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Metropolitan governance & competitiveness of European cities

"Governance in the Knowledge economy / creativity, research & Education at City-region Scale"

BRNO - Seminar Working Document

15, 16 & 17 June 2009

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"Governance in the Knowledge economy / creativity, research & Education at City-region Scale"

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PART 1

1. Introductory note to the theme: "Governance in the Knowledge economy / creativity, research & Education at City-region Scale"

The existence and success of the knowledge-based economy raise questions about the underlying territorial determinants of economic performance. The creation and spread of new knowledge lead to innovation in production and service activities, which enhances economic performance and growth. These processes are obviously strongly influenced by national institutions and global knowledge flows. However, there are big disparities between regions in the same country regarding the development of the knowledge economy, and urban regions are often more involved than others; innovation and creativity emphasize therefore the relevance of the territorial frameworks, especially urban regions. Many aspects of the contemporary economic changes make big cities more important as principal places for innovation, creativity and the production of knowledge-intensive goods and services.

The interactive and social aspects of innovation make city-regions the ideal space for social learning processes. Social dynamics of urban regions are significant in shaping economic outcomes. Knowledge transfers between highly educated and skilled people happen more easily in cities, because the density and concentration of economic players in these areas offer a lot of opportunities for contact, interaction, and direct exchanges of knowledge. From this point of view, the foundations of economic success in an increasingly competitive world are the social qualities and instruments of urban places. Decisions that shape the spatial and social character of city regions may also have a direct impact on the economic well-being; academic researches have stressed the importance of local human and cultural assets, especially the existence of a "creative milieu", as booster for innovation.

Some issues of knowledge economy at a city region scale

City region may be a component of maximizing profit in contemporary economy. Its competitive advantage is in advanced economies an ability to export technologically intensive as well as labour-intensive products. Recently, technological processes and innovation in production became enormously important for economic growth. There is a clear competitive advantage for firms in which distributed supply chains and the role of large domestic markets became accepted. This advantage is central to explanations of industrial success. It seems that intra-industry trade and localized demand conditions for market competitiveness is more and more highlighted. However, the question is why some regions develop in this way, while others do not. In this process the emphasis is very much on markets, so funding and policy support by the public sector were very much challenged. You can say it was ignored in general. But our question is what kind of indirect way of influence works in spite of the tendencies of market-orientation. On the other hand, recently economic crises make incentives to enhance influence of governments, but it is not necessarily implemented at local or regional level.

Apart from competitive character of city regions in contemporary economics, there is advantage from a social structural point of view. It highlights regional development economics, the dynamic of which draws upon constructed advantage. This knowledge-based physical construction requires interfacing developments in various directions. It consists of knowledge Infrastructure, like universities, public sector research centres, mediating

agencies, professional consultancy, etc. They have to be actively involved in structural capacities. The geographical dimension remains always involved in operation of knowledge economy as well as knowledge-based economy.

Geographical proximity can be expected to serve the incubation of new technologies. However, the regions of origin do not necessarily coincide with the contexts that profit from these technologies at a later stage of development. The dynamics can evolve with the technology. As companies develop a competitive edge, their activities may move out of the region generating a threat of deindustrialization which has to be countered continuously at the regional level. Hence the necessity for keeping a momentum in technological innovation which makes the area still attractive for firms, as well as a quality of life which makes the area attractive for "innovative talents".

This problem is very complex therefore it is necessary to select one from more specific aspects. Let's try to focus on the issue of *innovation*. We should concentrate only on topics of governance developing innovation in general. Forms, instruments, and methods are to be collected in order to disseminate experiences and existing practice gathered in city-regions involved in the working group.

Making incentives for innovation by government and governance

The starting point is that generating knowledge economy originally is not a function of local governments at all. It is primarily the role of the private sector, and that of the national and European authorities that are providing firms with the relevant legislative / fiscal framework. In spite of this fact, local authorities have been for long involved very much in local economic development. The focus is in this issue especially on the regional level, but city-regions may be preferred also from this aspect, because of their relatively large capacities.

Different types of policy instruments have been developed by local and regional authorities in order to enhance their innovative potential with effect on economic development. Some are now quite traditional.

- *Developing financial incentives*

Local governments accept principles of strategy for attracting foreign and domestic investments by offering tax incentives, giving sites to settle down undertakers and other advantages to give them opportunities to product among better circumstances. Whose (of which level) policy is it? What was the original motivation? If different actors take part, what is the division of tasks among them?

- *Creating Innovation centres*

Innovation centres are relatively traditional local institutions, concentrating infrastructure investments in areas to attract more enterprises. They can work in different forms for instance science parks (technological park, high tech campus, etc.) managed by professionals whose main aim is to promote culture of innovation and help new business to develop. Alternatively, there is no specific physical location of innovation policy, it is spread in the city or/and its region.

- *Supporting Universities as research centres*

Universities and other schools of advanced studies have autonomous or semi-autonomous rights. In the case of the city-size is about some hundred thousand inhabitants their position is quite strong in the local decision-making process. Municipalities are able to support them in a lot of way, mainly in development.

Other types of initiatives have gained in importance during the last decade:

• Promoting the city
Projects as focus points on innovation - There are quite a lot of projects for enhancing capacities of cities to get good position in global competition as a sub-centre of any type of world-wide strategies like Green city; Culture city, etc. These are good enough many times to concentrate sources on innovation for next decades adding subvention of the national government and other donors from the public and private sphere.

• Developing medium / long term shared visions
Cities may formulate and adopt comprehensive city cluster plans reflecting on long term perspectives. These economic plans involve strategic implications, administrative measurements, and incentives to promote enterprises to settle down and work continuously in the areas.

• Involving partners from industry
There are also pure economic methods to provide mechanisms for more involvement of private industry and investors in financing urban infrastructure and services. How do private actors take part in formulation of public policies on strengthening innovation?

• Favouring Cooperation of different levels of governments
It seems that in the case of innovation cooperation is not necessarily highlighted by municipalities, but different levels of territorial governments and national government should add capacities together. National sources, programmes, general preferences are needed to get special circumstances to be in success as city-region.

Role of governance in management of innovation in city regions

The role of municipalities and other public actors is necessarily limited and indirect in economic development, whether it is acting on the whole local economy or influencing position of located firms in the world economy.
What aspects can be influenced and what ways? It would be good to list issues of our different cases in partner cities and city-regions, and then try to select direct and indirect ways and instruments which proved to have an effect on content, context, and process of innovation from the side of local institutions.

1 Main characteristics of innovation – existing or needed - in your city-region

What kind of fields of industry or services is relevant from the point of view of making innovation at city regional scale in your case? What is its history in brief? Meaning of innovation in regional economic development at city-region scale.
What are the main existing support instruments for innovation in your city-region?

2 The role of public actors in development these initiatives

What is the role of different public actors to promote any type of experiments to put the city in a better position in the national or international competition? National government, regional institutions may formulate and implement policies. Or, in the other hand, is the big city in the position to generate optimal circumstances for innovation alone?

Is the city or city-regional government relevant in participation of innovation policy of the area? What is the distribution of responsibility among different levels of decentralized governments?
Please, specify importance of linkages between city and its region in this issue, if it is a real phenomenon at all.

3 Institutional backgrounds

Is there any specific organizational form of managing institutions from the side of the public sector like a department, development agency, bureau, etc.? Are there formalized rules on their operation?
Are there formal managing institutions from the private and /or academic sectors?

4 Methods of governance

It is supposed that classical functions of territorial responsibility are not really working in the innovation issue. What are more indirect instruments to influence public and private actors? Esp. advantages of using infrastructure, financial benefits, competitive user's fees, policy of participation, etc.

5 Innovation in crisis

Recently most of the areas are faced with circumstances and consequences of deep economic decrease and the world-wide financial crises. Is there any specific strategy from the side of institutions, city-regional policies discussed to avoid of diminish or at least harmful effects? They might have role in finding individual ways out from the general economic shock. For instance, in 1980s urban innovation was crucial in fiscal austerity.

2. Contributions from Partners

2.1. Brno

2.2. Brussels-Capital Region

2.3. Burgas

2.4. Eindhoven

2.5. Florence

2.6. Krakow

2.7. Lille Metropole

2.8. Seville

2.1. Brno

1 Main characteristics of innovation

Brief history and relevant areas of industry and services
As early as in times of the Austrian monarchy and later during the Austrian-Hungarian Empire, Brno city-region was one of the most industrially developed regions of Central Europe. In the 19th century, Brno was even called "Austrian Manchester" because of its developed engineering and textile industry. After the creation of Czechoslovakia, the position of Brno and its surroundings as an important industrial area of a newly created state was not significantly weakened, even though other areas were gaining significance, however, mostly in heavy industry area. After the World War Two, the industrial base of the city of Brno and its surroundings focused on several industrial areas – beside above-mentioned engineering and textile industry also on armament (as a specific branch of engineering production), electro-technical, chemical and food-processing industry.

The period after 1989 can be characterized as a period of economical change with decrease in production volume as well as in number of employees in previously important factories, some even ceased to exist while services increased their share significantly. Direct foreign investments began (and still continue) to flow into the city and its infrastructure.

Industrial history of the city and its surroundings therefore also determine key industrial areas at the city-region level. These are engineering, electrical engineering, or special fabrics. Due to a wide university and scientific-research base, Brno also has a great potential in the area of so called life-sciences, information and communication technologies, or environmental technologies.

Importance of innovation in regional economic development at the city-region level
Innovation represents in today's global economy the main competitive advantage of developed economies. Promotion of research, development, and innovation is therefore, also at the regional and local level, in the forefront of interest of politicians and economical strategists.
Already in 2001, the South Moravian Region (NUTS 3) was the first region to continuously promote innovation within the scope of the Czech Republic. A year later, it was also the first region to design and later implement the Regional Innovation Strategy (RIS I). Since then, a second version (RIS II) was already successfully elaborated and implemented. **Regional Innovation Strategy of South Moravian region 3 (**RIS JMK 3) – the third version - has been elaborated for the period 2009-2013.
Activities implemented within the above-mentioned innovation strategies put South Moravia to the forefront in the area of promotion of innovation and innovative business in the Czech Republic.

2. The main existing support tools for innovation in city-region

The above-mentioned **Regional Innovation Strategies (RIS)** are one of the system tools for innovation promotion. RIS represent an efficient tool through which innovation infrastructure is built up in order to create innovation.
Among **outcomes of the RIS I and RIS II** belong, for example, the creation of the South Moravian Innovation Centre (SMIC), Technological incubator II and Biotechnological incubator – INBIT, foundation of the Micro Loan Fund, Patent and License Fund and

organization of several biotechnology conferences (Gate2Biotech). In order to promote competitiveness of larger companies, the creation of two clusters (CEITEC Cluster – bioinformatics, Water Treatment Alliance) has been facilitated. The Technology Transfer Office at the Masaryk University has also been founded in order to promote contract research, creation of spin-off companies and cooperation between industry and university in general. In order to support talented youth and attract foreign students and scientists, financial tools, managed by the South Moravian Centre for International Mobility (founded in 2006), have been established. The above-mentioned measures helped create and develop 40 progressive companies, for example Y Soft, Westcom or Strokom. Together, these companies have created 300 highly qualified work places and have registered 22 patents. 175 talented students have been supported by scholarships amounting to the total of 8 millions CZK.

RIS JMK 3 is a set of measures dealing with problems and needs which have been identified on the basis of a survey on business and science and research area in the South Moravian Region. The objective of the RIS JMK 3 is to increase competitiveness of the South Moravian Region through the cooperation between businesses and the science-research area and also by maximizing benefits of science-research projects of the **International Clinical Research Centre (ICRC) and Central European Institute of Technology (CEITEC).** The strategy fulfills the vision and the fact that in 2013, the South Moravian Region will be the most innovative region in the Czech Republic and will rank among fifty most innovative regions in the European Union.

The draft of measures is divided into four priority areas:
- Technology transfer;
- Guidance and services for small and medium-sized companies;
- Human resources;
- Internationalization.

Technology transfer – factual responsibility – SMIC, universities, the Academy of Sciences of the Czech Republic; financial responsibility - operational programs, the City of Brno, other organizations.

Cooperation between universities or more precisely R&D institutions and companies in the area of technology transfer (TT) is one of the basic elements of a functioning regional innovation system. More efficient technology transfer should be achieved through further completion of the system of organizations and experts (technology transfer centers and innovation centers) and through financial tools.

- ***Innovation vouchers*** – the goal is to promote cooperation between universities and companies through a financial tool subsidizing smaller joined projects.

- Fund for technology verification (***Technology Accelerator Fund18 alias Pre - Seed Fund)***
Fund resources will be allocated to the so called "proof of concept", that is the completion and practical verification of the technology's functionality so that it becomes interesting for investors, attractive to start a new company, or so that it protects intellectual property and subsequently sells the license. Resources will be allocated via grants.

Guidance and services for companies (factual responsibility – SMIC, financial responsibility – the South Moravian Region, operational programs – namely Operational Programme Enterprise and Innovations - OPEI, City of Brno, district towns)

- ***Technology incubators*** (existing, produced by RIS – The Technology Transfer Office at the Masaryk University, Technology Incubator of Brno University if Technology, Technology incubator II and INBIT) – foundation of new incubators and science-technology parks for key economic areas of the South Moravian Region (ICT, creative industry) and in selected district towns of the region (outside Brno). Incubated companies give back invested public resources by creating jobs with high added value, tax payments and so on.

- Fund for innovative business support (Seed Fund)
Currently, the possibility to use public resources in order to support new innovative companies by providing finances for the implementation of an innovative business intention, does not exist in the South Moravian Region. The Seed Fund is commonly used throughout the World in order to stimulate the creation and early development of innovative companies. The principle of "Seed" financing is the provision of public resources to finance companies' equity. The investor (fund) receives in exchange a tradable share in the company which, in case of success, secures the investment return. On the other hand, if the business intention does not succeed, the funding recipient does not have to return provided resources; this the most important difference compared to loan financing (in case of innovative companies in the South Moravian Region – the Micro Loan Fund). The Seed Fund will carry on with the success of Micro Loan Fund and will enable to combine public and private resources (decrease the risk of private investors through public sector participation).

- *Loan financing* – Micro Loan Fund, Patent and License Fund

- ***Investment Forum*** – introduction of innovative companies, experience, contacts

- *Innovation centers* – initiating creation of innovation centers for priority areas in the South Moravian Region, namely for engineering, life-sciences and electrotechnics. Innovation centre provides space for establishing new contacts and ties within the area between academic and business sphere, experience sharing and so on. The aim is to support development of that particular area in the South Moravian Region. In 2008, the Microsoft innovation centre (MSIC) was opened in Brno, and is one of a kind in the Czech Republic. MSIC supports the development of local software economy.

Human Resources (factual responsibility – South Moravian Centre for International Mobility, SMIC, the City of Brno, the South Moravian Region, financial responsibility – operational programs, the City of Brno, the South Moravian Region, SMIC)
Activities / projects focused on popularization of science, technical and natural science majors, quality of education at high schools and universities, development of gifted students in the South Moravian Region, increase in internationalization of universities, provision of quality human resources for research and development, increase of absorption capacity of the region for implementation of R&D projects and provision of sufficient human resources for the development of innovative business.

Internationalization (factual responsibility – SMIC, the South Moravian Region and other organizations, financial responsibility – the City of Brno, the South Moravian Region and other)
Brokerage events, trade missions, conferences, international high school, international house, region promotion.

3. Public actors in developing these initiatives

Systems of innovative business promotion in the CR are defined by the National Innovation strategy of the CR from 2004. Among other important legislative regulations, there are National innovation policy of the CR for 2005 – 2010 and the Law on innovation.

Among actors providing support for innovation in general, there are national and local government authorities, chambers, banks, unions, agencies, associations and foundations (e.g. Association of Innovative Entrepreneurship CR, Association of research organizations, Czech Science Foundation, Society for Promotion of Technology Transfer, Science and Technology Parks Association CR, etc.), research and development workplaces (i.e. Academy of Sciences of the Czech Republic, universities, other research and development workplaces and organizations), foreign agencies and organizations (e.g. International Innovation Centre, Technology Innovation Information, Technology Response Network), businesses, customers, clients, consumers (creating incentives, consumption and market demand including feed back for innovation business).

In case of Brno city-region, the most important institutions in the field of innovation are: South Moravian Innovation Centre (SMIC) - founded in 2003 as an interest association of legal entities, the South Moravian Region, City of Brno, Masaryk University, Brno University of Technology, Mendel University of Agriculture and Forestry in Brno and University of Veterinary and Pharmaceutical Sciences Brno. The activities of SMIC abide by the basic document which is the Regional Innovation Strategy of the South Moravian Region. The foundation of SMIC as an independent body was one of the outcomes of the Regional Innovation Strategy I (RIS I).

Regional development agency of South Moravia (RDA SM) is an interest association of legal entities. Members of the association are: South Moravian Region (SMR), Association of municipalities and towns of South Moravia and Regional Chamber of Commerce of South Moravia (RCC SM). Activities of this body are also financially supported by the City of Brno. RDA SM works on non-profit principle – all incomes are reinvested in further activities and projects in favour of the region. RDA SM is active in the field of innovation promotion. In this framework it has been developing several activities which promote the development of innovation environment in the South Moravian Region and facilitate the preparation of additional projects. RDA SM initiates the setting of Regional Innovation Strategy and takes part in the implementation of some measures of the strategy. RDA SM is active as a regional representative of the Association of Innovative Entrepreneurship of the Czech Republic. The main task of the RDA SM is the collection of information in the field of innovation promotion, in particular target update of Technological Profile of the CR which assembles basic information about all actors of regional innovation system.

South Moravian Centre for International Mobility settled by the South Moravian Region and universities has the objective to promote international mobility of students (by providing service and counselling for individual foreign applicants for study), to create suitable conditions in order to make South Moravian universities more international as well as to promote regional development cooperation. The City of Brno considers the membership in this organization in the context of implementation of certain projects defined in the Regional Innovation Strategy 3.

First Innovation Park is a counselling company specialized in the promotion of research, development, and innovative business in the field of new technology (in particular information and communication technology). People connected to the First Innovation Park

have also founded an internet platform for the exchange of experience and experts' ideas, it was named Brnopolis. Under the auspices of Brnopolis, they organize various meetings.

Business and Innovation Centre Brno (BIC) is a business and innovation centre providing services in the field of business promotion. It is a member of the European Business Network Brussels (EBN Brussels) and a member of Czech National Committee of the EBN and the Science and Technology Parks Association.
Brno Regional Chamber of Commerce (Brno RCC) helps to promote business activities, to put through and protect interests of its members. Within its sphere of action, the Chamber provides counselling service related to business activities. This body is also supported by financial contribution of the City of Brno.

As an example of horizontal cooperation – governance at the city-region level –it is possible to bring forward the setting of *Regional innovation strategy (RIS 3).*

The City of Brno, South Moravian Region, and other institutions are represented in the **steering bodies of the strategy**:

Steering Committee is a supreme body responsible for monitoring of preparation and for ensuring financial sources for approved projects. The members of the committee are the leading representatives of the South Moravian Region (SMR), City of Brno, Masaryk University (MU), Brno University of Technology (BUT), Mendel University of Agriculture and Forestry in Brno (MUAFB), University of Veterinary and Pharmaceutical Sciences Brno (UVPSB), University of Defence (UD) and Academy of Sciences of the CR (ASCR).

Coordination Committee is a board responsible for factual quality of the strategy. The members of the coordination committee ensure the reporting of conclusions to the mother institutions. The members of the committee are competent officers of the South Moravian Region and of the City of Brno, chief professionals of intermediate institutions, of technology transfer centres by universities, a representative of Regional Chamber of Commerce (RCC) and representatives of major R&D projects (CEITEC and ICRC).
Regional Innovation Strategy of the South Moravian Region 3 is in compliance with the following **papers**:

- Lisbon Strategy;
- Economic Growth Strategy of the Czech Republic;
- Regional Development program;
- Strategy for Brno.

4. Innovation in crisis

Regional Innovation Strategy of the South Moravian Region 3, was in fact defined prior to the outbreak of the economic crisis, however, we can say that even the new economic order does not affect its validity and it is not necessary to amend anything. It is essential to implement individual projects which will be difficult with regard to the reduced resources of public and private budgets.

At present, the City of Brno elaborates its Economic development policy in cooperation with experts in relevant fields. One of the areas of the policy is the promotion of knowledge economy and innovative business. Its outcomes will be concrete systematic measures and projects. However, not even the need for this policy is related directly to the above mentioned economic crisis. Nevertheless, it will naturally reflect the present conditions.

2.3. Brussels-Capital Region

1. Main characteristics of innovation at city-region level

1.1. Division of tasks among different governments' tiers and public actors

"Prime" responsibility in the field of scientific research and innovation is assigned to the Communities and Regions, in accordance with their respective areas of activity. The Federal Authority, however, exceptionally still withholds certain "exclusive" responsibilities. Some of these are subject to co-operation agreements signed with the federated authorities concerned.

The Regions provide the general support of industrial and technological research and innovation.

The Communities are responsible for the general support of research carried out in higher education institutions

The Federal Authority, besides supporting research required for the fulfilment of its own assignments, also finances the federal scientific institutions, space research conducted in an international context, data transfer networks between scientific institutions as well as several other activities requiring uniform implementation at national or international level. Besides, each authority funds and runs several own research and public-utility institutions (see below the section institutional background).

The universities (which come under the responsibility of the Communities) perform most of the fundamental research.

A group of **sectoral collective research centres** meeting the specific needs of the companies in terms of scientific and technological research is jointly funded by the companies of the concerned industrial sector and public authorities (Federal Authority and Regions).

1.2. Main thematic priorities for innovation in the Brussels-Capital Region

Brussels has several assets to become a Region of knowledge:
- 13000 jobs (including 9000 researchers) are linked with activities related to research and innovation
- 4 universities centres of excellence
- 4 industrial higher education institutes
- 3 faculties of medicines and university hospitals
- several public and private research centres

Based on that analysis, the Brussels-Capital Region has increased its support to research and innovation.

The Contract for Economy and Employment (in 2005) and the Regional Plan for Innovation (in 2006) are at the root of the Brussels-Capital Region's ambitions in terms of research and technological innovation:
- Strengthen scientific centres of excellence and stimulate activity in three leading edge economic sectors: **information & communication technologies**, **life sciences** and the **environment**.

- Develop a platform for all research stakeholders: businesses, investors, organisations, researchers ... whether from Brussels, Belgium or abroad.
- Encourage scientific study amongst young people in order to renew the pool of researchers in the future.

The Flemish and the Walloon Regions have also developed their own thematic priorities.

2. Forms of governance in innovation at city-region level

2.1. Cooperation between actors at the city-region level

As the results of this division of tasks between different governments, there is no common research and innovation strategy at the city-region level. Each Region and each Community has developed its own research and innovation strategy without any coordination. There is no real cooperation between the public actors.

The situation is different with non public actors. For instance universities are cooperating in the framework of European or Federal research programmes.

The chambers of commerce and the business associations of the 3 Regions are also working together since November 2008 to draw up a vision of future for the metropolitan area of Brussels. They have setted-up « the business Route 2018 for Metropolitan Brussels » with thematic workshops involving actors form the civil society. 3 of those workshops are related to research and innovation: Brussels as a pole of ICT, Brussels as a pole of knowledge, and Brussels as pole of the new industries.

2.2. Institutional background in the Brussels-Capital Region

The main public actors are:
1. **The Institute for the Encouragement of Scientific** "Research and Innovation of Brussels" (IRSIB): it has been created in 2003 to promote, support, and valorise scientific research and technological innovation in the Brussels-Capital Region

2. **The Brussels Enterprise Agency** (ABE): It is the regional agency that offers companies a one-stop shop for all of the information they need on setting up or exercising an economic or innovative activity in the Brussels-Capital Region

3. **The Regional Company for the Development of the Brussels-Capital region** (SDRB): Its activities are concentrated primarily on infrastructure for accommodating companies, especially scientific and industrial parks and buildings for companies

4. **The Regional Company for Investments in Brussels**: its finances innovative project of SMEs or starters

Other players are also actively involved in supporting research:
1. The University Interfaces, a structure created by the universities and high education institutes to raise and promote their scientific and technological potential for the benefit of the economic activity in the Region.

2. The research centres: Universities or Universities/companies working together.

3. Methods of governance and support instruments for innovation in the Brussels-Capital Region

The Brussels authorities have gradually devoted more and more budget to support research in its various aspects. There has been a sharp rise in the regional budget devoted to research, from € 24 million in 2004 to more than **€ 37 million in 2009**, an increase of more than 50%.

Financial support has been provided to both companies and university:

1. Business support

Since 2002, the support aims to encourage and finance scientific research and technological innovation amongst companies in Brussels. It takes different forms:

- Industrial research
- Pre-competitive development
- Technical feasibility studies
- Filing and maintenance of patents

These different programmes have financed over 250 projects in nearly 150 companies from all economic sectors in Brussels.

2. Support for Universities

Actions in this area support research projects whose themes are in the areas of competence of the Region:

- "Brains back to Brussels" (BB2B)
- Prospective Research for Brussels – PRFB
- The regional leadership programmes
- Spin-off in Brussels (SOIB)

In addition to the "strictly" research budget must be added other budgets participating in research support, including incubators to which more than **€ 30 million** has been invested over the past five years, most notably in the development and operation of these infrastructures.

2.3. Burgas

Main characteristics of innovation – existing or needed - in your city-region

It has been the third year of the Bulgarian membership in the European Union and although the Bulgarian economy has shown a significant growth, it is not transferred in innovative potential. The innovative system of the country still suffers from fragmented educational and research infrastructure, low levels of involvement of business in the innovation process, ineffective cooperation of different key actors in the innovation system.
There are several problems the country still has to face:

- low quality of educational services;
- low percentage of population involved in life long learning activities;
- insufficient number of employees in the research sector;
- almost 60% of the people engaged in research and scientific activities work in the state sector;
- investments in research and innovations decrease especially in situation of financial crisis;
- low percentage of innovative enterprises and weak cooperation between the different innovative actors.

Same problems should be noted as relevant for Burgas region. The marketing analysis of the companies in the South East region in Bulgaria conducted in 2007 shows the following weaknesses of innovative environment:

- research institutions, universities and technology brokers are not used by the companies as a resource for information about technologies, know how and equipment;
- high prices of innovations;
- lack of financial resources for development of new products and processes;
- only 1/3 of the companies are using systems for supporting business decisions;
- existing prejudices that cooperation with other actors will not contribute significantly to the good performance of the company;
- a long period of return of the investments made;
- high risk of investments in innovations.

Companies that have introduced innovative products in the market for the period of 2003 – 2005 are 18% of the companies active in the region. Sectors of high involvement in innovation activities are: ecology chemical industry, tourism, food industry, real estates, banking and financing.

A significantly low percentage of the companies in the South East region were supported by programs for research and development – 3,4%.

Role of governance in management of innovation in city regions

The Role of the State

State participation in the management of the innovative process is limited to creating conditions and mechanisms for motivating private sector to take risks and invests in new products. As the Bulgarian economic is weak and lacks financial resources the state can not withdraw from supporting education and research.

Besides the Ministry of Economics and the Ministry of Education and Science there are few agencies that are involved in the process of innovation development at national and regional levels – Agency for SME, Agency for Investments and Trade etc.

During the last four years there were several major steps undertaken in the field of policy making:

- the National Fund for Innovations and the National Fund for Scientific research were started aiming at supporting priority innovative and research projects;
- Several Technology Transfer Centres are functioning within academic institutions;
- Some new stimulating instruments were introduced, such as: voucher schemes for financing innovative and research projects, scientific contests for university graduates' innovative companies, grant schemes for attracting Bulgarian scientists living and working abroad etc.;
- Ministry of Education has developed and introduced the so called National Road map for developing Bulgarian scientific infrastructure as an integral part in the process of developing EU infrastructural projects in the field of science and technology.

Still there is a significant lagging in the process of policy making at all levels.

Regional level

As a whole the regional level is recognized as one of the active levels for developing policies and supportive mechanisms. The efforts and the institutional infrastructure are quite scares and dispersed. Key actors at regional level are the regional representatives of the state agencies, Branch organizations such as Chamber of Commerce, Trade and Industrial Chamber, some new non governmental structures with mediating functions – High Technological Business incubator of Burgas, the Agency for Regional Development and Innovations.

It was in 2005 when the South East region in Bulgaria consisting of three major districts – Burgas, Sliven and Yambol, started to implement the SERBUL Project (South East Regional Innovation Strategy). The main objective of the project was to improve regional institutions' capacity for formulating and implementing policies based on the local and regional businesses' real needs and focusing especially on small and medium enterprises. As a result the Regional Innovation Strategy of the South East Planning Region in Bulgaria was developed.

The Strategy was developed with the active participation of business, different organizations supporting innovations, state and local institutions, universities etc.
Several objectives were defined in order to increase the South East region's competitiveness in the field of innovations:

The role of the Municipal authority

The role of municipal authorities in the whole process of stimulating and developing innovations is still an open question. In fact there are no legal mechanisms that can be effectively used by local and even regional authorities in order to create a friendly environment for innovations. Basic instruments in that direction lie in the hands of the state.
Municipalities themselves are potential beneficiaries of EU funding under the Competitiveness 2007 – 2013 Operational Programs, where they can participate in the establishment and management of technological parks. Municipalities are given the opportunity to build and rehabilitate industrial zones by the Regional Development 2007 – 2013 Operational Programme as well. Those opportunities are cautiously used though because there a lots of issues which have to be addressed first:

- as there are no legal definition and mandate for local authorities to develop mechanisms for innovation stimulation, it is quite unclear what their role in the implementation of such major projects can be. Municipalities are supposed to build partnerships with different stakeholders, participating with land property and without any clear vision how the future management of the property and the investments will be implemented;
- another major difficulty is the lack of experience and traditions in developing local and regional strategies for attracting major investors which is obviously a significant prerequisite for implementing effective policies in the field of innovation.

Making incentives for innovation by government and governance

Financial incentives

The Competitiveness 2007 – 2013 Operational Programme is the basic program for implementing the national and regional policies for economic and social cohesion in Bulgaria. The Programme focuses on improving competitiveness of the Bulgarian enterprises and develop five priority directions of intervention:
- development of economy based on knowledge and innovative activities;
- increasing effective performance of enterprises and creation of favourable business environment;
- financial resources for enterprises successful development;
- stabilization of the Bulgarian positions on the international market;
- Technical assistance.

Within the next few years the Programme will finance different measures such as: scientific and technological parks, research projects, creation of regional organizations supporting business initiatives, regional business incubators, creation of new financial instruments etc.

In the context of the opportunities described there several possible fields of activities for the local and regional authorities:

1. Support for creation of Innovation centres:

High Technology Business Incubator in Burgas – High Tech Business Incubator – Burgas (HTBI-Burgas) is a public, non-profit organization with ideal aim in social benefit. It was established in 2004 in the city of Burgas by highly motivated specialists with solid business, legal and technological background and entrepreneurial experience. The mission of the organization is to encourage single entrepreneurs, researchers and academic teams to start their own businesses as well as to stimulate and support young innovative high tech start-ups in the region of Burgas.

High tech Business Incubator – Burgas is currently focused on the reconstruction and renovation of a building located in the campus of the Burgas Prof. Dr. Asen Zlatarov University which will result in the physical establishment of the Incubator and will expand the portfolio of the services provided with the inclusion of the provision of space and basic operational services to the incubatees. Another initiative of HTBI is the establishment of a high tech cluster in the region of Burgas, which will include: pro-innovative infrastructure, NGOs, high tech companies, local authorities and higher educational institutions. The cluster will be an incentive for the pro-innovative decision and policy-making process of the local authorities and a basis for the creation of a favorable entrepreneurship climate. HTBI is the

core establisher of the Burgas Technology Transfer Office and is focused on the encouragement of technology transfer and technological commercialization.

Business and Technology Park in Burgas

The city of Burgas together with its local partners has started to develop a concept for creating a centre for business and competitiveness aiming at:

- creating an element for technologically based enterprises – industrial and service orientated;
- creating an element for applied research with participation of universities and other institutions;
- creating an infrastructure for innovative and technology based activities ;
- creating a centre of knowledge which to connect business with science;
- a center for developing strategies for attracting foreign investments etc.

The project is under development. Burgas Municipality has dedicated a terrain for the construction of the Technology Park. The first phase of the project will be financed by the Competitiveness Operational Programme.

2. Supporting Universities as research centres

The City of Burgas has supported the creation of the Centre for Technology Transfer in the Asen Zlatarov University of Burgas. The Project was financed by the Ministry of Economics and the PHARE Programme. The Centre has the ambition to work at regional level by supporting high technology and spin off companies, as well as technologically based small and medium enterprises in the region.

3. Promoting the city - Projects as focus points on innovation

Respecting its geographical and economic potential the city of Burgas has identified several major innovative projects in the field of tourism and industry:

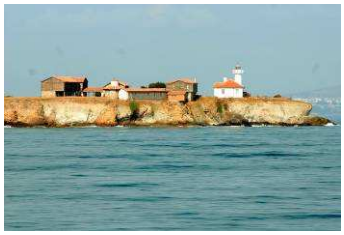
"SUPER BURGAS – A zone for public access to the seaport, the railway station and the bus station of Burgas" Project

The project concept illustrates the new approach to urban territory development and aims to transform the nowadays closed sea port area into a public area with a variety of functions reflecting the public interests.

"CHERNOMORETS ARENA" Project

The project concept aims to re innovate and rebuild the area around the existing Chernomorets stadium by creating a modern and attractive centre of sports and entertainment facilities.

"ST. ANASTASIA ISLAND – A lively and attractive leisure opportunity" Project



The island is situated 6 km off shore and offers a spectacular view to the Burgas gulf. The aim of the project is to turn the Island of St. Anastasia into one of the main touristic attractions with opportunities for developing cultural tourism.

"INDUSTRIAL ZONE development on the territory of Burgas" Project

The project proposed aims to build an Industrial Park within the North Industrial zone situated in the northwest part of the city of Burgas. The area communicates with the major transportation corridors of the municipality.

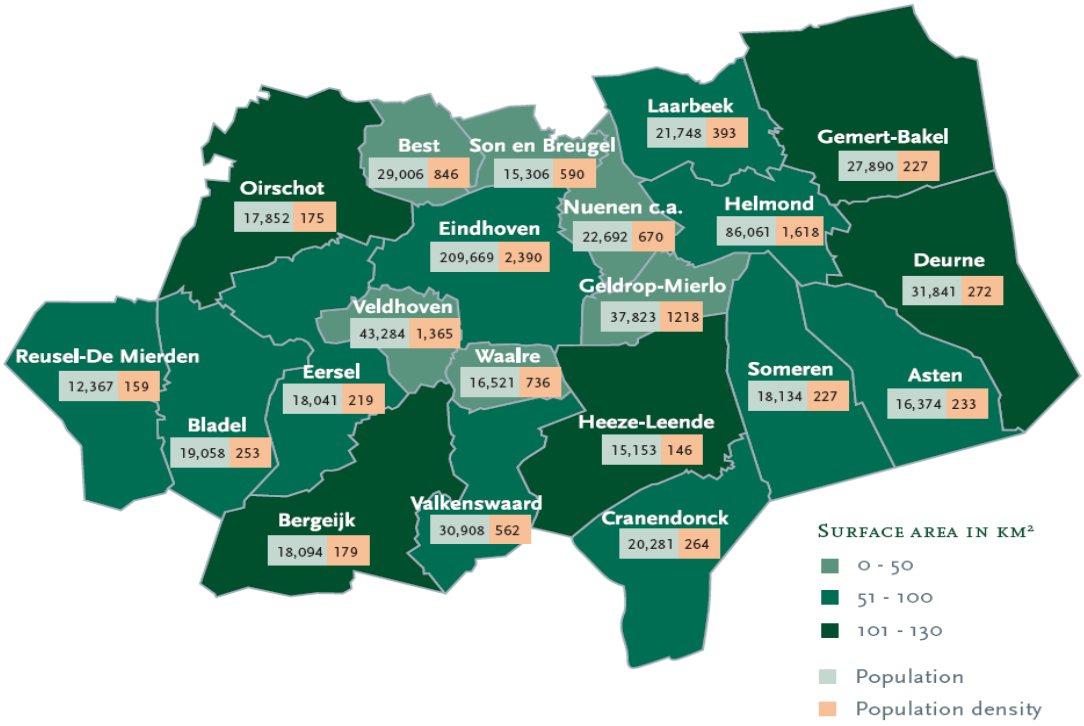
The project concepts are integrated in the Municipality Strategic plans, more specific in the Urban Master Plan that has been recently developed and opportunities for their financial provision are sought.

2.4. Eindhoven

Governance in the knowledge economy / creativity, research & education at City Region Scale in the Eindhoven region

The city region

The city region is located between the economic centres of the Dutch Randstad conurbation, the Ruhr conurbation of Central Germany, Brussels and Antwerp. The region covers 1370 km², representing 3,3% of the total area of the Netherlands. The region has 725.000 inhabitants and 32.000 businesses and 385.000 jobs. The economic structure is characterised by the presence of a high quality industrial base, and a service sector which continuously undergoing steady growth. Annual growth here is well above the national average. As in most other countries, the Netherlands have three levels of government. The SRE (Eindhoven region) is an intermunicipal co-operative union with an official legal status, in which municipalities co-operate in order to promote common interests. The working area covers 21 municipalities



The region and his municipalities

Transforming into Brainport

The Eindhoven region, or southeast Brabant, has transformed since the late 19th century from a mainly rural area to a strongly industrial one, a new technology has long been its trademark. One of the initial driving forces for this was Philips, now one of the world's biggest electronics companies. Started in Eindhoven as lightning producers, by 1925 Philips was involved with the first experiments in television and radio. Philips research in the 1970's make break through in the processing, storage and transmission of images, sound and data,

which led amongst other things to invention of the Compact Disc. The regions reputation for high-tech activities has attracted new companies to invest such as ASML and FEI. Eindhovens Technical University, founded in 1956, has also contributed to this economic development.

As a result of its international reputation for cutting-edge R&D, the Eindhoven region has become known as 'Brainport', a recognized hotspot within the e southeast Netherlands top technology zone. Netherlands top technology zone and ranking in the top technology zone of the European Innovation Scoreboard, belonging tot the top technology regions of Europe. Spearhead sectors for the Eindhoven region are medical technology, automotive, nanotechnology en mechatronics and ICT.

Internationals situated in the region

Location

On a European scale, Eindhoven is an important crossroad. Other Dutch cities such as Utrecht, Amsterdam, Rotterdam, and Maastricht are all within 1.5 hours by train or car, and cities in neighbouring countries such as Brussels, Antwerp, Aachen, and Dusseldorf are similarly close at hand. Eindhoven fast developing regional airport means that destinations such as Paris, Milan, Barcelona, London, and Rome are all within easy reach.

Making incentives for innovation by government and governance

Brainport is constantly improving regional capabilities and capacities that can spur innovation and economic growth. The dynamism of Brainport depends on the ability of innovating successfully and the self-organisation of regional actors. Innovation excellence depends of lot of actors, such as people, open innovation culture, a strong knowledge base, access to knowledge by knowledge sharing and knowledge transfer, finance, entrepreneurship, coverage of value chains, spin-off creation, incubation models, political awareness and new forms of governance (public-private). The high amount of parameters

and their independency raise new questions on modelling and monitoring the 'open 'innovation ecosystem' and measure its overall performance.

Cross border cooperation as a basis

The consequence of globalisation raised questions about the kinds of activity that can be retained in and attracted tot the Eindhoven region. Paradoxically globalisation is closely connected with the increasing importance of proximity and location. The role of regions as a nexus of knowledge and innovation based economic growth has increased. Firms, tend to choose an optimal ecosystem, allowing close interaction on a consistent basis. In order to gain leadership in competitiveness on a global scale, further developments are necessary, making use of the strengths and complementaries of regional innovations systems through interregional cooperation and transnational innovation activities. Regional innovation networks are not new; they tend to be limited to areas within countries. Cross border cooperation has not yet been fully exploited. Eindhoven Region chooses to develop critical mass by working in the ELAT region (Eindhoven-Leuven-Aachen Triangle) to build a strong cooperation on the complementary strengths of these three regions, to compete on the world market.

Innovation is the driving force of economic development

Innovation (transforming knowledge into economic goods) is the driving force behind future economic development. In the economic production structure, the combination of knowledge is getting more important. In the Lisbon Strategy, the Union recognizes this and it has set itself a new strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion.

Achieving this goal requires an overall strategy aimed at (among others) preparing the transition to a knowledge-based economy and society by better policies for the information society and R&D, as well as by stepping up the process of structural reform for competitiveness and innovation and by completing the internal market. The ELAt project focuses on improving the access to the information society in order to facilitate the transition to a knowledge-based economy and society

Regions are the basis for excellence

The knowledge economy is a network economy. Specialised companies need to co-operate to bring forth new products, services, techniques and concepts. Direct contacts are needed for exchange of tacit knowledge. That is why in a knowledge economy the "organising capacity" of actors has become such a vital factor for a region's enduring economic prosperity. Not only networks of companies are needed, but in particular also strategic alliances between companies and institutions of education and research. Also important are the quality of the living environment, cultural provisions en the quality of the local knowledge & educational infrastructure.

Regions are the key to successful innovation and excellence, despite of the latest communication technologies. Innovation is always linked to geographic regions. The Euricur report (European cities in the knowledge Economy, June 2004) recognises this, and the

researchers formulated seven knowledge economy foundations: Knowledge base, Economic base, Quality of Life, Accessibility, Urban diversity, Urban scale and Social equity.

In the case studies (9 European cities, including Eindhoven) there is no (urban) region or city that scores superb on all these factors.

Regional cooperation

Because it is hard for one region to score well on all seven foundations knowledge economy, regional cooperation is the key to success. Regional innovation networks are not new. What is new is that transnational European regions join forces to realise a joint innovation strategy with the prosperity of the region and surrounding as point of departure. The ELAT project is really an initiative of the local partners in Eindhoven, Leuven and Aachen (bottom up), and fits remarkably well in the national and European policy. In the past, regional cooperation on innovation was often built on one specific topic, within one country, or within border areas.

Spatial relevance

The triangle Eindhoven, Leaven and Apache (ELAT) is a translational geographically concentrated area with the potential to become a European top technology region. Due to the intermediary position of the ELA-triangle between the Flemish Urban network, the Ruhr Area and the Dutch Randstad, the significance of cooperation within the ELA-triangle surpasses the scale of these regions. It is not an overestimation to declare the cooperation of importance to NWE-area (North-West-East) and on a larger geographical scale to the EU as well. As is written before there are clear economic reasons that make cooperation on innovation necessary and inevitable. It is all about creating a critical mass in research, development, and innovation, in order to create economies of scale and scope.

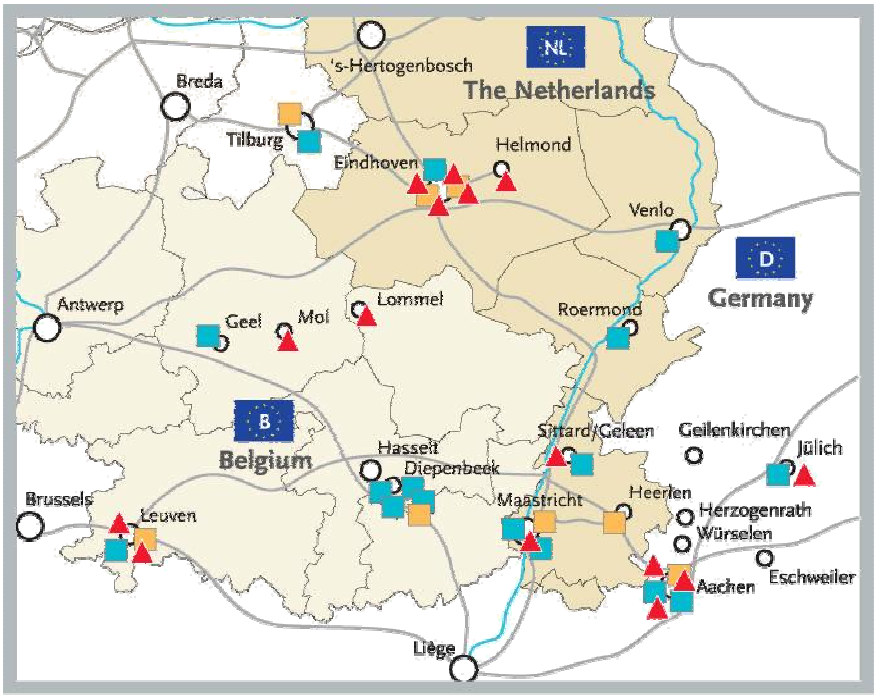
Creating favourable conditions to become a European top technology region can't do without cooperation in general and on spatial planning in particular. This is traditionally clear for physical and virtual (broadband) innovation environments. But it is increasingly perceived that top quality in the field of housing and the living environment, cultural and leisure services are essential as well to facilitate the knowledge and/or creative economy. So the scope for the transnational cooperation of Eindhoven, Leuven and Aachen within the field of territorial development is much wider than is suggested by the traditional arguments only.

1+1+1=4

The partnership consists of six partners from three well doing innovative R&D regions. Today, each region scores very well on innovation, R&D, spin offs and start ups. But for the future, the regional and local authorities of Eindhoven, Leuven and Aachen realized that strategic cooperation is necessary to pursue the ambitions.
Neither Eindhoven, Leuven nor Aachen has the critical mass to become an absolute top technology region of European or world class. But when they join forces the sum will be more than the individual parts (1+1+1=4).

Transnational cooperation between Eindhoven, Leuven and Aachen means a larger economic base, a larger knowledge base, a larger urban scale and a larger urban diversity (four of the seven knowledge economy foundations, according to Euricur). The Triangle has the potential

to become a Top Technology region, also because of the presence of 5 (top) universities and the institutions and business activities that go with them.



- Universities of Technology
- Universities of applied sciences
- Research institutes

The Eindhoven region has about 725.000 inhabitants; the Leuven region about 465.000 inhabitants and the Aachen region has about 1.29 million people. Together about 2.480.000 inhabitants

Brainport Eindhoven, working with a joint agenda

In the region the government is working together with the industry and knowledge institutes like the Technical University Eindhoven. This is a strong cooperation developing together several programmes for the region. The intensive 'triple helix' cooperation between industry, knowledge and educational institutions and the government is unique. The have jointly developed the strategic programme known as 'brainport navigator 2013, beyond Lisbon!'.

The programme covers the domain People, Technology, Business, and Basics. This broad vision is the backdrop for the economic structural reinforcement. Brainport is working towards, with the aim of developing the international competitiveness of the region. The programmes are: high techno systems and materials: food: automotive: lifetec and design.

PEOPLE: - A good fit between people and work - Life long learning - Developing competences - Encouraging entrepreneurship - Interesting young people in a engineering career - Attracting international knowledge workers	**TECHNOLOGY**: - Strengthening and attracting research centers - Stimulating innovation, cooperation and knowledge transfer - Translating new technology into applications in sectors - Contributing through new technology to solving issues in society like energy and mobility
BUSINESS: - Creating and strengthening national and international networks - Attracting investments from home and abroad - Assisting start-up business - Encouraging innovation in and with small and medium-sized enterprise - Information/communication	**BASICS**: - ICT broadband - Good accessibility - Favorable business climate - International cooperation - Attractive city centers and residential areas - Distinctive cultural opportunities - International school

Changing from government to governance

At first the government was associated with laws, rules and taxes but nowadays the government in the region is associated with creating pre-conditions for successful entrepreneurship: for creating a high quality of life in a sustainable society.

What instruments are created?

Financial instruments

A lot of financial instruments are created with help of the EG, the national government, the province Noord Brabant and the Eindhoven Region. All are created to stimulate entrepreneurship by industry, knowledge institutes, and local governments. The main goal is to make to accelerate innovations. Separately it is possible to get help from local government for small entrepreneurs most focused on interest free capital. The Eindhoven region is mostly co-financing several national, provincial, and local financial instruments. The region offers a broad package of resources to provide financial support to highly promising companies in various phases of their business. Two special programmes are founded: the design incubator and incubator 3+

Creating innovation centres

The Eindhoven Region created with the 21 municipalities a separate economic development corporation called 'brainport development'. It is responsible for the economic promotion of the region and strives to attract new business to the region and retain them. It informs and advises companies that are new to the region on business accommodation options and promotes the climate for locating in the region. Brainport development offers small professional business accommodation with the facilities to boost the success rate and quality

of small companies. Entrepreneurs that are accommodated in the centres have access to supervision and advice from expert business advisors.

A special accommodation is created at the Eindhoven High Tech Campus: the Beta Technology & Business Accelerator in Eindhoven for small successful starters in the high tech industry.

Supporting Universities and research centres

The government is responsible creating a situation for new types of universities or educational institutes who are educating student for creating 'products of tomorrow'. Examples are new Automotive Campus educating students to create mobility for the future; the Food Campus which educates students to design healthy food: an International School that includes all stages of education for kids between 12 and 18 year.

Promoting the region

The region with the biggest city in the centre is promoted as the Eindhoven Region (tourists) or Brainport (industry). Together with 21 municipalities the region is creating a region where it is good to live, study, work and recreate. It has an international high standard high tech swimming pool; an international famous art museum called 'van Abbemuseum', an international equestrian centre and a wide choice of concert halls, museums, and places of entertainment. The combination of urban and rural environments is unique with economic growth coupled with conservation of the natural green landscape.

Cooperation between different levels of governments

To be successful it is important that governments are cooperating at all levels: international, national, provincial, regional, local and even transnational (ELAT triangle e.g.). At this time all types of governments are convinced that the have to cooperate to reach the goals the agreed about. The province is most in the lead about spational planning in general; the region is the lead about accessibility of the region and developing visions about housing, tourism and recreation, public transport, regional spational development, economic changes, environmental issues, health care and social services, cultural history and rural development. The main cities Eindhoven, Helmond and Veldhoven are sometimes dominant when the theme is their local economic development; the accessibility of the cities and housing.

Alliance management

The regional development is so complex that no organisation is capable of realizing solutions by themselves. It is important to connect parties on social and economic issues. Hierarchy is not important: it must be an involuntary but voluntary commitment. It seems te be a paradox: but it is important parties are internal convinced that cooperation without borders is the only way to solve the problems we have to deal with. Breaking boundaries between governments, industries (open innovation) and educational institutes (developing together and starting entrepreneurship together) and between countries (ELAT as cooperation between regions in the Netherlands, Belgium and Germany is the prove of the pudding.

2.5. Florence

According to Title V of the Constitution, the subjects of concurrent legislation include those related to education (with the exception of the autonomy of school institutions and excluding professional training and education), scientific and technological research, and support for production sector innovation, along with the development of cultural and environmental assets and the promotion and organization of cultural activities. The Regions have legislative power with regard to subjects of concurrent legislation, except for determining the fundamental principles, which is reserved for State legislation.

Therefore, the regional provisions within which City Councils can find a more or less broad, albeit increasingly synergic operating margin, move within different types of state framework laws or outline laws.

At this time of general crisis, the sectors in question can be defined as being strategic and, in any case, based on a competitiveness created by the specificity and specialization of the relevant actions.

The term innovation appears to be rather predictable and the affirmation of a knowledge economy is, *latu senso* – broadly speaking - necessary. Innovative capacity is unanimously considered to be one of the key factors of international competitiveness and one of the main elements determining the development and wellbeing of a country. Various factors contribute to innovative ability, the best known of which is research, often considered to be one of the main conditions that make the same possible. Whilst in Italy research is an element of weakness, technological transfer and the networking of knowledge has given more positive results due to the ability to translate the same into development (not just in industrial terms), thus contributing to increased competitiveness in traditional sectors, as demonstrated by the numerous successful examples of "made in Italy" products.

The above considerations characterized the recent bill no. 297 drawn up by the Regional Government of Tuscany - *Disposizioni in materia di ricerca ed innovazione* [Provisions regarding research and innovation] - which aims to promote the circulation and progress of knowledge and research as fundamental factors for regional development, to promote the maximization of human resources as active subjects in the circulation and transfer of knowledge, to integrate research, innovation, technological transfer and advanced training policies in synergy with the public and private subjects operating in the regional territory, to promote and support interaction, cooperation and aggregation processes between subjects operating in Tuscany in the research, circulation and transfer of knowledge and research results, and to promote research and the transfer of research results.

In this context, the instruments are defined for planning and coordinating regional interventions for the development in Tuscany of advanced training and research activities in the scientific, technological, humanistic, economic and legal fields, in accordance with regional, national and European planning policies and coherently with inter-regional agreements and initiatives, favoring the convergence of actions as well as public and private investment, actions for circulating and transferring scientific and technological skills from the research system in order for the same to be developed and applied to the innovation of organizational, production and distribution processes and services, as well as the maximization of human resources, promoting the same and supporting their qualification and introduction into the regional research and business system.

For this purpose, the Regional Government encourages cooperation between the subjects operating in Tuscany in the field of advanced training, public and private research and the circulation and transfer of the results of the same, whilst respecting specific autonomies, and their cooperation with the international scientific community, with particular reference to the European research area as per the European Commission Communication dated 18th January 2000 COM/2000/6, through the setting up of a coordination process called the *Rete regionale della ricerca* [Regional research network] consisting of the Regional Government, local bodies, universities and advanced training high schools, research institutes and the public and private subjects carrying out research activities, scientific and technological parks and other subjects involved in circulating and transferring knowledge, as well as the subjects receiving the knowledge and research results transferred, with particular reference to private companies, subjects in the regional healthcare service and local public service companies.

Consistently with EC guidelines on research and the trends followed by the national research plan, the *Programma regionale di sviluppo* [Regional Development Plan] determines the overall framework for regional planning policies aimed at achieving the above objectives and specifies the strategic guidelines regarding the promotion and support of research and the circulation and transfer of knowledge regarding the results of the said research, outlining the general and specific objectives, identifying the overriding lines of intervention, organizing the framework resources destined for the same and their relevant allocation to sector programs and plans. It defines the methods of coordination between the sector programs, with reference to interventions regarding research, innovation, technological transfer, and advanced training, the convergence strategies for the actions, as well as for public and private investments, also by identifying inter-sectorial strategic actions of regional interest. The Plan also identifies the forms of collaboration between the subjects in the regional research network who contribute to the optimum implementation of the prearranged objectives, and defines the strategies for the promotion and consolidation of the connections between the research system and the production system, also by identifying innovative actions for facilitating technological transfers to businesses.

Within this operational framework, which has a strong interactive and subsidiary, as well as inter-relational nature, the Incubatore Tecnologico di Firenze e SAM - Spazio Arti e Mestieri [Florence Technological Incubator and SAM – Spazio Arti e Mestieri] - should be viewed as significant examples of the relationship between the city of Florence and the Tuscan region.

The Florence technological incubator

A Memorandum of Understanding was signed in April 2009 between the Regional Government, the Provincial administration, the City Councils and the other subjects with incubators which, whilst confirming the autonomy of each party, identified forms of coordination and synergy for the organization and supply of specific services to businesses, with a view to optimizing the management of the resources and skills available in the region. The Network that was set up aimed to extend and consolidate all the existing incubators present in the region (technological incubators, specialized technological incubators, generalist incubators) in order to develop, qualify, and promote the regional system of business incubation in its various structures and specificities.

The Florence Technological Incubator possessed all the necessary requisites for this Network in accordance with the Memorandum of Understanding: it was set up following an initiative by Florence City Council after a Memorandum was signed, in December 2000,

between Florence City Council, the Provincial Administration of Florence, the Chamber of Commerce of Florence and the University of Florence in order to realize a metropolitan incubation system offering businesses in the area technological infrastructures and support, training and consultancy services for the creation and development of small businesses in highly innovative sectors, as well as to encourage the process of technological transfer and innovation. It was important, from an institutional viewpoint, for Florence City Council to set up this infrastructure because it often represents – in terms of its own sector of economic promotion and economic development in general – a system that is capable of generating virtuous reactions between the world of scientific and technological research, the territory, and the business system.

This operation was considered to be so important that, in 2002, the Local Government of Florence purchased a property of around 1000 sq. meters using ministerial and EC funds. In order to guarantee the optimal management of the structure, in 2003 Florence City Council entrusted the distribution of support services for starting up the business to the Associazione per la Scuola di Tecnologie Industriali [Industrial Technology School Association] of Florence, with the contribution of Florence City Council, which already had many years of experience in the advanced technological training sector in the Florentine area – whilst the City Council remained responsible for the total financing of the management itself.

The mission of the Florence Incubator is to assist the creation and development of innovative and technological businesses within a "facilitated" and stimulating environment through **pre-incubation, incubation** and **aggregation** services. The activities aim to make it easier for business ideas to emerge from the world of university research, to evaluate innovative entrepreneurial projects, to support the start-up and growth of businesses, to train entrepreneurs and offer premises and services to facilitate the establishment and development of companies.

Through its activities and network of relations, the incubator offers to act as a partner during the startup phase and throughout the development of growth plans, providing training and coaching services which aim to achieve sustainable, market-oriented economic and operational results.

To enter, it is necessary to put in an application which is assessed by a special Committee that selects the various proposals. Applications should be accompanied by the CVs of the aspiring entrepreneurs and a draft of their business plan. Entrepreneurs who have already started their activity should attach a brief profile of their company. Only entrepreneurs who have established or started up a business activity within the last 5 years can be admitted.

Selection is carried out giving priority to the innovative nature of the projects and companies, the technical-economic feasibility of the same, the age of the proposers, and the training requirements of the entrepreneurs/applicants. After admittance to the Incubator, training courses are held. The various subjects covered include business plans (outlines, aims, drafting, etc.), the establishment of the Company, the various obligations, requirements and phases, the organization of the company and the labor market, the development, research and protection of intellectual property, business accountancy and budgeting, the financial aspects of the company, funding and public contributions, private financing and elements of marketing, as well as market approaches.

The incubator of University of Florence

As said in the presentation above, about education, there is no concurrent legislation. The university is under the national law and regulation. The University of Florence can trace its origins to the *Studium Generale*, which was established by the Florentine Republic in 1321. Initially, Civil and Canon Law, Literature, and Medicine were among the subjects taught at the *Studium*, and various famous scholars were invited to teach there: Giovanni Bocaccio was asked to lecture on the Divine Comedy. However, the importance of the *Studium* was fully recognized with a Bull by Popo Clemente VI in 1349, in which he officially authorised the *Studium* to grant regular degrees, extended the *Privilegia maxima*, and established that the first Italian Faculty of Theology would be in Florence.

In 1364, with Emperor Carlo VII, the Florentine Studium became an Imperial University. However, when Lorenzo the Magnificent gained control of Florence and much of Tuscany, the *Studium* was moved to Pisa, in 1473. Carlo VIII moved it back to Florence from 1497-1515, but with the return of the Medici family it was once again transferred to Pisa. In spite of these moves, many teaching activities continued in Florence, and scientific research found substantial support in the various Academies of the time, like the Crusca and the Cimento. Only in 1859, when the Grand Duke was exiled, were all these separate teaching activities reunited in a suitable system called the *Istituto di Studi Pratici e di Perfezionamento*; a year later this was recognized as a full fledged university by the Government of Unified Italy. In 1923, with a special Act of Parliament the *Instututo* was officially denominated a University. Later, the new University was organized into the various faculties: Agriculture, Architecture, Arts, Economics, Education, Law, Mathematics, Physical and Natural Sciences, Medicine and Surgery, Pharmacy, and Political Science. The Faculty of Engineering was added to the 10 faculties in 1970 and the Faculty of Psychology in 2002.

As a fact of innovation / research, the link and actively collaboration about Region and University and, specifically, the new Pole of University and Technology in Sesto Fiorentino (inside the metropolitan area) is going on because of the opening of the Incubator. The Region had financed the rebuilding of the future site of the Incubator and now it's starting the organisation of the structure that it is supposed to be leaded by the Fondazione per la Ricerca ed il Trasferimento Tecnologico [Research and Tecnological Transfer Foundation] whom incoporators are Commerce Chamber of Pistoia, Prato and Florence, Province of Prato, Pistoia and Florence and the University of Florence of course. Also this Incubator is provided inside the regional research network especially for the research specialization in order to complete the network and to guarantee the best knowledge.

Since the Incubator of the Municipality of Florence is a "best practice" in Tuscany because of the organisation and the attendance of real technological enterprises inside, there is a project of co-organisation with the Tecnological Incubator of the University to create a big one Incubator in Florence with a site in Brozzi District (where it is actually located the Florence Technological Incubator) and a site in the Pole of the University and Technology in Sesto Fiorentino. This means that the Fondazione per la Ricerca ed il Trasferimento Tecnologico will have a new member that is the Municipality of Florence. With this new big Incubator and the Regional Research Network of Incubator it will start a deeper collaboration not only in the city-region scale but in the metropolitan and bigger area (Florence – Prato – Pistoia).

The creative incubator "SAM", Spazio Arti e Mestieri (Space of Art and Craft)

The space dedicated to art and craft has been restored by the Municipality of Florence. The idea was to establish a competitive <creative incubator> dealing with the promotion, valorisation and economic and cultural development of the craft, artistic and business enterprises of Florence. The Vecchio Conventino - the place where SAM is located - was in the beginning a convent in the district of San Frediano in Oltrarno; then it was a hospital for the soldiers' survivors from the Caporetto's Battle and, after, the building was bought by the Gusmano Vignali Florentine Artistic Society. It starts the history of the place as a situation intrinsically bound up with the business, craft, artistic and social history of the district.

From the beginning of 1900, the various rooms inside were rented for use as workshops for sculpture and engraving, small-scale industries o fan artistic nature and for professional use in teaching and specialisation in artistic crafts. From this moment on the Conventino became entwined with that of numerous artists and craftmen, a site of great artistic and intellectual ferment. After that, in recent period, it became finally property of the Municipality.

It was clear, from the beginning, that the building had to conserve and promote its <creative> vocation not only because it is placed in the natural art district but because its history.
Currently, the intention is to plan and promote cultural, craft and artistic initiatives that contemplate the history of the city, its prerogatives and its vocations, looking to tomorrow and to the new generation in the respect of the mission of the economic development department - strategic sector of the Municipality that is to promote economy and culture and ensure the historical art enterprises.

The SAM/Vecchio Conventino is really new: the great opening has been at the end of April of this year in the occasion of the start meeting of the European project IN HAND - Innovative Handicraft leaded by the Fondazione di Firenze per l'Artigianato Artistico (the same association that manage the SAM/Vecchio Conventino, chosen by the Municipality of Florence) whom member are Municipality of Florence, Province of Florence, Commerce Chamber of Florence and CNA and Confartigianato (Trade Unions)

Strictly link to the work's craft, it is the educational and communicative itinerary unwinds through the corridors of the first floor of the Sam space: the itinerary of knowledge, considering that Sam is a space where workshops of craftsmen and artists exist side by side.

The creative incubator is thus the idea to give space to the new economy considering the historical one and in the respect of that: help people/artist/worker to find a "comfortable" place with the typical services of spin off incubator. Considering the artistic theme and the craft, the educational side is very important: that is why is on study the project to promote special knowledge itinerary (with stage and study) accredited and approved by the Tuscany Region and to co-organise different and specialised advanced courses with the Province of Florence (the official responsible for the European Social Found).

2.6. Krakow

1. Main Characteristics of Innovation

The Kraków Metropolitan Area has well-developed innovation resources. Kraków is one of the most important academic centres of Poland and one of the leading national centres of modern and innovative economy. The majority of tertiary schools of the Region are concentrated in Kraków, and Kraków's colleges and universities have their external faculties in neighbouring smaller towns, e.g. in Tarnów, Nowy Scz, Chrzanów and Nowy Targ. 7.6% of all Polish tertiary schools are located in the Małopolskie Region (there are 16 administrative Regions in Poland). Those schools educate more than 207,000 undergraduates and more than 4,000 doctoral students. In respect of the expenditures allocated to research and development and the number of college students, the Region occupies the second position in Poland.

Table 1. Tertiary Education in the Małopolskie Region

	Małopolskie	Region's Share in Poland (%)
Number of tertiary schools (state-owned and private)	34	7.7%
Total number of students	207,000	10.5%
Total number of graduates	34,302	8.8%
Academic teachers	12,206	12.3%

Research and development activities are conducted in the Małopolskie Region by 96 units:
- 31 research and development units, including 12 run by the Polish Academy of Sciences;
- 6 service units;
- 43 development units;
- 16 tertiary schools.

The largest state-owned tertiary schools located in the Kraków Metropolitan Area are:
- Jagiellonian University in Kraków/*Uniwersytet Jagielloński w Krakowie*
- Jagiellonian University Medical College/*Collegium Medicum Uniwersytetu Jagiellońskiego*
- AGH University of Science and Technology/*Akademia Górniczo-Hutnicza im. Stanisława Staszica*
- Tadeusz Kościuszko Cracow University of Technology/*Politechnika Krakowska im. Tadeusza Kościuszki*
- Cracow University of Economics/*Uniwersytet Ekonomiczny w Krakowie*
- Agricultural University of Cracow/*Uniwersytet Rolniczy im. Hugona Kołłątaja w Krakowie*
- Pedagogical University/*Uniwersytet Pedagogiczny im. Komisji Edukacji Narodowej w Krakowie*
- Academy of Physical Education in Kraków/*Akademia Wychowania Fizycznego im. Bronisława Czecha w Krakowie*
- Academy of Music in Kraków/*Akademia Muzyczna w Krakowie*
- Jan Matejko Academy of Fine Arts in Kraków/*Akademia Sztuk Pięknych im. Jana Matejki w Krakowie*
- Ludwik Solski State School of Drama in Kraków/*Państwowa Wyższa Szkoła Teatralna im. Ludwika Solskiego w Krakowie*
- The Pontifical Academy of Theology in Kraków/*Papieska Akademia Teologiczna w Krakowie*

2. Role of Innovation in Strategic Documents

Innovation and research and development activities belong to the priorities of the Małopolskie Region. The records which regulate the significance of innovation and research and development are taken into account in the Region's main strategic documents:

Małopolskie Regional Spatial Plan

The records of the Regional Spatial Plan relating to innovation and education comprise the following, e.g.:
- Maintenance and increase of the leading role of Kraków as an academic and research and development centre, with the dominating potential in the Region,
- Expansion of interrelationships between tertiary schools and research and development units and entities involved in the transfer of technologies,
- Development of teaching and student facilities in all the schools.

Through the following:
- Completion of the construction of Campus III of the Jagiellonian University, with a Technology Park and the buildings of the Polish Academy of Sciences and the Pontifical Academy of Theology,
- Construction of a Congress and Exhibition Centre of the Cracow University of Technology in the Czyyny Borough,
- Placement in Kraków of an institution coordinating the activities in the area of technology transfer on a regional level.

Spatial Purposes:
- Coordination of the activities in the areas of technology transfer and innovation on the regional level and co-operation with national and foreign organizations,
- Actions to make Special Economic Zones more dynamic,
- Supporting innovative activities and projects.

Małopolskie Regional Development Strategy

The Strategy is carried out within nine regional development policy areas, including Area II – Regional Opportunity Economy, where the purpose of activities is competitive, open and innovative economy. As part of that Area, the policy direction was indicated: development of innovation and modern technologies. The programme assumptions and the anticipated actions included the following:
- Preparation of a programme of expansion of financial support instruments for the development innovation and modern technologies,
- Building of a structure for the implementation of the programme, taking into account co-operation with social partners,
- Preparation of revisions of the educational curricula in order to adopt them to the requirements of developing modern and innovative regional economy.

Małopolskie Regional Innovation Strategy

That document contains the most important activities which will allow to attain a competition level similar to that of other European Union member countries. As the main direction, it was proposed to use the existing potential by setting up a network of contacts between the existing entities of the Regional Innovation System. A Consortium Agreement was drafted,

with a joint strategy of four universities: Jagiellonian University, AGH University of Science and Technology, Cracow University of Technology and Agricultural University of Cracow, providing for co-operation in the following areas: biotechnology, computer science, product quality and competitiveness, environment shaping and protection in the context of sustainable development, nanotechnology, new technologies in medicine and renewable energy resources.

3. Institutions and Instruments Supporting Innovation

Institutions

The Małopolska Agency for Regional Development S.A. (MARR S.A.) established in 1993, carries out activities contributing to the comprehensive development of the Małopolskie Region. MARR S.A. supports local initiatives, provides financial support for enterprises and programmes aimed at the Region's development, initiates and promotes entrepreneurship, is involved in investment promotions and operates for the benefit of environmental protection. The statutory objectives of MARR S.A. are fulfilled according to the non-profit rule. The Agency maintains close relationships with central and local-government authorities, as well as national and international institutions of similar character.

Financial Instruments

The instruments intended to implement innovation, financed from the European Regional Development Fund (ERFD):

National

- Infrastructure and Environment Operating Programme (financed from ERFD),
- Innovative Economy POIG Operating Programme (financed from ERFD),

To support innovative entrepreneurs, a technological credit was introduced. It is a financial instrument to be implemented under the Innovative Economy Operating Programme. The Bank Gospodarstwa Krajowego will offer technological bonuses to small and medium-sized businesses to repay parts of the technological credit principal, granted by the co-operating commercial banks for the execution of technological projects.

Regional

- Małopolska Regional Operating Programme (financed from ERFD)

The Małopolska Regional Operating Programme includes two tasks intended to finance projects that concern innovation directly.

Priority 1: The conditions for the development of open society, based on knowledge, intended to improve the access to education and the development of information society. As part of this Priority, subsidies will be granted in two areas: capital investments in the tertiary school and continuous education infrastructure (the allocated resources amount to 97 million euros) and the capital investments in infrastructure and technologies serving the development of the information society (66 million euros have been allocated).

Priority 2: Regional Opportunity Economy. The basic goal of that Priority is to strengthen business competitiveness. The anticipated activities include the development and increase of business competitiveness (the allocated resources amount to 140 million euros) and the support for research commercialization (21 million euros).

4. Management

4.1. Implementation of the Regional Innovation System Project

The goal of the Project is to implement the "Małopolskie Regional Innovation Strategy for 2008-2013" (RSI) by creation of the RSI monitoring and evaluation system allowing to evaluate the regional actions related to the implementation of a widely understood innovation and indication of new activities. The Project is intended to create a "platform" of co-operation between various organizations in the Region: businesses, colleges, research and development units, business support institutions, and regional authorities.

4.2. Creation of the Special Economic Zone

The Special Economic Zone, established by the Regulation of the Council of Ministers of 14 October 1997, was designed to operate from 1998 to 2017. The Kraków Special Economic Zone consists of 19 subzones on the area of 17 municipalities. The land designed for capital investments in Krakow Metropolitan Area is situated in the following subzones: Krakow □ródmie□cie, Krakow – Podgórze, Kraków – Nowa Huta, (Sendzimir Steelworks), Bochnia, Dobczyce, Słomniki, Zabierzów, and Niepołomice. The Kraków Special Economic Zone offers to its investors primarily greenfield land and office space to lease.

The Zone founders recognized the following essential objectives:

- Development of the high technology industry, utilizing the research and development potential of the Kraków's tertiary schools and research and development institutes.
- Creation of favourable economic, infrastructural and organizational conditions for the local and foreign investors who declare the use and expansion of the research and development potential existing in Kraków, mainly in the area of advanced technologies, academic institutions and business support organizations.
- Supporting grassroot initiatives of entrepreneurs and scientific institutions whose goal is to ensure effective methods of improving co-operation and exchange of ideas and technologies. Clusters are one of the co-operation methods. Their operation is initiated and coordinated by the Kraków Technology Park. Until now, the Małopolski Information Technology Cluster and the European Game Centre have been established. Also, the Design Zone is planned to be opened. The objectives of those initiatives include creation of the co-operation network for businesses, local governments, colleges and businesses support organizations.

Kraków Technology Park

The Krakowski Park Technologiczny Company manages the Zone, with the surface area of 416.67 hectares. It also has the status of a technology park as the only one in Poland. The shareholders' capital amounts presently to PLN 2,175,000. The Company's share structure is the following: State Treasury (government): 52.2% votes, AGH University of Science and Technology: 10.7% votes, Cracow University of Technology: 10.7% votes, Jagiellonian University: 10.7% votes, Małopolskie Region: 10.7% votes, Kraków Municipality: 3.6% votes, Mittal Steel Poland S.A.: 1.4 % votes. The Kraków Technology Park (KPT) supports by its function the technological development of the Małopolskie Region and general entrepreneurship, and promotes innovation and new technologies. In the Park, there is the Technology Incubator supporting academic spin-offs. The KPT also initiates creation of new co-operation networks between businesses and the local governments. Such companies as

Motorola, Comarch, RR Donnelley, Ericpol, ACS, M.A.N or ABB have placed their businesses in the KPT. Kraków may also boast the only modern technology centre for the motor industry, the Delphi Technical Centre, in the Region.

Other Parks

LifeScience UJ. Jagiello□skie Centrum Innowacji Sp. z o.o. (JCI) is the entity which manages the LifeScience Park in Kraków, designed to facilitate co-operation of the companies operating in the Life Science sector, with the use of the Jagiellonian University's resources. The Company is also involved in the promotion of the city of Kraków as place of the development of that particular science, offering high class laboratories in the LifeScience Park under construction, which are designed for commercial research in the areas of biotechnology, biomedicine, chemistry, biochemistry, pharmacology, biophysics and physics. In addition, JCI is the administrator of the LifeScience Cluster in Kraków, which constitutes a co-operation network of businesses and organizations that have the largest in Poland scientific potential in the Life Science industry. The Jagiellonian University is the sole shareholder of the Jagiellońskie Centrum Innowacji Sp. z o.o.

Park Technologiczny Politechniki. The Park is the place where the Copernicus business and innovation centre will be located. It is mainly a complex of buildings designated for sale or lease for office, research, and production purposes of the advance technology companies.

4.3. Clusters in the Małopolska Region

- Małopolski Information Technology Cluster
- Małopolski Information Technology E-Cluster
- LifeScience Kraków Cluster
- Multimedia and Information System Cluster (a multi-cluster collecting a number of companies from the Małopolskie Region)
- Małopolsko-Podkarpacki Pure Energy Cluster (40 partners from the Regions of Małopolskie, Podkarpackie and Silesia)
- "Minatech" Interregional Innovation Technology Cluster (integrating the regions of Małopolskie, □wi□tokrzyskie, Podkarpackie and Silesia)

Those Clusters are mainly involved in supporting the development of innovative technologies by the creation of co-operation networks among businesses, municipalities, colleges, universities and business-support organizations.

4.4. Presence of the Organizations which Operate as the Centres of Technology Transfer, Controlled by Universities

CITTRU Centre of Technology Transfer and Technology of the Jagiellonian University
CITTRU UJ is the team of people involved in the research and commercial co-operation. Owing to their competences and experience, they have completed or work on a number of Projects. The Centre offers training (e.g. on the transfer of technology and structural funds), patents, a network of national and international contacts, and business and financial consultancy. CITTRU obtained more than one million Polish zlotys for the Jagiellonian University from various types of funds (in 2005). The Innovation Database contains more than 1,000 University experts.

CYFRONET AGH Academic Computer Centre
CYFRONET assures access to the international computer network, computing resources and other information services to the research entities and educational organizations. The Centre

conducts research in the area of the use of large capacity computers, computer networks and information and tele-information services. The Centre works on analyses and implementation projects in the areas of high technologies and the technologies which can be applied in the IT infrastructure design, construction, and operation. It is involved in consulting, expert opinions, training and human resource improvement.

Technology Transfer Centre of the AGH University of Science and Technology - supports innovative solutions in the terms of technology and knowledge. It cooperates in areas of knowledge marketing, entrepreneurship environments and operating and financing of technology transfer. It facilitates technology contacts among businesses and researchers from AGH University of Science, organizations, creates partnership networks

Technology Transfer Centre of the Cracow University of Technology supports innovative solutions, implements international projects designed for the development of sciences and increasing of the Polish businesses' competitive edge. It facilitates technology contacts among businesses and research organizations, creates partnership networks, and helps to prepare applications for the Framework Programmes and Structural Funds. The CTT PK also fulfils the role of the Regional Contact Point for the Framework Programmes, e.g. The European Regional Information Centre for Scholars. CTT PK coordinates the Southern Poland Innovation Transfer Centre (IRC), and presently also the Southern Poland Enterprise Europe Network Consortium. Since 2004, CTT PK has been accredited by the Polish Agency for Entrepreneurship Development in the areas of information, training, consulting, and pro-innovation services for small and medium-sized businesses.

4.5. Research and Development Units of International Corporations:

1. ABB Research Centre in Kraków
2. Motorola Software Center in Kraków
3. Delphi technical Centre in Kraków
4. IBM Software Laboratory
5. Pliva Research and Development Centre

4.6. Other

We should also point out that the Małopolskie Region is the region where economic tertiary schools plays important position in the research and development areas, so it enjoys excellent conditions for the development of market services. Employment is regularly increasing in such sectors as commerce and repairs, financial services, transportation, and warehousing, real-estate agency services and all services relating to business operations. The last sector is developing especially well in Kraków where a growing significance is noted in the sector called Business Processing Offshoring. In 2006, the city was the place of 12 large corporations, such as Bayer, CapGemini, Ernst&Young, IBM or KPMG.

2.7. Lille Metropole

1. Main characteristics of innovation – existing or needed - in the city-region

Research and innovation in Lille Metropolitan Area

Lille Metropolitan area is a cross border territory marked by its industrial past namely in the textile, steel and mining industries. From the 60s till the 90s the territory underwent a long economic depression and a long-term conversion process. It has been starting to recover since then but the path of this recovery is clearly not fast enough to bring back a full prosperity.

The French and Belgian authorities are working on the economic change of the territory in order to move from a productive economy to knowledge economy.

150 000 students are studying in 7 universities (Lille 1, Lille 2, Lille 3, Université d'Artois, Université de Valenciennes , KULAK in Kortrijk, and the Catholic university) and « grandes écoles » (prestigious higher education institutes). Some of them have a national or an international reputation: for example EDHEC (business School), the school of journalism (Ecole Supérieure de Journalisme de Lille), ENSAM (Ecole Nationale Supérieure d'Arts et Métiers - higher education engineering school), etc. Some of them are very specific and are related to lines of business developed in the Lille Metropolitan area like: Supinfocom (digital and image) and ENSAT (textile).

However, despite the number of research and training centres and laboratories, activities related to research in the Nord-Pas de Calais region represent only 0.7 % of the GDP, which is below the national average (2.1%) and the Lisbon objectives (3%).

The public research efforts (0.38% of GDP) as well as the private investments (0.32%) are not sufficient to catch up the gap. (To compare: the Rhône-Alpes Region: 1.75 %, Catalogna: 0,86%, Lombardie : 0,86%, and Baden Wuttenberg: 3,08%).

The Belgian part of the Lille metropolitan area presents contrasted situation: R&D activities are quite important in Flanders (2.12%) but they are below the Lisbon objectives. The Walloon part has nearly no R&D activities at all.

Innovative sectors in the Lille Metropolitan Area

Some public and private initiatives allowed to the clusters structuring on the territory.
On the French side:
- Competitiveness poles (pôles de compétitivité) are clusters recognised and funded by the State
- Centres of excellence (pôles d'excellence) are clusters identified and initiated by the local authorities (and especially Region Nord-Pas-de-Calais)
On the Belgian side:
- Clusters have been promoted by the Flemish and Walloon Regions

Competitiveness poles

In 2005, the French Government certified 5 competitiveness poles on the Lille Metropolitan area (4 poles with a European scope, 1 pole with a worldwide scope). They were defined as:

"the pooling of companies, higher education schools, and public or private research institutions within the same territory. They are supposed to work together in synergy in order to implement innovative economic development projects" on the themes:

- Textile, competitiveness pole **Up-Tex** (chemistry / materials / textile)
Textile industry is one of the symbols of Lille Metropole's economic activity. In spite of job losses, the textile sector as a huge potential for development based on its technical assets and its economic weight (SMEs network, comprehensive training system, professional organisation, Business Parks for innovative textile etc). This sector still represents 15 000 jobs.
The project Up-Tex is defined as a platform of competencies in the field of new materials (polymeric, textiles of the future) and high performance textile process.

- Mass retailing and distance sailing, competitiveness pole **PICOM**
As an answer to the textile crisis, numbers of local companies have developed mass retailing (general as well as highly specialised) and distance sailing activities, creating major Companies (that have an international scope): Auchan (Alcampo-Opole), la Redoute, Décathlon, etc. PICOM is build around European leaders in mass retailing and distance sailing based in and around Lille (three of French top five). Technological and organisational solutions have to be found to ensure the correct operation of each link of the processing industry: optimisation of the logistic chain, development of the customer relationship, development of e-services ...
"The competitiveness pole PICOM is the first step of a collective action gathering companies, research / university / higher education school, and local actors. They aim at establish in the next 10 years in Lille Metropole the research centre and the international capital of the future mass retailing and distance sailing."

- Materials & Applications for a Sustainable Use, competitiveness pole **MAUD**
Based on major industrial actors and R&D centres in the fields of the art of preparing and presenting food, and vegetable chemistry, the pole targets the relation between food and materials for new application.
Several worldwide scope companies specialised in innovative materials for internal / domestic use are located in Lille Metropolitan area (Arc International – world leader in tableware; Roquette Frères – French producer and fourth world producer of the starch industry). In 2007, the competitiveness pole MAUD represents 15 000 jobs and has a turnover of 475 Millions Euros.

- Innovative transport system, competitiveness pole **I-trans**
The aim of I-trans is to become the first European cluster for innovative transport system: design, construction, competitive management, and maintenance of railway systems equipment. I-trans is a worldwide scope competitiveness pole. Several global companies are located in the Lille Metropolitan area and more particularly in the area around Valenciennes: Toyota, Bombardier, Alstom. This competitiveness pole gathers more than 40 000 jobs and has a turnover of 1 444 Million Euros. Nevertheless, at the moment I-trans companies work mainly on production (and not design).

- Health, competitiveness pole **Nutrition Health Longevity**
Based on industrial and scientific resources in this field, the pole wants to contribute actively to the development of the European markets of 'food health' through two paths: metabolic and cardiovascular diseases and the diseases of ageing.
This competitiveness pole developed around the Lille Regional General Hospital (CHRU) and the University (1st CHRU de France) gathers 9 000 jobs and has a turnover of 320 Million Euros.

Some structures mainly "associations" were implemented for each competitiveness pole to lead, to coordinate and to encourage projects.

A steering committee was created for each pole and it is composed of representatives from institutions (local authorities), economic and research actors. A scientific committee assists the steering committee by giving advice about the projects which would like to be admitted.

In 2008, the French State has evaluated the poles. The conclusions concerning Lille Metropolitan area competitiveness poles were the following:

- MAUD has to be strongly reshaped before the end of 2009
- Up-Tex has to improve some of its actions
- Nutrition Health Longevity and PICOM have reached their objectives
- I-Trans could become a worldwide scope competitiveness pole – I-Trans achieved all its objectives

There was a real synergy of public and private structures / organisms to define innovative projects.

Walloon clusters

Wallonia works on the cluster development for its whole territory. Clusters are defined by the Walloon Government as a way to organise the productive system initiated by companies (with a possible participation of research centres) and defined by a cooperation framework on related activities, on a voluntary development between complementary companies, and promoting a common vision of development.

The difference with the French competitiveness poles is that Walloon clusters appear not to be linked with a specific area but to concern R&D and innovative businesses in the whole Region.

The Walloon part of Lille Metropolitan area seems not to be much concerned by the process. There is no research centre on the IDETA territory that is likely to join these clusters.

Flemish clusters

A similar process is being implemented by the Flemish region.
Kortrijk and the area have been recognised as the leader of a cluster on design activities.

Centres of excellence at Regional Level

The « clusters » which carries a seal approval of the **Région Nord-Pas de Calais** are regional centres of excellence. They are registered in the "Schéma Régional de Développement Economique" (SRDE) – Economic Development Regional Plan. This Regional Plan dealing with economic development policies is required by the law on civil liberties and local duties (13 August 2004) that permits Regions to have a direct control of the State funds for 5 years.

The Nord-Pas de Calais Region proposed to its partners (Departments, Chambers of Commerce, inter-municipality structures) to develop an economic policy responding to the main regional challenges for the next 10 years.
On November 24th, 2005, the Regional Council approved the Schéma Régional de Développement Economique.with a broad majority.

The goal of centres of excellence identified by the document is to encourage partnerships between companies' research centres, and training organisms to help the development of Regional SMEs / SMIs.

The leadership of each centre of excellence is given to a "voluntary" Local authority where a significant number of companies are located. The development / working programme is defined in close link with the concerned companies, universities, expert, and scientific centres.

Ten centres of excellence were identified in the Nord-Pas de Calais region. Four already exist among which three are located in the Lille Metropolitan Area, they are dealing respectively with: plastics processing, Image, and Logistics.

Centres of excellence (development poles) initiated by agglomerations

Some agglomerations work on the implementation of new clusters. For example several development areas specially dedicated to innovative activities development are registered in the Lille Métropole Master Plan. Several of these projects are clearly recognised in the National or Regional innovation policies.

- The urban development zone (ZAC – Zone d'Aménagement Concerté) **Eurasanté**: the development of this area played a decisive role in the creation of the competitiveness pole Nutrition Health Longevity.
(Eurasanté park: a theme-specific science park focused on biology - healthcare; located to the south of Lille, right in the heart of one of the largest hospital sites in Europe and relying on the Regional University Hospital Centre and the faculties of medicine and pharmacy.)

- The "image pole" on the **Site de l'Union** – This project became one of the central elements of centre of excellence dedicated to image. Two other territories in the Lille Metropolitan area are also part of the development of activities related to image: the Communauté d'Agglomération Porte du Hainaut (site of Wallers Aremberg) and Valenciennes Métropole.
(Site de l'Union (Roubaix, Tourcoing, Wattrelos) - At the centre of the Franco-Belgian agglomeration. Covering roughly 70 hectares, this former industrial site has undergone extensive changes in recent decades as a result of industrial crisis. It involves an economic development project based on modern companies involved in textiles, graphic arts and image-based activities and on the emergence of new craft, industrial and tertiary activities. Key research, training and exchange facilities are helping to boost the site's economic pulling power: the Centre Européen du Textile Innovant (CETI), a textile teaching and learning centre, an 'incubator' and specialist image-based services. This is also regarded as a symbolic renewal scheme with green space and housing projects.)

- Euratechnologies is a development area dedicated to Communication technology-based activities. This project becomes one of the main centres of innovation in Lille Metropole. Information and Communication Technology are identified by the Nord-Pas de Calais Region as a major activity for the whole Region development (even if it not appears as a centre of excellence).

Innovation development in Lille Metropolitan Area

The cooperation process of Lille Metropolitan area works on the definition of a "way of working" aiming at developing innovation and research. Several sectors on which projects could be set up, were identified :

- multilingualism
- design

LA officers associated with players from: universities and research, civil society, and companies, have identified several action trails. These projects were then presented and approved by the political leaders.

The partners are now working on the identification of actions to be developed in priority; this could be the starting point for the development of operational projects in medium or long term.

Besides, an expertise work concerning research and innovation within the Lille Metropolitan Area was done in 2007 by Jacques Duveaux. This work identified several actions aiming at developing innovation in the Lille Metropolitan Area.

THE IMAGE POLE (CLUSTER)

This cluster is the result of a working group set up by members of the Digiport team (Services centre in information and communication Technologies of Lille métropole and Nord-Pas de Calais Region), and also by the following partners: DAE, DRESTIC, DAC, LMCU, SAEM Euralille, SEM Ville Renouvelée, CCI du Valenciennois, Communauté d'Agglomération de la Porte du Hainaut, Valenciennes Métropole, Université of Valenciennes, Pôle Numérique Régional.

The Nord-Pas de Calais Region have 4 « image » fields:
- Cinema and television (with more than 60 movies produced every year and 600 actors and technicians)
- Video game (representing 500 jobs)
- Animation movie (representing 500 jobs)
- Computer animation and virtual worlds (100 jobs)

Theses fields lean on a professional network gathering hundreds of companies, 12 schools counting 1000 students, 6 laboratories and about fifty researchers.

This cluster is developed on 3 territories which work with each other: "Lille Métropole", "Valenciennes Métropole" and the "Porte du Hainaut".

The aim of the "Image Pole" is also to build a strong partnership with the Belgian part of the Lille Metropolitan area (Wallonia and Flanders) but also with other European regions.

2. The role of public actors in development these initiatives
3. Institutional background

Policies in this field are developed as common initiatives from the different players (companies, academic, and the different institutional and local levels).

Innovation which is part of economic development and / or academic activities requires the participation of the different political levels: the National Government (academic), the Nord-Pas de Calais Region (economic development), and inter-municipality structures (economic development).

The National Government

The French State, through its offices in the region, funds (for a part) the competitiveness poles and gives them some governance and development objectives.

This level is also an active player in innovation through its funding and participation to the research programmes of universities and research centres. CNRS (Centre National de la Recherche Scientifique), a national government agency is coordinating research programmes from the different public research institutions. The future autonomy of universities will give them more freedom to define their actions and research programme. In addition, a huge financial investment should be done soon to redevelop the universities of Lille and – on a lesser extend - Valenciennes.

Within the framework of the French State current reflation plan (plan de relance), the budget of the « plan campus » (plan dedicated to investments in the most important French universities) was increased. Twelve projects will receive important funding to redevelop universities. The project « universités de Lille » (merging of the Lille three public universities) was ranked 11th and will so receive funding from the French State.

The University of Valenciennes although not being ranked in this process will also receive some funding as a "promising university".

The Nord-Pas de Calais Region

The Nord-Pas de Calais Region promotes innovation through elements which are part of the Regional Economic Plan.

One of the eight strategic axis is related to innovation development: "Put innovation, research and its promotion as a priority to accelerate the change / mutation of the regional economy."

To respond to this commitment, the regional council identified several actions as the implementation of financial tools / funding, technical tools, specific human resources (business engineers).

Some other strategic axis like axis 2 of the SRDE – "to structure the Region using the economic centres of excellence" – are part of the innovation development.

Finally, the Nord-Pas de Calais Region in partnership with Chambers of Commerce implements several structures that aim to develop innovation and Entrepreneurship. These structures are gathered through the name « Nord-Pas de Calais, la Créativallée ».
Their goals are to accelerate the economic change of the Region and to improve its image (from production to creation). To achieve its goal the Region sets up some technical tools: some structures as « je crée », the network for technology development in Nord-Pas de Calais, Nord France Expert, etc.

The inter-municipal structures

The inter-municipal structures take part in the development of innovative activities within the framework of their expertise "economic development" and their participation to the leadership of competitiveness poles or excellence centres.

Some agglomerations have sometimes created their own development structures like for example Eurasanté (Health) (Eurasanté is a structure dedicated to economic development as well as an urban development zone) or Digiport (ITC) for Lille Métropole Communauté Urbaine.

These last years, Lille Metropole has gained a new leading position for innovation development within the Lille Metropolitan area territory. The creation of new development agencies / structures in the other parts of the Lille Metropolitan area and specific initiatives from some Chambers of Commerce help the development of creative industries / activities in other parts of the metropolitan area. Some new innovation clusters are emerging (they are often identified as regional centres of excellence). Some fields rise at the same time in several part of the Lille Metropolitan area; it is the case for example of the "Image pole" in Lille Metropole, Porte du Hainaut and Valenciennes Metropole.

The inter-municipal structures are also leader (or participate to the development) of agencies implemented to develop the centres of excellence or the competitiveness poles.
These new structures can be:

- created especially for the new clusters (MAUD, Up Tex)
- developed on the basis of the previous organisation (Eurasanté became the lead partner of the competitiveness pole Nutrition Health Longevity)

4. Methods of governance

In order to obtain National and Regional funding local authorities developed partnerships with Chambers of Commerce, companies, and academics in order to identify concrete development projects.

In the Lille Metropolitan Area partnerships between private companies and public players exist in various ways. The existence of companies Head offices in Lille Metropole has helped the development of private / public partnerships. Employers represented by MEDEF* and businessmen (as individual) have been for a long time keen to participate in the definition of local policies. Even if local authorities tend to be governed by left wing coalitions, this wish has most of the time be recognised by them as an asset for the area as it is showing the commitment of the business community to the local development.

**: Medef - Mouvement des Entreprises de France or MEDEF (Movement of the French Enterprises) is the largest union of employers in France. It was formerly known as the Conseil National du Patronat Français or CNPF (National Council of the French Employers).*

Examples:

- The Comité Grand Lille is a totally informal body created in 1993 on the initiative of Bruno Bonduelle, a leading local industrialist. The idea was to provide an opportunity for civic and business to think strategically about the future of the city-region. The committee now brings together around 700 business and industrial leaders, academics, artists, NGO representatives, officers, and elected politicians. The committee has created several working groups on specific topics but meets every second month in plenary sessions in order to discuss and recommend possible actions to improve the area's image and position as a major European centre – actions in such fields as culture, tourism, education, entrepreneurship, and international partnerships.

The committee creates a link between business leaders (traditionally rather Christian Democrat) and local politicians (from different parties, but with a strong presence of socialists) on strategic ideas for the promotion of the city-region, focusing on common goals and not on political differences or the rivalries between individual municipalities. The committee also helps secure business support for various flagship events.
One of the committee's first actions was to put forward Lille's bid to be the official French candidate city for the 2004 Olympics. The bid had a powerful effect in bringing local leaders together around a common goal. Lille's selection as the French candidate greatly boosted local pride and reinforced the role of the Committee, even though Athens was eventually selected. Later, the Comité Grand Lille went on to promote Lille's successful bid to become European Capital of Culture in 2004.

- The Conseil de Développement was created in 2002 (Voynet law 1999) to favour consultation and citizen participation. It is composed of 150 unelected representatives from the civil society (associations, trade unions, business etc) and personalities from Lille Métropole but also from the neighbouring areas (Belgium and the Coal Mine area).
The Conseil de développement is providing advice and recommendations on issues that are being debated by the *Lille métropole* council. It is also promoting specific development projects in such fields as culture, employment, the housing market *etc*.
Since 2004, at the city region level, nine *conseils de développment* (from Lille Métropole and from the different agglomerations around Lille) are working together to promote specific development projects and support the Lille Metropolitan Area project.
In 2009, the Conseil de développement of Eurométropole Lille Kortrijk Tournai was created. Like the others, the Conseil de développement of Eurométropole Lille Kortrijk Tournai aims at favouring consultation and citizen participation but also at providing advice and recommendations on issues linked to the Eurometropole territory.

This partnership culture is not developed in such a way in the Coal Mine area mainly because of the small number of headquarters and economic leaders in this territory

2.8. Seville

A metropolitan area in a move towards knowledge economy

An important element of context is to be found in the evolution of the economic structure of Seville and, in a lesser extent, of its metropolitan area. During the last 20 years, Seville's economy, traditionally characterized by a limited weight of industrial activities, has experienced the emergence of what can be described as "items" of knowledge economy.

Important industrial and business development took place in sectors with strong technological content, with investments of solar energy world leaders Abengoa Solar and Schott Solar, European aeronautical consortium Airbus-EADS, Renault and other developments in the Cartuja '93 Technology Park (see Seville's contribution for the Brussels seminar). In the meantime, the development of advanced business-to-business services rose to reach in 2008 25% of the companies of the service sector.

With regards to education and research, one can underline the progression of R+D capacities and activities in Seville universities (University of Seville and University Pablo de Olavide). According to data from the University of Seville, the number of R+D project went from 9 in 2003 to 175 in 2007. In the "European Cities and Regions of the Future 2010-2011 Awards" of Foreign Direct Investment Magazine, a publication of the Financial Times Group, Seville has been ranked second among European large cities (this category includes cities with a population of between 500,000 and 1 million) in terms of human resources.

In this context, the challenge for public authorities is to consolidate, extend and sustain this trend, and convert Seville into a city of innovation and knowledge economy. This is actually the meaning of a number of pending and on-going projects.

Within the Spanish institutional system, the distribution of competences and of public financial capacities places regional governments (Comunidades Autónomas) at the forefront of public support to economic development and innovation, and Andalusia is no exception to it. However, municipalities are allowed to take initiatives on their own. In this perspective, Seville's most significant actions stems from the municipality's urban integrated development agency, Sevilla Global, and from collaborative projects with important stakeholders such as Universities, the Regional government and companies. In the current situation, there is no concrete metropolitan approach on innovation and knowledge economy issues, as no real common political will has yet emerged.

Support to innovation, a strong competence of regional public authorities

In Andalusia, **Agencia IDEA**, the regional agency for development and innovation, is the executive entity of the Junta de Andalucía's related policies. Since, the instrument of an active policy for economic and industrial modernization based on key words such as knowledge economy, R+D+i, cluster development.

Based on the traditional development agency model, Agencia IDEA has progressively focused its intervention on innovation issues while increasing its capacities. As a piece of evidence of this process, the agency's staff went from 289 to 328 people between 2005 and 2008.

Actions taken by the agency in the field of innovation are clearly oriented towards support to companies. Basically, 4 types of initiatives can be underlined:

- Management of subsidy schemes and technical support to applications to other R+D programmes and funds, with a particular focus on sectors considered as strategic at regional level (aeronautics, agro-industry, biotechnologies, environment and energy, etc);
- Financial support to private industrial investments, especially for projects with high technological content in designated strategic sectors;
- Management of regional projects, such as cooperation networks between agents of the Innovation-Science-Enterprise system;
- Development of industrial and technology infrastructures (usually in cooperation with municipalities, which typically provide the productive land) and impulse of regional clusters;
- Technology watch and benchmarking.

Innovation support initiatives from Seville Global

Created in 2000 by the municipality of Seville for economic promotion purposes, Seville Global is nowadays an urban integrated development agency, with 6 areas of intervention: Business information and external promotion, Business incubation, Revitalization of business parks, Training and employment, Business systems, and **Innovation and enterprise**.

The agency's activities in the area of Innovation and Enterprise combine subsidy programmes, advanced business services and the promotion of the participation of local companies in European cooperation projects.

The "Seville Open Technology" programme

The "Seville Open Technology" programme aims at promoting the integration of ICT tools in the management systems of local SMEs companies. It consists of a financial support scheme for investments in e-business solutions, which is co-funded by the Regional Government.

As part of the first phase of the programme, a call was launched in 2006. 34 projects have been supported, for a total investment of 403,453€, 65% of which were brought by the programme grants.

The current second phase of the programme, opened with the organization of a call in June 2008, is focused on customer-relationship management solutions. Financial aid can reach 65% of expenditure for projects with a maximum budget of 15,000€.

As a complement to the grant scheme, Sevilla Global has set up a telematic service in order to ensure the access to adequate information and the correct design of ICT strategies (for management goals, e-commerce and customer-relationships) among SMEs. The so-called "E-Business for SMEs" service consists of a self-diagnosis program and information on potential ICT service providers. The ambition is to put SMEs in the best conditions for the implementation of ICT solutions.

The Innovaempresa Programme

Innovaempresa was a one-semester postgraduate programme developed between 2003 and 2007 by Sevilla Global in collaboration with the EOI (School of Industrial Organization) Business School and co-funded by the national Ministry of Industry, Tourism and Commerce and the European Social Fund. The basic objective was to train researchers willing to launch

business projects and entrepreneurs who sought to develop innovative or technology-based activities.

The Minerva Program

This initiative, with an initial budget of about two million euros, was launched in 2007 with the creation of a pilot R+D service platform for mobile technologies. This infrastructure, developed in the Cartuja '93 Technology Park, has converted the park into a test bench for the development of last generation applications and services based on mobile technologies.

The project has given way to the participation of more than 90 companies and 30 research groups from Andalucía in more than 40 investigation lines. In 2009, about ten projects were in practical experimentation phase.

As member of the project public-private partnership, which includes the Regional government, the University of Seville, VODAFONE, the Andalusian Asociation of Research and Industrial Cooperation (AICIA) and the Andalusian Association of ICT Entrepreneurs (ETICOM), Sevilla Global's main role is to carry out dissemination activities on the project and its results at national and international levels and also among local companies.

Participation in the Urbact's UNIC network

The Urban Network For Innovation in Ceramic (2008-2011) is a network of 9 European emblematic "ceramic cities". On behalf of the municipality of Seville, the Sevilla Global Agency leads the working group on the promotion of innovation in the sector. In their exchange of experiences and in the perspective of the elaboration of Local Action Plans, the partners look into the different forms of innovation: in materials and products, in processes and restoration techniques, access to new markets, etc.

The municipality of Seville as promoter of the development of innovation districts

In 2001, the development and creation of innovation districts was appointed as one of the top priorities for the modernization of the local production system in the first "Sevilla 2010" Strategic Plan. The concept of "**innovation district**" is to be understood as a production space that concentrate technology activities and facilitate knowledge transfers between academia and the business community.

In addition to the Cartuja '93 Technology Park (see Seville's contribution to the Brussels seminar), which experienced a significant growth in terms of number of companies during the last decade, three developments should be mentioned:

- The establishment of the so-called "**Biotecnópolis**", a new Science and Technology Park, specializing in biotechnologies, in the immediate surroundings of the campus of the Pablo de Olivade University is being promoted in the perspective of collaboration between the university, the Regional Government and the municipalities of Seville and Alcalá de Guadaíra.
  Currently, the Pablo de Olavide University is carrying out a first development of the facility inside the perimeter of the university.

- The joint development by technology group Abengoa and the municipality of Seville in the southern part of the city of the **"Palmas Altas" Campus**, inaugurated in 2009.
  The architectural complex, an avant-garde project designed by Pritzker Prize winner Sir Richard Rogers and a European landmark in sustainable building, home of Abengoa's

headquarters, is intended to become a leading international R+D+I centre. The objective is to attract other companies that collaborate with Abengoa, as well as other entities from the academic and training sectors and from public administration.

- The "**Media Park**" project (Ciudad de la Imagen y de la Comunicación) consists of the edification of a specialized business park which intends to facilitate the concentration of entities linked to the audiovisual industry, which are currently spread in different sectors of the city, and the attraction of new actors.
  In the beginning of 2010, the municipality of Seville, which acts as urban planner and promoter of this project, approved the partial plan of the facility.

In parallel to the establishment of innovation districts, the Seville 2010 Strategic Plan included the development of **Networks of innovation and knowledge (RICO)** in strategic economic and industrial sectors, in order to foster exchanges between the scientific, technology, production and training systems. As a first move, priority has been given to aeronautics, the automotive industry, the flamenco music industry and the craft industry. Current assessments of this priority point out that in spite of some concrete initiatives, the exchanges between actors are not sufficient to consider the central objective as completed.

3. SYNTHESIS OF THE THEME "GOVERNANCE REGARDING THE KNOWLEDGE ECONOMY, RESEARCH & EDUCATION AT CITY-REGION LEVEL"

Contemporary studies on innovative processes make use of a range of scales, from the global to the regional and local. In addition, network-based approaches have introduced a non-territorially bounded dimension to studies of innovation. Our investigation has pointed to the importance of city-regional interconnections. This viewpoint seeks to build upon such insights suggesting that greater attention should be given to territorial connections in studies of innovation. At the same time, extra-local interconnection is extended beyond the globalisation of research and development, especially between trans-national corporations, which is the obvious environment of the innovation issue these days.

There have been many efforts made to regenerate cities as the basis for the construction of new institutional alliances and policy networks supported by a series of urban-based initiatives. Successive governments premised their intervention on the assumption that cities (and particular parts thereof) were the most appropriate geographical level around which to organise policy intervention. In pursuing this city-based agenda, the policies are themselves instrumental in constituting the city as an object of policy: a problem in need of a solution.

It explores regeneration policy and the political implications of the shift away from 'marginal localism' towards an alternative model of 'city-based regional actions'.

1/ Lessons learned from the case of Brno

The municipal government of Brno is very active in making and implementing city strategy in order to realise its vision of being an intellectual centre of innovation within the European region. Efforts of the city are combined with the activities of the South Moravian Region, namely in the framework of the South Moravian Innovation Centre. It obtains financial support, and provides advice, contacts and space for start-up companies, as well as other services covering the regional area as a whole.

Urban development projects are implemented mainly in the Brno industrial zone, the Czech Technology Park Brno and the Masaryk University Campus in Brno–Bohunice. The Brno industrial zone is focused on investments in the processing industry, strategic services, and technological centres. The Czech Technology Park Brno has been established for high-tech industry to generate synergy between research, development, and business. The university campus focuses on education and research, especially in the field of biotechnology and preclinical research.

Lessons learned from the case relate mainly to the involvement of different actors from the area with greater capabilities and interests in innovation. Particular examples of activities are presented here below.

1.1. Innovation centres and project orientation development

Although innovation centres are initiated mainly by public funds, development and research activities are based on different projects from the EU and any other private money. Among the latter, an example of private funding is the New Technologies for Mechanical Engineering (NETME) project, which was presented in the seminar. Nevertheless, the whole initiative is

involved in the integrative Brno City development plan. Its implementation is under the umbrella of Brno University of Technology.

The research project called the Central European Institute of Technology (CEITEC) is the largest planned investment in research and development. Brno's position in the field of innovation technologies should be consolidated and significantly improved through projects like these. The CEITEC is a unique trans-regional project being prepared in the Brno area. The project is based on an idea common to universities, Academy of Science Institutes and the departmental research institutes in Brno. The CEITEC has established itself as a centre of scientific excellence dedicated to research and development in the areas of biotechnologies and advanced materials technologies. The project meets the need for concentration and increases R&D competitiveness in the Czech Republic. Simultaneously, the utilisation of outcomes is emphasised. The project aspires to be funded by the European Research and Development Fund through its Research and Development for Innovations Operational Programme.

1.2. Creative clusters

An example of creative clusters is BRNOPOLIS, also introduced in the seminar. Brnopolis is a non-profit project for local people in creative professions, who share their experience and interest in international city development. It includes moderated multiblogging on the web and the open coffee face to face informal meetings that are a part of the network of events held in over 80 cities around the world. It is important that neither formal institutions nor municipalities are involved in the management of the knowledge economy in general. However, universities and especially motivated local governments take part in projects relevant to this issue.

2/ Similarities and differences between partner cities

There are different forms of governance of the knowledge economy at city-region levels in partner cities. Some main characteristics are listed here, such as:

- institutional initiatives
- managing creative clusters
- direct knowledge management with spatial relevance.

2.1. Institutional initiatives

Conseil de Développement in Lille métropole
The Conseil de Développement was created in 2002 as a statutory body to favour consultation and citizen participation. It is composed of 150 unelected representatives of civil society (associations, trade unions, businesses etc) and personalities from Lille Métropole, but also from neighbouring areas (Belgium and the Coal Mining area). The Conseil de Développement provides advice and recommendations on issues that are being debated by the Lille Métropole council. It also promotes specific development projects in such fields as culture, employment, the housing market etc. Since 2004, at the city region level, nine councils of development (from Lille Métropole and from the different agglomerations around Lille) are working together to promote specific development projects and support the Lille Metropolitan Area project. Conseil de Développement is very active in the promotion of the knowledge society in the Lille area.

Special Economic Zone in Krakow
The Special Economic Zone, established by the regulation of the Council of Ministers issued

in 1997, was designed to operate from 1998 to 2017. The Kraków Special Economic Zone consists of 19 subzones within a territory made up of 17 municipalities. The land designed for capital investments in the Krakow Metropolitan Area is situated in quite a few subzones. The Kraków Special Economic Zone offers its investors primarily greenfield land and office space for lease.

2.2. Non-institutional initiatives

Cooperation managed by non public sector actors in the Brussels capital region
The universities in the metropolitan area (Brussels, Leuven, Louvain la Neuve) cooperate within the framework of European and Belgian research programmes.
Universities cooperate within the framework of European federal research programmes. The chamber of commerce and the business associations in 3 regions work together in order to draw up a vision for the future of the metropolitan area of Brussels. Through the Regional Plan for innovation, financial support is provided to either universities or companies. There are also services offered by the Region to support innovative companies.

2.3. Knowledge management with spatial relevance

Creative framework for incubations in Florence
The regional government encourages cooperation between actors operating in Tuscany in the field of advanced training, public and private research and transfer of the results through the setting up of a coordination process called regional research network, consisting of the Regional Government. Local bodies, universities, advanced training high schools, research institutes. They carry out research activities; operate scientific technology parks, and other projects relating to the circulation and transfer of knowledge, with particular reference to private companies in regional healthcare service and local public service companies. Within this operational framework, which has a strong interactive and inter-relational dimension, the Florence Technological Incubator and art & craft incubation should be viewed as significant examples of the relationship between the city of Florence and the Tuscan region in the field of innovation.

The Florence Technological Incubator, established after a Memorandum was signed in 2000 between Florence City Council, the Provincial Administration of Florence, the Chamber of Commerce of Florence and the University of Florence in order to create a metropolitan incubation system, offers businesses in the area of technological infrastructures and support, training and consultancy services for the creation and development of small businesses in highly innovative sectors and to encourage the process of technological transfer and innovation.

The mission of the Florence Incubator is to assist the creation and development of innovative and technological businesses within a "facilitated" and stimulating environment through pre-incubation, incubation and aggregation services. The Region financed the rebuilding of the future site of the incubator and it's now starting the organisation of the structure that is supposed to be lead by the Research and Technological Transfer Foundation partners, i.e. the commercial chambers of Pistoia, Prato and Florence, the Provinces of Prato, Pistoia and Florence and the University of Florence.

The creative incubator called 'Space of Art and Craft' (Italian abbreviation: SAM) deals with the promotion, enhancement and economic and cultural development of the craft, artistic and business enterprises of Florence. The creative incubator aims to give space to the new economy, while taking into account the historical economy and the need to respect and help

people / artists / workers to find a comfortable place within a typical services spin-off incubator.

ELA linking to the Eindhoven area
The triangle of Eindhoven, Leuven and Aachen (ELA) is a transnational geographically concentrated area with potential to become a top European technology region. Due to the intermediary position of the ELA-triangle between the Flemish Urban network, the Ruhr Area and the Dutch Randstad, the significance of cooperation within the ELA-triangle surpasses the scale of these regions. Creating favourable conditions is necessary to become a top technology region. These three all together are able to fulfil the criteria in terms of capabilities. Transnational cooperation between Eindhoven, Leuven and Aachen means a larger economic and knowledge base, urban diversity (though knowledge economy foundations). The triangle has a potential to become a Top Technology region, because of the presence of 5 top universities, institutions and strong business activities.

The common issue in this subgroup may be the existence of indirect public management with a relatively strong but informal spatial character at the level of city-regions. Critical mass needs to be achieved in research, development and innovation, in order to create economies of scale and to increase the scope of development in the global economy.

3/ Conclusion of group discussion on key issues relating to managing the knowledge economy at city-region level

• What is the evidence for the need to tackle the issue of the knowledge economy / creativity, research and education at the city-region level?
These factors are listed by participating partners in priority order, according to the weighting of preference:

- Critical mass
- Mobilisation of public resources
- Human factor – human ecosystem that favours initiatives
- Part of the development strategy
- Availability of land
- Unfair competition in the surrounding area (mutual benefit)
- Quality of life
- Provision of services (education, etc.) / externalities
- Tax / tax systems
- Legal competences

• What types of mechanisms are needed to develop the knowledge economy / creativity, research & education at city-region level and for involvement in city region cooperation?
These factors are listed by the group in priority order, according to the weighting of preference:

- Bringing together players (public, academic, private) – questions of leadership, commitment)
- Strategy making (strategy process)
- Project management (common)
- Managing expectations – win-win situations / agreements
- Individual entrepreneurs as "trainers" (ambassadors)
- Competition for public funds
- Networking (open coffee meetings)
- "3 T" of economic development of Richard Florida: Talent, Tolerance, Technology.

"Governance in the Knowledge economy / creativity, research & Education at City-region Scale"

BRNO – seminar Working Document

15, 16 & 17 June 2009

PART 2

1. PROGRAMME

The Brno seminar was an official national event in the framework of the "European Year of Creativity and Innovation 2009" with the participation of Mr. Petr Grametbauer, Ministry for Regional Development of the Czech Republic

Sunday June 14th 2009

For the partners already arrived in Brno

16.30 City Centre – excursion
18.30 Dinner

Monday June 15th 2009

13.30 Meeting at the hotel lobby

14.00 / 14.30 Venue: New Town Hall
Welcome by Lord Mayor, New Town Hall (short excursion)

15.00 / 17.30 Venue: Urban Centre Brno in the Old Town Hall
(Coffee break during this session – 15 min)
Tower of the Old Town Hall (short excursion – 10 min)

- Introduction / Presentation of the programme (Lead Partner - 15 min)
- Management of the working group - diverse (Lead Partner - 15 min)
- Management of the working group - focus on partners actions at local level (LSG & LAP) – (Each partner about 3 min - total 25 min)
- Synthesis of the last meeting in Seville (Lead Expert – 15 min)
- Introductory note of Brno seminar (Lead Expert – 15 min)
- City of Brno and its Strategy – presentation and introduction - Mrs. Zezůlková (10 min)
- Regional Innovation Strategy – presentation - Mr. Chládek (30 min) www.risjmk.cz

18.00 / 19.00 Villa Tugendhat – excursion

20.30 / 22.00 Dinner

Tuesday June 16th 2009

8.15 Meeting at the hotel lobby

8.45 / 11.30 Venue: The Jiří Mahen Library
(Coffee break during this session – 15 min)

- Project NETME (New Technologies for Mechanical Engineering) – presentation - Mr. Stehlík (15 min + questions)
- Brnopolis – presentation - Mr. Veselý (15 min + questions)
- Presentation by Eindhoven - Joining Forces Partner (15 min + questions)
- Presentation by Florence - Joining Forces Partner (15 min + questions)

11.30 / 12.00 Preparation of the meeting with Local Support Group (30 min)

12.00 / 13.30 Lunch

14.00 / 16.00 Venue: Masaryk University Campus – library

- Project Masaryk University Campus - presentation Mr. Janíček (20 min + questions)

- South Moravian Innovation Centre and Biotechnological Incubator INBIT - presentation Mr. Hudeček (15 min + questions)
- Project CEITEC – presentation Mr. Hruda (20 min + questions) www.ceitec.cz
- Tour – Campus area (40 min)

16.30 / 19.30 Venue: M-Palace (Coffee break during this session – 15 min)
Meeting with ULSG: Introduction of ULSG - Start-up / Mr. Mulíček, Mr. Dokoupil, Mr. Chládek – Workshop with the members of ULSG (similar to the workshop in Eindhoven). Topics (importance of creative industry, knowledge economy and research for image of the city-region and its competitiveness, involvement of stakeholders into innovation processes, importance of support framework – innovation strategies and infrastructure – innovation centers, incubators, cluster, spatial and strategic aspects) will be discussed at first in smaller groups. After this part of session the results will be introduced to the rest of participants who are supposed to discuss about them. - Discussion about Local Action Plan

19.30 / 21.30 Dinner

Wednesday June17th 2009

8.30 Meeting at the hotel lobby

9.00 / 13.00 Venue: Urban Centre Brno in the Old Town Hall
(Coffee break during this session – 15 min)

- Project ICRC Brno – presentation - Mr. Kára (15 min + questions) www.fnusa.cz/icrc.php
- Working session on Brno Conclusions – discussion about theme, notes of other partners etc. (45 min)
- Working session on Joining Forces general Conclusions (45 min)
- Working session on seminar Reports, etc. (45 min)
- Working session on Local Action Plan in greater detail (contents, etc.) (45 min)

13.00 / 14.00 Lunch

14.00 / 16.00 Venue: Kraví hora - planetarium

- Management of the working group – administrative and financial questions (30 min)
- Communication plan (30 min)
- Preparation of the next seminar (30 min)
- Conclusion and evaluation (30 min)

16.00 / 19.00 **Optional Programme** - *For the partners who will leave on Thursday*
Museum Mendelanium - optional excursion
Kravi Hora – leisure time area (swimming-pool, sauna) - optional sport activity

20.00 Dinner – *For the partners who will leave on Thursday*



2. SOME VISITS & SUMMARY OF PRESENTATIONS

Brnopolis

Ideas lab or think network for creative professionals

Brnopolis is:

- open Brno community of creative professionals with foreign experience and interested in international city development
- non-profit apolitical initiative inviting and exchanging opinions and experience
- informal communication platform **think network or ideas lab** hat brings like-minded people together to share ideas, contacts & experience
- It also brings these voices to local government and policy makers in Brno and the region

Objectives

- improving the city competitiveness and attractiveness for the creative class and the services sector (with a special focus on hi-tech)
- bringing experience for the city international development
- supporting creative individuals and organisations to find new (local or foreign) partners
- building an active community of "hubs" that network and communicate through public-private discussions face to face and on the weblog
- connect the community to similar initiatives, projects and hubs abroad
- generate ideas or recommendations for policy makers

Contact: www.brnopolis.eu

Villa Tugendhat

UNESCO World Heritage since 2001.

"The Tugendhat Villa in Brno, designed by the architect Mies van der Rohe, is an outstanding example of the international style in the modern movement in architecture as it developed in Europe in the 1920s. Its particular value lies in the application of innovative spatial and aesthetic concepts that aim to satisfy new lifestyle needs by taking advantage of the opportunities afforded by modern industrial production.

Justification for Inscription

- Criterion 1: The Tugendhat Villa is a masterpiece of the Modern Movement in architecture.
- Criterion 2: The German architect Mies van der Rohe applied the radical new concepts of the Modern Movement triumphantly to the Tugendhat Villa to the design of residential buildings. Criterion iv Architecture was revolutionized by the Modern Movement in the 1920s and the work of Mies van der Rohe, epitomized by the Tugendhat Villa, played a major role in its worldwide diffusion and acceptance."

Source: http://whc.unesco.org/en
More Information: http://www.tugendhat.eu/en/

Project NETME

New Technologies for Mechanical Engineering

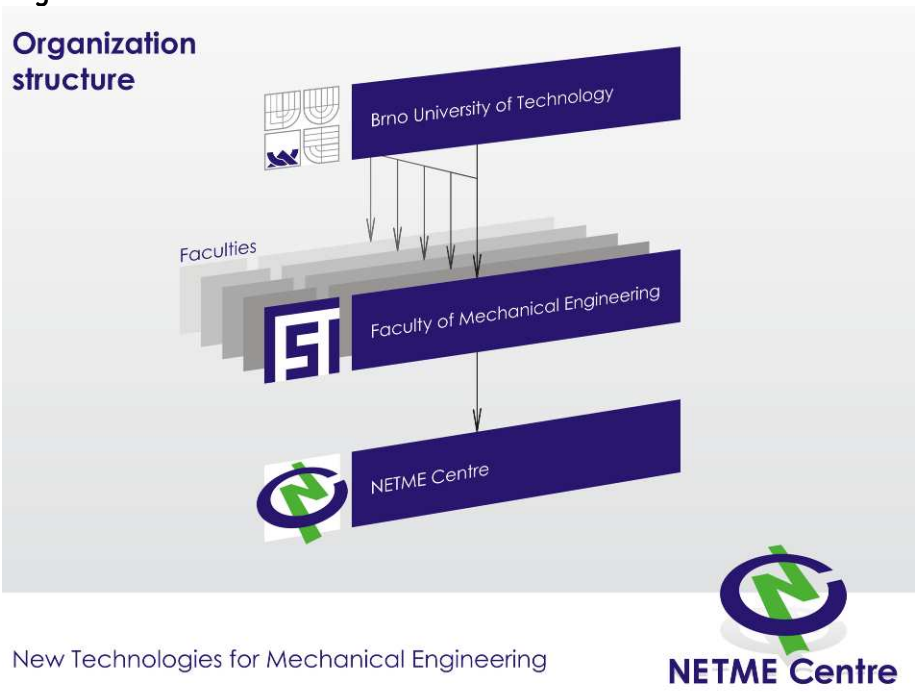
Priority Axis: Local Research and Development Centre

Area of Focus: Competitive engineering

Main Aim: Strengthening regional competitiveness and social stability of the region through effective utilization of results from research and development.

Project Location: Optimal location of the centre: to be built within the Faculty of Mechanical Engineering in the "Pod Palackého vrchem" area, close to Czech Technology Park, South Moravian Innovation Centre with Technology Incubator and other faculties of Brno University of Technology

Organization Structure:



Project CEITEC

Central European Institute of Technology

CEITEC is a project aiming to set up a Central European centre of excellence in Brno.
Together with local universities and research institutes (Masaryk University, Brno University of Technology, Mendel University of Agriculture and Forestry in Brno, Institute of Scientific Instruments, Academy of Sciences of the Czech Republic, Institute of Physics of Materials, Academy of Sciences of the Czech Republic and the Veterinary Research Institute.) a laboratory will be outfitted with first-class equipment and facilities which will foster the perfect conditions for basic and applied research in the field of life sciences and advanced materials and technology.

The project will contribute to the science research capacity of the Czech Republic and also strengthen relations between Czech science and top international research institutes and companies. In the framework of research cooperation projects and joint technological development, CEITEC will create and maintain quality relationships with leading

international scientific and research institutions. Increased collaboration will bring about significant positive effects for both Brno and the South Moravia region, and for the whole area of European Research.

The core of the project consists of nine research programs (Advanced Nanotechnology and Microtechnology, Advanced Materials, Advanced Communication and Control Technologies, Structural Biology, Genomics and Proteomics of Plant Systems, Molecular Medicine, Neuroscience, Molecular Animal Medicine and Biomedical Technologies), bringing together research groups specialising in specific, progressive scientific fields and disciplines. Multiple synergies are generated by the project, in particular the interaction between programs addressing multidisciplinary issues across the research groups.

Goals:

- To utilize plant systems as renewable sources of materials and biologically active compounds
- To develop advanced materials and functional nanostructures for medicine, energy and information and communication technologies.
- To utilize information and communication technologies for biomedicine.
- To understand the mechanisms of the genesis and spreading of important diseases, methods of their prevention, early diagnostics and therapy.

Main points of the CEITEC strategy:

- To attract and support the best scientists (local and international)
- The best infrastructure (a network of shared and specialized laboratories)
- Focus on scientific excellence (supported by a system of management and regular evaluation)
- Transparent and effective rules for cooperation with real world applications.

Source / More Information: www.ceitec.cz



3. MEETING WITH LOCAL SUPPORT GROUP

The objective was to discuss the importance of creative industry, knowledge economy and research for image of the city-region and its competitiveness, involvement of stakeholders into innovation processes, importance of support framework – innovation strategies and infrastructure – innovation centers, incubators, cluster, spatial and strategic aspects.

Working methods:

- First discussion in small groups (3 topics)
- Plenary session – presentation of the groups discussions and global discussion

Apart from the above mentioned overall issues, the following topics and questions were discussed in a greater detail.

Topics & questions - Key issues to debate concerning innovation policy and agglomeration relations:

Governance

- How to effectively involve "bigger – not start- ups" companies in to the strategic process in order to make the strategy their strategy?
- Is it better to design intervention in generic way or in a specific way concerning the industry sectors?
- How do you involve companies located out of the regional core or in peripheral areas even though those companies are innovative or has got sufficient absorptive capacity?

Document

- What are the key factors to turn written document into a process where specific projects are carried out?
- How do you perceive the existence of a specialized innovation strategy in the context of general city/regional strategic planning?
- Do you have one? Is it necessary or it is again another useless document?

Image

- Can regions / cities help to promote local industries and research teams on international scale by any means or is it waste of money?

DISCUSSIONS:

Governance

Don't talk of strategy, it is matter of feeling
None intervention

Document

Real investors
Managers instead of officers
Political will
Communication with public from beginning
Strategy ↔ projects

Image

Difference between city image – city marketing – city branding!
What is the identity of the city?
What should be the image of the city? (Image – external – difference between the feeling of the users of the city and the visitors)
People should be proud on the city. (Lille – R. Station – Zone – TGV – Cultural Capital)
The city needs a footprint!
The city needs a slogan - Brno you will live / be in! Brno city live! / Brno Live´s / Brno Bruist (drones)
You can use the industrial history / heritage
What is the target group?
Scale of communication - local – regional – national – international? (Culture, local beer, events, Mediterranean spirit, wine, theaters),
Observations: green, pleasant, young, quiet, nice buildings, safe, hilly, lazy, nice to be, not feeling the energy of the young dynamic city, nice surroundings, the station plot is not developed, colorful.
Do you need to be presented like an industrial city / area → usp´s
Prague and Vienna are nearby – use it!



4. CONCLUSIONS: BRNO SEMINAR - FIRST ELEMENTS

2 questions:

- What the evidence for the need for tackling the issue of knowledge economy / creativity, research & education at city-region scale?
- What type of mechanisms to develop knowledge economy / creativity, research & education at city-region scale and for the involvement of city region cooperation?

1. What the evidence for the need for tackling the issue of knowledge economy / creativity, research & education at city-region scale?

First step = The JOINING FORCES partners thought about factors / evidence for the need for tackling the issue of knowledge economy / creativity, research & education at city-region scale:

1. Availability of lands
2. Mobilisation of public resources
3. Visibility (external companies)
4. Responsibility of the main city (driving effect)
5. Quality of jobs / well being in the Region
6. Quality of life
7. Unfair competition developing in the surrounding area (mutual benefit)
8. Provision of services (education, etc.) / externalities
9. Duplication of initiatives
10. Tax / tax systems
11. Legal competences
12. Critical mass
13. Part of the development strategy
14. More / less scales
15. Human factor – human ecosystem of initiative

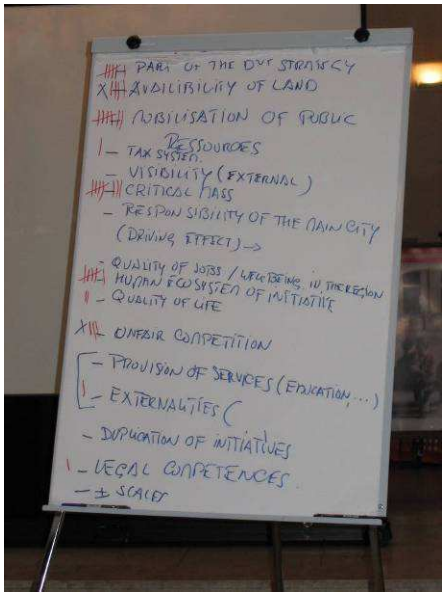
Second step = when they agreed the list of factors / evidence, each partner was asked to choose 3 of them:

1. Availability of lands	IIII = 4
2. Mobilisation of public resources	IIIIIII = 7
3. Visibility (external companies)	
4. Responsibility of the main city (driving effect)	
5. Quality of jobs / well being in the Region	
6. Quality of life	II = 2
7. Unfair competition developing in the surrounding area (mutual benefit)	III = 3
8. Provision of services (education, etc.) / externalities	I = 1
9. Duplication of initiatives	
10. Tax / tax systems	I = 1
11. Legal competences	I = 1
12. Critical mass	IIIIIIII = 8
13. Part of the development strategy	IIIIII = 6
14. More / less scales	
15. Human factor – human ecosystem of initiative	IIIIIII = 7

Summary =
These factors are (listed by priority):

- Critical mass
- Mobilisation of public resources
- Human factor – human ecosystem of initiative
- Part of the development strategy

- Availability of lands
- Unfair competition developing in the surrounding area (mutual benefit)
- Quality of life
- Provision of services (education, etc.) / externalities
- Tax / tax systems
- Legal competences



2. What type of mechanisms to develop knowledge economy / creativity, research & education at city-region scale and for the involvement of city region cooperation?

First step = The JOINING FORCES partners thought about what type of mechanisms to develop knowledge economy / creativity, research & education at city-region scale and for the involvement of city region cooperation:

1. Bringing together players (public, academic, private) – questions of leadership, commitment
2. Managing expectation – win-win situations / agreements
3. Specific association
4. Individual entrepreneurs as "trainers" (ambassadors)
5. Balance between flexibility and planning
6. Human resources (funding, researchers, etc.)
7. Competition for public funds
8. Strategy making (strategy process)

9. Networking (open coffee)
10. "3 T" of economic development of Richard Florida: Talent, Tolerance, Technology
11. Project management (common)

Second step = when they agreed the list of type of mechanisms, each partner was asked to choose 2 of them:

1. Bringing together players (public, academic, private) – questions of leadership, commitment)	IIIIIIII = 8
2. Managing expectation – win-win situations / agreements	II = 2
3. Specific association	
4. Individual entrepreneurs as "trainers" (ambassadors)	II = 2
5. Balance between flexibility and planning	
6. Human resources (funding, researchers, etc.)	
7. Competition for public funds	I = 1
8. strategy making (strategy process)	IIIIIIII = 8
9. networking (open coffee)	I = 1
10. "3 T" of economic development of Richard Florida: Talent, Tolerance, Technology	I = 1
11. project management (common)	III = 3

Summary =
These mechanisms are (listed by priority):

- Bringing together players (public, academic, private) – questions of leadership, commitment)
- Strategy making (strategy process)

- Project management (common)
- Managing expectation – win-win situations / agreements
- Individual entrepreneurs as "trainers" (ambassadors)

- Competition for public funds
- Networking (open coffee)
- "3 T" of economic development of Richard Florida: Talent, Tolerance, Technology



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Editorial: Joining Forces / Agence de développement et d'urbanisme de Lille Métropole
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Design: Agence de développement et d'urbanisme de Lille Métropole
Photography: MB / Agence de développement et d'urbanisme de Lille Métropole

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