further 13 to 15,000 residents for the eastern Fish harbour development.

Another major change will be in Central Pasila, which is 3 kilometres to the north of the city centre. It is old railway yards. The City will aim to build one million square metres of commercial, offices and residential over the next 20 years. Additionally, the City is building new residential districts to the east in Vuosaari for forty thousand people. There will also be a new linear development from the old Fish harbour right up into the ecological village of Viikki (13,000 people), which will then connect up to the new village called Aero Malmi for up to 20,000 people.

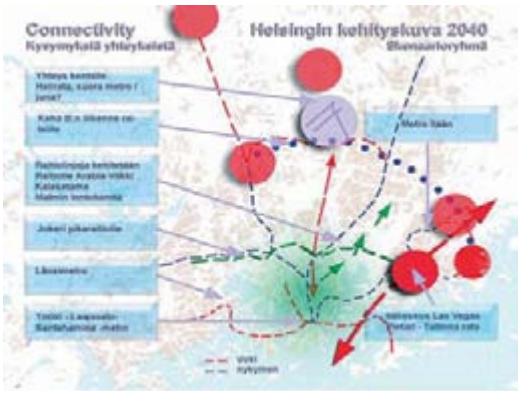
In public transport terms, the aim is to build a new western metro to our neighbour Espoo, a new metro



to the south-east of the city to Laajasalo, and a circle line metro covering the inner-city. In addition, a metro or commuter rail option exists to link downtown with the City Airport. The extension of the existing metro eastwards forms a major part of new public transport investment over the next 30 years.

Competitive City – Nordic Welfare City

Despite Helsinki being a medium sized city of 565,000 people, with a metropolitan region of 1.2 million, in terms of the new scenarios being created, it is essential to take a global perspective. World cities are no longer simply about critical mass - it is also about competitiveness and the quality of life. According to latest figures, Finland, in recent times, is the most competitive country in the world, secondly comes the USA, third is Sweden, fourth is Denmark. Up until last year fifth was Norway. What this means is that there is a very healthy Scandinavian Nordic grouping which offers a significant level of competitive mass within the world economy.

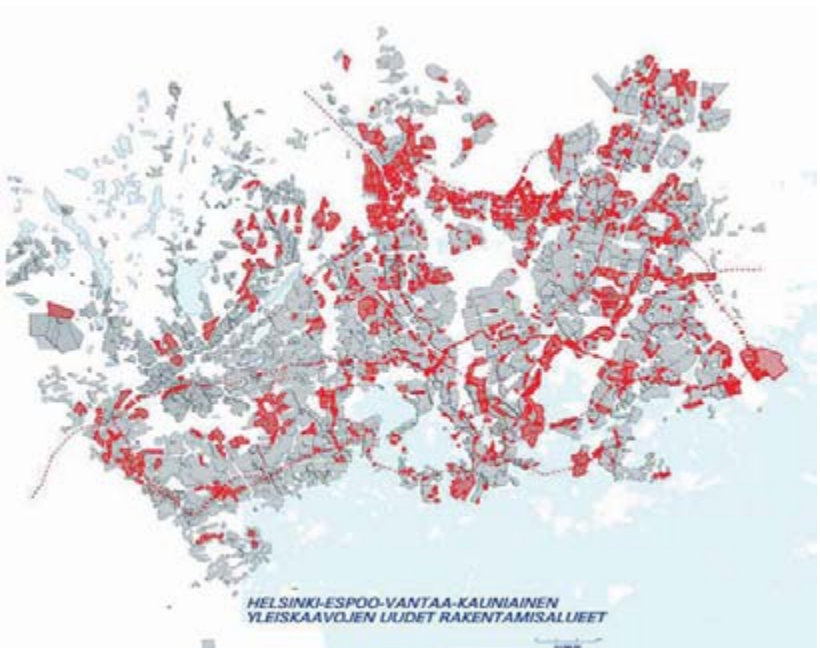


Helsinki, Stockholm, Copenhagen and Oslo all operate a Nordic social welfare model, based upon dynamic economies aligned to strong levels of social justice in the city. Each has relatively higher levels of taxation and market regulations. The Scandinavian countries form a rainbow of activity across northern Europe, and each have quality environments and healthy living indices. And yet they represent at the moment the most competitive connected area in the world. The high standard of living epitomises the view that by reinvesting taxes into the physical and economic structures, the levels of return in human capital justify the national policy direction. It is about the 'will' to achieve a quality city. To do so, society has to be willing to pay for that. Countries that have low taxation are more likely to have wider disparities in society in comparison with Nordic countries.

All of Helsinki's developments are made on brownfield sites. It's an important policy statement and it adds up to an overall set of policies which aim to create a socially sustainable city and a high quality, easily accessible public transport network and equally high quality environment. The City of Helsinki invests greatly in creating a well-managed and qualitative public transport system. In 2002 and 2003 the European Union gave awards to Helsinki for the high quality levels of its public transport system. For a city of over half a million the connectivity within the city is excellent. The metro, with two branch lines, covers the eastern areas. The overland rail system runs north, north-west and directly to the upper-west region. There are 10 tram lines covering the entire inner city, and a feeder bus system operating around each of the metro and commuter train lines. That's why 72% of people choose to use public transport coming into the city centre core at rush hours every day, which is one of the highest in the EU.

City-Region

In terms of the Metropolitan area, Helsinki has to the west, Espoo, with 232,000 people and 190,000 to the north in the city of Vantaa. To the east, is Sipoo. There are only 18 thousand people in Sipoo even though it's double the size of Helsinki geographically. The difference between Helsinki and the surrounding municipalities is that they base their city planning on low density, single family houses, with uneven clusters, and it is recognised that the private car is the primary mode of transport. New investment in the public transport infrastructure is essential to combat sprawl and lower energy consumption. It means that there are unconnected clusters filling up the geographical base of the region without spatial cohesiveness taken into account.



In practice, within the metropolitan area, Helsinki's plan-led, Nordic welfare model co-exists with neighbouring cities that contain sprawl similar to the north-American model. Such planning inconsistencies produce contradictions as to how the metropolitan area should develop cohesively. Certainly, the European Union is now advocating that cities create strategic alliances at a city regional level in order for the city core to be successful, but based upon a polycentric structure spatially at the metropolitan level. This would provide a greater form of balanced competitiveness in the regions across the EU. That is why Helsinki is buying up land on the eastern fringes of Sipoo on the open market. It offers the opportunity in the future to extend the metro eastwards into new development neighbourhood clusters forming part of the Capital city and help maintain cohesiveness. At the same time, there is now greater cooperation at the spatial level between the surrounding municipalities, so it appears that for the first time in a long time a level of strategic alliance is paying dividends spatially. The surrounding cities recognise the need to build more compactly and densely in order to create a more cohesive regional structure for the future.

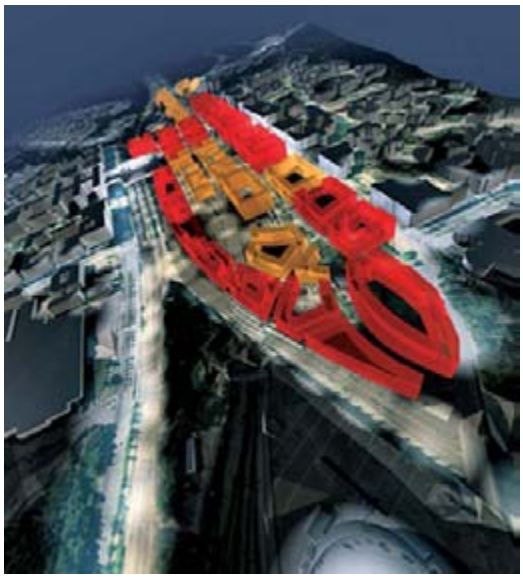
Planning for the Future

Helsinki

The future of Helsinki is based upon the Master Plan 2002 and the Regional Plan 2006. The Helsinki Master Plan sets out the various material development changes that will shape the future of the city's structure. The significant number of development projects is briefly explained, providing a snapshot of what is to come.

Kamppi – Töölönlahti Bay

The Kamppi-Töölönlahti bay lies in the heart of the city centre. Kamppi is the first PPP public/private partnership in Finland. City planning has a major say in the urban design process as the City owns the land. The Töölölahti Bay area, adjacent to the Central Railway Station, is situated right in the very heart of the city centre. The entire area is to be redeveloped for the 21st Century for commercial and residential purposes.



Central Pasila

Central Pasila is three kilometres to the north of Central Station. The area is a valley-like landscape between two city districts, occupied by redundant railway yards. A new vitality of residential towers and commercial landscapes will complete the city's new urban identity. Some one million square metres of offices and residential is the key aim.

Ruoholahti – Jätkäsaari – Hernesaari (3 new areas)

These areas sit adjacent to the city centre within walking distance. There are three development projects. The first is Ruoholahti, which is nearly complete. This new high-rise waterfront development is built round a new canal, primarily residential for 8,000 people, and nearly the same number of jobs. A new metro and tram line into the heart of the development ensures that is has an urban identity and close affinity with downtown.

Jätkäsaari and Hernesaari are old port and warehouse activities. The City, by shifting the old harbours in Jätkäsaari and the Fish Harbour to Vuosaari, will open up the inner city to new urban quarters that feature apartments, businesses and an extensive urban park acting as its main spine. These extensions aim to reverse the trend of falling residential population in the very heart of the city. Additionally, it offers new investment to downtown and upgrades the use of local services. So Helsinki's answer is to expand the city centre with an additional twenty five thousand people, including nearly 10.000 workplaces. New jobs and workplaces are located along a northern spine, including the new Nokia headquarters. Jätkäsaari will be built in the next twenty years.

Kalasatama – Fish Harbour – Building a waterfront city quarter in central Helsinki

The Fish Harbour development initiates a new linear plan for the City. It includes following a line up from the Fish harbour to the Arabia development and then continues up to the new Eco-Viikki village. The linear formation follows through on to the forthcoming Aero-Malmi development in the north. Together, it creates a linear development axis for the city that will over the future 40 years continue up to the City Airport. The initial local plan for the Fish harbour has been made and an international ideas competition has been carried out. It is intended to build dense commercial offices around the new metro station, and housing for 15,000 residents and 6,000 workplaces. State-of-the art housing is to be developed along the waterfronts.

Construction of the Vuosaari Harbour will completely transform the inner city. All cargo harbour functions will be transferred from the West and Sörnäinen Harbours to Vuosaari. Railway carriage operations will also cease in Central-Pasila. These measures will free seven kilometres of shoreline and a large piece of land next to the second largest train terminus in Finland. Helsinki is faced with change of a magnitude not seen for more than nearly two centuries. Planning for the replacement of Sörnäinen Harbour and Hanasaari power-plants with the Kalasatama Fish Harbour is already in progress. A two-stage international competition secured a new master-plan for the development, which is likely to be built in stages over the next two decades.

Arabia Waterfront

← Jätkäsaari.

This is the first ICT 'wired' village in Helsinki. The underlying basis of this new urban quarter is to create a hi-tech innovation centre. It aims to attract new innovative industries.

The waterfront project is for 7,000 residents. The City owns the land. The linear park dominates the urban design of the plan. It is an 'open' system of parkland, as Helsinki does not plan for walled or gated communities. The aim in Helsinki is to create neighbourhood clusters that are of a high quality and designed in such a way that it is impossible to distinguish between private and social housing. The City generally aims for 50% social housing. The tram has also been extended from downtown into the heart of this development.

Eco-Viikki

This is an eco-village development for 13,000 residents and some seven thousand jobs, mainly in the university sector and associated bio-med businesses.

The area directly to the south of the eco-village is the nature reserve. There is medium density terrace housing to the south, rising to much higher densities nearer the northern motorway corridor. The key idea of the ecological village is that all the materials had to be made of natural materials. The aim has been to save 50% energy costs through generating electricity with the aid of solar panels distributed throughout the project area as well as saving 40% in consumption of water, a good percentage of it being recycled. There

will also be 3 new public parks. Each park will have its own specific theme.

Eco-Viikki demonstrates the close relationship to nature and water. The sea is close at hand, parks and garden allotments enclose the village inside and out. The solar panels are an added feature on most buildings as are the chimney stacks which act purely to increase the circulation of air into dwellings by as much as 40%. The extreme range of temperatures between summer and winter are taken into account in the building process. The minimum number of glass is four panes per window. The amount of insulation being built into every single dwelling is a significant element to keep the house warm in winter and cool in summer.

Eco-Viikki has a variety of housing types. In the medium density terraces, gardens feature as a common element, both front and back. Together with the communal garden allotments, gardening and ecological form aim to be an important element of the village community. These communal areas are used for growing vegetables and fruit. All the space is allocated and efficiently used. The medium density housing is staggered towards the front of the village, with high-density blocks in the middle and top-end of the area.

Aero Malmi

Aero Malmi is now being planned. It was the former inner-city light-aircraft airport. It is expected that construction will commence within the next 15 years, and the building process will last for about the same. By undertaking the planning now, it allows the City to budget for the new infrastructure required, including the likelihood of a tramline into the heart of the scheme. The area is intended to contain between 18,000 to 20,000 people and will primarily be high density, low-level forms of residential.

Vuosaari

Vuosaari is 14 kilometres to the east of the city centre. It will be for forty thousand inhabitants. The whole

area encompasses the new hi-tech goods harbour. A number of the new neighbourhoods have already been built. It includes a major local shopping centre. During the 1990's, the social mix was predominantly 75% social housing. This kicked-off a debate about the need to create a better balance. To this degree, the social mix was re-planned, and a new area for private housing was approved, in order to attract more private investment into this 'new-town district'.

Blocks of flats predominate in these new developments. The aim is to create high density, compact urban quarters. In Helsinki generally, 85% of people live in apartment blocks, 4% live in terraced housing and 8% live in detached or semi-detached housing. Helsinki is a European city with a European solution to housing.

Public transport is the key form of connectivity to the city centre for those living in Vuosaari which ultimately, will boast 3 metro stations. The metro takes only 20 minutes to downtown. The bus operates a circular feeder service, which means that the buses no longer go into the city centre, but instead go in a loop into the neighbourhoods, collect the passengers, then feed them back to the individual stations. In this way, people have a high quality alternative to the car. The new high-tech goods harbour is located on the fringes of Vuosaari and it is expected that there will be up to 10,000 workplaces.

Herttoniemi Waterfront

Herttoniemi is one of seven new waterfront development areas currently under construction. Water offers significant potential to stimulate investment interest as well as providing high quality social housing. Herttoniemi waterfront is built around the new metro for the area. Some 8,000 residents live here by the sea. Approximately 65% of people living in this new neighbourhood live in social housing. Social housing is successful in this area as it offers a high quality of life 10 minutes from the city centre.

Kruunuvuorenranta

Kruunuvuorenranta could be considered as the jewel in Helsinki's crown. It sits directly opposite the city centre. It is an area that has been used for the past eighty years as an oil depot. The City owns the land, as it does with all the new development areas, and in its place the City will build a new village for ten thousand people. An ideas competition is now being held. The highly diversified archipelago landscape and waterfront shoreline offers immense potential to create an elegant urban village format. The highly maritime flavour will enable a broad mixture of high and medium density living to be achieved side-by-side. The scenic views to the city will enhance the natural environment and its surroundings.

Pikku Huopalahti

This is a new area to the north-west of downtown for about 7,500 people. It contains 4 separate villages, echoing the 'empire city' ideal from the downtown quarter. It is a high density, compact set of neighbourhoods that prefers to be urban rather than suburban. In order to achieve this basic goal, the tram is built into the heart of the development to give urban connectivity.

Kuninkaantammi

The new Kuninkaantammi residential and job area is being planned at the northern part of Hakuninmaa on the very outskirts of the city. It is formerly a sewage treatment plant and reservoir. It is intended to exploit the water resources in the area as well as the forested landmarks of majestic oaks. The master plan for the area will maximise the public transportation connections, which will allow for a mixed high density and low-rise apartments development to take shape. It is expected to have 5,000 residents. The townscape image is modelled round a diverse 'medieval' form of town housing in the central core, with commercial and shopping interspersed in the compact urban form.

City Centre – A New Vision

Helsinki's city centre is Finland's number one shopping and office location and in the forthcoming Strategic Plan 2040, the vision is to strengthen the role of the city centre and, at the same time, develop a more evenly balanced polycentric structure to the region. In practice, this supports a strategy of building more regional centres to maintain a better balance with the centre and the peripheries, thereby overcoming the traditional disadvantages of suburban living. In absolute terms, such a strategy has enabled the city centre economy to continuously grow, although the total level of sales of the city downtown will marginally be reduced overtime as the number of regional areas develop.

There are nearly 400,000 jobs within the city of Helsinki, and about 700,000 in the Metropolitan area. The majority of workplaces are in the main downtown peninsula. Office and shop rents are at a premium, reflecting the continued high demand for such floorspace.

The Land-use Master Plan 2002 identified the need for a minimum of 320,000 m² of office floorspace annually for the whole of Helsinki, with the aim to build over 4,462 million m² in the next 20 years. In this respect, the immediate core city central area cannot accommodate all demand, and therefore it is essential to create overspill within the neighbouring areas. This in turn will relieve pressure on the key office locations within the downtown whilst applying a more even balance spatially. Five new zones for the extended city core are envisaged, all of which are brownfield sites.

In this respect, the key area will be Central Pasila, approximately 3 kilometres to the north of the Central Railway Station. At least 1million m² of offices and residential is planned to be built in the former railway yards, primarily commercial offices, and residential. The second and somewhat separate development is the Töölönlahti Bay and Kamppi development. This is located immediately adjacent to the Central Railway Station downtown, and the Kamppi section is nearing completion. The Töölönlahti Bay and Kamppi area forms an L-shaped plan linking both sides of the main Mannerheim road that dissects the cultural downtown in two. A total of 625,000 m² of mainly offices and shops, with some residential will eventually be built. By placing greater emphasis on the actual peripheral

areas of the city centre, the intention will be to help pull the shape of the city core into a wider domain physically. The current main axis of Alexander Street and North Esplanade will come up against greater competition from the north-west section of downtown, thereby increasing competition and simultaneously, increasing the level of choice.

The Kamppi-Töölönlahti Bay development is only one of five key new areas being designed to improve and strengthen the downtown. Another area is Ruolahti/Jätkasaari/Hernesaari, a mere kilometre from the centre of the city, represents a major extension of the city centre. Ruoholahti was built during the past 10 years, creating homes for 7,000 people and nearly the same amount of jobs. At least 250,000m² of office floorspace has been built together with a new shopping centre. The adjacent area of Jätkäsaari, planned for 2020, will ultimately create a new city centre district for 25,000 to 30,000 residents linked by metro and tram, and an almost doubling of workplaces. In previous decades, the city core has witnessed a steady decline in the population. By increasing the number of residents and workplaces in the heart of the city will help sustain public and local services as well as regenerate downtown living.

The Fish harbour, some 2 kilometres to the north-east of the centre, and still considered part of the growing city central area, is expected to have 15,000 new residents and 12,000 new jobs by 2025. In a linear progression, the connecting area to the Fish Harbour is a high-tech new 'Wired Village', Arabia. It consists of 7,000 residents and jobs for nearly 8,000 workers.

A further extension will be the South Harbour, which is now under review with the intention of initiating an International Competition in 2008. The possibilities to build new commercial and residential apartments for the area will help strengthen the overall inner city economy.

The City of Helsinki's overall strategy is clear. The existing city centre cannot exist in a vacuum, nor remain with economic inertia. The Strategic Plan for Helsinki aims to widen the city centre's franchise to the areas that immediately border it on the basis that the built-up city centre does not allow for extensive new build possibilities, due in part to conservation

Proposed Inner City Developments

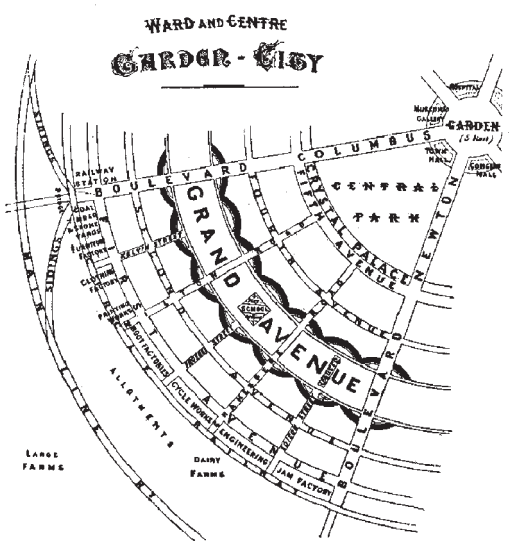
	Size ha*	residents	jobs	commercial m²
Central Pasila	59 ha	2000	10.000	500.000
Kamppi–Töölö	83 ha	nominal	12.000	625.000
Ruoholahti	50 ha	7.500	14.000	420.000
Jätkasaari	80 ha	15.000	3.500	105.000
Hernesaari	60 ha	900	1.800	10.000
Fish Harbour	175 ha	15.000	12.000	535.000
Arabia	85 ha	7.000	7.900	315.000
Total		**61.200**		**2.510.000m²**

*ha = hectares

policies and partly the limited scale of development choice. Hence, developers prefer to invest in the new areas located within easy distance of the key department stores and the city centre core. By doing so, the cultural heart of the city will be revitalised, with the aim to build half as much again of office floorspace as exists now in order to generate a new wave of residents living and working down-town and aid the sustainability of the city centre core.

Plan Led

In setting out these conclusions, the visions once created by the town planner Ebenezer Howard of a hundred years ago needs to be put in place. Howard realised his visions with the setting up two corporations in Welwyn Garden City and Letchworth just north of London. Ebenezer Howard's idea was that in order to create a harmonious city one not only had to control the construction of an area through its physical layout, but to also control its social context, and in perpetuity. The community had to own the land. This principle has been at the forefront of city planning in Helsinki. That is why some 80% of land is in public ownership. It means that the City council decides what is going to be built, where it's going to be built, how much is going to be built, when it's going to be built, (ten years, twenty years, or forty years into the future), and most important of all, the City decides 'who' is going to build it.



Now according to the OECD Finland has the lowest level of corruption and particularly Helsinki as a city has probably one of the lowest level of corruption in the world. So, even though the City controls the development process, it still manages to negotiate the building process in a fair manner and in a highly competitive tendering process. This is an important point, as every single building, every single block of flats, every single line of terraces is subject to competitive tendering. It means that every housing block normally has to have a dual-level of a price control mechanism as well as overseeing quality control by staging architectural competitions.

Key Issues

In addressing the key issues there are no slums in Helsinki. As a city, Helsinki has nearly four hundred thousand jobs, and there are nearly six hundred and ninety thousand jobs regionally, which provides Finland's know-how economy and it is one of the key Nordic power houses. In terms of Connectivity, public transport covers the city admirably, with clear investment guidelines for the future. All new major district developments are being built round the pubic transport interchanges and on brownfield land. All the land is in public ownership. Future investment in public transport is ensured. There are a thousand kilometres of cycle routes. The environment is probably one of the highest quality environments in the European Union. There are 48 parks. Environmental issues are taken seriously. For example, Helsinki owns its energy. It owns its harbours and ports, Helsinki oversees all the public works. Basically, Helsinki owns its city. This means that all profits are re-invested back into the public domain. It means that Helsinki has 93% efficiency in the distribution of heating. i.e. 93% of all houses and commercial buildings in the entire city are connected to the district central heating system. In addition, there are two hundred kilometres of underground tunnels - a world record for a city of this size. These are service tunnels built into the granite rock underneath the city, and not just within the city centre, for the tun-

nels stretch out fourteen kilometres to the east and up to the north and west, because that's what carries the district central heating pipes. And the tunnels are large enough for an articulated lorry to go through and there are sufficient tunnels that already take future needs into account.

It is also the case that the treatment of water is handled by the City. A total of 96 per cent of waste water and waste elements are cleaned to 100% efficiency (good enough to drink/re-circulate) but instead, it is pumped through a natural granite tunnel under the city that stretches out ten kilometres into the Bay. This has improved the quality of the sea round the city. But it also demonstrates that the City of Helsinki views the need to be involved at all levels of the development process, and attaches great importance to having joint partnerships with the private sector. The City does so knowingly because it wishes to remain in control of the city structure and aims to have a direct say in how the city shapes its own future.

Plan-led City Planning

Managing rapid growth and fitting all these new development areas into the city structure with minimal problems, is a massive challenge for city planning. City development can best be controlled when there is a high value society with a high tax base. In this way, public money is used to invest in the city's infrastructure and resources are distributed more evenly throughout the city. By doing so, Helsinki raises the city's profile through creating a high quality of life for its citizens. When public money is used in a highly organised and disciplined manner, it creates a circle of improvement. It enables a smoother relationship between the different departments within the City Council. It allows for greater levels of integration and coordination between departments. And it is city planning, spearheaded by a plan-led system, which coordinates the development areas because it is City Planning that has made the physical plans, design and layouts for all these new areas.

Integrated Planning and Transport

Strong city planning needs to lead the city structure, and for that, a city requires a strong, efficient and well-educated planning department. This is one of the key components to success. It equally requires that planning and transportation are married together, automatically, so that when new plans are being prepared, traffic and transport are one of the main starting points in the planning process. In the new ascension EU countries it may be the case that 'roads' have a particularly strong emphasis on paving the way for new development rather than using investment in a more overall balanced manner by inputting first and foremost into public transport.

Smart City-regions

The European Union in its future regional policy of Territorial Agenda, places importance first and foremost to allocating structural funds to city regions that will uphold the new sets of standards being promoted by the concept of 'territorial cohesion'. This can only be done by integrating planning and public transport in particular, and that's where the word 'Smart City' comes into being. Why? The answer is that in order for the future of the European Union to succeed, the EU needs to promote the ESDP, the European Spatial Development Perspective. The key issue is based on creating polycentric city regions all round Europe. The city is viewed as the engine and the core of development within a city-region. In order to make cities 'smart', cities will need to stop sprawl, be compact, high density city-regions, with public transport as an essential component in the planning of cities, and keeping environments sustainable. By doing so, city-regions will require to build a polycentric city structure. The sprawl city, which is a serious problem for the future of the EU, will need to prevent further sprawl from taking root. In some cases, the car is taking pride of place and motorways have been given a high priority, at the direct expense of providing new investment in public transport. In particular, there is poor connectivity to the outlying, disadvantaged suburbs. The aims of the EU need to address some of these major problems. But it will be a long struggle to ensure that we can create polycentric smart city-regions and build a polycentric Europe.

Helsinki: CITY-REGION

Final Report

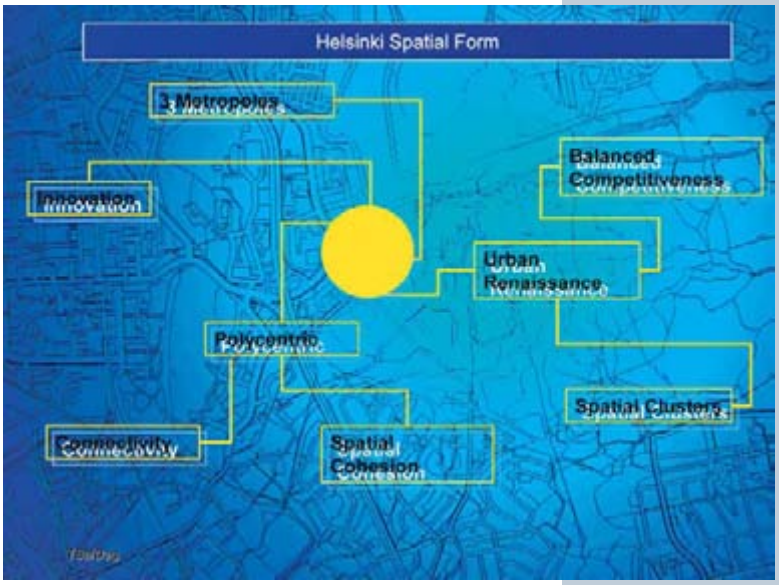
2
Greater Helsinki Region

Douglas Gordon
architect
City Planning
City of Helsinki

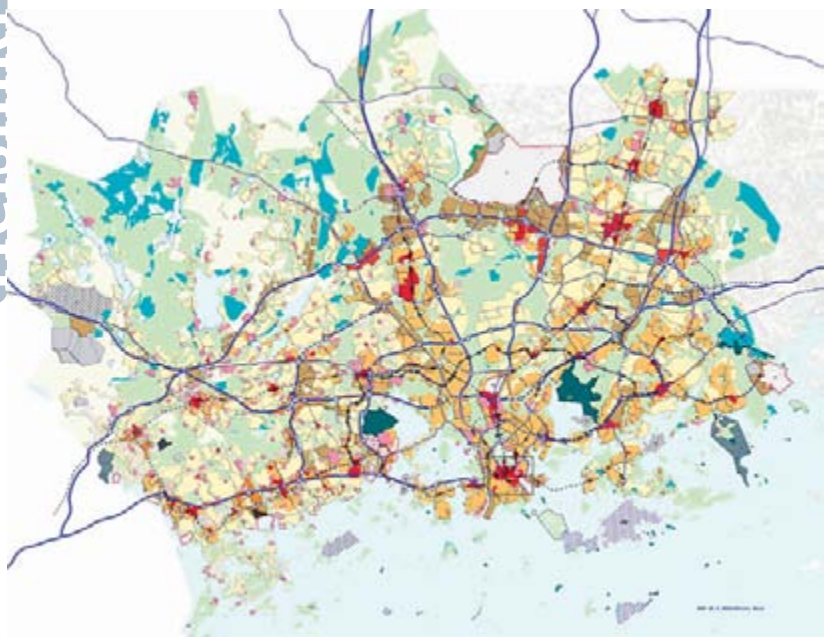
Finland has emerged as a leading centre for information technology. The Finnish model combines a dynamic informational economy with a strong sense of social justice. This is in line with the Nordic countries overall welfare system. There is a strong social democratic set of values and consensus. This in turn has produced low levels of social polarization compared to the typical developed national economies. Central to this, is the fact that the information economy is concentrated on the Helsinki metropolitan area within Finland. Yet, within this heterogeneity there are clear signs of spatial differentiation that has opened up between Espoo (232,000) to the west of Helsinki, Vantaa (190,00) to the north, Sipoo (18,700) its eastern neighbour, and Helsinki (565,000) itself.

These spatial differences appear through different urban forms. Helsinki is a compact, high density city of 186 km2 shaped in a five-fingered pattern of green wedges round a high quality and efficient public transport system.

Helsinki's housing form is dominated by apartment blocks (85%), with less than 12% of housing being terraced or detached/semi-detached. The city, by this very nature, has a highly concentrated centre together with compact, dense neighbourhoods in the suburbs. The suburbs are primarily characterized by apartment blocks closely knitted together between the 'forest-city' landscape. So, whilst the neighbourhood clusters are high density, the overall density of Helsinki is slightly lower than its European cousins due to the originality of its star-shape enabling settlements to open up to nature on its doorstep. This contrasts greatly with the presence of detached, suburban sprawl that dominates its Espoo neighbour. Vantaa, on the other hand, is a broad mixture of compactness in part, and suburban sprawl along its northern and western perimeters. Sipoo is the odd one out. Geographically, it is almost twice the size of the Capital city, yet only has 18,700 inhabitants. It can be argued convincingly that these dis-



Helsinki spatial form.



Helsinki Metropolitan Master Plan 2002.

tinct urban forms have come about precisely because of the different social and planning models adopted by each City or municipality, and in particular, the planning process of urban development leads to these contrasting spatial cohesion settings.

Helsinki is unique in Finland in that the majority of the land is in public ownership. Nearly 80% of all land belongs either to the City (66%) or the State (13.4%). This has enabled a competitive dualism to grow up. Helsinki has a history of strong self-government that works in unison with the guiding hand of Central Government that can be considered in Nordic welfare terms as of being an equally massive interest in pursuing a social justice policy for the nation as a whole. Espoo, on the other hand, owns approximately only 40% of the land.

Hence, within the metropolitan area, there is a severe contradiction between Helsinki's compact urban form and the more suburban sprawl of Espoo, based upon car-dependence. This dispersed pattern of urban development has been subsequently rationalized in the Espoo development plans (yleiskaavat). The irony is that the initial plans for growth in Espoo centred round the garden city of Tapiola, itself a compact urban framework. Subsequent patterns of urbanization have essentially become unplanned within the 312 km2. The 1970's saw Espoo emerge as five district centres formed as spatially unconnected clusters. Hence, unlike Helsinki, it can be argued that the formal planning process in Espoo has been based upon development leading the way on greenfield pastures with single family dwellings predominating. The key single difference was the area 'Leppävaara' in the north-central belt of Espoo. This is more compact and based upon apartment blocks. It is no coincidence that the City

➔ City of Espoo map.

of Helsinki owns large tracts of land there, hence, the immediate dichotomy of style and spatial cohesion for the area. A further material point is the location of the commuter suburban rail network to Leppävaara that operates nowadays almost as a metro style system during rush hours.

Tapiola is now considered a regional centre and the prime urban model for Espoo as a whole. This provides at least a better spatial balance in the metropolitan area, given that Helsinki built its own regional centres in the Eastern Centre and Malmi (north) over the past 30 years.

The city structure of Vantaa is a mixture of Helsinki's compactness and Espoo's fragmented spatial character. It is essentially two wings, east and west, with a heavy proportioned central frame (240 km2). The administrative centre is clearly defined by the area Tikkurila in the eastern sector, centred upon the main Helsinki-Tampere railway network. The districts of Martinlaakso and Myyrmäki make up a dual link with the west. They too are modeled by the suburban rail system. The key make-up of employment in Vantaa is characterised by mainly Finnish mainstream compa-

Helsinki city center.

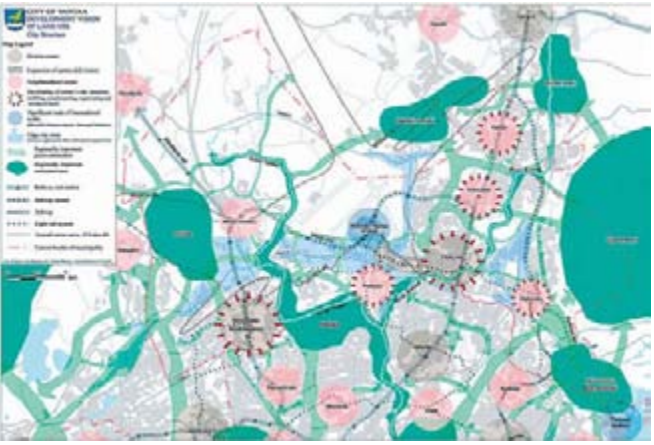
Helsinki city center.

← Espoo Keilaniemi.

Säterinmetsä Espoo.

nies, such as Finnair (airline) and Fazer (confectionary), with a growing limited number of electronic component firms located within the Helsinki-Vantaa international airport arena.

Sipoo is a vastly underpopulated municipality situated to the east of Helsinki with a land area of 364 km2,



almost double that of Helsinki. It is primarily a haven for summer cottages. The administrative centre is in the village of Nikkilä. In the past 10 years, Sipoo has had some initial growth, primarily families searching for the idyllic setting of a detached house in the countryside near the sea, and within easy commuting distance from the workplaces in downtown Helsinki. Both Vantaa and Espoo have adopted pro-growth strategies. Only Sipoo has maintained a fragile existence based upon low levels of population growth. The establishment of YTV, the metropolitan planning association for the region (which excludes Sipoo), has helped shape a less fragmented metropolis, and the density levels of Espoo to the west and Vantaa to the north have achieved levels that justify improved rates of public transport use to and from the Capital city. To the west, the State Railways (VR) suburban line commutes via Leppäävaara, through Espoo Centre and onto a future growth pole, Kauklahti. To the north, Vantaa is served by two main commuter lines, the north-eastern line via Tikkurila and Koivukylä and secondly, to the north-western direction that includes the key development areas of Myyrmäki, Martinlaakso and Vantaankoski. The latter two suburban lines have been the main reason why Vantaa has tended to concentrate its urban structure through high rise, compact, dense neigbourhoods built specifically round the rail network.

The future metro extension from Helsinki into Espoo via Tapiola will help upgrade the level of transport connectivity as well as place greater emphasis on higher density living. However, the weakest point for using public transport is between the various district centres within Espoo. Vantaa, however, expects an urban line extension from Vantaankoski up to Klaukkala within the next generation and in doing so, will ensure the development potential of Klaukkala to be realized through high density design guidelines. The other key development area for Vantaa's future will be built around Marja-Vantaa, a 30,000+ district for living and working. Beyond 2025, the area of Hyrylä, just north of the International airport, offers a similar line of potential.

← Vantaa.

← Vantaa Kartanonkoski.

Sipoo.

Suurpelto.

Economics is also beginning to play its part in reshaping our city structures. Economically, the major companies in Espoo, such as Nokia, Kone and Fortrum will benefit from being located near first class interchanges with superior accessibility. A picture emerges of a contrasting spatial planning programme that appears to be merging over time into an understanding that Espoo needs to create a new-style development structure to contain urban sprawl and devote land in the future to more concentrated forms of planning, such as the forthcoming SuurPelto development. The Suurpelot development area rekindles the apparent overtures Tapiola did in its conception in 1950's. The new urban setting is likely to engender similarities as that with Tapiola, being that it is centrally located and integrated within an environmental ecological design. This can only come about through political and planning concensus with clear aims and guidelines.

Sipoo remains an agrarian culture and outmoded spatial patterns. The spatial potential for growth is high. The City of Helsinki has already purchased on the open market getting towards some 2,000 hectares of land on the eastern perimeter of Sipoo. Helsinki aims to use some of this land with the specific aim of continuing the metro eastwards and for Helsinki to develop its eastern perimeter to accommodate further growth.

Sipoo shoreline.

Still, it is difficult to understand that Espoo, unlike Helsinki, is a 'city' without a centre. There is no traditional 'downtown'. Each of the five centres is as big as a traditional Finnish town. Vantaa does have a recognised centre, Tikkurila. The key aim, therefore, ought to be for the future to redefine Espoo as a city, or better still, one alternative could be for it to be incorporated into the City structure of a single administration Greater-Helsinki. This may never happen, of course. Nonetheless, in order for Espoo to be defined as a city, it would require a clear cut symbol of space that identifies itself as having a city centre and linkages to its five corners.

So, it is partly the planning process which initially contributes to the spatial planning of a city, but it appears that land ownership also plays a leading role. Additional key issues are the housing form, the level of density and the compact nature of development if a city is then capable of structuring its built environment round a high level public transport system. The need for urban neighbourhood clusters to be self-contained in terms of initial public services is essential. In terms of spatial cohesion, these clusters then need to identify themselves within a hierarchical order that connect to local, district and regional centres as well as being defined through a high-quality connectivity to the city.

The Helsinki city-region, it can be argued, has emanated from a single, historical core point and grown radially following the course of rail transport over the past 50 years. The contribution of setting up different municipal authorities has led to new development being directed according to the different planning philosophies upheld by each administration within the region, with Helsinki adhering to a more compact city plan, Espoo more fragmented, and Vantaa a mixture of both models, the latter two contributing to greater sprawl. But in recent times, both Espoo and Vantaa are beginning to merge towards the Helsinki structure, and away from sprawl. Only by pulling in the same direction can a more polycentric system of urbanity emerge in order to achieve a better balance, socially and competitively, between the city central core and the outlying regional suburbs.

City-Region Dimension

Greater Helsinki is one of the most dynamic metropolises in Europe. In the next 50 years its population is expected to grow from 1.2 million to over 2 million. With over 70 million square metres of new construction foreseen during this period, the overall physical structure of Greater Helsinki will be re-shaped in a way that will maintain its leading technological edge in the Baltic sphere of influence as well as being a prominent force in the wider Europe. Such an increase in growth and

significant structural transformation will require to be placed in a sustainable manner and take particular account of Finland's special relationship with nature.

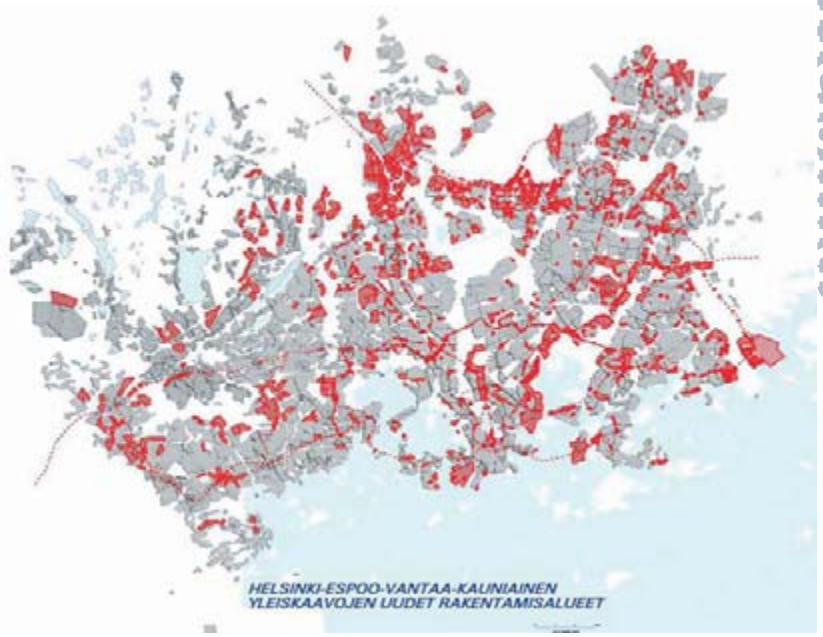
Greater Helsinki consists of Helsinki, the capital of Finland and the 13 municipalities that surround Helsinki, namely, Espoo, Vantaa, Kauniainen, Kerava, Tuusula, Järvenpää, Nurmijärvi, Mäntsälä, Pornainen, Hyvinkää, Kirkkonummi, Vihti and Sipoo. The main aim is to develop sustainable strategies for strengthening the competitiveness of Helsinki and for it to remain an attractive place to live and conduct business. Helsinki is highly placed in many international arenas of comparison, such as Global Competitiveness, OECD, and Economic Forum.

There are both centralizing and decentralizing forces in action in Finland at the present time. Global competition, a strong Helsinki brand and demands for concentrating and intensifying the urban structure to achieve more critical mass for clusters of innovation, speak for the need for centrifugal forces. On the other hand strong preferences for closeness to nature and single family houses speak for decentralized and multicentral tendencies, which lead to, for example, interpretations like the contemporary garden city. The planning problem is very challenging because during the next 50 years or so there will probably be more new housing built than the whole of the existing housing stock. In fact it has been estimated that due to the need for more space per capita and population growth, some 70 million square meters of new house construction are needed in the area. New housing is also needed to decrease the pressure of growing house prices.

Prices are now twice as high in Helsinki compared to many other parts of Finland. In addition the proportion of senior citizens relative to the whole population is increasing dramatically over the next decades. This is leading to a dramatic rise in single households. This sets another challenge for the whole society in terms of social care structures, the level and type of services available and the type of accommodation to be provided. This in its turn has led to a reappraisal of immigration levels for Finland and in the future it is expected that the population of this region will become increasingly multicultural.

In the age of the Information Society urban development is again relatively fast and metropolises play an increasingly important role in international competition. The economic development of the Region is dependent on high technology and knowledge. New technologies and communication systems demand again new models and solutions for human habitation and workplaces. Economic growth is mainly expected to be based on post-industrial and ICT-industry as well as on growth of services, higher education and research. An important part of the future task is to study the impact of the Information Society on city development and structure.

The present structure and location of key work environments and clusters is also causing problems, giving rise to excessive levels of commuting. This imbalance between the eastern and western parts of Helsinki as well as the relationship of peripheral municipalities with the core centre sets another challenge for finding suitable and sustainable future strategies. With the current increase in polycentric settlements within the region, the role of the traditional main centre, Helsinki, is also under pressure. The relationship between the region's various centres needs to be carefully studied. It is of the greatest importance how the new living and social environments strengthen ecologically, socially and culturally sustainable development in the area, and in addition the competitive advantages of Greater Helsinki. The location and quality of such new areas, their public acceptability and their ability to attract qualified labor and foreign investments are key factors for the long term success of the region.



City-Regional structure 2025 – new build areas.

Quantitative challenges

Finland is a large country and has been urbanized relatively late. Fifty years ago some 50 per cent of the population was still linked to agriculture. The rate of economic growth and urbanization was at its peak during the 1950's and the 1960's. Greater Helsinki municipalities have shown continuous growth: even now people are moving from other parts of Finland to municipalities in the Greater Helsinki region. At the moment the rate of growth in the region is the fastest growing within the European community, and only Dublin has a similar rate of success.

There are tremendous pressures to increase the supply of urban construction sites as the prices of land have increased unsustainably already for several years. The lack of suitable sites within the main settlements has led to an increase in urban sprawl in the region. The total population of Greater Helsinki is 1.2 million. The population growth will probably continue at the rate of 1 to 1.5 per cent per annum for a considerable period of time. In other words the population of the area may well be approaching two million within the next fifty years. Since the housing conditions are quite

modest when measured in per capita square meters available, long-term loans and historically stable interest rates brought in by the introduction of the euro will increase the demand for more spacious apartments and houses. At the moment, for example in Helsinki, the average area of home living space per inhabitant is 33 square meters. In other municipalities in the Greater Helsinki these figures are little bit higher but still do not meet the future needs of inhabitants. These needs and estimations are based on existing development figures for population growth for the past 50 years as well as the growth of housing square meters available per person during the same period of time. However high this predicted volume of building area needed might seem, it is no more than a consequence of old predictions, trends that are expected to slow down compared to the rate of change during the last half century.

Since Finland is sparsely populated and the growth of urbanization is a relatively new phenomenon, land use planning has a long tradition of allocating land generously for recreational and other non-residential uses. In the Finnish Modernist tradition most of the efforts have been concentrated on planning suburbs and developing the relationship between the built environment and nature. Many of the post-war planners had in mind as their ideal to mix nature and town into a new synthesis, a reinterpretation of Garden City ideals. The huge demand for new housing during the 1960's and 1970s, when people were moving from the countryside to cities seeking employment, led to a strong emphasis on using blocks of flats for housing developments. In some cases this paradigm emerged for example, as a garden city, such as Tapiola, and in other cases as 3 to 8-storey apartment buildings located freely within existing forest areas. Central European urban densities are rare in Finland and even in the city of Helsinki there are only 3,200 inhabitants per km2 while the corresponding figure for the Greater Helsinki is only 350.

It is a well-known fact that energy consumption for transportation is negatively correlating with population density. In other words low density means high energy consumption. With sky-rocketing energy prices and increasing consciousness of world climate risks, Greater Helsinki has to rely in the future more on high quality public transport systems and make more efficient urban structures for the range of services available. Where, how and with what kind of high quality integrated public transportation system this development will happen is the crucial question and key challenge for the region in terms of cultural, economical, ecological and social development.

Helsinki tram.

Qualitative challenges

Densification to create sustainable structures for the whole area demands new planning and spatial concepts.

The city of Helsinki cannot grow much more within its existing borders without radically renewing existing built-up areas or sacrificing parkland and other open spaces, options which are both politically and culturally difficult to implement.

The total efficiency of the region can be improved and hence encourage a steadiness in house-pricing. Since the majority of the population is living in suburbs, revitalizing and improving living conditions in these suburbs has recently been and is still one of the most urgent tasks facing the planners. New concepts such as urban villages, new garden cities, and ecological alternatives have been discussed but have not as yet been widely realized in the region. Helsinki is a green metropolis and the Helsinki region is a unique combination of sea and green areas. Finland has high international standards of protection for the natural environment. The provision of a high quality natural environment will in all likelihood be one of the important competitiveness factors among countries in the future.

Traffic system plans

According to international comparisons, the usage of public transportation into and out of the Helsinki peninsula during rush hours (some 72 per cent of all motorized trips) is very high. Yet in the whole Helsinki region public transportation covers only one-third of all trips. Without special efforts this share will continue to decline. The energy use per capita for transportation is double that of an average European city. In addition it is clear that the existing traffic system has until now emphasized dependency on one major urban centre, Helsinki itself. Helsinki region municipalities have approved several traffic system plans concerning their area in order to implement new infrastructure (names of these plans are PLJ, KEHYLI, Eastern Uusimaa and Western Uusimaa traffic system plans). The longest tradition has the PLJ traffic system plan approved by the municipalities of Helsinki, Espoo, Vantaa and Kauniainen. The latest plan was approved in the year 2002 and the review of the plan is under way.

The usefulness of the traffic network plans will be tested in the future. Their aim is to increase coordination and proper timing of the new infrastructure

projects in the region, ensure their realisation and financing and add sustainability in transportation systems. Potential new projects within the next 50 years may include among other things:

- Rapid coastal rail-link to St. Petersburg
- Direct rail /metro connection to Helsinki-Vantaa airport
- New light rail/metro lines along ring road II and III, i.e. so-called Jokeri II and III

In the long run there may be a tunnel/bridge connection to Tallinn to give a boost to the Helsinki-Tallinn twin city development as well as a more direct road/rail link to central Europe. It is also possible that the Turku and Lahti highways will be connected by a tunnel (Ring Road 0) and that the Western and Eastern highways will be connected by a tunnel under the centre of Helsinki.

Top Priority development zones

Greater Helsinki municipalities have identified 12 development zones, which form the basis for mutual future cooperation and cooperation with state officials, like ministries. These zones are considered to have the greatest volume for new housing and other developments within the region. Some of them create new development potential around existing infrastructure, some of them are already under realization, while some of them are just targets for future planning. The Top Priority development zones (listed below) for Greater Helsinki are physically combined into a single territorial map (The Top Priority development projects of the 14 municipalities) to provide an overall summary of the expected total development potential until 2040. These development projects are primarily aimed to create new residential and business areas for the future of the Region, and include open space, traffic and transport connectivity, tied together to create a spatially cohesive whole for the Greater Helsinki region.

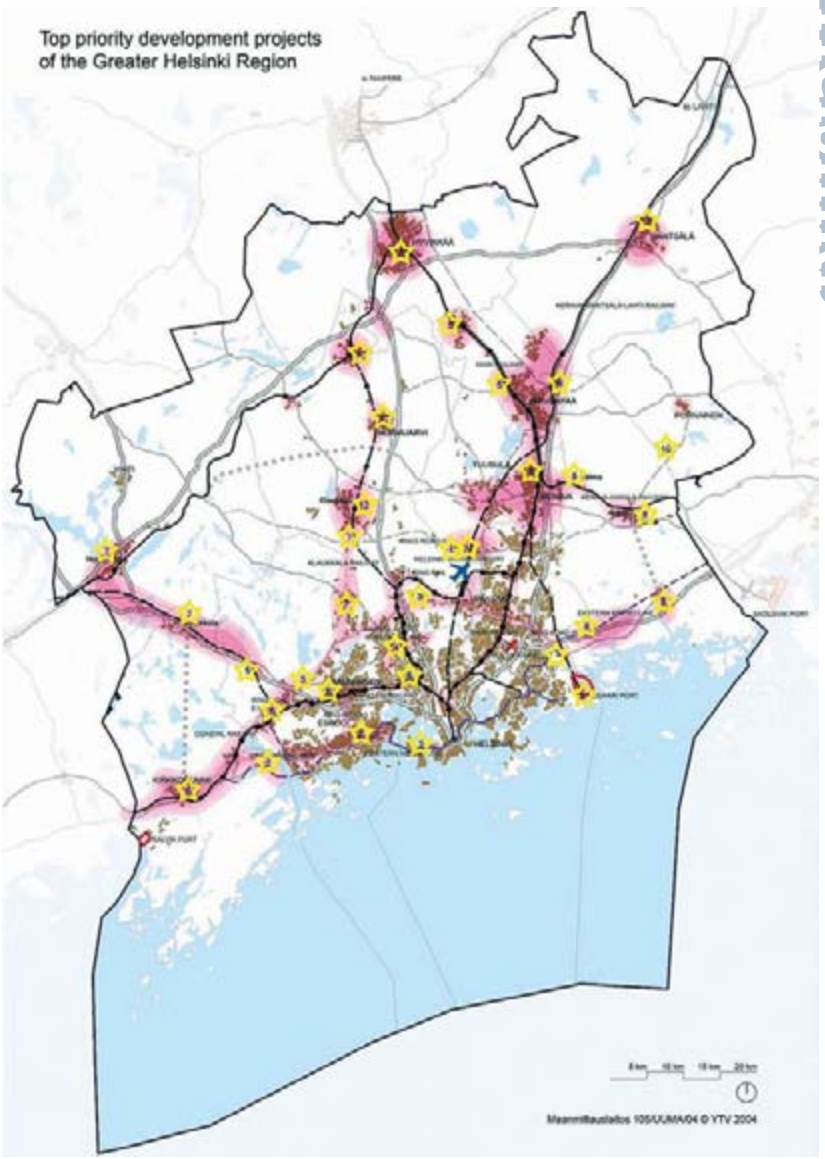
Top priority development projects of the Greater Helsinki Region

The above Map is a combination of three different development plans that have been put together, namely:

i the top priority development projects of the Greater Helsinki Region (Helsinki, Espoo. Kauniainen, Vantaa, Kuuma – group and the 'Fours' group of municipalities),
ii the strategic plan of the Kuuma – group of municipalities (Järvenpää, Kerava, Mäntsälä, Nurmijärvi, Pornainen and Tuusula), and
iii the strategy of land use, housing and traffic development for the 'Fours' group of municipalities (Hyvinkää, Kirkkonummi, Sipoo and Vihti).

1 Ring Rail development zone

The new regional railway line connecting the Main Railway line and Martinlaakso suburban line improves transversal connections between Vantaa district centres and opens a rail connection to Helsinki-Vantaa Airport. Some 200,000 new inhabitants with the same number of employees are expected to occupy the area along with some 2.5 million gross square meters of building potential.



Top priority development projects of the Greater Helsinki Region.

2 Western Metro line and the Western Highway development zone

The Western Metro line and Western Highway unite the coastal zone between Helsinki, Espoo and Kirkkonummi into a network of existing and future residential areas, business and public service areas. The plans assume 1.4 million gross square meters of building potential for the area.

3 Vuosaari Port impact area and Ring Road III (E18) development zone

The commercial and industrial zone from Vuosaari Port to Helsinki-Vantaa Airport and further to Espoo along Ring Road III creates possibilities for com-

mercial, industrial and regional logistical functions. Building potential of several million gross square meters is expected in the region.

4 Ring Road II land use zone
The regional co-operation target project encompasses areas in Espoo, Helsinki and Vantaa related to the development of Ring Road II. According to present day plans, building potential of 1.85 million gross square meters is envisaged primarily for residential use.

5 Main Railway route (Helsinki-Tampere) development zone
There is strong pressure to increase land use in the Main Railway route development zone north of Helsinki and to enhance the use of public transportation due to increased commuter traffic by private means. The development zone includes development areas for residential and business use.

6 Coastal Railway line development zone
The urban Coastal Railway line with its frequent metro-like service improves commuter connections in areas along the line and creates possibilities for new projects in Helsinki, Espoo and Kirkkonummi. Western extension would increase the use of the rail and facilitate the land use along the line and its stations.

7 Northern Espoo development zone
An economical and less compact form of housing is being sought in northern parts of Espoo. The natural expansion of the Metropolitan area continues in Kirkkonummi's Veikkola, Vihti's Nummela, Lohja and Nurmijärvi's Klaukkala.

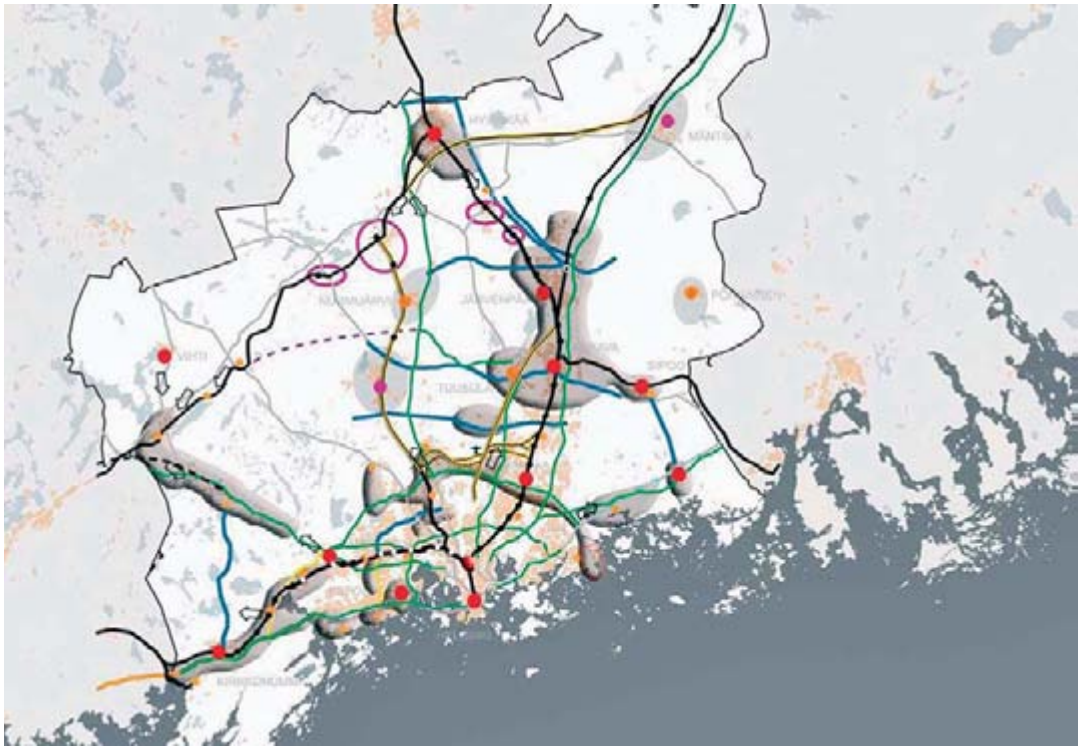
8 Expansions in middle and southern Sipoo
Extending urban structure to Sipoo; deployment of Kerava-Nikkilä railway line and development of southern zone based on Metro or some other rail connection. Sipoo municipality expects to have population increase of 40,000 by year 2025.

9 Kerava–Lahti 'shortcut' rail development zone
The new Kerava–Mäntsälä–Lahti 'shortcut' rail connects these areas to Helsinki. Mäntsälä municipality is prepared for new residential and business, especially logistics, areas.

10 New Airfield for light aircraft
Malmi airport is planned to be replaced with a new airfield of 200–300 ha. Municipality of Pornainen has expressed their interest towards offering the new location.

11 Ring Road zone IV
The future peripheral Ring Road IV (Tuusula-Vantaa-Nurmijärvi) growth zone in the north of the Metropolitan area offers possibilities for business and services areas, especially for logistical functions.

12 Klaukkala railway zone
Railway connection from Vantaa to Klaukkala's Nurmijärvi has been envisaged. Further extensions to Nurmijärvi and from there, the existing rail to Hyvinkää have potential for developing new residential and business areas.



Greater Helsinki 2050.

Helsinki: TRANSNATIONAL

Final Report

3 Transnational Identity

2007

Douglas Gordon
architect
City Planning
City of Helsinki

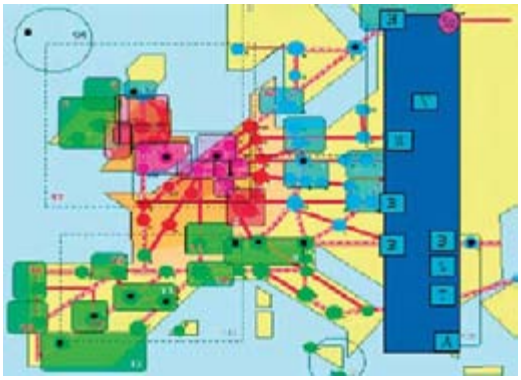
This is the third and final report in respect of Helsinki to complete the EU Polymetrex RINA on the North-South Interface project, the previous levels having described the city and the city-region. The transnational level addresses the issues of developing joint cross-border and transnational territorial development strategies with the project partners, the Cities of Athens and Thessaloniki (Greece), Sofia (Bulgaria), Bucharest (Romania), Warsaw (Poland), and Vilnius (Lithuania).

Setting the Scene

Transnational Cooperation

The final arm to this RINA project concentrates on Transnational identity. Trans-European cooperation can not only increase economies of scale and synergies, it can also diminish trade-offs and inconsistencies in policies. In doing so, many regions try to position themselves better in the European perspective by overcoming borders and developing joint cross-border and transnational territorial development strategies, but these regions face huge challenges of differences in administrative systems, competences, languages, policy cycles, political priorities, culture etc. It appears that EU Cohesion Policy, especially the instruments for European territorial cooperation, in many cases provides a conditio sine qua non for such cooperation.

It is essential that in order to understand the scope and intention behind Transnational cooperation that the project returns to its roots of ESDP (European Spatial Development Perspective). ESDP is a set of spatial planning initiatives which aims to promote a collective approach to spatial planning within the EU in order to achieve a better urban balance between city-regions in the future. Spatial policies are clearly defined through a combination of sectoral policies and strategic actions that will impact upon a city-region positively. In doing so, ESDP applies the dictum of creating better harmony between city-regions through the choice of using polycentricity as a means to achieve such a balance. ESDP sets out the *core principles* of spatial development. City-regions are expected to respond to these relatively new principles, namely, balanced polycentric territorial development, access to better infrastructure and knowledge, and management



of the natural environment. The ESDP highlights the relationship between territorial and polycentric development. As well, the ESDP highlights the special role which could be undertaken by Euro-corridors, global integration zones, gateway cities, urban clusters and individual urban poles in support of a better territorial balance within the Union.

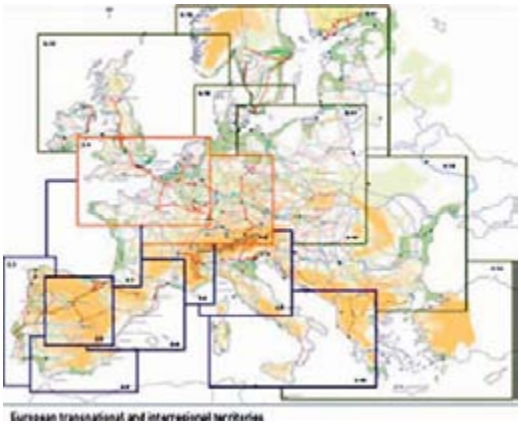
It is well to remind the EU RINA project that in analysing the City and secondly, the City-Region levels, the issue of polycentricity, being the core mantle upon which the EU wishes to build upon in creating a more uniform spatial network or city-regions, was referred to but never developed further other than by reference to ESDP objectives. The next part of the work now turns to examine in more detail what are the general aims of the EU spatially, what territorial cohesion adds to a metropolitan area, and what exactly polycentric city-regions may be in practice.

EU Aims

The EU aims to create more dense urban networks which can develop into a highly **integrated regional polycentric system**. A wide range of cities have the potential to increase their demographic mass through increased cooperation with neighbouring areas, and ultimately, between neighbouring cities at the international level. Helsinki is one such city. By strategic cooperation, polycentricity offers the opportunity to attract or establish a higher level of services between the city-regions in the North-South Interface. In principle, cooperation can support a better territorial balance and polycentric development right across the entire North-South *interface*.

Territorial cohesion and the added value of territorial development policies

In this respect, territorial cohesion plays an important part in the whole process of establishing a polycentric region. Public policies aimed at promoting territorial development and limiting disparities should first and foremost help areas to develop their territorial capital and to maximize their competitive advantage. The promotion of regional innovation strategies and the exploitation of regional territorial capital is therefore an important prerequisite for improving the global competitiveness of the whole EU territory. **Economic growth is based in part on the organisation of space** which is shaped by a range of policies at all levels of government as well as by social trends, technological development and market forces. **Some of these mainstream economic and sectoral policies have unintended spatial impacts which can compromise territorial development**, but overall, territorial cooperation seeks a more integrated role between city-regions.



European Territorial Cooperation (ETC)

It is proposed that ETC should have a stronger focus on strategic projects, in addition to a continuing emphasis on the development of innovative approaches and the exchange and dissemination of best practices on common issues. Strategic projects may cover multiple (sub) projects and investments. Improving (trans-)European territorial governance i.e. by developing common approaches, networks and integrated development strategies could be an important element of such projects as:-

- the integrated development of metropolitan axes with a cross-sectoral focus. This encompasses optimizing multimodal infrastructure and flows of transport; supporting economic activity; improving the (peri-) urban environment of living and working; connecting urban networks; the development and protection of natural resources, e.g. measures to minimize the effect of infrastructure on nature and to reduce negative environmental effects; synchronizing plans and procedures for planning and procurement, including the promotion of trans-European consortia for public-private-partnership preparation and implementation of infrastructure projects.
- projects leading to strategic trans-European partnerships between knowledge institutions and other partners in the innovation process.
- In general there may be a case for supporting projects that aim at urban growth poles and networks and connecting them to other networks, aiming at strategic alliances.

But first, the question has to be posed as to why city-regions as the main vehicle, and not cities?

The FUTURE of Cities: the new City-Regions

The competitiveness and well-being of Europe's metropolitan areas is essential to the achievement of the objectives of territorial cohesion. Competitiveness requires an economically and socially inclusive, and environmentally responsible, approach to urban affairs. Urban competitiveness and cohesion can be progressed most productively through the establishment of effective means for strategic decision making and action over Functional Urban Regions and Areas. In essence, Europe's future will depend to a great extent on the longer-term competitiveness and well being of its 120 or so recognised metropolitan regions and areas, which contain over 60% of Europe's population. This is the city-regional *dimension* to European affairs.

An Integrated City-Region Strategy will have a spatial dimension because of the need to balance urban renewal with urban expansion, integrate land use, transportation and infrastructure, sustain the vitality and viability of city and town centres, enable economic competitiveness through the provision of development opportunities, promote social inclusion, assess the environmental impact of development and safeguard valued resources.

In essence, city-regions are the key component for cities and their surrounding environs to act as the engine in developing the necessary integrated city-regional structure that will aim to achieve a better cohesiveness. For this, the issue of polycentric development requires to be explored to the next level.

What is Polycentricity?

Polycentricity means 'many centres'. It is a hierarchy of centres at a city-regional level closely associated around a primary central core, the key city, in a spatial structure that allows *complementarity and connectivity* between the centres and the core form. To this, must be added the term '*territorial cohesion*', which aims to uphold spatial awareness in respect of economic and social objectives for its citizens by reference to the spatial planning process. Its meaning in spatial planning is also a question of scale, for example, Greater London in respect of the whole of the South-East of England can be seen as being polycentric, but at a European level, it can be viewed as having a monocentric character.

Polycentric Development – Regional Competitiveness and Cohesion

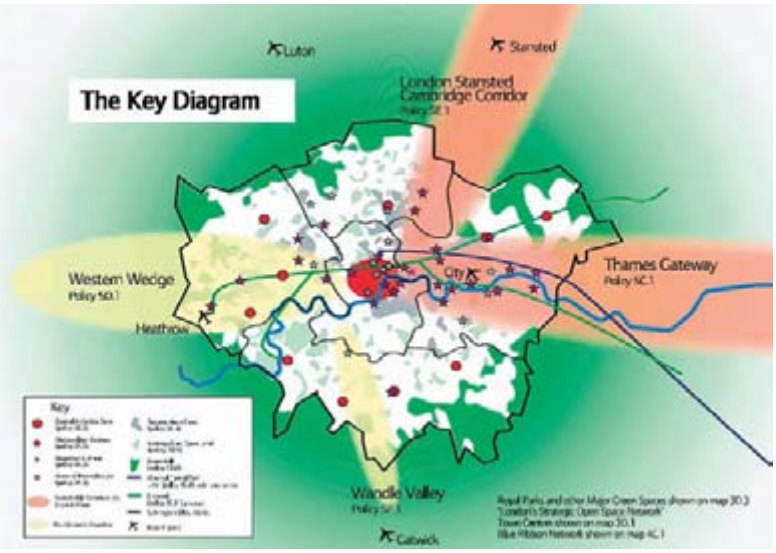
The key concept of polycentricity is to bridge the different interests of neighbouring cities/municipalities within the three underlying objectives of ESDP (European Spatial Development Perspective, 1999), namely, (1) economic and social cohesion, (2) conservation of natural resources and cultural heritage, and (3) a more balanced competitiveness of metropolitan territory.

In practice, polycentric urban development is a means by which regional competitiveness, environmental sustainability and balanced city-regional development (spatial cohesion) can be implemented under a single framework: polycentricity. The idea is to prevent urban sprawl in the peripheries of cities and their immediate hinterland, as well as avoiding wasteful competition at the city-regional level. Strategic alliances are viewed as the means to benefit from specialisation and complementarity.

Planning for the city-region as a single entity, or 'space', rather than a collection of independent municipalities, is more likely to improve the connectivity within the region, thereby adding to the economic value of the area. It will also reduce uneven development pressures and create a better cohesive planning unit. In order to do so, the concept of polycentricity has to feature in a more detailed and explicit format. The idea is for urban centres to be networked together using their specific economic strengths. By linking them through an upgraded public transport connected system as promoted by the newly adopted (May 2007) Territorial Agenda, the Regional Framework will become more comprehensive and far-reaching in its positive set of consequences.

Polycentric development can be seen therefore, to be more a process than a physical structure phenomena. This *new urban centrality aims to create a polycentric city and city-region, replacing the existing model based on an historical centre and disadvantaged peripheries*. Marginality will be reduced as the transformation upgrades new functions and services to the outer areas. Large-scale transformation around a theme of urban quality of life will improve the overall balance of a city-region. *Uncontrolled growth will be halted. New neighbourhoods* will be based around *a public transport expanding regional network*, and public services, universities, museums, congress centres and recreational facilities will be given greater emphasis to create a proper *balance* between quality and development of the centre and the expanding new periphery growth centres. The new polycentricity will shape a new accessible city-region.

European cities are characterised by their compact, higher density, mixed use, public transport, centre orientated urban form. In this sense many are *polycentric* and they have often grown from the accumulation of smaller independent urban settlements to form one in-



terdependent urban area. Larger cities of this kind have wide areas of influence beyond their immediate urban boundaries and the term Functional Urban Region/ Area has been adopted to describe what can be thought of as city-regions.

Polycentricity is essentially a concept that recognises the benefits that can be gained through the linking of urban areas to create markets for the higher-level services, activities and functions required to sustain competitive, high quality European urban life.

Polycentricity can be based on the *complementary* nature of related city-regions and the specialised services that they offer (their diversity) or their *collective* activities (their common interests). A polycentric approach allows city-regions to respond to change more positively through more robust labour markets and a more diverse economic and social base. Hence, spatial developments have to take account of their spatial dimensions following through on spatial policies and strategic actions.

Where does Polycentricity start?

In terms of city-wide urban planning, polycentricity by its very nature needs to start at the city level and mirror what is happening at the city-region level. By doing so, a city structure can develop in a form that adheres to a polycentric model internally so that the district and local neighbourhood centres can substantiate their role within the city-wide framework by means of clusters. By promoting polycentric development at the city-region level, the notion of better connected urban networks within a wider spatial development strategy provides a better understanding how the different parts of a city-region function in relation to each city or municipality, what specific infrastructural investment is required, and identifies what is creating change. By harnessing potential conflict between cities and exploring ways of promoting joint tourism or transport investment, making better links between key economic drivers and the universities, can only benefit a region as a whole.

Polycentricity and FUA's. Polycentricity in the European urban system shows that the 76 most powerful functional urban areas (FUA's) measured by demographic mass, competitiveness, connectivity and knowledge base are defined as MEGA's (Metropolitan European Growth Areas). The core area (Pentagon II) consists of London, Hamburg, Munich, Milan and Paris. In addition, cities such as Berlin, Madrid, Barcelona, Rome and Vienna can currently provide as high a level of functions.

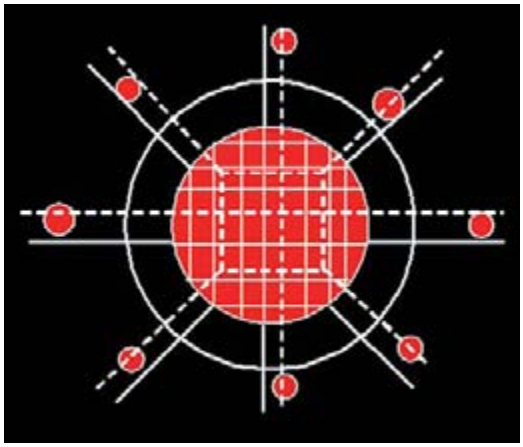
How to achieve Polycentricity?

Strategic cooperation between city-regions can take place by means of complementary specialisations, or by co-operation and creating shared advanced infrastructures and access to the provision of services. Complementarity is not simply about economic competition, but includes urban and strategic planning, culture, education and knowledge, and infrastructure. Hence, under what conditions competitiveness can be improved, and how can co-operation of spatial strategies be achieved? In terms of North-South project, the initiative aims to explore those questions and by doing so, to close in on urban functions by examining the possibilities for cooperation.

Before doing this, it is necessary to consider some of the problems associated with polycentricity as well as examining the relationship of spatial visions and how visions are translated into strategy.

Possible Problems of a Polycentric city-region?

Some doubts are being expressed about the validity of the claim held in the Territorial Agenda that a polycentric framework within Europe will aid economic growth and development. The concept is considered by some to be too loosely defined. It is unclear how close different cities need to be in order to achieve a polycentric structure. It may be the case that as in east Germany, the Saxon triangle of Dresden and Leipzig, or in Scotland, with Glasgow and Edinburgh being 70 kilometres apart, that the benefits may not accrue so easily. In such instances, the low percentage of workforce going to and fro between these destinations (under 2%) is unlikely to achieve major change.



So, to reinforce a polycentric pattern and introduce its processes within the North-South city-regions of the future beyond 2050 will require to set out a clear, unified spatial vision that challenges the need for an integrated approach to spatial development, to sort out the city-regional priorities, to defend the need for greater public transport connectivity regionally, improve geographically the links within the regions, particularly cross-town connections and to the International City-Airports, and to maintain social justice in the city-regions for all. These visions then need to be reinforced at the Transnational level in order to maximise the potential for increased cooperation across the North-South divide to achieve long-term success.

Spatial Visions

Spatial visions set out strategic ideas that can help create a modern competitive city-region. It is the spatial vision that creates a scenario for the future as to how a working partnership can be created through the design of a regional-wide connectivity matrix to give accessibility and maintain environmental standards. In more detail, a strategic vision examines a city-region's future development perspective. The vision provides a clear picture of how the city-regions can develop in unison, what the principles are for future growth spatially, and sets out the required infrastructural elements.

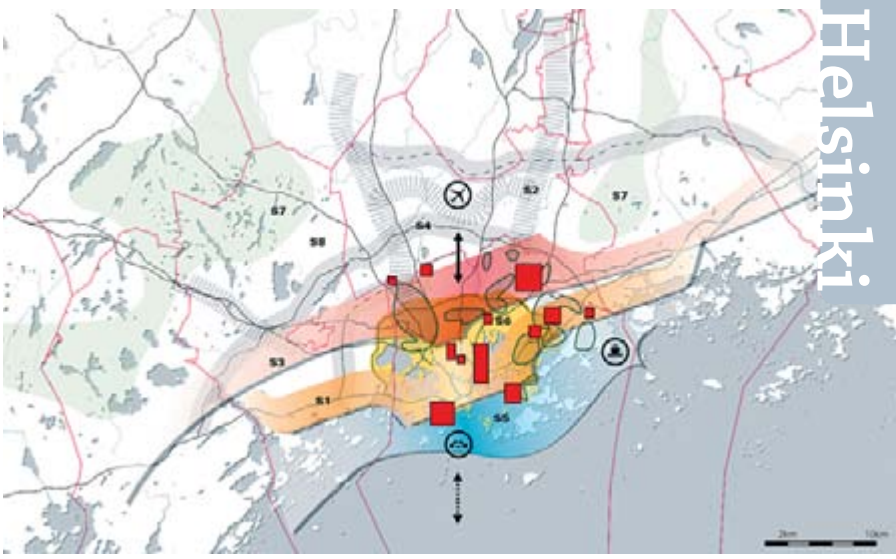
Spatial Visions are considered a new form of planning instrument within the EU. The City of Helsinki started to develop the use of spatial visions through its 'Strategic Planning Advice' (Kehityskuva) as early as 1992. The idea is for city-regions to prepare a spatial vision for its wider region. The vision statements are intended to provide the bridge between the European wide ESDP and the regional level.

The future of transnational and inter-regional spatial visions will require to meet head-on the spatial challenges in terms of economic competitiveness, social equity, connectivity and spatial cohesion for city regions. As a first step towards achieving a better understanding of how the North-South city-regions can cooperate together it requires to formulate an agreed Spatial Vision transnationally.

Spatial Vision for the North-South Interface RINA

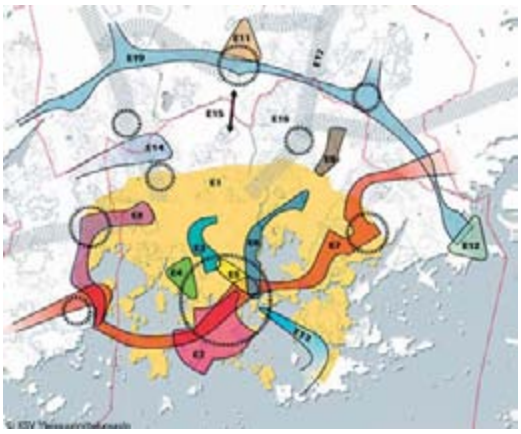
By 2050 the Vision for the North-South Interface will be to work towards creating compact and dense city-regions at a transnational level of European importance, with greater equality of spatial and business cohesion, strong balanced economies, a unified and connected public transport and traffic network, safe and secure city-regions with social equity, energy efficient and low carbon emissions, geared to clean and city-landscape environments.

This transnational vision provides the spatial framework for the strategies required to achieve the vision. By setting out the policies and pulling the various approaches of the economy, social equity, connectivity and spatial cohesion, the North-South transnational vision will take account of the physical and spatial demands of city growth and population needs within the future city-regional structures of Helsinki to Athens.

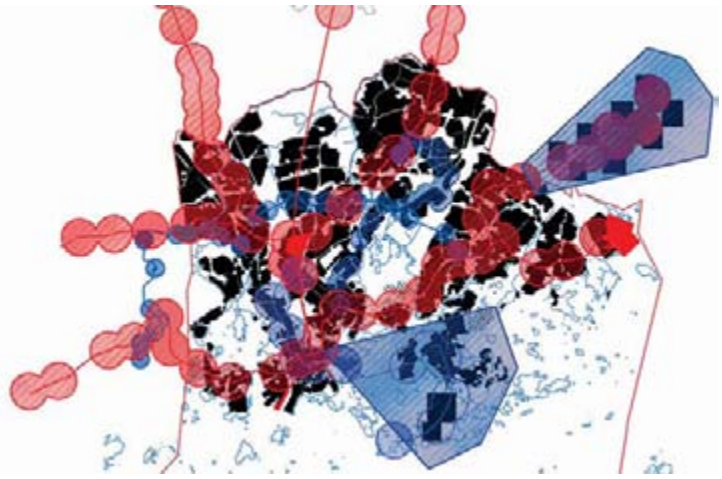


Transnational Vision – KEY ISSUES

The four KEY ISSUES of **Balanced competitive** City-regions, **Social equity**, greater **Connectivity** and **Spatially Cohesive Metropoles**, are the drivers of change. *Integrated and Working transnational* city-regions set out the economic development strategy for sustained, balanced growth and competitiveness, including improved access to employment and clear



Trans-European Corridors and Sofia



goals to reduce energy dependence within a climatic change scenario. Social *Equity* concentrates on creating more housing to prevent acute housing shortages, maintain reasonable equilibrium in house price rises, whilst upgrading the older suburban areas to enjoy tomorrow's standards today. A high emphasis is on maintaining a unique quality and attractive city-regional environs. A *Connected* transnational space provides the issues surrounding the need for compact metropolitan linkages as an essential element of a Transnational spatial strategy, none more so than issues affecting energy, transport infrastructure, brownfield development and open spaces. A spatially *cohesive* strategy pulls together the physical demands of integrating significant growth within the city-regional structures to achieve sustainable metropoles in order to make the Transnational North-South dimension succeed as a high-quality European network of integrated city-regions based upon strong economies, stable societies, and accessible cities structured around spatially cohesive polycentric frameworks.

Vision to Strategy (Implementation)

The Transnational North-South Vision consists of four key themes that dominate the strategy. The themes are balanced competitiveness, social equity, connected metropoles, and a spatially cohesive polycentric framework. By bringing these approaches together, the North-South Spatial Strategy will seek to achieve a coordinated approach to realising the Spatial Vision. The four key themes are developed into a series of policies under each heading of the Spatial Strategy. The integrated nature of the strategy means that elements are no longer compartmentalised by functions, but are brought together into a cohesive whole, as in real life. So, the issue of the environment therefore runs through each of the key themes as an integral part of the economy, of societal issues, of accessibility and of territorial cohesion, and not dealt with independently. In doing so, the vision can be implemented by making a set of objectives and policies for each main strategy contained in the vision. The policies are then visually transferred into a set of plans. There are four plans. The long term aim of the project if it gained support to continue under Interreg IV would be to arrange a series of trays for each main integrated policy. The first three plans would take account of the economic circumstances, then would come the social aspects visualising future development potential, and the third 'tray' would set out the traffic and city-landscape components. Individually, the series of trays would not stand alone, but form a part of a cohesive whole. It is this final 'cohesiveness' which integrates spatially the key elements from each of the other 'trays'. The fourth map would show the future spatial cohesion collectively and illustrates how the city-regional structure would connect up the North-South interface and how this would be managed for the next 50 years.

An Integrated Approach – the Transnational Key Objectives of the North – South City-Regions

At this stage of the proceedings, the transnational level can only hope to identify the initial way forward. Such has been the short time available to develop the North-South RINA in less than 18 months that it is no surprise that the policies emphasise the way forward in a set of action plans which come together as an agreed Joint Statement. These policies are policies of intent.

North –South City-Regions

aim: Balanced Competitiveness

to create a balanced development approach to growth and jobs in order to achieve a high-quality settle-ment structure

- **by having a more integrated approach and better connectivity, it will help achieve the wider European aim of creating balanced competitiveness and sustainability within the territorial setting. Balanced competitiveness can be achieved through synergies and clusters of competitiveness and innovative activities.**
- **to generate growth and jobs, each city-region requires long-term visions, action plans and critical mass for financing. By maintaining a joint spatial planning programme married to land**

ownership will target social and economic cohesion through an integration of economic, social, environmental and spatial practices.

- **Europe faces two key challenges: increasing global competition and a rapidly ageing workforce. The North-South metropoles must adapt by encouraging innovation and the growth of the knowledge economy through establishing more innovative living centres, improve the public transport services, and protect the environment.**

In terms of Helsinki the city is developing into a world-class innovatory city-region. The speed of change is electrifying. The capital of Finland is most probably the fastest growing city in the EU in relative terms. Major capital investments for the next half century are already planned. The City-level report provides a clear agenda of the major new development areas either under construction or that are planned for 2040. Nearly all of these new housing areas have a significant amount of workplaces integrated into the scheme of interest. New developments like Jätkäsaari and the Fishharbour in downtown envisage major new business centres as does Central Pasila, Kamppi and Töölönlahti Bay, and the new wired-city in Arabia. Altogether the new downtown will increase commercial floor-space by half to 7.5 million m² and an extra 62,000 new jobs.

The new Strategic Plan 2040 identifies the key growth areas and planned infrastructural changes required to ensure Helsinki is not simply aiming to maintain its existing position within the EU but wishes to develop into one of the most innovative and competitive metropolises in the World.

Helsinki's location within the Gulf of Finland near two major cities of St. Petersburg and Tallinn (which is a separate RINA) gives it an edge in terms of logistical and economic potential. But this feature equally applies to the North-South Interface as a whole provided the regions can cooperate at a transnational level to raise the status of the North-South axis into a dynamic transnational linked and unified set of connected city-regions, a String of Pearls.

The economics of Helsinki is growing at a rate close to 10 per cent. Allied to the fact that Helsinki is ranked amongst the top three regions of the EU in respect of issues such as safe and secure cities, competitiveness and ICT innovatory clusters, makes for good economic and spatial planning sense for the city-region to work closer together with the economic potential that exists within the North-South Interface and ensure effective cooperation at all levels of business development and partnership.

Greater Helsinki city-region has one of the highest GDP figures for similar regions in the EU. The city-region of nearly 1.2 million inhabitants enjoys a high quality life based around the principles of Nordic social welfare and a plan-led economy. Helsinki and Finland are also ranked as the least corrupt country in the world. The message is clear. Doing business in Helsinki enables for a safe environment, transparency and quality of service to be achieved.

Helsinki is a modern metropolis. It continuously is building its future through world networking. In the first instance, geographically, the most important partners of the future will be its immediate neighbours Tallinn and St.Petersburg. Both cities are more independent after the changes in August 19991. Many Finnish companies now invest in both of our neighbouring cities of St.Petersburg and Tallinn. Finnish expertise in retailing, real estate, construction, design, logistics and ICT has spread to next door eastwards into Russia and south to Estonia. But this vision could equally apply across the North-South Interface. By developing a String of Pearls framework across the EU's future development axis may enable greater international networks to create synergies previously unknown or not researched.

The future, therefore, is to create new opportunities to build even more cooperation with the North-South city-regions. So what may that entail? For the long-term future, it is envisaged to create a String of Pearls high-speed TGV dedicated rail link between all the cities North-South, in stages. In the short term, they may not be capable of being realised due to uneven levels of critical mass. Each city-region will require to define its relationship both North and South. There are about **100 million** residents in the North-South wider catch-

ment city-regions of the future. Together, the adjoining poles of each city-region can develop joint strategies to achieve greater critical mass. In Greater Helsinki's vision, its immediate neighbours of St.Petersburg and Tallinn could offer up to 10 million residents. If Sofia and Bucharest were to have superior connectivity between their regions, the possible benefits could in the long-term, be considerable. This represents huge opportunities commercially to unify and help support the business potential throughout the North-South interface. Hence, the possibility of linking the North-South interface to the centre of the EU through the major hubs could become reality. High-speed train links with an average distance of say, 400 - 800 kilometres may create new development corridors. For example, a tunnel from Helsinki to Tallinn may be the catalyst that directly connects Helsinki's window to central Europe.

A tunnel may take a significant period of time to achieve. In the meantime, the cross-channel ferry links between Helsinki and Tallinn have some of the highest frequency services in the world. A joint rail tunnel could make the journey time from Helsinki to Berlin as competitive as flying, taking into account that the maximum time would be four hours, door to door. And given that carbon emissions by electric trains are substantially less than air-flights, it is also an environmentally superior mode of transport.

Social Context

Strategic alliances and City Governance

aim: City-Regions will be the drivers of economic development in the future EU. In order for the North – South to ensure its position as a European dynamic network of urban metropoles, Helsinki-Athens by 2040 will need to improve Governance through single city-region authorities.

- **cities are key players in regional development but cannot operate in isolation. The rise of global competition within the EU means that cities need greater critical mass. This will require levels of agglomeration at the metropolitan level. Greater fiscal and urban planning coordination will maintain a superior level of services and ensures people who pay taxes in the hinterland contribute to the wider regional balance.**
- **coordination of land-use policies in a single unitary authority (new local governance) will help manage and contain urban sprawl, thereby contributing to a reduction in green house emissions and energy resources.**
- **flexible cooperation is needed to allow differences at the territorial regional level to prevail yet devise arrangements that allow municipalities to work together on economic development, infrastructure and transport.**
- **complementarity through strategic alliances will focus on cities cooperating at all levels of urban functions**

Attractive city-regions

aim: to create an attractive, liveable and sustainable environment, to bring about a compact, high density, connected set of city-regions, and to reduce sprawl.

- **people want to live and work in cities with clean air, green and secure spaces, attractive city centre and high quality services, including cultural and recreational amenities. In order to attract mobile and skilled knowledge workers and high value activities, environmental quality will be a long-term investment.**
- **urban sprawl and suburbanisation can leave city centres depressed and make them uncompetitive, and consumes energy resources.**
- **in the past, work came to the cities and people followed work. Today, cities must attract key knowledge workers and the key input is the attractiveness of a city's quality of life and environment.**
- **redevelopment of brownfield sites and public spaces improves local services, adds to the value of a city-region and avoids the use of green areas and loss of environment.**

People

aim: the involvement of citizens in the planning process helps promote a better sense of

competence and transparency in the community.

- **transparent planning system develops trust with its citizens.**

Connectivity

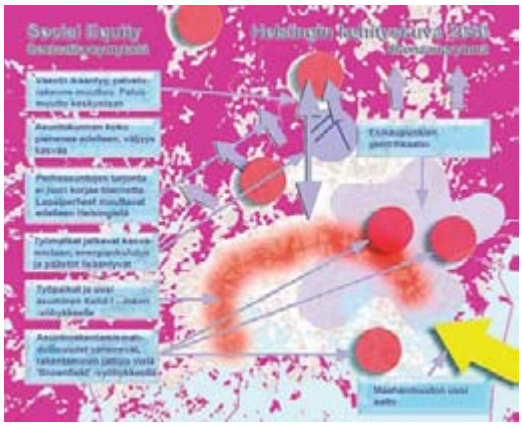
to create a clean, efficient, affordable and effective public transport transnational system of connectivity in order to improve mobility, accessibility, and reduce congestion.

- **it is important to improve the connectivity between the metropoles to achieve a unified and integrated series of links between the spatially connected city-regions and to Europe.**
- **improve connections to inter-urban and long-distance network North-South through a high-speed TGV train network between each of the city-regions.**
- **create efficient mobility within cities by having compact, dense neighbourhood system allied to high quality public transprot**
- **transport hubs of the future through new investment in the City Airports and City Harbours**
- **the cost of allowing car-useage to increase is too great a problem for future generations. The policy needs to be to reduce the volume of traffic and congestion through creating a high level alternative of public transport, controlling parking in the city centre, restricting the city centre access to cars, prioritising pedestrianisation**
- **provide high quality public transport**
- **improve better management of traffic in city centre through traffic calming measures**
- **integrate land-use planning decisions with traffic and transport with integrated management strategies for urban transport**
- **making public transport more affordable and improving overall quality**
- **walking and cycling in city centre to be encouraged for better health, to contribute to sustainability and lower carbon emissions**
- **there is a strong link between mobility and social and economic exclusion; prioritise those well-off to make public transport more affordable**
- **good links to central airport hub through direct public transport connections**

Territorial Cohesion: City Structure and Physical Environment Polycentric City-Regions

to improve the effectiveness of the North-South transnational city-regions through improved spatial cohesion by the development of polycentric city regions and a more balanced system of clusters and networks within each city-region operated by a high level of public transport connectivity.

- **Europe is characterised by a growing polycentralism. Polycentralism seeks to improve competitiveness through re-allocating resources to disadvantaged areas on the periphery. By strengthening territorial cohesion within the city-region this will create greater integration and connectivity within the transnational North-South city-regional metropoles.**
- **polycentricity may be essential to link up urban areas into a series of markets for high-level services and activities in order to sustain competitiveness, enable the cities to address issues collectively and achieve a common approach at a spatial level, such as transport and workplace locations, and provides greater critical mass.**
- **a polycentric metropole encourages greater en-**



ergy efficiency, wider use of public transport systems, promotes a superior jobs and homes spatial network and enables greater complementarity between districts.

- spatial plan-led polycentric region will be able to manage the spatial structure more effectively and in a more balanced manner.

North-South plan-led city-region

In order to achieve a successful city requires a strong planning process and city planning department to oversee and manage development. The preferred manner is to use a plan-led initiative. Developers and the private sector work in partnership with the city-region to agree where the best place spatially would be for future development and how this fits into the city-regional structure as a whole and based around the infrastructural interchanges and hubs. This is best achieved through an agreed set of criteria. In practical terms, to develop a city-region within an urban cohesive setting will require the adoption of a **'city-region' strategy**. What will a city-region look like, and how to achieve a city region in the future?

- city regions could be described as being compact, high density cities based around a highly competitive public transport network, economic and neighbourhood clusters, with economic and social cohesion set within a sustainable environment that reduces carbon emissions. This can best be achieved through the development of a polycentric model of urban development and move away from the more traditional monocentric city.

North-South Interface

to promote a polycentric inter-regional structure between each of the North-South city-regions to improve competitiveness, to give better urban balance through more compact and dense urban city-regions and to create greater spatial cohesion.

Climatic change requires shared responses to common problems; by focusing on improving rail and maritime connections between the North-South city-regions will help reduce green house emissions,

reduce time travel between cities and increase cross-border cooperation and use of services by larger populations.

CONCLUSIONS: N/S Competitive City-Regions

What does this mean for Helsinki?

The Territorial Agenda promotes transnational planning between city-regions in neighbouring countries.

Polycentricity explores the inter-relationships between urban settlements within a metropolitan area, and attempts to help set up a more balanced approach within a city-region in order to achieve greater unified competitiveness, such as can now be seen in the forthcoming Helsinki Strategic Planning Advice 2040

(Kehityskuva). A polycentric approach also intends to open up a new discussion on how structurally this may directly affect the strategic planning of a city-region, with the aim of preventing further sprawl, making the outer rings more compact and dense, thereby allowing a high-quality public transport to spread-out in relation to new developments.

The impact on Helsinki's spatial planning is seen more and more as an essential component for an economy to succeed. Globalisation, technological advances in ICT and traffic and communications suggest that greater emphasis will be placed in the future to cities needing to widen their franchise beyond their limited boundaries, require a more balanced regional approach and implies a wider context at a transnational level if city-regions are to be at the forefront of economic and societal development.

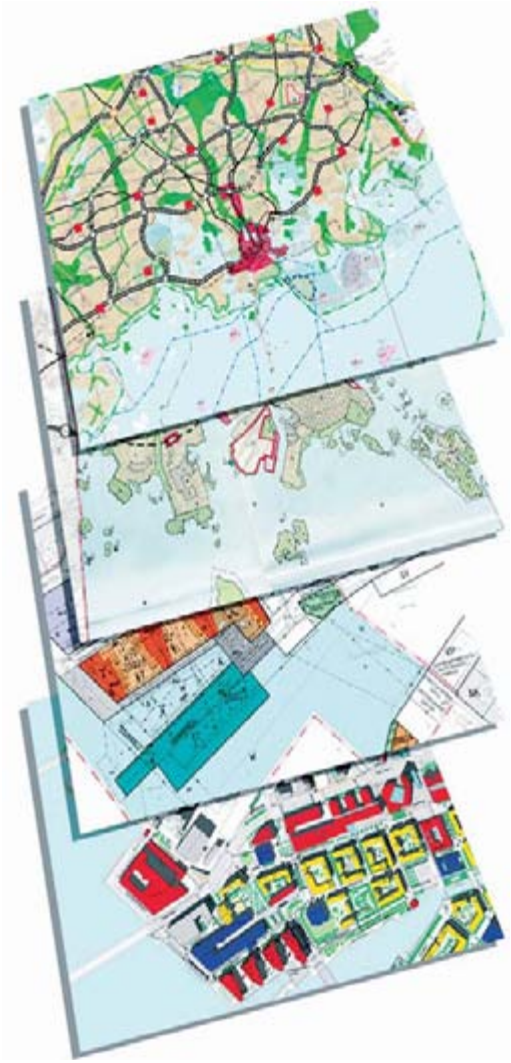
Competence

i. Administrative areas

It is clear that the EU now looks at cities as needing to depend upon the wider city-region. In Helsinki, the metropolis is sub-divided between four cities. The City of Helsinki's new Strategic Plan (Kehityskuva) is now underway and it represents a step towards greater strategic metropolitan overview rather than simply keep strategies to within its legal boundaries. The first round of discussions with politicians received acceptance that the new Strategic Plan can overstep administrative boundaries and provide a common analysis for the entire Great Helsinki Region.

ii. The Planning Process

Although the planning system in the Helsinki city-region is the same legal benchmark as its neighbours



Espoo and Vantaa, the planning processes and spatial cohesion results have been quite different, resulting in Helsinki employing the process to achieve a compact, high-density, sustainable city based round high-quality public transport and a Nordic welfare system of social justice. To varying degrees, Helsinki's neighbours have been unable to achieve such a compact city form, leading in part to sprawl and a region based on unconnected clusters. A more unified approach through strategic alliances at the spatial level is now beginning to show some benefits, and it is expected that over the next 30 years the entire city-region will become more compact, have a unified public transport system, and may even have a single unitary authority for the entire region.

The EU spatial agenda at a practical level will enable the Helsinki planning system to be reviewed in terms of how the processes can end up achieving somewhat different spatial results. By applying spatial cohesion more objectively, it can be seen for the region as a whole, the need to pull more together to achieve common goals on spatial compactness, transportation, and issues concerning the environment, especially if the growing trend of universal urban sprawl is to be halted and energy consumption savings maximised.

iii. Interreg III and IV.
Exchange of Experience and Knowledge

Funding helps bring international experience to bear on local work as well as to export tried and tested ideas from Finland to other countries. The need for practical exchange and transfer of ideas is essential if the EU is to manage programmes which ensure that the projects deliver in terms of improved regional **development solutions**, benchmarking, and to maintain the momentum for inter-regional work.

Helsinki's Capabilities

i. Spatial planning is concerned with key strategic issues for the long-term. To make long term strategies requires dedicated professional teams and a clear capability for informed decision making. In this respect, the EU spatial agenda will provide greater emphasis on the need to make joint decisions through strategic alliances, to work with the different cities in pooling data resources, and create effective cooperation with FUR's (Functional Urban Regions). Ultimately, however, governance for city-regions will need to be re-assessed along the lines of a single governing city-regional authority.
ii. Additionally, the need to balance development over a long-term perspective will lead to a wider understanding of the region's development potential. With this in mind, Helsinki has prepared a regional map showing all the potential development sites that are likely to be built until 2025 and a new 'Top Priority' map showing the key development priorities until 2050.
iii. Urban form and polycentricity will, by definition, become a major issue for discussion due to the EU Territorial agenda and the EU Polymetrex projects currently in progress. New polycentric strategies may become part of the region's agenda.
iv. In order to implement a strategically orientated planning process this will require a more policy aware approach.

Policy

- To promote a polycentric Greater Helsinki Region and a unified urban system in line with EU policies. This requires strengthening the city-region and outlying areas into an agreed set of regional centres to support the diversity and potential of this Northern capital.
- There are city-regions outside the core of Europe which can be strengthened to better utilise their territorial potentials and counteract current imbalances, supporting a more balanced and polycentric EU territory. **Helsinki is one of the leading examples of such potential**.

EU Perspective of Finland as a periphery

The future of northern and southern regions might lie in very different fields of activity. Many Northern regions can benefit from their current strength in relation to ICT and innovation and further capitalise these. The North may manage to keep its image of being "cool" while they may face severe challenges in terms of low accessibility, demographic development and consequence of possible increases of energy prices. Many southern regions can benefit from their pleasant climate and a population density which also in times of population decline will allow for the provision of a suitable level of service of general economic interest. Thus the south has perspectives of becoming a "hot" location which easily can attract knowledge workers, mobile retired people as well as holiday and second homes.

ESDP and Territorial Cohesion policy options for Helsinki: Helsinki is already well on its way to implementing these key issues of ESDP and Territorial Cohesion by the following actions:

- expansion of the 'gateway' role to Russia via St.Petersburg
- improving Helsinki's 'attractiveness' to attract more mobile investment.
- economic diversity to prevent single dependency of an economic activity
- to restructure derelict urban sites and areas (brownfields).
- promote a 'caring' policy to the eco-system
- create accessibility within the city-region through appropriate land-use plans to stimulate mixed urban functions, aiming for a polycentric structure with high-quality public transport connectivity.
- emphasis on creating a high-density, compact city-region, instead of 'sprawl' and uncontrolled expansion of the urban framework.
- coordination between land-use planning and transportation and traffic plans.

- reduction of negative side-effects of areas subject to high-concentrations of traffic. Helsinki, through its road barrier, noise-reduction programme, environmental traffic initiatives in the city centre and suburbs, is already implementing such initiatives.
- to improve freight transport with special regard to shipping navigation. Helsinki's new high-tech goods terminal harbour in Vuosaari should assist greatly in achieving this particular ESDP policy.
- coordinated and integrated infrastructure and land-use planning to maximise the spatial investment programme. It could be reasoned, that by owning nearly 66% of land (together with Finnish State, nearly 80% of land is municipalized) an integrated framework for spatial planning already exists and is being implemented effectively through the Master Plan (Yleiskaava 2002).

Policy
- To support *polycentricity* as a means by which Greater Helsinki region can develop as a hierarchy of centres at a city-regional level closely associated around a primary central core, the key city, in a spatial structure that allows **complementarity and connectivity** between the centres and the core form.

Building Clusters and the Territorial Dimension

Information and communication technology (ICT) are important means of the citizen's daily life and business communication in enterprises and industry. To foster growth and jobs and to enhance the quality of life, access to modern information and communication means is needed.

ICT innovative clusters are taking place both within functional urban areas and regions and also taking place between them. Links between urban areas and regions have been built primarily within the national context since the early 1990s. Now it is time to build clusters internationally. Transnational links are built with cross-border neighbouring areas and development zones, but also within Europe and globally. Hot spots of competitiveness and innovativeness are also outside Europe. Europe cannot turn inwards but it must build active links especially to North-America and Asia.

Policy
- To recognize the need for closer cooperation between Helsinki and the North-South Capital city-regions as polycentric neighbours in order to strengthen Helsinki's international economic standing and expand the region's critical mass capabilities.
- By promoting transnational clusters of competitive and innovative activities through strengthening the international identity and specialisation of cities/regions and identifying priorities for cooperation and synergies in investments, such as cooperation on territorial development, job markets, training, education, R&D.

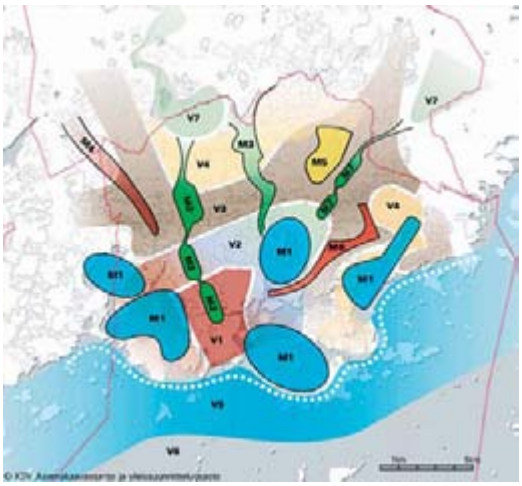
Transport Networks and Accessibility

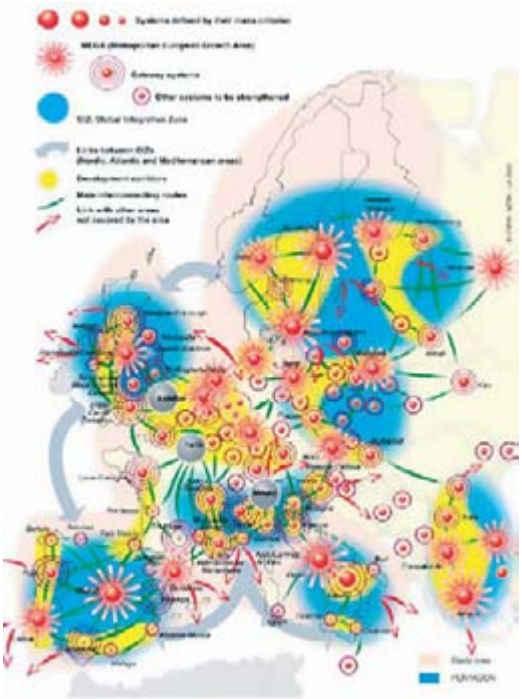
Accessibility is one of the most important indicators used to describe the territorial aspects of transport systems. The quantity and quality of a region's infrastructure endowment, as well as distance (travel time) to population and/or economic centres play an important role.

Policy
- High-speed rail lines can support cities between main nodes through strategic planning at a transnational level. Priority needs to be given to developing a TGV style high-speed train between Helsinki and the North-South interface Capital city-regions, including giving consideration to connecting Helsinki to the European mainland via a rail tunnel to Tallinn.

Environment and Culture

Natural heritage is an essential component of the environmental situation and living environment. The European Union established a network of especially protected areas "Natura 2000". Europe has many reasons to care for its great cultural diversity and the thousands of outstanding examples of ancient architecture, artifacts and landscapes which attract millions of tourists to renowned cities and historic sites. The impor-





tance of this cultural wealth can be measured in economic and social terms, in employment, job creation and a unique quality of life. Cultural heritage plays an essential role for Europe, in particular in enhancing the integration process of the new enlarged Europe with its complex cultural diversity. Failure to conserve and protect these treasures for future generations will be reflected in loss of cultural patrimony and reduced quality of life. Accordingly, spatial planning should approach this issue in a comprehensive manner.

Policy

- To support an integrated and sustainable development and maintenance of the European urban and rural environments through planning designed to protect, conserve, and enhance the natural and cultural heritage for improved quality of life.

In Summary

BALANCED COMPETITIVENESS and INNOVATION

Promoting TransNational Competitive and Innovative Regional Clusters

In order to create trans-European clusters of competitive and innovative activities, city-regions are encouraged to strengthen their international identity and specialisation and to identify priorities for cooperation and synergies in investments.

CONNECTIVITY

Strengthening TransEuropean Networks and ENERGY

In order to improve the accessibility of all the city-regions of the EU and especially the peripheral areas, the relevant regional actors need to upgrade to high-speed train systems. This in turn will support the need to lower carbon emissions, and also utilize territorial potentials for efficient, safe and environmentally friendly production of renewable energy.

CITYREGIONS and SPATIAL COHESION

Promoting Urban Development in a Polycentric Pattern

In order to promote polycentric EU territory, a more balanced European urban system of city-regions is to be achieved. This requires strengthening of the city-regions, especially outside the core areas of Europe.

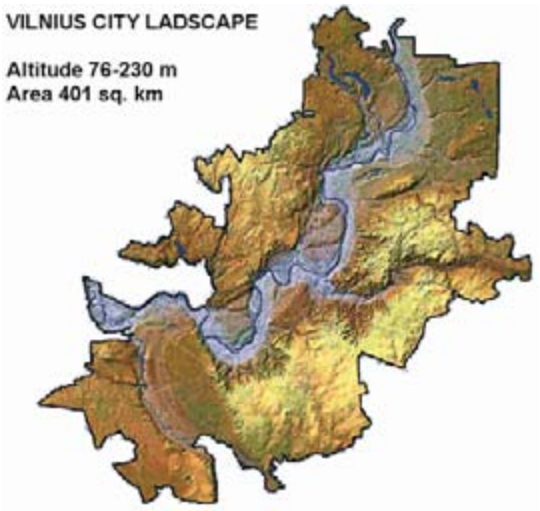
Vilnius

Vilnius: CITY

Final Report

1
Vilnius City Planning and Development

Linas Sinkevicius
ME Vilniaus Planas



1 Introduction

Vilnius is the capital of Lithuania, the country's administrative, cultural and economic centre with a population of 553,000. Vilnius metropolitan area within a radius of 50 km has a population of 800,000. Vilnius city, compared to the rest of Lithuania has quite various nationalities: Lithuanians – 57.8%, Polish – 18.7%, Russians – 14%, others – 9.5%.

Vilnius city covers an area of 401 sq km and has one of the lowest population densities (1,381 inhab./sq km) compared to other European capitals. The built up area covers 26%, forestry land and 37% of the city territory. The landscape identity of Vilnius consists of Neris and Vilnia river valleys, hills (height difference 154 m), forests and Old Town (UNESCO site).

Vilnius will become the European Capital of Culture in 2009. The State will celebrate a millennium since the first mentioning of the name of Lithuania in the Annals of Quedlinburg in 1009. This is an excellent opportunity to enhance the role of culture in Lithuania and European life, to make our culture known in the World. Lithuania was first among the new EU members to be named European Capital of Culture. Vilnius is a city of rich European experience, a city within which different architectural styles are intertwined, and where the spirit of East and West meets. The capital remains open to different cultures and ideas, just as it has been throughout its history. The title of European Capital of Culture 2009 is encouraging intense development of the city. Expansion of cultural and leisure infrastructure is planned, with a total planned investments of € 0.5 billion. Lithuania will host the European Basketball Championship in 2011 and the main competitions will be organised in Vilnius.

Foreign Direct Investment magazine of the Financial Times Group has named Vilnius the "City of Eastern Europe's future" and the "Baltic city of the future." Vilnius' credit rating was established in 2002 and is now annually updated by Standard & Poor's. In 2006, the long-term issuer credit rating on Vilnius

was set at BBB+, stable outlook. In 2005, Vilnius accumulated € 3,858 million in foreign direct investments (FDI). The city receives more than half of the investments that reach the country. The city is home to major companies and key financial institutions with highly developed infrastructure and high-quality services.

Office space in Vilnius increased 3 times from 2000 to 2004 and in 2006 was 144,700 sq m of rentable space, of which class A office space comprised 55,700 sq m (38.5% of the total modern office market). The formation of the first modern office area, the so-called Business Triangle, was completed. Meanwhile the development of a second area on the right bank of the River Neris is just gaining momentum. With a view to the future, the satellite districts in the North-Western, Northern, and North-Eastern parts of Vilnius, where class B1 properties are the most likely to appear, could be considered the most attractive places for realising new projects. Up to 70,000 sq. m of new rentable office space is expected to be available on the market in 2007–2008.

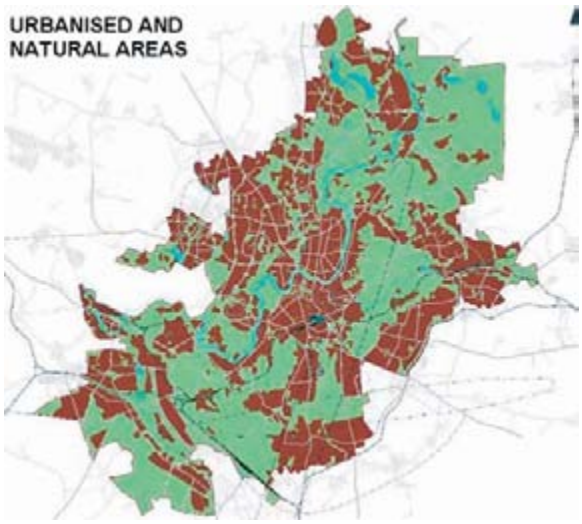
Retail market in Lithuania is one of the fastest with more and more investments in this real estate segment. According to preliminary Lithuanian Department of Statistics data, the turnover of retail food companies in 2000–2005 increased 39.9%; retail non-food companies 74.8%; and restaurants and bars as much as 116%. Retail in Vilnius increased 2.2 times from 2000 to 2004. Vilnius retail property market with the supply of modern retail space was 341,400 sq m in 2006. The retail market of Vilnius will enter a new phase of growth beginning in 2008, especially after the Panorama and Ozas shopping centres and the Akropolis II shopping and entertainment centre on the grounds of the former Velga plant are completed.

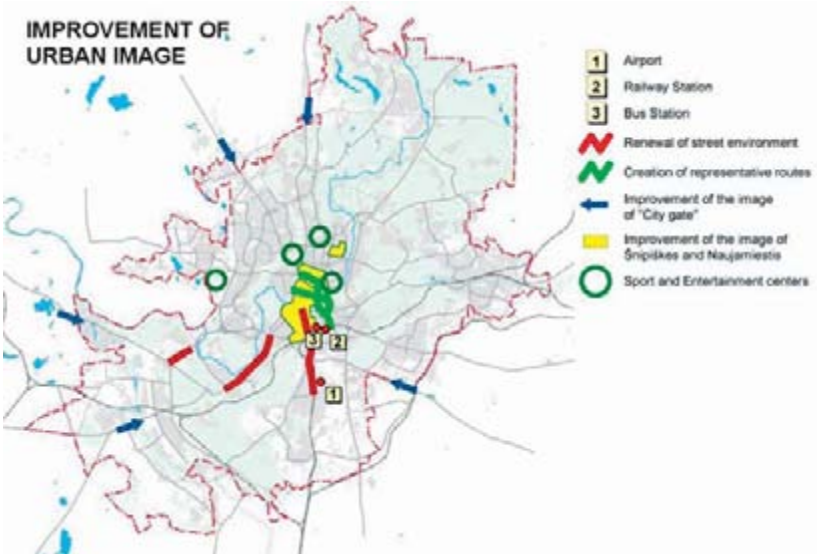
2 Vilnius City Strategic Plan 2002–2011

Vilnius City Strategic Plan 2002–2011 (SP) was approved in 2002. SP defines city vision, priorities, activities and serves as a basis for annual city budget, national, international and PPP projects. www.vilnius.lt/vmsp

VISION 2020: Vilnius – the capital of Lithuania, the most modern city in Central and Eastern Europe, an international centre of politics, business, science and culture.

Long term development priorities: 1) Increasing the international competitiveness of Vilnius, 2) Developing a new economy, 3) Creating an advanced society, 4) Developing of the transportation and engineering infrastructure.



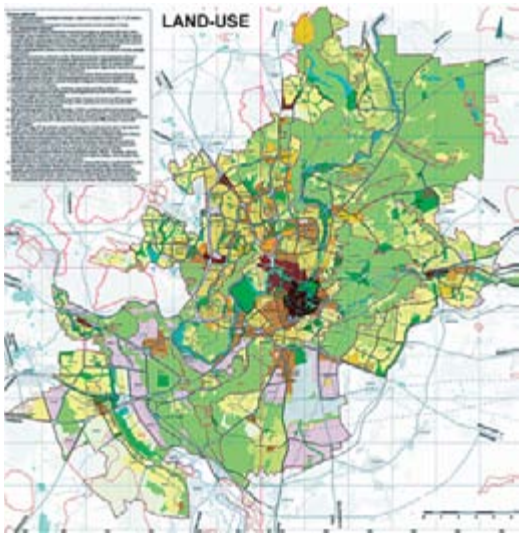


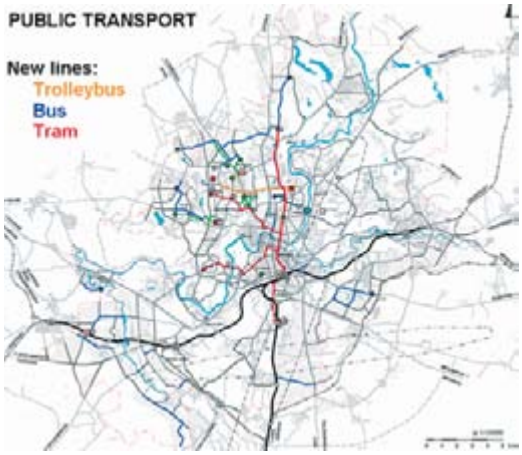
Primary Office Projects in Vilnius in 2007–2008

Project	Developer	Rentable office space, sqm
Vertas Business Centre, Gyneju st. 14	Ranga IV Investicijos	9,400
Business centre, Saltoniskiu st. 2	Vilmesta	6,500
Business centre, Kareiviu st. 6	Elektronas	6,000
Commercial-administrative building, Zirmunu st./Kareiviu st.	Evolis	2,700
Business centre, Ukmerges st. 120	Indeco	10,000
Office centre, Ozo st. 14	City Invest	8,300
Naujamiescio business centre, phases II/III	Vilbra	7,500
Business centre, Laisves Ave (near business centre L3)	E. L. L. Nekilnojamas Turtas	6,200
Business Centre, Ukmerges St.	Private person	13,081
Total		**69,681**

Major Retail Projects in Vilnius in 2007–2009

Project	Developer	Completion date	Area, sq. m
Vilniaus Vartai *(business-residential complex)*	Ranga	2007	7,300
Gedimino 9 *(shopping centre)*	Ajolas	2007	18,000
Panorama *(shopping centre)*	E. L. L. Nekilnojamas Turtas	2008	65,000
Ozas *(leisure and entertainment park)*	Rubicon Group	2008	60,000
Shopping and entertainment centre *(Velga industrial site redevelopment)*	Akropolis	2009–2015	100,000
Total			**250,300**





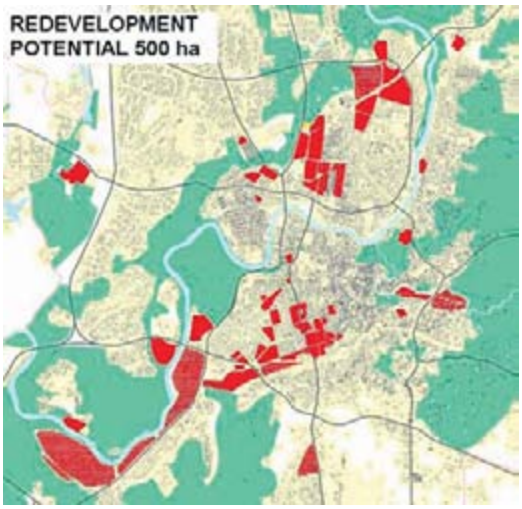
3 Vilnius City Master Plan 2015

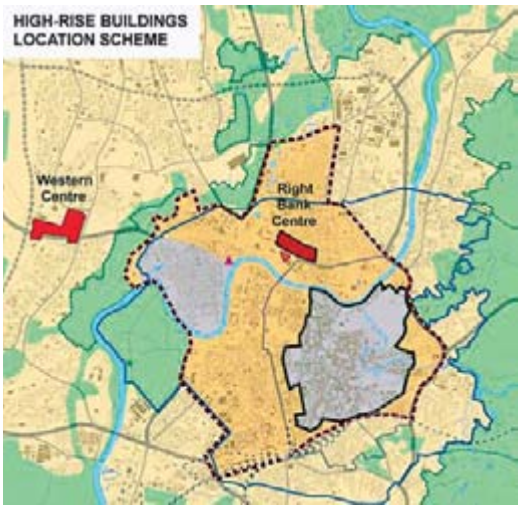
Vilnius city is planned periodically since 1953. Vilnius City Master Plan 2015 (MP) approved in 2007. According to MP forecast the number of population in Vilnius city will increase from 553 thousand in 2006 to 576 thousand in 2015. The number of city daytime population – from 673 to 716 thousand. The number of population in the metropolitan area (50 km around Vilnius) – will rise from 800 to 875 thousand. The planned average annual residential construction – 320 thousand sq m, of which 73% will be multi-unit construction.

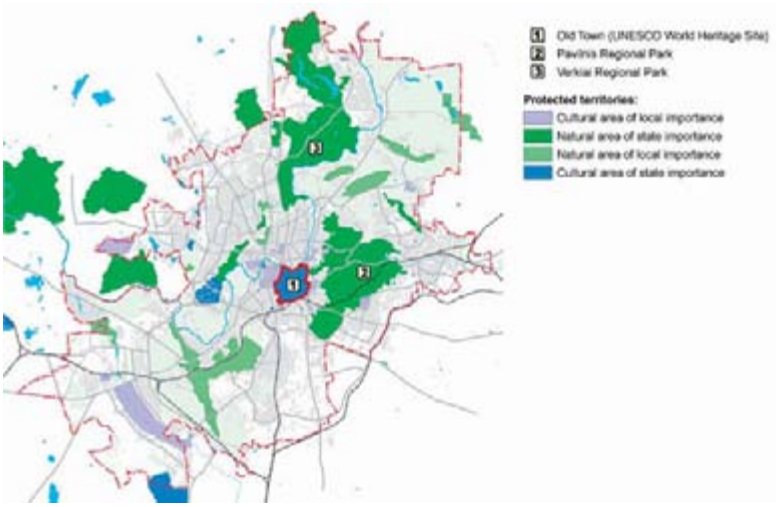
The most important tasks of MP are:

1) Development of polycentric city structure;
2) Concentration in priority development areas;
3) Support of internal development of the city (redevelopment);
4) Adaptation of more flexible land-use system;
5) Achievement of social integration and reduction of development disparities;
6) Modernisation of public transport;
7) Reduction of pollution;
8) Co-operation with neighbouring municipalities for balanced regional development.

Redevelopment priority of industrial territories is as follows: inefficiently used territories in Naujamiestis, Snipiskes, Vilkpede, Zirmunai and Zemieji Paneriai. The existing total industrial redevelopment potential is about 500 ha (120 ha – in City Centre). Gardening community territories in Vilnius has total area of 2300 ha with 26 thousand parcels. The Master Plan foresees 600 ha for conversion of gardening community territories into territories of single-family residential houses.







High-rise buildings (>35 m) are planned only in two locations in Vilnius: Right Bank Centre and Western Centre in Virsuliskes, near living districts. Those two locations still have a big potential, because in Right Bank Centre about 30% of planned skyscrapers are implemented and in Western Centre – only 10% implemented.

Residential territories development is the most interesting subject for investments and constructions in Vilnius today. Useful floor space per capita will increase from 23.3 to 28.2 sq m. The housing stock of the city is expected to reach 16.3 million sq m in 2015. About 320 thousand sq m of useful floor space are planned to be built yearly, which is equivalent to about 4,500 new housing units. The total of 1,516 ha of the city territories is expected to be used for residential developments, including 1,067 ha for low-rise single-family developments (including territories where the development has begun) and 449 ha for multi-unit developments.

www.vilnius.lt/bplanas

4 Detailed Planning

About 200 new detailed plans area prepared in Vilnius city annually with about total potential of 1 million sq m for housing and another 1 million sq m for commercial use. According to details plans (approved in 2002–2005) data Vilnius City still has potential to build more than 10 million sq m of new buildings (> 5 million sq m housing and > 5 million sq m commercial use).

5 Natural and Cultural Heritage Areas

Protected natural and cultural heritage areas occupy 17% of city territory. Two biggest natural protected areas in Vilnius are Verkiai Regional Park (2,668 ha) and Pavilnis Regional Park (2,153 ha). Regional parks have the biggest potential for recreation and each year more and more infrastructure and attractions for visitors implemented here. www.pavilniai-verkiai.lt

6 Vilnius Old Town Revitalisation

Vilnius Old Town inscribed on the UNESCO WORLD heritage list in 1994. Vilnius Old Town Revitalisation Strategy was prepared by international team, supported by the World Bank, UNESCO WHC, Denmark, Scotland, Norway in 1996. Strategy analysed existing situation and created main principles for Old Town protection: 1) Functional regeneration, 2) Public-private partnership, 3) Balance and integration between preservation and development, 4) New management instrument - Old Town Renewal Agency. Public Enterprise "Vilnius Old Town Renewal Agency" established in 1998. It was put many efforts for community development and awareness rising, for creation of more than 60 home-owners associations, development of international co-operation. Rapid physical renewal of buildings and environment in the Old Town area of 359 ha started. More than € 250 million from public and private funds was attracted for facades, streets, public spaces, housing and commercial objects. Vilnius Old Town revitalisation was the first most important step in Vilnius urban life since 1998.

www.vsaa.lt, www.ensure.org/vilnius2/gb/index.htm

7 Gedimino Av. and King Mindaugas Bridge (almost realized)

Gedimino Avenue is a central city street of 1.7 km long. The main administrative, cultural and religious organisations are located here. There are four squares next to the avenue. Gediminas Ave. is one of the main entrances to the Old Town. The bigger part of Gedimino Ave., between the Cathedral square and J. Tumo-Vaizganto street (including adjacent streets and squares), has been reconstructed, underground parking has been built, the engineering network renovated. Project implemented by State and the City of Vilnius co-operation with joint funding. As a part of this common programme, King Mindaugas Bridge was constructed in 2003 for King Mindaugas crowning 750 years anniversary.

8 North Town Redevelopment (almost realized)

North Town is a former military area located 3 km from city centre and occupies territory of 53 ha. CJSC "Siaures miestelis" established by the City of Vilnius in 1999 and responsible for redevelopment of this area to new office, commercial centres and housing area. Northtown Technology Park founded by the City of Vilnius and the Ministry of Economy of Lithuania in 2002. It is a public foundation created to manage the innovative environment and to become the city's major high tech business centre (http://www.smtp.lt/en). Redevelopment of North Town almost completed and this area is back to the city life again.

9 Bussiness Triangle (realized)

The "Business Triangle" project became a perfect pattern, how the old industrial area was transformed into an up-to-date commercial centre. The conversion based on an original idea of architects as well as on newest engineering and IT solutions became a foremost project not only in Vilnius City but also nationally. During seven years (2000–2006) of ongoing de-

velopments the "Business Triangle" (5 ha) changed its face out of all recognition. Nine massive objects were developed, more than 50 thousand sq m were leased, about 200 well-known companies set offices here, in which more than 5 thousand employees were occupied. Such indicators significantly outweigh similar indicators of other business complexes situated in Lithuania and within Baltic region. An actual market value of all objects situated in the "Business Triangle" reaches € 116 million. www.mgvalda.lt

10 Complex "City Gates" (realized)

The progressive business, commercial and residential complex "City Gates" settled in the very centre of Vilnius, near Neris River, in the strategically attractive and convenient place at the junction of Gelezinio Vilko and Gyneju streets in 2006. The project's developer is Ranga IV Investment. The modern and functional complex is devoted for business administration, retail sales (small boutiques and passageway) and dwelling (apartments and luxury suites). Complex has from 9 to 18 storeys and total area of 60 thousand sq m. Complex constructed on 1.2 ha land plot and part of complex (0.47 ha) built over the tunnel. Investments total € 46 million. www.rangaiv.lt

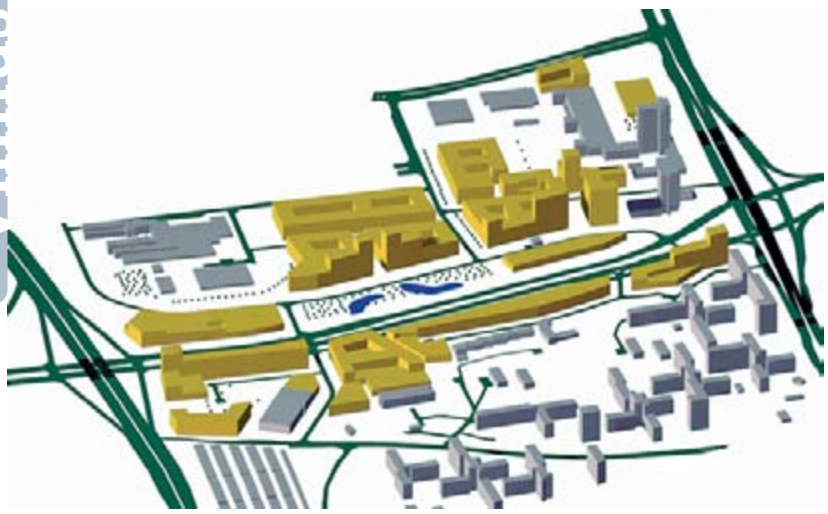
11 City Centre on the Right Bank of the Neris River (partly realized)

City centre expansion of on the right bank of the River Neris is under implementation in 120 ha area of Snipiskes district. Development here started in 2000. It is a continuation of old urban concept to form modern "Architectural hill" on the right bank of the Neris River. Vilnius City Municipal administration building (20-storey) with Europe Business Centre (33-storey) completed in 2004. Europe Business Centre is the highest skyscraper in Baltic States. Total area of planned commercial, residential and public buildings is 3 million sq m with approx. investments of € 1.4 billion. The fastest growing part of modern Vilnius has already attracted € 151 million from 2000 to 2005 and is expected to attract another € 130 million in short-term.

Neris River valley, located in between historic and modern parts of city centre becoming more and more important for recreation and Vilnius city image. International competition for Waterfront Park development concept will be organised by City of Vilnius in 2007. Boat tourism on Neris River is planned to start in near future.

12 Uzupis Industry Redevelopment (planned)

Three industrial sites of "Skaiteks", "Vilija" and "Vilniaus Kailiai" planned for redevelopment to multifunctional complex in Uzupis, Eastern part of Old Town by 2011. Project covers area of 26 ha and for implementation unites 6 developers (Realtus, Walzer, Sivysta, Mabilta,



Sermeta, VSRD). Height of new buildings will be 1-6 storeys. Total area of planned residential and commercial buildings floor space will be 120 thousand sq m. Planned investments € 180 million.

www.realtus.lt

13 Western Centre (planned)

Planned Western Centre is located in the middle of living districts area. To reduce monofunction of this mostly populated part of the city was decided to create here new office and commercial centre. This area of 32 ha is planned like the second location for high-rise buildings (up to 20 storeys). Total area of planned buildings floor space will be 280 thousand sq m. Planned investments € 220 million.

14 Multifunctional Complex Akropolis Ii (planned)

Multifunctional complex planned by JSC "Akropolis" on 13 ha former industrial factory "Velga" site near city centre. Complex will consist of commercial, entertainment, office and residential buildings. Implementation period will be 2009–2015. Total area of planned buildings floor space will be 230 thousand sq m. Planned investments € 260 million. www.akropolis.lt

15 Sunrise Valley Knowledge Economy Cluster (planned)

Five different locations planned for knowledge economy clusters development in Vilnius according to Vilnius City Strategic Plan. New knowledge economy cluster "Sunrise Valley" is planned on area of two biggest universities: Vilnius University (VU) and Vilnius Gediminas Technical University (VGTU). Detailed plan of 62 ha territory and architectural proposals for business incubator, science and technology park and

business offices development are prepared. VU and VGTU plans to move a number of faculties and research institutes (faculties of mathematics and informatics, biotechnology, electronics, etc.) to the Sunrise Valley. Total area of planned new public and commercial buildings is up to 500 thousand sq m with planned investments of € 290 million. www.sunrisevalley.lt

16 New Cultural Objects (planned)

The title "European Capital of Culture 2009" is encouraging intense development of the city. There are plans to develop three new cultural objects in Vilnius city centre:

1) Vilnius Art Centre, with expositions from the Guggenheim and the Hermitage museums and centres of the Litvak (Lithuanian Jews), arts education and multimedia (total area 22.4 thousand sq m, investments € 35 million.);
2) National Palace, with an 1,800-seat concert hall and cultural centre (total area 60 thousand sq m, investments € 87 million.);
3) Congress Centre, with a seating capacity of 3,000 (total area 28 thousand sq m, investments € 50 million.).

Total planned investments for three cultural objects € 172 million.

17 World Trade Centre (planned)

Danish investors JSC "World trade Centre Vilnius" planning to build World Trade Centre in Vilnius City centre by 2010. The new WTC concept (European version) based on more functions: Trade-Culture-Education-Networking and will be firstly implemented in Vilnius. Total area of planned buildings floor space will be 200 thousand sq m. Planned investments will be € 434 million.

18 "Soho" Quarter In Right Bank Centre (planned)

"Soho" quarter in Vilnius is planed to build on former industrial territory of 4.5 ha. Project developer "BM Bustas", design by "Jungtines pajegos". Buildings planned up to 10 storeys height, high quality architecture and quarter with water canals. The number of apartments will be 700 with 2,200 residents; the number of working places – 300. The building period is expected to be 2007–2009. Planned investments will be € 72.4 million.

19 Vilnius Amusement Park (partly realized)

Vilnius amusement park occupies territory of 61 ha, located in 4 km North from the city centre. CJSC "Vilniaus Pramogu Parkas" was established for development of the Vilnius amusement park. Siemens Arena (with 12,000 seats) was completed in 2004, the Indoor Water Park "Vichy" completed in 2007, Ozas Shopping and Entertainment Centre to be completed in 2007.

20 National Stadium (planned)

National stadium will be constructed in Vilnius on Seskine hill next to the existing biggest shopping and entertainment centre "Akropolis". Stadium capacity – 25,000 places (37,000 for entertainment events). Development area of 22.9 ha will include, stadium, sport centre and transport infrastructure. National stadium developers are State and City of Vilnius. It is planned to complete National stadium (first stage) in 2009. Planned investments are € 75 million.

21 Pilaite Northern Part Detailed Plan (partly realized)

Pilaite is a new living district located in Western part of the city. Southern part of Pilaite district is already completed and has population of 11 thousand. Northern part of Pilaite is planed as a city priority territory for new development, because it has good infrastructure. In area of 230 ha city plans new part for another 13.8 thousand residents in low-rise and in high-rise housing with commercial areas in Southern part.

Implementation started in 2005 and will be completed by 2015.

22 Gabija Multifunctional Quarter (partly realized)

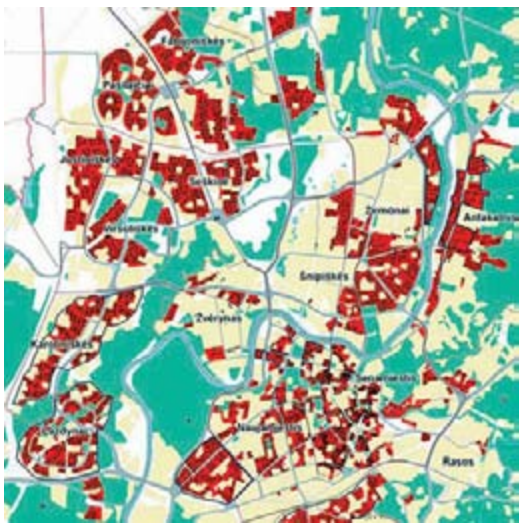
Gabija quarter is a new part of Pasilaiciai living district located in Nort-Western part of the city. Gabija quarter is planned as a city priority territory for new development, because it has good infrastructure and surrounded by existing living districts. New quarter of 92 ha planned for 8,000 residents and 2,000 new jobs. Implementation started in 2006 and will be completed in 2015. Total area of residential and commercial buildings is 960 thousand sq m.

23 Housing and Living Environment Renovation (partly realized)

Objective of the project is to renew multi-storey houses built in 1962–1992. Complex renovation will be done for buildings and living environment. Total territory for housing renovation covers 1,687 ha with 3,600 buildings (5–16 storeys). Common area of buildings floor space will be 8.3 million sq m. Planned investments are € 1.65 billion (of which the State and Municipality contribute up to 30%). Project implementation started in 2005 and planned up to 2020.

24 Modern Tram And Parking System (planned)

Vilnius city is planning to have modern tram with two lines (22.8 km, 33 tram stops), additionally to existing buses and trolleybuses. First line will connect railway and bus stations with City Centre and Santariskes medical campus; second line will link large residential areas and the City Centre. 6,000–8,000 parking places will be arranged on 8 parking sites (P+R type) at the modern tram lines and on 25 common parking sites. Planned total investments € 306–382 million.



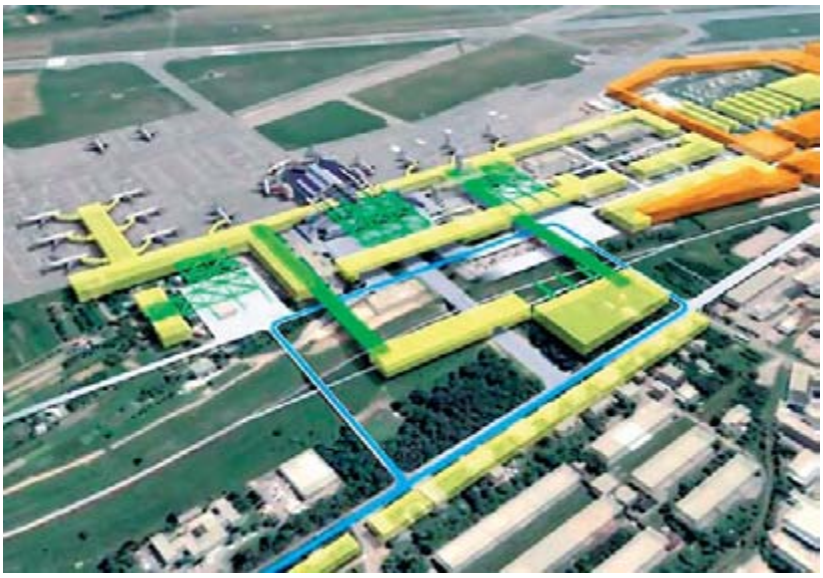
25 Modernisation Of Vilnius International Airport (planned)

Modernisation of Vilnius International Airport territory of 333 ha is planned with the goals to increase the capacities and quality of the Airport service and to construct new commercial buildings. It is planned expansion of the existing terminal, extension of runway and creation of effective transportation linkages with the city's centre, Kaunas Airport and planned Rail Baltica. Planned investments for the expansion of the Vilnius terminal (first stage) is € 29 million in 2006–2007. Total planned long term investments are € 230 million.

26 Vilnius Southern and Western Bypasses (partly realized)

Southern Bypass is a part of the TINA IXB international transport corridor, which crosses the City of Vilnius and links Vilnius-Kaunas-Klaipeda route with the Minsk direction. Construction started in 2006 and will be completed in 2008. Total length – 2.9 km. Planned investments of € 77.5 million represent 53% (€ 41.4 mln.) financed from EU Cohesion fund.

Western Bypass (TINA network, connection with Riga direction) planned construction in 2008–2013. Total length – 9 km. Planned investments € 113 million.



27 Indicators (2005)

	Vilnius City	Vilnius County	Lithuania
Population, thousand	553	849	3,425
Area, sq. km	401	9,731	65,300
Private land in 1.1.2007, %	23	42	55
Population density per 1 sq. km	1,379	87	53
Average useful floor space per capita, sq. m, total	24.1	24.3	23.8
Dwellings completed	2,888	3,388	5,933
Number of passenger cars of per 1 000 population	396	389	395
Number of students in universities, thousand	70	70	142

28 References

- Vilnius City Strategic Plan 2002–2011
- Vilnius City Master Plan 2015
- Vilnius City Municipal Government Administration
- www.vilnius.lt
- www.colliers.lt
- www.vsaa.lt
- www.smtp.lt
- www.mgvalda.lt
- www.rangaiv.lt
- www.realtus.lt
- www.akropolis.lt
- www.development.lt
- http://db.std.lt/RDB_EN/Dialog/statfile1.asp

Vilnius: CITY-REGION

Final Report

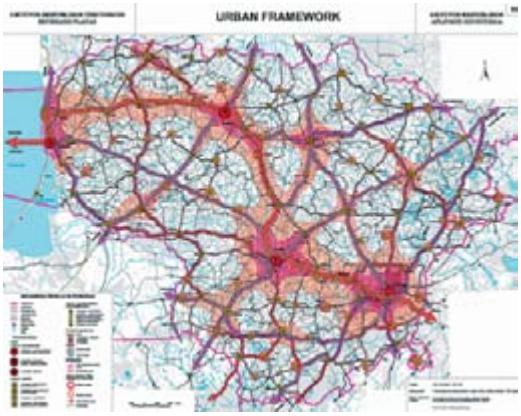
2
Vilnius Region Planning and Development

Linas Sinkevicius
ME Vilniaus Planas

1 Introduction

Vilnius County consists of 8 municipalities, has a population of 849 thousand and consists of various nationalities: Lithuanians – 54.9%, Polish – 25.4%, Russians – 11.6%, others – 8.1%. County generates one-third of the country's GDP. Vilnius County covers an area of 9,731 sq km and has population density 87 inhabitants/sq km. Built up areas covers 4.6%, forestry land – 42%, agricultural land – 43% of the County territory. Landscape identity of Vilnius County consists of Belt of Baltic Hills (from South to North), Neris, Vilnia, Sventoji, Merkys, rivers valleys, lakes, forests, Vilnius Old Town (UNESCO site), Trakai castle and Kernave (UNESCO site). Geographical centre of Europe located 26 km to North from Vilnius.

Lithuania has 10 counties and 60 municipalities. The last five decades in Lithuania was a period of intensive urban development. Unlike in the other two Baltic States Lithuanian cities network evolved in a polycentric and balanced way. Regional planning in Lithuania started by prof. Kazys Seselgis in 1961. Planning of settlements and industry location was very important for country development in planning economy conditions in rapid industrialisation period. Chosen alternative with 10 regional centres allowed to create balanced and polycentric urban system in Lithuania. New development (settlements and industry) was spread out more equally in Lithuania. As a consequence of regional planning, a network of five large cities (Vilnius, Kaunas, Klaipeda,



Siauliai, Panevezys) was formed and convenient communications among cities were established. Today we have 69% of urban population in Lithuania.

In order to expand the urban network further, closer cooperation among cities is being promoted. The newly established Vilnius and Kaunas Region has united the forces of the two largest cities and will increase the economic potential of the whole country. Vilnius, the European Capital of Culture 2009, is open to contemporary culture, art, business and newest scientific and technological ideas. Elektrenai, the very centre of this region, is aiming to become a tourism centre by establishing modern education, recreation and entertainment complexes.

2 Comprehensive Plan of the Territory of Lithuania

The Comprehensive Plan of the Territory of Lithuania (CP) approved by Seimas (Parliament of the Republic of Lithuania) in 2002 and has such major issues as:

1) Optimisation of urban system by development of urban frame of country and axes of urban integration. A system of 3 categories of urban centres, including national, regional and local level centres as well as relevant urban integration axes envisaged.
2) Ensuring landscape protection by improving nature framework, protection of landscape and biological diversity, use and protection of cultural heritage territory.

CP promotes an idea of uniting potentials of the biggest Lithuanian cities (Vilnius-Kaunas and Siauliai-Panevezys) and formation of strong urban network. CP is a basis preparing Master Plan of Counties.

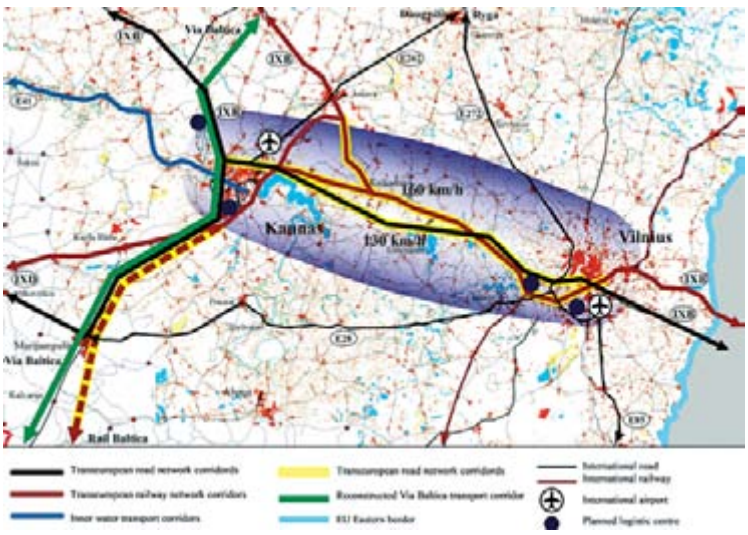
3 Vilnius and Kaunas Dipolis Strategic Plan

Vilnius and Kaunas, the two largest cities in Lithuania, are joining forces to establish one of the most advanced centres in Central and Eastern Europe. Vilnius and Kaunas Dipolis Strategic Plan prepared in 2004 suggests first of all those projects, which enhance competitiveness of the region and could potentially be financed from the EU funds or attract private investments. The Vilnius and Kaunas Region has a network of 16 municipalities. 1.6 mlillion people, almost half of the country's population, live in this region. 61% of Lithuania and 25% of Baltic States GDP is made in dipolis. Strategic Plan has 3 priorities with activities planned by 2015. www.vilnius.lt/dipolis/index.php?t1=401

1st prioritity.
Transportation system development

The major activities:

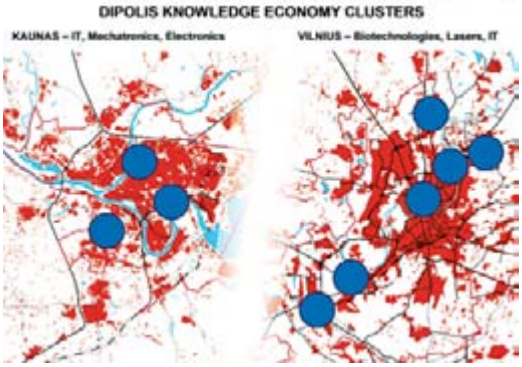
1. Construction of European gauge railway from Poland to Kaunas and its further development to Vilnius and to Rail Baltica network.



2. Reconstruction of TINA IX B international road corridor reaching max. speed of 130 km/h.
3. Modernisation of Vilnius and Kaunas airports.
4. Development of logistic centres in Kaunas and Vilnius.
5. Modernisation of Vilnius and Kaunas railway stations.

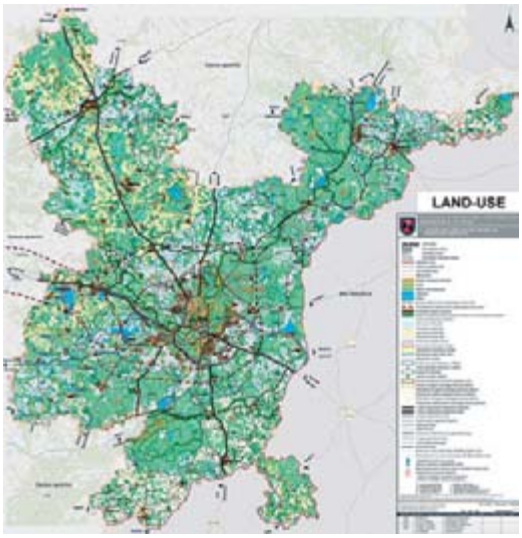
2nd priority. Economic development
The major activities:

1. International marketing of Dipolis development possibilities (exhibitions, property markets, conferences)
2. Development of Knowledge Economy Sector (17 universities, 115,000 students, 6+3 clusters in Biotechnologies, Lasers, IT, Electronics)



3rd priority. Tourism business and infrastructure development
The major activities:

1. Creation and implementation of special tourism programs (European geographical centre; Modern Kaunas (Art Nouveau); Youth Coast and Energoland in Elektrenai; Birstonas Royal resort; Rumsiskes open air ethnographic museum)
2. Initiation development of leisure centres, golf courses and camps



3. Development of water tourism (Nemunas and Neris rivers)
4. Creation of bicycle route "4 Capitals Vilnius-Trakai-Kaunas-Kernave"

4 Vilnius County Master Plan 2015 (project)

Vilnius County Master Plan 2015 (MP) is under preparation and will be completed in 2007. The most important tasks for MP are: 1) to concentrate development near existing, major urbanised areas, limiting urban sprawl in green field; 2) to develop engineering infrastructure; 3) to protect natural heritage and green framework.

Vilnius County population will increase by 33 thousand and will be 882 thousand in 2015, according to optimistic forecast. Only Vilnius City, Vilnius District and Trakai District municipalities will have population growth. The other five municipalities of Vilnius County will continue to lose population even according to optimistic prognosis.

Annual grow of GDP will be 9.3% and amount € 17.4 billion in 2015. GDP per capita will reach € 20 thousand in 2015, according to optimistic forecast. Vilnius City will continue to create 80% of Vilnius County GDP. Vilnius County will create 36% and Vilnius City 45% of National GDP in 2015.

MP envisaged territories of 22,680 ha for new development until 2015. Almost half of these territories planned in Vilnius City (5,110 ha) and in Vilnius District (4,869 ha). About 2,000 ha of new development territories planned for each municipality of Vilnius County. Implementation of this plan would increase build up areas 1.5 times from 44891 ha to 67571 ha. 50% of new development territories are planned for residential areas and another 50% for new jobs.

According to development trends (1997-2006), it is realistic to expect that only 20% (4,500 ha) of MP planned territories will be fully implemented with 4 million sq m of new living space and 2.6 million sq m of new commercial space in 2015. In which municipal-

ities and which territories it will happens belongs on further municipal plans and development trends.

5 Master Plans Preparation in Vilnius County

Vilnius County has 8 municipalities and most of them are planning to have new Master Plans by the end of 2007 and Salcininkai district municipality – at the end of 2008.

6 Vilnius City Master Plan 2015 (External Structure)

Vilnius city policy with respect to the development of the External Structure

Two zones of Direct Influence and Green Belt have been identified in the greater Vilnius suburban area:

1) The Zone Under Direct Influence of the city is the territory that has direct functional links with the city. Active urban development should be pursued in this zone by upgrading, complementing and expanding the existing centres and by new development in territories that are best suited for development. Priority should be given to utilising available engineering resources, social and basic services, while development of extensive and sprawling mono-functional low-rise residential territories should be restricted;
2) a proposal is made to establish Vilnius Green Belt, a territory which should be designated for the stabilisation of the ecosystem and for recreation of citizens. Spontaneous extensive urban development is proposed to be restricted in the Green Belt territory, by concentrating investment into the existing urban centres. Investment into green field developments should not be encouraged.

Coordination of actions and plans between the State, the County and the municipalities is provided for in order to achieve sustainable development of the city and its suburban territories. Coordination of actions is particularly important in directions of concentrated city development (directions of Pilaite, Ukmerge, Nemezis, Riese-Moletai, Lentvaris-Trakai) by developing social and engineering infrastructure and public transport in the peripheral zone, implementing projects for the development of external infrastructure of the capital city (corridors of international links, centres of logistics), forming the system of service centres in the city and its suburbs.

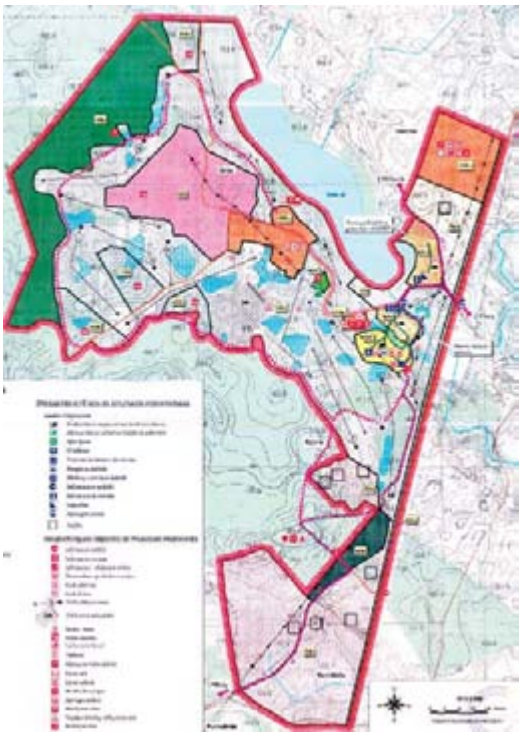
The key measures envisaged for the improvement of external links:

1) integration into the system of the European and national transport corridors, namely, implementation of Corridor IX b with a motorway and a European-gauge railway branch-line from Vilnius to Kaunas;
2) planning and implementation of a new representational access to the city from the Western direction via the residential district of Pilaite;
3) implementation of the city bypass network for transit traffic flows on the key East-West directions;
4) modernisation of Vilnius International Airport.

7 European Geographic Centre (partly implemented)

The Geographical centre of Europe was established in 1989 by the scientists of the French National Institute of Geography. They produced the definition of Europe's geographical centre and with the method of gravitation centres proved that the continent's geographic centre is in Lithuania, 26 km North of Vilnius, in Vilnius district, the vicinity of Purnuskes village. The fact is recorded in the Guinness Book of Records. The whole complex occupies area of 164 ha. An Information centre, a square with a monument and European centre golf courses (18 holes) are already functioning. Additionally, it is planned to develop hotel, camp, and tourism infrastructure.

www.egc.lt, www.golfclub.lt



8 Moluvenai Settlement (planned)

The planned area is located near Moluvenai village, Trakai district, next to Vilnius – Kaunas motorway, about 20 km to West from Vilnius. Planned settlement is situated in area of 102 ha to the West of Lake Didziulis. Commercial and public areas (7.7 ha) are planned in the impact zone of the highway near the entrances to the settlement to provide services for residents and transit travellers. Residential areas (61.6 ha, 600 residential units) will be laid out around the recreational area in the centre of the settlement. Recreational areas (24.1 ha) planned for golf course, strolling paths, horse-riding paths and sports grounds. Planned number of residents is expected to be about 2,000; number of jobs – 320. Planned investments will be € 180 million.

9 Multifunctional Complex in Sirvintai District (planned)

Special plan for multifunctional complex planned in Sirvintai District, next to motorway Vilnius-Panevezys, 25 km North-West from Vilnius. Total planned territory 20.7 thousand ha. Special Plan, approved in 2006, envisaged 5,250 ha for low density residential development and 1,420 ha for commercial and industrial development.

10 Science And Technology Centre "Youth Coast" (planned)

New centre "Youth Coast" with technology park, education centre and entertainment complex is planned in Elektrenai, in area of 14.6 ha. Elektrenai is a geographical centre of Vilnius and Kaunas Dipolis, located next to motorway. Total area of planed buildings is up to 28.5 thousand sq m. Planned investment – € 40 million from private sector, municipality and EU funds.

11 Amusement Park "Energoland" (planned)

Planned amusement park "Energoland" located in Elektrenai town, near the Vilnius–Kaunas–Klaipeda highway, 50 km from Vilnius and 50 km from Kaunas. "Energoland" planned in area of 5.6 ha and will include the "American Hills", the "Free Fall Tower" and the "Giant Swing". There is an old amusement centre in planned territory. Plans are to carry out the "Youth Coast" project planned nearby. Project initiated by Administration of Elektrenai Municipality. Implementation period will be 2007–2009. Planned investments account for € 10 million.

12 Baltic Hippodrome Project (planned)

Baltic Hippodrome with stud farm, hotel and entertainment park is planned in Trakai district, Paluknis, 37 km to South-East from Vilnius City Centre. Hippodrome complex planned area 454 ha. Planned Hippodrome capacity – 30,000 seats (1st stage – 10,000). 1,000 new jobs will be created in complex. Implementation period 2007-2010. Planned investments € 203 million. Investor – JSC Vilniaus Hipodromai (Lithuania) with Hippodrome Pty Ltd (Australia).

13 Ukmerge Former Military Town Redevelopment (planned)

Ukmerge former military town area of 22 ha planned for redevelopment. Area located 73 km to North-East from Vilnius City Centre in Western part of Ukmerge town. It is planned to create here Military Entertainment Park for extreme tourism, Leisure Park with Craft town, Audio-Visual Centre and Exposition of modern housing, construction materials and technologies. Project implementation period – 2007–2009. Area redevelopment initiated by Ukmerge District municipality. First stage Cleaning of former military site is partly financed by EU and will be completed in 2007.

14 Vilnius Southern Bypass (planned)

Vilnius Southern Bypass planned to connect motorways Vilnius-Klaipeda and Vilnius-Minsk. Total planed area about 300 ha in Vilnius City and Vilnius District municipalities. Total length of bypass 27 km. Implementation period 2007–2013. Forecast for traffic flow up to 31,000 vehicles per day in 2015. Planned investments € 78 million.

15 Vilnius Region Logistics Centre (planned)

One of three new planned regional public logistics centres in Lithuania will be created in Southern part of Vilnius in area of about 200 ha. There area two possible alternative locations in Vaidotai (in Vilnius District) or in Lentvaris (in Vilnius City). Final decision for location will be made at end of 2007. Project initiated by Ministry of Communications. Total planned area of buildings – 500 thousand sq m. Planned investments € 200 million from State, EU funds and private sector.

16 Vilnius Regional Landfill in Kazokiskes (partly implemented)

New, modern regional landfill is planned in Elektrenai municipality, Kazokiskes. Total planned area – 27.1 ha, first stage – 8.8 ha. Total investments € 20.9 million, partly financed from EU funds. First stage will be implemented in 2007. This modern landfill will replace 96 existing small landfills and dumps in Vilnius region, used to be closed.

17 Indicators (2005)

	Vilnius City	Vilnius County	Lithuania
Population, thous.	553	849	3425
Area, sq. km	401	9731	65300
Private land in 1.1.2007, %	23	42	55
Population density per 1 sq. km	1379	87	53
Average useful floor space per capita, sq. m, total	24.1	24.3	23.8
Dwellings completed	2888	3388	5933
Number of passenger cars of per 1 000 population	396	389	395
Number of students in universities, thous.	70	70	142

18 References

- Comprehensive Plan of the Territory of Lithuania
- Vilnius and Kaunas Dipolis Strategic Plan
- Vilnius County Master Plan 2015 (Project)
- Vilnius City Master Plan 2015
- Administration of Vilnius County Governor
- www.apskritis.lt
- www.vilnius.lt
- www.development.lt
- www.egc.lt
- www.golfclub.lt
- http://db.std.lt/RDB_EN/Dialog/statfile1.asp

Vilnius: TRANSNATIONAL

Final Report

3 Vilnius Transnational Planning and Development

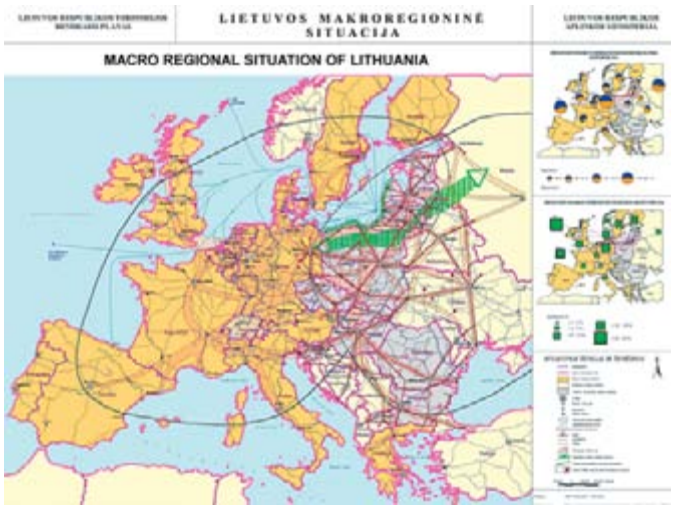
Linas Sinkevicius
ME Vilniaus Planas

1 Introduction

In 2009, Lithuania will celebrate one thousand years of history, dating from the first record of our nation in historical documents. Sixteen years ago the country regained its independence. Lithuania is a member of NATO and the European Union since 2004. Country's GDP is growing at twice the EU average. Soon, Lithuania's name will become familiar all over the World and Vilnius will be European Capital of Culture in 2009; our country will host the European Men's Basketball Championship in 2011.

Lithuania's cities have set as their main priorities the renovation and construction of cultural and sports facilities and the improvement of the transport infrastructure. However, the most ambitious goal of the country is to become a cluster of the knowledge economy. A network of five Lithuanian cities has already prepared projects for the reinforcement of synergies between science and business.

Vilnius, the capital of the country, nominated as a city of the future of Eastern Europe and the Baltic region by FDI magazine. The Old Town of Vilnius can be found on the UNESCO list of World heritage objects



since 1994. Special attention is paid to cultural objects because the city is preparing for its activities as a cultural capital of Europe. In the city centre a "triangle of culture" is being established. The current University Campus Sauletekis soon will become a cluster of economic expertise and know-how. Kaunas is located at an important international crossroads and famous for its technology specialists and athletes. Klaipeda is Lithuania's port, with free economic zone.

The quality of international transport corridors and our internal roads already comes as a pleasant surprise to every traveller. The improvement of transport infrastructure is one of the most generously supported EU cooperation projects.

Specific features of Lithuania are border with Belarus from East (35 km from Vilnius) and border with Kaliningrad Region (Russia), making EU territory only 83 km width in the South West of Lithuania.

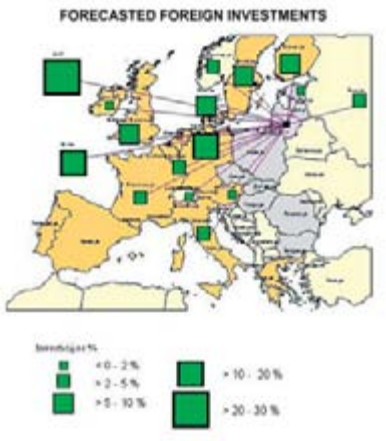
2 Comprehensive Plan of the Territory of Lithuania (transnational context)

The Comprehensive Plan of the Territory of Lithuania approved by Seimas (Parliament of the Republic of Lithuania) in 2002 and has such major issues concerning macro regional context:

1. Lithuania located on intersection of **Western and Eastern Europe**.
2. Two Trans-European corridors cross the territory of Lithuania: Corridor I (Via Baltica and Via Hanseatica) from North to South and **Corridor IX** (IXB and IXD) from West to East.
3. Uniting potentials of **Vilnius–Kaunas** (for transnational centre) and **Siauliai–Panevezys** (for regional centre) planned as a major means for urban framework development. Forecasted urban population grow in Lithuania from 69% to 72–75% by 2020.
4. International nature framework of **Baltic Hills** crosses the territory of Lithuania from South West to North East (through Vilnius County).

Forecasted major economics partners for Lithuania are: **Germany, Russia**, Sweden, Denmark, Netherlands, Great Britain, Italy, France, Ukraine, and Poland.

Forecasted major country investors in Lithuania are: **United States, Germany, Finland, Sweden, Denmark, Great Britain**, Norway, France, Italy, Luxembourg, and Russia.



3 Vilnius City Strategic Plan 2002–2011 (transnational context)

Strategic location of Vilnius

Lithuania – with its capital city of Vilnius – is strategically located at the intersection between North, East and Central Europe. In this context, Lithuania is actively developing as a regional economic, cultural and political centre, which defines the role and responsibility of Vilnius as a city contributing to the development not only of the country itself but also of the entire region. Vilnius vision is to be the most modern city in Central and Eastern Europe.

Vilnius Competitiveness in the Region (number of population in radius of 300 km)

Number of population is the main indicator of a region's competitiveness. In comparison to the capitals

of neighbouring countries, Vilnius distinguishes itself by the size of the population. 16 million inhabitants of Lithuania, Latvia, Byelorussia, Poland, and Russia live in the region of Central and Eastern Europe, 300 km around Vilnius City. Only Warsaw has a larger number of inhabitants. The closest neighbours of Vilnius are: Minsk – 170 km, Riga – 280 km, Kaliningrad – 350 km, and Warsaw – 460 km.

www.vilnius.lt/vmsp

4 Rail Baltica (planned)

Via Baltica highway and Rail Baltica are most important for Baltic States integration to Western Europe. Lithuania has good enough road network, but weak enough railways infrastructure, especially for passengers.

Rail Baltica will join Baltic States and Poland (Tallinn–Riga–Kaunas–Warsaw). The purposes of Rail Baltica project are to increase quality of cargo transportation in North-South direction and to create passengers route Vilnius–Riga–Tallinn.

Maximum speed in existing route is 120 km/h and only in separate segments. It is planned to reach speed of 120 km/h for cargo and 160 km/h for passenger transportation by 2013. Planned total investments for the whole of Rail Baltica route amounts to €3.91 billion. (Poland € 1.36 billion, Lithuania € 800 million, Latvia € 950 million, Estonia € 800 million.).

Additionally, 102 km section of Rail Baltica in Lithuania from Kaunas to Vilnius is planned with requested extra investments of about € 300 million.

Another, additional 167 km section of Rail Baltica in Lithuania from Siauliai to Klaipeda is possible within a long term perspective with extra investments of about € 500 million.

www.tid.lt

www.transp.lt

5 The Port ff Klaipeda (planned modernisation/extension)

Klaipeda city is located at the end of IXB international corridor, 312 km to West from Vilnius. Klaipeda State Seaport is the northernmost ice-free port on the Eastern coast of the Baltic Sea. It is the most important and the biggest Lithuanian transport hub, connecting sea, land and railway routes from East to West. As the port of Klaipeda is situated at the junction of three international transport corridors, it is a bridge between the Commonwealth of Independent States and the countries of the Asian region on the one hand, and

EXISTING SPEED IN RAIL BALTICA ROUTE

TRANSPORT CORRIDORS, CROSSING LITHUANIA

the European Union and other markets on the other. The annual port cargo handling capacity is up to 40 million tons.

An innovative logistic product in the Baltic States, the container and contrailer train Vikingas, connects the markets of the Baltic Sea and the Black Sea regions from the port of Klaipeda per Minsk, Kiev to the ports of Odessa and Ilyichevsk.

The container project of the Lithuanian, Russian and Belorussian railways called Merkurijus is intended for carriage of containers along the route Klaipeda/Kaliningrad–Minsk–Moscow and back. Similar projects related to Asian countries (Kazakhstan, Uzbekistan, China, etc.) are being considered.

The Japanese company Japan International Cooperation Agency (JICA) conducted a study on a deepwater port to examine the feasibility of the development of the Klaipeda port up to 17.5 m depth in the Northern direction.

In 2009, a new passenger/cargo terminal will be built in the centre of the port and the town. In the more distant future, the construction of an avantport 17.5 m in depth is planned. € 600 million should be invested for harbour modernisation in the years 2007 to 2013.

Additionally, the Port of Sventoji construction is planned. Port of Sventoji is located in North West of Lithuania, next to the existing Butinge Oil Terminal. € 63.7 million from EU funds allocated for the Port of Sventoji construction. Implementation period 2007–2013.

www.portofklaipeda.lt

6 New Nuclear Plant in Lithuania (planned)

Ignalina Nuclear Plant located in Utena County, Visaginas town, 158 km to North East from Vilnius. Existing Nuclear Plant should be stopped in 2009, according to EU requirements. Project to construct New Ignalina Nuclear Plant was initiated by Lithuania. Neighbouring countries Latvia, Estonia and Poland was invited to be partners in this ambitious project. Agreement between Lithuania, Latvia, Estonia and Poland for this project implementation used to be signed in 2007. Planned capacity of new Nuclear Plant 800–1600 MW. Planned investments amount to € 2.5–4.0 billion. Project implementation planned in 2015.

Additional important energy projects in Lithuania and Baltic Sea Region are to build Power Bridge to Poland and Power Bridge to Sweden.

http://www.lpc.lt/repository/Summary%20Report%20for%20Media_eng.pdf

7 References

- Comprehensive Plan of the Territory of Lithuania
- Vilnius and Kaunas Dipolis Strategic Plan
- Vilnius City Strategic Plan 2002–2011
- Summarising Feasibility Study of Constructing a New Nuclear Plant in Lithuania, 2006
- www.vilnius.lt
- www.development.lt
- www.tid.lt
- www.transp.lt
- www.portofklaipeda.lt

Warsaw

Warsaw: CITY

Final Report

1
Warsaw – New Challenges for the City

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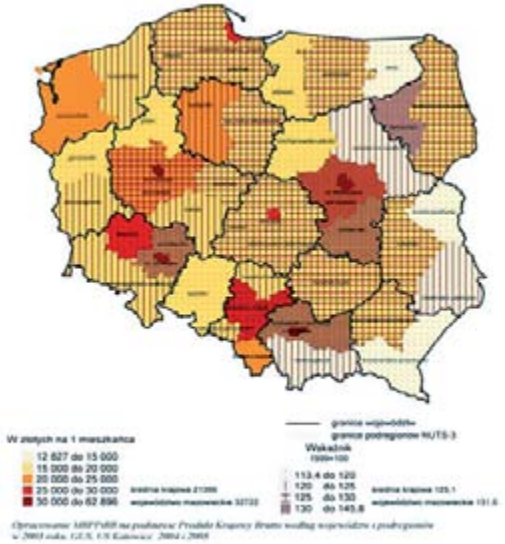
Introduction

Mazovia Region is one of the most successful regions in Europe in terms of GDP growth according to ESPON 2005 document. Warsaw, a capital city of Poland and Mazovia, is very important development engine in many aspects of polish space and economy. Actually, it should be said that Mazovia is so successful because of Warsaw, which generates most of incomes and profits for all region. Mazovia GDP is high, as a matter the fact the highest within Polish regions. Nevertheless, there is a big disparity between capital city and the rest of the



GDP in Poland in 2003 per capita (PLN)
Source: Strategia Rozwoju Województwa Mazowieckiego 2020, Warszawa 2006

region. Warsaw GDP comes to 294.4% of national average (for all Poland), whereas on the rest of Mazovia sub – regions (NUTS-3) amount to: ostrołęcko-siedlecki – 66.5%, radomski – 72.4%, ciechanowsko-płocki – 92.7%, warszawski – 96.0%. Moreover, new invest-

← Muranów.

MDM.

ments, new firms and innovations are concentrated in Warsaw. Still, it should be noticed that Warsaw is developing in specific conditions, which are a result of many factors, especially the historical ones.

Historic overview

Warsaw was established a capital of polish-Lithuanian commonwealth in the end of 16th century by Sigismund III of Vaasa dynasty, who was also the king of Sweden, as a city situated on a half way from Stockholm and Vilnius to Cracow. The modest little town which stayed a capital of great kingdom has never developed in a way of big, rich polish cities with strong bourgeois merchant class like Cracow, Gdansk, Wrocław or Lwow. For many years the city was a royal and aristocratic baroque residential town and a place of parliamentary sessions. In 19th century after polish partition, Warsaw was a provincial city of Russian Empire and no features of capital structures like proud imperial axes or great business districts were formed. The economical expansion of early capitalism in the end of century brought Warsaw great but chaotic and uncontrolled development. In the twenties and thirties of 20th century Warsaw was a place of modern town planning ("The Functional Warsaw") and many modernistic new housing estates was constructed in a suburbs according first to Howard's garden city and second to the Athens Charter rules. The Classical 19th century city with dense built-up blocks of 5–6 storey city houses disappeared after Second World War. In 1944 over 84% of Warsaw was destroyed, with the completely damaged city centre blown–up by the Nazis. During the fifties of the twentieth century great rebuilding work took place while whole old city districts were rebuilt.

After the war (until 1989) Poland was one of the countries in the orbit of the Soviet Union. It had a great influence on Warsaw spatial development. Very characteristic for this period are huge areas with housing estates. Blocks were built mainly in the fifties, sixties and seventies of previous century in whole Warsaw. The most known are: Mariensztat (1948–1949), MDM (1950–52), Muranów (1949–1969) in central Warsaw, Ursynów (1975 – until now) in Ursynów District, Bemowo (1977– until now), Górce (1982–until now) in Bemowo District, WSM (1946–1949),

View of the city.

Ursynów.

Bielany (1952–1970), Młociny (1961–1969) or Sady Żoliborskie (1960–1973) in Żoliborz District. But there is a lot more of them in Warsaw. They are diversified in style of architecture: you can find nice, green housing estates with interesting architecture but also lot of them are concrete, dull and unattractive housing areas.

Warsaw Trade Tower at Wola.

After 1989

After the political changes of 1989 Warsaw had to face a new reality and its challenges. Despite the fact Warsaw was the second largest urbanized area and industrial region in the country, the city was characterized by some features which caused problems in capitalist reality. Even though Warsaw had relatively well diversified economy it was limited because of the semi-closed national economy controlled by command center of state. Moreover, Warsaw had major spatial problems like:

- backward infrastructure, especially transport and telecommunication,
- polluted environment,
- shortage of attractive public spaces,
- overgrowth of production areas at the cost of social issues and public spaces,
- extension of urban spaces as a result of resignation from dense city,
- lack of spatial integration between rebuild historic district and downtown area,
- unformed new city center,
- lack of spatial connection between left and right side of Warsaw (city is divided by Vistula River).

These issues affected strongly on current situation of Warsaw.

In order to rise to new challenges after 1989 Warsaw had to change. Some of reactions were desirable and necessary like rapid development of SME's, growth of motorization, state withdrawal from subsidizing house development connected with creation of free real estate market and liberalization of land – use policy. But there were also less positive changes as collapse of many large manufacturing industries or too weak development control affected in spatial disorder.

➔ Świętokrzyski Bridge.

➔ Siekierkowski Bridge.

New development of Warsaw in city center.

However, it was noticeable that Warsaw economy took steps in the internationalization. A lot of globalization small pioneers appeared: international companies established their outlets, many retail malls chains market developed. Also state industrial enterprises were taken over by the international capital.

Political, social and economical changes, mentioned above, had great impact on spatial development. It is especially visible at city center where a lot of sky scrapers and new offices were built and new ones are planned. They are mainly well matched to the style of surroundings, but not always – sometimes they are very controversial. On the other hand, many malls have been situated in the outskirts of the town. They are some kind of new public places (and spaces), where

← Functional structure of Warsaw
Source: Study of The Conditions and Directions for the Spatial Development

Main green areas (green) and supporting area (beige)
Source: Study of The Conditions and Directions for the Spatial Development

many citizens spend weekends. Mostly, architecture of these buildings is unattractive or affected.

Structure of Warsaw

Right now three zones can be delimitated within Warsaw spatial structure. The first one is the city center zone, which covers whole Śródmieście district and parts of Wola, Praga Północ, Praga Południe, Mokotów, Ochota and Żoliborz. In this zone concentration of metropolitan, economic and cultural functions can be seen. Moreover, a lot of buildings have high historic, artistic and architectonical values.

The second is the urban zone. It surrounds the city center. Mainly it is composed of huge housing estates, built in the seventies and eighties, and former brownfields.

The third one is an outskirts zone, which cover 4 whole districts: Białołęka, Rembertów, Wawer, Wesoła and partly: Ursynów, Bemowo, and Bielany.

It should be mentioned that Warsaw is mostly a green city, with many parks. The most known are: Łazienki, Ogród Saski, Pole Mokotowskie, Lasek Bielański (reserve), Las Kabacki, Park Skaryszewski. Very precious, natural, ecological, cultural and landscape values are the Valley of Vistula River and the Skarpa Wiślana (scarp of Vistula).

These green areas create wedges which penetrate deep into the urban structure. They contain a lot of functions, for example, ecological, recreational or cultural.

The main problem of Warsaw is lack of good transport system. The main problems are:

- lack of ring road systems: inner ring and central area by-passes,
- lack of bridges,
- bad technical condition of road surface,
- lack of strategic parking system,
- one existing metro line – insufficient to satisfy needs of citizens,
- non-integrated transport system.

However, Warsaw has highly developed tramways system, which covers about half of the city. Also internal

Pole Mokotowskie.

Łazienki Królewskie Park.

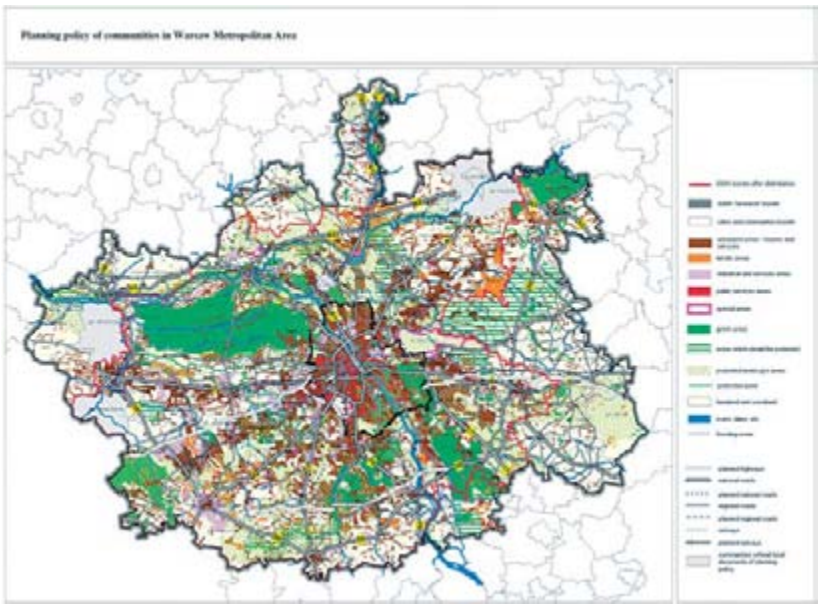
Scheme of tramways.

railway system is well developed, but unfortunately it is not properly adapted for public transport.

Another problem is urban sprawl of Warsaw. Very often borders between Warsaw and surrounding cities evanesce as a result of very fast development after 1989. It was caused mainly by economic growth and legislative changes in planning system. If to take to account all existing and planned (by municipal authorities) urbanized area within Warsaw Metropolitan Area it will give place for 5–6 million people. This is a serious problem, because according to GUS (= general statistic office) estimated population in 2030 will have 3.4 million.

Planning system

It is also important to know how the planning system has been changing through last few years, because it has a great impact on Warsaw development. Below, successive development plans of Warsaw are featured.



Spatial Development Plan of Warsaw Metropolitan Area (in preparing).

Despite the fact that sequential versions of rebuilding plan (1945, 1946, 1947, 1948) were not officially approved, they were the basis of decisions about demolitions, rebuilding and new constructions. They define use of lands in downtown districts and two production districts – Wola and Żerań. They also define location of tasks of economic plans (1947–1949 and 1950–1955). *Decree about ownership of parcels* (October 1945) had a great impact on mentioned plans. It abolished property rights, so all parcels, located within Warsaw boundaries from 1939, became the property of the state and city. It has to be said that it causes problems today because former owners fight about their property rights. The next was the General Plan (1955–1965) which described use of lands and investments program for much bigger area than previous ones – area of the city came to 427 square kilometres and was divided into 11 districts. *General perspective plan* (1969–1975) proposed creation of monocentric system of strips, where "urban strips" and "green wedges" interlaced each other. City centre had to be multifunctional, but with high rate of housing estates. Another *General spatial plan* (1969–1985) defined use of lands and functional structure of city with high precision. Plan was quite static and presented optimal view of city after realization of all investment programs. Next *Spatial perspective plan* (1982–1990) established fast development of the city and increase of *life standards*. Because of the economical problems in the late eighties it was changed and actually never implemented.

Land Use Development Plan 1992

It was created during very unfavourable time of changes in planning system. It had new formula – it did not define so strictly the use of land-use plans before, but was tool which co-ordinated and protected ecological, natural and cultural values. Warsaw was divided into 77 areas for which plan described main functions.

The present

After many changes the fundamental legal instrument of spatial planning in Poland is the "Spatial Planning and Land Management Act" of 27th March 2003. According to this Act the main principles of spatial planning are: spatial cohesion and sustainable development. The Act regulates especially:

- mechanisms of formulation of spatial policies,
- preparation of land use plans,
- powers and responsibilities among different tiers of administration,
- the way of solving possible conflicts between citizens and local government authorities.

According to the "Spatial Planning and Land Management Act" spatial planning takes place at the national, regional and local levels.

Municipalities play crucial role in spatial development. In fact municipal authorities are responsible for specific location of functions, intensity of land use, scale and forms of constructions.

Municipalities prepare two spatial planning documents: "Study of The Conditions and Directions for the Spatial Development" and "Land Use Development Plan". For practical reasons municipalities also prepare the third document related to economic and social development: "Local Development Strategy".

The "Study of the Conditions and Directions for the Spatial Development" is a planning document which defines spatial policy and local rules of spatial management in municipality. It should take into account national and regional goals and directions of development. Moreover, it is an obligatory but not legally binding document, prepared for whole municipality area.

The "Land Use Development Plan is a document which define requirements of development and implements planning policy which was described in "Study". However, municipality can function without a plan, it is only obligatory to prepare the "Land Use Development Plan" for areas indicated in the Study. In the absence of the "Land Use Development Plan" local authorities can manage spatial development through ordering two kinds of administrative decisions: "Decision on Development Conditions" and "Decision on Investments Serving Public Purposes".

Right now Warsaw has "Local Development Strategy of Warsaw 2020" issued in 2005 and "Study of The Conditions and Directions for the Spatial Development" issued in 2006. The first document shows direction of Warsaw social and economic development, the second one defines placed where can be realised this development spatially.

Enlarged EU – new challenges

Policies described in documents mentioned above are crucial because Warsaw again faced with new challenges after accession to EU in 2004. This time Warsaw was better prepared because it was (and actually still is):

- main gateway to the large polish market,
- centre of management and control of rising importance in European economy

New roads (also ring-roads). New tramway lines
Source: Local Development Strategy of Warsaw 2020

- leading national centre of financial and other specialized producer services,
- dominant national centre of wholesale trade
- growing educational centre.

However, some actions should be taken in order to make Warsaw as a metropolitan city, important not only in Poland but also in Europe. In that way "Local Development Strategy of Warsaw 2020" was prepared and adopted in 2005 by City Council and "Study of The Conditions and Directions for the Spatial Development" issued in 2006. According this documents Warsaw need to be formed as a modern metropolitan area directed to implementation of Lisbon Strategy. The main aims are:

- to provide efficient transport system within and outside Warsaw,
- to strengthen Warsaw position as an important European economical, financial and political centre,
- to build institution required for efficient functioning of Warsaw Metropolitan Area.

Below some example of planned actions by Warsaw authorities are presented.

Transport development

Warsaw will be divided into 3 zones for cars. In the first zone, the most inner, cars will be severely restricted, but pedestrian, cyclists and public transport will be treated as a priority. In the second zone public transport will also be a priority, though car transport will be more permissible. In the third zone car transport will be the main one. Moreover, city authorities plan development and constructions of new road and bridges, for example. Obwodnica Śródmiejska (City centre ring road), Obwodnica Miejska (City ring-road), Northern Bridge.

Metro will have another two lines and tramway system will be also developed. What's more, train system will be much more use than now – SKM system (Szybka Kolej Miejska - Rapid City Trains), which now has only one line, will operate on another 6 routes.

Revitalization of Royal Route.
Source: Local Development Strategy of Warsaw 2020

Regeneration

Warsaw has a great history, so it should be expressed in city spatial development. That is why city authorities planned many areas for regeneration and revitalization works. The most important for any Warsaw citizen is revaluation of the Royal Route (through Krakowskie Przedmieście Street) or rebuilding of damaged during Second World War Saxon Palace. Also old, but neglected buildings, which stand the test of last war, will be renovated.

New development

Some new developments are planed in order to improve quality of Warsaw space. The most significant will be new development of city centre, around Palace of Culture and Science, where many function and services will concentrate. Another fabulous development is Port Praski on the left bank of Vistula River.

After choosing Poland as a one of hosts of Euro 2012, it is really important to improve sport facilities, like the new National Stadium for 40 thousands people.

Due to planned R + D's development, city authorities, in cooperation with businessmen and scientists, want to create Warsaw Technological Park.

Conclusions

If Warsaw aspires to play an important role in European space, it needs a strong support and changes like:

- development of public spaces in the city center and creation of a metropolitan institution and facilities,
- regeneration of housing estates from 60's, 70', 80's of the twentieth century,
- redevelopment of brownfield areas,

Saxon Palace.
Source: Local Development Strategy of Warsaw 2020

Port Praski.
Source: Local Development Strategy of Warsaw 2020

National Stadium.
Source: Local Development Strategy of Warsaw 2020

Warsaw Technological Park.
Source: Local Development Strategy of Warsaw 2020

- increasing of accessions and opening "bottle–necks" at transport system by constructions of city ring–roads,
- increasing the connected and integrated system of transportation formed by rail, metro, trains and buses,
- changing the way of commuting with support for public transport,
- protecting parks and green system of Warsaw Metropolitan Area with forming a green belt around the city.

Thanks to actions, mentioned above, Warsaw can become a significant European city at the eastern edge of EU, which will be a connection between West and East and North and South of Europe. There is a lot to do, but Warsaw and their citizens many times in history recovered and city always developed very fast.

Warsaw: CITY-REGION

Final Report

2

Warsaw Metropolitan Area within Mazovia region

Dr. Tomasz Slawinksi
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Mazovia Region Office for Regional Mazovia Region

WMA in Poland

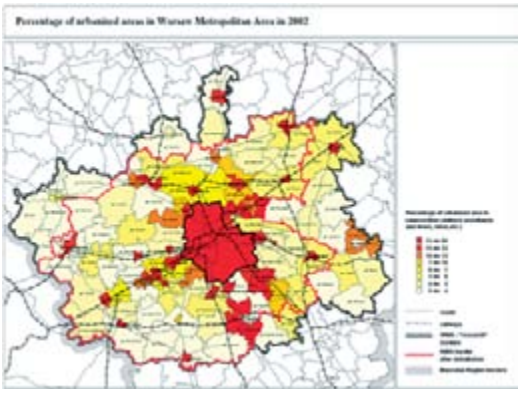
While Warsaw is key stone in Polish spaces; Warsaw city region is treated as a very important development engine not only in Mazovia, but also in central eastern Europe. The capital of Poland is the main administrative and decision-making core and the biggest city in country –1.7 million inhabitants and metropolitan area about 3 million inhabitants (figure 1, table 1). Warsaw also fulfills many others functions like economic, cultural, tourist, industrial, transport, scientific and innovation.

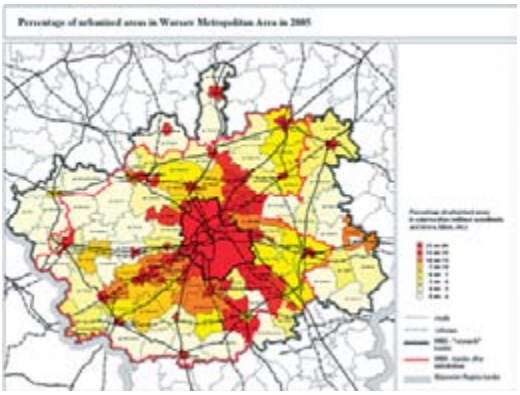
The terms of economic development in Warsaw and its city region is leading area of Polish economy.

Current situation of the Mazovia Region

About 3.4 million total of 5.7 million Mazovian population live in 85 cities – it is almost 65% of total population number. The highest density is in Warsaw and in surrounding counties. Warsaw Metropolitan Area consists of about 55% of Mazovian population. This high density causes many spatial changes within Warsaw Metropolitan Area like rapid growth of urbanized areas (only during last 3 years number of municipalities where percentage of development areas is over 15% raised from 33 to 42) (figure 2,3) or changing in agricultural land use (from agricultural to other functions)(figure 4).

While the demographic forecast for Warsaw and metropolitan area are stable, there is a significant urban sprawl from the city of Warsaw to surroundings





because of property and real estate prices growing very quickly in Warsaw.

Planned changes

In order to create friendly, well developed and competitive metropolitan space the Mazovia Region is preparing a *Spatial Development Plan for Warsaw Metropolitan Area*, which describes new directions of spatial development, determined by regional strategy adopted by the Regional Council in 2005. The role of this plan is more intentional but expresses the regional policy towards Warsaw city region.

Development aims of Warsaw Metropolitan Area (WMA)

Spatial Development Plan of Warsaw Metropolitan Area determines development aims of area. The first is to keep balance between the metropolis and its surroundings through strengthening current and new metropolitan functions. Another aim is to increase life standards in order to stimulate creative people to settle down in WMA.

Warsaw should be also a metropolis of well developed spaces. It can be achieved through stopping spatial, urban and architectural chaos and degradation of natural areas. Moreover city development should be more harmonious and ordered. Very important aim is to create local identity of habitants by creation of local identity and growth of inhabitant's activity.

Vision and idea

The main presumptions of planned vision of Metropolitan Area are:

- development of WMA should be compatible with previous development trends and tendencies – the development should follow main traditional transport corridors, which are crossing in the center of Warsaw (figure 5),
- development corridors should cover historical urban areas located along railways,
- between development corridors all extensive, open, green or yellow spaces as green wedges, which will be connected with multifunctional open spaces in Warsaw should be preserved and perform environmental functions,

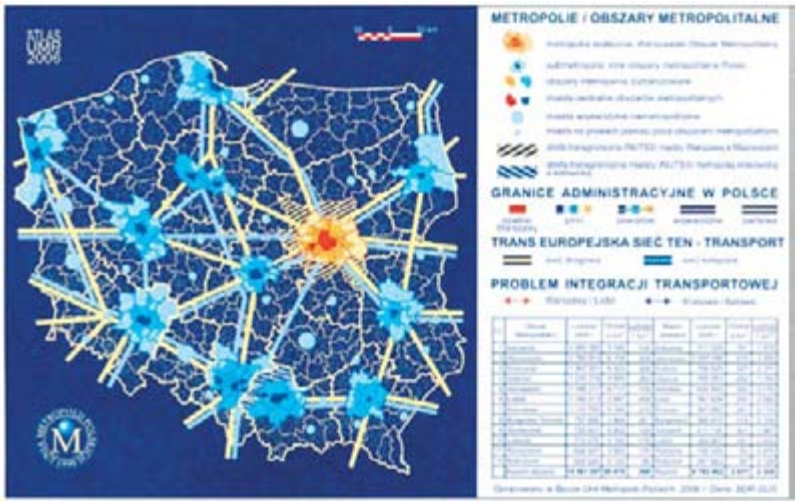


Fig. 1
Metropolitan areas in Poland
Source: A. Lubiatowski, Statystyka metropolitalna – wyzwaniem, Unia Metropolii Polskich.

Fig. 4
The area of agriculture lands turned into development use in municipalities (1992–2004).

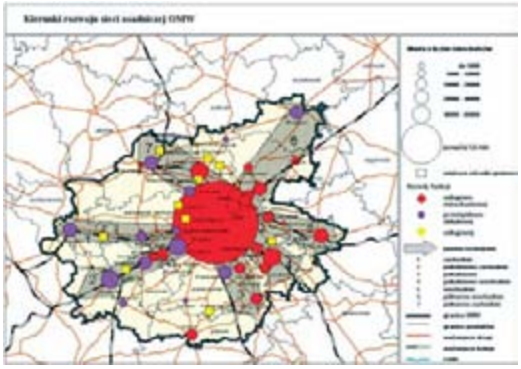


Fig. 5
Plan of WMA – development corridors.

	Area		Population 2006		GDP 2006		Unemployment rate 2006
	in thous. km ^{2}	in %	in mln	in %	per capita in PPS	Poland / UE 27 = 100	in %
UE - 27	4 325		492		21 502	/100	7,9
Poland	312	100	38,17	100	10 908	100/51	13
Mazovia Region	35	11,4	5,13	13,1	16 523	151/76	10,5
WMA	6	2,0	2,9	7,6	21 706	199/102	11,8
Warsaw	0,5	0,17	1,68	4,47	30 733	282/143	4,5
Mazovia Region		100		100		100	
WMA		17,4		56,3		131	
Warsaw		1,45		32,7		186	

Table 1
WMA basic data.
Source: GUS

← *Fig. 2 and 3*
Urban sprawl within WMA – percentage of urbanized areas in 2002 and 2005.

Fig. 6 and 7
Warsaw–Łódź connections.

Fig. 8
Regional connection between Mazovian and Łódź Metropolitan Areas.

- all development corridors should be connected through ring-roads,
- WMA should develop in co-operation with Metropolitan Area of Łódź, distanced of 130 km from Warsaw (figure 6, 7 and. 8).

Strategic perspective for the Metropolitan Region

The Spatial Development Plan of Warsaw Metropolitan Area is now at the preparation stage. The Plan's mission will be to create conditions for reaching territorial cohesion and sustainable development in the metropolitan region (figure 9, 10, 11). This mission will be fulfilled through the following objectives:

- strengthening metropolitan function of Warsaw through developing business and cultural contacts of international character,
- actions aiming at establishing centers of know-how and innovation within the industrial and economic zone,
- utilization of large research and development potential of Warsaw for the innovativeness of economy,
- stoppage of the urban sprawl process,
- development and modernization of transport system,
- adjusting to relevant standards the national roads comprising the Big Warsaw Ring road and extending the Warsaw junction with external links which eliminate transit traffic,
- protection and rational management of cultural heritage and natural resources,
- increase of ecological safety,
- regeneration and modernization buildings and degraded areas,
- using environmental and cultural qualities for tourism and recreational purposes,
- extending the links with Łódź in order to create bipolar city region.

According to WMA Plan the main investments serving public purposes, which are conducive to spatial development, are:

- elements of international and national transport infrastructure, which will increase efficiency of metropolitan transport system, like: modernization and development of Warsaw Airport (figure 12), construction of new airport for Warsaw, modernization of important, international railways, construction of A2 highway (Berlin-

➔ *Fig. 12*
New Terminal 2 of Warsaw Airport

Fig. 9
Plan of WMA – land use (project.)

Fig. 10
Plan of WMA – phases of development (project).

Fig. 11
Plan of WMA – transport system development (project.)

Warsaw-Moscow) and express roads between Warsaw and Łódź,
- elements of regional transport infrastructure, which will increase efficiency of transport system within WMA and between metropolitan area and region, like: modernization of regional railways (figure 13) and roads, development of Warsaw transport system,
- elements of power infrastructure, important for capital city, like energy lines (400/220/110 kV) connecting power plant in Kozienice with Warsaw,
- elements of water and sewage system, like: construction of North Water Supply System (2nd phase), construction of wastewater treatment plant „Południe", construction of sorting and composting plants within WMA.

Moreover, WMA Plan sets priority areas of spatial development actions and so called "problematic" areas. Priority areas (figure 14) are:
- key areas, where metropolitan function, cash and human transfer are focused (for ex. City center of Warsaw, airports, transport knots, main shopping centre),
- center areas, including city and housing estates centers with high concentration of people and services (ex. down-town of Warsaw, main county cities, other mazovian cities and municipality center),
- post–military and post–industrial areas (open or developed spaces, which can be used for housing reasons).

Problematic areas are:
- Areas of depopulation and social depression,
- Areas of ecological conflicts,
- Areas of transport conflicts (figure 15).

Improvement and balance of spatial development

The Plan determines the development of Warsaw as a European metropolis, center of Poland, Mazovia Region and WMA thanks to:
- creation new spatial conditions and infrastructure development which will strengthen metropolitan functions,

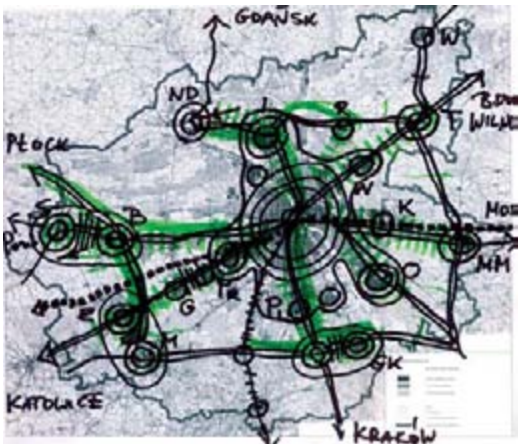


Fig. 13
Rail connections in WMA.

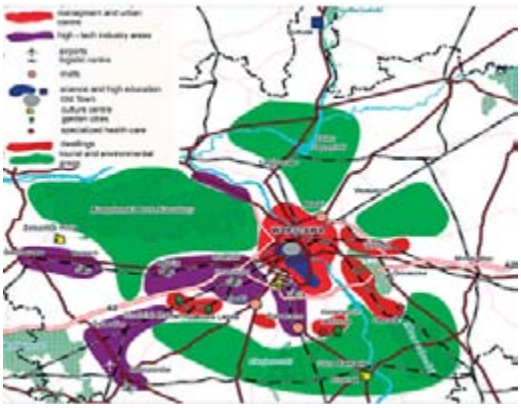


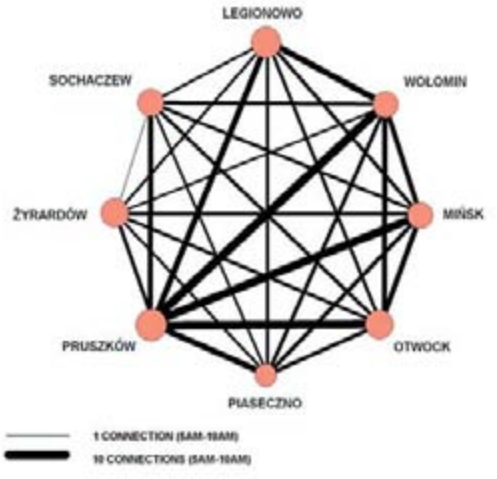
Fig. 14
Functional scheme of WMA.

Fig. 15
Main transportation problems in WMA.

Fig. 16
Panorama of Warsaw.
Fig. 17
Rondo 1 tower in Warsaw city centre.
Fig. 18
Planned skyscraper Orco.

Fig. 19
Transport corridors in Mazovia Region.

Fig. 20
Transport connections within WMA.



- creation and modernization of Warsaw Center as an area with architecture of high quality which will create attractive public spaces,
- improvement of international and national transport connections and creation of integrated public transport system within WMA (figure 19, 20).

Plan establishes also development of county and municipality centers (especially development of services for inhabitants), and also development along main transport corridors.

Protection and use of environment values

One of the most interesting ideas of spatial development within WMA is the creation of a green belt around Warsaw in order to protect open green and rural spaces from urban sprawl. Elements of green belt should be open areas situated outside of dense development area but connected with green areas within Warsaw (so called Natural System of City).

Green belt should include (figure 21, 22):

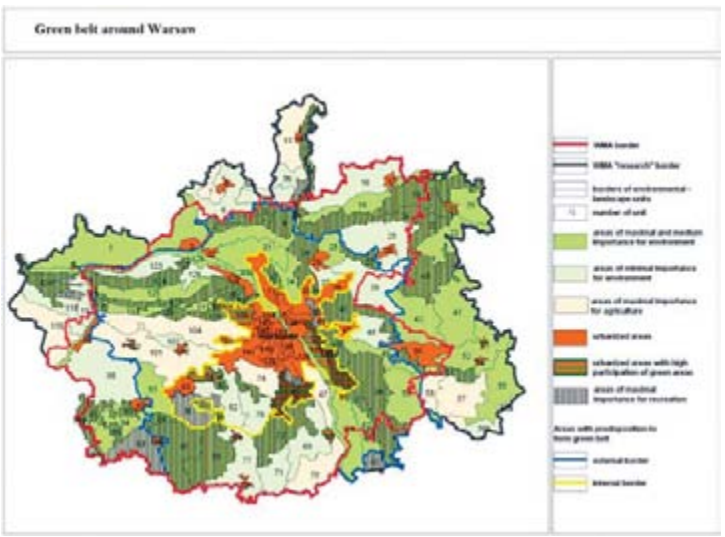
- main river valleys, especially of: Vistula, Bug, Narew, Jeziorka, Świder;
- forests complexes, especially: Kampinoski Forest, Chojnowski Forest, Celestynowsko – Otwocki Forest, forests near Rembertów, Nieporęt, Białobrzegi, Radzymin;
- rural areas with harmonious landscape, especially in west and south of WMA.

Main rules which should be obligatory within green belts are:

- preservation of spatial and functional continuity and protection of green and rural spaces in order to preserve biodiversity,
- establishment of new legal protected areas with high natural and landscape values,
- preservation and protection of areas with high rural values thanks to restriction for development, planting trees and bushes in the midst of fields,
- protection and reasonable use of natural water resources, preservation or planting trees or bushes along banks and lakesides,
- preservation of meadows and pastures from development,
- taking into consideration of ecological corridors in construction or modernization of roads,

Fig. 21
System of green areas in Mazovia.

Fig. 22
Green belt in WMA.



- creation of new tourist and leisure facilities,
- counter-action against urban sprawl.

Innovation within the metropolitan area

If WMA wants to compete with others metropolises it should create new possibility for innovation development. Therefore, the Plan includes some directions for spatial development which are strictly related to innovation issues. Main assumption of the Plan within this field is to create Warsaw as an innovative center in the international arena. It will be possible thanks to:

- development of business parks: Warsaw Technological Park at Siekierki (south part of Warsaw), Campus Bemowo at Bemowo District (in cooperation with Military University of Technology),
- creation of center for expo and fairs or business parks at post–industrial areas (ex. areas of previous URSUS Factory, Lucchini Steelworks, Kawęczyn, Służewiec Przemysłowy, Wyczółki),
- localization of future district for international institutions and organizations near by expo center,
- localization of international and national business institution in representative Warsaw center where social, political, scientific, business and cultural functions are concentrated,
- creation of academic center at Powiśle (Śródmieście District) between Warsaw University (BUW) Library of and Vistula River.

Tourism

It is believed that Warsaw city region, with its fascinating history and culture, should be one of the best known tourist attractions in Poland. For that reason Spatial development Plan of WMA establishes some necessary steps which will create new possibilities for tourism development within WMA.

Firstly, Warsaw needs congressional and expo centers which can be achieved thanks to regeneration and modernization of old halls and warehouses in such areas as: area between Towarowa Street and Brylowska Street, surroundings of Okęcie, Ursus – Mechanical Factory or Żerański Port, vicinity of Lucchini Steelworks, Fort Bema. Moreover, hotels net should be developed (luxury in city center, hotels and hostels with lower standards around Warsaw) (figure 23, 24).

Next, Warsaw needs development of sport centers like Olympic Center (between Czerniakowska Street, Sikorskiego Avenue and Siekierkowska Street). Finally, in vicinity of Royal Route there is planned to create tourist center and thematic tourist routes.

For other parts of WMA Plan establishes development of tourism in natural attractive areas of river valleys (Vistula, Bug) and forests (Kampinos, landscape parks), and also using cultural values of Żelazowa Wola, Góra Kalwaria, Czersk, Milanówek and Żyrardów for tourism reasons (figure 25).

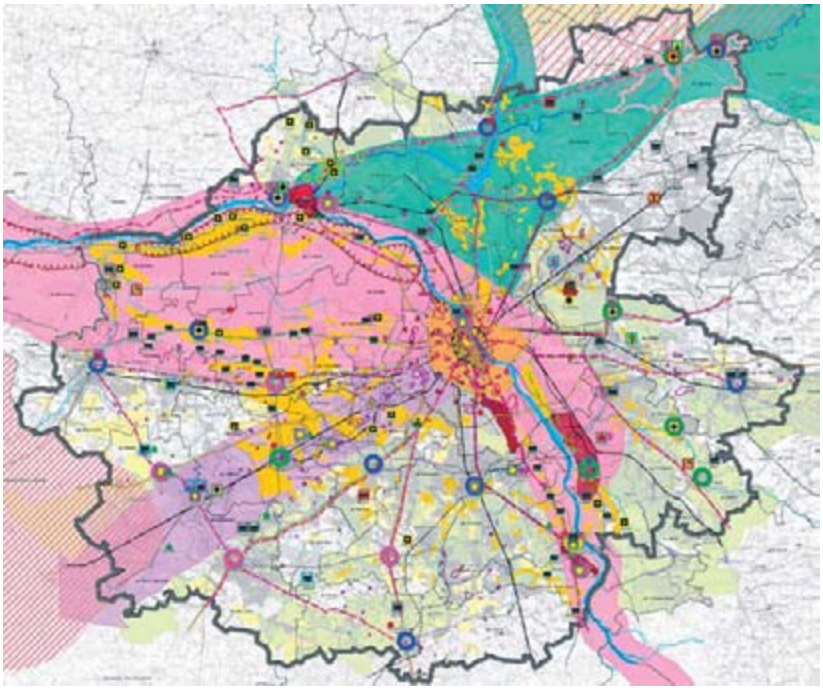
Transport system

Development of the transport system is one of requirement for harmonious development of WMA. Dynamic growth of international travellers' number and exchange of goods entails improvement of road and trail connections between Warsaw and the most important cities in Poland and whole Europe. Another thing is to assure good transport system within Warsaw. That is why it is planned to construct new roads and railways

Fig. 23
Sheraton Hotel.

Fig. 24
Bristol Hotel.

Fig. 25
Cultural heritage and tourism strips in WMA.



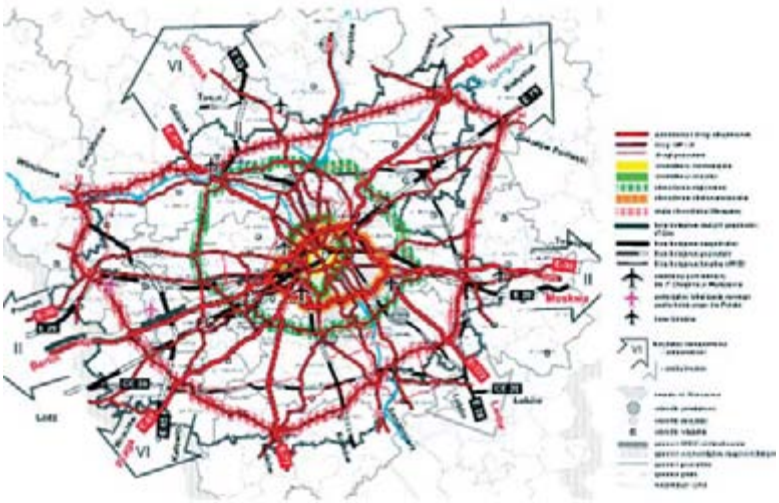


Fig. 26
Postulated transport links in WMA.

Fig. 27
Postulated transport corridors in Mazovia Region.

and to modernize existing ones (figure 26 and 27).

Investments regarded as the most necessary are mentioned below:

- construction of A2 highway Berlin–Warsaw–Moscow,
- construction of ring-roads of Warsaw,
- construction of ring-roads of Mazovia,
- modernization and construction of national roads,
- construction of new bridges over the Vistula (ex. North Bridge in Warsaw),
- modernization of railways included in international agreement AGC and AGTC like: E20 Kunowice–Warsaw–Terespol, E65 Gdańsk–Warszawa–Zawiercie, E75 Warszawa–Białystok–Kowno,
- construction of high speed rail connections between Warsaw–Łódź–Wrocław/Poznań with possibility of continuation to Berlin,
- localization and construction of new international airport 30–40 km from Warsaw, between capital city and Lodz,
- development and modernization of Warsaw Airport and also regional airports in Modlin and Mińsk Mazowiecki,
- improvement of public transport within Warsaw.

Warsaw: TRANSNATIONAL

Final Report

3
Warsaw Transnational Level Vision of International Connections of Mazovia Region

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Mazovia Region Office for Regional Mazovia Region

The Idea of European Union based on international connections and co-operation between members and citizens. This is the cause for improvement of every European associations and relationships. New connections and strengthening of existing ones are especially important for new members of EU located on the Union periphery. This idea came into prominence especially now when processes of globalization and competition intensified. Because of wider cooperation within the EU it will be possible to create new quality of European space.

Many European networks of cooperation come into being as a result of these new conditions within international arena.The best example of this trend are the North – South Interface or Baltic Sea Network which are a background for exchange of ideas and knowledge transfer. These networks help to rise up for new solutions and concepts.

Below are presented some ideas elaborated by European networks which can be significant for Mazovian and central - eastern EU border space and can determine new ways of development. These ideas are visions of some possible development paths of Europe which result from existing conditions.

TEN System

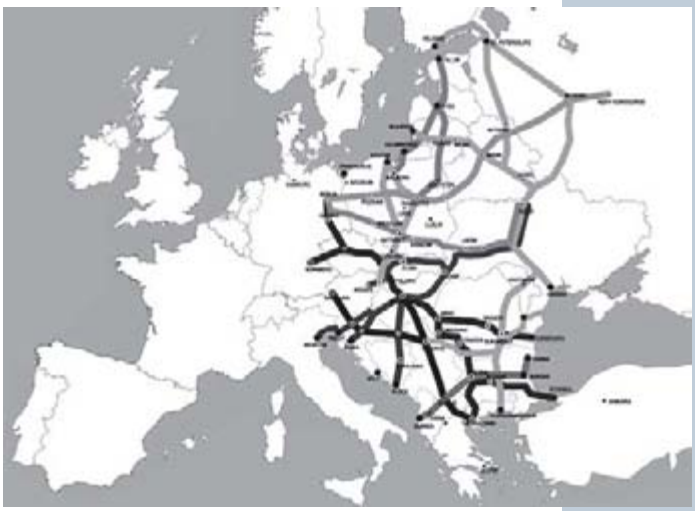
Looking for new ideas of social and economic development we should include among them, an improvement of transport systems - the base for economic growth. Roads and railways systems development is very remarkable. That is why the European Transport Corridors (TEN) were determined in order to improve in 1997 :

- transport connections which can help in defeat of social and economic barriers within regions and,
- cohesion of Europe.

TEN systems is presented on map below.

For development of Mazovia, centrally located on the half way form Helsinki to Athens, corridors mentioned below are most important:

- K I Warsaw–Lithuania, Latvia, Estonia (Road S8 "Via Baltica" and Railway E75),



- K II Berlin–Warsaw–Moscow (Highway A2, Railway E20 and Railway for goods trains CE20),
- K VI Gdańsk–Warsaw–Katowice (Highway A1, Roads S7 and S8, Railway E65-CMK),
- KA (planned) –Gdańsk–Warsaw–Bucharest/ Odessa (Roads S10 and S17, Railway E28).

But after ten years of implementing the TEN system and enlarging of EU, some new ideas especially concerning the strengthening of eastern part of EU and north – south direction were clear and necessary to be proposed.

Baltic Tangent

Baltic Tangent is an international project realised within INTERREG IIIB framework. The main goal is to increase accessibility of TEN-T within Baltic area, especially between Scandinavia, Baltic Republics and Russia. Rail Baltica is considered as one of the most important railways – it is planned to create high speed rail connection (V=250 km/h) between Tallinn, Riga, Kaunas and Warsaw, and further to Western Europe. Optimal variant of its location is still considered. In future it could also include St. Petersburg.

All European initiatives should be modified to take under consideration the north south interface, both in road and railroad system.

Central European Transport Corridor

Formation of Central European Transport Corridor was firstly an idea of West Pomerania Region of Poland and Scania Region of Sweden, but later also other regions joined this group: Lubuskie Region (PL), Lower Silesia Region (PL), Hradec Kralove Region (Czech Republic), Region of Bratislava (Slovakia). Creation of economic axis through Baltic Region and Central Europe to South-East Part of Mediterranean Region has been the main goal of this concept. Because of that international agreement about formation of Central European Transport Corridor (map below) was subscribed. The initial arrangement was signed on the 6th April 2004 by governments of six regions from four countries: West Pomeranian Voivodeship, Lubuskie Voivodeship, Dolnośląskie Voivodeship (Poland), Skania (Sweden), Region Hradec Kralove (Czech Republic), Region Bratislava (Slovakia). In May 2006 another two regions applied to enter this project: Region Győr-Moson-Sopron (Hungary) and Region Zagreb (Croatia). Moreover, one of the partners of CECT is Polish Ministry of Regional Development. The main aim of this project is stimulation of raising social and

economic growth, also increasing scientific cooperation and transport connection among all the regions situated between Scandinavia and Balkan Peninsula to create alternative high-developed area in Europe.

However, this proposal is missing Mazovia and Warsaw – the strongest and most important region and metropolis in Poland. This corridor is not crucial for Mazovia because it doesn't cut through region. A2 highway (part of European E30 from Cork, Ireland to Omsk, Russia), which will connect Warsaw with Lodz, Poznan and Frankfurt/Oder, will come into prominence for Mazovia Region by connecting with Central European Transport Corridor.

Road S-19 – new TEN corridor?

Road S-19 runs from north to south of Poland through 3 poorest Polish regions. Government has planned to modernize it in 2007–2015. After that, road S-19 will

have better quality and become so called "express road" (two-lane roadway, minimum about 6 km distance between crossroads, V max = 120km/h or 60-80 km/h in developed area).

This road links up three main regional cities of eastern Poland: Rzeszow, Lublin and Bialystok, so its modernization will improve accessibility to the regions. Moreover, S-19 can become a part of new TEN corridor which will connect Finland, Estonia, Latvia, Lithuania, eastern Poland and Slovakia, Hungary, Romania, Bulgaria and Greece. S-19 is regarded as a future development axis not only for the poorest regions of Poland, but also for Mazovia Region thanks to three possible connections with Warsaw by Via Baltica, highway A2 and road S17 (to Lublin).For that reasons Poland will solicit for including S-19 to TEN system during revision of TEN corridors in 2010. After inclusion this connection can be future instrument and determinant of development for eastern regions of EU.

Korytarz trasy S-19
Wzdłuż wschodnich granic Unii

New train connection on East of EU

EU pays special attention to rail transport as a solution which can prevent to global warming which is considered as the real threat for sustainable development of Europe. Problem of climate changes is a crucial one within Territorial Agenda of EU. Creating of railways system, which will connect Eastern metropolises of EU, is a very far-reaching task. Current railways system within the Helsinki–Athens axis is not cohesive. Actually international train connections on Eastern EU border are not attractive for passengers. The main reasons of this problem are:

- diverse infrastructure condition in different countries, including changes of track gauge in Sestokai /Lithuania (1435 mm/1529 mm) and voltage in electrification system, caused in long time of journey (much longer than plane journey).

Example - journey only on Polish territory takes 9 hours right now when flight from Helsinki to Athens takes only 4 hours.

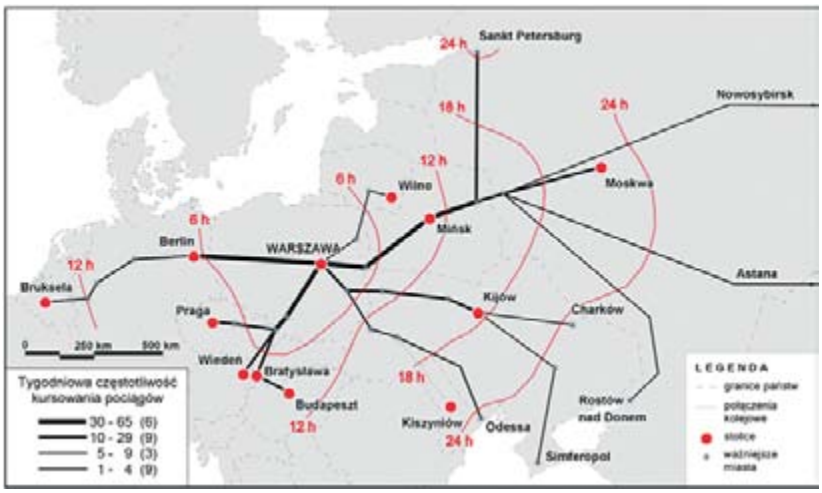
Trakiszki (border Poland–Lithuania) –Suwalki: one-track, non-electrified, maximal speed: 60 km/h;
Suwałki–Olecko–Ełk: one-track, non-electrified, maximal speed: 70 km/h;
Ełk–Białystok: one-track, electrified, maximal speed: 100 km/h;
or
Suwałki–Białystok: one-track, electrified (between Sokółka and Białystok), maximal speed: 80 km/h;
Białystok–Warsaw: two-track, electrified, maximal speed: 120 km/h;
Warsaw–Katowice: two-track, electrified , maximal speed: 160-200 km/h (between Grodzisk Mazowiecki–Zawiercie);
Katowice–Zebrzydowice (border Poland/ Czech Republic): two-track, electrified , maximal speed: 120 km/h.

- high number of countries and borders to cross – it raise price of tickets significantly,
- number current rail connections from North to East is very limited (ex. Warsaw–Vilnius – one connection, Warsaw–Budapest – one connection).

Since 1997 railways located within TEN have been modernized so that trains can get about 160 -200 km/h. Railway which could connect metropolises and regions of Eastern EU border should be combination of some parts of TEN corridors:

I. Helsinki–Tallinn–Riga–Kaunas–Warsaw– and Riga–Kaliningrad–Gdańsk („Rail Baltica")
VI. Gdańsk–Warsaw–Katowice–Żilina;
IV. Prague–Budapest–Konstanca/Thessalonniki/Istanbul;
X. Belgrad–Nis–Skopje–Veles–Saloniki;
Part B: Budapest–Nowy Sad–Belgrade
Part C: Nis–Sofia to corridor VI and later to Istanbul.

It is possible to create such railway of high speed train (ex. TGV) in future, but now construction of connection between eastern metropolises (especially Budapest – North) is the main and most important challenge. Anyway, future needs of development transport connections in corridor along east border of EU demand increasing importance of railway. New connection should mainly integrate railway systems of the countries situated along the corridor – with the one integrated table of fares and minimal speed 160 km/h. Selected sections of this connection could be adapt-



ed to the high speed railway standards. The connection could link following cities and metropolitan areas: Helsinki (ferry connection), Tallin (with branch to St. Petersburg), Riga, Kaunas (with branch to Vilnius), Warsaw, Silesia Region/Cracow, Bratislava, Budapest (to Sophia alternative way via Belgrade), Bucarest (from Warsaw alternative way via Lwow/Lviv/), Sophia, Thessaloniki, Athens.

The VASAB 2010 programme – International coordination of activities for spatial planning and development in the Baltic Sea Region (BSR)

Sweden initiated in 1992 meetings of ministers responsible for spatial planning, environment protection and regional policy from countries located around Baltic Sea Region. The first conference took place in Karlskron on 21st August 1992, where representatives of the following countries participated: Sweden, Denmark, Finland, Norway, Germany, Poland, Latvia, Lithuania, Estonia, Russia and Belarus.

The conference ended with the decision on taking actions and works on a special programme called Vision and Strategies around the Baltic 2010 – VASAB 2010. The concept was to be interdependent on national concepts of spatial development. The emphasis have been putting on such issues like spatial cohesion, regional infrastructure, settlement and cities networks, transport network, cross-border cooperation and so called "Baltic Sea Green Ring".

Thanks to this initiative many projects and new spatial ideas was developed, for example: transport corridors (THTR–Tampere–Helsinki–Tallin–Riga; TEM–Katowice–Gdynia–Karlskron, Via Baltica: Helsinki–Tallin–Riga–Kaunas–Warsaw–Berlin, Via Hanseatica St. Petersburg–Tartu–Riga–Kailngrad–Gdansk–Szczecin–Berlin), city network of the Gulf of Bothia Arch, development of tourism in the borderland between Poland and Germany, cross-border cooperation in the triangle: Latvia–Belarus–Lithuania, common recommendations for spatial planning in the shoreline zone of the Baltic Sea, cooperation in the zone of the "Sapphire Arch" of the Southern Baltic.

The Baltic Sea has become the internal basic of the European Union so it should be of high importance for the future planning activities. Moreover, not all the VASAB countries are members of EU. Thanks to participation within VASAB Norway, Russia and Belarus might use EU standards of spatial planning, which shall result in advantageous planning and development of infrastructure in the whole Baltic Sea Region.

The VASAB way of thinking should be implemented in north – south interface in forming the chain of economical, development, environmental, transport crossborder connections from Helsinki to Athens.

Other issues of development

North-south interface from Mazovian point of view should also consist of activities in other branches, not only transport and physical links, but also in common spatial policy and economic relations. For example, creation of a new zone which can be counterweight (counterbalance) for Western Europe development core of "Pentagon" is a great challenge for new members of EU and countries located on eastern border of European Union.

There is a need of support for the responsible national authorities to establish the metropolitan regions' interests and concerns into ESDP,

- transfer of knowledge should increase, so there is a proposal for establishing an intercultural transfer of know-how: "Baltic Brain Bridge", which can be joined with the "Balkan Brain Bridge"
- recommendation of membership of all metropolitan areas within network,
- the voice of a network will be heard more than a singular voice – North South metropolises should work in a closer manner of interests,
- thematic focus: aim the development of the inner functional quality and the link to priority projects of the Trans European Transport Network.

Ideas presented above are some possibilities for European development. They can result in important investments or being a ground for new outcomes. They present highly probable development scenarios for the EU. But it should be highlighted that all of these concepts are based on international co-operation and a united vision of development.

Bucharest

Bucharest: CITY

Final Report

1

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The University of Bucharest, Romania
under the Directorate of Prof. Dr. Ioan Ianos.

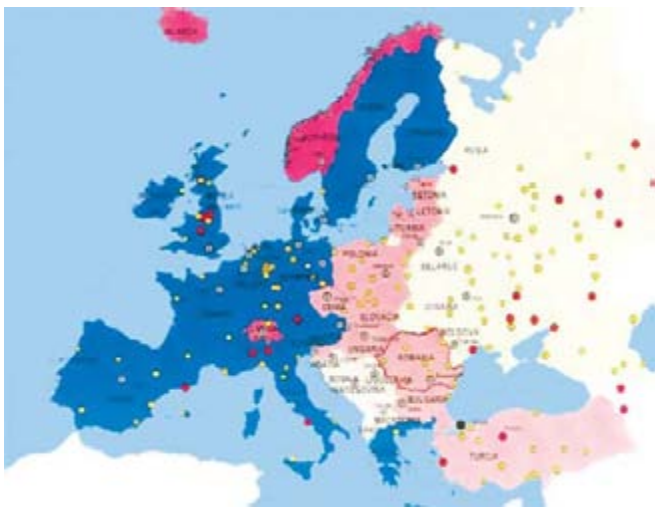
Today, territorial context for any local development is more and more enlarging, as a consequence of a necessity for comparison between regions, in order to be aware of their specific stronger and weaker points, and to reveal options for territorial cooperation; European Polymetrex "RINA – the North-South Interface" project is focused on what new initiatives have to be adopted in each development strategy of the selected capital-cities – the Cities of Athens and Thessaloniki (Greece), Sofia (Bulgaria), Bucharest (Romania), Belgrade (Serbia), Warsaw (Poland), Vilnius (Lithuania) and Helsinki (Finland) – in order to achieve a greater urban balance over their area of influence.

The reports upon the city and the city-region areas of Bucharest contain relevant data in relation to evidence and observe on territorial developments and cohesion in the specified territory, in order to build cooperation and partnerships, on one side, as well as some useful coordinates for preparing a common Action Plan with the project partners for resource and implementing the necessary transformations, on the other side.

It is obviously that a Development Integrated Strategy for the Capital City of Bucharest needs to be based upon a spatial dimension, at least for the metropolitan and the national levels – because there is a necessity for balance of its urban renewal with its urban expansion, to integrate the urban and the metropolitan land use with the transportation system and the whole infrastructure networks development in the area.

The main aims are:

- to sustain the vitality of its historical heritage, as well as the viability of the new achievements;
- the attractiveness of the old city centre as well as of the new urban poles;
- to enhance economic competitiveness by using the existing and future opportunities;
- to promote social inclusion;
- to assess the environmental impact of urban and territorial development;
- to safeguard all the valued resources.



Consequently, the aimed competitiveness of the City of Bucharest requires an economically, socially inclusive, and environmentally responsible approach of its urban affairs.

All the potential objectives which could be adoptable by the local and regional authorities, would have a better chance to be achieved in a context of cooperation at a transnational level definite over the selected area of „N-S Euro-corridor"; the specified regions would increase, economically and socially, based on synergy effects, this fact being a future consequence of their new territorial function as development nuclei, working into a new coherent spatial network created over the defined „N-S Interface" area.

The actual social trends of the Romanian society, the new technological developments and the free market forces have unintended spatial impacts, which could compromise the territorial development of Romania; in order to avoid that, the specialists can only try to apply the new principles of urban development (balanced polycentric territorial development, equal access to better infrastructure and knowledge, and the management of the natural environment) and to hope a positive growth reactions of the city and the city-region areas of Bucharest after the implementation process of these principles.

At the metropolitan level, the city of Bucharest aims to create a more balanced urban network which can be developed into a highly integrated regional polycentric system; the city of Bucharest and the towns located in its surrounding area have, together, the potential to increase their own demographic and economic mass through increasing the quality of their cooperation relations at local and international level.

In order to sketch an Action Plan, we need to present some useful aspects for a SWOT analysis, regarding with the following issues:

- Bucharest as the Capital City of Romania;
- the Metropolitan Area of Bucharest;
- the regional connectivity with the European territory (the European transport corridors);
- the strategic guidelines of the national territory (the National Territory Land Planning and the National Development Plan adopted between 2004–2006);
- Romania and its regional development (inter-regional relationships);
- Romania in the EU regional initiative (transnational cooperation).

Bucharest – the Capital City of Romania

Bucharest, the Capital City of Romania, lies in the southern part of the country, at 64 km distance from the Danube River, at 100 km from the southern Carpathian Mountains and at 250 km from the western side of the Black Sea; its geographical position is: 44°24'49" northern latitude (the same as Beograd, Geneva, Bordeaux, Minneapolis) and 26°05'48" eastern longitude (the same as Helsinki, Johannesburg).

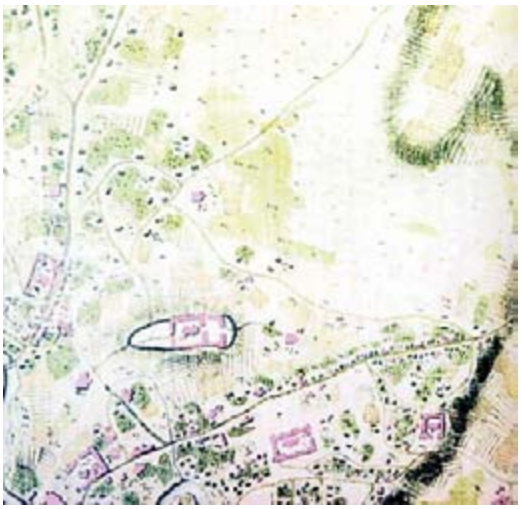
Picture 2
The Physical Map of Romania.

The special location of the City of Bucharest between the northern and the southern, the western and the eastern parts of Europe, along the Danube River, played and could play again in the future, a strategic role, making this capital-city an important crossroads point at the European level, as a linking location between Occident and Orient; this situation is equally important from political, economic and cultural points of view for the future of Romanian people.

Having this geopolitical potential, the City of Bucharest has to join with the European urban centers networks in order to capitalize its own advantages, to increase its level of participation at the European social, cultural and economic exchanges.

The City of Bucharest is lying on the Romanian Plain, at an altitude against the sea level around 96.3 m above; it is covered by two rivers: Dambovita and Colentina, which are playing an important role for the health and daily comfort of its inhabitants, as well as for the environmental balance of the territory; the two valleys created around the rivers are dividing the city territory in few characteristic areas – tablelands with meanders and terraces.

The first documentary attestation of Bucharest as a human settlement was in the 15th century (1459), during the reign of the Walachian prince Vlad Dracula the Impeller, when the princely residence was established in Bucharest for the first time in the history; this decision had a basic role for the further development of the city and the city-region.



← *Picture 1*
Romania in the Spatial European Context.

Map 3
The 1st Documentary Attestation of Bucharest (1459).

A few historical landmarks could be useful to understand the specific way of being of the actual population living in the city of Bucharest:

- in 1830 was initiated the People's Council (today the Local Administration);
- the city was divided in five administrative districts;
- in 1846 was drawn the first Urban Plan of the Bucharest City, developed by the City Hall services.

In 1877, after the National Independence War, the Romanian state achieved a status of independency and Bucharest became a Capital City; this historical moment was the starting point for a series of public interest actions with a great urban impact: at the middle of the 19th century was rectified the course and the natural bed of Dambovita River (because the River, which pass across the traditional core of the city, where caused a lot of problems for inhabitants by frequently floods until this public intervention); in 1869 was inaugurated the first railway linking between Bucharest and Giurgiu (a town on the Danube River border, located at around 60 km distance from Bucharest), creating, consequently, better connections between Bucharest and other European cities situated on the Danube River; the first railway station in Bucharest was open in 1869; the first tram (by horses) was inaugurated in 1872; the public lighting system was inaugurated in 1882; in 1894 was inaugurated the first electric tramline in the city; the first Electric Power Plant was built in 1892.

The period between the two World Wars was the most flourishing period of modern times for Bucharest: the year of 1921 was the starting moment for the investment of Baneasa Airport; in February 1926 was adopted the Urban Plan of the Capital City, when the City of Bucharest was divided into a central administrative area (containing four administrative districts having their own local councils) and an outlying administrative area, bordered by forts; the Society for Airline Transport was founded in 1931; the first automatic telephone communication plant was starting to operate in 1927; the "Palace of Telephones" was inaugurated in 1933; a lot of new banks and industrial plants were founded; in 1935 was finished the first Structural Development Plan for the City of Bucharest – being considered one of the best modern plan for urban development in Europe at that time.

The Second World War damaged large areas in Bucharest, destroying the most representative monuments; other 45 years of communism altered, also, the urban structure of the city and the social equilibrium of the local communities.

Picture 4
Bucharest – Urban Perspective along the Dambovita River in a Central Location.

The Romanian anti-communist revolution from December 1989 started major changes inside of the Romanian society – over the citizens' life, economical and social structures – generating a new urban dynamics of Romanian cities, mainly over the direct area of influence of the Capital City of Bucharest.

The contemporary people, Romanians and non-Romanians, are still considering the City of Bucharest as being a "gate-city" between Orient and Occident, delightful, still keeping lots of landmarks of history, being loved or rejected by different groups of inhabitants.

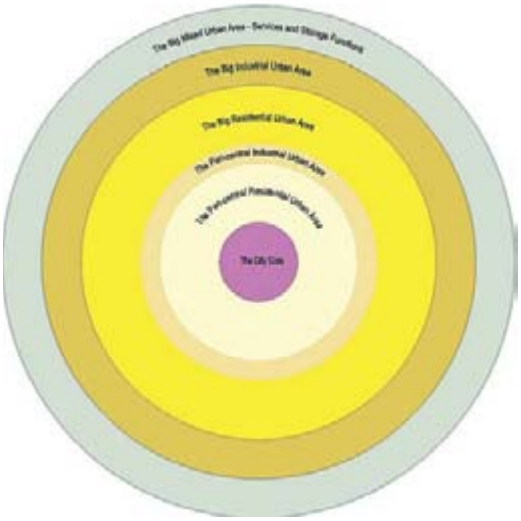
The actual City of Bucharest has the first rank in the hierarchy of the human settlements network from Romania, as regarding as its area and population; it is the most important and complex educational and cultural center of Romania. Here there are the most representative educational state institutions: the University of Bucharest, the University of Architecture and Urban Planning, the Art Academy, the Music Academy, the University for Pharmacy and Medical studies, the Polytechnic University, the Buildings and Civil Engineering Technical University, the Academy of Economic Studies, and many others. The City of Bucharest represents a location for many important cultural entities: The National Theatre, The Romanian Athenaeum, The National Opera House, The Central University Library, the National Museum of Art, the Romanian Peasant Museum, the Museum of Romanian Village, and others.

The existing wonderful mix of architectural styles, cultural institutions, churches, cathedrals, monuments of architecture, terraces, bistros and restaurants, the picturesque of the streets, the courtesy and kindness of its inhabitants represent the attractiveness of contemporary Bucharest – a capital city with a special urban personality.

Having important economic, social and cultural resources, with a stable formal population of more than 2.5 million inhabitants, and an informal one of approximately 4 million people, Bucharest is a real modern metropolis.

During the first years of the third millennium anybody could observe, over the entire world, different types of challenges with a large territorial impact: an accelerating globalization and emerging new economies, an increasing migration and changing in the evolution of demography, geographical concentration forces in society, the change of energy paradigm, the climate change – as a consequence, to be possible to respond to all these global challenges, an European and even a global perspective became inevitable for regional policy development. The already existing scenarios suggest that, within the context of increasing of global economic interdependencies, the major European cities will be proved as being even more important in a unified Europe.

In this context, the Romanian people want more and more from their capital-city: a better balanced



Map 5
The Existing Urban Structure of the City of Bucharest.

mixture of old and new values approach, over the older and younger urban areas, as well as a new vitality and prosperity.

The Existing Urban Structure

The existing Urban Structure of the City of Bucharest is a radial-concentric one, almost a monocentric one, being in a total contradiction with its size and mass, with its real urban flows.

The City Core is lying over the traditional Historic Centre, being surrounded by circular and concentric areas, each of them having homogenous specialised urban functions, as following:

- the City Core – the Traditional Centre – the Historic Centre;
- the Peri-central Residential Urban Area;
- the Peri-central Industrial Area;
- the Big residential Urban Area;
- the Big Industrial Urban area;
- the Big Mixed Urban Area, containing Services and Storage Functions.

Inside these circular specialised areas lying in the inner city, there already appeared new poles of urban development, as a consequence of the general trend of decentralisation of the Romanian society during the last decades. The main problem in maintaining the fragile urban equilibrium of the City is the actual inner city system of transport, which cannot support the contemporary needs for movement of the local categories of urban actors.

The Capital City of Bucharest has three strategic functional dimensions, correlated with its territorial levels of influence:

- it is the biggest Urban Agglomeration of the country, having structural relations with its surroundings; it occupies the first rank in the national network of cities; its area contains more then 10% of the Romanian resident population, only within the Core City of its urban agglomeration;
- it is an European Metropolis – more than 2,5 million of formal inhabitants live in the inner city; it has a good geographical position, being located at the intersection of the main Pan-European transportation corridors, as well as a good geopolitical location;
- it is an European Capital-City, being a political and administrative center for the whole national territory; the Capital-City of Romania plays an important role over the Central and Eastern European Region.

The Strategic Urban Development

The development perspectives of the City of Bucharest are increasingly influenced by the European dimension; it is necessary for the local authorities to take into consideration comparative advantages of the city, and of the City-region, as compared to other regions; they, also, have to be alert regarding with the effects of European policies in the region.

The people of Bucharest intend to create a new identity for their City, according with its aspiration to become a successful European metropolis; they want to increase the quality of their own life, the protection of the existing resources – the natural, urban and architectural ones; they desire a sustained vitality and a new attractiveness for Bucharest as a state capital-city and, also, as a large metropolis; they are expecting a new urban development approach, according its territorial functions as the city core of the urban agglomeration and the metropolitan area, playing an active role at the regional, metropolitan, national and international level.

The General Urban Plan (GUP) was adopted by the General City Council of Bucharest in 2000, will

Picture 6
The General Urban Plan – the Land Use Plan Regulations.

Picture 7
The Future Polycentric Urban Structure of the Inner City of Bucharest.

be available until 2010, and is refereeing to the horizon of time of 2025; the target point of the Bucharest GUP is to accomplish the actual level of the European Union countries until 2025. GUP is orientated to stimulate the economic, social and spatial growth of the city and its metropolitan territory, according with the principles of sustainable development; the rules and the spatial regulations of the GUP took into consideration the potential of the existing resources in the studied area – the economic, demographic, natural and cultural ones -, intending to maximize the chances of the Romanian capital city to integrate itself into the network of European successful capital cities.

Generally speaking, European cities are characterized by a compact urban structure, by a traditional centre orientated urban form, a high density and mixed land use, having a predominant usage of public transport; many of them are already polycentric and have often grown from the accumulation of small independent urban settlements by which were formed one single urban area.

Picture 8
The Polycentric Spatial Development Strategy of the Metropolitan Area of Bucharest.

According with the GUP, the future spatial development of the City of Bucharest was planned taking into consideration the actual urban trends, and the future European and national contexts; the long Romanian process called transition to an open, democratic and market-oriented society that Romania has engaged in has powerful effects (negative and positive ones) on the urban restructuring strategy; nowadays, a new urban centrality aims to create a polycentric city, replacing the obsolete model based on a historical centre and disadvantaged peripheries, which will be transformed or upgraded by introducing new functions to these areas, mainly services.

The actual large-scale transformations of the inner city and the city-region of Bucharest have a great impact upon the urban quality of life because of existing uncontrolled urban growth.

The new neighbourhoods which have appeared are not yet well integrated into a regional public transport network, the public infrastructure and public services are still weak over these areas, and, as a main consequence, will be necessary to generate a proper balance between the quality and the development of the traditional centre, on the one side, and the expanding of the new peripheral growth centres, on the other side, thereby creating a new ordered structure, a polycentric one, formed by the existing and future poles of development laying over the territory.

Linking the future urban areas in an integrated polycentric territorial structure, over the area of the inner city as well as over the metropolitan area of the City of Bucharest, the city could create bigger markets for higher-level quality services, activities and functions required for sustaining competitiveness and a higher quality of life, over the city and the city-region areas of Bucharest.

A polycentric development at the city-region level will generate better connected urban networks within a wider spatial development strategy, where the different parts of the city-region functional areas could be in relations of cooperation or complementarities, depending of their own identity and potential of development.

The urban actors of Bucharest aim to create an attractive metropolis with specific features:

- an attractive, livable and sustainable environment, having high density connections over the metropolitan territory;
- a clean air, green and secure spaces, an attractive city centre and high quality services, including cultural and recreational amenities;
- a high quality of life, also of the environment in the city, which will attract mobile and skilled knowledge workers and high value activities;
- redevelopment of the brown field sites and public spaces, and improvement of the local services, adding a plus-value to the city and the city-region; in this way will be avoided the use of green areas in the inner city and, in consequence, the damage of the environment;
- an efficient urban structure and administrative

management of the city, having as a consequence an efficient consumption of public resources.

The specialists and the local decision makers have to renounce the traditional approach based only on competition and potential conflicts between human settlements located in the territory; actually, the City of Bucharest has not yet an institutional organization for its metropolitan area, which is existing „de facto" but it is not recognizing „de jure", because such a kind of inappropriate approach; a smart solution could be a changing paradigm – the urban actors with interests in the area will have to explore new ways to promote joint tourism or infrastructure investments, making better links between the new key economic areas and the City of Bucharest, with expected benefits for the whole area which is under the influence of the metropolis.

Regional Competitiveness and Cohesion could be achieved in the territory of Bucharest after the implementation of a **Polycentric Development Strategy**, which could create the framework for an efficient use of the local resources – mainly of the urban, agricultural and forest land, of the human resources, of the existing cultural and economic resources, of the territorial infrastructure and the public works, of the natural landscapes, etc.

This key concept of polycentricism, presented as a framework for sustainable development, was emphasized by a document of the European Commission, "European Spatial Development Perspective" (ESDP), adopted in 1999 at Hanover; in ESDP were mentioned the objectives of the spatial development for the European continent: economic and social cohesion, conservation of natural resources and cultural heritage, and a more balanced competitiveness of metropolitan territories; this document constituted authentically a model for the Romanian specialists during the process of creating a spatial development strategy for the metropolitan area of Bucharest, specially taking into consideration the useful experience of some Romanian experts who participated at ESDP.

The development of the city of Bucharest cannot be abstracted from its historical and national context; so, the long process called transition to an open, democratic and market-oriented society, which Romania has engaged in, have powerful effects on urban restructuring strategy.

The artificial urban development strategies of Bucharest developed during the second half of the 20th century transformed the city as a real "predator" against the human settlements located in its surroundings (like in the "Lotka–Volterra" geographical model).

The very forced spatial and industrial development process applied upon the city of Bucharest has "aspired" the most active and youngest people from its neighborhoods and, consequently, increased, almost dramatically, its economic performance against the performance of the neighboring settlements.

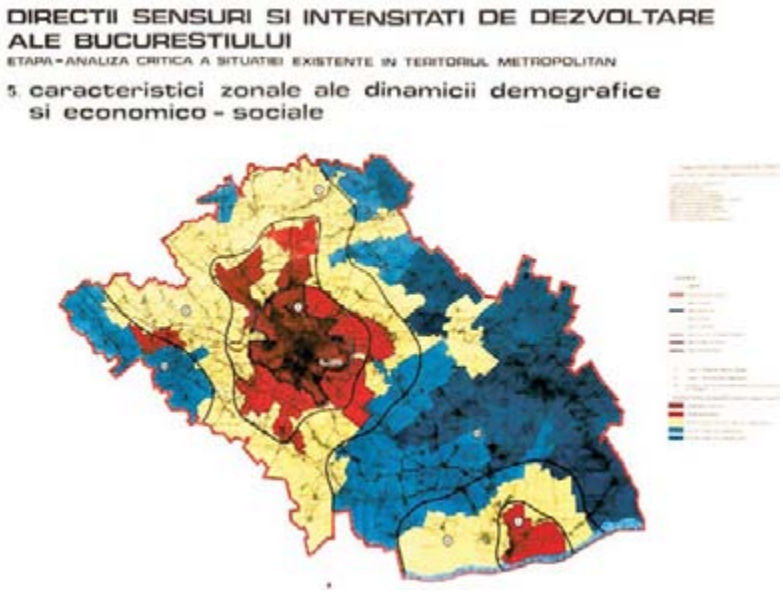
In this context, the City of Bucharest created a real vacuum over an area of 50 km radius in the surrounding territories, where now there are no other towns

Picture 9
The Polycentric Spatial Development Regional Strategy of Bucharest.

more than 20,000 inhabitants; this territory, having about 5000 km², became one of the poorest regions of Romania.

The nowadays transit period to a market economy favours the spontaneous process of creating a metropolitan area in the vicinity of Bucharest; but, the diminished level of the state control over this territory and, especially, the phenomenon of, allegedly, "corruption", were considered in part to be blocking all the initiatives whose objectives were to realize a management of the spatial processes of metropolitan development, in parallel with increasing role of local authorities in controlling this phenomenon in order to respect the public reasons and the public interests.

The main criteria which were taken into consideration by the Romanian experts for defining the met-



Picture 10
Economical and Social Disparities over the Metropolitan Area of Bucharest (the "Lotka–Volterra" Geographical Model).

Picture 11
The Metropolitan Urban System of the City of Bucharest.

➔ *Picture 14*
The Transport System of Bucharest.

ropolitan territory were combining different points of view: a traditional one, a spatial – geographical one, social and demographic ones and a functional one.

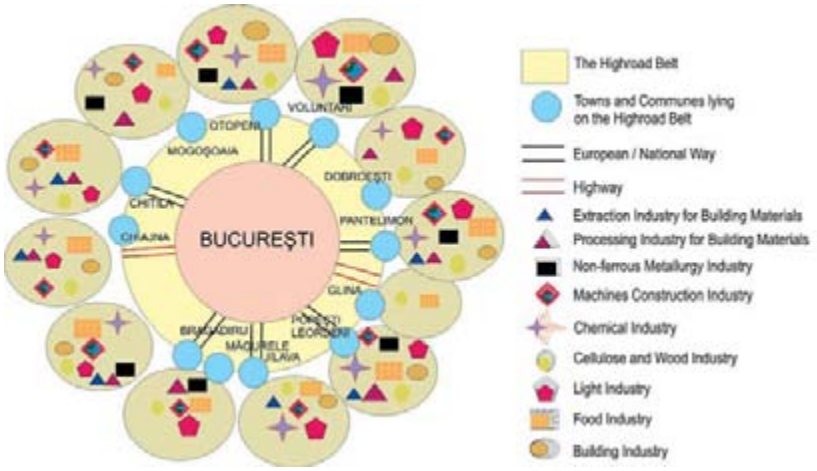
To reconsider the capital-city status of Bucharest, as well as its metropolitan status, could constitute supplementary chances for attending a sustainable development of this region, because the national and international urban functions could integrate the capital-city of Romania in an international network of interests. The decongestion of the urban core and the urban agglomeration areas will have as a main consequence the decreasing of the ecological pressure upon the agricultural land and over the natural protected areas in the studied territory.

A special mention has to be made about the most dynamic area surrounding the actual Inner City area of Bucharest – it is about the administrative areas of the 1st ring of 12 towns and communes laying along the first highroad belt of Bucharest; there are five towns and seven communes, which are confronted with significant transformations of their urban functions, on one side, and big mutations over the social structure of their inhabitants, on the other side.

Three-four decades ago, these settlements were specialized as transportation and storage areas, integrated into the urban system of Bucharest; in the last decades they were transformed in logistics and residential areas, strengthening their economic power and social prestige.

Picture 12
Towns and Communes Lying on the 1st Highroad Belt.

Picture13
Industrial Specialisation of the Towns and Communes Lying on the 1st Highroad Belt.



The functional zoning of this special area was not finished yet; nowadays there is a mixture of industrial, residential, services functions all over the area lying on the 1st highroad of Bucharest, making it almost, relatively, a homogeneous area.

Establishing of complementary relations between the Core-city of Bucharest and its metropolitan territory will lead toward creation of an integrated and functionally efficient urban system.

The Expected Effects, inside of the Core-city of Bucharest, as well as of the other inner-city areas lying on the metropolitan territory, after applying the adequate territorial development strategy and urban policies in connection with this vision, are:

- increasing **diversity** over the whole area of the City of Bucharest, as well as over the other urban areas;
- **decreasing the traffic congestion** and the **pressure of investments** on the Historic Centre of Bucharest, on other central locations and protected areas;
- attending a more **balanced urban and territorial structure** between the Core-city and the City-region;
- creating a new modern **urban image** and a new **urban landscape** in the studied area.

The inner city transport system of Bucharest will be connected with the national and international routes of transportation network, being linked with them by the metropolitan transport system; will be covered all types of connections for the Capital-city of Romania: ruttier, railway, air and naval connections.

Due to its good local level of accessibility, inside and around the administrative territory of the City of Bucharest, the experts are considering that the metropolis could be interesting for the investors, especially if the city will increase its European level of accessibility – now that Bucharest is situated at a peripheral location as regarding the "European Pentagon".

Bucharest: CITY-REGION

Final Report

2

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Nowadays, **metropolitan regions** and their **core-cities** are the key components for the existence and development of urban systems; they are acting as **engines in developing their territories** of reference, having an important role in creating **integrated regional structures**, and, as a consequence, in generating a **better cohesiveness** of territories, all over the world.

In this context, the capital status of the city of Bucharest, as well as its metropolitan status, has to be reconsidered, in respect for a better integration of the Romanian territories in the international networks of interests.

The identified metropolitan area of Bucharest territory is 5,046 sq km, having almost 3.0 million inhabitants (informal data suggests the number of its inhabitants at over 4,5 million people); the core-city of this metropolitan area is the city of Bucharest, with its administrative area of 228.2 sq km and around 2.4 million of inhabitants (informal data suggests nearly 4.0 million); another 6 towns having together an urbanized area of almost 490 sq km in total together with around 100.000 inhabitants; over the metropolitan territory there are another 87 communes with a stable population of around 500.000 inhabitants.

During the communist period, the City of Bucharest acted as a magnet over its surrounding territory, creating a **territorial vacuum over a 50 km radius area** – as a consequence of a forced industrial policy applied to it. Now, in the mentioned territory there are only a few towns, each of them having a population of 20,000 inhabitants at the most; this territory has become one of the poorest regions of the Romanian territory.

In order to induce territorial development in the mentioned area there is a need to create a kind of stabilized series of metropolitan-nuclei, in which the free entry, free movement, and free expansion will have to be subordinated to the main objective, **the preservation of these poly-nuclei**, on one side, and of **the natural environment** on the other. In this respect, from the first stages of a concrete action-plan upon the defined territory, it will be necessary **to avoid the spreading out of opportunities for investments outside of the dedicated areas, in order to realize the metropolitan poles of development**.

The new Urban and Metropolitan Nucleus, the future Poles and Axes of Development, have to be constituting, actually, by **a mix of tertiary activities**; they have a **strategic role** for the development process of the **city of Bucharest, of the others cities lying in the area** and, also, for **the whole city-region**, from a **structural** point of view, as well as from a **functional** one.

Another urgent necessity is to create **an institutional framework in order to manage the metropolitan territory of Bucharest** – this has to be based on **an integrated strategy to develop the whole region**.

The metropolitan spatial planning involves: **competency** (to have the authority of adopting, implementing and safeguarding a metropolitan spatial strategy); **capability** (having the knowledge and the know-how for making well aware decisions) and **processes** (the

Picture 15
The Future Urban System of the City of Bucharest.

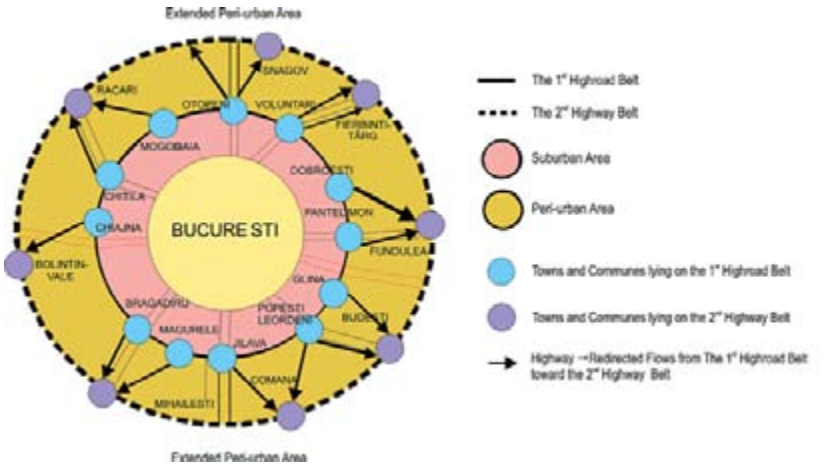
existence of a survey and the periodical overview of the issues with a view to updating the strategy).

A main objective for attending a balanced and a sustainable development over the metropolitan area of Bucharest is to create **new spatial structural axes of urban development and new poles of interest** over the territory immediately surrounding **the core-city** (now-a-days it being a very dynamic but a non-systematized area) – this kind of development approach could generate a new series of development processes over the neighbored area of the metropolitan nucleus.

So, in the metropolitan territory of the City of Bucharest there is necessary to create **New Axes of Development, New Urban and Metropolitan Poles of Interest**, situated **in the privileged locations** – in terms of **accessibility** and **local potential**.

This **spatial vision** set out the strategic ideas that can help the local community to create a modern competitive metropolis; the planning process for obtaining a regional connectivity matrix will give accessibility and will maintain environmental standards in each location belonging to the area of influence of the Capital-city, increasing the **economic competitiveness**, **social equity**, **connectivity** and **spatial cohesion** for all human settlements located in the metropolitan area.

Picture 16
The 1st and the 2nd rings of Communes and Towns Surrounding the City of Bucharest.



Until the 9th decade of the 20th century, the City of Bucharest looked like an "island-city" of prosperity lying in a sea of poverty; after the revolutionary political, economical and social changes, started after 1990, the Capital-city of Romania confronted with a new kind of urban dynamic, which generated a modernizing process even over its surrounding areas.

This time it could be observed an increased tendency of economic development, especially over the 1st ring of towns and communes' area lying in the immediate vicinity of the Capital-city.

The mentioned area is developing on a circular axis – the existing highroad belt of the City of Bucharest; the modernizing and urban development process of the Capital-city generated a fundamental changing of the functional and social structures in the neighbored areas.

If at the starting point, when the highroad was created, transportation and territorial transit function was its main urban role, nowadays its surrounding area hosts different activities and functions – residential areas, services, logistic parks, industrial parks, storage areas – due to the special accessibility of this geographic space.

The very dynamic economic and social development of some of the human settlements lying on the area of synergetic influence of the belt highroad and the Capital-city contributed to transform their administrative status – five of the former communes became towns in 10-15 years: Otopeni (in 2000), Voluntari and Popesti-Leordeni (in 2004), Pantelimon, Magurele, Bragadiru and Chitila (in 2005). The new administrative status of the new towns generated a new and stronger development dynamic, economically, as well as socially.

Unfortunately, this development is not enough controlled, and started to transform itself into a blockage factor which negatively affects the territorial connectivity between the City of Bucharest with the metropolitan, national and European territory, because of the huge flows that the highroad belt redirects upon the administrative area of the Capital-city.

We can see that this uncontrolled development over the belt highroad area doesn't **affect** only the **connectivity** between the neighboring settlements existing in the area, but **affects as well the entire functional structure of a bigger territory, the metropolitan one**.

Consequently, there is a need to create **a new transportation belt, a future highway belt**, which will have to be situated at approx. 30 km distance from the City of Bucharest, in such a way as to connect the other existing settlements surrounding the Capital-city in **a second ring of towns and communes**, creating in this way a new level of **accessibility** which could redirect some territorial flows actually orientated to Bucharest towards this **future ring of settlements**.

The Expected Effects, after applying the adequate territorial development strategy and urban policies in connection with this vision, will generate benefits:

(a) inside of the Inner city area – the core city area:

- increasing **diversity** over the whole area of the city;
- **decreasing the traffic congestion** and the **pressure of investments** on the historic centre area, as well as upon other central and protected areas;
- attending a more **balanced urban structure** of the city and **a territorial structure** of the city-region;
- creating a modern **urban image** and a new **urban landscape** in the studied area;

(b) at the metropolitan level:

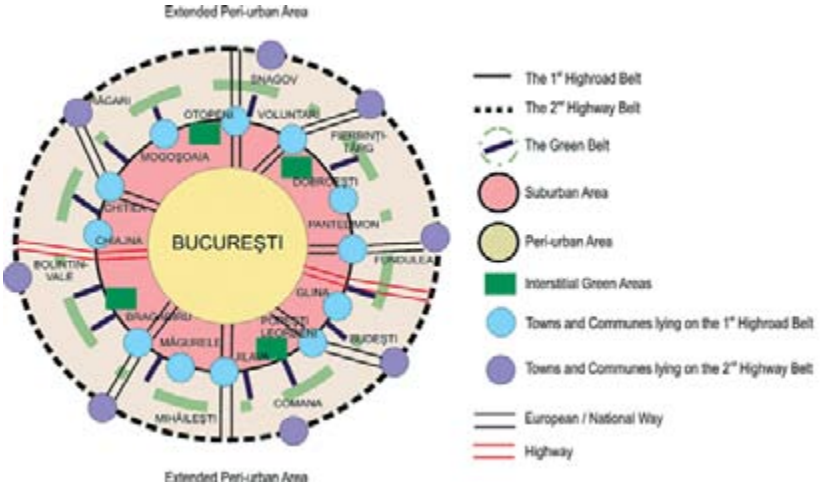
- structuring **a new sustainable development urban system**, which will be attended by: creating of new urban nucleus and axes of development over the metropolitan territory; modernizing the infrastructure system and developing the tertiary domain of activity in all the settlements located in the metropolitan area; creating a major network of transport and communications at a higher level of efficiency over the metropolitan territory; defining and creating the green-yellow belt for the city-core and the metropolitan area.

As we already earlier observed, the metropolitan area of Bucharest doesn't exist formally, but it was created "de facto" in a spontaneous manner, as **a necessity for**, but, in the same time, **as a consequence of**, attending **connectivity** between the human settlements located in the area, their **cooperation** and their **complementarities** during the real development processes – that actually happened, despite the lack of the will-power of the Romanian politicians to organize this metropolitan territory, although the lot of research and studies there were realized in this respect; this spontaneity of the metropolitan coagulation process around the administrative territory of the City of Bucharest, and the lack of a territorial institutional management, had **perverse consequences** upon the effectiveness of the spatial development around the city-core.

Some of these problems could be solved by **cooperation**, whose main specific feature is that – in the context of a formal existence and managed territorial function of the metropolitan area -, could generate **an institutional advantage** which can be used for improving the quality of life and increasing the development level of all administrative entities.

The coordination of the metropolitan development processes have to be based on **public participation**, on the safeguarding of **public interest** and on the planning principles of **public–private partnerships**; transparency, a good **communication** and **cooperation** among all the stakeholders existing in all settlements of the metropolitan territory of the City of Bucharest represent the basic conditions for successful actions, taking into consideration the need for developing the level of trust in the local authorities and involvement of the citizens.

Identifying the local **potential** is the key stage for the city-region development; this objective could create **stable local teams of experts**, in order to realize targeted **analysis** over the entire area, to apply the **new**



Picture 17
A Sustainable Development Model for the Urban Agglomeration of Bucharest.

principles of urban development over the entire structure of the local administration; also important are the European experience and knowledge on common challenges related to the territorial development, bringing together the European dimension as well as the local perspectives. The local administration and political leaders will have to attend the new understanding of the future development potential and challenges of the territories, in order to have a chance to manage the territory for which they will be responsible.

So, during the first stages of the long process called territorial development of Bucharest, **cooperation** will be orientated **to making aware the local resources** and the local **potential**, to produce **regulations** for the entire metropolitan area, and to **increase the level of connectivity** and **accessibility** for all the settlements located in the studied area; the next stages will be focused on **attractiveness as a factor for the increasing the business performances** of this territory, by **social welfare** and **quality of urban life**.

Cooperation is necessary during the process of preparing **the planning regulations in order to form the green-yellow belt**, in respect to preserve the yet existing natural land, and to increase the level of the quality of urban air; creating a set of clear rules for the **protection of the natural and cultural resources** from the whole metropolitan territory, will it be possible to increase the level of **attractiveness** of this territory and, consequently, the stability of its active population.

A polycentric approach can be based, also, only on the **complementarities** of resources and the potential of the different related areas existing in the **inner city**, as well as in the **metropolitan territory of Bucharest**; based on these differences, specific areas will be orientated towards a **specialisation of their services offers**.

This kind of polycentric approach seems to allow to the existing component areas, as well as to the entire metropolitan territory as a whole, **to respond more positively to change**, based on a more robust labour market, through a more diverse economic and social base.

In order to create positive premises for an integrated development of the territory surrounding the City

of Bucharest, the already realized studies by Romanian and foreign experts concluded what is necessary to be done in the region in the future:

- to create a **polycentric** and **balanced** urban system;
- to constitute **development axis** along the **European transport corridors**;
- to regulate and realize **the green-yellow belt** area;
- to use the local specific resources and their potential of development by creating **"regional parks of activities"** – the so called **clusters**.

This new **polycentricism** of the future development will shape a new **accessible** city-region, and will create a proper **balance** between the traditional centre, the peripheries and the expanding network of the new growth centers **in respect with quality of life and urban development**; consequently, the **new urban system of the City of Bucharest** will be composed by:

- the **"City-core"** of the system – the City of Bucharest;
- the **"Little Crown"** of urban-rural settlements – formed by the first ring composed by the 12 towns and urban-communes outlying the city;
- the **Metropolitan Development Nuclei**;
- the **Metropolitan Development Axis** located along the European transportation corridors.

Based on already mentioned strategic objectives, the stakeholders will develop together the territorial development policies, focused on:

- the **territorial cooperation** policy;
- the **land-use** policy;
- the **dwelling** policy;
- the regional **social** and **economical** development policy;
- the development of the **public services** policy;
- the **natural and cultural environmental** policies.

Picture 18
The Green-Yellow Belt Area surrounding the City of Bucharest.

A green-yellow belt (constituted by urban and territorial regulations over forest and agricultural cultures protected land) is obligatory, and urgently, to be realized; this green belt will be located over the surrounding area of the City of Bucharest, trying to counteract the negative effects generated by the very **high density of population** existing in the inner city (almost 10,000 urban inhabitants / sq. km) and the **high level of pollution** in the area; the green yellow belt of the metropolis will improve the quality of life over the whole city-region territory.

The forming of the **green-yellow belt** around the Capital City of Bucharest, having strong land-use regulations, represents an important objective of the metropolitan development plan, ensuring in this way territorial connections between urban development areas and their environmental protection, regarding with:

- **Control** of the constructed areas **expansion**;
- **Protection** of the **valuable traditional areas** located in the studied territory;
- **Support** for **urban renewal** in selected locations.

The main **principles for the land-use within the green-yellow belt** area are according with the following goals:

- insuring the **access** of the urban population to the **open rural space**;
- insuring the opportunities for **sports and recreation** next to the urban areas;
- **protection**, on one side, and **extension**, on the other side, of the **attractive natural areas** situated near by the urban areas;
- **improving** the abandoned or degraded grounds locations;
- a **balanced land-use for the agricultural and forest** lands purposes.

Taking into consideration this future / planned green belt area and its regulations, on the one hand, and the human settlements network from the urban system of the City of Bucharest, on the other, we could discuss about some different types of development poles, which will be integrated in the metropolitan territory system; there will belong to the following categories:

- **poles situated in the first crown area of human settlements**, which will be designated to **intensive urbanization**;
- **poles** having a major role for urban development **within the limits of the green-yellow belt area**;
- poles of local importance **located at the boundaries of the green-yellow belt area**;
- **poles of growth** having touristy and port-transportation functions, situated along the axis of the **Bucharest–Danube navigable channel**.

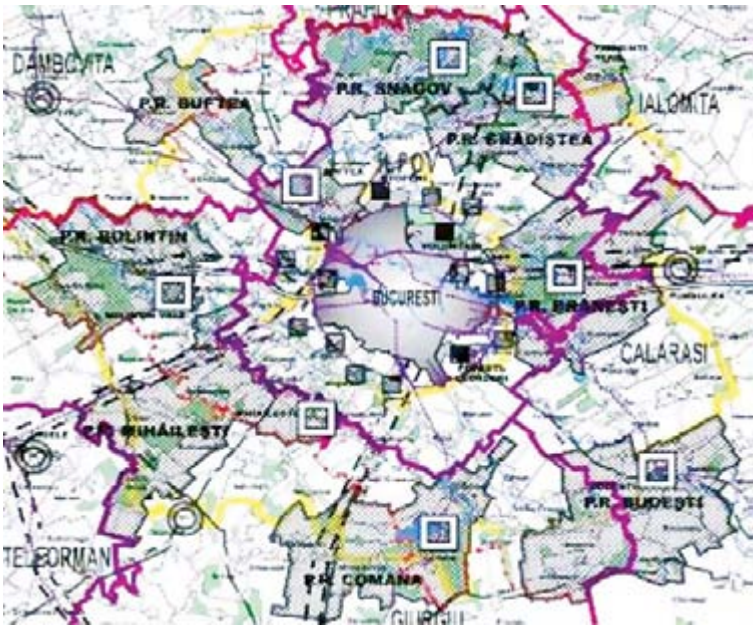
The future of the City and City-region of Bucharest, as well as of the quality of life for their inhabitants, will depend on **the quality of the spatial and administrative management**; in this respect it is necessary to plan the future development following a few steps:

- the urban planning for the metropolis, as well as

for all the human settlements in the region, which will have to be realized only in **a territorial context** – a national, an European, even a global one, for the Capital-city of Bucharest, and a regional one for the other settlements in the area;

- **a polycentric city-region framework** which could generate more equilibrium over the inner city-system of Bucharest and a more balanced development over the surrounding area of it;
- **the conservation of the existing vitality of the city-core** in the metropolitan area, during the development process, which will have **to strengthen the traditional city-centers** and to create **a better urban balance with the peripherical areas**;
- the future territorial and urban development process have to be controlled by **strong regulations and urban rules**, in order to reduce urban sprawl and the decay of the natural and cultural protected areas; in this respect, it seems to be preferable to realize future compact developments, with appropriate high density, to protect the urban green spaces and the natural environment, as well as the local cultural heritage;
- as a consequence of the previous paragraphs, **the development have to be concentrated around the key interchanges locations**, such as airports, road and naval transport corridors, rail, metro, tram and bus;
- to be possible to generate development in the poorest areas, the first priority should be **the ensuring of accessibility to public infrastructure**, starting with transport investments throughout the urban and city-region territories;
- to create **synergies of employment clusters**, at both within the traditional city centers and the new urban centers, as well as towards the periphery and within the new metropolitan poles of development at appropriate selected locations, in order to create better urban balance for workplaces and urban mass, to make possible the maintaining of efficient urban and metropolitan public transport systems;
- **ICT and innovation cluster developments** should be supported through the organization of space by linkages with universities, research centers, as well as by locating new developments closely to new synergy locations such as City Airports, Connective Rail and Motorways Hubs, also Port Harbors on the Danube River, as well as on the other existing navigable rivers in the area;
- **finishing the works at the Bucharest–Danube navigable Channel** will make possible to create a navigable connection between Bucharest and the Central and Western Europe, on one side, and, on the other, to generate regional development along its axis – just over the poorest area of the metropolitan territory.

A Romanian team of planning experts identified a series of available locations for creating **clusters** – these being cooperation areas, based on the local specific resources, on the local potential and on common interests between the local communities; **these clusters were named "regional parks of activities" (RPA)** and will be possible to be created by a mutual agreement between all urban actors involved in the process.



Picture19
The Clusters Network surrounding the City of Bucharest.

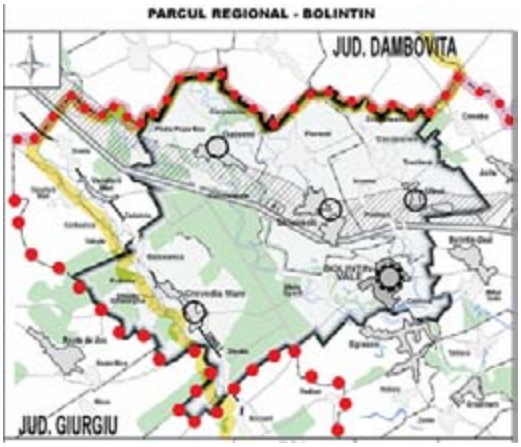
The RPA-s are located in the surrounding area of the City of Bucharest, each of them located at around 30 km distance from the Capital; the core of these RPAs are already existing big communes, having different levels of accessibility, but having the administrative power to negotiate and organize a financing programme in order to create an adequate public infrastructure. The concentration of economic, research or entertainment activities around the territories of these 8 administrative centers **will transform them into 7 future metropolitan poles of development**, contributing at the balance of the development process over the entire metropolitan area.

For a facile identification, the RPAs could have the same name as the core-settlement; they are presented further on: RPA Branesti; RPA Snagov – Gradistea, RPA Buftea, RPA Bolintin, RPA Mihailesti, RPA Comana, RPA Budesti. All these RPAs have commune objectives:

- the capitalization of the local resources and of their potential;
- achieving a new local identity and increasing their own attractiveness;
- promoting local brands and a better integration in the national and European exchanging networks;
- accessing European funds.

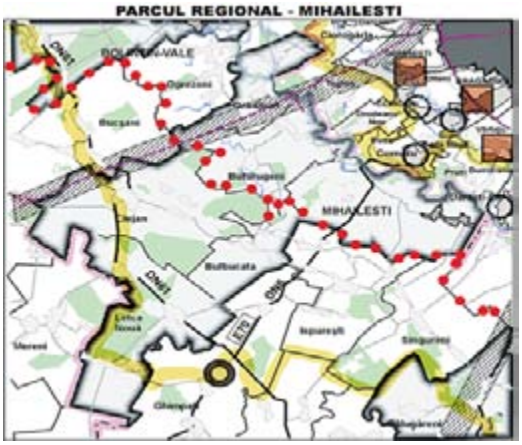
Every RPA has a different plan of development, based on its **specific existing resources and the future potential**; it was defined as a consequence of the **analysis, discussions and debate processes between expert teams and local urban actors**.

Picture 20 The functional structure of the "Branesti" Regional Park of Actvities. The predominant functional orientations of the **RPA Branesti** will be focused on: **Education, Research, Recreation, Religious and Tourism; 35.441 ha.**

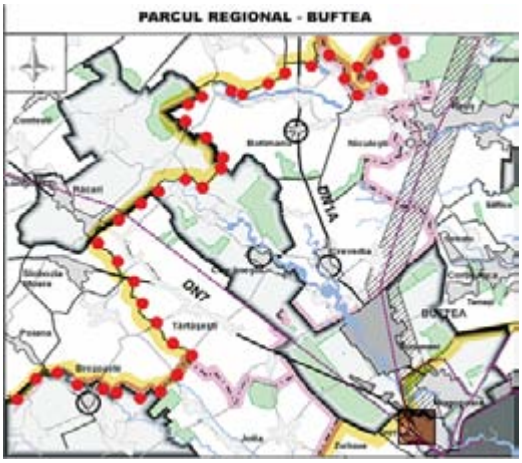


Picture 23 The functional structure of the "Bolintin" Regional Park of Actvities. The predominant functional profiles of the **RPA Bolintin** will be the **specialized education, agriculture, water supply for the City of Bucharest; 23.962 ha.**

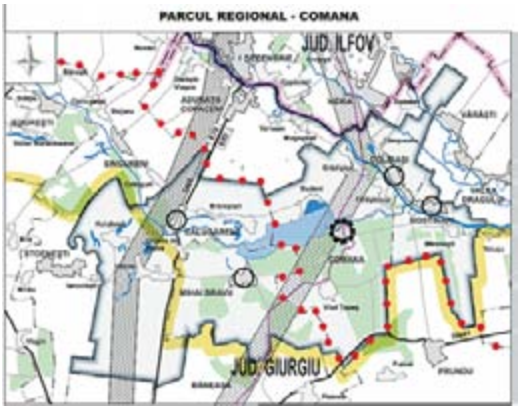
Picture 21 The functional structure of the "Snagov-Gradistea-Vlasia" Regional Park of Actvities. The predominant functional profiles of the **RPA Snagov-Gradistea-Vlasia** will be: **Sport and Recreation; 54,811 ha.**



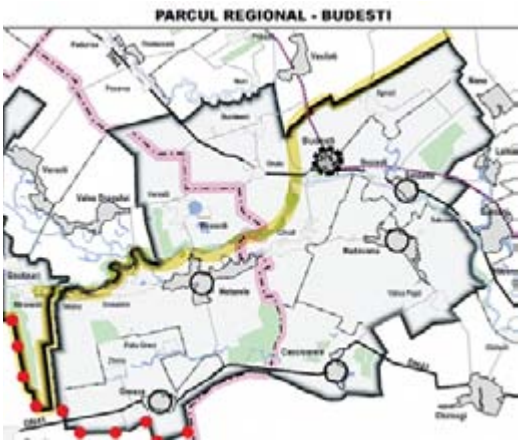
Picture 24 The functional structure of the "Mihailesti" Regional Park of Actvities. The predominant functional orientations of the **RPA Mihailesti** will be **zootechnics and small industry related to it, Gardening, Recreation; 33.605 ha.**



Picture 22 The functional structure of the "Buftea" Regional Park of Actvities. The predominant functional profiles of the **RPA Buftea** will be: **media studies, entertainment, depositing; 29.553 ha.**



Picture 25 The functional structure of the "Comana" Regional Park of Actvities. The predominant functional orientations of the **RPA Comana** will be **vegetables, fishing, natural tourism and historical tourism; 35.194 ha.**



Picture 26 The functional structure of the "Budesti" Regional Park of Activities. The predominant functional orientations of the **RPA Budesti** are **fishing, agriculture and depositing; 41.865 ha**.

Picture 27
Strategic Axis of National and Continental Connections for the Metropolitan Area of Bucharest.

Picture 28
The Navigable Channel Linking the City of Bucharest with The Danube River.

The connections between the metropolitan area of the City of Bucharest and the national territory will be ensured by the regional and national transport corridors; the connectivity of this territory to the studied "North-South Interface" area will be ensured by the European transport corridors.

The main directions of these connections represents the force lines of the metropolitan territory, on one side, but also, strategic axis for future development of the metropolitan area, on the other side; in the metropolitan territory already there are two international airports: "Henry Coanda" (its former name was "Otopeni") and "Baneasa"; they ensure national, continental and intercontinental connections by air.

One of the strategic axis of continental development and connection is represented by the European navigable corridor number VII, The Danube River, which partially is representing a national boundary at the southern part of the territory.

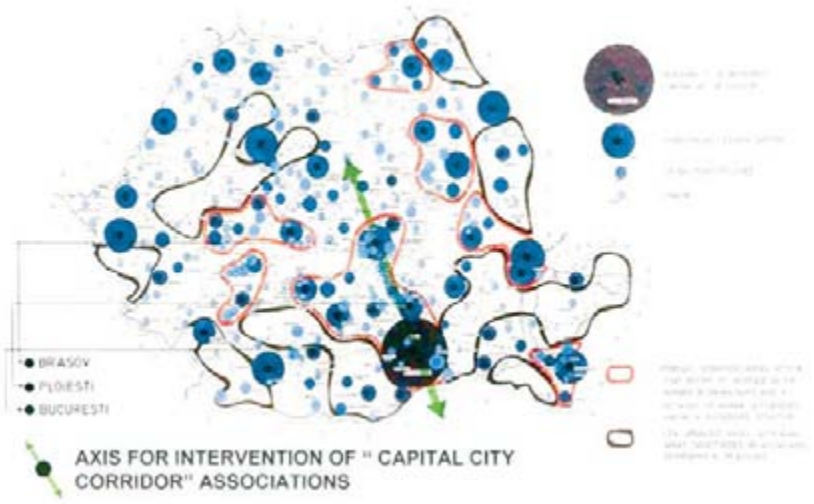
The Capital-city of Romania has a great chance to be almost connected with this navigable corridor, because a part of the Danube river represents the south-eastern boundary of the metropolitan area of the City of Bucharest, and a navigable channel having the mission to realize this connection was 60-70% finished until 17 years ago, but finally was abandoned after the Romanian revolution; this channel was realized by systemizing the natural route of the Arges river.

The entire length of the Bucharest-Danube channel there is on the metropolitan territory of Bucharest, following a north-west – south-east direction, linking the City of Bucharest (by two ports, one of them being in the commune of "1 Decembrie", situated on the Arges river at the southern part of the metropolis, the main one, and another one in the commune Glina, situated on Dambovita river at the eastern part of the metropolis) with Oltenita, a town situated on the Danube river.

The linkage of the Capital City of Romania with the main European navigable route Rhin-Main-Danube, will connect the City of Bucharest with the Cities of Belgrade, Budapest, Bratislava, Vienna, Frankfurt, Duisburg, Rotterdam, as well as with the Romanian port from Constanta, situated near by the western coast of the Black Sea.

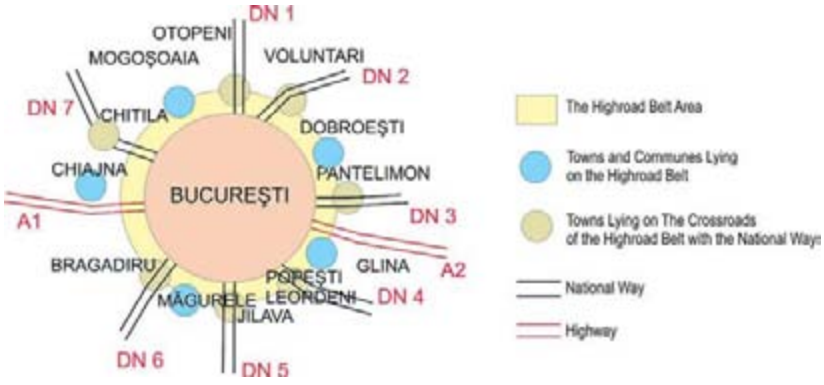
The local benefits will be great: jobs during the final execution period and mainly, after that, flood protec-

Picture 29
The Existing Stage of works at The Bucharest – The Danube RiverNavigable Channel.



Picture 30
The Romanian Network of Human Settlements.

Picture 31
Increasing Connectivity between the City-region of Bucharest with the "EU-NS Interface" Area.



tion for 11 human settlements, irrigation systems for more than 30,000 ha agricultural land, fishing and fish industry on about 1,200 ha, tourism development, increasing the quality of the micro-climate and regional climate by creating an "eater-mirror" of about 4,000ha in a very existing arid area, reducing the dependency of ruttier transport.

The relative good connectivity of the City of Bucharest with the rest of the national territory was permitted to the metropolis to adequately support its functional structure, created a transfer of functions and population towards other cities, towns and little human settlement, especially upon the north-west – south-east direction.

In this respect, we really could speak about spontaneity in the creation of a functional interchanges axis, which would have to be formally used in a planning process, in order to generate systemized interventions towards the benefits for the all settlements located in the area.

The **capital-corridor interventions** will affect positively the cities of Bucharest, Ploiesti, Campina, Brasov and Giurgiu, contributing at their **future and sustainable development**.

Brasov – Major changes of the functional structure and profile; development of new temporary or specialized residential areas;

Campina – Transfer of the common urban functions between this city and the Capital-city; indifferent or uncomfortable functional relations; its population will increase by transfer; transfer of specific functions; change of the functional profile;

Ploiesti – Population will increase by transfer from Bucharest; transfer of specific functions; changing of the local functional profile.

Bucharest – A massive adaptation of the functional and structural profile; stabilizing or decreasing of existing population; Harmonizing with the network.

Giurgiu – Transfer of urban functions; change of the functional profile; increasing population.

But these dreams, which are linking our present with the future, could be compromised if we don't take care about what is happening nowadays in the surrounding area of the Capital-City.

This very dynamic area lying on the synergetic area of influence of the City of Bucharest and the main national and European corridor of transportation could be transformed into **a factor of a sustainable development process**, or into **an interface area which will connect the Capital-city with the rest of the world**.

Our future will be up to our level of consciousness and involvement.

Picture 32
A Proper Future Connectivity Between the City of Bucharest with the "EU-NS Interface" Area will Depend on the Quality of the Public Management over its Surrounding Highroad Belt Area.

Bucharest: TRANSATIONAL

Final Report

3

Dr. Arch. Victoria-Marinela Berza
on behalf of The Interdisciplinary Centre for Advanced Research on Territorial Dynamics
The University of Bucharest, Romania
under the Directorate of Prof. Dr. Ioan Ianos.

This report on the spatial development perspective over a European large area (which is represented by the reference territory of the project named "Representative Inter-regional Network Areas / 2006–2007 – North-South Interfaces" refers to the capital city-regions lying in the mentioned territory, mainly; these regions, including the Capital-city region of Bucharest (see Picture 33), have a long history of transnational relations and present similar contexts, which offered to the project team the possibility to adopt **a common set of key issues related with what all of us want to attain in the medium and long term future**, on the one side, and **how to surpass the gap between our dreams and our possibilities**, taking into consideration the **existing resources and the foreseeing potential**, on the other.

This vision has to be split up into local strategies, sustained by spatial development frameworks, which will have to support different characteristics of territorial development: **economy, social equity, connectivity and spatial cohesion**. **Increasing global competition and the rapidly ageing workforce** which Europe has to face need to be counteracted through **an increasing adaptability and flexibility of the metropolis located in the studied area**; this territory must adapt itself by encouraging innovation, supporting the knowledge economy and protecting the environment, ensuring safe and secure city regions with social equity, all of these strategic plans making possible the maintenance of its mass in terms of population and economic development.

European Regional cooperation represents a significant part of the Romanian diplomacy which is

Picture 33 The Location of the Romanian Territory in the studied territory of the „RINA N-S I" Project.

Picture 34
Romania is an important knot of the Pan-European Transport Corridors Network.

complementary to the process of European and Euro-Atlantic full integration; Romania has been and will be, actively involved in promoting **the regional cooperation policy** by a dynamic involvement in the European and South-East European organizations, as well as a constant contribution to the debates on issues of interest with the involved states.

An important debate is focused on reinforcing **a polycentric pattern and introducing a unified spatial vision** that could create the proper environment for integrated development of different areas in Europe, sorting out the city-regional priorities, defending the need for greater public transport connectivity at a regional scale, improving the connectivity within the regions, maintaining social justice for all citizens living in the area. **The local visions need to be coordinated and reinforced at a transnational level, in order to maximise the existing potential and achieve long-term success through a synergetic effect.**

One of the most important aspects of the spatial development policies is **the effect of the existing urban and territorial structure, which generates the main determination on these policies**; this approach had to be adopted in our project because of the demographic decreasing and the limitation of economic resources existing over the studied area. As a consequence, **the project team will not expect major changes of the existing human settlements and regional structures in the area**, but expects a changing of the local representatives' attitude which could influence positively the comprehensive development in the area.

Picture 35
The Romanian Airway Transportation Network.

The international and interdisciplinary team of the "North-South Interface" project emphasised another important aspect: the city-regions which were involved in the study are **actively participants at the international cooperation** (having their own initiatives), as well as at a higher level of **decentralisation and democracy in the area**. These processes were **strongly influenced by the quality of the communication systems** existing in the area, which favoured the exchange of information and the mobility of people.

The Trans European transport network (TEN), being a programme of priority projects, could considerably support a better territorial balance over the "North-South Interface" area.

According to the map of the Pan-European Transport Corridors Network, Romania is an important knot of it, being located at the crossroad of the two longest Pan-European Corridors; the Romanian territory is covered by three important Pan–European corridors (Picture 34):

- **The Corridor 4** (on the west-east European direction), linking: Berlin/Nuremberg–Prague–Budapest–Bucharest–Constanta–Istanbul/Thessaloniki, which penetrate the administrative area of Bucharest on the "Pitesti-Bucharest" road section;
- **The Corridor 9** (on the north-south direction) linking: Helsinki–St. Petersburg–Moscow/Pskov–Kiev–Liubashevska–Chisinau/Odessa–Bucharest–Dimitrovgrad–Alexandropolis, which has a direct linkage with the administrative area of the City of Bucharest;
- **The Corridor 7** – The Danube, which is running at about 65 km distance from Bucharest (the southern direction) and includes the "Danube River–Black Sea" Channel.

Romania, as well as the other countries lying in the studied territory, wanted to increase efforts for developing the national and international transportation networks.

The first priority was grant to **multimodal transport corridors**, as well as to a **better connectivity** between the national transportation networks and those of the neighbouring countries, in similar conditions which were imposed by the older European countries on their own territories, regarding with the environmental standards.

The main objective of Romanian transportation policies is **to develop the main and local transportation networks according with the sustainable development principles, the main national strategic objectives and the spatial development processes**.

The Romanian efforts are focusing, also, on **modernizing its airway transportation infrastructure**, by:

modernizing international and local Romanian airports; modernizing the Romanian air-flotilla stock; developing the infrastructure of four Romanian international airports (Bucharest-Henry Coanda, Bucharest-Băneasa, Timişoara, Constanţa).

Romania has to reconstruct and improve, also, **the older transportation routes and the traditional communication links** with the **western and eastern Europe**, as well as with the **northern and southern Europe**; it has to realize better and more efficient connections with the other city-regions located in the studied area, using **all possible modes of transport and communication: by rails, by roads, by rivers and seas, by air**.

For the Railway transportation network are necessary some kinds of rehabilitation measures: short, medium and long term rehabilitation and modernization of the existing railway lines and of the whole railway telecommunications system; short and medium term modernization of Romanian rolling stock; short and medium term rehabilitation programmes for the railway stations located in 37 cities at least.

The Romanian Naval transportation infrastructure has to be modernized, also, by ensuring the navigability of the Romanian internal main rivers, as well as of the Danube River, inclusively on the "Danube–Black Sea" Channel; the most important Romanian port on the Black Sea, Constanta Harbor, and the strategic port on the "Danube-Black Sea" Channel (Cernavoda City area) need to be modernized, as well.

At present, the most dynamic sector of Romanian economy is represented by **telecomunications**; our country, as well as the other country from the Central and Eastern Europe, **transformed the belated start into an advantage, adopting the most modern technologies for their telecommunications systems**.

This fact was posible thanks to the **size of Romanian market**, which is very attractive for the foreign investors, on one side, and to the official position of the Romanian Governments who supported the development of infrastructure and the transition to an "informatised society" during the last years, on the other.

But there are big differences between different locations, in terms of **accesibility, in the surrounding area of the City-region of Bucharest**, in the other 7 regions of territorial development existing in Romania, as well as the others City-regions existing in the "RINA North-South Interface" studied territory; in this respect, the involved city-regions and their countries should ensure **a proper level of accesibility for the majority of population living in the studied geographical space**, increasing and developing transport facilities at the level of the secondary networks, in order to ensure **adequate conditions for a good quality of life over the whole territory**.

Unfortunately, there are, also, **a lot of low-density areas without chances in developing there infrastructure and telecomunications networks too soon**, this aspect condemning them at a low social and economic development, **increasing in this way the gap between the poor and the rich Romanian population**.

Picture 36 The Romanian Railway Transportation Network.

Picture 37 The Romanian Navigable Routes Network.

Picture 38 The Romanian Road Transportation Network.

Picture 39 The Romanian Mixed Transportation Network

Picture 40
Differences between Levels of Accesibility and Connectivity: between the "Bucharest-Ilfov" Region for Development and its surrounding areas, on one side, and between it and the other Seven Romanian Regions for Territorial Development, on the other.

But there is no doubt that the recent development of infrastructure, the economic and social dynamics represent positive signs towards attending general prosperity for the Romanian people.

The spatial development policies have to contribute at this process, increasing the level of the involvement of citizens and regional actors, in order to be aware of the local potential and to use the existing opportunities.

The Member States of the EU adopted a key issue: **regional determination**; in this respect, many components of the European Structural Funds were targeted for improving regional economies and reducing regional disparities.

In Romania there are 8 regions for territorial development, representing, more or less, historical and geographical areas, referring to NUTS II level – similarly to those existing in other European Member States. Six of the 8 Romanian Regions for Territorial Development have, totally, **19 districts located along the national frontiers**; they could be submitted to some specific development issues which came from their outlying geographical position.

The economical and social development of these regions will be stimulated by generating a cross border cooperation process with the neighboring countries, based by the Cross Border Cooperation UE Programmes.

Picture 41
The Romanian National Territory Development Plan.

The studied regions **involved into the "RINA NSI" project do not contain homogeneous or similar units** usable during the different analysis and synthesis stages of the project. On the other side, they present an **internal diversity and different types of disparities, which have to be understood properly**, in order to obtain a complex and comprehensive approach of the problems over the entire studied territory.

For all that, the **main characteristics of the City-region of Bucharest are quite similarly with the other city-regions belonging to the studied area**:

- First of all, during the last decade, the city, the city-region and the metropolitan areas were transformed by **very dynamic urbanising processes**;
- **The demographic distribution of the City of Bucharest is becoming almost similarly** with those of the biggest cities lying in the area;
- The urban development of Bucharest was **mainly influenced by the administrative and industrial functions of the city, while its service functions played a secondary role** – also the others former communist capital-cities located in the studied area. For this reason, the little towns and communes lying in the surrounding area of the Capital-city of Bucharest are not enough developed, and a responsible intervention in this respect seems to be necessary as a priority for the short term future;
- **The hierarchic system of the Romanian national human settlements needs to become more flexible, more differentiated, less constraining**, in order to favour an increasing of urban specialisation until at the lowest levels of settlements, and their free cooperation in a national framework as well as in an international one;
- **Multipolar cities and polycentric territorial systems should be developed**, coming out in favour of **territorial cohesion and sustainable development of the metropolitan area of Bucharest, as well as in the others city-regions located in the area of the "RINA NSI" project**.

To complete and modernize the transportation infrastructure will be a priority of the **Romanian National Territory Development Plan**, in order to increase the **European accessibility of the Romanian regions**; as a consequence, investments in the Pan–European corridors will be started as a priority; will be ensured a balanced distribution of investments for rehabilitation and modernization of the transportation routes, of the railway system and the development of naval transportation on the Danube River; these actions will be completed with investments in inter-modal platforms across the main harbors on the Danube River.

For the future development of the Romanian national infrastructure, the activities will be oriented to: finishing the connectivity process to TINA network and to TEN–T; stopping the degrading process of the

existing Romanian infrastructure; ensuring a safe transport; realizing connections to the TRACECA corridor; promoting ecological transport technologies; integrating local roads network in the national road system.

There is a strong aim at the level of the central and local governments to obtain a **good connectivity and a fluent traffic** over the whole Romanian territory; in this respect the actions will be focused on **construction of highways, the extension of existing road network and construction of new bridges**.

The Romanian network of human settlements is well structured and balanced; Romania is divided into 41 counties, plus the municipality of Bucharest (the Capital City of Romania).

Over the Romanian territory there are **263 urban settlements** (84 municipalities and 179 towns); and **12,750 rural settlements**. Urban population represents around 55% from the Romanian resident population (statistics data from the national census / 2002).

The internal structure of the majority of Romanian cities and towns reflects a dynamic and uncomplete transformation of the older urban systems; the functional structure is rapidly changing in the inner city areas, as well as in their surrounding areas, and **most cities are not prepared for these transformations**.

An uncontrolled urban increasing represents a great danger for the chances which really exist in order to attain a sustainable development over the project area; this type of spontaneous development **can lead to social segregation and urban function congestion, as well as a wrong representativeness for the developed locations**. It seems to be obligatory for the local and central authorities to confront themselves with these new challanges, to solve the existing and the future problems using a **democratic approach** and modern instruments for urban management, taking into consideration **the public interest**.

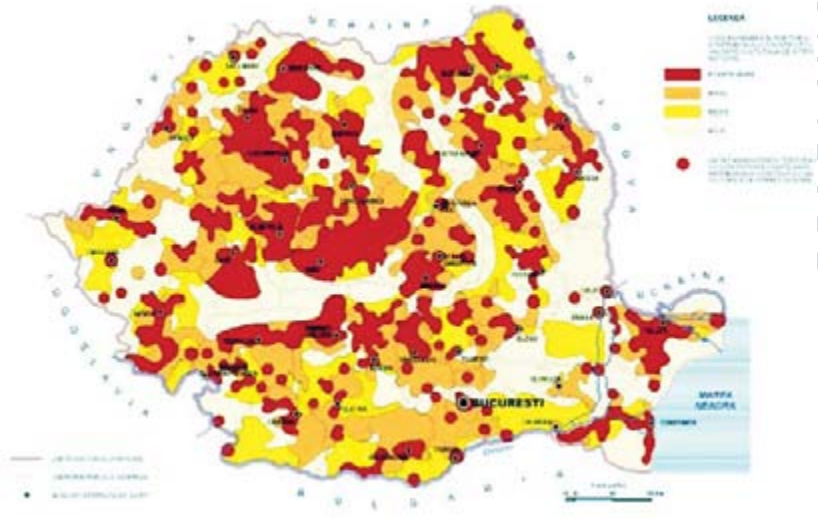
The Romanian territory has a **very rich cultural heritage and a large variety of valuable cultural landscapes**; here, can be founded representative monuments for most European art styles and cultural ages; to consider this geographic space as one of the richest folkloric art territory and an authentic rural architecture area would not be an exaggeration.

But a lot of Romanian **monuments are neglected and deteriorated** and, unfortunately, the specific data base is not completed yet or in accordance with European standards.

Some areas in Romania are populated by **multiple nationalities, having a distinct cultural heritage**, in those areas being necesary special policies for cultural management.

Romania has **a large network of natural parks**; they are protected by rules, but there is a discrepancy between the written law and the effective application of the existing regulations.

The protected lanscapes network is less developped in our country, the natural protected locations being isolated and **unorganised into ecological corridors**. This is another reason that it is necessary to create a new Urbanity and a new Territorial equilibrium in Romania.



Picture 42
The Romanian Protected Constructed Areas Network.

The Capital-city of Bucharest could become an example in these respects, for other cities from Romania, hurrying itself to:

- develop **a polynucleate city, a polycentric "Greater Bucharest" city-region as well as a polycentric metropolitan area**;
- create **the "green-yellow" belt area surrounding the very dense urban agglomeration of the Capital-city of Bucharest**;
- **integrate strategic spatial planning and public ownership of land**, in order to create social equity over the entire administrative area of the city;
- **implement more then 70 years of plans for strategic development**, which were realized before, during and after Romanian communist period.

The Capital-city of Bucharest's area, the "Greater Bucharest" city-region and the metropolitan area can be structured as **a hierarchy of urban centers starting from the inner-city level, closely associated around the traditional central core (the historic centre)**, on

Picture 43
The Romanian Natural Protected Areas Network.

Picture 44
The „Black Sea" Economic Cooperation Area.

one side, **and a city-regional structure closely associated around the key city, in a spatial system that allows complementarity and connectivity** between the **polynucleated structure and the urban form**.

The admission of Romania in European Union (the 1st of January 2007) developed strategic objectives: connection toward the European and Intercontinental **poles of comprehensive development networks**; creating **urban balanced structures**; strengthening **trans-Carpathians connections** in order to attend a balanced regional development.

The main objectives of the EU program for **"Cross Border Cooperation"** (CBC) have to: create a **competitive economy** based on exploitation of common advantages and sustained development; improve **physical and economical infrastructure**; develop the **human resources** of the regions, preparing them for the EU integration, **improving the cultural and educational connections, the quality of environment**; create an efficient **institutional system** for CBC.

The Cross Border Cooperation Programmes have a successful history in Romania: during the 2004–2006 period, the development of the Cross Border Cooperation Programmes was supported by the "New Neighborhood Programme" (68 M€); it was envisaged at the Romanian borders with Serbia & Montenegro, Moldavia and Ukraine; Phare CBC programmes for RO-BG and RO-HU were financed with an annual allocation of 8 M€ and 5 M€ for the last period; in July 2004, the Ministry of Public Finance, acting as a National Aid Coordinator (according with the provisions of Phare 2004 Programming Guide), submitted to the EU Commission services the joint programming documents for the following CBC: Romania–Hungary, Romania–Bulgaria, Romania–Moldavia, Romania–Serbia & Montenegro, Romania–Ukraine.

Also, other 3M€ was been allocated for the Phare 2003 Cross Border Cooperation Programme between Romania and Hungary, in order to realize a joint project in the fields of economic cooperation, environment protection and social and economic development.

Cross Border Cooperation Programme between Romania and Bulgaria benefits (from Phare 2003 funds) of an 8 M€ total allocation for different projects in the field of transport infrastructure, economic cooperation, environment protection, and social and economic development.

The extension of the cross border activities was accomplished through 2003 Programme – "External Border Initiative" by which was promoted projects on the Romania – Serbia & Montenegro, Moldavia and Ukraine borders, with a total amount of 6.56 M€.

In the new geopolitical context the "Caucasian–Central Asia" Area will obtain a world–wide emphasis; in this respect the opening of the **TRACECA Corridor** (containing railway and road transportation modes) will be an extremely important objective for the comprehensive development of the area; it will **overpass the Black Sea** (through the Constanta Harbor, the biggest harbor in the Black Sea area) and **the Caspian Sea**; it will be **connected with the Pan-European corridors**, inclusively with the **Corridor IV, Corridor VII and corridor IX**.

The Black Sea Economic Cooperation Area is based on the principles laid down in the Helsinki Final Act, on the documents of the following-up Conference on Security and Cooperation in Europe and, particularly, on the Paris Charter for a New Europe; it is based, also, on **shared values** such as: **democracy, human rights and fundamental freedoms, prosperity and economic liberty, social justice and equal security for all the Participating States**.

The goals and principles of **Summit Declaration of the Black Sea Economic Cooperation Area** (BSEC) are conforming with the provisions of the United Nations Charter.

The BSEC will contribute to create a future European wider economic zone; it aims to promote mutual understanding, peace and security over the region. The "Black Sea" area could become a peaceful, stabile and prosper territory, having friendly and good-neighbourly relations.

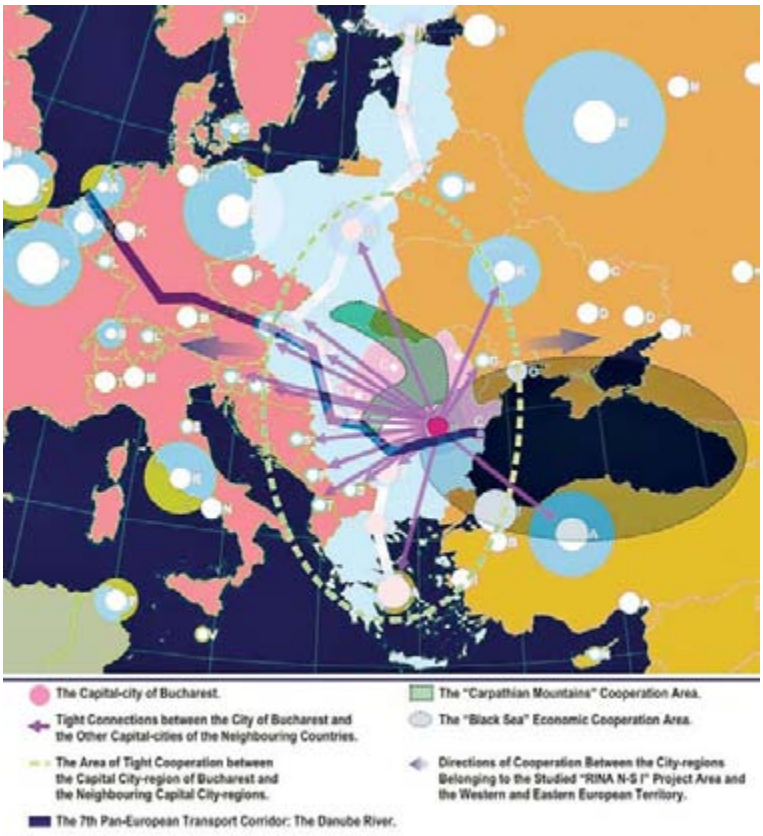
Over the Central Europe, there are 5 countries (Hungary, Poland, Romania, Slovakia and Ukraine) meeting in a rural mountainous area, lying along the **Carpathian Mountains** and over the Tisza River basin; the region is low developed from an economical point of view, due to the complex historical relationships.

The Council of the "Carpathian Euro-region" was the first one of that type in the Central and South-Eastern Europe; it already began to promote a cooperation attitude between governments, being assisted by NGO's sector.

Another strategic and large cooperation territory is represented by the **area of influence of the Danube River**; this will be optimized as a Pan–European Corridor territorial function, belonging to the trans-European network TEN. The Danube River represents the Corridor VII of the Pan–European Transportation Network; it also has good **connections with the Main River and the Rhine River**.

As well the Danube River became a **central axis of the enlarged Europe** and the **Black Sea became the eastern coastal area of the EU**, a **potential cooperation programme between the riverside states on the Danube River** could become **an important catalyst for the economic development over the Danube River's area of influence**.

These countries could **focus together** on targeted analysis, trend studies, visions, perspectives and scenarios, impact assessments, innovative and experimental studies, on technical and methodological sharing, as well as **the other countries of the "RINA North-South Interface" territory**.



Picture 45
The Area of Tight Cooperation between the Capital City-region of Bucharest and the Neighbour Capital City-regions.

Flexible cooperation is needed in order to allow the city-regions to work together on economic development, infrastructure, transport, waste management and environmental action plans.

The Transnational Visions on cooperation areas and the strategic comprehensive development plans have to focus on four key themes: balanced competitiveness, social equity, connected metropolis and city-regions, and a spatially cohesive polycentric framework.

Sofia

Sofia CITY

Final Report

1

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1 General Data about Sofia and Bulgaria

1.1 Geographic Location

Bulgaria is located on the Balkan Peninsula in South-Eastern Europe and is bordered by Rumania on the north, Serbia and FYRO Macedonia on the west, Greece and Turkey on the south, and the Black Sea on the east. The territory of the country is approx. 111 000 km2 and the population is 7,761 million people (2004 – National Statistical Institute), which makes a population density of around 70 people per sq. km. About 70% of the population is urban.

Sofia is the Capital and the biggest city in Bulgaria, located in the western part of the country. According to the last census, in 2001 the population of the city of Sofia was 1,113,700 people (14.3% of the total population of Bulgaria).

The strategic geographic location of Sofia, and Bulgaria as a whole, is very important. Five (from the total number of ten) Pan-European Transport Corridors (Nos 4, 7, 8, 9 and 10) pass through the territory of Bulgaria. Three of them (Nos 4, 8 and 10) intersect in the capital municipality. This unique cross-road position of Sofia is considered as one of the main factors that will drive the development of the city and the region.

1.2 Territorial and Administrative Structure of Bulgaria

Bulgaria is divided into 28 districts (oblast), which correspond to the NUTS 3 level in the European classification of territorial units. The district administrations are local bodies of the central administration, responsible for implementation of national policies at local level – so, in fact they are not a level of self-governance. Districts consist of municipalities (obshtina), which are the territorial and administrative units for local self-governance. The administrative boundaries of Sofia Municipality and Sofia City District are identical, which is not the standard case for the country.

In relation to the EU accession, a higher territorial level was introduced – so called 'planning regions' at NUTS 2 level - only for planning/programming purposes, without respective administrations. There are 6 planning regions in the country – North-Western, North-Central, North-Eastern, South-Western, South-Central and South-Eastern. Sofia is the centre of the South-Western Planning Region (comprised of 5 districts and 52 municipalities with a total area of 20,306.4 km² and population of 2,098,800 people) which is the most economically developed region in the country.

The planning regions boundaries are now in procedure of change, those of South-western remaining same as previous

1.3 Socio-economic and Demographic Data

Planning Regions (2005)

Planning regions	Area (km²)	% of the total area of the country	Population (persons)	% of the national total	Population density (persons/km²)	Arable land 2003 (dca/capita)	Number of districts	Number of municipalities
Republic of Bulgaria	111001.9	100.0	7718750	100.0	69.9	6.4	28	264
Northwestern	10606	9.3	493708	6.4	46.5	11.9	3	32
North Central	17952	16.2	1140453	14.8	63.5	8.6	5	41
Northeastern	19923	17.9	1270018	16.5	63.7	9.3	6	49
Southeastern	14648	13.2	774538	10.0	52.9	8.6	3	22
South Central	27516	24.8	1921178	24.9	69.8	5.0	6	68
Southwestern	20306	18.3	2118885	27.4	104.3	2.5	5	52

Sources: National Strategy for Regional Development

Population ('000)

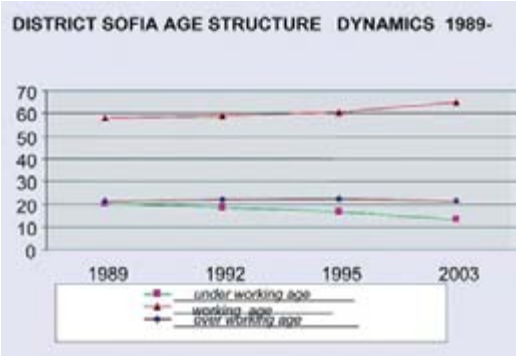
Level	1975*	1985*	1992*	2001*	2003	2005
Bulgaria	8727.7	8948.6	8487.3	7973.7	7801.3	7718.7
Sofia region (SWRP)	2084.2	2217.6	2176.4	2098.8	2110.0	2118.8
Sofia district (Sofia Municipality)	1076.7	1201.7	1190.1	1178.5	1208.9	1231.6
City of Sofia	967.2	1120.9	114.9	1099.5	1127.5	1148.4

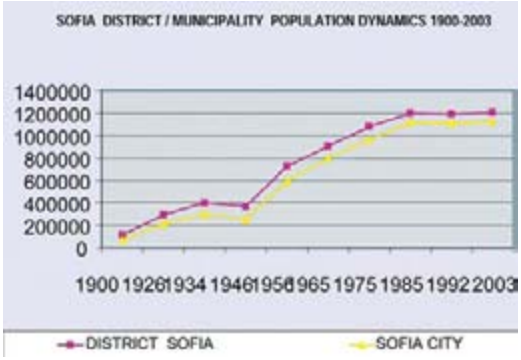
Source: National stat. institute (NSI)
*According to official census

Population Density (inh. per km²)

Level	2003	2005
Bulgaria	70.3	69.5
Sofia region (SWRP)	104.0	104.3
Sofia district (Sofia Municipality)	922.8	913.0
City of Sofia	6362.8	6480.7

2003	2005
Population increase Natural incr. (- 4.0 ‰) Migration incr. (+ 12.7‰) **Total incr. (+8.7‰)**	**Population increase** Natural incr. (- 2.9 ‰) Migration incr. (+ 12.2‰) **Total incr. (+9.3‰)**
Population age structure (groups) 0-14 years – 13.6% 15-64 years – 65.2% 65 + years – 21.2% 100.0%	**Population age structure (groups)** 0-14 years – 13.6% 15-64 years – 65.2% 65 + years – 21.2% 100.0%





Employment

	1990	1992	2001	2003*	2005
Employed pers.	580 000	482 280	544 500	570 000	625
% of the registered unemployed persons	1,44	8,90	4,40	3,54	2.80

*The number of the unemployed persons in Bulgaria is about13.5%

Employment per sectors

Sectors	1990	1998	2000	2003	2005
Agriculture/ forestry (I)	1.6	2.7	2.3	1.9	1.5
Manufacturing Industry (II)	42.2	25.9	23.6	22.5	22.0
Services (III)	56.2	71.4	74.1	75.6	76.5

Housing

	1998	2002	2005
Dwellings	481 336	517 436	523141
Dwellings /1 000 inh.	401	433	424.8
Average nbr. inh./ dwelling	2,49	2,31	2.35
Living floor space per capita (m²)	15,21	17,21	16.96
Average number of personsin a household	2,5	2,55	2.51
Number of households per 100 dwellings	90,5	88,9	93.8

Motorisation – passengers cars

	1992	2003	2005
Number of passengers cars		575876	615425
Number of passengers cars per 1000 inhabitants	274	476	500

Educational structure (2001)

Higher education	21,8%
College education	5,5%
Secondary education	42,2%
Primary education	14,6%
Elementary education	5,8%
Lower and children	10,1%

Education

	2002–2003	2005–2006
Universities and Higher schools	19	20
Students	88 704	91184
Teaching staff	8 844	11335
Scientists	12 800	12318

Cultural institutes

Theatres	19
Opera	1
Operetta	1
Puppet theatres	2
Museums	27

Modal split

Mass public transport		64,7%
in that number:	Buses	45,5%
	Trams	29,6%
	Trolleybuses	17,1%
	Underground	3,3%
	Trains	0,8%
		100,0%
Private cars		17,4%
By foot		10,6%
Office transport		3,6%
Railway, bicycle, and other		3,7%
		100%

1.4 National Planning Context

The Bulgarian legislation distinguishes between two parallel and supposedly coordinated planning processes, regulated by separate laws:

- **Spatial Planning**
  regulated by the *Territorial Planning Act*
- **Regional Development Policy**
  regulated by the *Regional Development Act*.

The Territorial Planning Act (TPA), adopted in 2001 and updated 2007, is the keystone of Bulgarian spatial planning system. Together with its subordinate legislation (ordinances) TPA regulates most aspects and levels of the spatial planning: territorial planning (at national and regional level); land use planning and zoning (at municipal and city level); detailed planning (at city district level). TPA determines the subordination and relationships between different types and levels of spatial plans; the procedures for their elaboration, approval and application; the roles and responsibilities of the respective institutions, etc.

Spatial planning is carried out at national and regional/district levels through spatial schemes and at local level through spatial plans (master plans and detailed plans). Spatial schemes determine the general spatial and settlement structure of the respective territory (national or regional/district); transport and infrastructure networks and facilities with national/regional significance; nature and heritage reservation areas, etc. Regional/district spatial schemes must comply with the National Comprehensive Spatial Scheme. Spatial schemes do not have direct development application; they are the basis for the next planning level – spatial plans.

Master plans are produced for the territory of municipalities, parts of municipalities, or individual cities and towns. They determine the spatial structure of the territory, land use and zoning designation, the backbone of the transport and infrastructure networks, measures for protection of environment and cultural heritage, measures for prevention of urban disasters, etc. Master plans are binding for the next level of plans – detailed spatial plans, which produced for the territory of (small) settlements or parts of settlements and are the necessary precondition for starting development permit procedures.

The Regional Development Act (RDA), adopted in 2004 and updated 2006, regulates the national policy for balanced and sustainable development of the different regions of Bulgaria. The law provides for planning, programming, management, resource allocation, state support, monitoring and control of regional development.

RDA determines a special territorial level (so called 'planning regions'– NUTS 2) only for planning/programming purposes. RDA also provides for designation of some particular areas (one or more neighbouring municipalities) as 'special impact areas' – i.e. economic growth areas, industrial decline areas, underdeveloped border areas, underdeveloped rural areas, underdeveloped mountain areas and Sofia municipality – for application of differentiated policies, measures and/or resources according to local needs and potentials.

The regional development policy is implemented through a system of coordinated strategic plans and programs for the different territorial levels:

- *National Regional Development Strategy* – NUTS 0
- *Regional Development Plans* – NUTS 2,
- *District Development Strategies* – NUTS 3,
- *Municipal Development Plans* – LAU 1 (NUTS4).

The state support for regional development is implemented through the *National Regional Development Operative Programme*, which include the whole territory of the country and is related to the *National Development Plan* with corresponding financial sources.

The inter-relationship between the spatial planning and the regional development policy at different territorial levels is shown in the following diagram 4.

Although, on theory, the two planning processes (spatial planning and regional development policy) should function in inter-relationship and coordination with one another, in practice this rarely happens.

In terms of regional policy – the whole set of strategic/planning documents at NUTS 0, NUTS 2 and NUTS 3 levels (national regional development strategy, regional development plans, district development strategies) is already finished and most municipal development plans (LAU 1) are either finished or in the process of preparation. However, there is a significant lag in the field of spatial planning – the national and regional/district level comprehensive spatial schemes have not yet been prepared. Some cities and municipalities (including Sofia) are in the process of elaboration of their Master Plans, which are in most cases outdated (e.g. the current Master Plan of Sofia is adopted in 1961). However, the coordination between the spatial plans and the regional development documents is insufficient.

Sofia CITY-REGION

Final Report

2

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2.1 Natural-geographic Conditions and Spatial Structure Of Sofia

Sofia is situated in the southern part of a small plain (Sofiysko Pole) surrounded by several mountains – Balkan Mountain Range (Stara Planina) to the north and several smaller mountains (Lyulin, Vitosha, Plana, Lozen) to the south. Especially important for Sofia is Vitosha Mountain, which has a National Park statute and is a favourite place for sports and entertainment. The city of Sofia is located in the southern part of the plain and the city periphery reaches the foothills of Vitosha Mountain. The biggest river Iskar cuts the plain from south to north direction along the eastern periphery of the city.

The territory of Sofia Municipality covers an area of 1311 square kilometres in the central Sofiysko Pole and parts of the surrounding mountains. It includes the city of Sofia and 37 smaller settlements – 3 towns and 34 villages.

The city of Sofia itself is very compact with radial transport network and strong monocentric structure. Most large transport routes converge on the city centre, while the concentric rings and tangent routes are missing or incomplete.

The spatial structure of Sofia is typical of most former socialist cities. Four concentric zones can be identified:

City centre. This is the area with the highest built-up and population density and includes the main administrative, representative, cultural and office buildings. The city centre of Sofia has preserved, to a considerable extent, its residential function, however since 1989 there has been an increasing tendency for commercialisation of this part of the city.

Inner city. Most parts of the inner city were built up and incorporated into the city in the period between the World Wars.

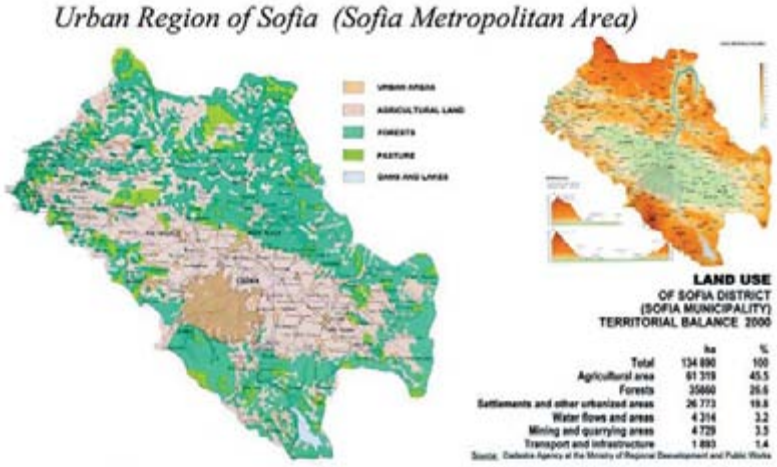
Large panel-housing estates from the socialist period. The overwhelming part of Sofia's panel housing stock is concentrated in four clusters of high-rise housing estates on the periphery of the compact city, the biggest one being *Lyulin* (115 000 inhabitants) and *Mladost* (100 000 inhabitants). These housing estates have been suffering from an array of problems. In the past they had been known as 'bedroom towns', because of its lack of public services and employment opportunities. Now their biggest problem is the inadequate maintenance of the housing stock and public spaces (especially green spaces) and a large part of them are in need of reconstruction and renewal.

Suburban ring. This consists of many settlements and suburbs (mainly along the ring road) which have to considerable extent preserved their traditional rural character with low-density single family detached or semi-detached housing. Although there is a tendency for increased suburbanization, the share of people living outside of the compact city is very small – between 6.5–7.0%.

Typical for Sofia is the large share of industrial areas in the compact city – remnants from the industrial heritage of the socialist past. Now most of these industrial areas are inadequate to the current economic

base of the city (mainly in the service sector) and are derelict and decaying. Most and the biggest of industrial zones are concentrated in the northern part of the city and the surrounding area.

This is one of the reasons for the substantial disparity in the quality of living environment between the northern and southern parts of the city. Northern areas have worse ecological conditions, owing not only to the proximity of many industrial zones but also to the lack of major green areas and parks. In contrast, southern parts of the city are more attractive and overwhelming part of the new construction and investments are concentrated there. This disparity between south and north (and to a lesser degree between east and west) is one of the main problems of the city.



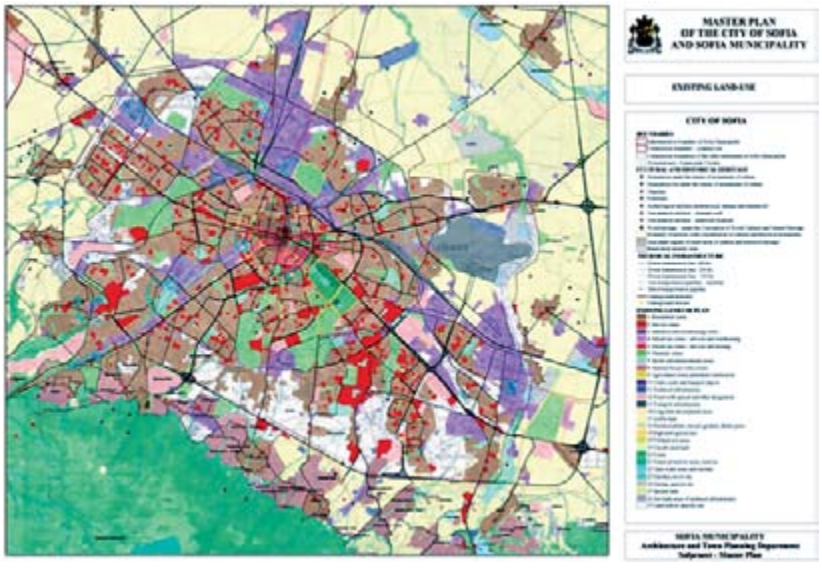
2.2 Strengths and Weaknesses of Sofia

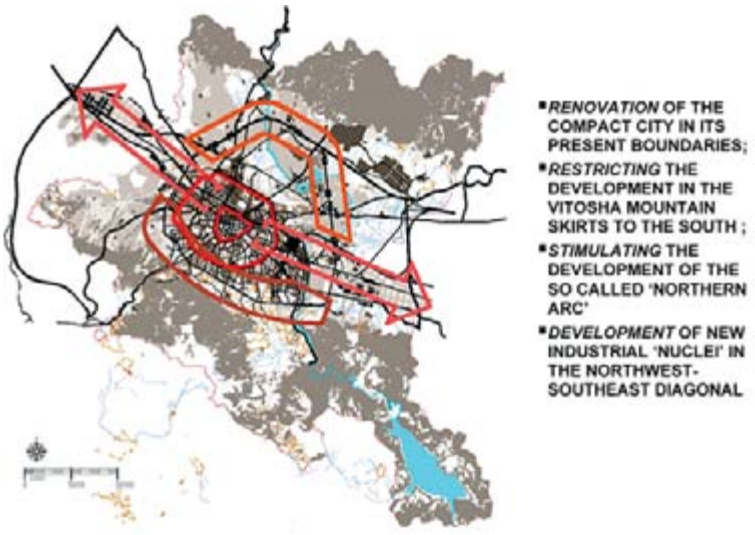
Several major **problems** of Sofia could be identified:

- Over-concentration (on both regional and city levels) of population and economic activities. More than 93% of the population of Sofia Municipality lives in the city of Sofia. There is a strange phenomenon – the most densely populated district in Bulgaria (Sofia City district) is surrounded by the most rarely populated district in the country. The situation is getting worse by the significant migration from the rest of the country. Thus, although the population of Bulgaria as a whole is diminishing (due to negative natural growth and emigration from the country) the population of Sofia city is constantly increasing.
- On city level, the still predominantly monocentric spatial structure, coupled with the radial road network with incomplete rings and tangent routes, pose a significant transport pressure to the city centre in terms of traffic congestion, parking spaces etc. The problem is getting worse by the extreme growth of motorization – motorisation rose from 274 passengers' cars per 1000 inhabitants in 1992 to 500 cars per 1000 inhabitants in 2005. The number of cars in the city is increasing every day.
- Spatial imbalances between different parts of the city, which leads to over-development of certain areas and underdevelopment in others.
- Outdated and inadequate technical infrastructure. It is a paradox that some of the most expensive neighbourhoods on the slopes of Vitosha mountain lack such basic infrastructure as sewerage.
- Large derelict and decaying industrial areas, inadequate for the new economic and ecological requirements. Lack of modern industrial infrastructure, such as hi-tech parks, logistic centres, etc. Insufficient modern business infrastructure.
- Large panel housing estates in an urgent need of renewal (including in terms of energy efficiency).
- Low quality of public and communal services, insufficient maintenance of public spaces, green areas, etc.

Despite these major problems, Sofia has a number of **strengths**, which are a great potential for development of the city.

- Strategic geographic location in the centre of the South-Eastern Europe on the crossing point of three Trans-European Transport Corridors (Nos 4, 8, 10). This is very important for the future development of the city and the region, because a crossroads location means not only development of the infrastructure, but also transfer of people, goods, services, tourists, etc.
- Administrative and political centre of Bulgaria where most control and command functions of the government and the business are concentrated. The EU membership of Bulgaria will increase the regional importance of the country and its capital city.
- Sofia is the largest and the most dynamic economic centre of the country, producing nearly a third of the national GDP. In the past several years Bulgaria attracted considerable Foreign Direct Investment (FDI) and is the SEE leader in FDI per GDP. Most of the FDI is concentrated in Sofia.





The main principles of the Master Plan.

- An important advantage of the city is the educational level of the population – over 70% of the population is with at least secondary education and 27% is with higher or college education. In Sofia are concentrated 20 universities and 58 research institutes with a large number of students and scholars. There are a large number of foreign students – including from the neighbouring countries (Greece, FYRO Macedonia, etc.). The existence of many foreign students from Greece, for example, which is a more economically developed country, is a good indication for the quality of Bulgaria higher education. Sofia is a real regional academic centre.
- The natural conditions of the city provide unique opportunities for sports, recreation and tourism. The proximity of the Vitosha mountain is a real treasure for the city. A very important, but not well developed resource is the large number of mineral water springs, abundant in Sofia. It is believed that the mineral waters, in addition to the crossroads location, are the very reason for the emergence of the city thousands of years ago. There are 42 geothermal sources in Sofia with a wide range of potable and curative characteristics, covering all known mineral water types in Europe. Unfortunately, this unique potential is poorly utilized.

There are many other strengths of Sofia, as for example the rich cultural life and historical heritage from different eras, cultures and religions.

The main question is how this rich and unique potential could be best utilized for the future development of the city.

2.3 Master Plan of Sofia

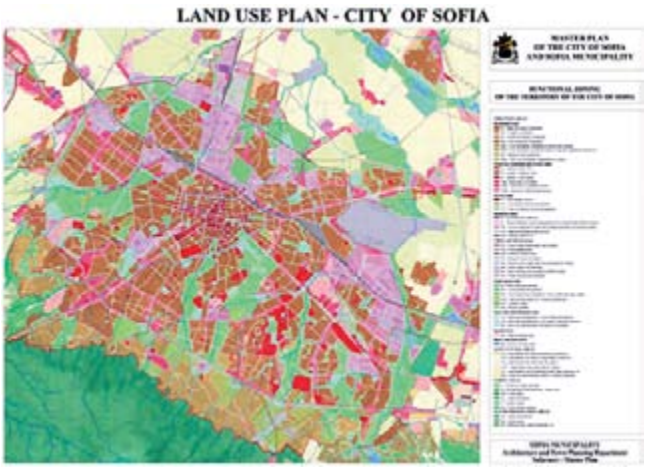
The **Master Plan of Sofia** is one of the main instruments for realization of the strategic vision and aims of the development of the Sofia City-Region. This extensive document was prepared in the period 1998–2003 and after some procedural delays was approved in December 2006 by the National Parliament with a special Law for Planning and Development of Sofia Municipality.

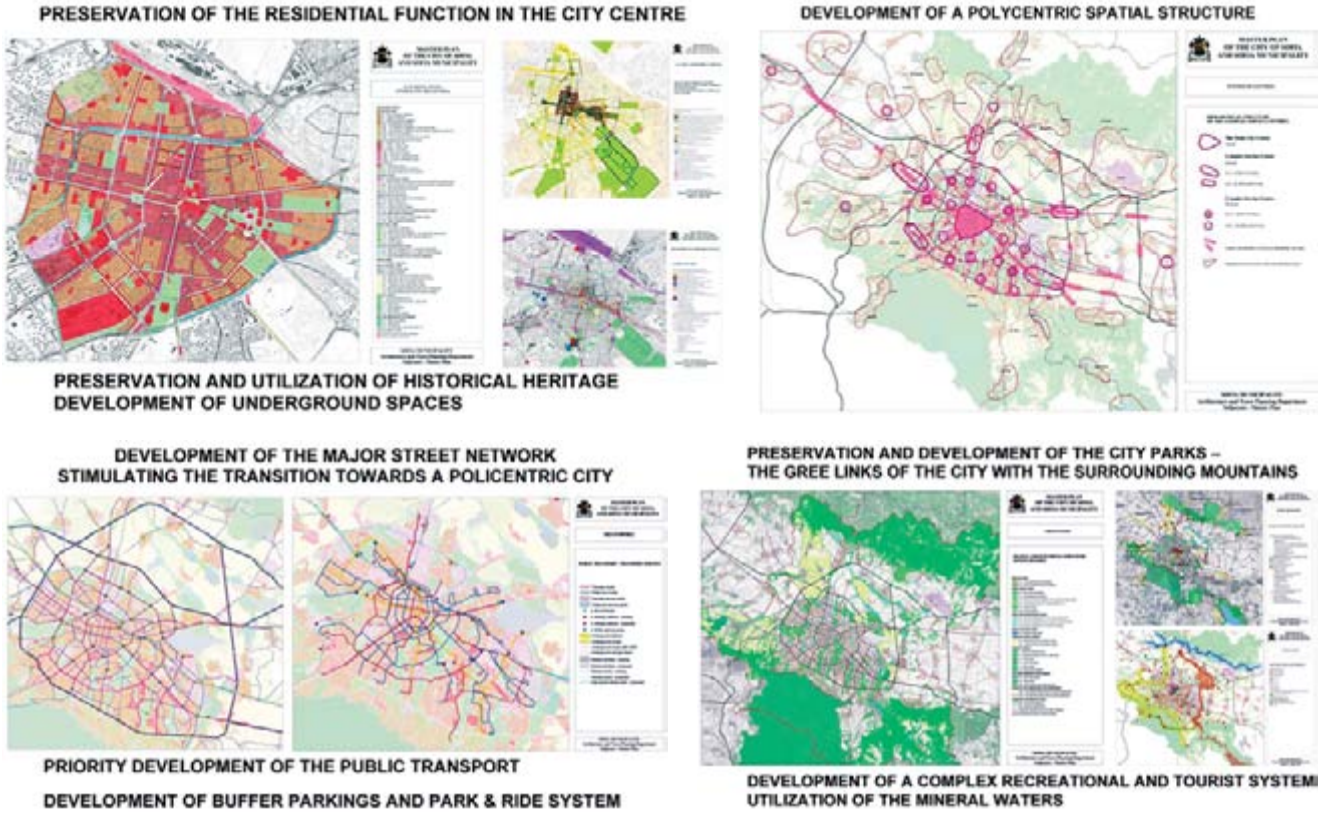
The Plan's major goal is *to create conditions for integration of Sofia in the unified European space; to provide for sustainable development and a new quality of the living environment for residence, work and recreation of the inhabitants and guests of the Capital.*

The projected time scope of the Master Plan is defined until the year 2020. The future development of the city-region is planned on three territorial levels – the city of Sofia (so called ‚The Compact City'), Sofia Municipality (including the city of Sofia itself and another 37 human settlements around the Capital), and Zone of Active Influence (so called ‚Sofia Metropolitan Area', comprising eight neighbouring municipalities).

The Plan defines a set of aims with functional, spatial and environmental character, as well as specific objectives for each of the main functional systems – residence, employment, recreation, transport and technical infrastructure.

Trying to utilize the city's major strengths while eliminating its weaknesses, the Master Plan aims to provide for a balanced and sustainable spatial development and a new quality of the urban environment.





The *main principles* of the Master Plan are: limitation of the spatial increase of the Compact City; activation of the settlements structures in the surrounding region and development of balancing urbanized nuclei in the north-west – south-east axis; limitation of the development in the skirts of the Vitosha Mountain to the south and stimulation of development to the north; development of a polycentric spatial structure of the city.

These principles are applied in the main document of the **Master Plan – Land Use and Zoning Plan** in scale 1:10 000 for the city of Sofia and in scale 1:25 000 for the Sofia Municipality and the Zone of Active Influence (Metropolitan Area). There are detailed maps in scale 1:5 000 for some specific parts – for example, the centre of the city and other areas with current or expected high investment activity.

Besides the Land Use and Zoning Plan, the Master Plan includes a large number of schemes, other graphic materials, and specialized studies by functional systems and specific topics – *residence, work, recreation and green system, services and public centres, macro-spatial structure, transport and technical infrastructure, cultural and historical heritage, underground spaces, etc.* These specialized studies analyze specific problems, define specific objectives, and propose specific solutions for each individual element of the urban environment. For example, some of the **measures** that are proposed are:

- reconstruction and renewal of the large panel housing estates and the disadvantaged neighbourhoods; preservation of the residential function in the centre of the city, invaded by commercial and business activities; development of modern high-quality residential areas, etc.
- regeneration of old industrial zones; development of modern industrial and hi-tech parks, inter-modal logistic and distribution facilities, modern business centres, etc.
- renewal of the historic city centre; development of a hierarchical system of secondary and tertiary public centres in the whole territory of the city and the region;
- development of specialized centres and environments; protection and utilization of the mineral waters and development of spa centres;
- protection and enlargement of the urban green system; development of new city parks and theme parks;
- construction of the elements of the Trans-European Transport Corridors and their links with the city and the surrounding region; reconstruction and further development of the city transport infrastructure;
- development of the underground public transport (Metro) system; development of a park-and-ride system;
- protection and preservation of the cultural and historical heritage; development of cultural itineraries in the surrounding region; etc.

An *implementation programme* and an *action plan* for realization of these large-scale measures have been prepared. They determine the most urgent actions, time-

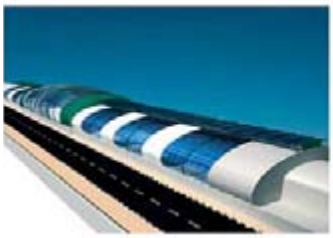
SOFIA AIRPORT EXTENTION

Project : New Passenger Terminal of Sofia Airport

Capacity: 2.6 million passenger per year, 26 000 tons of cargo per year

Project: Multi-functional complex – retail, office entertainment and residential

Location: 3 km to the south-west of



METROPOLITAN SOFIA

Project: Extension of the 1-st line of the Metropolitan Sofia

Phase 1: From Serdika to Interpred Stations
Phase 2: From Interpred to Mladost1 Stations
Phase 3: From Mladost1 to Mladost4 Stations
Phase 4: From Mladost 1 Station to Sofia Airport

Project: Construction of the 2-nd line of the Metropolitan Sofia from the Central Railway Station to the Hemus Hotel

WESTERN PART OF THE CITY CENTRE

Project: Development of a modern Central Business District in the western part of the City Centre with cultural facilities and exposition of the historical heritage

Location: City Center – West Direction

Location:

scale for realization and the respective actors. The proposed actions and measures will be incorporated in the Development Plan and annual budgets of Sofia Municipality. For implementation of the Plan on a regional level (outside the administrative boundary of Sofia Municipality) a special inter-municipal body will be constituted – 'Social and Economic Council of Sofia Metropolitan Area'. This consultative body will include representatives from Sofia Municipality and the other neighbouring municipalities comprising the Zone of Active Influence of the city of Sofia. It will ensure coordinated efforts for realization of projects and measures with common interest.

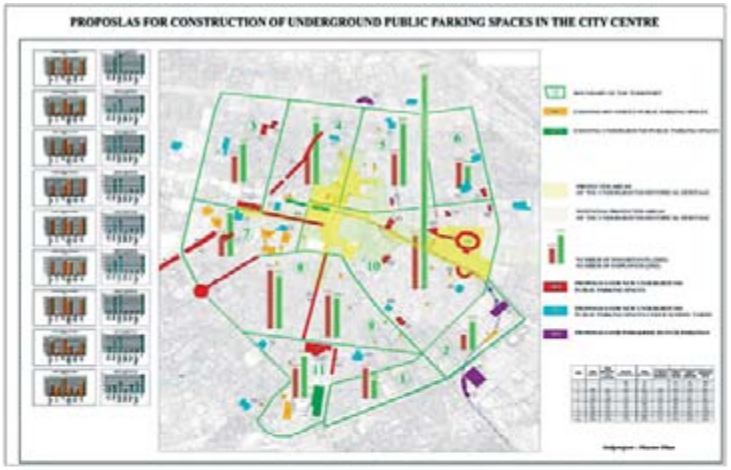
The Master Plan is approved by the Municipal Council in 2003 and now is in the process of final endorsement by the National Parliament (according to Bulgarian legislation, the Master Plan of Sofia should be adopted through a special legislative act – *Law for Approval and Implementation of the Master Plan of Sofia*.

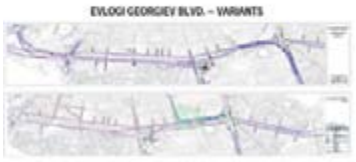
2.4 Sofia City-region (Oblast) Development Strategy

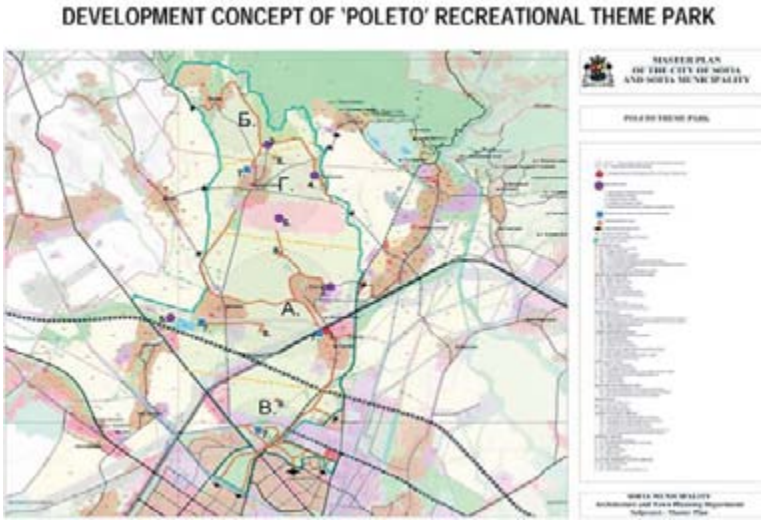
Sofia District Development Strategy (SDDS) for the period 2007–2013 formulates the vision, strategic objectives and priorities for development of the Sofia District, as well as determines specific objectives and measures for each priority – a basis for the elaboration of the Development Plan of Sofia Municipality, according to Bulgarian Regional Development Act.

In territorial terms, Sofia District is identical with Sofia Municipality and therefore there is a high degree of coordination between the two planning levels.

The **main aim** of the Strategy is defined as: *Development of Sofia as a sustainable city-region – an attractive economic, political, cultural and academic centre with strategic importance in South Eastern Europe*. For implementation of this main aim the District Strategy formulates three strategic objectives, as well as three development priorities.







Strategic Objectives

- Maintaining a high level of economic growth through development of a knowledge-based economy;
- Achieving balanced and sustainable development of the whole territory of the city and the surrounding region;
- Positioning in the European polycentric urban system as an important centre in SEE with attractive living and business environment.

Development Priorities

- Increasing the competitiveness of the city through development of a knowledge-based economy
- Development of modern business, office and service centres and complexes
- Development of modern industrial and warehousing zones and high-tech parks
- Regeneration and renewal of the existing industrial zones
- Development and modernization of the transport and technical infrastructure
- Reconstruction and development of the road infrastructure
- Development of the public parking system
- Construction of the Underground rail (Metro) as the backbone of a modern public transport system
- Improvement in the living conditions and the quality of the living environment.
- Reconstruction and development of the public centres
- Development of zones for sports and recreation and facilities for entertainment and attractions
- Restructuring and development of the urban residential structures

For each development priority SDDS determines a number of specific objectives and measures, which will form the basis for the preparation of the Development Plan of Sofia Municipality (now in the process of elaboration), where concrete actions and projects will be determined.

Sofia TRANSNATIONAL

Final Report

3

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SOFIA MUNICIPALITY OP "SOFPROECT – MASTER PLAN"

3.1 Development Plan of the South-West Planning Region

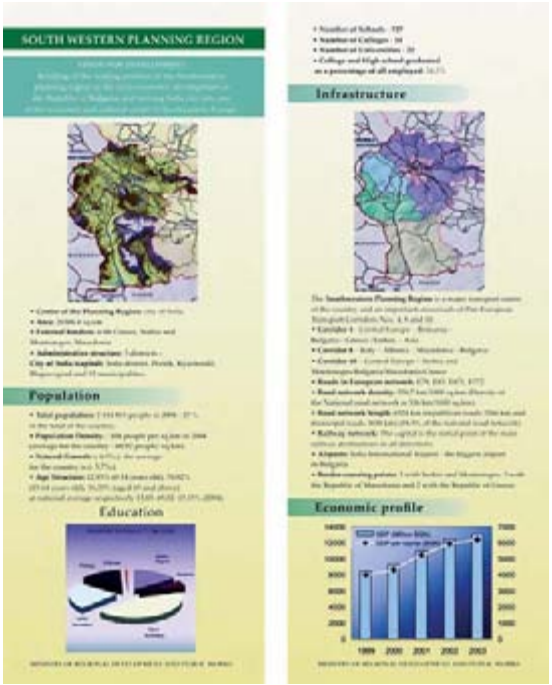
The **Development Plan of South-Western Planning Region** (DPSWPR) with centre Sofia for the period 2007–2013 defines the policy aims and priorities for sustainable socio-economic development of the region with correspondence of the aims and priorities of the European and national regional development policies.

The **main aim** of the DPSWPR is defined as: *Boosting the leading position of the South-Western Planning Region in the socio-economic development of the Republic of Bulgaria and turning the City of Sofia into one of the most attractive economic and cultural centres in South-East Europe.*

DPSWPR acknowledges the special role of the City of Sofia as a motor for the economic development not only for the South-Western Planning Region, but also for the country as a whole. Thus a special emphasis is given on the socio-economic development of the capital city.

At the same time, DPSWPR formulate a clear objective for a balanced polycentric development of the region. It aims at diminishing intra-regional differences through development of the infrastructure and human resources in the major urban centres, smaller settlements and peripheral areas.

A special importance in the Plan is also placed on the fact that the South-Western Planning Region is located in the North-South urban axis Bucharest/ Belgrade–Sofia–Thessalonica–Athens (Trans European Transport Corridor 4, which is the main 'structural axis' of the territory), and also to the location of the region along three national borders – linking the country with Greece, Serbia and FYR of Macedonia. Combined with the rich natural and cultural-historical resources



of the region, there is a great potential for development of tourism and for trans-border cooperation.

3.2 National Regional Development Strategy

The **National Regional Development Strategy** (NRDS) of the Republic of Bulgaria for the period 2005–2015 is the fundamental document formulating the long-term objectives and priorities of the country's regional policy. It outlines the "top-down" approach, serving in this way as a milestone for the district strategies for regional development, the municipal and regional development plans and the National Regional Development Operative Programme.

The **main goal** of the regional development for the period until 2015, as formulated in the strategy, is achievement of a *sustainable and balanced development of the regions in the Republic of Bulgaria*. NRDS defines three major strategic objectives:

- Accelerated economic development of Bulgarian regions,
- Decrease of intra-regional and inter-regional differences,
- Territorial co-operation and partnership at regional, national and EU levels.

The NRDS acknowledges the leading position of Sofia in the national economy and determines Sofia Municipality as a 'special impact zone' for implementation of specific measures and programmes for stimulating socio-economic development of the city. At the same time, the need of *environmental protection and sustainable way of development* is a major priority in the strategy and requires taking full account of the environmental considerations in the efforts to implement the objectives of economic and social development and territorial cohesion in the country.

3.3 Development of the National Transport Network in Relation to the Rina North-South Objectives

Five Pan-European Transport Corridors (PETCs) pass through the territory of Bulgaria – 4, 7, 8, 9 and 10. Two of them (4 and 9) are in the direction North-South, the other three carry out East-West links. Three of these five corridors intersect in Sofia – Corridor 4 (direction North-South), Corridor 8 (direction West-East) and Corridor 10 (diagonal link Northwest-Southeast).

Development of the Pan-European Transport Corridors is one of the main priorities in the National Regional Development Strategy, Development Plan of the South-West Planning Region and Sofia District Development Strategy. At this moment all PETCs except Corridor 7 (River Danube) are not functioning at full length and capacity due to the incomplete transport infrastructure in the territory of the country and also in the neighbouring countries.

The following investment projects are being considered for improvement of the national transport network and development of the Pan-European Transport Corridors:

Trans-European network outlines for road and rail transport development up to 2020 in Bulgaria.

Road transport links North-South

- Lyulin Highway and Struma Highway – parts of the PETC 4 from Sofia Ring Road through Daskalovo junction to Kulata at the Greek-Bulgarian border – under construction. Total length 165 km, estimated project costs 824.5 million Euros.
- Construction of the section of PETC4 from Sofia to Vidin through the Petrohan Pass tunnel after 2013
- Construction of combined rail and road bridge above the Danube River at Vidin-Kalafat

These projects will connect the Port of Vidin on the Danube River and the Port of Thessaloniki on the Aegean Sea and will ensure connection to the East-West links Danube River (Corridor 7) and Via Egnatia in Greece.

Road transport links East-West

- Corridor 8 connecting Black Sea port of Varna and Bourgas (and through them – Ukraine, Russia and Caucasus region) through Sofia and Skopje to the Adriatic port of Duras, Albania, and then through ferry to Bari, Italy. The main route of Corridor 8 is through the Trakia Highway, connecting Sofia and Bourgas and then Varna through Cherno More Highway. *As a result of RINA North-South project the new complementary route of PETC 8 in the north part of Bulgaria is proposed as a development priority – through national Hemus Highway from Sofia to Varna*. This will not only provide direct link Sofia – Varna (and then to the Black Sea, i.e. Ukraine, Russia, etc.) in West-East direction, *but through the intersection with the Corridor 9 will ensure better connection to Bucharest through the Danube Bridge Russe-Giurgiu and therefore will improve North-South links*.
- Maritsa Highway – from near the city of Plovdiv to Svilengrad at Turkish-Bulgarian border. Maritsa Highway is part of both PETC 4 and PETC10, connecting Sofia with Istanbul, and links CEE countries with Middle East. Therefore it has a dual role – in both North-South and East-West directions. Total length – 116 km, in operation – 20 km; estimated costs 385 million Euro.
- Construction of the sector of Trakia highway Sofia Ring Road-Kalotina on the Serbian-Bulgarian border and then to Nish (Serbia) – part of the PETC 10

Reconstruction and development of the **rail network** of the Pan-European Corridors in the directions **North-South and West-East**.

- Reconstruction of the railroad Sofia-Vidin – part of the PETC IV
- Construction of a second bridge above the Danube River, at Vidin-Kalafat, combined rail and road

The above projects will provide modern rail connection between the Port of Thessaloniki on the Aegean Sea and the Port of Vidin on the Danube River and thus will ensure freight connections in the direction North-South and links in East-West directions through the Mediterranean Sea and the Danube River.

Development of the **high-speed train** connections in the **North-South and East-West** directions

- Reconstruction, electrification and upgrading of the railroad Sofia–Plovdiv–Svilengrad–Greek/Turkish border for high speeds – part of PETCs 4 and 10, providing connections in North-South (Northern Europe–East Mediterranean) and West-East (Central Europe–Middle East) directions.
- *As a result of RINA North-South project, new high speed train connections (160 km/h) are proposed Thessaloniki–Sofia (part of PETC 4) and Sofia–Bucharest (parts of the proposed new route of PETC 8 and PETC 9).*

Air transport

- Reconstruction, development and expansion of Sofia Airport. A new terminal has been constructed for 2.6 million passengers and 26 000 tons of cargo per year. A new 3600m runway has been constructed suitable for all kinds of aircraft. The project was completed in 2006. A new road link to the new terminal and underground (Metro) connection are under way.

New airports in the Sofia Metropolitan Region are planned in the tourist zone Bansko-Razlog and near Sofia (former military airport) for small tourist and business flights.

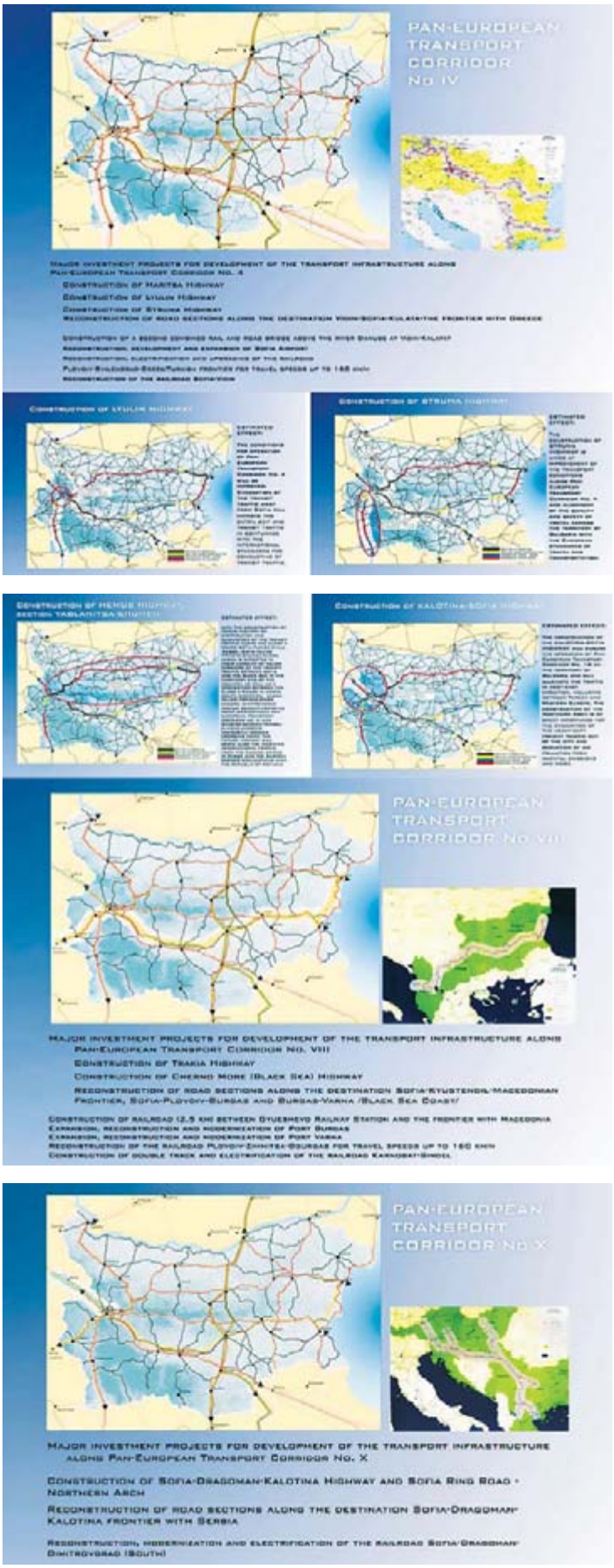
Logistics

Due to its crossroads location Sofia is developing into an important logistic centre in the region. A new inter-modal terminal is under construction near to Sofia Airport. Another one is planned near the crossing points of the Pan-European Transport Corridors.

Thessaloniki is becoming the major **sea port** of Sofia region and Vidin and Russe – the major **ports on the Danube River**. Therefore, the links Sofia–Thessaloniki, Sofia–Vidin and Sofia–Russe (Bucharest) are very important, as they will connect not only the cities of Sofia, Thessaloniki and Bucharest with one another, but also will connect the major ports and logistic infrastructure of the region.

Technical infrastructure

Through Sofia Metropolitan region passes the backbone of technical infrastructure for **gas supply**, **telecommunications and energy** (electricity) supplying the region and some of the neighbouring countries – Northern Greece, FYROM and Serbia.



In the process of negotiation is the construction of oil pipeline which will supply Russian **oil** to Greece, FYROM, Albania and Italy.

3.4 Directions for Regional and Transnational Cooperation in Relation to the Rina North-South Interface

Economic Cooperation

Development of regional clusters in

- Education – knowledge base for business
- Logistics
- Light industry (textile, clothing and shoe industry)
- Wine production
- Agriculture and processing industry
- Food and beverages

Better opportunities for retaining people in smaller settlements and second level regional centres – better balance at the metropolitan, national and EU level.

Mutual exchange of know-how and labour force. Common labour market – better choice of people for jobs and jobs for people.

Development of joint institutional structures for promoting small and medium enterprises – business incubators, information networks and centres, specialized professional education centres, etc.

Tourism

Development of tourism on the basis of the natural potential of the Sofia-Thessaloniki region for sea, winter and SPA tourism.

Complementary of natural resources for tourism between Sofia and Thessaloniki:

- Sofia region – high mountains, abundance of mineral springs;
- Thessaloniki region – long and picturesque sea coast

At the same time – rich cultural and historical heritage and common religious traditions in both regions.

Thus, the combination of winter sports and tourism in Bansko-Razlog (Pirin Mountain), Borovetz (Rila Mountain), spa tourism (Sandanski) and sea tourism (Halkidiki), combined with a lot of historical monuments in Northern Greece and Southern Bulgaria, as well as religious pilgrim sites (Athos in Greece, Rila Monastery in Bulgaria) provide great possibilities for development of exceptionally diverse all-year tourism in Sofia-Thessaloniki region. The Danube River and Rumanian tourist sites provide for complementarity and higher diversity of the tourist product on the Balkan level as well.

This will require the development of:

- common programmes and marketing strategies;
- trans-border tourist routes/itineraries;
- joint travel agencies/partnerships;
- common reservation systems;
- common centres for professional qualifications, training and exchange of experience.

Cultural Cooperation

The common historical heritage and cultural traditions between Bulgaria, Greece and Romania is a good precondition for a broad cultural cooperation in arts, music, folklore, theatre, etc – joint festivals, local events and performances, common tours, etc.

Environmental Protection

Common water management and environmental control of the river Danube – Bulgaria and Romania.

Common water management and environmental control of the rivers Struma (Strimon) and Mesta (Nestos) – Sofia and Thessaloniki regions

Formation of coordination centre for disaster management, prevention and control – forest fires, earthquakes, floods, trans-border pollution, etc.

Common measures for protection of the flora and fauna, trans-border green infrastructure development for climate change mitigation.

Thessaloniki

Thessaloniki CITY

Final Report

1
Polycentricity and Better European Territorial Balance

November 2007

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ORGANISATION OF PLANNING AND ENVIRONMENTAL PROTECTION OF THESSALONIKI

1 Introduction

1.1 Objectives of the report

This report presents the main considerations for the future development of the Thessaloniki agglomeration. It has been prepared in the context of the Polymetrex Project, towards the perspective of polycentric development of cities-regions and the creation of synergies between the cities along defined Corridors, the so called, RINA Corridors.

In the context of the project three main approaches were maintained for defining the desired future profile of the agglomerations examined by the project:

- the city level approach, considering the urban area of the agglomeration ,
- the region level approach considering a wider area surrounding the agglomerations that has direct interface and interconnection with the agglomeration and
- the transnational cities synergies approach that assume the international role of the agglomerations examined by the project and focus in identifying "means" and areas of cooperation and synergy building among the cities.

This report provides a concise description of the city level profile of the Thessaloniki agglomeration. The existing situation regarding basic structural indicators (socioeconomic, spatial, infrastructure) and the existing plans for the future development of the agglomeration are described here. The main objective is to provide a vision for the Thessaloniki Metropolitan area that follows a policy for:

- Strengthening the polycentric development through better urban balance with the periphery and
- enhancing infrastructure development and characteristics

Main emphasis is given to transport infrastructure development since this is a crucial factor for achieving urban cohesion and integration with the periphery.

Figure 2.1
The Thessaloniki Metropolitan area in Greece.

Figure 2.2
The Prefecture of Thessaloniki and the urban block.

2 City of Thessaloniki current situation

Thessaloniki Agglomeration comprises the Municipality of Thessaloniki and 14 municipalities in total and keeps a dominant role to the prefecture of Thessaloniki structure, operation and development

Thus in the following paragraphs the wider area of Thessaloniki was considered and the provided information refers to the city and to the prefecture area.

2.1 Brief overview of the city

Thessaloniki, the second largest city of Greece, is the capital of the region of Central Macedonia. With a population of over 1.000.000 people, it constitutes a modern European commercial and cultural metropolis, and one of the most important trade and communication centres, situated in the heart of Balkans.

Thessaloniki is a lively modern city with its own distinctive intellectual and artistic personality, bustling with life and movement. It is built in the cove of Thermaikos Bay, surrounded by Mount Hortiatis and Kedrinos Lofos (Cedar Hill), also known as "Sheikh Sou" on the North, and two rivers on the West, Gallikos River and Axios River. Four rivers flow into Thermaikos Bay: Gallikos, Axios, Loudias, and Aliakmon. The bay had quite a different shape in ancient times.

2.2 City-Prefecture development indicators-facts and figures

2.2.1 Socioeconomic Profile

2.2.1.a Population

From a population point of view, the Prefecture represents 56.5% of the population of Region of Central Macedonia, percentage that is allocated in the city of Thessaloniki. The official number of inhabitants reported by the 2001 census raises the population at 981.933. Thessaloniki Metropolitan area participates in the population of Central Macedonia with percentage 52.5% and 9% of the total of the entire Country.

From 1961 up to 2001, a period of forty years, the size of Thessaloniki over doubled. During the previous 20 years, 1981-2001, the city was increasing with a high yearly rhythm of 21.3%. Main characteristic of urban enlargement of last years was the intense reconstruction in the Suburban area and the remaining wider area of Thessaloniki (WAT), as well as in departments of prefecture Thessaloniki that is not included in the WAT as defined by the N. 1561/85 Master plan of the city. At the census of 2001 the population of the Thessaloniki urban area, that is to say the cohesive department of city, was about 800.764 residents and it represented roughly the 85% of the Thessaloniki Metropolitan area. The total Thessaloniki urban area amounted to 5.500 ha, a cohesive region with very high densities and very intense problems of congestion.

The following table indicates the allocation of the population in the Metropolitan area of Thessaloniki

	1981	1991	2001
Thessaloniki Metropolitan area	706.180	749.048	800.764
Thessaloniki Suburban Area	103.568	128.191	181.169
Wider Thessaloniki Area	61.832	69.625	75.892
Prefecture of Thessaloniki	871.580	946.864	1.057.825

Table 2.1
Population development in the metropolitan area of Thessaloniki.

A basic observation, beside the constant evolution rate of over 10% during the last 10 years, is that there is significant population increase in the suburban area of Thessaloniki while the growth rate in the urban area

Figure 2.3
Population evolution and trends.

Figure 2.4 Population growth 1991–2001. Source: Egnatia Motorway

has remained constant. More specifically the population in the suburban area rose by 43% between 1991 and 2001, while in the urban area this rate remained stable at around 6-7% between the two reporting periods (1981–1991 and 1991–2001).

The growth rate for the wider area of Thessaloniki decreased from 12.60% to 9.00%, although higher than the urban area growth.

The Figure 2.4 indicates the population growth in the prefecture of Thessaloniki between 1991 and 2001.

2.2.2 Local employment profile

2.2.2.a Industry and employment

Thessaloniki is the second industrial centre of the Country and represents roughly 15% of the total National Production. The local economy is specialised in traditional sectors of intensity employment (foodstuffs, clothing, plastic, and metal products). According to the Thessaloniki Chamber of Commerce, in the prefecture of Thessaloniki are installed about 17,000, manufacturing enterprises, the majority being SMEs. Also, about 450 large enterprises equal to 18% of the total number of big enterprises in the country. These enterprises employ 32,000 persons.

The higher percentage of these enterprises are located in the western part of the agglomeration where the Industrial zone of Thessaloniki has also been established about 20 years ago.

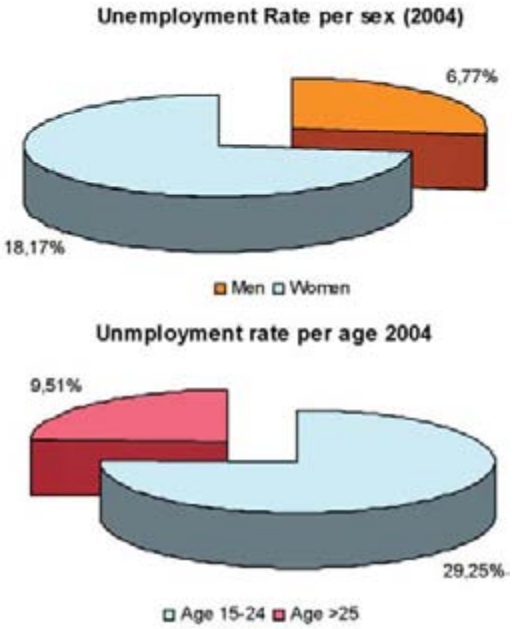
The registered labour force of the prefecture of Thessaloniki has increased between the year 2000-2004 by around 8.6%% from 438,120 to 475,190 employees. The allocation per productivity sector is provided in the Figure 2.5 (in 1 000 employees).

The clear trend is that the tertiary sector is the most dominant in the prefecture of Thessaloniki and the rise of the labour force has been observed only in this category, reaching since 2000 a growth rate of 14%.

→ *Figure 2.6* Unemployment rate per sex and Age. Data from Eurostat 2007

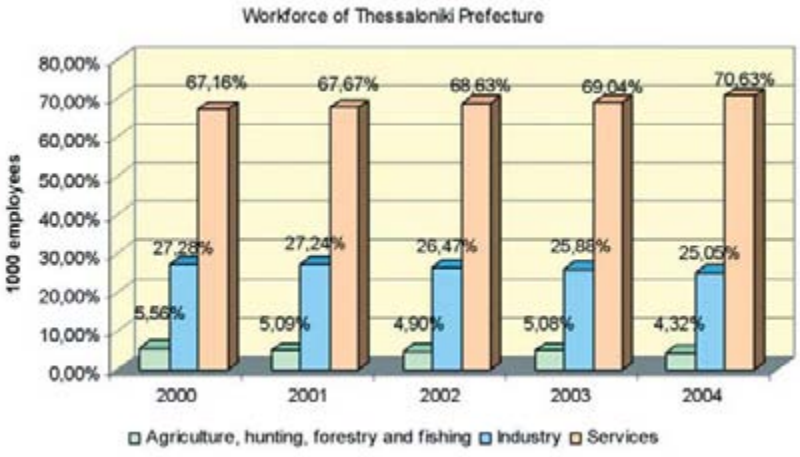
2.2.2.b Unemployment

The unemployment rate of the Prefecture of Thessaloniki was 11.46% in 2004 which is lower for the rate of the Central Macedonia region (12.4%) but higher than the National rate (10.5%). The total number of the unemployed active population reaches the sum around 58,700 persons of which 65% of them are women. The Figure 2.6 provides a clear view of the situation in the prefecture of Thessaloniki per age and sex.



It is obvious that the main unemployed social categories are young people and women.

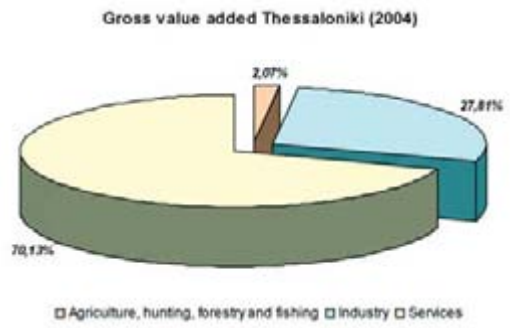
Figure 2.5



2.2.2.c Main Economic Indices

The GDP of Thessaloniki is higher than the corresponding average national figure and amount to 15,340,80mios € (2004, Eurostat), which brings the prefecture into second place of the national ranking behind Attica.

As far as the GVA indicators of the area of Thessaloniki, as also derived from the employment indicators, these are depicted in the following figure and indicate that the tertiary sector is dominating in Thessaloniki with a rate of over 70%. However, on a national level, the industrial operation of Thessaloniki is far more important since it represents 12.5% of the



← *Figure 2.7*
Gross added value Indicator for Thessaloniki.

total national contribution in the domain, as compared to the services where the prefecture reaches the amount of 9% of the total national figure.

2.3 Spatial & Land Use structure of the Thessaloniki wider area

Thessaloniki wider area is articulated in three big sub areas:

- The Thessaloniki metropolis: a cohesive department of the greater area that constitutes the backbone of the residential region
- The suburban area: an area that surrounds the cohesive department where various suburban settlements are established which are extensive except drawing residence,
- The remaining wider Thessaloniki area where, beside settlements and extended suburban residence, large cultivated agricultural territories are developed.

Considering the Metropolitan area, one of the main characteristics of its spatial structure is the monocentric character, resulting from a big concentration and clustering of mainly commercial enterprises in the city centre. However, during the last years a growth of central operations is observed also outside the Metropolitan area and in the city centre.

The total residential region of Metropolitan Area amounts to 5.500 ha. It is a very cohesive area with high density. The average mixed density of the Metropolitan Area of Thessaloniki is expected to amount to 160 inhabitants/ha. The mixed density that was estimated based on the densities per Municipality is still even higher and reaches 229 individuals/ha. The central area has the higher mixed density of residence (in the urban units that it is lived), 363 individuals/ha, while registered reaches 482 individuals/ha.

Taking into account the above figures and the fact that the metropolitan (central) area has simultaneously the higher density of employment during the day, it may easily be resulted that the specific area of Thessaloniki faces serious problems of congestion.

The following map indicates the Land use in the Metropolitan area of Thessaloniki

2.4 Transport

2.4.1 Major Infrastructure Projects

Since 1999 the agglomeration of Thessaloniki possesses a Master plan for the development of its multimodal transport system until 2020. The Transport master Plan consolidates the transport infrastructure of the greater Thessaloniki agglomeration to a solid intermodal urban and inter-urban transport system with major emphasis on the development and use of environmentally friendly transport modes and the creation of "accessible by all" transport system .

The applied transport system development philosophy is to provide increased accessibility to the agglomerations' economic activities mainly by public transport and to secure efficient by-pass of through traffic from the city center. Until today these two main priorities have been implemented through the construction and operation of some major infrastructure projects:

- The Inner and Outer Ring Roads of Thessaloniki which achieve the first a good by-pass of the city center for daily commuting trips while the second secure direct connection of all National traffic towards Chalkidiki tourist pole attraction and vice versa.
- The reconfiguration of the surface Public Transport network by introducing direct express lines services and expanding the bus network to cover the suburban areas, thus providing better quality of service to the passengers. .
- The displacement of major intra regional & inter regional public transport terminals far away of the city centre.
- The launching of the metro project construction which has been performed with a considerable delay during 2006.
- The launching of an additional by-pass of the city center through the construction of an under sea highway connecting the Port of Thessaloniki to the Eastern part up to the International fair area along the by the sea existing avenue. The project is expected to start September 2007.
- The development of efficient interfaces between the different terminals & hubs of alternative pub-

Figure 2.8
Land Use in the Metropolitan area of Thessaloniki.

Figure 2.9
Transport Masterplan of the Metropolitan city of Thessaloniki.

lic transport networks and services by implementing new technologies for integrated information provision for passengers.

The completion of the above mentioned projects and of those foreseen for the future are presented in the relevant subsequent chapter of this report and is expected to improve considerably the quality of life of the citizens and to demonstrate Thessaloniki agglomeration as a modern European city.

2.4.2 The public Transport System

The Public Transport network of Thessaloniki includes 68 bus lines and extends to a distance of 50 kms, parametrically to the city. The network is constituted by urban lines that serve the Metropolitan area and suburban lines which serve the municipalities and the communities that are situated to the proximity of the metropolitan area.

The form of network is mainly radial with major re-embarkation terminals situated in the fringes of the city at the Eastern and the Western part of the Agglomeration.

The urban lines are further distinguished as follows:

1. The main lines (lines "trunks" that go through the main road axes and connect the stations of re-embarkation and the centre of the city.
2. The simple urban lines that serve the municipalities of the Metropolitan area of Thessaloniki, by connecting them mainly with the historical & commercial centre. Some of these lines lead to stations re-embarkation and operate as feeders to the main lines.
3. The traversing lines that connect remote communes with the Metropolitan Area.

The suburban lines are also distinguished by:

- Suburban lines in their totality connecting Municipalities of the periphery with some station of re-embarkation and operate as feeders in the urban network. Lines, what serve regions near the P.S.C., lead directly to the wider centre of city.
- Local lines that connects settlements and municipal apartments between them and with their administrative centre.
- Suburban lines of connection with the Metropolitan area of Thessaloniki and operate as feeders to them.

The total length of the network presented in Figure 2.10 approaches to some 960,820 km. According to the Operation plan, 5,748 itineraries are executed daily. The average planed frequency of bus lines is 15 minutes for the urban lines and 29 minutes for the suburban. Annually 40.000.000 vehicle-Km is implemented and from this the 92% are covered by the programmed itineraries of bus lines. The capacity of PT system, according to the plan, is about 380.000.000 passengers annually. The transported passengers yearly are about 135.000.000 and the average system occupancy is near to 35%.

The PT network is served by 536 thermic buses and provides passenger access to it through 2000 bus-stations. The Organisation of Public Transport of Thessaloniki (OASTH), operates daily 505 buses (94% of total of fleet). The Fleet of OASTH is supplemented by two specifically adjusted vehicles for disabled persons transportation.

2.4.3 Major Transport Hubs

2.4.3.a The port of Thessaloniki

The port of Thessaloniki is a major export and transit trade port of Greece, covering an area of 1.250.000 sqm which starts from the historical city center (old port) and expands until the western boarders of the agglomeration (new port and intermodal terminal). It has an advantageous geographic position with respect to Egnatia Avenue and other TransEuropean network Corridors (Corridor X, IX, VII) that are under construction and connect Northern to the South of Europe.

The port of Thessaloniki handles cargo worth 6% of GDP annually, approximately 40% of GDP of the Central Macedonia region. 15 million tones of cargo are traded annually, of which approximately 7 million tones are general cargo and 8 million are liquid fuel. Approximately 3500 ships sail into the harbour, more than 200,000 passengers (from just 50,000 in 1987) are transferred and more than 250,000 TEUs (containers units) are long shored.

Main Advantages of the Port

- Established brand name in the Balkans region.
- Railway and road networks, which connect the port with the international hinterland.
- International airport, close to the city of Thessaloniki.
- Free Trade Zone, which as of May 1st, 1995, operates under the customs regime of the European Union.
- Complete, modern, with excellent infrastructure and modern long shoring equipment.
- Reliable, with speed and quality of service and without delays or long waiting time.
- Remarkable railway infrastructure within the port, lines to all bases and Rail Mounted Transtainer for loading and unloading merchandise by rail.
- Natural channels for large ships, 6200 metre long base with a draught up to 12m., and with the prospect to build new lines of 15m draught.
- Active and well-trained labour force (with participation in Greek and European staff training programs).
- Maximum merchandise security thanks to secure-area storage.
- Close to central Macedonia as the main national inland, of demonstrated growing economic activity.

Container Terminal

The container terminal is one of the most important services of Thessaloniki Port Authority. It offers loading and unloading, storage and packing/ unpacking of containers providing:

- High quality equipment and infrastructure acquisition projects in progress aiming at servicing 4th generation ships.
- 24-hour service, 365 days a year.
- Speed in loading and unloading.
- Flat Rates (same pricelist, day-night, bank holiday-weekday).

Conventional Terminal

The equipment here is of high quality. Simple and heavy shipments are serviced from and to European, Asian, African and American countries as well as transit shipments to and from the Balkans and the Black Sea Zone.

Passenger Terminal

The "Makedonia" Passenger Terminal offers excellent facilities for all passengers traveling to and from Thessaloniki. Inside the air-conditioned terminal building, visitors will find commercial stalls, ATMs, an Info kiosk and free Wi-Fi Internet Access.

The development of the port of Thessaloniki is among the basic axes for the future development of the city of Thessaloniki, in terms of spatial planning and transnational impact.

2.4.3.b The international Airport of Thessaloniki

The Airport is located 13 km east from the city of Thessaloniki in the region "Mikra" and belongs in the

Figure 2.10
The Bus Network of Thessaloniki.

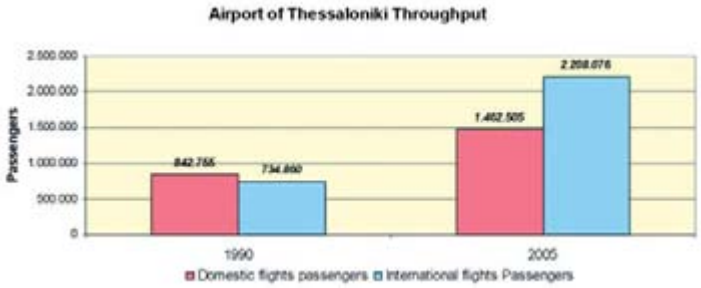


Figure 2.11 Thessaloniki Airport Throughput.

municipality Thermis. The building installations cover 21,000 m².

The basic statistics of the airport are provide in the following Figure 2.11.

The growth rate observed in the airport of Thessaloniki indicates a higher rise in the International passenger traffic which for the last 16 years has tripled. The average growth rate of international passengers was of about 8% and the trend is indicating a constant rise. Nevertheless, the increasing number of passengers of the airport of Thessaloniki indicates the developing of the Metropolitan area and Region of Thessaloniki as an important International pole for the Balkans, since the International throughput in wider area, the Athens International Airport, remain the core air gateway of the country with a throughput of 9 million international passengers annually.

3 Vision for the Thessaloniki Metropolitan Area Development

3.1 Introduction

The existing situation of the Thessaloniki Metropolitan area as presented in the previous chapter demonstrates a dynamic profile of a city with strong historical and geostrategic position in the SE Europe and a greater potential for becoming major peripheral city of the EU possessing significant international gateways with strong socioeconomic development.

However, the development of the Agglomeration is lacking a consolidated multiple level Plan and an Organization with strong authority for implementing it. There are important efforts in the past for consolidating a strategic Master Plan for the city at different levels and with different thematic areas specialisation. Among these Plans the following should be mentioned:

- *Thessaloniki Metropolitan area masterplan (1985, 1995)* prepared by the Thessaloniki Organization for Town Planning (ORA). The plan defines the Land use development in the greater Thessaloniki area and gives the first practical guidelines for the polycentric development of the Thessaloniki agglomeration.
- *Strategic Plan for sustainable development of Thessaloniki: axes and priority actions 2010*. This plan provides guidelines for the future development of Thessaloniki metropolis. It was prepared by a multidisciplinary team of experts under the supervision of ORA and the Ministry of Northern Greece and consists of the basic strategic concept for the sustainable development of the Thessaloniki Agglomeration.
- *The Strategic Master Plan Study for the Thessaloniki Transport Infrastructure development.* As mentioned previously this study consolidates a strategy for the development of transport infrastructure in the greater Thessaloniki area until the time horizon of 2015. The study assumes a "scenario" of land use development that takes into account the implemented expansion of the agglomeration achieved until the year 1999 against the planed expansion as declared in the Thessaloniki Metropolitan area masterplan (1985, 1995).
- *The Strategic Plan for the City Centre revitalization. (2002–2010).* This is a plan defined by the current political power of the Municipality of Thessaloniki and concerns the revitalization of the city centre, the development of recreation areas, the upgrading of the seaside area and the reorganization of the International fair "quarter" located in the city centre.

In the following paragraphs the various intervention proposals, priorities and strategies suggested by the different Plans are consolidated into a robust vision framework for the development of Thessaloniki.

3.1.1 Vision for Thessaloniki Strategic Development objectives

The future development of Thessaloniki should be based on the strong points of its existing situation, should exploit its historical characteristics and should secure the sustainable future development at the level of the agglomeration and of the prefecture and of the region.

In this context the city spatial structure and the infrastructure of the agglomeration should:

- Facilitate economic growth through efficient accessibility to production areas and markets
- Enable labour exchange among regions and across borders for supporting economic growth
- Maintain the historical physiognomy of Thessaloniki and make it central point of the touristic development of the greater area ,
- Improve the quality of life through efficient protection of natural environment and facilitation of the daily citizens activities
- Contribute to the balance of social inequalities inside the agglomeration and to the early management (alleviation) of reasons for inequalities creation
- Enlarge the choices of residence and work through recreation initiatives and polycentricity implementation
- Protect residential areas from polluting operations and land uses through also qualitative upgrading of each neighbourhood

Some more special strategic objectives may also be identified for the future Spatial and Infrastructure de-

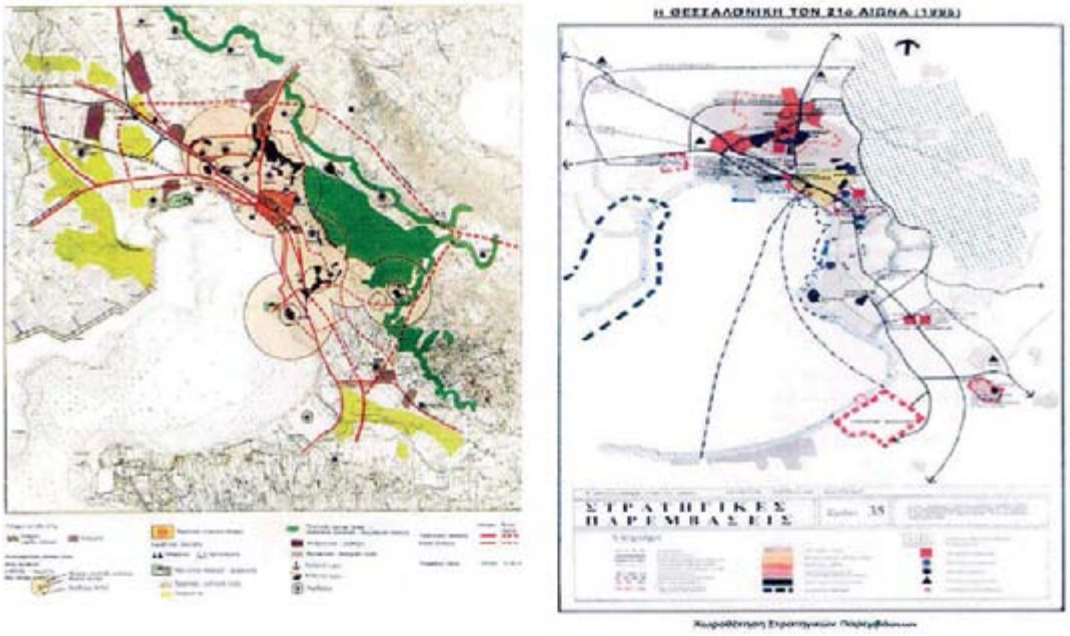


Figure 3.1
The metropolitan area of Thessaloniki Masterplan.

velopment of the Thessaloniki agglomeration. The most important of these objectives that demands a consolidated (as suggested by the POLYETREX PLUS project) development strategy at city, region and at national-International level may be summarised as following:

1. **The development of the wider region of Thessaloniki at the national level**. This will require encouragement of decentralisation in the suburban settlements, rational growth of all economic activities and geographic redeployment of some of them, the organisation of Thessaloniki as centre of region and support of its national and international role
2. **The development of the wider area of Thessaloniki by fostering and protecting the historical elements**, reducing pollution and improving of environment and quality of life, economic reconstruction, alleviation of inequalities in the distribution of social equipment, urban and built-up growth with application of social political residence and ground, safeguarding of Thessalonica from disasters
3. **The polycentric land-planning organisation of the Thessaloniki Metropolitan area** and the creation of new urban structure, including planning of remaining region as primarily rural space, organisation of system of settlements and centres of supralocal importance, single planning of the urban and the suburban area, interception of expansion of urban network, polycentric structure, control of uses and density

The Master plan of Thessaloniki substantiates some of the above mentioned vision objectives by suggesting specific directions for basic sectors and frames of organisation and reconstruction. Figure 3.1 shows the basic concept of the Thessaloniki Master plan.

It is apparent from this plan that the development of the primary sector is protected; the planning of industrial sector districts is organizing the respective activities in the greater area; etc. Additionally, the interception and spread of urban the network and the growth of suburban centres is promoted; the polycentric structure of the city is supported by:

- reallocation and arrangement of special operations of the city
- the creation of essential social infrastructure
- the organisation of transport as a system and
- the development of necessary technical infrastructure in the periphery.

In the same figure it is clear the main targets of locating industrial activities at the West part of the agglomeration and service economic activities to the East part of the agglomeration, and in parallel restoring the historic profile of the city centre.

3.2 Vision for Thessaloniki: Sustainable development axes and priority actions 2020

The priority actions presented in this paragraph have been worked out through a DELPHI approach involving the majority of institutions of the city. The proposals derived from this process in the context of the "Strategic Plan for sustainable development of Thessaloniki: axes and priority actions 2010" were focused to prospects for dynamic development of Thessaloniki in order to undertake an international role and as:

- Node of transports - "Gate of Balkans"
- Centre of industrial activities and exports
- Centre of trade
- Centre of services to the Balkans and the Black Sea.

In the context of the POLYMETREX projects these proposals have been critically assessed and here we

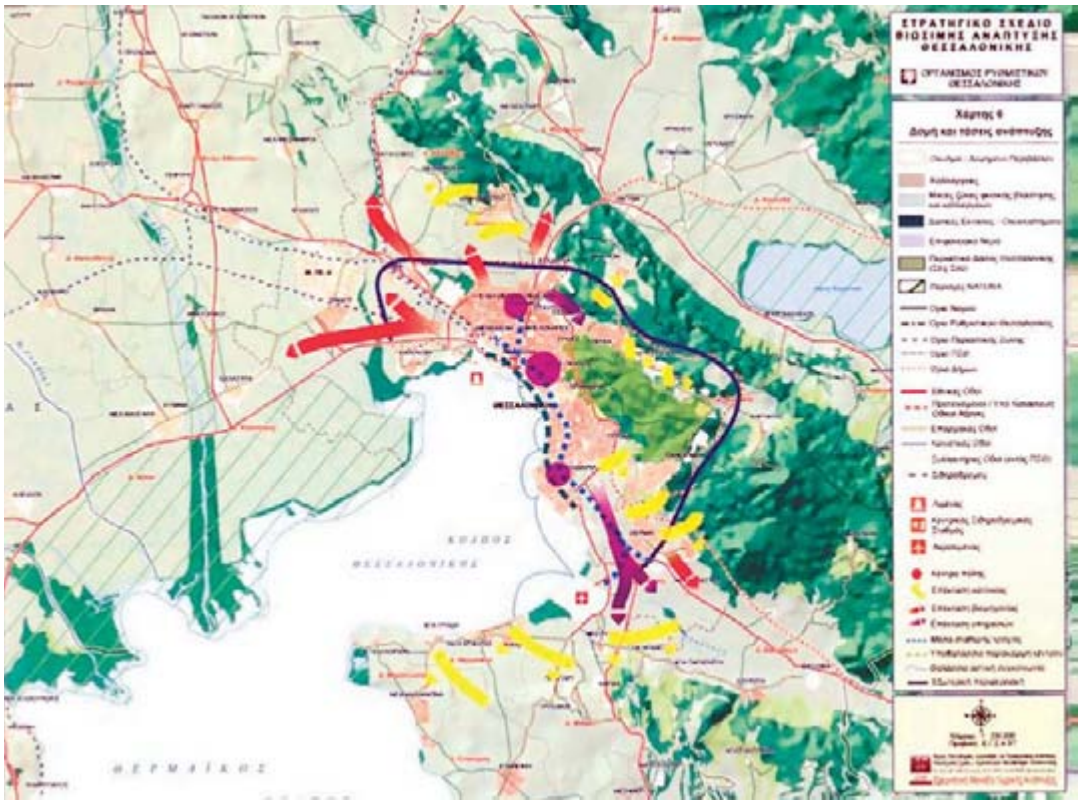


Figure 3.2
Strategic plan for sustainable development of Thessaloniki.

present those that are in accordance with the strategic objectives of the City development vision presented in the previous paragraph.

The basic axes and the related operational Plans are as follows:

1. Institutional Frame – Operational Plan for Governance
2. Productive system – Operational Plan for Competitiveness
3. Human Potential – Operational Plan for Employment
4. Infrastructures – Operational Plan for Infrastructures
5. Purchase of Land and Residence – Operational Plan for urban development
6. Environment and Quality of Life – Operational Plan for Quality of Life

The Figure 3.2 indicate the development priorities and actions previously presented.

It can be easily observed that the basic industrial units are to be developed towards the Western Part of Thessaloniki, while the Services centers are to be moved towards the eastern part following the traditional development tendency in the city of the last 40 years.

Beside the current city center, new administrative territories should be introduced for each geographic wider area, in the west and in the east, while new transport infrastructure and services are proposed. The main residential plans are to be expanded to the east and South East of the agglomeration area, envisaging an additional coastal links of these suburban areas with the city center.

Figure 4.1
The Thessaloniki Metro planned network and extensions.

4 Infrastructure projects implementing the vision for the Thessaloniki Metropolitan area

4.1 Transport Infrastructure

The Thessaloniki Metro

Thessaloniki is the only European city with population over 1 million residents which does not have any transportation means of fixed track. This situation is about to change through the incoming construction of the THESSALONIKI METRO Base Line, a Project

that has been designed based on the state-of-the-art technology for Metro related Projects.

THESSALONIKI METRO is approximately 9.6 km. long with 13 Stations west to east. The 13 stations (New Railway Station, Dimokratias, Venizelou, Aghia Sofia, Sintrivani, Panepistimio, Papafi, Efklidi, Fleming, Analipseos, Patriakiou, Voulgari, Nea Elvetia) shall be of center-platform type - each platform being approximately 60m. Long - fully accessible to Persons of Special Needs and shall be constructed by means of the Cut and Cover method, in view of minimizing any impact on the vehicular traffic and the functions of the city.

When the project is commissioned, the train operation shall be driverless and fully automatic; however there will be one onboard train attendant for each train. For the first phase of the project, the required number of trains is 18 trains, each one with a minimum capacity of 450 passengers. The design headway of the trains shall be 90 seconds (180 seconds for the first phase of operation). The above data imply a minimum system capacity of 18,000 passengers per direction per peak hour, but during the first phase of operation the anticipated rider ship will be 12,500 passengers/direction/peak hour.

Marine urban transport

The Project of marine urban transport is promoted in the present phase for auctioning by the Region of Central Macedonia. There have been completed the traffic and feasibility study and the premeditation of work of infrastructure (jetties, harbour manufactures). There has been already an approval by the Organisation of Thessaloniki for the pre-feasibility of environmental consequences and promoted is the publication of relative decision of arrangement by the Region. Objective of Region of Central Macedonia is to publish, as soon as possible, the proclamation for the auctioning of work. The work will be materialised with self-financing against concession of exploitation. The cost of investment (land infrastructure, harbour work and boats) is estimated to be 42 mill. of Euros.

The main reasons that render necessary and attractive marine urban transport are the following:

- The rapid increase of traffic in the main road axes of city and particularly in the axis Centre from/to Kalamaria, because of the big increase of indicator of property of private cars and preference of private cars set against public transport.

- The significant urbanisation of Eastern suburbs, which has been changed in areas of permanent residence. The residential area of city begins to be shifted East to the Municipalities Thermaikos, Epanomi's and Michaniona, with result the increase of journeys to/from the centre of city.

The marine transport could offer fast, comfortable and reliable journeys in the particular itineraries, contribute in the reduction of the environment consequences from the emissions of pollutants of private cars and promote the tourist projection and growth of all urban area.

The Thessaloniki Submarine road artery

The Thessaloniki Submarine Artery is an artery of double traffic, length of 6,5 km that will overpass the historical centre of city. It will cross undergrounds (2,5 km tunnels and 1,5 km Cut and Cover) and partly submarine. It will be start roughly near the port of Thessaloniki and will emerge again in the surface afterwards near the hotel Macedonia in the eastern part of the city. The main axis has three traffic lanes per direction, an emergency lane and pavements. **The design of the artery is not yet available and there are a lot of concerns about its construction mainly from the citizens and local authorities. The construction of the artery is not yet ratified.**

The Suburban Railway of Thessaloniki

The suburban-regional railway will constitute a new, modern, alternative mean of urban transport, which incorporate in the integrated and coordinated transport planning of all means of mass transport of Thessaloniki (Metro, buses, marine transport) will allow the reception and the operation of measures of discouragement of the use of private cars.

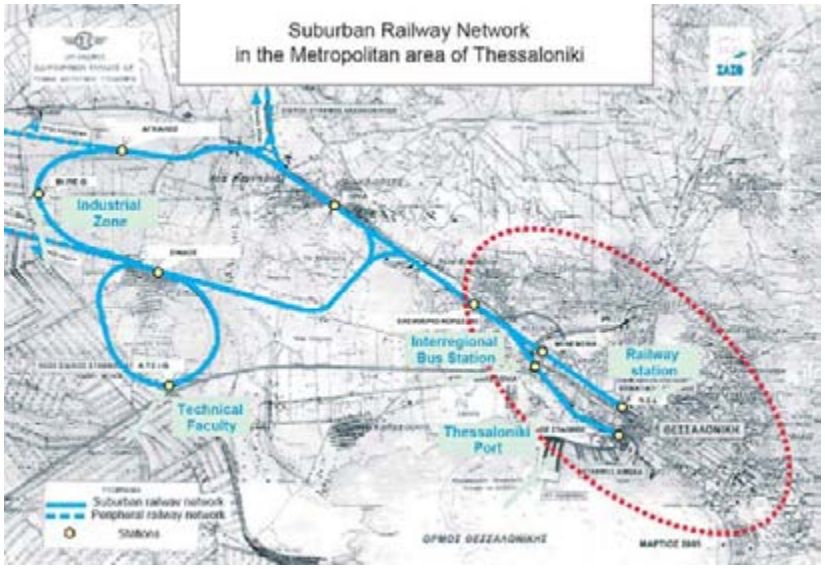
Objective of suburban constitutes the service of the suburbs of Thessaloniki but the connection the urban and regional centers of Central Macedonia with the city of Thessaloniki.

The suburban-regional railway is expected to have the following basic qualitative and operational characteristics:

- Service, mainly, of journeys that have as basic aim employment, education the markets and, in certain cases, recreation.
- Time of itineraries below 60 minutes for the suburban railway that serves the regions of extension of urban area of Thessaloniki.

- Itinerary times lower than 90 minutes for suburban journeys that connect urban centres of regional scope with the city of Thessaloniki.
- Frequency of itineraries from 30 until 60 minutes, in connection with the demand for movement, the rush hours and the development of passenger movement.
- Arrangement of stations in relatively small distances (1-4 km), in the case where the railway connection goes through from suburban environment and important land uses exist, that should be served (residence, education, industry, trade etc).
- Arrangement of stations in all the main settlements, from which goes through the railway connection, except the urban area and the suburban area Thessaloniki.
- Service of movement demand that have as origin and as destination intermediary stations along the suburban-regional connection.
- Modern and suitable rolling stock (adequate number of seats, high level of comfort).
- Integration, interconnection and co-ordination with all the transport means of the city in a single operational system, in level of stations of re-embarkation of public transport, itineraries, pricing policy, location of re-embarkation for private cars, information etc.
- Promotion for acknowledgement of new offered transport services, aiming at the consolidation of suburban-regional railway as alternative mean of public transport in the conscience of passenger public. The user should conceive that the operational characteristics (frequency, safety, reliability, comfort, information), that provides the suburban railway which resemble more to the characteristics of metro and least with those of conventional railway.

Figure 4.2
The Suburban railway network.



The challenge for urban transport is to attract the users of private cars, offering competitive and qualitative services. The next years the public transport might become an attractive characteristic of Thessaloniki, in the frame of completed system of intermodal passenger and freight transport, that will be addressed to all citizens and will include the bus, the metro, the suburban railway and the marine transport.

4.2 Quality of Life

The vision for the improvement of the quality of life of Thessaloniki metropolitan area can be summarized in the following points:

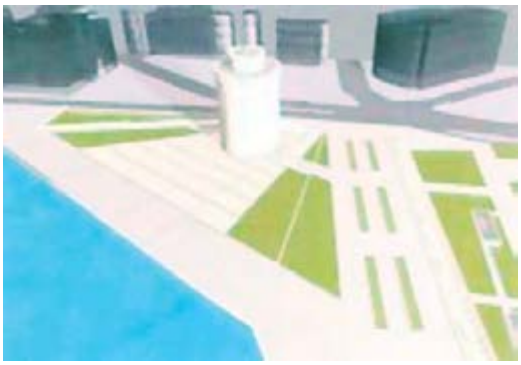
- Creation of forest-park in Kedrinos Lofos Hill
- Reformation and restoration of natural sluices
- Creation of the Metropolitan Park that would connect the Coast of Thessaloniki with the existing forest
- Reformation of the abandoned military camps in the city into parks

- Restoration of the historical city merchant center, (Aristotelous area, Ag. Minas traditional markets, etc)
- Renovation of existing parks that have been badly maintained
- Integration of the archaeological sites and creation of historic promenades in the city. Three main promenades have been planned from the White tower, from the Aristotelous square and the fort of Vardaris which would lead to the Ano Poli and the statue of Alexander

Beside these plan various other architectural and spatial planning projects have been under way and are nearly to be completed providing to the city.

Reformation of the Shore side

Square of White Tower: The Symbol of city is being reformed and acquires a new environment with pedes-



trian zones, pavement and green spaces, new flowerbeds, plantings of trees and urban equipment.

New Shore side: 14 new thematic parks, result of an international architecture competition will transform the new shoreside of the city. Already the work for five of them has begun

Old Shore side: The reformation with new pavements and lighting will renew the picture of city, from the shore side from the White Tower to the Port. The studies are also completed and the work is about to be materialised within 2007.

The New City Hall

The new Thessaloniki City Hall building will be ready in the summer of 2008, at the former Tsirogiannis Military Camp. The contemporary architecture five-storey building, with a spectacular view of the Thermaikos Bay, is the biggest project ever launched by a municipality nationwide and will cover an area of 15,000sqm featuring a 900-space parking area.

A ticket-free bus route will serve commuters wishing to get to downtown Thessaloniki or reach the parking areas on to city outskirts.

4.3 Urban Productivity vision

Support of domestic economy

The difficulties encountered by the large enterprises of Thessaloniki, the deindustrialization and the lack of investment in the wider area require generous investment programmes and provision incentives in order to reduce the investments of local assets in other countries as well as the reformation of the local administration procedures for tackling bureaucracy.

Furthermore, as far as the SMEs are concerned a competitive environment is required with a transparent banking and taxing system that would support and not hinder their operational works, with special emphasis to the regional enterprises.

The new Development law provides new perspectives for the industry and manufacturers, the SMEs in general, while for the region of Thessaloniki a different approach based on the special characteristics of the labour profile of the city would be needed.

Industry and Innovation

Industrial Zone

In a long term basis and in conjunction to the provision of perspectives for investment initiatives, the industrial zone should acquire sustainable operation characteristics and both in terms of environment and competitiveness in order to make it attractive for new investors and workers. The fewer the environmental impacts the better cooperation with the urban area.

Innovation pole in Eastern Thessaloniki

The current infrastructure of the technological and research activities are required to be expanded and supported in order to make innovation and development the driving force of Thessaloniki's development.

Establishment and operation of the World Trade Center of Thessaloniki

In parallel to the innovation pole of Thessaloniki, the World Trade Center of Thessaloniki should be integrated which have been promoted by 21 municipalities of the Metropolitan area of Thessaloniki in order to bring closer the enterprises of Thessaloniki with over 750.000 dynamically developed enterprises from the 300 members and 90 countries participating in the project and seeking for new partners markets and products.

Helexpo – The International Exposition of Thessaloniki

The National exposition body needs to find its way after a long period stabilization. The basic axes that should be followed are:

1. Upgrade of its international role
2. Settlement of the proprietary and operational status
3. Reformation of the Exposition center with shopping centers, cinemas, hotels and modern conference and exhibition infrastructure

4.4 Urban Governance

Development and Decentralisation

Aiming at an integrated and more dynamic organizational structure in order to achieve better convergence with the European self-administration and decentralization the Metropolitan governance is required to be enacted. In order to efficiently support the local economy and ensure the regional development the following actions should be introduced:

- The upgrade of the public administration in Thessaloniki
- Transfer of decision making in the regional authorities
- Participation of local entities and bodies their political and entrepreneurial support
- Support of domestic production bodies
- Exploitation of local scientific community

Modernization of the Municipality of Thessaloniki

The basic actions required in order to alleviate the collateral problems of bureaucracy should be as follows:

- Technological tools for the service of the citizens
- On-Line Services for the citizens
- Provision of Internet access points at central administration buildings
- Creation of a call center in the municipality of Thessaloniki
- Development of GIS based applications
- Digital operation of the libraries of the Municipality of Thessaloniki and provision of the information over web

Metropolitan Governance

The metropolitan governance in the big urban blocks of Greece (Athens, Thessaloniki, Piraeus) is a new challenge, as urgent as the confrontation of the over-dispersed decision making and responsibilities among administrative bodies. Responsibilities such as water supply, sewerage, control and management of urban transport, construction of parking sites, transposition of open-air markets, preservation of green spaces and other are controlled from Athens and the central administration, which is not in the position to have the entire image of the situation in all cases.

In this changing environment, the role the Organisation of Thessaloniki (OR.TH.) is to make efforts in order to control urban spread and land uses, as well as to improve traffic conditions and to protect the environment. The "Urban Pilot Project for the Renewal of the Commercial and Historical City Center" and the "URBAN project for the Western Municipalities of Thessaloniki" are two of the most successful ones.

The role of the ORTH in the city of Thessaloniki for the future is to

1. Develop the Strategic Plan of Thessaloniki
2. Updating the Master Plan of Thessaloniki
3. Promote a (Land Use) Urban Control Zone in the outskirts of Thessaloniki
4. Promote and approve the General Land Use Plans (GLUPs) in Greater Area of Thessaloniki
5. Complete and promote of the proposals of the "General Traffic Study of Thessaloniki". Thessaloniki's traffic problem is the city's most important problem under assessment. The METRO and the underwater arterial road which soon will be under construction will not solve the city's traffic problem. There are a number of measures and interventions that need to be promoted as regards the traffic issue.
6. Promote the environmental protection plan of Thessaloniki

Central Macedonia CITY-REGION

Final Report

2
Polycentricity and Better European Territorial Balance

November 2007

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ORGANISATION OF PLANNING AND ENVIRONMENTAL PROTECTION OF THESSALONIKI

1 Introduction

1.1 Objectives of the report

The present report comprises the outcome of the analysis for the Region of Central Macedonia (RCM) level report in the context of the Polymetrex Project, towards the perspective of polycentric development and creation of synergies between the cities across the RINA Corridors as set out in the project. The report provides a sound description of the region of Central Macedonia, the existing situation in the basic structural indicators and the existing plans for the future development.

The main outcome of the report is to provide a vision for the Central Macedonia region for strengthening the polycentric development through better regional balance, placing emphasis on spatial planning and transport infrastructure development

2 Region of Central Macedonia (RCM) Portrait

2.1 Brief overview of the RCM

Its geographical and strategic position has made it a crossroads for trade with the Balkan countries and Eastern Europe. It is northern Greece's leading region and takes in the central part of Macedonia, comprising

Figure 2.1
The position of Central Macedonia.

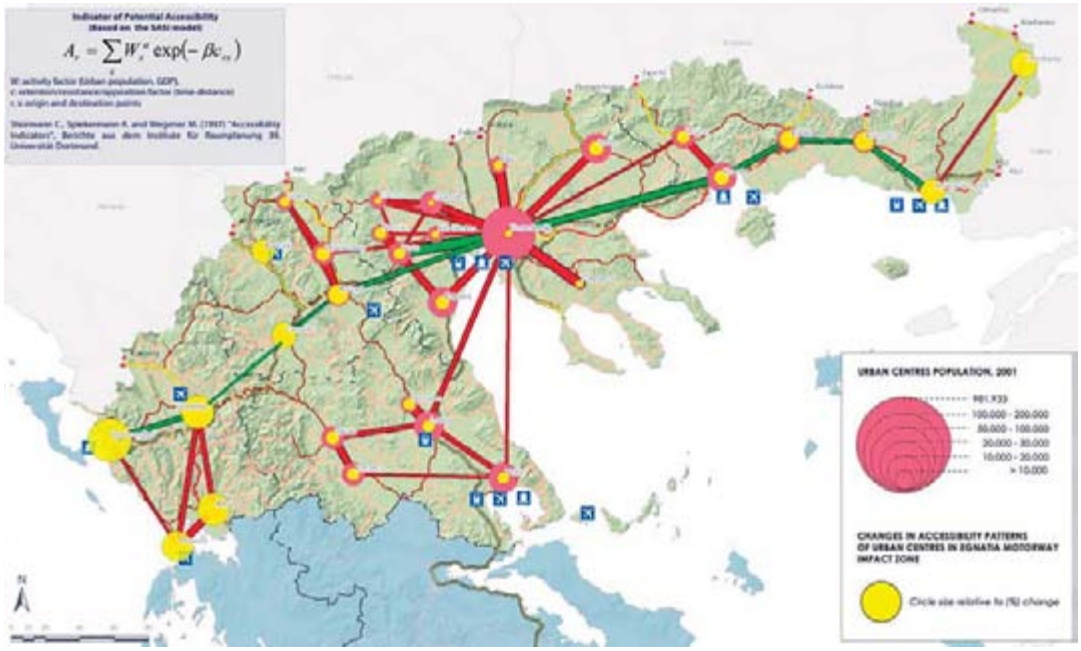


Figure 2.2
Main cities of the Region of Central Macedonia and accessibility patterns (Egnatia motorway observatory, 2007).

the prefectures of Thessaloniki, Imathia, Kilkis, Pella, Pieria, Serres and Chalkidiki.

It is bounded by the Former Yugoslav Republic of Macedonia and Bulgaria to the north, by the region of Western Macedonia to the west, by the region of Eastern Macedonia and Thrace to the east and by the Aegean to the south. In demographic, economic and cultural terms it is Greece's second most important centre after Attica. The regional capital is Thessaloniki, Greece's second largest city. The region is low-lying, and the Macedonian plain is one of the largest in Greece and exceptionally fertile.

The main cities of the region are Thessaloniki, Serres, Katerini, Veria, Giannitsa, Naousa, Edessa, Kilkis, Poligiros, Alexandria. The position of the cities in the area of the RCM is depicted in the following Map indicating also their spatial integration in the Region by the introduction of the Egnatia motorway. As it is depicted the accessibility of Thessaloniki has not been changed much, since it was nonetheless better connected by transport infrastructure, however, the index of the surrounding cities that had access to the infrastructure has risen significantly.

2.2 Regional development indicators-facts and figures

2.2.1 Population

General

The population of Central Macedonia grew by 7.6% between 1991 and 2001. In the 2001 census the Central

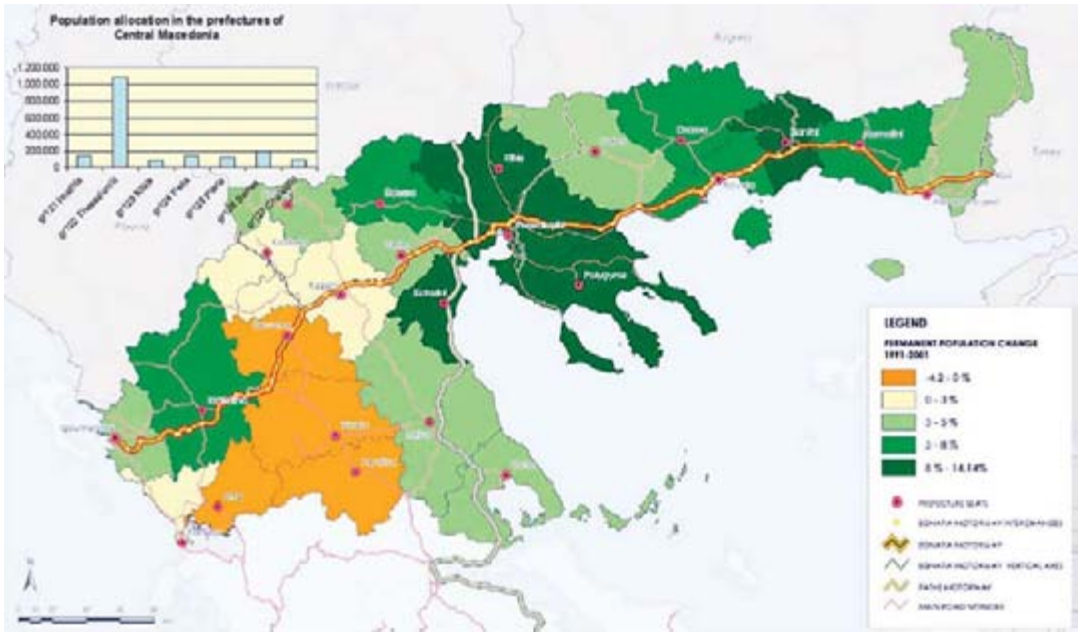


Figure 2.3
Population and population growth in the area of Central Macedonia (Egnatia Motorway).

Macedonia population was 1.875.258 of which 58% is allocated in the prefecture of Thessaloniki. The following graph indicates the allocation of the population within the Central Macedonia region and the evolution.

This increase was due mainly to internal migration from a number of rural areas in northern Greece to Central Macedonia in general and to the Thessaloniki area in particular. The development of industry and tourism has resulted in an even greater influx, and the region is now home to some 17% of Greece's total population. Around 1.000.000 people live in the city of Thessaloniki. More births than deaths have been registered every year since 1990.

Even though the growth rate of the population of the region is decreasing as depicted in Figure 2.4, however this growth is above the national average growth. Furthermore, as concerns the growth per prefecture, this also varies from case to case. Still the prefecture determining the profile of the region in terms of population and growth remains the one of Thessaloniki.

The high trend scenario of the population growth for the year 2030 of Eurostat does not exceed a total number of 2.184.912. Given that the estimation for 2005 is expected at around 1.900.000 residents then the projection from 25 years from now would not exceed a growth rate of 15%, which corresponds to an annual average growth of 0.5%. In general terms there are not any significant demographic changes in the region and not expected any sharp demographic phenomena.

Composition of the population

The composition of the region per age and sex follow the national trend. In the census of 2001, the female population comprised of 952.896 (50.81%) while the male population counted 922.362 (49.19%). As in the national trend, the population of Central Macedonia is ageing and this is visible when comparing the population pyramids of the region.

According to these changes the population of over 70 year and between 65–69 years old has increased by 43% and 69% respectively. On the other hand the sharpest decrease was observed in the age range of 10-14 years old which reach the amount of 19%. In general, provided that the birth rates are significantly low during the following years a severe ageing of the population is expected which should be taken under consideration when creating the vision for the future profile of the region.

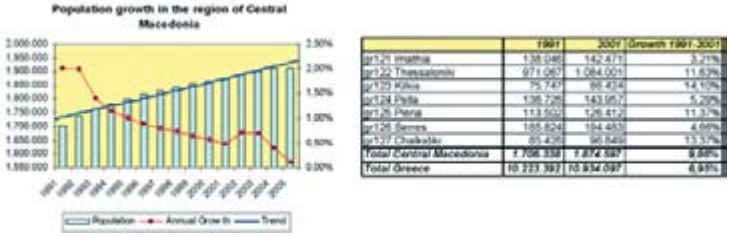


Figure 2.4
Population growth and prefecture allocation.

2.2.2 Employment

The number of jobs continuously decreased during the latest years from 1996 to 2002, however since then a sharp increase has been observed reporting growth rate of 4.5% and achieves a work force of 768.100 in 2004. A mere 19% of the region's employment was in the primary sector in 1998, which has been constantly decreasing as well and in 2004 this rate was not more of 14%. The concrete situation in terms of employment per sector may be depicted in the following Figure 2.6. The industrial sector remained stable between 2000–2004, with not significant alterations, while an increase has been observed for the tertiary sector rising from 57.48% to 63.15%.

As emerging from Figure 2.6 the dominating prefecture in the region of Central Macedonia in Thessaloniki, where over 61% of the total labour force

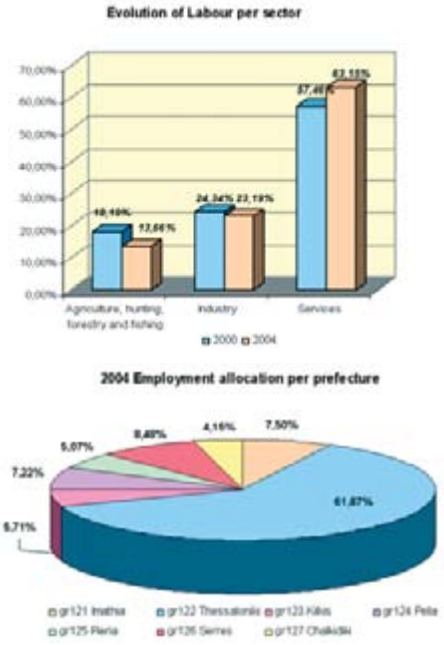


Figure 2.6
Labour Market on Central Macedonia Region.
Eurostat 2007 data

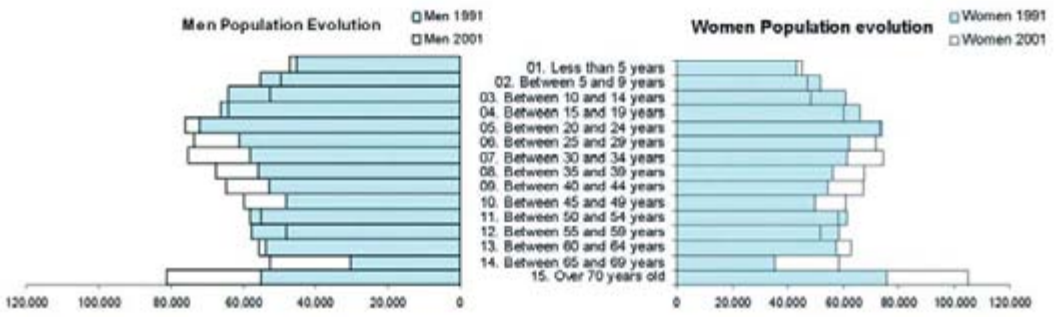


Figure 2.5
Population composition and evolution in the region of Central Macedonia.
Eurostat 2007 data

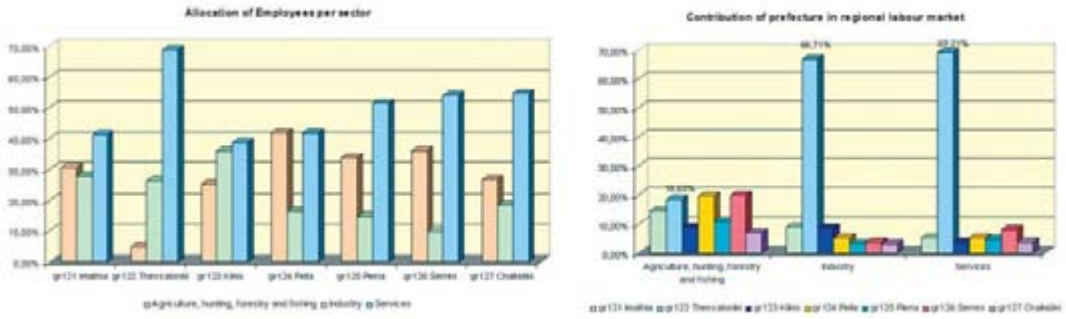


Figure 2.7
Labour force profile in Central Macedonia prefectures.

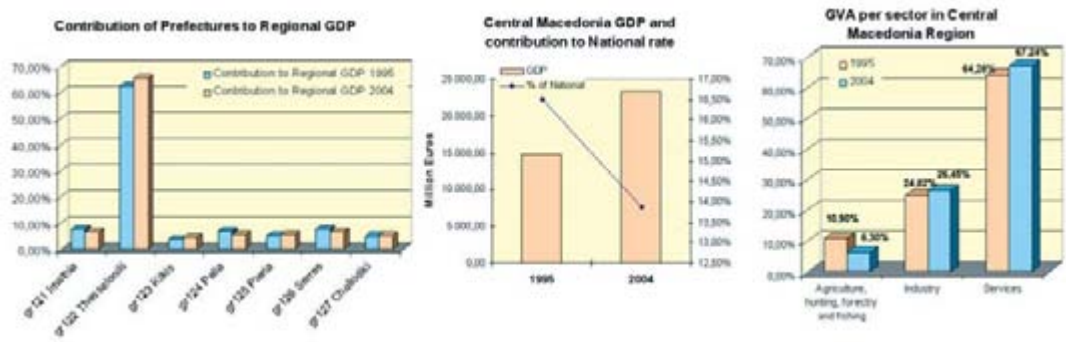


Figure 2.8
GDP and GVA of Central Macedonia Region.

of the region is concentrated and in majority in the urban area of the city.

The role of each prefecture in the region of Central Macedonia varies from one to another as different orientations are observed for each one. There are areas that are concentrating on the primary sector like the prefecture of Pella and Serres, while other Kilkis and Imathia have a more dense concentration on Industry, mostly in the areas near the Metropolitan centre of Thessaloniki. As far as the tertiary sector is concerned, Pieria and Chalkidi promoting tourism have a high rate of employees allocated in services. Finally, Thessaloniki given its role as the leading Metropolitan area of the region in terms of governance, development and industry, low is the allocation (as a rate) in the primary sector.

However, when examining the true allocation of regional labour force per sector, apart from the primary sector where the employment is rather balanced, few employees are allocate both in the industry and services, except Thessaloniki, which represents the 68% and 69% of the labour force of the region in these categories.

The majority of the active population (52%) have only elementary education, while 16% have completed university or other higher education. A mere 0.5% of the labour force has obtained a postgraduate qualification. Some 11% of the region's economically active population was unemployed, one in three being less than 25 years old. 48% of the unemployed persons were concerned by a long-term unemployment in 2001.

2.2.3 Unemployment

The rate of unemployment in the region of Central Macedonia reaches the amount of 11.1% (2005) which is above the national average 9.8% (2005). The total number of Unemployed individuals in the region varied from 88.000 to 99.000 from 1999–2004 reached the number of 91.000 in 2005. The trend since 1999, though indicate a short decrease in the rate of unemployment of 0.2 % per year.

2.2.4 Economy

The overall GDP of the region of Central Macedonia reaches the amount of 23.372,30 million € in 2004 which was the second highest rate behind the region of Attica. This amount consists of 13.88% of the National GDP, which however has declined since 1999. The following figure indicates the evolution of the GDP since 1999 and how this is formed from the prefectures of the Central Macedonia Region.

The prefecture of Thessaloniki is dominating the economic activities of the region since its overall contribution to the Regional GDP reaches the 65%.

The secondary sector is particularly well developed and rising during the last years achieving a rate of 28.46% in 2004. Thessaloniki is home to more than 70.000 industrial, craft and commercial businesses, including an oil refinery, tobacco factories, chemical plants, steel mills, etc. The prefecture of Imathia has a highly developed cotton industry, with ginning and spinning mills, as well as a fruit-processing industry.

The tertiary sector contributes some 67% of regional GDP, with Thessaloniki alone accounting for 68.45% of Central Macedonia's output.

In 1999, Central Macedonia accounted for 16% of Greek expenditure on research and development. About 71% of the research and development expenditures came from the higher education sector, 17% from the business enterprise sector and 12% from the government sector.

2.2.5 Transport

The main transport gateways of a regional importance comprise of the following:

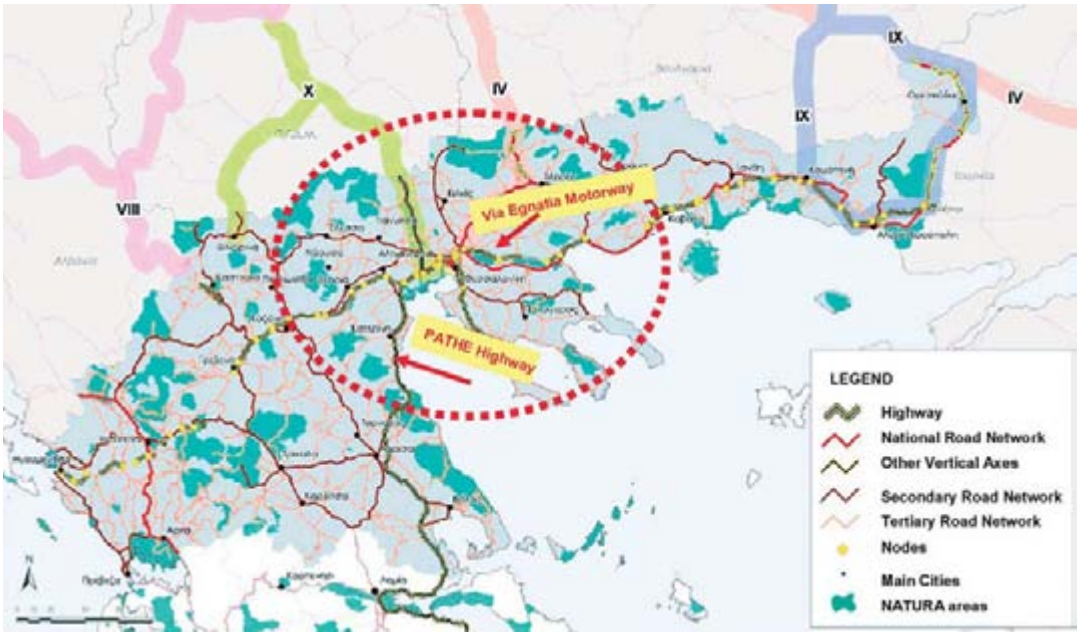


Figure 2.9
The road network and main Axes.

1. The international Airport of Thessaloniki: This is the only civil airport operating in the region of Central Macedonia[1].
2. The Port Authority of Thessaloniki: The port of Thessaloniki is the main maritime gateway of region providing both freight and passenger services. The capture area of the port however, goes well beyond the boundaries of the region since it is considered as the main gateway of the entire Balkan peninsula[2].
3. The Road Network

As far as the transport network is concerned there the road Network is under constant development and the main projects that are underway are the PATHE motorway (North-South Axis) and the Via Egnatia Motorway (Horizontal Axis). The overview of the existing road Infrastructure is as depicted in Figure 2.9.

Road Axis PATRA–ATHENS–THESSALONIKI–EVZONI «PATHE»

The main road axis of the country, with a total length of 730 km, after taking account of an anticipated shortening by 40 km due to the Maliakos Bay Junction, connects Patra, Athens, Thessaloniki and the Border (PATHE), belongs to the Trans-European Roadway Network and will be upgraded to a modern highway. The central Macedonia region is within the northern parts of the motorway leading to the borderlines with FYROM.

The Egnatia Motorway

The Egnatia Motorway is being constructed to open up a new, modern and safe road connecting the countries of the European Union, the Balkans and the East. It unifies the hinterland of Northern Greece and supports its modernisation, opening new horizons for cross border co-operation with the regional market of the Balkans, which is currently under reform. It also provides improved communication with the countries of the Black Sea and the Middle East.

This motorway constitutes a part of the Trans-european Network for transport and is one of the fourteen priority projects of the European Union. It is a crucial project for the achievement of the targets of the Single European Market, employment opportunities within and the financial cohesion of the European Union member-states.

4. The railway Network

The railway network is not so well developed and this fact also hinders the multimodal operations, both in terms of passengers and freight. The network is becoming obsolete. There are several missing links that are plans for the renovation of the lines and modernization of the network but still remaining plans for the future.

The current network suffers from a number of weaknesses:

- the network in question, is developed mainly linearly, due to the morphology of the region, thus limiting the development of railway transportation towards areas non adjacent to the railway axis.
- there are many single-track lines and a large number of level crossings;
- rail electrification stands at a low level (although electrification is increasing) and large part of the rolling stock is obsolete

The current situation on the railway network is as depicted in Figure 2.10.

[1] The facts and figures of the International Airport of Thessaloniki have already been provided in the Thessaloniki City level Report

[2] The facts and figures of the Port of Thessaloniki have already been provided in the Thessaloniki City level Report

Figure 2.10
The railway network of Central Macedonia region and main Axes.

Basic priority of the Regional mater plans is oriented towards the improvement of the railway network and completing the railway network of the region with high quality infrastructure and services. This is why there are plans for the development of the suburban railway network of the region and the Egnatia Railway Axis.

2.2.6 Innovation

Central Macedonia compared to the rest of Greece, is in the forefront of information technology, e-commerce and of all kinds of services offered by the Internet. As two Greek Statistics Institutes' data show (Intel Hellas and Metron Analysis), since 1998 a real explosion took place in the purchase of hardware, software, modems, connection to the web and different pc accessories. These prove great development potential and a wide margin of improvement. Many enterprises, new or preexistent ones, feel the need to obtain visibility on the Internet in order to become more competitive in both the Domestic and European market. This is possible because of the decrease in the cost of internet connection and the public's awareness of the benefits of computerization.

The two Universities, two Technological Educational Institutions and Thessaloniki Technology Park, enable Central Macedonia to play an important role in RTDI programmes. The University of Thessaloniki has the largest student body and number of academic personnel in the country and the Balkans. The University of Macedonia specialises in economics and business administration, and has the necessary infrastructure for connection with RTDI applications. A crucial factor is the mobilization of adequate funds and the promotion of all appropriate public-private cooperation schemes; RTDI has to be freed from traditional state tutelage, in-house activities must be promoted and micro-initiatives should be encouraged in an unprecedented scale, if the Region wishes to affront inter-national and inter-regional rivalry.

Participation to the Innovating Regions in Europe network

Central Macedonia region is among the Greek Members of the IRE Network. The network of Innovating Regions in Europe (IRE) is a joint platform for collaboration and exchange of experiences in the development of regional innovation policies and schemes. The network aims to enable regions to access new tools and schemes for innovation promotion and to create an inter-regional learning process. It also seeks to put innovation at the top of the regional policy agenda. It is open to all European regions that can demonstrate good practice in the promotion of innovation.

2.2.7 Telecommunications

The main advantage is the great market potential and the privileged location of the Region. Greek Telecom's lagging situation besides being a weakness, allows for the adoption of the latest technologies without taking recourse to used in-between solutions. New telecommunication services are becoming widely known.

2.2.8 Culture

Central Macedonia has some of the most important archaeological sites of the country, particularly those pertaining to the Macedonian Royal and Byzantine periods. The unique Holy Mountain monastic state on Athos peninsula is located in Central Macedonia. The important cultural heritage of the region is showcased by a network of museums and modern monument sights.

3 Central Macedonia Area Strategic Plans

3.1 Regional Operation Programme (ROP) of Central Macedonia (2000–2006)

Central Macedonia's ROP is one of the 13 Regional Programmes that are been currently implemented in Greece. Its total budget surpasses 1.5 billion Euros and is the biggest – so far – development program to be implemented within the Region of Central Macedonia.

The development strategy is being formed basically by the selection of a centre for the development of actions in the area (Thessaloniki), while the priority of balanced development in every part of the Region is highlighted as well. Finally, a special focus of the development effort is being adopted, stressing the need

Figure 3.1
Industrial pole of Development.
Source: Regional Framework for the Spatial Planning and sustainable development for the Region of Central Macedonia

for quality of the environment, as a criterion for reaching socio-economic cohesion

The general objective is set in three types of actions:

- Promotion of Innovation and Entrepreneurship
- Integral development of degraded urban areas
- Integral interventions in mountain/remote rural areas

Projects and actions are being planned and funded that:

- Create infrastructures in all the basic development sectors of the region
- Aid the investing plans of small – medium companies
- Offer equal opportunities for the integration of human workforce in the labour market
- Provide social care services to people who need help
- Support the rural development
- Create the conditions for the development and protection of the environment

The basic priority axes of the ROP are the following

Priority Axis 1: Promotion of Thessaloniki's metropolitan role and encouragement of innovation and entrepreneurship

Priority Axis 2: Protection and promotion of the environment in Central Macedonia

Priority Axis 3: Reduction of interregional disparities in Central Macedonia

Priority Axis 4: Rural Development

Priority Axis 5: Reduction of unemployment and provision of equal opportunities in knowledge and skills

Priority Axis 6: Development of mountainous areas, hinterland zones and disadvantaged / problematic areas

Priority Axis 7: Technical Assistance

3.2 Regional Framework for the Spatial Planning and sustainable development for the Region of Central Macedonia

The main development zones for the industry, as set from the plan for Central Macedonia region is as follows:

a) The core, national and transnational range industry, remain in the metropolitan area of Thessaloniki, with emphasis in the Western and Northern part of the prefecture including parts from the bordering prefectures
b) The zone of intensiveness and qualitative reformation in the prefectures of Imathia and Pella
c) Smaller poles in the prefectures of Serres and Pieria

In the Northern parts of the region and especially across the borders, organized areas and free trade zones should be established, 3–4 in the entire region. The most convenient spots for this purpose are the Metropolitan area of Thessaloniki and along the main transport infrastructure. Finally, the mines of the prefecture of Chalkidiki should be promoted by the provision of incentives to industrial units to be established and intensify ores production.

3.3 The Regional Framework of Spatial planning and Sustainable development of the Region of Central Macedonia (RFRPSD)

The Regional Framework of Regional Planning and Sustainable Development of the Region of Central Macedonia (RFRPSD) encloses today's regional policy for the Region of Central Macedonia and constitutes the basic document of reference for the coordination and the integration of the various sectoral pol-

icies, programmes and investment plans of the State, the public organisations and enterprises and the local authorities, that have serious impacts on the cohesion and development of the region's territory. The RFRPSD was developed by the ministry of Environment and Public Works (Y.PE.XO.DE.) in cooperation with other Ministries and responsible organisations, and specifies, within a time framework of 15 years, the basic priorities and strategic options for the comprehensive and sustainable spatial development of the region of Central Macedonia. Y.PE.XO.DE. is the responsible carrier for the monitoring and evaluation of the observance of its options, priorities and directions. The RFRPSD, taking into account the directions of ESDP, forms a pattern of spatial organisation for the whole territory of the region, in which Thessaloniki enjoys a dominant place and in many sectors determines the dynamic of the city's patterns.

The planning of the metropolitan area of Thessaloniki is ruled by the Law 1561/85 concerning the Master Plan and the Programme of Environmental Protection of Thessaloniki, which deals with significant issues such as the decentralisation of the Urban Agglomeration of Thessaloniki, the protection of a wider agricultural area that belongs to the Wider Thessaloniki Area, the restriction of mono-centricity and the hierarchical organisation of a system of centres, the propulsion of the historical cast of features and the taking of measures for the confrontation of pollution as well as the environmental protection in general. The Organisation of Thessaloniki is the managerial organ of the master plan. Two of the most basic implementation activities of the master plan are the Strategic Plan of Thessaloniki and the Study for the determination of land uses in the out-of-plan areas of the Peri-Urban Zone of Thessaloniki (study of ZOE).

4 The vision for Region Central Macedonia

4.1 Vision for the development of Central Macedonia Region

4.1.1 Assessment of position and perspective of the region

The wording up of the vision contains four basic notions:

- Innovation
- Balanced development
- Sustainable development
- Pivotal role in S.E. Europe

The total budget for the achievement of the scopes will surpass the 1.562 billion €. The subcategories for these targets are summarized as follows

- Enforcement of the development role and the perspectives of Thessaloniki
- Introduction and exploitation of RCM dynamics in the wider region of SE Europe
- Enforcement of RCM productive network competitiveness
- Assurance of cohesion inside the Region
- Environmental protection with integration of the environmental dimension in the development procedure

The main results from the previous analysis of the region of Central Macedonia as a Gateway of the country to SE Europe are highlighted by the following:

European and International level

- The spatial integration of Europe is expected in a meso-macro level basis having favourable impact on the confrontation of the problem of the peripheral position of the country and region
- The dynamic of the region as a gateway of the country to/from the Balkans is dependant on the reformation of the local economies and infrastructure to the Northern countries, and EU. The perspective of the EU enlargement and improvement of the relations with Turkey increases the potential economic relationships and cooperation as well as spatial integration of the region.
- The upgrade of the role of the Central Macedonia Region pre-supposes the rehabilitation of the cohesion of the general spatial system and development of Transport and Energy networks and infrastructure as well as the facilitation of the mobility of goods and passengers

At national level

The main characteristic of the region is that it is the second metropolitan center of country and its geographical position is characterized by the balance between the existed and planned projects.

The completion of the projects planned and under construction (PATHE, Egnatia Motorway, modernization of railway network, natural gas network) will contribute to the development of closer relations with the rest of the country and the European countries creation a central pole profile. Moreover these projects would alleviate the natural and physical barriers (mountainous areas in the Western and eastern parts) and improve the accessibility of the region. This fact would contribute effectively to the rational organisation of the spatial planning as well as through the better accessibility the peripheral regions of the country would benefited from upgraded transnational relations.

With focal point the city of Thessaloniki, not only the region of Central Macedonia but also entire Northern Greece would aim at a) promoting the metropolitan governance and its expansion, b) and developing as a pole of financial transactions, culture, tourism and innovation.

These basic parameters have been expressed in the "Strategic plan for the development of the region for the period 2007–2013".

4.1.2 Vision streamlines

The main vision for the Region of Central Macedonia is to become a region of innovation and balanced sustainable development, with a pivotal role in S.E. Europe.

Figure 4.1
Gravity of the cities of Central Macedonia
Source: EGNATIA Motorway observatory

The prospects of Central Macedonia in a competitive European and international environment are determined according to the capacity of the productive system for adaptation and reformation. Core element, not only for the confrontation challenges but also for the exploitation of opportunities in the frame of its knowledge economy, is the growth of regional strategy for the innovation and competitiveness. At the same time, the geography of the region shapes one exceptionally favourable background for the growth of Central Macedonia and Thessaloniki and upgrades it notably as a metropolitan Balkan Centre, as well as a pole of transnational collaboration and European Integration in the wider region of SE Europe. According to the above the vision of Region of Central Macedonia is delimited.

The formulation of vision includes four basic principles that place special emphasis and content in the strategic orientation of the Region in order for the actions to comprise in a medium and long term period the driving force for growth and achievement of the real economic and social cohesion with the rest of EU members

Innovation

The constant search, amendment and redefinition of competitive advantages of the Region render henceforth a primal need, given the high rhythms of consumption. Available local comparative advantages as the adaptation with the rapid developments of globalised economy become a necessity. The boost will emerge from the diffusion of innovation as strategic approach for the methodical production of new scientific and research knowledge, new technologies, new production processes of existing but also new products and services, new forms of administration, organisation and collaboration in the level of enterprise, between enterprises and between enterprises and state. This will materialise in applicable and sustainable activities from the growth indicators in Central Macedonia and they will constitute the strategic points in selected production sectors that can be rendered diachronically as pioneers in European level.

Balanced Development

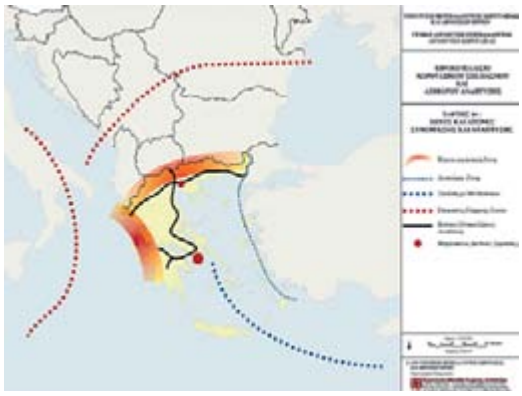
The reduction of intraregional inequalities is based on the possibility of a polycentric development approach with sustainable demographic and productive characteristics of Central Macedonia, compatible with the also planned metropolitan role of Thessaloniki. The unbalanced territorial growth does not only forebode the shrinkage of productive and social structures of the Region except Thessaloniki, but it includes the danger for incontrollable concentration of population and activities in Thessaloniki, with emerging decrease of quality of life, exacerbation of environmental and traffic problems, etc.

Sustainable development

The reduction of the unfavourable consequences from the primary sector activity in the natural environment through an integrated developmental approach that attributes particular emphasis in environmental sustainability and rational management of space is consolidated in Central Macedonia as a permanent characteristic and way to the European integration. This fact would put an end to the reproduction of negative models that downgrade the quality of life, attractiveness and international competitiveness of the Region

Pivotal role in S.E. Europe

The process of the progressive homogenisation of the Balkan economic space through the lifting of the transnational competitiveness of the past, the liberalisation of markets and the future integration of certain countries in EU, creates favourable conditions of extension



economic activity with expected positive impact for the growth Central Macedonia. The emergence of the region in nodal point for development in the Balkans and, wider, in South-eastern Europe, exploits the vested advantages because of the geographic position as gate of country to the area of interest - but also as the south-eastern borders of EU and node of transport, communication, energy networks of national and international importance. Moreover, it promotes the possibilities for a dynamic pole of growth that is planned through the metropolitan operation of the Urban and wider area of Thessaloniki. [3]

The achievement of the above mentioned streamlines have as priority development axes the following:

Priority Axis I: The Completion of the infrastructure and improvement of accessibility

The general objectives of the RCM in respect to the infrastructure and accessibility services pass through the establishment of a polycentric network of urban centers that would be operating compensational to the Metropolitan area of Thessaloniki. This objective would be achieved only with a polycentric model of urban development on a national and international level with basic pole the center of Thessaloniki. In any case the improvement of the accessibility, the development of the transport infrastructure and the cohesion of the regions are collaterally connected.

Thus considering the above, the development of the RCM passes through the rational development of Thessaloniki since, as also defined from the first part of the present report, the Thessaloniki Metropolitan area dominates the productivity, economic and demographic indices of the region. Its metropolitan profile affects not only the narrow boundaries of the region but also the greater area of North Greece and Southern Balkans along the via Egnatia motorway.

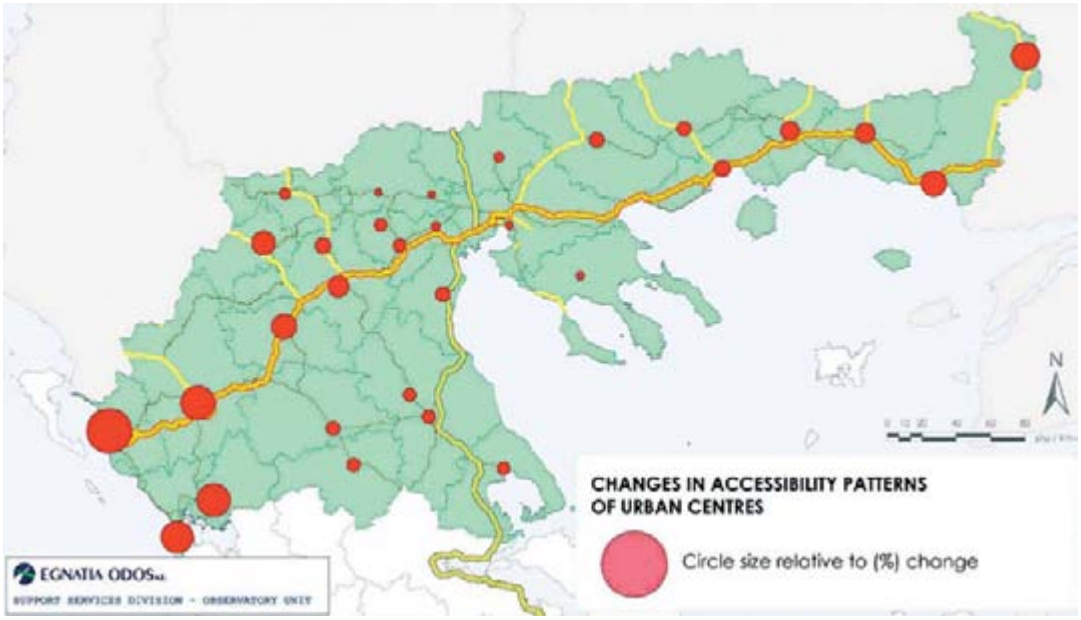
The strategic plan is relying on basic infrastructure projects in order to strengthen its National and international point that are about to change the geographic and socio-economic map in the area. These maybe be summarized to the following:

- The Egnatia Highway with its vertical roads in Central Macedonia is being completed
- The completion of the Patras–Athens–Thessaloniki–Evzoni (P.A.TH.E.) route is coming to its final stage
- The contract with the contractor of Thessaloniki Metro and its extensions [4]
- The Submarine Tunnel award procedure [5]
- The modernization of "Macedonia" Airport is being completed with the construction of runway 10/28 [6]
- The completion of Thessaloniki Port extension, with the full construction of the sixth dock [7]
- The projects of Greek Railways are multiple, some of the most important including the moderni-

[3] The details on the development of the metropolitan area of Thessaloniki are reported in the "Thessaloniki city level report" for Polymetrex.

[4,5,6,7,8] Reported in the "Thessaloniki City Level Report".

Figure 4.2
Changes in accessibility patterns from EGNATIA ODOS
Source: EGNATIA Motorway observatory



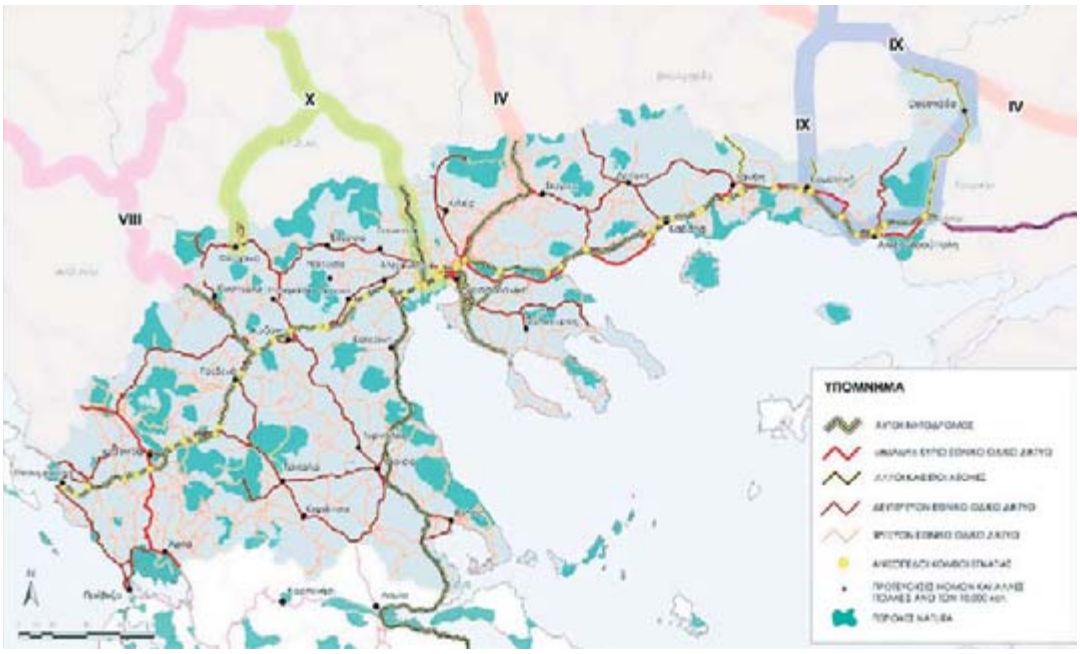


Figure 4.3
The future road Network of Central Macedonia.

zation of the existing network, the electrification and the Suburban Lines [8]

These plans would upgrade the role of Central Macedonia in the Balkans and provide new development perspectives for the entire area of Northern Greece and SE Europe.

Extent reference have been made in the Thessaloniki City Level Report about the vision concerning the development of the Infrastructure of Thessaloniki, such as the upgrade and development projects of the port, the airport, the metro, the submarine road artery, the suburban railway etc. However the transport links infrastructure in the wider area of the RCM that will enhance the development of the region are the completion of the Egnatia Motorway and the railway infrastructure expansion. The following map indicates the road network after the completion of the road infrastructure projects under way including the segments of the Egnatia motorway.

The conclusion of the road network would find the area of Northern that would result (already does) beneficial impacts on:

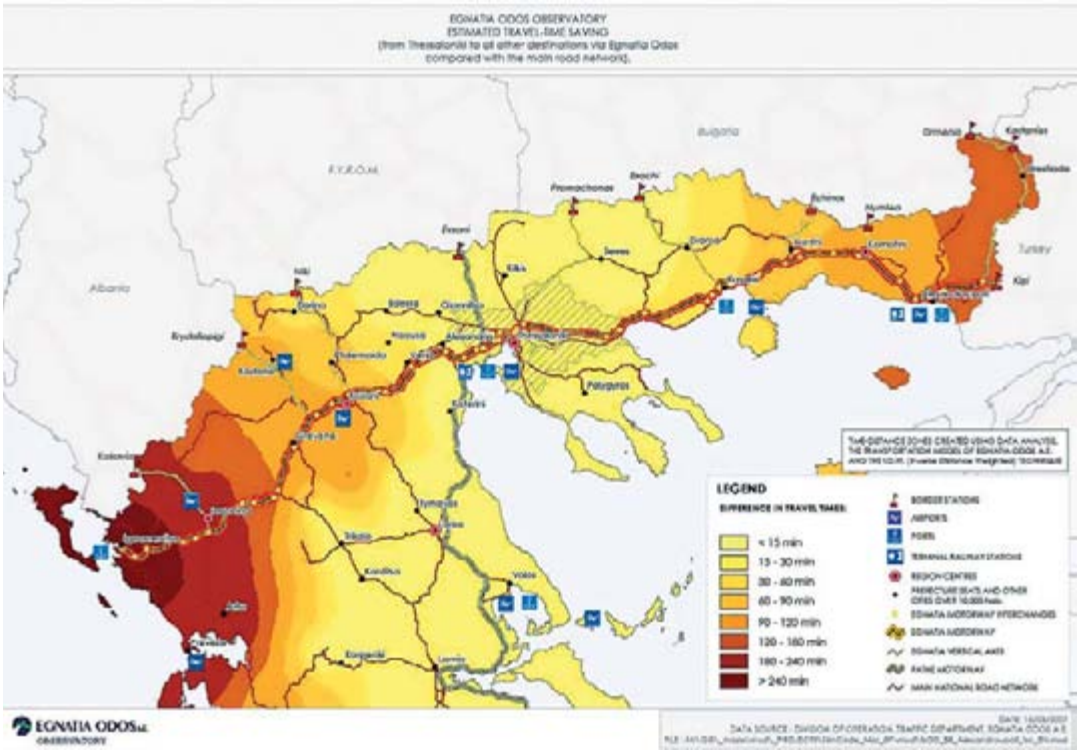


Figure 4.4
Future Road Network and differences in travel times
Source: EGNATIA Motorway observatory

Figure 4.5
Simulation of Railway flows for the Egnatia Railway.

- Mobility and accessibility of RCM
- Social and Economic Cohesion
- Urban Balance and networking
- Quality of the environment

Moreover the existence of the infrastructure provides the ground to achieve strategic transnational agreements on mobility of passengers and freight as those that are under way nowadays such as the Corridors Thessaloniki–Constantinople's and Thessaloniki–Sofia. Finally the travel times and the accessibility of the metropolitan area of Thessaloniki by the Egnatia motorway may be observed in the figure. Of course the darker areas would have a time saving of more than 4 hours than today's situation expanding the impact of the city also to both horizontal directions.

Vision for the railways

The suburban railway that is planned to be operational within the following years analysed in the "Thessaloniki City level Report", and the P.A.THE. railway network along Corridor X are not the only projects that are planned for Northern Greece. There are studies that are under evaluation and discussions for the integration railway network of Greece in a horizontal perspective (beside the North-South of Corridor X). The Egnatia railway Axis would be the equivalent to the road network railway line that would be in reality the connection of the current missing links of the Greek network in Northern Greece. This Corridor is considered as a branch of the Western Axis qualified as a TEN-T priority project, and is expected to have a similar impact to the intermediate regions and catchments areas mostly for the operation of intermodal services between the ports of the Adriatic, the port of Igoumenitsa in Western Greece and the region of Central Greece. This infrastructure would provide a gateway to the west along the Euromediterranean RINA Corridor rationalizing the railway network. The following maps demonstrate the railway freight flows with and without the integration of the Railway Egnatia, showing relatively beneficial impact along the network and connection between the centres of Thessaloniki and Igoumenitsa in western Greece.

This railway infrastructure would be connected a priori with the suburban railway and Corridor X, while, as in the case of the road axis, new transnational corridors would be created. However it should be mentioned at this point that this infrastructure project is not situated in the above mentioned form in the RCM. However there will be significant impact from its operation, as well as there are extensions to the East that are under study that would improve the connectivity of the RCM and the ports situated in the coasts of Northern Greece, including of course the port of Thessaloniki

Priority Axis II: Digital Cohesion and entrepreneurship

A concrete strategy for Innovation and Technological development of the region of Central Macedonia would be the key to respond to the challenges imposed by the European trends as well as to take advantage of the opportunities emerging by this fact. The momentum for the development of Central Macedonia and Thessaloniki into a Metropolitan Balkan pole seems ideal due to its geography and strengthening of the position is SE Europe. Moreover, the European Regions are heading towards innovative models of governance from the regional competitiveness occurs from technological innovation and transformation of scientific and technical knowledge into products of every day's life. Thus the development of innovative environments comprises for RCM a challenge that should be exploited through a strategy towards ICT and innovation.

In line with these trends special emphasis should be placed in the support of entrepreneurial activity that would lead to products of high added value incorporating knowledge environmental care and innovation. The basic actions that need to be taken within the following years with a short-term approach maybe summarized as follows:

Productive environment

- Support of the regional network of scientists, enterprises and innovative structures (Innovation Zone of Eastern Thessaloniki, Innovation Pole of RCM, spin-offs, clusters of technological companies etc)
- Combined support of innovative entrepreneurship development through the promotion of ICT and diffusion of best practices programmes
- Improvement of technical infrastructure and services to enterprises in order to upgrade added value product, especially in domains that are under international competition
- Support of competitiveness of enterprises in the secondary and tertiary sectors that contribute to the regional competitiveness

- Enforcement of Information Society with programs of digital innovation fields and diffusion of web applications
- Coordinates support of broadband and wireless networks as well as entrepreneurship in domains that use digital technologies

Finally, as far as tourism and culture are concerned, which comprise strong development poles of RCM basic choice is the support of competitive tourism and sustainable management of natural, cultural and touristic resources. In order to achieve these goals the following would be required for the RCM:

- Expansion and differentiation of tourism product towards a sustainable direction, especially for new sites and creation of alternative tourism
- Preservation, reduction and control of environmental impact of tourism
- Improvement of the quality of the competitiveness of touristic services
- Appropriate publicity-promotion of touristic products of the RCM in traditional and new markets
- Promotion of innovation and entrepreneurship of high capabilities in tourism and integration of culture

Priority Axis III:
Sustainable development and quality of life
The strategy for sustainable development comprises the sole acceptable social selection for the design of a policy for the RCM in the coming years. The three principles environment-society-economy requires a multidimensional interposition that would integrate all.

Environment:
The improvement of environmental infrastructures that are under construction in several areas and contribute to national or regional goals comprises of a specific target. The coordinated actions for systematic and dynamic confrontation of pollution sites, as well as placing even more emphasis on the prevention of new forms of pollution are a second target. The realization of the targets for promotion of natural and structural environment, the development of environmental infrastructures and the sustainable management of the natural resources would allow the environmental dimension to the development policies of all economic sectors. The basic categories that would be improved in order to achieve this environmental sustainability in the years to come maybe summarized to the following:

- Management of solid and hazardous wastes
- Protection of the soil
- Management of water resources
- Quality of air
- Management of natural environment
- Confrontation of changes
- Civil protection and danger management
- Creation of mechanisms and tools for environmental and spatial policy

Culture
The cultural environment of the RCM is rather expanded and covers a wide variety of chronological periods of history. However, the modern culture will also be fostered by the reformation-restoration of monuments and historical centers like the one in the Metropolitan area of Thessaloniki, as well as integration of traditional settlements of the RCM into touristical sites.

The interventions that would improve the cultural environment of the RCM maybe summarized to the following:

- Restoration of operations of monument spaces and assurance of visitation, as well as examination of rehabilitation
- Creation of modern museums for the promotion of cultural and historical background of the RCM
- Creation of modern cultural infrastructure of production and provision of cultural products
- Creation of cultural institutions and support of investments in the domain of culture

4.1.3 Vision for the spatial dimension

The target for rational spatial interventions would result the achievement of balanced development setting the sector and regional policies more compact. On a regional level, for the RCM the challenge comprises the reformation of the activities in the urban space and the province according to their respective advantages as well the reduction and avoidance of several inequalities on a development level.

Sustainable urban development
The basic lines for sustainable urban development in the RCM are mostly expressed for the case of the Thessaloniki Metropolitan area, which is the most important case of urban development. Still for the other urban spaces of the RCM the following prerequisites should be created:

1. Protection and improvement of urban environment through:
   a. Protection of natural environment within and around the urban block
   b. Improvement of the structured environment
   c. Emphasis on the urban operations, including the network infrastructures (waste management, water supplies), public transport, mobility of goods and people
2. Strengthening of the economic prosperity and social cohesion, with emphasis on the integrated approach on the problems encountered in the local community (unemployment etc). This could be achieved with:
   a. Synergies with local enterprises
   b. Development of entrepreneurship
   c. Improvement of human resources capabilities
   d. Ensuring equality for all members of the local societies

Thessaloniki TRANSNATIONAL

Final Report

3
Polycentricity and Better European Territorial Balance

November 2007

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ORGANISATION OF PLANNING AND ENVIRONMENTAL PROTECTION OF THESSALONIKI

1 Introduction

1.1 Objectives of the report

This report presents the main considerations for the future Transnational role of Thessaloniki agglomeration and relations that may developed between the city and other European metropolitan areas. It has been prepared in the context of the Polymetrex Project, aiming at the polycentric development of city-regions and the creation of synergies between the cities along defined Corridors, the so called, RINA Corridors.

In the context of the project three main approaches were examined for defining the desired future development profile of the agglomerations:

- the city level approach, considering the urban area of the agglomeration ,
- the region level approach considering a wider area surrounding the agglomerations that has direct interface and interconnection with the agglomeration and
- the transnational level approach that assumes the international role of the agglomerations examined by the project and focuses in identifying "means", areas of cooperation and scenarios for developing and implementing joint cross-borders and Transnational territorial development strategies among the project partners cities.

This report provides a concise description of the Transnational profile of the Thessaloniki agglomeration. The currently identified Transnational role of the Thessaloniki agglomeration and its position in the polycentric Spatial development of Europe are described here. The main objective is to create a scenario for possible interfaces between the Thessaloniki Metropolitan area and the RINA cities in the future in line with the EU policy for:

- Strengthening the polycentric development through better urban balance with the periphery and
- Creating functional corridors within Europe through synergetic economic and infrastructure development along these Corridors

2 Currently defined Transnational role of Thessaloniki

The multi cultural structure of the city of Thessaloniki is an historic possibility with different interpretations and constitutes the determinant of all efforts and city development initiatives undertaken by Public and Private Entities at local and national level. In all development scenarios the expansion of the international role of Thessaloniki is closely related with the city's substantial contribution to the balanced and complementary development of the national space, and the diffusion of the profits of its development to all regions of the Northern Greece. The international metropolitan role of Thessaloniki has been expressed in many national and transnational studies and in many cases was set as a high priority axis of many spatial development plans.

2.1 Position & potential of Thessaloniki in the context of Polycentric Spatial Development

The evaluation of the position and the prospects of Thessaloniki as described by different National, European and Regional studies & projects may be summarized in the following:

A. According to EU polycentric spatial development "road-map"

Extent work on the polycentricity of Greece has been undertaken by the ESPON and INTERREG projects, with significant results. In the ESPON 1.1.1. project the terms Functional Urban Areas (FUAs) and Metropolitan Growth Areas (MEGAs) have been introduced in order to classify the European Urban centers.

According to this classification Thessaloniki, has been ranked a FUA of Transnational profile. Despite its developing role, Thessaloniki was not considered, according to the methodology of ESPON, as a Metropolitan European Growth Area (MEGA) but still its transnational role is rather significant mostly for the North-South Corridor.

- Thessaloniki is on the well known "red octopus" (Van der Meer:1998) which demonstrates the potential for the creation of multiple zones & corridors of spatial development along the whole EU as a positive result of the EU integration and the diffusion of the development from the core EU developed countries towards West – East & North South EU periphery.

The Map 2.1 consolidates the country and the major cities position to the European polycentric space.

B. According to National-Local Polycentric spatial development "road map"

The "General Framework of Spatial Planning and Sustainable development" (GFSPSD), released by the Ministry of Environment Spatial Planning, in July 31, 2007, (a strategic document setting the National priorities for development) specifies the following priorities for the Thessaloniki region development:

- Reinforcement of the role of Thessaloniki as a Gateway and as regional metropolitan center of Europe
- Promotion of the role of Thessaloniki as a cultural metropolis and as a centre of tourism and leisure within the Balkans and the area of the Black Sea
- Promotion of the role of a entrepreneurial/commercial node of the EU with the countries of the Black Sea
- Promotion of the role of a city as a Balkan centre for research and innovation, transshipment node, logistics, and centre of social services provision (education, health)
- Improvement of the efficiency in all sectors (economy, education, health, leisure, culture), improvement of the environment and gradual balancing with the Metropolitan area of Athens

Furthermore, the "Strategy-Specific targets for the development of Central Macedonia Region-2007-2013", assesses the current situation in the area of Thessaloniki at two levels.

At European and International level

- Europe's spatial integration is expected on a meso-macro level to have favorable impact on the confrontation of the problem caused by the geographical and peripheral position the Thessaloniki agglomeration in relation to Europe.
- The prospect of the city, as a "gateway" of the country to the Balkans, is dependant at great ex-

Map 2.1

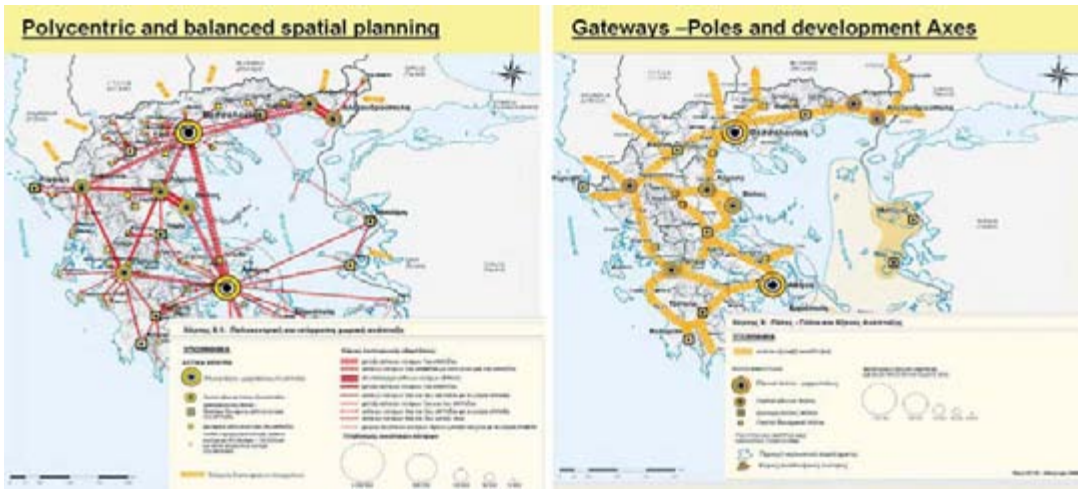


Figure 2.1
Polycentric Development – Gateways and Development axes.
Source: General Framework of Spatial Planning and Sustainable development, July 2007

tent on the reformation of the local economies and infrastructure of the Northern neighboring countries, as well as on their perspective relations with EU. The EU enlargement and improvement of the relations with Turkey increases the potential economic relationships and cooperation as well as spatial integration of the region. (See Figure 2.1)

- The upgrade of the role of Thessaloniki pre-supposes the improvement of the continuity and cohesion of the spatial system of the enlarged area through the development of transport, energy and infrastructure networks, as well as through the facilitation of the mobility of goods, services and human resources.

At National level

- Thessaloniki is the second metropolitan centre of the country and its geographical position is central in the junction of already existed and planned development "pushing" infrastructure projects. (See Figure 2.1)
- The completion of the infrastructure projects (PATHE, Egnatia Motorway, modernization of railway O.S.E. network, natural gas network) will contribute to the development of closer functional relations of Thessaloniki with the rest of the country and abroad. (See maps in Figure 2.2) This will result in strengthening the central role of Thessaloniki and in its transformation to a dynamic city in the context of a wider developmental framework. At the same time, these projects would alleviate city's isolation and problematic accessibility caused by natural and physical barriers (mountainous areas in the Western and eastern parts of the Macedonia region). Moreover, they would contribute effectively to the functioning and the rational spatial organisation of the wider Thessaloniki & Central Macedonia region area.
- For the focal point the city of Thessaloniki, an integrated and dynamic development would be aimed a) through the promotion that the metropolitan governance and its expansion would mobilize, b) and as a pole of financial transactions, culture, tourism and technological innovation.

In top of the above the Strategic Plan for Sustainable development of Thessaloniki: Axes and Priorities 2010" (SSDT) underlines that the increase of the in-

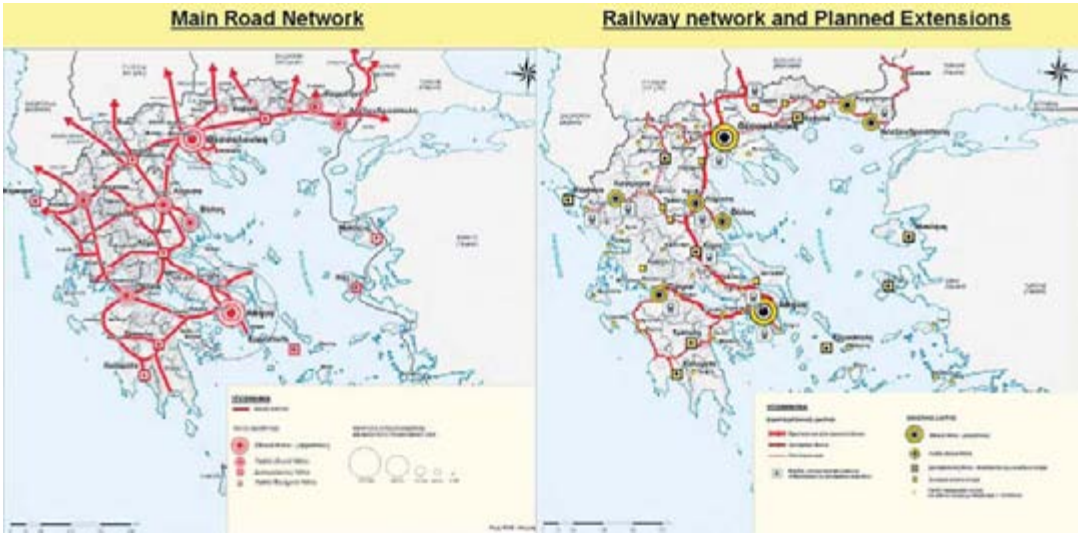


Figure 2.2
Main Road and Railway network-Extensions
Source: General Framework of Spatial Planning and Sustainable development, July 2007

fluential effect of the city to become a metropolitan center of the Balkans based on favorable geographic locations and other structural advantage.

The map that follows capitalizes the above described issues and consolidates the International role and Spatial cohesion for the Thessaloniki area.

The SWOT analysis that has been performed at regional level for the area of Thessaloniki vis-à-vis its transnational development and presented here indicates the axes that should be followed for achieving the regional cohesion and the International role of the city.

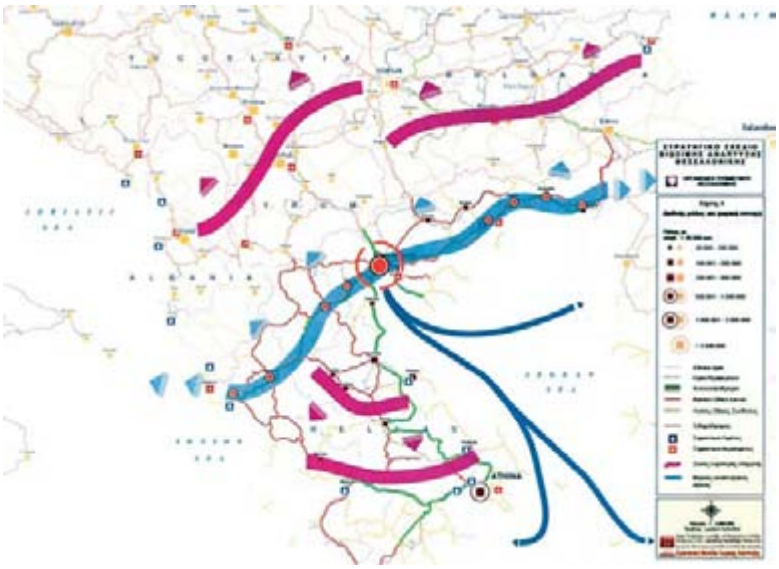
Strengths
- Significant geopolitics position in SE Europe
- Participation in TEN-T
- Significant node for transfer of energy in national and Balkan level
- Concentration of significant economic activities
- Availability of exploitable Renewable energy sources
- Existence of competent human resources
- Significant research and innovation
- Significant tourist poles
- Increase of transnational trading relations with the Balkans
- Significant entrepreneurial activity of Greek companies in the Balkans

Weaknesses
- Geographical distance from the European centers and inadequate connectivity (despite improvement)
- Low accessibility of the Central Macedonia Region, lack of extent borders with EU Members
- Population decrease in the border settlements

Opportunities
- Enlargement of EU to the East
- Completion of TEN-T and other Infrastructure projects
- Emergence of the Central Macedonia region as a pole of Innovation and research in SE Europe
- Large Scale reformation of Transnational infrastructure in Thessaloniki
- Investment opportunities in the Balkans and reinforcement of bilateral cooperation
- Demand for Tourism and alternative tourism

Threats
- Increasing competition in a liberalized environment in world trade and enlargement of EU
- Transfer of local economic activities and productive units in neighboring countries

Thus summarizing the above, the transnational role of Thessaloniki, is envisaged to be of primal significance mostly in the area of the Balkans, but only if all the advantages are exploited.



2.2 Thessaloniki within the geography of "possibilities"

2.2.1 The broader Geopolitical Context

The new European space is being reorganized in a context defined by the European unification process and the prospects of enlargement. The position of Thessaloniki in this reorganization context has been presented in the previous paragraph. Nevertheless, the spatial development approaches and strategies of the various countries are still characterized by structures and concepts, which have been shaped under different frameworks and have not completely incorporated the new reality. The prospect of the gradual accession of 13 new member-states creates the conditions for a dynamic development and expansion of the EU external boundary as its current borders will eventually turn into internal ones, and the countries of the Black Sea, Russia and even of the Middle East will constitute its new immediate neighbours.

Figure 2.3
International role and spatial cohesion for Thessaloniki area.
Source: "Strategic Plan for Sustainable development of Thessaloniki: Axes and Priorities 2010"

On the basis of this prospect, the internal tensions in the enlargement countries (for example regional conflicts due to the presence of national minorities) will eventually be removed and absorbed within the framework of a multi-cultural and unified Europe. It is expected that the role of the EU in the global system will be significantly strengthened by these trends especially to the extent that it will obtain direct intercontinental accesses to Asia and Africa, mainly through the extension of infrastructure and the creation of trade transactions and the movement of goods and raw materials. The adaptability and inter-operability of the basic infrastructure networks and the homogenisation of institutions and political procedures, which will promote co-operation and the growth of markets, will facilitate this expansion.

In the same context, the geopolitical importance of the broader area of Central, Danubian, Adriatic and SE Europe is significantly upgraded. This fact is reflected in the expression of a general international interest, especially after the recent developments in Yugoslavia, in the security and development of SE Europe, the incorporation of which emerges as a crucial and substantial component of the overall process of European unification.

Figure 2.4
Greece and Thessaloniki in the Balkans.

The above creates a new "geography of possibilities" enabling the definition of complementary or additional International role of the cities and interests for "interfaces" development among the cities. Thessaloniki is located in the center of this "geographical area of additional possibilities" and is prioritizing its development axes and cooperation strategy by identifying its role of a major "functional intersection" in this area.

2.2.2 Thessaloniki and the Balkan

The Balkans have always been at a crossroads of different cultures and civilisations, where different religions and peoples have existed side by side. It is a place where cultural differences give rise to tensions and suspicion. However, Greece, during the last decades, has stayed out of tensions in the area and has managed to sustain its developmental course, albeit not at the same rate over this period, and has become the leading international partner in the Balkans. The springboard in this effort is the area of Northern Greece. The future of Northern Greece and the country as a whole depends on the competitiveness of its productive network, which directly correlates with the investments in production sectors exposed to national and international competition.

The prospects for Northern Greece in the competitive European and international environment are defined on the basis of its productive system capacity for adjustment and restructuring. Regional cooperation among the Balkan states becomes a major political priority, in view of stability, development and the incorporation of the South-East European economies in the EU. The Interbalkan Co-operation Initiative has been designated as a strategic decision by the Balkan states, as it constitutes an honest and feasible mechanism of regional co-existence and co-operation, which can only eventuate in the improvement of political, economic and business relations. The rise of Northern Greece as a pivotal factor, in the Balkan and Southeastern European developments, exploits the advantages of its geographic position, as the country's gateway to the area of interest – but also as European Union's gateway to its south-eastern orders. At the same time, it takes advantage of its dynamic pole of development, which is promoted by the metropolitan character of the greater Thessaloniki. With the collapse of the communist regimes in the Balkans, the E.U. recognised Greece, and especially Northern Greece and Thessaloniki, as a bridge for developing Balkan economies.

While it can be taxing and politically dangerous to try to separate rumour from fact or wishful thinking from reality, it is evident that the changes in the area are steadily strengthening the city's economy and its reputation as a Balkan commercial centre. Especially, after Bulgaria's admission to the E.U., Northern Greece

has become its pathway to globalization. Thessaloniki is being hailed as the new metropolitan centre of the entire Balkan Peninsula, as well as the centre for information and coordination in several international initiatives for Balkan reconstruction.

The city has a long history as a centre of regional trade and finance and this continues in modern times. Since 1995, Thessaloniki has its own Stock Exchange, whose mission is to become a major stock market in southeastern Europe and the Balkan region. The impact of globalisation and the realisation that only through trade can smaller Balkan countries achieve competitiveness, both contribute to Thessaloniki's prominence. Until today, more than 2,500 Greek companies have invested in sectors which show favourable growth prospects and need improvement and upgrading. Among the many areas of investment are information technology and telecommunications, banking and finance, food and beverages, energy and petroleum products, networks retail and wholesale trade, construction, basic metals, building materials, packaging equipment, tobacco, agriculture and fishing.

Other sectors such as tourism, logistics, healthcare, education services and consulting are growing hand in hand with total market development. The process of gradual homogenisation of the Balkan economic area, through the lifting of international competition of the past, the liberalization of markets and the future accession of some countries to the E.U. create favourable conditions for financial expansion with expected benefits for Thessaloniki in general.

2.2.3 Accomplishments and future prosperity

The overall dynamic development and also the requirements for quality of life have created for Thessaloniki a situation which can be described by citing two characteristic elements: the improvement of the quality of the environment and of the social and urban infrastructures. It is partially true that in the late '90s Thessaloniki experienced a decade of stagnation and lack of developmental infrastructure. A series of important projects (such as the construction of a Subway system and the modernization of the "MACEDONIA" airport), remained government promises in writing, but were never translated into reality.

However, recent developments (as described in detail in the city report of this project) of particular importance to northern Greece are rapidly changing the prospects for the broader area: the agreements with Russia and Bulgaria for the construction of the Burgas-Alexandroupolis oil pipeline and for the commencement of work on the Greece-Turkey natural gas pipeline; the planned underwater pipeline to convey natural gas from Greece to Italy, and from there to the heart of Europe; the acceleration of rail links between Thessaloniki, Sofia and Istanbul.

Additionally, the National Motorway, the Egnatia Motorway and Northern Greece's prominence in shipping, translate into huge logistical advantages for market penetration.

Furthermore:

- The contract with the developer of Thessaloniki Metro and its extensions, through a specific implementation schedule, acts as a catalyst for improving the quality of life.
- The Submarine Tunnel award procedure, which, after many years of delay, has engaged a contractor and whose implementation has begun, is a project that is improving transport and traffic.
- The modernization of "Macedonia" Airport is being completed with the construction of runway 10/28. Thus, Thessaloniki airport is now becoming an airport of international standards.
- The establishment of the International University in the next months in Thessaloniki will promote the exchange of knowledge and academic staff and enhance the city's role as a gateway to knowledge and prosperity.
- The completion of the Thessaloniki Port extension, with the full construction of the sixth dock, as well as the modernization of road and railway access and its operation of a logistics centre, will make it possible for Thessaloniki to maintain its prominence as the maritime gate of the Balkans. Hence, the port of Thessaloniki is, already, one of the top crucial Greek ports and the main port of entry to the Balkan hinterland. It is also the nearest European Union port to the Balkan countries.
- The projects of Greek Railways are multiple, some of the most important including the modernization of the existing network, the electrification, the reduction of travel time between large national and International destinations and the Suburban Lines of Thessaloniki to important urban centres of Central Macedonia.

Last but not least, the state's intention regarding the development of Research and Innovation in Central Macedonia has also been expressed by the act for the formation of an "Innovation Zone for Eastern Thessaloniki" (Z.K.A.TH.), This act establishes stability of cooperation between public bodies and enterprises. The objective is to develop technology and research in sectors crucial for the Greek economy and to make use of its results, so that these can be implemented in every product designed or service rendered.

In addition, more incentives for new investments are offered by the new investment law, as well as through Public and Private sector Partnerships, while the new generation of privatizations and the 3rd Community Support Framework can reform the area's economy. As a result of all the above, Northern Greece's and Thessaloniki's particular role, as the economic engine of South-East Europe, creates a significant multiplier effect for businesses wanting to operate throughout the Balkans and benefit from regional market access. As Greece's neighbours develop market economies, create a new generation of entrepreneurs and generate an important consumer base, businesses based in Northern Greece and especially in the broader area of Thessaloniki enjoy multiple advan-

tages, reflecting the city's position as an emerging regional business hub.

2.3 Vision for the Thessaloniki International role in the context of the European Space

2.3.1 Thessaloniki in the future

Urban and regional development in the beginning of the 21st century is characterised by a shift towards technology, innovation and selective urban development, similar to the tendency, immediately after the Second-World-War, towards mass industrialisation and intensive urbanisation. In the near future, it is expected that Thessaloniki will undertake several new specialized roles (communication centre, specialized services centre, technology development and diffusion centre, etc.), in order to become a decisive player, through health care, the development of Information and Communication Technologies and transportation networks, research and business activities, production activities and know-how transportation, and through the concentration of knowledge intensification activities. Today, Thessaloniki remains a challenging business environment, but with much work to be done. Opportunities do - and will exist for exporters and investors.

A central point, in order to face challenges and to exploit opportunities as well, within the framework of knowledge economy, is the development of a general strategy about innovation and competitiveness, as innovation is high on the agenda of business associations that are demanding a regional approach to it in complete contrast to the situation a decade ago. At the same time, the area's geography forms an extremely favourable background for the development of Thessaloniki and for its transformation as the metropolitan centre of the Balkans and a pole of cross-border cooperation and European integration in the general area of S.E. Europe. Add to all these the skills of the labour force, the hundreds of thousands of multilingual citizens, Aristotle University, Macedonia University, International University, Private Colleges, the huge merchant marine and the state-of-the-art infrastructure of this city, we can reach the sum of a most interesting investment and business opportunity in the fastest growing areas of S.E. Europe.

2.3.2 Scenarios for Vision implementation

The basic scenarios for achieving international role of Thessaloniki as expressed in the previous chapters may be summarized to the following:

- **International Pole and Gateway of Europe** that takes advantage of the city location in order to emerge as a political planning center of economic influence (e.g. base of the reconstruction of the Balkans, European Organisations, black sea Bank etc)
- **Cohesion pole and development of the area of Northern Greece** in order to diffuse it dynamically in the wider area and achieve convergence with the other developed regions of the country (e.g. Attica region)
- **Center of Specialised tertiary services** with reinforced position in the competition of the cities in order to become a node of the European network of urban centers (e.g. center of tertiary activities, pole of innovation and research, cultural center, etc)
- **Metropolitan center with multi cultural profile**, combined with intense population increase as a result of a self powered developmental dynamic position in the Balkans.

These scenarios, despite their different aims, do not necessarily lead to competitive policies and strategies. More or less, these scenarios are based upon the structural data and statistical analyses of the last decade that confirm the increasing dynamism of the city. In any case, these trends corroborate the multiple possibilities of the cities and existence of advantages in several sectors.

3 Critical parameters for Thessaloniki North-South "interfaces" development

3.1 Basic considerations for "Interfaces" creation

In POLYMETREX we are seeking in defining possible interfaces among the cities of specified Corridors. As "Interfaces" we define synergies in regional economic growth, common strategies for regional cohesion achievement, cooperation in specific productive or commercial sector etc that may be implemented among the city-regions of the RINAs. In other words we are attempting to the balanced regional economic development along the RINAs and the creation of a network of "successful" cites that may create a multiplier effect in regions spatial integration and cohesion.

ESPON project 1.1.3. consolidated some basic questions and provided interesting answers on important issues related to spatial integration and regional cohesion i.e. successful "interfaces" achievement.

"Through the EU enlargement process the relationship between transport infrastructure and regional economic development has become more complex than ever, and the fruitful question is: Are regions with higher accessibility really more successful than other regions?

While transport accessibility functions as an integration process to overcome geographical distance, the question can be posed how much geography in itself affects regional development and cohesion. Another question related to physical and geographical distance is: To what extent does geographical proximity matter in the regional development of the ESPON space? Is it advantageous to have prosperous neighbours?

The hypothesis in this case is that regions with similar development patterns (either positive or negative) tend to be located close to one another. In an

enlarged and integrated Europe, especially as a consequence of the latest enlargement to the east, this kind of dependence can be expected to strengthen due to the constantly increasing mobility of goods and production factors, as well as intensified inter-regional cooperation. Neighbour dependent growth in the EU10, EU15 and EU27+2 is explored by the method of spatial autocorrelation.

Processes of integration and globalisation are also expected to affect the degree of regional specialisation and geographic concentration of economic activities in the entire ESPON space. This is particularly true in the light of effectiveness policies and interventions to increase regional competitiveness and boost productivity. However as regional specialisation increases, industry-specific shocks risk become region-specific shocks, thus eroding processes of convergence.

The main questions are: Is there a relationship between specialisation trends and economic sectors? Is there a relationship between specialisation trends and presence of MEGAs and is the relationship different for old and new member states? Which regions are most vulnerable? (chapter 2, section 2.6)

To address these questions we develop a typology showing powerful, slowing, converging and diverging regions based on GDP per capita and growth rate, which is augmented by the presence of MEGAs and type of regional specialisation (or de-specialisation) in various sectors.

While there has been much emphasis placed on decentralized economic development and regional specialization as some of the main means to redress regional disequilibria, the effects of financial and monetary integration have largely been neglected.

However ESPON address this topic by the hypothesis that financial and monetary integration in the enlarged EU will play in increasingly central role in determining patterns of territorial cohesion and competitiveness. The disappearance of local and autonomous banking systems and the concentration of financial activities in main financial centres are generally considered to be the consequence of ensuring efficiency and competitiveness of financial markets.

The salient question is: Will financial and monetary integration have beneficial repercussions for all the regions that make up the European economy or will it provoke spatial discontinuities? (chapter 2, section 2.7)

To answer this question, ESPON identified the cohesion and competitiveness effects of the enlargement process on economic and urban structures in a context of financial and monetary integration, with an additional focus on levels of FDI inflows received by the new member states.

While expanding trade and investment flows across borders between the EU15 and the new member states and accession countries and among them is expected to be a result of increased integration, the data about factor endowments is are in many ways incomplete. However cross-border interactions or flows can be approached by examining the potential for increased integrative flows, as we do in the section regarding the special position of border regions Border regions tend, for the most part, to be lagging regions. For instance, while border regions constitute about a quarter of all NUTS 3 regions within the EU, their share in the number of lagging regions (ESPON 2.1.1 and 3.1) amounts to nearly 40%".

On the basis of the above the following considerations may be summarized as enabling parameters for creating and developing "interfaces" among city-regions along the RINA North – South corridor:

Accessibility, which is directly influenced by transport policy and investments, is judged to play a crucial role in promoting the realisation of the cohesion objectives along RINA.

Thus a particular focus on the border regions of the EU, and especially in the new member states seems appropriate. The border between the EU15 and the EU10 is especially important, as much of this border constituted the former "Iron Curtain" separating the two previously very different political and economic systems.

The dominant role and increasing importance of borders and border regions is one of the most distinguishing features of the enlargement area today. We make the assumption that high levels of economic disparities in cross-border regions is not necessarily a handicap for integration, but rather gives greater potential for change. The geographical type of border, the density of border crossings and intensity of transnational activities are also important factors in examining the possibilities for potential flow integration of these areas.

3.2 Accessibility, a key indicator of the Thessaloniki potential in Interfacing along the North-South RINA

A more focused analysis of the Thessaloniki region accessibility level was performed in order to identify the geographical area, along the North South RINA territory, with high potential for Thessaloniki for Interfaces development. This approach was based on the assumption that any possible interfaces that could be developed and flourish among the RINA Corridor cities is not self sustained in case the accessibility ratio of the involved regions remain lower than the European average. The additional parameters that are crucial for interfaces development are not neglected but are revisited in the last chapter of this report when specifying the possible interfaces development between Thessaloniki and the other cities of the RINA Corridor.

3.2.1 Existing Accessibility level of the Thessaloniki Region.

Many studies have been implemented for the estimation of the accessibility index and yet, this is defined differently according to the model used. The ESPON studies provided the most reliable source for the identification of the accessibility indices of the region Thes-

	Alexandroupoli gateway	Attiki gateway	Igoumenitsa gateway	Patra gateway	Thessaloniki gateway
	Accessibility index class (average = 100)				
PA by road	20 - 40	20 - 40	20 - 40	0 - 20	20 - 40
PA by rail	20 - 40	20 - 40	0 - 20	0 - 20	20 - 40
PA by air	60 - 80	100 - 120	60 - 80	40 - 60	100 - 120
PA multimodal	60 - 80	100 - 120	60 - 80	40 - 60	80 - 100

Table 3.1
Modal and multimodal Accessibility Index of the main Greek Gateways. Data 2001.
Source ESPON 1.2.1

saloniki and have been also reproduced by subsequent analyses. After all in the context of spatial development, the quality of transport infrastructure in terms of capacity, connectivity, travel speeds etc. determines the quality of locations relative to other locations, i.e. the competitive advantage of locations which is usually measured as accessibility. Investment in transport Infrastructure leads to changing location qualities and may induce changes in spatial development patterns.

The following table indicates the accessibility index of the main Greek Gateways (including Thessaloniki) which illustrates the fact that the current accessibility of the Thessaloniki is rather limited compared to the EU average, which emerges mostly from the distance of Greece from the main centers of Europe.

As depicted from these figures, the accessibility of Thessaloniki, is better considering air transport and the intermodal options, due to the co-existence of an International airport, the sea port and the rail connections. On the other hand railway and road accessibility is rather limited due to the low level of infrastructure quality and peripheral position of the city compared to Central Europe.

Thus before examining the development of the interfaces along the RINA's the scenarios for the improvement of the accessibility indices in the region of Thessaloniki are looked at:

3.2.2 The scenarios for the future accessibility of Thessaloniki (2031)

The future accessibility level of Thessaloniki and the specific calculations of its accessibility from the North South RINA regions was based on information provided by the "Study on Strategic Evaluation on Transport Investment Priorities under structural and Cohesion funds for the Programming Period 2007–2013". The study estimates the impact of the Transport infrastructure development in Greece and other countries and follows a compatible to ESPON approach methodology using the SASI model [9].

For the year 2031 the accessibility indicators are calculated for three Scenarios, the Reference Scenario, the Maximum Scenario and the Balanced Scenario:

- The Reference scenario assumes further development of the European integration with the accession of Bulgaria and Romania to the European Union in 2007. Further European integration results in reductions in waiting times and lower barriers between countries.
- The Maximum Scenario, which comprises a listing of possible projects which have been identified in the respective countries [10];
- The Balanced Scenario, which applies a budget restriction (with in parallel an assessment of additional financing opportunities). Projects are prioritised on the basis of their benefit-cost ratio and their contribution to specific objectives and needs (sustainability, regional disparity, and contribution to accessibility).

The accessibility indices for the reference scenario and the regions of Greece are provided in the maps below for 2006.

As depicted in the figures, despite the transport projects that are under way the accessibility index

[9] The SASI model is a recursive-dynamic simulation model of socio-economic development of 1330 regions in Europe. The model was developed to assess socio-economic and spatial impacts of transport infrastructure investment and transport system improvements. Is has been applied and validated in several large EU projects including the IASON and ESPON projects.

[10] The impact assessment in SASI has only been done on a selected set of road and rail projects. This is done because these sub-sectors in general will receive the majority of funding and an assessment of their impacts can be done without having to go into too much project detail. It is assessed that this approach gives sufficient feedback on the potential impacts.

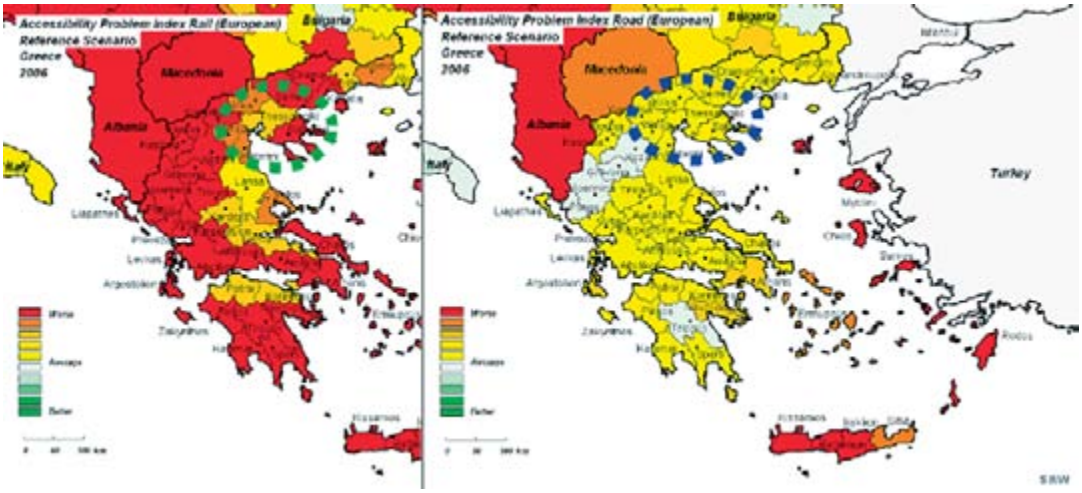


Figure 3.1
Accessibility problem Index Road-Rail for the Greek regions with Europe
Source: "Study on Strategic Evaluation on Transport Investment Priorities under structural and Cohesion funds for the Programming Period 2007–2013"

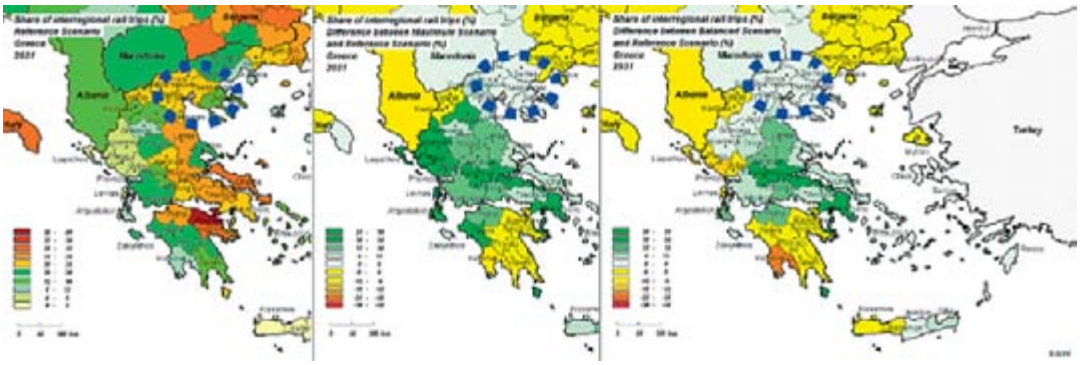


Figure 3.2
Accessibility of the Region of Central Macedonia in the three Scenarios 2031 (% share rail trips).

would still be lower than the European average. The road accessibility, however, would be improved significantly for Northern Greece, compared to the rail accessibility.

On the basis of the maximum scenario, two sub-sets are determined: the Maximum Road Scenario and the Maximum Rail Scenario which illustrates the differential impact of rail versus road projects.

The basic result from the simulation of the Accessibility of the Greek regions and the region of Thessaloniki for the three different scenarios is depicted in the following maps.

For the reference Scenario, the completion of the TEN-T have significant impact on the environmental sustainability in the entire country, expressed in rail trip share in the maps above. For the area of Thessaloniki the share of rail trips is expected to be increased by 24%-28% and is among the higher of the country. This share is not expected to change dramatically. Though, when examining the more optimistic scenarios. This mainly emerges from the fact that the additional railway projects proposed for the maximum and balanced scenarios are not situated in Northern Greece, and Thessaloniki needs are covered by the TEN-T infrastructure proposed.

3.2.3 Definition of geographical area for Thessaloniki interfaces development along North South RINA

The three maps that follow show the impact from the realization of the envisaged transport infrastructure and transport investment in Greece's accessibility. In fact they show the results of the difference between the Balanced Scenario and the Reference Scenario for the 2031 time horizon. It can be seen in these maps that because of its geographical position at the European periphery, the main impacts in accessibility from the transport infrastructure development affect only Greece and only marginal effects may be identified to the regions beyond the Greek borders.

The most notable effects are the combined impacts of the road and rail projects in Greece on the share of rail trips. The improvements on sections of the Athens-Thessaloniki railway line result in higher shares of rail use in Greece's northern neighbours FYROM, Kosovo, Bulgaria and parts of Romania. However, the effects of the road improvements in Greece are observed in an even wider area, resulting in lower shares of rail use in large parts of south-eastern Europe.

The approach and the result of the previous analysis may justify the definition of three geographical areas within the North –South RINA influence area, with different levels of Interfaces development possibilities and different priority in action taking for integration achievement:

- **Zone 1**: *High possibility for Interface development with Thessaloniki*. Interfaces are already been developed using the existing transport infrastructure and the capacities of the regions. High potential for common strategies and policies implementation exists for regional economic development and territorial cohesion. The achievement of the Intermodal Gateway profile by the city of Thessaloniki (as specified in Annex I) is crucial for facilitating the cities possible interfaces development within this zone.
- **Zone 2**: *Medium possibility for Interface development*. The development of interfaces and cooperation with valuable impact to balanced economic development or the regions along the Corridor is feasible until the year 2030 if the current EU program for infrastructure development and cohe-

Figure 3.3
Impact of Transport infrastructure development of Greece on European accessibility.

Figure 3.4
Influence zones along the RINA.

sion support will be implemented. Achievement of networks connectivity and reliable border crossing is the areas of priority intervention.

- **Zone 3**: *Long term possibility for interface development*. The possibility for achieving interfacing between Thessaloniki and the city-regions of this zone is low and can only be substantially implemented at a long term horizon (2050) and if important transport infrastructure will be realized that may create a major impact to the accessibility level of the Thessaloniki region with the respective region.

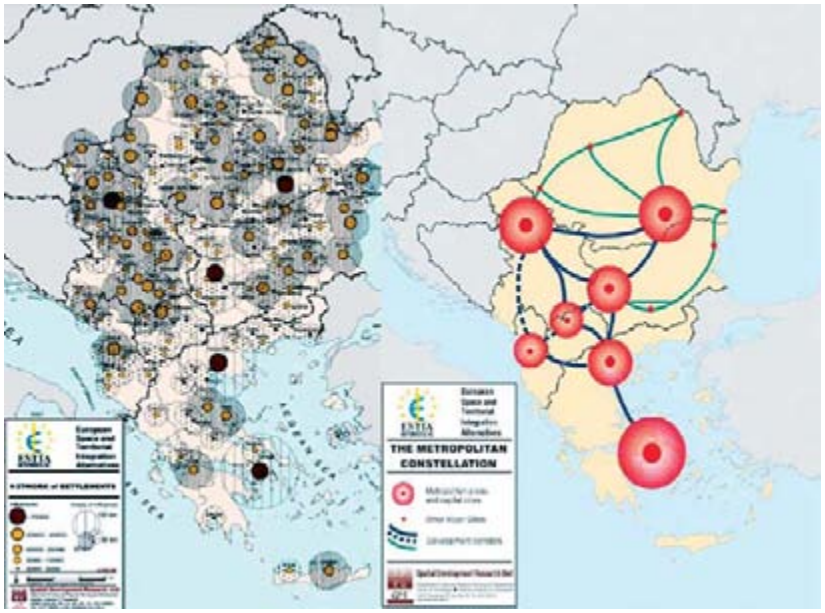


Figure 4.1
Network of Settlements and the metropolitan Constellation of SE Europe.
Source: ESTIA project

4 Cooperation among RINA's cities: Possible Thessaloniki interfaces development

4.1 Priority Interfaces

In the previous chapter the potential for the development of synergies and cooperation interfaces among the cities of the North-South RINA was examined and being proven feasible with different level of maturity for interfaces implementation.

In this chapter the typology of the possible cooperation interfaces is discussed in the context of strategic priorities of spatial development in the area these priorities may be summarized at the following.

4.1.1 Polycentric urban system and rural areas (see figure 6.1)

- *The possible access to services*. The urban systems and especially the small and medium-sized urban centres in the rural areas will have to be developed in such a way as to facilitate the access to urban functions. The strengthening of urban networks improves the complementarities between cities, increases synergies and economies of scale, favours specialisation and creates benefits through economic competition while simultaneously avoids risks.
- *Creation of a polycentric* and more balanced urban system through the coordination of structural policies and of trans-European and pan-European networks and the improvement of the connections between international/national and regional/local networks.
- *Promotion of strategies for an integrated spatial development of groups* of cities and of the network of smaller settlements and urban areas in individual member states in the context of international and cross-border co-operation.
- *Implement cross border economic, social, administrative*, safety cooperation's involving the border regions of both sides of the borders among EU and between EU and non EU countries.

More specifically, it concerns the development of sectoral policies oriented towards the international character of these cities and simultaneously policies that support this international function mainly through urban infrastructures (technical and social infrastructures) and programmes of urban regeneration. The co-operation and exchange of experience between the corresponding regions can play an important role.

- Strengthening of small and medium-sized towns in order to function as focal points of regional development and promotion of their networking,
- In parallel with, the support to the co-operation and the exchange of information between rural areas on the basis of common differentiation policies like agrotourism, maritime tourism etc.

The above priorities will result to a new metropolitan constellation as presented in the Figure 4.1

4.1.2 Improvement of networks infrastructure

- There is a considerable number of cooperation initiatives that are already established for the development of transport, energy and communication infrastructure within the influence area of the North South RINA Corridor.
- This type of international cooperation is particularly advanced among countries and regions of the zone 1 defined previously. This cooperation has already defined the outline of common policies for infrastructure development and has created in the past policy documents that influence the future development and integration of the SE Europe geographical area.
- Examples of international cooperation initiatives are: South East Cooperative Initiative (SECI), Black Sea economic Co-Operation (BSEC), The South-East European Cooperation Process (SEECP) etc.
- The strategic priorities for transport & energy infrastructure development in the area of Zone 1 are presented in maps of figure 6.2
- The connectivity of the physical infrastructure materializing the North South RINA Corridor has to take in to account the transport network priorities defined previously.

4.1.3 Management of natural resources and joint actions in disasters management

- The protection of environment and its prudent management are considered to be major priority for all countries along the RINA however the policies implemented are not common.
- There are margins for transnational cooperation at national and regional level for common policy development and implementation in water management zones (blue zones), specific areas of natural heritage (green zones).
- Cooperation for managing areas with serious environmental problems (like many urban areas) that affect negatively not only the economic development but also the quality of life. Integrated efforts and application of planning procedures for renewal or rehabilitation of all these areas along the RINA agglomerations will positively influence the sustainable development of the area. (Thessaloniki, Athens, Bucharest, Sofia etc could make part of this cooperation interface).
- Exchange of know-how and common strategy definition for managing Pollution Hot Spots (areas with seriously damaged environment by the human activity) through the introduction of cleaner technologies or other initiatives.
- Cooperation for integrated monitoring & management of physical catastrophes (fire, earthquakes, etc) and optimizing civil protection.

The Figure 4.2 shows the possible environmental action areas in Zone 1 of the North South RINA influence territory

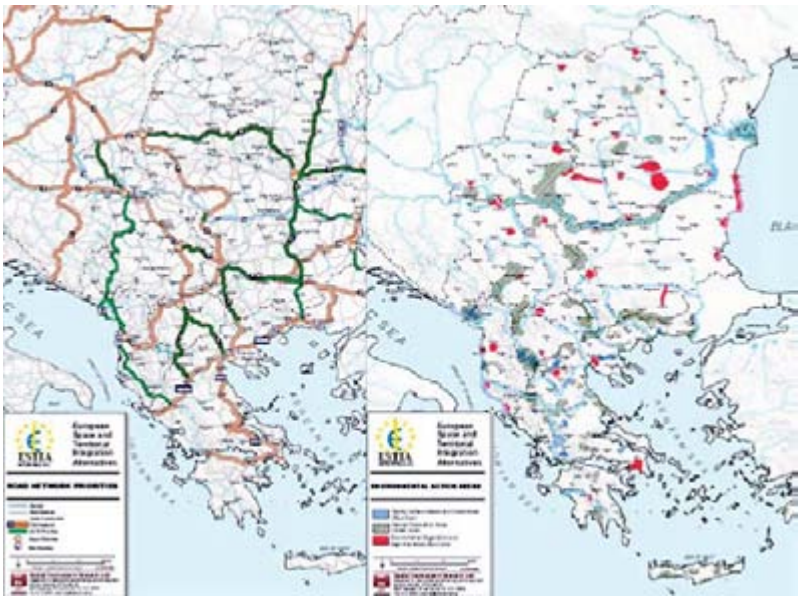


Figure 4.2
Road Network and Environmental action areas in SE Europe.
Source: ESTIA project

4.1.4 Protection and enhancement of cultural heritage

- The cooperation in this regards might deal with a series of issues among which there are :
- programmes for the conservation and improvement of common cultural heritage
- joint actions of cities/countryside through the sustainable exploitation of opportunities
- for innovations of strategic development of the space of cities and of their rural hinterland
- action programmes for the protection and conservation of urban and rural heritage and the promotion of architectural planning of a high quality.
- Cooperation for promoting the social and economic cohesion of the cities with its broader space through, inter alia, the improvement of tourism competition. (new tourism products provision)

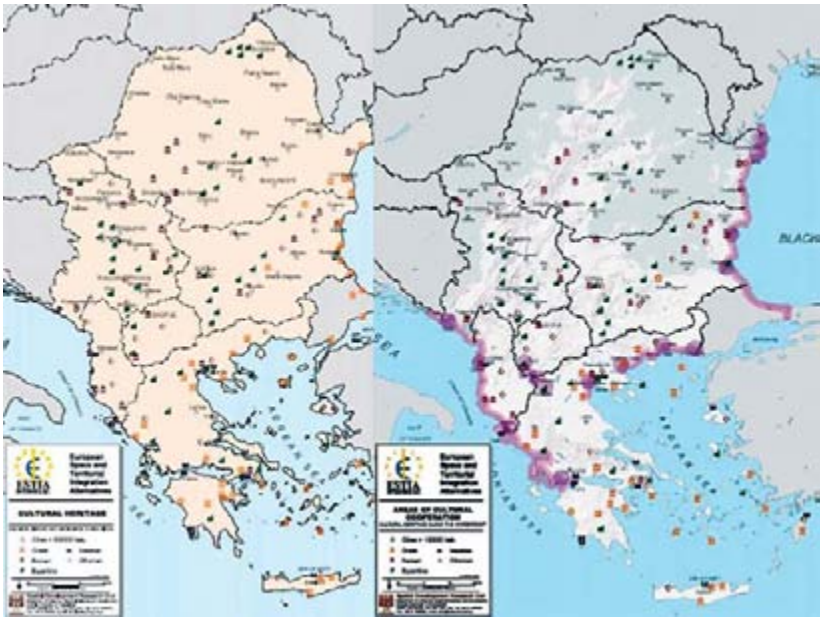


Figure 4.3
Cultural Heritage and Cultural areas of Cooperation.
Source: ESTIA project

Table 4.1
Interface Priorities for the City of Thessaloniki.

	Zone 1	Zone 2	Zone 3
Polycentric urban system and rural areas	3	3	3
Improvement of networks infrastructure	3	2	1
Management of natural resources and joint actions in disasters management	3	2	2
Protection and enhancement of cultural heritage	3	2	1

- Possible zones of cultural synergies have been defined by the ESTIA project and are depicted in Figure 4.3.

4.2 Ranking of Priorities

On the basis of the above the following considerations may be summarized as enabling parameters for creating and developing "interfaces" among city-regions along the RINA North – South corridor:

Based on the Zone described in the previous chapter the priorities set for each interface along the zones, in a scale from 1–3 (1=Moderate priority, 2=High priority, 3= Very high Priority) is depicted in the Table 4.1.

Athens

Athens Metropolitan Area Attica Region

Final Report

1

Profile of Athens
Trends – Vision for the Future

October 2007

Manos Papanikolaou
Lilian Palla

Consultants:
Centre of Research and Technology Hellas
Hellenic Institute of Transport

ORGANISATION FOR PLANNING AND ENVIRONMENTAL PROTECTION OF ATHENS

1 Introduction

1.1 General Context

Beyond its importance as one of the most well known historical cities worldwide, Athens is today a dynamic metropolis of SE Europe with dense links all over Europe, Middle East and North Africa. It is the capital city of Greece, with a high concentration of population and activities.

At the present time, the Athens Metropolitan Area (AMA) is a large economic and business centre undergoing at a rapid pace a multi-level transformation in the perspective of sustainability, playing a major role in the country's development, proclaiming an international status and labouring to acquire all the attributes that will allow for its full integration into the network of the metropolitan regions of Europe and the world panorama of important urban centers.

In the light of the major changes taking place in Europe and world wide and of the rising significance of metropolitan areas, considered as the "engines of growth" and exposed to an intensely competitive international environment, Athens is rightly seeking to assert itself more strongly on the international scene. To do this, however, the AMA must first be recognized as a functional entity, by developing all its long-standing as well as its recently acquired assets. This requires both a vision of the future of the city-region and a strategy to achieve it. Implementing such a strategy requires metropolitan wide planning and integration of planning with economic development and social and environmental goals (OECD, 2004).

1.2 Objectives of the Report

This Part, the 1st Part of the Athens Report, presents the outcome of the analysis of the Athens Metropolitan Area in the context of the PolyMETREXPlus objective, i.e. in the perspective of a polycentric and balanced sustainable development and the creation of synergies between the cities across the RINA. The Report provides an overall description of the urban/regional profile of Athens, the present situation as outlined by the basic structural indicators and the current plans for future development.

The main objective of the Report is to present a vision for the Athens Metropolitan Area based on the concepts of *compact city, polycentricity and urban sustainability.*

1.3 Structure of the Report

Besides this short introduction, the Report comprises 3 main sections. Section 2 refers to the current situation and trends of the AMA in the domains of population, economy and employment, education, research and development, innovation and ICT, the environment, the territorial organization and structure of the city-region, governance and transport infrastructure. Section 3 seeks to summarize current planning "response" by reviewing the most important plans and projects for

Athens. The concluding section 4 presents a vision for Athens based on the new Athens Strategic Plan.

2 Current Situation and Trends

2.1 Overview of the Region of Attica

Athens and its Metropolitan Area (AMA), that covers the whole Region of Attica, constitute the main "gateway" to Greece. One third of the Greek population resides in the AMA, which produces almost half of the GDP of Greece. Attica has the highest concentration of manufacturing, commercial and banking activity, it accounts for 40% of total national employment, and is the main hub of communications in the country. It also is the leading centre in terms of education and culture. The Region is consequently of major importance for the development of the country as a whole.

The Region of Attica has four administrative departments (Prefectures): Athens, Piraeus, Eastern Attica and Western Attica and comprises 152 Municipalities. The following figure indicates the administrative departments of the Region of Attica.

The Athens Metropolitan area is an extreme regional case that is regarded as a NUTS1, NUTS2, and NUTS3 level, due to its structure, size and density. Thus the NUTS3 regional unit (GR300) matches the NUTS2 level GR30 (Region of Attica) and also the upper level GR3 (Attica geographic department), unlike any other case in Greece.

Main figures for the Region of Attica (2004)

Area	3.808 km²
Capital city	Athens
Population of the Region	3.894.000 inhabitants
Population density	1.023 inhabitants / km²
GDP per inhabitant / EU27	94%
Employment by sector	agriculture 0,5%
	industry 23,5%
	services 76%

A more in depth analysis of the Region of Attica is given in the following paragraphs.

2.2 Population

General

Although Athens is one of the most well known historical cities worldwide, its modern history is relatively recent: In 1833 Athens emerged from the status of a small provincial town to become the capital of the newly founded Greek State, totaling at the time a population of 12,000 inhabitants that tripled during the next 20 years. At the beginning of the 20th century the city had a population of approximately 300,000 and reached one million inhabitants in 1940. The massive influx of Greek refugees coming from the Pontos and the Asia Minor regions after the year 1922 led to this rapid population increase.

At the present time, on the basis of the last Census results (2001) and the relevant projections, the Athens Metropolitan Area has approximately 4 million inhabitants, as a result of the dramatic population increase over the post war decades, particularly until 1980. This was due to the deep restructuring undergone by the country's system of production, which resulted in a massive decrease of the rural population and in waves of internal and external migration.

Figure 2.1
The Athens Metropolitan Area location in Greece

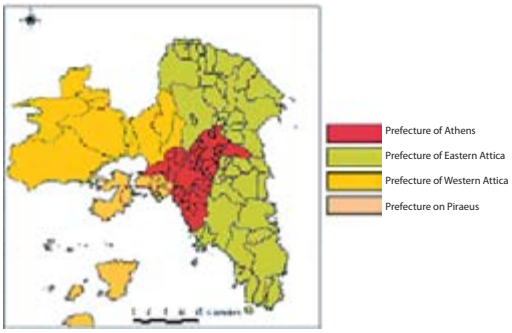


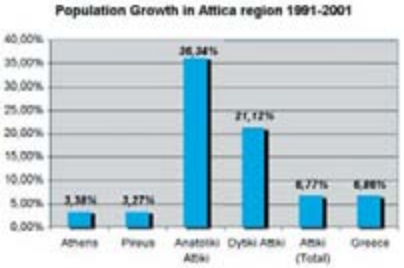
Figure 2.2
Region of Attica – Administrative division

As for future trends, it can be expected that in the next 20 years this size of the AMA population is not to be surpassed, given that the rate of population growth has considerably slowed down during the last decades. In case that the current demographic trends continue in the next years, it seems that a gradual population decrease will start after the year 2020.

In 2001 the total population of the Region was 3.894.573, representing over 35% of the population of the country. Between 1981 and 1991 the population growth at 4.5% was lower than the national average (5.3%) while the growth from 1991–2001 was at 6.8%, also below the national average.

Composition of the population

The population of Attica is an aging population. The population pyramids provide a clear overview of the evolution between 1991 and 2005.



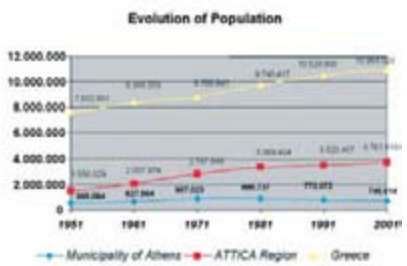


Figure 2.3
The evolution of the population of the Attica Region

The Figure 2.4 indicate a clear increase of the population in the ages of over 70, by 3.5% and 2,6% for female and male population respectively. On the other hand a sharp decrease by 19.5% has occurred in the ages under 19.

Immigration

Greece has received a very important influx of immigrants over the past decade, mainly from Albania, Bulgaria and other Eastern European countries, but also increasing numbers of Pakistanis, Poles, Filipinos and Africans.

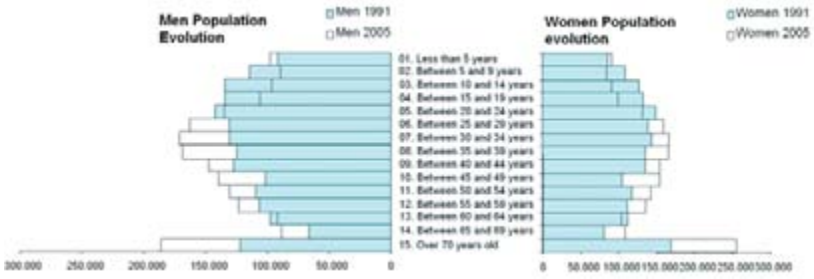


Figure 2.4
Population composition and evolution in the Region of Attica

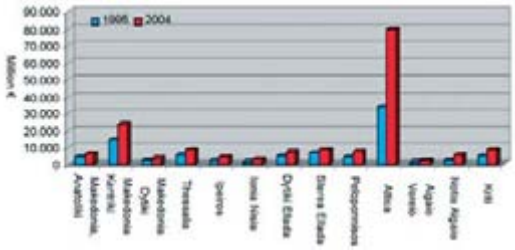


Figure 2.5
National GDP per Region (Eurostat 2007)

Migration has played a decisive role in the overall population growth in the Athens Metropolitan Area during the past decade, so it deserves a closer look even at the urban level. The number of registered migrants in the country (2001) is 797,091 while it is estimated that at least as many are present without official registration. Almost half of them (376,732)) live in the AMA, representing 10% of its total population. The increase of population is not evenly distributed among the various municipalities. The largest number of immigrants is concentrated in the City of Athens (140,626), representing 18.9% of its population.

With the biggest informal economy in Europe, Greece is now seeking to establish an effective policy on the management of the social and economic aspects of immigration.

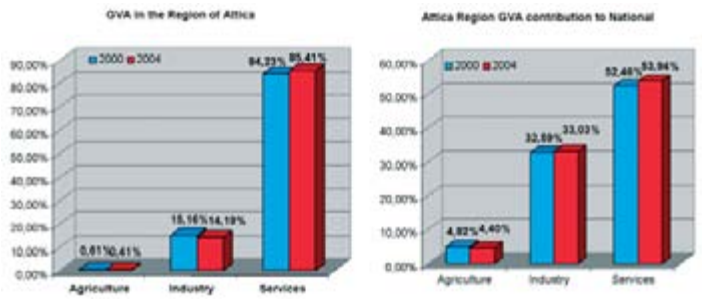


Figure 2.6
GVA Rates per Sector (Eurostat 2007)

2.3 Economy – Employment

2.3.1 Economy

The area of Athens has been the main industrial, financial and maritime development centre of the country and consequently its major growth pole since the first decades of the 20th century. Since the mid-1970s the productive structure of the area has been transformed, due to the wider international crisis and restructuring procedures, thus favoring a shift towards the services sector. Besides, the ongoing economic restructuring along with the massive decrease of the rural population, in the area as well as in the country, resulted to a further reduction of the agricultural sector, despite its relative high productivity. However, this transformation had the effect of further strengthening the predominant role of Attica at the national scale.

The AMA is the most important centre of GVA production and labour concentration in Greece. Employment comprises 90% of the labour force in the Region and counts for more than one million and a half persons.

The Region of Attica contributes to the National GDP a total amount that reaches half of the total Greek GDP (mainly after 2000) and its GDP per capita corresponds to 133 % of the GDP per capita of Greece (2004).

Compared to the other European countries, the GDP per capita of Attica corresponds to 94% of the EU-27 average, while the GDP per capita in PPS is exactly at the level of the EU-15 average or at 113% of the EU-27 (2004). The annual average growth rate of the Attica GDP in the decade 1995–2004 was at 3.99%, the corresponding rate of the EU-27 being at 2.16%.

The contribution of the economic sectors to the GVA of Attica and the contribution of the Region to the national GVA per sector are depicted in the Figure 2.6.

The regional economy is mainly based on Services and in a much lower percentage on Industry. The Primary Sector contribution is very low (0.40% in 2004) marking a decline compared to 2000. Nonetheless, in total numbers the contribution of the primary sector of Attica to the national primary sector is 4.40%.

The Region of Attica is the largest centre of industrial and secondary sector activities (manufacturing, energy and construction) in the country and accounts for 33% of the national secondary sector production of GVA (2004). Although the contribution of the Region to the national level has slightly increased, within the Region the percentage of the industry contribution to the GVA has fallen by 1%.

The Tertiary is the dominant sector in the Region of Attica: it accounts for more than 85% of the regional GVA (2004) and for 54% of the tertiary production at the national level, while in both cases its share has slightly increased since 2000.

Finally, as concerns the classification of the Attica Region in the national GVA composition, it is ranked as the 9th Region in regard to the primary sector contribution, while it is by far the main pole of the secondary and tertiary sector.

Year	Agriculture, hunting, forestry and fishing	Industry	Services (excluding extra-territorial organizations and bodies)	Total employees
1995	2,20	269,50	647,70	919,40
1996	2,20	255,20	650,20	907,60
1997	2,20	253,10	657,30	912,60
1998	2,80	264,50	691,00	958,30
1999	3,10	300,30	777,50	1.080,90
2000	2,84	287,02	879,04	1.168,90
2001	3,35	288,94	899,54	1.191,83
2002	3,47	285,26	906,91	1.195,64
2003	3,19	289,12	912,80	1.205,11
2004	2,58	294,43	954,84	1.251,85
Total Growth 1995–2004	**17,27%**	**9,25%**	**47,42%**	**36,16%**

Table 2.1
Work force allocation in Sectors (in thousands employees) - Eurostat, 2007

2.3.2 Employment

The labour force has an adequate level of qualification, with 17% having higher-education diplomas or University degrees and 40% having successfully completed lower or upper secondary school.

The concentration of economic activity in the Region means that it accounts for some 40% of total employment in Greece, with an increase of 36% in the number of employees between 1995 and 2004. Employment in the Region is centred on the tertiary and secondary sectors (76% and 23.5% respectively).

As shown in the Figure 2.7, the employment growth in the 3 sectors was not balanced and the tertiary sector has increased its share mostly against secondary sector over the past 10 years.

18% of those employed in the Region are self-employed (craft and cottage industries). The high concentration of company head offices explains the large proportion of employers (41% of the national total). Wage and salary earners account for 65% of those in employment. The branches employing the largest number of people are the chemical industries, followed by textiles, mechanical engineering and transport.

In recent years there have been large rises of unemployment in the clothing, footwear and plastics sectors, while the number of jobs has fallen substantially in the textiles and furniture industries.

Unemployment rate at 10.4% is the fifth highest in Greece. This is due not only to deindustrialization and the fall in private investment but also to the over concentration of population in the Region. In 2001, the number of unemployed people was 179 800, 40% more than in 1991, and this number represented about 10% of the Region's labour force. The problem of unemployment affects young people under 25 (about 30%), older workers and the less skilled and unskilled. About 67% of the total persons in unemployment were concerned by a long-term unemployment (more than 12 consecutive months).

The lowest earnings in manufacturing industry are in the clothing and footwear branches and the highest in the hydrocarbon and natural gas industries. The earnings of civil servants and employees in semi-public bodies and banks are regulated under the incomes policy.

The Figure 2.8 provides an overview of the labour density in the Athens Metropolitan area.

2.3.3 Labour Productivity

With regard to labour productivity, the Figure 2.9 indicates growth in the overall productivity of the Region of Attica (GDP/employment) and the share of each economic sector. Obviously, the productivity of Attica relies heavily on the tertiary sector, with a marked reduction of the primary sector despite its overall growth in real prices.

Figure 2.7
Employment division per economic sector

Figure 2.8
Labour density in the Athens Metropolitan area (Working positions / Hectares)
(Source: Metro Development study, 2000)

	2000	2001	2002	2003	2004
Attica	103,17	98,48	108,60	110,61	107,78
Greece=100	**100**	**100**	**100**	**100**	**100**

Table 2.2
Average Productivity index (100=Greece)

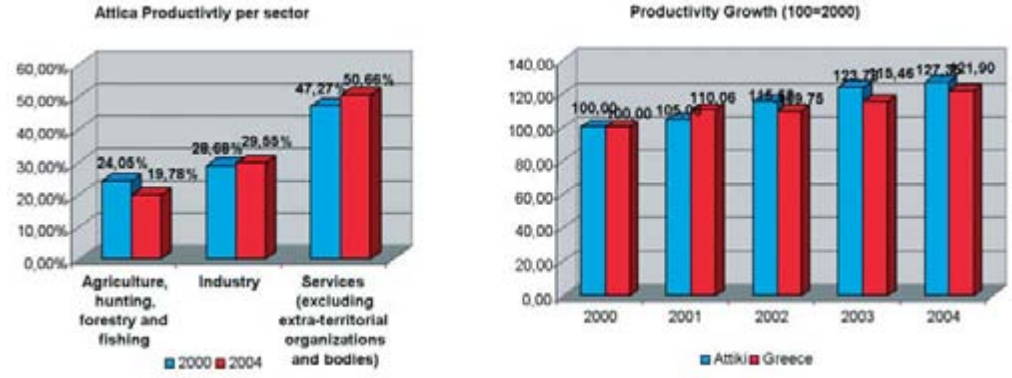


Figure 2.9
Productivity Indices of the Region of Attica

As illustrated by the above graphs, the productivity of Attica, as well as the growth rates of productivity in the Region remain well above the national average indices (with the exception of the year 2001).

The productivity growth rate between 1999 and 2004 was at 45.5%, well above average growth rates in the EU regions, to be compared only to the performance of certain regions of the New Member States. This rapid acceleration of productivity growth is due to a "catching up" process and, it could be argued, marks a successful application of the Cohesion Policy in the Region of Attica.

2.4 Education

The education and research sectors hold a predominant position in the national development policy.

Eight of the eighteen Greek Universities, comprising 74 Departments out of the total 235, are located in the AMA. Although, in a cursory view, the above figures might suggest that the offer of university education in the AMA is lesser than might be expected given the demographic and economic weight of the urban region, further analysis indicates that 50% of the registered students in Greece study in Athens. The same conditions apply to post-graduate studies: 48% of all postgraduate students study in Universities located in the Athens area.

The distribution of the various areas of study is: Humanities 22.3%, Economics 18.2%, Sciences 15.1%, Engineering 11.3%, Medicine 5.9%, Law 5.5%.

It is important to mention that most of the major Universities or high level educational institutions are located inside the city of Athens area, with a tendency during the last ten years towards moving to the northern parts of the agglomeration.

The education profile of the Attica population may be depicted in the following graph, based on the 2001 Census

Men are getting higher education with more frequency than women. Nearly 2% of the total male population possesses a higher degree (PhD or MSc) while the rate for women is 1%. The difference is even more visible in the bachelor graduates where the rate for men and women is 21.5% and 19% respectively. As for individuals with no education, women are also in a worse situation than men, but this is mostly observed in the ages of over 60 years old.

In total over 65% of the population of Attica have got at least a secondary education and 22% have a higher education.

2.5 Technology and Innovation

2.5.1 Research and Technological Development

Research and Technological Development (RTD) along with Innovation constitute crucial factors in enhancing productivity and promoting competitivity, given that to a great extent, they influence the competitiveness of firms and the quantity and quality of the jobs they can provide. At the same time they can improve the quality of life through their contribution to issues such as consumer protection or the protection of the environment. Considering the crucial role of cities and regions in

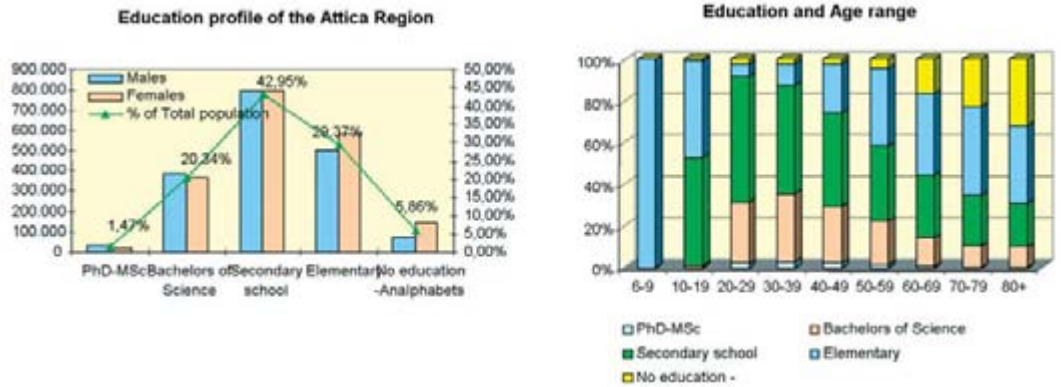


Figure 2.10
Education status in the Region of Attica

promoting development and employment in the contemporary competitive global context, RTD along with Innovation have a crucial role not only for national economies but also for cities and regions which seek to create a modern entrepreneurial environment and a diversified economic structure with high added value sectors which are capable of adopting and adapting innovative processes and products (EC, 2007).

The AMA is the most important centre in the country for the development and exploitation of Research and Technology and the implementation of Innovation in the whole spectrum of productive processes and the every day life of citizens. In addition to the Region's overall economic performance, the main factors for its good positioning at the national level have been the high share of the tertiary sector in regional employment, the regional specialization in the services sector, the relatively adequate endowment with technical infrastructure as well as with research and educational institutes. The educational attainment of its population is also a key element, representing the quality of the region's human capital. For example, the proportion of young people aged 20-24 with upper secondary education is above the average of the country and the EU-25 (ROP Attica 2007-13:16).

The Region of Attica seems to have an outstanding position at the national level in all indicators regarding RTD: Taking into account the Gross Domestic Expenditure on RTD (GERD), 58% of the total expenditure, 76% of the expenditure of private firms, 62% of the expenditure of public research centers and 44% of the expenditure of Universities is concentrated in Attica. Yet in terms of high technology patents per million inhabitants, the performance of Attica is quite similar with that of the Region of Crete, despite its better financial endowment (OP Competitiveness 2007-13, 2007: 24).

As far as Innovation is concerned, the Region seems to have the highest innovation performance among Greek regions and outperforms them in all relevant indicators. However it is rather lacking behind the EU average, given that it occupies the 86th position among 203 European regions (EU 25), according to the ranking provided by the European Innovation Scoreboard 2006. More specifically, regarding the Regional National Summary Innovation Index (RNSII) and the Revealed Regional Summary Innovation Index (RRSII) for Attica, the values are 1.0 and 0.21, respectively (ROP Attica 2007-13: 44–45).

Two main centres for the support and promotion of research and development activities operate in the AMA, namely: (1) the "LEUKIPPOS" Technology Park in the context of the National Centre for Scientific Research "Demokritos". The latter is a well-developed long-standing research Centre which operates under the supervision of the General Secretariat for Research and Technology (G.S.R.T.) of the Ministry of Development. It is a medium size, by international standards, multidisciplinary research Centre with up to date significant growth in the fields of science and technology. The Centre has at its disposal important laboratory facilities, many of which are unique in Greece, with scientific activities in eight administratively independent Institutes (Institute of Biology, Institute of Materials Science (IMS), Institute of MicroElectonics, Institute of Informatics Telecommunications, Institute of Nuclear Technology - Radiation Protection (INT-RP), Institute of Nuclear Physics, Institute of Radioisotopes & Radiodiagnostic Products, Institute of Physical Chemistry). A Liaison Office provides information and distributes information on technological projects, in order to improve cooperation at national and European level. (2) The Lavrio Technological and Science Park under the auspices of the National Technical University of Athens. It constitutes a Centre for development of modern technology and innovative firms, research and production joining, highlighting the new role of the high-level educational institutes for carrying out and exploitation of research activities, and promoting cooperative forms of local development action.

Concerning RTD location patterns, it could be generally argued that RTD activities spread over the urban fabric, proceeding in tandem with the development of the Services Sector. More specifically, they are mainly located in the Athens agglomeration, while there is a remarkable RTD development in the eastern part of the Region (ROP Attica 2007-13: 56).

2.5.2 ICTs, Information Society

Research and Technology development and exploitation of the Innovation potentials are strongly related with the development of Knowledge Economy, which in turn constitutes the core of the European Union Lisbon Strategy for the promotion of competitiveness of the EU as a whole as well as of its regions and cities. These developments are related with the development of Information and Communication Technologies and all relevant policies in the Information Society context. Hence, the existing Information Society capacity of the Attica Region is of great importance for supporting RTD and sustaining innovation. Furthermore, it influences the whole spectrum of the city's activities, that is the environmental quality, the infrastructure efficiency and the citizen's every day life, contributing in the Region's overall performance and prospects

The current situation can be assessed through indicators in three specific areas that generally characterize ICTs: access, infrastructure and services delivery. In terms of access (i.e. Internet penetration) as well as in terms of e-Government and e-commerce (e- services delivery, especially e-commerce and Income Tax Declaration) the Region of Attica is ahead of the remaining Greek regions.

According to the survey of the Information Society Observatory, the Region of Attica records the highest percentage of Internet use (31.8% of the total population). At the same time in the Region of Attica 2.21% of the purchasing transactions / ordering goods or services by individuals (e-commerce) and 4.15% of the Income Tax Declarations are being carried out through the Internet, which are the highest percentages among Greek regions. Nevertheless, the Region is lacking be-

hind the EU regions in the relevant broadband infrastructure, Internet penetration and e-Government indicators (ROP Attica 2007-13: 49).

A pre-requisite for improving economic development and competitiveness in Attica is a modern telecommunications sector in Greece. Much has been done to achieve this in recent years. Greece is situated in the 12th position among the OECD countries with regard to the infrastructure of the telephone network. It has to be mentioned that the ICTs arrangements for the Olympic Games were exemplary. There is a continuous development of infrastructure and improvement of the quality of the telephon services. Athens aims to become an international telecommunications crossroads, serving not only the needs of Greece but also a much wider area.

2.6 Territorial Organisation and Structure

The modern city of Athens developed around the two main urban settlements of Attica, namely the municipalities of Athens and Piraeus. Today the Athens agglomeration (Greater Athens) is an extended conurbation that spans all over the central part of the Region and along its coastal zone in an almost continuous urban sprawl. Many peripheral medium-sized agglomerations of the Region have also witnessed strong trends towards urban extension in recent years. The continuous population influx (mainly during the period 1950-80) and suburbanization are the main causes of this development. Peripheral settlements grew faster than the central areas of the agglomeration, putting excessive pressure on all kinds of infrastructure –particularly transport- and the environment.

However, the central area of Athens along with the neighboring city of Piraeus maintained the dominant role in the Region, while the other urban settlements were confined to a definitely peripheral role.

The last decade has witnessed a significant transformation in the area's functions, the infrastructure endowment and its overall role as a metropolitan area, which has in a certain degree affected the previously predominant centre – periphery pattern. These transformations concern the changes in the productive structure of the area, and the implementation of large-scale transport and physical planning interventions that in turn led to shifts in the traditional location patterns.

The distribution of population growth within the Region during the decade 1991-2001 is revealing: The population of the Greater Athens agglomeration increased by 3.9% and represents almost 85% of the total AMA population. However, at the same time, population in the rest of the Region increased by 27.4% and reached 574,076 inhabitants. This population growth is not only considerably higher than that of the Greater Athens, it is also far above the national average. Such rapid growth may be attributed to suburbanization, as a result of new infrastructure projects in the areas outside Greater Athens, associated with the location of the new Athens International Airport that provided significant employment opportunities and a major boost to the development of the East Attica area.

Population growth 1991–2001 (%)	
Athens	3.4
Pireus	3.3
East Attica	36.3
West Attica	21.1
Attica (Total)	*6.8*
Greece	*6.9*

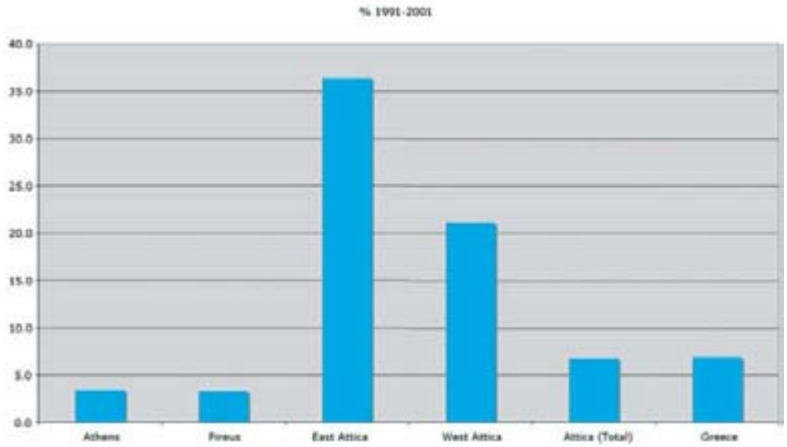
Table 2.3
Population growth 1991-2001 % (Source: NSSG Population Census 2001)

An examination of the population change for the period 1991-2001 in the municipalities of Greater Athens reveals that the majority of the municipalities experienced growth. The highest population increase is observed in the affluent communities on the southeastern coast of the agglomeration (86.7%). However, the central core (the Municipality of Athens) experienced a decline, losing 26,558 inhabitants. It is notable that, while in 1971 the share of the municipality of Athens in the population of Attica was 31%, it fell to approximately 20% in 2001. Minor decline was also observed in several of the municipalities immediately surrounding the core, probably due not only to suburbanization but also to the expansion of commercial and other activities outside the central core, displacing residences. These developments confirm the general patterns observed in other large cities of the world.

Overall population densities increased slightly (reaching an average of 6,979 people per sq. km. in Greater Athens in 2001). There are wide differences in terms of population density within the AMA. The most highly populated areas (23,000 inhabitants/sq. km) form part of the central core of the AMA, but their densities declined in the last decade, more or less following population changes, suggesting an overall lowering of pressures in the centre of the Athens agglomeration and confirming the general density gradient rule elsewhere in the world.

From a general perspective of growth patterns the following can be summarized:

Figure 2.11
Population growth in Attica Region 1991–2001 (%) (Source: NSSG, elaborated data)



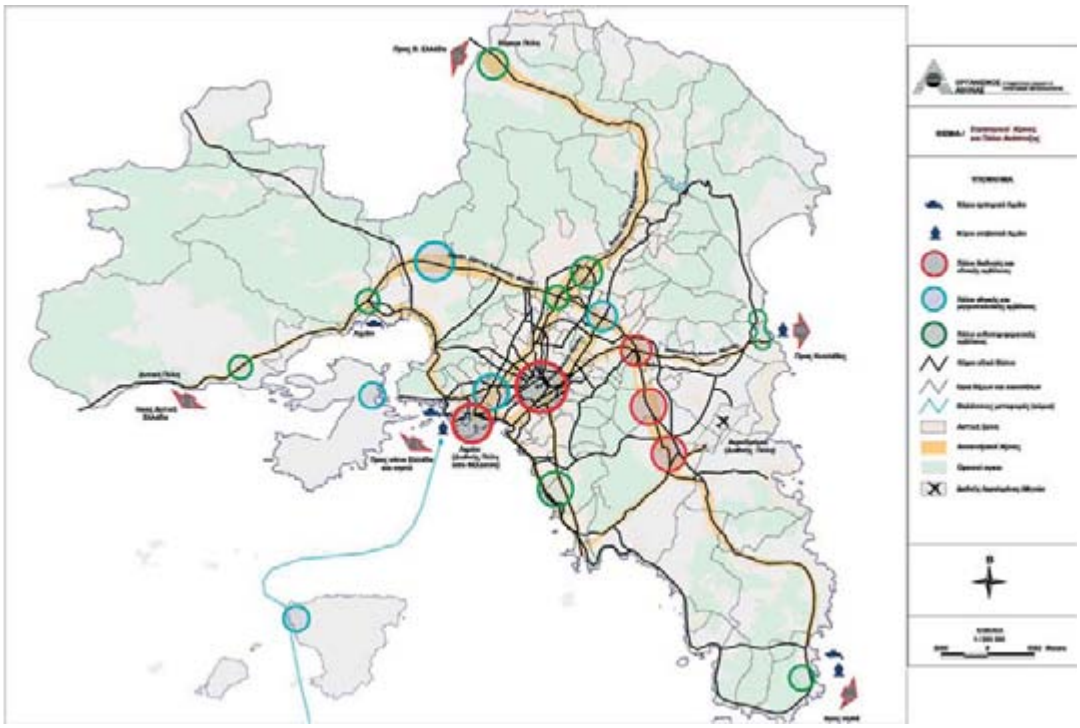


Figure 2.12
Athens Metropolitan Strategy (Organisation of Athens)

- There is a movement towards the peripheral municipalities located in the north and south of the Greater Athens agglomeration. The western (and south-western) part (mostly working suburbs and mixed industry) is already urbanized, with a lower level of infrastructure, services and standards of living, therefore not highly attractive to new development.
- Municipalities with high population and considerable density are the ones losing population in the last decade.
- Municipalities with low population and low population density at the edge of the urbanized area of Greater Athens are in most cases attracting new inhabitants.

The above-presented population changes are related to the tertiarization process and the relevant location patterns which favour the relocation of economic activities in the suburbs to the south and north edges of the main city centre and across the major road arteries. Industrial firms (manufacturing) tend to relocate to the north, to cut off jobs or to close down, while new firms in the Services, offering jobs in sectors of a strategic importance for economic development and influence, such as tertiary education, financial sector, Research and Technology Development activities, tend to locate in East Attica (ROP Attica, 2007: 57-28).

In this context the territorial structure of the Attica Region today might be better understood on the basis of the polycentricity and networking concepts instead of the centre – periphery model. It seems that the situation is being transformed as a result of the interrelationship between the newly established transport infrastructure and the newly emerging land use patterns.

A new development axis from east to west is being created (largely due to the construction of the Attiki Odos Motorway) along with the existing axis stretching through Attica from southwest to the north, on the route of the country's "S shaped development axis" going from Patras through Attica to Thessaloniki and via the Egnatia Motorway to Thrace. Along these axes new secondary growth poles are emerging, upgrading hitherto minor urban centres, contesting the overall dominance of the Athens central area and assuming an important role in the Region's development process. These recent trends tend to transform the spatial structure of Attica, towards a more polycentric and balanced territorial organization.

However, these new trends of spatial organisation create new pressures on hitherto less developed areas, which risk to be soon faced with serious congestion and environmental problems. Hence, these developments should be tackled through specific policy measures and actions. It should also be stressed that the efficiency of polycentric structure is strongly related to the level of both networking and communication as well as to the centres' specialization. The further upgrade of the urban public transport system along with interventions for the protection and upgrading of the environment (urban and peri-urban) are of crucial importance for the improvement of the city's functions and the quality of life of the citizens.

2.7 Transport Infrastructure

The insufficiency of transport infrastructure is a crucial feature of the Region of Attica, and particularly of the Athens agglomeration. This is due to a large extent to the lack of systematic infrastructure management and implementation of comprehensive transport service integration measures. This situation until the year 2000 (1st year of the Metro operation) was inhibiting the development of a more dynamic land

use profile in the peripheral areas of the agglomeration mainly due to low accessibility level of these areas. The current problems per transport sector can be summarized as follows:

2.7.1 Main road Network:

The established main road network usually follows the hierarchy that has been determined by the existing situation of transport flows and has not been planned to respond to appropriate criteria of space, distances, land use etc. As a result a continuous extension of congestion problems occurs, both in spatial terms (a greater part of the road network operates at capacity levels and reaches congestion levels) and duration (the periods of congestion are continuously increased).

The situation is worsened by illegal parking, which occupies an essential percentage of the already insufficient capacity of the road network. The lack of sufficient "off road" parking spaces or of legal and controlled parking spaces on the road, along with the mentality of not using public transport and with the continuous increase of the number of vehicles, increase continuously the need for illegal parking and, in combination with the lack of systematic controls, contribute to the continuous extension of illegal parking.

The basic structure of the road network is depicted in the Figure 2.13.

Figure 2.13
The structure of the road Network (Source: Metro Development study, 2000)

However, during the last few years and to a large extent due to the Olympic Games, transport issues have become a priority in urban policy, major new infrastructure has been developed and effective management measures are planned.

2.7.2 Public Transport

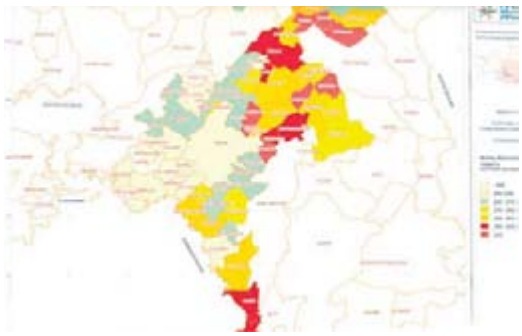


Figure 2.14
Private cars ownership (units/1000 residents, 1999)
(Source: Metro Development study, 2000)

During recent years the level of Public Transport service was improved and it continues being improved substantially by:

a. the replacement of the existing fleet of buses and trolley buses by new vehicles that offer improved comforts
b. the rearrangement of corridors and itineraries (primary lines and local express lines),
c. the creation of special bus lanes at the flow of traffic or contrary to it ,
d. the operation and continuous extension of the Metro lines and the essential upgrading of the old Underground line.
e. the construction of the first two new tram lines and the planning of an extensive network.
f. The establishment of a Suburban Railway.

In fact, although the continuing increase of the car ownership indicator, from 15/1000 residents in 1960 to 300/1000 in 2002, the number of annual movements per resident by Public Transport, was decreased from 480 (1967) to 140 (end of decade 1980), and recovered round 200 in 2002.

2.8 Governance Issues in the Athens Metropolitan Area

In Greece, national and sub-national levels of central Government administration are inextricable elements of the regulatory framework, and developments at one level affect others. Until the early 1990s, Greece had a highly centralized structure with decentralized Government offices of restricted competencies at the Prefecture level (Nomos). A series of major reforms undertaken in the past decade have restructured and empowered the sub national level. As a result Greece has a three-tier system: 13 decentralized Regions governed by a Council (consisting of representatives of the various regional institutions) and a Secretary General appointed by the government for four years, a "second level" of Local Authorities comprising 51 Prefectures, with the Prefect and the Council directly elected by the citizens, and a "first level" of 1 033 municipalities and communes.

In the Athens Metropolitan Area (AMA) the long history of the deeply centralized administrative function of the Greek State has been embedded.

Moreover, the Region of Attica presents several particularities compared to the other regions of Greece, as many of the responsibilities normally exercised by the regional agencies, in Attica are in fact exercised directly by the Ministries or by central agencies supervised by the Government (e.g. the Organisation of Athens-responsible for the Planning and Environmental Protection of Athens). There are about 300 public agencies in Attica Region with territorial or sectoral administrative competencies. All tiers of government are interwoven in the area and almost all kinds of plans are conducted and implemented at the various spatial and administrative levels. This creates enormous difficulties to delivering effective and efficient government

and weakens institutional capacity to develop long-term coherent strategies.

Coupled with the extremely complicated administration structure concerning the jurisdiction on the area's issues, there is an extreme fragmentation at the municipal level (152 municipalities in the Attica Region) and a relatively weak capacity at the metropolitan and regional level.

Policy and aspiration are generally in advance of implementation in Athens, and only central government seems to have any capability on bigger initiatives. National government controls much of what is decided in Athens, but policies are highly departmentalised, making cross-sectoral integration difficult.

Above all other considerations, Athens is the Capital city and is viewed by the government as belonging to the whole nation and being too important to have its governance relegated to a local authority administration. This makes the transition to metropolitan leadership difficult to achieve.

It should be noted, however, that the Olympic Games experience in Athens demonstrated how very significant achievements can be realized by a national government directing investments and regulating implementation process on key issues in the Capital to achieve a step change in a short period.

Today there is work in progress to define more regional devolution through the creation of a new democratic/participative tier at the regional level, but there is clearly varying opinion on how to proceed.

The prevailing scenarios on the best Metropolitan Government for the AMA (after long research and discussions) are towards the formulation of an elected regional council but with an appointed (by the parliament) presidency.

3 Major Plans for the Athens Metropolitan Area

3.1 Spatial and Development Plans

3.1.1 The Athens Structure Plan

The actual strategic spatial plan for the Athens Metropolitan Area is the Structure Plan and Programme for the Environmental Protection of Athens that was ratified by national Law in the mid-eighties (Law 1515/85). That same Law provided for the foundation of the Organisation of Athens (ORSA). The Organisation of Athens is a central Government agency and its legal mandate is to prepare, monitor and review the Athens Metropolitan Area Structure Plan and, in that context, to coordinate the programmes and actions pertaining to spatial aspects, of all public sector agencies.

The Structure Plan determines the guiding framework that sets the policy goals, orientations and specific measures for the sustainable development of Attica and suggests a number of priorities concerning urban and spatial structure.

On the more detailed scale of spatial planning, the realization of the Structure Plan goals is achieved by a series of plans, carried out by the Organisation of Athens: the General Urban Plans (Master Plans) that are prepared and approved for each municipality; the Development Control Zones that cover the entire sub-urban hinterland not included in the city plan; the Zones of Environmental Protection plans; and the Major Structural Interventions and Urban Rehabilitation Projects, which are of strategic importance for the spatial, economic and social development of the Athens Metropolitan Area.

The Structure Plan enforcement power lies mainly on setting the frame for detailed legally binding 'lower tier' spatial plans and building control instruments, as well as for individual projects. Its effectiveness is supported by a series of either restrictive/dissuading or else 'recommendation-type' policy measures that are not linked to any implementation programmes. No active role is assigned to the private sector stakeholders, who have to conform or else to try to negotiate a modification of the regulations in force. Existing legislation does not provide for an integrated set of flexible operational tools and mechanisms, pertaining to economic and social, as well as spatial, issues.

The main objectives of the Athens Structure Plan as regards the development of the AMA within the national territory are the:

a. Stabilization of the population of the AMA, ultimately aiming at its reduction.
b. Containment of the expanding economic activities of the Capital in favour of the country's periphery and promotion of its role as the site of central administration functions.

The objectives that concern the development of the Area itself may be summarized under the following headings:

1. Environmental protection, ecologic restructuring and pollution combating
2. Enhancement and protection of historical sites and the cultural heritage
3. Amelioration of the quality of life (city functions, relocation of activities, reinforcement of the public transport system, removal of disrupting activities from residential zones)
4. Spatial restructuring of the AMA by creating a polycentric structure, redistributing land uses and controlling densities, upgrading the Athens and Piraeus central areas, promoting the revival of neighbourhoods, limiting urban extensions in green field areas, and integrating existing illegally constructed areas in the urban fabric.
5. Economic restructuring by supporting the primary sector, modernizing the industrial activities, encouraging manufacturing and establishment of light industries that do not harm the environment and, also, by restraining and modernizing the tertiary sector.
6. Smoothing out inequalities as regards the social facilities distribution and the quality of the environment in degraded areas

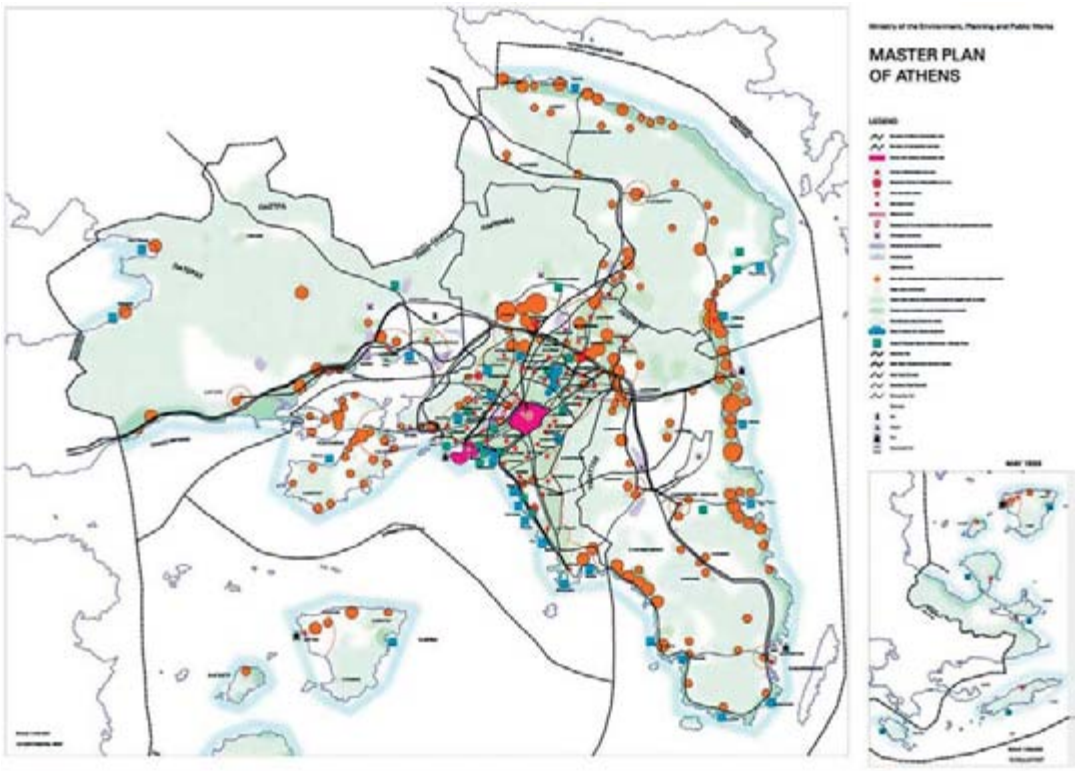


Figure 3.1
The Athens Structure Plan

7. Improvement and organization of a unified transport system by interconnecting all transport means.

The Figure 3.1 depicts the Athens Structure Plan and its priorities.

In terms of the current Project it is interesting to note that polycentricity, albeit at an intra-regional level, was one of the main strategic spatial planning concepts underpinning the Athens Structure Plan of 1985 – the others being the compact city along with the high priority accorded to the protection of the environment. It was only in later years that all three of the above named concepts achieved such a crucial importance in planning issues internationally, under the integrated approach of sustainable development planning. Almost 15 years later polycentricity, in a broader context, emerged as a dominant concept in European strategic spatial planning debates after the publication of the ESDP in 1999. It is also the point of departure of the PolyMETREXplus project and the main concept behind the RINAs.

Yet, notwithstanding the above-mentioned very positive aspects, as well as the many positive developments that it has generated, the 1985 Structure Plan is a largely outdated planning instrument. It is mainly promoting land use zoning, with insufficient regard for economic and development issues and it is not designed to cope with the challenges of the present day competitive international environment. Also, the Plan's implementation has been uneven, exacerbated through a lack of appropriate structures and resources to monitor and promote more effective planning.

3.1.2 The Regional Operational Programmes

Regional policies applied to the Athens Metropolitan Area since the eighties and until recently have mainly aimed to the encouragement of population relocation to other regions in parallel with economic and administrative decentralization (as Athens was considered to have reached saturation point), and to channelling investment to the rest of the country rather than to the Region of Attica, with the objective of achieving a more balanced demographic and economic development over the national territory.

Despite this policy, the Athens Metropolitan Area continued to grow, maintaining its share of population and economic activity. The recent infrastructure investments in the Attica Region have broken with these traditional regional policies, providing long awaited investment in transport infrastructure for the AMA (new airport, ring roads, new Metro, a tramway, upgrading of bus system, etc.). There is now more recognition of the need to better structure growth in the Athens Region rather than simply curtail it. This is linked to a greater understanding of the international role that Athens will have to play in a global economy, which will require better planning and investment strategies.

The Regional Development Programmes of the Attica Region conducted in the context of the 3rd Community Support Framework 2000–2006 and of the 4th Programming Period 2007–2013 aim at strengthening the city's role. The Athens Metropolitan Area, being by far the most important metropolitan centre in Greece, is expected to function as a driving force for the whole country's development perspectives, at the European and international level.

Both the above Regional Development Programmes have set as central objective the enhancement of the capital's international role in parallel with the counter balance of intra-regional inequalities in the socio-economic field and the quality of life. This general objective is analysed in the following strategic goals:

- Enhancement of the capital's international role and integration of the city in the major European urban centres network.

- Upgrading of the quality of life and rehabilitation of the environmental stability.
- Reduction of the unemployment level and combating social exclusion.
- Reduction of intra-urban inequalities with the emphasis put on islands, inland areas and West Attica.

3.2 Major Transport Infrastructure Projects for the Athens Metropolitan Area (AMA)

During the last decade big transport infrastructure projects were executed in the agglomeration of Athens and the Region of Attica and new transport services were established with direct result an increased accessibility of the Region from other regions of the country and abroad. Also, a better performance of transport infrastructure and services was achieved within the Region and the agglomeration, contributing to the balanced development (due to a balanced accessibility improvement) of practically all the areas of the Region.

This major upgrading of the AMA transport infrastructure and services, largely due to the hosting of the Olympic Games of 2004, has radically transformed the profile and functions of the Area and has generated new territorial development patterns.

The main existing transport infrastructure facilities, presented in the Figure 3.2, are shortly described in the following paragraphs.

3.2.1 International-National Level Transport Infrastructure

a. The Athens International Airport

The new Athens Airport is the principal air node of Greece with regard to international connections as well as the national connections with the many local airports of continental Greece and the islands.

The Athens International Airport "Eleftherios Venizelos" is regarded as one of the most functional and safest airports in the world. Thanks to its advantageous geographical location, state-of-the-art technological infrastructure and high level of services, it has soon earned international recognition and a great number of key international awards while at the same time it has gained the trust of both passengers and airlines. Today, it has developed into one of the most important air-hubs in Southeastern Europe and forms a strong pole of economic and social development in the Attica Region.

The traffic throughput of the airport for the year 2006 is presented in the following table.

2006 Traffic Levels Growth vs. 2005	
15.1 Million Passengers	+5.6%
191 Thousand Aircraft Movements	+5.5%
120 Thousand Tonnes of Cargo	+3.6%

Table 3.1
General facts and figures of AIA

Figure 3.2

b. Ports

The Attica Region comprises three Ports of national importance:

- the port of Piraeus
- the port of Rafina and
- the port of Eleusis

In addition to the above, the harbour of Lavrion is upgraded for freight and passenger transport to and from the islands of Cyclades.

The international Port of Piraeus is the largest port of the Mediterranean Sea in terms of passenger transport, while at the same time it serves an important volume of freight transport. It is composed of three sectors, with separated and autonomous operations.

- The (Central) Passenger Port with 1 international and 5 domestic terminals
- the Commercial Port (Drapetsonal-Keratsini-New Ikonio)
- the Repairing Area (Perama, Salamine)

Regarding international freight flows, the Port of Piraeus constitutes (along with Thessalonica and Volos) the main gate of the "eastern" North-South European axis.

Also, the Port of Piraeus constitutes the main port of the National Port System in terms of transshipment.

Figure 3.3
The ports of the region of Attica

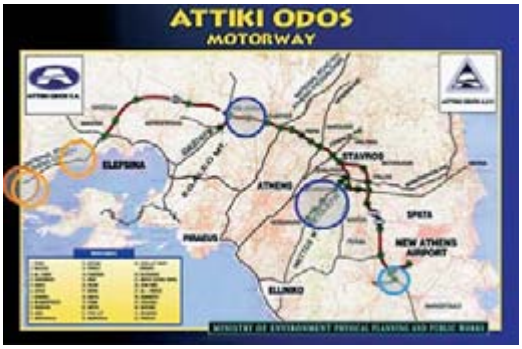
3.2.2 Athens Metropolitan Area Major Transport Infrastructure

a. Attiki Odos Motorway

Attiki Odos Motorway is a high-speed toll motorway that consists of two main motorways: the Elefsina Stavros Spata A/P Motorway (52.4km) and the Imittos Western Peripheral Motorway (12.9km).

The Attiki Odos is a cutting edge motorway in Europe, meeting the highest design standards for high-speed toll motorways. This enables a safe journey the entire length of the Attica without the need for traffic lights, connecting more than 30 districts in Attica. The Attiki Odos motorway assists in easing traffic congestion in the greater area of Athens, and in reducing traffic in the central arteries. It forms a backbone for the transport network, as well as for the layout of Attica's energy and communication networks and contributes to the integrated physical and urban planning of Attica.

It is incorporated in the Trans-European Networks (TEN-T). It is a priority project aimed at developing the greater area of Athens and Greece as a whole, namely as it forms part of the Athens peripheral ring road creating a bypass of Athens and thus easing congestion on the main arteries. It also serves as a link between the various means of transport and several major transport installations.



b. Attico Metro

The Athens Metro, or as it is more commonly known in Greece, the Attiko Metro is one of the most impressive underground mass transit systems in the world. It has an operating staff of 387 employees and runs two of the three metro lines. The lines run entirely underground. Attiko Metro operates a fleet of 42 trains and 252 wagons with a daily occupancy of 650,000 passengers. Extensions to both lines are under construction, most notably westwards, southwards and eastwards towards the peripheral suburbs

The frequency of trips is every 3 minutes in rush hours and 5 to 10 minutes in non-rush hours.

The metro operation has radically changed the everyday function of the city, while it determines new location patterns.

c. PROASTIAKOS – The suburban Railway development

The new Suburban Railway interconnects large regional transport attraction poles, such as satellite urban centers, international airports, campuses, industrial zones, harbors, etc. The Suburban Railway excels in the fields of speed, reliability, comfort, transport capacity, and safety.

In combination with the METRO and the tram, it constitutes the backbone of the metropolitan transport system by supplementing the former and being connected to them (and the other MMT) at central transfer stations. Nevertheless, its special features rank it top among MMTs as the fastest, most reliable, safest and most comfortable means of transport. The Suburban Railway is due to be fully completed in 2008.

d. The Athens Tram

Tram S.A. was founded in March 2001 and is a subsidiary company of ATTIKO METRO S.A. In 2002, the company began the construction of the new Athens tram network, while commercial operation started in July 2004, a few weeks before the Athens 2004 Olympic Games.

TRAM S.A. is a public service corporation supervised by the Ministry of Transportation & Communications. The company's mission is to design, develop and operate the modern tram network. The project was financed 50% by the European Fund of Regional Development of the 3rd Community Support Framework and 50% from National Funds.

The tram operater has a fleet of 42 trams that serve 47 stations. It employs 345 operators and has an average daily occupancy of 80,000 people.

4 Building a Vision for the City: the New Athens Strategic Plan

4.1 Globalization, Knowledge Economy and Metropolitan Areas

During the last two decades many social theorists and policy-makers along with international organizations and institutions have emphasized the key role of cities and regions in the contemporary knowledge economy. Thus it is often cited that "city-regions are locomotives of the national economies within which they are situated" (Scott and Storper 2003: 281) or in a similar way it is stated that "the cities [are] the motors of growth and jobs" (CEC 2005: 2) and that "cities are the engines of growth" (OECD 2004: 211). While urban areas always were the centre of national or regional economic activity, it seems that the significance of metropolitan areas has risen over the last years. Agglomeration economies (Krugman 1995) and clusters of industries (Porter 2003, Cooke 2002) are considered to be the main competitiveness factor of cities and regions. Globalization and the emerging knowledge economy (at least in the most developed parts of the world) have been the main driving forces behind this change. In this context, cities and regions are exposed to an intensely competitive environment, raising the issue of spatial competitiveness.

This highlights economy as a decisive component of metropolitan development. Issues of efficiency, productivity and employment emerge in the strategic spatial planning discourse as of equal or even higher priority along with the more "traditional", spatially oriented planning considerations. At the same time the heightened competition on global scale and the emerging knowledge economy affect also the urban structure and form, although in a complicated and indirect manner. The tertiarization of the economy and the consequent shift towards knowledge-based services, as well as unemployment, immigration and the retreat of welfare state, all contribute in one way or another to shifts in the functions of urban centres, suburbanization, gentrification, etc. At the regional level, inter-regional competition has established new urban hierarchies in favour of the most dynamic and well-endowed cities and tends to shaken traditional urban network patterns.

These developments call for a strategic response from metropolitan regions and the first step to this direction usually is the building of a vision. Especially in the case of major metropolitan areas, such a response to the challenges of globalisation should take into account not only their international interface but also their national and inter- regional context.

4.2 Athens Metropolitan Area: Recent Achievements and Persisting Problems

Today, Athens and its Region, Attica, are going through a very dynamic transition period — old institutional structures still subsist, but new integrated and strategic governance structures are emerging.

Mobilizing for the Olympic Games has generated new attitudes and innovative approaches involving the public and the private sector in partnership.

The Olympic infrastructures, complementing environmental and architectural assets, have effectively restructured the urban region. The intensity of the changes underway is also due to a "catching up" process subsequent to 20–30 years of inertia, which had eroded the competitiveness and quality of life of Athens.

A more conducive environment for economic growth is now being created thanks to the major infrastructure investments and major intervention projects, which include the enhancement of the city centre through the Programme of Unification of the Archaeological Sites and the redevelopment of the coastal zone. Also the metro and tramway networks, ring roads and major highways connecting outlying suburbs have upgraded the Metropolitan Area's quality of life and the competitiveness of the city.

The investments made in support of the Games improved the urban environment and the image of Athens, aiding the city and its region to develop as an international venue for year round tourism, convention business, sporting competitions and other major events.

Thus, the 2004 Olympic Games provided an excellent opportunity to project a new image of Athens as a city attractive in terms of both economic investment and quality of life. Key objectives were to make a success of the Games but also, and more importantly, to sustain into the future the momentum of the economic, social and environmental improvements generated by the Games.

There will still be considerable scope in the post-Olympic period to take up or neglect opportunities.

Notwithstanding the above positive developments, coupled with a successful economic performance, in other critical domains problems persist: Decades of uncontrolled growth of the Region have generated serious environmental problems leading to an unsustainable development pattern. Although recent investments in transports have upgraded infrastructure, the traffic congestion in rush hours persists in many sections of the road network and it is clear that further measures are needed. At the spatial level, although polycentricity seems to be an emerging pattern, it is not yet dominant. Furthermore, specific measures and actions are needed to address the issue of metropolitan governance.

In the economic domain, besides the positive results, several issues must be resolved in order to sustain growth in the long run. Investment and foremost penetration and use of ICTs is unsatisfactory, foreign investment remains limited for several years now and unemployment rates, especially for the young people and women, are persistently high.

The need for a strategic vision for Athens which takes it beyond the Olympic Games of 2004 and the Community Support Frameworks is crucial.

4.3 An Outline of the Vision for Athens – The New Athens Strategic Plan

At the present time, the Organisation of Athens is preparing a new Strategic Plan for the Athens Metropolitan Area to replace the 20-years old Athens Structure Plan.

The elaboration of a new strategy has largely drawn upon the evaluation of the performance of the earlier Plan, the extent to which its objectives have been met, the impacts of its particular choices, and its capability to deal with the new realities and the prospects of the city. It has also drawn on the valuable experience gained throughout the preparation and hosting the Athens 2004 Olympic Games process.

The new Plan is a comprehensive strategic framework, articulating the interconnections between economic, spatial, environmental and social issues in an integrated and flexible approach, formulating an Athenian vision shared by multiple sector-specific agencies.

This integrated approach will help to ensure the development of a global metropolitan strategy, balancing economic development, environmental protection and quality of life throughout the Metropolitan Area.

The overall goals of the Strategic Plan, which shape the vision for the future of Athens, are:

- Balanced economic development, competitivity, enhancement of the international role of Athens.
- Sustainable spatial development, prudent management and protection of the natural resources, the environment and the cultural heritage.
- Promotion of social and economic cohesion, upgrading of the quality of life for all citizens, equitable social and spatial distribution of investments and development benefits.

Following this triple line strategy, the main objectives of the Athens Strategic Plan correspond to the three interrelated facets of the Athens vision.

4.3.1 The Dynamic, Competitive and Outward Looking City

A vital dynamic economy is an indispensable component of a prosperous future. Athens should invest on its international role by enhancing its economic base, promoting the productivity (and thus the competitiveness) of the whole metropolitan economic fabric and intensifying international networking. The main objectives are:

- To upgrade existing and organize new urban spaces for hosting entrepreneurial activities (e.g. business, industrial and logistics parks) in the existing as well as the newly emerging development poles of the Region.
- To enhance horizontal networking between centres and support their specialization, not only through the provision of physical infrastructure but also through the promotion of virtual city networks.
- To upgrade the metropolitan centres of the AMA through urban regeneration interventions.
- To enhance and upgrade the international gates (ports, airport) of the AMA and improve their connectivity with the main metropolitan-level centres.
- To continuously upgrade ITCs infrastructure in the AMA and improve its position in the "virtual space", taking into account its geographical remoteness from the European core.
- To facilitate and regulate the existing relocation trends of the industrial sector from the central areas of the AMA to the periphery of the Region, by organizing suitable areas for hosting them.
- To exploit the proved ability of the city to organize and host international-level mega-events.
- To promote specialized tourist development in order to exploit the place-specific features of the AMA in conjunction with its cultural assets.

4.3.2 The Ecologically Responsible and Sustainable City

Taking into account the degradation of environmental conditions in the AMA and its peri-urban areas in conjunction with the global environmental issues, sustainability emerges as a top priority. The main objectives under this heading are:

- To prevent urban sprawl and uncontrolled suburbanization which in the long-run undermine the compact-city principle.
- To take measures for the protection of peri-urban landscape and the mountainous areas of Attica in order to prevent further degradation.
- To take measures for the upgrading of the urban as well as of the natural environment
- To tackle the problem of urban solid waste disposal in a sustainable and long-term manner.
- To reduce the energy consumption and differentiate the combustion pattern of the AMA by making use of resources which have a lower or negligible impact on global warming. To this aim the drafting of regulations for ecological buildings will be an important contribution.
- To establish sustainable mobility as the guiding principle for all transport interventions and regulations.
- To promote the model of the ecologically responsible city.

4.3.3 The Inclusive and Equitable City

The growth of Athens was accompanied by a growing social and economic diversity. This process was accelerated by the significant immigration flows of the last two decades that contributed to the creation of a multifaceted and complex social structure. Besides that, the multiplicity of interests and the complex administrative structure raised issues of transparency and participation in the decision-making process for the city. Thus cohesion and democratic participation are main issues. The main objectives are:

- To promote a polycentric and balanced urban structure taking into account the compact city principle.
- To promote the mix of compatible uses and take

measures to avoid the creation of segregated areas.
- To deliver social services and facilities in a balanced and equitable manner all over the metropolitan area.
- To improve the provision of public transport facilities.
- To promote metropolitan governance as a means of efficient management of the AMA as well as an institution which facilitates social inclusion and participation.
- To promote e-governance and relevant uses of the Internet that can help achieve socio-economic as well as environmental goals (e.g. through dematerialization).

4.3.4 Key Planning Issues

Among the key planning issues of the new Strategic Plan are:
- Enhancement of the specific identity of the city-region as a European Gateway Metropolis and as an economic and cultural pole of international significance
- Forming a development strategy that will promote public-private partnerships and improve Athens competitiveness, with the creation of a region-wide network of productive, economic and technological activities zones
- Development of endogenous economic activities and niche markets, which fully exploit the numerous place-specific assets of the Region, such as the cultural/archaeological, health and ecology tourism, year round sporting and conference activities, education as an economic activity, etc.
- Promotion of the historical and cultural identity of the city by the enhancement of the historical environment and the regeneration of the historic city center
- Preservation and integration of all environmentally sensitive areas in a green belt network
- Protecting the natural environment in the peri-urban areas and controlling urban sprawl
- Reclamation and development of urban brownfields into new functional poles enhancing the city's image and identity as a modern Metropolis
- Upgrading housing and infrastructure and improving quality of life in the urban area
- Linking the central urban core to the wider regional territory in view of a balanced polycentric development of the four Attica sub-regions

4.3.5 Spatial Interventions of Metropolitan Importance

In the above context, a number of Spatial Interventions of Metropolitan Importance are actually promoted or projected:
- The completion and extension of the "Unification of Archaeological Sites" programme over the whole city by the creation of a large pedestrian circuit and the refurbishment of the urban environment all along it.
- The upgrading of the Athens and Piraeus metropolitan centres;
- A regeneration project for the wider area of the port of Piraeus.
- The regeneration of the urban and suburban Coastal Zone by means of integrated projects, oriented towards sport, tourist and cultural activities.
- The regeneration of the "Eleonas" area in the metropolitan urban core, by the development of business parks, public administration and transport facilities, as well as green spaces and areas dedicated to leisure, sports and culture.
- Development of metropolitan parks (at the old airport of Hellinikon, Goudi and Attiko Alsos) with land uses such as leisure, culture and sports. (In Hellenikon in particular the plan includes a development strategy based on the development of 100 Ha so as to support the whole project financially)
- Regenerating areas around Olympic facilities in relation to their projected post-Olympic use.
- Development projects around central transport hubs and Metro-Suburban Railway stations.
- The unification of urban and peri-urban green spaces with major cultural and leisure installations.

References

1. Aggelidis, M. (2004) 'The centers and spatial entities in the strategic planning of Attica', in the *City and Space from the 20th to the 21st century,* Volume in honor of Professor Athanassios I. Arabantinos, National Technical University of Athens - Faculty of Architecture, University of Thessaly - Department of Department of Planning and Regional Development, Association of Greek Urban and Regional Planners, Athens: 1–14 [In Greek]
2. Gerardi, K (2004) 'The spatial structure of Attica. View for an spatially integrated development of the region of the capital city in the *City and Space from the 20th to the 21st century*, Volume in honor of Professor Athanassios I. Arabantinos, National Technical University of Athens - Faculty of Architecture, University of Thessaly - Department of Department of Planning and Regional Development, Association of Greek Urban and Regional Planners, Athens: 129–146. [In Greek]
3. METREX (2006) *Second Interim Report on the PolyMETREXpus project*, Glasgow 3 September.
4. OECD (2004) *Athens, Greece*, OECD Territorial Reviews, OECD Publications Service, Paris.
5. Scott J.A. and Stroper, M. (2003) 'Regions, Globalization, Development', *Regional Studies*, Vol. 37.6&7, pp. 579–593.
6. NTUA (2004) *Strategic Spatial Development Framework for Athens-Attica*, National Technical University of Athens-Faculty

of Architects-Department of Urban and Regional Planning, Hellenic Ministry for the Environment, Physical Planning and Public Works, Athens. [In Greek]
7. ROP Attica (2007) *Operational Programme of Attica 2007–2013*, Official document, March 2007, Athens. [In Greek]
8. European Commission (EC) (1999) *ESDP – European Spatial Development Perspective: Towards Balanced and Sustainable Development of the Territory of the EU*. Office for Official Publications of the European Communities, Luxembourg.
9. Cooke, P. (2002) *Knowledge economies. Clusters, learning and cooperation*, Routledge London.
10. Krugman, R.P. (1995), *Development, geography, and economic theory*. The MIT Press, Cambridge, Massachusetts.
11. Porter, E. M. (2003) 'The economic performance of regions', *Regional Studies*, Vol. 37.6 & 7, pp. 549–578.
12. Commission of the European Communities (CEC) (2005) *Cohesion Policy and cities: the urban contribution to growth and jobs in the regions*, Commission Staff Working Paper, 23.11.2005, Brussels

INTERREG IIIC
PolyMETREXplus Project
RINA North-South Interface

Athens Metropolitan Area Attica Region

Final Report

2
Transnational Relations

November 2007

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ORGANISATION FOR PLANNING AND ENVIRONMENTAL PROTECTION OF ATHENS

1 Introduction

The 2nd part of the Athens Final Report in the context of the INTERREG IIIC PolyMETREXplus project seeks to identify themes of networking and cooperation between the city regions along the RINA North South Interface, in view of achieving polycentricity, which is the key concept of the whole project.

The report explores the international role of Athens and proposes certain representative actions under the general objectives of polycentricity, sustainability and cohesion. The focus of this report is on the inter-regional/international dimensions. The aim is to "formulate actions that would engineer greater North-South connectivity and in doing so, promote sustainable forms of urban cohesion through improved cooperation at the metropolitan level" (METREX 2005b: 56). This in turn will lead in enhancing polycentricity and cohesion along the NS RINA and will raise its competitiveness potential.

1.1 Methodological approach

The identification of future actions and possible opportunities for networking and cooperation involves the following steps:

- The review of the main concepts of the project in the European context and specifically in the framework of the European Spatial Development Perspectives (ESDP) and the European Spatial Planning Observation Network (ESPON)
- The examination of the international role of Athens as identified by other studies and official documents since 2000,
- A rough analysis of the NS RINA and the positioning of Athens in it
- The proposal of relevant actions for Athens

The report comprises four sections. The first section reviews the main concepts of the report in the context of the on-going debate on the European Union (EU) spatial development trends and strategies, drawing specifically on the ESDP, the ESPON and the PolyMETREX projects. The second section reviews and highlights the main findings of previews studies, reports and official documents on the international potential and role of Athens. The third section seeks to identify the profile of the NS RINA and the way Athens interacts with the other city regions and countries of the NS RINA by analyzing data that refer to trade and transportation. Finally the last section puts forward a number of possible representative activities in relation to the Athens Metropolitan Area (AMA) according to the perspectives identified by the project.

2 Metropolitan areas in the European context: Competitiveness and polycentricity

2.1 The European context: the ESPD and ESPON framework

2.1.1 The ESDP framework

In the early nineties two groundbreaking study documents of the European Commission highlighted a shift towards more spatial-oriented policies. The studies Europe 2000 and Europe 2000 + (EEC 1994) stressed that, if the European Union policies seek to achieve economic and social cohesion along with regional as well as overall EU competitiveness, there is a rather overlooked spatial factor that should be taken into account. This consideration echoed the shift that was already taking place in mainstream economic theory which had acknowledged that geography matters and that the spatial distribution of economic activities is a key factor for achieving economic development and competitiveness (Krugman 1995, Porter 1990).

One of the most debated key issues that emerged out during the last ten years is the new role of cities and metropolitan areas in particular, and the concept of city region. Consequently, there has been a growing interest in urban policy at the national and supra national levels. Although this issue is not yet settled it seems that metropolitan areas and their hosting regions are of great importance for achieving competitiveness in a rapidly globalizing world. Globalization forces in conjunction with neo-liberal policies transcend the national scale in favor of regional or even metropolitan scales. Large metropolitan areas and city regions are world scale players of key importance. The new policy issue is how to reconcile competitiveness with cohesion, either social or territorial.

The European Union responded by adding territorial cohesion as a new policy objective. The objective of economic and social cohesion had already been introduced by the Single European Act in 1986 and was established by the Maastricht Treaty (1992) which incorporated it into the EC Treaty itself. The term "territorial cohesion" which was introduced in the second and the third Cohesion Report of the European Commission, represents a changing interpretation of the cohesion process and a growing interest in spatial matters. In this context the Commission issued in the late nineties the European Spatial Development Perspectives (ESDP) document (EC 1999). The ESDP document introduces several spatial policy recommendations based on the principles of sustainable spatial development which are "reflected in the triangle of objectives linking the three following fundamental goals of European policy: (I) economic and social cohesion; (II) conservation of natural resources and cultural heritage; and (III) more balanced competitiveness of the European territory". According to the ESDP the Policy Aims and Options for the Territory of the EU, along with the specific sub-objectives are as follows:

1. Spatial Orientation of Policies
2. Polycentric Spatial Development and a New Urban-Rural Relationship
   - 2.1. Polycentric and Balanced Spatial Development in the EU
   - 2.2. Dynamic, Attractive and Competitive Cities and Urbanised Regions
   - 2.3. Indigenous Development, Diverse and Productive Rural Areas
   - 2.4. Urban-Rural Partnership
3. Parity of Access to Infrastructure and Knowledge
   - 3.1. An Integrated Approach for Improved Transport Links and Access to Knowledge
   - 3.2. Polycentric Development Model: A Basis for Better Accessibility
   - 3.3. Efficient and Sustainable Use of the Infrastructure
   - 3.4. Diffusion of Innovation and Knowledge
4. Wise Management of the Natural and Cultural Heritage
   - 4.1. Natural and Cultural Heritage as a Development Asset
   - 4.2. Preservation and Development of the Natural Heritage
   - 4.3. Water Resource Management – a Special Challenge for Spatial Development
   - 4.4. Creative Management of Cultural Landscapes
   - 4.5. Creative Management of the Cultural Heritage

As far as the spatial organization and spatial hierarchies in the European territory are concerned, one of the key spatial issues highlighted in the ESDP is the fact that the European territory is characterized by a strong concentration of activities and development dynamics in its central areas that form the European Core, the so-called "Pentagon", while the rest of the areas constitute the European periphery. As it is noticed in the ESDP (EC, 1999: 20, 61):

> "At present, there is only one outstanding larger geographical zone of global economic integration: the core area of the EU, the pentagon defined by the metropolises of London, Paris, Milan, Munich and Hamburg". "This area represents 20% of the total area and contains about 40% of EU citizens producing about 50% of the EU's total GDP." It "offers strong global economic functions and services, which enable a high income level and a well-developed infrastructure. In addition, there are some isolated islands of significant growth (e.g. Barcelona, Region of the Øresund), where GDP is not yet high enough to change significantly the currently imbalanced spatial development in line with the underlying objectives of the ESDP".

2.1.2 The ESPON framework

In order to get the concepts introduced by the ESDP further elaborated and promoted all over the European territory not only by the Commission but also by the Member States, a Program under Structural Funds

INTERREG III was undertaken, namely the European Spatial Planning Observation Network (ESPON) for the programming period 2000–2006. The aim was to undertake "Applied research and studies on territorial development and spatial planning seen from a European perspective in support of policy development". The idea is that: "National, regional and local knowledge is partly already existing and available, although only covering smaller parts of the European territory. With the ESPON 2006 Programme and by addressing an enlarged EU territory and larger territorial entities, the Commission and the Member States expect to have at their disposal" a series of analyses, and diagnoses and more generally: "Integrated tools and appropriate instruments (ESPON database, indicators, methodologies for territorial impact analysis and spatial analyses, mapping facilities) in order to improve the spatial coordination of sector policies."

Polycentricity constitutes one main aspect in this course. Indeed, the ESPON Measure 1.1. "Cities, polycentric development and urban rural relations" resulted in one of the final reports of the project titled "Potentials for polycentric development in Europe". [1]

In the context of the above report the strengths of the 76 MEGAS (Metropolitan European Growth Areas) which constitute the strongest FUAs (Functional Urban Areas) are analyzed further and ranked and divided into five groups. For that purpose, seven functions of FUAs and relevant indicators have been identified (population, transport, tourism, manufacturing, knowledge, decision-making in the private sector, decision-making in the public sector) and each FUA has been ranked according to its importance for each variable (Nordregio, 2005: 8–9).

Athens, as well as Helsinki, along with 6 more European cities (Dublin, Geneva, Gothenburg, Manchester, Oslo and Torino) come to the Category 2 MEGAs, "cities that are relatively large, competitive and often with a strong knowledge basis. Most MEGAs in this category have one or two qualities that are notably weaker than the others, usually relating to either mass or accessibility" (Nordregio, 2005: 11, 13). These also happen to be among the few top category MEGAs in the peripheral parts of Europe.

In the context of the ESPON project 3.2 report "Scenarios on the territorial future of Europe" several spatial scenarios are presented, starting from a trend scenario which is followed by a cohesion-oriented and a competitiveness oriented scenario and concluding with "a scenario likely to achieve a desirable territorial evolution in Europe" (ESPON transnational project 3.2 group, 2007). This cohesion scenario 2030 is illustrated in the map in the left (ibid: 60).

As far as the study area is concerned, three economic integration areas based on major urban networks are foreseen along the North South RINA wider space, namely the northern (which includes all the

Figure 1
Cohesion-Oriented Scenario - Final Image of Europe 2030 (ESPON 3.2)
Source: ESPON 2007: 51

Nordic and Baltic Sea countries, along with Denmark, northern Germany and Poland), the central (which includes a part of Southern Germany, Austria, Czech Republic, Slovakia, Slovenia and parts of Romania, Croatia, and Serbia) and the southern (which includes Greece, Bulgaria, european part of Turkey, the most part of Romania, Albania, Former Yugoslav Republic of Macedonia and the most part of Serbia), interconnected by major communication links, along with a number of metropolitan areas (e.g. in the southern integration area, Belgrade and Bucharest) which act as linking nodes to other economic integration areas.

Figure 2
Roll Back Proactive Scenario – Image of Europe 2030 (ESPON 3.2)
Source: ESPON 2007: 60

[1] For details, http://www.espon.eu/mmp/online/website/content/projects/259/648/file_1174/fr-1.1.1_revised-full.pdf

2.2 The METREX/PolyMETREXplus framework and the North-South RINA

Over the last ten years the emphasis given on the spatial dimension of the European Union issues, the formation of the EU spatial perspectives and the related spatial development policies have led to the recognition of the role of various territorial entities in respect of their cohesion and competitiveness trends and dynamics. Starting from the theoretical and political debate that had focused on the regional dimension of Community issues and the relevant policies that concluded to the establishment of the common regional development policy of the EU since the midst 1970s, gradually the interest is moving towards a more specialized territorial perception. In this course, given the highlighting of the role of urban centres, of city regions and metropolitan areas at the theoretical and the policy making fields, a growing interest of the EU has emerged concerning the role and the prospects of urban centres as far as sustainable development, cohesion and competitiveness are concerned.

Despite the fact that urban policy does not constitute a legally binding common policy of the EU, since the midst 1990s a series of EU documents give the policy context for sustainable urban development (EC, 1998) and at the same time, various EU initiatives are implemented (URBAN I, URBAN II, URBAN AUDIT, etc.), mainly in the context of the cohesion policy. It is worth noting that actions which concern integrated urban interventions have already been incorporated in the EU policies co-financed by the Structural Funds (e.g. Regional Operational Programs in the context of the Community Support Frameworks), while recently the urban dimension has been stressed in connection to the Lisbon and Gothenberg agenda.

Metropolitan areas in particular could be considered as a specific aspect of the urban phenomenon that is characterised by a high developmental potential not only at the national but also at the European as well as the global levels, and at the same time its way of functioning determines the quality of life of a huge part of the European population.

The metropolitan dimension of European issues could not be considered as granted. On the contrary, it is being under formation, in relation to the cohesion policy and the competitiveness and sustainability agendas: "The metropolitan dimension to European affairs has expanded with practice to include the formulation and implementation of integrated strategies for metropolitan regions and areas and the governance of metropolitan areas because these can provide the context within which spatial planning and development can be carried out most effectively" (METREX Network, 2005).

The METREX, which is the network of European Metropolitan Regions and Areas, "provides a platform for the exchange of knowledge, expertise and experience on metropolitan affairs, and joint action on issues of common interest. The Network has members from some 50 metropolitan regions and areas and partners in many others. METREX contributes the metropolitan dimension to policies, programmes and projects on a European scale. The Network is a partner of European institutions, the research community, governmental organisations and other networks".

In the above framework, the METREX project PolyMETREXplus under the Interreg IIIC programme of the European Commission "seeks to contribute a metropolitan dimension to the objective of the European Spatial Planning Development Perspective (ESDP) for the harmonious, balanced and sustainable development of the European space and a metropolitan response to the three key strategic policy options of Global Integration Zones (GIZ), Polycentricity and Complementarity." It is stated that metropolitan areas in the European Union not only seek to further develop their strengths and opportunities and to tackle existing weaknesses and emerging threats, and furthermore to exploit their competitive advantages, but also they recognise that "co-operation and complementarity and the development of polycentric relationships with other metropolitan areas will also be important in securing their future" (ibid.)

The PolyMETREXplus Framework Polycentricity and better European territorial balance that has been prepared by METREX to summarise the outcomes and outputs of the PolyMETREXplus project, concludes that "a better European territorial balance could be achieved, over time; through the progressive development of well connected polycentric metropolitan clusters and corridors and that this approach should be commended to the European Union". The project examines closely the Metropolitan dimension to European affairs and stresses the potential for polycentric metropolitan co-operation. It has drawn significantly on the ESPON research findings and recommendations. In particular (METREX et al., 2007):

> "The PolyMETREXplus Vision for better European territorial balance concludes that the better connectivity in prospect through the Trans-European Transport Network (TEN-T) Programme of the European Union, augmented with additional proposals by ESPON and METREX, could improve European North/South and East/West connectivity and peripheral movements around the GIZ and enable the Mediterranean and Baltic/Danube/Aegean areas to function more effectively as counter balancing areas to the GIZ. If the metropolitan areas identified by ESPON as Potential or Weak Metropolitan European Growth Areas (MEGA) can also increase their strengths individually and collectively, through polycentric cooperation, then the Vision of better territorial balance could be realised, over time."

3 The international role of Athens: Studies, Plans and Programs

3.1 Studies and debate

As already stressed above, over the last years an on going discourse about the international role of var-

ious metropolises is taking place. This is due mainly to the changes occurring at the global level that, in turn, influence the national and the local / urban levels. Structural adjustments in the sphere of the economy have resulted in a dramatic change in the spatial patterns of development. Regional and urban hierarchies are faced with severe transformation of the previously existing structures and balances. The strong globalization trends of the economy have triggered a continuous struggle among urban centers which try to improve their competitive position at the national and supra national scales.

The city of Athens and more generally the Athens Metropolitan Area (AMA) is also faced with challenges concerning its role at the national and international levels. While the former is well defined and established, given the city's predominant position in the country's economic, administrative and spatial structure as capital of the Greek state, the latter is still under formation. In fact, it could be argued that the debate on the international role of Athens has just opened up.

Some representative aspects of the perception of the Athens international role are presented below. These are based on official policy documents and development programs, on policy analyses and proposals, as well as on scientific researches and studies. The majority of these documents have been conducted after the 1990s, given that to a great extent they have been produced in the context of the debate about the Olympic Games and the deriving benefits and threats for the AMA as well as for the whole country.

3.1.1 The study of the Organisation for Planning and Environmental Protection of Athens (2000)

The study titled The international role of Athens (Economou et al., 2001) is mainly based on a previous research project (1998) which had been conducted by the University of Thessaly on behalf of the Organization of Planning and Environmental Protection of Athens. Some findings of the study are briefly presented below. Three scenarios based on different combinations of selected variables are adopted by the study. These variables are summarized as follows (Economou et al., 2001: 111–124)

i. International economic trends
ii. The state of the close geopolitical environment of Greece
iii. The course of the European Unification
iv. The progress of the macroeconomic features and the corresponding dynamics in Greece
v. Sectoral economic and structural developments in Greece
vi. Capitalization of the Olympic Games
vii. The level of modernization of the Greek administrative system
viii. The degree of the improvement in supra local infrastructure needed for an active incorporation into the international economic framework
ix. The state of the environment in the Athens territory
x. Spatial policies implemented in Greece and the European Union

The above variables are grouped together into three alternative scenarios: first, the scenario based on the existing trends, second the dynamic scenario and third the unfavourable scenario. Given the low possibilities of the latter, only the first and the second scenarios are further examined in relation to the international role of Athens in the context of the study. The main differentiations that characterize the dynamic scenario refer to the acceleration of the improvement of both, the economic structure and the state of the environment in Athens, as well as to the efficiency of the programming and planning system. In the study it is stressed that, while an international role of Athens is rather hard to achieve in the medium run, such an effort might have a positive effect on the task for a wider international role in the long run (Economou et al., 2001: 125–126).

According to the above study, the results of the two scenarios differ between the short/medium and the long term. These results concern the following factors: (a) the activities related to the international role, (b) the geographical scope of the international role, (c) the "grade" of the international role, (d) the impacts of the international role on the spatial organization of the national territory, (e) the impacts of the international role on the spatial organization at the urban level. Following a detailed elaboration of these parameters, the implementation actions needed in order to promote the international role of Athens are identified in the study. Finally, the main policy axes proposed in the context of the study are as follows (Economou et al., 2001: 145–162):

(a) Immediate support of the activities that constitute the "raw material" of the recommended international role,
(b) Focusing on three broad geographical areas, specifically: (1) the Balkans-the Black Sea area and the rest of Eastern Europe, (2) Western Europe, (3) Eastern (mainly) Mediterranean,
(c) Improvement of the image of the wider area of Athens
(d) Housing conditions attracting to the staff of international firms,
(e) Land policy for the land needed,
(f) Controlling the accumulation of conventional activities

3.1.2 The OECD review of Athens Metropolitan Area (2004)

The review of the Organization for Economic Cooperation and Development (OECD) of the Athens Metropolitan Area (AMA) OECD Territorial Reviews, Athens, Greece (OECD, 2004), was conducted in the context of the Organization's Territorial Reviews of metropolitan regions that aim "to improve the performance of urban regions by assisting decision makers to make better use of underdeveloped assets and comparative advantages and to implement policies more ef-

fectively." It is stated that the AMA "illustrates the challenges, which urban regions face in dealing with occasional major events such as a world trade fair or international games. A key question is how such events contribute to the realization of a city's goals and development strategy" (OECD, 2004: 3-4).

The Review outlines key issues, which will be important in shaping the future development of Athens, highlights trends in related governmental policies, and highlights also strengths and weaknesses of the Region. The key challenges identified are as follows (OECD, 2004: 4):

- to simplify the governance/administrative/planning framework to better integrate the economic, social and environmental concerns of the entire Attica Region;
- to maintain the momentum of civic pride and public involvement created by the Olympic Games;
- to ensure continuity in finance for investment in the metropolitan region;
- to develop endogenous economic activities which fully exploit the assets of the region, for example year round sporting and conference activities, the health, ecology and cultural/archaeological tourism; education as an economic activity, etc.

The international role of Athens is considered in the European Union context. According to the report (OECD, 2004: 79–80), in the short run the decisive role of new sectors of the tertiary sector for the metropolitan development along with the intensification of competition in the European economic space will further strengthen the role of a few larger metropolises and, hence, inequalities among urban areas might deepen. The decisive factors refer to know-how and to productivity and market size, while on the other hand Northern metropolitan areas are more likely to be benefited from the on going deliberalization process. In the long run the decisive parameters derive from the accession in the European Union of the new Central and Eastern European countries and consequently from the way in which their large metropolitan centres will be incorporated into the European urban hierarchy. Besides, these centres are about to compete with metropolitan centres of the South periphery of the EU for the attraction of European Structural Funds as well as of Direct Foreign Investment. On the basis of the above described scenario it is argued that it is rather difficult for Athens to achieve a higher position in the European metropolitan centres hierarchy, given that

> "it will be difficult for Athens to attract functions like banking and insurance from established competitive metropolitan areas, even those of the South (Madrid, Milan, Barcelona)….
>
> As European space slowly integrates, metropolitan areas in Central and Eastern Europe will seek to recover their past role or develop a new one. As a result, Athens could be obliged to seek opportunities in the area of the Eastern Mediterranean and the Middle East and in certain cases in the countries of the Central-Adriatic and South Eastern Europe, and the Black Sea. These areas could well provide a market for dynamic enterprises located in Athens and in Thessaloniki. ….
>
> In the light of the major changes taking place in Europe and world wide, Athens is rightly seeking to assert itself more strongly on the international scene. To do this, however, the AMA must first be recognised as a functional entity, which requires both a vision of the future of Athens and a strategy to achieve it. Implementing such a strategy requires metropolitan wide planning and integration of planning with economic development and social and environmental goals." (OECD, 2004: 79–80)

It is therefore important for Athens to strengthen endogenous development and niche markets through the enhancement of its "numerous place-specific undervalued assets such as the Unification of Archaeological Sites, the development of the health and sports sector, all year round convention business, and education as an economic sector" (ibid.).

3.1.3 The study for the National General Framework for Spatial Planning and Sustainable Development

The study for the National General Framework for Spatial Planning and Sustainable Development (Ministry for the Environment Physical Planning and Public Works, and Group of Experts – MIN. ENV., 2002) has been conducted in the context of the preparation of the corresponding official framework for which the Law 2742/1999 "Spatial planning and sustainable development" makes provision. It is worth noting that this study had expressed the revival of the political and scientific concern on spatial development planning in Greece in the late 1990s. Its content to a large extent is considered representative of the scientific dialogue on spatial planning in Greece. In this study the international role of Athens is considered in conjunction with that of Thessaloniki, in the context of the corresponding role of Greece: In addition to the expected improvement of the country's position in the European context in economic and structural terms, a territorial integration of the country with the territorial entities of Central and Eastern Europe, the Balkans, the Black Sea area, and the South Eastern Mediterranean and the achievement of the territorial cohesion of the wider area constitute the preconditions needed for the upgrading of the country's international role. The development of the Transport, Energy and Telecommunication Networks is in turn considered necessary for this purpose (MIN. ENV., 2002: 1–13).

In the context of the SWOT analysis for the whole country, the following remarks are drawn (MIN. ENV., 2002: 66–69):

"Strengths and Opportunities:

- The geographical position of the country, which favors the strengthening of its links with the Balkans and the Black Sea area.
- The existing two metropolitan areas, which (under conditions) could broaden their international

role and the country's position in the international division of labour, in respect of the settlements network. More specifically, the Olympic Games, the new international airport, and the new dynamics of the Greek economy are correlated with the expected international role of Athens.

Weaknesses and Threats:

- The (theoretical) possibility for a new geopolitical instability in the Balkans, in respect of the structure of spatial development.
- The inadequacies of the contemporary role of the two metropolitan areas, with the biggest problem claimed to be in the case of Athens, in respect of the settlements' network."

On the basis of the above findings, the strategic options and the priorities for spatial planning policy conclude (among the remaining proposals) with some statements on the international role of Athens: "Some crucial advantages regarding the broadening of the country's international role, the undertaking of a leading role for the modernization of the national economy and the procedure of production restructuring, the technological innovation and the creation of islands of technological niches, along with the large scale infrastructure projects implemented in the Attica region as well as the benefits expected from the Olympic Games, are concentrated in Athens" (ibid.: 13).

Hence, Athens and Thessaloniki that have "increased potentialities for an international orientation" act as gates from and to Europe with respect to the Balkans and to the Central – Eastern Europe. On the other hand, the enhancement of the international role of the two metropolises (Athens and Thessaloniki) under certain conditions is not perceived as antagonistic to the development of the remaining urban centers of the country. What is important is that a distinctive role seems to be favored in this context: the international role of Athens is oriented to the South – Eastern Mediterranean, while that of Thessaloniki is oriented to the Balkans and to the Black Sea area. The priorities for the enhancement of the dynamics of the metropolises are promoted through the following interventions (MIN. ENV., 2002: 21–22):

- Selective supporting of important dynamic branches (telecommunication, transport, insurance-banking-shipping sectors, culture, tourism etc.).
- Creation of the conditions for the attraction of new investment
- Completion of the new infrastructure projects of international scale and their interconnecting networks (e.g. the new international airport of Athens, the Athens Metro, Olympic projects, Technological Parks, environmental protection projects etc.).
- Supporting of research, educational, and training activities for achieving a highly qualified human capital."

Finally, concerning the international role of Athens, the development of Athens as an entrepreneurial, technological, and transport centre as well as a pole of international significance that refers to the wider geographical area of the European Union, the new member states of the enlargement, the South – Eastern Mediterranean and the Middle East) is considered of crucial importance (ibid.).

3.2 The official context: Plans and Programs for the Athens Metropolitan Area and the region of Attica

3.2.1 National General Framework for Spatial Planning and Sustainable Development

The official proposal for the National General Framework for Spatial Planning and Sustainable Development (Ministry for the Environment Physical Planning and Public Works – MIN. ENV., 2007) is the draft proposal that is set under public consultation (since July 2007), in order to be adopted as law. The international role of Athens is once again associated with that of the whole country. In addition to the characteristics of Greece in respect of its international position and role that had been already declared in previous studies, new findings are drawn. As for the wider context, Greece is considered to be isolated from the main development cluster of Central European metropolises, and on the other hand its external environment (the Balkans, the Black Sea area, the Middle East and the South Eastern Mediterranean) is characterized by unstable international political parameters. The developments in the South Eastern Mediterranean and the Middle East, the rapid development of the new economies in Asia, as well as the strong presence of immigrants from various countries constitute some important factors which determine the characteristics of the new circumstances.

According to the draft of the proposal the axes that concern the international orientation of the country are distinguished as follows: (a) North – West axis to the central European complex, (b) North, North – East axis to the Balkans and Eastern Europe, (c) South, to the South Eastern axis and the wider Mediterranean.

Figure 3
Territorial Cohesion and International Gateways of Greece
Source: MIN. ENV. 2002: Map 17

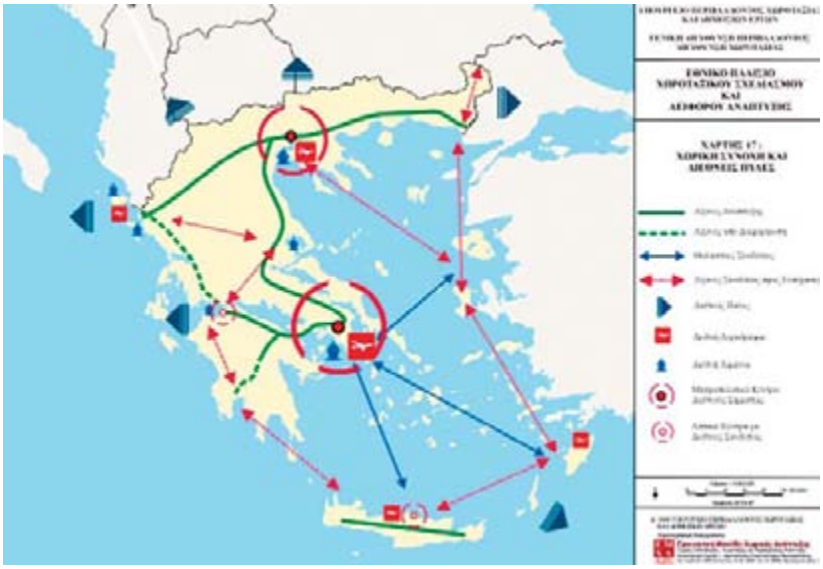


Figure 4
Greece in the European and broader Mediterranean space.
Source: MIN. ENV. 2007: Map 3.1

A comprehensive system of development poles is foreseen for the spatial organization of development centers and transport axes all over the country. In this framework, Athens and Thessaloniki are attributed a crucial developmental role and at the same time are defined as the country's main gateways at the international level. As far as Athens is concerned, the suggested objectives are derived from the proposals of the Athens Strategic Plan (not officially presented as yet):

- Establishment of the role of Athens as a City – Gate and a metropolis of the European Union.
- Support of its role as an entrepreneurial centre for linking the EU with the South – Eastern Mediterranean, the Middle East, the Balkans and the Black Sea area, through networking with the corresponding metropolitan areas, the aim being to create wider zones for economic integration.
- Identification and support of international range activities and improvement of its attractiveness through providing a high quality environment.

3.2.2 The Regional Development Program for Attica – ROP Attica 2000–2006

The Regional Development Program for Attica – ROP Attica 2000–2006 (General Secretariat of the Region of Attica, 2006) in the context of the regional section of the Community Support Framework for Greece 2000–2006 clearly sets the objective of promoting the region's international role.

It seems that it is the first time that such an orientation for the region's developmental effort has been selected, given that the main objectives during the previous programming periods were concentrated on the region's role at the national level. More specifically, the operational programme 1994–1999 aimed "to develop Attica's endogenous resources, modernise its economic fabric and resolve the problems posed by the overconcentration of activities in the region and the deterioration of the regional environment". On the contrary, as for the 2000–2006 programming period, "the general development objective set out for the Region of Attica is to highlight the international role of the country's capital city along with the counterbalancing of intraregional inequalities and the improvement of the quality of life", as it is stated in the official document of the ROP (General Secretariat of the Region of Attica, 2006: 36). The Strengthening of the international role of the capital city is one out of the six priorities defined by the programme. The budget of this priority accounts for about 30% of the total program's budget (according to the provisional allocation of financial resources by priority axis): [2]

> "The capital of this region, the city of Athens, is the capital of Greece and by far the biggest urban area with an immense dynamic on its way to becoming an important international metropolitan centre, and the gateway of the EU to Asia and Africa. Another major event, which can strengthen the international role of the region, is the Olympic Games of 2004. In this context, it is planned to improve the existing infrastructure and to provide a new one, as well as to create the conditions for sustainable development by paying greater attention to environmental problems. In order to strengthen the international role of the region, the private sector can also play a crucial role."

It is argued that the dominant role of Athens at the national level supports the potential for a further economic, commercial, transport and cultural role at the international level. This was expected to be accomplished through the large scale infrastructure projects that were under implementation in the area, and also through the big event of the Olympic Games (2004). There is also need for the enhancement of propulsive activities and infrastructure such as the tertiary education, the Research and Technological Development and the Information Society. The intense traffic congestion, the degradation of human settlements, the lack of infrastructure, the insufficiently organized development of the entire metropolitan system, the low degree of technological modernization, the level of unemployment, and the existing social inequalities, constitute urgent problems which have to be met and overcome.

Hence, in the context of the above priority axis the following measures are implemented through the ROP Attica 2000-06 (General Secretariat of the Region of Attica, 2006: 41–42).

- Transport connections and complementary transport infrastructure
- Strengthening of entrepreneurship and innovation

[2] http://ec.europa.eu/regional_policy/country/prordn/details.cfm?gv_PAY=GR&gv_reg=ALL&gv_PGM=2000GR161PO0002&LAN=5

- Promotion of archaeological and historical sites and support of the modern cultural activities
- Upgrading of infrastructure and equipment in the tertiary educational and the research institutes
- Private investment incentives

3.2.3 The Regional Development Program for Attica – ROP Attica 2007–2013

The Regional Development Program for Attica – ROP Attica 2007–2013 (Ministry of Economy and Finance, and General Secretariat of the Region of Attica – Ministry of Economy and Region of Attica, 2007) that has been recently (2007) submitted to the European Commission, also sets the international role of the Attica region among its main priorities.

It has to be noted that for the new programming period the Greek regional development policy is faced with a large change in the previously existing system of the European Union co-financed development programs. This is due to the differentiation of the relative position of some of the Greek regions in the EU context, the Attica Region included. Attica whose per capita GDP has exceeded 75% of the EU-25 average is no more a "Cohesion objective" (the previously "objective 1") region, but is characterized as a "phasing out" region in the context of the EU new cohesion policy for the 2007–2013 period.

According to the official text of the ROP Attica 2007–2013, which has been submitted by the Greek government to the European Commission, the region is characterized by dynamic development trends in all sectors of economic and social activities, while at the same time it operates as a driving force with important spread effects regarding the development of the rest of the country. This process is supported by the fact that according to functional criteria the Attica metropolitan region exceeds the official boundaries of the corresponding administrative region. It is argued that the region "constitutes the main co-operation gate at the national and the international level as well as the epicentre of the North – South developmental axis of the country, in cooperation with the Thessaloniki city which maintains a secondary role" (Ministry of Economy, and Region or Attica 2007: 6). The current geopolitical situation, in particular the accession of Bulgaria and Romania in the EU that made it possible for Greece to share borders with another European Union Member – State, is said to offer the Athens-Thessaloniki development double-pole a renewed role. It is also stressed that Attica is far ahead of the other Greek regions in terms of technological development, technical infrastructure, volume of production and consumption, and services in applied R&D. Moreover, Athens is the centre for administration and services in the whole country and at the same time it is an important transport node with an international influence. Besides, the Attica region exerts impact on the rest of the country, chiefly on its surrounding area whose extent is determined by commuting (Ministry of Economy, and Region of Attica, 2007).

As far as the region's position at the European urban system is concerned, the official text of the ROP Attica 2007-2013 refers to the ESPON classification according to which Attica belongs to the third grade of the European metropolises that includes also Helsinki, Geneva, Oslo, Dublin, and Manchester. All these cities are considered to be new potential development poles outside the traditional European development pentagon, thus supporting the polycentricity of the European urban system.

The ROP Attica 2007–2013 also refers to the classification made in the context of other studies, according to which, while the Attica region occupies the 8th position in terms of its population size, it occupies the 33rd position in terms of its per capita GDP and the 43rd position in terms of accessibility. Finally, it epitomises the conclusions of the comparative analysis as follows (Ministry of Economy, and Region of Attica, 2007: 10):

> "Athens turns out to be one of the biggest European metropolises in terms of its population size but it lacks behind in terms of economic performance and development, if compared with other Western metropolises. It seems that it is ahead of the South and East metropolises in the most sectors. The highly tertiarised economy creates the preconditions for development, given that the tertiary sector is the main pivot for jobs creation and development. Even though its peripheral position hinders it from gaining an important economic role over the common economic space, it creates opportunities and scope for Attica to achieve a leading profile in the Southeastern Europe and the Mediterranean."

This prospect aims to exploit the region's geographical position in the Mediterranean as a gateway to the EU, a starting and ending point of the Trans European Transport Networks (TENs-T) that is considered to be one key competitive advantage of Attica and of Greece in general.

Similar to the above is the approach for the role of Attica in the context of the National Strategic Framework of Reference 2007–2013 for Greece (Ministry of Economy and Finance, 2007).

On the basis of the analysis presented, the ROP Attica 2007-2013 defines "the Improvement of the Region's attractiveness as an entrepreneurial Centre" as one out of the four strategic objectives for the regional development over the 2007-2013 programming period. The fulfillment of this strategic objective is directly related to the quality of infrastructure, mainly the transport infrastructure in its various aspects (public urban transport systems, new road axes and their connection with the TENs-T, intermodality and interoperability etc.) (Ministry of Economy, and Region of Attica Authority, 2007:79–80).

3.3 Concluding remarks

From the above short presentation of the perception of the role of Athens in the various studies, research programs as well as in the official programming and planning documents prepared and implemented after the year 2000, some remarks could be drawn:

The international role of Athens has a short presence in the development programming and spatial planning discourse concerning the national as well as the regional level. Indeed, during the 1980s Athens was thought to be a factor contributing to the country's severe regional inequalities, given that the bulk of economic and administrative activities along with a huge part of the country's population are concentrated there. During the 1990s, however, some crucial transformations in the economic and geopolitical situation not only in Greece but in the European Union and the global terrain also, led to the reconsideration of the role of Athens in respect of its development potential.

First, at the global level, an ongoing relocation of economic activities is taking place which alters the competitive position of the various regions. In this context the geographical position of some previously remote regions, could be reversed to a potential advantage. Further more, the globalization process has highlighted the role of urban agglomerations and particularly of large metropolises as centres for the promotion of development and employment. This has resulted to a consequent reorientation of (regional) development policy objectives towards an enhancement of the role of urban centres and metropolises, instead of the emphasis given to endogenous local development during the 1980s.

In addition, as far as the global situation is concerned, an international role of Athens (and of Thessaloniki) is being shaped in the continuously changing geopolitical context of the EU, the South East Europe, the Mediterranean and the Middle East.

Second, at the national terrain, the Olympic Games mainly during the preparation stage undoubtedly constituted the catalyst which opened up the debate about the international role of Athens, in the context of the wider debate about the opportunities and threats stemming from this large event for the Athens Metropolitan Area itself and for the whole country too.

In general the international role of Athens is considered in relation with the corresponding role of the country and that of the Thessaloniki. It has to be stressed that the international role for the AMA is gradually identified with that of the whole country. Despite the fact that a metropolitan role in the Balkans had been already adopted by the Greek regional policy in the mid-1990s for the Thessaloniki greater area, at the beginning of the new millennium the international role of Thessaloniki is perceived as complementary to that of Athens, which seems to predominate at the national level.

Figure 5
GDP per capita of NS RINA countries.

Indeed, Athens and Thessaloniki constitute a double pole characterized by a specific orientation for each pole. The pole of Thessaloniki in particular is considered in the wider Balkans and Black Sea area, while that of Athens is perceived in relation with the Mediterranean and the Middle East. Furthermore, this double pole could promote the linking of Athens not only with the Southeastern Europe but with the Central – Northern Europe too, e.g. in the form of the North-South RINA. Such a prospect could support an integrated international role for Athens in the sense that Athens could operate as a node of the North–South–East relationship.

4 The North-South RINA and Athens Metropolitan Area: current situation and prospects

4.1 The specificity of the NS RINA

The North South RINA extents from Helsinki in the north of Europe, to Athens in the south. Although there is not a tradition of dense relations between the countries or the cities of the corridor as a whole, there are identifiable broader areas of cooperation and historical relations. For example in the south component of the corridor the countries and cities of Southern Europe (i.e Athens, Thessaloniki, Sofia, Bucharest and Belgrade) have a long history of periods of close relations either cooperative or competitive, throughout the last century. It must be noted that over the last two decades and particularly during the last ten years the exchanges (foreign direct investments, trade, migration, institutional, cultural) between them have been intensified mainly due to the EU integration process towards the East. The same holds for the north (or Baltic) component of the corridor (i.e. Helsinki, Tallinn, Riga, Vilnius) as well as the central (Budapest, Warsaw).

The NS RINA is the interface of the European Union to Eastern Europe and Asia countries (Russia, Belarus, Ukraine, Moldavia, Turkey) with whom the participating countries have a long history of established relationships. This eastern dimension in conjunction with the well established relations of the cities and countries of the corridor with the core of Europe adds a horizontal dimension to the NS RINA. In this way the NS RINA could be envisaged as intermediary and facilitator of the EU external relations (mainly trade and cultural but also political) with Eastern Europe and Asia countries.

This potential horizontal dimension which is based mainly on history and geography will be better served by the integration process along the corridor which currently is rather weak. The majority of the participating countries are new EU member states and in

the case of certain countries they have very low performance in economic, environmental and accessibility terms. Although there are convergence trends, the differences in terms of GDP per capita are in certain cases in the order of 1:4. Greece and Finland are the leading countries, while Romania and Bulgaria are at the lower end. If the current trends persist, the time needed for the new member states for "catching-up" the two older (i.e. Finland and Greece) in economic terms, may be longer than two decades.

The population of the total area of the corridor (Serbia excluded) is over 100 million people. The area comprises several small countries (like Estonia which has only 1,3 million inhabitants) two big countries (Poland and Romania, 38 million and 30 million inhabitants respectively) and several other countries in the middle. Big differences are also present in the population trends, where only Greece and Finland have positive population change, while all the other countries are exhibiting strong negative changes.

As far as unemployment is concerned, there seems to be a convergence trend towards lower rates, Hungary being the only exception.

This is clearly a positive sign even though the unemployment rates are still high.

The comparative analysis of the current situation at the country level shows that big differences between them remain although there are signs of convergence in certain indices. It is evident that the time scale for real convergence to happen is on the order of decades. This does not imply that at the city-region level the trends are the same with the ones at the country level.

4.2 Aspects of fragmentation and cohesion trends

The main subject matter of analysis and policy proposal in the PolyMETREX project is the city region (or the metropolitan area). Although cities (and particularly city regions) are considered as the "the engines of growth" (OECD 2004: 211), the fact is that they are embedded in their respective national economic and institutional framework. That means that the broader national socioeconomic environment should always be taken in account in order to better understand the current situation and prospective trends of the individual cities of the NS RINA corridor.

Budapest	-13,26
Riga	-11,99
Bucharest (Bucuresti)	-6,96
Tallinn (Pıhja-Eesti)	-5,76
Vilniaus (Apskritis)	-4,19
Sofia (Stolitsa)	2,11
Attica-Athens	5,90
Thessaloniki	8,16
Helsinki (Uusimaa)	11,09

Figure 6
Population change of NS RINA city regions 1995–2004
Source: EUROSTAT 2007 (data elaboration)

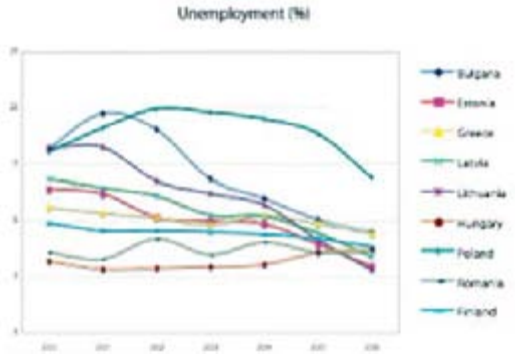


Figure 8
Unemployment rate of NS RINA countries 2000–2006

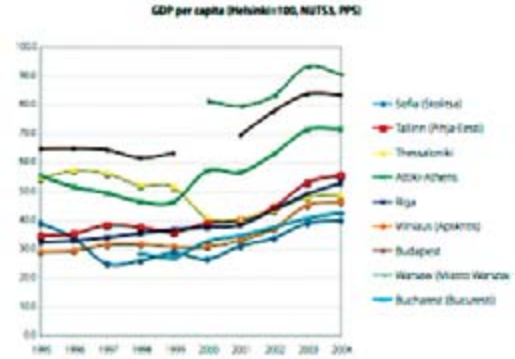


Figure 9
GDP per inhabitant of NS RINA countries 1995–2004

The NS RINA corridor comprises eleven city regions (Belgrade included). The total urban (city region) population of the corridor is over 15 million people (excluding Belgrade) which is highly dispersed across the corridor. The population per city region (NUTS 3 level) range from half million (Tallinn) to almost four million residents (Athens). All participating cities are the capitals of their respective countries, the only exception being Thessaloniki.

The population trends are also highly differentiated. It is notable that the majority of the city regions (almost all cities of the new EU member states) have negative population trends (Sofia being an exception) and that Helsinki has the highest positive rate (Fig. 6).

The economic performance of the city regions of the corridor is also highly differentiated. Helsinki is by far the most developed city region (as measured by GDP per capita) while Sofia has the lowest performance. It must be noted that in the case of GDP per capita there are differences on the order of 1:2. Four out of eleven city regions of the corridor (Belgrade excluded)

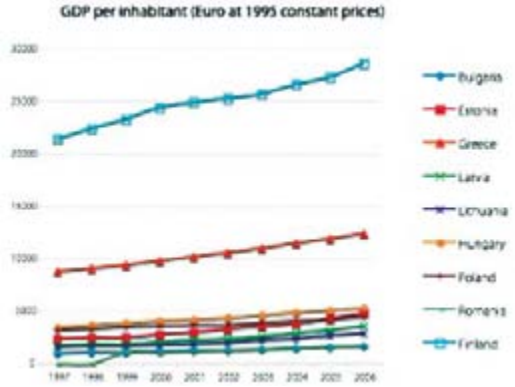


Figure 9
GDP per inhabitant of NS RINA countries 1997–2006

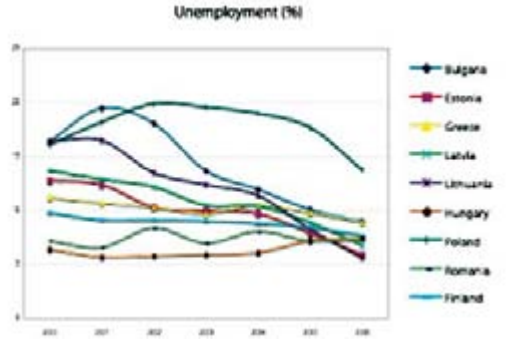


Figure 8
Unemployment of NS RINA city regions 2000–2006

Figure 10
Unemployment of NS RINA city regions 1995–2004

have less that 50% of the GPD per capita of Helsinki (Fig. 9). Despite these notable differences there is a tendency towards convergence. According to relevant data all city regions of the corridor do improve their relative position, Warsaw, Budapest and Athens being the most successful.

The labour market exhibits also strong convergence towards relatively low unemployment rates (Fig. 10).

Map 1
The North South RINA.

The lowest unemployment rate is recorded in Budapest and Helsinki.

The wider picture of the NS RINA corridor is that of a fragmented area. At the same time convergence process is in progress. Helsinki in the North and Athens in the South stand out as dominant development poles in the whole area (Map 1).

Helsinki has by far the most advanced and knowledge-intensive economy. Athens has the magnitude of an international city region and in the last decade is characterized by a remarkable economic growth. In the center of the corridor Budapest and Warsaw have similar economic performance and population trends, thus constituting together a third pole in the center of the corridor.

In this way three overlapping sub-areas of the NS RINA corridor could be identified: (a) a northern area comprised of Helsinki, Tallinn, Riga and Villnius, (b) a central area comprised of Warsaw and Budapest and (c) a southern area comprised of Bucharest, Sofia, Belgrade, Thessaloniki and Athens. These sub-areas (Map 1) could be perceived primary as cooperation areas that could develop common actions and strategies in various fields or thematic areas.

4.3 Accessibility: a key indicator of Athens potential along NS RINA

A more focused analysis of the Athens region accessibility level was performed in order to identify the geographical area, along the North South RINA territory, with high potential for Athens in Interfaces development. This approach is based on the assumption that any possible interfaces that could be developed and flourish among the NS RINA corridor cities is not self-sustained in case the accessibility ratio of the involved regions remain lower than the European average. The additional parameters that are crucial for interfaces development are not neglected but are revisited in the last section of this report when specifying the possible interfaces development between Athens and the other cities of the NS RINA corridor.

4.3.1 Existing Accessibility level of the Athens Region

Many studies have been conducted for the estimation of the accessibility index and yet, this is defined differently according to the model used. The ESPON studies provided the most reliable source for the identification of the accessibility indices of the region of Athens which has been also reproduced by subsequent analyses. After all in the context of spatial development, the quality of transport infrastructure in terms of capacity, connectivity, travel speeds etc. determines the quality of locations in relation to other locations, i.e. the competitive advantage of locations which is usually measured as accessibility. Investment in transport infrastructure leads to changing location qualities and may induce changes in spatial development patterns.

The following table illustrates the current accessibility of the main Greek Gateways (including Athens), which is rather low compared to the EU average.

As depicted from these figures, the accessibility index of Athens is higher than the average European index for air transport and multimodality, due to the coexistence of the International Airport of Athens, the port of Piraeus and the rail connections. Moreover, multimodality is highly rated due to the dense flows of containers in the port of Piraeus in a maritime-railways combination.

Thus before examining the development of the interfaces along the NS RINA the scenarios for the improvement of the accessibility indices as these were set from previous studies is required.

4.3.2 The scenarios for the future accessibility of Athens (2031)

The future accessibility level of Athens and the specific calculations of its accessibility from the North South RINA regions was based on information provided by the "Strategic Evaluation Study on Transport Investment Priorities under Structural and Cohesion funds for the Programming Period 2007–2013". The study estimates the impact of the transport infrastructure development in Greece and other countries and follows a compatible to the ESPON approach methodology using SASI model.

For the year 2031 the accessibility indicators may be calculated for three Scenarios, the Reference Scenario, the Maximum Scenario and the Balanced Scenario:

- The Reference Scenario assumes further development of the European integration with the accession of Bulgaria and Romania to the European Union in 2007. Further European integration results in reductions in waiting times and lower barriers between countries.
- The Maximum Scenario, which comprises a listing of possible projects which have been identified in the respective countries;
- The Balanced Scenario, which applies a budget restriction (in parallel with an assessment of additional financing opportunities). Projects are prioritized on the basis of their benefit-cost ratio and their contribution to specific objectives and needs (sustainability, regional disparities, and contribution to accessibility).

The accessibility indices for the Reference Scenario and the regions of Greece are provided in Figure 12.

As depicted in the figures, despite the transport projects that are under way the accessibility index would be lower or in the best case around the European average. The road accessibility, however, would be improved for Southern Greece, compared to the rail accessibility.

On the basis of the Maximum Scenario, two subsets are determined: the Maximum Road Scenario and the Maximum Rail Scenario which illustrates the differential impact of rail versus road projects.

Figure 13
Athens accessibility according to the three Scenarios 2031.

	Alexandroupoli gateway	Attiki gateway	Igoumenitsa gateway	Patra gateway	Thessaloniki gateway
	Accessibility index class (average = 100)				
PA by road	20 - 40	20 - 40	20 - 40	0 - 20	20 - 40
PA by rail	20 - 40	20 - 40	0 - 20	0 - 20	20 - 40
PA by air	60 - 80	100 - 120	60 - 80	40 - 60	100 - 120
PA multimodal	60 - 80	100 - 120	60 - 80	40 - 60	80 - 100

Figure 11
Accessibility index of main gateways of Greece.

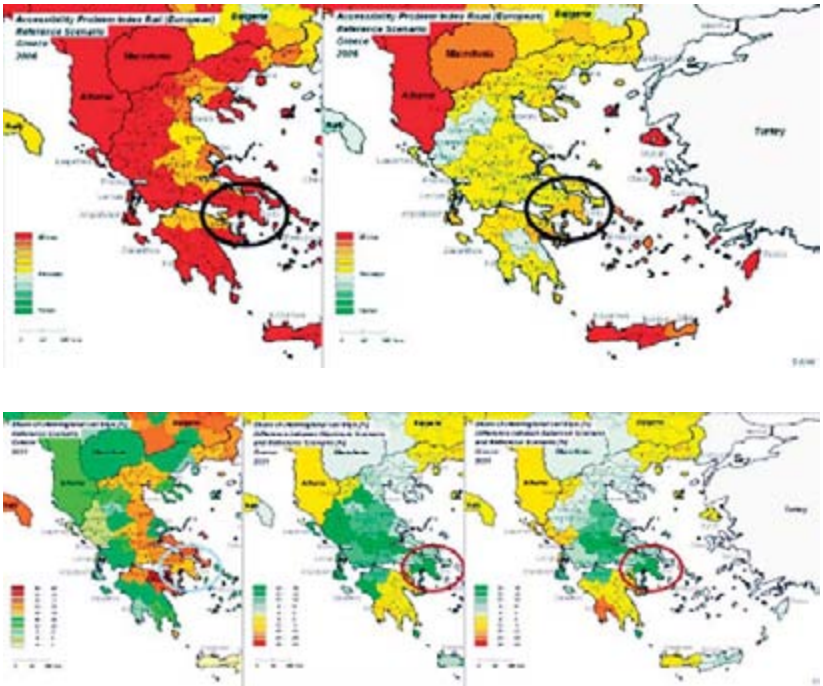
The basic result from the simulation of the accessibility of the Greek regions and the Attica region for the three different scenarios is depicted in the following maps (Figure 13).

For the Reference Scenario, the completion of the TEN-T have significant impact on the environmental sustainability of the entire country, expressed in rail trip share. For the area of Athens the share of rail trips is expected to be increased by 24%–28% and is among the higher of the country. This share is expected to change significantly (green color) when examining the more optimistic scenarios, since the proposed measures include the modernization of the line between city and Patras.

4.3.3 Definition of geographical area for Athens interfaces development along NS RINA

The three maps that follow show the impact on the accessibility of the Greek regions emerging from the realization of the envisaged transport infrastructure and transport investment in Greece. The most notable effects are the combined impacts of the road and rail projects in Greece on the share of rail trips. The improvements on sections of the Athens-Thessaloniki rail line result in higher shares of rail use in Greece's northern neighbors: FYROM, Kosovo, Bulgaria and parts of Romania. However, the effects of the road improvements in Greece are observed in an even wider

Figure 12
Accessibility index of Greece: Rail and Road. Reference Scenario 2006.



area, resulting in lower shares of rail use in large parts of south-eastern Europe.

The share of the region of Athens in terms of railway trips is estimated to be affected by 25%–30% due to the improvement of the North-South railway network.

The approach and the result of the previous analysis may justify the definition of three geographical areas within the North–South RINA influence area, with different levels of Interfaces development possibilities and different priority in action taking for integration achievement:

Figure 14
Impact of Transport infrastructure development of Greece on European accessibility, 2031.

Zone 1: High possibility for Interface development with Athens: Interfaces are already been developed using the existing transport infrastructure and the capacities of the regions. High potential for common strategies and policies implementation for regional economic development and territorial cohesion. The achievement of the Intermodal Gateway profile by Athens is crucial for facilitating the cities possible interfaces development within this zone.

Zone 2: Medium possibility for Interface development. The development of interfaces and cooperation with valuable impact to balanced economic development of the regions along the Corridor is feasible until the year 2030 if the current EU program for infrastructure development and cohesion support will be implemented. Achievement of networks connectivity and reliable border crossing is the areas of priority intervention.

Zone 3: Long term possibility for interface development. The possibility for achieving interfacing between Athens and the city-regions of this zone is low and can only be substantially implemented at a long term horizon (2050) and if important transport infrastructure will be realized that may create a major impact to the accessibility level of the Athens region with the relevant region.

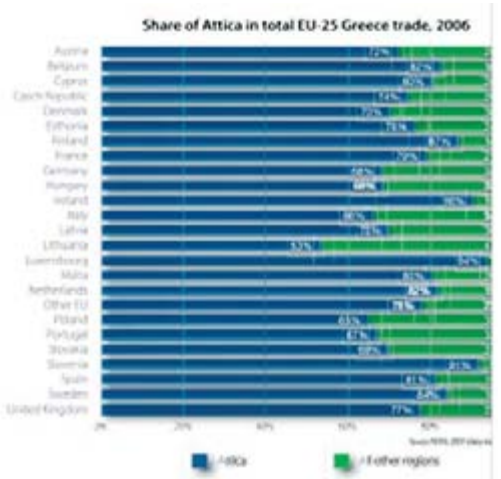


Figure 15
Share of Attica in EU-25 Greece trade, 2006
Source: Eurostat 2007. (data elaboration)

4.4 Athens and the NS RINA: networks of flows

The positioning of the Athens Metropolitan Area (AMA) in the corridor under question is better illustrated through the study of material flows. These flows are either trading products or people (traveling for business or tourism) and could be considered as the base for any kind of network either physical or institutional. It is a good indicator (or proxy) for the current state of affairs between the AMA and the NS RINA corridor as well as for the future potential developments. Two kind of flows are examined: (a) flows of trade, and (b) air and maritime flows of passengers and goods.

4.4.1 Trade flows

The external trade of Greece is predominantly oriented to the rest of the EU countries. Almost 60% of its total external trade (in value terms) is between Greece and the rest of the EU member states (first half-year 2007).

The dominant position of the AMA in the production system of Greece is also reflected in the regional structure of external trade. The share of Attica is almost 3/4 (74%) of the total EU and Greece trade, ranking first among the Greek regions.

It must be noted that the majority of trade between Greece and EU-27 is actually the trade between Greece and its five "traditional" trade partners, namely Germany, Italy, France Netherlands and the United Kingdom, which totally account for over 70% of the total trade. The eight RINA countries account for a small fraction of the total EU-Greece trade. After the last accession of Bulgaria and Romania to the EU in 2007, the total trade of the eight NS RINA countries with Greece account for just over 10% of the total EU-Greece trade (first half-year 2007, in value terms). Although this share is rather small considering other "old" EU countries (e.g. Germany of Italy) it constitutes a solid and promising base for further developments.

The Athens Metropolitan Area is very well positioned in the Greece-NS RINA countries' trade taking into account that its share ranges between 53% to 87% (Lithuania and Finland respectively) of the total trade. It seems that although Athens is not in a favorable geographical position in relation to other Greek regions, it

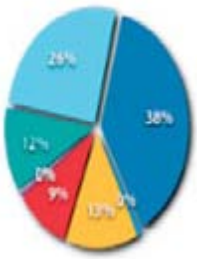


Figure 16
Breakdown of Greece-NS RINA countries trade, January–June 2007.

has a leading role in trade relations at the country level. This can easily be explained if are taken in mind its dominant role in production and its population magnitude. Another contributing factor is the presence of two main international gateways: Athens International Airport and Piraeus international port.

4.4.2 Air and maritime transport flows

The high performance of the AMA in international trade can be attributed, up to a point, to its transportation infrastructure which are also in fact its gateways to abroad. The International Airport of Athens "Eleftherios Venizelos" (operating since April 2001) has managed to develop to a major air-hub in the South Eastern Europe and the Mediterranean region. Its role for the connectivity of Athens to the rest of the world and to the NS RINA countries particularly, is of great value.

Although the total number of passengers movement to and from NS RINA countries is not very high (4,5% of the total passengers movement), what is very interesting and highly indicative of the rapidly developing relations between Athens (and Greece) and the rest of the NS RINA countries is the rate of the increase of the above indicator during the last five years. The increase of passengers traffic between 2003 and 2006 is over 60%, which outperforms the overall average increase of traffic for the airport as a whole (22,6%) and the increase of other major world geographical zones (Fig. 17).

The distribution of the traffic by country (2006) in the corridor reveals an interesting, almost geographical, pattern. It seems that proximity matters, considering that actually the vast majority of the traffic is between SE Europe countries and Athens (Romania 31%, Bulgaria 23%), followed by Hungary (23%) and Poland (16%). Finland (6%) and the rest three Baltic countries of the corridor have very low traffic (Estonia, Latvia, Lithuania cumulatively less than 1%). Besides, it seems that the situation is changing rapidly in favor of the northern countries of the corridor, if the rate of change during 2003-06 is taken into account (Fig. 18). The less favored routes have almost double growth rates than the other. That means that in the years ahead the current situation may change significantly.

The other gateway of the AMA, that is the international port of Piraeus, serves the maritime connectivity of the city region. Although the pattern of maritime transport in Greece is distributed enough, almost 1/5 of the goods (in weight terms) were transported through the Piraeus port during 2000-06 (Fig. 19). As far as the NS RINA is concerned, the share of Piraeus port to the the total maritime transport to and from the other NS RINA countries during the same period (2000-2006) is well above (average share 26%). Despite that the overall maritime transport with the NS RINA countries accounts for a small fraction of the total maritime trade of Greece (ranging between 1.5% to 3% during 2000-06), it seems that the port has a very positive contribution to a favorable positioning of the AMA in the NS RINA corridor.

Overall the existing air and maritime transportation infrastructure of Athens (along with the road and railroad connections) have a positive impact upon the connectivity of the Athens Metropolitan Area with the other city regions of the corridor and constitutes a solid base for further integration of the NS RINA corridor.

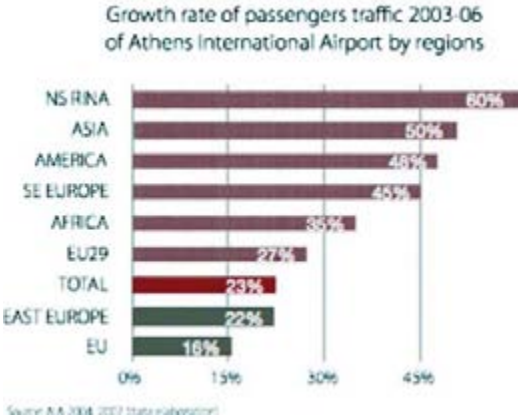


Figure 17
Growth rate of AIA passengers traffic by world region 2003–2006.

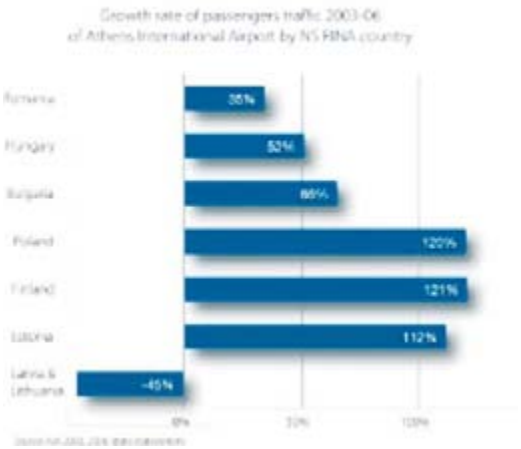


Figure 18
Growth rate of AIA passengers traffic by NS RINA country 2003–06.
Source: Eurostat 2007 (data elaboration)

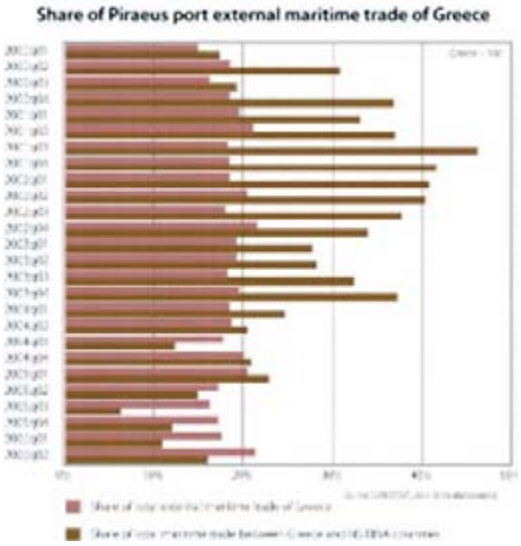


Figure 19
Share of Piraeus port external maritime trade of Greece, 2000–06.

4.4.3 Networks of flows and integration processes: Athens and the NS RINA corridor

The preceded analysis highlighted two main points about the positioning of Athens in the NS RINA corridor:

- The Athens city region has a leading position in the trade between Greece and the other NS RINA countries. Albeit its unfavorable geographical position in the corridor, its high performance should be attributed to its population magnitude, its production structure and performance and the primacy of Athens Metropolitan Area in the Greek network of settlements. As long as the magnitude of trade is considered to be a main indicator of integration, Athens has a leading role in these developments.
- The growth trends of air passengers traffic between Athens and the other city regions of the corridor highlight the possibility that in the next few years the predominately geographical pattern (i.e. based on proximity) of relations could be altered. This could be interpreted as a clear sign that networking and integration processes are under way during the last years, opening many different options for cooperation through out the corridor.

Although the magnitude of flows is currently rather small it seems that certain dynamics are under way and that in the emerging integration process along the corridor, the Athens Metropolitan Area is in a favorable position.

5 The North-South RINA and the Athens Metropolitan Area: possible actions and priorities

5.2 Framework for actions and priorities

The North-South Representative Interregional Networking Activity (NS RINA) is a thematic one about polycentricity (METREX 2005:28). But at the same time it can be perceived as a potential development corridor at the eastern part of European Union seeking for alternatives to the "Pentagon" Global Integration Zone and possible future interfaces to its neighbouring eastern countries of East Europe and Asia.

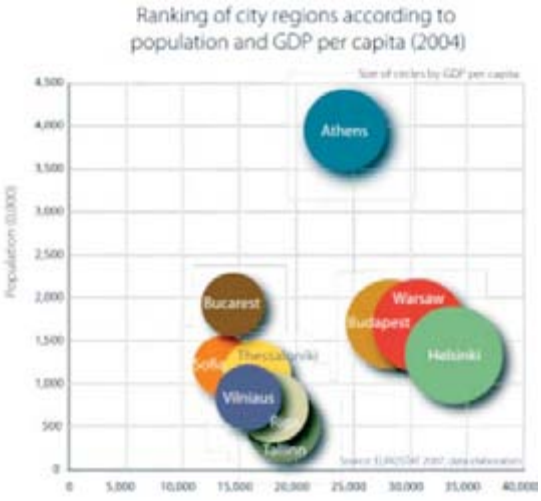


Figure 20
Ranking of city regions of NS RINA according to population and GDP per capita (2004).

The Athens Metropolitan Area is one of the 76 Metropolitan European Growth Areas (MEGAs) identified by the ESPON (ESPON 2005) or in other words, a Functional Urban Area (FUA) of excellence. As it has been identified in the last section of the report, Athens has well established relations with the rest of the city regions of the NS RINA which are primarily based on trade relations in conjunction with evolving physical human interactions.

As it is evident from the preceding examination of the current status of the NS RINA, Athens is in a favourable position either in the national or in the NS RINA context (Fig. 20). This is due to its performance in two significant indicators, namely GDP per capita and population. This is why despite its peripheral geographical position it has managed to develop relatively dense relations with the other city regions of the corridor.

The same is true for Helsinki that is situated in the northern edge of the corridor, mainly due to its high economic performance especially in the knowledge economy. In the central part of the corridor two other MEGAs, namely Warsaw and Budapest stand out due to their high economic development rates.

Three partially overlapping sub-areas of the corridor can be identified: (a) a northern area comprised of Helsinki, Tallinn, Riga and Villnius, (b) a central area comprised of Warsaw and Budapest and (c) a southern area comprised of Athens, Bucharest, Sofia, Belgrade and Thessaloniki.

This structure of the corridor does not imply that interactions or common actions between city regions belonging to different sub-areas can not be in place. In the contrary, it can help to identify the steps ahead in order to achieve sustainable spatial development for the whole corridor. These sub-areas should be perceived primary as cooperation and integration areas that could develop common actions and strategies in various fields or themes in order to achieve better balance with the GIZ in the one hand and to exploit the potential of the multifaceted East-West relations which are also of strategic importance for the EU, particularly in certain domains (e.g. energy), in the other.

Three broad policy options originating from the ESDP can help organize possible fields of action:

A Polycentric spatial development: Polycentricity is a key concept which tries to bridge cohesion (socioeconomic or territorial) to the competitiveness objective.

B Parity of access to infrastructure and knowledge: This refers to the key concept of accessibility which has been identified in many cases as the main obstacle towards integration.

C Wise management of the natural and cultural heritage: Environmental protection (sustainability) is an indispensable component of sustainable development which is key objective of the all the European policies.

Under these broad themes (polycentricity, accessibility, sustainability) several kind of actions could be envisaged according to the achieved level of cooperation

between the city regions of the RINA and the available financial means. Four broad types of action can be identified:

i. Networking and exchange of experience. In most cases this is the first step towards cooperation and a prerequisite for involvement in more demanding tasks. The financial demands are generally low. It can result to institutional networks of the city regions authorities but it can also be networking between NGOs.
ii. Planning/programming. This kind of actions is a stage before the implementation of common projects and involves the planning of programs of mutual interest and the effort to adapt structural policies to the needs of the city regions of the EU periphery.
iii. Implementation of common actions. This is the next step and involves the implementation of common projects or actions.
iv. Management/governance. This can be seen as the final step towards integration and it could be achieved on certain themes or projects.

From another point of view these types of action could be seen as stages towards tighter cooperation and integration between the city regions of the RINA.

5.2 Possible actions relevant to Athens in the context of the NS RINA

All three major fields of action are relevant in the case of the Athens Metropolitan Area. Polycenticity, accessibility and sustainable urban development are in the core of all recent strategic planning studies and constitute the pillars of any future development of Athens. Possible actions by action field and type of action include:

A. Polycentricity:

1. Experience gained by city authorities on success stories of polycentric spatial development either at the city or at the city region level.
2. Exchange of experience on metropolitan governance and polycentricity.
3. Exchange of experience and planning of new ways of preventing urban sprawl and achieving a better urban-rural relationship
4. Planning future polycentricity visions at the inter-regional level (country level, RINA level or major parts of it).
5. Planning new ways for achieving better coordination and promoting the spatial orientation of EU structural policies.

B. Accessibillity:

1. Exchange of experience on intermodality at the city region level
2. Exchange of experience and planning on sustainable mobility at the city and city region level
3. Prioritization of TEN-T projects of the NS-RINA and the low carbon oxide mobility issue
4. Promoting the financing and implementation of TEN-T projects of the NS-RINA
5. Planning and promoting and implementing of new or upgrading old transport networks
6. Planning, promoting and implementing a High Speed Train along the NS RINA
7. Planning, promoting and implementing a high speed backbone fiber optic data network along the NS RINA

C. Sustainability:

1. Exchange of experience on urban air pollution and urban traffic management
2. Exchange of experience and planning on major physical or technological hazards
3. Planning and promoting programs for the renewal urban centers and the conservation of cultural heritage
4. Exchange of experience and planning on urban sustainability and energy consumption

These actions are summarized in the following table (Fig. 22) by theme and type of action.

Figure 21
Integration and polycentricity along NS RINA.
Size by GDP per capita 2004

5.4 Priorities by theme

The next step is to set indicative priorities by theme and sub-areas of the NS RINA. In the following table (Fig. 23) three classes of priorities are set (1=high priority, 2=moderate priority, 3=low priority). It must be noted that this prioritization is very rough and is done taking into account mainly the financial resources needed for the implementation of the action and the expected benefits from it for Athens. In a next stage a comprehensive study must follow in order to set priorities by action and geographical area and construct a relevant timetable. In that more detailed study many actions may change priorities.

Theme	Type of action			
	networking	planning	implementation	management
Polycentricity	A1, A2, A3	A3, A4, A5		
Accessibility	B1, B2	B2, B3, B4, B5, B6, B7	B4, B5, B6, B7	B6, B7
Sustainability	C1, C2	C3, C4	C3	

The alphanumeric figures correspond to the actions by theme as presented in the preceding paragraphs.

Figure 22
Actions along the NS RINA relevant to Athens by theme and type of action.

This prioritization by theme (and at a later stage by action and type of action) and geographical area can help for complex projects and actions to be planned and implemented in a "modular" (or gradual) way. A relevant example is the High Speed Train which is a relatively environmental friendly and efficient solution (for distances up to 800 km) that could contribute to the physical fragmentation problem. The main issue here is the high cost of the investments and the threat of being a 'mega-project' financial failure (e.g. the 'Chunnel'), taking into account the very long length of the whole corridor (over 3,000 km). A possible solution could be to plan the whole project in a modular way. This means that it could be planned and built in the context of the three sub-areas of of the corridor

Theme	NS RINA sub-areas		
	southern	central	northern
Polycentricity	1	1	1
Accessibility	1	2	3
Sustainability	1	1	2

Figure 23
Priorities for Athens by themes of action and NS RINA sub-areas.

in differentiated, but consistent time schedules according to the available financial resources. This is a crucial parameter taking into account the different financial abilities of the partners involved.

One of the main issues for the NS RINA is convergence and integration along it and with the European Union as a whole. This could be achieved on the one hand by strengthening and upgrading the knowledge economy of the whole area and by enhancing physical interconnections, sustainable mobility and polycentricity. This is a spatial vision which promotes cohesion, sustainability and competitiveness. The actions presented here can contribute to this direction.

References

Athens International Airport - AIA (2004) AEROSTAT 2003, Athens International Airport "Eleftherios Venizelos", Athens, http://www.aia.gr

Athens International Airport - AIA (2007) AEROSTAT 2006, Athens International Airport "Eleftherios Venizelos", Athens, http://www.aia.gr

Economou D., Getimis P., Demathas Z., Petrakos G., and Pyrgiotis J. (2001) The International Role of Athens, Athens Organisation - University Editions of Thessaly, Volos. [in Greek]

European Commission (EC) (1994) Europe 2000+, Cooperation for European Territorial Development Luxembourg: Office for Official Publications of the European Communities.

European Commission (EC) (1998) Sustainable Urban Development in the European Union: A Framework for Action. Communication from the Commission http://europa.eu.int/comm/regional_policy/sources /docoffic/official/communic/pdf/caud/caud_en.pdf

European Commission (EC) (1999) ESDP - European Spatial Development Perspective Towards Balanced and Sustainable Development of the Territory of the European Union, Luxembourg: Office for Official Publications of the European Communities.

European Spatial Planning Observation Network - ESPON (2005) Potentials for polycentric development in Europe, ESPON project 1.1.1 Final Report, (revised version March 2005), http://www.espon.eu.

European Spatial Planning Observation Network - ESPON (2007) Scenarios on the territorial future of Europe, ESPON project 3.2, (May 2007), http://www.espon.eu.

EUROSTAT (2007) EUROPA-Eurostat home page (several themes), http://epp.eurostat.ec.europa.eu/.

General Secretariat of the Region of Attica (2006) Regional Development Program for Attica – ROP Attica 2000-2006, revised, http://www.pepatt.gr/pep.htm [in Greek]. Organization for Economic Co-operataion and Development – OECD (2004) OECD Territorial Reviews, Athens, Greece, http://www.oecdbookshop.org/ oecd/display.asp?sf1=identifiers&lang=EN&st1=04200404 1e1.

Krugman, P (1995) Development, geography and economic theory, the MIT Press, Cambridge MA.

METREX (2005a) Towards a Polycentric Metropolitan Europe, Interim Report on the PolyMETREXplus project (First phase 2004–2005).

METREX (2005b) PolyMETREXplus: Framework/Action Plan/RINA position summary, Discussion Note 11, http://www.eurometrex.org.

METREX (2007), Genarlitat de Catalunya, Departament de Politica Territorial I Obres Publiques, and Institute de Studis Territorialis Genarlitat de Catalunya (2007) PolyMETREXplus Framework: Polycentricity and better European territorial balance. Ministry for the Environment Physical Planning and Public Works.

Ministry for the Environment Physical Planning and Public Works, and Group of Experts – MIN. ENV. (2002) Study for the General Framework for Spatial Planning and Sustainable Development at the national level. http://www.minenv.gr/ [in Greek].

Ministry for the Environment Physical Planning and Public Works - MIN. ENV. (2007) National General Framework for Spatial Planning and Sustainable Development, official draft proposal, http://www.minenv.gr/[in Greek].

Ministry of Economy and Finance, and General Secretariat of the Region of Attica – Ministry of Economy and Region of Attica (2007) Regional Development Program for Attica – ROP Attica 2007–2013, [in Greek]. http://www.hellaskps.gr/programper4/files/YP_SXEDIA_EP/OP13.pdf

Ministry of Economy and Finance (2007) National Strategic Framework of Reference 2007–2013 for Greece, http://www.hellaskps.gr/programper4/files/NSRF_VERSION_GR_SFC_120307.pdf [in Greek].

National Statistical Service of Greece (2007) Statistical on-line data, http://www.statistics.gr/Main_eng.asp

Organization for Economic Co-operation and Development - OECD (2004) Athens, Greece, OECD Territorial Reviews, OECD Publications Service, Paris.

Porter, M. (1990) The competitive advantage of nations, McMillan, London.

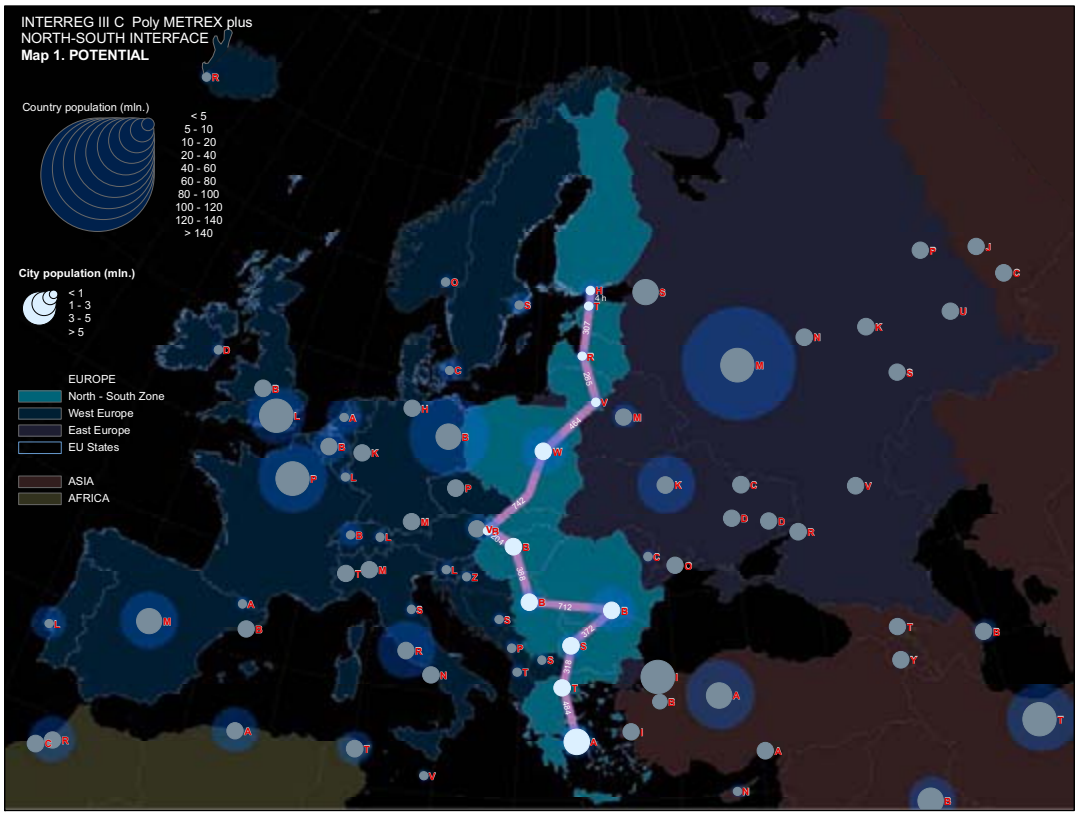
Conclusions

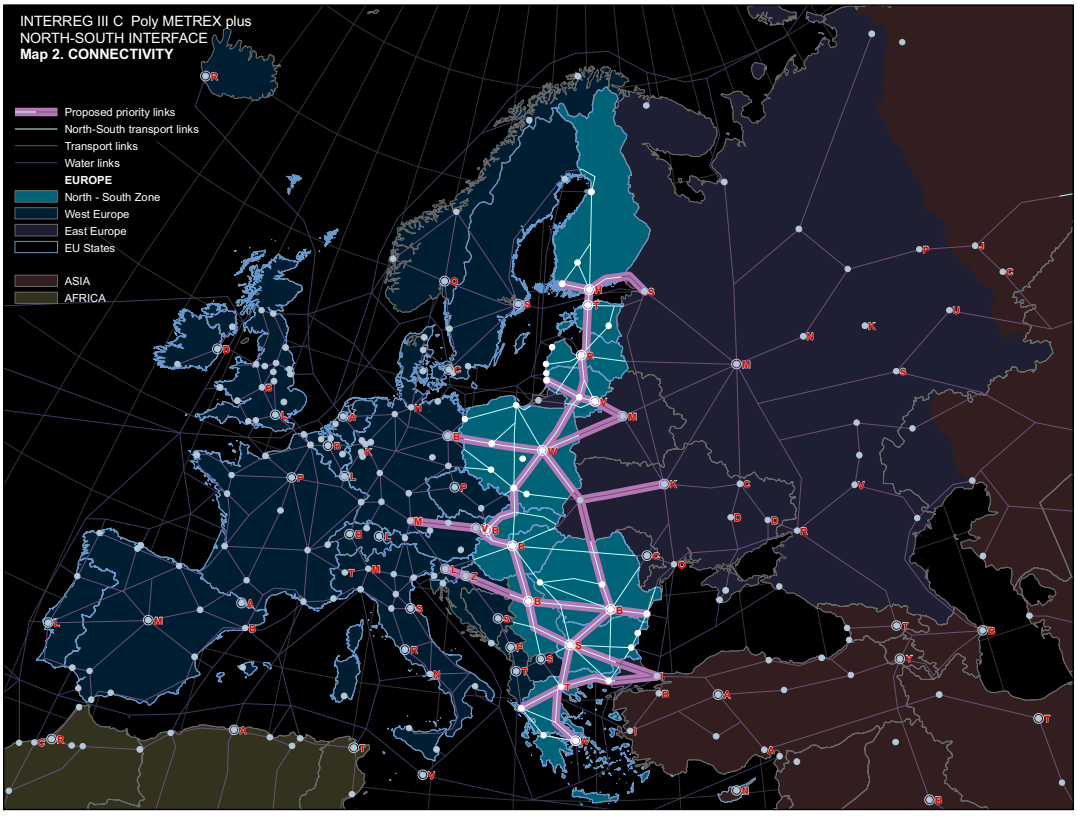
The North-South interface RINA RESULTS

- COOPERATION: PolyMETREX seeks to enable metropolitan areas to become as collectively strong as possible through the development of effective polycentric relationships between city-regions. This can only be done through long-term cooperation between the city-regions.
- KNOWLEDGE & EXPERIENCE: The North-South RINA has exchanged spatial planning knowledge and experience between 7 Capital city-regions as a means to contribute to the metropolitan dimension of European affairs.
- POLICIES & INSTRUMENTS: The North-South agenda has realized the objective of Interreg IIIC, which is to improve the effectiveness of policies and instruments for regional development and cohesion. This has been achieved in this RINA by the creation of policy options at a spatial planning level as to how the North-South city-regions should develop in the future in order to form polycentric regions.
- BALANCED EUROPE: These key policy options will be directly linked to the relationship with the Pentagon (Global Integration Zone) in the long term through creating polycentric city-regions, which in turn, will support the Territorial Agenda goal of creating a balanced sustainable Europe.
- TRANSNATIONAL CONNECTIVITY: The North-South recognizes the importance of transnational connectivity in achieving better economic balance with the Pentagon, and in particular, to evaluate the possibility for High-Speed Train Network North-South. In doing so, this may kick-start transnational economic and cultural development as well as lowering carbon emissions for travel.
- FRAMEWORK for a POLYCENTRIC North-South interface: forming *polycentric relationships* will help foster their collective economic and social strengths and address common environmental issues. An Action Plan, entitled *'Joint Statement of Intent'* delivers the necessary Policy Options to implement collectively. In doing so, all new development will be managed and controlled in line with the agreed set of policies. This in turn promotes a *Polycentric Benchmark* that can be drawn together as a direct input from the collective views of 7 city-regions, North to South, for the future well-being of the EU spatially.

A SPATIAL VISION: Setting the context

The PolyMETREX project envisaged that all the RINAS would be represented through 'themes', spatial visions, or corridors and clusters. In this respect, the North-South project places its prospectus in relation to an overall VISION based around a linked-corridor of high-speed rail connectivity. In effect, polycentralism would be achieved through a series of 'territorial tiles' comprising inter-connected city-regions





operating through their complementarity of functions and critical mass.

The North-South interface has recognised that there are four KEY Challenges for its city-regions. These challenges are taken from ESDP and Territorial Agenda. These challenges are the drivers of change. **Balanced competitiveness** sets out the economic development strategy for sustained, balanced growth and competitiveness, including improved access to employment and clear goals to reduce energy dependence within a climatic change scenario. **Social equity** concentrates on creating better urban living to prevent acute housing shortages, maintain reasonable equilibrium in house price rises, whilst upgrading the older suburban areas to enjoy tomorrow's standards today. A high emphasis is on maintaining a unique quality and attractive city environ. A **connected** North-South provides the issues surrounding the need for compact city-regions as an essential element of spatial strategy, none more so than issues affecting energy, transport infrastructure, brownfield development and open spaces. A spatially **cohesive** strategy pulls together the physical demands of integrating significant growth within the existing city-regional structure to achieve a sustainable metropole in order to make North-South into a high-quality area of the EU based upon a strong economy, a stable society, and an accessible city structured around a spatially cohesive polycentric framework.

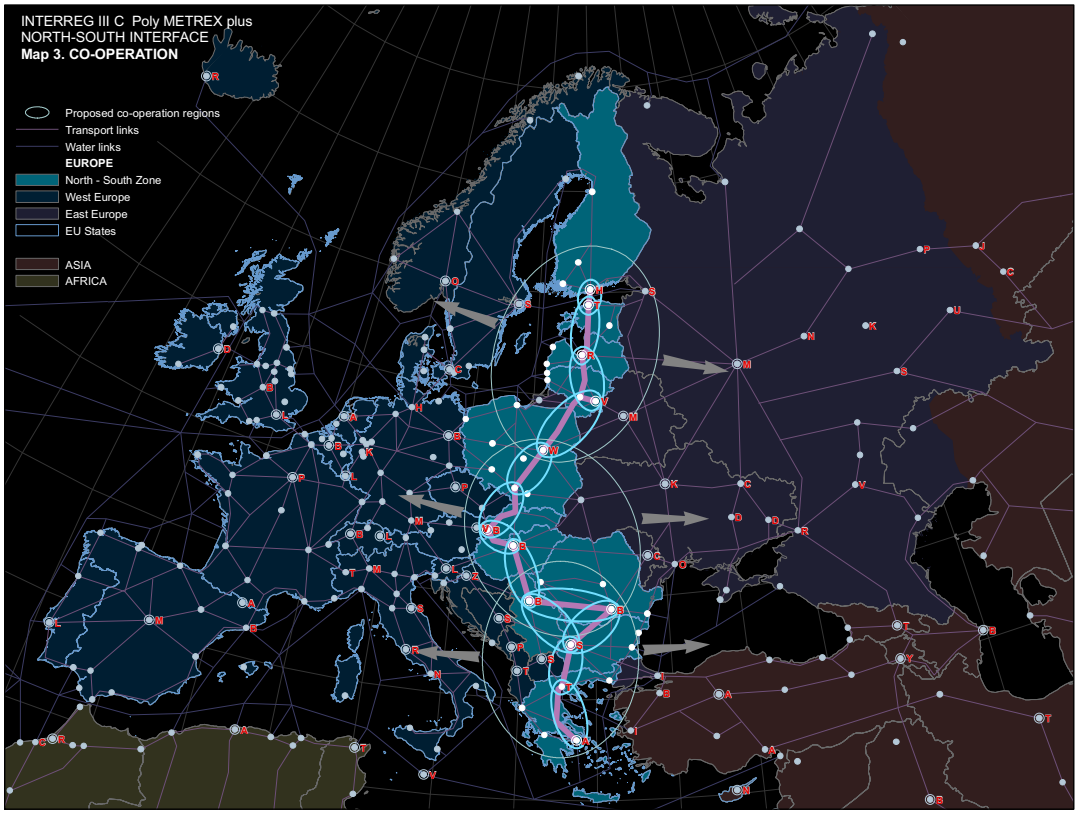
Vision to Strategy (Implementation)

In recognising these key challenges as being central to achieving a better quality of life in the North-South interface, it is essential to create a vision. The North-South **Vision** of balanced competitiveness, social equity, a connected city-region, and spatially cohesive polycentric frameworks, are the four key challenges that dominate the North-South vision. By bringing these approaches together, the North-South vision can create a series of spatial strategies that seek to achieve a co-ordinated approach in realising the future Vision. The four key challenges are developed into a series of *policies*. The integrated nature of the vision means that elements are no longer compartmentalised by functions, but are brought together into a cohesive whole, as in real life. So, the issue of the environment therefore runs through each of the key themes as an integral part of the economy, of societal issues, of accessibility and of territorial cohesion, and not dealt with independently. In doing so, the vision can be implemented by making a set of objectives and policies into a collective vision for all of the North-South city-regions.

What is the Vision for North-South?

The four Key Challenges set out the understanding of what the North-South interface requires to do collectively over the next 50 years or so if it is to meet the challenge of competing with the Pentagon and offering a better balance within the EU overall. To do this, the North-South RINA has agreed and adopted a VISION for its future. This vision is:-

By 2050 the Vision for the NORTH-SOUTH interface will be to work towards creating compact



and dense city-regions polycentric in character at a transnational level of EUROPEAN importance, with greater equality of spatial and business cohesion, strong balanced economies, a unified and connected high-speed public transport and traffic network, safe and secure city-regions with social Equity, energy efficient and low carbon emissions, geared to clean and city-landscape environments.

How to achieve this Vision?

North-South interface strategic plan vision of cooperation

In order to achieve the North-South Vision, the territory is divided evenly into three inter-connected sub-territories. In this way three overlapping sub-areas of the North-South territory can be identified:

(a) A northern area comprised of Helsinki, Tallinn, Riga,Vilnius and Warsaw,
(b) A central area comprised of Warsaw and Budapest and Belgrade,
(c) A southern area comprised of Belgrade, Bucharest, Sofia, Thessaloniki and Athens.

These sub-areas could be perceived mainly as intermediate cooperation areas, where the proximity and traditional relations of their metropolitan regions might form the basis for the development of common strategies. This structure of the North-South interface can help to identify the steps ahead in order to achieve sustainable development for the whole interface.

The Conclusions now turn to setting out these policies within a Joint Statement of Intent.

JOINT STATEMENT of INTENT

Spatial Planning Policy Options for the forming of Polycentric city-regions in order to achieve cohesion in the North-South interface.

The North-South RINA, consisting of Athens, Thessaloniki, Sofia, Bucharest, Warsaw, Vilnius and Helsinki, has adopted the following policy-options as a means of achieving the Vision:

- the management of growth and regeneration of our city-regions through creating more **compact, high density (at appropriate levels)** city-regional structures;
- making city-regions more polycentric, with high-density development within the new hierarchical regional centres and recognising that in order to do so, there is a need to complement the polycentric balance by **strengthening of the city centres**;
- to place greater emphasis on making new development to be confined into specific **new corridors of development in order to prevent urban sprawl**;
- to prioritise EU spending on developing a high-speed (TGV-style) dedicated train network throughout the North-South interface;
- to prioritise government and city-region spending on creating **high-quality public transport** to encourage consumers to leave their cars at home,

thereby helping to mitigate CO_2 emissions;
- to concentrate clusters of development around **key interchanges** of public transport, particularly rail, metro and tram networks;
- to create **synergies of employment clusters** within the city centre and in appropriate key locations within city-regions around key interchanges in order to create better urban balance with the periphery;
- to support ICT innovatory cluster development through the **re-organisation of space** within city-regions, and in particular, locating near **new synergies** such as city Airports, connectivity rail-hubs, and port harbours;
- aim to create **high-speed train networks** connecting within Europe as an alternative to air travel, and highlight the opportunity to build new-towns alongside the new high-speed rail network
- by examining new forms of city-region governance applicable throughout the EU
- to activate the North-South RINA as the mediator of the EU to Eastern Europe and Asia countries with whom the participating countries have a long history of transnational relations

Instruments to be applied for follow-up actions to achieve a polycentric North-South interface and to equally achieve territorial cohesion:

- to use **spatial planning** as the main instrument in the future for city-regions to be developed in a *polycentric* form
- investigate fresh, **new, innovative** approaches in spatial planning for the future of city-regions
- to support a new **Interreg IVC project** for the North-South RINA interface
- for each North-South city-region to develop **long-term strategic plans** to take account of the overall objectives and policy options contained in the RINA conclusions
- to explore the possible **city-region Governance** options that best fit the means to achieve polycentric city-regions
- to develop **maps** for the whole of the North-South interface in more detail to provide better **conceptual** understanding of the strategies
- to produce a more detailed spatial **transnational profile** for each circle of cooperation within the Baltic, Central and Southern circles of cooperation as set out in the spatial planning vision of cooperation and then to develop an integrated, and more detailed vision for a more unified interface in the future

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Documentation Page

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Abstract
The PolyMETREXplus project aims to realise the objective of Interreg IIIC, to improve the effectiveness of policies and instruments for regional development and cohesion, by contributing to the Territorial Agenda sought by the European Convention and the balanced and sustainable development of Europe sought by the ESDP. In effect, the PolyMetrex project has contributed to the effective polycentric city-region relationships and a better understanding of European Territorial balance.

The outcomes and output of the PolyMETREXplus has been formalised into RINAS – Representative Interregional Networking Activities. The Core objective has been to support Interreg IIIC "to improve the effectiveness of policies and instruments for regional development and cohesion" by producing a Framework for a Polycentric Metropolitan Europe, a related Action Plan and a Polycentric Practice Benchmark derived from a programme of RINAS.

The North-South interface RINA focuses on creating key policy options and instruments to guide the participating city-regions of Helsinki, Vilnius, Warsaw, Bucharest, Sofia, Thessaloniki and Athens towards better cooperation and in doing so, develops a spatial vision for the North-South interface. The key policy options are directly linked to the relationship with the EU Pentagon Global Integration Zone. The main thrust of the RINA is to create a unified polycentric set of city-regions with high-speed train connectivity between Helsinki and Athens.

The setting out of a broad strategic Vision within which city-regions can consider the possibility of forming polycentric relationships will help foster their collective economic and social strengths and address common environmental issues. Additionally, agreement enabled an Action Plan, entitled 'Joint Statement of Intent' to deliver the necessary proposals to ensure the key policy options are implemented. In doing so, it is intended that these conclusions will highlight the effectiveness of having a Polycentric Benchmark of instruments that can be drawn together as a direct input from the collective views of 7 city-regions from the North in Finland to the South in Greece to the future well-being of Europe spatially.

Keywords
POLYCENTRICITY, SPATIAL VISION, TERRITORIAL AGENDA, NORTH-SOUTH interface,
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North-South Interface

North East SOUTH West
INTERREG IIIC

METREX
The network of
European Metropolitan Regions and Areas