



EUROPEAN SPATIAL PLANNING
OBSERVATION NETWORK

ESPON 1.4.1

“The Role of Small and Medium-Sized Towns (SMESTO)”

Final Report



TRANSNATIONAL PROJECT GROUP

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**“The Role of
Small and Medium-Sized Towns
(SMESTO)”**

Final Report

This report represents the results of a research project conducted within the framework of the ESPON 2000-2006 programme, partly financed through the INTERREG programme.

The partnership behind the ESPON programme consists of the EU Commission and the Member States of the EU25, plus Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

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LIST OF ABBREVIATIONS AND GLOSSARY

Abbreviations

CAP	Common Agricultural Policy
CLC2000	CORINE Land Cover 2000
CoE	Centres of Expertise
CORINE	Coordinate Information of the Environment (European Environment Agency Land Cover database)
CU	(ESPON) Coordination Unit
DG Regio	Directorate General responsible for Regional Politics
DGOTDU	Directorate General of Urban Development and Spatial Planning, Lisbon
ECP	ESPON Contact Points
ESDP	European Spatial Development Perspective
EU	European Union
FDI	foreign direct investments
FUA	Functional Urban Area
GDP	gross domestic product
GIS	geographical information system
GSEI	General Services of Economic Interest
INSEE	Institut National de la Statistique et des Etudes Economiques
INTERREG	Community Initiative of the European Regional Development Fund (ERDF) in favour of co-operation between regions of the European Union
MA	metropolitan area
MEGA	Metropolitan Growth Area
NSS	National Spatial Strategy of Ireland
NUTS	Nomenclature des Unités Territoriales Statistiques (= Nomenclature of Territorial Units for Statistics; geocode standard for referencing the administrative division of countries for statistical purposes)
PPP	purchasing power parity
r & d	research and development
SCDI	Services Cost Distance Indicator
SF	Structural Fund
SGI	Services of General Interest
SME	Small and Medium-sized Enterprise(s)
SMESTO	Small and MEdium-Sized TOwn
SWOT	strengths, weaknesses, opportunities, threats
TEN(-T)	Trans European Networks (for Transport)
TPG	transnational project group
TTWA	Travel-To-Work Areas
WP	work package

Glossary

agglomerating areas	areas on the verge of becoming an agglomeration in Hungary
agglomeration	extended town area comprising the built-up area of the core city and adjacent suburbs, possibly a spacial planning entity (French: agglomeration; dutch: agglomeratie). Also a legally Swiss urban region
aire urbaine	defined French urban region
anchor cities	centres fostering the development of the surrounding territories in the Portuguese urban system
banlieue	French or Belgian characterisation of municipalities outside the urban core belonging to the urban area
bassins de vie	smallest territory in which the inhabitants have access to jobs and service in the French urban system
Bundesland	German or Austrian administrative regions (NUTS-2-level)
census town	Irish urban entity defined as a built-up area delimited by a morphological criterion
Central Places Theory	a geographical theory explaining the size and spacing of human settlements created by Walter Christaller
Centres of Expertise (CoE)	Finnish development program creating a network of thriving centres of top level know-how
commune-noyau	Swiss municipality with at least 2,000 jobs and a ratio of the number of persons working in the municipality to the number of active persons is higher than 0.85
couronne péri-urbaine	French characterisation of suburbs
DG Regio	Directorat General responsible for Regional Politics
electoral divisions	Irish statistical entity
enumeration districts	statistical entity in the UK
Fordism	a form of production or "production paradigm" that prevailed in post-war decades in western industrial countries
Functional Urban Areas (FUA)	urban area definition developed by ESPON 1.1.1
inner ring	UK definition of agglomeration municipalities with 15% of the active population travelling to the urban core
kernstad	Belgian statistical divisions for urban cores
kreisfreie Städte	German governmental privileged city definition
labour market areas	areas defined by the commuting pattern of workers travelling daily from one municipality to another

Länder	short for the plural of <i>Bundesland</i>
mesto	expression for 'city' in several countries of Slavic language
metropolitan cities	Italian agglomeration definition
Metropolitan Economic Labour Areas	UK agglomeration unit
Metropolitan Growth Area	metropolis definition developed by ESPON 1.1.1
Outer ring	UK definition of agglomeration municipalities whose active population travel to work in the agglomeration in question more than any other agglomeration
parisian model	way to describe the dominance of a primate city in an urban system (monocentric system)
peri-urban areas	French characterisation of suburbs
Post-Fordism	mode of production and associated socioeconomic system theorized to be found in most industrialized countries today; contrasted with <i>Fordism</i> .
Theory of the Primate City	a theory of the size of a country's leading city
pôle urbain	French urban core area definition
Rank Size Rule	a relational theory originally applied by George Kingsley Zipf on linguistic concerns
Raumordnungsgesetz	German Regional Planning Act
rayonnement	French for emittance (meaning urban influence)
région urbaine	defined Belgian urban region
Reste de l'agglomération	Swiss definition of main agglomeration areas
Rhein-Ruhr-model	way to describe the absence of a primate city in an urban system (polycentric system)
rural Scotland	Scottish territorial definition
Schwebebahn	suspension railway, in Wuppertal used for inner-city traffic
settlement groups of large towns	Hungarian urban definition
settlement groups of small towns	Scottish territorial definition
spillover effect	effect of a transaction between two parties on a third party who is not concerned (external effect)
Stadsgewest	Belgian governmental city definition
Städte	German or Austrian governmental city definition
Städtische Gemeinde	Swiss governmental privileged city definition

Statutarstadt	Austrian governmental privileged city definition
SWOT-analysis	qualitative analysis of strengths, weaknesses, opportunities and threats
Travel-To-Work Areas (TTWA)	UK urban areas defined by the commuting pattern
urban fields	Irish urban regions defined by their functions
urban Scotland	Scottish territorial definition
Übrige Agglomerations-gemeinden	Swiss definition of agglomeration areas
ville centrale	Belgian statistical divisions for urban cores
ville isolée	Swiss definition for town with more than 10,000 inhabitants
White Paper	government report outlining policy, namely by the European Commission in the present respect
Zipf's Law	a relational theory originally applied by George Kingsley Zipf on linguistic concerns
zone centrale	Swiss definition of main agglomeration areas

PART ONE: EXECUTIVE SUMMARY

*"Look, here is a town near enough to run to, and it is small.
Let me flee to it – it is very small, isn't it? Then my life will be spared."*

Lot in Genesis 19:20

EXECUTIVE SUMMARY

This ESPON study on “Roles of Small and Medium-sized Towns” pursues the following objectives:

- To find ways to conceptualise small- or medium-sized towns (SMESTOs), which can be applied all over Europe;
- To assess the possibilities and restrictions to identify empirically the concrete SMESTOs on European (and national) level;
- To describe the main roles that SMESTOs are playing in the context of territorial development and
- To derive options for typologies of SMESTOs and their regional context, which could facilitate the formulation of policies oriented towards urban development taking account of the diversity of potentials and challenges faced by small or medium-sized towns.

ESPON 1.4.1 is intended to serve as a preparatory study for a comprehensive and empirically oriented research on SMESTOs to be pursued in the next ESPON-programme. Therefore it does not contain the large sets of European statistics and maps known from other projects. It is more interested in demonstrating the diversity of the subject matter in Europe and to bridge the traditional views on SMESTOs held in the individual countries, trying to arrive eventually at a European state of the art definition.

It clearly builds on and deepens in the discussions initiated by ESPON 1.1.1 (Potentials for polycentric development in Europe) and ESPON 1.1.2 (Urban-rural relations in Europe) supplementing in particular the FUA-approach in two directions:

- Gaining additional structuring elements (urban nodes) across the European territory;
- Widening the scope of functional description and hence assessment of the individual urban nodes.

The discussion in the study is grouped around the role of SMESTOS within the

- spatial organisation of European cities and towns, identifying relevant nodes and analysing the way in which they structure the territory, and of SMESTOs as
- urban governance entities in Europe, taking administrative entities comprising one or more urban units as objects of (statistical) analysis and also the main field of urban policy action.

These two views are seen to complement each other when analysing the roles of SMESTOs in the future and even more so, when deriving policy options in favour of urban Europe.

In terms of results of the study we can pin down at least the following:

- (A) Urban studies on European level so far concentrate on larger towns and cities or even only metropolises. Therefore there is no systematic research on small- or medium-sized towns although policy making increasingly refers to them. Even statistically the information material available on European level is very weak and lacks any kind of conceptual comparability.
- (B) On the basis of an analysis of definition of urban entities in many European countries we propose a conceptual framework for a European definition for SMESTO which starts off with the perception of towns as concentrated dwellings of people (rather than a node of interaction or economic functions). The framework than uses a three step approach:
 - (1) Take all continuous (less than 200 m between two buildings) built-up areas with more than 200 inhabitants;
 - (2) Select the relevant centre points by way of assessing the territorial structuring power of each point;
 - (3) Overlay the catchment-area (isochrones) of identified centre-points with geo-coded amenities/public services to arrive at a functional potential of each of these nodes.
- (C) Typologies of SMESTOs have been kept to a minimum taking into account that the objects of classification were not yet defined, let alone that empirical data was available. Nevertheless we feel secure to propose three classifications to be used in future and be further developed:
 - (1) The **spatial position**, which we grouped into agglomerated, networked and isolated for each of which the case studies deliver interesting evidence.
 - (2) The **socio-economic performance**, though hard to measure in reality, we propose to group into four very broad categories:
 - dynamic/growing,
 - declining,
 - restructuring,
 - potential developing,which eventually could at least be estimated for all identified SMESTOs by taking into account the
 - (3) relationship between **urban nodes and administrative units**. This relationship reveals a more complex governance situation than “one town – one mayor” to be prevalent and guides to the identification of governance units on the basis of municipalities (NUTS 5) which are systematically connected with SMESTOs as defined under (B).
- (D) Research Project
For the next steps in view of an analysis of SMESTO we propose a research project comprising the following tasks:
 - A complete review of the availability and **cost of digital maps** delimiting built-up area, of built-up area centre points or of possible proxies which would offer a reasonable alternative to these data sets.

- The detailed review of **local territorial governance** levels in ESPON countries, and their respective competences, prerogatives and functions. This includes not only municipalities, but also for example inter-municipal cooperation bodies.
 - The **identification of important infrastructures**, such as hospitals, universities or airports, which may have a possible impact on SMESTOs development potentials if they have access to them.
 - The compilation of a detailed **ground transport network model** to be able to produce detailed local accessibility calculations and differentiate the positions of neighbouring SMESTOs within regional urban systems.
 - The compilation of an updated **NUTS 5 map of Europe**, so as to identify the *a priori* lowest level of territorial governance in Europe and to compare it with the geographical positions of built-up area and SMESTO centres.
 - A further **review of data** that can be available **at NUTS 5 level** in Europe. A NUTS 5 database has already been produced as part of the DG REGIO Study on Mountain Regions and been provided to ESPON. These data would have to be reviewed, completed and updated in view of an analysis of SMESTOs.
- (E) A policy framework for SMESTOs is given where SMESTOs are seen as focal points of different EU policies of which the most important are:
- **Urban policy**, addressing regeneration of urban centres and the revitalisation of industrial towns;
 - **Regional policy**, being a major catalyst for economic development;
 - **Spatial development policy**, aiming at polycentric urban development, urban-rural relationship and structuring metropolitan growth.

SCIENTIFIC SUMMARY

Introduction

The ESPON scientific support projects will address issues of a more technical and/or scientific nature to be presented in “state-of-the-art” documents. They will to some extent as well serve as a preparatory work for a possible continuation of ESPON activities after 2006. The present study ESPON 1.4.1 “The Role of Small and Medium-Sized Towns (SMESTO)” is a preparatory study for further research activities within the ESPON-framework. Therefore, concrete indicators or maps covering the entire European territory were not an issue, but scientific activities in terms of what possibilities and potentials are there for future follow-up projects had to be addressed.

Due to the preparatory nature of this study the methodology was mainly based on three pillars:

- Large parts of the study have to be covered by extensive **literature surveys**, including the analysis of relevant ESPON reports.
- A second source of information has been tapped by sending out a **questionnaire** to all project partners and to all ECP, gathering information on national definitions of SMESTOs and on data availability.
- **Case studies** on European cities have been conducted by various members of the TPG, two from each participating country.

Review of small and medium sized town definitions across ESPON space

Considering functional areas or agglomerations, one first needs to identify which central nodes one should depart from. When looking at large European cities, the identification of these nodes is relatively unproblematic. Indeed, both the agglomeration and the functional area will meet the selection criteria (e.g. demographic mass), except for a few intermediary nodes. Determining whether a city should or should not be taken into account is therefore a marginal issue, compared to the delimitation of its area. The situation is quite different with regards to SMESTOs. Indeed, identifying which nodes should be considered is in this case the core issue, as one has to deal with a very large number of nodes. The review of definitions used across ESPON Space is consequently of considerable importance for any analysis.

We considered three statistical approaches prevailing in Europe:

- A **morphological approach**, each SMESTO corresponding to a settlement area;
- A **functional approach**, each SMESTO corresponding to an integrated zone in terms of social and/or economic activity;
- An **administrative approach**, each SEMSTO corresponding to an area defined as urban, as a result of predetermined quantitative criteria (e.g. a

certain population threshold, a prevailing type of economic activity) or of a political process (statutory rights of the commune).

These three approaches do co-exist in European countries. For a future quantitative study to be possible, these general recommendations outlining the ideal approach of defining SMESTOs have been developed. Another focus has been laid on data availability, investigating basic indicators which can be obtained at the level of SMESTOs in each country. These indicators would include among others:

- Administrative status,
- SMESTO population,
- total employment and employment in services, manufacturing and primary activities,
- unemployment,
- endowment with public amenities.

The results of these analyses discharged in innovative approaches to the identification and definition of SMESTOs.

The **first approach** identified SMESTO centre-points and their geographical spread in relation to larger cities, using a map of the Oslo region as an example. The relationship between the general population mass in each country or region and the number and spread of SMESTO is in this respect particularly interesting. In rural areas one could for example identify different types of challenges with regards to public service provision, or opportunities for development, based on the facility with which one can reach small and intermediate centres. The position of SMESTOs with regards to larger cities and metropolitan regions is a second potential object of analysis. The accessibility to larger cities from each SMESTO is the indeed the primary factor determining their development potentials and challenges. Calculating travel times from each SMESTO to the nearest cities of a certain magnitude offers a first approach. But, more importantly, one would need to identify whether a SMESTO belongs to a European MEGA region, to a second urban region or to other types of territories.

The **second approach** outlined maps for possible morphological and functional identification of SMESTOs by the example of Austrian NUTS 3 region Klagenfurt – Villach and their relationship with administrative boundaries and population numbers. The morphological approach followed the UN recommendation for the definition of urban areas (Le Gléau et al., 1997), a 200 m maximum space between buildings. This showed that in reality there are various morphological – administrative relationships concerning SMESTOs, for instance one morphological SMESTO spreading over several municipalities or municipalities with more than one SMESTO.

Analysis of the roles and functions of SMESTOs

We then distinguished the SMESTOs as a group and individually from the metropolises, no matter how small these may be on a global scale. A differentiation which cannot rely on numbers (of inhabitants or else) alone, as the first review has

shown, but has to take into account the different functions of metropolises and SMESTOs on one hand and between SMESTOs on the other hand.

The findings from ESPON 1.1.1, especially the MEGAs as a group of cities complementary to SMESTOs serve as a starting point, assuming that MEGAs per definition and in the real world are functionally complete, whereas SMESTOs tend to be specialised on, or dominated by, one or a few functions within the wide range available.

Case studies have been conducted with the following objectives:

- to deepen the insight in potentials and challenges for SMESTOs in the ESPON space;
- to test the feasibility of proposed typologies and definitions and
- to enrich the abstract analyses with vivid images of concrete towns and their regions.

To a certain extent the case studies were intended to make up for the impossibility to indulge into statistical analysis for the whole ESPON area within this preparatory study. The case studies have been performed by 7 of the 8 partners, in order to capture a widespread variety of regional cases and also to be able to cover a great variety of European languages and – connected to this – of different historic and cultural background.

Table 1 Case studies conducted for ESPON 1.4.1

country	small town	medium town
Austria	Hallein	Salzburg
France	Saumur	Laval
Germany	Herdecke	Witten
Italy	Carpi	Ravenna
Poland	Mielec	Rzeszów
Spain	Vic	Lleida
Sweden	Sollefteå	Örnsköldsvik

A template (“Case Study Handbook”) has been developed to secure the homogeneity of the studies. The case studies can be found in Annex A.1 in their unabbreviated form.

In a next step the **regional embeddedness** of SMESTOs was presented, analysing existing structures and where they might lead in the future. Different densities once again showed the extensive heterogeneity of European SMESTOs of different regions. Contemporary “Central Place Theory” and related scientific approaches also came into focus of this task, pointing out that SMESTOs could very well remain an important part of the European urban structure.

Within their **urban functions**, the socio-demographic role SMESTOs (e.g. housing function, culture function, leisure function) has been analysed by drawing on policy oriented and academic literature. The issues relating to the population decline in many SMESTOs and to their function as population growth poles in a number of other cases stood in the centre of this task. Also the repercussions of ageing and

other changes in the structure of the urban population have been elaborated. Population changes – positive or negative – within the SMESTOs are cause and effect of the new spatial (re)organisation of many public sector activities, of provision of public amenities and other centrally provided services, mainly due to technological changes referring to Information Society and to transport. Regarding their economic roles (e.g. supply function, labour market function, functions in regional development) a number of economic benefits and drawbacks of cities (agglomerating and congesting forces) could be identified. Basically, these two forces balance the developments and sprawling of cities in a sense that has produced life cycle models of city development (i.e. urbanisation, de-urbanisation and re-urbanisation). The range of performance differences among the SMESTOs, as does the degree of specialisation in the spatial division of labour.

Typologies of SMESTOs and their respective regions

Taking the findings of the previous analyses as starting points the identification of appropriate typologies of SMESTOs considered three main elements:

- A multi-disciplinary approach able to capture the different hard and soft factors in play that define the role and the dynamics of SMESTOs: spatial, economic, social, demographic, cultural and geographic.
- A well integrated approach that identifies the linkages, complementarities and dynamics of SMESTOs both reflecting the different functional aspects and their different role within the spatial dynamics.
- A multi-sourcing approach that will be based on theoretical analysis as well as from questionnaires and case-studies.

It could also draw to some extent on the results of previous ESPON studies (especially 1.1.2) which under a different heading have proposed a number of regional typologies with regards to the urban rural divide.

The analysis of the existing typologies and conceptions related to the role and types of SMESTOs in their own regions in the various members states, including the new ones, will serve to identify some of the fundamental specifics based on countries' historical and urban policy evolutions and characteristics. Diverse types of criteria have been applied for the identification of the territory where SMESTOs are located in order to capture the complexity of the factors in play and their wide diversity.

REPORT ON NETWORKING

This ESPON project has been conducted by a transnational project group, whose contributors can be found on page 2. Table 2 gives an overview of the responsibilities of each partner in the respective task, as it was foreseen at the outset and largely implemented during the study.

Table 2 Division of labour between the project partners

task	1 ÖIR	2 Nord- regio	3 Nomis- ma	4 BBR	5 UIA- CIMES	6 HAS- CRS	7 IGSO	8 CITE- RES
Identifying European SMESTOs								
1.1 Definitions	C	R	C	C	C	C	C	C
1.2 Data availability	C	R						
Analyses of the Roles of SMESTOs								
2.1 Scope of functions	R	C	C					
2.2 Socio-demographic roles	R	C	C					
2.3 Economic roles	R		C					
2.4 Specific potentials and challenges	R							
Typologies								
3.1 Typologies of SMESTOs	C		R					
3.2 Typologies of regions regarding SMESTOs	C		R					
Case Studies								
4.1 Selection of Cases Study Towns	R	C	C	C	C	C	C	C
4.2 Methodology for Case Studies	R							
4.3 Conducting Case Studies	R	C	C	C	C	C	C	C
Conclusions and Recommendations								
5.1 Further Research Needs	C	R	C					
5.2 Policy recommendations	C	R	C					
PM, Reporting and Communication								
6.1 PM +TWG Communication	R	C	C	C	C	C	C	C
6.2 ESPON Networking	R	C	C	C	C	C	C	C
6.3 Reporting	R	C	C		C			

R ... Responsible Partner

C ... Contributing Partner

First period (1st March 2005 – 31st of August 2005)

During the starting phase of the project the emphasis was on the organisation of the project kick-off meeting, contracting and co-ordination of tasks between project partners. Participating partners at the kick-off meeting at ÖIR in Vienna on 19th of April 2005 were the core team members Nomisma, Nordregio and ÖIR but also BBR. This meeting served as a first discussion and clarification about the five work packages (WP), the links between them and next steps to do. Furthermore, first proposals of how to proceed especially for the WP 1, WP 2 and WP 4 were agreed on and a general discussion about content of WP 3 (typologies) took place.

During the first work phase the emphasis was on WP 1 (definitions of SMESTOs) and WP 2 (roles and functions). ÖIR helped to distribute the questionnaire elaborated by Nordregio for WP 1 and collected all replies. ÖIR undertook an intensive literature review about functions and roles of SMESTOs (WP 2). Concerning the case studies (WP 4), in a first step the selection criteria for case studies were elaborated. Furthermore, ÖIR drafted a "Case Study Handbook" for all the project partners involved (including the selection criteria for the case study regions to deal with in detail) in order to guarantee a consistent way of deeper investigations for the case study areas.

Second Period (1st September 2005 – 28th February 2006)

Nordregio arranged the second project meeting that was held in Stockholm on the 8th and 9th of September. The Nordregio team had prepared the presentation of its main findings and results from WP 1, dedicated to the definition of SMESTOS. Institutions present included representatives from core partners ÖIR, Nordregio and NOMISMA, project partner BBR and subcontractors Universitat de Lleida and West Hungarian Research Institute. The main items of the agenda were:

- Presentation of the results of WP 1 by Nordregio;
- Discussion of the further development of typologies (WP 3) based on WP 1;
- Presentation of case study cities selected following the guidelines given in the kick-off-meeting;
- Presentation of the general structure of the cases studies with its three main parts;
- Presentation of the main milestones for the project;
- Organisation of core team meeting in Bologna on the 30th and 31st of March 2006.

The interim report was finished in September 2005. It comprised draft reports on WP 2 & 3 and an outline for the case study outworking, including 28 working hypothesis on the roles of SMESTOs in spatial development to be verified within the case studies. The interim report was presented at the lead partner meeting in Luxemburg in October 2005. During December all of the case studies were sent in and their completeness verified by ÖIR. Feedback was given until January 2006 and revisions of some of the case studies were returned until the begin of February 2006. The case studies were subsequently analysed by ÖIR for presentation at the next core team meeting and further use within the framework of the other work packages.

Third Period (1st February 2006 – 31st May 2006)

The third period started off with the core team meeting in Bologna from 30th to 31st of March. It included:

- Presentation of the results of WP 4 Case Studies (ÖIR);
- Discussion on SMESTO Maps (Nordregio, ÖIR);
- Presentation of the outline of and discussion on WP 3 Typologies (Nomisma);

- Presentation of the outline of and discussion on WP 5 Conclusions, Research Needs (Nordregio).

In the final phase ÖIR formed the WP reports into a final report, whose weekly drafts were constantly discussed between all project partners via the internet. The final report was delivered on May 31st 2006.

PART TWO: RESULTS OF THE PROJECT

"The way of fortune is like the milkyway in the sky; which is a number of small stars, not seen asunder, but giving light together: so it is a number of little and scarce discerned virtues, or rather faculties and customs, that make men fortunate."

Francis Bacon

1 THE RELEVANCE OF SMESTOS IN TERRITORIAL POLICIES AND REGIONAL RESEARCH

1.1 The subject matter of this study

Small and medium-sized towns in Europe are the subject matter of this ESPON study (1.4.1). We have acronymed it SMESTO, using this abbreviation (**S**mall or **M**edium-**S**ized **T**own)¹ also within the study's text as a denominator of the diverse territorial objects we are describing and analysing.

As is the case with most generic terms, everybody knows what a SMESTO is – until one is asked to define it precisely, to describe what distinguishes a small or medium-sized town from a larger town, a city, a metropolis, a central place, a village, an urban area etc.. Then we immediately see that the term has a very vague meaning, differing with the respective context and particularly from country to country. As we will show in detail in chapter 2, many countries have been taking a very pragmatic approach to the definition of urban entities, leading not only to very different solutions between the Member States but even to a heterogeneous picture within many countries with respect to what is considered a city or a town. The statisticians and urbanists of a country may work with one definition whereas the political-administrative system may use (or not use) a different one. It is only in a few cases that any of these fit with the notions and concepts developed by (different groups) of researchers – human geographers, urban sociologists, regional economists, ecologists etc..

This heterogeneous approach not only applies for the definition but encompasses the whole perception of urban realities in general and the perception of SMESTOs' roles and functions in particular. SMESTOs are conceived on the one hand side as immature, less-developed or declining cities, in need for policy action from outside and from within in order to cope with present day economic dynamics. Much of the debate about them is concerned with the conditions of their survival and with the threats they are exposed to. On the other hand side small or medium-sized towns frequently are celebrated as last resorts of true urban ambience and idealised as the most appropriate (or natural?) linkage between the urban and the rural, a potentially sustainable form of urban structure. These basic differences can be observed all across Europe, they do not differ so much from country to country but depend on ideological positions.

This is but one reason to deal with the phenomenon of SMESTOs on a European level. Other reasons to attempt to find a European view on SMESTOs are:

- They are a dominant feature of spatial structure in every country. Whereas the existence of metropolises or large agglomerations might be doubted for some

¹ In the Slavic languages *mesto* is the word for town, and the "s" could be associated with *stare*, hence *stare mesto* meaning old town or *Altstadt* in German. Being such an old town or rather possessing a historic centre might be one of the most intriguing features of small or medium-sized towns.

smaller Member States, SMESTOs (how ever one defines them) are present everywhere.

- There is a strong suppositions that SMESTOs are key territorial units for both competitiveness of Europe, mainly via determining the competitiveness of the regions and for territorial cohesion.

1.2 The research context

There exists an enormous stock of scientific literature on urban entities and urban issues; towns and cities being among the most important research objects in geography and other fields of research – even when considering only English-language literature. Research literature (as well as policy literature) is also abundant in many other European languages.

For a very large part of urban research the notion of cities and towns is taken for granted. The urban is seen as the opposite of the rural and differentiation within these poles of the familiar dichotomy is avoided. Frequently, the obvious differences between cities/towns in size (how ever measured) and (functional) scope is purposely blurred by the authors – be it for the sake of an argument or be it in the interest of (seemingly) greater generality.²

It is the merit of ESPON to have taken up a debate again which questions this omni-present rural-urban dichotomy within 1.1.2 and has come forward with new proposals for envisaging the different “r-urban” texture of Europe’s regions. With its polycentricity study (1.1.1) ESPON has also put an end to the very “qualitative” approach of differentiating Europe into a rural and urban and into a (generally very vaguely if defined at all) centre and periphery. ESPON 1.1.1 delivered the first meaningful empirical evidence for the concept of polycentricity for Europe. This SMESTO studies should be seen as a further step towards describing and understanding polycentricity, thus it builds on 1.1.1 although proposing quite different approaches as regards some of the most basic concepts of 1.1.1, e.g. the FUA.

An analysis of European urban nodes is confronted with the fact that neither cities nor towns are spatially bounded objects of study. This is not a novelty; as shown by a quote of the French geographer Georges Chabot, the “entire territory” could be identified as a “**field for inter-urban competition**” as early as in the 1930s.³ The dissolution of cities’ economic functions and social significance into an continuously expanding suburban and “r-urban” space was first theorised in the 1960s by Melvin Webbers, who introduced notions such as the “**post-city age**” and the “**nonplace**”

² The recently published study on European Urban Policy (Vandenberg 2006) is rather the exception to the rule stating clearly that towns (i.e. municipalities) with more than 100,000 inhabitants are the objects of their policy interest.

³ *“One cannot today content oneself with opposing cities [...] and the countryside. [...] The city has indeed become [...] the principle for the constitution of regions; the entire country is but a field for inter-urban competition, and it is often useful to know how far the influence of a city extends. [...] But, even more frequently, the influence of a city is exerted through another one. [...] This way, a hierarchy of suzerain and vassal cities and towns is established, with relationships of mutual interdependency between them. This organisation seems to rather faithfully reflect the urban civilisation of Western Europe.”* (Georges Chabot, 1931)

urban realm". Webbers predictions, according to which the urban and rural entities would dissolve in new types of continuous and undistinguished spatial patterns, have not been verified. They nonetheless opened for a wide range of critical approaches to urban geography and the study of cities as economic and social phenomena. Manuel Castell's informational city is but one of these approaches, which described how the interplay between technology on the one hand, and society, culture and institutions on the other, generates combined dynamics of concentration and deconcentration at different scales. In view of these dynamics, there is a need to separate the city, as an architectural entity, from urban modes of living and urban forms of economic activity, which may exist in many "non-city" types of environments. Françoise Choay formalised this distinction between "the urban", i.e. the model around which the global civilisation is fashioned, and the city which is a specific living environment within this civilisation (Choay, 1994).

ESPON project 1.1.1, dealing with cities as nodes in polycentric development, sought to bypass these issues by specifying the concept of city as a Functional Urban Area (FUA). This method is based on the assumption that the spatial boundaries of the city can be assimilated to those of the labour market that is organised around it (Antikainen, 2005). This approach has however shown its limitations, as it leads to a mono-scale approach of urban phenomena. At the upper level of the urban hierarchy, the relevant scale to analyse global cities such as London is considerably wider than the local, or even metropolitan, labour market area; at the other end of the urban hierarchy, each labour market can have multiple relevant subnodes; the dynamics of the European urban system lies in the interplay between a wide range of scales such as these. FUAs are an unsatisfactory compromise, which leads to a static perception of Europe's towns and cities (Gløersen, 2006).

Urban research output is not only voluminous, it also follows very distinctive lines of interest and addresses completely different groups of issues. We have discovered at least four such distinctive lines of interest, which are each characterised by specific methodologies of specific pool of theories and very often a specific language. These are:

- **The economic role and functions of urban entities** within the development of global political economy, the leading fields of theory being regional economics, international trade and innovation economics;
- **The form and the evolution of the urban fabric**, architecture and urban planning as well as sociology being the guiding professions;
- **The territorial organisation of delivery of public and private goods** (and services), relating in general to transport and infrastructure planning, public finance and micro-economics;
- **Territorial governance**, i.e. the acquiring and wielding of local political power and performance of local administration.

Certainly all these lines of research interest are relevant for a synthesis applied on European SMESTOs, but it is evident that such a synthesis needs to remain within the context of this study on a rather superficial level.

1.3 The policy context

Not to the least the importance of SMESTOs items derives from the large population share which lives and works in these. Even before we embark on the tour to define, identify and characterise the European SMESTO, we can claim that roughly half of the European population is living in small- or medium-sized towns.

To answer the question of population shares on an empirical basis two different data bases have been used:⁴

- the EUROSTAT GISCO STEUGG data base which has been further developed by the BBR by additional population data missing in the original Eurostat file
- the ESPON NUTS 5 data base.

The statistical analyses in table 3 show results of calculations on the basis of the two data bases. For the calculations similar threshold are used.

Table 3 Population share of municipalities by size groups

Population class	Number of cities/municipalities		Population	
	absolute	in %	absolute	in %
5,000 – 10,000	10,367	53.8	71,842,291	19.6
10,000 – 20,000	5,390	28.0	72,903,934	19.9
20,000 – 50,000	2,421	12.6	72,735,991	19.8
50,000 – 100,000	679	3.5	46,206,932	12.6
> 100,000	407	2.1	103,124,225	28.1
total	19,264	100.0	366,813,373	100.0

The share of population by size-classes of municipalities for all ESPON-countries is shown in figure 1.

⁴ The first data base is an approach to present cities and towns concerning the national delineation. The second one bases on the administrative division of the European municipalities (LAU 2 – former called NUTS 5). Both sources have methodological insufficiencies. The data base for cities and towns is not complete, especially with regard to the population size lower 20.000 inhabitants. On the other hand the NUTS 5 data base deals only with the level of municipalities which could not be compared in all cases with the delineation of cities or towns. An example is the use of wards in the U.K does not allow any representation of London which consists on many of them. The same is the case in Paris which is formed by various numerous municipalities. On the contrary Berlin or Madrid consisting only of one LAU 2 unit each are represented correct and are by this the two biggest cities in the data base (see map 5). Thus it is obvious that the share of population living in smaller units is higher in the LAU 2 data base. However, it is worthwhile to do this analysis to get a first approach and impression. Further more its is important with regard to further research work in this field.

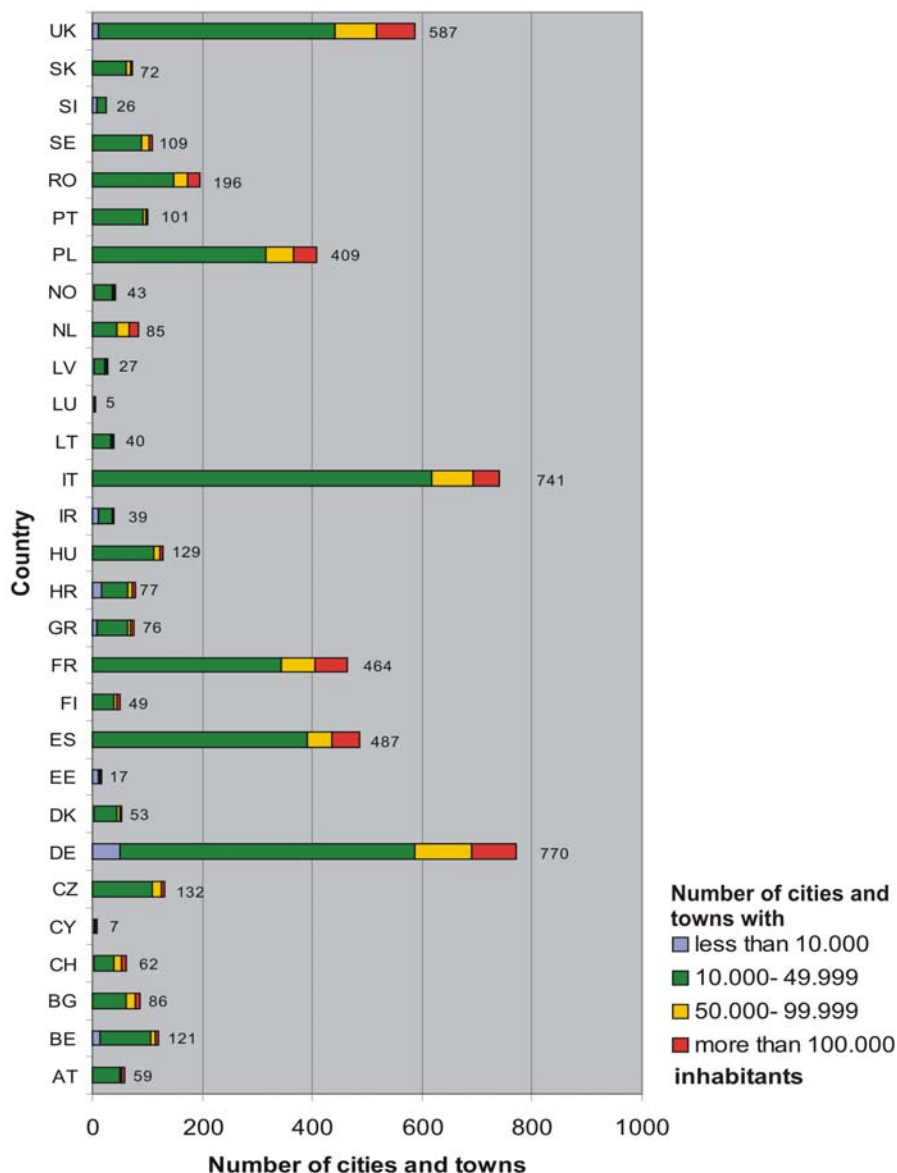
Figure 1 Share of population by size-classes of municipalities



Source: EUROSTAT GISCO STEUGG, completed by BBR

What may be even more relevant from the policy making point of view is the absolute number of municipalities. Of the roughly 9,000 municipalities with more than 10,000 inhabitants about 8,500 (i.e. 90%) have less than 100,000 inhabitants. This means 8,500 mayors and local administrations, acting not only for the local population but also important members of decision making units on national and regional level. They are important for the European level as policy makers delivering to the (local) electorate and thus important partner of European policy as the regional administration (about 300 NUTS II regions) sometimes endowed with less political power than the mayor of a municipality.

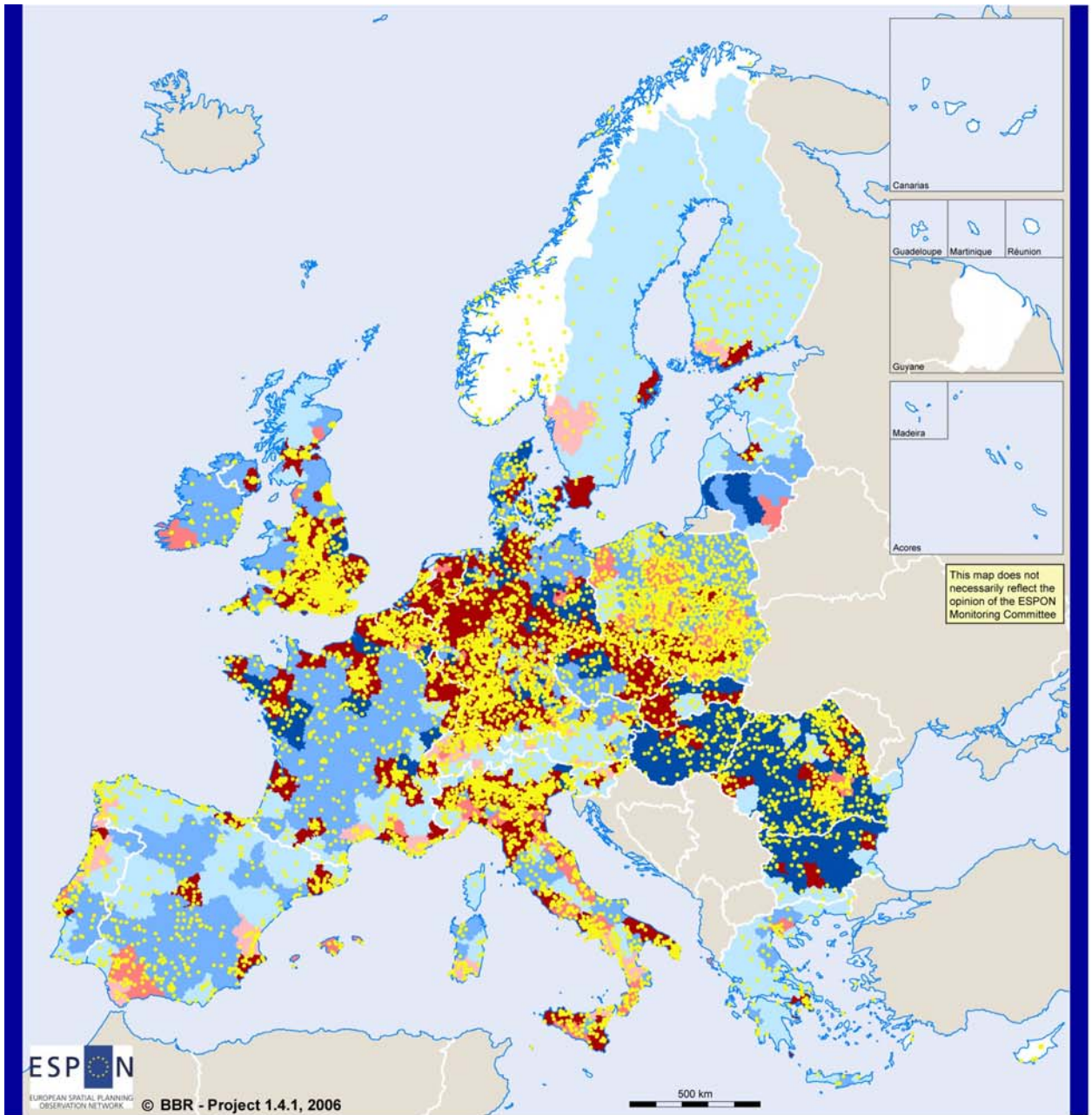
Figure 2 Municipalities by size-classes per country



Source: EUROSTAT GISCO STEUGG, completed by BBR

It has to be noted that we are not (yet) talking about small or medium-sized towns which will be defined and analysed only in the forthcoming chapters, but of administrative units of a certain population on size. The size-categories of municipalities must not be mixed up with SMESTOs. However in order to give a first impression of the quantitative and geographical issues faced with, we have compiled 5 maps of European administrative units with a population ranging from 5,000 inhabitants to over 100,000 inhabitants. The number of inhabitants at NUTS 5-Level has been put in context to the types of the urban – rural typology developed in ESPON 1.1.2 on the NUTS III-Level. In the future work on the topic of cities it is necessary to create a unique reference which gives information on which LAU 2 belongs to which city or town concerning to the national urban system. ESPON II is potentially asked to do this for the first time in a European context. On basis of such a reference an aggregation could be done showing the real distribution and size of cities and towns within the ESPON space.

Map 1 European towns from 5,000 to 10,000 inhabitants



● population 5.000 - 10.000

Urban-rural typology, based on

population density, FUA ranking, land cover

- High urban influence, high human intervention
- High urban influence, medium human intervention
- High urban influence, low human intervention
- Low urban influence, high human intervention
- Low urban influence, medium human intervention
- Low urban influence, low human intervention
- no data

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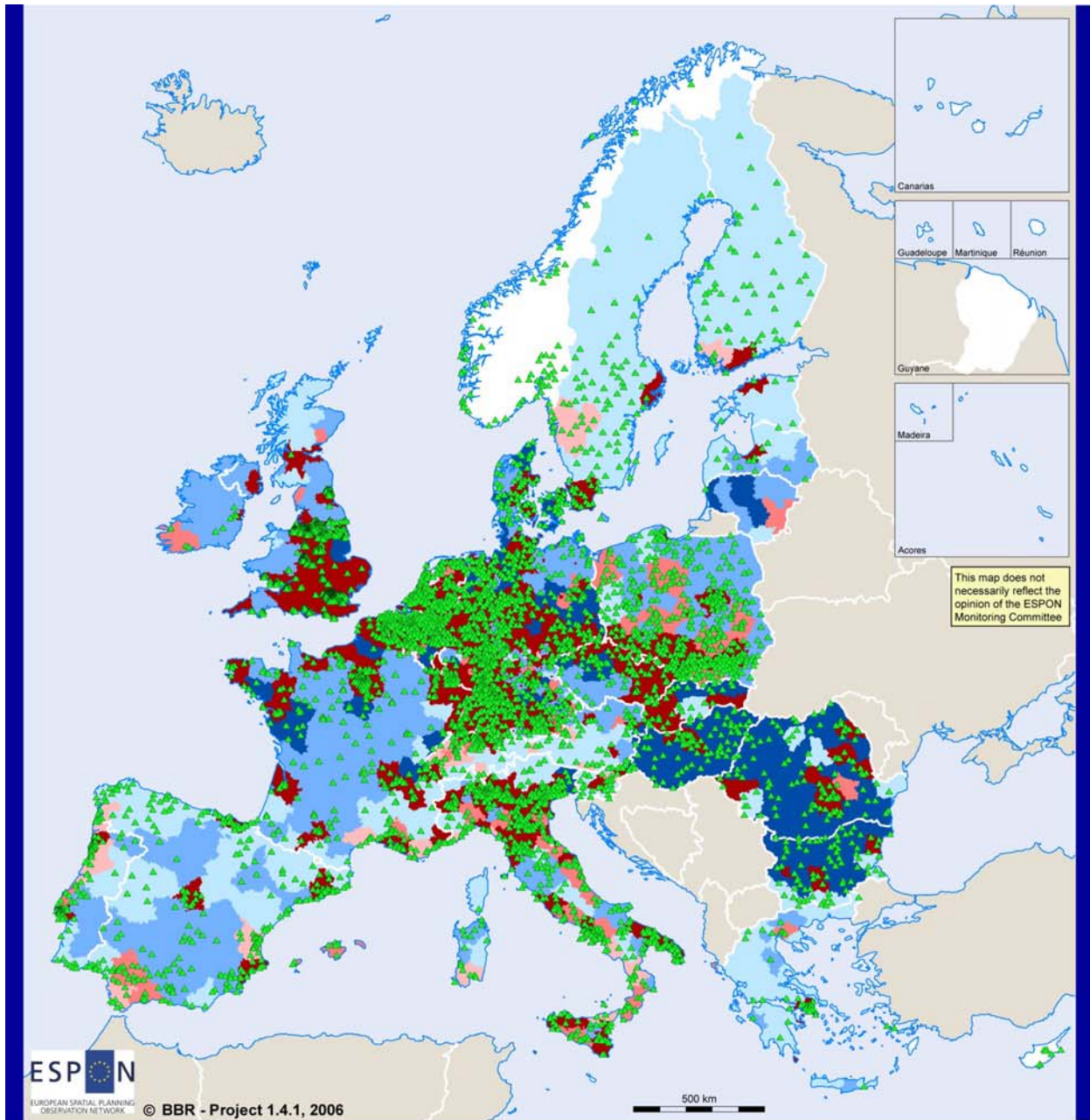
Origin of data: ESPON 1.1.2 CURS

ESPON 1.4.1 BBR, own calculations

Regional level: Urban-rural typology = NUTS 3;
municipalities = NUTS 5

Source: ESPON database

Map 2 European towns from 10,000 to 20,000 inhabitants



This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

▲ population 10.000 - 20.000

Urban-rural typology, based on

population density, FUA ranking, land cover

- High urban influence, high human intervention
- High urban influence, medium human intervention
- High urban influence, low human intervention
- Low urban influence, high human intervention
- Low urban influence, medium human intervention
- Low urban influence, low human intervention
- no data

© EuroGeographics Association for administrative boundaries

Origin of data: ESPON 1.1.2 CURS

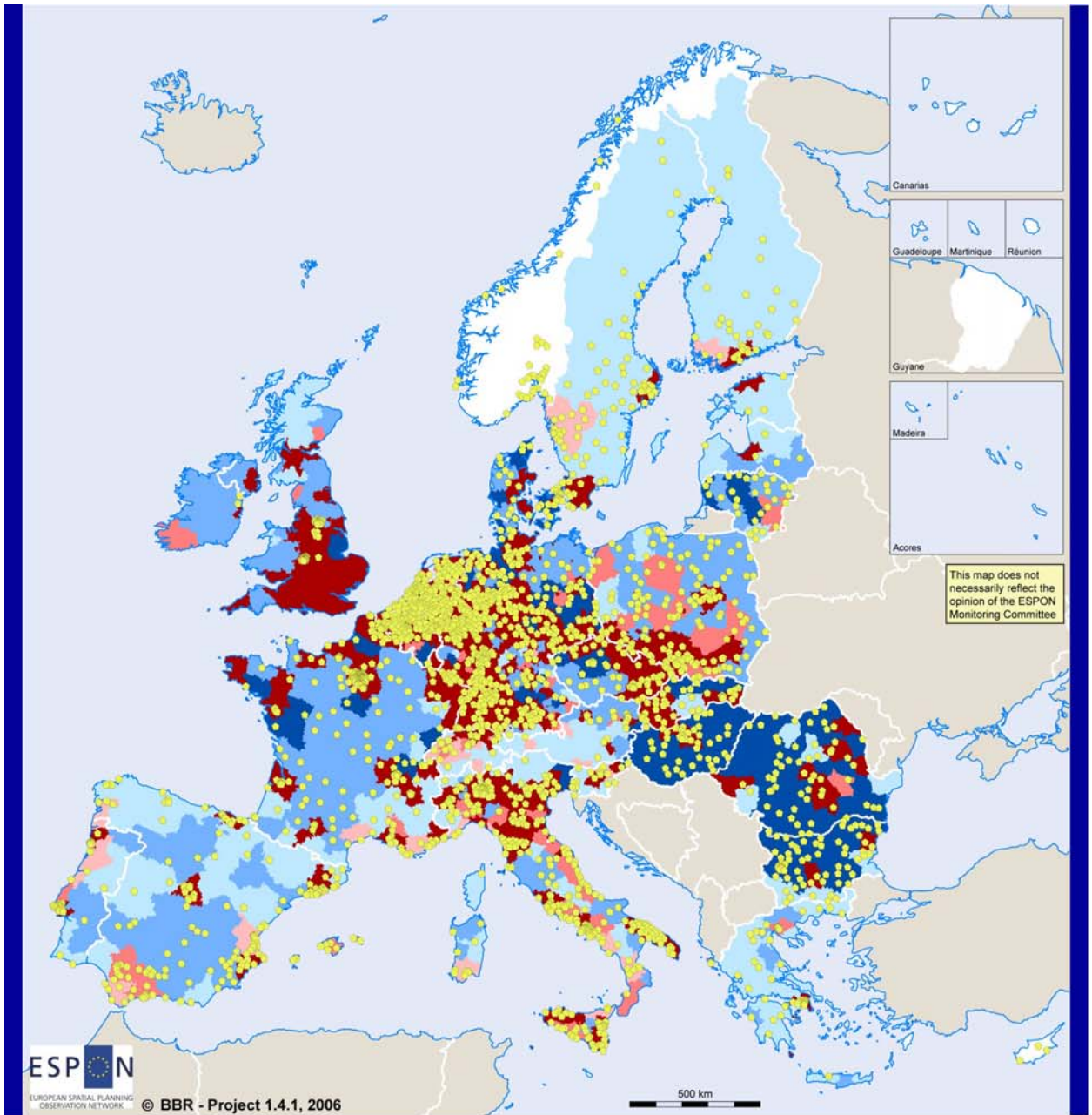
ESPON 1.4.1 BBR, own calculations

Regional level: Urban-rural typology = NUTS 3;

municipalities = NUTS 5

Source: ESPON database

Map 3 European towns from 20,000 to 50,000 inhabitants



● population 20.000 - 50.000

Urban-rural typology, based on

population density, FUA ranking, land cover

- High urban influence, high human intervention
- High urban influence, medium human intervention
- High urban influence, low human intervention
- Low urban influence, high human intervention
- Low urban influence, medium human intervention
- Low urban influence, low human intervention
- no data

© EuroGeographics Association for administrative boundaries

Origin of data: ESPON 1.1.2 CURS

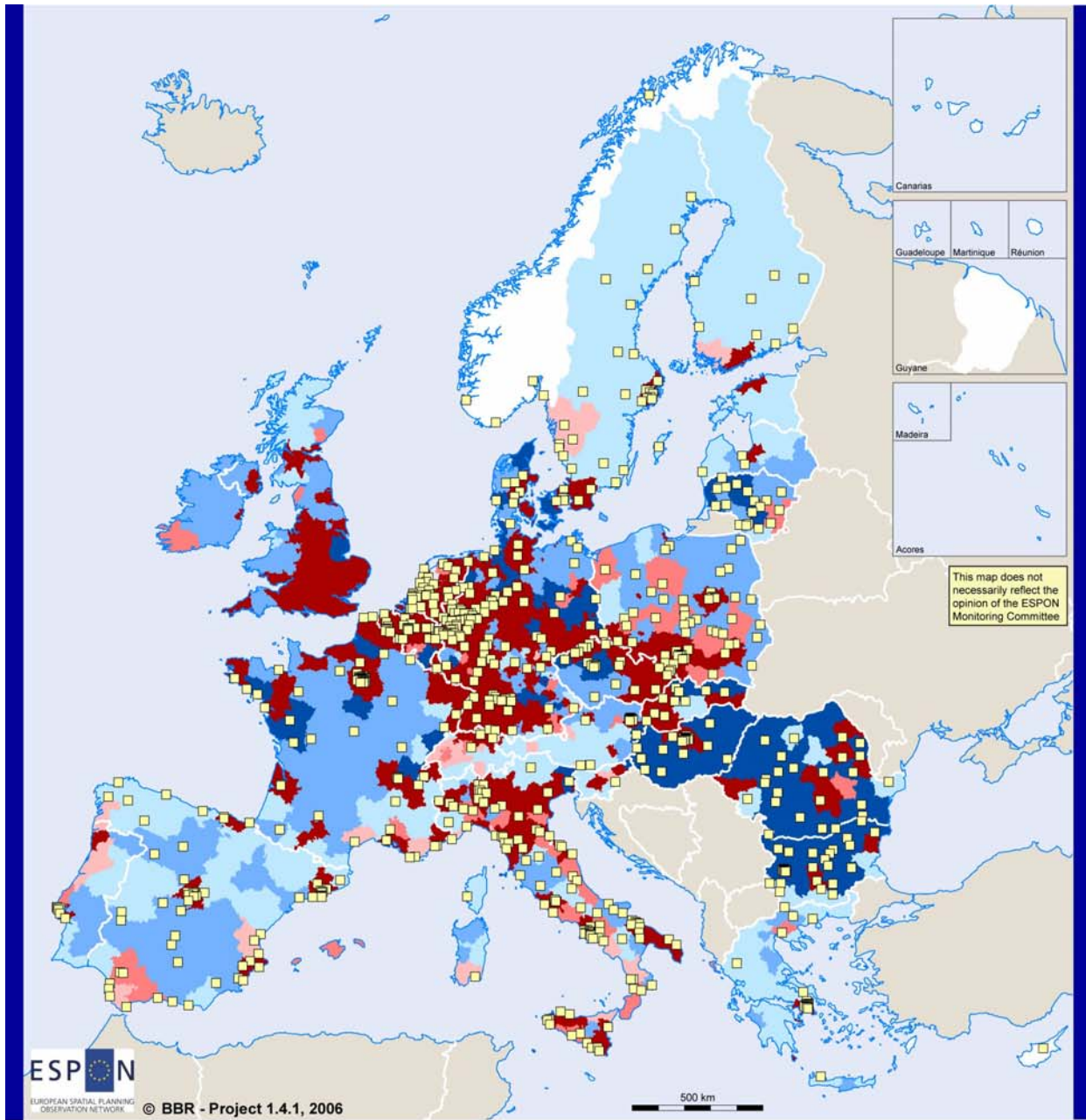
ESPON 1.4.1 BBR, own calculations

Regional level: Urban-rural typology = NUTS 3;

municipalities = NUTS 5

Source: ESPON database

Map 4 European towns from 50,000 to 100,000 inhabitants



This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

■ population 50.000 - 100.000

Urban-rural typology, based on
population density, FUA ranking, land cover

- High urban influence, high human intervention
- High urban influence, medium human intervention
- High urban influence, low human intervention
- Low urban influence, high human intervention
- Low urban influence, medium human intervention
- Low urban influence, low human intervention
- no data

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Origin of data: ESPON 1.1.2 CURS

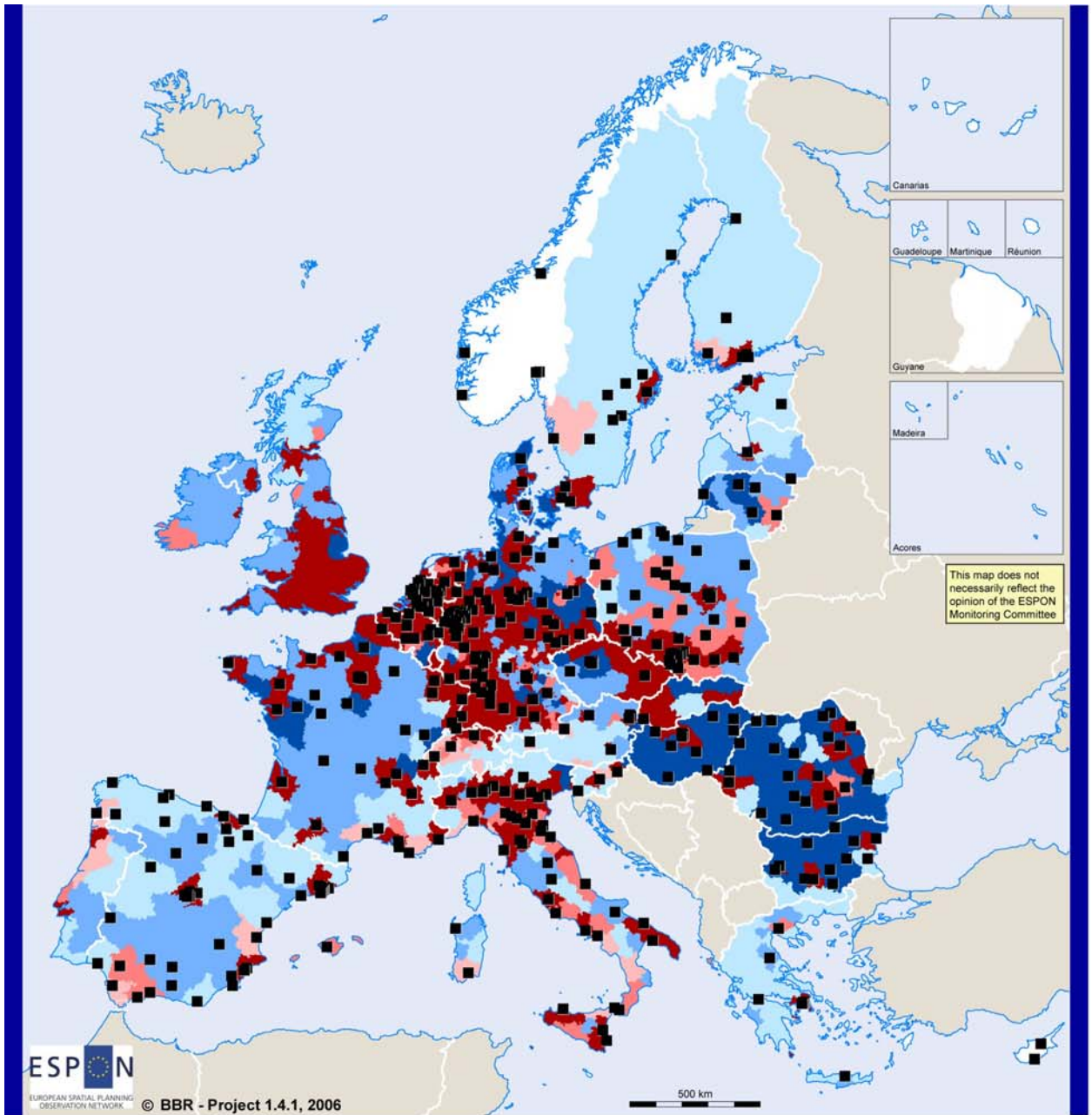
ESPON 1.4.1 BBR, own calculations

Regional level: Urban-rural typology = NUTS 3;

municipalities = NUTS 5

Source: ESPON database

Map 5 European towns with 100,000+ inhabitants



■ population > 100.000

Urban-rural typology, based on

population density, FUA ranking, land cover

- High urban influence, high human intervention
- High urban influence, medium human intervention
- High urban influence, low human intervention
- Low urban influence, high human intervention
- Low urban influence, medium human intervention
- Low urban influence, low human intervention
- no data

© EuroGeographics Association for administrative boundaries

Origin of data: ESPON 1.1.2 CURS

ESPON 1.4.1 BBR, own calculations

Regional level: Urban-rural typology = NUTS 3;

municipalities = NUTS 5

Source: ESPON database

It is fairly obvious that SMESTOs are key elements within the policy of territorial cohesion: the very concept of polycentricity implies the existence and the functioning of small or medium-sized towns and cannot be restrained to the large agglomerations. SMESTOs are frequently needed to attain polycentricity within an agglomeration and certainly outside the large agglomerations they are the main nodes of territorial structure, hence a prerequisite for polycentricity. This holds true on national as well as on regional level.

An important instrument of territorial cohesion are the Structural Funds, which in their new regulations are stressing the urban dimension. Again this urban dimension is not only addressing the metropolises but also SMESTOs, as has already been the case within the Community Initiative URBAN of the past two financing periods. The new objective of territorial co-operation could also add to the importance of SMESTOs within Cohesion Policies. Particularly in cross-border co-operation the SMESTOs on either side of the borders have been playing a key role already in the past, which could be enhanced in the future.

Other European Policies of relevance for SMESTOs are:

- Rural development,
- environment, and, to a lesser extent,
- employment.

1.4 Turning issues of European urban policy into a research agenda

Already in the terms of reference for this study a number of policy option focussing on SMESTO were raised, citing the ESDP:

- Strengthening small- and medium-sized towns in rural areas as focal points for regional development and promotion of their networking;
- Maintenance of basic supply of services and public transport in small- and medium-sized towns;
- Promotion and support of partnership-based cooperation between small- and medium-sized towns at a national and transnational level through joint projects and mutual exchange of experience.

These and further policy options arising from the analysis form the baseline of the study which should provide arguments for policy-making on European level with respect to SMESTOs.

The research input to policy-making can be expected to produce the following results:

- Selection of criteria for definition of SMESTOs that can be applied throughout the ESPON-space and if so, secure that the objects of observation are comparable in a meaningful sense. This exercise is rather comparable to the definition of small- and medium-sized enterprises (SMEs) in statistics than to a delimitation of a territory on a European map. It will imply a certain shift from

discontinuous perception of national and European territory as dominant within ESPON up to now to a more continuous understanding of space.

- Clarification of concepts and notions used to describe a SMESTO, taking into account the results of earlier ESPON work.
- Development of characteristics of groups of SMESTOs, which can serve for differentiation between SMESTOs and eventually lead to a classification (typology) of European SMESTOs.

It is not foreseen to give a quantitative account on European SMESTOs, nor to test the proposed typologies on a European level. On the contrary, this study should only establish a basis on which such quantitative testing and perhaps simulation can be exceeded in the forthcoming ESPON research.

As usual in transnational research projects the objectives and tasks of the study according to the terms of reference have initially been divided into work packages, these comprised:

- WP 1: Identifying European SMESTOs
- WP 2: Analysis of the roles and functions of SMESTOs
- WP 3: Typologies of SMESTOs and their respective regions
- WP 4: Case studies on European SMESTOs
- WP 5: Conclusions and recommendations
- WP 6: Project management, reporting and communication

As can be seen from this overview, some work packages were result-oriented and others more process-oriented. The final report therefore reflects the WP-structure only partly. Following this introductory chapter in **chapter 2** we first lay the fundamentals for a qualitative concept of SMESTOs, asking “What is a SMESTO?” and reporting on the different answers given throughout Europe.

Chapter 3 draws on a great variety of sources – literature survey, country questionnaires and the case studies – in order to describe comprehensively the functions and roles of SMESTO. The diversity of SMESTOs in Europe should thereby be made apparent and ways to deal with this diversity explored.

This analysis of function and roles is further developed in **chapter 4**, where economic performance and its prerequisites is added. The form of the analysis is a design of frameworks for possible typologies of SMESTOs both on micro-level (individual towns) and meso-level (regions).

Concluding **chapter 5** summarizes our proposals concerning future studies on SMESTOs within ESPON and particularly addresses the issue of quantification. Furthermore a number of first policy options – beside future research – are discussed that show the importance of SMESTOs for territorial cohesion and regional development.

2 WHAT IS A SMESTO?

The need for information on cities and SMESTOs despite the spatial dissolution of traditionally urban economic and social functions is illustrated by the continued use of concepts of urban and rural by national statistical institutes. The first objective of this chapter is to review the approaches to define “urban areas” currently implemented in a selection of European countries. While a number of different approaches co-exist, often in the same country, it is necessary to identify which can be useful in a comparative pan-European perspective (section 2.1).

Many European countries also have defined specific criteria to distinguish SMESTOs from other urban areas (section 2.2). The diversity of criteria used reflects the wide range of perceptions of the urban system which prevail across Europe. Even if they cannot be used as such in a pan-European study, these criteria need to be compiled in order to improve or knowledge of the different types of contexts that can be encountered, and to construct an analytical framework susceptible of making sense in each of them (section 2.3).

2.1 Approaches to define urban areas

Previous studies have described the different standards that are used in order to define what is a city in different European countries. In each country, the definition of the town that came up has been in accordance with *“the nature and history of its urban population, as well as its political and administrative structures for land-use control”* (Eurostat, 1992). Any international comparison needs to carefully consider these differences.

These difference form the backdrop against which the three main approaches identified across Europe should be understood:

- The **“administrative approach”** defines urban areas based on the legal or administrative status of municipalities. This approach corresponds to the city as an instrument used by the state to structure, organise and control a country, but also as a forum for the interaction of local actors (governance).
- The **“morphological approach”**, defines urban areas based on the extent and/or continuity of the built-up area, the number of inhabitants, proportion of the municipal area covered by urban settlements. This approach corresponds to the city or town as a physical or architectural object.
- The **“functional approach”** defines urban areas based on interactions between a core area, which may be defined according to morphological criteria, and the surrounding territories. Daily commuting flows are the central parameter in this respect, as they reflect the existence of a common labour market. This approach corresponds to the city as an economic and social entity.

The three approaches show how difficult it can be to define and delimit an urban area or town. They also express different but all relevant perceptions of the nature of the town. Is it primarily a built-up environment for living, a place of and for

social interaction, an economic or political sphere? One or more of the approaches of urban areas described above are applied in all European countries. Some approaches are actively used by public authorities for urban policies, and thereby have an official status. Others may only be used as statistical entities. Finally, some approaches are used for research purposes, and have not been validated by national authorities.

As a first step in this study we will define the basic notions that are the most used when defining urban areas in Europe. The aim is not to provide an exhaustive enumeration of the parameters used but to improve the understanding on how the definition of urban areas and towns is tackled across Europe, in view of providing a framework for the analysis of European SMESTOs.

2.1.1 Administrative approaches to urban areas

In some European countries municipalities are classified as urban or rural, based on their total population (irrespective of the spatial organisation of the settlements), their administrative role, their history or simply a decision by national authorities.

Municipal population thresholds

In some countries a municipality is considered urban when it reaches a certain threshold of population, and it is thus considering the administrative boundaries of the municipality as the formal delimitation of the town, irrespective of the actual structure of the settlements. Each municipality is granted town status when its population reaches a certain threshold level. This status can give them special rights and duties towards the rest of the national (or regional in case of federal states) territory. Table 4 below summarises some interesting cases:

Table 4 Population thresholds for defining urban municipalities

Country	Name	Definition of the agglomeration
Switzerland ⁵	<i>Commune Urbaine</i> <i>Städtische Gemeinde</i>	More than 10,000 inhabitants
Austria ⁶	<i>Statutarstadt</i>	More than 20,000 inhabitants
Czech Republic ⁷	X	More than 2,000 inhabitants
Spain ⁸	X	More than 10,000 inhabitants
Italy ⁹	X	More than 10,000 inhabitants
Slovakia ¹⁰	X	More than 5,000 inhabitants (combined with function as a centre)
Luxembourg ¹¹	X	Population of communes with an administrative centre of more than 2,000 inhabitants

⁵ From the *Office Fédéral de la Statistique*, Switzerland

⁶ Questionnaire 3

⁷ From ESPON 1.1.2., 2003

⁸ From Eurostat, 1992

⁹ Ibid

¹⁰ Op. Cit. (2003)

¹¹ Ibid

Town status by governmental decision

Municipalities can become a town by decision of the government when the town has a certain administrative status, such as a regional capital for instance. This way of defining cities focuses on their importance in the institutional and political system as a centre for public decision-making.

In Poland¹², town status is granted municipalities by decision of the Prime Minister, on a case-to-case basis. The decision is made on the basis of criteria such as population size and density of the built-up area, but there are no quantitative criteria.

In Italy¹³, the government has lately taken steps in view of improving the definition of urban areas. In 1990, the law on administrative units defined suburban areas around the largest cities as metropolitan areas. In 2001 a new administrative unit, called *metropolitan cities*, was introduced in the legislation, as a complement to the other administrative levels (regions, provinces and municipalities). However, both laws have not been implemented so far.

In Germany, granting town ordinances and privileges is a prerogative of the *Länder*. This is however not the only way in which an area can be defined as a town: a demographic mass above a certain threshold level or the presence of a certain range of central place functions can also be sufficient. On the basis of either of these three criteria, 1,408 *Städte* and 88 *Kreisfreie Städte* have been defined (Eurostat, 1992).

In Hungary¹⁴, two types of towns can be distinguished (with the exception of the capital-city of Budapest, which has a special status): the first group of towns comprises the county capitals as well as all the settlements of more than 50,000 inhabitants, which have been granted urban status by decision of the parliament; towns of the second type are granted the status of town (or urban area) by the presidency on the basis of multiple factors such as functional, morphological, institutional or cultural.

Governmental decisions play a major role in the identification and delimitation of Irish towns and cities (Central Statistics Office, 2002). The urban system is constituted of two main categories of towns, in addition to the capital city Dublin, which has a special status reflecting its dominant position in the Irish urban system. The first category consists of *towns with legally defined boundaries*. The towns with legally defined boundaries comprise five cities, five boroughs and 75 towns. These towns are particularly important in the Irish administrative system. However, in some cases urban areas, following a morphological criteria, are extending beyond the legally fixed boundaries. In that case, contiguous suburbs or environs areas are defined around the 'legal' town on the basis of the census results, and in line with the definition of the built-up area as applied for the *census towns*. The second category of towns is the *census towns* that do not have already pre-defined legally boundaries and are basically defined as a built-up area, and delimited by a

¹² Questionnaire 9

¹³ Questionnaire 4

¹⁴ From Central Statistical Office, Hungary

morphological criterion (see the morphological definition of towns in Ireland in next section 2.1.2).

In Cyprus, municipalities constitute the form of government for urban (and tourist) centres, while communities govern rural areas. A community can get the status of municipality, to be approved by the Council of Ministers, if it has a population of more than 5,000 inhabitants or the sufficient economic resources to function as a municipality.¹⁵

Moreover, in some countries a municipality that is granted the status of town needs to fulfil some particular duties such as hosting a local or regional administration. This is the case for the statutory cities (*Statutarstädte*) of Austria.¹⁶

The main challenge related to administrative delimitations of cities is that they cannot evolve at the same pace as the pace of urban development. This is partly due to the fact administrative delimitations of cities are often also spatial contexts for public service provision. Changes in boundaries following the extension or shrinking of urban areas are avoided in order to provide some organisational stability. From a statistical point of view, this however implies that there is the need to find new and innovative delimitation methods (Eurostat, 1992). By assimilating towns to a certain number of municipalities, countries that use the administrative approach to distinguish urban and rural areas, highlight the institutional importance of towns as essential spatial contexts for local democracy and governance.

Historical towns

Up until the nineteenth century and its Industrial Revolution, towns and countryside could be relatively easily distinguished. Even in cases where the urban sphere would extend outside of the physical and legal boundaries of the city, typically materialised by the ring-wall and would form suburbs, the two types of environments would be quite distinct.

In some countries, the historical factors are still an important criteria when it comes to identifying cities and defining their place in the national urban hierarchy. In Germany¹⁷, for instance, the town ordinances and privileges granted by the *Länder* are mostly related to historical rights. In Poland¹⁸, historical factors are one of the qualitative criteria used by the government to define urban areas.

However, in the United Kingdom the rationality of using historical heritage as a basis for defining modern towns is questioned for two main reasons. On the one hand, historical freestanding towns have grown into large built-up areas, extending beyond the historical boundaries. On the other hand, some historical freestanding towns have lost influence and can no longer be considered as relevant nodes in the urban system (Denham & White, 1998).

¹⁵ Questionnaire 10

¹⁶ Questionnaire 3

¹⁷ Questionnaire 6

¹⁸ Questionnaire 9

2.1.2 Morphological approaches in European countries

The morphological approach relates to the analysis of the spatial spread of dwellings across each territory, and how these dwellings form continuous built-up areas.

Continuous built-up areas

In many countries the definition of a continuous built-up area is the first step of differentiating urban areas from rural ones. The use of the continuous built-up areas can be explained by the need to measure the geographical progression of urban types of settlements (Le Gléau et al., 1997).

When defining the urban built-up area, two parameters are most commonly used: First, the distance between buildings must be below a given threshold; second, the total population of the built-up area must exceed a certain minimum level. While the use of these two parameters is commonly accepted, there are significant differences between thresholds applied in each country.

The first parameter taken into consideration is the **maximum distance between buildings**. This parameter measures the density of the settlements and determines whether a building should be included in a settlement area or not. In European countries the maximum distance between houses ranges from 50 m in the United Kingdom¹⁹ (except Northern Ireland) and Norway to 250 m in Belgium (Decrop, 2002). Most of the countries have applied the threshold of 200 m (France, Denmark, Sweden, Finland, Ireland and Greece), **which is recommended by the United Nations for the definition of urban areas** (Le Gléau et al., 1997).

It is important to note that different types of land-use are not taken into account in the same way across Europe. While areas used for public, commercial and industrial purposes are excluded from the morphological urban area in France, other countries such as Ireland, Belgium and the Nordic Countries include them. Consequently, urbanised areas in France can appear to be more fragmented and less extensive than in these other European countries for methodological reasons (Le Gléau et al., 1997).

The continuous built-up area can only be considered as “urban” if its **aggregated population** exceeds a certain threshold. The values used for this threshold differ widely between the European countries. Some countries also use proxies rather than actual population figures. In Ireland for example, the indicator used is the number of occupied dwellings (50 in this case) instead of the population figure (Central Statistics Office, 2002). When a population threshold is used, the threshold levels range from 200 inhabitants in Belgium and the Nordic Countries (Le Gléau *et al.*, 1997) to 10,000 inhabitants in Austria²⁰ and Greece²¹. It is around 1,000 inhabitants in England and Wales (Denham and White, 1998), 2,000 inhabitants in

¹⁹ From Statistics UK

²⁰ Questionnaire 3

²¹ Questionnaire 7

France²² and 3,000 inhabitants in Scotland (called 'urban settlement') (Scottish Executive, 2004).

In the above mentioned examples, the thresholds are defined on a national basis. However, in regionalised (Spain, Italy) or federal (Germany) countries, there is no nationally unified definition of urban settlements, the definition being undertaken at the regional level.

Table 5 Synthesis continuous built-up area

Country	Distance threshold	Population threshold
Finland ²³	200 m	200 inh.
Sweden		
Denmark		
Norway ²⁴	50 m	200 inh.
Wales ²⁵	50 m	1,000 inh.
England		
Scotland ²⁶ (Urban settlement)	50 m	3,000 inh
Greece ²⁷	200 m	10,000 inh ²⁸
Ireland ²⁹	200 m	50 occupied dwellings
Belgium ³⁰	250 m	150 inh. (in the statistical sector) Population density > 500 inh/km ² ³¹

Morphological urban areas

In countries using a morphological approach, the continuous built-up areas are often approximated to administrative or statistical boundaries. Formal urban area delimitations are then based on these approximated boundaries. This approximation tends to lead to a convergence between the administrative and morphological approaches.

In a first group of countries a morphological urban area is defined by readjusting the built-up areas to the municipal boundaries. The method used to carry out this approximation varies. In France³², a municipality belongs to a morphological urban area if more than 50% of its population belongs to a continuous built-up area which has a total population of more than 2,000 inhabitants (including both parts of the built-up area that are within the municipality and in neighbouring municipalities). In Austria³³ and Greece³⁴, a municipality is considered as an urban area if it has on its

²² From Institut National de la Statistique et des Etudes Economiques (INSEE)

²³ From (Le Gléau et al., 1997)

²⁴ From Statistics Norway

²⁵ From (Denham and White, 1998)

²⁶ Ibid

²⁷ Op. Cit. (1997)

²⁸ Questionnaire 7

²⁹ Op. Cit (1997); and (Central statistical Office, 2002)

³⁰ Op. Cit. (1997); and (Decrop, 2002)

³¹ Monografie verstedelijking 2001, 2006 (to be published)

³² From Institut National de la Statistique et des Etudes Economiques (INSEE)

³³ Questionnaire 3

³⁴ Questionnaire 7

territory a built-up area following the above mentioned criteria, irrespective of the share of the municipal population or territory which is concerned. In Scotland (Scottish Executive, 2004), localities having a permanent population of more than 1,000 inhabitants are described as urban settlements. If the built-up area is spreading over several municipalities, these are all considered to belong to the morphological urban area.

A second group of countries uses territorial divisions below the municipal level in order to delimit urban areas. Those divisions have often a statistical purpose and are used, for instance, for the population censuses: in England and Wales, it is the *enumeration districts*, and in Ireland, the *electoral divisions*. In the Irish case, the Aggregate Town Areas are defined as the aggregation of the Electoral Divisions whose continuous built-up areas have a total population of more than 1,500 inhabitants (Le Gléau et al., 1997).

Finally, a third type of approach of built-up areas is found in the Nordic Countries (Sweden, Finland, Denmark and Norway). In those countries, there is no readjustment of the built-up area to any administrative or statistical division of the territory. Instead, the built-up areas are considered as a statistical area in their own right.

2.1.3 Population densities

Some of the countries that do not have a formal definition of urban areas, like Germany or Poland, use population density as a basis for delimiting urban areas.

In the German case (ESPON 1.1.2, 2003) for instance, NUTS 3 regions with a population density of more than 150 inh/km² are considered urban. In Poland³⁵, the population density is used as a qualitative parameter. It is in other words taken into consideration without any formal quantitative threshold.

In the Netherlands, the Statistical Office has defined 5 possible degrees of urbanisation. The spatial unit used is the municipality, and the parameter is the density of addresses per km². 5 categories of municipalities are defined on the basis of this parameter:

- Extremely urbanised: 2,500 addresses or more;
- Strongly urbanised: 1,500 to 2,500 addresses;
- Moderately urbanised: 1,000 to 1,500 addresses;
- Hardly urbanised: 500 to 1,000 addresses;
- Not urbanised: fewer than 500 addresses.

The urban areas of the Netherlands are then defined as belonging to the two first categories, while the rural areas correspond to the two last. Municipalities belonging to the “moderately urbanised” category are considered as corresponding to an intermediate type of environment.

³⁵ Questionnaire 9

In Scotland, the minimum threshold for urban areas is 5 residents/hectare, or 500 inh/km² (as an alternative to the previously continuous inhabited areas of more than 500 inhabitants) (Denham and White, 1998). Different types of densities are used in order to define the urban object. Densities, whether in terms of population or jobs, are also used in order to define their functional areas. This methodology is further described in the next section.

The results obtained by using population densities to distinguish urban and rural areas are heavily influenced by two main factors. First, the level of the statistical units used (NUTS 3, 4 or 5) can drastically change the resulting delimitation. Taking into account statistical units of higher rank there would be a tendency towards the assimilation of non-urban areas in more densely populated areas, or inversely to dilute densely populated areas in their sparser surroundings. Secondly, the results will also depend on the relative size of the territorial units at that level, the average size of regions and municipalities varying widely from country to country.

2.1.4 Functional approaches

The third identified approach emphasises the importance of functional relations as a fundamental element of the perception of what can be considered as urban.

Many countries complement the morphological and administrative approaches such as those described above with functional ones, in order to get a better grasp of the complex structure of urbanised areas. These functional approaches generally divide the urban territory in three main parts:

- The **urban core** is defined as the very heart of the urban region;
- The **inner ring** corresponds to the areas that are adjacent to the urban core;
- The **outer ring** corresponds to the outer limits of the urban region, often with settlements more spread than in the other two parts.

The area defined by the aggregation of these three parts we refer to as the **urban region**.

The definition of urban regions is based on the relative functional and economic role that each of its three constitutive parts has in the urban system. In some countries, such as France, Belgium and the Netherlands (Eurostat, 1992), there is an official definition of the urban regions (for example: *aire urbaine* in France, *région urbaine/ Stadsgewest* in Belgium, *agglomération* in Switzerland). However, in other countries, the concept of "urban regions" has been developed and applied empirically by research institutes or national agencies in order to promote this new approach of dealing with the urban object. It is the case in the United Kingdom, Ireland, Spain and Germany.

The functional approach is based on the exchanges and relations that take place between the different parts of the urban region, and could be roughly described as the delimitation of the zone of influence of the central core by identifying:

- The total population size of the central core;
- The size of the working population in the central core or its density of jobs;

- The labour market areas and the commuting pattern to the cores;
- The proportion of employment in specific sectors.

The above list is a non-exhaustive enumeration of indicators used to define the central, the agglomeration or the suburban areas of the urban regions. The following section provides precise examples of how the three divisions of the urban region (urban core, inner ring and outer ring) are put into practice in various countries. The notion of “ring” around an urban core should be taken as an image and **not as a strict territorial reality**, as the three parts of the urban region can have varying forms and extents. In fact, the idea is to define the urban region constituted of three main parts that are concentrically organised overall.

The urban core

The urban core is the most central part of the urban region. The definition differs largely between countries, as each of them adapts the notion of urban core to its specific national and territorial context. Some of the most interesting definitions are summarised in table 6.

Table 6 Definition of urban core in selected European countries

Country	Name	Definition of the urban core
France ³⁶	<i>Pôle urbain</i>	Urban area with at least 5,000 jobs and not belonging to any other agglomeration
Belgium ³⁷	<i>Ville centrale</i> <i>Kernstad</i>	Statistical divisions of the territory with a density of population over 50 inh per hectare and three other parameters linked to the share of housing in the city centres
Switzerland ³⁸	<i>Commune-noyau</i>	One or more urban municipalities (more than 10,000 inhabitants situated at the centre of an agglomeration, which means functionally linked to a belt of surrounding municipalities
Austria ³⁹	X	Municipality with a minimum of 10,000 inhabitants, at least 5,000 local employees (not working in agriculture)
United Kingdom ⁴⁰	<i>Metropolitan economic labour areas</i>	At least one municipality with a minimum of 20,000 jobs + adjacent municipalities with a job density of 1,235 jobs/km ²
The Netherlands	X	Not defined

The functional importance of the urban core is usually defined in the different countries as a matter of size, whether considering the total population size or the size of the pool of jobs in this very area. The threshold in itself differs from one country to another and can range from 5,000 jobs as in France and Austria to 20,000 jobs in the United Kingdom. Some countries apply both types of thresholds, as in the Austrian example, stressing the importance for the urban core to be both a population and economic centre.

³⁶ From the Institut National de la Statistique et des Etudes Economiques (INSEE)

³⁷ Extracted from (Decrop, 2002)

³⁸ From the Office Fédéral de la Statistique

³⁹ Questionnaire 3

⁴⁰ Extracted from (Eurostat, 1992)

Table 7 displays the large range of definitions that are used for defining the urban cores in Europe. However, the parameter that seems to be used quite systematically is the number of jobs or employed persons present in this core.

Inner ring

The inner ring can be described as an urbanised area situated in the direct surroundings of the urban core. It is often described as an area that is adjacent and contiguous to the urban core, that is also extensively urbanised and that has specific patterns of exchanges, especially in terms of daily commuting and pooling of labour market resources.

Table 7 Definition of inner ring in selected European countries

Country	Name	Definition of the inner ring
France ⁴¹	<i>Banlieue</i>	Municipalities outside the urban core belonging to the urban area
Belgium ⁴²	<i>Agglomération</i> <i>Agglomeration</i>	Contains the urban core and its adjacent divisions defined by the continuity of the built-up areas and a high density of population (no threshold mentioned)
Switzerland ⁴³	<i>Zone centrale</i>	Municipality (or group of municipalities) with at least 2,000 jobs and a ratio of the number of persons working in the municipality to the number of active persons is higher than 0.85. The urban core defined above is also included in this <i>zone centrale</i>
Austria ⁴⁴	X	Adjacent municipalities with 30% of the active population working in the urban core
United Kingdom ⁴⁵	<i>Inner ring</i>	Adjacent municipalities with 15% of the active population travelling to the urban core. Urban core and inner ring shall have a total population of at least 70,000 inhabitants
The Netherlands ⁴⁶	X	Continuous built-up area adjusted to local administrative boundaries, as well as substantial size in terms of jobs (50,000) and public facilities potential users (150,000). The agglomeration shall also preferably have at least 100,000 inhabitants

The inner ring is the natural continuation of the urban core and there is no disruption in the urban fabric between the urban core and its surrounding ring. Most of the definitions of the inner ring gathered in the table here above are using a threshold in the share of the active population of the agglomeration municipalities that are commuting daily in order to work in the urban core. The threshold varies from 15% in the United Kingdom to 40% in France.

However, in other countries, the definition stresses the fact that the inner ring is an area not only having strong commuting patterns with the urban core, but also an area with high concentration of both persons and economic activities (jobs for example): in the United Kingdom, the urban core and the inner ring shall have

⁴¹ From the Institut National de la Statistique et des Etudes Economiques (INSEE)

⁴² Extracted from (Decrop, 2002)

⁴³ From the Office Fédéral de la Statistique

⁴⁴ Questionnaire 3

⁴⁵ Extracted from (Eurostat, 1992)

⁴⁶ From (Vliegen, 2003)

more than 70,000 inhabitants. But this is especially true in the Netherlands, which defines three different thresholds for an area to be an agglomeration: 100,000 inhabitants, 50,000 jobs and 150,000 potential users of public facilities. The latter is particularly interesting as it refers to the agglomeration as the place for central functions linked to the society. This will be further developed in this section, especially with the use of the German example.

Outer ring

The outer ring represents the very edge of the urban region. It is often the limit between what can be called urban and rural. Varying definitions can be seen in table 8.

Table 8 Definition of outer ring in selected European countries

Country	Name	Definition of the outer ring
France ⁴⁷	<i>Couronne péri-urbaine</i>	Municipalities belonging to the same urban area than the urban core, and with 40% of the dwelling population working in the urban core
Belgium ⁴⁸	<i>Banlieue</i>	Strong dependence of the suburban areas towards the agglomeration in terms of daily commuting, plus other criteria like median income, commuting of students, population evolution
Switzerland	<i>Reste de l'agglomération Übrige Agglomerationsgemeinden</i>	Municipalities with at least 1/6 of the working active population working in the urban core, plus 3 out of 5 parameters defined by built-up area continuity, density of population and jobs, population growth and maximum number of persons employed in the primary sector. The inner ring is subtracted to this zone
Austria	X	Not defined
United Kingdom ⁴⁹	<i>Outer ring</i>	Municipalities whose active population travel to work in the agglomeration in question more than any other agglomeration
The Netherlands ⁵⁰	X	Analysis of the commuting data between the agglomeration and the surrounding municipalities as well as the interrelation of the housing markets

The outer ring does not seem to be as precisely defined as the urban core and the inner ring, as most countries do not use accurate figures to define the extent of those suburban areas.

In Belgium, the Netherlands and the United Kingdom, the outer ring is defined by the dependence upon the agglomeration as regards daily commuting. In France, the *couronne péri-urbaine* is defined by ways of continuity with the urban core and the inner ring, as well as by using a certain threshold in the commuting pattern (40% of the active population).

⁴⁷ From the Institut National de la Statistique et des Etudes Economiques (INSEE)

⁴⁸ Extracted from (Decrop, 2002)

⁴⁹ Extracted from (Eurostat, 1992)

⁵⁰ From (Vliengen, 2003)

In Italy⁵¹, the national authorities have defined *metropolitan areas*, which intent to define the agglomeration area around the biggest Italian cities. However, the delimitation is still not clear as it is devolved to the Italian regions. Each region will then delimit its metropolitan area according to the regional territorial configuration.

In Poland⁵², almost the same process is under way. 12 metropolitan areas have been identified in the framework of the National Spatial Development Concept. These include 9 developed and 3 potential MAs. The former exceed the population threshold of 0.5 million. The delimitation criteria (the basic spatial units are *Gmina* – township, NUTS 5) include: high level of local budgetary revenues, high business activity (in particular with respect to FDIs), and positive migration balance.

In Hungary⁵³, the Central Statistical Office is using the concept of *agglomeration* in order to describe the urban influence area phenomenon. There are four of these agglomerations in the country. Their definition is based on morphological (continuity of settlements, intensive land-use, population density...) and functional (daily commuting, share of employees in certain sectors...) criteria. Two other types of urban spatial entities are commonly used: *agglomerating areas* and *settlement groups of large towns*, which can be described as early stages in the process of becoming an *agglomeration*.

Based on the previously defined spatial entities within the urban region, one could define the **urban influence area** as the total area covered by the urban core, the inner ring and the outer ring. In most countries, this urban influence area would be defined by the combination of the suburban and peri-urban areas around the urban core. The urban influence area therefore represents the area that is polarised by the urban core. The notion of the urban region is particularly relevant for identifying the sphere of influence of the largest urban areas, the metropolitan areas, and might not be fully applicable to the analysis of smaller urban units.

Labour market areas

Labour market areas are based on the commuting pattern of workers travelling daily from one municipality to another. It is assumed that if the active population of a municipality is substantially travelling to a certain municipality more than any other municipality, those entities are in fact part of the same functional entity: the labour market area. In some cases, such as in Finland, the core-municipality of labour market areas is defined *a priori* by the authorities and then the proportion of the active population which travels to the defined core-municipality for its daily working activity, but the majority of countries (Sweden, Norway, Italy to name only a few) relies first and foremost on the statistical analysis of commuting patterns to identify the centres of the labour market areas. Each country using the labour market areas applies a specific threshold. A surrounding municipality in which more than a certain percentage of the active population is travelling to the core-municipality is said to be part of labour market. The gathering of all those municipalities shapes the labour market area.

⁵¹ Questionnaire 4

⁵² Questionnaire 9

⁵³ Partly from Questionnaire 5

In Norway, the first stage when defining the labour market areas is the identification of the centres spread out over the Norwegian territory. This identification is made by using municipal commuting data for 1990 and 2000, as well as a travel time matrix between municipalities. Depending on how the commuting pattern evolves, some new centres can appear while others can be included in the commuting area of another centre. Once the centres have been defined, surrounding municipalities where at least 10% of the labour force commute to the centre municipality will be included in the labour market area of the centre municipality. In addition, municipalities from which it takes less than 30 minutes to commute to the centre municipality are also included in the labour market area (Juvkam, 2002).

In Sweden, the premises of a definition of labour market areas was based on a report published by an expert group for urban and regional studies (ERU) and Statistics Sweden (SCB) (Carlsson et al., 2003). However, the Swedish Agency for Economic Development, NUTEK, has then taken the task to upgrade this definition. The centre municipalities have been identified by using two parameters: first, less than 20% of the municipality's active population shall be commuting outside the municipality for work; and the commuting to any other specific municipality shall be below 7.5% of the total municipal out-commuting pattern (Lindblad, 2003). The other municipalities are included in the labour market area of the centre municipality to which the commuting flows are the highest. Chains of commuting are identified, as in the Finnish case. Two interesting comments that can be done on both the Norwegian and the Swedish cases: the whole national territory is covered, that is to say that all municipalities belong to the labour market area of some centre; inversely, no municipality belongs to multiple labour market area.

In the United Kingdom⁵⁴, the commuting pattern (available at the ward level) is the basis for the definition of the *Travel-To-Work Areas* (TTWA). The delimitation is the responsibility of Statistics UK and it uses two main criteria: the commuting pattern itself, that is to say 70% of the active population living in the area are working there and 70% those working in the area are living there, and a threshold for the total number of the working population (20,000). However, in the areas with lower population densities, other figures are used, respectively 75% and 3,500. In Belgium, the government has applied a functional approach for defining labour market areas, named *zone résidentielle migrants alternants* or *forensenwoonzone*, the criterion being that 15% of working population commute to the agglomeration.

As described above, labour market areas are delimited based on commuting patterns between municipalities. However, this definition takes only into account daily commuting patterns between the home and the workplace; this is only one component of the everyday mobility of the population. Based on this observation, a consortium of major French national institutes have identified *bassins de vie* (INSEE, 2003). These *bassins de vie* are defined as the smallest territory in which the inhabitants have access to jobs and services (hospitals, schools, retail centres...). The intention is to divide the national territory into entities that have a meaning for the daily life of the inhabitants. Contrary to labour market areas, *bassins de vie* are not based on local administrative boundaries. Furthermore, as

⁵⁴ From Statistics UK

they take into consideration the accessibility to public services, thus taking into account the “non-professional” side of the daily life (INSEE, 2003).

Table 9 provides a synthesis of the different notions that have been described and developed in section 2.1. It displays how those notions are been applied in some of the countries of the European Union, plus Switzerland and Norway. It displays the multiple potential definitions of urban areas that can be found in the European countries. In fact, the table also shows that a wide range of definitions is used within each country.

Table 9 Synthesis of the definition of urban areas in European countries

Countries	Morphological approach		Functional approach		Administrative approach	
	Continuous built-up area	Density	Urban Regions	Labour Market Areas	Size of municipality as a basis for the town	Town by government al decision
Austria	E	N	E	N	E	E
Belgium	E	N	E	E	N	N
Czech Republic	N	N	N	N	E	N
Finland	E	N	N	E	N	N
France	E	N	E	E	N	N
Germany	N	E	N	N	E	E
Greece	E	N	N	N	N	N
Hungary	N	N	E	N	E	E
Ireland	E	N	E	N	N	N
Italy	N	N	E	E	E	E
Norway	E	N	N	E	N	N
Poland	E	N	E	N	E	E
Spain	E	N	E	N	E	N
Sweden	E	N	N	E	N	N
The Netherlands	N	E	E	N	N	N
United Kingdom	E	N	E	N	N	N

E: Existing definition, N: No definition found

The delimitation of the urban phenomenon is highly dependent on the perspective, i.e. on the issue under scrutiny, the purpose of the classification (statistical, political, economic) and the territorial level of interest (Regional or national). Consequently, it seems difficult to choose one definition rather than another, as each of them can be relevant within a certain analytical perspective or territorial strategy.

2.1.5 Availability of data for SMESTOs, delimited according to national criteria

If one is to base an analysis on the prevailing national definition of SMESTOs, this requires that social and economic data need to be compiled for the corresponding areas. In order to assess the potential feasibility of such a project, a questionnaire was sent to the national experts with a list of main indicators for a study of SMESTOs.

The indicators have been gathered in four main categories for a total of 17 indicators: geography and positioning (3 indicators), demography (5), economy (8) and infrastructure (1).




Table 10 summarizes the responses received from the project's national experts. The main purpose of the table is twofold: first, it is possible to assess which type of indicator is the most easily (or difficultly) available, and which countries have the most complete set of indicators that would enable an in-depth analysis.

In the category "geography and positioning" very few indicators are considered to be easily available. The indicators in this category are generally either not available or difficult and/or costly to get. In some cases, the national expert could not provide information on data availability. This first category is central to the delimitation of the SMESTO by a morphological approach, as described in section 2.3, as part of the 'identification' phase.

The demographic and economic indicators seem to be the most easily available, with some few exceptions. The indicators listed are aiming at giving a better insight on the socio-economic situation and trends in the SMESTOs but also in their wider territorial context (for instance, NUTS 3/2 region). In these two categories, the indicators that seem to be the most problematic to gather are the ones dealing with the commuting pattern, which is essential for the functional characterisation of the SMESTOs.

Table 10 Data availability in selected European countries

Indicators	Geography / positioning			Demography				Economy								Infrastructure		
	G_01	G_02	G_03	D_01	D_02a	D_02b	D_03a	D_03b	E_01	E_02	E_03	E_04	E_05	E_06	E_07a	E_07b	I_01	
Italy	2001	1991	1991	2002	2002	2002	2002	2002	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
Austria		N/A	N/A	2002	N/A	N/A	2003	2003	N/A	2003	2003	2003	2003	2003	N/A	N/A	N/A	N/A
Hungary	2002	2002	N/A	2002	2003	2003	2003	2003	2002	2001	2001	2001	2001	2001	2001	2001	2001	2002
Germany	N/A	N/A	N/A	2003	2003	2003	2003	2003	N/A	2003	2003	2003	2003	N/A	2003	2003	2003	N/A
Spain	2003		2001	2002	2004	2004	2004	2004	2001	2001	2001	2001	2001	2001	2001	2001	2001	
France	N/A	N/A	1999	1999	2004	2004	2003	N/A	2002	2002	2002	2002	N/A	N/A	N/A	N/A	N/A	N/A
Finland	2000	2000	2000	2002	2004	2004	2004	2004	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
Poland	2002	2002	1988	2002	2004	2004	2004	2004	2002	2002	2002	2002	2002	2002	1988	1988	2002	2002

	Easily available
	Available with some efforts
	Difficult to obtain or Costly
2000	Closest year available
N/A	Indicator not available or not answered in the questionnaire

G_01	Delimitation of the urban areas
G_02	Positioning of the urban centres
G_03	Delimitation of the functional areas
D_01	Total population
D_02a	Number of birth
D_02b	Number of death
D_03a	Number of in-migrants
D_03b	Number of out-migrants
E_01	Total number of unemployed persons
E_02	Total number of persons in employment
E_03	Total number of persons working in the primary sector (agriculture, fishery, forestry, mining and quarrying, exploitation of natural resources)
E_04	Total number of persons working in the services sector
E_05	Total number of persons working in the manufacturing sector
E_06	Total number of persons working in the business services sector
E_07a	Number of city-dwellers working outside the city limits (out-commuting)
E_07b	Number of persons working in the city but living outside its limits (in-commuting)
I_01	List of secondary establishments

Source: ESPON 1.4.1. received questionnaire

2.2 Differentiating SMESTOs from other urban areas

2.2.1 SMESTO: current state of the affairs

Chapter 2.1 has enabled us to improve our understanding on how urban areas are defined across Europe. From that point of departure, the second part of analysis is to investigate what parameters and methods could be used in order to enable the identification of SMESTOs. The basic questions that need to be addressed are the following: are SMESTOs defined in European countries? And, if yes, what are the criteria used?

The questionnaire that was sent to different national experts has provided a broad overview of how a SMESTO are defined. One of the main results of the survey is that there are few explicit definitions of small and medium-sized towns across Europe. Most countries define urban areas or towns/cities as such, but do not have an additional definition of the small and medium-sized entities. In most cases, it seems that a tacit understanding of what is a SMESTO could be as a town or urban area that is located outside of the metropolitan or large city regions.

First, the range of towns defined as SMESTOs in selected European countries by way of quantitative criteria is compared. The second section focuses on the qualitative criteria that are currently used in Europe when defining the hierarchy of urban centres.

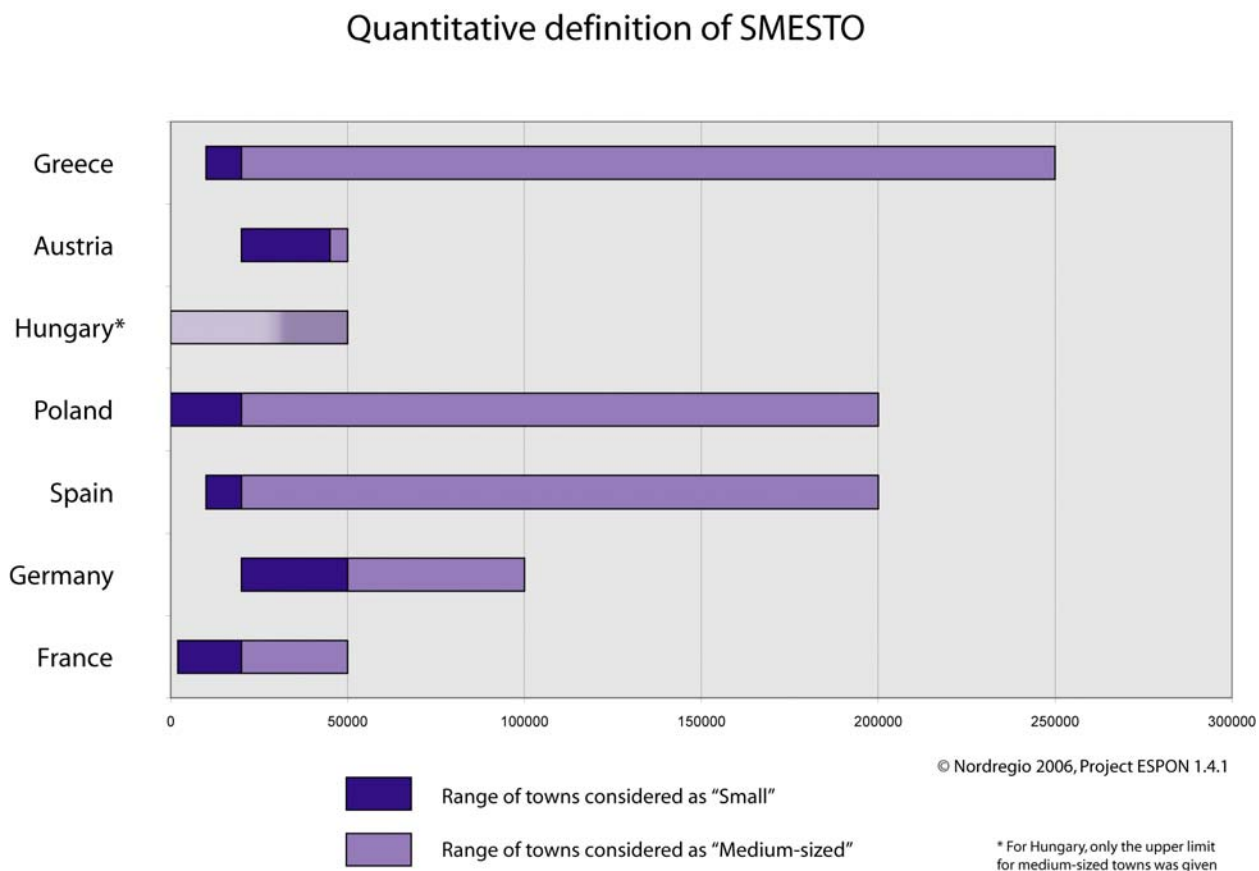
Quantitative definition of SMESTO

In most countries, SMESTOs are defined as urban units with a population comprised between certain threshold values. The number of inhabitants is regularly the basis for distinguishing the SMESTO from the larger urban agglomeration, as SMESTOs and rural areas have already been delimitating when defining urban areas.

The use of size threshold is not surprising because it is the direct consequence of the appellation of the SMESTO. Three thresholds are commonly used: the upper limit for a town to be called medium-sized, the bottom limit for a town to be called small, and finally the limit that differentiates small towns from medium-sized ones.

The thresholds displayed in Figure 3 can either have official or unofficial status. The figure shows the wide disparity of quantitative definition of the small and medium-sized towns in Europe. Obviously, the quantitative understanding of the range of towns that are to be considered small and medium-sized depends upon general characteristics of the national urban system such as the size of the largest urban areas, the number of secondary centres and the distance between them.

Figure 3 Thresholds used for the definition of small and medium sized towns in a selection of European countries



Source: Data gathered via the questionnaire sent to the ESPON 1.4.1. project's national experts

The quantitative definition of SMESTO are however not correlated with the total size of the national population, as the definitions in France or Germany are for instance more restrictive than in Greece. As the thresholds used are so different, it is not feasible to use the various national definitions of SMESTOs as a basis for a European-wide study. Just as an example, a large town in France (more than 50,000 inhabitants) is considered a medium-sized town in Spain or Poland.

A pan-European study on SMESTOs therefore requires new SMESTO definition criteria to be designed and implemented. These criteria should take into account the various territorial contexts that can be found in Europe, as SMESTOs of equivalent demographic mass do not have the same functional importance if, for instance, they are close to metropolitan area or in a less densely populated region.

Qualitative definition of SMESTO

As described earlier, the town is also the place where different functions are gathered. Those functions can be economic, cultural, political, administrative or even financial, and the town seems to be shaped by the combination of those functions, which makes it of importance for the rest of the territory (Rosenblat,

Cicille, 2003; Roncayolo, 1997). Analysing the SMESTO through this lens would lead us to focus on them as intermediate functional centres.

An interesting example of such an application can be found in the qualitative ranking of German cities using **centrality** as a parameter when defining centres of more or less importance. A ranking realised by Gatzweiler (Bundesministerium für Verkehr, Bau- und Wohnungswesen, 2004) delimitates German SMESTOs as such:

- Big medium-sized towns: central places of higher-order or central places of medium-order, from 50,000 to 100,000 inhabitants,
- Small medium-sized towns: central places of higher-order or central places of medium-order, below 50,000 inhabitants,
- Small town: possession of town ordinances and privileges, often centre of low level.

In his ranking, Gatzweiler uses the centrality of the town as a main criterion for definition which towns can be considered as medium-sized or small. The centrality criterion takes into account the proximity or not of some essential functions (hospitals, universities...) on the town's territory.

The reference to centrality can be traced back to the **Central Place Theory** of Christaller (1933, for more detail see chapter 3.2.1) which formalised a relationship between the demographic size of a town and the degree of specialisation, number, range and economic weight of the functions gathered in that place (Pumain, 1993). The compilation of other indicators beside the mere size of the town stresses the need for a more nuanced classification of towns in the urban hierarchies (Pumain, 1993). This definition emphasizes that SMESTOs have an important place in the functional pattern of the national territory, especially with regards to their hinterland.

Besides Germany, other countries apply qualitative criteria for identifying or characterising SMESTO. In Poland for example, some medium-sized towns are defined as growth pole centres, and the importance of the SMESTOs is seen in enhancing a more balanced structure of the territory at the national level.

The *Centres of Expertise* (CoE) programme in Finland offers another example. Indeed, this programme is aiming at "creating a network of thriving centres of top level know-how" and therefore, "cities and functional urban regions are more clearly seen as the driving forces of regional development and the national economy" (Committee for Urban Policy, 1999). This vision of SMESTOs focuses on their capacity for innovation and growth insofar as they organise in networks.

Another example can be found in Italy⁵⁵, where each region has its own approach and strategy dealing with SMESTOs, implying that issues related to SMESTOs are specific to the territorial and functional context of each region and therefore need to be dealt with at this scale rather than at the national one.

⁵⁵ Questionnaire 4

However, in most other European countries, the definition of SMESTOs, if it exists, lacks this type of functional analysis. Moreover, SMESTO are often defined rather negatively, as urban entities that do not belong to the category of “large cities and agglomerations”.

2.2.2 SMESTO in their territorial context

The review of SMESTO definitions across Europe shows that the relationship with the territorial context is a central parameter. This section synthesises the approaches that have been observed by defining three “ideal types” of SMESTOs, in terms of their territorial context.

The first type of context concerns SMESTOs that are located within or at the fringe of a large agglomeration, that is to say a major city and its functional area. The functional area of the different SMESTOs and the one of the large agglomeration are overlapping, and may be spatially and functionally inextricable from each other. This is the typical situation for a peri-urban town. Such SMESTOs may have a low degree of functional and strategic autonomy, insofar as they act mainly as relays for the main city. In the case of new towns (or “villes nouvelles”), their existence results from a policy seeking to structure the peri-urban space. These attempts have generally given mixed results, unless a clearly identified and largely shared sense of community and belonging has been allowed to emerge. The difficulty of preserving or creating an identity, a sense of belonging and a functional coherence within the wider context of a metropolitan region is generally a challenge for SMESTOs in this category.

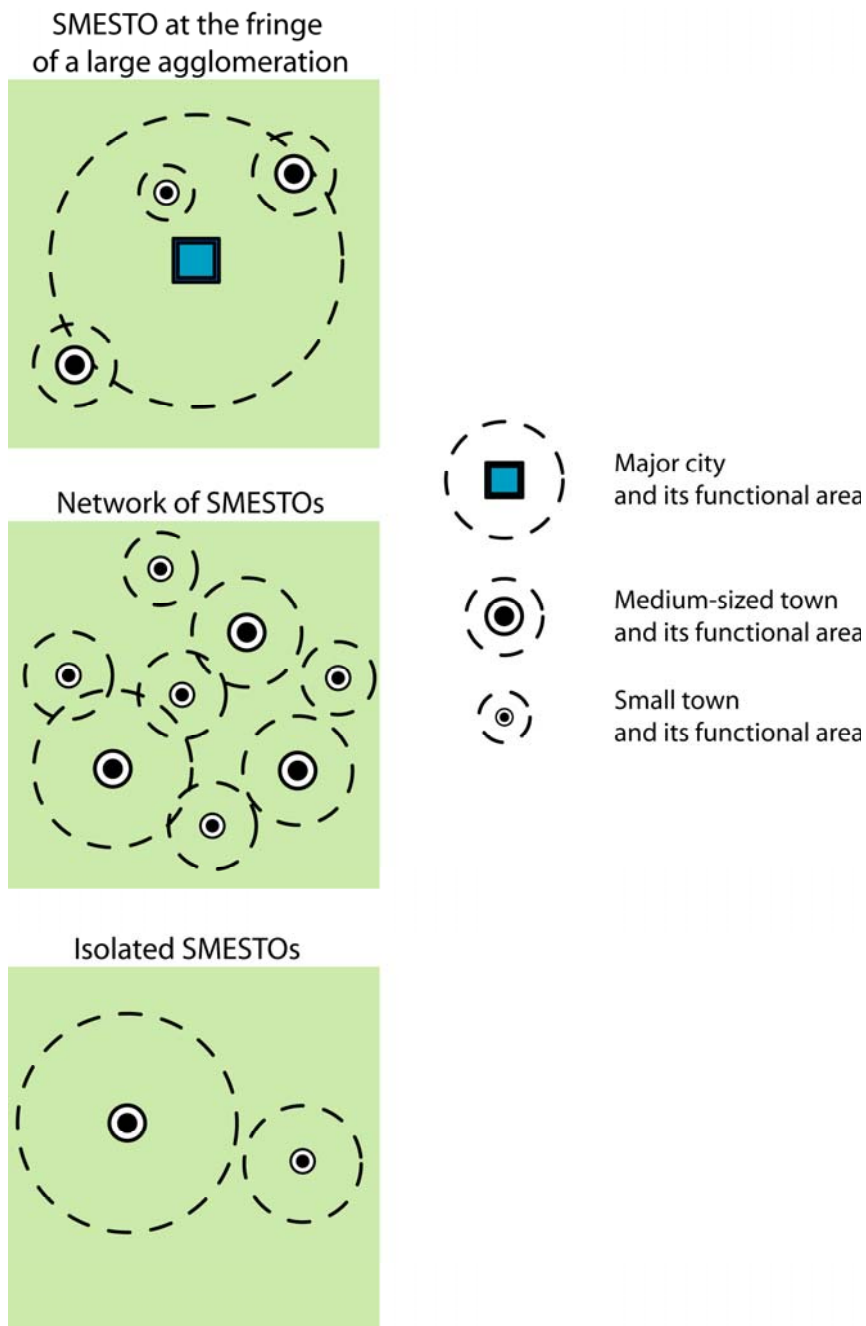
In the second type, the SMESTO is primarily seen as an element in a network together with other small- or medium-sized towns. These types of SMESTOs are not dominated by any major agglomeration or metropolitan area in the same way as previously described. They may however result from a labour market with an insufficient mass to develop a diversified range of specialised and competitive activities. A specialisation in a unique sector of activity allows high level of competitiveness, but also increases the vulnerability of the SMESTO to fluctuations in market prices and product cycles. In these cases, a high level of interaction between SMESTOs of comparable size may compensate for this weakness, as different specialised profiles in neighbouring towns create a system with a high competitiveness and a reduced overall vulnerability. Sub-categories could be defined based on the degree of specialisation between the nodes, and the nature of the interaction between them. In Cyprus, the polycentric pattern of small- and medium-sized settlements can be seen as an illustration of this second type of territorial context, combined with the fact that each main urban area also hosts a primary function (port, airport...).⁵⁶

The last ideal type concerns SMESTOs which act as poles in rural areas. Different sub-categories can be hypothesised: On the one hand, based on growth pole theory, small towns can be seen as “sub-poles” in rural economic development (Courtney & Errington, 2003). This could be linked with the example of the Finnish

⁵⁶ Questionnaire 10

CoE briefly described in the previous section. Small towns can also act as service centres in the context of rural economy (e.g. in a context of high value added vineyard exploitation), even if changes in the agri-business tends to undermine SMESTOs traditional role in relation to farming. The administrative and public service provision centres are another category of rural SMESTOs whose emergence and maintained existence is determined by national welfare policies. Finally, isolated SMESTOs in a generally uninhabited regional context, such as fishing harbours along the Scottish or Norwegian coast or mining towns in Sweden, should be mentioned as a special case.

Figure 4 Three main types of SMESTOs



The Irish National Spatial Strategy (DELG, 2000) considers categories of SMESTOs which partly correspond to these three ideal types. The document consequently gives some indication of relevant issues in each case, The spatial strategy states that the level of functions that are attributed to an urban centre is highly dependent on its territorial localisation. On the one hand, it is stated that some smaller urban centres provide a level of service provision which is disproportionately high compared to their demographic size (DELG, 2000). The reason invoked is that these centres “serve relatively large rural catchments”. This functional significance on its territory is often emphasised by the granting by national authorities of administrative responsibilities (DELG, 2000). This type of small urban centres with a large catchment area would correspond to our third ideal type. However, the spatial strategy also identifies some other smaller urban centres that “develop as commuter settlements” to larger centres and therefore offer a range and extent of functions which is reduced in relation to that which their size would have suggested (DELG, 2000). Centres belonging to this category are identified in the direct vicinity of larger cities. They can be seen as illustrations of our first ideal type in the figure above.

Other previous studies in Europe have also stressed the importance of the towns, and especially SMESTOs, as an engine for the development of their territory.

In Portugal, a study entitled “Medium-sized cities and territorial dynamics” is putting the emphasis on cities in the context of their territories. In their analysis of the Portuguese urban system, SMESTOs could be regarded as “centres fostering the development of the surrounding territories”, and are called *anchor cities* (DGOTDU, 2002). With such a definition the *anchor city* should be highly integrated with its surrounding territory, and be able to work as a catalyst for the development of both the city and its territory by fully taking advantage of the regional resources (DGOTDU, 2002).

2.2.3 Towards a functional definition of SMESTOs

In most cases, SMESTO are defined as urban areas comprised in the range of an upper and bottom threshold. However, this type of approach does not put enough emphasis on the significance for the wider territory of the functions that are being located in the SMESTO. Indeed, SMESTOs are often acting as the centre for the provision of services to the population as well as to businesses. This functional significance which is essential when defining SMESTOs.

An interesting example in that regard can be found in the National Spatial Strategy of Ireland (NSS). In this report, two important notions are being described in order to define and visualize the functional significance of the urban centres of more than 5,000 inhabitants (See chapter 1 for an idea on the definition of urban areas in Ireland). The definition of a function, made in the NSS, is a “*specific activity or service provided in an urban centre, serving the resident population and the population of the centre’s hinterland*” (DELG, 2000). The calculated functions are the one that are located inside the urban centre.

Functions are divided in seven categories (DELG, 2000):

- Financial services;

- Retail services;
- Business services;
- Social and administrative services;
- Educational services (second and third level);
- Tourism and leisure services;
- Agricultural services.

First, an index of service provision quality is calculated with respects to each of the functions. The aggregated index is then obtained by averaging these seven indexes. This aggregated index, called *functional index*, serves as the basis for describing the functional significance of the urban centres. By comparing the functional ranking of the urban centres with their ranking in terms of total population, it is possible to analyse if an urban centre has more, or less, functions that its size would have presupposed (DELG, 2000).

The second notion of interest developed in the National Spatial Strategy of Ireland is the definition of the *urban fields* associated to the seven *urban functions* of the urban centres. For each function, the shape of the urban field associated depends on (DELG, 2000):

- The proximity of urban centres with the same function,
- The nature and pattern of the transportation system,
- The topography of the hinterland and
- The extent and size of the function itself.

The overall urban field of each centre is created by the combination of the seven functions' urban fields. The visualisation of the urban fields is also based on the extent of the urban areas or semi-areas (described as *peri-urban areas* and *very strong areas* in the rural typology defined for the NSS), the proximity to cities and the degree of remoteness using the distance to urban centres of different sizes (NSS, 2000).

The definition of the urban fields is interesting because it stresses the functional importance that the urban centres do have on their hinterland. However, it does not consider the extent and size of the functions that are located in its close surroundings, which would enhance their potential centrality.

The definition of centrality in Germany is based on the inventory of predefined functions that are available on the municipal territory (in Germany, towns are urban municipalities). As there is no national definition of what is centrality in Germany, we will take the example of Bavaria. In that region the centrality criterion distinguishes medium-sized from small towns by regarding the type of services that are located (or not) in the municipality, according to a detailed set of public or private services (table 11).

Table 11 Definition of functions in small, medium-sized and large towns in Bavaria

Einstufung der zentralen Orte in Bayern				
Zentralitätskriterien	Klein- zentrum	Unter- zentrum	Mittel- zentrum	Ober- zentrum
Einzelhandelszentrum				
Einzelhandelsumsatz in Mio. EUR (GfK-Schätzung)	10	25	100	350
Arbeitsplatzzentralität				
Sozialversicherungspflichtig Beschäftigte	850	2,000	6,500	21,000
Sozialversicherungspflichtig beschäftigte Einpendler	500	1,200	4,000	12,000
Ausstattung				
Allgemeine Dienste				
Postfiliale, -agentur	1	1	1	1
Bank, Sparkasse	1	1	1	1
Gesundheit				
Arzt, Allgemeinarzt	1	1	1	1
Zahnarzt	1	1	1	1
Gebietsarzt, ohne Allgemeinarzt	1	1	1	1
Apotheke	1	1	1	1
Krankenhaus Versorgungsstufe II, III oder IV			1	1
Krankenhaus Versorgungsstufe III oder IV				1
Soziales				
Einrichtung mit ambulantem Pflegedienst	1	1	1	1
Altenpflegeheim		1	1	1
Bildung				
Grundschule	1	1	1	1
Hauptschule		1	1	1
Einrichtung der Erwachsenenbildung (Sitz)			1	1
Realschule			1	1
Gymnasium			1	1
Berufliche Schule (Berufs-, Fachober-, Berufsober-, Berufsfach-, Wirtschafts-, Fachschule, Fachakademie)			1	1
Fachhochschule, Hochschule, Universität				1
Öffentlicher Personenverkehr				
Bushaltestelle (mind. 3 Fahrtenpaare pro Tag)	1	1	1	1
Bahnhof, Haltepunkt		1	1	1
Bahnhof mit Fahrkartenverkauf			1	1
Fernbahnanschluss			1	1
Behörden und Gerichte				
Sitz einer Verwaltungsgemeinschaft	1			
Polizeiinspektion, -station		1	1	1
Kreisverwaltungsbehörde			1	1
Amtsgericht bzw. -zweigstelle			1	1
Finanzamt bzw. -außenstelle			1	1
Arbeitsamt bzw. -geschäftsstelle			1	1
Landgericht				1
Gesamt	13	16	27	30
zu erfüllende Zentralitätskriterien	11	13	20	28
			16 (m MZ)	26 (m OZ)
Einwohner im Verflechtungsbereich	5,000	10,000	30,000	---

Source: Bayerisches Staatsministerium, Landesentwicklungsprogramm Bayern

The Irish and German approaches are interesting first steps towards a functional characterisation of SMESTOs. These approaches however presume that activities and services which are relevant to characterise a given SMESTO are necessarily offered within the town's boundaries. As a second step, it would be interesting to characterise the SMESTO not only by the functions it has inside its own hinterland⁵⁷, but also by the functions present within neighbouring areas. SMESTO could then be characterised not as a destination for some specific urban functions, but as a hub to some specific functions.

The classification of municipalities according to their urban endowment and context in Norway offers a good example of how the territorial context can be taken into account. Four categories have been defined based on this analysis (Blekesaune, 1999):

- Centrality 3: Municipalities with towns with at least 50,000 inhabitants, and municipalities with less than 75 minutes travel time to such towns (Oslo 90 minutes),
- Centrality 2: Municipalities with towns with a population between 15,000 and 50,000 inhabitants, and municipalities with less than 60 minutes travelling time to such towns,
- Centrality 1: Municipalities with towns with a population between 5,000 and 15,000 inhabitants, and municipalities with less than 45 minutes travelling time to such towns,
- Centrality 0: Municipalities that fulfil none of the above criteria.

In fact this type of classification uses the complementarities between the morphological and functional approaches. It is worth reminding the reader that urban areas in Norway are defined on purely morphological grounds using the continuous built-up areas as a criterion (see section 2.1.2).

A Scottish study published in 2002 and dedicated to the availability of services in rural areas offers an interesting example of how one could take into account functions situated in the wider territorial context of each SMESTO. The study first divides the territory into three main categories, namely *urban Scotland*, *small towns* and *rural Scotland*. It then analyses the proximity to different services (20 listed) from these each type of territory. Using the driving time by car to each identified service, the study looks at the areas that are within 5, 15 or more minutes from the selected facilities. The proximity to certain services is then used to characterise towns.

From the four examples described in this sub-chapter, it is possible to draw two main conclusions. First of all, centrality can be defined with different types of criteria (proximity to large/medium/small towns, proximity to services etc.), and the choice of those criteria depends on the purpose of the study itself. Second, combining morphological and functional approaches improves the accuracy of the analysis, especially when it comes to SMESTOs.

⁵⁷ Insofar as this concept of "own hinterland" makes sense in areas with dense networks of SMESTOs.

2.3 A Framework for the analysis of European SMESTOs

The first two chapters have been drawing the framework for the continuation of this study dedicated to the description and analysis of the “role of small and medium-sized towns in Europe”. The first chapter stressed that very different approaches are being used in Europe in order to define and delimitate urban objects (urban areas, towns, cities, agglomeration, suburban areas). These approaches have been classified in three main categories: administrative, morphological and functional. The scientific and official materials gathered in a selection of European countries highlight the fact that urban areas as they are defined in different countries are incomparable entities. It is therefore necessary to redefine the urban objects in a common European approach. The second chapter reviewed the criteria most commonly used to identify SMESTOs in selected countries. These criteria were subdivided in two broad categories: quantitative and qualitative. The two last sections of chapter 2.2 gave some indication of possible functional approaches for the identification of SMESTOs, especially with respect to the relationship to its hinterland and wider territorial situation.

The objective of this section is to sketch a definition of SMESTO that could be used on a pan-European scale. Before doing so, it is essential to focus on the notion of “small-” and “medium-sized”, in order to identify SMESTOs within the general urban system. Then, the different steps to be followed in order to reach a comprehensive and relevant definition of SMESTO are described. The final sub-chapter will be dedicated to the type of data that should be available for such a potential study.

2.3.1 Why are SMESTO “small” or “medium-sized”?

A necessary first step for the definition of SMESTO would be to respond to the following basic question:

- What are the notions of “small-” and “medium-sized” referring to?
- Which are the most relevant criteria for differentiating small or medium-sized towns from larger cities?

Obviously, “small-” and “medium-sized” generally refers to the size in terms of population of the towns (see examples given in sub-chapter 2.1). However, these are highly subjective qualifications, whose concrete meaning depends on the large towns and cities existing in the considered urban system. The need to consider city sizes relative to the urban context is illustrated by Pumain (1999) who suggests constructing cartographic representations where the circles representing the size of cities and towns do not correspond to absolute population figures, but to the population in relation to the largest city in the urban system. This method allows for a representation of differences in the structure of urban systems. Because of contrasts in terms of population mass traditional maps generally hide these differences. The statistical approaches to be drafted within ESPON 1.4.1 would have to be designed in the same spirit of “relativity”, as it is important to study the size of the towns in the context of the national urban systems.

The second important notion when classifying cities is centrality, which is for example widely used in Germany, and is based on the identification of each city or

town's functions (see section 2.2.3). The assessment of a city's or town's functional importance is however confronted with a "tautological dilemma", as the account of the functions present is based on a certain delimitation of the city or town, while this delimitation should ideally be based on the hinterlands of these very functions. Looking at functions within the administrative or morphological boundaries of a city can indeed create a significant bias in the analysis. Relevant commercial functions, universities or research centres situated in rural areas may for example not be taken into account. One would therefore need to design an assessment method which considers the immediate territorial context of each urban area, rather than trying to characterise the built-up area as such.

A third interesting criterion for defining SMESTO would be to focus on territorial influence (or *rayonnement* in French). For instance, two towns having the same size and the same degree of centrality can have territorial influence areas of different extents depending on their geographical (and territorial) situation: if one town is situated in a rural area and the other within a denser network of towns, the former will certainly have a larger influence on its territory than the latter. Specific functions may also be relevant at a national or even international scale. Some industries or research activities may be situated in a SMESTO, but function as part of a wider network. The organisation of a widely recognised cultural event may also increase a specific SMESTO's territorial influence.

The TPG's strategy for the definition will be developed in two distinct action stages: **identification** and **characterisation**. This will be developed in the next sub-chapters.

2.3.2 Identification

The first stage is focused on the identification of SMESTOs. From the previous chapters, it seems that the town should first be described as a "way of living" and a "territorial reference" (Eurostat, 1992). This implies that what mainly differentiates a town from other spatial entities is

- its morphology as a continuous built-up area,
- a good access to wide array of networks (tangible or intangible) and
- a typical urban architecture.

Identification of the urban objects

The previously described "tautological dilemma" (see subchapter 2.1.3) implies that functions can only be identified on the basis of a delimitation, and that the delimitation is made on the basis of functions. Further, we have also seen that functional areas overlap, especially in the case of SMESTOs situated within the sphere of influence of a larger city. One therefore cannot depart from functional criteria in order to identify SMESTOs.

Using a morphological criterion therefore appears as the only possible point of departure when identifying SMESTOs. It is worth noting that the morphological approach is already widely used in European countries and that the criterion of

continuous built-up area is recommended by the United Nations for the definition of urban areas. Using such a method for delimitating urban areas would therefore bolster the possibility for a pan-European study. Moreover, using a morphological approach enables to capture the idea of the town as a dynamic object, which can either grow, shrink or stagnate, but cannot be bound overtime within a fixed perimeter.

In countries where urban areas are identified by using the built-up areas, the main task will be to gather the related GIS file in order to be able, as described above, to construct the morphological SMESTOs. Countries like the Nordic Countries, the United Kingdom, Austria, Greece or Ireland, France and Belgium already possess this kind of delimitation.

In countries where the delimitation of morphological entities is not available, it may be conceivable to use other entities as a substitute. However, this will need a more in-depth study of the national urban system in order to identify the best approximation to our urban areas and nodes. However, if in some cases, municipalities can serve as a good basis for this approximation of urban areas, it is not always possible because of the large differences in terms of municipality sizes within Europe.

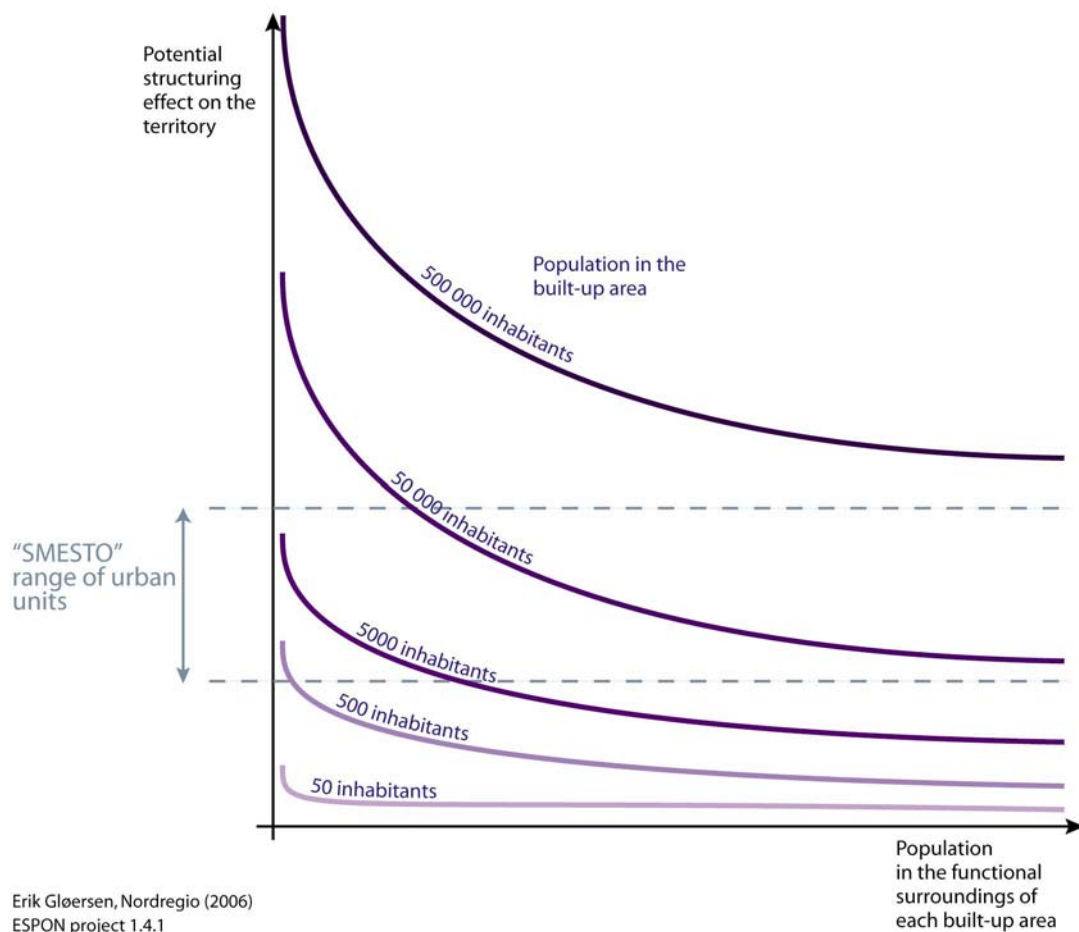
The Baltic States (Estonia, Latvia, Lithuania) are an example of countries where municipal boundaries might replace the morphological boundaries of SMESTOs. This is mainly because the differentiation between urban and rural space is the main principle that has been applied when drawing administrative boundaries. A differentiation is generally made between urban municipalities and rural municipalities. Moreover, the municipalities can be divided in districts that can be considered either as towns or cities (but without municipal status), but also as rural. For the sake of our analysis, the urban areas could be identified by (1) selecting the urban municipalities and (2) extracting the 'town' or 'city' districts of the rural municipalities. Because the Baltic States' municipalities are rather small, this would provide us with a fair approximation.

Another possibility is the use of the Corine Land Cover 2000 dataset. Corine Land Cover 2000 (CLC2000) is an update for the reference year 2000 of the first Corine Land Cover database which was finalised in the early 1990s as part of the European Commission Programme to Coordinate Information on the Environment. It provides consistent information on land cover and land cover changes during the past decade across Europe. CLC2000 is based on the photointerpretation of satellite images by the national teams of the participating countries. The resulting national land cover inventories are further integrated into a seamless land cover map of Europe. The resulting European database is based on standard methodology and nomenclature.

Bringing together actual built-up areas, and proxies for these areas, introduces a bias that may need to be compensated for. More generally, it is difficult and costly to access digital maps delimiting built up areas. It may therefore be more realistic, and from some points of view more coherent, to conceptualise the SMESTO as the centre-point of the built-up area or of the proxy area used, rather than as an area with borders. These centre-points can be constructed by using geographical information systems.

As previously shown, the territorial context is an essential parameter. A SMESTO structuring a wide rural area may have the same built-up area population as another one that is difficult to differentiate from the suburbs of a neighbouring agglomeration. Furthermore, the actual thresholds currently applied in European countries vary significantly. For these two reasons applying the same thresholds across Europe is not an option. Based on the presumption that the objective of a European study of SMESTOs is to identify how the continent's territory is structured by urban entities in the lower parts of the urban hierarchy, we can formulate a general hypothesis that this structuring effect is negatively correlated with the population in the surrounding area. Figure 5 illustrates this relationship between structuring effect and population in the surrounding area, for a certain number of built-up area population levels. It should be noted that the structuring effect on the territory is a theoretical entity, that we can not *a priori* lay claim to quantifying or even approaching empirically.

Figure 5 Graphical representation of the justification for using variable upper and lower thresholds for the identification of SMESTOs across Europe



Thus SMESTOs are defined by a certain type of structuring effect on the territory. This type of structuring effect corresponds to different ranges of built up area populations, depending on the population in the surroundings. The population in the surrounding area can be calculated continuously across Europe, as illustrated by Map 6.

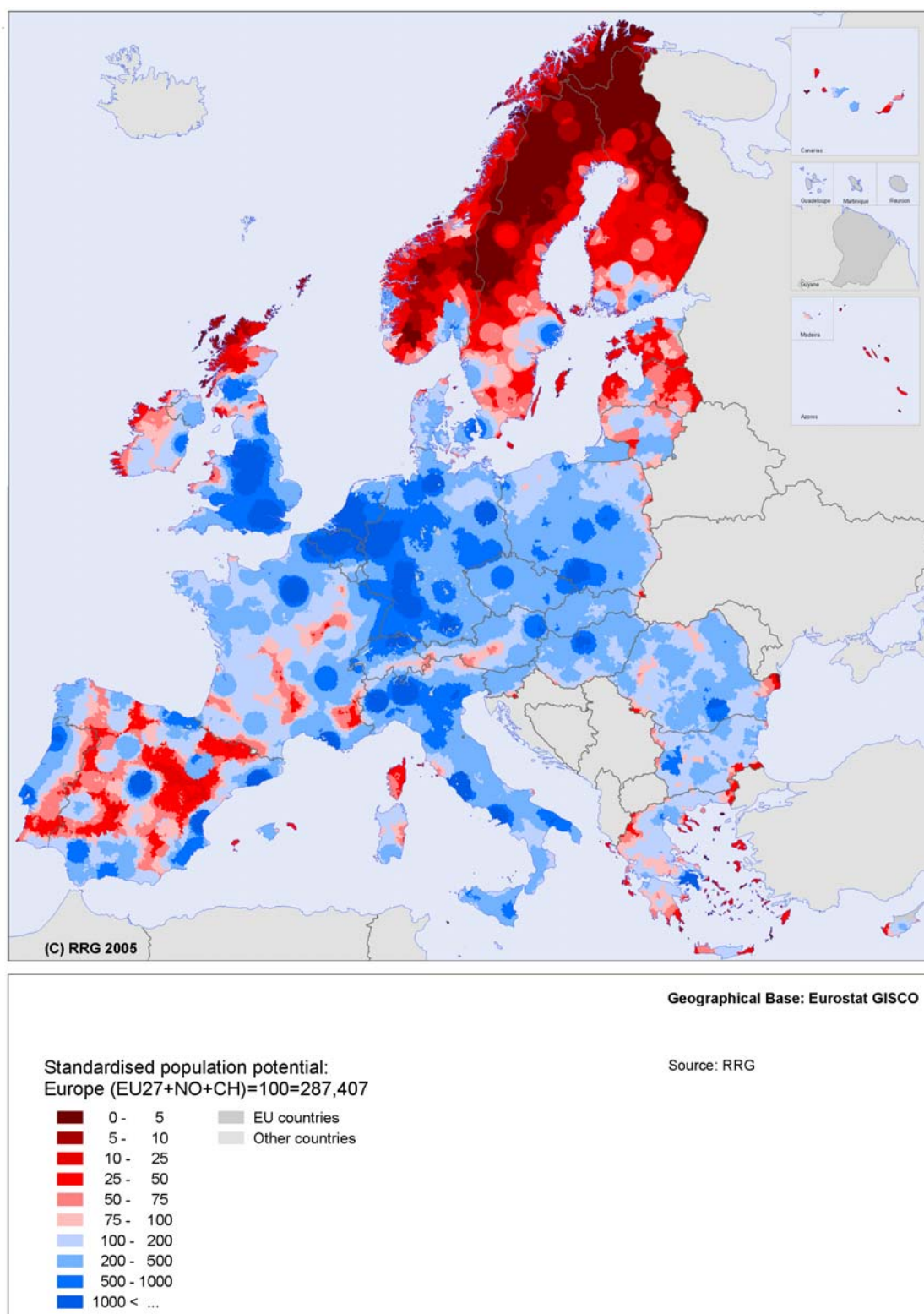
In this case, a 50 km range has been used, which can be considered as a proxy for maximal acceptable daily commuting travel time of approximately 45 minutes each way. This is feasible in countries with rather sparsely distributed settlements as in the Nordic Countries but might be limited in densely populated areas. Other ranges could therefore be considered, for example by focusing on access on more specialised services or on business-to-business relations. The values represented by Figure 5, have been calculated from each point on the map (by interpolation), to municipalities in all countries except Norway, Finland and Sweden, where 1x1 km grid population figures have been used because the large size of municipalities would otherwise create a bias in the calculations. These values are also referred to as "50 km population potentials".

An underlying hypothesis of this method is that SMESTOs are defined by a certain type of structuring effect on the territory. This type of structuring effect corresponds to different ranges of built up area populations, depending on the population in the functional surroundings. The objective is to define a mathematical function which establishes a relationship between "population in the surrounding area" and the upper and lower "built-up area population" thresholds for SMESTOs.

Insofar as the objective is stick as closely as possible to the social and political representations of SMESTOs across Europe, this function can be defined regressively, by departing from the thresholds used for small- and medium sized towns in each ESPON country, and comparing these with the typical "population potentials" to be found there. The series of "population potential" and "SMESTO threshold" couples produced in this way can then be used as a basis for calibrating the mathematical function linking the two sets of values.

50 km population potentials in Europe – The "population in the surrounding area" of each built-up area can be obtained by overlaying the built area centre-points with continuous spatial data of this type.

Map 6 Population potential in Europe⁵⁸



Source: Gløersen et al. (2006)

⁵⁸ Note: map not produced for ESPON!

2.3.3 The analysis of the SMESTO network in each country

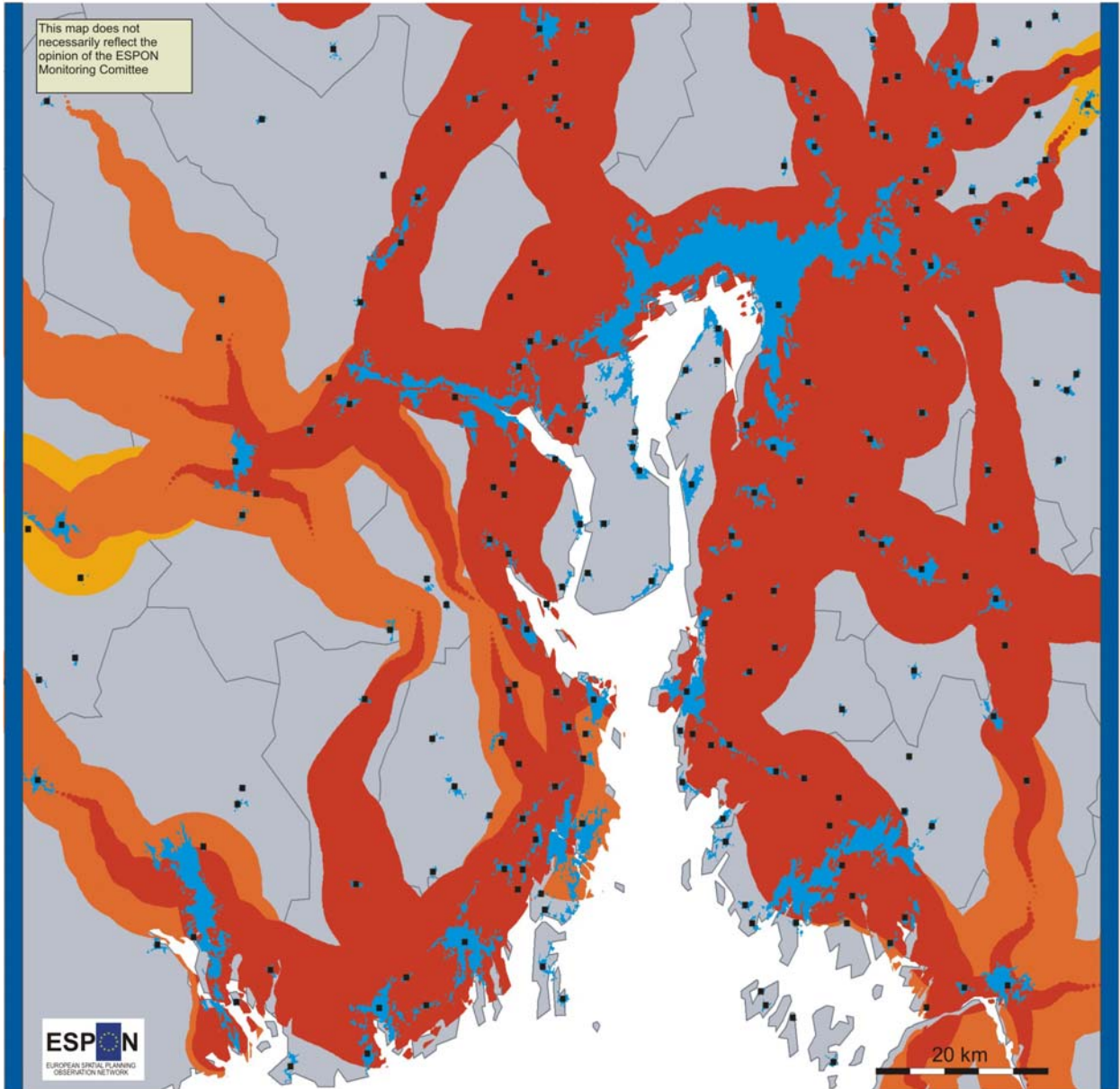
The number of SMESTO centre-points and their geographical spread obtained on the basis of the previously described method can be an object of analysis. The relationship between the general population mass in each country or region and the number and spread of SMESTO is in this respect particularly interesting. In rural areas one could for example identify different types of challenges with regards to public service provision, or opportunities for development, based on the facility with which one can reach small and intermediate centres. Analyses of this type could serve as a basis for typologies of the regions and countries with regards to their endowment with SMESTOs.

The position of SMESTOs with regards to larger cities and metropolitan regions is a second potential object of analysis. The accessibility to larger cities from each SMESTO is the indeed the primary factor determining their development potentials and challenges. Calculating travel times from each SMESTO to the nearest cities of a certain magnitude offers a first approach. But, more importantly, one would need to identify whether a SMESTO belongs to a European MEGA region, such as those that were identified by the Polynet project in the INTERREG III B North West Europe area, to an second region urban region or to other types of territories (see map 7). This would provide the basis for first a typology of SMESTO with regards to their territorial context.

Map 7 also shows the degree of approximation involved when using built-up area centre-points as a proxy for built-up area borders.

Map 7 Example of an overlay of SMESTO centre-points with accessibility measures to larger cities

Comparing Built-Up Areas, Built-Up Area Centre-Points and Areas accessible within 45 Minutes:
The Example of the Oslo Region



- Built-up areas
- Built-up area centre points
- Areas accessible with 45 minutes of Functional Urban Areas identified by ESPON project 1.1.1
- Municipal boundaries

Sources:
Built up areas: Statistics Norway
Isochrones: ESPON 1.1.1 / RRG

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2.3.4 Characterisation of SMESTOs

It was argued in the previous sections that both the “tautological dilemma” and the fact that functional urban areas overlap, especially at the scale of SMESTOs, makes it impossible use functional characteristics as an initial criterion for identifying SMESTOs. It is nonetheless essential to take into account functional endowments when it comes to characterising these SMESTOs, and comparing their respective strengths and weaknesses.

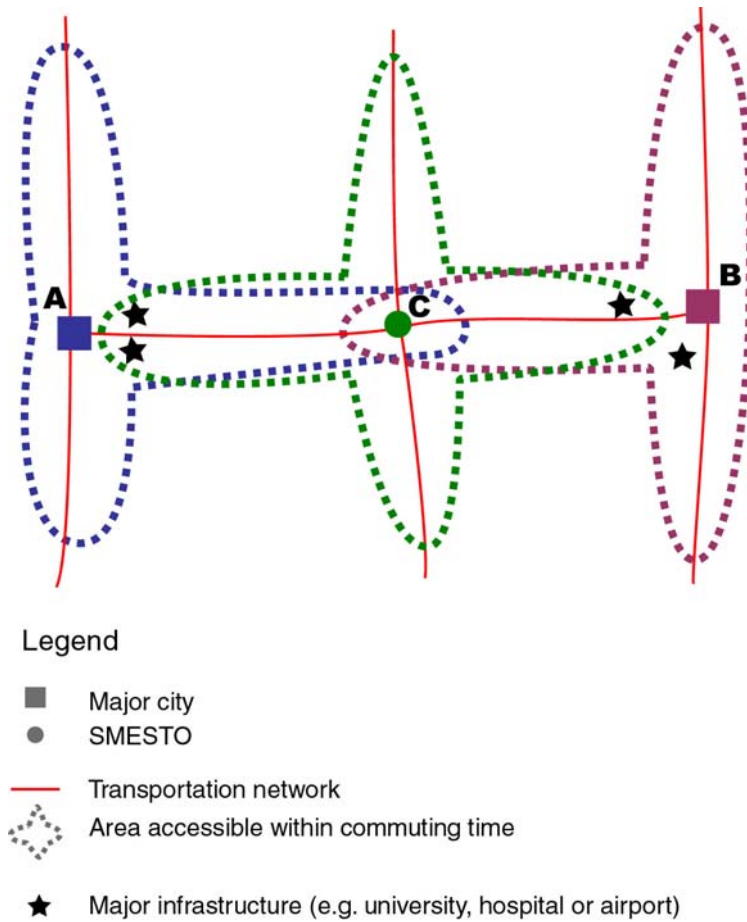
While there is some coherence to consider built-up areas as a spatial boundary for calculating the demographic weight of SMESTOs, their validity when it comes to identifying urban functions is questionable. The question is indeed not so much to list the functions that are situated within each built-up area, but rather to identify which ones are organised around each SMESTO. This implies taking into account both the SMESTO core (i.e. the built-up area) and the surrounding areas.

The notion of functions organised around a given urban centre can only be approached empirically through in-depth local analyses, for example by looking at market areas for retailers, spatial patterns of provider-client relationships between businesses and institutional cooperation between municipalities. At the pan-European scale, one can therefore at best identify a theoretical economic and social potential of each SMESTO, based on its position in relation to a certain number of economic functions and infrastructure endowment. This should be termed a theoretical potential as the institutional capacity and economic base of each SMESTO is not taken into account in the calculations.

The theoretical nature of this potential can be illustrated by Figure 6, in which three urban units are positioned based on the centre of their built-up area. The three areas within commuting, delimited by a dashed line, correspond to the potential labour market areas of each of the three urban units. One can therefore consider that infrastructure facilities situated within these lines contribute to each cities' economic development potential. Cities A and B have attracted two major infrastructure facilities situated in their immediate vicinity. SMESTO C is situated between these two cities, and has access to three of these four facilities, which are situated just within commuting distance of the town centre. This obviously does not imply that SMESTO C should be ranked above cities A and B. The institutional capacity and economic potential of SMESTO C is likely to be significantly lower than those of cities A and B. Furthermore, the difference of potential between having infrastructure facilities in the immediate vicinity of the built-up area, and just within commuting distance, should be taken into account.

It should be noted that, if one were to characterise these three urban units by applying the Functional Urban Area approach used in ESPON 1.1.1, two scenarios would be most probable. In the first case, SMESTO C attracts sufficient proportions of in-commuters to be identified as the centre of a labour market area. This labour market area is likely to be considerably smaller than those of cities A and B. By way of consequence, it will not include any of the infrastructure facilities, and the potentials deriving from the access to these will be ignored. In the second case, a large proportion of SMESTO C inhabitants are themselves commuting to either A or B, or both. In this case, SMESTO C is likely to belong to either of these labour market areas and will not be identified as a relevant urban unit at all.

Figure 6 Theoretical example illustrating the complexity of a functional characterisation of SMESTOs



There are a number of regional or national SMESTO characterisations. This analysis is based on centrality functions of urban nodes, defined for instance as functional relevance in innovative industries, public services or decision-making. This methodology can be adequate well, insofar as results for individual SMESTOs can be verified based on in depth knowledge of local conditions and expert advice, and when the functional areas can be corrected manually when required. This is not the case for a pan European study.

For a more refined characterisation of the SMESTOs, indicators for infrastructure and amenities (hospitals, airports, stations, universities...) should be available as geo-coded points, so that it is possible to measure the proximity of the SMESTOs to such infrastructure. It could then be interesting to picture the isochrones around the facilities (in a similar way as done by the ESPON 1.1.1 team) and assess proximity. The transport infrastructures such as road and rail are also important in assessing the connectivity inside the SMESTOs' region. As regards, the accessibility of the region in the wider European perspective, the use of the multi-modal accessibility and other indicators produced in the framework of the ESPON 1.1.1. project are good indicators for assessing the global accessibility of the regions. The following maps will therefore show the approach how SMESTOs can be identified and characterised by applying the method within the example of the Austrian NUTS 3 region Klagenfurt – Villach (AT211).

2.3.5 Mapping of SMESTOs from identification to characterisation

The following chapter will try to practically apply the steps from “identification” of SMESTOs until “characterisation” as described above. The aim is to end up with the evidence that the approach suggested by the TPG is practicable and applicable in a pan-European study. In brief the following analytical steps have been distinguished in order to depict SMESTOs in a spatial setting:

- (1) **Identification of the SMESTO/urban object** – i.e. practically by using morphological criteria to localize continuous built-up areas (either by region related GIS files or CLC data sets)
- (2) **Constructing/defining SMESTO centre-points** – either by geometrical means or (if possible) by detailed GIS based information on “centre”-defining attributes – such as historical centres, church towers,...
- (3) **Constructing the “structuring effects on the territory” of each SMESTO** – either by accessibility ranges (isochrones) or by adding socio-geographical area delimitations such as labour market areas, market areas for retailers, etc. (see chapter 2.3.4 above). Thus a functional area approach is applied rather than an administrative one, which would not be applicable in a pan-European mapping approach (for the administrative approaches see chapter 2.1)
- (4) **Adding the “functional characterisation” of the SMESTOs in the form of infrastructure attributes/endowments** within the previously defined area – such as train stations, hospitals, schools, etc. – in the form of points.

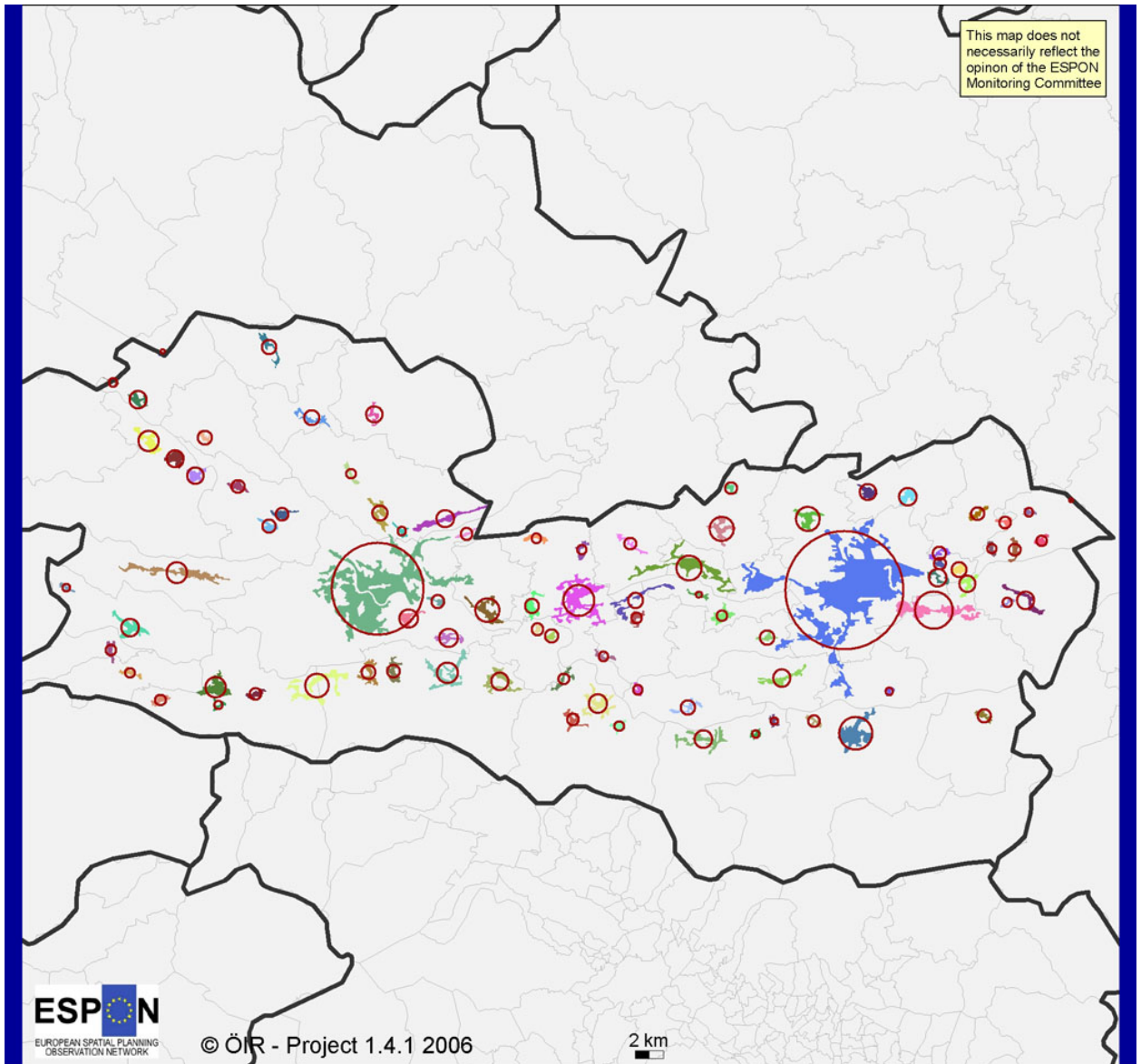
Short description of the area

The Austrian NUTS 3 region Klagenfurt – Villach (AT211) is the central region of the southernmost Austrian *Bundesland* (province of) Carinthia and has no urban agglomeration that could be labelled “metropolis”. The regional capital Klagenfurt has a population of about 91,000 (administrative area), the second largest city Villach of about 58,000 – towns that could at first glance well be considered as “medium-sized”. The other municipalities in the NUTS 3 region have all well below 10,000 inhabitants and could therefore be called “small”.

Step 1 + 2: Identification of the SMESTO/urban object & constructing/defining SMESTO centre-points

According to the proposed definition with a maximum space of 200 m between buildings (see chapter 2.1.2) to define morphological settlement areas, we mapped those and calculated the inhabitants of these (first-step) morphological SMESTOs as can be seen in map 8. The circles correspond to the number of inhabitants of each of the settlement units, interpolated from administrative unit data (municipalities). As can be easily seen this first approach already distinguishes quite well the morphological structure of space. Still the overall aim – i.e. the distinction between the single SMESTOs and their territorial context – is still missing. Especially when looking at the two largest morphological units it is still quite unclear whether they consist of several smaller SMESTOs or whether some of the smaller morphological units do not account for a single SMESTO altogether.

Map 8 Morphological SMESTOs and their population in the Austrian NUTS 3 region Klagenfurt – Villach



Morphological SMESTOs

■ Continuous built-up areas

Population



NUTS regions

~ NUTS 3

~ NUTS 5

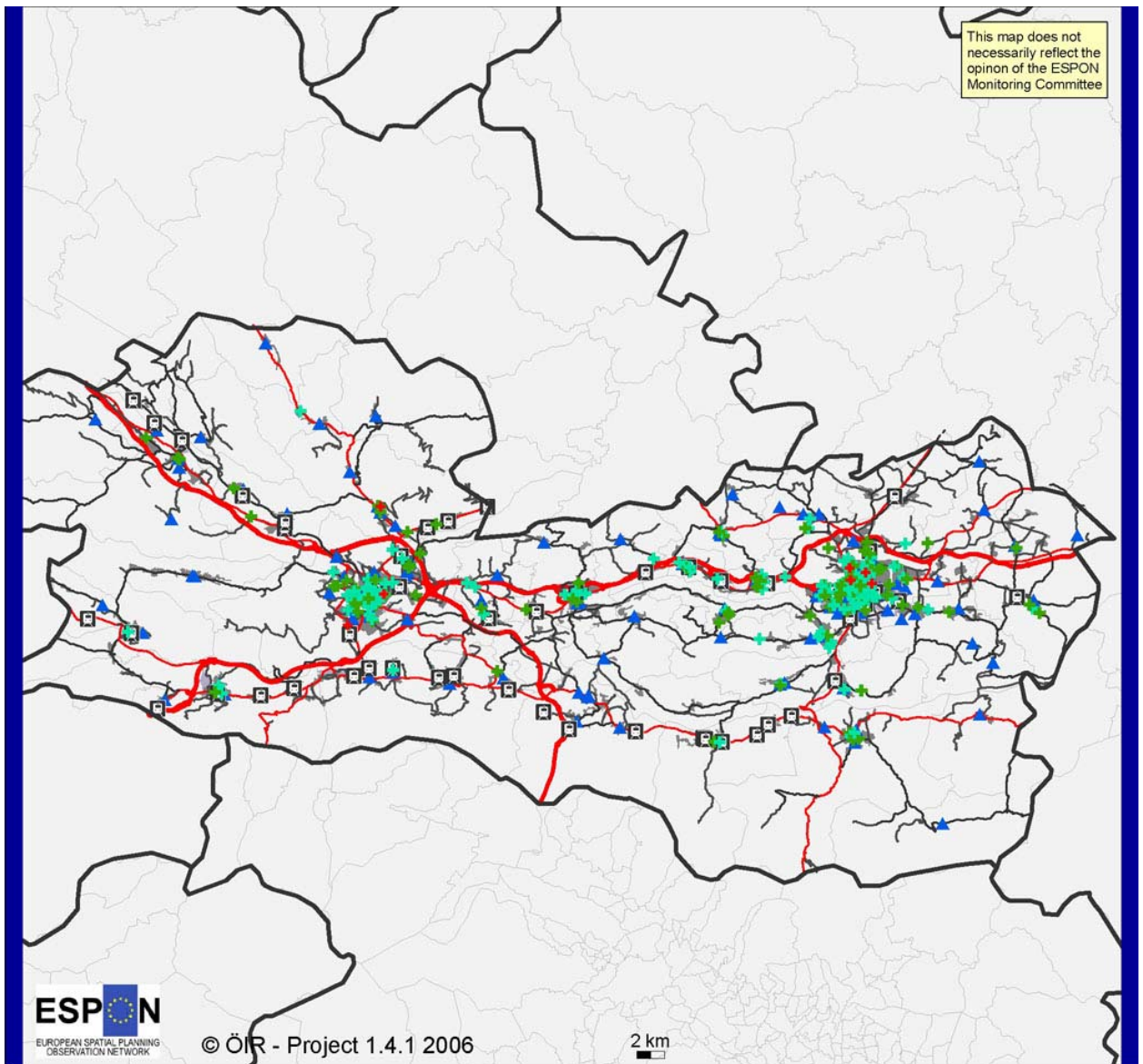
Source of data: ÖIR;
EEA CORINE;
EuroGeographics 2001.

Step 3 + 4:

Constructing the “structuring effects on the territory” of each SMESTO & adding the “functional characterisation” of the SMESTOs in the form of infrastructure attributes/endowments

In order to delimit the lower threshold of where we distinguish a SMESTO from a village, we identified the morphological settlement units bigger than 25 ha using the ‘urban fabric’ CORINE land cover dataset 2000. In this map we already added some of the main SMESTO central supply functions to illustrate their location in advance (although analytically this step would be the last one for depicting the SMESTO!): railway stations, general practitioners, medical specialists, hospitals, schools (all using point coordinates) and commercial areas (using the CORINE land cover dataset 2000). As another step we added the road network (using vectors). All these collected base data are shown in map 9.

Map 9 Settlement units and selected central facilities in the Austrian NUTS 3 region Klagenfurt – Villach



CORINE 2000 Urban fabric	Road network	Services
■ Continuous urban fabric	— Highway	+ Practitioner
■ Discontinuous urban fabric	— National road	+ Medical specialist
■ Industrial or commercial units	— Regional road	▲ Education
	— Urban network	+ Hospital
		■ Railway station

Source of data: ÖIR;
EEA CORINE;
EuroGeographics 2001.

Step 5 + 6:

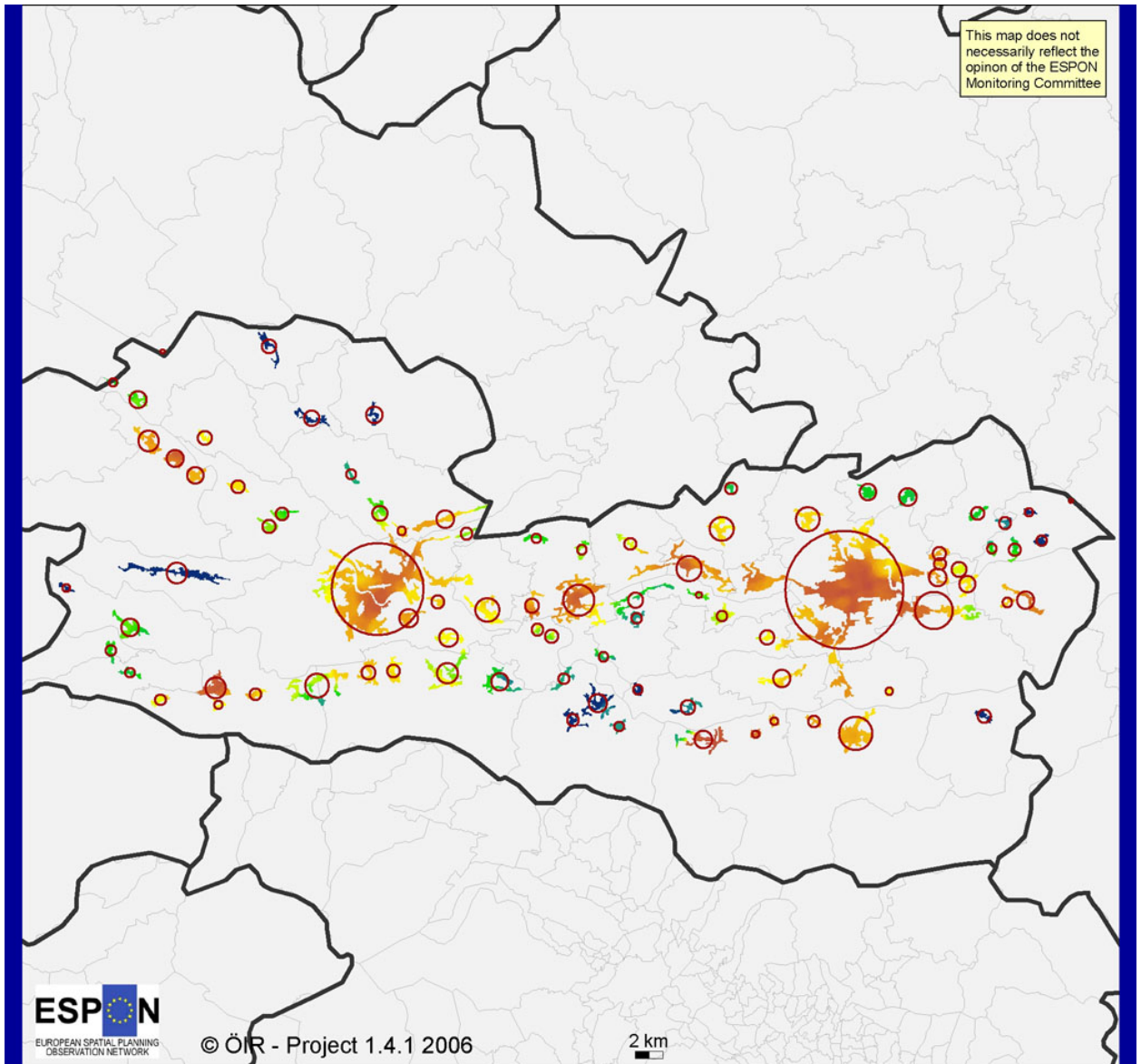
Constructing the “structuring effects on the territory” by introducing accessibility factors

For this reason the road network was divided into the following classes and weighted with average travelling speeds taken from ESPON 1.2.1: highways 110 km/h, national roads 70 km/h, regional roads 60 km/h and urban streets 25 km/h. We then calculated the cost distance to reach each one of the facilities mentioned above for a 10 x 10 m grid of the road network (calculated from the vector network) itself and then assigned these values to the adjacent morphological settlement units in a 50 x 50 m grid. We applied the Services Cost Distance Indicator (SCDI) method to calculate the accessibility (methodology explained in detail in annex A.3 of this report).


The result is a map of how easily all the chosen amenities can be reached and how important the housing function of a SMESTO is (measured by its inhabitants). The SCDI shown in map 10 ranges from “poor accessibility to SMESTO functions” (i.e. “high effort” in the map below) to “excellent accessibility to SMESTO functions” (i.e. “low effort” in the map below). It has to be noticed that we only looked at an isolated NUTS 3-region, which can falsify the indicator in SMESTOs near the borders in the map below. Especially to the north due to the local topography (to the north there is the city of St. Veit supposedly exerting influence on the surrounding SMESTOs as would the city of Spittal to the northwest). Whereas the results for the Southern border seem to be quite accurate with the mountain range of the *Karawanken* forming the Austrian – Slovenian border and thus building a natural barrier.

This map already incorporates all the analytical steps which would be necessary to depict SMESTOs all over Europe. The localisation, the territorial context and the functions and roles are depicted and by thoroughly analysing the accessibility to SMESTO functions it would even be possible to fine-tune the delimitations of the single SMESTOs within their regional network as described in chapter 2.3.4 “Characterisation of SMESTOs” above.


Map 10 Services Cost Distance Indicators (SCDI) for settlement units in the Austrian NUTS 3 region Klagenfurt – Villach



Services Cost Distance Indicator
 Cost distance to the entirety of services.


 high effort
 low effort

Population


 50.000
 10.000
 1.000

NUTS regions


 NUTS 3
 NUTS 5

Source of data: ÖIR;
 EEA CORINE;
 EuroGeographics 2001.

In order to show this possibility of fine-tuning the delimitations of the single SMESTO we have to take a closer look at the network of SMESTOs in order to distinguish between the single attributes in the way described in the analytical figure 6 above.

Map 11 therefore zooms into a part of the regional capital Klagenfurt and surrounding SMESTOs along the eastern shores of the Wörthersee lake. The facilities and the road network have been added again to illustrate the effects of the methodology.

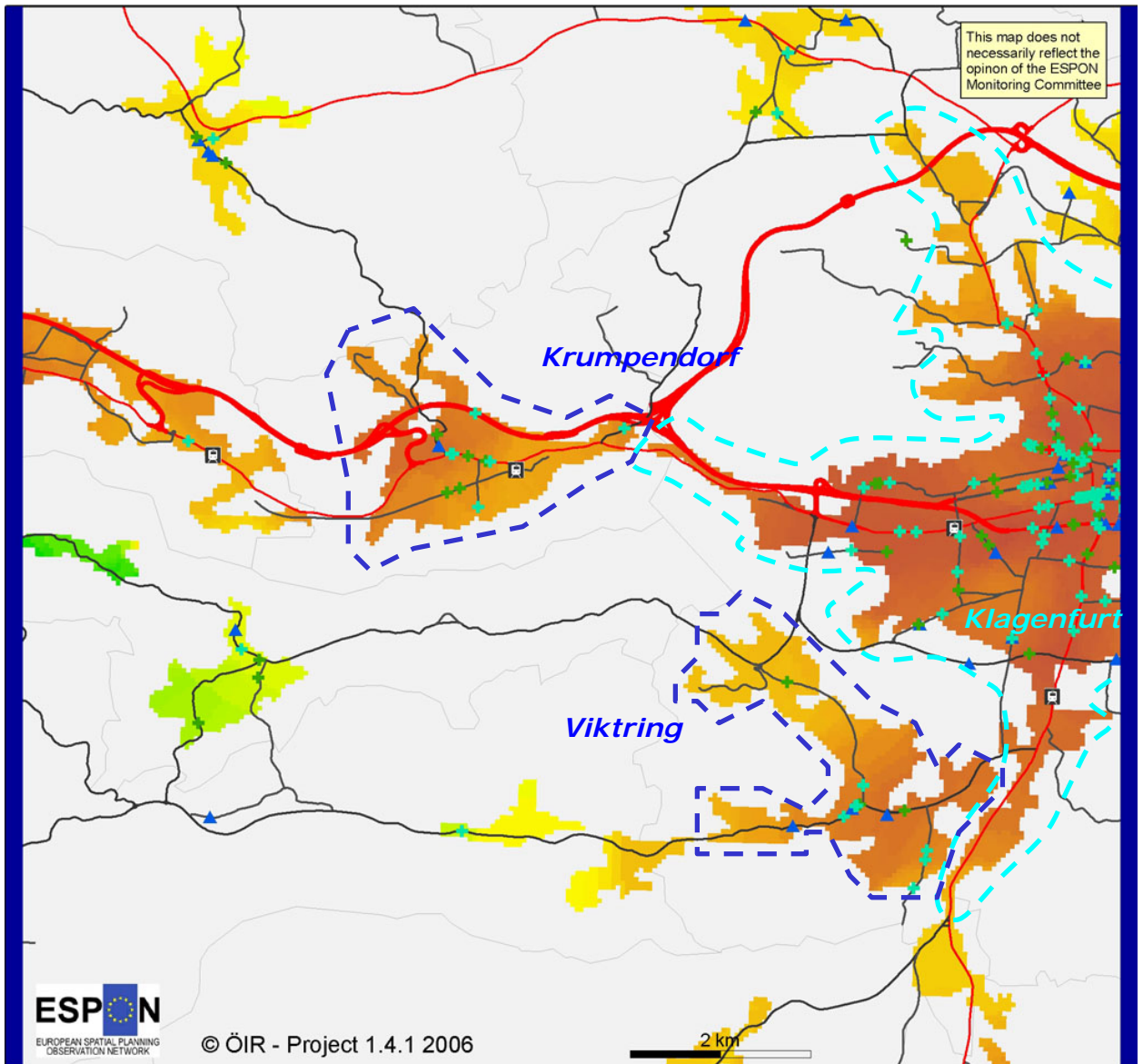
It has to be noted in the first place that we have apparently chosen such attributes/functional infrastructure which are/is located mainly within the built-up areas rather than in the surrounding area. This facilitates of course the distinction and delimitation of the single SMESTOs within this settlement network. While Klagenfurt as medium-sized town becomes quite apparent on the right hand side of the map with a rather homogenous accessibility index ("low effort" for the whole settlement area) and a rather high density of attributes within its limits. The neighbouring SMESTOs (in the centre of the map Krumpendorf and Viktring in the South-west of Klagenfurt) could be described as rather "small towns"⁵⁹ with less developed accessibility indicators and less endowments as well. Still their delimitations vis-à-vis their regional context becomes apparent with their rather homogenous settlement areas.

Unfortunately we seem to have chosen SMESTO attributes which do not meet the challenge which has been described in chapter 2.3.4 – i.e. the situation when functions are to be found in the surrounding areas of SMESTOs. Of course this shortcoming is also due to the analytical approach we have taken when delaminating our SMESTOs in this map. If labour market areas were to be taken into consideration as basis for defining the borders of each SMESTO the overlapping of the SMESTO areas would have been more significant and therefore the "sharing" of single functional attributes (e.g. some educational institutions in Klagenfurt) would have become visible.

Still even with this approach the aim of mapping SMESTOs in a way that pan-European maps could be produced for depicting and classifying them is fulfilled and the practical proof has been provided that the identification, delimitation and classification of SMESTOs could be done without having to meet the problem of the rather heterogeneous definitions and delimitations of SMESTOs to be found nationally.

⁵⁹ Whereas Viktring belongs to the administrative unit of Klagenfurt, Krumpendorf does not.

Map 11 Services Cost Distance Indicators (SCDI) for the Klagenfurt – Wörthersee area



<p>Services Cost Distance Indicator</p> <p>Cost distance to the entirety of services.</p> <p>high effort</p> <p>low effort</p>	<p>Road network</p> <ul style="list-style-type: none"> Highway National road Regional road Urban network 	<p>Services</p> <ul style="list-style-type: none"> Practitioner Medical specialist Education Hospital Railway station 	<p>Source of data: ÖIR; EEA CORINE; EuroGeographics 2001.</p>
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3 GRASPING THE DIVERSITY OF EUROPEAN SMESTOS

This chapter describes the diverse **roles and functions** of SMESTOs, whereby the terms roles and functions are used widely synonymously. Thereby we try to identify diverse perspectives from which roles of SMESTOs can be viewed. We describe these roles as “the actions and activities assigned to or required or expected of the cities under observation”. In each of the following subchapters – analysing the diversity of SMESTOs – the used perspective is explained and supported by historic and state-of-the-art literature and by the results of the case studies conducted.

Where applicable, the strengths and weaknesses of small or medium-sized towns viewed from the respective perspective are pointed out. In some cases the strengths outweigh the weaknesses and vice versa. It has to be kept in mind, though, that a strength in one SMESTO can easily be a weakness in another. While one SMESTO for example may be suffering from increasing land consumption by detached houses, another SMESTO will see its main asset in offering this kind of residencies at the fringe of a big metropolis. The same proves to be true for the time level: a strength today can very well turn into a weakness in future, as some of the case studies have shown. For instance successful economic specialisation would be an engine for SMESTO development as long as it works, but when the industry on which the SMESTO solely depends breaks down, it will be a major disadvantage.

Thus the role of small or medium sized towns will be explored with regard to possible threats and opportunities. For this categorisation the same limitations are applicable as for strengths and weaknesses. Where no strengths and weaknesses can be identified, it is hard to determine threats and opportunities. Strengths and weaknesses as well as threats and opportunities have also been an issue in the case studies, where SWOT analysis for the different SMESTOs and their surrounding regions have been pursued. Examples from these case studies will be used to furthermore illustrate the overall picture throughout the chapter.

Special case study insights can be identified by the box surrounding them.

In each of the TGP's countries one town considered small and one considered medium-sized was chosen. It was kept an eye upon including towns influenced by large agglomerations, towns that compete (or cooperate) with towns of similar size and towns that stand alone in rural areas. Following a list of **28 working hypotheses** (see Annex A.1) the next analytical step has been to translate these hypothesis into a criteria set which will allow for an identification of the case studies to be conducted with the aim of testing the feasibility of the proposed working hypothesis. These hypotheses have been approved or turned down by each case study author and will also be used to deepen the insight into European SMESTOs. When setting up the criteria for case study selection we had to face one problem noteworthy, the selection and the amount of criteria will be following the trade-off between complexity and practicability:

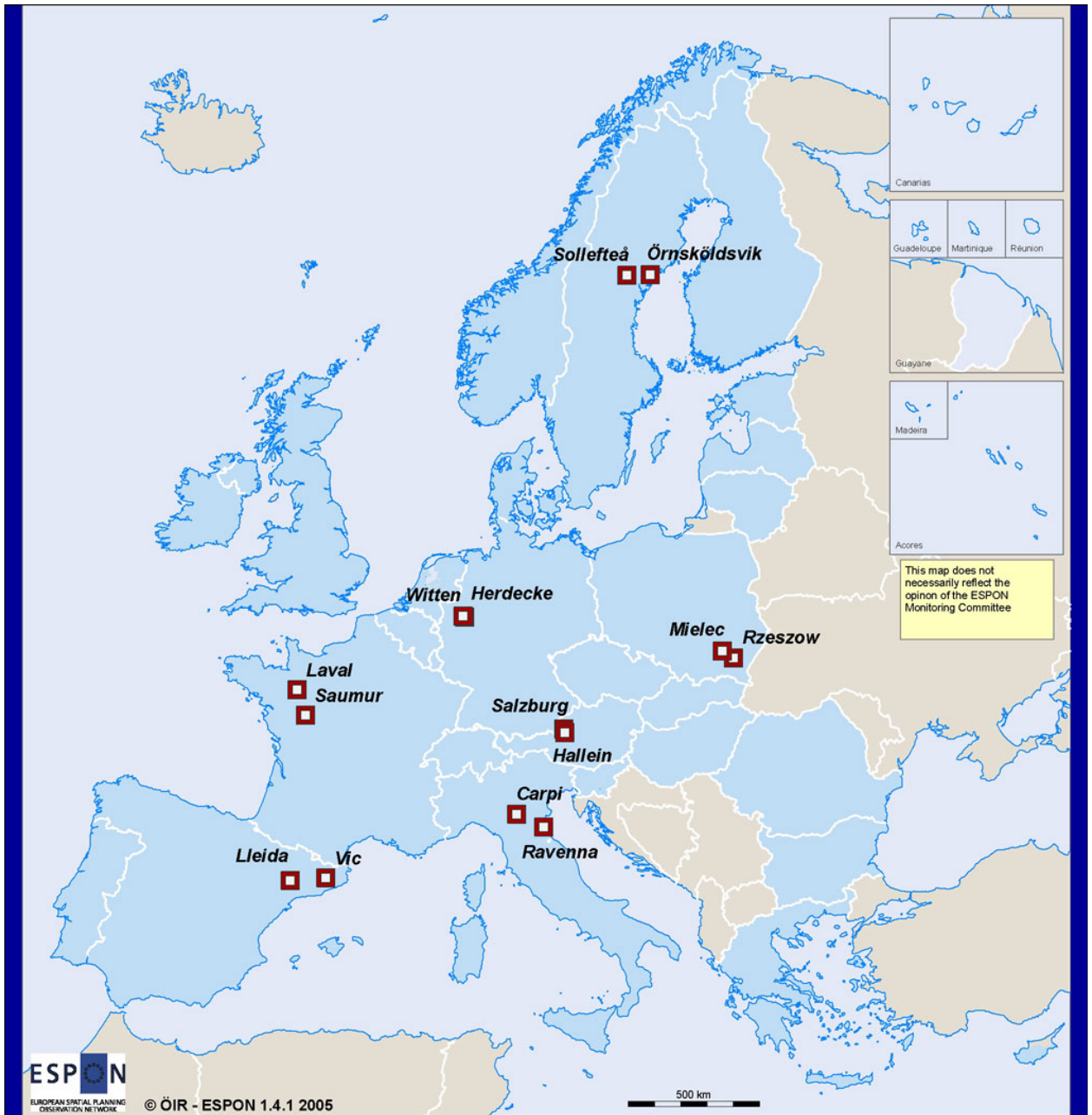
- If we try to picture the whole complexity of the roles and functions of SMESTOs by setting up numerous criteria trying to describe as many aspects as possible – we will end up with an amount of different classes of SMESTOs which will be difficult to handle: on the one hand the amount of case studies is rather limited and we would therefore have the problem to conduct case studies for all of the classes identified. On the other hand the ultimate goal of the project at hand is to set up groups of SMESTOs which should then be used in a larger thematic ESPON project. Thus our intention should be primarily to identify criteria and characteristics of SMESTOs which will be able to classify them in an operational and in a political context practicable way, which calls for a rather simple easily reproducible classification.
- If we reduce the complexity of the picture of SMESTOs too much we will end up in a set of criteria which will not allow for sufficient differentiation between the single SMESTOs – or even worse – between SMESTOs and bigger cities.

In order to guarantee a broad coverage of different types of regions with SMESTOs project following criteria were chosen in order to finally select the case study area: A combination of four mentioned criteria will be necessary to select the two case study cities per country represented by the TPG: Austria, Germany, Spain, France, Italy, Poland and Sweden. The result is shown in table 12 and map 12 below.

Table 12 Overview on the selected case study cities

name	country	inhabitants (municipality)	NUTS level/ SF classification	territorial position	dominant socio- economic orientation
Hallein	Austria	18,000	III/other/no objective area	network	Industries
Salzburg	Austria	140,000	III/other/no objective area	network	services, administrative centre
Saumur	France	31,000	III/other/no objective area	network	services, administrative centre
Laval	France	63,000	III/other/no objective area	isolated rural	Industries
Herdecke	Germany	26,000	III/other/no objective area	agglomerated	services, administrative centre
Witten	Germany	102,000	III/other/no objective area	agglomerated	Industries
Carpi	Italy	61,000	III/other/no objective area	network	Industries
Ravenna	Italy	147,000	III/other/no objective area	network	services, administrative centre
Mielec	Poland	62,000	II/objective 1	network	Industries
Rzeszów	Poland	159,000	II/objective 1	network	services, administrative centre
Vic	Spain	38,000	III/other/no objective area	agglomerated	Industries
Lleida	Spain	125,000	III/other/no objective area	isolated rural	services, administrative centre
Sollefteå	Sweden	22,000	II/objective 1	isolated rural	Industries
Örnsköldsvik	Sweden	56,000	II/objective 1	isolated rural	services, administrative centre

Map 12 Overview on the selected case study cities



■ Case study region
 Geographical Base: Eurostat GISCO
 ESPON space

3.1 Historic roots

There are many sources within the European urban literature describing the development of small or medium sized towns in Europe. In urban history one distinguishes genetic city types which range from Roman cities to market places in the middle ages, cities of the nobles and administrative cities (17th/18th century) to industrial cities in the 19th and 20th century and finally new towns in the 20th century.

Hofmeister (1999) and others speak of functional historic aspects of European towns: in the pre-industrial town in Europe sales, retailing, trade and craft as well as (secondary) religious and administrative functions were of importance. A main function of fortified towns was to provide protection for the surrounding peasant population in case of attacks. Of course the differentiation between small, medium and large towns was a different one, as the urban entities were much smaller than nowadays. The hierarchy of a town was often defined by the importance of the resident profane or spiritual sovereign.

Medieval towns were often functionally divided in streets assigned to different craftsmanship, though on a more local level than today's economy based on division of labour. Quite logical, as in the old towns of those days the walking distance was the measure to deal with. This can be observed in **York**, for instance, where the *Shambles*, an old street of timber-framed shops dating from the later mediaeval era, was originally occupied by butchers. **Ypres** in medieval times was renowned for its linen trade with England with clothing industry mainly located around the famous cloth hall *Lakenhal*. These examples could be extended almost endlessly. Our conception of a town is mostly preserved in today's SMESTOs which frequently were important centres of economy and culture.

After industrialisation set in, functions began to sprawl more and more territorially beyond the city cores as the city spread out due to dimensional reasons. With the first social movements taking place in the late 19th century, the relocation of residential areas was also an issue, as hygienic conditions in the early industrialised cities were on decline. As an example, Ebenezer Howard founded the **Garden City movement** in England in 1898 as a new urbanism approach, planning self-contained communities surrounded by greenbelts, and containing carefully balanced areas of residences, industry, and agriculture.

The relatively new development of the **sustainable city** movement (Capello R., Nijkamp P., Pepping G., 1999) tries to put these forces into the context of city size and urban development thresholds which makes them relevant for the research question at hand. Basically they build a correlation between city size and its sustainability. In other words it is assumed that there has to be an optimal city size where the above mentioned agglomerating forces counterbalance the congesting forces in such a way that a general long term equilibrium could be achieved. Empirical observations suggest that this "optimal size" will be found within the range of SMESTOs.

After World War II many European towns were even stronger marked by functionalism. This development had its peak in the economic rise of the post-war period: tertiary quarters with only car accessibility and scaled commercial centres were constructed in huge numbers and the dependence of urban policy-makers on private investors as well as low sensibility of planning offices had major lasting consequences. Inner city habitats have been replaced by tertiary uses, resulting in the decay of spatial and social structures; housing functions have been replaced by supply functions with the consequence of the decay of city centres and suburbanisation. In the late 1970s the spatial development potential and the specific flair of SMESTOs were rediscovered by urban planners. Due to the increasing dissatisfaction of citizens and its reinforcement by growing protest movements spatial planning had to be thought over again. Qualitative growth and

the renewal of historic centres were some new tendencies until in the last decade SMESTOs again lost importance and planning was refocused on big urban agglomerations in Europe (Leimbrock, 1992). What about SMESTOs relationships with their surrounding regions?

3.2 Regional embeddedness

3.2.1 Territorial position

For SMESTOs it is hard to stand up against other spatial entities. Neither the theoretical framework developed by urban researchers nor that of those specialising in rural planning or in regional development seems to fit with the specific social and economic contexts of SMESTOs. The same can be said about policies makers: urban as well as rural development mainly concentrate on big agglomerations and agricultural territories and not much interest is shown in their linkage to SMESTOs. But nonetheless these towns constitute an important link between metropolises and rural areas.

Central Place Theory

As was already mentioned, **centrality**⁶⁰ is a very important attribute for the attractiveness of small and medium sized towns. The explanation of the rank of smaller scale urban entities within an urban hierarchy leads back to the economically grounded "Theory of Central Places" of Walter Christaller (1933). Christaller (1933) analysed economic patterns of distribution, localisation and impact of urban settlements (see also figure 7).

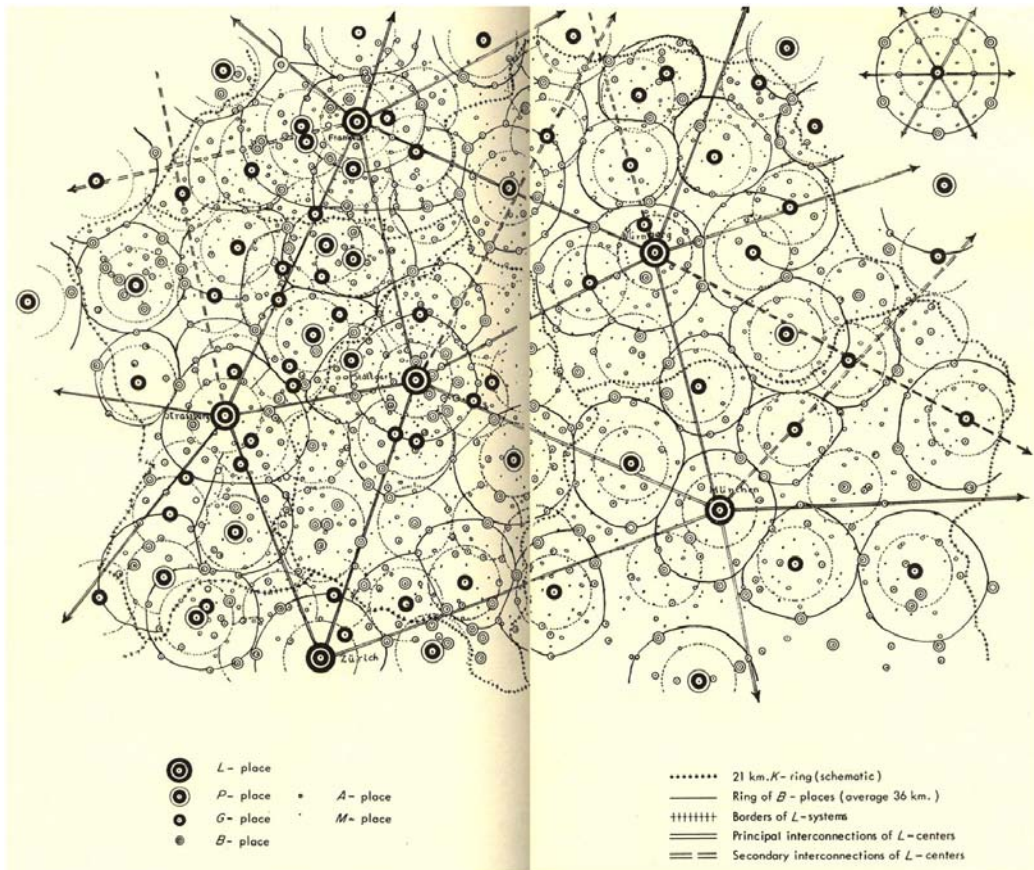
Christaller has identified central goods, that each have a specific threshold or minimum market required to bring about the respective good and a specific range in space, defined by the maximum distance possibly covered by consumers to purchase a central good. Different goods and services are therefore demanded and offered within a certain space – basic goods in smaller scale centres and specialised goods and services in higher ranking centres. The result of these consumer preferences is that a system of centres of various sizes will emerge over space. Each center will supply particular types of goods forming levels of hierarchy. In the functional hierarchies, generalisations can be made regarding the spacing, size and function of settlements. The graphical application of these principles leads to Christaller's famous hexagons.

Two different perspectives of centrality can be identified. First, centrality can be seen from a **functional perspective**, which means that a centre fulfils functions for its surrounding hinterland. Secondly, centrality can also be viewed from a **spatial-geographic perspective**. This means that a centre is situated towards the middle of a region as it can be seen in the mentioned hexagons to minimise the distance to the consumers. The **German Regional Planning Act**

⁶⁰ According to *Bataini et al.* (2002), centrality refers to the extent of an area for personal service activities (culture, retailing, etc.) offered within a town centre.

(*Raumordnungsgesetz*) serves as an example of a normative application of Christaller's Central Place Theory in spatial and regional planning (central places concept). In § 2 it demands the concentration of settlements on a system of capable central places within the framework of a decentralised settlement structure, to be conducted by the regional authorities (*Länder*). Usually these central places are divided in upper, middle and lower centres that are to fulfil predefined supply functions (see also Figure 4).

Figure 7 The empirical observations of the urban system of South-East Germany inspired the Christaller model



Source: Christaller (1933)

To make the theory work, Christaller had to make several simplifying assumptions, though:

- the particular area was flat without any geological barriers;
- the population was evenly distributed;
- all natural resources were evenly distributed;
- all consumers maintained the same purchasing power;
- no provider of goods or services could earn excessive profits and
- only one type of transport existed and it would be equally accessible in all directions.

This is where the weaknesses of Christaller's theory can be found. For instance, consumers of higher economic status tend to be more mobile and therefore bypass centres providing only lower order goods. Purchasing power and density affect the spacing of centres and hierarchical arrangements. Some of these assumptions even grew more unrealistic as urban development speeded up since 1933. It is clearly to be seen that transportation underwent an enormous change since Christaller's days, cheap energy got available for broad public and travelling distances got longer therefore.

A view on central places of today

Analysing current settlement structures and associated issues in regional development, one observes a continuous growth of big agglomerations. Division of labour, innovation and stimulations in the transport sector, suburbanisation and new lifestyles led to modern settlement structures moving away more and more from Christaller's theoretical framework reducing also the importance of the legal framework of centralities and hence of small and medium-sized towns (Blotevogel, 2002). The generalised usage of individual motorised vehicles has extended people's daily range and allowed suburbanisation to develop.⁶¹ Consequently, the SMESTOs have to some extent been shortcut as providers of basic services; the inherited urban network no longer corresponds to the current patterns of mobility.

This leads to a situation in which SMESTOs are largely shortcut by larger agglomerations as providers of basic goods and services, as highways, high speed railways and air connections optimised according to the "hubs and spokes" model lead to the emergence of high contrast in terms of accessibility between some well-connected nodes and the rest of the territory. If one were to consider the enlargement of daily mobility patterns only, one could expect the Christaller pattern to be reproduced at a larger scale, villages are replaced by SMESTOs, SMESTOs by large agglomerations, and main urban nodes by global cities: The theoretical trend towards hexagonal patterns could be maintained.

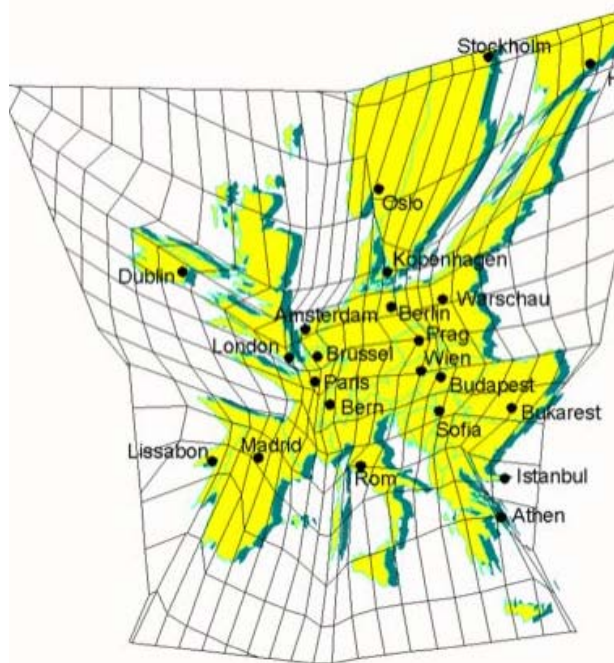
The growth of many European cities is however already limited, as congestion and pollution makes them less attractive both economically and from a quality of life perspective. In the long run, with possible rising energy shortage and congestion reaching an upper limit, disturbing the economic equilibrium one could draw back on Christaller's central places as regional supply centres gaining importance again, as SMESTOs are able to fulfil a compact structure without dispersed growth in their hinterland.

The Rhein-Ruhr-area, in which our case study towns Witten and Herdecke are located, gives an example of an atypical settlement structure different from the ideal one that Central Place Theory was based on. The area was designed for the exploitation and processing of mineral resources and developed to one single agglomeration area, where centrality functions were distributed over a huge surface and hierarchies cannot be explained by Christaller's theory anymore.

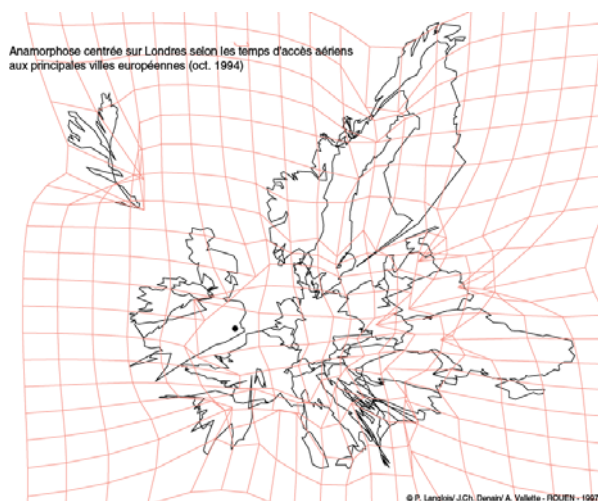
⁶¹ This development was in fact already identified and analysed by Christaller (1933), but of course not to the extent we can realize today.

The changing relationship of SMESTOs and smaller urban units can be illustrated by comparing the two maps in Figure 8. Both maps distort Europe by using air travel time instead of topographical distance. However, while the left map hypothesises a maintained spatial continuity of Europe, the right one allows the European territory to be folded, so that Barcelona appears in France and Greece is overlaying Croatia. This latter type of representation can be complex to read and interpret, but effectively illustrates the emergence of a discontinuous space, in which some large cities disconnect themselves from their surrounding region and form a new type of proximity with other, distant but well connected nodes. The restructuring of the upper tier of the urban hierarchy is a main parameter in the understanding of current development challenges for SMESTOs.

Figure 8 Two types of distortions of the European territory produced by replacing topographical distance with air travel times between main airports



Source: Spiekermann (1996)



Source: Denain, Langlois (1998)

While the Spiekermann map hypothesises that the travel time from a given airport will determine the accessibility for all surrounding territories, the right map considers that it only concern a limited area around the airport. By way of consequence, this latter maps shows folds and distortions which reflect the relative position of many SMESTOs as “bypassed” areas. This kind of map can also be produced at other scales, especially in relation to high speed railway connections and highways.

Beyond the traditional Central Place Theory

Blotevogel (et al., 2002) evaluated the Central Place Theory and tried to put it in a contemporary context:

In its traditional form as an instrument of spatial planning policy, the central places concept [...] has now become largely obsolete. [...] The orientation of spatial and settlement structure to the central places concept is not an end in itself, but is rather justified by the contribution which the central places concept is capable of making towards achieving the "sustainable development" of spatial and settlement structure.

He also doubts the capability of the traditional concept to fit into modern discursive planning methods and public participation models.

A main asset to update the central places concept according to Blotevogel (et al., 2002) will be to see central places as perceived clusters of central amenities independent of municipal boundaries. **Intermunicipal cooperation** will be a major challenge for spatial and regional planning to create transmunicipal central places in the future. This focus on integration between neighbouring municipalities in order to establish urban entities with a better performance in terms of economic, social and/or ecological development has also been seen as a dimension of the polycentric planning agenda for Europe (ESDP, 1999). According to Sassen (2000) the widespread growth of small cities in Europe is a strong indication of how balanced the urban system of western European nations is. It is the most balanced urban system in the world, and its difference to US American urban hierarchies is tremendous. SMESTOs in Europe may reinforce their strengths and functions by cooperating with other cities, and there is an existing network to build on.

Urban development

The concept of centrality is also important from an inner development point of view. If the goal is to halt dispersed urban growth, to preserve ecological recreation spaces, to provide safe and efficient public transport systems etc., it implies a focus on the specific attractiveness and the reinforcement of an inner city's economic power. Tagliaventi (1999), who focuses mainly on Mediterranean cities, argues that cities are fragile. Therefore it is necessary to preserve traditional urban spaces and to enrich them. He further says that SMESTOs are desperately seeking a new model of sustainable development. Despite their difficult position in terms of budget control, urban renaissance is a true option. That includes the reconstruction and conservation of historic centres and further means generating new local small businesses.

Preserving and developing small commercial units in town goes hand in hand with maintaining a significant residential presence in the city centre. The increasing problems of traffic and congestion are also prevailing urbanistic problems within SMESTOs. Another weakness is that the rise of the tertiary sector and its selective demand can not resolve the built and functional deficits in the city centre. Retailing and other industries are continuously heading toward peripheral zones on the outskirts of town. This frequently leads to spatial and sometimes also social erosion within SMESTOs.

SMESTOs have a historically founded urbanity and a density of societal functions. According to Krejs (1999) SMESTOs have also similar functions as metropolises despite their different character. According to Krejs, the success of SMESTOs

depends on preserving historical heritage and letting in new influences at the same time. Further, it is important to also set an architectural focus outside the city centre. To avoid uncontrolled growth it is necessary to revitalise desolate and monotone urban milieus and run a dialog between the old and the new. But the loss of importance of traditional urban industries is leading to new functional laws within the town. The core density disappears and the centre becomes stripped of its importance. This horizontal functional broadening results in a separation between housing and working making new mobility necessary. Settlement structures require long term strategies and adequate concepts for densely populated areas to reduce suburbanisation. Alongside, suburbanisation is bound to occur in the secondary and tertiary sector (e.g. huge retailing). This leads to suburbanisation and "peri-urbanisation" in peripheral regions, as it is already occurring in the Alps (Bätzig, 1999).

Thus, central places may play an important role for settlement planning oriented towards sustainability. Smaller scale centres are supporting decentralised concentration as the sum of all transports (of persons or goods) builds a minimum. If we comprise the advantages of SMESTOs within spatial and settlement development it can be seen that smaller and medium cities are on the one hand more sustainable because of their compact structure and shorter travelling distances.

SMESTOs vs. metropolises

It was already said that the large number of cities in Europe within a very close distance and competition and accelerated transport make fewer cities necessary, leading to weaknesses of smaller and medium sized cities. Many functions of SMESTOs have been taken over by metropolises nowadays: increasing traffic speed and expanding communication networks facilitate the accessibility of central nodes. Apart from that, the gap between smaller cities and metropolises is rising due to globalisation and structural changes. By the search for the cheapest production location at the cheapest transport gates especially SMESTOs with an industrial tradition or off the main transport axis are affected. On the one hand we have the effects of urban sprawl, on the other hand the phenomenon of urban decline.

On the other hand, some SMESTOs already show characteristics of bigger cities. Not only concerning 'classic' suburbanisation, but also inner city differentiation, separation of functions and even segregation of weaker social classes such as immigrants as was mentioned in the Spanish case studies of Lleida and Vic.

The following inter-relationships of smaller towns and metropolises should be considered. There is some reasoning for strong urbanisation, i.e. the process in which the number of people living in cities increases compared with the number of people living in rural areas.

The "**Theory of the Primate City**" says that a country's leading city is always disproportionately large and exceptionally expressive of the national identity and feeling. The primate city is commonly at least twice as large as the next largest city and more than twice as significant (Jefferson, 1939). Primate cities' sheer size and

activity becomes a strong pull factor, bringing additional residents to the city and causing the primate city to become even larger and more disproportional to smaller cities in the country. However, not every country has a primate city. Another theory is the so-called "Rank Size Rule" (or "Zipf's Law") which tries to explain the size of cities in a country. Zipf explained that the second largest and the smaller cities should represent a proportion of the largest city. While some countries' urban hierarchy somewhat fits into Zipf's scheme, later geographers argued that his model should be seen as a probability model and that deviations are to be expected. Both theories are closely connected to Christaller's Central Place Theory and are important for the explanation of the theory of city systems, which claims that cities are interrelated subsystems in a complex hierarchy. The theory not only covers economic indicators (such as the transaction costs) but also social, demographic and geographic connections and communication and information flows.

SMESTOs are not only reduced metropolises: it is impossible to imitate large-scale actions of large-scale cities. The aim must be to strengthen positive aspects of the small and medium sized town and to develop appropriate urban actions within the available cultural and economic resources to increase their strategic position. If smaller and mainly medium sized centres are to play an eminent role at national levels, it is counterproductive to follow the direction of metropolises. In an urban system each urban type has its functions and is interdependent with others. The various cities have various roles to play: specialised services must be supplied and places of interaction must be provided. Within this system it is important to stand out and be different from other urban entities.

Agglomerations, on the one hand, need SMESTOs in order to compete on an international scale. Their competitiveness is based on having access to efficient networks; for that the whole city and its settlement network is important. SMESTOs, on the other hand, need metropolises: although agglomerations are growth centres, SMESTOs while being situated on a lower level of the central place structure are parts of a connected urban system. SMESTOs' significance in urban networks depends also on their rural hinterlands, which are usually more connected to their neighbouring SMESTO than to a metropolis. This is most evident in the case of (potential) rural development poles.

It should be mentioned, though, that differences within urban hierarchies in Europe are also immense. While the "*Parisian model*" shows the strong importance of a primate city⁶², the "*Rhein-Ruhr model*" shows a big number of large metropolises with equivalent functions, while for example in some Eastern European countries in more remote areas, SMESTOs are still the predominant city type. This shows clearly that a very careful and targeted approach has to be applied when evaluating Europe's SMESTOs (Pumain, Rozenblat, 1999).

Rozenblat's and Cicille's 2003 comparative analysis on European agglomerations with more than 200,000 inhabitants shows quite remarkable results. While Paris

⁶² ESPON 1.1.1 has shown that France has a remarkably regular pattern of FUAs covering the entire territory although the regional capital cities are relatively weak, the reason why it achieved a higher polycentricity index than expected. Four FUAs have European significance, 21 score nationally, while 54 are of only regional significance (ESPON 1.1.1, 2005).

and London confirm their expected national and European dominance with all the other national cities far behind on a score consisting of 15 indicators (including population, accessibility, economic power and diversity, education and tourism amongst others), cities in other countries fulfill more surprising roles. Amsterdam for instance seems to have a very high rank amongst the European cities taking into account the strong grade of polycentricity in the Netherlands that was analysed in ESPON 1.1.1. Other examples like Germany seem to be more clearly polycentristic with only Berlin and Munich standing out a little bit over an otherwise balanced system of cities.

France as well as the UK have a number of medium cities that would very well rank amongst the most important ones in smaller countries but also in Germany or Italy. Further, if we have a look at Rozenblat's and Cicille's (2003) particular indicators, from a functional perspective Birmingham ranks amongst the top European cities in the field of fairs and exhibitions, Lyon amongst the most accessible, Nice amongst the most important tourist centres. But in their respective countries they seem to be overshadowed completely by their capitals.

In the case study hypothesis section the question was raised if SMESTOs are endangered to be dominated by metropolises to be seen in losing functions and economic power. Results showed that the majority of authors confirms the hypothesis. Most of the case studies were not dominated by a metropolises, though. The examples of Witten and Herdecke show, that also on the edge of big agglomeration small towns can achieve importance through specialisation (in these cases education and housing, respectively) rather than by mixed functionality which is easier to achieve and more appropriate for larger towns.

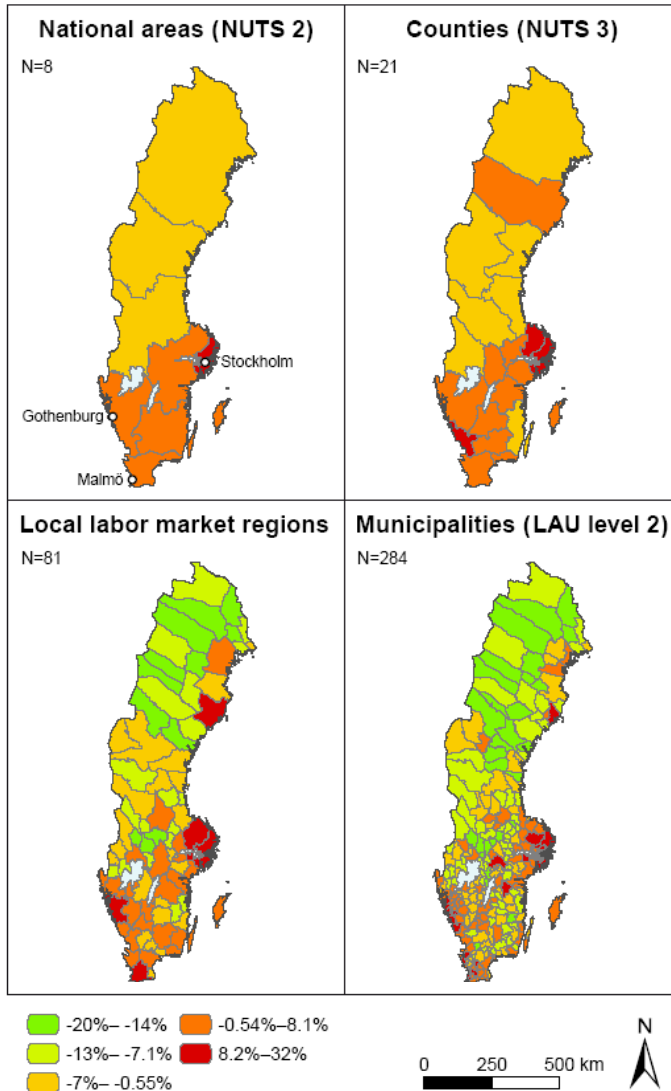
Finally, SMESTOs have the opportunity to reevaluate rural areas and present "the golden middle" in spatial planning, combining advantages of metropolises and rural areas – also a major asset in tourism development, as will be discussed later. For this to happen, however, communities must be willing to strengthen inter-communal and regional cooperation. Targets are to reduce the polarisation between primate cities and the periphery, building networks of SMESTOs and reinforcing sustainable regional development.

3.2.2 Densities

Settlement density is hard to be grasped statistically. There are different impressions of urban densities, depending on the statistical level that is used, especially if you have a look on densities on a European scale. A NUTS-4- or NUTS-5-area can be very densely populated, while the NUTS-3-area containing these smaller spatial units will not be dense at all. The same effect can be observed if you go beyond municipality level: a smaller municipality often has a rather low density though the actual building plot is completely built up with anthropogenic structures. ESPON 3.4.3 shows how boundaries and/or scale level affect statistical results, especially when visualised by maps, as the Swedish example in figure 9 shows. All four maps use the same signature colours for population densities and at first glance give a very different picture of the situation. On NUTS-2- and 3-level (top left and right) density seems to be quite average in most of the regions, but on the

local labour market marked and municipality level respectively (bottom left and right) an obvious north-south-gradient becomes apparent.

Figure 9 Population density in Sweden related to different scales

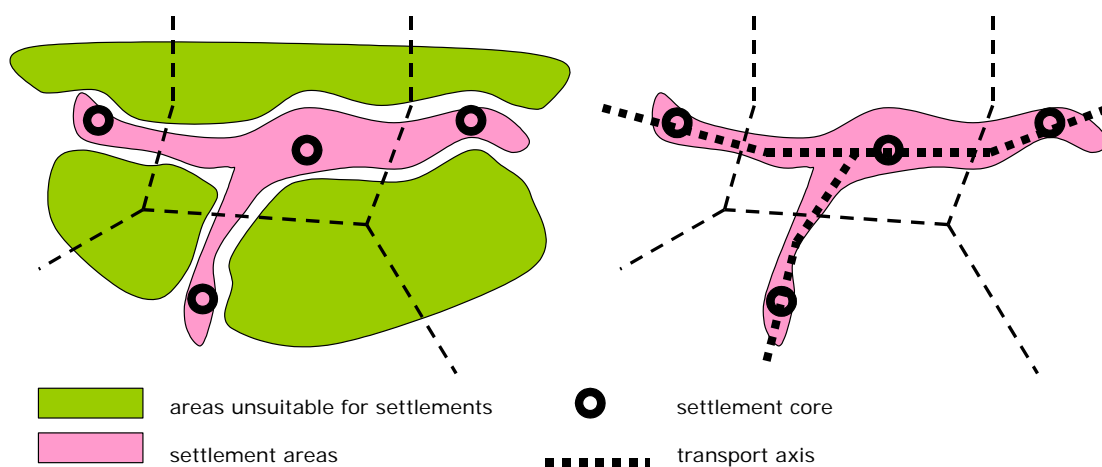


Source: ESPON 3.4.3 interim report, case study 1

Thus, thinking only of administrative boundaries when analysing the density of settlement areas seems too simple. Morphological and functional development has been transgressing these barriers for long time already and in most cases is rather based on topographic or economic circumstances. The formula “urban area = municipality” has not been challenged for the first time in ESPON 1.1.1 since urban sprawl is a widely observed phenomenon. So during the FUA discussion, continuous settlement criteria were *not considered operational from a spatial development point of view, as functional influence areas of cities usually overlap, and often include rural areas*. As a result, there was a functional approach with the construction of 45-minute-commuting around a urban core area building a functional urban area, not taking into account the continuous settlement area.

Back to densities, it would be necessary to relate them to potential building land rather than statistical geographic units to make a clear, homogenous statement. These effects can be watched in very **sparsely populated areas** as in Scandinavia, where municipalities are very large, in topographically delimited areas where there is only little apt space for settlements and along important transport axis, where fast accessibility to other areas is a major requirement. Figure 10 demonstrates an Alpine-valley-like situation on the left, where due to topography there is no other choice than to build up the valley bottom rather densely. On the right figure the compact settlement structure along the main road brings the advantage of rapid accessibility to neighbouring cores and is therefore profitable economically.

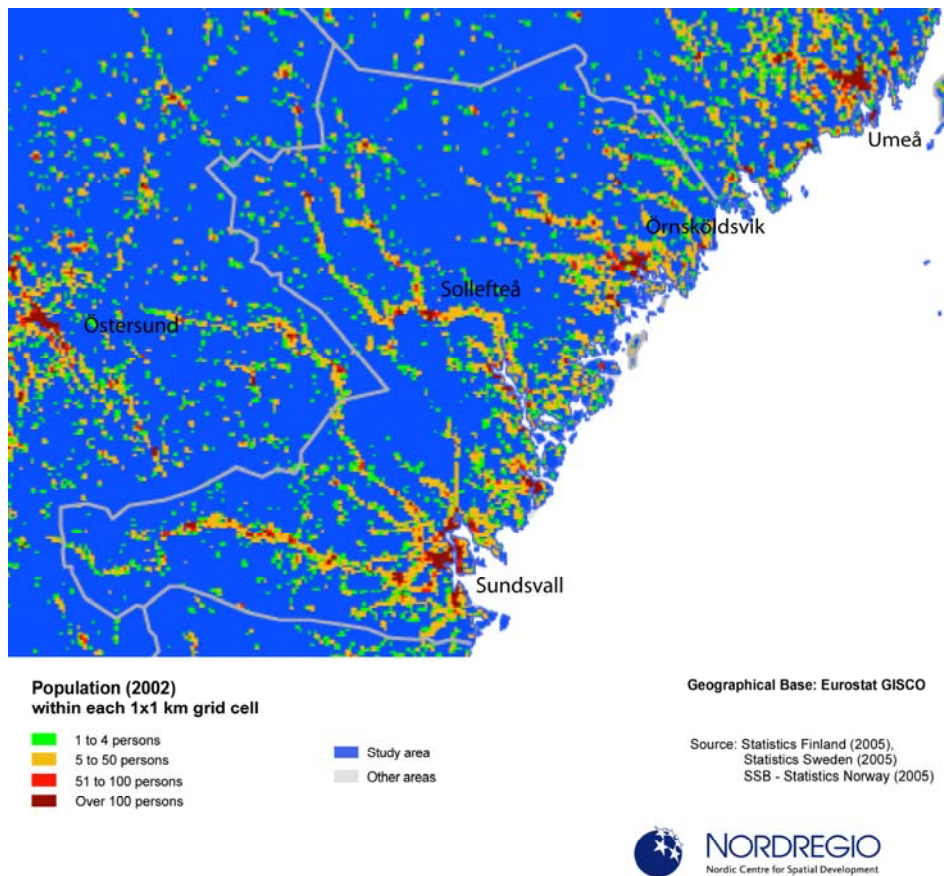
Figure 10 Dense settlements in sparsely populated areas (left: mountainous; right: along main transport axis) overcoming municipal boundaries



Source: ÖIR

The Scandinavian examples shows well that sparsely populated areas can nonetheless have a dense core. The Swedish case study towns of Örnsköldsvik and Soffteleå “are the major settlements in their respective municipalities, which have a total population of respectively 22,000 and 56,000 inhabitants” (Swedish case studies). Other settlements of the municipalities hardly have more than 1,000 inhabitants; settlement structure is extremely sparse outside the cores (related to municipality borders). In figure 11 one can see the dense concentration in very few settlements, having a very low population density on a regional (and the Swedish case even on communal/NUTS 5) level but creating nonetheless dense cores.

Figure 11 Disperse settlement structure in Västernorrland



Source: Nordregio

Alpine valleys, as mentioned above (figure 10 left side), are an example for topographically constrained settlement areas (Bätzig, 1999). The alpine regions are among the most sparsely populated areas in Europe, but if you travel through one of these narrow valleys, it is often the case that one village follows the next and the rest of the arable surface will be covered by farms. Land cover management was no big issue in former days so detached houses could be easily built anywhere at least if any agricultural use was involved. Taking into account the definition proposed in chapter 2 (a maximum 200 m of free space between buildings defining a morphological settlement area) many of these valleys would be considered as completely built up.

Dense **settlement areas along main transport axis** profit from good accessibility to an urban centre or a network of SMESTOs. Regional development usually encourages this trend to avoid urban sprawl and increasing infrastructural costs, so well accessible areas are in most cases easier to be built up (especially in higher densities). Planned cities along single transport lines date back to the 19th century, when Soría y Mata (1894) developed the idea of a **linear city**. These model cities were subsequently realised in communist led countries such as the Soviet Union or China. For economy of scale and functional reasons cities also developed historically in a linear way, as the example of German industrial town Wuppertal shows, that emerged from a couple of small cities along the

"Schwebebahn" suspension railway in the valley of the Wupper. Another example is the distinct regional development along rail and road transport axis in Denmark.

3.2.3 Accessibility

Small and medium sized towns in Europe are a highly heterogeneous group of urban entities. They are not only differentiated by their size and historical or economical backgrounds, they also differ tremendously in their accessibility. Three main differences of accessibility depending on territorial positions can be identified:

- SMESTOs within the catchment areas of densely populated agglomerations;
- SMESTOs in regions dominated by medium-sized cities and with a good connection to European transport networks;
- SMESTOs in remote and peripheral areas.

In the case studies the chosen cities in catchments of densely populated areas and agglomerations are Witten, Herdecke and to some extent Vic, which is located closely to Barcelona but still has some "real and psychological remoteness from the metropolitan centre" (Spanish case studies). Most of the case study towns were located in areas where a more or less dense network of SMESTOs existed: Carpi and Hallein are small towns to some extent dominated by medium-sized towns (Modena and Salzburg respectively), Salzburg and Rzeszów are medium-sized towns dominating small towns and Mielec, Saumur, Ravenna and Örnsköldsvik are SMESTOs more or less equally integrated in a functional SMESTO-network. Softellå, Lleida and Laval are located in remote or peripheral areas.

It has to be kept in mind by all means that different transportation systems fulfil different functions. A high speed rail line may well serve the residential population, but for the economy good connectivity to seaports, inland waterways or intermodal cargo terminals will be more essential. In ESPON 1.2.1 different transport indicators for those diverse needs have been developed, including for instance:

- Connectivity to basic transport networks;
- Access to motorway entrances, rail stations, airports, seaports;
- Cost to commercial seaports by truck, cost for freight road transport;
- Time for road freight transport;
- Travel times by air or rail between or to MEGAs;
- Number of cities of more than 100,000 inhabitants accessible by cars by step of time.

Additionally, the special needs of a SMESTO or a region and its local players must be taken into consideration. In many rural areas and smaller towns there is not always a comprehensive and integrated traffic infrastructure as one cannot choose between road and rail. The meaning of easy global access must not be overestimated, as for the local economy and population reaching the local sales market by car at an appropriate cost and time span is more important than global

connectivity, or let us say, for going on a holiday once a year by aeroplane. This is an important issue when deciding whether financial resources shall be invested in improving the global connectivity of a MEGA⁶³ or the local connectivity between SMESTOs. A good balance between the two will be required in most cases. If all resources are used to improve the accessibility of the big agglomerations, rural and peripheral areas will suffer, if more resources are put into low-density areas, a point will be reached where the cost–benefit ratio of the communication infrastructure is too ineffective, as it serves only very few people.

SMESTOs in the catchments of densely populated areas and agglomerations

At a time when polycentric development is an issue for Europe, small and medium sized towns represent an important reserve for urban development. They are places where an attractive lifestyle can be realised. Their strengthening could reduce congestion and development problems of big metropolises – although there is a trade-off between decentralisation and the reduction of traffic. Kroner and Pinning (1984) argue that small and medium-sized towns at the entrance of agglomeration regions fulfil absorption and release functions for metropolises as their growth and development potential is also limited. Perlik (1984) says that there are differences in the value added between the cities and rural areas, as the scenarios of SMESTOs near agglomerations can differ: these towns may be incorporated in the agglomeration sooner or later, or lose their significance. Another possibility would be that they are restructured as local centres, allowing them to retain their place in the urban hierarchy.

One problem arising when defining catchment areas in agglomerations is that you cannot always measure from the very core of a city, as structures and therefore destinations are disperse and travelling speed depends on availability of a high level transportation network, congestion and other factors. Ideally, every single point of the transport network should be benchmarked.

SMESTOS in regions dominated by medium sized towns and with a good connection to European traffic networks

These towns may profit from inner- and intraregional migration from rural areas. If they are centrally located they are at an advantage, because many SMESTOs fulfil the advantages of agglomerations without their negative aspects. This type of town can bring new impulses to rural spatial development. For this type of SMESTO networks Christaller's (1933) Central Place Theory will work out the best as space seems to be rather homogenous and interconnectivity between the centres is provided. Here the central places will interact with their hinterland and the classic urban – rural relationship is still in place and may also be referred to in regional development policy.

⁶³ MEGA ... Metropolitan Growth Area, see ESPON 1.1.1

SMESTOs in remote and peripheral areas

Remoteness has to be analysed on a different level: regionally an area can easily be considered as remote while on a European or global level it appears to be well integrated in the urban system of a region or country. Once again, for the local population it can well be more important to be able to reach the nearest MEGA in less than an hour by car than to be able to reach all European MEGAs in less than 3 hours by plane. Really far off places can be found in Scandinavia⁶⁴ or in some parts of the Iberian Peninsula, while the Alps can no longer be considered peripheral.

Remote areas need alternative concepts of development – they often lack integrated strategies of social and economic regeneration due to their new place on the periphery in a global context. Due to altered transportation costs their economic importance is threatened and the integration in global economic flows gets complicated. On the other hand they are urgently needed as nodes of development and supply for their respective region (administration, education, health etc.), but only with a certain economic size these functions can be properly realised.

Bätzing (1999) argues in the context of the Alpine regions that the relationship between agglomerations and peripheral SMESTOs has changed. Stating the example of alpine regions he claims that they have been transformed into suburbs and are no longer central places. Peri-urbanisation, the transformation of remote areas into housing regions of centrally agglomerated regions, is another major problem of how to provide good accessibility.

New developments in the transport sector and Trans European Networks

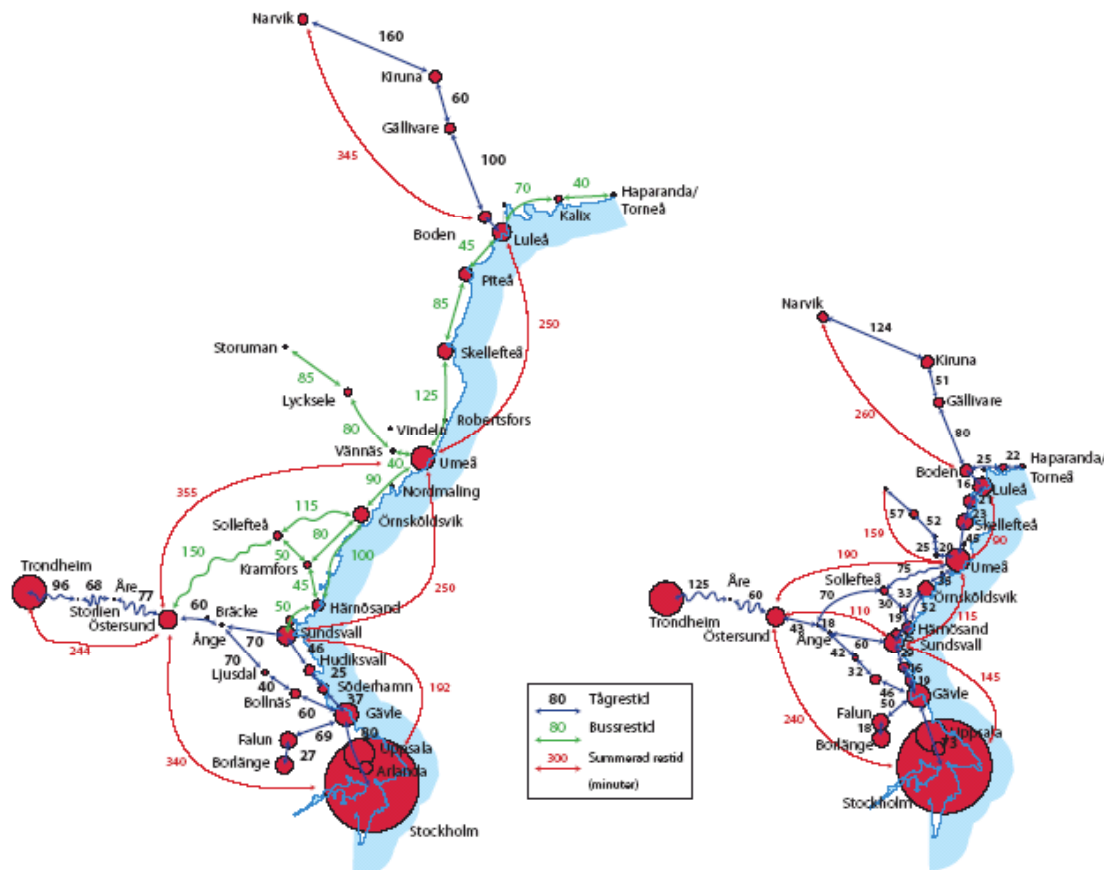
In Europe accessibility gets rearranged widely with the realisation of the Trans European Networks for Transport (TEN-T). This is especially true for the long neglected connections to and within the new Member States. But also transnational and global accessibility is changing: low cost aircraft operators compete heavily with traditional airlines and offer international tickets for prices that are very often below the ones for rail tickets. But can SMESTOs profit from these new means of transport as well as bigger agglomerations can for instance in rail traffic?

In rail traffic, some of the case study towns, i.e. Örnsköldsvik, Lleida and Laval, profit from being an intermediate station in existing or future high-speed or high-capacity rail links, even though more or less by coincidence, as the major intent of these routes is to create a connection between bigger agglomerations. This proves especially true for the remote area towns of Lleida and Laval. In the case of Örnsköldsvik the aim of the newly constructed Botniabanan rather is to connect the network of medium-sized towns along the Swedish coastline. Figure 12 shows how Botniabanan will change travel times along the Swedish coastline in the future.

⁶⁴ These Scandinavian remote towns in many cases have good air- and seaborne global transport links, though.

But generally, the SMESTOS seem to suffer from poor rail connection to other urban centres, in a regional context or even concerning the relations to a dominating metropolis. As the case studies of Herdecke and Vic show for instance, which are only connected by outdated commuter lines. There is no appropriate interregional connectivity, as major rail services transport routes are all orientated towards metropolitan nodes.

Figure 12 Current travel-time by train, bus and multimodal in 2005 (current) and 2015 (prognosis) along the Gulf of Bothnia

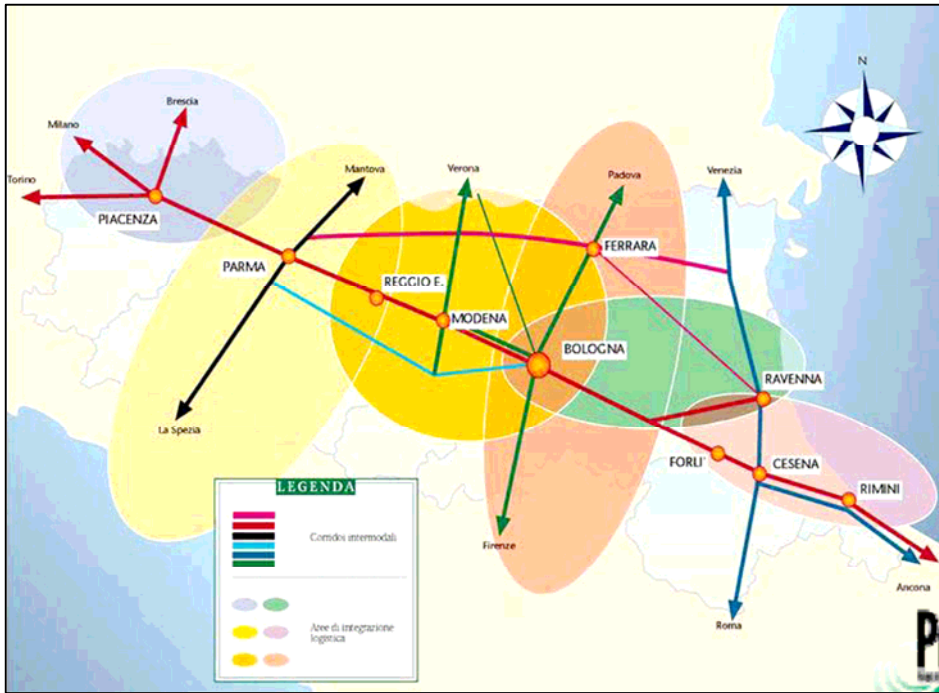


Source: Önsköldsvik case study/Infraplan AB, Banverket

Concerning **motorised road traffic** connections are usually better, with motorways or other high-capacity roads connecting at least all case study towns in more densely populated areas to other urban systems.

But once again, these roads are mainly built to connect the big urban centres, and if a SMESTO is a bit off the direct line between neighbouring cities, it might easily be neglected concerning a direct motorway link, as the case studies of Ravenna or Mielec show. The Milano – Bologna – Ancona corridor shown on figure 13 shows that Ravenna, though about the same size as most of the other medium-sized towns of its region, is off the main tracks, as it is not located on the direct line. The two Polish case study towns Mielec and Rzeszów lay behind relating to high-capacity transport links, as it is often the case in the new member states. A new east-west-motorway is being built at the moment, though.

Figure 13 Intermodal system Emilia-Romagna: Ravenna off the Bologna – Ancona track



Source: Ravenna case study

In **air traffic** the situation is quite different: for SMESTOs in peripheral areas airplane connection often is the only acceptable way of transportation apart from the regional scale, especially for islands. Towns of 30,000 inhabitants as Örnköldsvik in Europe normally rarely have airports offering scheduled traffic. This is even more the case with SMESTOs located on islands. The figure below shows the Greek airport network as an example.

Figure 14 Dense network of Greek airports



Source: www.greeklandscapes.com

In air traffic there is another important role of SMESTOs: airports are for various reasons very often located outside the metropolitan area itself and serve as a major tax income and labour market for small towns on the fringe of big agglomerations. This tendency is getting stronger, as new **low cost air carriers** tend to choose either regional airports or small airports on the fringe of agglomerations, because of lower fees. As an example, two of the most successful low cost carriers offer these German destinations, which hardly saw any noteworthy international traffic a few years earlier (towns' inhabitants in parentheses): Weeze (10,000), Altenburg (40,000) are at the fringe of Düsseldorf and Halle – Leipzig metropolitan areas, Friedrichshafen (60,000) and Paderborn (140,000) are more peripheral SMESTOs. Similar examples in other countries include Charleroi (near Brussels), Girona (near Barcelona), or the more peripheral East Midlands (UK) and Pescara (IT) airports.

Even Polish case study town Rzeszów offers a low cost connection to London.

Airlines can therefore offer affordable high speed connections again to peripheral regions. International commuting might not yet be common on a daily basis throughout Europe, but in some areas at least landborne commuting is not unusual anymore, looking at examples as Polish – German or Austrian – Slovakian – Hungarian border regions.

Accessibility is also a major impact on some of urban functions a town's.

3.3 Urban functions

According to Elsasser (1998) and other authors SMESTOs fulfil the following functions:

- **Supply function** – this means the provision of a region's population with necessary goods and services.
- **Housing function** – it corresponds to the provision of sufficient habitat and building grounds.
- **Labour market function** – SMESTOs are able to keep small structures and renew local economic entities.
- **Cultural function** – it includes leisure and tourism and can be reinforced by city marketing and branding.

According to Bataini et al. (2002) medium sized towns with an industrial background but also SMESTOs in general have the following functions:

- **Institution-objectification function** which views the city as a social system and claims to institutionalise codes and rules of a city.
- **Anchorage in built up area function** which signifies the relationship of a city with its surrounding space.
- **Symbolisation function** which argues that cities have a symbolic dimension, an urban culture, which is shaping the image of a town.

- **Productive combination function** which views the city as a place with a sectorial logic: Various services such as communication, marketing, advertising etc. are linked to several sectors. As for the relations between players, it appears that a degree of redundancy in cities creates the possibility of choosing partners.

3.3.1 Supply function

Winkel (2001) and Elsasser (1998) argue that the **supply function** shall secure the existence of rural areas, creating a surplus or spill-over of functions and tasks of towns, enriching their region and hinterland. As we mentioned earlier using the example of the German Central Places Concept, SMESTOs outside agglomerations are often considered as a “backbone” of the regional supply with goods and services. Much of the research debate is about the gradual loss of importance of this supply function.

But new tendencies in the tertiary sector show that central places outside of metropolises lose importance because the latter absorb functions from SMESTOs. Due to suburbanisation and the diversion of functions and in order to ensure a minimum supply of goods and services for remote areas, a redevelopment of the central place concept seems to be necessary, as was described in section 3.2.1. Supply networks for the rural hinterland have to be re-established. Some SMESTOs were able to ameliorate their position within urban hierarchies, others have lost influence as central places. There is the danger of increasing retailing structures in the greenfields – it is crucial to preserve the city centre as an important modern and attractive place. **Accessibility and mobility** in general influence the supply function of SMESTOs as well. Small towns in areas where individual motorised vehicles are not available to everyone have kept most of their supply duties, which can be seen in the new member states, where a dense network of smaller towns exist (see e.g. the mass of Polish or Romanian cities from 5 to 10,000 inhabitants in map 1).

Apart from economic open market controlled supply with goods, there are **Services of General Interest (SGI)** that are kept an eye on by the community as well as by the member states. SGI cover a broad range of different types of activities, from the big network industries (energy, postal services, transport and telecommunications) to health, education and social services. **General Services of Economic Interest (GSEI)** have already been addressed to in the Charter of Fundamental Rights of the European Union (2000/C 364/01, Article 36):

Access to services of general economic interest. The Union recognises and respects access to services of general economic interest as provided for in national laws and practices, in accordance with the Treaty establishing the European Community, in order to promote the social and territorial cohesion of the Union.

In the White Paper on Services of General Interest (COM(2004) 374 final) the Commission asks for SGI to *be organised and regulated as closely as possible to the citizens and that the principle of subsidiarity must be strictly respected*, which suggests a strengthening of the polycentric structure. Main issue in the background is **territorial cohesion**: *The access of all citizens and enterprises to affordable*

high-quality services of general interest throughout the territory of the Member States is essential for the promotion of social and territorial cohesion in the European Union, including the reduction of handicaps caused by the lack of accessibility of the outermost regions.

In the Cohesion Policy in Support of Growth and Jobs (COM(2005) 0299, chapter 5) paper remote and rural areas were especially taken into account as well as cooperation models between the urban network and urban – rural relations respectively:

Cohesion policy can also play a central role in improving the situation of cross border and broader transnational areas as well as regions suffering from other handicaps due to their insularity, remoteness (such as the outermost or Arctic regions), sparse population or mountain character by promoting better accessibility, notably in the case of services of general economic interest, by sustaining economic activity and by promoting economic diversification on the basis of their endogenous capacities and natural endowments. [...] In urban areas, the focus should be on improving competitiveness (through clustering and networking) and achieving more balanced development between the economically strongest cities and the rest of the urban network. [...] Measures to promote cross-border, transnational, and interregional cooperation should complement the three priorities indicated above.

So the strengthening of small and medium-sized towns and the cooperation between them is widely seen as an appropriate measure to improve the supply situation of disadvantaged.

3.3.2 Housing function

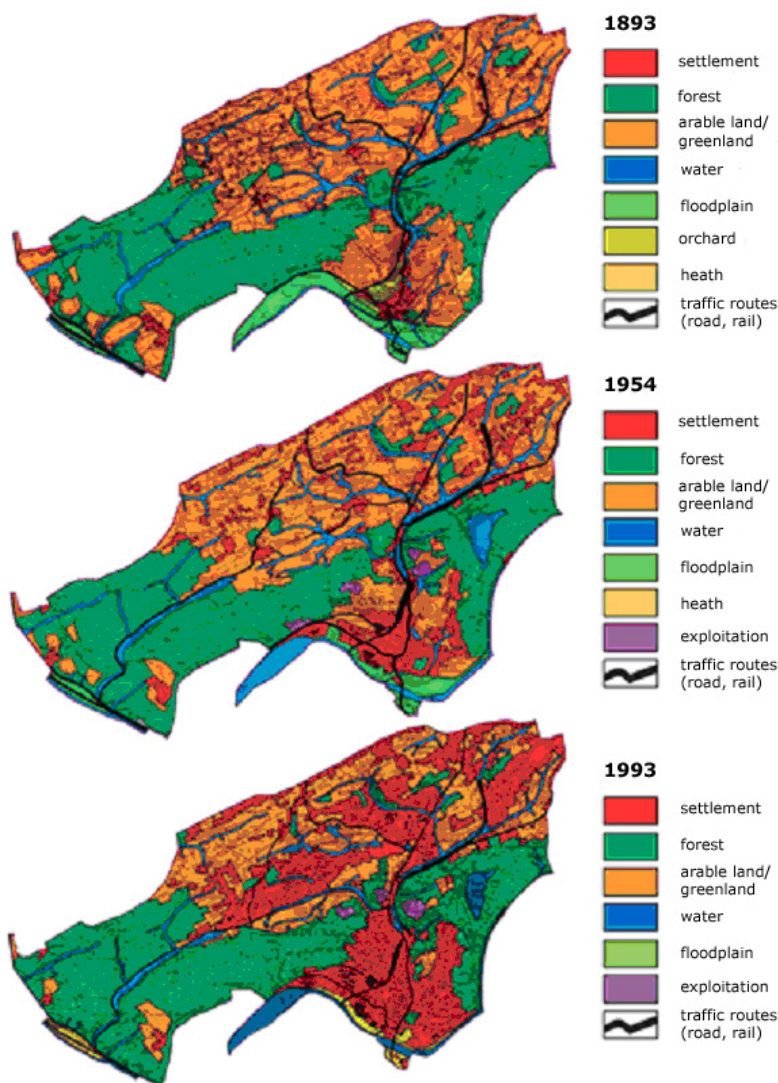
SMESTOs combine the advantages of country and city living and by forming a continuum between the town and surrounding landscape, they eliminate their juxtaposition. The housing function in SMESTOs outside of agglomeration areas may play an important role to avoid urban sprawl, as long as enough apartments and building ground can be provided. As can be seen in nearly all of the SWOT analysis conducted within the framework of the case studies, the existence and quality of the natural environment is a major reason for the high quality of life compared to metropolises.

In the hypothesis section it was clearly confirmed by the case study authors that SMESTOs offer a high quality of life. SMESTOs combine the advantages of land and city, eliminating its contradictions., towns and landscape can often still be seen as a unit and SMESTOs are the ecological continuum of the landscape. Still it has to be kept in mind that the 14 case studies are far from being representative for all SMESTOs in Europe, as there are more than enough towns that do not at all possess beautiful surroundings. Because of a growing separation of housing and employment functions (horizontal division), mobility gets more important. Because of that it has to be kept in mind that detached houses, that are the predominant housing structures in many SMESTOs, cause more or less excessive land use and traffic increase because the travelling distances are longer than in densely built up areas. A problem that is worsening in SMESTOs at the fringe of larger

agglomerations, which are then a case of suburbanisation by themselves. Residential purposes then usually exceed other functions.

SMESTOs as Vic, Herdecke or Hallein from the case studies, serve at least to some extent as **dormitories** or sleeping towns for neighbouring labour market centres. As the case of Herdecke in the polycentric, highly industrialised Rhein-Ruhr-Area shows, the trend to suburbanisation and the higher living quality of small towns might be possibly used for developing an economic basis in itself, which is expressed in an enormous population growth from the 1970s to the 1990s. Hence, the *attractive location for residential purposes and high share of single occupancy domestic buildings* is definitely seen in the case study as a main strength of Herdecke and the further development of this sectoral specialisation as major opportunity in the SWOT analysis.

Figure 15 Urbanisation process in Herdecke



Source: Herdecke case study/City of Herdecke, environment report, slightly modified

3.3.3 Culture & leisure function

In the post-modern city cultural functions such as leisure and tourism show increasing significance, which was also widely confirmed in the hypothesis section of the case studies. Cities are the cultural expression of our society and a platform for cultural production independent of their size. Especially of small and medium-sized towns a strength is their rich and diverse cultural heritage for Europe, their image reflecting a change of culture and economy (Dower, 1998). Such towns are marked by their cultural landscape, i.e. winery towns, health resorts, port towns, etc. and there are rigid personal ties and connections to these cultural landscapes.

This is why in smaller and medium sized towns people are perceived as romantic and straightforward and the towns as homely and comfortable, correlating with Leopold Kohr's (1957) "small is beautiful" ideas as well as with today's anti-globalisation movements. On the other hand SMESTOs are sometimes being perceived as underdeveloped places, while bigger cities are seen as places of hope, emancipation, and freedom (as mentioned before, in the last 50 years the vitality of many SMESTOs has been gradually disturbed due to the trend to centralisation and agglomeration).

Even shrinking cities have opportunities to reevaluate their position by reinforcing soft factors of urban development such as culture and leisure. For example most sub-cultural music scenes emanated from cities or quarters in urban decline and many music festivals take place in small towns because of available open space, surroundings and no neighbours being disturbed. "Monoculture" should not be not an issue though, as the quality of culture depends very much on its diversity. So the culture and leisure function can be said to serve economic as well as non-economic characteristics:

- it is a soft location factor for investors;
- it is an economic pillar in tourism;
- it creates cultural nodes for their respective surroundings (natural heritage);
- it creates a local identity;
- it preserves the cultural heritage.

More or less of all the case studies show that a major future opportunity for SMESTOS lays in the strengthening and promotion of the leisure and tourism industry. All towns have major natural and/or cultural assets in their surroundings, with outstanding landscapes and/or other magnets of tourism, such as wine growing regions (Laval, Saumur) or beautiful mountainous areas (Vic, Hallein, Salzburg, Rzeszov). A major part of the analysed SMESTOS can also look back on a rich historical heritage: Salzburg, Lleida or Ravenna have been partly built in Medieval Ages or earlier already. Figure 16 shows a view of the historic town of Hallein.

Figure 16 Historic town of Hallein



Source: www.hallein.gv.at

These case study experiences do not signify that all SMESTOs in Europe offer beautiful landscapes, of course. There are many examples for small or medium-sized towns located in amidst brownfields (as it was the case in the Rhein-Ruhr-Area some 20 years ago) or intensive industrial farming areas. But while some metropolises in Europe developed only since the industrialisation period either around a relatively small core or as a merger of several small villages (as Madrid or Berlin), historically grown SMESTOs tend to be still dominated by their historic centre. But notwithstanding, as more and more people are leaving some SMESTOs (predominantly in remote areas) local cultural heritage as well as customs and traditions could still be vanishing. How do SMESTOs overcome these advantages of metropolitan areas to pursue their success in regional economic development?

3.4 Roles in regional development

This is a key section for understanding and describing the current roles of SMESTOs in Europe, as many other roles are closely related to the regional economic implications of small and medium sized cities. Historically seen, Messerli (1998), who analyses the roles of SMESTOs in Europe with a special focus on Alpine regions, identifies three phases in the development of European towns:

- In the historic phase, which lasted until the 1950, the towns were still agriculturally marked, but gained new transport functions, administrative and tourist functions and saw the beginnings of an industrial establishment. The growing town slowly became independent from their agricultural hinterland.
- The historic phase turned into the "*Fordist*" model lasting until the 1980s. Hand in hand with this standardised mass production came up, implying that urban growth was based on economies of scales, relying on localisation and urbanisation advantages. Industrial centres shifted from the centres to the periphery. The hierarchy of urban systems remains stable, because innovation and diffusion processes emanate from large urban centres.

- This was followed by the "*Postfordist*" economic development model in the 1980s. In this new model economic growth had little to do with urban size – flexible specialisation and strongly localised production systems replaced the mass production system. City size and growth dynamics were replaced by flexible specialisation and the degree of integration in urban systems (Capello, 1992, Maillat, 1998). That way SMESTOs could gain a new significance as places for high-ranking economic functions. Essential conditions were the existence of the required resources and modern communication infrastructure.

So apparently the shift to Postfordism offered new opportunities for SMESTOs' economic growth. That is not to say that all small and medium-sized towns could take advantage of the structural changes. Big agglomerations still provide economic benefits, at least for a number of economy branches.

3.4.1 The impact of structural change on SMESTOs

Explaining economic growth most studies refer to the perspective of **exogenous development** and examine location factors for industry, service and high-tech activities. They try to show what attracts and keeps companies and residents in a region, and therefore where public investments could and should or could not and should not be made (Bataini et al., 2002). The location-related factors are generic (airport, schools, affordable land etc.) and can be developed with political determination. Although these factors serve to compare regions, their underlying economic strategies have only superficial links to the local economic environment. While the focus is on lowest costs for business investment, specific local and regional characteristics are neglected. Territory has a passive role and the land is only seen as a place where activities take place and resources can be exploited.

A more qualitative approach to assessing the attractiveness of SMESTOs refers to the specific characteristics of a region (**endogenous development**). Hereby a region's potential is defined by its centrality and specialisation. Centrality structures a region between a centre (urban unit) and its hinterland. In this context it is important to point out that SMESTOs fulfil important tasks for their region which makes the centrality factor more important.

According to Erickcek (2004) the economic challenges for small cities are out-of-date infrastructure, dependence on traditional industry, obsolete human capital base, declining regional competitiveness, weakened civic infrastructure and capacity as well as limited access to resources. Due to Postfordism, globalisation of the world economy and a shift from secondary to tertiary economic activities, many smaller and particularly medium sized towns having strong roots in the secondary sector are in an economic downturn. The structural changes to tertiary activities seemed to have favoured big cities and metropolises.

This has led to a de-connection of local activities: Many areas only have branch plant productions, which do not generate a social or civic environment attractive to professional workers. These regions often lose key private sector stakeholders (Erickcek, 2004), which is seen for example in the break-up of economic leadership: a company goes from a private-owner to foreign investors, who have no emotional linkage to a certain region or city. Global enterprises are not locally

rooted – they chose locations worldwide, identifying the most profitable supply networks.

SMESTOs also have fewer resiliencies against economic down-turns and plant closings or major-downsizing due to their small structures. They not only lack growth facilitating amenities especially for professional workers (e.g. cultural entities such as theatres, major sport leagues etc.) but they lack also a manufacturing heritage of tolerance and diversity – much different from the breadth of production base and capital mobility in metropolises. So have smaller places, competing for location factors to attract global companies, a role in today's global economy?

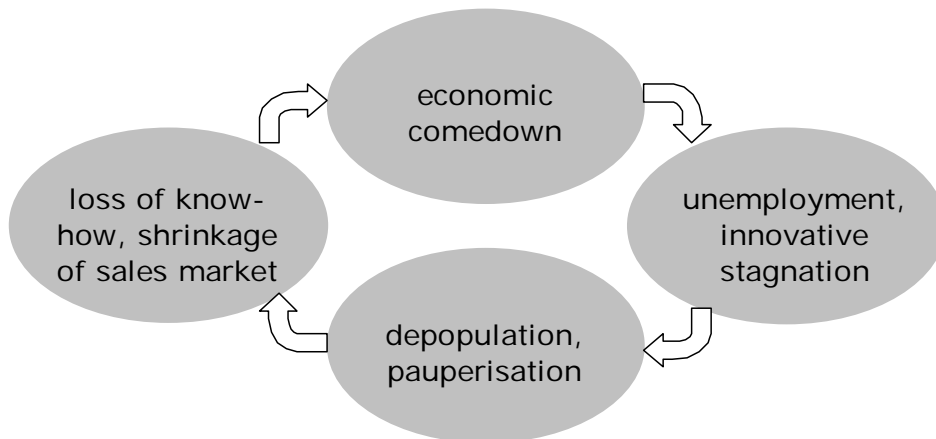
SMESTOs trapped in a vicious circle

In many parts of economics there is an assumption that a complex system of determinants will tend to lead to a state of equilibrium (dating back to Adam Smith, 1776). When this tendency is absent, a **vicious circle** may start and cause economic downturn. This circle will continue in its momentum until an exogenous factor intervenes and stops the cycle. In the case of SMESTOs structural changes driven by globalisation and the effect of tertiary specialisation increased the competition between urbanities. During this process the differences between big agglomerations and small and medium cities increased significantly. This led to a heavily researched phenomenon, called urban decline, also sometimes referred to as the debate on “shrinking cities”.

It occurred predominately in smaller and medium sized cities with a former industrial background. When centres of a lesser-scale get destabilised economically, it can lead to severe effects on their socio-demographic structure. International companies may close their plants and branches in former industrial areas of peripheral smaller scale locations, resulting in high unemployment rates. The local workforce cannot be absorbed easily by other industries, leading to a growing amount of socially disadvantaged, welfare recipients and unemployed and reinforces negative demographic and social trends.

Another consequence is that people who can leave the impacted area may move to bigger agglomerations. Predominately the loss of educated people affects smaller and medium sized towns because of a deficit of jobs, unattractive living and working conditions, and related social disparities. So the downward spiral moves on: if small and medium sized towns do not react fast enough to changing structures, such as for depopulation, aging population, growth of unemployment, single households, and professionals without children etc. the reliance on state budget transfers will increase enormously and the remaining local firms and administration will have limited opportunities of selecting and hiring appropriate staff, as illustrated in figure 17. Furthermore, increasing nationalist thinking, the loss of local know-how and experiences as well as local traditions can be possible consequences.

Figure 17 Vicious circle of SMESTOs



Highly mobile people will choose other cities as a consequence – they prefer places that are innovative, diverse and tolerant (Florida, 2002). Bigger cities can offer more opportunities to different socio-demographic groups, especially to smaller ones. They have always been seen as “cauldrons of diversity and difference, fonts for creativity and innovation” (Jacobs 1969/1984). SMESTOs in contrast rather tend towards specialisation.

Agglomeration benefits

Economies of agglomeration describe the benefits that the economy obtains when companies locate close to each other. The clustering and linkages allow individual firms to enjoy both internal and external economies. Auxiliary industries, specialised machines or services used only occasionally by larger firms tend to locate in agglomeration areas, not just to lower costs but as necessity for finding sufficient customers.

The agglomeration theory is related to the idea of economies of scale and network effects and provides two kinds of efficiency gains: first, products whose **transaction costs** increase strongly with distance are only exchanged inside the agglomeration. Second, transportation costs lower with proximity, an incentive to co-locate for firms with high transaction costs (Johansson, Quigley, 2004). Also Glaeser (et al., 1998/2000) identifies agglomerating forces and the reduction of transaction costs as key advantages of big metropolises. Cities form and grow to exploit economies of agglomeration.

Rozenblat (2005) recapitulates the effects involved as follows:

- multiplier effects (of internal offer and demand);
- competitiveness effects (concerning export capacity);
- productivity effects.

Another point, which Glaeser (1998/2000) as well as Florida (2002) support, is the importance of **human capital**, which in its heterogeneity and high-qualification can only be found in bigger agglomerations. On the other hand, there are congesting

forces, such as traffic, pollution and crime, which outweigh the advantages of metropolises. Smaller cities are often considered to be more sustainable. The reduced transportation costs and the higher level of division of labour are as important as spillovers (positive externalities) of spatial proximity. Also industrial clustering based on Porter (1990) is a well-rated concept.

There are of course also **diseconomies of agglomeration**. Additional competition drives down pricing power. Large cities attract problems of crowding and congestion. It is this tension between economies and diseconomies that allows cities to grow, but keeps them from becoming too large. As Johansson and Quigley (2004) stated, the case is unproved. It may be true that spillovers occur more frequently in agglomeration areas, but the value of an innovation is reduced when knowledge diffuses quickly to other firms. So SMESTOs could well profit from developing innovative products before global economy can react.

Specialisation vs. diversification

Smith foresaw the relevance of specialisation and division of labour already 1776: *The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labour.* This major condition of industrial society is also of major impact for SMESTOs.

Gatzweiler (1993) argues that global centralisation weakens the role of SMESTOs whether they are located in the periphery or not. Therefore it is important to find economic niches and foster specialisation, which can be difficult and risky. These towns can only keep their place in the urban hierarchies with political support and esteem by society. Likewise, Pumain (1999) argues that small and medium sized centres require political support with consideration of the complementarities between cities and their hinterland. Rural areas should be reevaluated with a focus on building own networks of SMESTOs, also referred to as horizontal cooperation. The influence of big agglomerations should be reduced.

A region is said to be specialised when a significant share of its labour force is involved in economic export activities. Centrality and specialisation complement each other. The success of regional development is based on a combination of exogenous and endogenous factors. This is even more valid for SMESTOs as their attractiveness depends on the capacity of the production system to generate specific resources and new activities to establish an exchange with its exterior surroundings. Cities are places where social structures and industrial services develop, reinforcing the vital role of centrality and specialisation.

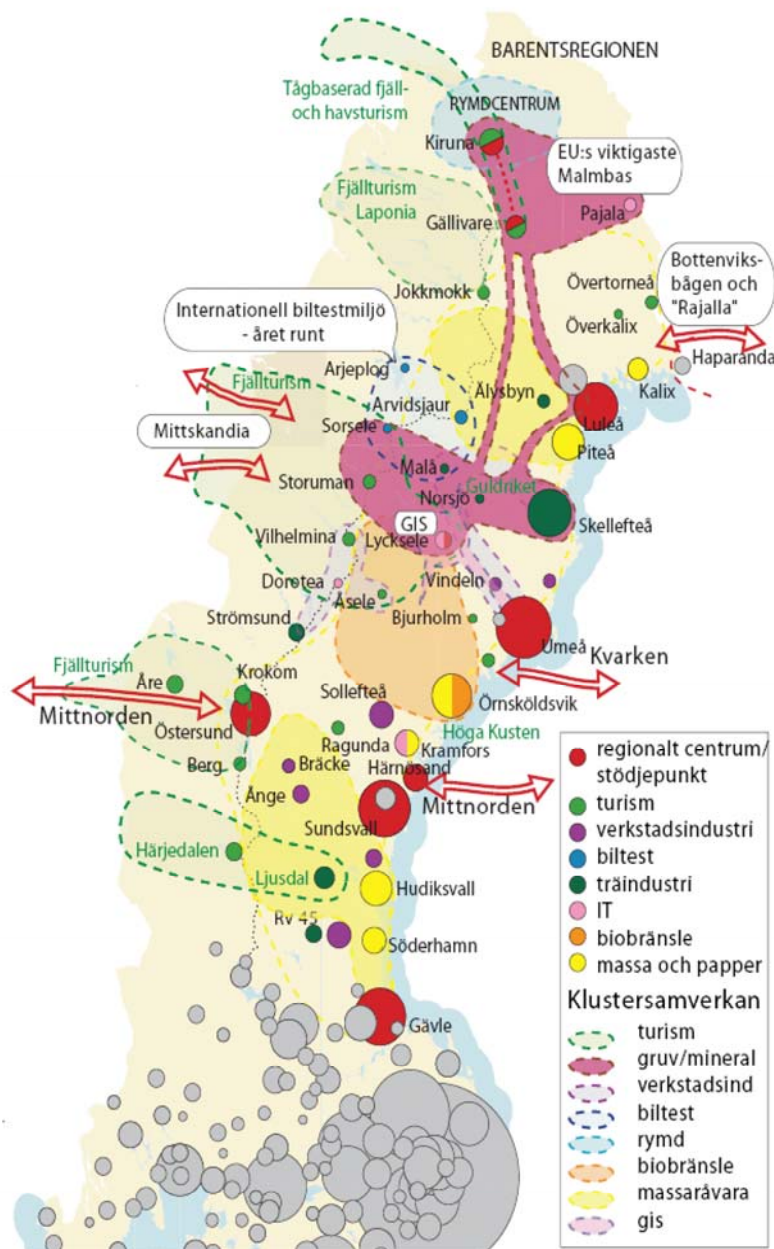
Production niches and economic specialisation are a topic in nearly all of the case SMESTOs. In some of them they could already be created (Carpi, Witten, Herecke), at least to some extent, in others the creation of such niches are a major issue for future development (Mielec, Ravenna).

Specific resources have the capacity to attract investments. SMESTOs and their administration should try to be different and reinforce high-value added economic

activities (Batani et al., 2002). The city size alone does not matter – the problem are often an inappropriate economic structures and networks.

Specialisation can be a gain for economic development and the labour market, as for instance the successful clustering in the Swedish region of Västernorrland shows (figure 18). But it does not have to be, necessarily, for a gain today may be a loss in the future. Regional economic change can be best understood as a moving landscape of growth poles that due to innovation and changing consumer preferences expand or contract over time. Hence, what used to be a core location in one stage of economic development may well become a less-favoured peripheral area in a subsequent phase (Hospers, 2004).

Figure 18 Development of economic clusters in the case study region of Västernorrland



Source: Swedish case studies/Infraplan AB

Specialisation alone reinforces selected industries, which may not be in demand in the future and a mono-structural imprinted infrastructure may be useless. There is the danger that this will hinder innovation of foreign investors and not support them. Specialisation of a limited number of production branches could create an obstacle concerning the adaptation to the new economic environment. An over specialised city is vulnerable to the idea of territorial and urban competition.

Rather, it is important to support existing urban milieus and infrastructure and to establish networks within their respective areas. Urban socio-economic regeneration, re-gaining of economic activity and the restoration of functions (economically, socially, environmental) is a key to a **diversified, differentiated development** of SMESTOs. Together, a city and its hinterland can strengthen each other, provide highly specialised employment and build a regionally functional entity, as for example in rural development poles. The figure below shows the Swedish system of specialised economic clustering such as paper industry, IT or biofuel clusters.

But, as stated already, specialisation on selected and mono-structural industries includes the risk that these industries may not be demanded in the future and structures will then collapse. Specialisation to a limited number of production branches could create hazards concerning adaptation to new economic environment. An over specialised city is vulnerable to the idea of territorial and urban competition and is non-diversified. The question was raised in the case studies whether innovation and specialisation alone pose threats to small and medium size towns and it was confirmed in all the case studies but one.

Case study examples like Mielec show that severe labour market problems are due when old industries in mono-orientated decline or break down like the Mielec' aircraft industry. It has to be mentioned, though, that the Mielec industry could not cope with the fall of the iron curtain and the traditional COMECON sales market. From 1989 to 1994 the number of employees in the city therefore dropped from 20,112 to 8,750. As a result, Mielec changed its orientation from mono-orientation completely towards other sectors, establishing the economic zone of the SSE Euro-Park that made Mielec a dynamic growth centre again: *The Zone gave rise to demand for various kinds of service. A number of new firms appeared, and many new jobs were created. There was a visible increase of demand for services, including transport, communication, logistics, protection, education (due to demand from the firms located in the Zone the Centre for Practical Training and the Higher School of Economics and Administration were established, in particular, in Mielec), computer, catering and accommodation.*

On the other hand, Carpi shows that a highly specialised industrial profile – textile design and industry in this case – can bring along a stable economic performance. Though the sector has been suffering from foreign competition lately, Carpi still experiences a steady growth of the urban economy that exports large shares of its production, mainly to EU neighbouring countries. A further development of the branch would even require immigration, since the local labour supply could not satisfy the demands.

Some more examples would include the Italian SMESTO of **Maniago**, that specialised in the production of knives and blades and is still very successful or the German region Bayerischer Wald around the Bavarian SMESTO of **Zwiesel**, that is strongly orientated towards glass and crystal industry.

Networking benefits

Clustering is a form of economic cooperation building once again on Glaeser's spill-over effects (1998) and unite the benefits that come from agglomeration as well as from networking. Proximity markets, markets where distances are short, facilitate information flow from buyers to sellers and in-between sellers, respectively. Buyers and sellers can find each other at low transaction costs in urban regions, and they increase with urban size increasing.

What if agglomeration benefits cannot be achieved due to political or technical reasons, as in many SMESTO dominated areas? Johansson and Quigley (2004) see the answer in networks. They reduce the effective distance between nodes and therefore the transaction costs that would otherwise incur: *When co-location is infeasible, networks may substitute for agglomeration. This possibility of substitution means that small regions may survive and prosper – to the extent that networks can substitute for geographically proximate linkages, for local diversity in production and consumption, and for the spillouts of knowledge in dense regions.*

New technologies such as e-commerce facilitate the development of new network so that many of the advantages of large agglomerations can nowadays be generated by networks of SMESTOs as well. The same proves true for the development of standardisation, which also makes the substitution of agglomeration benefits by network benefits easier: standardisation of complex commodities makes it possible to rely upon network solutions to achieve diversity in consumption and production (Johansson, Quigley 2004).

Individual solutions

SMESTOs should, according to Bataini et al. (2002) **concentrate on local rather than national or global solutions** and build on their endogenous potential, including the strengthening of their social and cultural networks. Moreover, new public infrastructure according to the changing demographic profiles should be established, including health care centres, hospitals, schools, parks, etc., places for residents to meet. This would renew the position of SMESTOs as places providing a high quality of life with a human living environment.

Relief could be generated by increasing the density of the urban fabric, using environmental concern to recreate mixed cities and to avoid mono-functional ones. The rehabilitation process of the city centre goes hand in hand with large-scale problem resolving strategies in inner city areas (Leimbrock, 1992). Nonetheless, some towns prosper through specialisation. A strategy to rely on, too?

The question if these theories would correspond to reality was raised in the hypothesis section of the case studies but only confirmed by around 50% of the authors. This could be a result of some of the case study cities already have overcome the shift from the secondary to the tertiary sector and succeeded in specialisation, such as Witten or Herdecke. When the coal mines in the Rhein-Ruhr-Area were abandoned for instance, the pressure on politics to create economic alternatives to the traditional industries was enormous.

Essen will be “European Capital of Culture” 2010. The concept of the entry was to present the Ruhr Area and its immense development from a region marked by heavy industry into an attractive cultural region and versatile urban landscape. The competition for the cultural capital of Europe is understood in the Ruhr Area as a long-term and sustained program for urban development. The issue of whether the regional urban landscapes can be shaped with and through culture is the focal point (source: City of Dortmund). On the other hand, Herdecke specialised mainly on residential functions, Witten on housing and on education by establishing a private university.

Universities⁶⁵ can in fact be a key to growth, as well as corporate research centres – a dense intellectual infrastructure can lead to knowledge spillovers. But this is not the only necessity: As their location is vulnerable, SMESTOs have to concentrate on local potentials and ideas. Only a local innovation scheme can lead to local innovation and find ways to stimulate the locally rooted economy (Lang, 2004). This is not yet clustering or cooperation but micro level diversification and entrepreneurial innovation.

So city types are shifting and SMESTOs are searching for new roles and identities (Smidt-Jensen, 2004). In order to remain competitive, cities need to work on their image. By city branding and city marketing a growing number of places are transforming their ad hoc economic campaigns into sophisticated marketing strategies, designed to build up tourism and attract outside investors. By creating a strong identity, they target specific buyers and make places more attractive. Place marketing and branding are relatively new – hereby it is difficult to develop a brand that convinces everyone – from local citizen to potential foreign investors.

Besides local special resources, such as cultural values, traditions and localised know-how, there is the so-called social capital. Different aspects of community life (Putnam, 2000) are still stronger established in smaller scale and in peripheral regions than in bigger agglomerations, where people are less engaged in civic groups, such as political, religious, leisure institutions. Conversely, Florida (2002), in his book “Rise of the Creative Class” says that these strong ties are irrelevant. Today weak ties are important because the ways in which communities create economic growth has been transformed. A strong social capital base can easily shut out newcomers, raise barriers to entry and delay innovation.

⁶⁵ Which smaller cities are less likely to have; however, two of Europe’s three best rated universities are in smaller towns, Cambridge and Oxford.

3.5 Urban Governance

Urban units are political decision centres with a concentration of decision makers. This is notably valid for larger agglomerations, but SMESTOs represent such centres, too.

The decision-making power within any urban unit is primarily focused on the “running of a town”, which means the production of public services of a very wide range (administrative, social, educational, health, infrastructure and planning etc.). Depending on the national governmental system and its specific division of powers and obligations the catalogue of urban rights and duties can vary tremendously. Not least in the struggle for obtaining the necessary resources in order to fulfil their obligations (according to the electorates’ expectations) SMESTOs’ reveal their relative importance within the urban system of a state. Much of the distribution of financial (and other) resources between the administrative units is nationally regulated and fixed over time but in all countries there remains a considerable volume of resources to be bargained for. It is basically via these bargaining processes between different tiers of political decision making that the SMESTOs (and all other urban units) gain relative political influence on areas far beyond their own territory.

If a town is affected by urban decline, urban institutions frequently take the role of private investors stretching their financial abilities to the utmost or – sometimes – beyond. Quevit and van Doren (2000) advise medium-sized towns in decline to adhere to the following mission:

- “Burying” the past – decisive resources of the past are no longer necessarily those that make it possible to set up new projects;
- Subsidiary actions – this describes a situative type of public intervention. Local government accompanies private initiatives to re-launch local development and to help mobilise resources of all local actors;
- The role of a city can be defined by its resources but also in relation to the urban systems to which it belongs;
- Development must act in a partnership-oriented manner – for the benefit of the community;
- Taking on own identity among others and develop coherent strategies and projects using characteristics of the local context.

The analysis of the different systems of administrative governmental division of powers, obligations and resources between the SMESTOs and other institutions would be a prerequisite for a more detailed elaboration of policy options both for polycentric urban development on European and national level and for individual urban units. For such an analysis we cannot restrict ourselves to the definition of SMESTOs as proposed in chapter 2, i.e. continuous built-up area with a structuring effect for the territory, but have to add the administrative dimension. In table 13 the major cases that need to be considered are called A, B, C, D. Whereas the case A (“one town, one mayor”) usually is in our heads as the standard situation, case D (“several towns, several mayors”) is not only the more general but possibly also the more frequent. The cases C and D clearly require co-operation between the

concerned administrative units for which the preconditions – legally, economically, socially – are sometimes not favourable.

Table 13 Possible combinations of SMESTO entities

Number of administrative units	Number of (morphological) SMESTOs	
	1	2 or more
1	A	B
2 or more	C	D

Even more than in the case of metropolises, where decisions of the core have external effects on the surrounding region and thus should be taken in co-operation with the region and its units, the SMESTO case demands to co-operate because the external effects of administrative decisions take place within the same morphological/functional territory. The territorial decision making processes furthermore are less unbalanced as in the case of metropolises where the co-operation partners are more on a parity level.

As described in the chapters “densities” and “accessibility” also the morphological development of SMESTOs follows topographical (e.g. Alpine valleys) or functional (e.g. transport axis) forces often more than governmental. As urban development in the **Austrian Rhine Valley** has crossed municipal borders as an example, increasing cooperation between local actors has been established. Weiss (2005) mentions the following reasons for increasing cooperation between the municipalities and other local actors:

- The geographic references for public services do not correspond to historic boundaries of communes and counties increasingly often.
- Without regional cooperation a suboptimal spatial situation of services of regional interest is possible.
- Without regional balance of benefits and expenditures between communities increasing competition will take place, that is orientated towards maximizing individual profits rather than towards the finding of the best location economically and socially.

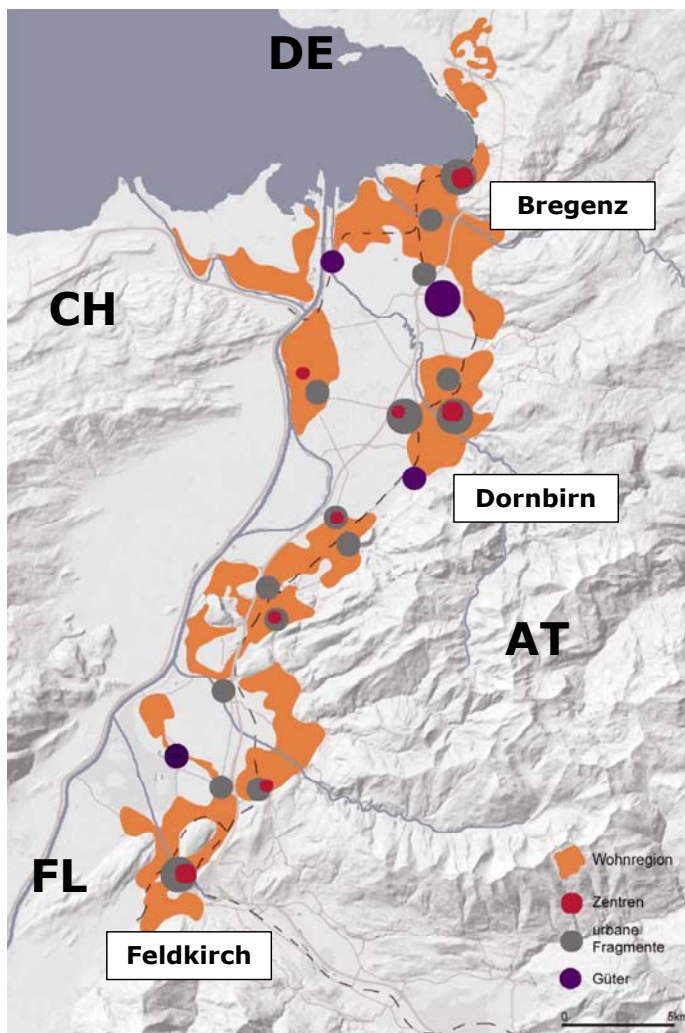
This region even built up a polycentric structure historically. In the Austrian Rhine Valley a distribution of so-called “capital functions” throughout the whole region could be identified (Salzmann, 2005) and can be seen in table 14. The Rhine Valley (NUTS III “Rheintal – Bodenseegebiet”) in the Austrian region of Vorarlberg (NUTS II) consists of 29 municipalities with up to 40,000 inhabitants and appears morphologically and even functionally as one dense SMESTO-network of about 240,000 inhabitants. The same dispersion of functions also holds true for the private sector. There are even some amenities functionally belonging to the Austrian Rhine Valley located abroad, such as the airport St. Gallen-Altenrhein. Since long ago for most people the places to reside, recreate, work or study are not located in the same municipality anymore. Though the area is rather considered as rural at first glance, this functional division is normally associated with bigger agglomerations. Figure 19 shows the various centres of the Rhine-Valley-SMESTOs with their respective functional focus.

Table 14 Selection of supply functions of the Austrian Rhine Valley municipalities

	administration	economy & labour	education	culture & leisure
Bregenz	regional government	employment agency		provincial theatre, provincial museum, Bregenz festival, Lake Constance
Dornbirn		shopping center	local college, Federal Economic Chamber academy, high school for sports	Austrian Broadcasting Corporation local office
Feldkirch	provincial court	Federal Economic Chamber, Chamber of Labour	teacher training college	Catholic Church diocese
Hohenems		commercial zone		movie centre, leisure centre
Lustenau		economic zone		
Wolfurt		freight rail terminal		

Source: ÖIR according to Salzmann, Geli (2005), S. 1

Figure 19 Polycentric structure of the Austrian Rhine Valley



Source: Salzmann, Geli (2005), S. 6

(legend from top to bottom: residential areas – centres – ‘urban fragments’ – goods)

4 TOWARDS A TYPOLOGY OF SMESTOS FOR EUROPE

The main challenge when designing a typology of SMESTOs is related to the difficulty in specifying simple and homogenous criteria recognised throughout Europe, taking into consideration the wide diverging conceptions and definitions and the great diversity of SMESTOs existing in each European country. Moreover, the typology should reflect that this diversity is not only the result of concrete territorial specificities but also of policy (planning) appreciations. The following reflections shall serve as a stimulation for follow-up studies and a showing-up of potentials and possibilities for further research issues.

4.1 Framework for a SMESTO typology

A typology needs to be drawn from stylised facts before deciding which factors to use for the typology. Two questions arise in the first place:

(1) “Which is the scope of a SMESTOs typology?”

The typology would serve primarily as an instrument for guiding the policies at European level, when defining a strategy for urban development vis-à-vis SMESTOs. Regarding this, it needs to be of qualitative character as a synthesis of previous descriptive quantitative analysis. Policy advice needs to address the main problems that SMESTO are facing as a result of their growth or decline. The dynamic character of SMESTOs will therefore define their final qualitative appreciation.

(2) “Which is the level of synthesis and abstraction that we want to reach by the typology?”

The typology needs to be based on simple fundamental findings that give some implicit and explicit indications for concrete policy targets at present but also for potentials in a long term perspective. The simplifications of the typology inevitably leave out many tangible and intangible factors that might have an impact on the SMESTOs' position and dynamics.

This is why the typology will only be a first instrument to indicate a framework of fundamental factors. From an analytical point of view excessive simplification might exclude those factors relevant for further advancement of the analysis of SMESTOs. Therefore some suggestions are added in chapter 5 of this report as possible further fields of study.

There are three scales of approach to the typology also recommended by ESPON that are inter-related: the **micro**, **meso** and **macro** level. While the micro level (concentrating on the SMESTO itself) seems to leave out too many of the important functional interrelations between SMESTOs and their regions discussed in previous sections of this study, the macro level (European and global context) may be too high of a level to really grasp all important details concerning the relatively small SMESTO entities. A meso-level or combined approach therefore appears to be most appropriate.

4.1.1 Regional ESPON-typologies of relevance for SMESTOs

The ESPON projects have elaborated a wide range of typologies of regions and territories from different perspectives, depending on the specific scopes and targets of the respective studies. It is clear that in each of those different typologies SMESTOs may be positioned differently, since they have not been the specific focus of the studies, but have nevertheless been integrated into the urban analysis, stressing them from different viewpoints: economic performance, accessibility, spatial relations, urban hierarchy, polarisation or polycentric development.

In order to identify the features that characterise a standard typology of SMESTOs, looking through the existing typologies for NUTS 3 regions there are three relevant aspects that can be highlighted:

- SMESTOs in integrated urban areas in terms of the local FUA;
- SMESTOs within the rural-urban patterns;
- SMESTOs' relation to accessibility, infrastructure endowment and economic performance.

In table 15 only a few of the ESPON projects that might represent a first step towards a regional typology focussing on SMESTOs are mentioned.

Table 15 Selected typologies from previous ESPON projects

Regional Typology	Regional Type (NUTS 3)	ESPON projects	Relevance for SMESTO typology
FUA typology (6 types)	(1) 3 Monocentric (2) 1 Bipolar (3) 1 Polycentric No FUA	1.1.1 Polycentric development	In order to identify the role of SMESTOs in this typology more micro-level information would be needed on local FUAs (changed threshold population criteria). Rural-urban relations are not taken into consideration whilst remaining an important aspect related to small settlements.
Urban-rural Typology (10 types)	(1) Urban densely populated and high urban integration (2) Urban-rural densely populated and high urban integration (3) Urban-Rural not densely populated with high urban integration (4) Urban peripheral not densely populated and low urban integration (5) R-U densely populated with high urban integration (6) R-U not densely populated but high urban integration (7) Rural peripheral not densely populated but high urban integration (8) Peripheral-urban, densely populated and high urban integration (9) Peripheral-rural densely populated and high urban integration (10) Peripheral, not densely populated and low urban integration	1.1.2 Urban-rural relations in Europe	SMESTOs here can be identified within each type, in relation to the surrounding regional conditions, in relation to population density in various degrees of integration between urban settlements and rural areas. Isolated SMESTOs, or densely populated regions with close urban integration. This regional typology can be among the most interesting for further development of a SMESTO-Typology.
Accessibility and GDP (4 types)	(1) Successful regions with high accessibility (2) Successful peripheral regions (3) Lagging regions in the European core (4) Lagging peripheral regions	1.2.1 Transport services and networks	The combination of these indicators (GDP) + accessibility, can help in identifying the place that SMESTO can have in the regional context and to which extent they can contribute to the economic performance (GDP) depending on the degree of infrastructures endowment.
Lagging Regions (3 types)	(1) Lagging region (2) Potentially lagging regions (3) Non lagging regions	2.1.1 Territorial impact of EU transport and TEN policies	SMESTO can be identified as their economic performance contribute to the region's decline or development. Relevance of policy cohesion and trade off between the equity and efficiency criteria. More economic attributes need to be specified for the SMESTOs.

From the screening of regional typologies some preliminary conclusions can be drawn:

- The regional typology in term of **polarisation, monocentricity or polycentricity** at regional level (ESPON 1.1.1) is considered as one of the most relevant approaches for further development. The FUAs represent a useful tool for analysing the different degrees of polarisation through the identification of the core city that has a multifunctional role within the FUA delimitation. Within this typology, however, SMESTOs are not fully covered, since the threshold of population for identifying the FUAs is too high, excluding too many smaller urban settlements. For a complete SMESTO typology small settlements cannot be ignored or left out of the analytical scheme (population remaining out of the FUAs). Furthermore, the rural – urban relations are not taken into consideration; particularly important for those cases of rural areas, low population density, with sparsely located small towns or cities. However we consider that on the base of the present FUA analysis, further research might be done for encompassing those aspects that are crucial for a SMESTO typology.
- The typology based on **rural-urban analysis** (ESPON 1.1.2) takes into consideration a wide range of indicators at successive analytical stages, including regional performance (GDP per capita) correlated to population density, rural-urban patterns and urban hierarchy. Different degrees of urban integration, related to different urban densities and diverse relations between urban areas (built-up land) and agricultural areas, are ordered within a detailed typology, where SMESTOs are integral components. This contribution can be extremely valuable for a SMESTO typology, because of the increasing connection between urban areas and rural areas, potential “urban-rural functional areas”. In the cases of countries with low population density, the sparse cities include large rural spaces within their area of influence. As well, SMESTOs have a particularly crucial role to play in the development of rural regions (see chapter 3.4). A SMESTO typology would greatly benefit from a rural-urban analysis as developed in ESPON 1.1.2.
- The regional typology based on **accessibility** (ESPON 1.2.1) indicates the expected results in terms of a positive correlation between advanced economic regions and the highly accessible (both in terms of infrastructure at disposal and intensity of use). Various decreasing degrees indicate wide differences among the cases towards the worst performances. Those indications are also extremely useful for these SMESTOs that are better agglomerated in core areas (favourable conditions) versus those that are located in peripheral regions and are harder to access, which concerns in particular the New Members States. The accessibility indications can be relevant for a typology of SMESTOs stressing the constraints.
- The typology based on **territorial impact of EU transport and service and the TEN policies** (ESPON 2.1.1) deals with the evaluation of different policy impacts on accessibility and ICT development. A clear trade-off between three main policy goals is emerging, i.e. between economic efficiency, spatial equity and environmental sustainability. The primacy of concentration in advanced regions clearly shows the advantages to the latter regions vis-à-vis the peripheral regions. The relation between economic performances (GDP per

capita in PPP) and accessibility confirms their positive correlation. Here the role of the SMESTOs remains secondary and only ex-post extrapolations from various types of regional profiles might be identified. The consideration about the necessity to develop more local based network for infrastructures and ICT in those peripheral areas – exploiting the benefits from core regions that enjoy rapid growth – suggests also an attempt to compose the trade-off between core and periphery. From a SMESTO perspective, this indicates the necessity to rely on the leading role played by large metropolitan areas but nonetheless to provide SMESTOs with facilities and better accessibility in order to exploit the opportunity for growth to full extent.

4.1.2 The spatial identification of SMESTOs

Taking into consideration the two perspectives, the SMESTOs as individual entities and the SMESTOs in the regional framework, two different sets of factors need to be developed: first is the spatial identification of the SMESTO as individual entity (or aggregation of different entities). Secondly, quantitative attributes will be added in order to qualify them. The non-correspondence between the administrative boundaries and the morphological dimension (see chapter 2.1.2) indicates the difficulty in the identification of city delimitation as spatial entity, as different location choice, land use management, population density are all factors that influence the growth of the urban space beyond the original administrative boundaries.

Sections 2.3.3 and 2.3.4 have already presented possible methods to overcome these problems by combining morphological and functional factors and relating them to administrative units. In order to delineate the spatial dimension in terms of areas of influence that go beyond the administrative boundaries, the spatial indicators are the following (table 16):

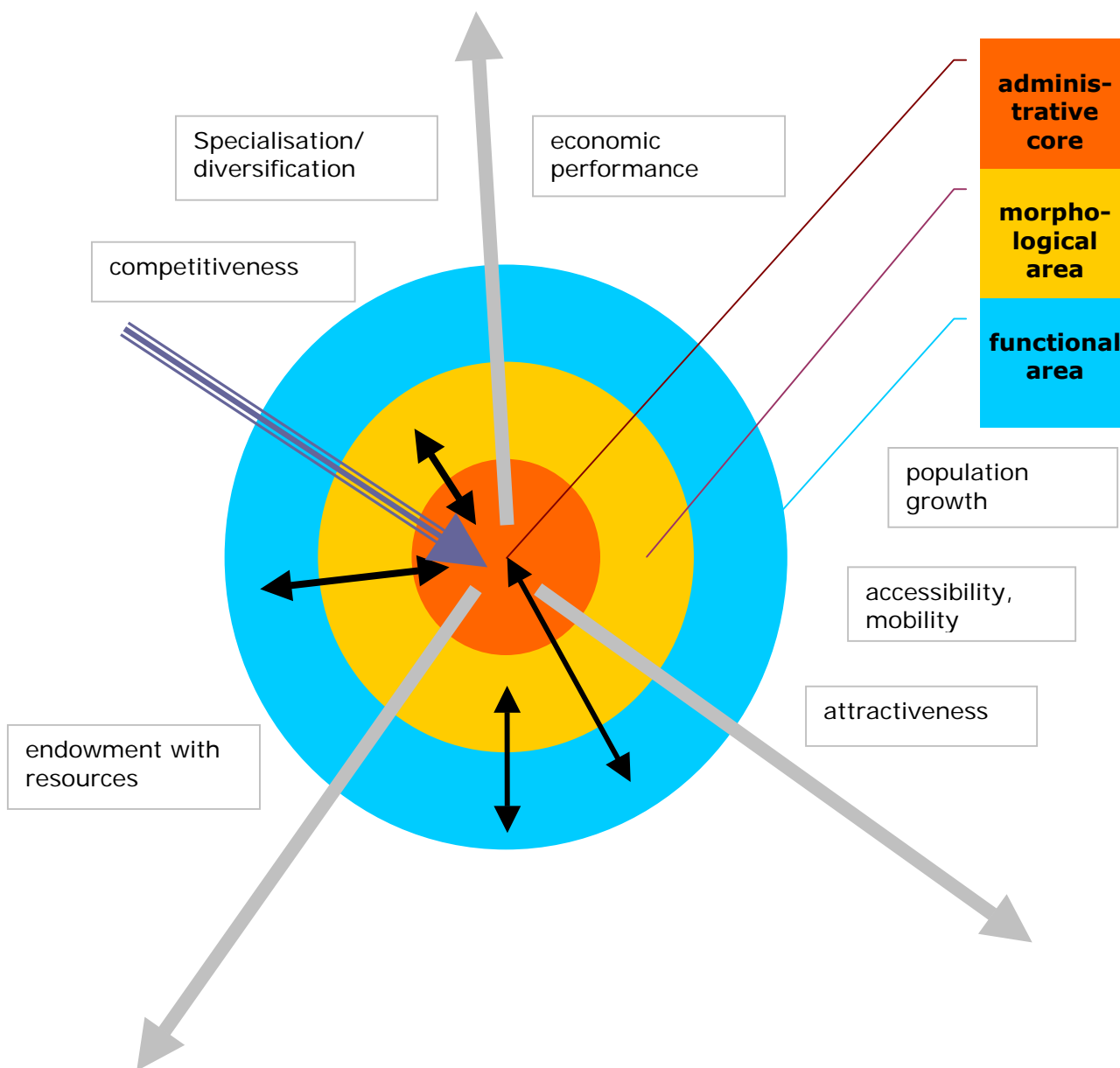
Table 16 Basic indicators for the spatial identification of SMESTOs

Main categories	Scopes	Specifications
Spatial indicators		
(1) Morphology	Built-up area and land use	– Individual settlements of certain size at least 200 m apart from each other;
(2) Accessibility	Time/mobility	– The isochrones from the SMESTO centre (in chapter 2.3 45 minutes were used) will be the central indicator for measuring the accessibility: influence zone of the core town (PUSH areas in respect to ESPON 1.1.1); – Alternately Services Cost Distance Indicator (SCDI) as calculated in chapter 2.3.4;
(3) Attraction capacity	Labour mobility	– The daily commuting population (travel to work areas) for the identification of the urban areas (local labour System), that are the base for the identification of the FUAs (ESPON, 1.1.1).

Thus, the SMESTOs would be primarily identified within their spatial dimension, and not within a traditional hierarchy on base of their size, although sheer size remains critical for further urban attributes. The three dimensions morphology, administration and functionality do not coincide with each other because of the

respective diverse components. The typology also needs to address these different perspectives. In figure 20 the three dimensions of a SMESTO are represented in abstract terms: it indicates an (stylised) internal coherence and the relation with the surrounding territory. The qualitative attributes (see indicators) refer to next chapter.

Figure 20 Scheme of SMESTOs' internal spatial coherence and external integration
(This is a case of one isolated municipality)



In order to identify the influence of an urban node on its surroundings, the combination between administrative unit and morphological dimension will be set as in the scheme already introduced in chapter 3.5.2 (table 17).

Table 17 Possible combinations of SMESTO entities

Number of administrative units	Number of (morphological) SMESTOs	
	1	2 or more
1	A	B
2 or more	C	D

The next step would be to identify the SMESTO within the regional context, using as options *isolated*, *networked* or *agglomerated* as sketched in table 18. The different combination might correspond to different regional typologies. Different combinations between isolated or networked do not necessarily determine the competitiveness of SMESTOs as individual units, since the factors that play a role in one case or another might be different. For SMESTOs' performance additional attributes need to be added.

Table 18 From isolated to agglomerated SMESTO

ESPON regional typology (NUTS 3)	Regional position of SMESTOs		
	Isolated (1)	Networked (2)	Agglomerated (3)
Typ 1	1.1	1.2	1.3
Typ 2	2.1	2.2	2.3
etc. (see chapter 4.2)	xx	xy	xz

On the base of this scheme one can proceed with the identification of typologies for regions most appropriate for SMESTOs and afterwards with a typology for SMESTOs in the different options (isolated, networked, agglomerated).

4.2 SMESTO typologies for empirical testing

4.2.1 Suggested components for a SMESTO regions' typology

The main components that need to be taken into consideration for a typology of regions more appropriate for SMESTOs are therefore considered the following:

- A regional typology (NUTS 3), based on the spatial polarisation/hierarchy, for the positioning of SMESTO within the existing regional urban structure (see also chapter 2.2.2): this will clarify the spatial relations of the SMESTO in its territory, their degree of mono- or polycentricism and the hierarchy following different spatial functions.
- The relevance of accessibility and its impact on the regional economic performance, that in turn has strong influence on the SMESTO positions.
- The importance of population density within the region as it has a significant impact on identifying the relevant SMESTOs as structuring elements of the region, as well as the degree of integration between urban and rural areas.

All the necessary indicators should be available at NUTS 3 level:

- Accessibility: distance to core nodes;
- Spatial polarisation: analysis in terms of the local FUA;
- Economic performance: GDP per capita PPP;
- Population density;
- Rural-urban relations.

As a result a simplified **example for a typology of SMESTO regions** can be built up as seen in table 19: non-quantified criteria are given for each indicator, but only in combinations. From this preliminary typology further specifications are needed for better characterising the mix of criteria consisting of spatial dimension (polarisation), degree of development (level) and dynamic factors (growth/decline). A quantitative testing of these types will be necessary.

Table 19 Example for a typology of SMESTO regions

SMESTO-region type	Description
(1)	Densely populated region, with several SMESTOs of various size: weak hierarchy and strong polycentric structure. Good accessibility and good economic performance
(2)	Densely populated region, but mono-centric with one large agglomeration and several SMESTOs around: strong hierarchy, lower degree of accessibility in the periphery of the region, whilst good to the metropolitan core, relatively good economic performance, but concentrated on the large agglomeration (dominating concentration).
(3)	Peripheral region, low population density, few SMESTOs, low hierarchy with surrounding rural areas, weak economic performance. The SMESTOs with smaller population numbers plays a service function in the area.
(4)	Highly rural dominated regions with very low population density and one or few SMESTO. Low accessibility and low economic performance.
(5)	Rural region in central areas, with large agglomeration and few SMESTOs around: good accessibility, residential function, good economic performance.

4.2.2 Suggested components for a typology of SMESTOs as individual entities

Following the identification of the spatial dimension of SMESTOs, the additional attributes to characterise a SMESTO as an individual entity have to be defined. For the identification of these attributes and the quantitative indicators for the typology, a three-stage-approach is imaginable:

- Selection of indicators;
- Analysis of these indicators in static and dynamic terms;
- Combination of these indicators into a typology.

Selection of indicators

A first selection of indicators will qualify the SMESTO in term of economic, social and location characteristics. Three main groups of indicators that characterise the SMESTOs can be identified in:

- Accessibility and location aspects;
- Demographic aspects;
- Economic and social aspects.

All indicators have to be available at NUTS 5 level as the smallest pan-European territorial unit. The NUTS 5 data are to be aggregated to urban areas using the functional principle specified in the typology of SMESTO regions (section 4.2.1). Some of these indicators are the same as for the typology of SMESTO regions, changing of course the statistical scale to NUTS 5.

Accessibility is determined by the relative development of infrastructures (rail, roads, airports) for ensuring access to and mobility within the region/area (see also ESPON 2.1.1 and 1.2.1). The location is characterised by the relative position of the SMESTOs in the regional context as central or peripheral. Additional attributes as geo-physical conditions are needed, e.g. as islands, mountain regions, coastal areas etc.. Detailed lists of these indicators (see also the spatial indicators mentioned in section 4.1) will have various sub-indicators, as a measure of the accessibility and peripherality respectively.

Concerning **demographic aspects**, the size of the urban area is relevant for the potential capacity to exert a specific function. A certain “critical mass” is necessary to have the potential to become relevant for a function. But at the same time the function is not necessarily dependent on the size, as small SMESTOs have – as was identified in the previous chapter of this study – high importance to low level services in rural and peripheral areas. The main demographic indicator will obviously be the

- Number of inhabitants in the “urban area”.

Further information about the population’s composition provides additional information that can be relevant for SMESTOs for its present and future demographic trend, and in particular for (social) policy scopes:

- Aging population/fertility rate;
- Contribution of migration (outflow/inflow of people).

Particular stress needs to be laid on the **economic and social** aspects since we consider them particularly crucial for the identification of the SMESTO’s type. Functions and roles of SMESTOs rely on economic and social strengths or weaknesses and are not only of local and regional relevance but also possibly of European relevance. Different factors can be identified in:

- Economic wealth: synthetic indicator for the economic performance index such as GDP per capita in PPP.

- Activity structure: this implies the relative specialisation or diversification by sectors in public and private industries and services. The relation between specialisation and diversification acquires a renovated importance in a globalised economy, because it is a balanced mixture between these two factors that may sustain SMESTOs' competitiveness. A good level of general service provision though is a sine-qua-non condition even for a highly specialised SMESTO.

For indication of the economic profile of the SMESTO two indicators could be of particular importance: the number of employees by sectors (manufacture, service, tourism etc.) and the output by sectors (contribution to GDP by sectors).

For each sector, in particular for services and tourism, more detailed sub-indicators could be demanded since they can better characterise the relative city function level: employees per type of services (financial audit, social sector, health, etc.), number of employees in services (by branches) per inhabitant, to measure the degree of development of services, tourism indicators such as number of beds, number of tourist resorts, number of visitors to name but a few.

Specialisation can be measured by the export performance linking economic activity and integration into international markets. The export/import value can be a key factor for a SMESTOs' competitiveness.

Innovation, Research & Development activities and knowledge can be relevant for measuring the potential existing in the SMESTO, in particular for those cases where the position of excellence can be based on innovation and technology. Indicators can be the number of patents, spending in r&d, number of research centres, number of students at universities.

Crossing social distress and economic performance, the employment and unemployment rate are necessary for completing the SMESTO profile, other indirect indicators of economic potential. Poverty also might be significant for those SMESTOs under strong social decline and weak economic basis. Policy makers need to be primarily sensitive to those indications for elaboration of adequate solutions.

Analysis of these indicators in static and dynamic terms

The analysis of the indicators in dynamic terms is relevant for measuring the processes that dominate the SMESTOs presently. In particular it is relevant to measure trends concerning demographic trends (and its composition), economic growth, as GDP per capita PPP, functional changes (specialisation/diversification) as sector/branch performances, socio-economic trends .

The following examples suggest a key of analysis on base of the mentioned indicators:

- Example 1: the growth of population of a SMESTO might not necessarily a positive trend, if this happens in a disordered and uncontrolled way, without the up-grading of the service provision for maintaining its function: sprawl, social marginality, poverty, criminality etc. can be the result.
- Example 2: a very highly qualified SMESTO might be very active and dynamic in terms of output/export and not necessarily at population increase. This

corresponds completely to its strongly specialised economic function, while not being dynamic in attracting people to live there. A “dynamic city” not necessarily needs to have increasing population for maintaining its role, if this is anchored to its main (economic or possibly cultural or historical) profile, associated with efficiency of service provision. The capacity to be competitive for a small town might be precisely based on the “small size” of its urban structure and its high quality of living or its high efficiency, for instance.

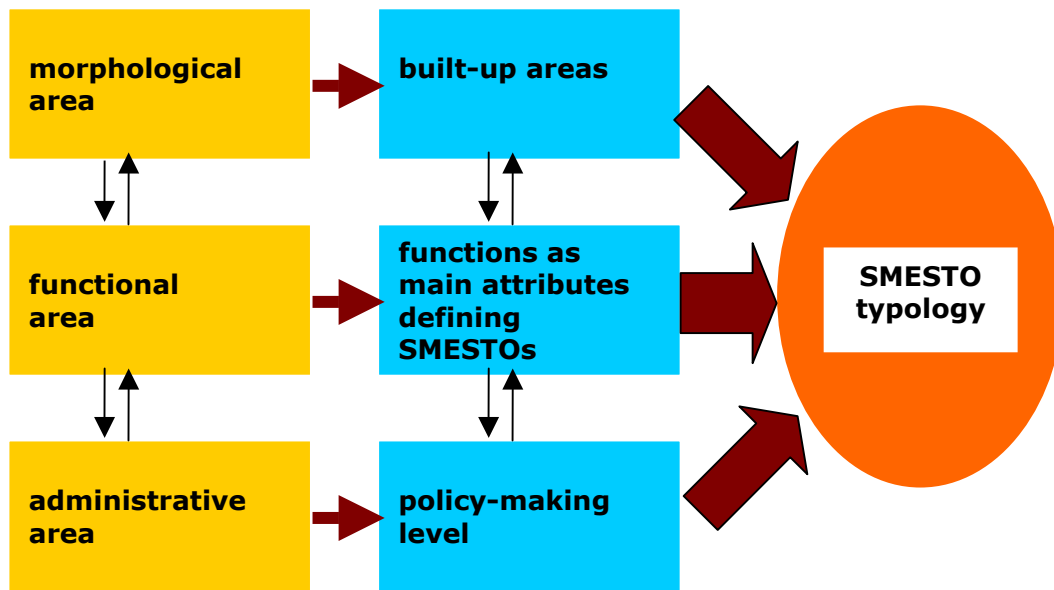
- Example 3: the decline of a SMESTOs’ resident population accompanied by a simultaneous enlargement of the surrounding urban settlements might indicate different ongoing processes, either negative or positive, depending on the specification of the factors in play: it might be positive, because the quality functions of the city core (high ranking service provision, for instance) might become stronger at the point that real estate market becomes too expensive for the traditional resident population, favouring the decentralisation of secondary services and population increase in the surrounding residential areas. Or it might be negative if the growth of the surrounding areas is negatively related to the de-qualification of the core-city functions (possibly due to public mismanagement, criminality etc.).

Combination of the indicators to a typology

All the previously reviewed aspects that constitute a SMESTO have to be subsumed for the final typology (see figure 21). The following approach is suggested:

- The primal determinant for the typology would be the functions that constitute a SMESTO. As explained, the size or the morphology of the SMESTO does not necessarily determine its standing within the territory. The degree of importance of a town’s functions will determine its main profile in dynamic terms and in terms of the place it will have in the hierarchy or in its inter-relations with the other urban structures.
- The combination of SMESTO’s economic bases (specialisation) and economic performance will indicate to which degree the town succeeds or fails. Thus central attention will be given to the substantive economic bases of the SMESTO together with its (possible) existing potential (labour market skill, location etc.). The success will indicate the SMESTOs’ dynamic and long term growth perspective.
- Peripherality and accessibility will be associated to the other criteria (functions) but these factors might not explain the decline or the dynamic of a town by itself; they need to be associated with other parameters such as level of service provision, loose institutional capacity, failed valorisation of environmental or natural resources etc.. When the geo-physical conditions exceed the possibility of creating conducive urban infrastructure and living quality in urban settlements, these aspects will dominate over the other aspects. These considerations have also policy implications, because facing extremely harsh conditions (as in the Nordic Countries), resources for investments in urban development/infrastructure might be shifted towards urban settlement development in other areas.

Figure 21 From SMESTOs' functions to SMESTOs' typology



From the weighted indicators mentioned above **four broad categories for a main typology of SMESTOs** can be identified in dynamic terms (relation between levels and rate of growth):

- (a) **Dynamic and growing SMESTOs:** where most of the proposed quantitative indicators are positively related.
- (b) **Declining SMESTOs:** where most of the proposed indicators are negatively related.
- (c) **Restructuring SMESTOs:** where several indicators show deterioration of functions but a process of up-grading of the functions is ongoing.
- (d) **Potential developing SMESTOs:** where new trends are emerging for different endowed resources (geo-physical, historical, location related, quality factors).

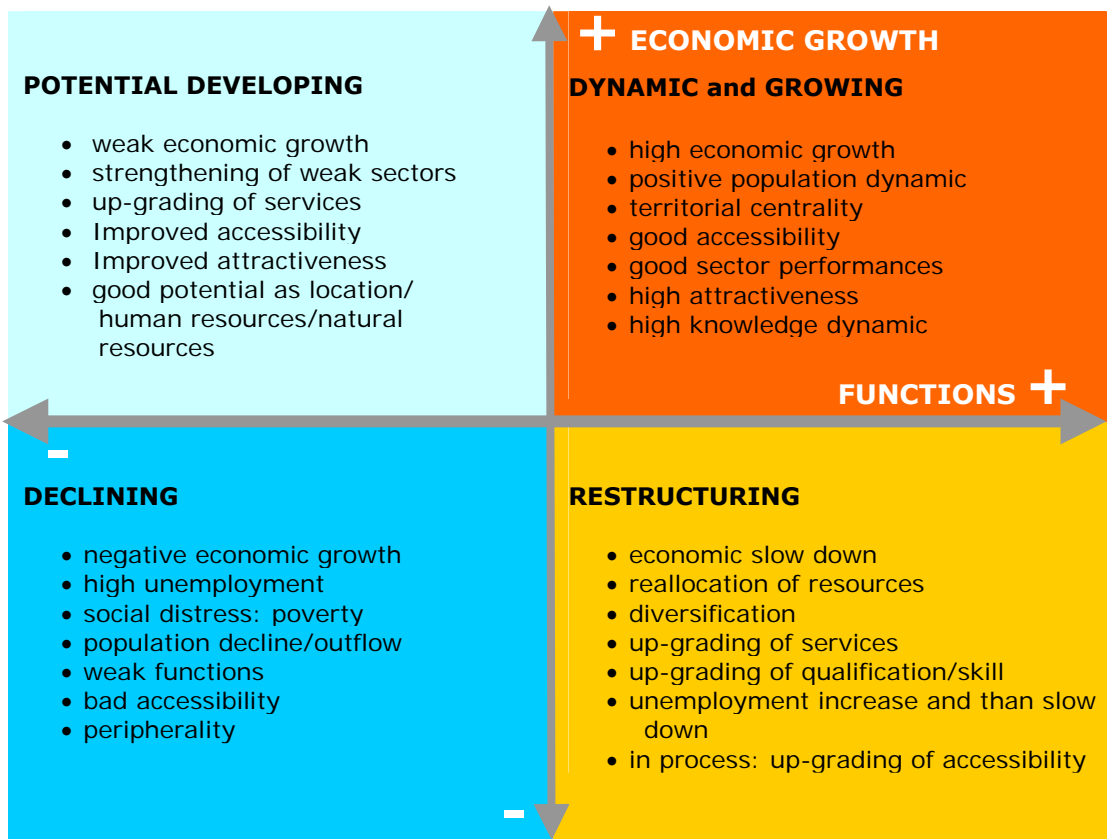
The follow-up would be a sub-typology of SMESTOs. Under each category the combination of the positions, relations and dominating functions etc. will be added making up the various sub-types of SMESTOs. As a matrix it could shape as in table 20.

Table 20 Example for a typology of SMESTO entities

TYOLOGY A-B-C-D	Positions	Relations	Functions	Aggregation
A Dynamic and growing	i centrality ii peripherality iii- island iv- mountain	1 individual 2 networked 3 agglomerated	by dominant function/specialisation/diversification x,y,z,...	for example: A,i,2,x... A,iv,3,z,y...
B Declining	ibid	ibid	ibid	for example: A,i,2,x... A,iv,3,z,y...
C Under restructuring	ibid	ibid	ibid	for example: A,i,2,x... A,iv,3,z,y...
D Potential developing	ibid	ibid	strengthening of functions on the base of natural/geophysical/labour... resources	for example: A,i,2,x... A,iv,3,z,y...

This potential SMESTO sub-typology is finally represented in figure 22. Each of the four main categories corresponds to some specific attributes; the two main indicators on which the graphic is built are on one side functions (as level of performances) and the other is the economic growth (e.g. as GDP per capita in PPP).

Figure 22 From SMESTOs' functions to SMESTOs' typology: dynamic trends, decline or growing potential for a possible typology of SMESTO entities



5 CONCLUSIONS AND RECOMMENDATIONS

The main purpose of the present study is to examine the feasibility and potential outcomes of a study of SMESTOs in Europe. The review of these aspects has led to the design of a conceptual framework, a preliminary data review and some methodological suggestions. It also allows us to formulate a tentative framework for policies oriented towards SMESTOs.

5.1 Further research needs

The analysis has shown the need for a careful conceptualisation of SMESTOs in order to capture the various dimensions of geographical analysis of the European territory and of policy design for more coherent spatial development. This leads to a conceptual framework, whose application however depends upon the data availability situation across Europe.

5.1.1 Further development of concepts

Two parallel approaches have been developed throughout this report. These approaches are in many ways complementary, and would need to be further developed jointly.

Urban centre-points

The analysis of the way in which centre-points such as continuous built-up areas structure the European territory helps uncovering geographical evidence which can guide policy making, for example transport infrastructure developments. Such an analysis could reveal structural characteristics of urban systems in each country, and thereby provide useful insights to understand differences in rural development trends, cluster dynamics or other spatially related economic and social evolutions.

We have however shown that the functional characterisation of each individual node is complex, as one cannot easily identify the factors of economic growth within a SMESTO's vicinity which are effectively mobilised for its development. The characterisation of nodes is therefore rather to be expressed in terms of potentials and limitations.

Statistical assessment of urban administrative units

The statistical analysis of administrative entities allows for relatively straightforward comparisons of social and economic weight, comparable to those developed in ESPON 1.1.1 for *Functional Urban Areas (FUAs)*. The main limitation of this analysis is that it does not provide geographical evidence, but only a characterisation of the territorial governance entities that have been established. This limitation is greater in the case of SMESTOs than it was in the case of FUAs of more than 50,000 inhabitants described by ESPON 1.1.1. This is because the smallest administrative entity will in some countries encompass multiple SMESTOs; an analysis based on

such entities would consequently eliminate a number of relevant urban centres. This was generally not the case for the FUAs analysis of ESPON 1.1.1, where the main problem was that the extent of the delimitations would vary.

Furthermore, because of the reduced size of SMESTOs, an analysis based on administrative entities will in many cases include both urban and rural areas. This implies that possible difference in development trends between neighbouring urban and rural areas are ignored and may lead to misleading conclusions; a stable population at a municipal scale may for example correspond to SMESTO experiencing strong in-migration from neighbouring rural areas.

Such information is valuable in spite of these limitations, insofar as governance entities are implementing territorial development policies. The analysis is complicated by the fact that different levels need to be taken into account, such as inter-municipal cooperation bodies, and that these levels can have variable prerogatives. An initial quantitative confrontation of results stemming from the analysis of urban centres described above and those emerging from a statistical assessment of basic administrative entities should therefore lead on to a qualitative assessment of the various other levels of urban governance that may have been implemented.

The quantitative confrontation of governance entities and urban structures can consist of a mere overlay of administrative boundaries with SMESTO centres identified as relevant and their potential influence areas. It can also lead to more complex assessments, comparing the spread of urban centres, major infrastructures and administrative boundaries (as demonstrated in maps 8 – 11).

A qualitative assessment of the levels of urban governance in place in various countries will have to take into account their respective political function, prerogatives and spatial boundaries, in order to assess to what extent they may contribute to a more coherent urban management and be susceptible of developing successful strategic actions in favour of SMESTOs.

Generally, one should furthermore be particularly careful when designing European maps with data stemming from urban administrative entities, insofar as these may easily be interpreted as reflecting spatial structures rather than institutional differences in the delimitation of these entities.

The analysis developed in the present report has shown that the conceptual difference between spatially **continuous data** (e.g. centre points of cities, travel times to specific functions, access to people within a certain travel time) and **discrete data** describing bounded geographical zones (e.g. population, unemployment rate, net migration) is of fundamental importance when one seeks to approach narrow scale phenomena such as SMESTOs.

SMESTO are geographical objects of study insofar as concentrated built-up areas structure the perception of space and orient spatial behaviour. It may be justified to accompany an analysis of SMESTOs with other types of centralities, for example commercial centres (extra-urban malls, theme parks), cultural spots (e.g. Stonehenge, Pompeii), transport hubs (e.g. extra-urban airports) and industrial centres. The complexity of the inter-relation between these different types of

centralities needs to be taken into account. One indeed cannot presume that “urban” is a frame within which other functions are organised; functions which are not oriented towards the general public (i.e. dependent upon population concentrations) can at the contrary be quite external to the SMESTO and develop independently from it. An understanding of how centralities structure the European territory therefore requires multiple of parallel approaches, in order to provide the basis for more coherent spatial development perspectives.

5.1.2 Issues related to data availability


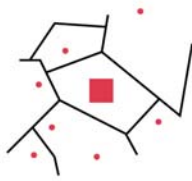
The two approaches described above are taking two different stands on the identification of SMESTO in Europe. The first approach considers towns as nodes that structure the European territory, while the second stresses the importance of towns in the governance system and the implementation of territorial development policies, thus identifying them in groups of local administrative units (primarily municipalities/NUTS 5). The implementation of both approaches is dependent on the availability of data. Data here does not necessarily mean quantitative indicators, but are more thought as the needed material for performing the two approaches.

As a first step for assessing the availability of data, a questionnaire was sent to different national experts in selected European countries. This method enabled to pinpoint the main obstacles potentially hindering data collection on SMESTO on a pan-European basis.

SMESTO as nodes structuring the territory

The spatial approach conceptualised towns as nodes in the territory. For doing so, a needed step is to be able to locate these points. The main input needed for performing this analysis is maps representing the **built-up areas** extent of the SMESTO (pictured as polygons). However, the central question here is not so much the characterisation of the built-up area as such, but to identify where it is located and to analyse what activities are to be found in and around it. The objective is therefore to identify and delimit the area that is within reach of the built-up area, for daily commuting, regular commercial exchanges or other types of social or economic relationships. For this purpose, the extent of the urban area can be of secondary importance, especially when it is of reduced size as is generally the case for SMESTO. The focus is rather on the identification of the urban centre. One can therefore envisage to replace the built-up area with a central point, with the help of a Geographical Information System (GIS).

Figure 23 Conceptual and methodological differences between the analysis of the spatial organisation of European cities and that of urban governance entities

Spatial organisation of European cities and towns	Urban governance entities in Europe
<p>Geographical approach: Identifying relevant nodes and analysing the way in which they structure the territory.</p>	<p>Geographical approach: Statistical analysis of administrative entities which comprise one or more urban units.</p>
	
<p>Potential output: Typology of spatial structures in European countries and regions,</p>	<p>Potential output: Typology of administrative entities which comprise one or more urban units.</p>
<p>Methodology / indicators:</p> <ul style="list-style-type: none"> - SMESTO endowment in European countries and regions, - territorial spread of SMESTOs, - distance between SMESTOs and major infrastructure 	<p>Methodology / indicators: Functional characterisation SWOT-analysis</p>
<p>Challenges:</p> <ul style="list-style-type: none"> - Which are the relevant criteria to identify centre-points? - Need to compile delimitation of built-up areas in Europe and detailed network models for accessibility calculations - Difficult to assess the functional importance of each node 	<p>Challenges:</p> <ul style="list-style-type: none"> - Identifying SMESTOs to administrative entities remains questionable, even in cases when these are defined according to functional criteria. - Administrative entities are not comparable from country to country. - Multiple levels may need to be taken into account: municipalities, cooperation entities, labour market areas...
<p>Expected result Description of spatial trends as a context for policy-making:</p>	<p>Expected result Description of governance entities as spatial contexts for policy making:</p>
<p>What differentiates urban networks and settlement patterns in different parts of Europe? How should this be reflected in policies?</p>	<p>To what extent are they adapted to current challenges? How could their efficiency be improved?</p>

This approach has been implemented by the project team for Norway, where the cartographic material is easily available. Map 7 in section 2.3.3 displays the extent of the built-up areas (in blue) and the constructed centre-points (black dots). This example shows that the approximation induced when replacing the polygon with a point is relatively modest for small settlements (i.e. SMESTOs), while it is quite significant for large cities such as the Oslo agglomeration (at the top of the map). As the present object of investigation is small and medium-sized settlements, replacing built-up areas with centre-points can be considered as a satisfactory methodology to construct a European map of SMESTO centre-points. Going a step further, the maps of the Austrian NUTS-3-region Klagenfurt – Villach (maps 8 – 11) used the Corine Land Cover 2000 satellite dataset do display morphological settlement units, merging units that are within a minimum distance of 200 m (United Nations recommendation, see chapter 2.1.2).

The questionnaire that was sent to the national experts showed that the availability of cartographic material related to geography or positioning of the urban areas varies. In the cases when such material is difficult to obtain, it may be conceivable to use proxies or 'substitutes' to the delimited built-up area for constructing the centre-points. A possible substitute can be the centroid of the local administrative units, but only in cases where their delimitation is derived from the definition of urban areas. The Baltic countries for example define urban and rural municipalities which give a relatively good approximation of where the SMESTOs are located.

Another important aspect for the characterisation of SMESTO is related to their proximity to specific **service infrastructure** (SGI, GSEI; see chapter 3.3.1), represented as points on the territory. Hospitals, universities or airports are essential facilities for the development of regions in Europe. If the access to such infrastructure is often translated into averaged indicators (number of hospital beds, number of students...) on a certain statistical level, this way of taking them into consideration does not reflect the actual accessibility from/to the settlements. Consequently, the project team proposes that these infrastructures should be represented as points, requiring information on their location (i.e. geographical X,Y coordinates). This would allow for a calculation of the potential accessibility to these types of infrastructure, for example by using the isochrones methodologies developed by ESPON 1.1.1. This method will enable to identify SMESTOs that are within or beyond the functional hinterland of such infrastructure. This type of analysis has already been performed in more regional contexts (Gløersen et al., 2005).

In the maps of the Austrian NUTS-3-region Klagenfurt – Villach (maps 8 – 11) a selection of these service utilities have been located and the costs⁶⁶ to reach these on the road network from each morphological settlement unit have been calculated. It could be shown that an identification of functional settlement units that fulfil certain centrality tasks – the SMESTOs – is possible, availability of the respective data (services in form of coordinates, detailed transport network) presumed.

⁶⁶ In the shape of the 'Cost Distance Indicator'; methodological explanation see annex A.3.

From the different contacts made by the project team, it seems that the purchase cost of certain material can be seen as an obstacle for data collection. Indeed, there are strong disparities within Europe, as data are easily and freely available in some countries, while they can be costly in others. The price is especially critical for the data related to the delimitation of the built-up areas. These data are available for free only in a few countries (Norway for instance). Generally the data purchase cost of several thousands Euros per country is to be expected (e.g. from EUR 5,000 to EUR 19,000 in Germany, depending on the geographical precision needed, and about EUR 1,300 in Finland for a single user licence, without the right to data dissemination within a network such as ESPON). The total amount for a study of SMESTOs in 29 or 30 countries can therefore be significant. An alternative would be the use of the Corine Land Cover 2000 dataset presented in section 2.3.2.

Finally, improved data on the transport infrastructures are an essential prerequisite for the analyses proposed above. Only detailed rail and road network models can allow for a narrow scale analysis of interaction potentials between small and medium-sized urban centres and to develop a more detailed understanding of the access to punctual infrastructure such as hospitals, airports and universities. The compilation detailed transport network models for the ESPON community is however an instrument with wide potential applications.

SMESTO and local governance entities

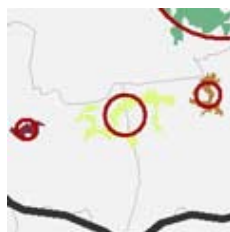
The second approach to the SMESTOs proposed in this report considers towns as an important point of reference in local and regional governance system. In this perspective, SMESTOs are assigned to the local administrative entities (municipalities – NUTS 5) to which they belong. This is particularly important when analysing the governance context of the SMESTO, and of the role of SMESTOS in the implementation of territorial development policies. This approach is consistent with the need to characterise the SMESTO, as suggested in the typology proposed in chapter 4. The data needed for this analysis consist of quantitative indicators collected at the same statistical level, presumably the lowest one, NUTS 5. However, in that regard, the issue of comparability is central.

First of all, the local statistical units are not always comparable from one country to another. For instance, in the Nordic Countries, the NUTS 5 areas are quite large and often comprise more than one town whereas in densely populated areas a couple of municipalities can form one morphological unity, as displayed in the parts extracted from the Klagenfurt – Villach maps in figure 24. Moreover, the socio-economic indicators are not always fully compatible in Europe, as the statistical methodologies differ from country to country. Also of importance and already pointed out in chapter 2.1.5, the years for the latest updates of socio-economic indicators vary significantly.

Figure 24 Three types of morphological-administrative relations (zoomed from map 8; legend see p. 76)



Three SMESTOs in one municipality (NUTS 5)



One SMESTO across the border of two municipalities



One SMESTO spreading over several municipalities

As a conclusion, the task of compiling the data for the whole of the ESPON space (29 countries) should be a strong focus of future research projects dealing with SMESTO, and should not be under-estimated in the budget, both in man-hour and money, as it will set up the stage for the rest of the analysis. It may not be possible to envisage all aspects of the SMESTO analyses outlined above in all ESPON countries, as some may neither be able to provide the fundamental data on urban central points, nor any reasonable proxies.

SMESTO and territorial development

The two conceptual approaches to the SMESTO developed above describe two parallel but complementary structures of the SMESTO. The complementarity between the two becomes evident in the light of territorial development policies.

Indeed, the spatial approach led to an improved understanding of the spatial structure of the territory, especially as regards the inter-linkages between the SMESTOs. This approach is essential for describing the territorial context of the SMESTOs, as sketched in chapter 2.2.2. The relative positioning of SMESTOs in the urban system enables to draw observations of its potential location advantages and disadvantages. Territorial development policies should consequently focus on how to improve the spatial structure, based on the spatial analysis. Improving the spatial structure would especially aim at a higher degree of connectivity between SMESTOs, but also assessing the spatial effects of locating specific infrastructure, such as hospitals, airports or universities, and their impact on the accessibility to services from the SMESTO. However, territorial development policies are to a large extent implemented by local governance entities, and thus strongly related to our second approach, the governance approach.

The governance approach, related to the local administrative units, enables to better understand the institutional reality of SMESTOs. This approach focuses on the municipality and its actors, both the decision-making bodies and the economic agents. Territorial policies are decided and implemented by the governance actors at the local level, but have spatial impacts beyond the administrative borders. Consequently, territorial policies should also address their spatial impacts both inside and outside the 'policy' boundaries. The complex interrelation between administrative boundaries and functional areas of different kinds is illustrated by Figure 25.

Figure 25 Overlay of administrative boundaries, SMESTO centre-points and functional urban areas of different kinds and spatial extents



Identifying the dynamics of the urban system

The previous distinctions focus on individual SMESTOs, and on the interaction between these. It is however also important to identify the urban systems formed by SMESTOs and larger urban entities in a regional, national or European context. An urban system can be defined from a physical point of view: as nodes in space with specific masses and distances. Seen from this point of view the urban system is quite static or changes only slowly on the long run. The masses e.g. measured as built-up areas or total population will of course change but only slowly over time. The distances measured in time have been changing due to new transport technologies or new infrastructures.

An urban system could also be defined from a functional point of view: as concentrations of urban functions, services or industries, which supply a specific hinterland or a market and where the individual nodes in the system have a hierarchical relation to each other. But modes of production in service production and manufacturing are dynamic which lead to increased concentration in some cases and to the opposite in others. During the last part of the 20th century therefore the vertical national urban hierarchies have been replaced by more complicated patterns:

"The cities of Europe are not tied up to national hierarchies but are part of multivarious networks with an infinite number of cities in different regions. With globalisation, the cities' relationships to each other and to regions have become complex and multifaceted." (Illeris, 2002)

Small and medium sizes town and cities therefore are not always at the bottom of the urban hierarchy in functional terms. Clusters exist in specialised industrial districts outside of large cities as well as inside them. Strong cultural traditions of entrepreneurship make some of them very competitive. International trade is therefore often more important for smaller towns, where the bulk of manufacturing industries are now located while metropolitan centres apart from serving themselves primarily produce service for their own countries.

A third way to define an urban system is from a governmental or administrative point of view where the system consists of administrative entities which in some cases could have a hierarchical relationship to each other and where the relationship between the entities is formal and informal power or the supply with public services. In other cases you could talk about a non hierarchical system where the relations could be co-operation between different entities. The organisation of public services has in periods been very dynamic where new services have been build up. During the 1970ies for example, SMESTOs benefited relatively more than big cities, while rural areas often lost their few services, shops and primary schools.

Based on these three ways of approaching urban systems, one can hypothesise that they are dynamic in more ways and should be understood and analysed with this in mind.

5.1.3 Next steps in view of an analysis of SMESTO

Based on the conceptual and methodological considerations developed above, one can envisage the following next steps in view of a pan-European study of SMESTOs:

- A complete review of the availability and cost of digital maps delimiting built-up area, of built-up area centre points or of possible proxies which would offer a reasonable alternative to these data sets.
- The identification of important infrastructures, such as hospitals, universities or airports, which may have a possible impact on SMESTOs development potentials if they have access to them; a first mapping of these infrastructures has already been produced as part of the DG REGIO Study of Mountain Regions and been provided to ESPON. These data would have to be reviewed, completed and updated in view of an analysis of SMESTOs.
- The compilation of a detailed ground transport network model, so as to be able to produce detailed local accessibility calculations and differentiate the positions of neighbouring SMESTOs within regional urban systems.
- The compilation of an updated NUTS 5 map of Europe, so as to identify the *a priori* lowest level of territorial governance in Europe and to compare it with the geographical positions of built-up area and SMESTO centres.
- The detailed review of local territorial governance levels in ESPON countries, and their respective competences, prerogatives and functions. This includes not only municipalities, but also for example inter-municipal cooperation bodies.
- A further review of data that can be available at NUTS 5 level in Europe. A NUTS 5 database has already been produced as part of the DG REGIO Study of Mountain Regions and been provided to ESPON. These data would have to be reviewed, completed and updated in view of an analysis of SMESTOs.

This review of next steps shows that the analysis of European SMESTOs is a challenging task. All aspects may not be possible to analyse in all ESPON countries. It therefore needs to be considered whether the statistical underperformance of some countries should lead the ESPON community to ignore certain aspects of the

SMESTO question, or whether analyses should be produced based on the high standards achieved in major parts of the ESPON space. One should in any case avoid the use of proxies leading to excessive distortions of the final results.

5.2 Framework for policies oriented towards SMESTOs

The typology suggested in chapter 4 has particularly stressed the strong relationships between the administrative entities and the spatial structure in the context of SMESTOs. This combination poses challenges that cannot be dealt with "classic" spatial development instruments and tools in an easy or simple way but demand new integrative instruments.

An example of new methods for territorial policies for SMESTO could be handled on an inter-municipal basis. Coalitions of municipalities could be seen as a relevant level, between the more rigid regional and municipal ones, to tackle spatial challenges using territorial policies. Such inter-municipal partnerships have already put in place in many European countries, for instance Austria, France, Germany. Inter-municipal partnerships enable to create a policy-making territory that is relevant to the spatial structure.

SMESTOs can be dealt with from an administrative and spatial perspective in national or supra national policies in different ways:

- as individual specific urban areas, often from an administrative perspective;
- as nodes in an urban system, often from a spatial perspective;
- or as SMESTOs in general both from a spatial and from an administrative perspective.

In the following section 5.2.1 a limited number of EU policy documents will be assessed with the efforts to enlighten how SMESTOs are addressed in EU policy. In section 5.2.2 some general policy implications will be developed according to the three above mentioned ways.

5.2.1 SMESTOs in selected EU-policy documents

At EU level SMESTOs are addressed in regional and territorial policy documents such as the **ESDP** from 1999, but also in the programming of the **Structural Funds, INTERREG IIIB** (2000 – 2006) and in the **3rd Cohesion Report** from 2003. In sectoral policies, e.g. **rural development policy** or in **environmental policy**, SMESTOs are not addressed very explicitly even though SMESTOs could play an important role in these policies.

The **ESDP** document mentions SMESTOs in its policy options on several occasions, especially in relation to the policy objective of "*balanced and polycentric urban system and a new urban-rural relationship*", and consequently highlights their importance in the European strategy for spatial development. The ESDP considers SMESTOs as relevant entities for structuring the European territory. In fact, the ESDP does not seem to have policy options for SMESTO as such (isolated entities), but as structuring poles in differentiated territorial context.

The territorial contexts can be summarized as threefold:

- SMESTOs structuring the hinterland of metropolitan areas;
- Networks of SMESTOs, developed around complementarity in functional terms and co-operation, in urbanised regions (economic diversification);
- SMESTOs in rural, less-densely populated or economically weak regions (public service provision, endogenous development, revitalisation of economic life).

First of all, the SMESTO are primarily emphasised regarding their potential for achieving a more balanced spatial structure of the European continent. In some specific territorial contexts, SMESTO form the hinterland of the metropolitan regions, and are thus needed for improving the relationship between the metropolis and its neighbouring territory. The SMESTOs are considered as a support for the development of metropolitan areas.

Second, the ESDP stresses the need to develop city-networks, fostering complementarity and co-operation between cities. This is particularly the case in the context of urbanised regions. The potential for economic development of the SMESTO lies on their ability to benefit from their interdependencies.

Finally, SMESTOs are most frequently mentioned in the ESDP in relation to rural regions, stressing their potential for structuring the development of regions that are either less-densely populated or economically weak. In that particular territorial context, SMESTOs are perceived as *'active regional centres revitalising rural regions in decline'*. SMESTO are thus considered as the focal point of less-favoured regions, especially when it comes to the *'development of industry and service-related activities, research and technology, tourism and recreation'*, and thus act as the main impulse for endogenous development. The issue of public service provision is also at the heart of the role of the SMESTOs in those regions.

If the ESDP is not explicitly calling for a 'SMESTO policy' it highlights the multi-facet nature of the SMESTO for structuring urbanised regions or less-favoured regions, but also as a 'natural' attribute to the metropolitan regions. Seen from the above developed three ways of viewing SMESTOs, the ESDP document are foremost addressed from a spatial perspective as nodes in an urban system – metropolitan or non-metropolitan – or as individual nodes in less populated rural areas.

The 1999 **Structural Fund** guidelines have a reference to the ESDP and do mention polycentric development, a new urban-rural relationship and parity of access to infrastructure and service. The 2003 revision does however not refer to any of them.

In the Community guidelines for the **INTERREG III Programme** (Strand B) for the years 2000-2006 the three above mentioned ESDP themes are referred and it is expected that the transnational co-operation should take account of the ESDP recommendations in general. The priorities of most INTERREG IIIB programmes are coherent with the ESDP, and the degree of the coherence between the ESDP and the implementation of INTERREG IIIB programmes were considered in the mid-term evaluations the programmes. Here it is stated that funding is provided to projects concerning polycentric urban systems or urban-rural relationship in lesser

degree than other ESDP themes as sustainable development and management of natural and cultural heritage.

Again, in the **EU regional policy** the SMESTOs are viewed foremost from a spatial point of view as nodes in a polycentric urban system.

One could also expect that SMESTOs could be an element in the **URBAN initiative**. In the URBAN Community Initiative urban areas in crises are addressed, particularly in terms of three axes: physical and environmental regeneration; social inclusion and entrepreneurship and employment. Especially the theme *'lack of entrepreneurship and employment'* could be relevant for SMESTOs outside metropolitan regions. But the main part of the URBAN programme is concerning cities with at least 100,000 inhabitants. In the so called URBAN II (2001 – 2006) towns and cities with 20,000 – 100,000 inhabitants are included in the programme. In specific cases towns with 10,000 inhabitants could be included. 98% of the URBAN II money goes for urban regeneration. Here in the URBAN programme the urban entities are foremost viewed from the individual city or town point of view. The themes that are addressed have an endogenous character.

In the **Third Report on Economic and Social Cohesion** from SMESTOs are addressed in the paragraph on territorial cohesion in Part 1. Here the role of SMESTOs as facilitators of economic diversification in rural areas far from urban centres is underlined.

In the **Common Agricultural Policy (CAP)** in the so called 'Pillar 2' on rural development agreed in 2005 for the period 2007 – 2013, urban-rural relations are mentioned as an element of the rural development policy. Under the so called 'Axis 3' themes like *'wider Rural Development i.e. renovation and development of villages, ensuring basic service and economic diversification'* are addressed. SMESTOs are not mentioned explicit in the Pillar 2 although they could play a crucial role as potential nodes in a spatial strategy especially in rural areas far from metropolitan regions.

The urban environment has been a specific EU-policy theme since 1990 where the **Green Paper on Urban Environment** was presented. The report proposed for the first time an overall approach and a series of actions at the European level, stressing the importance of developing co-operation and integration between policies.

A series of initiatives followed the report on EU-level:

The **EU Expert Group on the Urban Environment** was established in 1991 and the 'Sustainable Cities Project' was launched in 1993. In 1996, the Expert Group launched a major report **'European Sustainable Cities'**. The report provided a detailed framework for local action, identifying urban management, policy integration, eco-system thinking and co-operation and partnership as the basic principles for progressing towards sustainability in urban areas.

The 1997 Communication **'Towards an Urban Agenda in the European Union'** build on this report, focussing on economic, social and environmental challenges facing European towns and cities, and underlining the need for an urban

perspective in EU policies. This was followed by the 1998 Communication on **'Sustainable Urban development in the European Union: A Framework for Action'** with four interdependent policy aims:

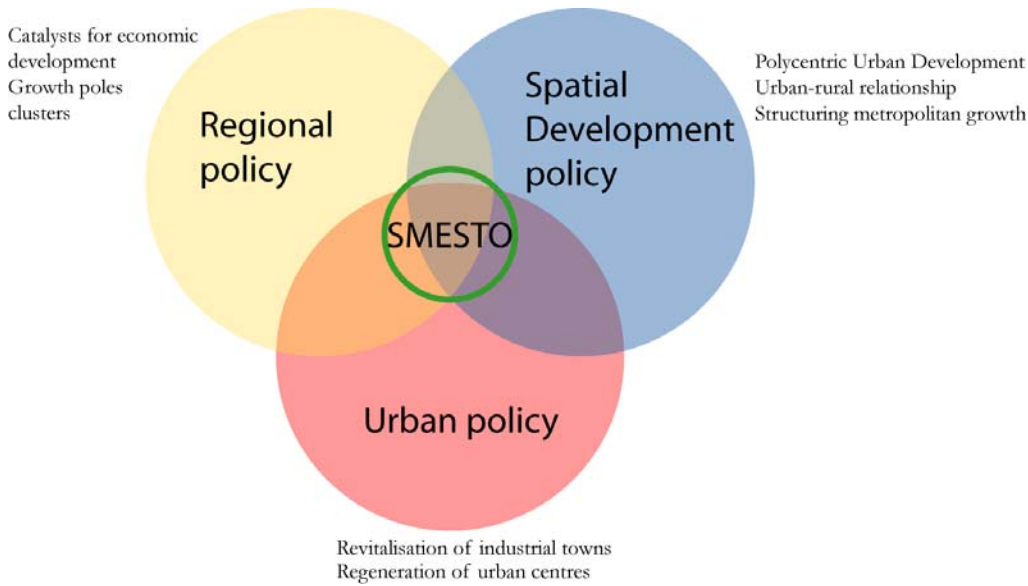
- Strengthening economic prosperity and employment in towns and cities;
- Promoting equality, social inclusion and regeneration in urban areas;
- Protecting and improving the urban environment towards local and global sustainability and
- Contributing towards good governance and local empowerment.

A series of policy objectives were addressed as of essential interest for SMESTOs in specific could be mentioned the objective of promoting resource efficient settlement patterns that minimise land-take and urban sprawl. In 2001, the EU Expert Group produced the report 'Towards a More Sustainable Urban Land Use' and in 2004 the report 'Towards a Thematic Strategy on the Urban Environment' was published. The focal point of the Expert Group's work is urban settlements in general and the specific challenges and potentials of SMESTOs are often addressed only in an implicit way. The governmental perspective is underlined where the specific integrated approach in which multiple policy themes are integrated according to one specific (urban) territory could inspire other policies.

5.2.2 Policy implications

Instead of talking about a specific 'SMESTO Policy' one could argue that SMESTOs should be addressed in an integrated way where several different sectoral policies are co-ordinated. Here it is important to be aware of the fact that the SMESTOs should be addressed from both a spatial and from a governmental point of view. As an integrated policy theme SMESTOs should first of all be addressed in regional policy, in spatial development policy and in urban policy; in regional and spatial development policy foremost as spatial entities, as nodes in an urban system or as individual nodes in less populated areas. In urban policy SMESTOs will often be viewed as individual entities and often from an endogenous point of view. In urban policy the governance or the administrative perspective will be stressed.

Figure 26 SMESTOs: a focal point of different EU policies



SMESTOs could also be addressed in a number of other sectoral policies e.g. in:

- Rural development policy; economic diversification, provision of basic services (e.g. Services of General Interest);
- Social policy; social cohesion, employment and economic reorganisation;
- Environmental policy; counteracting urban sprawl and the externalities of concentration of the urban growth in few an big cities, development of compact and sustainable urban entities;
- Transport policy; SMESTOs as transport nodes in metropolitan and rural regions.

Concerning these sectoral policies one could hypothesise that there could be an added value, seen from the individual sectoral perspective, if the SMESTOs were addressed in a clearer and more explicit way. Seen from a SMESTO perspective there would be an added value if these sectoral policies were integrated or at least co-ordinated. By considering the ESPON macro-meso-micro analytical scales, it can be concluded that SMESTOs have several potentials as elements in territorial development policy:

Macro

At macro level it can be stated that SMESTOs are having a potential as elements or themes in European Regional and Spatial Development Policy in relation to territorial cohesion and territorial development in general.

SMESTOs are important elements in a European polycentric urban development promoting territorial cohesion on the one hand and reinforcing the competitiveness of the individual region on the other hand.

But SMESTOs can also play a strategic role as individuals, when there are no possibilities of polycentric development.

SMESTOs in peripheral rural areas can play a crucial role in the attempt of diversifying the economic base of these areas and by ensuring a minimum level of service.

This however does not need to imply SMESTOs need to be the pivot of rural development. Current debates around 'rural development poles' indeed challenge the view according to which a 'pole' needs to be an urban centre. Peltre (2005) on the contrary argues that the 'rural development pole' is to be understood as an exclusively rural area with an integrated development strategy. This type of areas is to be developed on the basis of cooperation between rural local authorities, in consultation with surrounding towns. In a context of 'rural development poles', SMESTOs are in other words part of a polycentric type of local governance. This implies that rural areas are not merely to be considered as hinterlands of SMESTOs, but assert themselves as autonomous actors with their own agendas and strategies.

Meso

At meso level it can be concluded that SMESTOs could play an important role in spatial development policies as well: in many of the Member States there is a considerable growth pressure in the metropolitan regions often associated with urban sprawl, social segregation and traffic congestion as impacts in metropolitan regions and with depopulation, lack of services and economic decline as impacts in peripheral regions.

At national level SMESTOs can be used as tools in the efforts to counteract the polarisation of urban growth.

SMESTOs with good accessibility to national transport infrastructure or SMESTOs in attractive surroundings, coastal zones etc. are having specific possibilities in such strategies.

Micro

At micro level it can be concluded that SMESTOs will be viewed from an more endogenous perspective:

At regional and local level the SMESTOs offer good possibilities as living areas of high quality.

Living areas in a small scale in the SMESTOs can be an alternative to traditional suburban social segregated settlements and can attract all kinds of citizens. For SMESTOs it is possible to obtain a great variety of functions and in different land uses. The SMESTOs in that way can be an element in strategies to counteract social segregation.

PART THREE: ANNEXES

"run away, turn away, run away, turn away, run away"

Bronski Beat: "Smalltown Boy", 1984

A.1 Case study documentation

The case studies are presented in a separate volume (A.1) due to their extent. In this annex one can find case studies on the following towns:

Country	small town	medium town
Austria	Hallein	Salzburg
France	Saumur	Laval
Germany	Herdecke	Witten
Italy	Carpi	Ravenna
Poland	Mielec	Rzeszów
Spain	Vic	Lleida
Sweden	Sollefteå	Örnsköldsvik

A.2 Questionnaires

The following questionnaires were received:

- *Questionnaire 1: France*
- *Questionnaire 2: Spain*
- *Questionnaire 3: Austria*
- *Questionnaire 4: Italy*
- *Questionnaire 5: Hungary*
- *Questionnaire 6: Germany*
- *Questionnaire 7: Greece*
- *Questionnaire 8: Finland*
- *Questionnaire 9: Poland*
- *Questionnaire 10: Cyprus*

Questionnaire template to the experts for WP1

(1) Definition of the cities and towns

- How are the cities and towns defined and delimited in your country?
 - In morphological terms?
(For example: a settlement area of more than 2000 inhabitants with a maximum distance between the settlements of 200 m)
 - In **functional** terms?
(For example: on the basis of commuting patterns?)
 - In **administrative** terms?
(For instance: the definition of a municipality as urban or rural, on a purely legal basis or with predetermined quantitative criteria on selected issues)

Please feel free to make comments or to develop the points that haven't been mentioned and that you think are of importance for the definition of cities.

- Suburban areas/urban influence areas:
 - Have suburban or urban influence areas been delimited in your country?
 - What are the criteria for this delimitation?
(For instance: contiguity of the settlements around a city node or belonging to the commuting area)
 - According to the definition in your country, can a city (as defined earlier) be part of the suburban area or influence area of another city?

(2) Definition of the Small and Medium-sized towns (SMESTO)

After having defined the cities and towns, the objective of the following questions is to provide a definition of the SMESTO in your national context.

- Having in mind the definition of the cities and towns above, what are the criteria used when defining SMESTO in your country?
(For instance: in Sweden, a definition of a medium-sized town is a municipality between 20,000 and 50,000 inhabitants, with more than 70% of the total population living in the urban area, as well as less than 40% of the inhabitants employed in the manufacturing sector)
- How are the functional areas defined in the case of the SMESTO?
- How has the definition of the SMESTO been used in terms of concrete policies in your country?

(3) Availability of data concerning the SMESTOs

In our project, we are interested in measuring the availability of data concerning the SMESTOs in Europe.

We wish to remind you that the purpose of these questions is **not to actually collect the data sets, but to assess their availability and to gather information on them.**

We have defined 4 families of indicators that are covering the most relevant issues concerning the SMESTO: Demography, Geography, Economy and Infrastructure.

The objective for us is to have a better idea of the kind of indicators that are available in each country, making the comparison of the SMESTOs on a European scale possible.

G_01 and G_03 correspond to GIS maps. They should preferably be in formats such as ArcView (.shp), ArcInfo export (.e00) or ArcGIS. Other GIS formats (e.g. Mapinfo) also acceptable. Indicator G_02 can be a list with latitudes and longitudes of SMESTO centres in any digital format, or a GIS file in any of the previously mentioned formats.

Here is the list of indicators:

Geography and Positioning

- Delimitation of the urban areas G_01
- Positioning of the urban centres G_02
- Delimitation of the functional areas G_03

Demography

- Total population D_01
- Number of birth D_02a
- Number of death D_02b
- Number of in-migrants D_03a
- Number of out-migrants D_03b

Economy

- Total number of unemployed persons E_01
- Total number of persons in employment E_02
- Total number of persons working in the primary sector (Agriculture, Fishery, Forestry, Mining and Quarrying, exploitation of natural resources) E_03
- Total number of persons working in the services sector E_04
- Total number of persons working in manufacturing sector E_05
- Total number of persons working in the business services sector E_06
- Number of city-dwellers working outside the city limits (out-commuting) E_07a
- Number of persons working in the city but living outside its limits (in-commuting) E_07b

Infrastructure (in the functional area of the SMESTOs)

- List of secondary education establishments I_01

This list of indicators is non-exhaustive and we would appreciate if you could give us more information on possible other indicators that could be useful when studying the SMESTO. You can use the following tables as template for the new indicators.

Country:	Indicator code: <i>G_01</i>	Category: <i>Geography</i>
Indicator definition: <i>Delimitation of the urban areas (Extent of settlement areas – GIS map with “polygon data”)</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:		
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Example of representation of urban areas

Here, the settlement areas are displayed in orange colour.

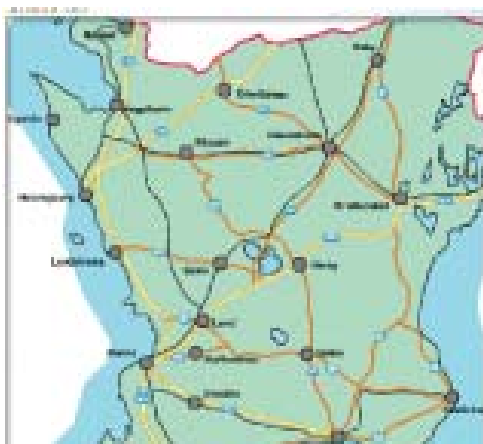


Source: SSB

Country:	Indicator code: <i>G_02</i>	Category: <i>Geography</i>
Indicator definition: <i>Positioning of the urban centres (GIS file with points, or list of latitudes and longitudes)</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:		
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

For example, positioning of the cities of Scania, Sweden

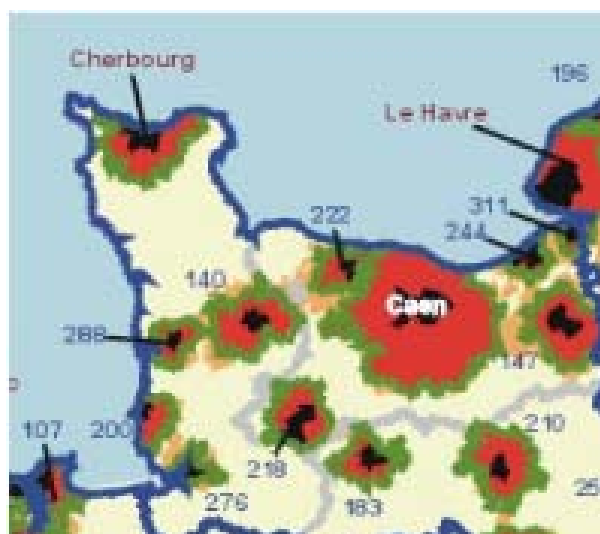
Here, the cities are displayed as grey dots.



Source: Kartbolaget AB

Country:	Indicator code: <i>G_03</i>	Category: <i>Geography</i>
Indicator definition: <i>Delimitation of the functional areas (GIS map with "polygon data")</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:		
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Example of representation of functional areas:



Source: INSEE

Country:	Indicator code: <i>D_01</i>	Category: <i>Demography</i>
Indicator definition: <i>Total population</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left) Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>D_02a</i>	Category: <i>Demography</i>
Indicator definition: <i>Number of birth</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available:	Historical data:	
2004 <input type="checkbox"/> yes <input type="checkbox"/> no	1999 <input type="checkbox"/> yes <input type="checkbox"/> no	
2003 <input type="checkbox"/> yes <input type="checkbox"/> no	1998 <input type="checkbox"/> yes <input type="checkbox"/> no	
2002 <input type="checkbox"/> yes <input type="checkbox"/> no	1997 <input type="checkbox"/> yes <input type="checkbox"/> no	
2001 <input type="checkbox"/> yes <input type="checkbox"/> no	1996 <input type="checkbox"/> yes <input type="checkbox"/> no	
2000 <input type="checkbox"/> yes <input type="checkbox"/> no	1995 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1994 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1993 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1992 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1991 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1990 <input type="checkbox"/> yes <input type="checkbox"/> no	
Comments:		
<i>xxx</i>		
Other contact persons/institutions:		
<i>xxx</i>		

Country:	Indicator code: <i>D_02b</i>	Category: <i>Demography</i>
Indicator definition: <i>Number of death</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available:	Historical data:	
2004 <input type="checkbox"/> yes <input type="checkbox"/> no	1999 <input type="checkbox"/> yes <input type="checkbox"/> no	
2003 <input type="checkbox"/> yes <input type="checkbox"/> no	1998 <input type="checkbox"/> yes <input type="checkbox"/> no	
2002 <input type="checkbox"/> yes <input type="checkbox"/> no	1997 <input type="checkbox"/> yes <input type="checkbox"/> no	
2001 <input type="checkbox"/> yes <input type="checkbox"/> no	1996 <input type="checkbox"/> yes <input type="checkbox"/> no	
2000 <input type="checkbox"/> yes <input type="checkbox"/> no	1995 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1994 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1993 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1992 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1991 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1990 <input type="checkbox"/> yes <input type="checkbox"/> no	
Comments:		
<i>xxx</i>		
Other contact persons/institutions:		
<i>xxx</i>		

Country:	Indicator code: <i>D_03a</i>	Category: <i>Demography</i>
Indicator definition: <i>Number of in-migrants</i> <i>Sum of foreign and domestic in-migrants, independently of origin</i>		
Description of the data: <i>xxx</i>		
If necessary, please specify the type of in-migrant not taken into account: <input type="checkbox"/> foreign <input type="checkbox"/> domestic		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available:	Historical data:	
2004 <input type="checkbox"/> yes <input type="checkbox"/> no	1999 <input type="checkbox"/> yes <input type="checkbox"/> no	
2003 <input type="checkbox"/> yes <input type="checkbox"/> no	1998 <input type="checkbox"/> yes <input type="checkbox"/> no	
2002 <input type="checkbox"/> yes <input type="checkbox"/> no	1997 <input type="checkbox"/> yes <input type="checkbox"/> no	
2001 <input type="checkbox"/> yes <input type="checkbox"/> no	1996 <input type="checkbox"/> yes <input type="checkbox"/> no	
2000 <input type="checkbox"/> yes <input type="checkbox"/> no	1995 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1994 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1993 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1992 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1991 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1990 <input type="checkbox"/> yes <input type="checkbox"/> no	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>D_03b</i>	Category: <i>Demography</i>
Indicator definition: <i>Number of out-migrants</i> <i>Sum of foreign and domestic out-migrants, independently of destination</i>		
Description of the data: <i>xxx</i>		
If necessary, please specify the type of out-migrant not taken into account: <input type="checkbox"/> foreign <input type="checkbox"/> domestic		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available:	Historical data:	
2004 <input type="checkbox"/> yes <input type="checkbox"/> no	1999 <input type="checkbox"/> yes <input type="checkbox"/> no	
2003 <input type="checkbox"/> yes <input type="checkbox"/> no	1998 <input type="checkbox"/> yes <input type="checkbox"/> no	
2002 <input type="checkbox"/> yes <input type="checkbox"/> no	1997 <input type="checkbox"/> yes <input type="checkbox"/> no	
2001 <input type="checkbox"/> yes <input type="checkbox"/> no	1996 <input type="checkbox"/> yes <input type="checkbox"/> no	
2000 <input type="checkbox"/> yes <input type="checkbox"/> no	1995 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1994 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1993 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1992 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1991 <input type="checkbox"/> yes <input type="checkbox"/> no	
	1990 <input type="checkbox"/> yes <input type="checkbox"/> no	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>E_01</i>	Category: <i>Economy</i>
Indicator definition: <i>Total number of unemployed persons</i>		
Description of the data: <i>xxx</i>		
Please specify if the figures have been adjusted to labour force surveys figures: <input type="checkbox"/> adjusted <input type="checkbox"/> not adjusted		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left) Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>E_02</i>	Category: <i>Economy</i>
Indicator definition: <i>Number of persons in employment (Sum of self-employed and employed persons)</i>		
Description of the data: <i>xxx</i>		
If necessary, please specify the type workers NOT included: <input type="checkbox"/> wage earner <input type="checkbox"/> independent and self-employed persons <input type="checkbox"/> other:		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left)	
Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>E_03</i>	Category: <i>Economy</i>
Indicator definition: <i>Total number of persons working in the primary sector (Agriculture, Fishery, Forestry, Mining and Quarrying, exploitation of natural resources) (Sum of self-employed and employed persons)</i>		
Description of the data: <i>xxx</i>		
If necessary, please specify the type of activities are NOT taken into account in these data sets: <input type="checkbox"/> Agriculture <input type="checkbox"/> Fishery <input type="checkbox"/> Forestry <input type="checkbox"/> Mining and Quarrying <input type="checkbox"/> Exploitation of other natural resources <input type="checkbox"/> Other <input type="checkbox"/> All are included		
If necessary, please specify the type workers NOT included: <input type="checkbox"/> wage earner <input type="checkbox"/> independent and self-employed persons <input type="checkbox"/> other:		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left)	
Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>E_04</i>	Category: <i>Economy</i>
Indicator definition: <i>Total number of persons working in the services sector (Sum of self-employed and employed persons)</i>		
Description of the data: <i>xxx</i>		
If necessary, please specify the type workers NOT included: <input type="checkbox"/> wage earner <input type="checkbox"/> independent and self-employed persons <input type="checkbox"/> other:		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left)	
Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>E_05</i>	Category: <i>Economy</i>
Indicator definition: <i>Total number of persons working in the manufacturing sector (Sum of self-employed and employed persons)</i>		
Description of the data: <i>xxx</i>		
If necessary, please specify the type workers NOT included: <input type="checkbox"/> wage earner <input type="checkbox"/> independent and self-employed persons <input type="checkbox"/> other:		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left)	
Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>E_06</i>	Category: <i>Economy</i>
Indicator definition: <i>Total number of persons working in the business services activity (Sum of self-employed and employed persons)</i>		
Description of the data: <i>xxx</i>		
If necessary, please specify the type workers NOT included: <input type="checkbox"/> wage earner <input type="checkbox"/> independent and self-employed persons <input type="checkbox"/> other:		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left)	
Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	Please specify what part of the year the data refers to: <input type="checkbox"/> Beginning of the year <input type="checkbox"/> End of the year <input type="checkbox"/> Yearly average	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>E_07a</i>	Category: <i>Economy</i>
Indicator definition: <i>Number of city-dwellers working outside the city limits (out-commuting)</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left)	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>E_07b</i>	Category: <i>Economy</i>
Indicator definition: <i>Number of persons working inside the city but living outside its limits (in-commuting)</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:	Historical data: 1993 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year: (if possible, 10 years before year indicated to the left)	
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

Country:	Indicator code: <i>I_01</i>	Category: <i>Infrastructure</i>
Indicator definition: <i>Number of secondary education establishments</i>		
Description of the data: <i>xxx</i>		
Data source(s): <i>xxx</i>		
Original data format(s): <i>xxx</i>		Price: <i>xxx</i>
Overall degree of confidence, reliability: <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high		
Year available: 2002 <input type="checkbox"/> yes <input type="checkbox"/> no If not, closest available year:		
Comments: <i>xxx</i>		
Other contact persons/institutions: <i>xxx</i>		

(4) Further contacts

This questionnaire is the first step for our gathering of information. We would appreciate if you could give us more information concerning institutions (and persons) that could be of assistance for us if we want or need more information about the definition of the Small and Medium-sized towns or the data availability.

Complete name
Name of the Institution
Address
Phone number
E-mail

Complete name
Name of the Institution
Address
Phone number
E-mail

Complete name
Name of the Institution
Address
Phone number
E-mail

Complete name
Name of the Institution
Address
Phone number
E-mail

Complete name
Name of the Institution
Address
Phone number
E-mail

Complete name
Name of the Institution
Address
Phone number
E-mail

Thank you for your co-operation!!!

A.3 The Methodology of the Cost Distance Algorithm

This method was used to calculate the GIS-based Cost Distance Indicator of the Austrian NUTS-3-region "Klagenfurt – Villach" SMESTOs presented in maps 8-11 in chapter 2.3.5. Source: <http://webhelp.esri.com/>.

The Cost functions are similar to Euclidean functions, but instead of calculating the actual distance from one point to another, the Cost functions determine the shortest weighted distance (or accumulated travel cost) from each cell to the nearest cell in the set of source cells. The weighted distance functions apply distance not in geographic units but in cost units.

All weighted-distance functions require a source raster and a cost raster. A source raster can contain single or multiple zones, which may or may not be connected. All cells that have a value (including 0) are processed as source cells. All nonsource cells need to be assigned NoData in the source raster.

The Cost Distance function creates an output raster in which each cell is assigned the accumulative cost to the closest source cell. The algorithm utilizes the node/link cell representation. In the node/link representation, each center of a cell is considered a node and each node is connected by links to its adjacent nodes.

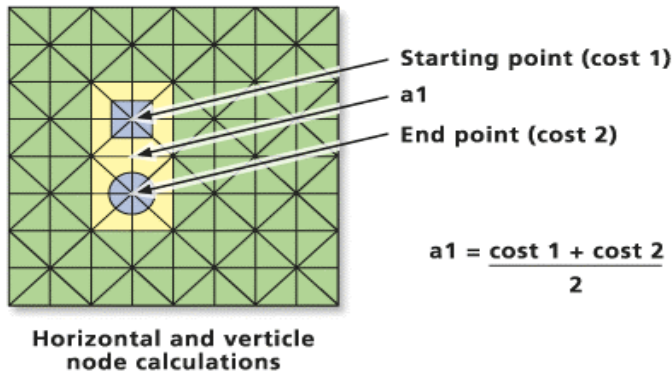
Every link has an impedance associated with it. The impedance is derived from the costs associated with the cells at each end of the link (from the cost surface) and from the direction of movement. The cost assigned to each cell represents the cost per unit distance for moving through the cell. Thus, each cell is multiplied by the cell resolution, while also compensating for diagonal movement, to obtain the total cost of passing through a cell. To calculate the cost to travel through each cell, the following formula is used:

*costpercell = cost assigned to the cell * the cell resolution*

If moving from a cell to one of its four directly connected neighbours, the cost to move across the links to the neighbouring node is 1 times cell 1, plus cell 2, divided by 2.

$$a1 = (cost1 + cost2)/2$$

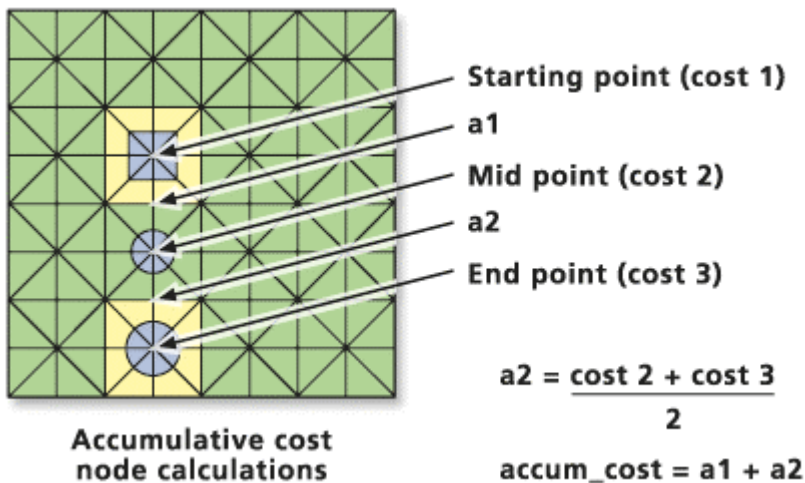
where cost1 is the cost of cell 1, cost2 is the cost of cell 2, and a1 is the total cost of the link from cell 1 to cell 2.



The accumulative cost is determined by the following formula:

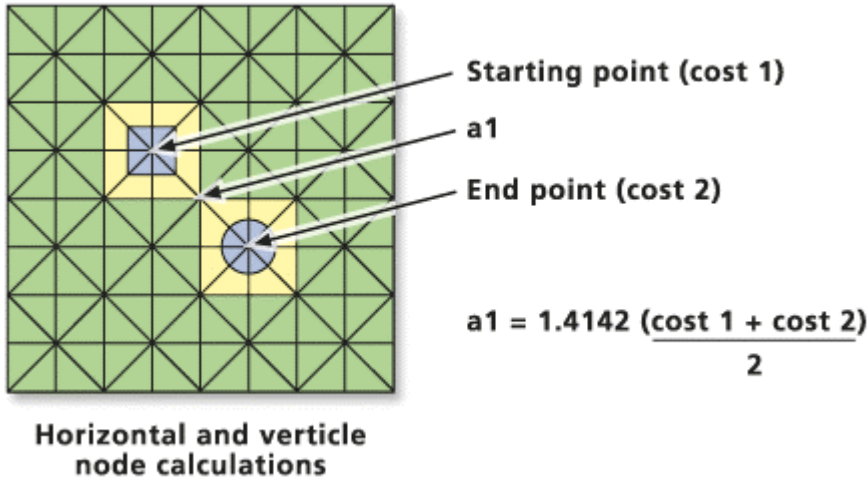
$$accum_cost = a1 + (cost2 + cost3)/2$$

where cost2 is the cost of cell 2, cost3 is the cost of cell 3, and accum_cost is the accumulative cost to move into cell 3 from cell 1. a2 is the cost of moving from cell 2 to 3.



If the movement is diagonal, the cost to travel over the link is 1.414214 (or the square root of 2) times the cost of cell 1 plus the cost of cell 2, divided by 2.

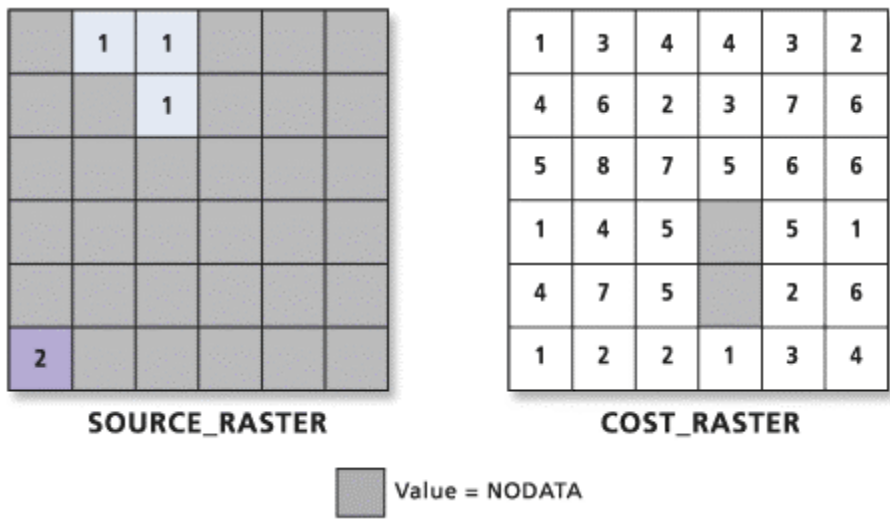
$$a1 = 1.414214 (cost1 + cost2)/2$$



But when determining the accumulative cost for diagonal movement, the following formula must be used.

$$accum_cost = a1 + 1.414214(cost2 + cost3)/2$$

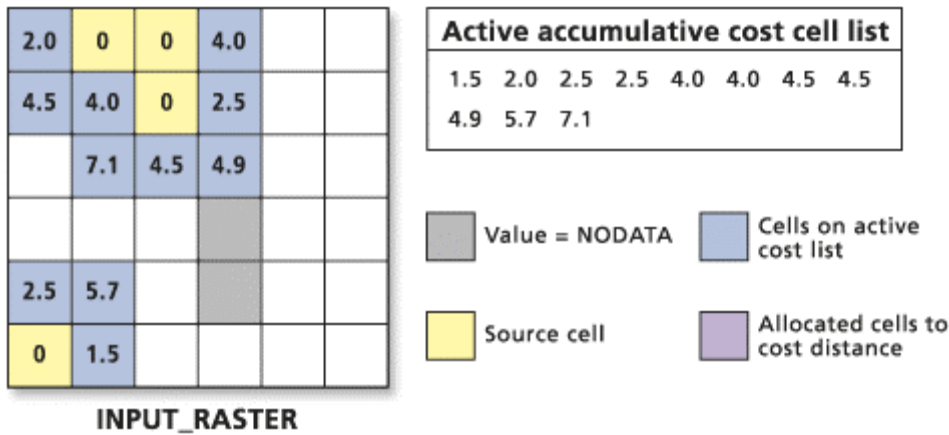
Creating an accumulative cost-distance raster using graph theory can be viewed as an attempt to identify the lowest cost cell and adding it to an output list. It is an iterative process that begins with the source cells. The goal of each cell is to be assigned quickly to the output cost-distance raster.



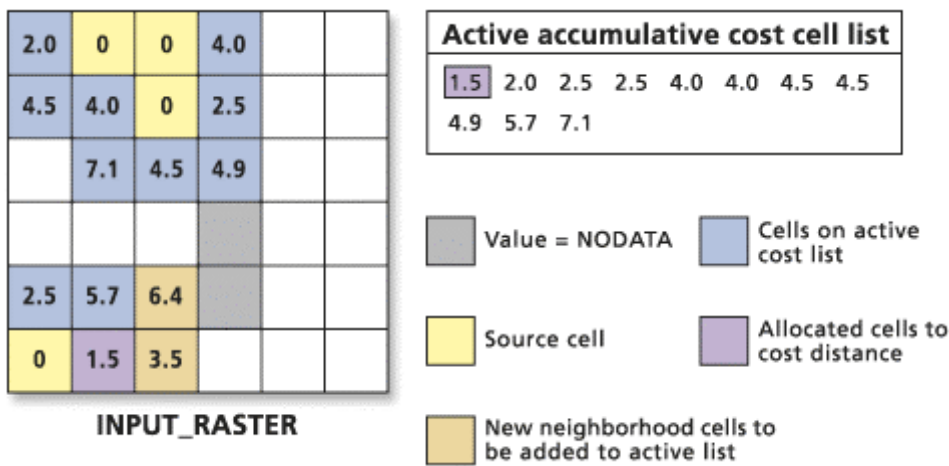
In the first iteration, the source cells are identified and assigned to zero since there is no accumulative cost to return to themselves. Next, all the source cell's neighbours are activated, and a cost is assigned to the links between the source cell nodes and the neighbourhood cell's nodes using the above accumulative cost

formulas. Each of these neighbourhood cells can now reach a source; consequently, they can be chosen or assigned to the output accumulative cost raster. To be assigned to the output raster, a cell must have the next least-cost path to a source.

The accumulative cost values are arranged in a list from the lowest accumulative cost to the highest.

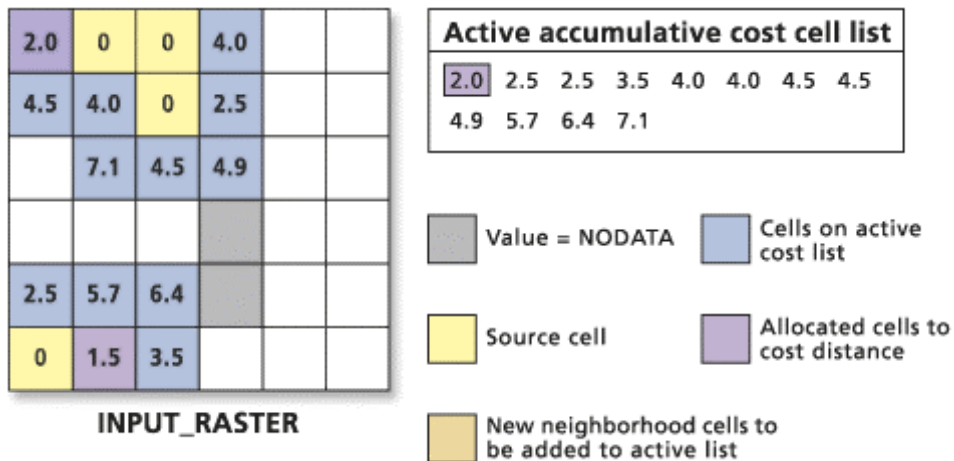


The lowest cost cell is chosen from the active accumulative cost cell list, and the value for that cell location is assigned to the output cost-distance raster. The list of active cells expands to include the neighbours of the chosen cell, because those cells now have a way to reach a source. Only those cells that can possibly reach a source can be active in the list. The cost to move into these cells is calculated using the accumulative cost formulas.

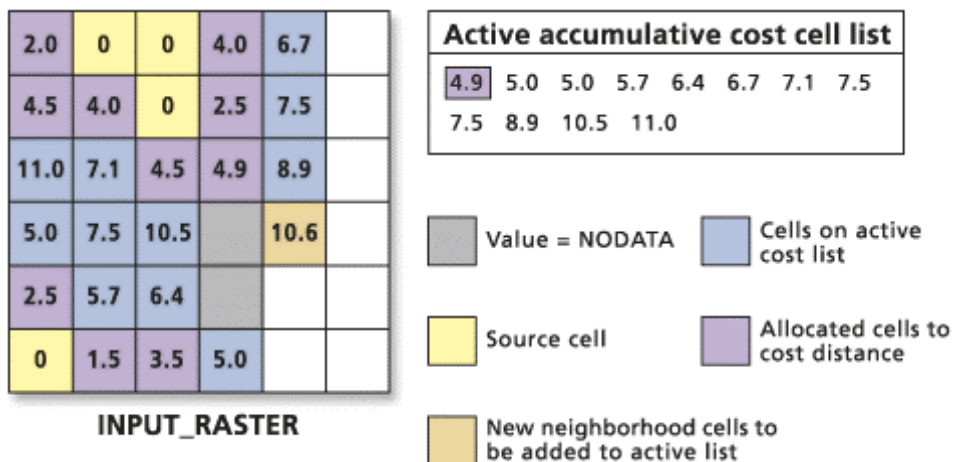


Again, the active cell on the list with the lowest cost is chosen, the neighbourhood is expanded, the new costs are calculated, and these new cost cells are added to the active list.

Source cells do not have to be connected. All disconnected sources contribute equally to the active list. Only the cell with the lowest accumulative cost is chosen and expanded, regardless of the source to which it will be allocated.



This allocation process continues. Furthermore, cells on the active list are updated if a new, cheaper route is created by the addition of new cell locations to the output raster.








This updating can occur with the advent of new paths for cells on the active list as more cells are allocated to the output raster. When the cell with the lowest value on the active accumulative cost list is allocated to the output raster, all the accumulative costs are calculated. These costs are also calculated for the neighbouring cells of the newly assigned output cell, even if the neighbouring cells are on the active list through another cell. If the new accumulative cost for the locations on the active list is greater than the one the cells currently have, the value is ignored. If the accumulative cost is less, then the old accumulative cost for the location is replaced on the active list with the new value. That cell, which has discovered a cheaper and more desirable path to a source, then moves up on the active chosen list. In the example below, the cell location at row 3, column 1 (highlighted by the box) had an accumulative cost of 11.0 when it was put on the active list to reach the source at the top of the raster. But because the lower source expanded to this location, the cell had access to a cheaper accumulative cost path to reach a source. The value for the location was updated on the active list and allocated to the output earlier, because of this lower accumulative cost.

2.0	0	0	4.0	6.7	
4.5	4.0	0	2.5	7.5	
8.0	7.1	4.5	4.9	8.9	
5.0	7.5	10.5		10.6	
2.5	5.7	6.4		7.1	
0	1.5	5.5	5.0	7.0	

INPUT_RASTER

Active accumulative cost cell list						
5.0	5.0	5.7	6.4	6.7	7.1	7.5
7.5	8.9	10.5	10.6	11.0		






-  Value = NODATA
-  Cells on active cost list
-  Source cell
-  Allocated cells to cost distance
-  New neighborhood cells to be added to active list

If there are multiple zones or disconnected sets of source cells on the input source raster, the growing process continues and allocates the cheapest cost cell from the active list, regardless of which source it is from. When the growth fronts meet, the least-cost path back to the source proceeds until all eligible cells have received a cost value.

2.0	0	0	4.0	6.7	9.2
4.5	4.0	0	2.5	7.5	13.1
8.0	7.1	4.5	4.9	8.9	
5.0	7.5	10.5		10.6	9.2
2.5	5.7	6.4		7.1	11.1
0	1.5	5.5	5.0	7.0	10.5

INPUT_RASTER






Active accumulative cost cell list						
7.1	7.1	7.5	7.5	8.0	8.9	9.2
10.5	10.5	10.6	11.0	11.1		

-  Value = NODATA
-  Cells on active cost list
-  Source cell
-  Allocated cells to cost distance
-  New neighborhood cells to be added to active list

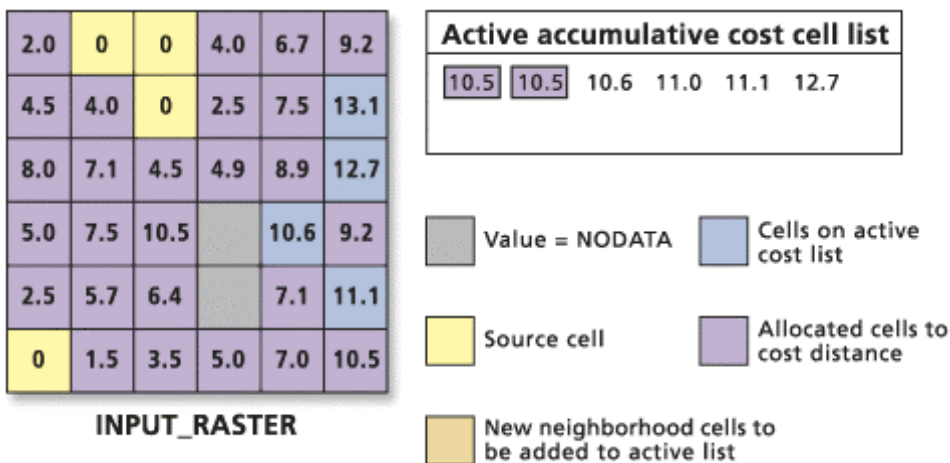
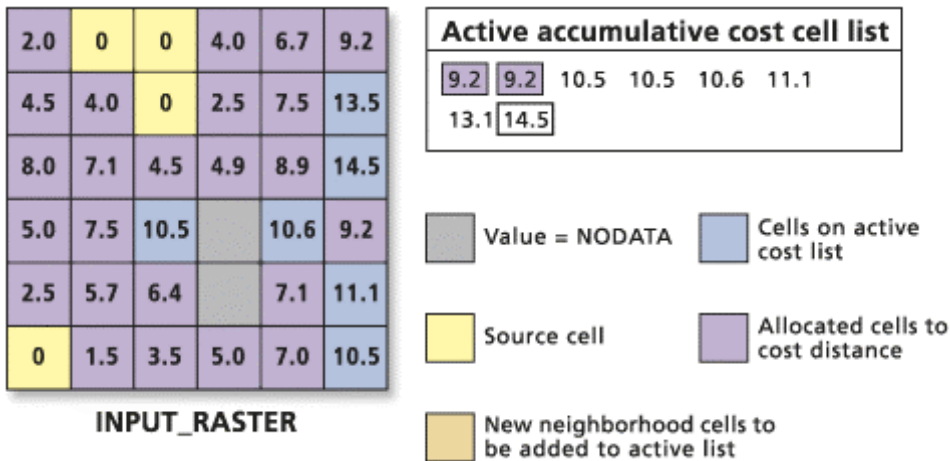
2.0	0	0	4.0	6.7	9.2
4.5	4.0	0	2.5	7.5	13.1
8.0	7.1	4.5	4.9	8.9	14.5
5.0	7.5	10.5		10.6	9.2
2.5	5.7	6.4		7.1	11.1
0	1.5	3.5	5.0	7.0	10.5

INPUT_RASTER

Active accumulative cost cell list						
7.5	7.5	8.0	8.9	9.2	9.2	
10.5	10.5	10.6	11.0	11.1		

-  Value = NODATA
-  Cells on active cost list
-  Source cell
-  Allocated cells to cost distance
-  New neighborhood cells to be added to active list

It is conceivable that when the growing patterns meet, cells from one growth pattern will discover that they can reach a source cell in another set or growth pattern more cheaply; if so, they will be reassigned to the new source. This behaviour was witnessed by the cell at row 3, column 1 earlier, but is also exemplified below by the cell located at row 3, column 6.



When all cells have been chosen from the active list, the result is the accumulative cost or weighted-distance raster. The procedure used ensures that the lowest accumulative cost is guaranteed for each cell. This process continues for all cells until the edge of the raster is encountered, the boundary of the window is found, or the maximum distance is reached.

No travel is allowed through cells containing NoData values. The least accumulative cost for cells on the back side of a group of NoData cells is determined by the cost to travel around these locations. If a cell location is assigned NoData on the input cost raster, then NoData will be assigned to the cell location on the cost distance output raster.

2.0	0	0	4.0	6.7	9.2
4.5	4.0	0	2.5	7.5	13.5
8.0	7.1	4.5	4.9	8.9	14.5
5.0	7.5	10.5		10.6	9.2
2.5	5.7	6.4		7.1	11.1
0	1.5	3.5	5.0	7.0	10.5

Cost distance output raster

6	7	8
5	0	1
4	3	2

Back-link positions

The cost distance raster identifies the accumulative cost for each cell to return to the closest cell in the set of source cells. It does not show which source cell to return to or how to get there. The cost back link returns a raster with a value range from 0 to 8 that can be used to reconstruct the route to the source. Each value (0 through 8) identifies which neighbouring cell to move into to get back to the source.

If the cell is assigned 5 as part of the least-cost path to a source, the path should move to the left neighbouring cell. If that cell has 7, the path should then move due north.

Cost allocation produces a raster similar to the Euclidean allocation function; like the Euclidean function, the raster identifies which cells will be allocated to which source, but unlike the Euclidean function, it does so on the basis of the lowest accumulative cost to reach a source. Once the accumulative cost and back link rasters are created, least-cost path routes can be derived from any designated destination cell or zones. The Cost Path function retraces the destination cells through the back link raster to a source.

A.4 ESPON performance indicators achieved

Number of performance indicators achieved

Number of spatial indicators developed:

- in total 1

covering

- the EU territory 0

- more than the EU territory 0

Number of spatial indicators applied:

- in total 1

covering

- the EU territory 0

- more than the EU territory 0

Number of spatial concepts defined 2

Number of spatial typologies tested 0

Number of EU maps produced 5

Number of ESDP policy options addressed in that field 6

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EUROPEAN SPATIAL PLANNING
OBSERVATION NETWORK

ESPON 1.4.1

„The Role of Small and Medium-Sized Towns (SMESTO)“

Annex A.1 Case study documentation



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ESPON 1.4.1

**“The Role of
Small and Medium-Sized Towns
(SMESTO)”**

**Annex A.1
Case study documentation**

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The partnership behind the ESPON programme consists of the EU Commission and the Member States of the EU25, plus Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

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A.1 CASE STUDY DOCUMENTATION

1 INTRODUCTION

1.1 Case study objectives

Based upon the Terms of Reference of the project (ToR) the following working steps concerning case studies had to be envisaged:

"Having defined small and medium sized towns, their role in spatial development needs to be further analysed. The role might differ regarding the geographical context of a town (being linked with a big city or part of a functional cluster of towns or the only town in a region), the economic performance, the function and size a town has or other aspects such as accessibility or socio-economic specialisation in a certain sector.

For this analysis of roles, the 3-Level-Approach developed by ESPON should be applied, i.e. the analysis should differentiate roles in spatial development regarding (a) regional, (b) national/ trans – national, and (c) European context. At present for each geographical context various working hypothesis (!) can be identified, such as cities as motors for regional development, or the importance of second tier cities in national urban systems etc. The main hypotheses in the field should be identified and assessed when analysing the role of small and medium sized cities. The analysis should be based on literature studies as well as on case studies (!) and possibly statistical and spatial analysis. With regard to the decisive role of the national context it is considered important to not only review literature available in English, but also other national literature for selected countries. Certainly, the analysis as well as the selection of suitable case studies need to reflect the European diversity in the field.

The analysis should also pay attention to existing spatial typologies and assess whether the role of cities differs in different types of areas. For this purpose the typologies provided by other ESPON projects should be taken into account, such as functional urban areas, rural- urban distinction, accessibility etc. Furthermore, typologies widely used in the field of European spatial policies should be employed, such as mountain areas, island, coastal areas, areas eligible for different types of Structural Funds support etc."

The objective of the conducting of the case studies was:

- to deepen the insight in the potentials and challenges for SMESTOs in the ESPON space;
- to test the feasibility of the proposed working hypothesis and definitions (together with the identification of possible additional ones);
- to enrich the abstract analysis with vivid images of concrete towns and their regions.

The case studies try to capture a widespread variety of regional cases and also to be able to cover a great variety of European historic and cultural backgrounds – though of course no full coverage can be provided.

Following all these intentions we have provided a preparatory document which simply states the working hypothesis we have identified so far based upon the findings of our literature studies on the roles of SMESTOs. Together with information from the definition of SMESTOS, we have then tried to translate these hypothesis into selection criteria for the case studies. This means we set up combinations of these criteria and allocate them to the single case study countries. The final selection of which region(s) and case study cities to choose was made by the TPG in the workshop in Stockholm on the basis of suggestions from each country expert.

1.2 Working hypothesis on the roles of SMESTOs in spatial development

The following list of hypothesis is based upon a literature review on the topic. Generally it has to be stated that the roles of small and medium sized cities are hardly referred to explicitly. Therefore the literature body of urban research had to be analysed as well.

In order to follow the suggestion from the ToR, we clustered the following hypothesis along the ESPON 3-level approach (regional/national; trans-national/European).

Regional context

Hypothesis 1

The success of regional development is based on a combination of exogenous and endogenous factors. This is even more valid for SMESTOs as their attractiveness depends on the capacity of the production system to generate specific resources and new activities to establish an interface with the exterior. Cities are the places where personal and industrial services develop, reinforcing centrality and specialisation. SMESTOs are rather struggling with the aspect of specialisation due to the relative disadvantage compared with bigger cities.

Hypothesis 2

SMESTOs are more dominantly determined by exogenous factors (e.g. regional decline, urban systems in the vicinity, regional attractiveness) than by endogenous factors (e.g. urban planning, cultural heritage conservation).

Hypothesis 3

SMESTOs (in an exogenously determined setting of regional decline) are to be affected most by the "shrinking cities" phenomenon – followed by social problems (de-population, ageing population, unemployment).

Hypothesis 4

Rich in built patrimony and natural environment, SMESTOs offer a high quality of life. SMESTOs combine the advantages of land and city, eliminating its contradictions. Towns and landscape can often still be seen as a unit and SMESTOs are the ecological continuum of the landscape. These towns are marked by its landscape (cultural landscape – vinery towns, health resorts, etc.) and there are rigid personal ties and connections to these cultural landscapes.

Hypothesis 5

An economic problem of SMESTOs is that small areas have fewer resiliencies against economic down-turns and plant closings or major-downsizing. A private leadership pool disappears and smaller cities lack economic capacity to weather shutdown or closings of major employers. They not only lack growth facilitating amenities especially for professional workers (e.g. cultural entities such as theatres, major sport leagues etc.) but they lack also a manufacturing heritage of tolerance and diversity – apart from the breadth of production base and capital mobility in metropolises.

Hypothesis 6

Innovation and specialisation alone pose threats to small and medium size towns. These aspects alone reinforce selected industries, which may not be demanded in the future and a mono-structural imprinted infrastructure may be useless. There is the danger that this will hinder innovation of foreign investors and not support them. Specialisation to a limited number of production branches could create hazards concerning adaptation to new economic environment. An over specialised city is vulnerable to the idea of territorial and urban competition and is non-diversified.

Hypothesis 7

SMESTOs can be successful when finding production niches (Porter theory) embedded in an innovation scheme which enforces the advantages of low transaction costs and thus facilitates knowledge spill-over. On the other hand it outweighs the potential disadvantages of a lack of growth facilitating amenities.

Hypothesis 8

SMESTOs face the following economic challenges: Out-of-date infrastructure, dependence on traditional industry, obsolete human capital base, declining regional competitiveness, weakened civic infrastructure and capacity, limited access to resources.

Hypothesis 9

SMESTOs show generally a mix of the following basic functions:

- Supply function – this means the provision of a regions population with necessary goods and services.
- Labour market function whereby an aim is to keep small structures and renew local economic entities.
- Housing function which corresponds with the provision of enough habitat and building grounds.
- Cultural functions which include leisure and tourism. They can be reinforced by city marketing and branding.

Hypothesis 10

SMESTOs are (either losing or) gaining attractiveness if the following circumstances hold true:

- SMESTOs being embedded in agglomerations with raising economic performance (preferably service oriented) – especially the housing and supply functions will dominate
- SMESTOs being embedded in a rural spatial context with raising economic performance (e.g. through specialisation) –the labour market function and cultural function will dominate

Hypothesis 11

In SMESTOs cultural functions such as leisure, tourism etc. show increasing significance. In order to be competitive, cities need to show their best face. By city branding and city marketing tourism shall be supported and outside investors should be attracted. City types are shifting and SMESTOs are searching for new roles and identities.

Hypothesis 12

Mainly in the periphery SMESTOs lose their importance. They fulfil only a minimum of supply functions for its region (administration, education, health etc.) but only at a certain economic size these functions can be realized.

Hypothesis 13

Local governments of smaller and medium size towns are more likely affected by globalisation, structural change and urban decline – as a consequence it is difficult for local governments to maintain the basic supply of functions and the provision with basic goods and services, as a minimum of economic resources is necessary to maintain infrastructure, health systems.

Hypothesis 14

In respect of governance SMESTOs show the following advantages: On the one hand decision processes are more manageable and faster. On the other hand the proximity to citizens is very close – therefore participation processes could be facilitated.

National/trans-national context

Hypothesis 15

SMESTOs are incorporating an "optimum size" – i.e. a balance between the negative externalities of agglomerations (pollution, security, isolation) and the positive externalities of cities (low transaction costs, innovation spillovers)

Hypothesis 16

SMESTOs are more prone to a "brain drain" of the workforce (to be expressed by the amount of highly qualified jobs within its region) than bigger cities.

Hypothesis 16a

On the other hand SMESTOs are more likely the residential area of persons with higher household incomes (especially in SMESTOs located in larger agglomerations and/or in rural SMESTOs).

Hypothesis 17

The exogenous setting determines also the socio-demographic character of SMESTOs:

- SMESTOs in agglomeration areas are characterised by weak social ties and weak local identification with the SMESTO by their inhabitants – “Sleeping Towns”
- Rural SMESTOs are characterized by strong social ties of their inhabitants – leading to social networks.

Hypothesis 18

SMESTOs in different regions are also seen as local innovative centres, with heterogeneity of people, organisations and institutions, which leads to social, technical and cultural innovations contributing not only on a regional but also national scale.

Hypothesis 20

Small and medium cities at the entrance of agglomeration regions fulfil absorption and release functions for big metropolises as their growth and development potential is also limited.

Hypothesis 21

The relation between agglomerations and peripheral SMESTOs has changed. The suburbanisation of European transit axis has developed in long line. Periurbanisation – i.e. the transformation of remote areas into housing regions of centrally agglomerated regions, is the ultimate result.

EU-context

Hypothesis 22

SMESTOs are increasingly confronted with competition between cities of their own size but also with bigger urban units within specific roles (e.g. culture, tourism). This competition is partly sought for actively and successfully.

Hypothesis 23

Smaller and medium sized towns present a rich and diverse cultural heritage for Europe.

Hypothesis 24

Europe has a big number of cities in a very close distance – this leads to weaknesses of smaller and medium cities, because of competition and accelerating transport makes fewer cities necessary.

Hypothesis 24a

But according to the theory of city systems it is not the physical distance between cities that counts but the hierarchical distance, indicated by the number of steps on the central place hierarchy, which is introduced in the most public regional planning strategies of European nations.

Hypothesis 25

SMESTOs are the most vital part of the European urban system – thus supporting and enforcing the European metropolises – to be seen in the strong inter-linkages (exchange of labour and goods).

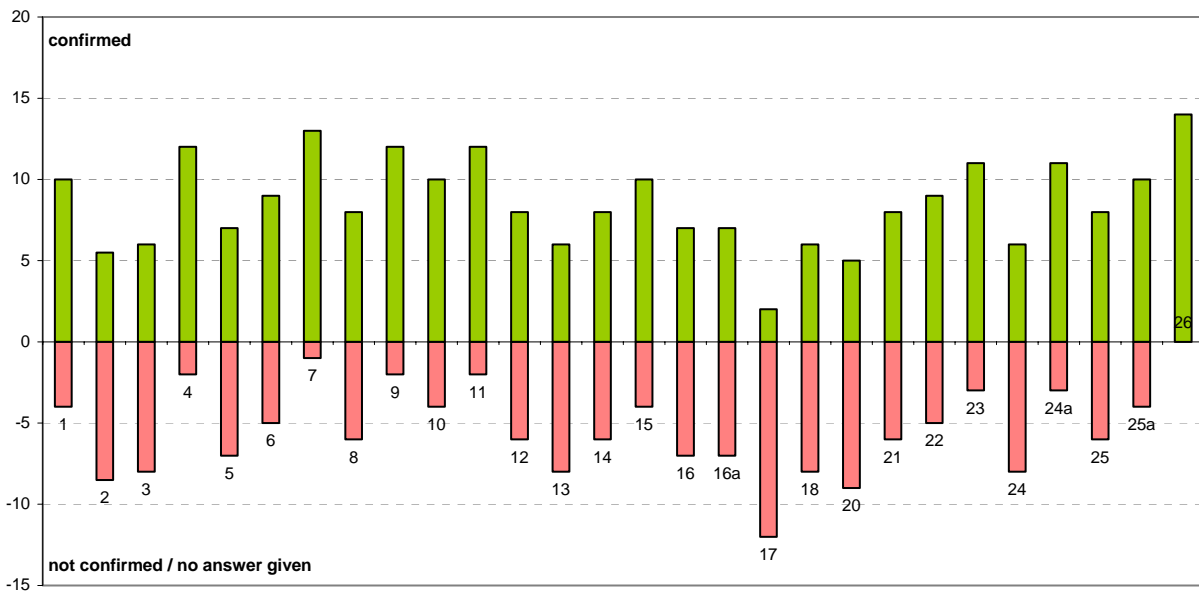
Hypothesis 25a

SMESTOs are endangered to be dominated by the tier one cities of Europe – to be seen in losing functions (administrational, social) and economic power.

Hypothesis 26

SMESTOs show an increasing willingness and self-organisation to set up international networks and enforce political lobbying in order to strengthen their position vis-à-vis the metropolitan areas.

The diagram below shows an overview on the answers to all working hypotheses given by the case study authors.



2 AUSTRIA

2.1 Case study Hallein



Source: Hallein.net, Halleiner Infoserver



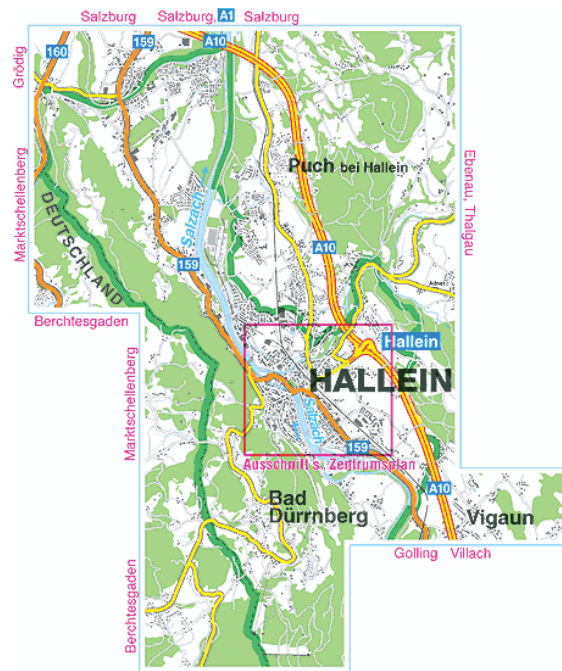
Source: http://www.hallein.gv.at/de_galerie_hallein-ansichten_2_5.html

2.1.1 Descriptive section

Geographic position



Source: Regionalverband Tennengau, <http://www.tennengau.at/regionalprofil.html>



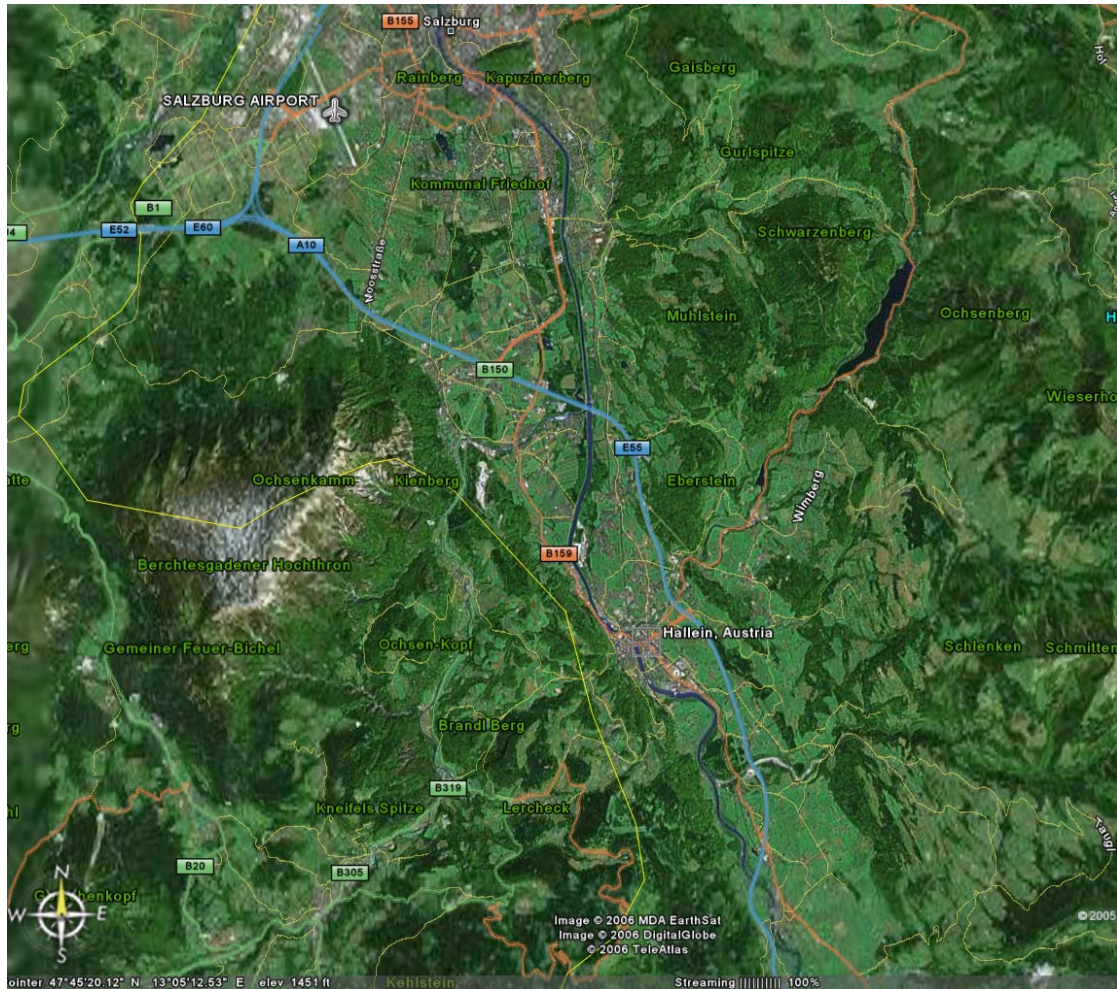
Source: Map2web, <http://www.map2web.cc/hallein/>

Hallein is the second largest SMESTO in the Greater Salzburg region with close to 18,000 inhabitants. It is located approx. 15 km south of the city of Salzburg. It is the regional capital of Tennengau and only a few kilometres away from the Bavarian border. Historically an important site for salt extraction featuring a rich Celtic archaeological history, it is now a major regional industrial centre and offers important educational facilities for the region, such as a high school, trade school, fashion school and vocational colleges offering everything from timber management to mechanical engineering (HTB). In the nearby town of Puch is a newly relocated college (Fachhochschule, formerly located in Salzburg).

Transport wise it is well connected with the city of Salzburg by means of a regional rail line (Tauernbahn). It also lies along the major highway route (A10) between Salzburg and Southern Austria and Northern Italy.

Being extremely close to the Bavarian border and to Salzburg with its international airport, Hallein benefits from a location that is easily accessible and near a major transport node on Austria's East-West and North-South axis. Situated along a river in a rather narrow valley with high mountains to the West its growth potential is limited however.

Below is a current satellite photo (courtesy of Google Earth).



Source: Google Earth

Its economic activity can be described as dynamic with over 9,000 employees, mostly in the production (paper, metal etc.) industry. In the entire region of Tennengau (the surrounding province) a third of all employees work in the production industry, although the number has been declining in recent years (Regionalprofil Tennengau, data from 1999).

It is also a tourist destination for summer (lies on the river Salzach and close to mountains) and winter tourism (skiing). There are 2 distinct geographic areas within its region, one being the *Salzach* (river) valley, the other being an alpine mountainous landscape. From a land use and economic development point of view, the relevant Regional Plan calls for the Salzach river valley to become a top location for the service and production industry in designated areas, whereas the mountainous alpine landscape seems predestined for light tourism and agricultural uses.



Source: Land Salzburg website, http://www.salzburg.gv.at/raum_tennengau

Hallein had a predominant position in the past due to the wealth stemming from its salt extraction. This 1000 year old tradition of the “white gold” has marked and shaped the city. The ruling clergy of Salzburg used the wealth created by the salt to enrich, enhance and beautify their residential seat of Salzburg. After a last attempt to modernise the production system in the 1950s, the salt works finally closed down in 1989. Already in the post war period an effort had been made to concentrate on other industries and several factories (including paper and metal) were then founded in Hallein. Nowadays the salt mine is used as a museum, tourist attraction and as a site for cultural events.

The town itself has a historic centre spreading along mostly the northern side of the river Salzach (and on the island *Perner*) with a smaller newer town development mostly built on the Southern banks of the river.

Since the 1940s and 1950s however, the city has gradually expanded its Northern parts, which are close to the city of Salzburg. Most of the resident population living in these parts (roughly 3000 to 4000 people) work in Salzburg.

Another larger area was developed in the 1950s in Au, which is also oriented toward Salzburg.

Burgfried, to the east of Hallein’s city centre and its rail line was developed over time to accommodate the additional growth of Hallein, but is now on its way to turning into a major part of the city, on a competing scale with Hallein’s core city. There are new large scale shopping facilities in the area and also a major commercial area of 8 ha in size. In this part of town is where the current and future development occurs, however with little synergy effects on the old town. Hallein is hoping to get back some of the purchasing power lost to other outer lying shopping centres, although there is no false hope that this commercial development will allow them to compete with Salzburg’s retail offer.

The city centre itself has a much slower development. With its special historic preservation status hardly any investment occurs, as it is costly and difficult to rehabilitate and convert some of the historic structures in the old part of town. The northern part of the old city centre is the more problematic zone: several houses near the town hall are standing empty. The city government is actively trying to revitalize the old part by seeking financing for a student housing facility with approximately 200 beds.

A majority of the employees in the nearby paper production plant are of foreign ethnicities, particularly from Turkey and former Yugoslavia. These groups largely live in Hallein's old city centre. According to local officials, 70-80% of the primary school children do not speak German and need to be taught in separate classes. The effect of the immigrant groups settling in the city centre makes other inhabitants move out of town, causing a serious demographic and socio-cultural issue. The immigrant groups, however, seize the opportunities of cheap and available housing and though dilapidated are increasingly buying houses in this old part of town.

There is development pressure from the city of Salzburg to be felt. In Salzburg itself the prices are disproportionately high and a lot of the new growth occurs to the South of Salzburg, in the direction of Hallein. The communities near or in Hallein that are most growth oriented towards Salzburg are Taxach-Rif, Au, Neualm and Burgfried.

The map below shows the historic part of Hallein, situated along the river Salzach.



Source: Digital city map, website of the city of Hallein, <http://www.hallein.com>

(Poly)centricity of the region

(a) Morphological dimension

There are 13 communities within Tennengau, one of which is Hallein. They are jointly united in a Regional Association *Regionalverband Tennengau*, formed when a new planning law dictated such in the early 1990s. Hallein has a predominant position within the region of Tennengau, but is still lower in the city hierarchy than nearby Salzburg.

The urban pattern of the region around Hallein is rather strongly mono-nuclear, where Hallein presents the dominant town, interdependent with SMESTOs in the outer core that have partially taken on its roles (Oberalm and Puch). These towns are partly strongly urbanised, especially along the major transport axes and partly still characterised through sparse development. Further the region's urban pattern includes semi-peripheral and peripheral SMESTOs (Golling, Kuchl, Vigaun) with rather dispersed development and a rather strong dependence on Hallein. These towns, however, have also started to take on partial basic functions of the main regional core. Finally, there are rural SMESTOs with a strong agricultural and touristy orientation.

The regional program calls for a strengthening of Hallein's position as a major regional centre with superior supply, labour market and housing functions. The attractiveness of the city is to be improved and the dependence on the city of Salzburg to be reduced. Its housing function is to be increased as well. An area at Hallein's access node to the major highway is being reserved for new business expansion (with a preference for large scale production) marketed through the Regional Association.



Source: Regionalverband Tennengau, <http://www.tennengau.at/regionalprofil/betriebsstandorte/hallein-bahnhof.html>

Suburbanisation issues exist especially in terms of the livelihood of the inner town centre which is entirely under historic preservation (as is the city of Salzburg). As is the case in nearby Salzburg, people tend to shop in suburban shopping centres and retail in the inner city is struggling and dependent on tourism.

Overall, the urbanisation pattern seems to be strongly mono-nuclear, with Salzburg dominating the development of the surrounding region.

(b) Relational dimension

Hallein serves as a major employment and civic service centre for the region with important public facilities such as a hospital, schools and kindergartens, a court house, and community service for an agglomeration of 50,000 inhabitants. While being an important regional centre with administrative functions, its position is secondary to Salzburg's and the relational patterns can be described as mostly mono-oriented:

On a local/regional level, employment is largely dominated toward the Salzburg area, with twice as many inhabitants commuting to Salzburg than the other way round.

On a regional/national level, Bavarians from Berchtesgaden, for instance, come and shop in the area, but with a preference for the shopping centres in the outskirts of Salzburg, such as Europark.

On a regional level, from a tourist perspective, a lot of day travellers visit Hallein and its surroundings. People from the larger region visit thermal baths in Berchtesgaden (Therme Watzmann) as there is nothing comparable in the Salzburg agglomeration. Austrians, living near the border, might also go to Berchtesgaden for skiing and hiking and vice versa. Economically, however, along the lines of a shared labour market, there does not appear to be any major cross border development to speak of. The relations between the cross border regions are so far most pronounced in recreational and commercial activities.

Overall, it appears that Hallein is stronger oriented toward Salzburg than Hallein's outer towns to Hallein with a pattern of rather mono-oriented relations.

Historic and recent developments

Both the local population and visitors travelling in the region have generally satisfactory travel options available to them. The available highway infrastructure is adequate, the public transport by bus and rail is relatively extensive, and the new S-Bahn (regional rail) project connecting Hallein to Salzburg and Freilassing will increase these options further. There are plans to extend the local rail network, as especially Hallein's South side of the Salzach River is not as accessible or connected to the regional transport infrastructure. It was decided to keep the right of way dedicated to a future extension, although there is no planning approval or financing in place yet.

There are also discussions to increase the Tauernautobahn (N-S highway route A10) to 3 lanes to allow for future capacity growth.

The production plants and manufacturing businesses in the area cause a high proportion of truck traffic which increasingly gets shifted to rail. Several enterprises now have their own dedicated freight rail link. Generally there is a political push to shift more trips to public transport, but obviously this will only be possible in areas with the corresponding densities.

The population is growing steadily and disproportionately high in Hallein's city centre due to the large immigrant population (with an average family size of 3.8). As mentioned above, the city's policy is to strengthen the inner city by bringing in students and by creating more central housing.

Increasingly there is a realization at the political planning level of the necessity to cooperate and plan jointly within the wider region, including the Bavarian territory of Berchtesgaden. In 1995, the EU Regio was founded and agreements were reached to commonly plan for future settlement patterns, transport infrastructure and economic development. While this represents a strategic long term opportunity a lot needs to still happen to make such a planning vision a day to day reality.

Roles and functions

Socio-demographic role

Overall, the agglomeration has a steadily growing population of over 54,000 inhabitants. The area is attractive as living environment and inhabitants have relatively short commuting times into Hallein (as major regional employment centre) or into the agglomeration of Salzburg. The majority of housing in the area are single family homes in a dispersed structure. In the future, a higher population density is desirable along the main public transport corridor. Also, as growth in employment is not as high as the influx of inhabitants, there is an imbalance of jobs and residents.

As elsewhere, a widely existing phenomenon is the ageing population which will increase significantly over the next decades. This will be paralleled by a decrease in the young population.

Due to the excellent educational facilities and the relatively good prospects in the employment sector, brain drain is not as critical an issue.

Functions of the individual SMESTOs within the surrounding region and beyond (national/European)

(a) Supply functions, labour market function, housing

The town of Hallein holds a strong supply, labour market and housing function for the region, including Salzburg. As described above, other major towns in the region (outer core) have partially taking over some of the core roles, but Hallein dominates in its position as a major regional centre and in holding these functions.

(b) Socio-cultural dimension: high quality of life, cultural offers

A rich cultural program is on offer in Hallein, including serving as a site for some of the Salzburg Festival performances. Theatre performances, art exhibits, and concerts are staged as well. The town features 2 museums, including a Celtic museum and a museum, in honour of Franz Xaver Gruber, the composer of the song "Silent Night, Holy Night" who lived and died there. The different sites for art and music happenings are shown below.



Source: Stadt Hallein website (Schubert und Franzke)

(c) Accessibility – transportation node

As described above, Hallein is well served by both a vehicular and a public transport system and is easily accessible by road and rail. Travel to the airport is by highway or by transferring in Salzburg's main station to the bus line if traveling by rail. On the A10, the major N-S highway, however, transit truck traffic has been banned, as the transit traffic became too much. There is now also a 100km restriction on the highway to curb air pollution.

(d) Political-administrative function

Hallein is the regional capital and holds an important role as an administrative and educational center and as a tourist attraction.

The offer in educational facilities is good and there is an official commitment to keep it that way. Hallein sports a high school, trade school, fashion school and vocational colleges offering everything from timber management to mechanical engineering (HTB). In the nearby town of Puch is a newly relocated college (Fachhochschule, formerly located in Salzburg). It is politically controversial why the school was located in Puch, rather than staying in Salzburg or being located in Hallein, already the educational centre of the region.

(e) Socio-economic structure and performance

The SMESTO Hallein has over 18,000 inhabitants with a growth rate of 2% in the last few years. Its population density is the highest in the district with over 1,300 residents per square kilometre (only Salzburg's is significantly higher with almost 2,800 inhabitants per square kilometre), compared with only 343 in the overall district of Hallein. Overall there has been an increase of over 27% in places to work to almost a 1,000 places between 1991 and 2001. Of the region's total number of work places more than a third are in the SMESTO Hallein.

The Hallein region is known for its great industrial heritage. Even nowadays, a third of all employees in the district still work in the production industry. Although businesses are economically doing well in the area and production has increased, there has been a loss of production related jobs of 14% in the past years due to more automated processes requiring fewer people. The biggest growth in jobs is now occurring in the service industry. Apart from day tourism, tourism is a sector that is rather weak with only about 4% of the yearly overnight accommodations in the province.

The district's labor market shows a strong correlation with the city of Salzburg. The commuting pattern is rather high, with a third of all employed people in the region commuting out of the area. That is twice as many as commute into the area. About 80% of all commuters work in Salzburg and its adjacent communities (Anif, Grödig, Bergheim, Wals).

Unemployment has been decreasing (-3.6% in 2003 compared to the previous year) and places for apprenticeships are increasing (+8% for the same period), showing a positive trend in the district.

(f) Specific know-how or resources, structural changes (within the SMESTO and its hinterland), unemployment and GDP developments (also compared to national level), dependencies of specific sectors, specialisations, FDI & public support (e.g. EU and/or national funds acquired)

The timber industry has a strong foothold in the region and plans call for a further cluster specialisation of that sector. Other specialised industries in the region include the metal and chemical industry, construction materials and food products. Hallein is to be a place with a balanced equilibrium of jobs and housing. The technical college (HTL) in Hallein is to serve as knowledge based impetus for a technologically oriented service industry centre.

SWOT analysis

HALLEIN and surrounding region

Strengths	Weaknesses
<ul style="list-style-type: none"> - quality and variety of educational facilities, - strong foothold for industrial production, machinery (Emco, Bosch, Roco), construction and chemical industry (Leube, Erdal) - broad recreational and cultural offer - good infrastructure and along major highway route - located in a dynamic and easily accessible region 	<ul style="list-style-type: none"> - in the shadow of Salzburg city, - not much of an international reputation, - an overall loss of jobs over past decade but growth of inhabitants (imbalance) - identity closely linked with historic salt mine production - touristically in strong competition with higher frequented sites and skiing areas
Opportunities	Threats
<ul style="list-style-type: none"> - Further cooperation with existing educational facilities to attract F&E and other new businesses. - Access to a wider catchment area for its educational and recreational offers and economic activities with higher cross boarder activity on the Bavarian side. - Reviving the city centre by building housing for young students - Making use of the new S-bahn link to reduce car dependency 	<ul style="list-style-type: none"> - Local (indigenous) population is moving out of the city centre while immigrant population is moving into the dilapidated housing (suffering from underinvestment due to historic preservation status) - new job creation needed to maintain the economic livelihood of the region (gradual shift from production to services). - Difficulty to maintain the balance between an area with an economic motor and its natural beauty.

2.1.2 Policy section

The governance aspect

The main actors include the mayor of Hallein, the Regional Association (Regionalverband), the community representatives (Regionalbeirat) as well as the major companies based in Hallein, such as M-Real, Binder, EMCO, and Voglauer Werke to name but a few. Further there are Tech-Invest and Land-Invest, 2 companies of assistance in the acquisition and relocation of businesses into the region.

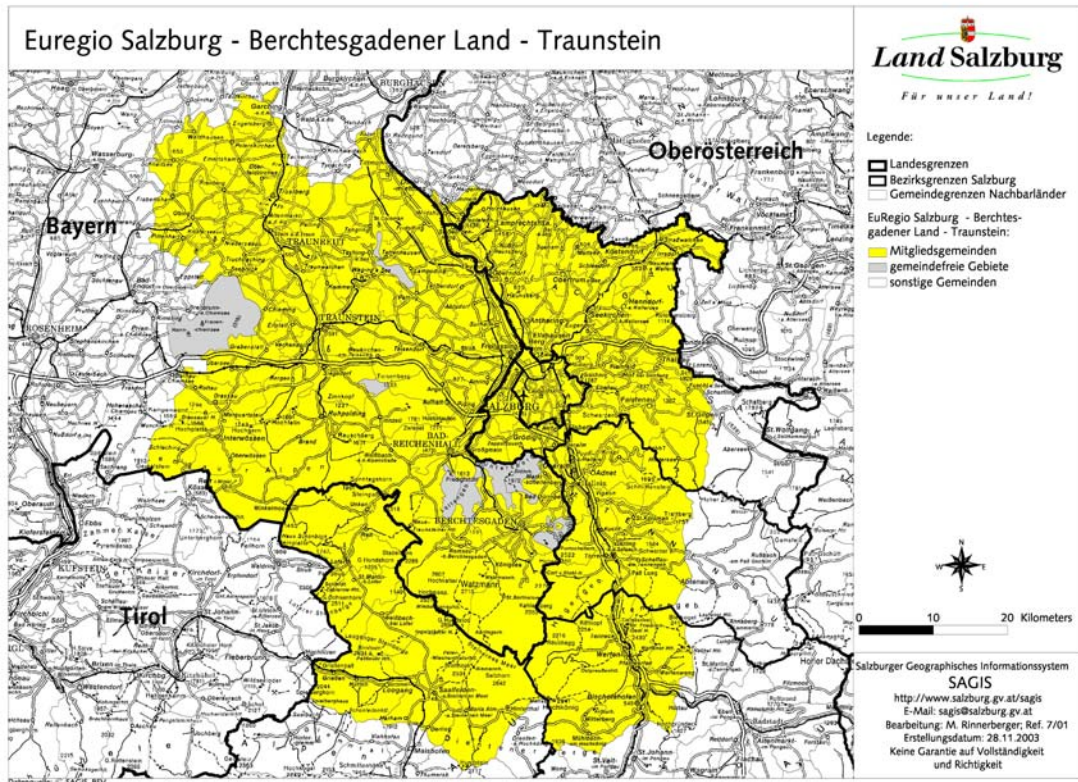
The aspects of prevailing challenges and options of development on the level of the individual SMESTO within the region and on the regional level

A major challenge is to overcome the thinking within small boundaries. Each town is concerned with its very own particular situation and thinking within the boundaries of the town itself, then on the community level, up to the district level, and then on to the province level. There is not much multilateral thinking on a political level outside one's jurisdiction and too little thinking of spatial planning within functional areas rather than within geographic boundaries.

The EuRegio, for instance, is a voluntary association that looks at the large Salzburg/Berchtesgaden/Traunstein region with roughly 800,000 inhabitants as one

functional area and is concerned with strategically positioning the EU-Regio as a competitive and well known region between Munich and Vienna. While the EU-Regio has a strategic plan with specific projects in place it is a step-by-step process to overcome administrative hurdles and opposition stemming from a more local oriented mind set of the politicians and the population in the area. What is really needed is political commitment at the national level to make such a strategy feasible and derive benefits from a unified and therefore more competitive region.

The area of the EU-Regio is shown below.



Hypo-thesis	Confirmed	Not confirmed	Information cannot be given	Comments
1	yes			
2	yes			
3	yes			
4	yes			
5	yes			
6	yes			
7	yes			
8	yes			
9	yes			
10	yes			
11	yes			
12	yes			
13	yes			
14	yes			
15	yes			
16	Yes			
16a	yes			
17		?		
18		?		
19		Missing from my text		
20	yes			
21	yes			
22	yes			
23	yes			
24	Yes			
24a	Yes			
25	Yes	Somewhat contradictory		
25a	yes			
26	yes			

2.2 Case study Salzburg

2.2.1 Descriptive section

Geographic position



Source: The World Fact Book, <http://www.cia.gov/cia/publications/factbook/geos/au.html>

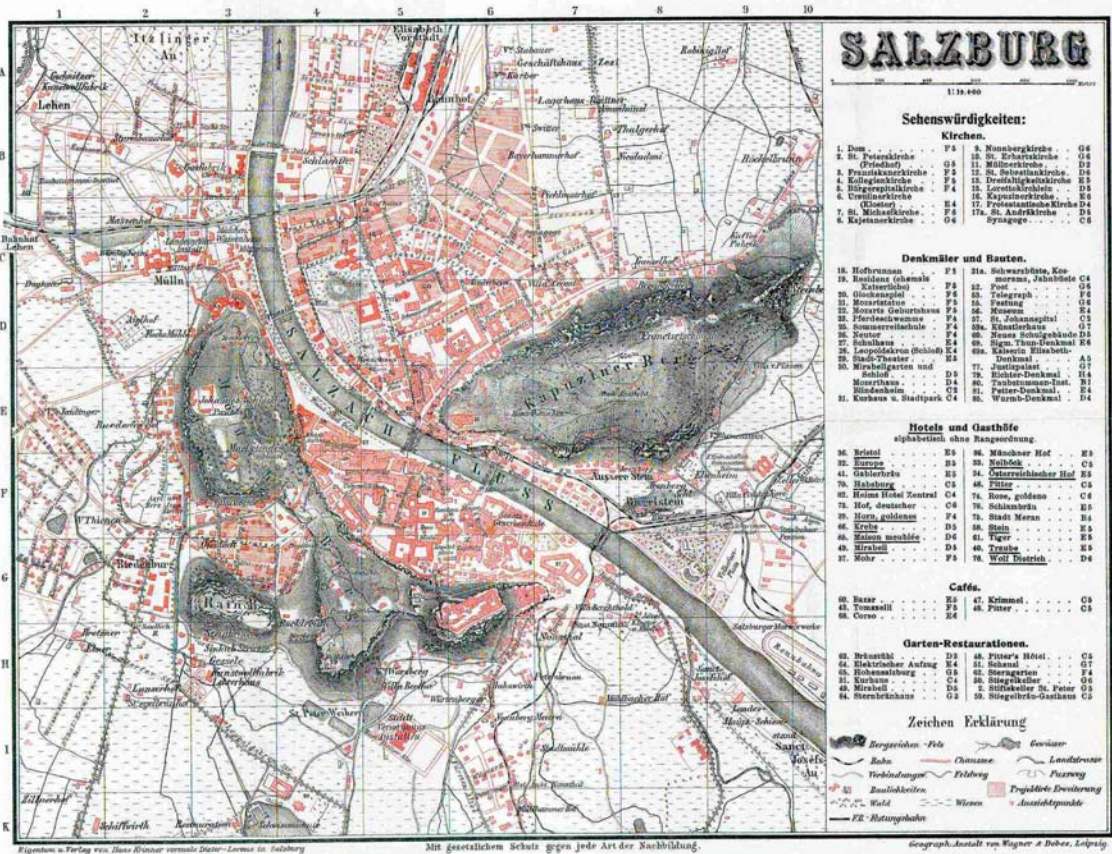
Salzburg is Austria's 4th largest city (after Vienna, Graz, and Linz) and by all means its best known after Vienna. With over 140,000 inhabitants the city is small and compact, surrounded by mountains, and close to the German border. (The agglomeration has close to 370,000 inhabitants.) Its geographic position within Austria's transport network is central: it is 300 km from Vienna and approx. 200 in the western direction towards Innsbruck. It is served by a highway and rail system, serving as a central node for going east and west as well as northwest into Germany and south to Klagenfurt and on to Italy and/or Slovenia.

Pattern of urbanisation

Urbanisation process/level

Salzburg had a powerful position as an important cultural and spiritual centre in the Middle Ages which lasted until the early 19th century when it became part of Austria. Until then it was the seat of the archbishop, extremely independent and dominant. After losing its rank as independent archdiocese its influence decreased steadily and for roughly 150 years no significant development occurred in Salzburg; it was as if the city stood still. The population decreased and the city's development stagnated. On the positive end, this meant that the old historic centre was fully preserved.

At the beginning of the first Republic (following WW I), Salzburg was a small town with about 40,000 inhabitants. The old town structure on both sides of the *Salzach* river looked in essence the way it looks today. The Southern part of the city did not extend much at all, in the Western part of the city; however, the development reached already the neighboring town Maxglan. The map below shows how the city looked in 1922.



Source: website Stadt Salzburg: http://www.stadt-salzburg.at/internet/themen/bildung_forschung/

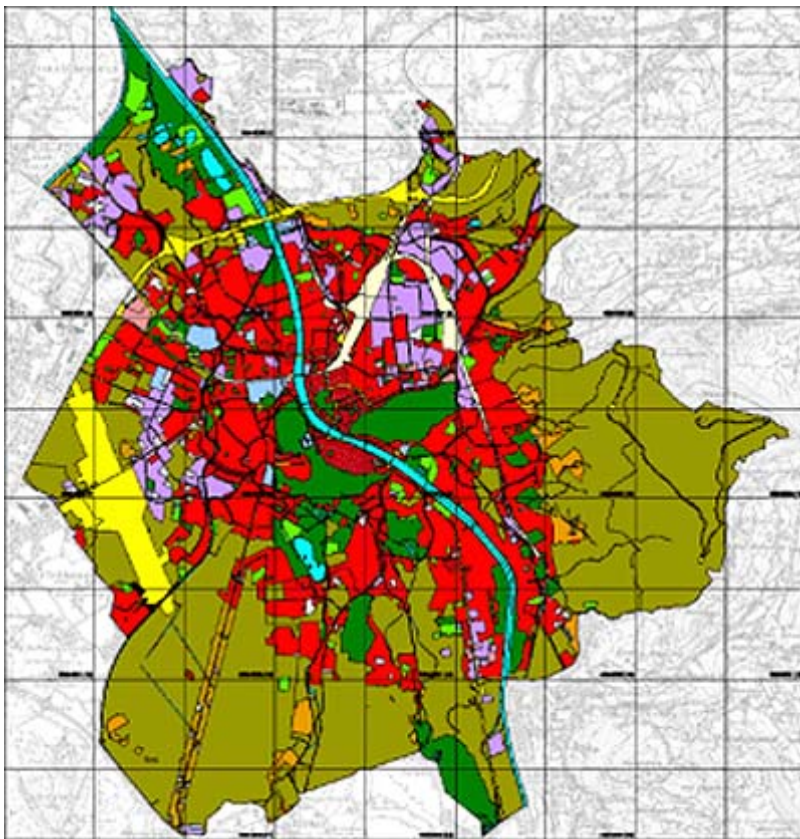
There are only a few medium sized cities in Austria. The urban hierarchical system is dominated by the capital city Vienna with 1.6 million inhabitants. No other Austrian city comes close in size; Graz, Linz, Innsbruck and Salzburg are the only other cities with more than 100,000 inhabitants.

Linz and Graz, however, are cities forming part of much larger agglomerations than Salzburg. Linz, for instance, has over 600,000 inhabitants in a 30 km radius. From an educational facility point of view, Linz is also better positioned. It has a university of Economics, a technical University, major industry and has as a result proportionally more students and international exchange in business, making it perhaps a more open and modern city. Salzburg is a more conservative city with an emphasis on its historic past and therefore on tourism. Its agglomeration is significantly smaller and therefore more directly comparable with the city of Innsbruck, which is similar in size and famed as a tourist destination.

Along with a changing and growing European region, cities like Salzburg must find ways to compete on a wider scale. Nowadays, SMESTOs must not only fulfil basic

functions for their hinterland, but must represent a motor for their wider regions. To achieve that Salzburg must redefine itself and concentrate on specialised functions that make it competitive or complementary with other cities' functions.

It already has a strong tourist role and has made itself a name as "City of Mozart" (his birth place) and yearly host to the world renowned *Salzburg Festival* featuring music and performing arts.



Source: website Stadt Salzburg, http://www.stadt-salzburg.at/internet/themen/bauen_wohnen_stadtpl/t2_89547/t2_95664/t2_52396/p2_52398.htm

The city's zoning plan (see above) differentiates between the 3 major categories of buildable land, transport infrastructure and open spaces. Its core goals are to:

- Create sufficient affordable housing, with a high percentage of subsidized housing
- Designate sufficient spaces for commercial use for both expanding and new businesses
- Maintain a high quality of life by preserving green open spaces for leisure and recreation
- Rezone former industrial or commercial areas into residential areas if more appropriate due to their central location

The city's regional development is based on the regional development plan *REK 1994* (Räumliches Entwicklungskonzept). The city has been updating that plan, realizing the opportunities and threats of the geopolitical and economic changes of

the last 10 years. The city planning department's assessment of its current situation includes the following threats:

- Loss of jobs in commerce and industry to surrounding region and low wage countries
- Stagnating population of the city and surrounding region
- Decreased activity in city centre
- Increased environmental and traffic impact in the agglomeration

(Poly)centricity of the region

(a) Morphological dimension

As mentioned above, the city has been experiencing strong suburbanisation, especially to the north and west of the city along the major highway between Anif and Eugendorf. The aim is to follow more sustainable development guidelines along pre-designated axes for future development. The strong growth in industry and commerce has created big demands on land for commercial purposes, which is scarce due to the landlocked geography.

The Regional Program for Salzburg and surrounding communities (Regionalprogramm Salzburg Stadt und Umgebungsgemeinden, 1999) addresses these issues and calls for a balanced development model along major and minor development corridors for housing, commercial and open spaces, in line with the existing and planned transport infrastructure.

There is also an impetus to think on a broader supra-regional level and plan within the now 10 year old *EUregio*, encompassing the wider Salzburg area, but also parts of the neighbouring (cross-border) provinces Berchtesgaden and Traunstein, totalling close to 100 towns and communities.

Salzburg's relations to other major cities such as Linz or Munich are rather weak: Salzburg and Linz, for instance, really constitute two separate economic areas with no interaction and commuting patterns to speak of.

Its economic relations to Bavaria are also not highly pronounced. A recent traffic survey of the cross boarder region showed that less than 3% commute between the cross boarder regions for work related reasons. It is clear, though, that Austria's joining the EU in 1995 and the subsequent doing away with the border to Germany, has opened up travel and leisure patterns between the two countries.

Due to changing travel and work patterns and lack of such data for cross boarder regions, however, it is a mission of the *EURegio* to produce better and more reliable data for cross boarder travel patterns. Studies have been made to examine how consumer spending flows work between the two border regions but there is a lack of data for business, commercial and educational trends.

The Bavarian border region used to be very strong economically but has been stagnating and losing in importance over the past ten years. While Bad Reichenhall used to attract shoppers from Salzburg, nowadays, Bavarians come and shop in the

surroundings of Salzburg (especially in the shopping centres near the city boarder, in Wals). They also come to the city for culture and entertainment. It is an aim of the city of Salzburg to bank on that potential and to also open the academic institutions to increased exchange with foreign, particularly German students (in the context of interregional development).

It remains to be shown how the entire cross boarder region will develop and which place will reach or maintain a predominant position. At present, one can still find a rather mono-nuclear pattern with Salzburg being the biggest city in the wider agglomeration, dwarfing some of the other towns in size and status. This includes the Bavarian towns forming part of the *EURegio*, which are all of a Hallein like scale.

(b) Relational dimension

The relational dimension on a regional scale, between Salzburg and Hallein for instance, is mostly mono-oriented (from Hallein to Salzburg). People from Hallein for instance shop in the surroundings of Salzburg. They also work to a large extent in the suburbanized areas to the South of Salzburg, but also to a degree in the city centre (two thirds of all employees from the district of Hallein work in Salzburg and its adjacent communities.) Of Salzburg employees 22% commute for work outside the city, mostly into the surrounding agglomeration. Only a small percentage commutes to the neighboring province and abroad (2001 data by the Economic Chamber Salzburg).

The new regional rail line (now under construction) which will connect Salzburg with cities to the North (Freilassing) and to the South (Hallein) will certainly increase but also change this pattern somewhat into more poly-oriented flows.

The relations between Salzburg and Linz are also poly-oriented. As discussed before, however, both of these cities have their own economic sphere and orientation and there is not much economic or cultural interaction between the two cities to speak of.

The relations between Bavaria and Salzburg tend to be more poly-oriented on a recreational level. The consumer behavior, however, is again more mono-oriented toward Salzburg.

Historic and recent developments

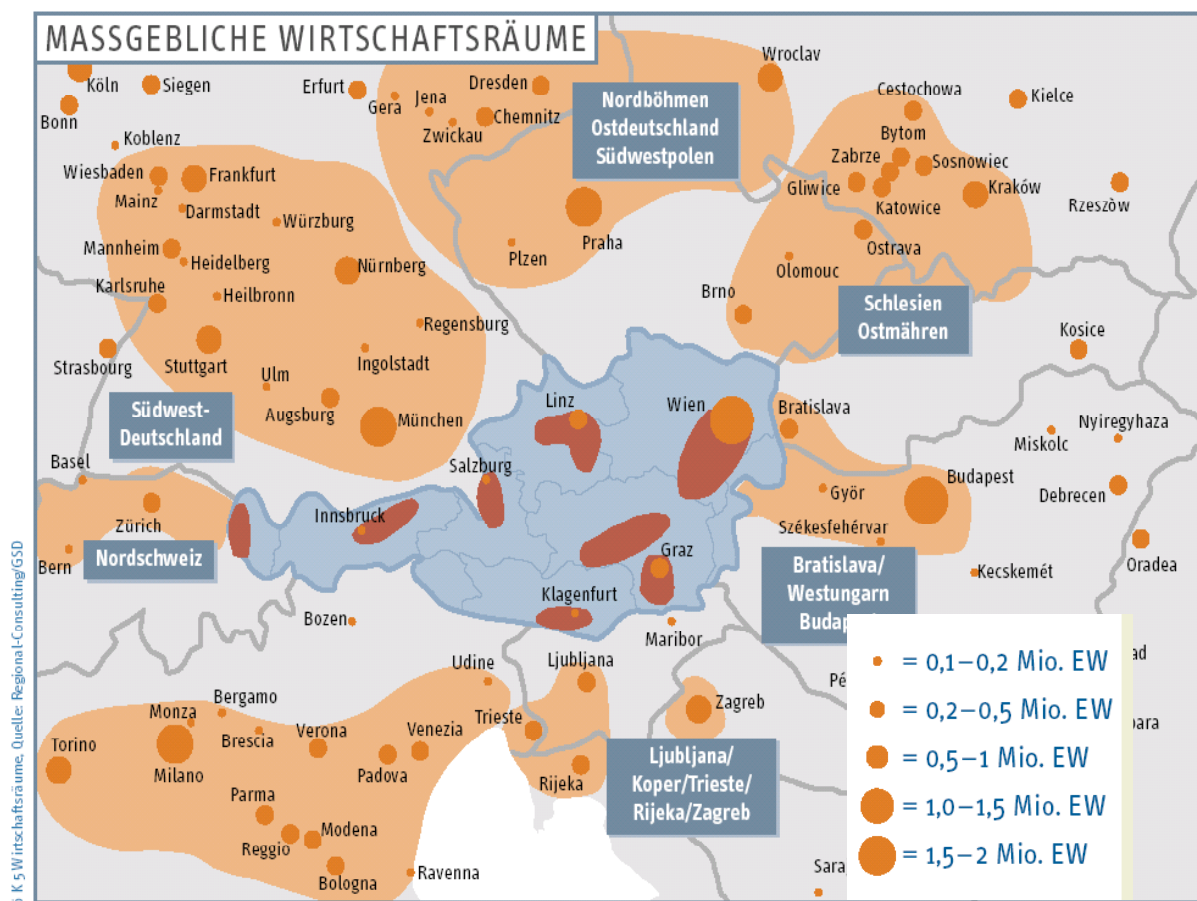
After WW II Salzburg served as the headquarter of the US army and became known as the city of the "Golden West". Post war economic growth occurred here much quicker than in the rest of Austria. Salzburg profited from a favourable and stable geo-political position during that period and also served as a gateway to Eastern Europe, as a base that was used by German companies to cater to the Eastern European market.

This comparative advantage changed with the Soviet Union's collapse in 1991 and Austria's entry into the European Union in 1995. All Austrian SMESTOs felt the effects of a more competitive and dynamic economic region within a political system that deregulated trade barriers and facilitated increased cross-boarder

economic activities. The Eastern cities of Vienna and Graz experienced increased economic growth after the opening of Eastern European markets, whereas the Western cities of Linz, Innsbruck and Salzburg were more economically dynamic before – during the more stable and monopolized system before the fall of the Iron Curtain.

In the last ten years, it seems Salzburg has regained economically, certainly not as a gateway to the East, but as a regional centre for commerce and trade.

The city however is failing to act on strategic issues. It is confidently comfortable in its role as a successful cultural and tourism hub. It has seen growth in employment by 10,000 jobs and the population has been growing again since 2001. Transportation problems exist in the surrounding agglomeration but not in the city perimeters itself. What is lacking is a commitment to plan for the entire region and see the city within an international dynamic context. The map below was included in a strategic study on Salzburg’s city region in competition with other city regions (by OIR in 2003), showing the Austrian economic areas in scale and the neighbouring countries’ cities in size.



Current development projects focus on improving Salzburg’s educational facilities and strengthening its role as a transport node coupled with commercial activity. The projects include the reconstruction of the central rail station by converting

some underutilized freight areas into active commercial and office use (for the major health care provider, for instance, placing it in a central location).

Another project entails the redevelopment of a part of the University for Humanities where an area is added on for expanding and modernizing the facilities, but also to include a mixed use development with housing and recreation. This was a conscious decision to strengthen the Faculty for Humanities in a changing educational environment where students are more likely to study technology or economics.

Further, there are plans for the development of a "Science City" in the northern part of Salzburg, Itzling; the now available campus of the technical college (which relocated to Puch, outside Salzburg), next to the Technology Centre, would provide the space for this new project. The tenants would include the department of applied research of the University of Salzburg, as well as new laboratories and offices for private firms. The plans also call for improved pedestrian and bicycle access, improved access by public transport and new green spaces to enhance the new campus development.

Roles and functions

Socio-demographic role

Compared to the other major medium-sized agglomerations in Austria (Linz-Wels and Graz), the demographic growth in Salzburg has been the most dynamic from the 1960s to the 1990s. This has been matched by growth in employment and land and real estate prices.

Overall, Salzburg province has gained in population by over 7% in the years 1991-2001, except for the city of Salzburg where it has stagnated. The forecast for the next 50 years is a continuous growth in population by approximately 11%, with the highest growth occurring in the first 25 years. As elsewhere in Europe, the population will age significantly, however, with less children (-11% by 2013) and more people aged over 60 years (+86% by 2033). By the year 2050 every third person will be over 60 years of age, while only 14% will be under the age of 15 (die Bevölkerung des Landes Salzburg, 2001).

Since the beginning of the 1990s, industry and commerce have been losing in importance as employment sectors in the city, whereas the agglomeration has seen a rather strong growth in that sector. Now, the service industry is the most predominant, and also trade and tourism represent important contributors to the economy.

The Regional Program for Salzburg and surrounding communities (Regionalprogramm Salzburg Stadt und Umgebungsgemeinden, 1999) states that the city of Salzburg should become a center for culture, high tech and modern production industry and services.

An economic analysis of the city has shown that Salzburg has a strong economic profile with clear strengths but little focus. What is lacking are pronounced economic clusters. The dynamic development of the surrounding region shows

there is strong potential in commerce and industry which could be further developed in cooperation with the Bavarian region. Trade, culture and entertainment are at present the predominant sectors of the city (Giffinger, Schremmer, 2003).

High quality educational facilities and increased R&D are necessary to build on Salzburg's economic potential. A sole focus on culture and tourism – as has been exercised in the past – will prevent Salzburg from developing its full potential and from strengthening its regional standing.

Role of SMESTOs in relation to urban growth

11 communities are part of the agglomeration of Salzburg, forming the *Regionalverband Salzburg Stadt und Umgebungsgemeinden*:

- (1) the City of Salzburg
- (2) Anif
- (3) Anthering
- (4) Bergheim
- (5) Elixhausen
- (6) Elsbethen
- (7) Eugendorf
- (8) Grödig
- (9) Grossgmain
- (10) Hallwang
- (11) Wals-Siezenheim

These communities jointly created a regional development program where the major axes for residential, recreational, and commercial development were determined. Major and minor centres were designated to act as nodes for transport, living and commercial activity. A green belt around the entire city region has been permanently zoned as green open space. Additionally, areas were reserved for agricultural and ecological purposes. Economic development goals and transport priorities were determined as well.

Housing constitutes a problem: The chief reason for the strong urbanization are the extremely high property prices in the city of Salzburg, leading people to move to the surrounding communities. This also includes young families and students, making the centre city of Salzburg lack young life and innovation. In the surroundings, there is no adequate regional transportation system in place, neither for individual motorized nor for public transport. The commuting times in the surrounding communities present long travel times for small distances. Relief is in sight: The y-shaped regional rail line that is currently under construction and that will lead from Freilassing (German boarder via Salzburg to Hallein) and in the other direction to Strasswalchen will offer alternative transportation and alleviate congestion in the region.

Functions of the individual SMESTOs within the surrounding region and beyond (national/European)

(a) Supply functions, labour market function, housing

The city of Salzburg has a strong function in supply, labour market and housing, not without partly losing out to surrounding communities, however. The Regional Program for Salzburg and surrounding communities identifies a need to concentrate the housing function in the city of Salzburg and the adjacent community of Wals – Siezenheim. The plan also foresees to further concentrate the labour market function in the communities of Anif, Anthering, Bergheim, Elsbethen, Eugendorf, Grödig, Hallwang, and again Wals – Siezenheim. The entire agglomeration is to become a sophisticated economic hub for labor and supply for the entire larger region.

(b) Socio-cultural dimension

High quality of life, cultural offers: Salzburg is the key location for the main cultural activities and tourism. Surrounding communities profit from a spill over effect, but are second tier in size and name. The quality of life is prevalent for the city and surrounding region with the preservation of a historic city centre and sufficient recreational possibilities as well as areas of outstanding natural beauty in close proximity. The regional development plan also calls for a further intensification of tourism in general and spa and wellness tourism specifically in the city and the communities of Grossgmain and Anif.

(c) Accessibility – transportation node

Various transportation improvements for road and rail have been designated as priority projects. As motorized individual vehicles have been restricted to the city centre, traffic has grown in the surrounding area. There has been underinvestment in the regional public transport network which the current regional development plan aims to correct.

Important to point out on a European level is the transport project MAGISTRALE, which calls for a high speed high capacity transport/train line from Paris to Budapest. At present, the implementation is ranked as a priority project of the EU. For Salzburg, the biggest doubt factor is the implementation on the Bavarian side, which requires cross boarder lobbying and cooperation (Giffinger, Schremmer, 2003). Not only that, but the capacity for the Magistrale coupled with the local rail system would require a four track rail line system, two of which would be for the regional S-Bahn rail line and two for the high speed Magistrale rail system.

(d) Political-administrative function

Salzburg is the capital city of the province of Salzburg and therefore is the seat of the provincial government. In order to be more interactive with local citizens, administrative activities are carried out by the district administrative authorities. In the capital Salzburg, as a city with its own status, this is done by the mayor together with the city council. In the surrounding districts (like Hallein or Zell am See) it is the district governor who has the district authorities.

Salzburg can look back on a centuries-old tradition as a university city and a centre of education and training. In 1622 the first university was opened here. But it was not until the early 1960s that it was re-opened as a university with full status after 150 years of changeable fortunes and struggle. The four faculties – natural sciences, the humanities, theology and law are divided into about 70 institutes. In addition, there is the internationally renowned Mozarteum (university for music and art) and since 2003 a Private Medical University.

From an educational point of view, Salzburg has a range of qualitative facilities, but lacks a technical university and a University of Economics. The city laments the relocation of a specialised college (Fachhochschule) to the town Puch near Hallein. Bavarian youngsters come to Salzburg for leisure and recreation, but go to Munich for educational purposes. As with F&E facilities, Salzburg cannot compete with Munich in terms of breadth of educational facilities on offer. It also stands in competition with Linz which has excellent faculties for technology and economics.

(e) Socio-economic structure and performance

For many years Salzburg's economy occupied a leading position in Austria. On a European scale the province is one of the most dynamic regions. In a recent survey of European regions Salzburg is listed as one of the top locations for investments. The above-average level of economic performance is reflected in the Gross Regional Product of Salzburg: From 1995 to 2002 the GRP has risen an average of 3.5 per cent compared to the overall Austrian GNP of 3.3 per cent. In 2002 the Gross Regional Product of Salzburg reached 15.97 billion Euros. Regional income is significantly above European and national average.

Salzburg's employees have a high training standard, making it an economically successful region within the EU. In terms of vocational training the level is not only clearly above the Austrian but also above the EU-average.

Nevertheless, in Salzburg there are also economic regions with severe problems. The EU supports these regions in Salzburg province through its Regional Development Fund, in particular the Lungau district and parts of the Pinzgau and Pongau districts.

The reform of EU-structural policy in 1999 brought about considerable changes in the implementation of EU-regional policy. The province of Salzburg largely succeeded in asserting its claims for subsidies: the Lungau and Upper Pinzgau districts as Objective 2 Areas continue to receive EU structural fund subsidies since the year 2000.

A total of more than 17 million Euros are available for regional development from EU subsidies. Besides subsidies from the EU-Regional Development Fund, money also flows from the European Social Fund and the INTERREG-programmes to Salzburg for measures related to employment policy. Using aid from the European Social Fund, unemployed persons are taken care of in Salzburg by offering them further training possibilities and help in re-establishing themselves, either as employees or in founding their own companies. INTERREG subsidies are granted in Salzburg province in the border areas with Bavaria and Italy for the planning and development of infrastructure. (Data from Land Salzburg)

Unemployment has been increasing in the last few years. In 2005 there were over 4,700 unemployed in the city of Salzburg, an increase of 55% compared with 1995. (AMS Salzburg)

Salzburg, as is the rest of Austria, is fairly dependent on the German economy. Munich, as the largest agglomeration within a 150km radius, has a dominant role in holding specialised functions (such as the media cluster) and in attracting F&E facilities. Whereas other South-German SMESTOs seem to have profited from the magnetism of Munich, Salzburg has not managed to do so (Giffinger, Schremmer, 2003).

No clear strategy has been put forward in what F& E facilities to attract and invest in. Opinions diverge about F&E facilities associated with tourism, culture and the natural environment (all 3 of which Salzburg seems predestined for) to high tech outfits (less existing specialty and higher competition). To reach a critical mass the strategic positioning paper for Salzburg argues cross boarder cooperation is absolutely essential in securing the necessary capacity of research funds, human capital and physical facilities.

Salzburg also stands in competition with Linz which has a more targeted economic outlook and is more active in attracting new businesses.

SWOT analysis

Salzburg Stadt

Strengths	Weaknesses
<ul style="list-style-type: none"> - Favorable geographic position, - international standing and image, - relatively dynamic economic environment, - good educational facilities - a beautiful living environment with picturesque towns, the Alps and lakes - Good cross-boarder potential with dynamic S-German region with Munich as a driving motor. 	<ul style="list-style-type: none"> - Political and institutional barriers to creating an open and competitive economic environment, - no targeted unified approach to attract specific business investment or F&E facilities, - too much focus on culture (Salzburg as the city of Mozart and the Salzburg festival), - no diversified strategy in building niche specializations or top of the line educational facilities. - An inability of local government to think, plan and act on a regional and supra-regional level in the long term interest of the Salzburg REGION (this also holds true for various planning efforts within the city of Salzburg where no overriding perspective combining the various findings exists).

Opportunities	Threats
<ul style="list-style-type: none"> - Potential to excel in specialized areas by developing clusters, - Investing in F&E, and creating complementary educational programs. - Opportunities to benefit from a wider catchment area by pursuing cross boarder cooperation with the S-German region (EU-Regio), especially in offering combined advantages such as large well connected and accessible commercial sites with cheaper prices on the Bavarian side, coupled with a high-quality living environment on the Salzburg side. - Potential to serve as major multi-modal node between the large economic agglomerations of Bavaria, Vienna, Northern Italy and Slovenia upon implementation of the MAGISTRALE. 	<ul style="list-style-type: none"> - Loosing out to other more dynamic S-German SMESTOs by not acting on economic development goals in a timely manner, - Loosing business to other international locations by not providing the right environment - Being less competitive in the future due to traffic growth in the surrounding region and not acting on it - "not seeing the forest for the trees" by getting stuck in local disputes rather than taking "big picture" measures.

Salzburg Region

Strengths	Weaknesses
<ul style="list-style-type: none"> - Favorable geographic position, - international standing and image, - relatively dynamic economic environment, - good cross-boarder potential with dynamic S-German region with Munich as a driving motor. 	<ul style="list-style-type: none"> - An inability of local government to think, plan and act on a regional and supra-regional level in the long term interest of the Salzburg REGION (this also holds true for various planning efforts within the city of Salzburg where no overriding perspective combining the various findings exists).
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2.2.2 Policy section

The governance aspect

On a supraregional level there are two organisations responsible for regional planning issues: the Regional Association and EuRegio Salzburg – Berchtesgaden Land – Traunstein.

The city of Salzburg works on various levels with different partners on regional planning issues within the province and within the wider region. The main actors in the region are:

- der Städtebund (The association of cities)
- die Österreichische Raumordnungskonferenz (ÖROK) (Austrian spatial planning authority)
- das Amt der Salzburger Landesregierung, Abteilung 7 – Landesplanung (Ministry, Department of provincial spatial planning)
- der Regionalverband Salzburg Stadt und Umgebungsgemeinden (RVS) (the regional association of Salzburg and surrounding communities)
- die EuRegio Salzburg – Berchtesgadener Land – Traunstein (EuRegio) (The EU regio)
- das Bayerisches Staatsministerium für Landesentwicklung und Umweltfragen (StMLU) (the Bavarian Ministry for development and environmental issues)
- der Regionale Planungsverband Südost-Oberbayern. (the regional planning council of Southeastern Bavaria)

On a more local level, the city of Salzburg is administered by the mayor, his representatives and two city counselors.

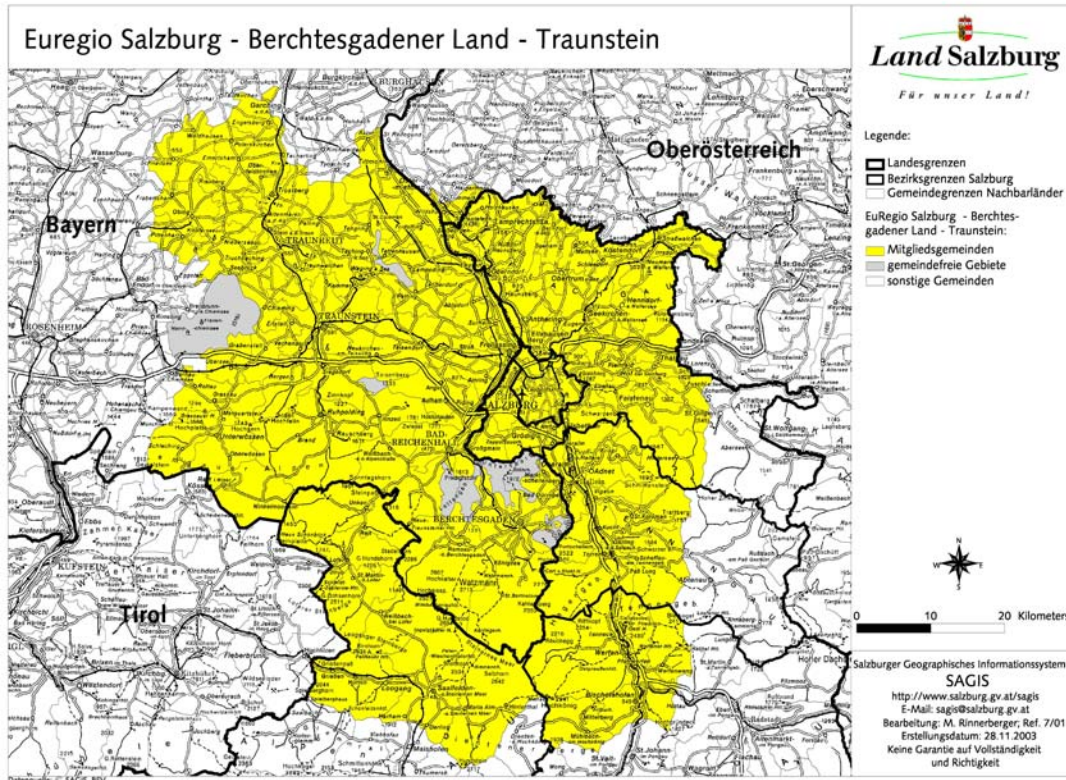
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The EuRegio, for instance, is a voluntary association that looks at the large Salzburg/Berchtesgaden/Traunstein region with roughly 800,000 inhabitants as one functional area and is concerned with strategically positioning the EU-Regio as a competitive and well known region between Munich and Vienna. While the EU-Regio has a strategic plan with specific projects in place it is a step-by-step process to overcome administrative hurdles and opposition stemming from a more local oriented mind set of the politicians and the population in the area. What is really

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The area of the EU-Regio is shown below.



Hypo-thesis	Confirmed	Not confirmed	Information cannot be given	Comments
1	yes			
2		no		
3	Yes			
4	yes			
5	Yes			
6	yes			In Szbg no threat of being overspecialised economically (at present)
7	Yes			
8		No		In the case of Szbg these obstacles could be overcome
9	Yes			
10	yes			
11	yes			
12	yes			
13		No		Not the case for SZBG Not true for medium sized well positioned cities such as Szbg
14		No		Not confirmed that governance is easier
15	Yes			
16	Yes			
16a	Yes			
17		no		Not sure if true for Szbg – a city in agglomeration area with strong identification of inhabitants
18	Yes			
19			Missing from my text	
20		no		Probably true but cannot be confirmed for Szbg
21	yes			
22	yes			
23	yes			
24	Yes			
24a	yes			
25	yes	no		Not sure if true
25a				This contradicts hyp. 25
26	yes			EU-regio

3 FRANCE

Jean-Paul Carrière (Professor in planning, Laboratoire CITERES, University of Tours)

Marie Fournier (Junior research worker, Laboratoire CITERES, University of Tours)

According to the regulations of the handbook, we've chosen the Pays de la Loire¹ region (NUTS 2) as a study case region and the cities of Laval and Saumur as study case cities (NUTS5).

Both are located in the inner part of PdIL and appear as good illustrations of the cases envisaged by the handbook. The city of Laval corresponds quite well to the criteria given for city 2:

- criterion B: medium sized town (70-150 000 inhabitants)
- criterion C: importance of industries
- criterion G: region dominated by one urban centre

Saumur corresponds more to the criteria given for city 1:

- criterion A: small town (less than 70 000 inhabitants)
- criterion D: importance of services, administrative centre
- criterion G: region dominated by one urban centre

The study case on the SMESTO of Laval will be presented first, before the one on Saumur.

¹ In the text, the abbreviation *PdIL* will be used for the name of the region.

3.1 Case study Laval

3.1.1 Descriptive section

Geographic position of the PdIL region

Laval and Saumur are two SMESTOs located in the PdIL region, on the Western part of France and Europe, in the heart of the French Atlantic Arch. Like other French Atlantic territories, PdIL is a region with strong rural characters, despite the fact it is dominated by a large urban area: Nantes/Saint-Nazaire. As a consequence, it can be considered as a good example to study the situation and part played by SMESTOs in the spatial development of rural areas.

Like most French Atlantic regions, PdIL is also torn apart between two aspects of its identity. On the one hand, PdIL is a maritime region. Two departments of PdIL, Loire-Atlantique and Vendée have strong links with the Atlantic ocean, the maritime industry and tourism. In the last few years, urbanism has rapidly spread on the coastal fringe. Nantes is the single urban centre which clearly dominates the whole region and it now has a European size, with a global urban area of 972 809 inhabitants, representing 30.19% of the regional population. The urban area of Nantes-Saint-Nazaire is dynamic in demographic terms thanks to natural growth (0.5% per year in the 90's) and a continuous flow of migrations (0.4% per year). It was even a little bit surprising that Nantes, the 8th French city, was not classified as Mega, but only as interregional FUA, by ESPON 111, when Le Havre, a smaller city in demographic and economic terms, got the title. The Nantes/Saint-Nazaire area was ranked among the 13 Atlantic metropolises by the ASDP. It concentrates a lot of economic functions or high-technology sectors (aeronautics, research, electronics...) and remains one of the most important French Atlantic harbours. It also has an international airport and good links with Paris thanks to the TGV.

On the other hand, the three other departments of the PdIL region (Maine-et-Loire, Mayenne and Sarthe) do not share this maritime identity and can be described much more as rural departments. Urbanisation is not as widespread and agriculture still plays a major role in the local economy. One should also mention the case of the inner Vendée and the Northern part of Loire-Atlantique, which do not belong nor benefit from the "coastal impact". Those territories have many more similarities with Maine-et-Loire or Mayenne. In Sarthe, the influence of the Parisian region is already noticeable.

The two cities of Saumur and Laval belong to the inner areas of PdIL. Laval is the capital of Mayenne, which remains the most rural department in the region. Saumur is "sous-préfecture" in Maine-et-Loire, on the Eastern part of the department. Those two SMESTOS are isolated cities. They both have large rural areas nearby and remain the main pole of services and employment.

Patterns of urbanisation

The PdIL population represents 5% of the French population (3 220 700 inhabitants in 1999)². The regional population density is low in comparison with the rest of France and EU: 100 inhabitants/square kilometre.

Traditionnally, PdIL is more a rural than an urban region. Considering the figures of the last century, it appears that the region was very much behind and has not completely caught up its lateness yet.

Year	1906	1968	1975	1999
PdIL/Urbanisation rate	27.3%	53.9%	58.7%	61.3%
France/Urbanisation rate	42.1%	70%	71.3%	75.5%

Sources: Michel Bodiguel, "Pays de la Loire de 1975 à 1985"/RGP Insee 1999.

Today, there is a huge discrepancy between Loire-Atlantique and the rest of the region. Because of Nantes and the whole coastal fringe, this department even has a higher urbanisation rate than the national average. All the other departments are below.

Department (NUTS3)	Urbanisation rate
Loire-Atlantique	76.7%
Maine-et-Loire	64.9%
Sarthe	62.8%
Vendée	53%
Mayenne	49.1%

Source: Ministère de l'intérieur, de la sécurité intérieure et des libertés locales, "Les collectivités locales en chiffres 2005".

Consequently, the urban network is weaker in PdIL than in most French regions. Nantes is the single urban centre which clearly dominates the region. Angers (332 624 inhabitants) and Le Mans (322 061 inhabitants) are the two other FUAs which have a significant weight.

All the other cities and urban centres of the inner rural areas can be regarded as medium-sized or more often small towns. However, most of the time they assume the same urban functions than bigger cities in other regions. Laval and Cholet are the only two medium-sized cities in PdIL. 18 small towns, whose "Unité urbaine"³ has a size between 10 000 and 50 000 inhabitants, represent the last level of the PdIL urban hierarchy⁴.

² Most of the statistics used for this study come from the last general census in France which took place in 1999 and was run by the INSEE.

³ The concept of "unité urbaine" refers to a continuous settlement area. It is a built space with more than 2 000 inhabitants and less than 200 metres between two buildings.

⁴ Some small towns with less than 10 000 inhabitants are also considered as they are « sous-préfecture de département »; indeed, they have major administrative and political functions.

Small towns (NUTS5)	Population of the "Unité Urbaine"
Les Sables d'Olonne	38,500
Saumur	31,443
Saint-Gilles-Croix-de-Vie	19,982
Saint-Brévin-les-Pins	16,326
La Flèche	16,241
Challans	16,152
Château-Gontier	15,701
Fontenay-le-Comte	15,667
Mayenne	15,636
Clisson	14,440
Les Herbiers	13,932
Bouaye	13,488
Sablé s/Sarthe	12,716
Châteaubriant	11,903
La Ferté-Bernard	11,250
Saint-Jean-de-Monts	10,224
Ancenis	9,497
Segré	7,721
Mamers	6,534

Source: RGP Insee 1999.

Polycentricity of the region

(a) Morphological dimension

If we consider this item at two different scales (national and regional), it rapidly occurs that the PdIL region suffers from the centrality of France and definitely benefits from a polycentric urban network at its own scale.

The territories gathered in the PdIL region have very different historical roots. The department of Loire-Atlantique used to make part of Brittany. Maine-et-Loire is the heir of the Anjou. Mayenne and Sarthe formed the Maine. In the South, Vendée was part of Poitou.

Today, the morphology of the urban network is still very much influenced by this background. The location of Nantes, on the Western fringe of the region, also reinforces the polycentricity of the region. However, because Nantes is a city port, it has always attracted population and goods. Its economic booming, which found its roots in the 18th century and the development of the Triangular Trade explain its domination on the PdIL region today .

Still, VIGARIE [2000] describes three major subsystems within PdIL. Le Mans dominates several small towns, all located on the fringes of the department (La Ferté-Bernard, La Flèche, Mamers, Sablé-sur-Sarthe). Those small cities are real function centres for relatively large patches of area but none of them is more than 16 000 inhabitants. The system organised around Angers is quite different. Towns are bigger and used to be competing with each other. Cholet and Saumur both possess a wide range of services and activities. The system organised around Nantes is the largest and the most complete in the region. It gathers medium-sized

cities like La Baule or La Roche s/Yon, then small towns like Ancenis, or Challans and Les Herbiers in Vendée. Eventually, the city of Laval does not really belong to any of those three sub-systems. Around it, two small towns provide rural areas with employment, goods and services: Mayenne in the Northern part of the department and Château-Gontier in the Southern part. Laval itself is more or less attracted by three different cities: Le Mans, which is the closest, Nantes and also Rennes in Brittany.

(b) Relational dimension

When considering relational polycentricity, it is worth noticing that the urban area of Nantes attracts a large part of the workforce from the whole department of Loire-Atlantique but also from Maine-et-Loire and Vendée. For instance, at the extreme North-West of Maine-et-Loire, in the small commune of La Varenne (600 inhabitants), 200 people go to the urban area of Nantes everyday to work or study. La Varenne is about 35 minutes by car from Nantes⁵.

But flows are also multi-directional. The figures of the Regional Office for Transport [2003] well show that traffics are relatively the same between Le Mans and Angers or between Le Mans and Laval (around 20 000 vehicles a day). Around Nantes, traffic comes from Angers, La Roche-sur-Yon (Vendée) but also Brittany (Rennes); the figures are also around 20 000 vehicles a day. However, the busiest road in PdIL remains the motorway A11 that makes the link between Le Mans and the Parisian region; from Laval to Le Mans, there are about 20 000 vehicles that daily use it. Beyond Le Mans, about 40 000 vehicles use the section of the motorway that makes the link between Le Mans and Paris. As it was already mentioned, the impact of the Parisian region is increasing in the Eastern part of the region. Le Mans is now at the outskirts of Paris; it takes only an hour to reach Paris by train, thanks to the TGV. To SOUMAGNE, Le Mans now belongs to the "Periparisian system".

What is more, the PdIL region is also very much influenced by its neighbouring regions. The Regional Office for Transport points out the strong relations which exist between Nantes and Rennes in Brittany, Laval and Rennes or Angers and Tours in Region Centre.

Hence, one can conclude that if the PdIL region suffers from centricity at the national scale, it is a polycentric region with one dominating urban centre: Nantes/Saint-Nazaire.

Historic and recent developments

In the last few years, the discrepancy between coastal and inner areas appeared as one of the main issues at stake in PdIL.

As already mentioned, Nantes is a city-port and the conurbation of Nantes Saint-Nazaire is the most dynamic area in PdIL. Atlantic tropism and relocations of firms coming from the Parisian region during the last decades explain a large part of this dynamic. Today, the Autonomous Port of Nantes is the fifth most important port in

⁵ Source: Regional Office for Transport.

France. In 1999, it accounted for 70 percent of the port traffic on the French Atlantic Coast. Its activities are very diverse and represent its major strength. Nantes is definitely headed towards the Ocean and has few links with the inner areas of its administrative region. Apart from Nantes, the whole coastal area benefits from a real dynamic. Tourism is one of the major assets, especially in Vendée. Population and urbanisation is increasing rapidly.

On the other hand, the inner parts of the region have more difficulties to maintain. Most of the hinterlands still have strong rural characters, low population density and weaker dynamics.

In terms of demographics or economy, coastal and inner areas are not evolving at the same speed. The average annual rate of change reached 0.83% in Loire-Atlantique (twice as much as at the national scale) between 1990 and 1999 and 0.64% in Vendée, which is the second best result in the region [INSEE RGP 1999]. The figures were better for those two departments in 1990-1999 than in 1982-1990, which was the former intercensal period. In both cases, net immigration explains most of these results (0.44% in Loire-Atlantique and 0.48% in Vendée). In the inner departments, population dynamics were more limited. In Maine-et-Loire, the average annual rate of change corresponded to the national average (0.42%) but this result was far below the one observed during the former intercensal period (0.55%). In Sarthe, results also corresponded to the national average. Mayenne had the lowest rate, with 0.29% between 1990 and 1999.

Hence, it is taking into account this general context that we can work on our two study case cities: Laval and Saumur. In respect with the study case handbook, the study will be divided into three major parts. For each city (first Laval, then Saumur):

- Roles and functions of the SMESTO (corresponds to the end of chapter 2.2.1, descriptive section)
- Analytical section (chapter 2.2.2)
- Policy section (chapter 2.2.3)

Roles and functions of Laval

Laval is the Préfecture of Mayenne (NUTS3). In the PdIL region, Mayenne appears as the most fragile department. Most indicators reveal its weaknesses. However, when considering the very different territories gathered within this department, strong disparities occur. One should mainly stress the discrepancy which exists between the rural areas located on the fringes of the department and the urban spine that has developed following the National Road 162, making the link between the towns of Mayenne in the North, Laval in the central part of the department and Château-Gontier in the Southern part.

(1) The department of Mayenne (NUTS3)

(a) Socio-demography

(I) A weakened demography

With 285 338 inhabitants on 5 175 square kilometres in 1999 [INSEE, 1999], the population of Mayenne only represents 8.8% of the regional population (and 16.1% of the regional space). In PdIL, Mayenne had the smallest population increase and the lowest results on the last census.

Mayenne is the only department where population was decreasing for the last decades. Between 1800 and 1980, its population diminished by 11%. As a comparison, population doubled at a national scale during that same period. Since then, its population started to increase again, thanks to a very high birth rate. Between 1990 and 1999, the average annual rate of change was 0.29% (0.58% for PdIL).

However, there are still more out-migrants than in-migrants in Mayenne. Most of the migrants are youths between 17 and 30 who leave the department to study and find their first job. Surveys show they often come back to Mayenne when they are 30 or 40 and have children. As a matter of fact, Mayenne is the youngest rural department in France.

Today, demographic figures keeps plummeting in most rural areas, especially on the Western part of the department. In those areas, the ageing of population is becoming a real threat. The urban areas, around Mayenne, Château-Gontier and Loiron, succeed in maintaining their population. The agglomeration of Laval is the only territory which has massively gained population within the long term.

(II) A population which remains rural and low qualified

More than half of Mayenne's population lives in rural areas (51%). Population density is one of the lowest at the national scale (55 inhabitants/square kilometres against 108 inhabitants/square kilometres at the national scale). Large patches of areas have a population density lower than 20 inhabitants/square kilometres. On the opposite, population concentrates within the urban areas of the department. As a result, half of the population lives on a third of the department.

Secondly, level of education remains low in Mayenne. More than a quarter of the population between 15 and 39 is not graduated. In the Northern part of the department, about a third of the active population has no diploma. As a matter of fact, more than one worker out of 3 is a semiskilled or skilled worker (the national average is one out of 4). This specificity appears in all parts of Mayenne, even in the urban agglomeration of Laval. Quite logically, the number of managers in Mayenne is well below the national average.

(b) Economic structure

In Mayenne, agriculture and agri-food industry play a major role in the economy. 12% of the active population works in the primary sector and cattle breeding is the first activity. However, employment in the fields of agriculture has been rapidly decreasing in the last few years, even faster than at the national level (-35% between 1990 and 1999/-26% at the national scale). Today, more than half of the arable lands are owned by farmers who are more than 50 years old.

The agri-food industry is located in Laval but also in the Northern and Western parts of the department. Those firms ("*Etablissements des Fromageries BEL*", "*Société d'exploitation des abattoirs d'Evron*", *CELIA*) play a major role in the rural areas, where the primary sector and the agri-food industry represent about the third of the local employment.

The secondary sector is also very developed in Mayenne. It represents one quarter of the jobs within the department (18% at the national scale). Industry is very diversified: of course food-industry but also textile, imprimeries and even new fields like industrial chemistry.

Industry in Mayenne is dynamic and has been able to evolve. Employment did not decrease as much as it occurred at the national scale between 1990 and 1999 (-3% in Mayenne/-12% national figure). It is on the Northern and Western part of the department that most jobs have disappeared. To explain the relative good health of the secondary sector, one should lay the emphasis on the structure of the sector itself. In Mayenne, there is a good balance between big firms and small industries born locally. The department has encountered several closings in the last few years; but some new structures have already reappeared in more recent fields of industry and are called, in the years to come, to make the whole industry of Mayenne evolve. Unemployment in Mayenne remains 4 points lower than in the rest of France (6.4% in Mayenne versus 10% in France)⁶. In many aspects, it is worth making the comparison with the Italian Industrial Districts or clusters. The whole industrial sector in Mayenne is organised within a strong network where firms are all connected with each other, work in complementarity or have similar activities. Just like most clusters, the industrial structure in Mayenne shows good capacities to adapt when industrial activities collapse; today, new activities are developing, especially in the field of digital images or agri-food.

Finally, the tertiary sector is weaker in Mayenne than in most French departments. In 1999, it represented 56% of the active population. Mayenne is the last department in France when considering the part of the tertiary sector within employments. The city of Laval is the only territory where figures equal the national ones. Generally speaking, the tertiary sector is more important in the urban areas. In Laval, Mayenne and Château-Gontier, the part of public sector is particularly large, thanks to schools, social welfare and health structures. However, things are evolving very quickly. Between 1990 and 1999, the part of the tertiary sector has increased by 23% in the department (only 13% at the national level).

⁶ Figures for the 31th december 2004/definition of the International Labour Organisation.

(c) Performance

In the last few months, tendencies that had already shown up were confirmed. In terms of demography, population is now increasing faster than at the end of the 1990s. The birth rate in Mayenne is higher than in the rest of the region and in France (13.4/1000, 13.1/1000 in PdIL and 12.8/1000 in France).

In economic terms, trends are not all good and the economic structure is evolving. The number of new enterprises has increased (6.8%) but remains below the regional figures (14.9%). The unemployment rate has increased by 1% while it is decreasing in the rest of the region.

The secondary sector is losing workers, except in the field of agri-food which has gained employments (2.3%). On the other hand, Employment within the tertiary sector is increasing, especially in the health services and services to enterprises. In general terms, employment has increased by 0.1% within the last 12 months.

A new tendency can also be noted; the development of tourism. Mayenne, in comparison with many other areas in PdIL, does not have so many assets to play on. However, hotels occupancy has increased by 9.4% within a year. This figure is much higher than in the rest of PdIL (4.9%). However, it is very likely that this increase corresponds more to the development of tourism for business than family tourism.

SWOT analysis for the department of Mayenne (NUTS3)

Strengths	Weaknesses
<ul style="list-style-type: none">- dense industrial network- low unemployment rate- good infrastructures for enterprises- environmental assets	<ul style="list-style-type: none">- low population increase- low qualified population- ageing population in rural areas- weak tertiary sector- weak urban network
Opportunities	Threats
<ul style="list-style-type: none">- opportunities for new enterprises to settle down in the region (workforce, good infrastructures, low prices)- touristy assets still to be enhanced (agri-tourism)	<ul style="list-style-type: none">- decline of traditional industries- decline of the primary sector- population decline or exodus from large patches of rural areas (Northern part of the department)

(2) The SMESTOs of Laval (NUTS5)

As already mentioned, Mayenne is a territory full of contrasts. In most rural areas, population is ageing, agriculture progressively declining and economic difficulties appearing. On the opposite, in the main urban centres, demographic and economic indicators are mostly positive. This situation is particularly true in the case of Laval.

Laval: historic and recent developments

Laval is an old market town. The city has progressively developed on the River Mayenne since the Roman Ages.

Like most cities in France, Laval mainly expanded in the second part of the 19th century and after the Second World War. Still, in 1946, Laval was described as a declining city. Nevertheless, in only a few decades (1950-1970s), the local economy was boosted and the city expanded. Historically, Laval was famous for its textile industry. In a few years, some new industries developed: car industry, mechanics, electronics... Because those industries needed many workers, the city of Laval became very attractive. Within a few years, its population increased by more than 10 000 inhabitants, to reach about 50 000 inhabitants. Large peri-urban areas developed around the old town.

In 1964, Laval was a very dynamic city and its tertiary sector had also developed.

Those positive trends stopped in 1975 when the economic crisis hit France. Because Laval was a city mainly depending on the industrial sector, it was largely hurt. From 1975 to 1982, Laval's population decreased by about 2.8%. The immigration rate was largely negative and natural growth was also declining.

However, in comparison with most other SMESTOs in the Western part of France, the city of Laval quickly had a new start from the 1980s onward. Between 1982 and 1990, its total population was rising again (+0.2%) and it rose again by 1.2% from 1990 to 1999.

Today, as it was already mentioned, new fields of activity are developing (high-tech industry) and the city of Laval is benefiting from very positive trends.

Socio-demographic role of the city

The city of Laval and its agglomeration is far more dynamic in demographical terms than the rest of the department. Population is younger and the city gathers most of the higher positions in the department.

The urban agglomeration of Laval is the only area in Mayenne where population has always been increasing. Between 1982 and 1999, the population of the city itself increased by 6.1% and the one of the agglomeration by 10.3%. Today, the city of Laval represents 22% of the total population of Mayenne, and its agglomeration more than a third (102 575 inhabitants within the agglomeration versus 285 338 in the department).

The agglomeration of Laval gathers more youths than the rest of the department. The ratio of the young population (less than 30) is about 0.42 within the city and 0.38 in Mayenne. There is also a huge discrepancy in terms of leading positions. The part of managers within the active population is only 6.2% in Mayenne. It represents 11% of the active population in the city of Laval and 9.2% within its agglomeration.

Considering the local urban network, Laval clearly dominates its department. The two other small towns of the department, Mayenne and Château-Gontier, only represent respectively 15 636 and 15 701 inhabitants, that is to say a quarter of the departmental capital.

Main functions of the city

In order to keep the scheme developed within the handbook, the main items are listed before each paragraph, but the order has not been kept.

Accessibility – transportation node

Despite its relative small size, Laval has good assets to play on in terms of accessibility. The city is a real node between Brittany and Ile de France.

Laval benefits from the TGV rail line that links Paris to Brittany. From Paris to Le Mans, the TGV is at its maximum speed (it takes less than an hour to reach Le Mans from Paris). Then, the line continues towards Laval and Rennes. As a result, it takes only an hour and a half to reach Paris from Laval. Every day, 4 TGVs go in each direction; the TGV station is located in the heart of Laval.

Laval is also on the motorway A81 "l'Océane ". It takes 45 min. to go from Laval to Rennes or Le Mans and 2h30 min. to Paris.

Political-administrative functions

Because Laval is the Préfecture of the department, it gathers a large part of the political and administrative functions at the scale of the department. Just like in any other Préfecture, most ministries have departmental services there (Education, Equipment, Agriculture, Justice...). By the same, the main hospital of the department is located in Laval, as well as the only psychiatric service of the department.

Laval is also the centre for local government of Mayenne: the "Conseil Général". Thanks to decentralisation, local governments have recently gained new competences in the social and economic fields, in transport, road infrastructures...

Eventually, the commune of Laval is now part of a larger grouping of communes: "Laval agglomeration". As the name suggests it, the commune of Laval is the core area of this agglomeration. 20 communes are gathered within this grouping, which was created in 2001 and is about 95 000 inhabitants. Its competences have been transferred by the communes themselves: economy, land planning, welfare, tourism, public transport, waste and environment, local public equipments.

As a consequence, Laval gathers most of the administrative structures in Mayenne. The towns of Mayenne and Château-Gontier, the two "sous-préfectures", also have some administrative functions, but all of them depend on the departmental services located in the capital of the department. As a consequence, if Laval is the only area in Mayenne where the tertiary sector reaches the national figures, it is obvious that the public sector plays a major part in those results.

Supply functions, labour market functions, housing

In Mayenne, like in many French regions, employment is progressively concentrating in cities, while housing is developing away from core urban areas.

Laval is an isolated city, with its own polarisation area. Like most medium-sized towns in this case, the city provides a large patch of Mayenne with services and jobs. Around Laval and between the three towns of Mayenne, Laval and Château-Gontier, a continuous patch of urbanisation keeps developing. Employment concentrates in the core area; it increased by 11% between 1990 and 1999 in the agglomeration of Laval.

Housing is therefore expanding in the rural areas all around. The number of people commuting from the rural areas towards Laval largely increased in the past decade, especially from the Western part (Loiron area) and the rural area referred as "Maine-Angevin" (South-East of Mayenne).

Socio-economic structure and performance

As it was mentioned previously, there is a huge discrepancy in Mayenne between most rural areas, which are still very dependent on the primary sector and have difficulties in keeping their population and the urban areas all concentrated along the National Road 162.

As a result, the city of Laval and the area around is the only territory in Mayenne whose economic structure more or less corresponds to the national one. The tertiary sector is by far the most important (73.5% of the active population within the "Unité Urbaine"). The secondary sector also remains very important with a large part played by some new activities since a few years. If the industrial sector is facing a real change at the departmental level, the city of Laval benefits from a strong dynamic. Today, there are about 4 000 enterprises located on the territory of the agglomeration. *DCN, Renault, Thalès* have developed projects there. Some enterprises born in Mayenne are also located in Laval: *Gruau, Lactalis, Séché Environnement*. Above all, one must mention the strong network of small or medium-sized enterprises located there.

Laval industrial network is definitely heading towards new fields of activity. Some traditional industries become more fragile and the city is taking a new start. One should particularly mention "*Laval Mayenne Technopole*". Created in 1996 by the city, this structure lays the emphasis on technological innovation and makes the link between "grandes écoles", research laboratories and local firms. It also helps business persons who have projects or want to create new firms. Three fields are privileged: food safety, virtual reality, electromagnetic compatibility. "*Laval Mayenne Technopole*" works at the scale of the whole department and give most opportunities to endogenous development.

The city of Laval definitely works hard on attracting new enterprises and helping those already settled down. Taxes on enterprises are the lowest among the French cities between 70 000 and 100 000 inhabitants (13.9%) and Laval also has the lowest rate of unemployment among all medium-sized towns in the Western part of France (5.8%). In novembre 2005, the economic newspaper "*L'Entreprise*" made a

classification of the most attractive medium-sized cities for enterprises. Among those between 70 000 and 100 000 inhabitants, Laval was the first one.

Lastly, Laval is part of two "*Competitive clusters*". In response to the changes in the global economy and their impact on the French economy, the French administration has launched a wide-ranging industrial strategy focusing on the key factors of industrial competitiveness, particularly Research and Development. The government defined a series of measures to promote clusters and 55 projects were granted in 2005. Laval is partner in the projects called "*Images et réseaux*" ("images and networks") and "*EMC2*" (dealing with mechanics and composites).

As a fact, even though the economic structure is threatened in some parts of Mayenne, some big enterprises, like *Mann + Hummel* (automobile industry) have recently settled down in the area of Laval.

Socio-cultural dimension: high quality of life, cultural offers

Eventually, considering quality of life, many indicators can be taken into account. To attract new enterprises or firms, the agglomeration of Laval enhances the fact there is a good quality of life in Mayenne. Like in most rural areas, nature and preserved environment are major assets to play on.

Globally, among the French Atlantic Arch, Laval is described as a city with a good quality of life. It is one of the medium-sized cities which has the lowest level of delinquency (74 acts of delinquency/1000 inhabitants versus 116.7/1000 inhabitants in Nantes), a very good (and used) public transport (89 trips/inhabitants/year (146 in Nantes)) and a relatively good cultural offer for a city of that size (cinema, theatre, exhibitions). However, some surveys mention a weakness in terms of health services. Laval is one of the SMESTOs on the Atlantic Arch which have fewer specialists [PRAUD, 2005].

However, the city of Laval is making strong efforts in order to develop its poles of competences. Since a few years, several "grandes écoles"⁷ have settled down in Laval; its good accessibility from the Parisian region and a low cost of life are some of its main assets. The campus of Laval receives 3 200 students every year. There are 2 engineering schools (ESIEA Ouest and ESTACE-Campus Ouest) as well as an *Institut Universitaire Technologique* and a *Centre Universitaire de la Mayenne-Laval*. Eventually, an *Ecole Supérieure de Création Interactive Numérique* (interactive and digital research) is brand new.

One of the major weaknesses of the city, and the department in general, remains the low results of the tourist industry. The city and agglomeration of Laval are developing activities on fluvial transports and possess a global historical heritage but no real "jewel" to attract tourists.

⁷ In France, the tertiary education sector is divided into two parts: Universities on the one hand and "Grandes Ecoles" which correspond to high standard schools and impose admission tests.

SWOT analysis for the SMESTO of Laval (NUTS5)

Strengths	Weaknesses
<ul style="list-style-type: none"> - main administrative and urban centre in Mayenne - strong industrial network and good capacities to adapt - good accessibility from the Parisian region - good infrastructures for local enterprises - good quality of life 	<ul style="list-style-type: none"> - low qualified workforce - weak tertiary sector (tourism) - lack of city marketing
Opportunities	Threats
<ul style="list-style-type: none"> - development of a Research and Development local pole (digital images) - cooperation with the major poles of the region (within the "Competitive clusters") - efforts made by local authorities to attract new firms - good opportunities in the tertiary sector (tourism, services to enterprises) - development of the tertiary education sector 	<ul style="list-style-type: none"> - threats on traditional industries - threats on low qualified jobs

3.1.2 Analytical section

In France, the INSEE (*National Institute for Statistics and Economic Studies*) is the main source for statistics in demography or economy. The data come from national censuses. Chambres of commerce can also provide us with data on enterprises or business and most ministries publish their own statistics too.

However, the INSEE is the only organism that enables us to have a direct access (by the internet) to a large panel of data and gives enough details to study evolutions at various spatial scales.

In France, the different categories proposed by the handbook are all implemented and the INSEE provides us with data for most of them. The following developments concern the SMESTO of Laval, but general explanations are also made concerning those different categories. Those indications will remain valid for the second study case (Saumur) or any other town and will not be repeated.

A map has been done for each delimitation (for the two SMESTOs) and lists of communes (NUTS5) gathered within those delimitation are presented in the annexes.

(1) Administrative area

(a) General presentation

In France, this first category corresponds to "la commune". It still is the first administrative level. Local authorities are elected within this delimitation.

However, in more strategical terms (town planning, economic development, social welfare...), "l'intercommunalité" has recently become the main delimitation to take

into account locally. In July 1999, a law on the reinforcement and simplification of the intercommunal cooperation created "les communautés d'agglomération" and modified the status of the "communautés de communes" and "communautés urbaines" which already existed. Five years later (January 2004), 86% of the communes in France belonged to one of those groupings [Ministry for Local Governments, 2005].

In most urban areas, there is no more reason to consider the communes by themselves, while they are all interconnected with each other and tackle the same issues. The objective of "l'intercommunalité" is to develop a real project for the whole grouping that takes into account the complementarities and resources of all partners.

The competences of those groupings are transferred by the communes. For the "communautés d'agglomération", which concerns most of the urban areas, communes must appoint authority to the agglomeration in the fields of economic development, land planning, habitat and welfare, city management; it is compulsory to transfer those competences. Communes can also decide to transfer local roads and car parks management, sewage and water management, environmental issues or major equipments.

As a consequence, the competences of "communautés d'agglomération" are very large. However, there are no elections at this level yet. The leaders of the groupings are chosen amongst the people elected within the communes. Therefore, the legitimacy of the grouping remains weak.

(b) Data available for the study case and evolutions

Statistical data are available at the level of the communes. The INSEE provides us with some demographical data back to the census realised in 1975 (intercensal period 1962-75: total population, births, deaths, natural increase, net immigration, housing). Most socio-economic data are available for the last three census realised in 1982, 1990 and 1999. Therefore, it is possible to get a large set of indicators on the commune of Laval itself. The statistics of ministries (especially Ministry of Education, Ministry of Finances) can also be useful. But the results are only given for the last 2 or 3 years.

Considering "l'intercommunalité", Laval is the main pole of a grouping called "Laval agglomération", which gathers 20 communes (see list of communes in the annexes). It represents 93 501 inhabitants. Statistically, the INSEE does not work at the scale of the groupings yet, nor ministries. As a consequence, to get data, it is necessary to add the results of all the communes and calculate the mean, taking into account the part of the communes within the grouping.

Once again, it is possible to get data up to 1975 or 1982. However, one should wonder if it is relevant to consider those groupings 20 years before they were created. "Laval Agglomération" is only four years old.

(c) Review of the data

The data set provided into the Handbook has been taken into account to list the main data available. As it was already mentioned, it is at the communal level that we can find most data. The review of all data is presented at the end of this part, as well as the ones for the PdIL Region (NUTS2) and the departments of Mayenne (NUTS3).

If comparing with the Data Set provided in the handbook, 4 data are missing or presented differently. The first one is the GDP; this data is only available at the scale of the department (NUTS3) or region (NUTS2). The second one is the number of in-migrants and out-migrants. Censuses do not provide us with detailed figures; we only get the net immigration figures. The third main difference with the data set concerns the number of out-commuters and in-commuters. Within an area, we only get the number of people who live in a commune and work in another one. Finally, it was not possible to get precise and homogenous data about the evolution within the economic structure. We only have figures for the last census in 1999.

For all the other data, most results are presented as it was asked in the handbook. One should also mention the fact that most of them are directly available for all the different delimitations that were considered.

(2) Continuous settlement area

(a) General presentation

While the first category corresponds to real administrative delimitations, the second one has no real implementation in France. During the 1990s, the INSEE created a new zone called "Unité Urbaine", that perfectly refers to the definition given by the handbook: *"an area with group of houses with less than 200 metres between them and more than 2 000 inhabitants"*. However, this delimitation is only statistical, mainly taking into account spatial reality.

There is no link between the "Unités Urbaines" and the groupings ("communautés d'agglomération") we have just mentioned. Most of the time, the "Unités Urbaines" cover a far smaller patch of area. In the case of SMESTOs, the "Unités Urbaines" gather the main urban pole with 2 or 3 very small communes on the outskirts. In the case of bigger towns, the "Unité Urbaine" is larger.

(b) Data available for the study case and evolutions

In the case of Laval, the "Unité Urbaine" covers only 4 communes. It represents 62 729 inhabitants, whereas "Laval agglomération" gathers 20 communes and about 95 000 inhabitants. Concerning the evolution of the delimitation, the "Unité Urbaine" is a really new zoning but the INSEE provides us with data calculated afterwards, up to 1975.

(c) Review of the data

Once again, tables are presented at the end of this part.

(3) Functional Urban Area

(a) General presentation

This category also corresponds to a statistical delimitation created by the INSEE: "l'Aire Urbaine". An "Aire Urbaine" can be described as a grouping of communes without any enclave constituted by one major urban pole and several rural communes or smaller towns. At least 40% of the active population living within the "Aire Urbaine" works in the main pole or in one of the communes that are attracted by it.

It is a statistical delimitation and has no real implementation but gives good information on the territory daily influenced by the core pole. It gathers urban but also rural areas.

(b) Data available for the study case and evolutions

In the case of Laval, 38 communes belong to the "Aire Urbaine" (102 575 inhabitants). The INSEE gives very detailed statistics for this delimitation. There are very few data missing in comparison with the ones provided for the communes. The only data missing concerns the evolution of the youths (people under 30/total population) in the last decade.

The delimitation into "Aires Urbaines" was created in the 1980s. Since then, things have changed, as most urban poles keep attracting new activities. As a result, most "Aires Urbaines" have spread since 1990. However, the data provided by the INSEE remain relevant. Indeed, it was decided in 1999 to give 2 lists of results for the "Aires Urbaines". The first one keeps the delimitation as it was in 1990 and all results are given from 1982 to 1999. The second list gives results for the "Aire Urbaine" delimitation in 1999, with once again results from 1982 to 1999.

For this study, we chose to give the results for the "Aire Urbaine 99" (new delimitation).

(c) Review of the data

The data are presented at the end of this Part.

(4) Urban influence Area

(a) General presentation

This last category also corresponds to a statistical delimitation used by the INSEE: "la zone d'emploi". This delimitation was created by the INSEE and the Ministry of Labour services to make surveys on employment and its local environment.

It can be described as an area where most people live and work. Commuting is one of the main indicators to delimitate this zoning, with respect to departmental and regional boundaries. There should be at least 25 000 active persons within a "zone d'emploi".

(b) Data available for the study case and evolutions

In the case of Laval, 56 communes are gathered within its "zone d'emploi" with a total of 119 355 inhabitants. It covers the Western part of the department.

Once again, most of the data are available at the scale of the "zone d'emploi". In comparison with the ones available at the communal scale, those missing refer to the evolution of unemployment and the evolution of the number of commuters.

This delimitation has always kept the same size since it is implemented.

(c) Review of the data

The data are presented in the two following pages with those for the Region PdL, the department of Mayenne, the commune of Laval, its agglomeration, its Continuous Settlement Area and its Functional Urban Area.

Tables for the PdIL Region, the department of Mayenne and the commune of Laval

	Region PdIL	Mayenne	Commune of Laval
<i>Demography</i>			
Total population 99	3,222,061	285,338	50,947
Population change 82-99%	9.1	4.7	1.2
Number of births 90-99	351,376	31,751	6,791
Evolution in the number of births 75-99%	9	6.3	-10.1
Number of deaths 90-99	247,344	22,746	3,577
Evolution in the number of deaths 75-99%	21.4	16	18.3
Annual net immigration 82-90%	0.05	-0.16	-0.89
Annual net immigration 90-99%	0.21	-0.07	-0.6
Annual natural increase 82-90%	0.49	0.44	0.91
Annual natural increase 90-99%	0.37	0.36	0.7
Number of households 99	1,292,740	113,501	23,044
Evolution in the number of households 82-99%	22.4	17.1	18.5
Share of young people in total population 90	0.43	0.43	0.46
Share of young people in total population 99	0.39	0.38	0.42
<i>Socio-economic data</i>			
GDP per capita (Euros)	21,485	21,297	NA
GDP per capita/national GDP per capita	0.9	0.9	NA
Number of unemployed persons 99	161,754	9,819	2,735
Change in the number of unemployed persons 82-99%	34.3	28	28
Number of persons in employment 99	1,291,136	120,678	21,414
Change in the number of persons in employment 82-99%	10.2	0.9	-3.2
Persons working in the primary sector 99%	6.8	12.1	0.5
Persons working in the industry sector 99%	28.5	31.3	25.7
Persons working in the service sector 99%	64.5	56.5	73.7
Number of commuters 99	721,108	61,622	4,703
Evolution in the number of commuters 82-99%	40	44	45
<i>Infrastructures</i>			
Institutions of secondary education (collèges/lycées)	413/236	41/25	9/10
Hospitals	41	7	1

Tables for the urban area of Laval: Continuous Settlement Area, Agglomeration, Functional Urban Area, Urban Influence Area

	Laval_CSA	Laval_agglo	Laval_FUA	Laval_UIA
<i>Demography</i>				
Total population 99	62,729	88,311	102,575	119,355
Population change 82-99%	6.1	10.3	10.3	8.1
Number of births 90-99	7,987	10,638	12,278	14,113
Evolution in the number of births 75-99%	-2.7	4.5	7	7.7
Number of deaths 90-99	4,049	5,097	5,880	7,458
Evolution in the number of deaths 75-99%	21.2	23.2	22.6	19.2
Annual net immigration 82-90%	-0.43	NA	-0.11	-0.19

	Laval_CSA	Laval_agglo	Laval_FUA	Laval_UIA
Annual net immigration 90-99%	-0.43	NA	-0.18	-0.19
Annual natural increase 82-90%	0.91	NA	0.87	0.75
Annual natural increase 90-99%	0.71	NA	0.71	0.63
Number of households 99	27,191	35,899	41,051	47,804
Evolution in the number of households 82-99%	21.4	23.7	23	13.5
Share of young people in total population 90	0.46	0.46	NA	0.45
Share of young people in total population 99	0.42	0.41	0.41	0.4
<i>Socio-economic data</i>				
GDP per capita (Euros)	NA	NA	NA	NA
GDP per capita/national GDP per capita	NA	NA	NA	NA
Number of unemployed persons 99	3,036	3,694	4,096	4,497
Change in the number of unemployed persons 82-99%	28.3	30.1	29.8	NA
Number of persons in employment 99	26,883	39,257	45,780	52,443
Change in the number of persons in employment 82-99%	3.4	10.6	10.8	NA
Persons working in the primary sector 99%	1.1	2.9	4.6	7
Persons working in the industry sector 99%	25.4	27.2	27.5	27.8
Persons working in the service sector 99%	73.5	70	67.9	65.7
Number of commuters 99	8,825	18,779	23,503	26,842
Evolution in the number of commuters 82-99%	41.4	43.6	44	NA
<i>Infrastructures</i>				
Institutions of secondary education (collèges/lycées)	9/10	9/10	9/10	13/10
Hospitals	1	1	1	1

3.1.3 Policy section

This last section deals with the institutional and strategic context which that has to be taken into account within the SMESTO of Laval as well as the challenges the city will face in the coming years.

Governance aspect

Main local authorities in the case of Laval

In the case of Laval, three levels of local government can be considered:

- the Region PdIL (NUTS2)

- the Department of Mayenne (NUTS3)
- the commune or “intercommunalité” of Laval (NUTS5)

Today, they are the main actors for policy planning and implementation at a local scale. Since the beginning of the 1980s, local authorities have gained lots of competences. More recently, in 2003 and 2004, some decentralisation acts were voted and central government transferred new competences to the local governments. If all decisions have not been implemented yet, it is worth reminding most of the changes. The details given now are also relevant in the case of Saumur.

As a fact, the Region (NUTS2) and Department (NUTS3) are the two levels which have gained most competences from the last reforms. Before 2003, the regional government of PdIL (*Conseil Régional*), located in Nantes, was already responsible for regional railways as well as secondary education infrastructures (“lycées”). It is now expected to coordinate economic development for the whole region and has gained new competences in the research and education field. The regional government can also provide local cultural or sport initiatives with subsidies. The enhancement of the regional historical and environmental heritage is also a major objective for the regional government. In comparison with the departmental (NUTS3) or communal (NUTS5) levels, the “Conseils Régionaux” have much more room for manoeuvre to invest funds in projects or determine strategies.

The departmental government for Mayenne (*Conseil Général*) has also gained competences with the decentralisation acts. The Department (NUTS3) is mainly responsible for road infrastructures and social welfare. It also runs the secondary education infrastructures (collèges) and now coordinates most actions in the fields of habitat.

Eventually, communes did not gain so many competences from the 2003 and 2004 reforms. What is more, most decisions are now taken at the scale of the groupings and not at the communal one. In the case of Laval (NUTS5), “Laval Agglomération” (20 communes) is competent for economic development, land planning, habitat and welfare, environmental issues. Even though political choices are still made at the communal scale, most strategic decisions must be taken within this cooperation.

New instruments of planning

Today, the communal scale is less and less relevant. Since 2000, local governments have to implement new plans at the communal or intercommunal scale (*Plan Local d’Urbanisme* (PLU)). They correspond to development area map but lay the emphasis on strategic orientations for the territory. Sustainable urban development has become a major objective.

Those new plans are also influenced by another new type of plan: the “*Schémas de Cohérence Territoriale*” (SCOT). SCOTs are strategic plans designed at a much larger scale than the communal one. Once again, there is a strong emphasis on sustainable development and those plans give orientations in very different fields: road infrastructures and transport, economic development, local agriculture and industry, environmental issues, habitat... Local development plans (PLU) must be in coherence with SCOTs.

In the case of Laval, a SCOT was designed and covers about 35 communes. It corresponds to the Western part of the department and gathers the grouping of Laval (20 communes) and the one created around the town of Loiron, on the West of Laval (15 communes). Total population is about 108 000 inhabitants.

Prevailing challenges and options of development

As a consequence, when considering the SMESTO of Laval, one cannot consider the core city by itself. It is worth referring to the grouping of communes at least: "Laval agglomeration". Today, most planning decisions are taken at the scale of the grouping; a large part are very much influenced by the SCOT's orientations.

When considering figures (chapter 2.2.3), it also appears that most trends are far more positive at the scale of the grouping and at the one of Laval itself. Demographic and economic development takes place in the whole agglomeration and not only within the core city.

Today, Laval Agglomeration is working hard to be attractive. It benefits from many assets: good network of industrial firms, good infrastructures towards Brittany and Paris, low prices and taxes in comparison with some big cities around (Rennes, Nantes or even more Paris). The SMESTO needs to reinforce its service and research sector as well as enhance its local environmental and historical assets but efforts have been made with the creation of "*Laval Mayenne Technopole*" to give a new dynamic to the local economy.

Hence, the case of Laval is interesting to study. This SMESTO is quite isolated within the Region Pays de la Loire; it is surrounded mostly by rural areas with very low population density and activities. Still, it is the first centre for services and employment within Mayenne and has kept gaining population and activities within the last twenty years. Considering the typology given by the handbook, Laval can be considered as a "dynamic and growing SMESTO".

Still, many territories in Mayenne are far from being as wealthy as Laval agglomeration is. Within the department, many rural areas keep losing population and activities. Traditional industries are collapsing on the Northern part of the department and the primary sector is rapidly declining as farmers go on retirement. As a consequence, there is a need in the department of Mayenne for a more balanced development between the urban areas which benefit from most of the local dynamics and large patches of rural areas which are progressively declining. Today, one of the main challenges for the SMESTO is to launch new dynamics within the rural areas that surround it.

Photos/Figures

City centre by night



Photographies : Armel Istin

Inside of the old castle of Laval



Photographies : Armel Istin

Market



Photographies : Armel Istin

Next to the cathedral



Photographies : Armel Istin

Old castle



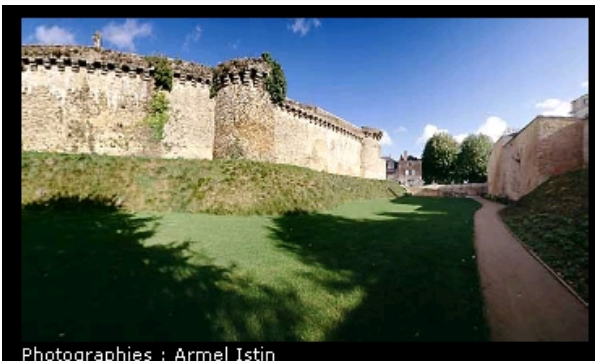
Photographies : Armel Istin

Perrine Public garden



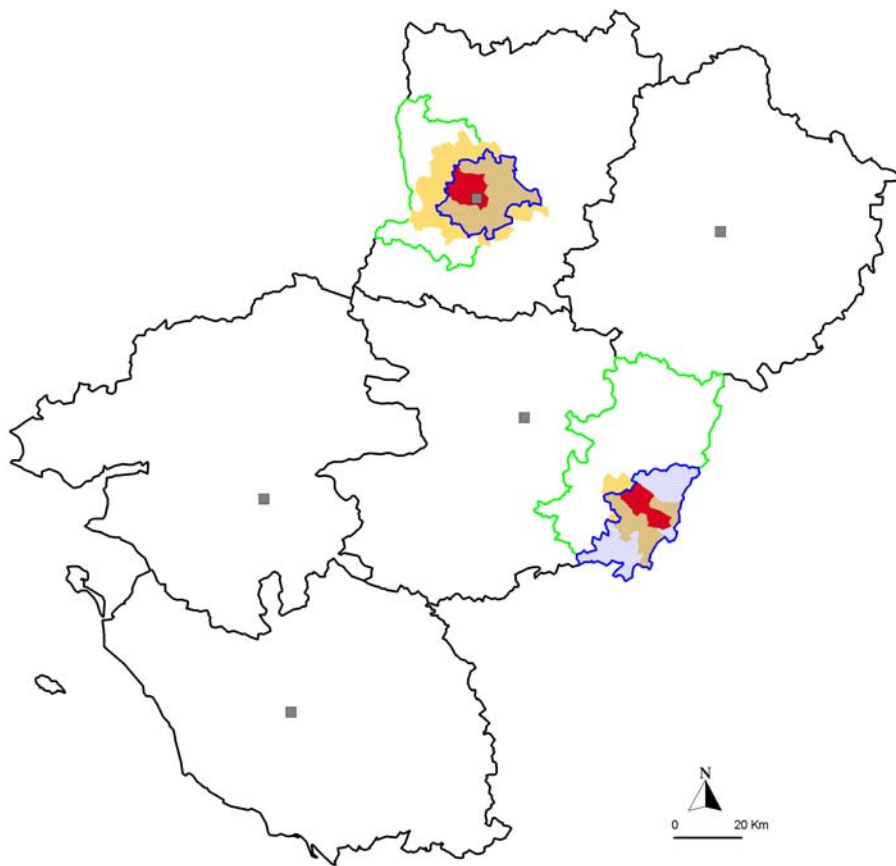
Photographies : Armel Istin

The walls of the city



Photographies : Armel Istin

Spatial categories for the SMESTOs of Laval and Saumur



- Continuous Settlement Area
- Agglomeration
- Functional Urban Area
- Urban Influence Area
- Prefecture

Source : INSEE , SMESTOs' websites
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Buguelou, Fournier

3.2 Case study Saumur

Within the first study case on the SMESTO of Laval, a general description of the regional context (Region PdIL/NUTS 2) has been done. Consequently, the study case on the city of Saumur will directly start with the last section of chapter 2.1.1, *Roles and functions of the SMESTO* (study on the NUTS3 and NUTS5 levels).

Then, chapter 2.1.2, *Analytical section* will be forwarded. Because the general presentations done within the study case of Laval are also relevant in the case of Saumur, the emphasis will be directly laid on the SMESTO itself.

3.2.1 Descriptive section

The case of Saumur is very different from the one of Laval. Saumur is a small town located in the department of Maine-et-Loire, whose capital is Angers. Saumur is at the outskirts of the department, on the Eastern fringe and is facing strong difficulties since a few decades.

The department of Maine-et-Loire (NUTS3)

Socio-demography

(I) A demography which slows down

With 739 242 inhabitants, the department of Maine-et-Loire represents 22% of the total population in PdIL.

Globally, Maine-et-Loire is a wealthy department within PdIL. For long, it was one of the most dynamic areas in the region. However, things have evolved since a few decades. As we described it in the first part, the PdIL region is torn apart between two aspects of its identity: on the one hand a coastal identity and on the other hand a more "rural" identity. As a fact, Maine-et-Loire is today facing difficulties. The region around Angers, its capital, is the only one within the department which remains dynamic in the regional context.

In demographical terms, population increase slowed down during the last decade. Between 1990 and 1999, population increased by 3.8% (annual 0.42%). This result is superior to the national average. Still, it is far below the one of the previous intercensal period; between 1982 and 1990, the annual average rate of change was 0.55%. Just like in Mayenne or Sarthe, Maine-et-Loire keeps a relatively good natural increase but its net immigration was negative for the last two decades. Some rural areas are particularly threatened like *le Segréen* (North West of the department) or *les Mauges* (South).

(II) A department still rural and industrial

Even though Maine-et-Loire urbanisation rate reaches 64%, the department is still rural and very much dependent on agriculture. This urbanisation rate can be mainly explained by the impact of the agglomeration of Angers on the department. Angers

agglomeration gathers 270 331 inhabitants (more than a third of the population of the department). However, on the fringes of the department (*Segréen* in the North, *Saumurois* in the South-East and *Choletais* in the South West), most people live in rural areas and a SMESTO provides them with services and employment. In Maine-et-Loire, there are three SMESTOs (which are also "sous-préfectures de département"): Segré, Saumur and Cholet.

As it was already mentioned in the case of Mayenne, a large part of the active population in Maine-et-Loire is composed by industrial workers. There are about 112 000 workers in the department, which represent a third of total employment. As a fact, rural areas do not only live on agriculture but also a lot on the manufacturing industries. In the main cities, the number of employees has rapidly increased; they now represent one active person out of 4 but managers are still less numerous in Maine-et-Loire than in most French departments. Their part has increased by 18% in the last decade (between 1990 and 1999) but Maine-et-Loire is always behind. Most of them work in public structures.

Economic structure

The primary sector is still far more important in Maine-et-Loire than in most French departments. Around 9% of the active population works in the field of agriculture. Some rural areas, like in the North (*Segréen*) are specialised in cattle breeding and milk farming. They have been facing difficulties for a few years already. But a large part of agriculture in Maine-et-Loire is still wealthy. On the River Loire, farmers have specialised in vegetable gardening, wine production and horticulture. Those productions, with a great added value, are often sold locally, in the cities around (Angers, Saumur, Tours).

The industry sector also employs a large part of the active population in Maine-et-Loire. The best example remains the region of "*le Choletais*" which has strong similarities with the so-called "Italian Districts". The textile industry as settled down in the rural areas around Cholet very early in the beginning of the 20th century. Small workshops were created in villages by the industrials and merchants of Cholet. This tradition has remained for decades and the area around Cholet specialised in textile and leather industry. Leaders in this field, such as *ERAM*, *Catimini* or *TBS* developed their activities within *le Choletais*. Around them, a large number of small subcontractors were created and could complement the activity. Today, the textile industry is facing difficulties, as competition is increasing with the industries of the developing countries. But thanks to this very dense network of enterprises, new fields of activity in engineering industry and agri-food are now developing instead.

Lastly, the tertiary sector employs 62% of the active population. If it is less than the national average, those figures are currently booming. The health sector quickly developed in the last few years, as well as services to enterprises; employment within the public administration sector also increased. Last but not least, the trade sector employs about 40 000 people in Maine-et-Loire and employment within this field increased by 2.5% for the last year.

Performance

In the last few months, the economic activity in Maine-et-Loire seemed to keep up a good dynamic. There was a higher rate of new enterprises in Maine-et-Loire than in the rest of PdIL and France. But its economic structure is evolving; as a whole, it appears that the traditional fields of the industrial sector are slowly declining whereas primary and tertiary sectors are strengthening.

The decrease of the industrial sector is accelerating, especially if we consider employment. There are still difficulties in the fields of textile, leather industry but also within the intermediate goods industry and agri-food industry. When considering recent evolutions, it appears that the need for skilled workers is increasing but semiskilled workers lose jobs.

On the opposite, Maine-et-Loire is a place where the primary sector is reinforcing and even creates jobs. 1650 jobs have been created in the last twenty years in vegetable gardening. Above all, the service sector is currently booming. It is particularly important to lay the emphasis on the touristy assets Maine-et-Loire can play on. Tourism is well structured in the department, with enough capacities to welcome visitors. The main assets are the River Loire, listed at the World Heritage by the UNESCO, "les Châteaux de la Loire" located in the department, the local built heritage and the vineyards of Anjou and Saumur. With the creation of the Regional Natural Park "Loire-Anjou-Touraine", the stress is put on favouring development as well as preserving of the environment.

SWOT analysis for the department of Maine-et-Loire (NUTS3)

Strengths	Weaknesses
<ul style="list-style-type: none">- demography still dynamic- strong polycentric urban network- Angers: second city in the Region PdIL- strength and diversity of the primary sector (vegetable gardening, cattle breeding, crops)- strength of the services sector- environmental and touristy assets	<ul style="list-style-type: none">- negative net immigration- dominance of a low qualified workforce
Opportunities	Threats
<ul style="list-style-type: none">- good links between the cities of "Val de Loire" (Tours-Saumur-Angers-Nantes)- opportunities for local productions with high added value (wines, mushrooms...)- touristy assets still to be enhanced (River Loire within the UNESCO World Heritage)	<ul style="list-style-type: none">- traditional industries facing difficulties- unemployment increasing for low qualified workers- population decline or exodus from some rural areas (Southern part of the department)

The SMESTO of Saumur (NUTS5)

Within this context, what is the situation of Saumur and its area ? In fact, the case of Saumur is not easy; at the outskirts of Maine-et-Loire and the PdIL region, this SMESTO is facing difficulties since a few decades already.

Saumur: Historic and recent developments

Saumur also used to be a market town. The city rapidly developed during the Roman Ages and the Middle Ages. Saumur was a wealthy city, just as all the other cities those located on the River Loire. For centuries, the river was a real asset for Saumur, for trade and to export its products (especially wine).

The economic wealth of the Loire valley started to decline in the end of the 19th century. In the first part of the 20th century, Saumur did not gain population. In comparison, most medium size cities in France were rapidly developing at that time. In the case of Saumur, the birth rate was already declining while the death rate was quite high. Saumur's total population could maintain only thanks to its immigration rate.

In the 20th century, the city of Saumur only expanded between 1945 and 1965. During those two decades, Saumur benefited from the French "baby-boom". But very rapidly, the immigration rate became largely negative, whereas most SMESTOs in France were still very attractive at that time. Until 1975, most French cities (like Laval) were benefiting from a real economic boost ("Trente Glorieuses") but Saumur was already declining. Locally, several American military camps which used to provide the area with jobs closed. By the same, mechanisation started in the wine industry, replacing workers. At that time, Saumur's economy was still dominated by the agri-food industry; the technical evolutions strengthened the local industry.

In the 1970s, new fields of industry started to develop in the region of Saumur. Local authorities took some measures to attract new firms and the city benefited from a national campaign to decentralise firms. Those new industries were mainly from the textile industry, mechanics, electronics. However, the economic crisis very quickly hit Saumur after the arrival of those new activities. Between 1975 and 1982, the unemployment rate increased by 3 times.

Since then, the city of Saumur is still facing difficulties to find new fields of development and its total population keeps declining.

Socio-demographic role of the city

Saumur can be both considered as small or a medium-sized town. In France, a medium-sized town is more than 20 000 inhabitants. Within the frame of the Atlantic Area, a town is medium-sized when its Continuous Settlement Area reaches 50 000. As a fact, with a Continuous Settlement Area of 31 443 inhabitants, Saumur is on the one hand a medium-sized town and on the other hand a small town.

Still, Saumur is the main urban centre in the Eastern part of Maine-et-Loire. But since a few decades, many indicators reveal its weaknesses [FOURNIER, 2005]. Among the small towns of PdLL, Saumur most of the time has some of the worst results (population, ageing, net immigration...). Since a few decades already, local population is progressively declining. Between 1982 and 1999, population in the commune of Saumur has decreased by 7.7%. The phenomenon is noticeable within its whole urban area. One explanation is the very low natural increase and especially the decrease in the number of births. The ageing of population gets faster. At the same time, there are more out-migrants than in-migrants every year.

If we consider the urban network in Maine-et-Loire, it occurs that three cities used to compete with each other: Angers, Cholet and Saumur. The three of them dominate a large patch of the department and have very different identities. The three cities have their own Chambers of Commerce and Industry; for long, market days were the same in the three cities. However, it seems that Saumur is slowly plummeting while Angers has rapidly spread around. When we study figures more carefully, it also occurs that is mainly the commune of Saumur itself whose population is declining. At a larger scale, in the rural areas that border the city, population has increased in the last few years.

Main functions of the city

Saumur is a city with a large variety of assets and a very specific socio-economic structure.

Accessibility – transportation node

Saumur benefits from good railway and road connections. As Laval is at a crossroad between Brittany and the Parisian area, Saumur makes the link between region Centre and region PdLL.

The main railway that reaches Saumur is a secondary (that is to say non TGV) line that goes from Paris towards Nantes, by Orléans, Tours, Saumur and Angers. There is about half an hour to go from Saumur to Tours or, in the other direction, from Saumur to Angers. Commuting is very important between the three cities. In 2003, 820 000 travellers went on the train between Angers and Saumur.

By road, the motorway A85 and the National Road 147 also make the link between Angers and Saumur towards region Centre.

Political-administrative functions

Saumur is a "sous-préfecture" in Maine-et-Loire. At a smaller scale than in Angers, the deconcentrated services of the State are competent for all formalities. A local hospital and a court of justice are also located there. Saumur is also the urban core of several local governments. As well as in Laval, a grouping of communes was created around Saumur, gathering 32 communes and called "Agglomération Saumur Loire Développement".

Supply functions, labour market functions, housing

Saumur is the first pole of services and employment in the Eastern part of Maine-et-Loire and remains an isolated urban pole, in the sense that it is not directly influenced by the spread of Angers agglomeration. Saumur is not a "dormitory area" for Angers yet.

Saumur gathers 40% of the enterprises located within the Eastern part of the department and attracts about 3 000 workers every day, which represents about 10% of its total population. Supply functions are also important. Trade is a strong sector of activity in Saumur. Its trading area covers 106 communes (about 142 000 inhabitants). It heads towards the North of Maine-et-Loire (Baugé, Noyant) and reaches the Northern fringes of departments Vienne (Loudun) and Deux-Sèvres (Thouars) in the South.

Socio-economic structure and performance

In and around the city of Saumur, the economic structure is very diverse.

About 10% of the active population works within the primary sector in Saumur's Functional Urban Area. This rate is very high in comparison with French figures. What is more, this sector is very dynamic; cattle breeding and feed crops take a major part of the arable land, but also vineyards with famous seals (Crémant de Loire, Chardonnay, Sauvignon...) and some specific fields of activity and know-how like roses and mushrooms farming.

Within the secondary sector, several industrial firms have settled in or around Saumur. Once again, the agri-food industry is leader (mushrooms, wines). Most of the other firms are specialised in metallurgy, electronic or chemistry. It is within the industry area that most difficulties occurred in the last few years. One specific know-how has also been developed in the area: medals (religious, military...) production.

Eventually, the tertiary sector plays a major part within Saumur economy. There is a large number of craftspersons or self employed persons within Saumurois, who represent about 35% of these activities for the whole department (while total population in Saumurois is only about 17% of the Maine-et-Loire population). Saumur also benefits from very many touristy assets. In Saumur itself, its chateau, the National School for horse riding (*Cadre Noir*), the river Loire attract tourists from France and the whole Europe. Within the Saumurois, there are about 30 chateaux and 24 museums. Some major assets are worse reminding: the Royal Abbey of Fontevraud and the zoo of Doué-la-Fontaine. Two million tourists come every year to Saumurois. About a third are foreign people (British, Dutch, German). Saumurois possesses good capacities in terms of hotels, guest houses... Hotels accommodate about 30% of the tourists. In opposition to the coastal areas, tourism in Saumurois is not really seasonal and keeps going in winter times.

Socio-cultural dimension: high quality of life, cultural offers

As it has just been mentioned, Saumur benefits from a high quality of life, thanks to an exceptional natural and built environment. The very large trade sector (food

shops, cafes...) also plays a major part within the local quality of life. Because it is a touristy place, Saumur benefits from a wide variety of shops. About 20% of the shops in Maine-et-Loire are located in Saumurois. Most of them are small enterprises; 9 out of 10 have a commercial surface that is less than 300 square metres. In the last few years, the city launched new cultural manifestations. A whole cultural program is now proposed in winter time. Those events have a great success; the attendance rate increased by 20% within the last year.

But Saumur remains a medium-sized town at the outskirts of Maine-et-Loire. There are 6 "lycées" (high secondary schools) in Saumur but very few superior formations. Some degrees proposed by the University of Angers are located in Saumur, but they mainly concern fields in which the city itself has specialised: stud farms management, ecotourism or services.

SWOT analysis for the SMESTO of Saumur (NUTS5)

Strengths	Weaknesses
<ul style="list-style-type: none"> - primary sector is dynamic (vegetable gardening, vineyards, roses) - strength of the services sector, crafts and trade - high quality of life - main touristy assets within the department of Maine-et-Loire 	<ul style="list-style-type: none"> - population decline - ageing population - negative net immigration - industrial decline - high unemployment rate - low qualified workforce - few tertiary education schools
Opportunities	Threats
<ul style="list-style-type: none"> - Saumur, a city of "Val de Loire": major asset to enhance (tourism) - good opportunities for local productions (vegetable gardening, "vins du Saumurois") 	<ul style="list-style-type: none"> - decline of the industrial sector and increase of unemployment - more population exodus - isolation of the city itself at the outskirts of the department and region

3.2.2 Analytical section

Because this second part has already been developed in general terms in the case of Laval, developments will only concern Saumur itself. Once again, maps will be proposed for the spatial delimitations and the lists of communes are presented in the annexes. The tables with statistical data are provided at the end of this section for each of the delimitations. The INSEE remains the main source.

(1) Administrative area

Just like in the case of Laval, the first administrative area corresponds to "la commune". But even though Saumur is a relatively small city, a "communauté d'agglomération" was created in 2000. 32 communes belong to this grouping (see list within the annexes), which represents 61 332 inhabitants. It was named "Saumur Loire Développement".

(2) Continuous settlement area

The continuous settlement area corresponds to the "Unité Urbaine", as it is defined by the INSEE. This delimitation represents a spatial reality but has no direct influence on planning or public policies.

Saumur "Unité Urbaine" covers far less communes than its "communauté d'agglomération". Only 4 communes belong to it: Saumur, Parnay, Souzay-Champigny and Turquant. It represents about 31 443 inhabitants, while the commune of Saumur itself is 29 857 inhabitants.

Once again, it shows that there is very little difference between the core city and its "Unité Urbaine" in the case of SMESTOs. This remark is not valid for larger cities.

(3) Functional Urban Area

The Functional Urban Area corresponds to the INSEE delimitation "Aire Urbaine", which mainly takes into account commuting (40% of the active population within this zone works in the main urban pole).

In the case of Saumur, the FUA gathered 22 communes and 47 445 inhabitants in 1999. It is one of the rare cases where the FUA is smaller than the "communauté d'agglomération". It reveals that within this grouping ("Saumur Loire Développement"), there are smaller urban poles which are also very attractive; it must be the case of the commune of Montreuil-Bellay for instance, in the Southern part of the agglomeration. With 4 461 inhabitants, it is the second urban pole within the agglomeration after Saumur.

(4) Urban Influence Area

On the opposite, the Urban Influence Area of Saumur is very large. This delimitation also created by the INSEE ("zone d'emploi") takes into account daily movements between the main urban centres and the communes around.

The UIA of Saumur gathers 103 communes. This large area reaches the Northern part of the department towards Baugé and corresponds to all the South and Eastern part of Maine-et-Loire.

131 522 inhabitants live in the UIA of Saumur. When considering those figures, it appears that most communes are in fact very small and rural communes (average population per commune: 1 275 inhabitants). What is more, if we deduct the three main towns of the UIA (Saumur, Baugé and Montreuil-Bellay) and their population, it remains 37 981 inhabitants within 100 communes; that is to say about 380 inhabitants per commune.

Data about those different categories are presented within the following two pages.

Tables for the PdIL Region, the department of Maine-et-Loire and the commune of Saumur

	Region PdIL	Maine-et-Loire	Saumur Commune
<i>Demography</i>			
Total population 99	3,222,061	732,942	29,857
Population change 82-99%	9.1	7.9	-7.7
Number of births 90-99	351,376	83,120	3,875
Evolution in the number of births 75-99%	9	5	-6.5
Number of deaths 90-99	247,344	53,106	2,881
Evolution in the number of deaths 75-99%	21.4	20	22
Annual net immigration 82-90%	0.05	-0.1	-1.43
Annual net immigration 90-99%	0.21	-0.05	-0.47
Annual natural increase 82-90%	0.49	0.65	0.63
Annual natural increase 90-99%	0.37	0.46	0.37
Number of households 99	1,292,740	288,312	12,952
Evolution in the number of households 82-99%	22.4	22	10
Share of young people in total population 90	0.43	0.45	0.43
Share of young people in total population 99	0.39	0.41	0.39
<i>Socio-economic data</i>			
GDP per capita (Euros)	21,485	19,648	NA
GDP per capita/national GDP per capita	0.9	0.8	NA
Number of unemployed persons 99	161,754	35,924	2,192
Change in the number of unemployed persons 82-99%	34.3	33.7	22.4
Number of persons in employment 99	1,291,136	293,415	10,584
Change in the number of persons in employment 82-99%	10.2	8.1	-13
Persons working in the primary sector 99%	6.8	8.7	5.5
Persons working in the industry sector 99%	28.5	29	26.9
Persons working in the service sector 99%	64.5	62.1	67
Number of commuters 99	721,108	160,416	2,887
Evolution in the number of commuters 82-99%	40	41.3	32.4
<i>Infrastructures</i>			
Institutions of secondary education (collèges/lycées)	413/236	93/52	7/6
Hospitals	41	11	1

Tables for the urban area of Saumur: Continuous Settlement Area, Agglomeration, Functional Urban Area, Urban Influence Area

	Saumur CSA	Saumur aggro	Saumur FUA	Saumur UIA
<i>Demography</i>				
Total population 99	31,443	61,339	47,445	131,522
Population change 82-99%	-6.4	1	-2	2.7
Number of births 90-99	4,040	7,300	5,696	14,795
Evolution in the number of births 75-99%	-4.5	5.9	3.1	10.5
Number of deaths 90-99	2,990	5,220	4,050	11,712
Evolution in the number of deaths 75-99%	21.5	19.8	20.8	19.2
Annual net immigration 82-90%	-1.3	NA	-0.71	-0.19

	Saumur CSA	Saumur agglo	Saumur FUA	Saumur UIA
Annual net immigration 90-99%	-0.43	NA	-0.48	-0.13
Annual natural increase 82-90%	0.6	NA	0.56	0.38
Annual natural increase 90-99%	0.37	NA	0.38	0.26
Number of households 99	13,576	24,763	19,533	51,890
Evolution in the number of households 82-99%	11.3	14.5	13.8	9.4
Share of young people in total population 90	0.43	0.42	NA	0.42
Share of young people in total population 99	0.38	0.38	0.38	0.37
Socio-economic data				
GDP per capita (Euros)	NA	NA	NA	NA
GDP per capita/national GDP per capita	NA	NA	NA	NA
Number of unemployed persons 99	2,294	3,948	3,155	7,205
Change in the number of unemployed persons 82-99%	23.6	29.4	28	NA
Number of persons in employment 99	11,205	22,830	17,624	49,699
Change in the number of persons in employment 82-99%	-11.6	-2.8	-3.8	NA
Persons working in the primary sector 99%	6.3	12.3	9.7	15
Persons working in the industry sector 99%	27.3	27.9	27.7	27.6
Persons working in the service sector 99%	66.3	59.8	62.5	57.4
Number of commuters 99	3,342	11,082	8,262	26,579
Evolution in the number of commuters 82-99%	33	35.	34.	NA
Infrastructures				
Institutions of secondary education (collèges/lycées)	7/6	8/7	7/6	16/7
Hospitals	1	1	1	4

3.2.3 Policy section

Governance aspect

Just like in Laval, three main levels of local government can be considered:

- the Region PdIL (NUTS2)
- the Department of Maine-et-Loire (NUTS3)
- the commune or "intercommunalité" of Saumur (NUTS5)

As we have already mentioned the competences of the regional (NUTS2) and departmental (NUTS3) local governments, it is worth focusing here on the agglomeration of Saumur itself: "Saumur Loire Développement" and evoking

another kind of cooperation that is currently spreading in most French rural areas: "les Pays". In the case of Saumur, it is "le Pays du Saumurois".

The grouping which is organised around Saumur gathers 32 communes (see list in the annexes). It is quite a large grouping when considering the size of Saumur itself: total population within the agglomeration is twice as large as Saumur population. The communes transferred several competences to the grouping such as economic development, city planning, environmental issues, social welfare... and just like in most cases, this grouping is progressively gaining position. With a budget of more than 50 million euros in 2005, "Saumur Loire Développement" launched several investments and projects recently (especially in transport, leisure...) and laid the emphasis on the economic development as well as local waste and water issues.

But like most rural areas, the city of Saumur and its surroundings have also developed another kind of cooperation since a few years: "le Pays du Saumurois". "Les Pays" were created in 1995 at the national level to reinforce the links between rural and urban areas, promote local resources and find new ways of endogenous development. In PdIL, most rural areas now belong to a "Pays". Around Saumur, "le Pays du Saumurois" was official in 2003. It gathers 45 communes which all belong to one of the following three groupings: "Saumur Loire Développement", the grouping organised around Doué-la-Fontaine ("Communauté de Communes de la Région de Doué la Fontaine") and the grouping of Genes ("Communauté de Communes de Genes"). Its population reaches 80 000 inhabitants. "Le Pays du Saumurois" lays the emphasis on actions within the tourist sector. The objective is to strengthen the resources and complementarities of the three groupings. Doué-la-Fontaine is indeed another major touristy pole in Maine-et-Loire and a cooperation between the two towns of Saumur and Doué would make both of them more attractive.

Prevailing challenges and options of development

It is within the frame of its agglomeration ("Saumur Loire Développement") or "Pays du Saumurois" that the SMESTO of Saumur has to find new means of development.

Saumur is a rich city, with a great cultural, environmental and cultural heritage. Still, it has been progressively plummeting since a few decades, at the outskirts of Maine-et-Loire. When considering figures, most economic and demographical indicators are declining at the scale of the commune itself, but also at the scale of the Functional Urban Area.

Saumur has not found ways to enhance efficiently its assets yet. Today, it should concentrate on endogenous development and reinforce activities within its main economic fields.

Tourism already plays a large part within local economy. Still, Saumur could benefits more of a very favourable local context. The SMESTO of Saumur is the heart of the "Pays du Saumurois"; with the other urban and touristy pole of Doué-la-Fontaine, there is a good basis for a larger cooperation. Saumur is also part of

the Regional Natural Park of “Loire-Anjou-Touraine”, which represents another good opportunity to reinforce its image nationwide and even further. Saumur is located within the area delimited by the UNESCO World Heritage on the River Loire. Once more, it is a great opportunity to attract more people and create new activities.

Among the primary sector, some traditional activities are also facing difficulties and should be boosted. It is particularly the case of mushrooms cultures, which were traditionally cultivated in caves and are currently plummeting.

Eventually, Saumur appears as “potential developing SMESTO” with great opportunities to handle. It is within the frame of its agglomeration and even more within the frame of “Pays du Saumurois” or “PNR Loire-Anjou-Touraine”, that some new dynamics can take roots.

3.2.4 General conclusion

As a matter of fact, it appears that both study cases illustrate very different contexts and realities. The SMESTO of Laval is a strong medium-sized town, even though it is quite isolated in the PdIL region. Whereas the department of Mayenne is facing economic and demographic difficulties, the agglomeration of Laval benefits from a good dynamic and has several assets to play on.

On the other hand, the SMESTO of Saumur is a small town with new dynamics to launch. Within Maine-et-Loire, Saumur is isolated and most activities are concentrating around Angers or traditionally around Cholet within the industrial sector. Saumur has to enhance a different identity and develop cooperation with close territories. We have already mentioned several examples; opportunities also exists outside the PdIL region, in region Centre with cities such as Chinon or Langeais, all located on the River Loire.

Hypo-thesis	Confirmed	Not confirmed	Information cannot be given	Comments
1	Laval Saumur			See the difficulties faced by the industries in Laval in the 70s, when the city was mainly industrial See the difficulties Saumur is facing in the agro-food industry
2		Laval Saumur		In the case of Laval, its department Mayenne has been facing difficulties while Laval has nearly always had positive trends. On the opposite, the city of Saumur is declining while the department of Maine-et-Loire is one of the wealthiest in the Western part of France.
3	Saumur	Laval		See figures
4	Laval Saumur			Both cities benefit from a very rich heritage which marks their urban landscape.
5	Saumur	Laval		The city of Saumur has many more difficulties to face the decline of its traditional industries than the city of Laval, where new fields of competences are continuously

Hypothesis	Confirmed	Not confirmed	Information cannot be given	Comments
				developed.
6	Saumur	Laval		
7	Laval	Saumur		
8	Saumur	Laval		See description of the local economies in the text.
9	Laval Saumur			Both cities used to be market cities in the past times. They are also both located in rural areas where they must at least supply with most basic functions.
10	Laval Saumur			
11	Laval Saumur			Saumur is already a city that puts the emphasis on its cultural heritage. In the case of Laval, that is a new field to develop activities.
12	Saumur	Laval		
13	Saumur	Laval		
14			Laval Saumur	
15	Laval	Saumur		If Laval benefits from many advantages: low costs, innovation spillovers and quality of life, the city of Saumur does not benefit from so positive trends.
16 16a		Laval Saumur		
17	Laval Saumur			The two cities are good examples of SMESTOs located in rural areas.
18	Laval Saumur			In the case of Laval, see the new fields of activities which are developing (high-tech). In the case of Saumur, one can mention, its cultural and historical assets.
19				
20			Laval Saumur	
21			Laval Saumur	
22	Laval	Saumur		In comparison with Laval, Saumur has many more difficulties to face competition.
23	Laval Saumur			
24 24a	Laval Saumur			
25 25a	Laval Saumur			
26	Laval Saumur			See the new urban networks which are developing between cities in France (poles de compétitivité).

3.2.5 Annexes

List of communes (NUTS5) located in the Continuous Settlement Areas of Laval and Saumur

Laval CSA	Saumur CSA
Changé	Parnay
Laval	Saumur
Saint Berthevin	Souzay-Champigny
	Turquant

List of communes (NUTS5) located in the Agglomerations of Laval and Saumur

Laval Agglo	Saumur Agglo
Ahuillé	Allonnes
Argentré	Antoigné
Bonchamp	Artannes
Châlons-du-Maine	Brain sur Allonnes
Changé	Brézé
Entrammes	Brossay
Forcé	Chacé
La Chapelle-Anthenaise	Cizay la Madeleine
Laval	Courchamps
L'Huisserie	Distré
Louverné	Epieds
Louvigné	Fontevraud
Montflours	La Breille les Pins
Montigné-le-Brillant	Le Coudray-Macouard
Nuillé-sur-Vicoin	Le Puy Notre Dame
Parné-sur-Roc	Montreuil Bellay
Saint-Berthevin	Montsoreau
Saint Jean sur Mayenne	Neuillé
Saint-Germain-le-Fouilloux	Parnay
Soulgé-sur-Ouette	Rou-Marson
	Saint-Cyr-en-bourg
	Saint-Just-sur-Dives
	Saint-Macaire
	Saumur
	Souzay-Champigny
	Turquant
	Varennes
	Varrains
	Vaudelnay
	Verrie
	Villebernier
	Vivy

List of communes (NUTS5) located in the Functional Urban Areas of Laval and Saumur

Laval FUA	Saumur FUA
Ahuillé	Artannes
Andouillé	Brézé
Argentré	Chacé
Astillé	Chênehutte-Trèves-Cunault
La Baconnière	Le Coudray-Macouard
Bazougers	Courchamps
Beaulieu-sur-Oudon	Distré
Bonchamp	Epieds
La Brûlatte	Montsoreau
Châlons-du-Maine	Parnay
Changé	Rou-Marson
La Chappelle-Anthenaise	Saint-Cyr-en-bourg
Courbeville	Saint-Martin-de-la-Place
Entrammes	Saumur
Forcé	Souzay-Champigny
Le Genest-Saint-Isle	Turquant
L'Huisserie	Les Ulmes
Laval	Varennes-sur-Loire
Loiron	Varrains
Louverné	Verrie
Louvigné	Villebernier
Maisoncelles-du-Maine	
Montflours	
Montigné-le-Brillant	
Montjean	
Nuillé-sur-Vicoin	
Olivet	
Origné	
Parné-sur-Roc	
Ruillé-le-Gravelais	
Sacé	
Saint-Berthevin	
Saint-Georges-le-Flécharde	
Saint-Germain-le-Guillaume	
Saint-Jean-sur-Mayenne	
Saint-Ouën-des-Toits	
Soulgé-sur-Ouette	

List of the communes (NUTS5) located in the Urban Influence Area of Laval and Saumur

Laval UIA	Saumur UIA
Ahuillé	Allonnes
Andouillé	Ambillou-Château
Argentré	Antoigné
Astillé	Artannes
La Baconnière	Auverse
Beaulieu-sur-Oudon	Beaugé
La Bigottière	Beaufort-en-Vallée
Bonchamp	Blou
Le Bourgneuf-la-Forêt	Bocé
Bourgon	Brain-sur-Allonnes
La Brûlatte	Breil
Chailland	La Breille-les-Pins
Châlons-du-Maine	Brézé
Changé	Brigné
La Chapelle-Anthenaise	Brion
La Chapelle-Craonnaise	Broc
Cosmes	Brossay
Cossé-le-Vivien	Chacé
Courbeveille	Chalonnnes-sous-le-Lude
La Croixille	Chartrené
Cuillé	Chavaignes
Entrammes	Chemellier
Forcé	Chênehutte-Trèves-Cunault
Gastines	Chevire-le-Rouge
Le Genest-Saint-Isle	Chigné
La Gravelle	Cizay-la-Madeleine
L'Huisserie	Clefs
Juvigné	Concourson-sur-Layon
Laubrières	Comé
Launay-Villiers	Le Coudray-Macouard
Laval	Courchamps
Loiron	Courléon
Louverné	Coutures
Louvigné	Cuon
Méral	Dénezé-sous-Doué
Montflours	Dénezé-sous-le-Lude
Montigné-le-Brillant	Distré
Montjean	Doué-la-Fontaine
Nuillé-sur-Vicoin	Echemiré
Olivet	Epieds
Parné-sur-Roc	Fontaine-Guérin
Peuton	Fontevraud-l'Abbaye
Port-Brillet	Forges
Quelaines-Saint-Gault	Fougeré
Ruillé-le-Gravelais	Gée
Saint-Berthevin	Gennes
Saint-Cyr-le-Gravelais	Genneteil
Saint-Germain-le-Fouilloux	Grézillé
Saint-Germain-le-Guillaume	Le Guédéniau
Saint-Hilaire-du-Maine	La Lande-Chasles
Saint-Jean-sur-Mayenne	Lasse

Laval UIA	Saumur UIA
Saint-Ouën-des-Toits	Linières-Bouton
Saint-Pierre-des-Landes	Longué-Jumelles
Saint-Pierre-la-Cour	Louerre
Saint-Poix	Louresse-Rochemenier
Simplé	Martigné-Briand
	Mazé
	Meigné
	Meigné-le-Vicomte
	La Ménitré
	Méon
	Montfort
	Montpollin
	Montreuil-Bellay
	Montsoreau
	Mouliherne
	Neuillé
	Noyant
	Noyant-la-Plaine
	Parçay-les-Pins
	Parnay
	La Pellerine
	Pontigné
	Le Puy-Notre-Dame
	Les Rosiers-sur-Loire
	Rou-Marson
	Saint-Clément-des-Levées
	Saint-Cyr-en-Bourg
	Saint-Georges-des-Sept-Voies
	Saint-Georges-du-Bois
	Saint-Georges-sur-Layon
	Saint-Just-sur-Dive
	Saint-Macaire-du-Bois
	Saint-Martin-d'Arcé
	Saint-Martin-de-la-Place
	Saint-Philbert-du-Peuple
	Saint-Quentin-lès-Beaurepaire
	Saumur
	Souzay-Champigny
	Le Thoueil
	Turquant
	Les Ulmes
	Varennnes-sur-Loire
	Varrains
	Vaudelnay
	Vaulandry
	Les Verchers-sur-Layon
	Vernantes
	Vernoil
	Verrie
	Le Vieil-Baugé
	Villebernier
	Vivy

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General statistics: www.insee.fr

Region Pays de la Loire: www.paysdelaloire.fr

SMESTO of Laval:

- www.lamayenne.fr
- www.mayenne.cci.fr
- www.mairie-laval.fr
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- www.laval-tourisme.com

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- www.cg49.fr
- www.saumur.cci.fr
- www.ville-saumur.fr
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- www.ot-saumur.fr

The photographs of the two SMESTOS provided with the studies come from their Tourist Information Centre websites.

4 GERMANY

4.1 Case study Herdecke

4.1.1 Descriptive section

Geographic position

The municipality of Herdecke, subject of matter of this SMESTO case study, is situated in the western part of Germany, in the federal state North-Rhine-Westfalia and belongs to the administrative district of Arnsberg (see figure 1).

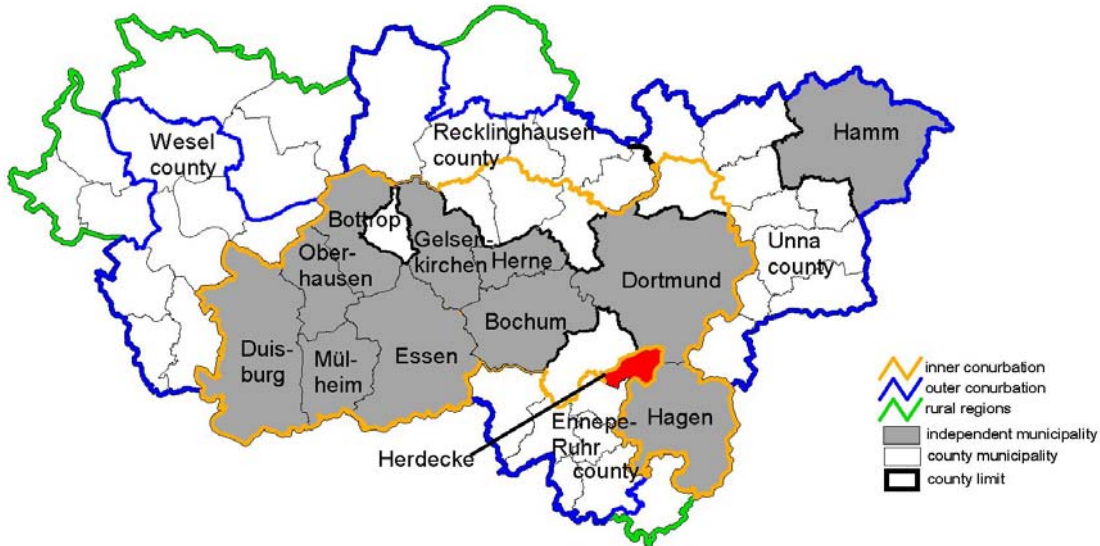
Figure 1: Geographic position of the Ruhr Area in North-Rhine Westfalia



Data source: http://upload.wikimedia.org/wikipedia/commons/0/09/Lage_des_Ruhrgebiets.png, changed by BBR, 2005

Herdecke is not a district-free city like Bochum or Dortmund. Together with eight other municipalities, all of them small or medium sized towns, it is part of the Ennepe-Ruhr Kreis (county).

Figure 2: Geographic position of Herdecke in the Ruhr Area



Data source: ATKIS®VG 250, © Bundesamt für Kartographie und Geodäsie 2003

In a wider regional perspective Herdecke is part of the Ruhr Area (Ruhrgebiet), the former coal mining and steel industry region in western Germany, which is going through a radical process of transformation nowadays from a mono-structured industrial stamped area to a service oriented region with a diversified economic structure. Today the Ruhr Area is the biggest metropolitan region in Germany with a population of 5 million people.

The administrative organisation of the Ruhr Area is held by the "Regionalverband Ruhr" (RVR), an association of the 11 independent municipalities and four counties, each of them consisting out of nine to 13 county municipalities. Referring to the settlement density the Ruhr Area can be divided into a core area, the so called inner conurbation (Ballungskern), a surrounding area called outer conurbation (Ballungsrand) and rural areas (ländliches Gebiet).

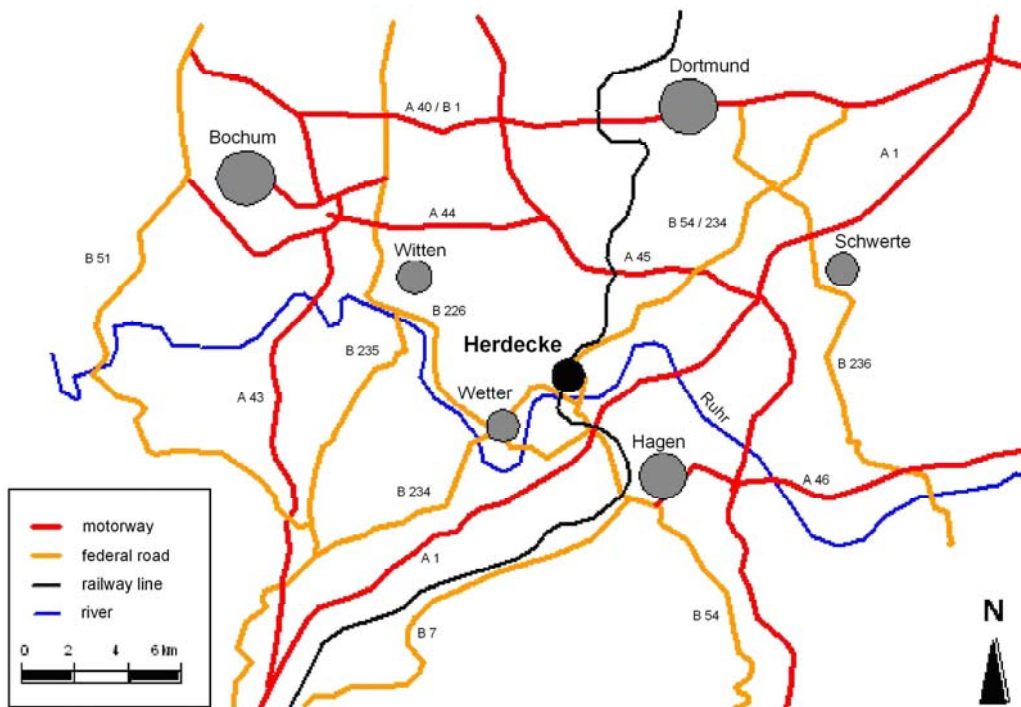
Herdecke is located in the outer conurbation, south of the city of Dortmund, one of the core urban agglomerations in the eastern part of the Ruhr Area. Other surrounding cities are the city of Witten in the north-west (subject of matter in the other case study) and the city of Wetter in the south (both municipalities of the Ennepe-Ruhr-Kreis and SMESTOs themselves). In the south-east the city Hagen is neighbouring Herdecke.

Situated north of the River Ruhr, which can be seen as a border between the lowlands of northern part of Germany and the southern situated low mountain range, Herdecke already belongs to the natural landscape unit of the Süderbergland, a region that can be characterized by an average height above NN

of 200 – 500 m and relatively strong topography and relief. Therefore the largest part of the total area of Herdecke is open space countryside and shows an attractive and high quality of nature (65% of the total area, while only about 35% are settlement areas with high density of population and are densely populated. Herdecke is situated between the Ardey-mountains in the north and two storage lakes (lake Hengstey and lake Harkort) of the River Ruhr at the southern border of the city.

Herdecke is closely linked to main transport infrastructure as depicted in figure 2: Motorways pass on the eastern border (A 45, Sauerlandlinie) and on the southern border (A1). Two federal roads cross in the city center (B54 and B236). At the main railroad station the train between Dortmund and Hagen stops. Because of the low density of intervals the regional connection via rail is the only medium.

Figure 3: Regional transport infrastructure



Source: Land use plan, City of Herdecke 2001

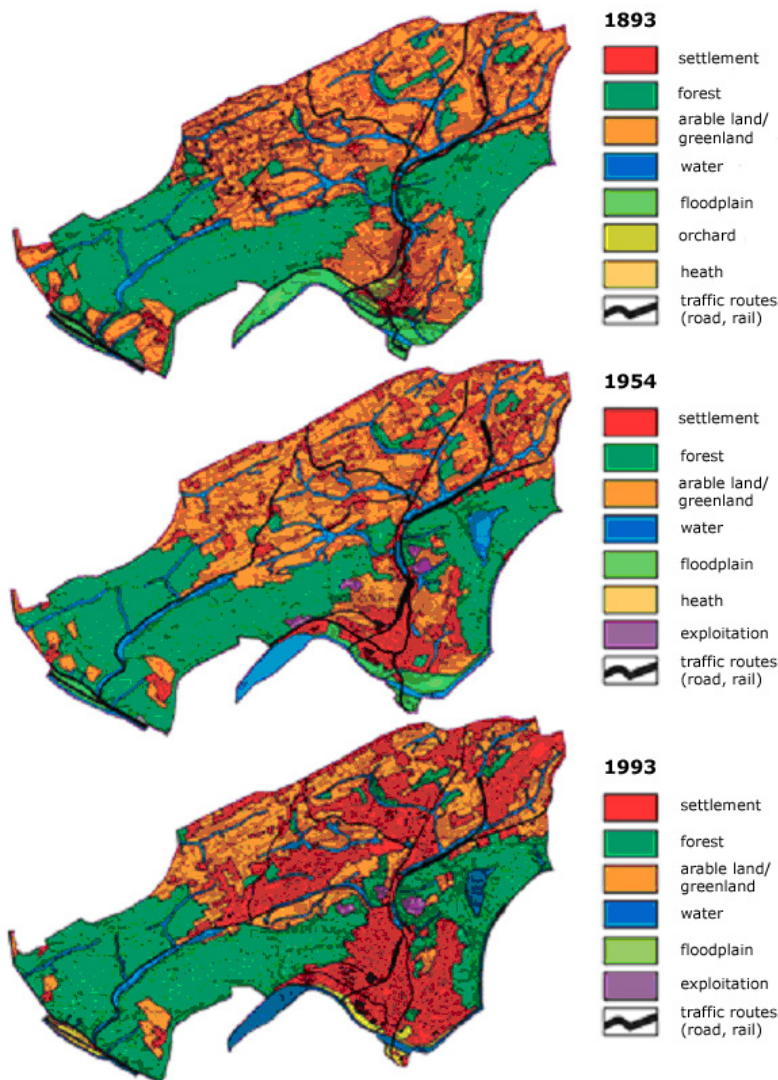
Pattern of urbanisation

Urbanisation process and level

Origin of the development of Herdecke was a Carolingian Basilica (church), that was built in 819. First settlements around this church arose in the 14th century. In 1615 Herdecke held an important regional position as a corn market and in 1739 the city received its town charter. With the beginning industrialization in the 19th century the regional economic importance of Herdecke diminished, because of missing coal deposits, a rather untypical situation for a city in the Ruhr Area. Therefore the first industrial enterprises, two metal-working companies and a colouring and lacquer company, settled down in Herdecke only at the beginning of the 20th century.

At that time the settlement area of Herdecke was still very small (see figure 3). Reasonable extensions of the settlement area began in 1940, simultaneously to the incorporation of the village Ende. Between 1980 and 2000 the settlement area of Herdecke has been increased about 25% because of strong settlement activities especially for housing, forced by the district administration in Arnsberg. This strong effort can be explained by the extraordinary increase of the importance of Herdecke as a residential area for employees in the core area of the Ruhr area.

Figure 4: Urbanisation process in Herdecke



Source: City of Herdecke, environment report, slightly modified

Today the settlement and traffic area of Herdecke is about 34.5% of the total area (average in Ennepe-Ruhr-Kreis: 27.3%). It covers a total area of about 22.4 square km, with a north-south extension of about 5 km and west-east extent of 8 km. The total population is about 25,000 inhabitants with an average population density of 1,151 inhabitants per km².

Urban areas with high population density were established surrounding the settlement focus: The main focus lies in the south-east of the town, close to the storage lakes and builds the downtown region of the city. It comprises about 13,000 inhabitants and offers a big variety of functions like supply, administrative, residential, industry and service functions. The secondary settlement focus is created around the former village Ende north-east of the city centre. It comprises around 6,000 inhabitants and provides mainly residential, services and supply functions. Over the last 25 years this was the main zone for settlement enlargement activities. West of this settlement focus lies the area for the hospital with attached hostels and service facilities. Main areas for commercial and industrial functions are located in the south, west of the city centre and close to the river Ruhr (Westfalia-Area) and West of the second focus in Ende (Gahlenfeld).

The settlement structure can be described as a compact and dense urban structure with noticeable edges between the south-eastern part of Herdecke (city centre) and the landscape. A similar structure is found in the second settlement focus in Ende. The remaining part of the urban area (north-eastern part) shows a rather disperse settlement structure of middle to low density resp. predominantly of green space structure in the western part.

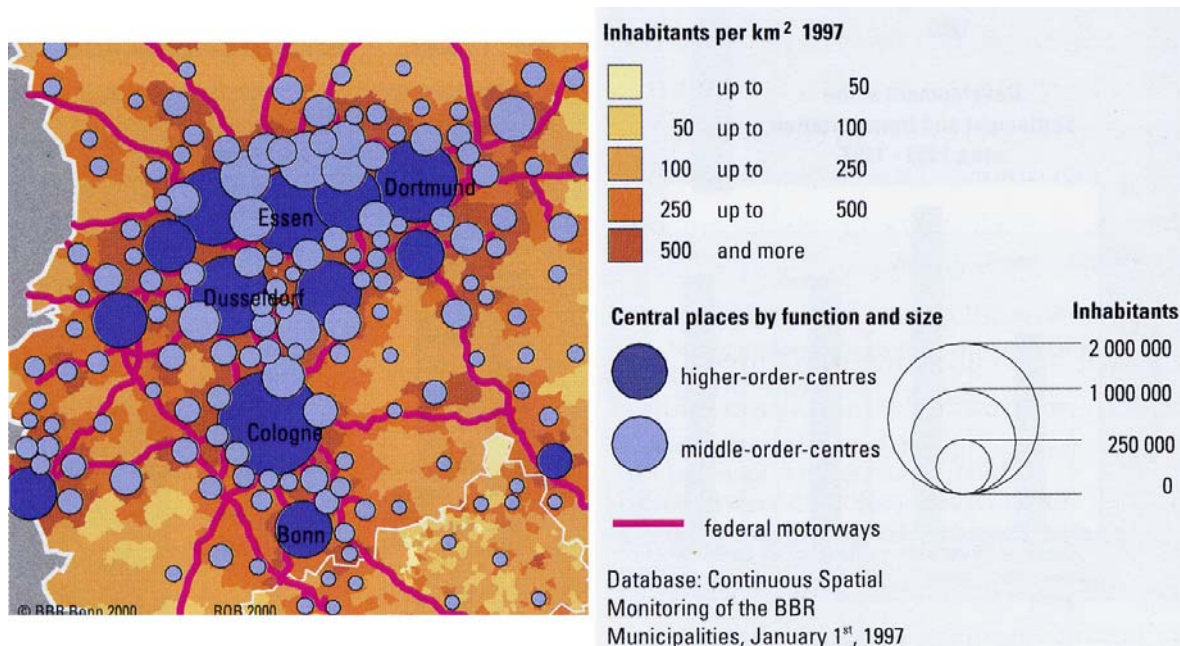
Polycentricity of the region

Before describing the region Herdecke is located in or belongs to and its polycentricity two levels of regional context depending on the spatial scale of observation have to be distinguished. As already mentioned before the SMESTO Herdecke belongs to the Ruhr Area, which in turn can be seen as part of the Metropolitan Rhine/Ruhr region (see figure 4). Both, the Ruhr Area and the Rhine/Ruhr region are definitely a polycentric region, former consisting out of several higher order centres in the core area (e.g. Essen, Bochum and Dortmund) and surrounding SMESTOs or middle and lower order centres (cf. figure 1). Regarding the Rhine/Ruhr region this structure is supplemented by higher order centres like Düsseldorf, Cologne and Bonn along the river Rhine and again several middle and lower order centres surrounding them (see figure 4).

On a smaller scale Herdecke belongs to a region that can be delimited by the boundaries of the Ennepe-Ruhr-Kreis, in the same time the next higher administrative level. This county consists out of nine different cities with a total population in between 10,000 people (Breckerfeld) and 100,000 people (Witten). Therefore this region is rather homogeneous one, because none of these cities holds an outstanding role and function compared to the other.

The differentiation of regional contexts of the SMESTOS seems to be reasonable for a proper description of roles and functions as well as challenges and potentials of Herdecke, because those show several different activities of cooperation in the core area as well as inside the County. Hence in the following description the particular context will be mentioned.

Figure 5: Polycentric Region Rhine/Ruhr



Source: BBR: Spatial Development and Spatial Planning in Germany. 2001

(a) Morphological dimension

On the level of the RVR the region shows a strongly hierarchical pattern with several nodes and centres. Herdecke is a middle order centre (25,000 – 50,000 inhabitants) and is surrounded by cities (Witten, Wetter) which are on the same level (see map 1). The region is dominated by several higher order centres in the north like Bochum (15 km distance) or Dortmund (16 km distance) and Hagen in the south (23 km distance). This shows the inherited poly nuclear pattern of the region (see map 4) with several dominant cities in the core of the agglomeration area Rhine/Ruhr (Essen, Bochum Dortmund, Düsseldorf), that hold the bigger share of the economic activities, surrounded by several less dominant cities, focussed on certain functions as for example supply and residential functions. On the level of the Ennepe-Ruhr-Kreis the region shows a less hierarchical pattern consisting out of several cities rank more or less on the same level of regional importance.

Due to the very high share of settlement area and a huge population density a sustainable settlement development is very important topic in the Ruhr area. Cities in the core of the agglomeration area show a share of settlement area between 50 and 70% of the total area, surrounding cities bear a share between 30 and 50%. Suburbanisation process is still going on. In relation to the population the consumption of green space for settlement purposes in SMESTOs is higher than in large cities in the core area.

(b) Relational dimension

In between this conglomeration of cities in the eastern part of the Ruhr Area Herdecke offers a system of poly-oriented relations, i.e. co-operations exist in variable and with different surrounding towns. For example in the field of economic development: Herdecke is member of the EN-Agentur with the other cities in the

Ennepe-Ruhr-Kreis and in the same time works on an agreement with Bochum, Hagen and others for the governance of commercial areas

Administrative co-operation mainly exists with Bochum, Hagen and the cities of the Ennepe-Ruhr-Kreis, because they form a subregional planning unit on the main formal planning instrument on the regional level in North-Rhine Westfalia ("Gebietsentwicklungsplan"). In contrast to this economic co-operations and activities exist especially with Dortmund. Not only the main share of commuters travel to Dortmund, but in addition earlier plans for an inter-municipal commercial area have been especially discussed with Dortmund. Last but not least Herdecke is the mostly frequented region for short-time recreation purposes (daily, weekend) from all surrounding cities both from the north and from the south because of its natural beauty and attractiveness.

Historic and recent developments

During the last decades Herdecke successfully managed the structural transformation from a commercially oriented small town to a fully equipped service oriented subregional centre. Compared to other surrounding cities on the fringe of the agglomeration core area of the same size a downright positive development can be noted. While in 1960 the proportion of employees in the industrial and commercial sector averages 69%, in 1997 the share reduced to 35%, corresponding with increasing rates of jobs in the service sector to 63%.

The most important recent development in Herdecke is the change of use of a huge commercial area west of the city centre (Westfalia-area), where Westfalia-Surge, a traditional company located in Herdecke employing 350 people that has been producing milking installations in this area for 30 years, has announced its closing of business and will move to another SMESTO in the Ruhr Area soon. This means that Herdecke will loose about 350 jobs but will open the chance to redevelop the area to factor the attraction of the city centre and the landscape of the Ruhr valley. This offers a great variety of possibilities to complete the downtown area (e.g. a mixed used zone for commercial and residential purposes), close to the River Ruhr.

Roles and functions

The main long term process that influences both the socio-demographic and economic structure and performance of the Ruhr Area lasts already for about 40 years and there is still an ongoing transformation from a mono-structured coal-mining and steel-producing region into a booming region with a diversified economic structure and high potentials of an unspoiled area. During this period the roles and functions of most of the towns in the Ruhr Area have changed and will change and every single town has to work out which functions it can fulfil in the future in order to ensure a successful development.

Until the end of 1990's the cities of the Ennepe-Ruhr-Kreis (including Herdecke) benefited from the continuing suburbanization process, i.e. showed an increasing population, but since the year 2000 this trend stagnated. Current demographic forecasts estimate a population decrease for the Ennepe-Ruhr-Kreis of 5 – 10% until 2020. Other prognoses forecast a slightly less decrease of 5% until 2015.

Associated with this demographic turn an excess of age of the population is expected: share of people less than 19 years old will decrease in the Ennepe-Ruhr-Kreis about 7% until 2015 while the share of the people at the age of 60 and older will increase for about 5.5%.

Socio-demographic role

Herdecke experienced an enormous growth of its population since the 1970s. This trend was particularly pushed by two main aspects: firstly the increasing activities of Herdecke in extending its settlement area and secondly the boosting trend of suburbanization in the Ruhr Area. This situation supported the position of Herdecke as one of the most demanded locations for residential purposes, which was also pushed by its attractive natural landscape. This development reached its climax in the 1990s with a population of 26,000 people. Although a slight decrease has to be stated since then, the city managed to keep its size of population almost stable.

Until the year 2015 a decrease is forecasted to a level of 25,000 people. Compared to other cities in the Ruhr Area and especially in the Ennepe-Ruhr-Kreis this loss of population is rather low. But the other main trend described as the demographic change, the change of the population structure will hit Herdecke in the same way as other cities: the middle-aged group of people between 18 and 45 years old will fall from 37% in 2001 to 34% in 2015. In turn the share of people older than 45 years will increase from 45% in 2001 to 51% in 2015. There is to mention a specification of relatively high parts of the population with an orientation to anthroposophy which plays a role for the elections and the local cultural commitments (see below).

Urban growth

Compared to cities situated on the northern fringe of the agglomeration core area of the Ruhr Area the Ennepe-Ruhr-Kreis, and thus Herdecke, shows only slight migration surplus resulting in urban sprawl). Reasons for this are: Destination areas for a migration from the cities to its hinterland are mainly the cities directly neighbouring to the core area e.g. the city of Witten (see figure 1). That's why the hinterland of the core area is not a closed belt. Unlike the outer conurbation zone north of the core area, which appears as a coherent suburbanisation ring, on the southern border several other regional centres e.g. Düsseldorf, Krefeld or Hagen lie closely to the core area.

Therefore the urban growth in Herdecke over the last 25 years cannot be described using the urban sprawl phenomena. Although there have been extensions of the build up area, this has been very limited compared to other cities. Main reason for this is the settlement policy of the city council: Knowing its good position in the region as first choice as a place for residence especially for people from the upper class, the city council wants to foster this position by following a moderate settlement policy that aims at a certain target group. An example for this strategy is the fact that in Ahlenberg, the north eastern part of Herdecke, where the upper class of Herdecke primarily lives, plots must have a size of at least 1,000 m².

Functions within the region

Because of their traditional and old-grown structures and economic roles and functions (see section 1.2) the SMESTOs of the Ennepe-Ruhr-Kreis (Herdecke and Witten a.o) focus more on the maintenance of their own development than fulfil typical supplement functions of the adjoining core area.

(a) Supply functions, labour market functions, housing

The economic structure of Herdecke shows a relatively high share of people working in the tertiary sector (service, trade, transport), where more than 63% of all job holders are employed. In comparison the Ennepe-Ruhr-Kreis shows an average of 56% in this sector. Accordingly the average number of people employed in the secondary sector (industry, metal working etc.) is only 35% in Herdecke, but about 42% in the Ennepe-Ruhr-Kreis. In a regional context labour market functions of Herdecke have to be judged low, because the number of working places is relatively compared to its size. This results in the high number of commuters and a surplus in outgoing commuters.

One of the biggest employers in Herdecke is the community hospital of Herdecke, the first nationwide anthroposophical hospital with 1,100 employees. Other important employers are the colouring and lacquer company Doerken (70 employees), the gardening tools producer "Idealspaten", the pharmaceuticals company "Pharma-Zentrale Dr. Poelmann" and a company dealing with stone materials called "Grandi".

Supply functions of Herdecke have to be judged low as well. The available retail facilities cover the normal needs but do not have any regional meaning. The structure of the retail industry in Herdecke can be characterized as a fragmented and small-scale structure consisting out of single traders. Besides one bigger department store (Karstadt) stores and warehouses are missing totally. Hence a majority of the population is using supply facilities in the bigger cities nearby (Dortmund, Hagen). According to the city council the retail structure should be enhanced in the course of the re-use of the Westfalia-Area (see section 1.3).

Between 1981 and 2001 the number of domestic buildings arises about 35%. While in 1980 Herdecke showed a supply with living space below the average, meanwhile it takes a leading position in this field. Significant is a comparably high share of buildings up to three floors (eleven %, Ennepe-Ruhr-Kreis six %). Both figures indicate an outstanding position of Herdecke for residential purposes for the surrounding cities especially from the nearby core area of the Ruhr Area.

(b) Socio-cultural dimension

Main socio-cultural facilities in Herdecke are the municipal music school, a youth centre, a small theatre in the city centre, the "Ruhrfestsaal" north of the river Ruhr and a small repertory cinema. None of these facilities have a regional relevance. The only important cultural events in Herdecke are certain arrangements of the regularly held "Klavierfestival Ruhr", a well known series of piano concerts all over the Ruhr Area.

All in all the number, size and importance of the cultural facilities of Herdecke can be assessed as low level. Main reasons are the high number of cultural offers in the nearby higher order centres (e.g. Schauspielhaus Bochum, Musiktheater Gelsenkirchen, several Multiplex cinemas in each city).

(c) Accessibility

The role of Herdecke according to its accessibility can be described as dominated by medium sized cities and with a good connection to European traffic networks. As already mentioned in the section 1.1 the city shows a very good connection to the regional transport infrastructure. Therefore Herdecke holds the role of a city that has the advantages of an agglomeration without showing the negative aspects like metropolises, as huge volume of traffic.

(d) Political-administrative function

From a political-administrative point of view Herdecke shows the following strengths: because of the small size decision making processes are more manageable and faster, proximity to the citizens is very close and participation processes can be facilitated much easier. The political culture in Herdecke can be described as consensus-oriented. In addition a relatively strong commitment of the citizenship can be noticed.

(e) Socio-economic structure and performance

The total number of employed persons in Herdecke is about 7,500 people. Although this figure points up an increase of about eleven % compared to 1990, the economic performance of Herdecke is still under-average. Therefore the relation between people commuting to Herdecke for work is still less compared to the number of people living in Herdecke and working in the surrounding cities, especially in the core area of the Ruhrgebiet. Similar to the decrease of population (cf. section 1.4.1) until 2015 a decrease of employees of about six % is forecasted.

Regarding the average income of people living in Herdecke, the city shows a downright positive position. Counting the number of millionaires the city ranks on 5th position of all cities in the RVR-region, i.e. a total number of 39 people with an annual income of more than 500,000 € live in Herdecke.

SWOT analysis

The SWOT analysis is carried out for Herdecke and for the Ennepe-Ruhr-Kreis. A SWOT analysis for the higher level regional context (Ruhr Area, Rhine/Ruhr Region) would not make any sense because of their heterogeneity and the corresponding wide range and variety of strengths and weaknesses resp. opportunities and threads.

SWOT analysis Ennepe-Ruhr-Kreis

Strengths	Weaknesses
<ul style="list-style-type: none"> - wide range of offers concerning the industrial history and culture of the region - successful co-operation of cities, museums and churches in the field of arts and exhibitions - attractive natural landscape - historical buildings (Herbede Mansion, Witten Mansion) 	<ul style="list-style-type: none"> - position between the higher order centres in the north (Bochum, Dortmund) and in the south east (Hagen) - mono-structured economy still concentrating on metal working industry, insufficient structured service sector
Opportunities	Threats
<ul style="list-style-type: none"> - establishing a regional focus on health science and biotechnology - extending the economic sector of leisure, recreation and tourism because of the high quality of the natural landscape - extending the high quality location for residential purposes, combined with a diversified service and cultural offers 	<ul style="list-style-type: none"> - location between the higher order centres in the north (Bochum, Dortmund) and in the south east (Hagen): - downturn of city centres because of loss of spending capacity and limited supply and market functions

SWOT analysis: Herdecke

Strengths	Weaknesses
<ul style="list-style-type: none"> - high proportion of open space, attractive natural landscape - attractive location for residential purposes, high share of single occupancy domestic buildings - historical timber-framed architecture in the city centre - extensive offerings for leisure and recreation 	<ul style="list-style-type: none"> - few possibilities for enlargement of industrial and commercial areas - topography with a strong relief; big amount of nature preservation areas - surplus of commuters travelling to other cities to work - deficient regional public transport connections - business hours of the local retail sales
Opportunities	Threats
<ul style="list-style-type: none"> - huge free built up area (Westfalia-Gelände) close to the city centre - long tradition as a city gaining migration surplus as a counterpart for demographic turn - qualitative improvement of existing residential areas 	<ul style="list-style-type: none"> - qualitative and quantitative changes in size and structure of population, necessarily resulting in: <ul style="list-style-type: none"> - adjustment of the infrastructure - adjustment of social policy - adjustment of migration policy

4.1.2 Policy section

Governance

Main actors

Main actors in the region influencing the spatial development are the Regionalverband Ruhr (RVR, see section 3.1.3) on the one hand and the administrative districts (Regierungsbezirke) on the other hand. While the RVR is responsible for the whole region, the responsibility on district level is divided by the different administrative districts: the administrative district of Arnsberg for the south-eastern part, Düsseldorf for the western part and Münster for the north-eastern part. As both institutions deal partly with the same aspects of spatial development (RVR is working on concepts and masterplans for open pace development, district are responsible for the formal spatial development) difficulties in the coordination are pre-assigned. Main actor on the county level is county council (cf. section 3.1.3).

The municipal council of Herdecke is made of four parties: SPD, CDU, FDP, Green Party. The ruling majority is held by a coalition of the SPD and the Green Party since the last local election in 2004. Before, the majority was held by the SPD. The mayor, who is heading the city council for about ten years, is member of the SPD. Due to this situation the municipal council and city council together represent the main actor in Herdecke.

Compared to other cities in the Ruhrgebiet the city of Herdecke shows an above-average number of people usually voting the Green Party (ca. 20%). i.e. that the Green Party must not necessarily be one of the main actors in the city but its importance and its influence is much bigger than in other German cities.

Other important actors in Herdecke are the community hospital Herdecke, who is the biggest employer in the city, and MarkE, the local power supply company. Moreover the local citizenship holds a relatively strong position and is influencing policy, not only because of its high educational standard, but also because of the typical setting in a small town, where the policy-makers are personally known to many citizens and responds and commentaries to political decisions are exchanged very fast over the local newspapers. Concerning the last aspects mentioned the three local newspapers seem to play an important role in decision making and formation of opinion.

Dominant area of action and influence

Due to the positive development of Herdecke during the last two decades, the city council envisages a stabilization of the current situation as its dominant area of action and influence in the future. That means in simple words, Herdecke does not want to grow any further but keep its position as a comparably rich, healthy and attractive small town on the fringe of the Ruhr Area. Concerning the spatial development Herdecke follows a consequently sustainable development by total reduction of its consumption of open space. According to the city administration this

also means to accept a possible loss of population due to a restricted settlement policy.

Concerning the further development of the already built up area, the re-use of the Westfalia-Area close to the city centre, as described above, is the main interest of Herdecke. Main interest in an economic perspective is to extend the role in the field of biotechnology and health-science. Bases are the already resident institutions and facilities in the field of bio-technology and health science, especially hospital and the medical faculty of the university. These activities pick up a trend that is predominant in the whole region of the middle part of the Ruhr Area, whereby additional impacts can emerge.

Institutional setting

Because of the multiple linkages of Herdecke in an economic as well as in a political perspective several both formal and informal co-ordination exists within the SMESTO and the region.

Political-administrative perspective

Herdecke is part of the Ennepe-Ruhr-Kreis, the next higher level of administration. The county council of the Ennepe-Ruhr-Kreis, that represents nine municipalities, is responsible for a balanced regional development. Politics and administration on the county level dispose of a variety of planning instruments to assure this balance of interests and development. Nevertheless most of the decisions concerning spatial development are made on municipal level. The county council in turn represents the county in the Regional Planning Board (Bezirksregierung) and in the RVR.

The regional planning board at the administrative district (Regierungsbezirk Arnsberg) is responsible for the formal subregional planning. Main content of the subregional plans are the definition of regional settlement corridors and protection of open space. Herdecke belongs to the planning section Bochum and Hagen (including the SMESTOs Herdecke, Witten, Herne).

The RVR is made up of eleven towns and cities and four rural districts. Since 1920, the year in which the "Ruhr Coal Region Settlement Association" was founded, there has been a regional umbrella organisation with headquarters in Essen. Renamed the "Kommunalverband Ruhrgebiet" (Association of Local Authorities in the Ruhr Region) – or KVR – in 1979 this institution is responsible for a range of activities above and beyond those undertaken by the individual local authorities. These range from the construction and operation of major leisure facilities to PR work for the whole region. In October 2004 the old KVR was dissolved and replaced by the new "Regionalverband Ruhr" (Ruhr Area Regional Association), or RVR.

(a) Cultural and educational perspective

A regional co-operation in the field of leisure and recreation deals with the development of the valley of the river Ruhr. All cities in the region, that are located on the river, i.e. Bochum, Hagen, Wetter, Witten, Hattingen and Herdecke, as well as the regional actors RVR and Ennepe-Ruhr-Kreis are involved in this initiative.

Aim is to improve the touristy potential of the region by improving and restoring the natural beauty and potential of the Ruhr, which was heavily regulated over the last 200 years, when industrialization started.

(b) Economic perspective

The Ennepe-Ruhr-Kreis has established a business development agency (EN-Agentur) in 2002, aiming at an improvement of the regional socio-economic structure by supporting the local economy. All cities of the county are members of the EN-Agentur.

Prevailing challenges and options of development

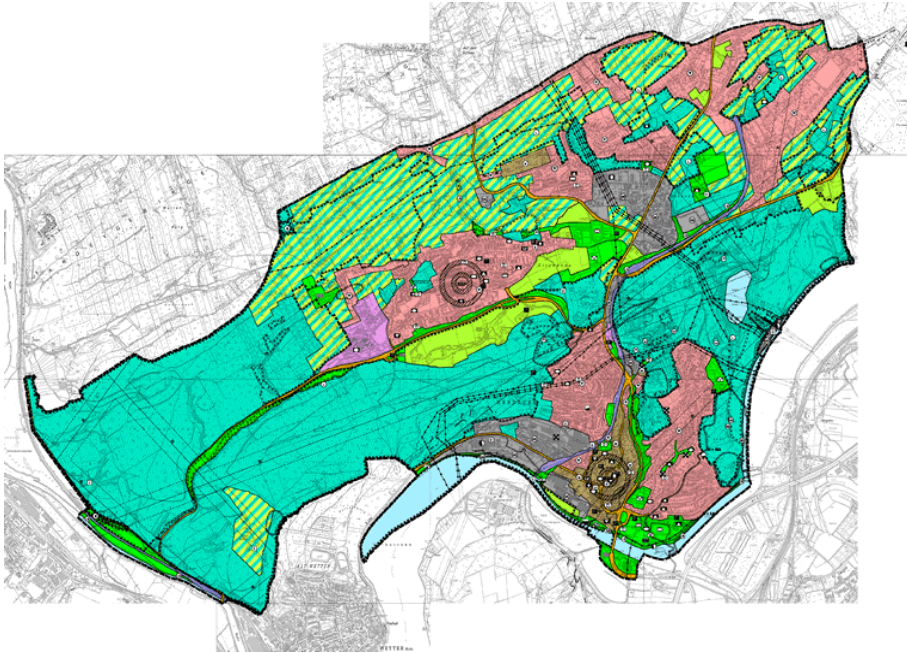
Current challenges and options of development are:

- Ensuring the ongoing urban development by strategic and sustainable further development of core urban area. Extension of the built up area should be avoided, particularly because of non-existing possibilities for new settlement areas.
- Avoiding decrease of population. Objective is to keep a population over 25,000 people, which is the threshold for getting the status of a subregional centre. Means should be to ensure a sufficient offer for housing possibilities for local people and in moreover provide housing area for people working in the core agglomeration area.

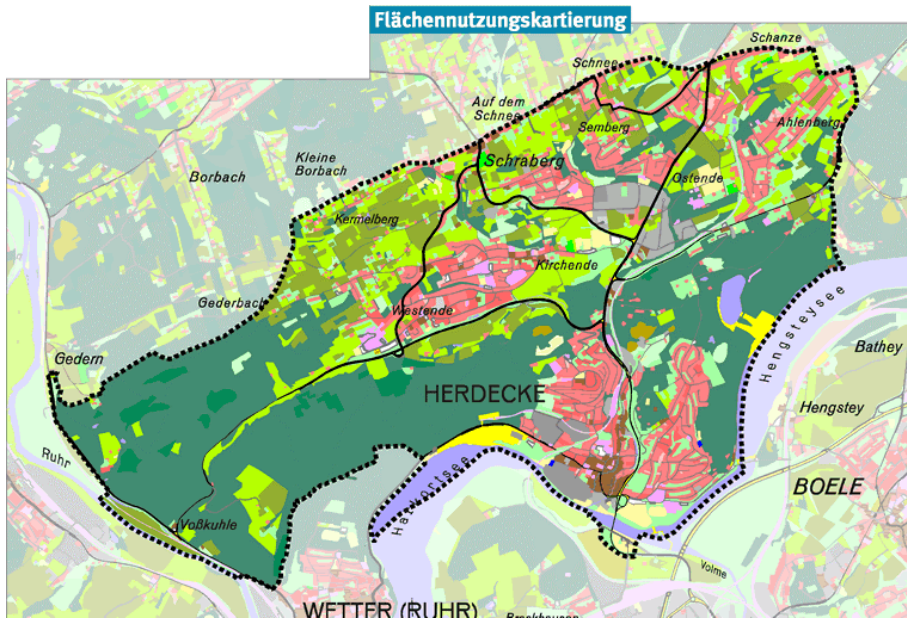
Hypothesis	General (for DE)			Herdecke		
	valid	invalid	Note	valid	invalid	Note
1		X			X	
2		X			X	
3		X			X	
4	X		In most of the cases	X		
5		X		X		
6		X		X		
7				X		
8		X			X	
9a	X			X		
9b	X			X		To a limited extend
9c	X			X		
9d	X			X		To a limited extend
10a				X		
10b				n.n.		
11	X		As well as bigger cities!		X	Since a long time for Herdecke it's role is clearly defined
12		X		X		Daily supply, but on a high level
13					X	
14	X			X		
15			May be the case for medium sized cities in Germany	X		
16						As the city defined it's role as primarily being a high class residential area, it's difficult to answer
16a		X	Could be, but not necessarily, see chosen examples.	X		
17a		X			X	
17b			Difficult to answer, a very romantic point of view	n.n.	n.n.	
18		X	Depends on the individual case (spatial context)	n.n.	n.n.	
19						Does not exist!
20	X			X		But restricted
21	X			n.n.	n.n.	
22	X				X	
23	X		Mostly, yes		X	
24		X			X	
24a		X		X		Only partly true
25			Both can not live without the other one	n.n.	n.n.	The mix is the key
25a		X		x		
26			partly	x		To a certain extend

Figures/Photos

Land use plan of the City of Herdecke



Actual utilisation of the City of Herdecke



Town hall



**The Beck Quarter
in the Old Town**



Mallinckrodt mansion



Half-timbered house



**The Beck Quarter, photographed
at the beck „Herdecke“**



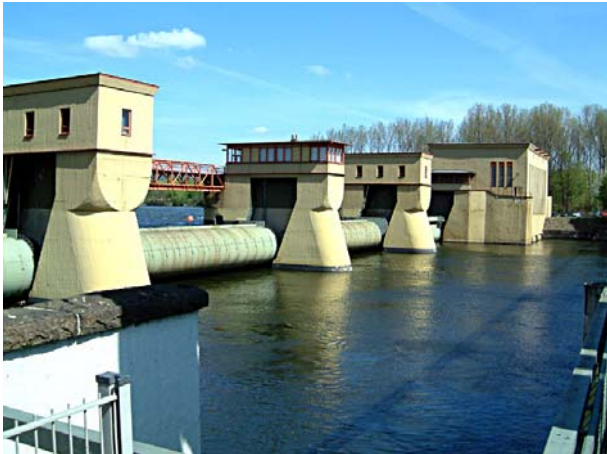
Narrow pass in the district of Ende



Farmhouse „Gut Schede“



Barrage at lake Hengstey



Viaduct over the river Ruhr



View over lake Hengstey and Herdecke municipal area



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Abbreviations

BBR	Bundesamt für Bauwesen und Raumordnung (Federal Office for Building und Regional Planning)
CDU	Christlich Demokratische Union Deutschlands (Christian Democratic Union)
EN-Agentur	Wirtschaftsförderungsagentur Ennepe-Ruhr GmbH (Promotion of the Economy Agency)
FDP	Freie Demokratische Partei Deutschlands (Liberal Democratic Party)
FLW	Freie Liste Witten
GLS e.G.	Gemeinschaftsbank für Leihen und Schenken (Community bank for Loans and Gifts)
IHK	Industrie- und Handelskammer (Chamber of Commerce and Industry)
KVR	Kommunalverband Ruhrgebiet
LDS	Landesamt für Datenverarbeitung und Statistik NRW
NRW	North-Rhine Westfalia
RVR	Regionalverband Ruhr
SPD	Sozialdemokratische Partei Deutschlands (Social Democratic Party of Germany)

4.2 Case study Witten

4.2.1 Descriptive section

Geographic position

The municipality of Witten, subject of matter of this SMESTO case study, lies in the western part of Germany, in the federal state North Rhine-Westfalia (NRW) and belongs to the administrative district of Arnsberg.

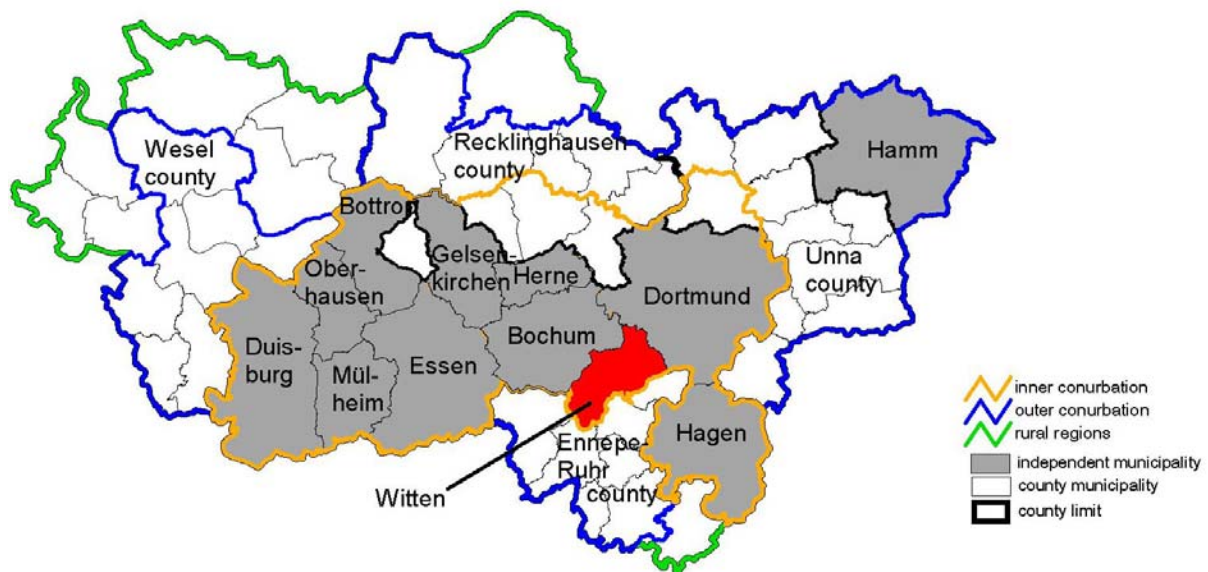
Figure 1: Geographic position of the Ruhr Area in North-Rhine Westfalia



Source: http://upload.wikimedia.org/wikipedia/commons/0/09/Lage_des_Ruhrgebiets.png, changed by BBR, 2005

Until the year 1975 Witten held the status of an independent municipality in the Ruhr Area. During a process of municipal restructuring in NRW in the beginning of the 1970s Witten was integrated into the Ennepe-Ruhr-Kreis (county) that consists of nine municipalities, all of them small or medium sized towns. Witten is the biggest town in the Ennepe-Ruhr-Kreis, bearing a population of a little more than 100,000 people.

Figure 2: Geographic position of Witten in the Ruhr Area



Data source: ATKIS®VG 250, © Bundesamt für Kartographie und Geodäsie 2003

In a wider regional perspective Witten is part of the Ruhr Area (Ruhrgebiet), the former coal mining and steel industry region in Western Germany. Nowadays it is going through a radical process of transformation from a mono-structured industrial stamped area to a more service oriented region with a diversified economic structure. Today the Ruhr Area is the biggest metropolitan region in Germany with a population of five million people.

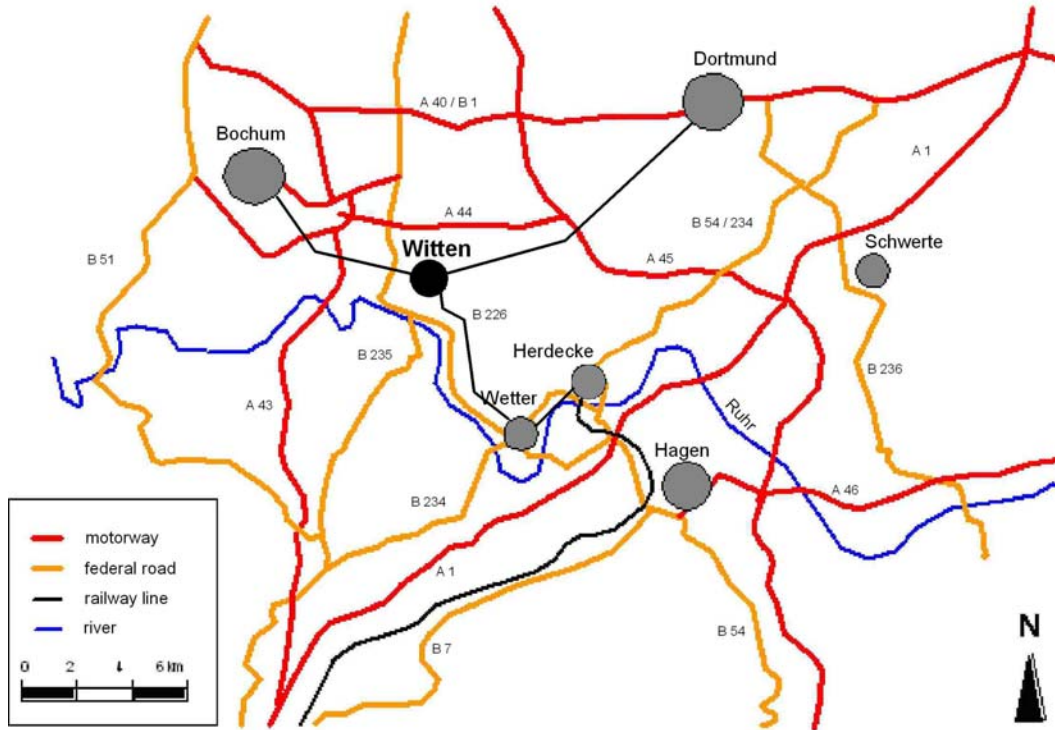
The administrative organization of the Ruhr Area is carried out by the Regionalverband Ruhr, an association of independent municipalities and four counties, each of them consisting of nine to 13 municipalities (see figure 1). Referring to the urbanization density the Ruhr Area is divided into a core area, the so called inner conurbation (Ballungskern), a surrounding area, the so called outer conurbation (Ballungsrand) and some rather rural areas (ländliches Gebiet). The city of Witten, located on the fringe of the inner core area, which is formed by the central independent municipalities, is still a part of the core area. It is situated south of the City of Bochum and south-west of Dortmund. Other surrounding cities are from west to east Hattingen, Sprockhövel, Wetter and Herdecke, altogether municipalities of the Ennepe-Ruhr-Kreis and SMESTOs themselves.

Witten is situated at the crossover from the lowlands, which are characteristic for the northern part of Germany, to the low mountain range that characterizes most of the middle part of Germany. Typical elements of the natural landscape of Witten are therefore the valley of the river Ruhr, which forms the boundary between the two mentioned natural landscape units, and the forested hills of the Ardey-mountains.

The urban area of Witten comprises a crossing of three important motorways (A43, A44, A45) with six motorway junctions. Therefore Witten shows very good regional transport connections. The existing railroad network is only used by regional trains

and not by supra-regional or national high-speed trains i.e. the supra-regional public transport connection has to be judged medium.

Figure 3: Regional transport infrastructure



Source: Land use plan, City of Herdecke 2001, modified

Pattern of urbanisation

Urbanisation process and level

The first mention of Witten dates from the year 1214, but until the 18th century the development of Witten was mainly affected by an agricultural economy. In the 17th century a regional corn market was established, that kept its supply function until the end of the 18th century.

The most important factor of the development of Witten was its huge coal deposits, which were already exploited on a small scale since the 16th century. With the beginning industrialization the economic development of Witten, based on the coal deposits, took a fundamental change. In the following several industrial companies settled in Witten, the city received its town charter in 1825 and the population rose from 1,860 people in 1825 to 32,000 until the end of the 19th century. In 1928 the population grew to 73,000 not only because of migration but also because of several incorporations of surrounding villages. In 1975 Witten became a part of the Ennepe-Ruhr-Kreis.

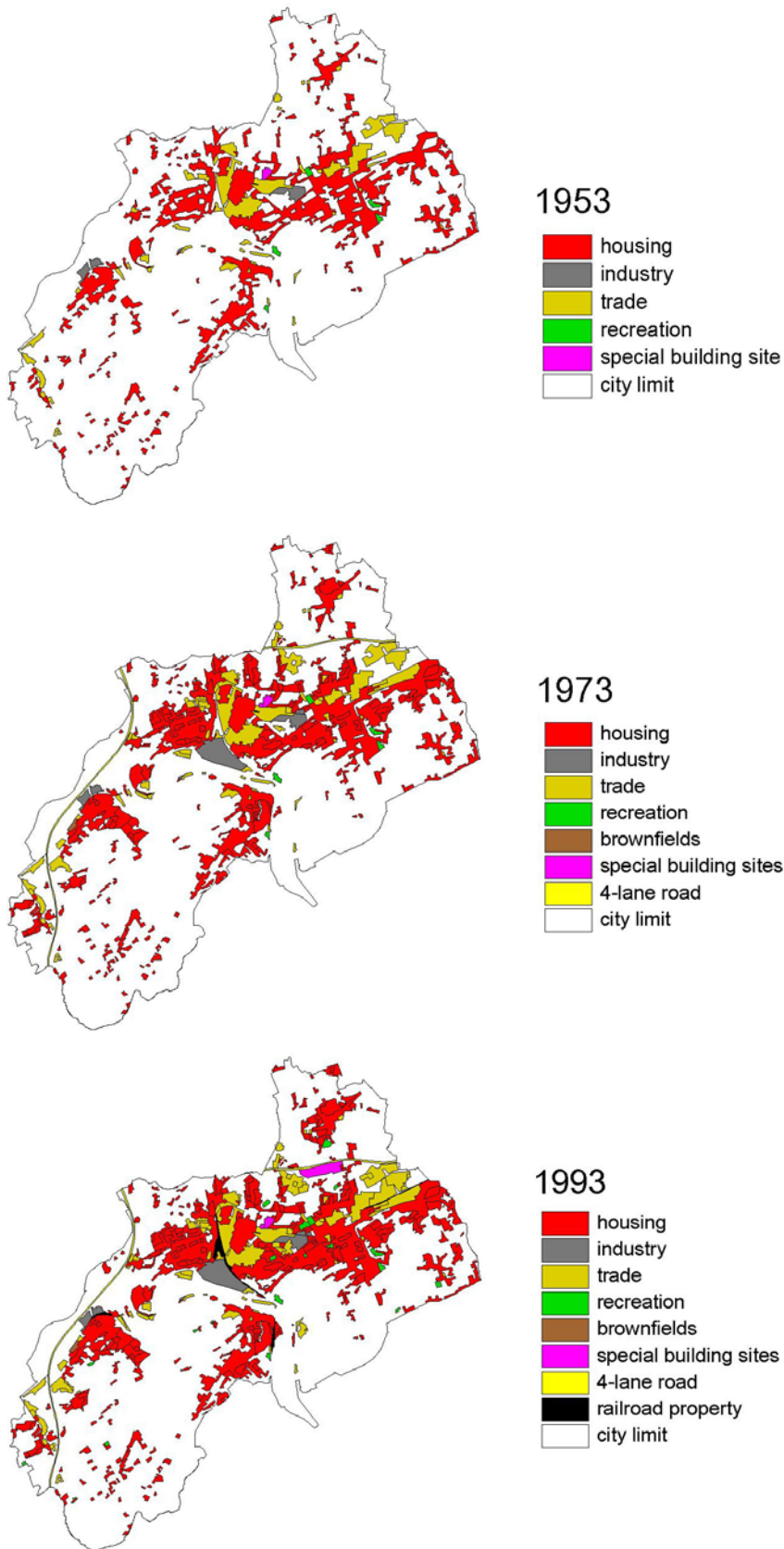
Today Witten covers a total area of about 72.4 square km with a north-south extension of about 12.8 km and west-east extent of 12.3 km. The total population is about 102,000 inhabitants with an average population density of 1,407

inhabitants per km². The built up area is about 31 km² (42%) and the total size of open space about 41 km².

The development of the settlement structure (see figure 3) was mainly influenced by two aspects: First the process of industrialization based on huge coal deposits during the last two centuries and secondly the extensive incorporations of surrounding villages. The first lead to a disperse settlement structure with the most core areas bearing huge zones, which were originally used for industrial activities. Although the industrial use in terms of steel manufacturing companies was finished with the end of coal mining and steel working, these areas are still in use, mostly for commercial and trade functions.

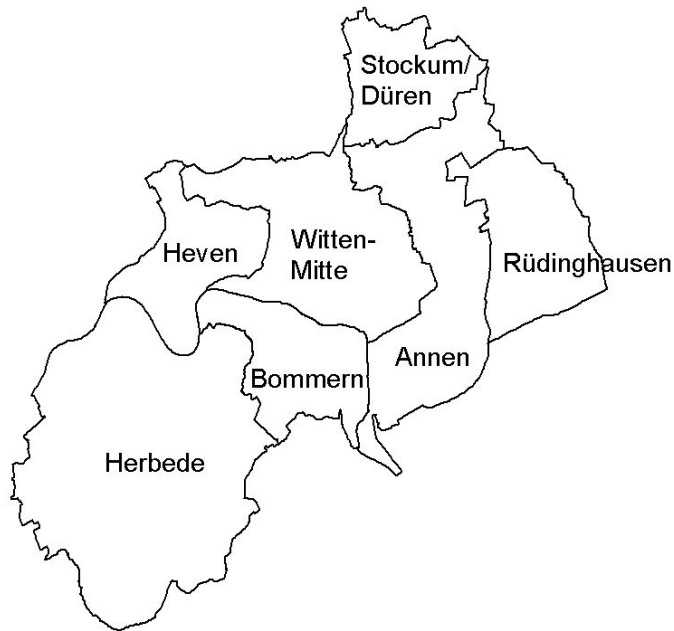
The latter is the reason for the current settlement pattern consisting out of different settlement focuses and partly showing wide areas of open space in between. These settlement focuses have developed more or less until the 1950s. The main focus is the downtown area of Witten, more or less in the centre of the area. This core is surrounded by four other suburbs named Annen in the east, Bommern, Stockum in the north and Heven in the West (see figure 4). Though these cores have started overlapping each other in the last 50 years, the identity of each suburb is still visible.

Figure 4: Urbanisation process in Witten



Data source: KVR 1999

Figure 5: City districts of Witten



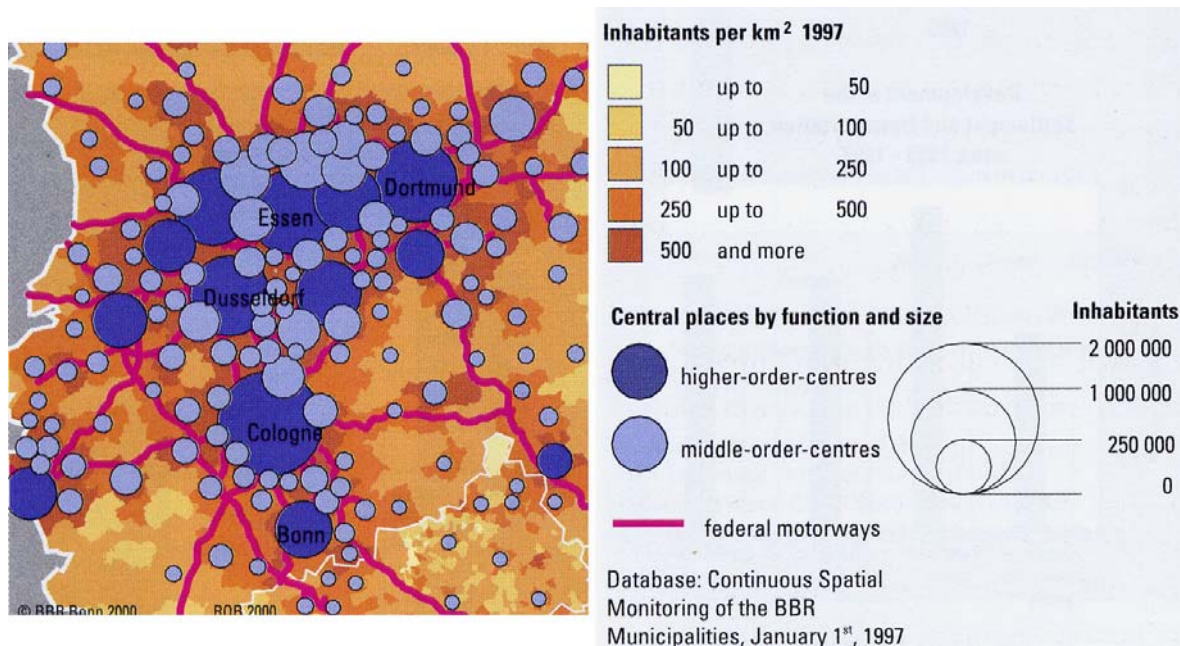
Source: City of Witten, 2005

Three different types of settlement can be distinguished. While the suburbs Heven, Annen and Rüdinghausen show a functional structure of a core area providing a mixed land use, the suburbs Stockum, Herbede and Bommern focus on housing with a over-average share of single occupancy houses and supply functions on a small level. The third type, that is typical for the southern and less densely populated part of Witten, is a more rural area with a disperse settlement structure.

Polycentricity of the region

Before describing the SMESTO's region and its polycentricity, two levels of regional context have to be distinguished. As already mentioned before the SMESTO Herdecke belongs to the Ruhr Area, which in turn can be seen as part of the Metropolitan Rhine/Ruhr region (see figure 4). Both, the Ruhr Area and the Rhine/Ruhr region are definitely a polycentric region, former consisting out of several higher order centres in the core area (e.g. Essen, Bochum an Dortmund) and surrounding SMESTOs or middle and lower order centres (cf. figure 1). Regarding the Rhine/Ruhr region this structure is supplemented by higher order centres like Düsseldorf, Cologne and Bonn along the river Rhine and again several middle and lower order centres surrounding them (see figure 5).

Figure 6: Polycentric Region Rhine/Ruhr



Source: BBR: Spatial Development and Spatial Planning in Germany. 2001

On a smaller scale of view Witten belongs to a region that can be delimited by the boundaries of the Ennepe-Ruhr-Kreis, in the same time the next higher administrative level. This county consists of nine cities with a total population between 10,000 people (Breckerfeld) and 100,000 people (namely Witten). Hereby the emphasized position of Witten inside the Ennepe-Ruhr-Kreis becomes obvious.

The differentiation of regional contexts of the SMESTO seems to be reasonable for a proper description of roles and functions as well as challenges and potentials of the SMESTO, because those show several different activities of co-operation in the core area as well as inside the county. Hence in the following description the particular context will be mentioned.

(a) Morphological dimension

On the level of the Ruhr Area the region shows a strongly hierarchical pattern with several nodes and centres. Witten is a middle order centre and is surrounded by cities (Hattingen, Herdecke) which are on the same level (see figure 1). The region is dominated by several higher order centres in the north like Bochum (11 km distance), Dortmund (16 km distance) and Hagen in the south (17 km distance). This already makes clear that the region inherits a poly-nuclear pattern (see figure 5) with several dominant cities in the core of the agglomeration area Rhine/Ruhr (Essen, Bochum Dortmund, Düsseldorf), which hold the bigger share of the economic activities, surrounded by several less dominant cities, focused on certain functions like supply and residential ones. On the level of the Ennepe-Ruhr-Kreis the region shows a less hierarchical pattern consisting out of several cities ranking more or less on the same level of regional importance.

Due to the very high share of settlement area and a huge population density a sustainable settlement development is a very important topic in the Ruhr Area. Cities in the core of the agglomeration area show a share of settlement area

between 50 and 70% of the total area, surrounding cities bear a share between 30 and 50%. Whilst the suburbanization process is continuing on both sides, the consumption of open space for settlement purposes in relation to the population in SMESTOs is higher than the one in large cities situated in the core.

(b) Relational dimension

In between this east-Ruhr Area agglomeration, Witten offers a system of poly-oriented relations, i.e. co-operations exist with different surrounding towns (cf. section 3.1.3), for example in the field of economic development: Together with the other cities of the Ennepe-Ruhr-Kreis Witten shapes the EN-Agentur and simultaneously works on a retail concept with Bochum, Hagen.

Administrative co-operations mainly exist with Bochum, Hagen and the cities of the Ennepe-Ruhr-Kreis, because those form a subregional planning unit for the "Gebietsentwicklungsplan", the main formal planning instrument on the regional level in NRW. Co-operations in the field of economic development also exist inside the Ennepe-Ruhr-Kreis on the one hand (EN-Agentur, see above) as well as with different cities from the core of the Ruhr Area on the other hand.

Historic and recent developments

The most important recent long-term development of Witten is to manage the structural transformation from an industrial economy based on coal mining and steel production to a future-oriented city with a diversified economic structure. Compared to other cities in the region the proportion of people working in the secondary economic sector is still high. Due to its high potentials in the fields of leisure and recreation as well as its attractive natural landscape combined with the advantageous location on the fringe of the core area of the Ruhr Area, Witten wants to distinguish itself as an attractive location for housing and leisure activities.

Witten recently started a comprehensive planning process for its city development. This process comprises the development of several masterplans (housing, labour, retail, transport, open space) as well as development concepts for each district of the city and the setup of a new land use plan. During the development a wide spread phase of communication and participation of the citizenship is envisaged. At the end of the process a set of long term spatial development objectives should be available that guide the further spatial development of Witten.

Roles and functions

The main long term process that influences both the socio-demographic and economic structure and performance of the Ruhr Area, is the already 40 years lasting and still ongoing transformation from a mono-structured coal-mining and steel producing region into a booming region with a diversified economic structure and a high natural potential. During this period the roles and functions of most of the towns in the Ruhr Area changed and will change and every single town has to work out which functions it can fulfil in the future in order to ensure a successful development.

Till the end of 1990's the cities of the Ennepe-Ruhr-Kreis (including Witten and Herdecke) benefited from the continuing suburbanisation process (increasing population), but since the year 2000 the population stagnated. Current demographic forecasts estimate a population decrease for the Ennepe-Ruhr-Kreis of 5 – 10% until 2020. Other prognoses (LDS) forecast a slightly less decrease of 5% until 2015. Associated with this demographic turn an excess of age of the population is expected: share of people less than 19 years old will decrease in the Ennepe-Ruhr-Kreis about 7% until 2015 while the share of the people at the age of 60 and older will increase for about 5.5%.

Socio-demographic role

The number of inhabitants of the Ennepe-Ruhr-Kreis remained almost stable from 1992 to 2001, while at the same time in the city of Witten the population decreased for about nearly three %. As the city of Witten had a growth of population in the early 1990ies, (presumably as a result of the reunification of Germany), the population declined continuously from 107,000 inhabitants in 1992 to 104,000 in 2002.

In 2003 a population forecast was carried out and projected a further decline of population from 103,000 in 2003 up to 93,000 in the year 2020. This corresponds to a decline of 10%. This forecast is based on positive-realistic assumptions of immigration of about 100,000 inhabitants. The forecast does not include possible effects of measures of the city of Witten, which aim to increase the number of inhabitants, e.g. by promoting Witten as a location of high-class living and working. Different ages were equally presented in the population of Witten in the year 2001. Corresponding to the general trend in Germany the proportion of the people older than 60 years will grow in the next ten to 20 years.

Today the fraction of academic people of the whole population is much higher than 40 years ago. This might be caused in the proximity to the universities of Bochum and Dortmund as well as in the fact that Witten itself has a university since the late 1980s.

Furthermore Witten emerged as a centre for anthroposophic oriented institutions. Besides anthroposophic kindergartens and schools a corresponding European wide noted centre for the teacher-training is located in Witten. The "Gemeinschaftsbank für Leihen und Schenken" (GLS e.G.) which is the first ethic and green bank of Germany, is in the adjacent city of Bochum.

Urban growth

Due to its location on the fringe of the core region of the Ruhr Area Witten is predestined to show urban sprawl phenomena, resulting from suburbanisation processes. Accordingly the built up area grew between 1990 and 2003 for about 310 ha. In 2003 the proportion of built up area is about 3,100 ha, which is 42% of the total area. This is less than the cities in the core area of the Ruhr Area which show a percentage of built up area between 50 and 70%. On the other hand a proportion of 42% built up area is more than in any other municipality of the

Ennepe-Ruhr-Kreis. This underscores the special role of Witten as the northernmost city in the Ennepe-Ruhr-Kreis.

Migration trends in connection with suburbanization bear a very clear direction. In general people from the core area of the Ruhrgebiet move to Witten, while Witten in turn shows a loss of population towards the other cities of the Ennepe-Ruhr-Kreis southwardly. Therefore Witten can be described as a city with transit of population on its way from the core to the hinterland.

Functions within the region

Because of their traditional and old-grown structures and economic roles and functions (see section 1.2) the SMESTO's of the Ennepe-Ruhr-Kreis (Herdecke and Witten a.o.) focus more on the maintenance of their own development than fulfil typical supplement functions of the adjoining core area.

(a) Supply functions, labour market functions, housing

The downtown area of Witten has a huge pedestrian area with a diversified retail structure. In the same way all the other suburbs in Witten fulfil a sufficient supply function for the local population. Beyond this the city of Witten does not fulfil noteworthy supply functions for the surrounding cities. This is especially based on the close-by higher order centres in the core area that have a much more detailed and bigger supply and the same accessibility. The only facility with a supra-regional importance is the furniture store Ostermann.

The labour market in Witten is affected by the still existing focus of the local economy on the secondary sector (industry and manufacturing.) see below). A characteristic feature is the highly qualified working class in Witten. This is supposed to be a result of the still strong basis of the local economy in the manufacturing sector.

Compared to other cities in the Ennepe-Ruhr-Kreis, Witten shows an over-average proportion of apartment buildings and multi-family residences as well as a lack of single-occupancy houses. While the increase of one-family houses between 1990 and 2003 was about 13.4 houses per 1,000 inhabitants in the Ennepe-Ruhr-Kreis, Witten only showed an increase of 11.4 houses per 1,000 inhabitants. Therefore the improvement of the one family house sector seems to be a certain strategy to avoid too much population loss (cf. section 3.2).

(b) Socio-cultural dimension

The city of Witten operates a variety of cultural offers, organized under the umbrella of the "Kulturforum" (cultural forum). This includes a conservatory for music, the city library, a regional known museum (Märkisches Museum) and an office for culture. The latter is responsible for the citywide information about cultural activities as well as consultancy and management of cultural events. Places for venues are the Saalbau Witten and the Haus Witten, a historical manor.

Together with the Ennepe-Ruhr-Kreis and its municipalities miscellaneous arts activities at different places of the county are conducted. Furthermore several

events of the "Ruhr Triennale" and the "Klavier Festival Ruhr", both supra-regional well known series of activities in classical music, take place in Witten every year. Altogether the socio-cultural role of Witten cannot compete with the role the bigger cities in the core area (Dortmund, Essen, Bochum) take, but for a medium sized town Witten shows a great variety and considerable contribution to regional cultural scene.

(c) Accessibility

The role of the Witten according to its accessibility can be described as a SMESTO in the catchments of densely populated areas and agglomerations. As already mentioned in section 1.1 the city is located closely to the neighbouring higher order centres in the north (e.g. it takes 30 minutes on a tramway to go from the city centre of Bochum to the city centre of Witten) and it shows a very good connection to the regional transport infrastructure. Judged by the settlement structure Witten is already incorporated in the core area, what becomes obvious by travelling from Witten to Bochum or Dortmund, because of the continuing built up area you can't experience the boundary between the cities.

(d) Political-administrative function

The political-administrative system can be characterized as suffering from a long-lasting dominance of one party. Therefore a controversial political situation exists that inhibits a collective and consensus-oriented policy making and decision taking. On the other a strong citizenship exists, becoming obvious through three local political initiatives that are represented in the city council (cf. section 3.1).

(e) Socio-economic structure and performance

The economy of Witten is still stamped by steel and engineering industries and shows a relatively high share in the secondary sector (commercial and industry). More than 33% (10,805) of the total amount of employees (= 29,457) are working in the manufacturing industry. Especially the steel industry still has a relatively high importance in Witten. The method of electronic steel producing, a relatively new and prospering branch in the field of steel producing, is practiced in Witten. A positive factor for the manufacturing economy is the close-by automobile production in Bochum (Opel), because several automotive supply industries exist in Witten as well.

Rather new and future oriented economic sectors in Witten are health industry and bio-technology. Nearly 50 companies are already operating in the "Region Mittleres Ruhrgebiet", where the University Witten Herdecke, which is located in Witten, is a key player. An enlargement of activities in this field is envisaged by the city of Witten.

SWOT analysis

The SWOT analysis is carried out for Witten and for the Ennepe-Ruhr-Kreis. A SWOT analysis for the higher level regional context (Ruhr area, Rhine Ruhr Region) would not make any sense because of their heterogeneity and the corresponding wide range and variety of strengths and weaknesses resp. opportunities and threads.

SWOT analysis: Ennepe-Ruhr-Kreis

Strengths	Weaknesses
<ul style="list-style-type: none"> - wide range of offers concerning the industrial history and culture of the region - successful co-operation of cities, museums and churches in the field of arts and exhibitions - attractive natural landscape - historical buildings (Herbede Mansion, Witten Mansion) 	<ul style="list-style-type: none"> - position between the higher order centres in the north (Bochum, Dortmund) and in the south east (Hagen) - mono-structured economy still concentrating on metal working industry, insufficient structured service sector
Opportunities	Threats
<ul style="list-style-type: none"> - establishing a regional focus on health science and biotechnology - extending the economic sector of leisure, recreation and tourism because of the high quality of the natural landscape - extending the high quality location for residential purposes, combined with a diversified service and cultural offers 	<ul style="list-style-type: none"> - location between the higher order centres in the north (Bochum, Dortmund) and in the south east (Hagen): - downturn of city centres because of loss of spending capacity and limited supply and market functions

SWOT analysis: Witten

Strengths	Weaknesses
<ul style="list-style-type: none"> - attractive natural landscape with a high potential for leisure and recreational purposes - pronounced local identities of the single districts of Witten - location at the fringe of the core area combined with the good accessibility (regional transport connections) - strong engagement of the local citizenship - the University Witten/Herdecke 	<ul style="list-style-type: none"> - lack of accessibility of the river Ruhr because of existing industrial areas - political culture, because of a long lasting dominance - disperse settlement structure - high proportion of unalluring architecture from the 50's to 60's especially for housing - missing political concepts for a comprehensive city development
Opportunities	Threats
<ul style="list-style-type: none"> - location offering a combination of housing, working and leisure purposes of a high quality - strong identification of the citizens with their quarter - Continuing the economic transformation process and developing unique fields of competence, e.g. in health industry or biotechnology 	<ul style="list-style-type: none"> - degeneration of residential areas with architecture of the 50's and 60's to social hotspots - disperse settlement structure preventing improvement of residential areas, for example towards the river Ruhr

4.2.2 Policy section

Governance

Main actors

Main actors in the region influencing the spatial development are the Regionalverband Ruhr (RVR, see section 3.1.3) on the one hand and the administrative districts (Regierungsbezirke) on the other hand. While the RVR is responsible for the whole region, the responsibility on the part of the districts is divided by the different administrative districts: the administrative district of Arnsberg for the south-eastern part, Düsseldorf for the western part and Münster for the north-eastern part. As both institutions partly deal with the same aspects of spatial development (RVR is working on concepts and masterplans for open space development, the districts are responsible for the formal spatial development) difficulties in the coordination are preassigned. Main actor on the county level is county council (cf. section 3.1.3).

The municipal council of Witten consists out of seven parties. Besides the usual nationwide established parties SPD, CDU, FDP, Green Party, three local Initiatives are represented: Wittener Bürgerschaft, Freie Liste Witten (FLW) and AUF Witten. The ruling majority is held by a coalition of the SPD and the Green Party since the last election in 2004. Beforehand the majority was held by the SPD.

Main actors in the economic sector are Ostermann, a nationwide known furniture store, employing 1200 people and the University Witten Herdecke. Besides them some local investors and the community of the local architects play an important role in the city development. In the moment the Bahnflächenentwicklungsgesellschaft (BEG), a NRW-wide initiative for the redevelopment of derelict rail road areas, and the church of Witten, selling unoccupied buildings and properties, are influencing the development as well as the local housing association.

Dominant area of action and influence

Two dominant areas of actions and influence can be seen for the city of Witten: first to establish and qualify Witten as an attractive location for the combination of housing, working and leisure and recreation; second to extend and consolidate its role in the field of biotechnology and health science and industry.

The first is to be followed by a threefold strategy of city development which is described in section 3.2. Basis is on the one hand the huge and attractive potential of the natural landscape, on the other hand the optimal accessibility, which was already a positive location factor for Witten in the past. Leading principle for this development according to the city administration should be an enhanced development of already built up area that is no longer in use. Potentials for this exist within the huge industrial and commercial areas e.g. along the river Ruhr.

Basis for second dominant area of influence are the already resident institutions and facilities in the field of biotechnology and health science namely, the University, especially its medical faculty. These activities pick up a trend that is dominant in the whole region of the middle Ruhr Area, whereby additional impacts can emerge. Especially the triangle of the three universities in Bochum, Dortmund and Witten can form a basis for research and development institutions. Other push factors in this field are the several anthroposophical facilities and institutions as well as the relatively strong anchorage of them in the citizenship (cf. section 1.4.3).

Institutional setting

Because of the multiple linkages of the SMESTO in an economic and political perspective several both formal and informal co-operations exist within the SMESTO.

(a) Political-administrative

Witten is part of the Ennepe-Ruhr-Kreis, the next higher level of administration. The county council of the Ennepe-Ruhr-Kreis, that represents nine municipalities, is responsible for a balanced regional development. Politics and administration on the county level dispose of a variety of planning instruments to assure this balance of interests and development. Nevertheless most of the decisions concerning spatial development are made on municipal level. The county council in turn represents the county in the Regional Planning Board (Bezirksregierung) and in the RVR.

The regional planning board and the administrative district (Regierungsbezirk Arnsberg) is responsible for the formal sub-regional planning. Main content of the sub-regional plans are the definition of regional settlement corridors and protection of open space. Witten belongs to the planning section Bochum and Hagen (including the SMESTOs Herdecke, Witten, Herne).

The RVR is made up of eleven towns and cities and four rural districts. Since 1920, the year in which the "Ruhr Coal Region Settlement Association" was founded, there has been a regional umbrella organisation with headquarters in Essen. Renamed the "Kommunalverband Ruhrgebiet" (Association of Local Authorities in the Ruhr Region) – or KVR – in 1979 this institution is responsible for a range of activities above and beyond those undertaken by the individual local authorities. These range from the construction and operation of major leisure facilities to PR work for the whole region. In October 2004 the old KVR was dissolved and replaced by the new "Regionalverband Ruhr" (Ruhr Area Regional Association), or RVR.

(b) Cultural and educational perspective

The University of Witten/Herdecke, Germany's first private university, founded in 1983 is located in the neighbouring city of Witten. Although it is a private university, it forms a triangle together with the nearby universities of Bochum and Dortmund. Co-operations between these three universities are limited up to now but should be extended in the future.

A regional co-operation in the field of leisure and recreation deals with the development of the valley of the river Ruhr. All cities in the region, that are located

on the river, i.e. Bochum, Hagen, Wetter, Witten, Hattingen and Herdecke, as well as the regional actors RVR and Ennepe-Ruhr-Kreis are involved in this initiative. Aim is to improve the touristy potential of the region by improving and restoring the natural beauty and potential of the Ruhr, which was heavily regulated over the last 200 years, when industrialization started.

(c) Economic perspective

The Ennepe-Ruhr-Kreis has established a business development agency (EN-Agentur) in 2002, aiming at an improvement of the regional socio-economic structure by supporting the local economy. All cities of the county are members of the EN-Agentur.

Bochum, Hattingen, Herne and Witten are working together in Bochum's Chamber of Commerce and Industry (IHK) for the middle Ruhr region. 24,000 companies of every order of magnitude within the fields of industry, retailing and service providers encompassing a wide variety of activities based in Bochum, Hattingen, Herne and Witten belong to the chamber.

Prevailing challenges and options of development

In order to face the prevailing challenges a threefold strategy of city development can be delineated:

Firstly the city of Witten has to improve its offerings for residential areas, especially for single occupancy houses, in order to compete with other surrounding cities like Dortmund. Thus the disproportion of apartment buildings to single occupancy houses can be diminished and Witten can improve its position as a high quality location for residential purposes. Simultaneously in a process of urban renewal the existing areas for housing, especially those that consist of architecture from the 50's to 60's, have to be enhanced in order to avoid the downfall of this quarter and the appearance of social hotspots. Thirdly the potentials that emerge within the current shrinking process (brownfields, other wasteland) have to be used for a qualitative improvement of the built up area. These challenges have to be faced during the current development of a new land use plan. This is associated with the development of an eligible concept for the use and protection of open space.

Hypothesis	General (for DE)			Witten		
	valid	invalid	Note	valid	invalid	Note
1		X			X	
2		X			X	
3		X			X	
4	X		In most of the cases	X		
5		X		X		
6		X		X		
7				X		
8		X			X	
9a	X			X		
9b	X			X		To a limited extend
9c	X			X		
9d	X			X		To a limited extend
10a				X		
10b				n.n.		
11	X		As well as bigger cities!		X	Since a long time for Herdecke it's role is clearly defined
12		X		X		Daily supply, but on a high level
13					X	
14	X			X		
15			May be the case for medium sized cities in Germany	X		
16						As the city defined it's role as primarily being a high class residential area, it's difficult to answer
16a		X	Could be, but not necessarily, see chosen examples.	X		
17a		X			X	
17b			Difficult to answer, a very romantic point of view	n.n.	n.n.	
18		X	Depends on the individual case (spatial context)	n.n.	n.n.	
19						Does not exist!
20	X			X		But restricted
21	X			n.n.	n.n.	
22	X				X	
23	X		Mostly, yes		X	
24		X			X	
24a		X		X		Only partly true
25			Both can not live without the other one	n.n.	n.n.	The mix is the key
25a		X		x		
26			partly	x		To a certain extend

Photos/Figures

Witten in an old sight



Coal industry



The river Ruhr in the municipal area of Witten



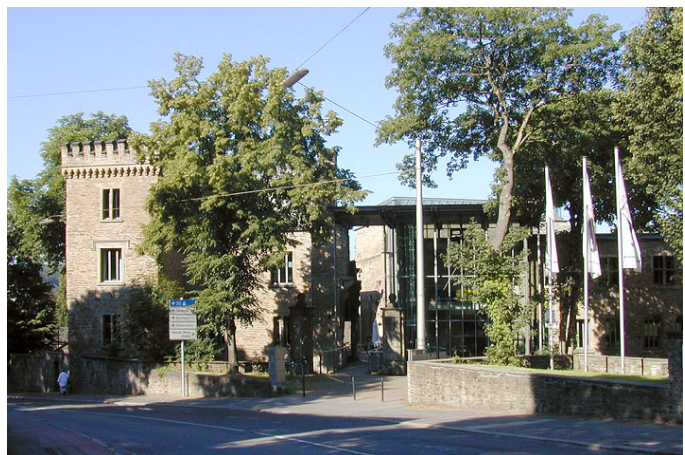
Town silhouette



River Ruhr in picturesque countryside



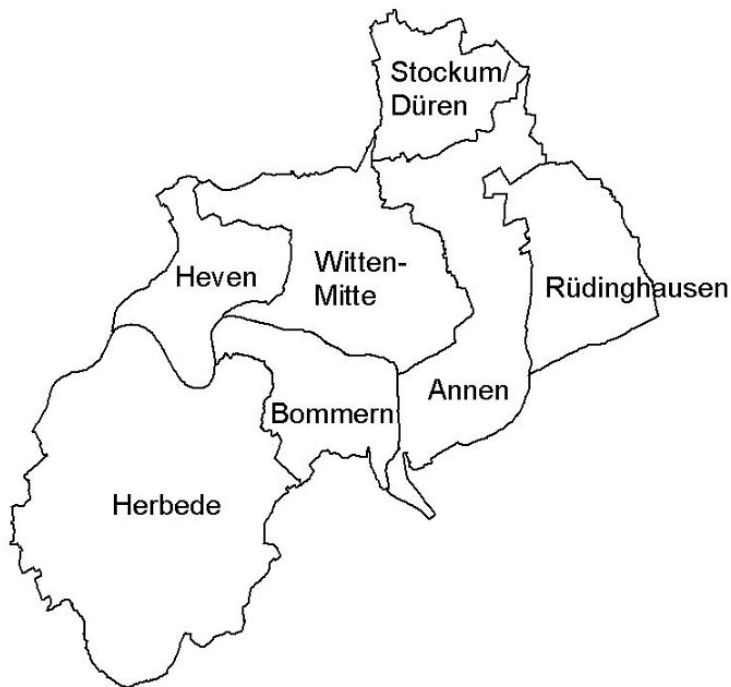
Witten mansion



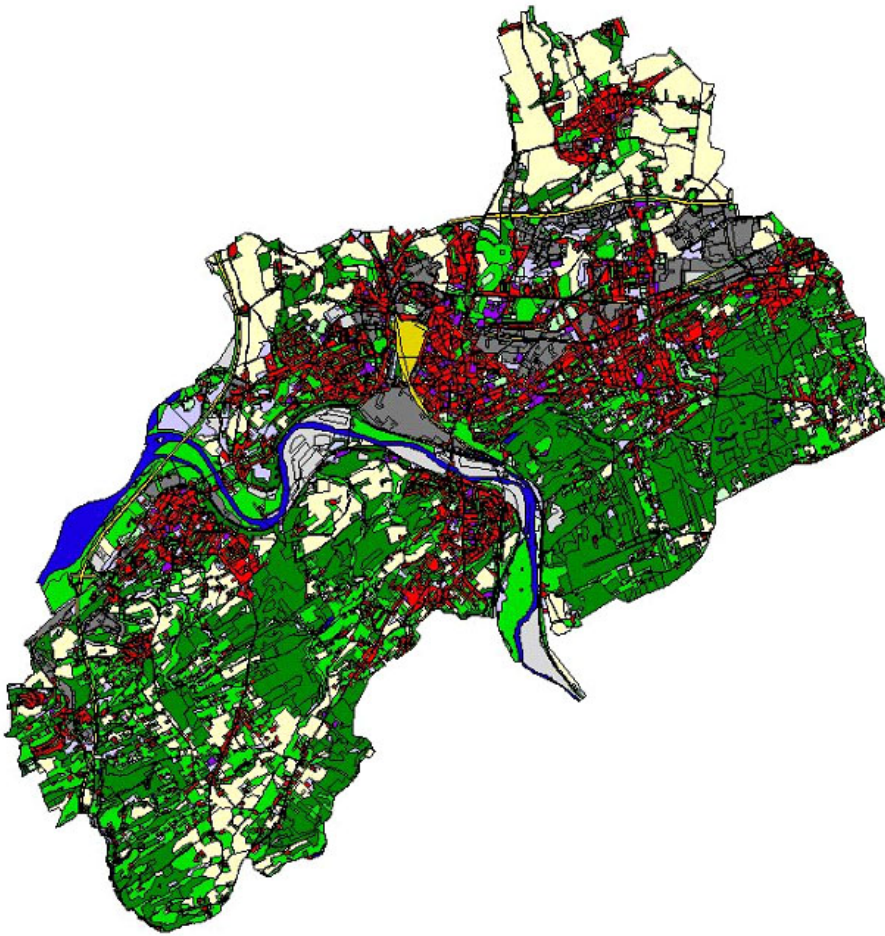
Map of planning measures in the Ruhr valley



Witten's Districts



Land use mapping of the City of Witten



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Abbreviations

BBR	Bundesamt für Bauwesen und Raumordnung (Federal Office for Building und Regional Planning)
CDU	Christlich Demokratische Union Deutschlands (Christian Democratic Union)
EN-Agentur	Wirtschaftsförderungsagentur Ennepe-Ruhr GmbH (Promotion of the Economy Agency)
FDP	Freie Demokratische Partei Deutschlands (Liberal Democratic Party)
FLW	Freie Liste Witten
GLS e.G.	Gemeinschaftsbank für Leihen und Schenken (Community bank for Loans and Gifts)
IHK	Industrie- und Handelskammer (Chamber of Commerce and Industry)
KVR	Kommunalverband Ruhrgebiet
LDS	Landesamt für Datenverarbeitung und Statistik NRW
NRW	North-Rhine Westfalia
RVR	Regionalverband Ruhr
SPD	Sozialdemokratische Partei Deutschlands (Social Democratic Party of Germany)

5 ITALY

5.1 Case study Carpi

5.1.1 Descriptive section

Geographic position

Municipality under the Province's Chief – Town (NUTS III) of Modena (43 municipalities) in the Emilia Romagna Region (NUTS II).

- **61,111 inhabitants** (ISTAT 2001)
- **Density: 464.5 inh./km²**
- The **very high population density** indicates the strong urbanisation pattern of this part of the Emilia Romagna Region, characterised by dense urban settlements with a large number of municipalities, with relatively limited agricultural areas, because of the proximity of each town to the other.
- The location is relatively well deserved by **road** – on the high-way Modena-Verona- Brenner (to Austria-Germany) – and **train** transport network: not far from the main regional axis Bologna-Milan and Bologna- Florence-Rome, as well Modena –Mantova –Verona.
- Modena, the Carpi's Chief-Town, has a central location very close to Bologna (20 minutes by train) is part of the central area in the Region Emilia Romagna, (see also the Fig.in the Ravenna's Case Study – the inter-modal transport system pag.1), for the crossing of many national and European flows. This situation is therefore beneficial also for the small towns close to Modena, as Carpi is.
- Carpi is the **biggest municipality of Modena Province** per number of inhabitants and this indicated the relative important position of the town within the provincial urban system, in particularly taking into consideration the large number of STs.

Pattern of urbanisation

Urbanisation process: History, city size, hierarchy

- Carpi – on the contrary of Modena and Mantona cases, two close medium cities that enjoyed of a very rich and prestigious ancient urban development up to the strong urban functions created up to the XX cent – has been characterised by a relatively recent urbanisation history, whilst its agricultural profile has more ancient roots, at the time of the Roman Empire.
- Carpi town, at the end of XIX Cent. was still within the borders of the town-walls, indicating its late development; only at the beginning of the XX century started to develop further. It is however after the Second World War that acquires the present configuration. The town has nevertheless, not suffered of

too rapid or stocky urban development, keeping a steady but moderate rate of expansion, particularly due to the industrial location plants.

Poly-centricity

(a) Morphological dimension

- The **urban territory** is built around the historic centre of relatively large size, based still on a XIV Century original settlement.
- The **historic centre maintains still important urban functions** and remains the commercial centre of the town. It has also beautiful important monuments, that indicates a good **preservation of its Middle Age past** within the ancient city-walls.
- **The modern town** is characterised by a certain homogenous type of houses and medium and high buildings, alternate with sparse green areas.
- **The industrial part** is relatively on the border of the modern town; but the core of the industrial district is outside the city, as separated entity, whilst close to the town (in the map, blue-green areas).

(b) Relational dimension

- Carpi is a small municipality well integrated into the geo-physical and economic territorial system of the Region Emilia Romagna, and more in general in the *Padania Plane* space (that also encompass part of Lombardia and Veneto regions).
- This Small town, that is however the biggest urban centre in the Modena's Province, is an integral part of the polycentric urban system of the Region Emilia Romagna, where the Medium Cities, like Modena, plays as pole for the related urban network of the surrounding small towns, as Carpi.
- The large number of Small Towns located within the Modena's Province gives a clear indication of the high urban density, confirming the urbanisation patters of the Emilia area, by contrast with Emilia area (see Ravenna Case Study).

The Modena Province' Municipalities (43 in total):

Bastiglia, Bomporto, Campogalliano, Camposanto, **Carpi**, Castelfranco Emilia, Castelnuovo Rangone, Castelvetro di Modena, Cavezzo, Concordia sulla Secchia, Fanano, Finale Emilia, Fiorano Modenese, Fiumalbo, Formigine, Frassinoro, Guiglia, Lama Mocogno, **Maranello**, Marano sul Panaro, Medolla, Mirandola, Modena, Montecreto, Montefiorino, Montese, Nonantola, Novi di Modena, Palagano, Pavullo nel Frignano, Pievepelago, Polinago, Prignano sulla Secchia, Ravarino, Riolunato, San Cesario sul Panaro, San Felice sul Panaro, San Possidonio, San Prospero, **Sassuolo**, Savignano sul Panaro, Serramazzoni, Sestola, Soliera, Spilamberto, Vignola, Zocca.

- To this regard there are **different hierarchical sub-systems of different scale**, between the Regional Capital (Bologna), the Provincial Chief-town (Modena), and the local municipalities (like Carpi) and among the latter.

Regional history and recent development

- The Region Emilia Romagna is characterised by a dense urban settlement system. The “*Metropolitan Polycentric Regional System*” (see Ravenna’s Case Study) is aimed at the improvement of *its inter-modal transport system*, favouring the regional mobility – for facilitating the flows of goods and daily people commuting (labour and students) from one centre to another – and also for improving the access to main European poles.
- The perspective of future improvement of the regional transport system would be extremely beneficial for the Medium and Small towns, and also for the SMEs (Small and Medium enterprises) that represent the economic fabric of the local economy, improving their access to European markets (in term of speedy and transport costs).

The *Industrial District* that has the core town in Carpi, comprises five municipalities (small towns, where Carpi is the biggest) in the surrounding areas: a part Carpi, there are Cavezzo, Concordia, Novi e San Possidonio.

- Other municipalities that are located in the **Modena’s Province** excel for their world *renomé*: two examples as Sassuolo, recognised as world ceramic producer cluster and Maranello for the *Ferrari* production centre. The first, at present, is suffering from the pressure coming from international competition, the second maintaining the “excellence” in innovation and high technology, including the high service function.

Role and function

Carpi, the symbol of a Small town highly specialised in the industrial sector (textile and engineering) is the **core city of the Industrial District**, having a *dominant function* within the Cluster areas.

- In the 1980ies, the industrial structure went through a profound crisis that has bearded a process of selection of those firms that were more performing for sustaining competition, in particular through acquisition, increasing the average size of the firms.

Economic function

(a) Textile-clothing industry

- **Highly specialised in the textile –clothing industry** that represent 80% of total firms and 70% of the employment. **The high profile of this specialisation**, based on a flexible productive system (sub-contractors) has ensured a steady growth of the urban economy that exports large share of its production mainly to EU neighbouring countries, in particular to Germany.
- **The conceptions and the design (including high fashion)** are mainly located in the Carpi town, whilst the industrial production is spread among the surrounding firms (subcontractors) located into the district. This also indicates

that Carpi town acts as **strong high quality profile service (conception) function**

- The stronger position in term of innovative design and consolidated industrial fabric of some industrial districts in Emilia Romagna, as Carpi district, has narrowed the effects of de-location of firms as happened in the Veneto Region in the last few years. However the recent trend toward the loosing of market shares, including Modena's industrial clusters, has impacted also the Carpi District and this has created stress on its economy.
- Carpi is again at present going through a **reorganisation process for attempting to adapt to higher quality services and production**, in particular for innovating products as well for up-grading own skill and capacity to compete on the global markets/mainly European.

(b) Engineering industrial branch

- The **other industrial specialisation is in the engineering sector, mainly machineries for wood-cut, automatic and agricultural machineries**. The export also has a relevant share as market outlet. However also this branch is accusing a certain decline in the last years, while stabilising, instead of a growing number of the firms specialised in this sector.
- There are two main constraints for the further development of these branches:
 - A- **The unsatisfied demand for labour forces vis-à-vis** the not adequate local labour supply, that requires more contribution from immigration;
 - B- **The need for more products and processes innovation** in order to sustain the competition. The traditional (consolidated) system of sub-contractor that allowed a great flexibility in the near past, needs also to be up-graded.Both these needs require an **up-grade of the Small Towns's service function** that provide labour, including at the first stage **Carpi town function**.

Service Function

- **Carpi town has the central function for the Industrial District** and consequently ensures services and high functions directly and indirectly related to the industrial activities for the other surrounding small towns, part of the Carpi Industrial District.
- **Traditionally the commercial function** has been very well developed, related also to the **historic centre of the town**. The **tourist function** is in fact the secondary potential of Carpi, that has preserved a beautiful and old medieval centre.
- It is clear that **its role is under the hierarchy vis-à-vis Modena**, the Province Chief-lieu and consequently has less diversification than Modena as Medium City has, including the institutional function (as Province).
- **Good quality municipal governance in the framework of conducive provincial institutional management**, that allow a close co-operation in term of coordination and policy implementation for ensuring a certain favourable environment for the economic activities.

SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> - Relatively good location in a dense urban areas surrounding an industrial dynamic Medium City as Modena, that acts as main pole for the industrial districts system of the area (province and beyond the province) within the Region E-R. - High consolidated industrial specialisation that allowed Carpi to acquire the core function of the Textile-clothing Industrial District in the near past. - Strong economic (industrial) and social (labour market) integration into the provincial and regional (more Emilian industrial area) dynamic system that represents the main economic base on which the Polycentric Urban System of the Region Emilia Romagna – with dense network of Medium and Small cities, differently inter-related at different scales – is based. - Good quality municipal governance in the framework of conducive provincial institutional management. <p>The Modena Province</p> <ul style="list-style-type: none"> - The dominant profile of the Modena’s Province is based on industrial clusters system, that foresees diversified sector specialisations. Their close location have contributed to create a favourable environment that has been the base for the growth of the 1980-90ies. The urban system result therefore highly integrated into large areas, covering the spatial dimension of the clusters. Various types and size of towns are one closely interrelated to the other, following the various specialisation patters. The Province Capital Town, Modena provides those high services that serve the sub-urban systems for the Province as a whole. 	<ul style="list-style-type: none"> - The increasing international competition, in particular from the nearly acceding countries (Romania in particular) and emerging economies (China and India) put stress on the traditional textile and engineering industrial branches and on the old Industrial District performance. The relative slow down and sometime decline of the industrial activities would require a strategy for diversification and up-grading. - Need for further improvement of innovation and labour qualification for increasing the quality component: problem of low skill of immigration labour forces. <p>The Modena Province</p> <ul style="list-style-type: none"> - The industrial clusters since the 1990ies, are suffering from international competition – mainly from emerging economies – and processes of reorganisation and reallocation of resources are at different degrees touching most of the present productive systems. Thus the towns that are characterised by high specialisation profile suffer from the relative decline of their traditional strong economic base.
Opportunities	Threats
<ul style="list-style-type: none"> - The close location to main roads and transport axis within the Emilia Romagna scheme gives to Carpi location some possibility to improve its openness toward international markets, through the improvement of the transport linkages. - The old consolidated entrepreneurial culture is an asset for the future that needs to be adapted to the new requirements: the urban policy can be focused on the improvement of the service functions for business development and enhancement of the investments attractiveness. - The old historic centre of Carpi represents the opportunity for developing also more active tourism attraction, for its cultural heritage of Middle Age period. This might help also the diversification of its economy, to balance the relative decline of the industrial sector. <p>The Modena Province</p> <ul style="list-style-type: none"> - The up-grading of the public and private services for business and the strengthening of the linkages between the different sub-urban systems in the Province, might bring positive effects for the business environment. 	<ul style="list-style-type: none"> - The Industrial District capacity to compete on the international market – not only Carpi but also other clusters (like Sassuolo) – has been relatively eroded and the small and medium cities/towns that have their economic foundations based on them, need to go through a heavy and wide reorganisation, looking for strengthening new and more qualified functions. - The capacity to up-grade Carpi’s functions are also related to the degree by which a wider Provincial (including Modena Chif-lieu) and Regional (Bologna) plans for the effective improvement of the inter-modal transport system are followed and implemented, in order to easy the access also to the other small towns, not directly located on the main existing axis.

5.2 Case study Ravenna

5.2.1 Descriptive section

Geographic position

Province's Chief –Town (NUTS III) in the Region Emilia Romagna (NUTS II).

- **146,989 inhabitants as *Comune*** (at the 31 December 2004), over 351,000 for the Province (18 municipalities) as a whole.
- **Density: 189 inh./Km²**

Emilia-Romagna Region (NUTS II) and its Provinces (NUTS III)



- Ravenna, located 10 Km from the sea-side, has been historically a **City-port**: now **Commercial and Tourist Port** of international importance.
- **Transport linkages by road** (height-ways to Bologna/Ancona/Venezia) and **train** networks to Bologna (Emilia Romagna's regional capital) and Venezia (Veneto's regional capital), the two main cities that dominates Ravenna's cultural and economic linkages, plus those to Ancon (Marche's regional capital), toward the South.
- **Access to three (3) main airports: Bologna** (dominant airport), **Venezia** (more faraway), **Forlì** (small secondary airport). The distance of Ravenna from the airports however represents a strong constraint for an easy and quick access to the city.
- Even if Ravenna's geographic position is potentially well placed in the middle of a triangle (Bologna -Venice - Ancon, but also Florence, crossing the mountains by a beautiful landscape road), the transport infrastructures quality (speedy), as they are at present, represents a relative handicap for accessing easily to the city. Ravenna remains relatively apart from the main axis (Milan/Florence/Venice), as well as from the "Via Emilia" – the ancient Roman

road that crosses the region – along which the other regional cities, like Modena, Reggio Emilia, Parma, Piacenza, are located. Its location along the **Adriatic Sea coasts**, gives however to Ravenna a particular good potential strength for the possibility to develop linkages from North-East to South-East Italy. In this perspective, in the next few years (by 2010) a plan for building an *European high-way* based on the already existing old road along the Adriatic, will be completed, starting from Venice, going through Ravenna and reaching Rome (three old historical capitals).

- Relevant natural beauty: pins woods and Regional protected Parks around the Po River: they represent one of the strength of Ravenna province's attraction.

Pattern of urbanisation

Urbanisation process: History, city size, hierarchy

- Ravenna as very ancient city has a long history of consolidated urban development, acquiring at each stage, various functions and roles: following its role as Capital of the *Western Roman Empire*, under the Byzantine emperor, became than regional capital of at that time "*Emilia*", and than regional capital of *Romagna* at a later stage. Local and regional competition with other cities (Venice and for short time, Forli) have been always the background that has foresaw different stages of its up-surge alternate to its decline.
- A part a fundamental agricultural profile matured during the XX century, the modern city has been developed mainly after the Second World War, based on the leading industries (petrol-chemical industry). Ravenna has acquired than double functions: the naturally agricultural vocation town has been coupled with the heavy industrialisation of the 50ies-60ies, having a serious damage on the environment because of the air pollution by chemical emissions.
- This path has modified the morphology of the city, enlarging and acquiring different distinct zones, however remaining relatively under a certain institutional management control: the land use policy has always been very strict and not submitted to speculation, as in many other cases, however underestimating the damages connected with the chemical emissions of the large plants – located not enough far from the built populated areas – not only to the close urban population but as well to the natural green areas (the destruction of part of the pins wood along the sea-side).
- The creation of different industrial zones – where the large petrochemical plants were located – have developed on the external borders of the city, leaving the old and modern city out of these structural changes. The preservation of the ancient and old town has been the positive result of an attentive urban policy: this well preserved historical centre has become to day one of the strength of the city's profile, beneficial for its cultural and tourist attraction capacity.
- The weakness of the regional transport infrastructures has negatively affected Ravenna's development, that instead of its vocation toward international relations (tourist attraction and cultural industry, industrial and agro-food production) has been relatively de-favoured vis-à-vis its neighbouring regional

cities, like Forli (located on the Emilia Road) and Ferrara (closer to the Veneto and in particular, to Venice).

Poly-centricity

(a) Morphological dimension

- Around its "historic centre" the city has growth at different stages, with extensive green/agricultural areas, surrounding the city, that separate Ravenna city, from numerous small settlements (*frazioni*). On the Eastern side, going toward the sea-side there are the small sparsely urban settlements along the coast with residential and seasonal population, as Casal Borsetti, Porto Corsini, Marina di Ravenna, Punta Marina, Lido Adriano, few decades ago very active centres, a part tourist attraction, also for fishing.
- The port is integrated into the old city centre through an effective system of canals that have however the technical constraints of being not very deep for large ships.
- The other numerous surrounding urban settlements (*frazioni*) on the Western side are dispersed in the surrounding agricultural type land,. All these small centres are dependent on Ravenna for mayor services provision and employment, indicating a dynamic relations between them and the city, that also reflects the coexistence of well integrated rural areas into diffused urban areas. So there are no sprawl phenomena, even if part of the population living in these centres, is moving daily to Ravenna for working.
- The small towns within the Ravenna's Province has also historical background. Their historical centres are mainly from the Middle Age period, or for the more recent ones, since the XIX Century: this fact has contributed to maintain a certain positive feature as poles of attractiveness, even during the more recent period of industrialisation and increasing building up of enterprses as food processing (tomatos, sugar, fruits related products) firms (for instance Alfonsine, Massa Lombarda).

The small towns (*frazioni*) within the Ravenna Province are: Alfonsine, Bagnacavallo, Bagnara di Romagna, Brisighella, Casola Valsenio, Castel Bolognese, Cervia, Conselice, Cotignola, Faenza, Fusignano, Lugo, Massa Lombarda, Riolo Terme, Russi, Sant'Agata sul Santerno, Solarolo.

- Among those Small Towns there are some, as Brisigella, Faenza, Riolo Terme, that enjoy of a strong cultural and historical attraction capacity for Tourist and leisure attraction: Riolo Terme as well as Cervia, are spa-towns, whilst Faenza has an international *renomé* for its traditional ceramics design. Among the more recent ones (beginning of the Century) as Cervia, are characterised by high tourist attraction for the sea-side summer activities along the Adriatic Sea.

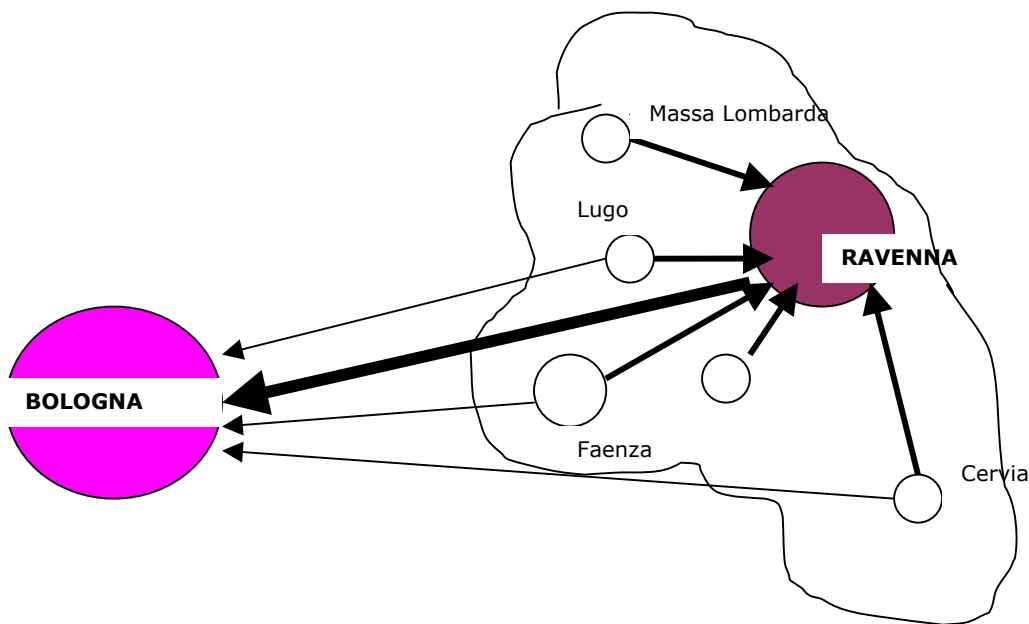
(b) Relational dimension

- The Region Emilia Romagna is one of the best examples in Italy of **polycentric development**: 40% of total population live in 10 main cities/towns, out of which, 8 are Province's Chief Towns and one is Regional

Capital. The interconnections among these cities/towns are intensive, either for transport linkages, labour mobility, economic flows, and tourist attraction.

- The dominant urban pole in the region of course remains the Regional Capital, Bologna, but the other Medium Cities, like Ravenna, with their surrounding Provinces, have each own peculiar profile, even if with strong similarities.
- Each Medium City is related to numerous Small Towns – within their municipalities – and reproducing at different stages, a type *of network between the dominant functions of the main city/towns and the secondary importance function of the others cities/towns.*

Example of urban integration at different stages in the Region Emilia Romagna:



- This regional urban system has reached a strong integrating stage, based however on various complementary profiles that represent the *comparative advantage* of the Region Emilia Romagna in the European spatial framework. These characteristics indicate a **weak urban hierarchy**, since the **role of the medium cities** vis-à-vis the regional capital, remains strong and this favours a **well balanced and diversified functional integration** within the regional spatial dimension of E-R. region as a whole.

Regional history and recent development

- The city is located in one of the most advanced and highly productivity type region in Italy (regional GDP per capita has been often one of the highest in Italy, together with Trentino-Alto Adige Region). Because of the economic profile of the region, the international pressure on competitiveness is extremely high, and this of course affects also its urban development that needs to be of higher quality in term of public and private service provision to population and private business, in order to ensure sustainability to the economic growth perspective.

- The economic model of the Region E-R. has a peculiar profile by industrial *clusters* (local production systems) of different types, variously integrated. In fact the Region is characterised by two large diverse sub-areas: **Emilia**, as mainly dominated by SMEs development organised on the base of clusters (also called the *industrial districts*), whilst **Romagna**, where Ravenna is located, characterised by less intense small business diffusion instead dominated by few large industrial companies (large former public and private groups), coupled with intensive agricultural activity.
- These diverse economic specialisations are also reflected on the urban patterns: Emilia enjoys of much higher population density that are the base of very dense urban settlements (a large number of STs), one close to the other (see Carpi Case study), whilst Romagna, has a more dispersed STs on a relevant agricultural or green areas (plane and hills). Romagna in fact for its natural and economic features, is more attractive for tourism, including the Adriatic Sea coasts.

Role and function

The role of Ravenna within the regional (NUTS 3) system is very clear as contributes to improve the higher service provision for the surrounding STs. Its positive demographic trend in the last decades, in particular since 1969, shows Ravenna's capacity to attract people, initially facilitated by the economic activities of the large companies located there. Following a relative declining of some of these industrial activities, the population registered during the 1980ies a net decline but other sector, mainly service, have increased the opportunities for employment. Also the opening of the University, even if commuting students remain numerous from the surrounding area, has contributed to increase the resident people.

New functions have been acquired through the fundamental modification of Ravenna's specialisation profiles. The losing of previous comparative advantages has opened up in this last decade, a process of re-orientation toward more quality and value-added activities, on the background of an improved quality service provision that however remains still a target to be fully achieved.

Economic Functions

- **The decline of the petro-chemical industry:** Traditionally dominated by agriculture, as was the Romagna area's main vocation, the industrialisation of Ravenna was led by the petro-chemical large plants development of the 1950-70ies. The sector decline has brought a heavy impact on the Ravenna economic fabric, leaving also still large territory still facing the need for costing cleaning up-land.
- **Agro-food industry as the second profile of the Ravenna's economy:** the trend toward its relative decline, whilst remains still relevant for few competitive firms that have been acquired by large companies, has, together with the petro-chemical decline, represented the main serious problem of the Ravenna economy, looking for diversifying its profile.

- **New emerging cluster for ship-building for *pleasance* (yachts):** this new activity is planned to become operational in few years time, and represents one of the featuring profile of the city: transfer of different plants from the close region-Marche, plus new investments, for creating a *new industrial pole* highly technologically specialised in this branch. The Port and the city's natural "sea" vocation, justifies this choice. Services and facilities are also expected to grow accordingly.

Cultural and Tourist Function

- **Ravenna, as historic site and tourist function,** has an extremely rich cultural heritage (it is also *Capital of mosaics*) that is also confirmed by its eight (8) ancient monuments under the UNESCO' World heritage. The offer is however still not adequate in term of tourist services (hotel capacities/beds) comparing with this so great existing potential.
- **The development of the cultural function:**
 - **Music centre attraction:** this reach historic background has created favourable conditions for its present cultural development, becoming an international place where classic and contemporaneous music Festivals are carried out (*Ravenna Festival, Mosaics di Notte, Ravenna Bella di Sera, Ravenna Jazz, Mosaics Sonori*) of international renom .
 - **University rapid growth,** opening up different faculties, is acquiring an increasing weight that improve the attractiveness of the city as educational pole, slowing down the perspective of student population to move to other universities, mainly Bologna (the oldest university in Europe) strong pole.
- **The sea-side and the connected "cruiser" activities,** also represents the other tourist attractions, whilst it cannot compete with Rimini and its surrounding small settlements.

Transport/Port Function

- **The strengthening of the Port function,** both for commercial purposes and for pleasure (yacht), with very important planned investments for its further development, represents one of the re-born activity that confirms the link of Ravenna with international markets and in particular with the Adriatic area, looking toward the East and South European rimes.

SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> - Historic sites and natural beauties represent its main strengths for developing tourist and cultural functions. The good city management and attentive historic monuments preservation policies have made the historic city centre extremely attractive for cultural and living scopes. - Agriculture and agro-food industries remain relevant for its more diversified profile, in particular in term of "quality" competitiveness (biological production). The preservation of agricultural lands remains at present still one of its strength, well integrated with the dispersed urban settlements (small towns). - The integration into the polycentric regional system, gives to Ravenna an important function, based on own specific profile. 	<ul style="list-style-type: none"> - The decline of previous highly specialised profiles (agriculture and petrochemical) has brought a long process of adaptation and re-orientation toward more diversified profiles, but still based on alternative specialisations (Port/ Tourist cruiser activity/cultural/new industrial cluster) - Certain peripherality, out of the main cross nodes (Emilia road and international airports) has negatively affected Ravenna potential development. The new large investment programmes are meant to improve its accessibility in the next years and consequently its better insertion into the European space. - The insufficient services provision for tourist attraction, as well as for future or coming enterprises: both service functions require improvement in light of the expected investments in the different sectors and the expected economic growth impact.
<p>The Province (NUTS 3)</p> <ul style="list-style-type: none"> - The region where Ravenna is located has a diversified natural and economic profile: the natural beauty associated with the sparse STs of historic importance, makes the region very attractive, additionally to coast tourist attraction capacities along the Adriatic sea-side. - The Province shows a good management capacity in governing the local SM Towns, fully exploiting the various natural heritage and specialisations that have become an instrument for attraction of activities. The valorisation of old traditional brands – in food for instance (wine, cheese, bread) – additionally to architectural heritages (castles and ancient resorts) had made the Province very peculiar and pleasant ensuring a high quality of life. 	<p>The Province (NUTS 3)</p> <ul style="list-style-type: none"> - The transport network in the Province, among the small municipalities, remains still mainly based on the traditional road (with the exception of few towns close to the highway Bologna-Ravenna), and local train network: an improvement in the linkages to speed up the access to the regional capital, Bologna and to the other Medium cities would contribute to strength its potential development, including improvement of attraction capacity of the region. - The improvement of the tourist capacity (beds) remains still not fully adequate in the STs. Much could be done for the renovation of old sites/ ancient resorts and the building of new ones, given the existing potentials, in particular in the historic centres.
Opportunities	Threats
<ul style="list-style-type: none"> - The rich historical background needs still to be fully exploited. The potential development would be relevant for strengthening its profile as cultural and tourist city. - The geographical position represents important opportunity for reinforcing its median location at the crossing of various directions conducing to other relevant regional capital cities, as Bologna or international city, as Venice or more faraway, Rome. - The expected development of the new technologic pole of ship-building (yacht) branch will open up new possibilities for strengthening its partially lost industrial function, however based on new competitive and highly skilled production segment. 	<ul style="list-style-type: none"> - The periphery of the city is at present a barrier that narrows the opportunity for further development. The improvement of its position requires a very substantial and costly plan of long term investments. - The University pole development suffers of the competition of the already existing and consolidated universities, primarily of Bologna, but also of Forli. Its strengthening will also depend on the resources at disposal for its development, both from local municipality and from University policy in the regional context. - The agriculture sector development for the agro-food industry suffers of the increasing competition at international level: its survival and the connected employment will represent an important asset for the strengthening of the Ravenna's province economy.

Opportunities	Threats
<p>The Province (NUTS 3)</p> <ul style="list-style-type: none"> - The natural resource endowment (agricultural lands, quality (biologic) food products) and historical heritage would contribute to increase the economic diversification and better confirms its vocation for becoming an attractive region also for business location. 	<p>The Province (NUTS 3)</p> <ul style="list-style-type: none"> - Better transport linkages, including the up-grading of the present road system, require extensive investments in infrastructures: the present macro-economic situation, facing increasing constraints on the public spending side, also with the devolution from the State to the Regions of most of the spending items (ongoing process toward federalism), put much constraints on the provincial and local administration's budgets. This might become a factor that will limit their capacity to implement more substantial plan of investments in their territory.

5.2.2 Policy section

- Both the City (Ravenna) and its Province (including the centralised Provincial institutions located in Ravenna) are characterised by a very good public administration capacity in dealing with urban planning, defence of the historical sites, maintenance of the green areas – thought, damages and greasing environment already took place in the past decades (1950ies-1960ies) during the intensive industrialisation by petrol-chemical industries. The lack of sprawl phenomena, either at the city (Ravenna) or the individual municipality levels, confirms the successful management of the urban development.
- This good governance has also favoured the development of an attractive environment for the high living standard quality – the pleasant architectural milieu of the ancient City as well as the positive linkages between urban built-up areas and rural areas – but also for business development. These conditions have also facilitated the shift toward diversification of the economy facing the problems of declining of traditional activities.
- The close cooperation between Ravenna Province Chief lieu and the small municipalities, in term of specialisation/complementarities, service network, have created a **highly integrated local urban system, enclosing also rural areas**. The competition with other provincial chief-lieu, as Forli or Rimini, remain related to sector competition (ex. for tourist attraction to sea-side, or university student attraction) but globally not very relevant in the remaining sectors, because of the peculiarities that each of the Province has acquired and consolidated.

For photos of Ravenna please look at here below:

<http://www.medcoast.org.tr/med03/ravenna-photos.htm>

<http://www.zanzig.com/travel/italy-photos/2448-083.htm>

http://www.stats.ox.ac.uk/~rpley/Photos/PieveACastello/img_1919.html

		Confirmation 1, non-confirmation 0	
		Carpi	Ravenna
Regional Context	1	1	1
	2	0	0
	3	0	0
	4	0	1
	5	0	0
	6	1	1
	7	1	1
	8	1	1
	9	1	1
	10	0	1
	11	0	1
	12	1	1
	13	0	0
	14	1	1
National/trans-national context	15	0	1
	16	0	0
	16a	0	0
	17	0	0
	18	0	0
	20	1	0
	21	0	0
	22	0	0
EU-context	23	1	1
	24	0	0
	24a	1	0
	25	0	0
	25a	0	1
26	1	1	

6 POLAND

6.1 Case study Mielec

6.1.1 Descriptive section

Geographic position

The town of Mielec is located in south-eastern Poland in the valley of river Wisłoka. Since 1999 it is the seat of the county ("powiat") of Mielec, being a part of the Subcarpathian province ("voivodship"). The population number of Mielec is 61,990 (2004), accounting roughly for 50% of population of the entire county. Mielec is situated at some 60 km to the northwest of Rzeszów, the capital of province, and 30 km distance from the international road E30 (planned motorway A4), linking the countries of Western Europe with Southern Poland and Ukraine. Three provincial-level roads cross the town: no. 875 (Mielec-Kolbuszowa), no. 984 (Mielec-Lisia Góra), and no. 985 (Nagnajów-Dębica).

The town is situated at the local railway line Dębica-Tarnobrzeg. At the distance of approximately 30 km from Mielec there is a re-loading station between the standard and wide gauge tracks on the line leading to Ukraine and Russia. The closest airport servicing scheduled flights is near Rzeszów (Rzeszów-Jasionka). Yet, there is also in Mielec, on the area of the Special Economic Zone, an airport allowing for the chartered service of passenger and cargo in the domestic and international traffic.

Pattern of urbanisation

Urbanisation process/level

In the second half of the 19th century Mielec underwent a rapid economic development associated with the construction of the railway line Dębica-Tarnobrzeg. The town continued to develop intensely in the inter-war period owing to the development of the Central Industrial Region (COP).

The area of COP encompassed 46 counties of the then provinces of Kielce, Lublin, Cracow and Lwów. Its total area was 59,935 sq. km (15.4% of the total surface of the country), and the population was above 6 million persons (i.e. roughly 18% of the total population of Poland). Rural population constituted as much as 83% of the respective total, while the average for Poland as a whole was at around 70% (Zawadzki S. M., 1963). Development of the COP started in 1936 upon the initiative of Eugeniusz Kwiatkowski, the then Deputy Prime Minister. The selection of this particular location and the construction of the COP, which was meant to be a region concentrating heavy industry, was mainly due to the national defence considerations (location in the centre of the country, far from boundaries with Germany and the Soviet Union, and safeguarded on the South by the mountain chain of Carpathians) as well as the demographic and social ones (partial liquidation

of the rural unemployment, estimated to reach on the area in question some 500 thousand persons).

The territory of the COP was not homogeneous neither in geographical nor in economic terms. The development plans for the area assumed its subdivision into three parts (see Fig. 1). Region A (on the side of Kielce) was meant to play the role of raw material supply, while region B (on the side of Lublin) was supposed to provide mainly food products. Region C, centred on Sandomierz, was designated as the proper area of industrial projects (Zawadzki S. M., 1963). In the framework of implementation of the four-year investment plan construction was undertaken on the area of COP of the plants linked with the armaments industry, in particular – the steel works and the power plant in Stalowa Wola, the synthetic rubber plant in Dębica, the aircraft factory in Mielec, cellulose plant in Niedomice, aircraft engine, machine-tools and artillery equipment plants in Rzeszów, as well as hydropower station in Rożnów. Construction of most of these projects had not been completed before 1939. After World War II the plants, in their majority destroyed, were rebuilt and expanded (*Wielka Encyklopedia PWN*, 2001). The majority of production of the Transport Equipment Plant of the Polish Aircraft Corporation (WSK PZL) in Mielec, as well as in Rzeszów was oriented for export to the other countries of the Warsaw Pact.

Figure 1: Central Industrial Region (COP)



Source: Map from the school handbook by Anna Radziwił and Wojciech Roszkowski

(Poly)centricity of the region

The Subcarpathian province (voivodship) is inhabited by the population of 2,097,000 (2004), that is – 5.5% of the total population of Poland. In terms of population density (118 persons per sq. km) the province is 7th in Poland among 16 provinces. The towns of the Subcarpathian province feature, against the background of the Polish average, a higher demographic dynamics, and thus also a younger age structure. Roughly 50% of the population in the province is below 30 years of age. The Subcarpathian is the least urbanised province in Poland. Its 45 towns jointly account for 40.5% of the total population (see Fig. 2), while the urbanisation indicator for Poland as a whole is 61.8%. This low urbanization level is partly mitigated by commuting traffic which substitutes for rural-urban migration.

In the years 1995-1999 the Subcarpathian province, as one of few in Poland, featured a population increase, which was the effect of relatively high natural increase and a modest net migration outflow (Dziemianowicz W., 2000). Currently, the problem of depopulation affects also this province, although its scale is limited. In the years 2000-2004 population of the province decreased by some 3,400 persons. In the years 1995-2004 in each of the five biggest towns of the region population decline was noted – the most significant one in Stalowa Wola (7.4%) and in Mielec (4.7%), that is – in the centres struggling with problems of industrial restructuring.

In the size structure of towns of the province (Table 1) the very small towns dominate, having less than 5,000 inhabitants – almost 30% of the urban population (more than 1/3 of all towns), while in terms of population sub-totals the largest share falls on the towns between 50,000 and 100,000 inhabitants.

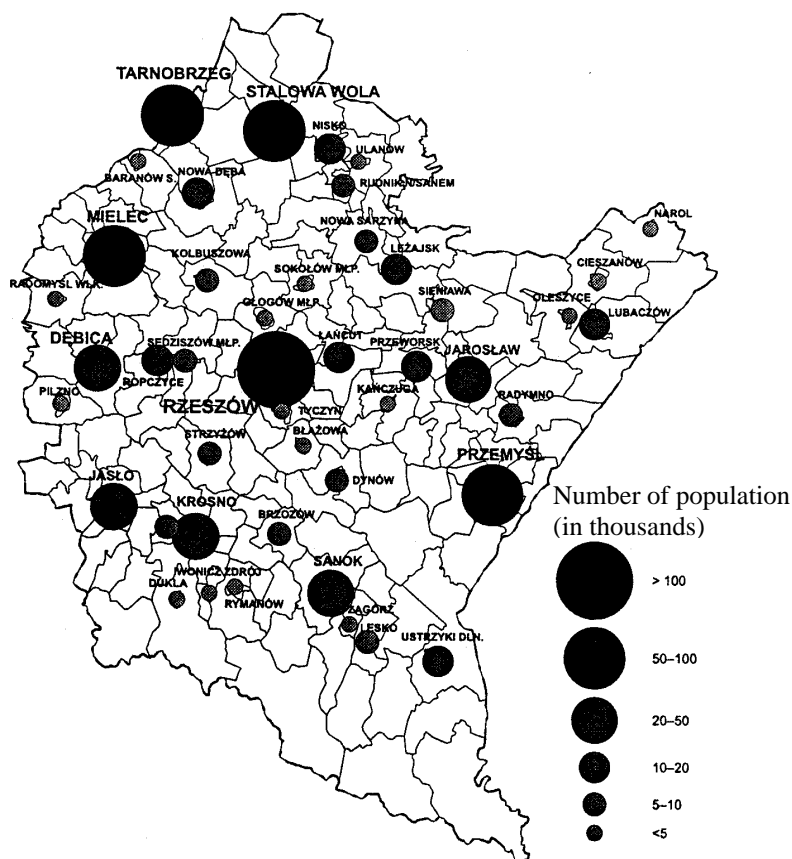
Table 1: Structure of towns of the Subcarpathian province in terms of numbers and population

Groups of towns as to their population	Number of towns	1988		Number of towns	2003	
		Urban population number			Urban population number	
		'000	in %		'000	in %
Below 5,000	17	48	6.0	17	49.5	5.8
5,000-10,000	9	63.6	8.0	11	78.6	9.3
10,000-20,000	7	90.4	11.4	7	102.6	12.1
20,000-50,000	6	252.9	31.7	5	213.4	25.1
50,000-100,000	3	193.9	24.3	4	246.0	29.0
Above 100,000	1	148.7	18.6	1	159.1	18.7
Totals	43	797.5	100.0	45	849.2	100.0

Source: calculations on the basis of data from the statistical yearbooks of GUS (Main Statistical Office)

There is only one town in the province with population of more than 100,000 (Rzeszów – 159,000). The other major towns of the province are Przemyśl (67,800), Stalowa Wola (66,500), Mielec (61,300) and Tarnobrzeg (50,000). These towns are among the 100 municipalities in Poland with the highest population numbers.

Figure 2: Distribution of the towns in Subcarpathian province



Source: Kurek S., 2004, *Przemiany demograficzne ...*

In 1988 the highest population outflow was observed in Tyczyn (more than 50‰), which was probably linked with the closeness and attractiveness of Rzeszów. High population outflow coefficients (above 25‰) were also observed in the very small towns (Iwonicz Zdrój, Baranów Sandomierski, Radomyśl Wielki, Ulanów), from where population migrated to bigger centres in search for jobs. The lowest values (below 10‰) were noted for the major towns of the region: Rzeszów, Stalowa Wola and Krosno, as well as Mielec and Sanok. In 2001 only the town of Tyczyn featured lower population outflow than 10‰. The remaining towns of the Subcarpathian province featured higher population outflows than the national average (9.8‰). In the period 1988-2001 the outflow from industrial towns (Sanok, Stalowa Wola, Mielec, Nowa Sarzyna, Tarnobrzeg) increased, but so it did from Rzeszów and a number of small urban places. The biggest population inflows in the years 1988-2001 were observed in the following five towns of the Subcarpathian province: Radomyśl Wielki, Rymanów, Pilzno, Baranów Sandomierski and Sędziszów Małopolski (Kurek S., 2004).

In the years 1988-1994 the biggest population increases were observed in the very small towns (like Sieniawa, Dynów, Radymno). Of the medium-sized towns only in Nisko a very high absolute increase was observed. Population decline affected three towns (Zagórz, Baranów Sandomierski, Ulanów). These are very small towns with population numbers below 5,000. The biggest centres of the province were

characterised by small population increases. During the period of systemic transformation the intensity of migration declined. In the period 1995-2001 population decrease was observed already in 13 towns, among which there were also the former provincial (voivodship) centres (Krosno, Przemyśl), as well as mono-functional industrial towns (Mielec, Stalowa Wola, Sanok, Jarosław, Nowa Sarzyna). The same occurred in towns with health resort functions (Rymanów Zdrój, Iwonicz Zdrój). This was linked with a significant drop of the numbers of visitors and patients. The highest population increases were noted in the towns of Radomyśl Wielki and Ropczyce, but this was mainly caused by administrative changes (Kurek S., 2004).

Historic and recent developments

See above (part "Patterns of urbanization")

Roles and functions

Mielec constituted in that period a perfect example of industrial mono-culture, dominated by just one large factory. While in the period of high demand for labour the dominating employer secured jobs for the local community, in the times of worse economic conditions its problems were directly translated into the collapse of the local labour market (Dziemianowicz W. et al., 2000). At the beginning of the 1990s this was the case of Mielec, due to troubles of WSK PZL Mielec, caused by the breakdown of exports to the former main sales market of the Soviet Union. The difficulties with selling of produce and ineffective restructuring of the plant brought about a rapid decline of employment numbers – from 20,100 persons in 1989 down to 8,700 in 1994 – and the raising unemployment rate in the region of Mielec (see Table 2) (Domański, B., Gwosdz K., 2005).

Table 2: Employment in WSK PZL Mielec and joblessness in the district of Mielec in the years 1987-1994

Year	Number of employees	Previous year = 100	Year 1987 = 100	Unemployment rate in the district of Mielec
1987	20,810	-	100.0	-
1989	20,112	96.6	96.6	-
1990	18,420	91.6	88.5	6.7
1991	15,748	85.4	75.7	13.2
1992	12,596	79.9	60.5	16.3
1993	9,526	75.6	45.8	21.9
1994	8,750	91.9	42.0	20.9

Source: Domański B., Gwosdz K. (2005)

The crisis of the factory meant not just the collapse of the local labour market, but, simultaneously, socio-economic decline of the town and the decrease of its significance in the region. The turning point in the crisis of the town was constituted by the establishment in 1995 of the first in Poland Special Economic Zone (SSE) (see photo 1), the SSE Euro-Park Mielec, which influenced in a significant manner the further development of the town. One year after the Zone had been opened, 229 workers found employment there, in 1997 employment in the Zone reached

1624, and in 1998 – 2920. Currently (as of 31 July 2005) SSE Euro-Park Mielec employs already more than 10,000 persons (the list of biggest companies – see table 3).

Table 3: Biggest companies of the Special Economic Zone SSE Euro-Park Mielec

Company	Number of employees
Lear Automotive	2,151
BRW	1,585
Kamax	998
Henry Bury	710
Krono-Wood	426
Kirchhoff Polska	379

Source: *Dziesięć lat ...*, 2005.

The influence of Mielec as a centre fulfilling various functions (industrial, administrative, service) is mainly limited to the area of the county (powiat) of Mielec. This is reflected, in particular, in the range of job commuting to the Zone. Some 84% of employees come either from Mielec (57%) or from other localities of the powiat of Mielec (27%). Less than 5% of the employees of enterprises located in the Zone come from the powiats neighbouring upon the powiat of Mielec. Quite intensive job commuting to Mielec takes place from municipalities situated to the Northeast of the town, this fact being linked with the decrease of job commuting to Tarnobrzeg. In the South a competition is observed from the side of the strong industrial centre of Dębica. A visible barrier to job commuting to Mielec is constituted by the river Vistula (Domański B., Gwosdz K., 2005). There are even cases of commuting over the distance of more than 100 km (e.g. Przemyśl, Krosno), but their share is marginal.

In the SSE Euro-Park Mielec the firms producing construction materials (21%) are dominate. The subsequent ranks are occupied by the metal branch (19%), production of transport means (17%), chemicals and plastics (14%), as well as wood processing and furniture production (11%) (Dziemianowicz W. et al., 2000). All the large industrial enterprises of the powiat of Mielec, employing more than 250 persons, except for R&G and Autopart, are located on the area of the Zone (Domański B., Gwosdz K., 2005). The increase of employment in the companies of the Zone and its surroundings entails a steady decrease of the local unemployment rate. An additional factor causing the decrease of the number of unemployed is constituted by labour migration abroad, temporary and permanent. At the end of May 2005 the rate of unemployment in the powiat of Mielec was 14.4% and represented one of lower valuyues among all powiats 9other than city-powiats) in Poland.

The impact from the SSE Euro-Park Mielec on both town and powiat is seen through the growth of economic activity caused by the investment boom in the core area of the Zone – in Mielec itself.⁸ The Zone gave rise to demand for various kinds of

⁸ SSE Euro-Park Mielec is situated in seven localities of the south-eastern Poland. The main part of the Zone is located in Mielec, while the remaining ones in Dębica, Gorlice, Sanok, Pustków, Jarosław and Leżajsk.

service. A number of new firms appeared, and many new jobs were created. There was a visible increase of demand for services, including transport, communication, logistics, protection (property protection agencies; mainly rendered to the firms of the Zone, employ approximately 300 persons), education (due to demand from the firms located in the Zone the Centre for Practical Training and the Higher School of Economics and Administration were established, in particular, in Mielec), computer, catering and accommodation. A diagnostic parameter of the development of the Mielece Zone is the increase of traffic intensity on roads of the Zone. Some 5,000 cars enter its area daily, of which approximately 1,100 are trucks. Besides, around 13,000 railway cars enter annually the zone over the side-track leading to it.

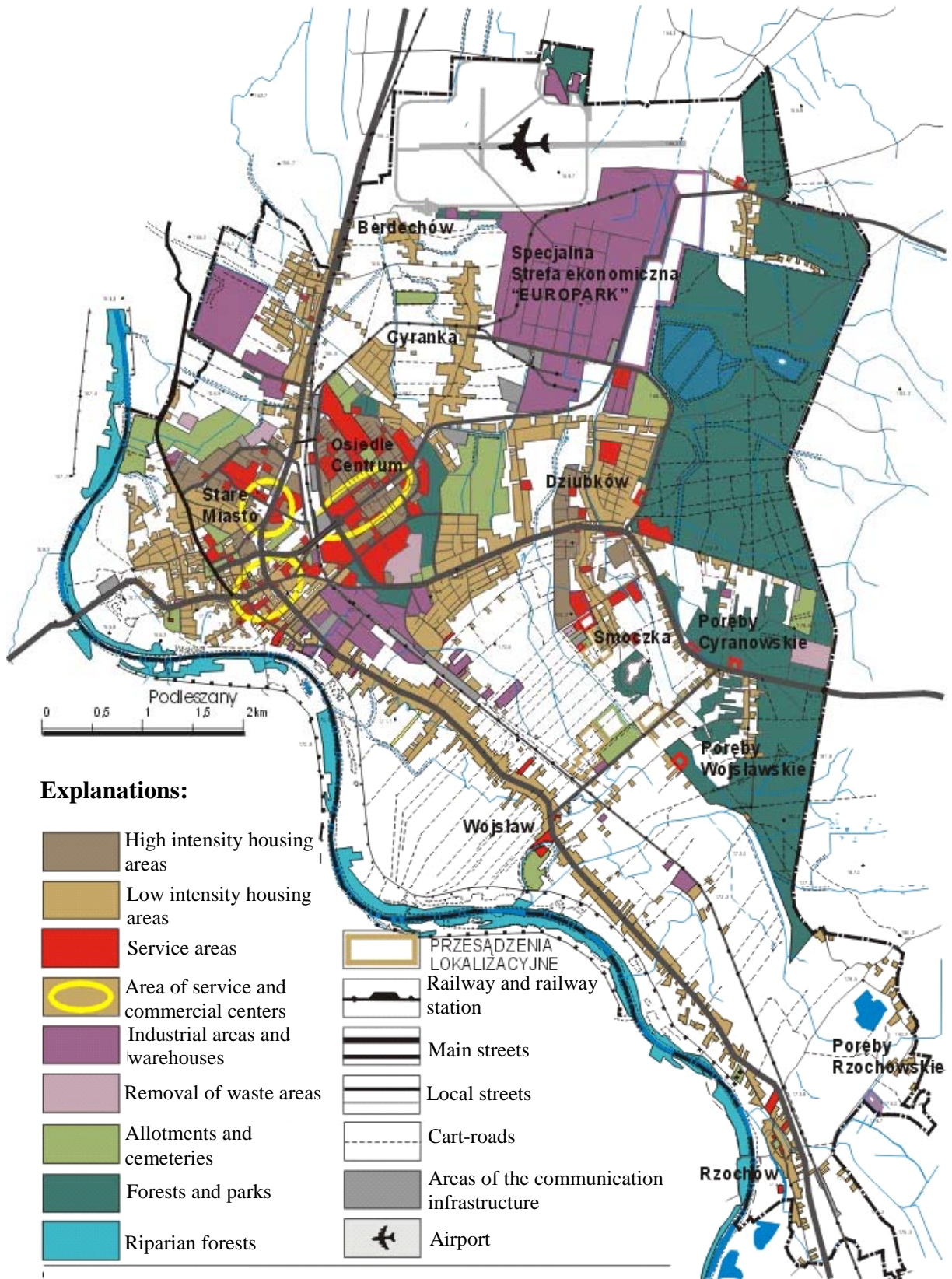
Mielec is a dynamic centre, which develops co-operation with foreign towns, such as Douchy-les-Mines in France, Löhne in Germany, Vila Nova de Poiares in Portugal and Mukachevo in Ukraine. The town's cultural, sports, commercial and school groups maintain community contacts with similar groups in Erlangen (Germany), Copenhagen (Denmark), Saint-Affrique and Morlaix (France), Tiszaföldvár (Hungary), Agueda (Portugal), Kegums and Dobeles Rajons (Latvia).

Photo 1: Special Economic Zone in Mielec



Source: www.mielec.pl

Functional and spatial structure of Mielec



Source: www.mielec.pl

Mielec plays the role of an educational centre of supra-primary level featuring county-wide range of influence. There are ten secondary schools in the town, along with two post-secondary educational establishments: the Higher School of Economics and Management, and the Teachers' College of Foreign languages. A much broader offer, and that at a higher level, is provided by Rzeszów, distant by less than 60 km.

Mielec disposes of a moderate social infrastructure, adapted to the rank of the centre. There is quite well developed sports and recreation infrastructure (swimming pools, bathing facilities, sports halls, sports fields and stadiums, tennis courts, etc.). The accessibility of the services associated with broadly understood culture, is however, somewhat worse. There are six local newspapers in the region, and a radio broadcasting station (Radio Puls FM). The cultural offer is complemented by the Regional Museum, the Self-Governmental Culture Centre, libraries and cinema.

It is characteristic that the towns featuring well developed industrial function display a higher level of economic development than of the quality of life. This is the case of Mielec. Another characteristic feature is the regularity, according to which, if the town is the sole urban centre in the county, even within the poorly developed areas with low level of living, it features itself a relatively high level of life, since it concentrates various service functions, which are inaccessible on the area surrounding the town. Taking into account the four groups of characteristics, associated with technical infrastructure, housing conditions, social infrastructure and education of the inhabitants, it can be stated, that the level of living in Mielec belongs among the higher than the average and a steady increase of this level is observed.

SWOT analysis

Strengths	Weaknesses
<p>Region</p> <ul style="list-style-type: none"> - Age structure (younger population) - Development of small and medium firms - Good ecological condition (Karpaty mountains) - Location on the main transport corridor (Western Europe-Ukraine) - Relatively high level of education <p>Mielec SMESTO</p> <ul style="list-style-type: none"> - Special Economic Zone - Export oriented production - Foreign investors 	<p>Region</p> <ul style="list-style-type: none"> - Monofunctional industrial character of some smaller cities - Hidden unemployment in agriculture (very small farms) - Poor transport connections to Warsaw - Scale of FDI lower than in the other parts of Poland - Position of Rzeszów – lack of the truly big urban centre (metropolitan area) in the region <p>Mielec SMESTO</p> <ul style="list-style-type: none"> - Polarisation of the society (relatively well paid workers of the Zone contrasted to long term unemployed persons) - Still relatively weak service sector
Opportunities	Threats
<p>Region</p> <ul style="list-style-type: none"> - Transport development: A4 motorway construction (by 2011 up to the Ukrainian border), Jasionka airport development <p>Mielec SMESTO</p> <ul style="list-style-type: none"> - Development of transport infrastructure (construction of A4 motorway up to Tarnów – 40 km from the city, probably by the year 2008) - Growing local service market 	<p>Region</p> <ul style="list-style-type: none"> - Hard" external border of the UE (in condition of strong economic linkages to Ukraine) - Delay in A4 motorway construction (present location decision) <p>Mielec SMESTO</p> <ul style="list-style-type: none"> - Negative migration balance - Social exclusion problems

6.1.2 Analytical section

The available statistical data originate from two sources: the National Census, carried out in Poland in 2002, and from the current registers, which as of now account for the year 2004.

The proper organ of the governmental administration in matters of statistics is the Main Statistical Office (GUS) in Warsaw. It provides statistical data both in the form of publications (annually published statistical yearbooks), and in the electronic form (only with respect to the most recent data). One can reach most rapidly both the general and the detailed statistical data through the web. The webpages of the GUS (www.stat.gov.pl) and the pages of the provincial statistical offices make available the following statistical data:

- (1) **current information** – general data concerning Poland, containing basic data on the economy for the current year,
- (2) **basic information**, grouped according to features, referring mainly to provinces (voivodships), but also to administrative units of lower level (counties, communes); in their majority these data are not older than the year 2000;

- (3) **Regional Data Bank** (data since 1995) and **statistical tables on demography** for the years 1999-2003; data available down to the level of communes (municipalities); and
- (4) the **REGON register** of business activities (available upon order).

The Regional Data Bank is the largest in Poland ordered set of information on the economic, demographic and social conditions, as well as on the state of environment, describing provinces, counties and municipalities as the subjects of the system of social and administrative organisation of the state, as well as regions and sub-regions, constituting the elements of nomenclature of territorial units for statistical purposes. In the Bank statistical information is being systematically complemented and updated, making it possible to organise data according to subsets of features and particular units of administrative division. The details of the availability of statistical information in the Regional Data Bank is shown in the table below (the reference units are given in the brackets):

Table 4: Availability of statistical data in the Regional Data Bank according to categories and groups of features (selection)

Category	Groups of features (selection)
Population	Population numbers and natural processes (NUTS-5); migrations (NUTS-5); households (NUTS-2)
Labour market	Employed (NUTS-5); unemployment (NUTS-5); work conditions (NUTS-4); economic activity of population (NUTS-2); social benefits (NUTS-2)
Agriculture	Agricultural land (NUTS-5); forests (NUTS-5); farms (NUTS-2); cultures (NUTS-2); animals in husbandry (NUTS-2); animal production (NUTS-2)
Transport and communication	Public roads: communal (NUTS-5), county (NUTS-4), provincial and national (NUTS-2); transport vehicles: in county (NUTS-4) and province (NUTS-2); road accidents (NUTS-2); railway, maritime and air transport (NUTS-2); communication (NUTS-5)
Housing sector	Dwelling stock (NUTS-5); dwellings constructed (NUTS-5); reduction of dwelling stock (NUTS-5); communal dwellings assigned (NUTS-5); construction licenses issued (NUTS-4); support for the running dwelling costs (NUTS-5)
Municipal sector	Network facilities (NUTS-5); municipal transport (NUTS-5); heating sector (NUTS-4)
Trade	Shops (NUTS-5); open-air market places (NUTS-5); wholesale sales (NUTS-3); retail sales (NUTS-5)
Tourism	Accommodation capacity (NUTS-5); selected accommodation facilities according to category (NUTS-5)
Primary and above-primary education sector	Primary education (NUTS-5); centres for children and the young (NUTS-3); gymnasium (intermediate) education (NUTS-5); basic trade training (NUTS-5); general secondary education (NUTS-5); post-secondary education (NUTS-5)
Health and social care	Hospitals (NUTS-5); spa care (NUTS-5); pharmacies (NUTS-5); nurseries (NUTS-5); social care facilities (NUTS-5); health care facilities (NUTS-5)
Culture and arts	Libraries (NUTS-5); cinemas (NUTS-5); museums (NUTS-5)
Revenues and expenditures of the territorial self-governmental units	Revenues/expenditures of the communal budgets (NUTS-5); revenues/expenditures of the county budgets (NUTS-4)
Investment and fixed assets	Value of implemented projects in environmental protection and water economy (NUTS-5); investment outlays into environmental protection according to directions of investing (NUTS-5)

NUTS-2: data available from the level of provinces
NUTS-3: data available from the level of subregions
NUTS-4: data available from the level of counties
NUTS-5: data available from the level of municipalities

The detailed economic data can be obtained from the national official register of businesses REGON. This register is the currently updated computerised information base on the entities active in national economy, having the form of a central database and the local databases.

All the legal entities, organisations not having legal identity, physical persons conducting business, as well as local units of any of these categories of entities, are obliged to register in the REGON system. The register is available in the form of the periodically published catalogues of selected groups of entities registered, and in the form of excerpts from the register, provided on individual orders upon payment of a fee. The following information can be provided from the REGON register of the entities active in national economy: id number, name (complete or abbreviated), location code (province, county, commune, locality of the seat, street), address of the seat, direct contact (phone, facsimile), legal form (basic, particular), ownership form, activity conducted (with distinction of the dominating activity), as well as dates of establishment, start of activity, suspension of activity, its re-activation or termination.

There are no statistical data representing the zone of influence of Mielec, the functions of the town and the compact urban settlement area. The available data concern only the administrative area of the town and county (powiat). The data in electronic version are available for the period since 1998.

6.1.3 Policy section

Main actors

Main actors in the region:

- Central government;
- Regional authorities (Urząd Wojewódzki – government and Marshal Office – self-government);
- Local authorities;
- Foreign investors (including Heineken, Krono-Kaindl, Mondi, Goodyear, Owens Illinois, Linde, ICN Pharmaceuticals, Novartis and others);
- Political parties (generally rather conservative and/or agrarian);
- National Parks authorities (Carpathian mountain regions);
- Catholic Church.

Main actors in Mielec:

- Local authorities;

- Special Economic Zone SSE Euro-Park Mielec;
- Foreign investors (see table 3)

The role of the largest employer in Mielec is played by the Special Economic Zone Euro-Park Mielec, which concentrates currently 106 companies, and employs almost eleven thousand people. The largest employer in the public sector remains the municipality of Mielec, employing more than two thousand persons.

In 2004 the urban commune of Mielec was awarded the “Fair Play Municipality” prize from the National Chamber of Industry. Local authorities make every effort to attract the consecutive new investors, and to secure further development to those already in (like, for instance, introduction of real estate tax relief for five years).

The goals and challenges facing the authorities of the town, are contained in the Strategy of Development of the Municipality of Mielec. Three main questions have been incorporated in it:

- the development of human resources,
- the expansion of infrastructure, environmental protection and spatial organisation,
- the economic development and the promotion of investment attractiveness.

The table below presents the detailed objectives:

Development of human resources	Decreasing the rate of joblessness through creation of conditions for increasing the number of jobs Creation of conditions for family and block housing construction Ensuring systematic inflow of young university educated staff for local business, institutions and administration Adaptation of the existing base to the needs of sports and recreation Creation of a stable and effective system of comprehensive health care
Expansion of infrastructure and spatial development	Adaptation of the road network to the needs of connections with the main cities of the country and the international routes Use of airport as the transport asset of the town Expansion of the sewage, water supply, heat supply and energy infrastructure
Economic development and promotion of investment attractiveness	Supporting ecological farming and agricultural and food processing Promotion of investment attractiveness of Mielec at home and abroad Drawing in the outside investors Supporting the development of small and medium enterprises Collaboration in strengthening of aircraft industry

Source: www.mielec.pl

Some of these goals have been successfully attained, at least in part (like, e.g., decreasing joblessness). It appears that the biggest challenge for Mielec is associated with the transport infrastructure, that is – ensuring adequate transport accessibility to the main cities of Poland (and especially Warsaw) and the possibly big use of the local airport.

6.1.4 References

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Hypothesis	Confirmed	Not confirmed	Information cannot be given	Comments
1	x			
2	x			
3	x			
4		x		
5	x			
6	x			
7	x			
8	x			
9	x			
10	x			
11	x			
12		x		
13		x		
14		X		In Poland it is the case of towns smaller than Mielec
15		X		
16	X			
16a		X		
17			X	Mielec is not a typical city for the categories described in the hypothesis
18	x			
19			x	Lack of the hypothesis..
20			x	Not the case of Mielec
21			x	Not the case of Mielec
22	x			
23		x		Mielec is not a historical centre
24		x		
24a	x			
25		X		
25a		X		Not the case of Mielec
26	x			

6.2 Case study Rzeszów

6.2.1 Descriptive section

Geographic position

The town of Rzeszów is located in south-eastern part of Poland. It has 159,000 inhabitants (2004). The advantageous location of the city at the crossing of important transport routes (see Fig. 1), as well as the closeness to the eastern and southern boundaries (roughly 90 km from the boundaries with both Ukraine and Slovakia), are constitutive for its significance as an important transport node, and are conducive to the development of economy, trade and tourism.

Rzeszów lies on the international road E-40 linking Zgorzelec, on the Polish-German border, with Medyka, on the Polish-Ukrainian border, on the national road no. 19, stretching northwards towards the border crossing to Lithuania in Budzisko, and on the national road no. 9, linking Rzeszów with the road border crossing with Slovakia in Barwinek. The development of the city will be significantly influenced by the expansion of the transport network, planned for the nearest future. The motorway A4, which is to pass to the North of Rzeszów (see Fig. 2), shall secure the connection between the road network of Western Europe and the ones of Ukraine, Russia and the Balkans. Currently, the motorway A4 runs from the border crossing of Jędrzychowice/Ludwigsdorf to Cracow. Plans envisage construction of the 77 kilometre segment to Tarnów, and then to the border crossing in Korczowa (until 2013).

Railway lines Tarnobrzeg-Jasło and Tarnów-Przemyśl cross in Rzeszów. The latter continues towards the boundary with Ukraine (railway crossing in Medyka). The main railway line E-30 Dresden-Wrocław-Cracow-Rzeszów-L'viv-Kiev crosses the city. The so-called "metallurgic-sulphuric" railway line, crossing the northern part of the province, links Polish mining and metallurgic region of Upper Silesia with Ukraine and farther on with Russia.

The airport of Rzeszów-Jasionka (see photo 1), situated some 11 km from the centre of the town, can service the international air traffic, both passengers and cargo. The airport has a very convenient location in terms of geography (the highest number of flying days), topography (flat approaches and lack of air traffic obstacles), and geopolitics (the airport in Rzeszów is the easternmost airport in the European Union and the only civil one in the south-eastern Poland). Very good technical parameters of the airport and its technical equipment cause that it can accommodate even the largest aircraft. The number of passengers serviced by the airport Rzeszów-Jasionka increases steadily. In 2001 this was slightly more than 28,000 passengers a year, currently almost 74,000. According to the forecasts by 2006 the number of passengers will increase to 233,000, and in 2010 it will reach approximately 500,000.

Currently, there are regular flights to Warsaw, since October 31st, 2005, cheap air company Ryanair started operating flights to London, and since November 1st – to Frankfurt on Main. Plans include connections with Rome, Barcelona and Stockholm.

Since June 2006 chartered flights to Tunis are being offered. Talks are advanced concerning the connection with Tbilisi (Georgia).

Figure 1: Rzeszów and surroundings



Source: Polska, Atlas Samochodowy, 1997, PPWK, Warszawa-Wrocław (Poland, Road Atlas)

Photo 1: The airport of Rzeszów-Jasionka



Source: www.erzeszow.pl

Pattern of urbanisation

Urbanisation process/level

Just after Małopolska Region had been annexed by the Austrian Empire, in late 18th century, Rzeszów was a small township of roughly 3,300 inhabitants. During almost 150 years the number of inhabitants increased more than seven times over. The first Polish population census, carried out in 1921, showed that not quite 25,000 people lived in Rzeszów. Over the entire inter-war period the town occupied the area of roughly 8 sq. km. The subsequent census (1931) showed the number of 27,000 inhabitants, but just before the outbreak of the World War II Rzeszów had more than 42,000 inhabitants. The structure of the population, inhabiting the town, was changing, as well, so that it got younger with the inflow of the rural population, seeking jobs. With the establishment of the Central Industrial Region (COP) and location of several large plants in Rzeszów, a quick growth of the town took place (Kaszuba K., Szromnik A., 2005).

After the World War II population of Rzeszów dropped to 29,500. At the beginning of the 1950s, due to the changes in the administrative boundaries (the area of the town increased more than fourfold, to 40 sq. km) the population number increased to 44,500. In 1977 the last change of the town boundaries took place, and so its area until today is 45 sq. km (Majka S., 2004).

The historical and administrative centre of the town is the quarter of Downtown, partly closed for car traffic, where historical buildings dominate, mainly dating from the 17th-19th centuries (see photo 2). The process of industrialisation was accompanied by an intensive urbanisation of Rzeszów. In that period, two biggest housing estates of the town appeared: Baranówka and Nowe Miasto (see photo 3). In the 1980s the third one, Krakowska-Południe, appeared. In parallel, family housing developed, and the quarters of Zimowit and Biała expanded in this way.

In terms of area, Rzeszów is the smallest of the provincial capitals in Poland. Even some county (powiat) centres in the Subcarpathian province have a bigger area than Rzeszów, while being inhabited by a much smaller number of persons (Tarnobrzeg, Stalowa Wola, Nisko). Rzeszów has a high density of population – 3,000 inhabitants per sq. km. Among the provincial capitals in Poland only Warsaw (3,300) and Białystok (3,100) have higher densities of population. In order for the town to develop further its area must be expanded. It is essential to gain new areas for construction projects, housing and industrial. There is nowadays too high density of structures, little space for green areas, lack of reserve for extension of roads and streets. Difficulties arise as to the final location decisions concerning the planned circular roads and thruways, which would cross the neighbouring municipalities.

Given these requirements the central government decided on the inclusion of two villages, Załęże and Słocina, in Rzeszów on January 1st, 2006. In a year the town will expand again, by inclusion of the subsequent two villages (Zwiężczyca and a part of Przybyszówka) (see Fig. 2). Owing to this decision, Rzeszów will increase its area by 14.5 sq. km and its population will grow by 4,300.

According to the updated concept of the spatial development of the country⁹, Rzeszów fulfils the national functions, as distinguished from the large cities (like, e.g., Warsaw, Cracow, Poznań, Wrocław), which fulfil also the international functions.

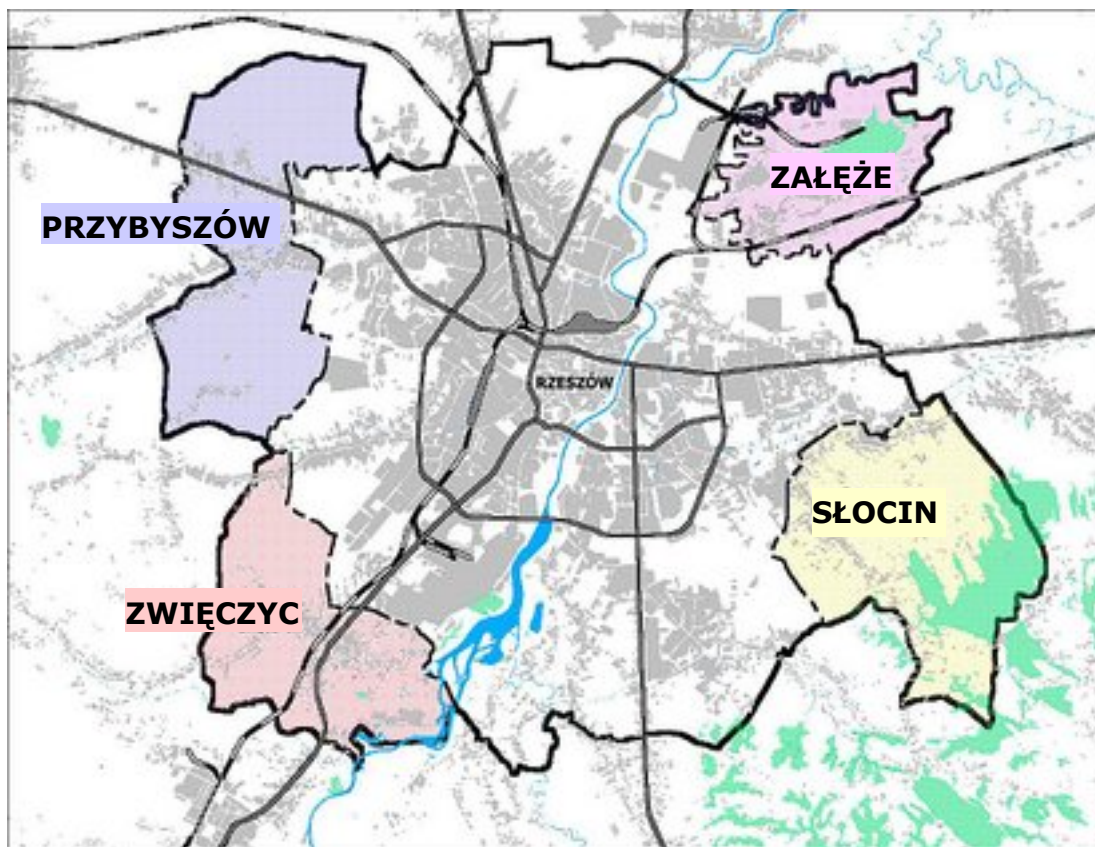
Due to the course of historical processes the urban network of the eastern part of Poland displays a relative underdevelopment. The accelerated development of the largest towns of eastern Poland, and particularly the strengthening of their metropolitan functions (such as university education, science, culture, economic promotion, managerial functions) and of their international connections – may become the factors of acceleration of development for the entire area of eastern Poland (*Zaktualizowana koncepcja...*, 2005).

Considering the above, the Concept document on spatial development of the country indicates three potential metropolitan areas in the eastern part of Poland, and among them also Rzeszów. It appears that the metropolitan area of Rzeszów was delimited in a somewhat exaggerated manner. The Law on spatial planning and organisation poses the condition for the centre of a metropolitan area to be a "large city". Rzeszów, however, has "only" 159,000 inhabitants. The metropolitan area is defined, in particular, through the population number (one of the fundamental

⁹ The updated Concept for the spatial organisation of the country was adopted by the government of Poland, but in legal terms it is not a binding document.

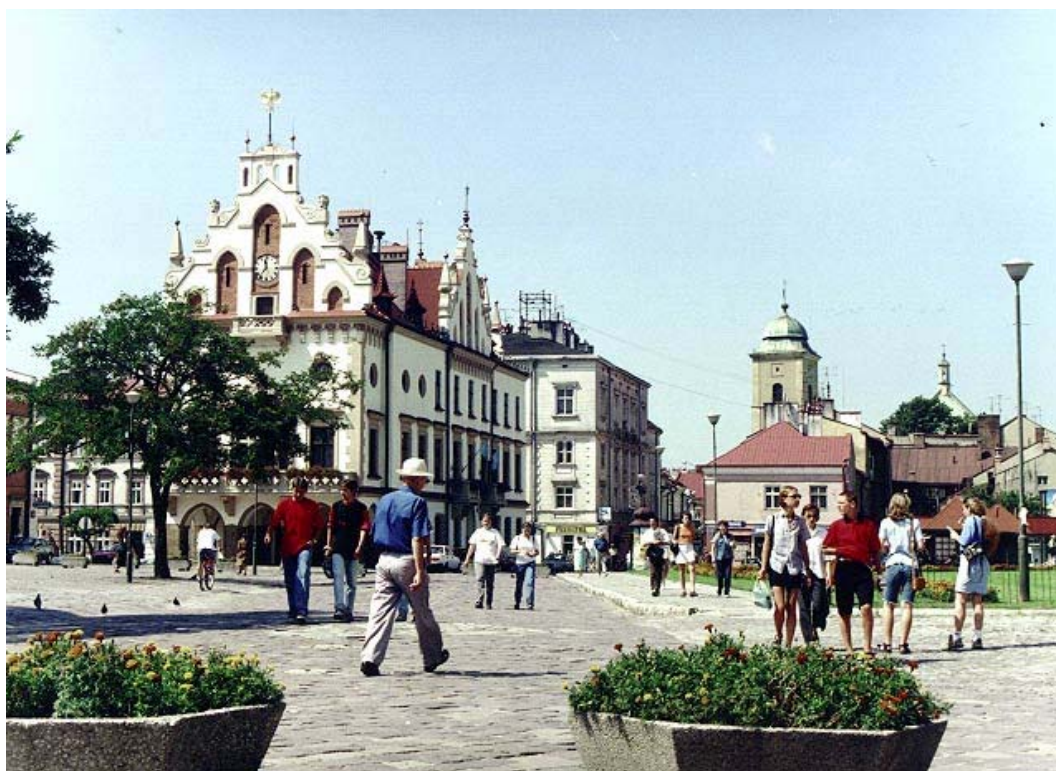
conditions), which should be at about 500,000, while Rzeszów, together with the surrounding area, has only 245,000 inhabitants. All the three potential metropolitan areas of eastern Poland (i.e. Rzeszów, Lublin and Białystok), taken together, have the population of not quite 1,100,000. For comparison, the Upper Silesian area has 3,239,200 inhabitants, and the Warsaw area – 2,680,600 inhabitants. A metropolitan area should be characterised, in particular, by high competitiveness of production and specialised service (including research and development, as well as culture) on the national and international scale, by high quality of services, institutions and material facilities, and the functions in question ought to be located in various parts of the metropolitan area, and not only in the confines of the very core city. In the case of Rzeszów this town is the main motive force, especially for the areas neighbouring upon it.

Figure 2: Changes of boundaries of Rzeszów



Source: www.erzeszow.pl

Photo 2: Rzeszów – The Old Town



Source: www.erzeszow.pl

Photo 3: Baranówka housing estate



Source: www.erzeszow.pl

(Poly)centricity of the region

The Subcarpathian province (voivodship) is inhabited by the population of 2,097,000 (2004), that is – 5.5% of the total population of Poland. In terms of population density (118 persons per sq. km) the province is 7th in Poland among 16 provinces. Population density in the towns of Subcarpathian province is 806 per sq.km, and in the rural areas – 74 per sq. km (2002). The towns of the Subcarpathian province feature, against the background of the Polish average, a higher demographic dynamics, and thus also a younger age structure. Roughly 50% of the population in the province is below 30 years of age. The Subcarpathian is the least urbanised province in Poland. Its 45 towns jointly account for 40.5% of the total population (see Fig. 3), while the urbanisation indicator for Poland as a whole is 61.8%. This low urbanization level is partly mitigated by commuting traffic which substitutes for rural-urban migration.

In the years 1995-1999 the Subcarpathian province, as one of few in Poland, featured a population increase, which was the effect of relatively high natural increase¹⁰ and a modest net migration outflow (Dziemianowicz W., 2000). Currently, the problem of depopulation affects also this province, although its scale is limited. In the years 2000-2004 population of the province decreased by some 3,400 persons. In the years 1995-2004 in each of the five biggest towns of the region population decline was noted – the most significant one in Stalowa Wola (7.4%) and in Mielec (4.7%), that is – in the centres struggling with problems of industrial restructuring.

In the size structure of towns of the province (Table 1) the very small towns dominate, having less than 5,000 inhabitants – almost 30% of the urban population (more than 1/3 of all towns), while in terms of population sub-totals the largest share falls on the towns between 50,000 and 100,000 inhabitants.

Table 1: Structure of towns of the Subcarpathian province in terms of numbers and population

Groups of towns as to their population	Number of towns	1988		Number of towns	2003	
		Urban population number '000	in %		Urban population number '000	in %
Below 5,000	17	48	6.0	17	49.5	5.8
5,000-10,000	9	63.6	8.0	11	78.6	9.3
10,000-20,000	7	90.4	11.4	7	102.6	12.1
20,000-50,000	6	252.9	31.7	5	213.4	25.1
50,000-100,000	3	193.9	24.3	4	246.0	29.0
Above 100,000	1	148.7	18.6	1	159.1	18.7
Totals	43	797.5	100.0	45	849.2	100.0

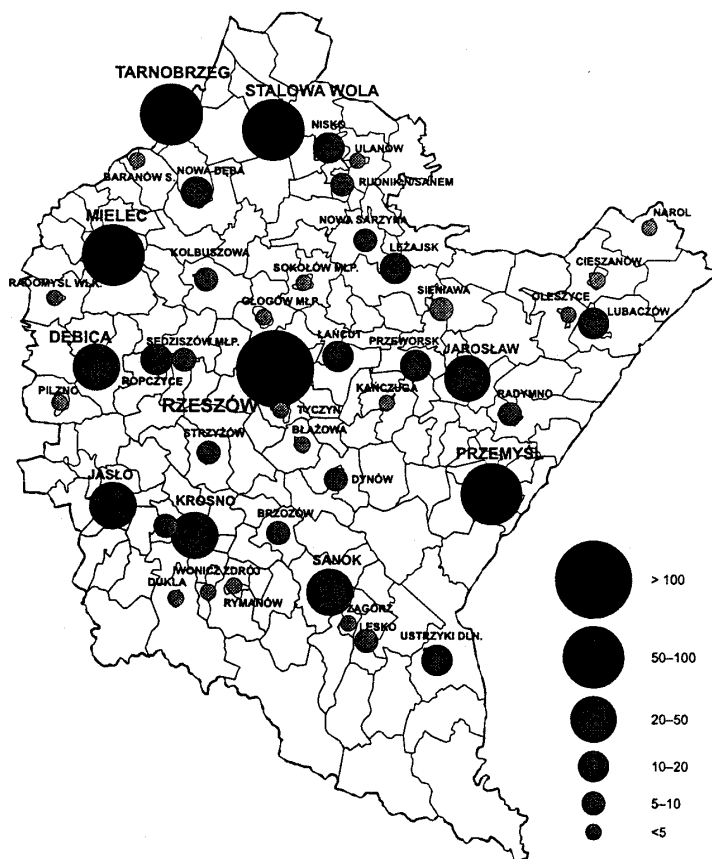
Source: calculations on the basis of data from the statistical yearbooks of GUS (Main Statistical Office)

There is only one town in the province with population of more than 100,000 (Rzeszów – 159,000). The other major towns of the province are Przemyśl

¹⁰ Side by side with Olsztyn, Rzeszów has the highest natural increase (1.61‰) among the provincial capitals in Poland.

(67,800), Stalowa Wola (66,500), Mielec (61,300) and Tarnobrzeg (50,000). These towns are among the 100 municipalities in Poland with the highest population numbers.

Figure 3: Distribution of the towns in Subcarpathian province



Source: Kurek S., 2004, *Przemiany demograficzne ...*

In 1988 the highest population outflow was observed in Tyczyn (more than 50‰), which was probably linked with the closeness and attractiveness of Rzeszów. High population outflow coefficients (above 25‰) were also observed in the very small towns (Iwonicz Zdrój, Baranów Sandomierski, Radomyśl Wielki, Ulanów), from where population migrated to bigger centres in search for jobs. The lowest values (below 10‰) were noted for the major towns of the region: Rzeszów, Stalowa Wola and Krosno, as well as Mielec and Sanok. In 2001 only the town of Tyczyn featured lower population outflow than 10‰. The remaining towns of the Subcarpathian province featured higher population outflows than the national average (9.8‰). In the period 1988-2001 the outflow from industrial towns (Sanok, Stalowa Wola, Mielec, Nowa Sarzyna, Tarnobrzeg) increased, but so it did from Rzeszów and a number of small urban places. The biggest population inflows in the years 1988-2001 were observed in the following five towns of the Subcarpathian province: Radomyśl Wielki, Rymanów, Pilzno, Baranów Sandomierski and Sędziszów Małopolski (Kurek S., 2004).

In the years 1988-1994 the biggest population increases were observed in the very small towns (like Sieniawa, Dynów, Radymno). Of the medium-sized towns only in

Nisko a very high absolute increase was observed. Population decline affected three towns (Zagórz, Baranów Sandomierski, Ulanów). These are very small towns with population numbers below 5,000. The biggest centres of the province were characterised by small population increases. During the period of systemic transformation the intensity of migration declined. In the period 1995-2001 population decrease was observed already in 13 towns, among which there were also the former provincial (voivodship) centres (Krosno, Przemyśl), as well as mono-functional industrial towns (Mielec, Stalowa Wola, Sanok, Jarosław, Nowa Sarzyna). The same occurred in towns with health resort functions (Rymanów Zdrój, Iwonicz Zdrój). This was linked with a significant drop of the numbers of visitors and patients. The highest population increases were noted in the towns of Radomyśl Wielki and Ropczyce, but this was mainly caused by administrative changes (Kurek S., 2004).

Between the year 1950 and the most recent national census the highest rate of population growth among the towns having the rights of a separate county was displayed by Tarnobrzeg (almost ten-fold increase), followed by Rzeszów (eight-fold increase) (*Ludność. Stan oraz struktura...*, 2003).

The inhabitants of the Subcarpathian province are, on the national scale, among the least mobile. According to the census of 2002 not less than 67.7% of the entire population of the province have never left the place of their birth for a period longer than 12 months. Among the mobile ones almost 1/3 migrated in the years 1989-2002, while the remaining ones changed their place of residence before 1989. These migrations took place overwhelmingly (in 80%) within the confines of the same Subcarpathian province, and for every fifth person having moved in the years 1989-2002 the current place of residence is Rzeszów or the county of Rzeszów (*Ludność. Stan oraz struktura...*, 2003).

Historic and recent developments

During almost one and a half century Rzeszów belonged to the part of Poland annexed by the Austrian Empire. Its location close to the border with the Russian Empire, that is – within the area of high investment risk, caused a significant outflow of capital, and therefore also a slow decline of the city. Economic activation took place only in the second half of the 19th century. The Austrian province of Galicia gained a significant autonomy within the frames of the Austro-Hungarian Monarchy, railway line was constructed, which was then extended to L'viv. This was a push for the development of the town. The subsequent period of the socio-economic growth of Rzeszów occurred in the years between the world wars. Owing to the development of the modern branches of industry, Rzeszów turned from a provincial economic centre, whose inhabitants busied themselves with trade, service and crafts, into a production centre on the national scale.

Until the middle of the 1930s Rzeszów had been an economic centre influencing first of all the area of its own county. Here one can mention the important role of fairs and market days, wholesale trade, small industrial production, crafts, services and banking (Kaszuba K., Szromnik A., 2005).

Of the inter-war period the best time for Rzeszów were the years 1937-1939. In the framework of the governmental program of development of the Polish arms industry, the Central Industrial Region (COP) was established in the middle of the part of Poland called Little Poland. Rzeszów was chosen as location of the State Aircraft Plants, where aeroplane engines are produced until today, and of the branch of the Cegielski Works of Poznań, producing anti-aircraft artillery. This brought about an investment boom in Rzeszów and resulted in creation of numerous jobs for the inhabitants of the town.

Roles and functions

Rzeszów is the biggest cultural and economic centre of the south-eastern part of Poland. It is the seat of the authorities and the most important institutions of the region (including Provincial Speaker's Office of the Subcarpathian Province, the County Office, the chapter of the Main Administrative Court, and the Appeal Prosecutor's Office). Rzeszów fulfils the function of the leading industrial, service, cultural (theatres, philharmonic, museums) and educational (classical university, university of technology, etc.) centre of the region.

The basis for the economic development of the town after 1945 was its intensive industrialisation. On the foundations of the destroyed branch of Cegielski Works, since 1948 the factory of the mechanical home appliances, "Predom Zelmer", was constructed. In the 1960s and 1970s a couple of new industrial plants were built, like Meat Processing Plants, Fruit and Vegetable Processing Plant "Alima", Printing Plant, Pharmaceutical Plant belonging to the "Polfa" combine, Motor Vehicle Automation Plant, Optical Works "Optores", Silverware Plant "Resovia-Silver", or the Clothing Factory "Conres".

The majority of the industrial plants are concentrated along the railway line Tarnobrzeg-Jasło, cutting the town from North to South, and especially in the south-western part of the town, as well as between the quarter of Old Town and the river Wisłok.

The service sector is relatively little developed in the Subcarpathian province, with 4.5% share of the total employment in this sector in Poland (11th place in the country for the total of 16 provinces). The more important branches of service in the province, in terms of significance for the labour market, are construction, retail and wholesale trade, as well as health and social care. These branches account together for close to 64% of all those employed in service, which corresponds to 28% of the total employment in the province (Dziemianowicz W., 2000).

Economic development of the town is also facilitated by the contacts with partner towns, among which we should mention Buffalo (USA), Bielefeld (Germany), Klagenfurt (Austria), Košice (Slovakia), Lamia (Greece), Nyiregyhaza (Hungary), as well as L'viv, Lutsk and Ivano-Frankivs'k in Ukraine. Contacts and collaboration take place in various domains. There is an intensive development of co-operation of the artistic and scholarly communities. The constant elements of collaboration include joint seminars, lectures, exchange of students, journalists, sportsmen, policemen, firemen, and groups of schoolchildren, as well as professional stages for the researchers or health care workers.

The economic potential of the town is complemented by the pool of skilled main d'oeuvre. After World War II Rzeszów became the most important university centre of the south-eastern Poland. In 1963 two first university-level schools were established in Rzeszów: Higher Engineering School, which was afterwards transformed into the Ignacy Łukasiewicz University of Technology in Rzeszów, and the Higher Pedagogical School. In 1969 the Marie Skłodowska-Curie University in Lublin opened its branch in Rzeszów, and in 1993 the academic sector in Rzeszów grew by addition of the Agricultural Academy and the Higher Catholic Seminary. The subsequent stage of development of the academic centre in Rzeszów started in 1996, when two private schools were established: the Higher School of Management and the Higher School of Computer Science and Administration. Then, in 2001, merger of three schools: Higher Pedagogical School, the Branch of the Marie Skłodowska-Curie University and the Branch of the Economic Faculty of the Agricultural Academy in Cracow brought the establishment of the University of Rzeszów.

During the last decade there was a dynamic development of the specialist professional education, adapting its educational profile to the economic changes, taking place in the country and in the region. The number of students increased during this decade by almost 300%. High importance should be attached to the possibility of changing the profile of learning and of gaining new skills, matching better the labour market. Such possibilities are offered, in particular, by the numerous education centres, functioning in Rzeszów and elsewhere in the province. The university level schools functioning in the town teach in total approximately 45,000 students. The biggest ones are the University of Rzeszów, University of Technology in Rzeszów, and the Higher School of Computer Science and Administration in Rzeszów.

The proximity of the absorptive eastern markets of Ukraine and Russia influences the structure of foreign trade of the Subcarpathian province. Main partners in export are Ukraine, Germany, Russia, USA, France, Italy, Denmark, Slovakia and Austria, while in import: Germany, Italy, USA, Belgium, The Netherlands, Hungary, France, Slovakia and United Kingdom.

Since 1995 the values of exports and imports have been systematically increasing. It is worth noting that the rate of increase of exports has been higher than that of imports, which resulted in an improvement of the situation in terms of trade balance. Starting with the second half of the 1990s the share of the Subcarpathian province in total value of Polish exports has also been increasing. The largest share in the structure of exports is taken by the products of electric machinery industry (roughly 25%). The consecutive ranks are occupied by the products of chemical, wood-and-paper, food processing and metallurgic industries. The most important export products of the province, from the point of view of the sales value, are: rubber and plastic products (2,606.2 million PLN [Polish zlotys], i.e. 13.1%), food products and beverages (2,221.2 million PLN, 11.1%), mechanical vehicles (2,191.9 million PLN, 11.0%), wood and wooden products (1,518.9 million PLN, 7.6%), as well as chemical products (1,482.7 million PLN, 7.4%). On the other hand, the most important imported products were machines and equipment for industry (value of imported goods 145.0 million USD, 15.4%), and plastics and natural rubber (48.8 million USD, 5.2%).

The neighbourhood with Ukraine, a sovereign country and aspiring to integration with the European Union, has key significance for the Subcarpathian province. Currently the basic form of collaboration is trade. There exist also the institutional frames for the collaboration with Ukraine, but they are being made use of to a very limited degree. The Subcarpathian province collaborates with the L'viv, Transcarpathian, Ivano-Frankivs'k, Tarnopil', Lugan', Chernihiv and Volhynia districts of Ukraine.

The visits of Ukrainians wishing to trade and earn in the 1990s were the factor activating the economic development of the region. A significant share of the incoming Ukrainians worked illegally in Poland. They found employment in the broadly understood farming activity, construction, as house service, or dealt in cross-border petty trade. Introduction of the visa regime for the Ukrainian citizens turned out a factor constraining the free movement of population. The main direction of movement of the population busying themselves with cross-border petty trade was East-West, while nowadays one observes an increasing population flow in the West-East direction (caused by the much lower gas prices in Ukraine).

More and more Ukrainians take up legal jobs. A new phenomenon consists in employment of English language teachers of Ukrainian origin, who fill the gaps left by Polish teachers in the smaller centres of eastern Poland (Duszczuk M., Korczyńska J., 2005).

Rzeszów became the centre having significance:

- on the international scale, with domination of the electric-machinery and food processing industries, also in air and surface transport;
- on the national and supra-regional scale in terms of skill formation, higher education, science and culture, research, health care, justice, radio and TV broadcasting;
- as the nodal area for the towns of the suburban zone – Łańcut, Tyczyn, Strzyżów, Sędziszów Małopolski, Głogów Małopolski, and for the urbanising areas around these towns;
- in terms of influence on the development of towns located within one hour ride from Rzeszów (Krosno, Dębica, Mielec, Tarnobrzeg, Stalowa Wola, Leżajsk);
- in the concept of spatial development of the country Rzeszów is considered as a potential metropolitan area and an essential element of the spatial development of the "eastern wall" of Poland, and as an independent centre of regional development of the eastern border area of Poland (Majka S., 2004).

SWOT analysis

Strengths	Weaknesses
<p>Region</p> <ul style="list-style-type: none"> - Age structure (younger population) - Development of small and medium firms - Good ecological condition (Karpaty mountains) - Location on the main transport corridor (Western Europe-Ukraine) - Relatively high level of education <p>Rzeszów SMESTO</p> <ul style="list-style-type: none"> - Location on the ECMT transport corridor - Well developed industrial sector - Higher education centre - Relatively high level of education 	<p>Region</p> <ul style="list-style-type: none"> - Monofunctional industrial character of some smaller cities - Hidden unemployment in agriculture (very small farms) - Poor transport connections to Warsaw - Scale of FDI lower than in the other parts of Poland - Position of Rzeszów – lack of the truly big urban centre (metropolitan area) in the region <p>Rzeszów SMESTO</p> <ul style="list-style-type: none"> - Still relatively weak service sector - Poor transport connections to Warsaw
Opportunities	Threats
<p>Region</p> <ul style="list-style-type: none"> - Transport development: A4 motorway construction (by 2011 up to the Ukrainian border), Jasionka airport development <p>Rzeszów SMESTO</p> <ul style="list-style-type: none"> - Development of transport infrastructure (construction of A4; Jasionka airport) - Growing local service market - Potential "Metropolitan Area" status 	<p>Region</p> <ul style="list-style-type: none"> - "Hard" external border of the UE (in condition of strong economic linkages to Ukraine) - Delay in A4 motorway construction (present location decision only to Tarnów) <p>Rzeszów SMESTO</p> <ul style="list-style-type: none"> - "Hard" external border of the UE (in condition of strong economic linkages to Ukraine) - Delay in A4 motorway construction (present location decision only to Tarnów)

6.2.2 Analytical section

The available statistical data originate from two sources: the National Census, carried out in Poland in 2002, and from the current registers, which as of now account for the year 2004.

The proper organ of the governmental administration in matters of statistics is the Main Statistical Office (GUS) in Warsaw. It provides statistical data both in the form of publications (annually published statistical yearbooks), and in the electronic form (only with respect to the most recent data). One can reach most rapidly both the general and the detailed statistical data through the web. The webpages of the GUS (www.stat.gov.pl) and the pages of the provincial statistical offices make available the following statistical data:

- (1) **current information** – general data concerning Poland, containing basic data on the economy for the current year,
- (2) **basic information**, grouped according to features, referring mainly to provinces (voivodships), but also to administrative units of lower level (counties, communes); in their majority these data are not older than the year 2000;

- (3) **Regional Data Bank** (data since 1995) and **statistical tables on demography** for the years 1999-2003; data available down to the level of communes (municipalities); and
- (4) the **REGON register** of business activities (available upon order).

The Regional Data Bank is the largest in Poland ordered set of information on the economic, demographic and social conditions, as well as on the state of environment, describing provinces, counties and municipalities as the subjects of the system of social and administrative organisation of the state, as well as regions and sub-regions, constituting the elements of nomenclature of territorial units for statistical purposes. In the Bank statistical information is being systematically complemented and updated, making it possible to organise data according to subsets of features and particular units of administrative division. The details of the availability of statistical information in the Regional Data Bank is shown in the table below (the reference units are given in the brackets):

Table 2: Availability of statistical data in the Regional Data Bank according to categories and groups of features (selection)

Category	Groups of features (selection)
Population	Population numbers and natural processes (NUTS-5); migrations (NUTS-5); households (NUTS-2)
Labour market	Employed (NUTS-5); unemployment (NUTS-5); work conditions (NUTS-4); economic activity of population (NUTS-2); social benefits (NUTS-2)
Agriculture	Agricultural land (NUTS-5); forests (NUTS-5); farms (NUTS-2); cultures (NUTS-2); animals in husbandry (NUTS-2); animal production (NUTS-2)
Transport and communication	Public roads: communal (NUTS-5), county (NUTS-4), provincial and national (NUTS-2); transport vehicles: in county (NUTS-4) and province (NUTS-2); road accidents (NUTS-2); railway, maritime and air transport (NUTS-2); communication (NUTS-5)
Housing sector	Dwelling stock (NUTS-5); dwellings constructed (NUTS-5); reduction of dwelling stock (NUTS-5); communal dwellings assigned (NUTS-5); construction licenses issued (NUTS-4); support for the running dwelling costs (NUTS-5)
Municipal sector	Network facilities (NUTS-5); municipal transport (NUTS-5); heating sector (NUTS-4)
Trade	Shops (NUTS-5); open-air market places (NUTS-5); wholesale sales (NUTS-3); retail sales (NUTS-5)
Tourism	Accommodation capacity (NUTS-5); selected accommodation facilities according to category (NUTS-5)
Primary and above-primary education sector	Primary education (NUTS-5); centres for children and the young (NUTS-3); gymnasium (intermediate) education (NUTS-5); basic trade training (NUTS-5); general secondary education (NUTS-5); post-secondary education (NUTS-5)
Health and social care	Hospitals (NUTS-5); spa care (NUTS-5); pharmacies (NUTS-5); nurseries (NUTS-5); social care facilities (NUTS-5); health care facilities (NUTS-5)
Culture and arts	Libraries (NUTS-5); cinemas (NUTS-5); museums (NUTS-5)
Revenues and expenditures of the territorial self-governmental units	Revenues/expenditures of the communal budgets (NUTS-5); revenues/expenditures of the county budgets (NUTS-4)
Investment and fixed assets	Value of implemented projects in environmental protection and water economy (NUTS-5); investment outlays into environmental protection according to directions of investing (NUTS-5)

Category	Groups of features (selection)
Environment state and protection	Municipal wastewater treatment plants (NUTS-5); municipal waste (NUTS-4); industrial wastewater treatment plants (NUTS-5); areas of greenery generally accessible and in the housing estates (NUTS-5); water consumption and water treatment (NUTS-5)
NUTS-2: data available from the level of provinces	
NUTS-3: data available from the level of subregions	
NUTS-4: data available from the level of counties	
NUTS-5: data available from the level of municipalities	

The detailed economic data can be obtained from the national official register of businesses REGON. This register is the currently updated computerised information base on the entities active in national economy, having the form of a central database and the local databases.

All the legal entities, organisations not having legal identity, physical persons conducting business, as well as local units of any of these categories of entities, are obliged to register in the REGON system. The register is available in the form of the periodically published catalogues of selected groups of entities registered, and in the form of excerpts from the register, provided on individual orders upon payment of a fee. The following information can be provided from the REGON register of the entities active in national economy: id number, name (complete or abbreviated), location code (province, county, commune, locality of the seat, street), address of the seat, direct contact (phone, facsimile), legal form (basic, particular), ownership form, activity conducted (with distinction of the dominating activity), as well as dates of establishment, start of activity, suspension of activity, its re-activation or termination.

The Nomenclature of the Territorial Units for Statistical Purposes (NUTS) was elaborated in Poland on the basis of the existing fundamental three-tier division of the country into provinces ("voivodships"), counties ("poviats") and communes (municipalities - "gminas"), which also served to define two additional levels (composed of non-administrative units), that is - regions and sub-regions. The NUTS system divides up Poland into the territorial, hierarchically connected units on five levels, of which three are treated as regional levels, and two as local levels. The regional stratum of the hierarchy encompasses: regions (six units), provinces (16), and subregions (45). The local stratum includes counties - landed counties and urban counties (314+65), and communes (2478), including urban communes, being the same towns-counties (65).

According to this hierarchical system the statistical data for Rzeszów refer to level 4, while information on Mielec - to level 5.

6.2.3 Policy section

Main actors

Main actors in the region:

- Central government;
- Regional authorities (Urząd Wojewódzki – government and Marshal Office – self-government);
- Local authorities;
- Foreign investors (including Heineken, Krono-Kaindl, Mondi, Goodyear, Owens Illinois, Linde, ICN Pharmaceuticals, Novartis and others);
- Political parties (generally rather conservative and/or agrarian);
- National Parks authorities (Carpathian mountain regions);
- Catholic Church.

Main actors in Rzeszów

- Local authorities;
- Regional authorities (Urząd Wojewódzki – government and Marshal Office – self-government);
- Big enterprises (Zelmer, Aircraft Factory)
- Most important Higher Education Institution (Rzeszów University, Rzeszów Technological University)

Interactions between local and regional authorities depends on political origin. Generally both the local and regional self-government is trying to lobbying for the city and region in Warsaw. The examples of such a lobbying are:

- Establishment of the Rzeszów University (successful)
- Faster construction of the A4 motorway
- Status of Potential Metropolitan Area

The relations between the local authorities and private entrepreneurs are generally good. The basis for the development of entrepreneurship is a concerted action of the investors and local authorities. In 2005 Rzeszów was awarded with the "Fair Play Municipality" prize (the urban commune of Mielec having obtained this title in the preceding edition of the prize). This was due to the positive assessment of the openness of the town towards the new economic and investment initiatives, friendly conditions offered the investors and the professional service for the investment making.

The most important objectives, being currently achieved by the town of Rzeszów, with co-financing from the sources of the European Union, include:

- reconstruction of the streets of Rzeszów along the route of the national road no. 4 (adaptation to the requirements of the EU),

- activation of the new areas for investment making in Rzeszów, due to improvement of transport-wise accessibility,
- improvement of quality of drinking water for the agglomeration of Rzeszów.

The most important challenges, facing the authorities of Rzeszów, can be divided into two groups, related to transport and social issues. Very important in terms of the further development of the town is the development of a consistent transport system (possibly quick construction of the motorway A4 and improvement of the railway connection with Warsaw). A big problem, which faces not only the town authorities, but also the country as a whole, is creation of new jobs. A gradual reduction of the influence exerted on the labour market by the large companies is observed, to the advantage of the small business and individual entrepreneurship, with a similar tendency noted in the supply of new jobs. The task of the authorities is to establish appropriate conditions for the development of the small and medium private enterprises. Another important issue is modernisation, transformation and joining of the mono-functional housing estates ("block-house-quarters") and the industrial areas.

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Hypothesis	Confirmed	Not confirmed	Information cannot be given	Comments
1	x			
2	x			
3		x		
4	x			
5		x		
6		X		
7	x			
8		x		
9	x			
10		x		
11	x			
12		x		
13		x		
14		x		In Poland it is the case of towns smaller than Rzeszów
15	x			
16		X		
16a		x		
17			x	Rzeszów is not a typical city for the categories described in the hypothesis
18	x			
19			x	Lack of the hypothesis..
20			x	Not the case of Rzeszów
21	x			
22	x			
23	x			
24		x		
24a	x			
25	x			
25a		x		
26	x			

7 SPAIN

7.1 Case study Vic

7.1.1 Descriptive section

Geographic position

- Vic is a city located in Catalonia, in north-east Spain, (NUTS 2). It is the capital of the *comarca* (local district) of Osona (NUTS 4) and its area of influence includes a number of municipalities located in neighbouring *comarques* (local districts). Its municipal area is 30.6 km² and it has a population of 37,825 (2005)
- The city is located in the centre of a small plain, in the valley of the river Ter. From a historical point of view, the relationship of Vic with its surrounding area has always been conditioned by the river network and the fact that it is enclosed by the relatively high mountains of the Pre-Pyrenees. These relations are established to the north (towards the Pyrenean area of Ripoll) and towards the south (there being an intense relationship with Barcelona). Vic could therefore be considered as structuring centre located between Barcelona and the Pyrenean territories.
- Vic is about an hour from the centre of Barcelona city. It therefore lies on the outer limits of the metropolitan region. As a result, it tends to be increasingly influenced by metropolitan dynamics.
- On the other hand, east-west communications have been extremely deficient until just recently. The new transport routes (inaugurated just a few years ago or currently under construction) should help to configure a powerful functional area including the cities of Manresa (population 67,000) and Olot (population 31,000) and make Vic a key communications centre, located right in the middle of Catalonia.
- This centrality of communications is, however, undermined by the lack of good railway communications. Connections with Barcelona have improved in recent years. On the other hand, railway contacts towards the north, in the direction of France, remain poor, with a deficient railway network, despite the fact that this is one of the few international rail links between Spain and France. The recent proposal for the construction of a railway connection with the rest of Europe avoiding the Barcelona area may, at some point in the future, provide Vic with the centrality that, despite its location, it does not enjoy at present.

Pattern of urbanisation

Urbanisation process/level

- During the Roman period an urban nucleus was created on the top of a hill. In the following centuries, the city grew out from this initial centre and down to the side of the river. In the 14th and 15th centuries, the settlement became consolidated as a typical medieval city. The new centre became the Mercadal (market square) and the main centre of local economic activity.
- In the 18th century an expansion plan was developed which followed a grid layout. This could be considered the first modern "*ensanche*" (area of expansion), projected without taking into consideration the historic city.
- During the 19th century, while the population of many Catalan cities began to experience important growth, that of Vic remained stagnated. In the course of this century, the two main events were the somewhat timid development of new roads that broke through the old city wall and the arrival of the railway. Although this latter event provided an economic impulse, it also supposed a physical barrier to the city's westward growth and continued to act as such until the railway lines were recently covered.
- In the 1920s, several new urbanistic projects were drawn up, but they were never applied. The task of further urbanising the city was essentially left to private initiatives, with the results being very different from those initially foreseen.
- In the 1950s and 1960s, the city experienced a certain level of demographic growth. On the one hand, immigrants came and settled in the historic centre, which endured a period of relative abandonment. On the other, new residential *barris* (neighbourhoods) were built on the southern periphery of Vic, with development continuing until this area was fully consolidated.
- During the 1990s and through until today, the city has steadily grown westwards, overcoming the barriers that had historically limited its development in this area. This urban growth has basically involved the construction of housing units in multi-family buildings located in the areas of urban expansion contiguous to the main city (following a line of action aimed at producing a relatively dense city without dispersed growth).
- This last phase has also seen the substitution of old industrial spaces. New uses have included the construction of housing, new leisure equipment (the Sucre) and educational spaces, particularly the University of Vic. Altogether, this has helped to increase the dynamism of the city and to maintain and/or improve its attractiveness for commercial and service uses.
- Finally, in the last 10 years, there has been a rapid eastward growth in suburbanisation, which has produced the physical fusion with the municipality of Calldetenes. This new growth, which has often taken the form of single-family (detached or terraced) housing, has largely been connected with the process of residential spreading from Barcelona's metropolitan region.

Evolution of the city's population

1860	13,712	1975	27,615
1900	11,628	1991	28,736
1940	15,516	2001	32,703
1960	20,303	2005	37,825

(Poly)centricity of the region

(a) Morphological dimension

Vic's urban system is basically defined by the limits to its own *comarca* (NUTS IV). The radial communications system has helped Vic to maintain its hegemony within its area of influence. This area groups together some 51 municipalities, which have a total population of over 138,630 inhabitants. Amongst them, there are 18 municipalities with populations of over 2,000. It is particularly relevant to single out Torelló (population 13,000) and Manlleu (population 19,500) which, although without challenging the role of Vic as the traditional market centre, have managed to create their own respective sub-areas. Furthermore, Vic's less intense area of influence also includes the town of (11,000 inhabitants). Taken as a whole, this means that it is possible to talk of a certain polycentrism within Vic's area of influence, although the city evidently maintains its position within its own urban hierarchy.

In recent years, the ongoing suburbanisation to which this territory has been exposed has led to a great increase in flows of labour and commodities. The relatively small size (1,200 km²) of Vic's area of influence has reduced the distance of movements and rendered this growth relatively sustainable in the medium term. Even so, the growing demand for residential areas exerted by the metropolitan area of Barcelona may soon make this growth unsustainable.

(b) Relational dimension

At the regional level, Vic's centrality is less evident. As previously stated, the lack of east-west communications has helped to provide cohesion within the territory structured by the city. But the recent and future opening of new communications routes is producing changes in these relationships and flows. Thus, improved connectivity with Manresa and Olot will imply providing openings for competitor cities, but at the same time, this will help to better the territory's urban network, which until now has been too heavily conditioned by the conditioning factor of the local relief. By the same reasoning, improvements in communications with Girona (located 45 minutes away) have also stimulated relations between the two cities.

However, without doubt, it is with Barcelona and its metropolitan region that Vic maintains its most intense relations. The proximity and power of Barcelona is such that Vic and its surrounding area might even be considered *mono-oriented*. Even so, Vic's relations with central Catalonia's other territorial centres should not be underestimated. As already mentioned, Vic is in the process of constructing an ever solidier territorial structure.

Historical and recent developments

- The city, and especially its immediate hinterland, has an important industrial tradition, particularly linked to the tanning industry and the textile sector, in general. However, over recent decades, the consequences of growing globalisation has plunged these sectors into crisis. Although some of these companies have so far managed to survive, they now enjoy a rather precarious existence, under the constant threat of short to medium term closure.
- The second area in which Vic and its hinterland have specialised during the last decades of the 20th century has been intensive livestock rearing. The area has been capable of building up a strong meat-based industry which has progressively diversified its product base within the food sector. In this sense, the area's industrial development has mainly been endogenous. Even so, it must always be remembered that Vic's proximity to the metropolitan area of Barcelona implies that the *comarca* and its activity are constantly subject to external forces and influences.
- In recent years, the University of Vic has played a very important role in the local area. This is one of the few cases in Spain of a private university, created by local business interests, assuming the mission of preventing a "brain drain" and promoting an improved level of education and training in the city and its surrounding area. The university has already made an important contribution to re-dynamising the region.
- Vic still maintains its traditional market and commercial functions, but it also has an important historic and cultural heritage, which it is now working to exploit by developing culture and tourism as alternative yet complementary economic bases.
- The area around Vic finds itself increasingly subjected to and affected by the dynamics of the metropolitan area of Barcelona. The major increase in the price of housing in and around Barcelona has led many people to Vic and its *comarca* in search of cheaper dwellings and a better quality of life. Many of these new residents, who have provoked important changes in both the local housing market and the general day-to-day functioning of the region, now commute to Barcelona on a daily basis, generating new transport flows and requirements.
- At the same time, the arrival in recent years of a major tide of foreign immigration has posed a series of new problems in the present and will offer important challenges in the future for both Vic and its area of influence.

Roles and functions

Socio-demographic role

Demographic evolution and structure

In 2004, the city of Vic had a population of 37,825. Its population growth over the last 15 years has been in excess of 25%. This growth has only been based on net migration and particularly that of the last few years. Net migration has been greater than 900 people per year, including an important number of immigrants from different sources, although there has also been a considerable flux of emigration. During the five year period between 1996 and 2001, the annual net rate of migration was 13.8 per thousand inhabitants, or two and a half points above the average for the *comarca* (NUTS 4) and four above the average for Catalonia.

While Vic hardly had any foreign residents twenty years ago, foreigners from outside the European Union now account for 17% of its total population: 12.5% are of African origin and 4% are from Latin-American countries.

The majority of these new residents are between 20 and 40 years old, which has implied a rejuvenation of the population pyramid and the labour market. The age structure of Vic's population otherwise reflects the same ageing process found throughout Catalonia, although this is more marked in Vic. The average age of the population is about 40.

Level of education

The population of Vic has a high level of studies. This is reflected by the percentage of people with university studies. In 2001, this was 1.2 points above the average for Catalonia and 3.8 points above that of the *comarca* of Osona (NUTS 4). But from a social optic, and knowing the role that it plays in the city, the most important period has been between 1996 and 2001, when the percentage of Vic's population with university studies increased by 3.3 points. Of equal importance is the fact that the percentage of the population without studies of any type fell by 4 points during the same period, to stand at just two points below the regional average. The inauguration of the University of Vic, in 1997, seems to have played an unquestionably important role in this general increase in the level of studies of the city's population.

The role of SMESTO in relation to urban growth

Vic's population density in 2004 was 1,196.3 per km². The interrelationship between Vic's population dynamics and those of its neighbouring municipalities is very clear. Over recent years, these municipalities have experienced very pronounced growth as a result of migration from the city of Vic. This has been residential migration, as this population has remained closely linked to the city, often for work-related motives. Thus, settlements like Folgueroles, which is 3 km from Vic, saw their populations increase by more than 30% between 1998 and 2004.

Approximately 15% of Vic's residents originally come from other Catalan *comarques* (local districts). This reflects a relatively recent phenomenon that is largely associated with the increasing mobility of the population, and particularly of the younger age groups.

Functions of the individual SMESTO both within and beyond the immediate region

(a) Supply functions, labour market and housing

We have already mentioned the number of impact factors that have derived from the creation of the city's University. One factor that is closely related to the university phenomenon has no doubt been the growth in the market for rented housing. Thus, 25% of Vic's housing represents rented accommodation, which is almost 10% greater than the average for Catalonia and Spain as a whole.

The creation and consolidation of the University of Vic has also had clear consequences for the urban system. These effects have included people reforming properties in order to offer them as rented accommodation for students. Large numbers of property owners have moved to live in outlying municipalities, either seeing an opportunity to make a business out of renting their flats or to change their old urban flat for a single-family house located just a few kilometres outside the city.

This phenomenon has not only been limited to people who have decided to rent out their flats. Recent years have also seen many of Vic's citizens move out of the city for other reasons. These include their preference for living in the surrounding area, their search for lower priced properties in the housing market, and –above all– their desire to have a house with a garden. Part of this collective includes young couples, often with young children, who have moved out of Vic to live in the small municipalities of the surrounding area. This has led to relatively uncontrolled urban growth, as such settlements do not tend to have such strict urbanistic controls as the central city.

One example of this is that between 1998 and 2004 a total of 19 municipalities in the *comarca* registered over 10% increases in their populations, while of the 51 municipalities in the *comarca* only 9 registered losses of population and the majority of these were settlements affected by factory closures associated with the decline of the area's textile industry.

In the last 10 years, this area's residential housing stock has increased by 50%, or by almost 14,000 housing units to the end of 2002. Of the medium-sized Catalan cities, Vic has been the one that has taken most advantage of the recovery in the housing market that began in 1996. Housing construction has taken place at a rate of 16.7 dwellings per 1,000 inhabitants during the last 6 years. Despite this level of growth, there have been no signs of large scale "urban sprawl", partly because the city has had the appropriate planning instruments and has always promoted forms of concentrated growth. It has allowed little margin for dispersed growth and for development of low density housing, in part, perhaps, because this type of offer could be found in the neighbouring municipalities.

Along the same lines, there has been very little dispersed growth. This has largely been due to the existence of very strict local norms relating to the construction of commercial centres on the outskirts of the city, which have been accompanied by similar measures from the regional authorities that have also prohibited the surrounding municipalities from allowing the development of this type of commerce.

One direct consequence of this policy has been that the city's small traders have not suffered the effects of this type of competition. In fact, just to the contrary, local small-scale commerce has recently experienced an important revitalisation, providing Vic with one of Catalonia's most dynamic open air commercial centres. Thus, over the past 8 years, the surface area dedicated to retail commerce has grown by around 30%, to reach a total area of about 112,000 m², basically associated with small and medium-sized outlets. The city's commercial equipment, more than 3.3 m² per inhabitant, stands at more than double the average for Catalonia, and is 50% greater than in Manresa (a city of the same hierarchical rank as Vic and which is increasingly seen as a competitor in this area). The city's traditional and well-known weekly market is estimated to receive more than 60,000 visitants and serves as the main driving force behind a very wide offer of family-run, specialised, commercial establishments.

(b) Socio-cultural dimension

Its fairs and markets are a couple of Vic's most important signs of identity, both for their economic and social importance, but above all for the force of social cohesion and integration that they exert upon the settlements of the city's wider urban area. Furthermore, the unique nature of these fairs and markets has made Vic an important centre for tourism.

The popularity of these events has turned them into important elements for dynamising all kinds of services and cultural and leisure-related initiatives. The most important fairs include a livestock fair and a music fair that attract people from far further afield than Vic's own urban area of influence. In particular, Vic's music market (*Mercat de Música Viva de Vic*) has become a reference point for the whole of Catalonia.

Vic's cultural offer is complemented by the city's rich artistic patrimony. The streets and squares of the historic centre are medieval in origin and no doubt one of the city's main tourist attractions, with the Plaça del Mercadal perhaps being the single most important destination for tourists.

The cultural offers options are fully complemented by that of museums. The most important of these is the Museu Episcopal, which houses outstanding collections of Romanesque and Gothic art. It should be added that this museum has recently been renewed. It currently occupies a new building located in the heart of the old part of the city. This change of location has also been accompanied by an important renovation of the surrounding urban space, which has brought with it a notable increase in the dynamism of this historic space.

The city's third element of cultural importance lies in the mural paintings that decorate the interior of the Gothic cathedral: they are the work of Josep Maria Sert.

From a socio-economic point of view, we should point out that the average per capita income of Osona and of the city of Vic has risen above the average for Catalonia in the course of the last two decades. This can largely be explained in terms of the historic accumulation of wealth in this *comarca*.

The fact that average income is greater than the average for Catalonia though with a lower degree of productivity can be explained by the fact that the level of employment in this area is much higher than the average for Catalonia.

The difference between the GDP of Vic and that of the *comarca* is due to the disequilibrium in the labour market that exists between the two areas (some 6,000 people per day commute from the *comarca* to work in the capital). The GDP of Vic is 34 points above the average for Catalonia, while that for the whole *comarca* lies 6 points below this average.

(c) Accessibility-mode of transport

Barcelona's influence upon Vic is clearly on the increase, though it is still too early to say that the city of Vic has fully fallen under the influence of the metropolitan dynamic. Examining the number of flows between the two cities, it is possible to observe that they increased by 60% between 1991 and 2001.

One of the most direct consequences of this increase in relations with Barcelona's metropolitan region has been an exodus of the most qualified people, although this tendency has not been excessive and the arrival of the University has tended to moderate this "brain drain".

Another direct consequence of increased relations with the metropolitan region and improvements in communications has been noted in Vic's urban system, which has tended to become more attractive to companies looking for cheaper industrial land. Even so, this attractiveness has also become a risk factor, as Vic is attracting activities that require a lot of land, create relatively few job opportunities and contribute little added value.

Even so, the most important factor to underline is the increase in the number of people setting up home in the area around Vic having moved out of Barcelona's metropolitan region.

From the point of view of accessibility, Vic has historically remained excluded from the great international communications systems that converge on the metropolitan region of Barcelona (with the most recent addition being the TGV line). Even so, in recent times transport infrastructure has opened the city to new territories in the interior, which were traditionally isolated from it. This has made the city of Vic one of the main neuralgic centres for transport and communications in inland Catalonia.

Promoting the road network that connects the cities of inland Catalonia (Lleida, Manresa, Vic and Girona) will favour the progressive implantation of logistical areas of low rotation and logistics-related activities connected with specific sectors that will serve the whole of Catalonia. This situation will soon be further fostered by the construction of a transport axis that will connect the city to Olot and Figueres.

There has been an important change in the fortunes of the city's rail connections with the inclusion of Vic's railway station in the network of Barcelona's neighbouring areas service. Although this has led an increase in the frequency of train services to the Catalan capital, the city's rail links continue to be somewhat deficient.

A recent project for the construction of line railway linking Lleida, Manresa, Vic and Girona with France would imply important improvements in connectivity, above all with respect to goods traffic, which would further help to promote Vic's logistical vocation.

On the other hand, the increase in demand for intra-comarcal traffic reveals one of the main deficits in current infrastructure, and it would be advisable to establish a series of integrated inter-urban bus services between the different municipalities in the area. In some cases, it might even be necessary to think in terms of other forms of public transport offering a greater carrying capacity, such as a comarcal metro service for the route Vic – Manlleu – Torelló. Such an initiative would imply considerably reinforcing the urban system formed by these three important population nuclei.

(d) Socio-economic structure and performance

The unemployment rate in Vic is around 5.4% of the active population. This is below the average for Catalonia and similar to that for the whole of Osona. These are low levels of unemployment which are close to what may be technically considered as levels of full employment.

One important fact to underline is the constant renewal of Vic's industrial structure. Over 20% of its industries are renewed almost every ten years and only 28% of its industries are currently over 35 years old. In the last few years the relative weight of the largest local companies (with over 250 workers) has become consolidated.

In the 1960s, coinciding with an important expansion in the *comarca's* livestock farming activity, the meat industry began to consolidate its position. In the last 15 years, the number of jobs in this sector has doubled. In the 1990s, these companies again played a key role in the area's industrial expansion, which –as previously mentioned- produced a powerful micro-cluster of industrial activity.

Tannery, which had historically been the city's most important industrial sector, has recently extended its business base, consolidating its position and growing exogenously, even though its relative weight in terms of employment has decreased.

The metal sector has experienced a slight decline in employment, although significant advances have been made in terms of specialisation.

The textile industry has endured a difficult restructuring process. Employment has fallen to 4% of the local total, with the sector bearing the brunt of local industrial decline.

At present, industry in Vic and its *comarca* revolves around the meat industry micro-cluster and a series of large, locally-controlled companies. These are mainly

tanneries and metallurgical concerns, although there are also chemical companies that are able to compete in global markets.

In this section on the roles and functions of the city, it is important to stress the importance of the University. The University of Vic, which was created in 1997, was the result of pressure from the city's civil society and local institutions, which were conscious that, as well as providing higher level studies, this institution would play an important role in creating a tertiary sector with a great multiplier effect, and that it would educate the city's socio-economic fabric, thereby helping to provide the city with a modern, dynamic image.

From the urbanistic point of view, it was decided to opt for a decentralised model with two main campuses located opposite the railway station and near the city centre.

After a few initial years of intense growth, the number of students on campus has stabilised at around 4,000 and 325 university lecturers offer 34 different degree subjects.

With its present dimensions, university students make up almost 11% of Vic's population: this ratio is similar to those of Catalonia's other peripheral universities.

The economic impact of the university upon Vic's commercial and industrial activity has also been important. The University has become a tool for "marketing the city" by aiding its external projection and it has become an important factor in attracting both industry and new residents. The presence of a qualified labour supply has increased the city's ability to attract new industry and has made it easier for entrepreneurs to develop new business projects there. The university does not only attract new teaching staff, but also encourages new residents to go and live in the area.

SWOT analysis

Osona (NUTS IV)

Strengths	Weaknesses
<ul style="list-style-type: none"> - Powerful structure for promoting the local economy which reaches out to the surrounding municipalities and serves the whole territory - Presence of a major reserve of intellectual capital in the comarca, mainly based at the University of Vic - Important industrial fabric - Existence of important industrial sectors (metal, agro-alimentary industries) - Positive evolution of the service sector, with great potential for growth - Density and urban concentration of population that facilitate the concentration of facilities, services and commerce in the comarca - Strong centrality of Vic within the comarca with respect to commerce and providing services - Slight increase in the birth rate in the last few years and demographic growth above the average for Catalonia. - Greater percentage of population under 15 than the average for Catalonia - Perception that local citizens enjoy a high quality of life - Attractive to potential new residents and tourists - Good vertical and transversal communications 	<ul style="list-style-type: none"> - High level of unemployment among the over 50s and women - Low level of education within the comarca as a whole, which affects all age groups - GDP below the average for Catalonia and increasing a lower rate than the regional average since 1996 - Lack of medium-large companies - The industrial sector is largely based on companies that use relatively unskilled labour and some sectors, for example the textile sector, are in a state of permanent crisis - Scattered and relatively small industrial estates. Lack of coordinated offer of land for industry - Lack of new industrial land, few projects to create new industrial land - Difficulties in achieving access to public transport on the industrial estates, due to their number and dispersion - Weak service sector, relatively unstructured and contributing little added value - Deficient public transport services - Weak structure of commercial and business associations and little collaboration between public and private sectors - Lack of coordination between the different tourist boards and therefore a lack of integrated tourist offers
Opportunities	Threats
<ul style="list-style-type: none"> - Potential demand for industrial services industrials - Potential demand for environmental services - Potential demand for first and second homes - Tourist potential of proximity to Montseny, offer of rural tourism and new opportunities to develop for cultural and industrial tourism. Projects associated with the river Ter and the Textile Museum at Manlleu. - Potential growth of new lines of employment associated with the service sector: daily life, improved quality of life, leisure and environmental services... - Demographic growth above the average for Catalonia - Possibility of creating public transport networks on some industrial estates - Improvements to infrastructure: Eix transversal, Eix Vic-Olot and RENFE. 	<ul style="list-style-type: none"> - Strong discrimination against women and people over 50 in the labour market - Although the level of unemployment is similar to that of the whole of Catalonia, it has tended to increase since 2000 - Precarious nature of many jobs created as a result of new lines of employment - Risk of some of the most important sectors for the economic structure of the comarca declining and contracting - Industrial delocalisation - Lack of industrial land and lack of consensus between municipalities and agents with regard to the creation of new industrial estates - Progressive ageing of the population - Pronounced increase in foreign immigration which could become a source of problems if more is not done to promote integration and allay the prejudices of certain sectors of the local population - Pollution of the subsoil due to applications of slurry

Vic (NUTS V)

Strengths	Weaknesses
<ul style="list-style-type: none"> - Great physical capacity of the territory - Urban quality (Main Square, Historic Centre, commercial establishments and museums...) - Firmly established population and business class - Presence of innovative companies - Existence of a wide variety of micro-companies - Strongly defined "neo-local identity" - Cheap production costs - Great capacity to attract resources from outside the comarca itself (Ripollès, Bages, Garrotxa...) - Reinvestment of agricultural capital in industrial projects - Solid base of economic activity (commerce, meat industry cluster...) - Incipient industrial diversification - Highly valued University 	<ul style="list-style-type: none"> - Chronically low birth rate - Flood of poorly qualified immigration - Predominance of mature productive sectors - Lack of business training and specialised labour - Evidently sub-standard railway communications - Real and psychological remoteness from the metropolitan centre - Still maintains a certain outward image of a closed, traditional city with a harsh climate - Excessive predominance of the meat industry
Opportunities	Threats
<ul style="list-style-type: none"> - Increase the demographic and industrial critical masses by creating stronger links with El Ripollès and La Garrotxa - Promote diversity (rejuvenation, labour supply, potential for professionalisation...) - Use growth to restructure the city - Project a more attractive city image (cultured, university city, wealthy, open...) - Use local capital to invest in productivity - Take advantage of competition in the housing market to attract professionals - Consolidate the city's centrality within Central Catalonia - Foster collaboration between the university and the local economy - Promote vocational training amongst young people 	<ul style="list-style-type: none"> - Social segregation and social instability - Stagnation of the university - Wealth effectively frozen in empty housing stock - Remaining tied to the past and to traditional activities

7.1.2 Analytical section

- Administrative area. Entity: municipality. 30.6 km². Population 37,825.
- Continuous area of settlement: the city of Vic is relatively small, but the reduced dimension of its municipal area has resulted in formation of a relatively small continuous urban space that physically unites it with the neighbouring municipalities of Calldetenes (population 2,143) and Gurb (population 2,126). The population nuclei nearest to Vic have recently experienced quite important growth.
- Functional urban area: this is defined by what is popularly known as "*La Plana de Vic*" (Vic Plain). This area contains a series of settlements that interact, with 28 different nuclei, which interact to produce a very balanced structure. Vic is the main nucleus, while the municipalities of Manlleu (19,488), Torelló

(13,008), Tona (7,030), Centelles (6,493), Taradell (5,613) and Roda de Ter (5,450) form a very dense urban structure together with other smaller population nuclei. The functional area structured around Vic plays a very important role in territorially organising the *comarca*. This area represents the main labour market in the *comarca*, while there are also indices of a certain degree of functional and territorial specialisation, with Vic as a large centre providing specialised services, industrial areas in and around Gurb, and residential functions in the peripheral municipalities. The *Plana de Vic* tends to function as a single urban system, with Vic as its centre, and various sub-centres spread across the rest of the plain. The most relevant of these are Manlleu, Torelló, Sant Hipòlit de Voltregà, Roda de Ter, Tona and Centelles. It is said that the *Plana de Vic* tends to function like a single city (city-territory model).

- Vic's area of influence: this includes the whole of the *Comarca d'Osona* (NUTS IV), which has a total population of 142,337 (2005). This implies a total surface area of 1260.1 km². The whole area groups together 51 municipalities, of which more than half have fewer than 2,000 inhabitants. On the other hand, it is clear that Vic's area of influence often extends beyond the boundaries of the *comarca*. More specific studies are required to quantify the extent of its influence, but it seems that this area would include the urban system around Ripoll. In 2005, Ripoll had a population of 10,717 and a surface area of 956.2 km², while its urban system had a total population of 26,400.

7.1.3 Policy section

Governance

- (1) In the city of Vic "governance" takes its form and is organised through a group of entities and representatives that have a commitment to the city and are involved in its day-to-day life. The city of Vic currently has 195 such entities, which participate in different aspects of the city's development. These entities can be roughly divided into the following types: 36 civic entities, 52 social groups, 50 cultural organisations, 28 sports clubs, 17 professional associations, and 12 miscellaneous groups. Amongst the most significant of these local agents it is possible to single out economic, social and political agents including:

Economic agents

These are entities that group together different commercial and tertiary sector associations. Amongst this group it is possible to highlight:

- Trade and commercial associations (centreVic, centreixample, ...)
- The municipal institute for economic promotion
- The Vic delegation of the Chamber of Commerce, Industry and Navigation of Barcelona (*Cambrà de Comerç, Indústria i Navegació de Barcelona*)
- The Independent Association of Young Business People (*Associació Independent de Joves Empresaris*)

- The professional association of lawyers (*Col·legi d'Advocats*)
- The professional association of architects (*Col·legi d'Arquitectes*)
- The professional association of technical architects and quantity surveyors (*Col·legi d'Arquitectes tècnics i Aparelladors*)
- The professional association of doctors (*Col·legi de Metges*)

Local trade union and social groups

- Trade Unions: UGT, CCOO...
- Federation of Associations of Neighbours
- University of Vic

Political parties with most representation on the city council

- Convergència i Unió (CiU), Esquerra Republicana de Catalunya (ERC), Partit Socialista de Catalunya (PSC), Plataforma per Catalunya (PxC) Iniciativa per Catalunya-Els Verds (ICV).

(2) At the NUTS IV regional level, the main agents that interact with the territory can also be placed in three different groups

Economic agents

- *Caixa d'Estalvis Comarcal de Manlleu* (savings bank)
- *Centre tecnològic d'Osona i del Ripollès* (technology centre)
- *Consorti de turisme d'Osona* (tourism organisation)

Social groups

- Trade Unions: UGT, CCOO...
- *Centre d'Estudis Socials d'Osona* (cultural organisation)
- *Platforma per la vegueria de l'Alt Ter*. A group dedicated to promoting a future union of the *comarques* (NUTS IV) of Osona and El Ripollès

Political groups and government organisations

- Provincial administration (*Diputació de Barcelona*)
- Local district council (*Consell comarcal*)
- The most strongly represented political parties in these organisations are (although not necessarily in the same proportion) the same as those represented on Vic City Council.

The city of Vic is governed at the first level by the City Council. This organisation has a series of specific competencies and shares its administrative responsibilities with two other higher level territorial authorities: the *Consell Comarcal d'Osona* (local district council) and the *Diputació Provincial de Barcelona* (provincial government). The competencies of each entity have been established by law:

The *Ajuntament de Vic* (Vic City Council) is responsible for undertaking actions within the municipal limits of the city of Vic. These responsibilities relating to the municipal area are laid out in administrative decree 2/2003, which formally confirms the revision of the Law relating to municipal and local affairs in Catalonia. This decree recognises the following competences:

- The municipal authority is responsible for managing its resources in order to meet the interests of its citizens within its defined area of operation. It is also responsible for promoting any form of activity and providing all of the public services required to satisfy the needs and aspirations of the community of neighbours that it serves.
- In accordance with the Law and associated legislation relating to this sector, local authorities have competencies and responsibilities relating to: the participation of their citizens in local affairs; their own organisation; local identity and representation; environmental sustainability and territorial management; social cohesion; the provision of transport infrastructure; local connectivity and communications; the introduction and development of information and communications technology; energy supplies; and the management of their economic resources.

Within its area of action, the ***Ajuntament de Vic*** (**Vic City Council**) has competences relating to:

- Safety in public places
- Organising the circulation of vehicles and pedestrians along urban thoroughfares
- Protecting its citizens and both preventing and extinguishing fires
- Structuring, managing, and undertaking action relating to urbanistic design and development; promoting and managing housing; organising and maintaining parks and gardens, the paving and quality of urban roads and walkways, and maintaining rural roads and pathways
- Conserving and protecting the natural environment and the city's local artistic and historic heritage
- Supervising supplies, slaughterhouses, trade fairs, markets and the defence of the interests of those who use and consume local services
- Protecting public health and participating in the provision and management of primary healthcare
- Providing and promoting social services and social reinsertion
- Providing water and public lighting; cleaning public thoroughfares; collecting and treating waste products; maintaining the sewer system; and treating waste waters
- Providing public transport services
- Providing and maintaining cultural and sports activities and facilities and infrastructure and support for leisure and tourism related activities
- Participating in the elaboration of educational programmes and cooperating with the educational authorities in the creation, construction and maintenance

of public educational centres; taking part in the management of educational centres and participating in tasks related with the monitoring and enforcement of compulsory schooling.

Consell Comarcal d'Osona (Local District Council). This body is responsible for the governance and administration of the NUTS IV region. It has been attributed competences by legislative decree 2/2003, which formally approved the revised text of the Law relating to the organisation of the *comarques* (local districts) of Catalonia. It has competences relating to the following matters:

- Ensuring that the different municipal authorities of the *comarca* undertake and provide and the services and activities that correspond to their local competences.
- Establishing a commission to provide consultancy services for the *comarca*
- Helping and cooperating with its municipalities
- Drawing up a programme of interventions for the *comarca* including the services, activities and public works that must be provided and carried out and also outlining the mechanisms and provisions made to ensure that it has the best possible coordination
- Providing technical assessment to municipalities
- Drawing up partial plans that include and combine proposals presented by the municipalities.

Diputació de Barcelona (Barcelona's Provincial Government). This body is responsible for the governance and administration of the NUTS III region, which corresponds to the province of Barcelona. The *Diputació* works together with the municipal authorities and is involved in drawing up territorial and urbanistic plans that relate to the territory as a whole. It cooperates with the other administrations in the following ways:

- Providing administrative support in the transmission of the required public administration documentation and proceedings
- Providing legal, economic and technical advice
- Helping to draft studies and projects
- Providing non-returnable loans and subsidies
- Carrying out work and setting up services
- Providing loans and credit facilities
- Setting up consortiums and helping to establish other types of legally recognised associations
- Participating in agreements and projects involving other regional and national government agencies

These last two administrative bodies cooperate in the general administration and management of the territory according to the terms established by a series of different laws. Apart from this, there are also other groups of organisations that are created to serve more specific functions and which also play a relevant role in

interventions both in the city and its surrounding region. There are also a number of other associations, consortiums and commissions that have been established in order to serve a series of very specific objectives.

By way of example, at the SMESTO level it is possible to find such a wide range of bodies and initiatives as:

- ***Auditoria Ambiental de Vic (Environmental Audit)***. Agenda 21
- ***Pla Director per a la Societat de la informació a Vic (Management Plan for Promoting the Information Society)***. This is a tool for studying and planning what services to give the city of Vic in order to enable it to progress with its plans for the introduction of new computer and communications-related technologies in the public and private social domains.
- ***Fòrum ambiental permanent (Permanent environmental forum)***.

At the regional level it is possible to find:

- ***Pla Estratègic Osona XXI (Strategic Plan for Osona)***. This seeks to establish the main guidelines for the *comarca's* future development (NUTS IV), and also looks to offer a forum for collective reflection upon the social, economic and cultural future of the *comarca*.
- **Territorial labour pacts** aimed dynamising insertion into the labour market
- Associations of municipalities to collectively manage different services
- Sectorial plans

Hypothesis	Confirmed	Not confirmed	Information cannot be given	Comments
1	X			
2		X		
3		X		
4	X			
5			X	
6	X			
7	X			
8		X		
9	X			
10	X			
11	X			
12	X			
13	X			
14	X			
15	X			
16	X			
16a	X			
17			X	
18		X		
19				There is not 19 th hipotesis
20	X			
21	X			
22	X			
23	X			
24	X			
24a	X			
25	X			
25a		X		
26	X			

Aerial photo of Vic and surroundings



The Market square, center of Vic's life



Renewal of old factory as entertainment center



Vic. Romanesque cathedral and new museum



Roman temple, rebuilt in 19th century



7.2 Case study Lleida

7.2.1 Descriptive section

Geographic position

- Lleida is located in the north-east of Spain, in the Autonomous Community of Catalonia (NUTS 2). It is the capital of the province (NUTS 3) of the same name, which has a surface area of 12,167 km². Its municipal area (NUTS 5) is 112.3 km².
- It lies to the south of the Pyrenees, in the middle of a large plain where various Pyrenean valleys converge with that of the river Ebro.
- Lleida's strategic location is principally determined by its location on the main axis between Barcelona and Madrid. This has resulted in it developing a series of major communications-related infrastructure (motorways, high speed train) links that connect the city to the main nodes in the rest of Spain. Plans are also currently underway for the construction of a regional airport.
- On the other hand, Lleida's communications with the rest of Europe are clearly deficient. It occupies a peripheral position, with few direct transport links with the rest of Europe and communication is further hindered by the barrier of the Pyrenees. There is a distinct lack of direct high speed train and motorway connections with the south of France, which would improve access to the main part of European territory.

Pattern of urbanisation

Urbanisation process/level

The evolution of the city and its present layout can be explained in terms of 4 main phases of urban development.

- (1) Until 1860. The first phase was very long and encompasses the founding of the original city by the Ibers and its subsequent Roman, Moorish and Christian periods. This period ends at the year 1860, when the city's medieval walls were knocked down and the city began to expand.
- (2) 1860-1940. Until the Spanish Civil War, the area around Lleida's historic centre experienced continuous growth. With the construction of its "*Ensanche*", it became consolidated as a city with a compact morphology.
- (3) 1940-1979. During the dictatorship of General Franco, there was considerable growth in the city's population and urbanisation. A number of suburbs appeared on what was originally the periphery of the consolidated city. They were poorly connected with the city centre and gave rise to polycentric growth. These neighbourhoods also began to exhibit serious deficiencies in terms of their services and infrastructures.
- (4) The final stage dates from 1979, with the arrival of new, democratically-elected city councils and the approval of a new city development plan. In these

years, the city grew and absorbed the “barris” on its periphery, giving rise to the rapidly growing, compact city that has particularly been evident over the last 8 years.

At the same time as this last phase, a new process of property growth has begun in the villages immediately surrounding Lleida. This growth has largely been the consequence of the high prices of property in Lleida itself. This has generated important population growth and inter-urban traffic flows, which in turn have created a series of new challenges, with Lleida strengthening its function as the region’s centre.

Evolution of the city’s population

1860	19,557
1900	21,432
1940	41,464
1960	63,850
1975	102,599
1991	112,093
2001	112,199
2005	124,709

(Poly)centricity of the region

(a) Morphological dimension

Since the Middle Ages, Lleida has been the biggest population centre of inland Catalonia. This was reinforced in the 19th century, when the city was made capital of its province and saw its centrality further enhanced.

Today, Lleida could be defined as a single, clearly mono-nuclear, centre. Its functional region includes a much of the part of the Ebro valley that is in Catalonia and part of that which is in the Autonomous Community of Aragon (NUTS 2), but not that which runs through other Spanish provinces.

It is possible to identify three different concentric regions that have the city of Lleida as their central nucleus. The attraction that the city exerts over its hinterland progressively declines with distance.

In terms of sustainability, Lleida is a classic example of a Mediterranean city: its urban plan is evidently compact and the predominant typology is of vertical, multi-family blocks of housing. It is only possible to find more dispersed housing patterns in areas that are more peripheral to the nucleus, such as rural areas where the main economic activity is intensive agriculture. These are generally individual houses located on plots of land that are dedicated to the production of sweet fruits.

In recent years, an intense process of sub-urbanisation and urban dispersion has begun, which has been characterised by:

- The growth of existing rural nuclei located within Lleida’s functional area.

- New housing estates on the periphery characterised by single family dwellings destined for the upper middle class.
- The more intensified residential use of agricultural land near the city.

This process involving an increase in the amount of urbanised space has had two very relevant consequences:

- It has produced an increase in the construction of housing units. This phenomenon has given rise to a slight segregation of the territory and, in turn, a certain division into residential and industrial areas, with the latter concentrating much of the employment on the outskirts of the city.
- There has been an important increase in labour mobility. Over the past 15 years, population movements associated with work have double in Lleida's functional area and in many cases they have increased even three or four-fold. This has been the result of both changes in where people live within Lleida and people moving to external nuclei and "commuting" to Lleida, taking advantage of improvements in local transport and communications infrastructure.

At the same time, it is important to stress that despite the increased rate of this suburbanisation process, this still remains very small in comparison with situations found in most other European cities and what has happened in the metropolitan area of Barcelona.

(b) Relational dimension

The centrality of Lleida is related to a territory structured in terms of small-scale secondary nuclei (5,000-15,000 inhabitants) that offer Lleida little in the way of competition. Work, commercial and service-related relations are therefore clearly dominated by the central city.

Despite the marked hierarchisation of the territory around Lleida, there is a visible network of flows among these secondary centres and this has helped to organise the territory and to provide it with cohesion.

However, on another scale, Lleida can be seen as an intermediate city that plays a clearly secondary role within its NUTS 2 region (Catalonia), in which Barcelona and its metropolitan region stand at the top of the hierarchy. For this reason, it is frequent to find Lleida's international relations established hierarchically via Barcelona.

Historical and recent developments

In the second half of the 20th century, the economy of Lleida and its area of influence was mainly based on agriculture and agriculturally related activities, with fruit and intensive livestock farming being the most important activities.

Along these lines, Lleida has maintained many of the traditional functions associated with SMESTO: supply, labour market, and cultural functions. However, at the same time, it has also experienced an increase in the size and specialisation of its tertiary sector function.

Historically speaking, Lleida has never been an important centre of industrial activity and its most important industries today are those connected with the agro-alimentary sector. Lleida's economic development has largely been endogenous, though with an increasing dependence on the ups and downs of international markets.

In recent years, the agrarian sector has found itself submerged in a progressively deeper crisis. In response to this, attempts have been made to diversify the base of the local economy. Examples of this attempt at diversification can be seen in initiatives as fostering the development of advanced tertiary sector activities or promoting local tourism.

However, there have been persistent mismatches between the demand for (minimally qualified) labour and the ever-better qualified young people entering the labour market. This situation has produced a certain type of "brain drain", which is particularly evident in the case of young people who move to Barcelona and do not return on account of the better employment opportunities available in the Catalan capital.

Over the last few years, the strategy of the city has been to promote itself as a major reference for the agro-alimentary sector within Europe. It has worked towards this goal with the establishment of a science and technology park dedicated to conducting agro-alimentary research, based on: a) the University of Lleida and b) the socio-economic structure and know how of the surrounding region.

Lleida is also eager to take advantage of the new opportunities offered by the construction of new elements of transport and communications infrastructure such as the High Speed Train or the city's future airport.

Roles and functions

Socio-demographic role

Demographic evolution

Lleida's demographic dynamics were marked by a sharp fall in its fertility rate between 1975 (2.7 children per woman) and 1995 (1.1 children/woman). This was part of a general tendency that was observed throughout Spain, and particularly in Catalonia. This low level of fecundity also coincided with a fall in mortality and an increase in life expectancy (77 years for men and 82.5 years for women). The result was:

- A progressive ageing of the population, which was observed throughout Lleida's area of influence. This ageing process was even more apparent in the rural areas surrounding the city itself.
- The population growth of Lleida city tended to stagnate. During the period 1975-95, there was also a fall in migration to the city. The combination of almost null net migration and population growth largely explains the very weak population growth experienced by Lleida during this period.

There has, however, been a major change in this tendency in the last few years, basically due to the arrival of a large number of foreigners. After years of almost stagnant growth, the population of Lleida city experienced important growth from 112,199 (2001) to 124,709 inhabitants (2005). This growth occurred despite the simultaneous acceleration in the process of suburbanisation and the loss of residents to neighbouring municipal areas.

The past 10 years have also seen an important increase in the city's birth rate. This has, at least in part, been due to the decision of members of some age groups to postpone having children until close to the biological limit. However, the major factor has been the impulse provided by the arrival of waves of immigration: this has brought an influx of young people with a tendency to have more children. The result has been an increase in the birth rate from 9.8‰ (1996) to 12.5‰ (2004).

Population structure

The structure of Lleida's population by age bands has evidently been affected by these recent demographic changes. The city's population pyramid shows a marked ageing tendency. More than 17% of the population is currently over 65 years of age, while 68% is between 15 and 64. Only 14.5% of the city's population is less than 15 years old.

In Spain, the "baby boom" occurred about 10 years later than in the main countries of EU. This has, therefore, resulted in a certain delay in the ageing process. Even so, the pronounced fall in the birth rate between 1975 and 1995 has had a major impact and has resulted in there being a relative lack of young people. This situation has to some extent been mitigated by recent immigration and the arrival of young immigrants who have contributed to an increase in the birth rate.

These immigrants have mainly come from: Eastern Europe (and above all from countries outside the European Union such as Romania and the Ukraine), Latin America (including Ecuador, Peru and Bolivia), North Africa (particularly from Morocco) and from Sub-Saharan Africa (including Senegal and Gambia). Immigrants currently account for between 10 and 15% of the city's population, with the majority of these people having arrived during the past six years.

As far as the structure and characteristics of households are concerned, the data available indicates that the average number of people per family has fallen: with 3.1 in 1991 and 2.76 in 2001. Over the same period, the number of homes has remained relatively stable, although the number of one person households has doubled, with single occupancy representing 25% of the overall total in 2001.

Level of education

The educational level of Spain's population remained relatively low until quite recently, but has shown a notable improvement in recent years.

As for the whole of society, the level of education of Lleida's population has gradually increased over the last two decades. Indexes of illiteracy and unfinished studies have decreased, while the percentage of the population with middle and higher level studies has increased. Looking at this within the context of Catalonia as

a whole, it is possible to observe a higher average level of studies in Lleida city, yet the percentage of people with secondary and university studies still remains 4.5% below the average for Catalonia.

	Year	Incomplete studies	Primary studies	Secondary studies	University studies
Lleida	1991	51.9	27.1	10.9	10.1
Lleida	2001	37.1	29.6	17.3	16.0
Catalonia	2001	40.0	31.1	16.2	12.7

Despite this higher level of studies, it is still true to say that there is a steady exodus (brain drain) of better qualified people, especially to Barcelona. There are no available statistics with which to quantify this tendency, but it can be observed through two different indicators:

- The great difficulty that Lleida’s labour market has to assimilate the large number of graduates leaving university every year.
- The important proportion of students who choose to study in Barcelona and then decide to stay and work there. There are far better employment prospects for highly qualified labour in Barcelona than in Lleida.

The role of SMESTO in relation to urban growth

At the regional scale, this is possible to observe thanks to data on daily commuting. Lleida functionally organises an immediate territory that, including the city itself, serves a population of 190,000, living in 67 different municipalities. The city also has a second, wider, area of influence, with a total population of around 250,000 inhabitants.

A study of these data reveals a strong polarisation around the central hub, which contains most of the area’s population, places of work and administrative, professional and commercial functions. It can be affirmed that Lleida has its own dynamic, which is independent from the influence exerted by the Barcelona metropolis. Lleida’s weight with respect to its hinterland goes clearly beyond the limits associated with NUTS 4, yet falls short of those associated with NUTS 3. As previously indicated, a number of municipalities that lie outside Catalonia have functional relationships with Lleida that are largely determined by their geographical proximity, which has been further strengthened by the now well-consolidated road network. It is expected that future developments associated with the introduction of the High Speed train will have the effect of further improving Lleida’s relations with the rest of the Spanish state.

Data obtained from a survey of property in Lleida, reveals a very dynamic panorama, especially in the city itself and in the settlements closest to it. It is, however, somewhat curious to note incipient growth in the development of single family dwellings both in Lleida and in the municipalities located in its immediate periphery. Yet, at the same time, data relating to the type of property tenancy and constructions still reveals the clear predominance of vertical property.

Functions of the individual SMESTO both within and beyond the immediate region

(a) Supply functions, labour market

An analysis of economic activity gives a global image of a NUTS 3 centre in which agriculture-related activity continues to be very important. The construction industry is another important source of employment, while industrial and tertiary sector activities still remain rather weak in comparison to their respective weights within Catalonia as a whole. Even so, the importance of agriculture has significantly reduced in recent years and there has been a slight increase in the importance of the industrial sector, which has experienced a decline in other parts of Catalonia.

However, it is important to underline that economic activity remains mainly concentrated in the city of Lleida itself, in line with its demographic weight and level of attraction as a market for labour (47% of the functional region's companies and 60% of its places of work are located in Lleida). On the other hand, the territory immediately around the city is characterised by a high level of specialisation in service sector activities. The loss of places of work in the primary sector has tended to fuel labour mobility and the flow of workers between municipalities and particularly to Lleida.

(b) Socio-cultural dimension

At the socio-cultural level, Lleida enjoys a high quality of life. Many recent studies have placed Lleida among the ten cities with the highest indexes of quality of life in Spain. It has also been recognised as one of the best Spanish cities in which to live and invest.

Other social indicators such as its level of income, health, educational opportunities and employment rate show that Lleida tends to exceed the level of performance associated with NUTS 2 and has indexes that are much higher than those of the state as a whole. According to the *Anuari Econòmic de Espanya 2005* published by "la Caixa de Pensions"¹¹, average annual incomes lie between 13,500 and 14,500 €. This means that Lleida earns a score of 9 out of 10 on a scale for which the average score for the Spanish state is 5 (10,200 – 11,300 €). Furthermore, for many years Lleida (NUTS 3) has repeatedly been the province with the lowest rate of unemployment in Spain, and has always been close to a level of full employment.

There are only two indicators for which Lleida lies slightly below the national average for Spain. These are the indexes associated with the accessibility to health care and road safety. The results of these indexes can be explained by the fact that they evaluate the whole NUTS 3 level. Lleida includes part of the Pyrenees where local relief exerts a very important limiting effect upon accessibility both within the mountain zone and between this area and the Lleida plain. The lack of a high quality road and rail network has limited access between the municipalities of the

¹¹ <http://www.anuarieco.lacaixa.comunicacions.com/java/X?cgi=caixa.anuari99.util.ChangeLanguage&lang=eng>

northern part of Lleida province and the capital, which is where the main healthcare facilities are concentrated.

As mentioned in the previous paragraph, an analysis of available facilities helps to establish a very clear hierarchisation of the region's urban system. First level services such as the University, Music Conservatory, Official Language School and Hospitals are all located in Lleida city. Healthcare facilities are predominantly polarised in Lleida city, which contains almost all of the region's hospitals. In the same way, there is a pronounced concentration of specialist doctors and healthcare services in the capital, with this applying to both public and private services. As far as museums and collections that are open to the public is concerned, there is again a clear concentration of resources in Lleida capital. Only a few NUTS 4 capitals with populations of more than 5,000 inhabitants are equipped with cinemas, theatres and primary healthcare facilities.

This analysis of the provision of public facilities therefore once again reinforces the clear hierarchisation of the city at the NUTS 3 level. The location of facilities obeys the dictates of a previously established planning system that basically set out to reinforce the existing urban hierarchy.

(c) Accessibility-mode of transport

The role that Lleida performs within its immediate territory is largely dictated by its regional and national transport and communications network. In this section, we will examine four main communications networks; the road, railway, high speed train and airport networks. The presence of this communications network at the national level determines Lleida's accessibility.

At a higher level of the scale, the road network is organised as a centralised node that unites Lleida with the smaller municipalities that surround it. This network has been improved in recent years thanks to construction of bypasses and improvements to previously existing roads. At the level of the autonomous community and the Spanish state, the road network has allowed Lleida to play an active role within the wider, national city system. The main communications routes are those provided by the motorway and dual carriageway that connect the Lleida region with that of Barcelona and with the other Catalan cities. This network, and particularly the motorway, has also provided better connections with the interior of the Iberian Peninsula and has situated Lleida at the point where the Mediterranean and Ebro axes, which constitute Spain's two main belts of economic growth, intercept.

The present rail network dates from the 19th century and is a predominantly centralised system that currently exhibits numerous deficiencies, largely on account of the time that has passed without it being subjected to any significant degree of improvement or further development. It can therefore be said that the Lleida region is poorly connected by rail and has a deficient service in terms of both the timetables available and the speed of the services provided. This problem is reflected in the fact that, in contrast to the general trend observed in Catalonia as a whole and in the rest of Spain, the number of people travelling by in Lleida has actually diminished in recent years.

The High Speed Train line that is being built between Madrid and the French border already passes through Lleida and will soon reach Barcelona. This new infrastructure may help to improve Lleida's accessibility with respect to Spain's main cities and, to a lesser extent, with those of the rest of Europe. The High Speed Train will tend to reinforce the polarisation already present in the Lleida region. At the same time, it is to be hoped that Lleida's improved accessibility will also help to spread the benefits offered by this service through the rest of the region. This would help to promote territorial cohesion and sustainability in the region.

(d) Educational institutions and socio-economic prospects

The remaining point in this section concerns the question of knowledge, research and development in Lleida and its region. Here, it is inevitable to refer to the role that the University plays within the territory. As previously mentioned, Lleida province has only one University. It is a public body and is organised around seven university centres. The impact of the supply of education within the territory is regionally concentrated because it includes students from Lleida province and also from municipalities in nearby areas of the neighbouring Autonomous Community of Aragon (NUTS 3). Despite the rather limited catchment area for students, there are considerable differences between the effective service areas of different university faculties. Higher level courses in Agronomic Engineering and Forestry, Medical Studies and INEFC (Physical Education and Sports Education) attract students from outside the region. This is due to a combination of the high level of demand for these degree courses and the lack of competition from Barcelona-based universities in the provision of these studies. The multiplier effect generated by the existence of the University of Lleida is reflected in local production and salaries. The service sector has been the main beneficiary of these impacts, reaping much greater benefits than other sectors, such as local industry. The *output* generated by the University is rarely used as an *input* by local companies, so in this case the local market largely fails to take advantage of this production. Even so, local companies tend to benefit at the highest level from the level of training and qualifications of staff that they recruit from the university and who help them to increase both the level and quality of their productivity.

The presence of the University has helped to consolidate the city as a centre that provides services. In this respect, the university has been one of the motors behind the development of tertiary sector activity in the territory and this has been one of the main growth areas over the past decade, contributing 69.8% of the city's gross added value. Without a doubt, this together with the city's moderate industrial growth has played an important part in the fact that Lleida's GDP is currently four points above the average for Catalonia.

At the NUTS 3 level, one of the main strategies is to consolidate and foster the development of the agro-industrial sector and especially to promote the transformation of primary products from fruit growing and livestock farming into industrial products. This objective is largely related to the important weight that agriculture continues to maintain within the local economy and to the consolidated lines of research conducted by the University of Lleida. This largely explains why the near future will see the creation of one of the few agro-industrial science and technology parks in the whole of Spain. Through this venture, it is hoped to be able to export technical knowledge at the European scale.

One area that still offers room for improvement is the promotion of tourism in both the city and its surrounding region. The level of local tourism is appreciably lower than in the rest of Catalonia, where it largely relates to sand and sea, and in Barcelona, where there is a far greater offer of touristic activities than Lleida. There is only a notable level of tourist activity in the Lleida Pyrenees, which is mainly linked to winter sports. In the case of Lleida city, the tourist activities on offer tend to be either for people passing through or relatively short term attractions, although a major effort is currently being made to promote the city's heritage and thereby generate a larger influx of tourists.

SWOT analysis

Comarca (Local District) Segrià (NUTS 4)

Strengths	Weaknesses
<ul style="list-style-type: none"> - Existence of a strong mechanism for economic promotion that extends to all of the municipalities in the local district and works with a territorial perspective - Existence of a major supply of intellectual capital in the local district, which is based at the University of Lleida - Greater percentage of the population with university level studies than the average for Catalonia as a whole - Important growth of the agro-industry sector - Consolidation of agro-alimentary research - Positive evolution of the service sector, with major potential for growth - Density and urban concentration of population that facilitate the agglomeration of facilities, services and commerce in the comarca (local district) - Strong central position of Lleida within the comarca, particularly with respect to commerce and the provision of services - High quality of life - Good vertical and transversal communications 	<ul style="list-style-type: none"> - Lack of medium-large scale companies - Scattered and rather small industrial estates. Lack of a coordinated supply of industrial land - Very weak service sector, which is relatively unstructured and offers little added value - Deficient public rail transport service - Insufficient degree of commercial and business association and very few examples of cooperation and joint public-private initiatives - Lack of coordination between the different tourist authorities in order to offer integrated tourism services - Much higher number of workers employed in the agricultural sector than the averages for Catalonia and Europe - Ageing population with an average age well above that of Catalonia as a whole
Opportunities	Threats
<ul style="list-style-type: none"> - Potential demand for industrial services - Potential demand for environmental services - Potential demand for first and second homes - Potential development of new sources of employment connected with the service sector: providing for day-to-day needs, improved quality of life, leisure and environmental services, etc. - Possibility of introducing a single comarca (local district) travel ticket to improve mobility within the comarca and promote the use of public transport - Improvements to existing local infrastructure 	<ul style="list-style-type: none"> - Risk of decline and contraction of some of the local area's basic economic sectors - Progressive ageing of the local population - Major growth of foreign immigration which could generate problems and confrontations with certain sectors of the population if more is not done to foster integration - Pollution of sub-soils through excessive applications of slurry - High percentage of the active population employed in the primary sector - Insufficient local rail network

Lleida (SMESTO, NUTS 5)

Strengths	Weaknesses
<ul style="list-style-type: none"> - High quality of life - Local GDP above the average for Catalonia - Existence of a wide range of different micro-companies - Great capacity to attract commerce from beyond the limits of its immediate administrative zone (comarca) - Reinvestment of agricultural capital in industry - University as a generator of research and cultural output - Strategic location and good road communications - High Speed train connection with Madrid and other Spanish cities - Construction of a new airport 	<ul style="list-style-type: none"> - Very small young population - Large influx of immigration with very little professional training - Rail communications remain insufficient - Persistent image of a rather closed, traditional city with a harsh climate
Opportunities	Threats
<ul style="list-style-type: none"> - Increase the demographic and industrial critical mass - Actively promote diversity (rejuvenation, labour supply, potential for professionalisation, etc.) - Project Lleida as a city that offers a high quality of life in order to attract new, well-qualified residents - Promote the Advanced Tertiary sector - Transform Lleida to make it a cultural pole of attraction with a varied offer of quality products. - Further promote Lleida's commercial vocation - Destine local capital to more productive investments - Take full advantage of the competitiveness of the city's property stock to attract professionals - Consolidate Lleida's position as a gateway to Catalonia - Promote collaboration between the university and the local economy - Encourage young people to undertake more professional training 	<ul style="list-style-type: none"> - Social segregation and a certain degree of social instability - Stagnation of the university - Wealth frozen in empty housing stock - Crisis in the agrarian economy of the surrounding rural area (comarca) - Competition from other cities in the area

7.2.2 Analytical section

- (1) Administrative area. Entity: municipality (municipio). 112.3 km². Population 124,709 (1-1-2005).
- (2) Continuous area of settlement: Given the dimensions of the municipal territory and the compactness of the city, Lleida does not constitute an area of continuous settlement beyond its municipality border. Even so, it is possible to include within this category some nearby municipalities such as Alpicat, Torrefarrera, Albatarrac, Torre-serona and Benavent. They are located less than 10 km from the city centre and have experienced major urbanistic growth in recent years, which they have largely received through the process

of the suburbanisation of Lleida city. Except for Alpicat, none of these villages have more than 2,000 inhabitants.

- (3) Functional urban area. It is possible to identify two such areas:
 - The urban system of Lleida is formed by the first ring of municipalities around the city. It consists of 67 municipalities and has a total surface area of 2,398 km². Some of these nuclei have experienced quite marked population growth in recent years with the arrival of new residents.
 - The functional area of Lleida involves a group of 145 municipalities and a total surface area of 6842 m². The day-to-day life of this territory is organised through a network of relations that centre on and around Lleida, in its role as the local capital. Many people in this area travel to Lleida to work and to perform a series of other activities and consume its services. This is an area in which there is a high degree of interaction, which shows that the functional limits as defined by the habitual behaviour of their citizens do not usually coincide with municipal limits. In this case, there are municipalities that belongs to another NUTS 2.
- (4) Lleida's area of influence. This includes almost the whole province (NUTS 3) and some municipalities located in the Autonomous Community of Aragon. It is estimated that this area includes 299 municipalities and has a total surface area of 17,289 km². The total population exceeds 350,000 people.

Although it is possible to delimit these four areas, only the first enjoys any form of official recognition and therefore offers abundant information at the municipal scale. The other three areas have been delimited as a result of various different studies, but none of them has any kind of official status, with respect to its limits or any of its functions.

As far as cartographic references are concerned, there are only a number of academic works, the majority of which have been carried out by the University of Lleida. But none of these cases constitute what might be regarded as official cartographic delimitations of the areas in question.

7.2.3 Policy section

Governance

- (1) **In the city of Lleida** this is formed and organised through a group of entities and representatives that have a commitment to the city and are involved in its day-to-day life. Amongst the most significant of these local agents it is possible to single out economic, social and political agents including:

Economic agents

These are entities that group together different commercial and tertiary sector associations. Amongst this group it is possible to highlight:

- The Chamber of Commerce and Industry (*Cambra Oficial de Comerç i Indústria de Lleida*)

- The Confederation of Business Organisations (*Confederació d'Organitzacions Empresariales de Lleida*)
- The Trade Fair Association (*Associació de Fira de Lleida*)

Local trade union and social groups

- Trade Unions: UGT, CCOO...
- Federation of Association of Neighbours
- University of Lleida

Political parties with most representation on Lleida City Council

- Partit Socialista de Catalunya (PSC) Convergència i Unió (CiU), Esquerra Republicana de Catalunya (ERC), Partit Popular (PP), Iniciativa per Catalunya- Els Verds (ICV).

(2) **At the NUTS 3 regional level**, the main agents that are active in the territory can also be placed in three different groups

Economic agents

- Provincial Federation of Commerce (*Federació Provincial de Comerç de Lleida*)
- National Institute of Employment (*Instituto Nacional de Empleo – INEM*)
- Sectors involved in the planning and exploitation of the agro-alimentary industry, such as Indulleida and Copaga.
- Consortium for Industrial Promotion (*Consorti de Promoció Econòmica*)

Social groups

- Trade Unions: UGT, CCOO...
- Young farmers associations (*USAC-Joves Agricultors*)
- Farmers' union (*Unió de Pagesos*)

Political groups and government organisations

- Provincial Administration (*Diputació de Lleida*)
- Local district councils (*Consells Comarcals*)
- The most strongly represented political parties in these organisations are (although not necessarily in the same proportion) the same as those represented on Lleida City Council.

The city of Lleida is governed at the first level by the City Council. This organisation has a series of specific competencies and shares its administrative responsibilities with two other higher level territorial authorities: the *Consell Comarcal del Segrià* (local district council) and the *Diputació Provincial de Lleida* (provincial government). The competencies of each entity have been established by law:

The *Ajuntament de Lleida* (Lleida City Council) is responsible for undertaking actions within the municipal limits of the city of Lleida. These responsibilities

relating to the municipal area are laid out in administrative decree 2/2003, which formally confirms the revision of the Law relating to municipal and local affairs in Catalonia. This decree recognises the following competences:

- The municipal authority is responsible for managing its resources in order to meet the interests of its citizens within its defined area of operation. It is also responsible for promoting any form of activity and providing all of the public services required to satisfy the needs and aspirations of the community of neighbours that it serves.
- In accordance with the Law and associated legislation relating to this sector, local authorities have competencies and responsibilities relating to: the participation of their citizens in local affairs; their own organisation; local identity and representation; environmental sustainability and territorial management; social cohesion; the provision of transport infrastructure; local connectivity and communications; the introduction and development of information and communications technology; energy supplies; and the management of their economic resources.

Within its area of action, the ***Ajuntament de Lleida (Lleida City Council)*** has competences relating to:

- Safety in public places
- Organising the circulation of vehicles and pedestrians along urban thoroughfares
- Protecting its citizens and both preventing and extinguishing fires
- Structuring, managing, and undertaking action relating to urbanistic design and development; promoting and managing housing; organising and maintaining parks and gardens, the paving and quality of urban roads and walkways, and maintaining rural roads and pathways
- Conserving and protecting the natural environment and the city's local artistic and historic heritage
- Supervising supplies, slaughterhouses, trade fairs, markets and the defence of the interests of those who use and consume local services
- Protecting public health and participating in the provision and management of primary healthcare
- Providing and promoting social services and social reinsertion
- Providing water and public lighting; cleaning public thoroughfares; collecting and treating waste products; maintaining the sewer system; and treating waste waters
- Providing public transport services
- Providing and maintaining cultural and sports activities and facilities and infrastructure and support for leisure and tourism related activities
- Participating in the elaboration of educational programmes and cooperating with the educational authorities in the creation, construction and maintenance of public educational centres; taking part in the management of educational

centres and participating in tasks related with the monitoring and enforcement of compulsory schooling.

Consell Comarcal del Segrià (Local District Council). This body is responsible for the governance and administration of the NUTS 4 region. It has been attributed competences by legislative decree 2/2003, which formally approved the revised text of the Law relating to the organisation of the *comarques* (local districts) of Catalonia. It has competences relating to the following matters:

- Ensuring that the different municipal authorities of the *comarca* undertake and provide and the services and activities that correspond to their local competences.
- Establishing a commission to provide consultancy services for the *comarca*
- Helping and cooperating with its municipalities
- Drawing up a programme of interventions for the *comarca* including the services, activities and public works that must be provided and carried out and also outlining the mechanisms and provisions made to ensure that it has the best possible coordination
- Providing technical assessment to municipalities
- Drawing up partial plans that include and combine proposals presented by the municipalities.

Diputació de Lleida (Lleida's Provincial Government). This body is responsible for the governance and administration of the NUTS 3 region, which corresponds to the province of Lleida. The *Diputació* works together with the municipal authorities and is involved in drawing up territorial and urbanistic plans that relate to the territory as a whole. It cooperates with the other administrations in the following ways:

- Providing administrative support in the transmission of the required public administration documentation and proceedings
- Providing legal, economic and technical advice
- Helping to draft studies and projects
- Providing non-returnable loans and subsidies
- Carrying out work and setting up services
- Providing loans and credit facilities
- Setting up consortiums and helping to establish other types of legally recognised associations
- Participating in agreements and projects involving other regional and national government agencies

These last two administrative bodies cooperate in the general administration and management of the territory according to the terms established by a series of different laws. Apart from this, there are also other groups of organisations that are created to serve more specific functions and which also play a relevant role in interventions both in the city and its surrounding region. There are also a number

of other associations, consortiums and commissions that have been established in order to serve a series of very specific objectives.

By way of example, at the SMESTO level it is possible to find such a wide range of bodies and initiatives as:

- The *Pla Estratègic de Lleida* (Strategic Plan for Lleida). This document outlines a set of Strategic Lines of Action, Objectives and Proposals established by the citizens of Lleida. The *Pla Estratègic* seeks to be a forum for collective reflection and debate concerning the future social, economic and cultural development of Lleida.
- The *Pla de Dinamització del Tren d'Alta Velocitat* (Plan for Dynamising the High Speed Train), which involves the participation of a number of local agents and the University of Lleida. This is an initiative to study the advantages deriving from the construction of the high speed train connection.
- Agenda 21, whose objective is to promote environmental sustainability

At the regional level, it is possible to find:

- Territorial agreements relating to employment and strategies for dynamising the process of helping workers enter the labour market
- Irrigation communities for ensuring a more responsible and sustainable use of water resources
- Sectorial plans

Hypothesis	Confirmed	Not confirmed	Information cannot be given	Comments
1	X			
2		X		
3		X		
4	X			
5				
6	X			
7	X			
8		X		
9	X			
10	X			
11	X			
12	X			
13	X			
14	X			
15	X			
16	X			
16a		X		
17			X	
18		X		
19				There is not 19 th hipotesis
20		X		
21	X			
22	X			
23	X			
24	X			
24a	X			
25	X			
25a	X			
26	X			

8 SWEDEN

8.1 Case studies Sollefteå and Örnsköldsvik

Preamble

Before formally starting the analysis of the Swedish case study, it is important to put it in the context of the conceptual framework described in the WP1 dealing with the definition of urban areas and SMESTO.

In Sweden, there is no formal definition of town. However, there is a clear definition of urban settlement that is based on the delimitation of continuous built-up areas (*Tätort* in Swedish). The definition used in Sweden is a maximum distance of 200m between housings, as well as a minimum of 200 inhabitants in that area. Those urban settlements are mainly used as a statistical tool, and their delimitation is not readjusted to other administrative boundaries, such as municipalities or post-code areas, as it is often the case in other countries (See WP1). However, in our case study, the appellation 'town' will only refer to the definition of the urban settlements.

Because Swedish municipalities are often very large, they are often not suitable entities for being considered as a town. However, as most of the demographic and socio-economic statistics are, in Sweden, available at this level, we will use the municipality in order to describe the close territorial context of the town. The formal region (*län*) of Västernorrland as well as the informal territory spreading between the towns of Sundsvall, Umeå and Östersund, will serve as a territorial basis for describing the relationship between the SMESTO and their wider regional context, depending on the issue at stake.

8.1.1 Descriptive section

Geographic position

The case study SMESTO, Sollefteå and Örnsköldsvik, are situated in the region of Västernorrland. The region is bordering the Baltic Sea and is situated in the middle of the country, on a North-South axis. In a European and Swedish perspective, the region can be considered as peripheral. The main air transport hubs in the region are located in the vicinity of the coastal towns of Sundsvall and Umeå. However, those towns are mainly connected to the region of Stockholm, and have few international connections. The road infrastructure is connecting the major towns of the coast (Sundsvall, Umeå, Gävle and Stockholm to the south) and the main town in the Swedish inland, Östersund. The rail infrastructure is poorly developed, as it is old-fashioned and is not properly linking the main towns, passing through the inland, and not linking the main coastal settlements.

The town of Sollefteå is situated in the inland of the Västernorrland region, even if quite close to the coast, and along the *Ångermanälven* River. The town is situated on the road and rail axis between Östersund and Umeå.

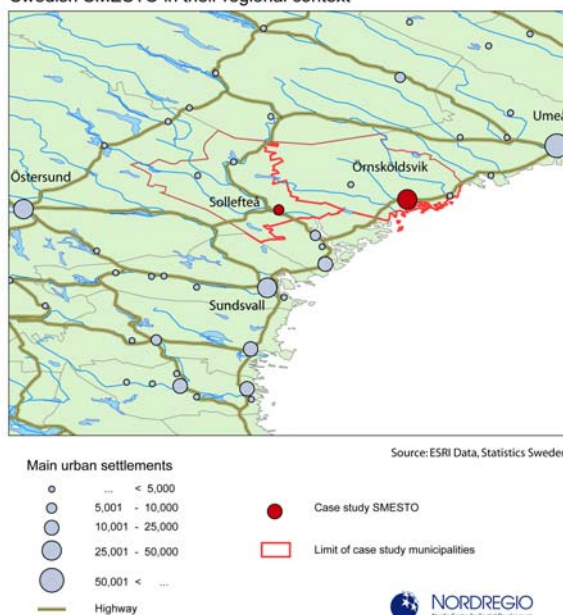
The town of Örnsköldsvik is situated on the coast of the Baltic Sea, between Sundsvall in the south and Umeå in the north. The town's accessibility is mainly realised by road, as it is poorly connected to the rail system. The development of the High Speed Train (HST) tracks, *Botniabanan*, will drastically improve the connections to Umeå.

Figures 1 & 2: Localisation of Sollefteå and Örnsköldsvik in a European and regional perspective

Swedish SMESTO in Europe



Swedish SMESTO in their regional context



Pattern of urbanisation

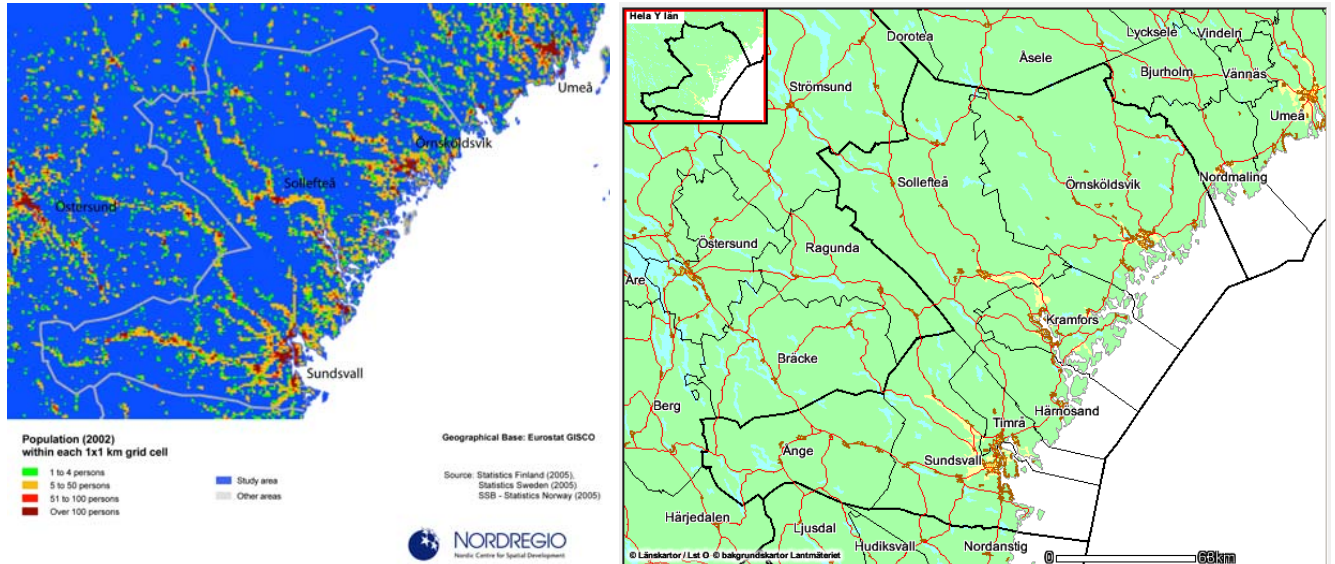
The region of Västernorrland as a whole has experienced a high rate of population increase from the beginning of the 19th century to the middle of 20th century, at a pace higher than the national one. The region reached its all-time high population figure in 1956 with 281,600 inhabitants. Since then, the population has steadily decreased, with the exception of some short period of time, and was of 244,195 inhabitants at the end of 2004.

The latest figures for the population of the urban settlements, from 2000, gives 8,712 inhabitants to the town of Sollefteå (minus 500 inhabitants since 1995), and 28,765 inhabitants to the town of Örnsköldsvik (minus 1,100 since 1995). The towns of Sollefteå and Örnsköldsvik are the major settlements in their respective municipalities, which have a total population of respectively 22,000 and 56,000 inhabitants. Those municipalities have few urban settlements of more than 1,000 inhabitants: Husum (1,757), Bredbyn (1,280) and Köpmanholmen (1,227) for Örnsköldsvik, and Långsele (1,697) and Ramsele (1,025) for Sollefteå.

The settlement pattern is essentially stretched along the main natural and transport (mainly road) corridors of the municipalities, with widely spread-out and very small settlements increasing the dependency on private car for mobility of persons. The

settlement pattern inside the municipalities under scrutiny is similar to the one of the northern parts of Sweden in general with a chain of urban settlements on the coast and a diffuse pattern of small housing settlements in the hinterland.

Figures 3 & 4: Settlement pattern and delimitation of urban settlements in the region



The historical development of the town of Sollefteå has been widely influenced by its location along the river *Ångermanälven*. The river, which is the third largest in Sweden, was used as a means for transporting the large amount of natural resources available in the Swedish hinterland. At the local scale, the bridge linking both banks of the river in the town, as well as the road and rail axes passing through the town's centre have had a strong territorial impact on urban planning issues. Moreover, the settlement of military garrisons in the town in the 19th century was also an important factor in improving transport connections, mainly by railway, between the town and the rest of the region.

The town of Örnköldsvik has had another path of development, due to different preconditions. Indeed, it was historically developed as a market town (*köping*), focusing on trade and industry, mainly using the natural resources available in the hinterland to develop a strong manufacturing economy. One of the basic functions of the town was to serve its surrounding hinterland and thus to act as a gateway. The seaport was also an essential asset in order to export the goods manufactured.

Polycentricity of the region

The morphological and relational approaches will be used as the main dimensions describing the polycentric (or monocentric) pattern of the region, at each scale of interest (European/national, regional, local).

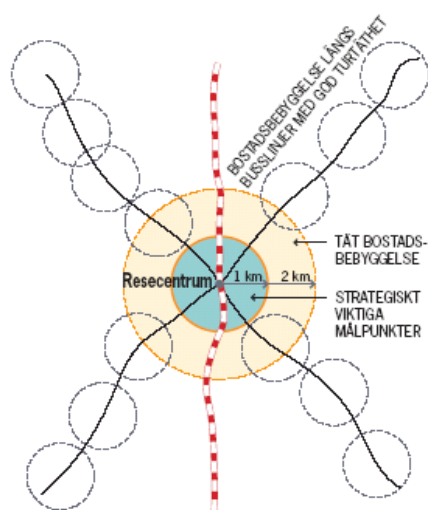
As regards the European and national scales, it is first interesting to refer to the ESPON 1.1.1 project in order to assess the degree of polycentricity of the region. The closest MEGA to our study region is the capital city of Stockholm, where as Umeå in the north and Gävle in the south are the closest transnational/national

FUAs. Östersund, Sundsvall, Härnösand (the regional capital of Västernorrland) and Örnsköldsvik are the only FUAs in our study area. However, as stated earlier in this paper, the region is highly peripheral in a European and national perspective, and are difficultly accessible with the main transport corridors. Indeed, even if the region has fairly good linkages to the Stockholm region with the E4 highway, the long distances between them (500 km) are a natural hinder for good accessibility between them. The foreseen upgrading of the southern sections of the E4 will improve the overall accessibility of the region the more densely populated parts of southern Sweden.

At the regional scale, we will consider two main territorial dimensions: along the coast of the Baltic Sea and traversal between the coast and the inland. The urban structure on the coastal area is often described as a "chain of pearls" (*pärkedja* in Swedish), with many medium-sized towns spaced out by around 30 to 50 km. The largest town is Umeå with 71,000 inhabitants. However, those coastal towns are poorly accessible to one another, due to long distances by car, and inadequate railway system that passes through the hinterland without connecting directly the main towns, and thus limiting the possibilities for commuting. This latter is expected to be improved with the implementation of two rail projects: the construction of a high-speed train connection between Umeå and Örnsköldsvik (*Botniabanan*) and the upgrading of the railway between Sundsvall and Kramfors (*Ådalsbana*), enabling more direct and faster connections between the main regional urban centres. The second dimension of interest at the regional scale is the coast-inland one. As figure 3 shows it, there are few large urban settlements in the inland parts of the region, with the exception of the town of Östersund, which has approximately 45,000 inhabitants. Thus, the pattern of infrastructure, either road or rail, in the inland is greatly oriented towards Östersund.

At the more local scale, that is to say if we have focusing on the urban structure of the municipalities, the pattern seems to be much more monocentric. In the municipalities of Sollefteå and Örnsköldsvik, the town of the same name is concentrating nearly half of the total population and other settlements are much smaller than the central town. Those towns are also acting as transport hubs, mainly in road and rail terms, for their municipal hinterland. Mobility from the hinterland to the central town is mainly realised with private cars.

Figure 5: Foreseen development around the new train stations



Source: Infraplan AB, Banverket

In fact, the development of the *Botniabanan* will probably increase this polarisation of the municipalities to their central town. Indeed, the new train stations are planned to be built close to the centre of the town, and thus serve as a catalyst to the town's development. An interesting scheme of development around this central station (*resentrum*) is to develop functions and housings concentrically around this point, which will have an increased local accessibility thanks to other transport means such as bus or even bicycle. The idea for the development of settlements in the region would then be close to the concept of "deconcentrated concentration" around the new central stations, and by this counter-balance the spreading of settlements in the municipalities.

Roles and functions

Region

The region overall is faced with two main demographic challenges.

First of all, the region has had a high loss of population in the past decades, even if the trend has ceased lately (in 2004), and has impacted both urban and rural areas.

The second major demographic feature is the ageing of the population. This phenomenon is mainly due to the out-migration of young adults, mostly highly educated, between 18 and 29, from the region. The result for the region is an unbalanced age structure, with an under-representation of persons below 44, and an over-representation of those who are older, when comparing it to the national age structure.

Those demographic trends are putting a lot of financial pressure, especially due to lower tax revenues, on the region and its municipalities, as they are in charge of

the provision of public services, such as health care, education or local public transportation.

The depopulation phenomenon has mainly affected the rural areas in the first place, but it is also now affecting the regional urban centres (Örnsköldsvik, Sundsvall, Härnösand, Sollefteå...). Indeed, between 1995 and 2000, that is to say at the end of the economic crisis that hit Sweden at the beginning of that decade, the main urban centres of Västernorrland lost a substantial amount of inhabitants. For instance, Härnösand lost 1,208 inhabitants between those years, which represented more than 6% of the total town population, and even the largest regional centre, Sundsvall, lost nearly 1% of its population. At the same time, some other large urban centres such as Umeå and Luleå, situated up north along the Baltic Sea coast, have gained population. But overall, the urban-rural divide in terms of distribution of the population has not substantially changed in the recent decades, as population in rural areas is representing approximately one-fourth of the total regional population. However, the areas outside the urban settlements have lost nearly 3% of their population between 1995 and 2000.

Figure 6: Localisation of the main regional universities and hospitals.



Source: Infraplan AB, Banverket

The region of Västernorrland has a long industrial tradition that was mainly built upon the large availability of natural resources in the hinterland, mainly water and wood. Industries based on the transformation of those resources, respectively to hydro-electricity and paper-pulp, were developed. Those capital-intensive industries are the main basis for the regional economy. Due to this, Västernorrland was ranked third in Sweden in terms of GDP per capita (248,000 Swedish Crowns,

approx. 25,000 euros), and fourth in GDP per employed person (523,000 Swedish Crowns, approx. 53,000 euros) in 2002, behind the three Swedish metropolitan areas (Stockholm, Göteborg and Malmö). However, the economic specialisation of region in traditionally 'masculine' activities has led to difficulties for women to find jobs in the private sector. As a consequence, women are more professionally involved in education and health care sectors, whereas men are more employed in construction and manufacturing activities. In some municipalities, the public sector is still an important engine for the local economy, but, in general, the share of the private sector has increased in the latest years. However, the availability of natural resources is felt as no longer sufficient for developing the regional economy. The fact that those industries are mainly focused on exports and thus are more dependent on exogenous forces and trends is also a reason for fostering a more endogenous type of development.

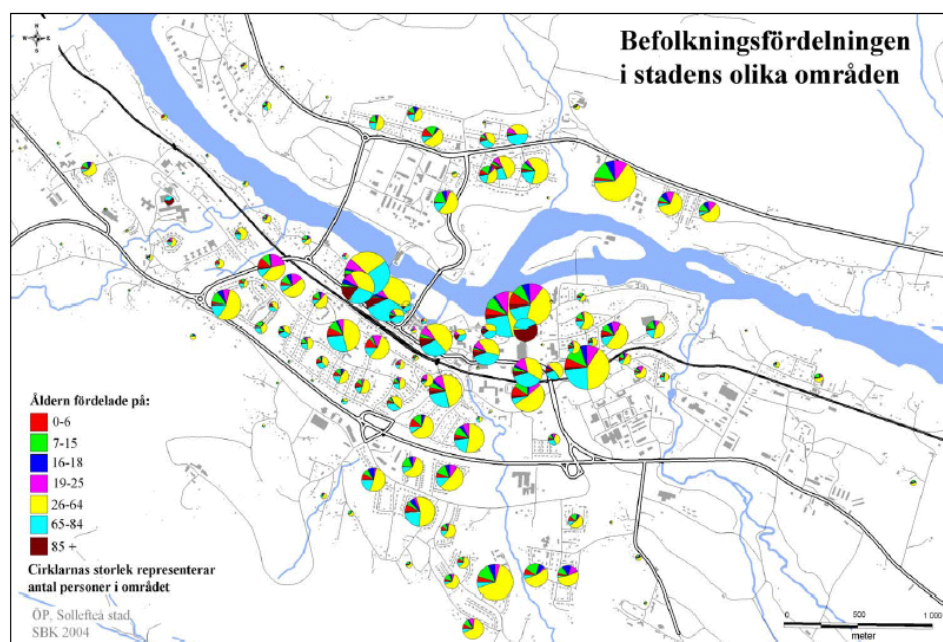
In order to foster the development of more innovative industries via clusters for instance, different policy strategies are stressing the need for better communications (road, train and IT), stronger co-operation (between the different levels in and outside the region) and better accessibility to higher education facilities.

Indeed, transport infrastructure has been one of the weak points of the region. As stated earlier in this report, the railway infrastructure does not fit the urban network, with the major coastal towns not properly connected with each other. Two projects have been drawn in order to improve the rail-connectivity of the region: the construction of new high-speed tracks between Kramfors and Umeå, as well as the upgrading of the *Ådalsbana* tracks between Sundsvall and Kramfors. Those two projects will significantly improve the connections the main coastal towns, will greatly reduce the travel times, and also increase the transport capacity both in terms of persons and goods/merchandises. The main logic is to enable a better sharing of human capital, labour markets, higher education possibilities as well as better accessibility to public services and cultural activities. Poor road connections limit the accessibility to the hinterland as well as the potential for developing the tourism industry there.

Sollefteå

Both the municipality and the town of Sollefteå have been faced with a severe trend of depopulation. As regards the municipality, both the natural change and the net migration components are negative. However, if the net migration rate is only slightly negative (-45), the natural change represents the main negative component (-195). At the town level, it is only possible to assess the total trend. The town has lost, between 1995 and 2000, more than 500 inhabitants, from a total of 9,283 to 8,712 inhabitants. As regards the age structure, it is interesting to have a closer look at the distribution of age classes over the town's territory.

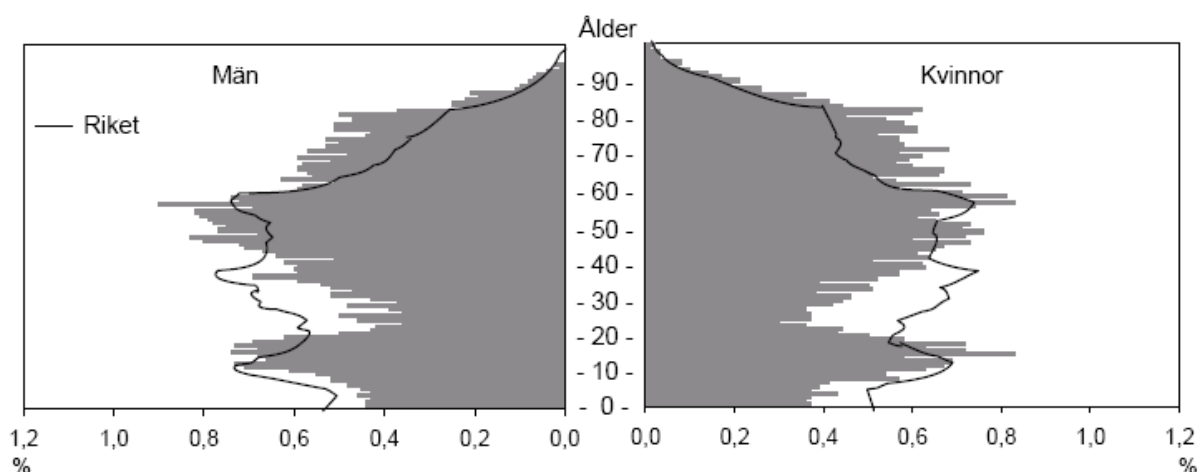
Figure 7: Age structure in the different town districts of Sollefteå



Source: Municipality of Sollefteå

Not surprisingly, the proportion of people with an age comprised between 26 and 64 is larger in the districts where villas are the norm. Retired and elderly people, that is to say older than 65, are over-represented in the central parts of the town, and more precisely between the railway and the river. This is an understandable choice as those persons often have a lower degree of mobility, and therefore proximity to shops and other services is of prime importance. Moreover, the municipality, like the rest of the region in general, is witnessing a severe shortage in people aged between 20 and 45, compared to the national average, and the trend is even more pronounced for women.

Figure 8: Age pyramid of the municipality of Sollefteå for men (left) and women (right)



Source: Statistics Sweden

Interestingly, the municipality is having a higher fertility rate compared to the national one, so it can be concluded that the natural shortage in birth is more due

to the lack of women in age of being pregnant than to the fertility rate itself. The depopulation is considered by the municipality to be one of its main threats, especially due to the strong out-migration of young adults.

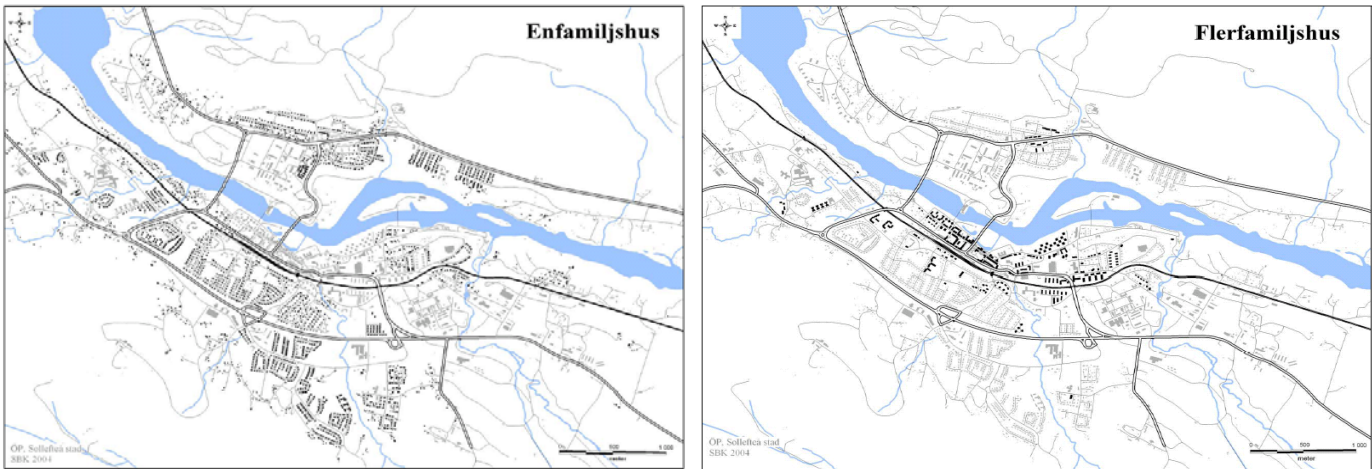
As regards the settlement pattern, and especially concerning the urban sprawl phenomenon, it can be said that the town of Sollefteå is not faced with such a problem. Indeed, the town is situated quite far from the main regional urban centres (Umeå, Östersund or Sundsvall), so their impacts on the distribution of settlements in Sollefteå are very little. However, there is a phenomenon of sprawl of small and dispersed settlements in the municipality along the main transport (road and rail) and natural (rivers) corridors (going north). This is clearly shown on figure 3. Another interesting feature is the sprawl of small settlements between the towns of Sollefteå and Kramfors. However, those settlements are not dense enough to be considered as urban, but the implementation of the new transport corridors along the coast could have an impact on the densification of this area.

In general, it is reasonably fair to consider that the town of Sollefteå is the centre for the provision of the basic services to the rest of its hinterland, which can be delimited to the rest of the municipality. The distribution of health care facilities is particularly interesting. Indeed, even if two or three small care centres are located in the other urban settlements (Jinsele, Långsele, Ramsele) of the municipality, the only hospital is situated in the western districts of the central town. The town is also playing the same "central" role when it comes to education (schools, high schools and some specific university courses), as well as public libraries or administrations. However, Sollefteå is also dependent on facilities located in other (bigger) towns as regards more specialised or larger service provision facilities (Universities, Hospitals, Opera....). In that regard, Sollefteå, and the region Västernorrland in general, is dependent on Umeå, the largest town in Northern Sweden.

The delimitation of labour market areas (using the municipal territorial level as the basis for analysis of commuting pattern) in Sweden is performed by the Swedish Agency for Economic and Regional Growth (*NUTEK*). As a result, the municipality of Sollefteå is belonging to the Labour Market Area (LMA) of Kramfors and is described as "Small region dominated by public sector".

As regards the housing market, the municipality of Sollefteå provides a larger offer than the demand is, as rated by the Swedish Planning and Housing Agency (*Boverket*). In the town itself, villas or single-houses districts are dominant in its surroundings, whereas bigger buildings can be found in the centre nearby the main transport axis.

Figure 9 & 10: Location of family houses (villas) and larger buildings in the town of Sollefteå



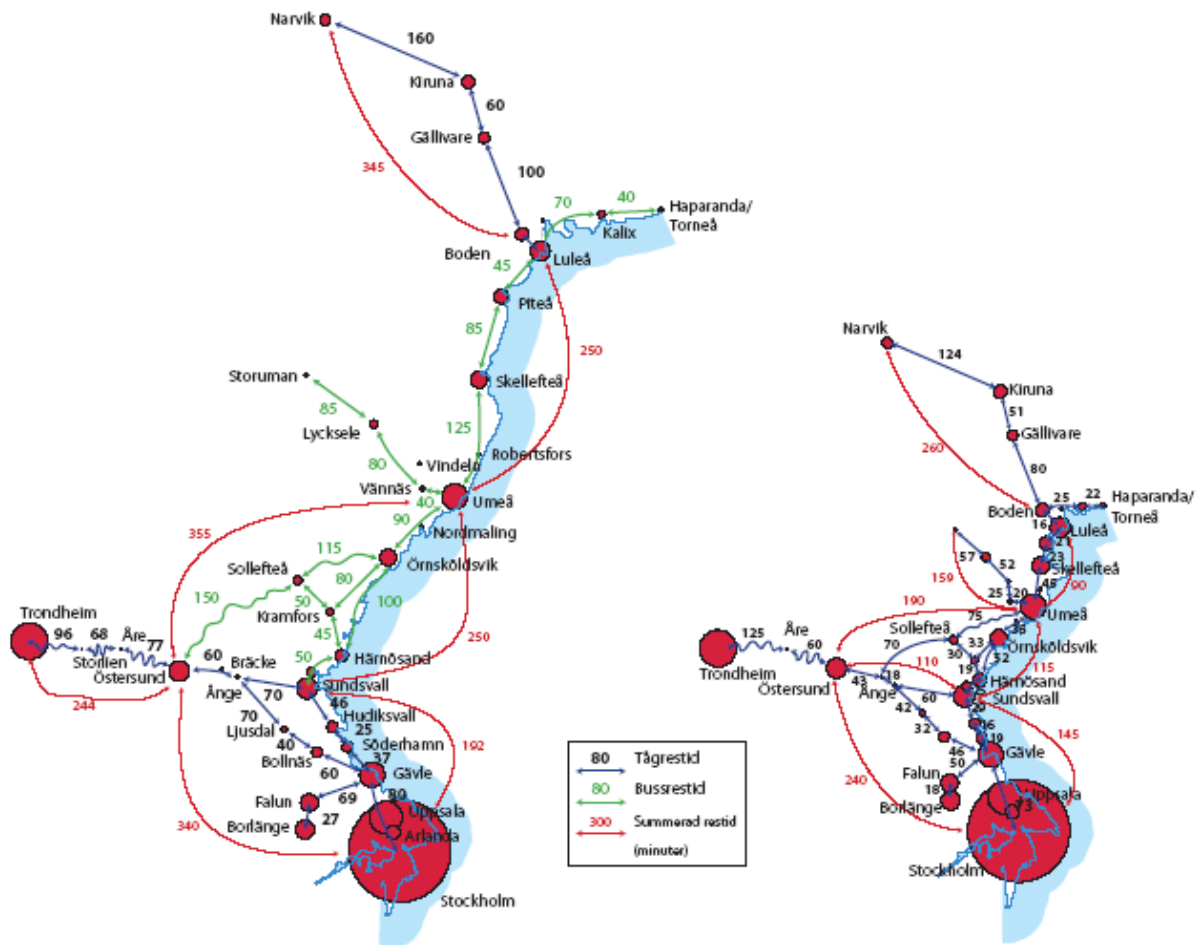
Source: Municipality of Sollefteå

The quality of life is often seen as quite good in Sollefteå thanks to the proximity of a diverse natural environment (natural reserves, protected areas, rivers), providing good possibilities for recreation, but also because of the good local offer in housings. As regards the cultural offer, the possibilities are quite limited, and the cultural amenities are often dedicated to the architectural environment of the town.

As regards transport connectivity, the town is well served, with road and rail infrastructure linking it to the main urban centres. However, because distances are long between those centres and because the infrastructure itself is ageing, Sollefteå has a poor accessibility to other labour markets for instance. Moreover, the road and rail networks are passing through the central parts of the town, which creates barriers for the intra-urban exchanges, as well as barriers for the green structure. The new regional transport projects will substantially improve the accessibility of Sollefteå by reducing the travel-times with other towns. For instance, the travel-time between Sollefteå and Örnsköldsvik will decrease from 115 minutes to 50 minutes, and Umeå will be accessible in less than 2 hours (100 minutes). However, Sollefteå is not directly connected to those new networks. So the improvement of its accessibility heavily relies on side projects targeting at improving the connections with those networks.

The town is the centre of the municipal administration, and it is thus centralising the administration services for the rest of the municipality. However, the town is not a particular entity with special rights in the municipal context.

Figure 11 & 12: Current travel-time by train, bus and multimodal in 2005 (current) and 2015 (prognosis)



Source: Infraplan AB, Banverket

As already stated earlier in this report, the economic structure of the municipality is dominated by the public sector. There is a strong disparity between the employment of men and women: two thirds of the men living in the municipality are working in the private sector, and one-third in the public sector; the figures are inverted for women. The health care services are representing almost 35% of the jobs in the municipality. As the town of Sollefteå is regrouping most of the municipal facilities in health care, the conclusion can be extended to the town. Historically, the settlement of two military garrisons inside the town has played a substantial role in the socio-economic structure. However, in the 1990s, those garrisons were shut down, and the town lost approximately 700 jobs due to that. Interestingly, it seems that the shut down of the garrisons does not seem to have negatively influenced the development of the municipality, as many of those who lost their jobs have found a new one. Indeed, new jobs were created in the municipality in both the public and private sectors. For instance, the settlement of a Civil security and Crisis authority and a long-distance work agency in the municipality has offered new job opportunities. Moreover, several call-center companies have also started their business in Sollefteå. In that sense, it seems that the shut down of the garrisons has enabled the municipality to improve the diversity of its economy, but also by developing new types of collaboration and networks.

The rest of the municipality is mainly focused on the production hydro-electricity, using the substantial water resources in its territory. The municipality is the largest producer of hydro-electricity in Sweden. As regards the potential for future economic development, it seems that the municipality is investing in the tourism industry. The good natural and architectural environments are the two main assets that Sollefteå is staking on. Of course, the improved accessibility to other towns will improve the potential for economic development, but a threat for the town could be to transform into a dormitory town. One of the main points of concern is the municipality's business climate that has been rated as belonging to the worst in Sweden, which could prevent new businesses from establishing there.

Örnsköldsvik

Similarly to the town of Sollefteå, the demographic trends have been quite negative for Örnsköldsvik during the 90s. Indeed, the town has lost, in a five-year period between 1995 and 2000, more than 1,000 inhabitants, which makes the town belonging to the ten Swedish towns that lost most population. During the same period, the municipality has lost approximately 2,500 inhabitants, but the town of Örnsköldsvik is representing nearly half the losses. Most of the loss of population occurred in the small urban settlements (*tätorter*) in the municipality, with minus 2,400 inhabitants overall, most of them being located in the periphery of the central town. However, it seems that since the year 2000, the trend has decreased. Between 2003 and 2004, the whole municipality has only lost 5 inhabitants, mainly due to a negative natural change (-114), where as the net migration rate has become slightly positive (+107). The flows of in- and out-migrants are slightly higher for women (respectively +754 and - 721) than for men (respectively +695 and -621). The migrants are mostly coming from or leaving to other regions in Sweden, rather than other municipalities in Västernorrland region or foreign destinations. Migration pattern is mainly affecting persons aged between 18 and 24, and especially women when it comes to out-migration. The main demographic issue for the municipality is therefore the low natality rate, due more to the shortage of women (and men) aged between 20 and 40 than to the fertility rate (2 children per woman) itself which is high compared to the national average (1,7). As regards social exclusion, there are few residents coming from foreign countries (5%), if we compare it to the Swedish national average (12%).

Because of quite long distances to other bigger towns, the town of Örnsköldsvik has not been directly influenced by the urban sprawl phenomenon. However, the town is quite spread out around its centre. Figure 3 reveals that there is a large spreading of small settlement in the town's closest neighbourhood. This phenomenon has two main consequences. First of all, it makes the provision of services to persons less efficient, as well as more difficult to draw a thorough public transportation plan. Second of all, it makes the use of private car essential for the mobility of persons. However, the development of two *Botniabanan* stations in the town's centre could serve as central from which the future development of settlements and activities could start, as described in figure 5.

As in the case of Sollefteå, the town of Örnsköldsvik is the centre for the provision of services to its hinterland, i.e. the rest of the municipality of the same name. The most important facilities (hospital and Mitthögskolan University) are situated downtown, and will be even more accessible to other regional towns as the two new

train stations will be build in direct vicinity of both of them. But the town is as well dependent on other towns, Umeå being the closest, for the provision of more specialised services. As regards the Labour market, the municipality has been defined by NUTEK as being a self-standing labour market. The current commuting pattern in and out of the municipality is quite limited. Interestingly, due to the type of jobs available in the municipality, commuting pattern is slightly positive for men, and slightly negative for women. Moreover, the source/destination of the commuting pattern is more targeted towards other regions (Umeå?) than towards other municipalities in the region. However, the labour market of Örnsköldsvik has been qualified as "small region dominated by private sector".

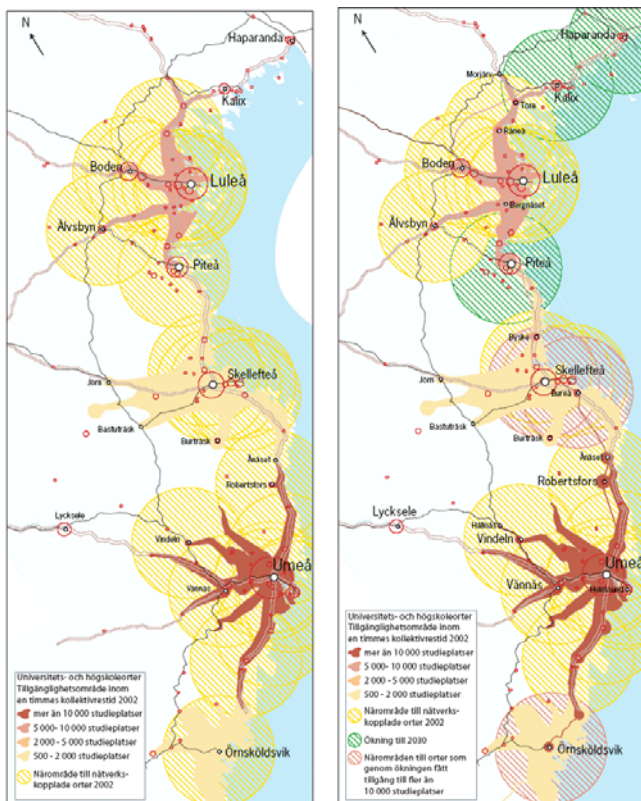
As regards housing market in Örnsköldsvik, the Swedish Planning and Housing Agency (*Boverket*) has assessed that it is quite balanced in the municipality but that there is a shortage of housings in the central town. Moreover, since 2000, the housing market has been more focused on the reconstruction of apartment blocks than on building new ones, thus more focusing on a qualitative improvement of the housing market than on a quantitative one. However, the municipal authorities themselves assess that good and cheap housings are relatively easy to find.

The quality of life is often rated as high in Örnsköldsvik, especially due to the proximity of services and activities, as well as to the proximity of a good natural environment. In that respect, the classification of the High Coast (*Höga Kusten*) area as World Heritage Site is believed to have increased the cultural offer and the attractivity of the town as a tourist destination. The Ice-Hockey team is also seen as an asset for the image of the town, but mainly at the national level.

Improvement of the accessibility to other towns has been one of the main positive developments in the recent years. The implementation of the Botniabanan will strongly reduce the travel-times, mainly between Örnsköldsvik and Umeå, but also to other towns such as Sundsvall and Östersund thanks to the improvement of other railway sections (*Ådalsbana* for instance).

The town will improve by 100% the surface accessible by 1 hour of commuting, and by 200% the number of jobs in commuting distance. The two figures are displaying the pattern in 2002, before the Botniabanan is completed, and in 2030. The figures are specifically assessing the accessibility to university places. The central part of Örnsköldsvik will have thus closer access to more than 10,000 places, mainly due to the better accessibility to Umeå. However, it is not clear how this will impact the development of the hinterland, as private car is still the most common means when going to town.

Figure 13: 60 minutes isochrones and accessibility to universities in 2002 and in 2030 (prognosis, on the right)



Source: Banverket

Örnsköldsvik is quite well connected by road to other major towns in the region, but the fact that the highway is passing directly through the town centre, is causing disturbances and acts as a barrier for urban planning. It is therefore planned to move the highway outside the downtown perimeter. The development of IT networks in the municipality is often seen as a way to decouple accessibility to work and commuting, enabling people that are living in the hinterland to work from home, or at least to commute less often.

The municipality has a strong industrial tradition and has developed a specialisation in two economic activities: manufacturing and production of paper-pulp. The development of such specialisations was made possible by the availability of specific natural resources (minerals, wood) in the hinterland. The economy is therefore also highly export-oriented. In that regard, the harbour is of high importance in the export process, as well as for trade and tourism. However, during the past decade, the economic crisis that struck Sweden combined with substantial improvements in terms of productivity led to job-cuts (-4,300 jobs). Consequently, in 2001, the municipality was above the national average in terms of unemployment, where as its neighbouring municipalities, especially between Örnsköldsvik and Umeå were well below that same average. In that respect, the new transport pattern is foreseen to improve the accessibility to a larger labour market, and will foster the pooling of human resources. However, the municipality is above the national average when it comes to GDP per capita, which stresses the fact that the job-cuts have enabled the economic activities to stay competitive in a wider perspective. But Örnsköldsvik is also trying to diversify its economic activities by trying to develop

tourism. As stated earlier in the report, the designation of a World Heritage Site in direct vicinity of the town will increase the tourism flows to the region, and Örnsköldsvik is expected to act as a hub. Health-care services represent the third largest activity after manufacturing and trade and communication, which is approximately in line with the national average (around 16%), and in which four-fifth of the employed are female. As in most of the regions' municipalities, the gender perspective can also be described in private (mostly men) – public (mostly women) sector disparities, especially when the private sector is highly focused on 'masculine' activities (manufacturing, energy).

SWOT analysis

Strengths	Weaknesses
<p>Västernorrland</p> <ul style="list-style-type: none"> - Improved business climate - Improved education level - Stabilisation of unemployment - Large resources in forestry and hydro-electricity - Export focused industry - Large potential in nature tourism <p>Sollefteå</p> <ul style="list-style-type: none"> - Good environment - Good housing situation - Large producer of hydro-electricity - Good health care sector <p>Örnsköldsvik</p> <ul style="list-style-type: none"> - Strong industrial tradition: hydraulics, bio-alcohol - Good local entrepreneurship - Good collaboration between public authorities and private actors - Active harbour - Good housing situation - Proximity to rich natural environment (Höga Kusten) 	<p>Västernorrland</p> <ul style="list-style-type: none"> - Loss of population - Traditional out-migration, especially for young adults - Education level still under national average - Strong foreign competition <p>Sollefteå</p> <ul style="list-style-type: none"> - Strong dependency on public sector - Poor connectivity to other major regional centres - No specialisation of the economy - One of Sweden's worst business climate <p>Örnsköldsvik</p> <ul style="list-style-type: none"> - Small share of persons employed in fast-growing economic activities - Poor communication to other parts of the region - Poorly developed education possibilities - Low offer in culture and entertainment - One-sided labour market
Opportunities	Threats
<p>Västernorrland</p> <ul style="list-style-type: none"> - Development of new industries linked to IT, fostered by a cluster dynamics - Better communication with other regions, especially Stockholm, but also between the region's main centres <p>Sollefteå</p> <ul style="list-style-type: none"> - Improved connectivity with other towns with Botniabanan and Ådalsbana if the town is well coupled to them - Development of new sectors of activity (handling of crisis, bio energy, archives) <p>Örnsköldsvik</p> <ul style="list-style-type: none"> - Development of tourism industry - Implementation of the Botniabanan - Development of new products based on cellulose 	<p>Västernorrland</p> <ul style="list-style-type: none"> - Lack of 'critical mass' - Rationalisation in paper industry and hydro-electricity - Lack of strategic co-operation in the region <p>Sollefteå</p> <ul style="list-style-type: none"> - Being left out of the new transport corridors if the town not properly connected - Thinning and ageing of the population will put more financial pressure on the active persons (higher taxes??) - Continuous gender unbalances for jobs will force young women to leave <p>Örnsköldsvik</p> <ul style="list-style-type: none"> - Strong dependency on export-based industries and many big companies are owned by foreign

(from wood)	investors
- Better communications with other urban centres, especially Umeå	- Sparse settlements and ageing of the population threaten the provision of public services.
- Improved possibilities for jobs and education	

Reflection on existing ESPON typologies

Västernorrland

Urban-rural typology: Low urban influence, low human intervention

Örnsköldsvik

Functional Urban Areas: Regional/local FUAs

FUA population: 50 000 – 250 000 inhabitants

Transport: Small airport (more than 50 000 passengers per year) or harbour (more than 20 000 TEU per year)

Tourism: Local significance

Industry: Minor industry or no industry (less than 1 billion in GVA)

Knowledge: Regional higher education institute

Business decision-making centres: N/A

Administrative: Local administrative centre

Sollefteå: Not belonging to any FUA typology

8.1.2 Analytical section

Administrative area

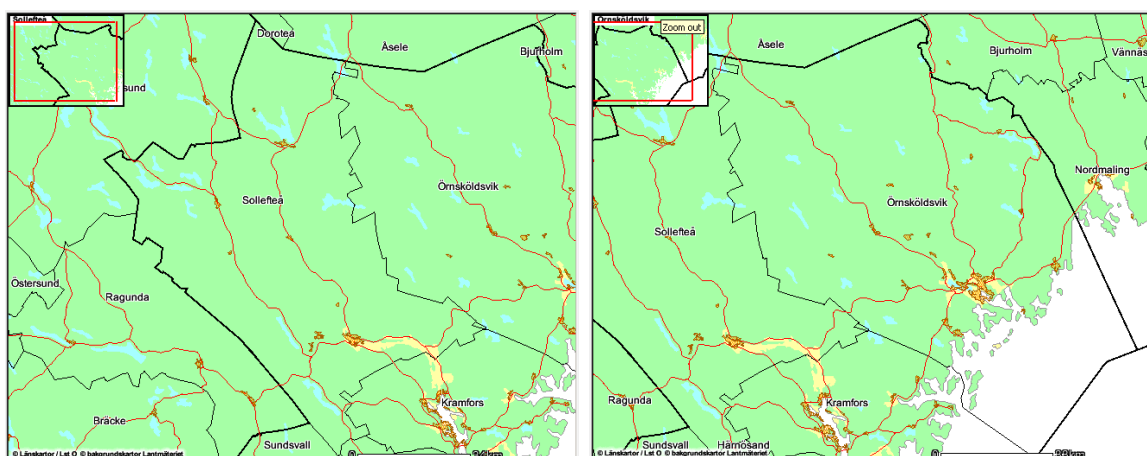
The local authority, or municipality, is the lowest tier of power in Sweden. However, the Swedish municipalities are, especially in the northern half, quite large and comprise not only numerous urban settlements, but also an extended hinterland. The fact that most municipalities are a mix of urban and rural areas affects the policies implemented at that level. For instance, some municipalities have their own rural policy. As such, those municipalities do not therefore represent any urban reality. Delimitation of the town is therefore not possible by using municipal boundaries. However, in an attempt to link the notions of municipality and town, the Association of Swedish Communes and Regions has realised a classification of the municipalities into 9 categories, from "Large Town" to "Small municipalities, below 12,500 inhabitants". This classification is using the large amount of data available at the municipal level in order to depict the disparities between municipalities, by using population, commuting, economic specialisation and level of urbanisation data at that level. Here is the result for our two SMESTO.

Örnsköldsvik: *Large cities* (Municipalities with 50,000-200,000 inhabitants, and more than 70 per cent of urbanisation)

Sollefteå: *Other municipalities, 12,500-25,000 inhabitants* (Municipalities that do not belong to any of the previous categories and have a population of 12,500-25,000)

The municipal level is therefore not appropriate in order to depict the urban reality, with the exception of the core municipalities of the largest Swedish metropolitan areas (Stockholm, Göteborg and Malmö) are constituted by almost 100% of urban settlements (See next section). But in the case of our two SMESTO, the surface of urban settlements is too little to use the municipality as a delimitation of the town.

Figure 15 & 16: The municipalities of Sollefteå and Önsköldsvik and their urban settlements

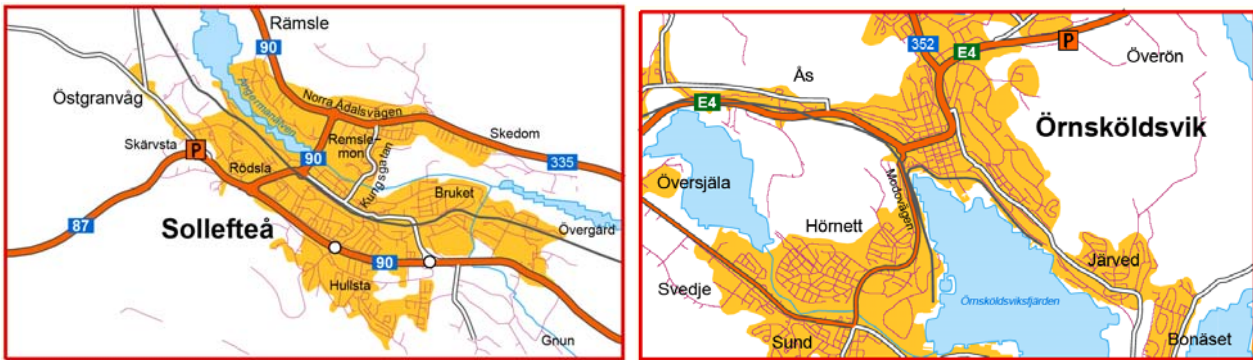


Continuous settlement area

As described in the report's preamble, there exists a precise definition of continuous built-up areas in Sweden: maximum distance of 200m between housings, as well as a minimum of 200 inhabitants. This definition is very precise and is reflecting the urban reality as a way of living. It is also interesting to note that it follows the UN recommendations on the definition of urban population. Moreover, it is updated each five years, the latest being 2000. The inhabitants inside those continuous settlement areas are considered as urban population.

However, there are almost no other statistics that are available at that territorial level of analysis. Indeed, it is only used to describe the extent (area) and size (population) of the urban phenomenon, but not to explain or analyse it! It is thus mainly a descriptive tool.

Figure 17 & 18: Delimitation of the continuous settlement areas for our case study SMESTO



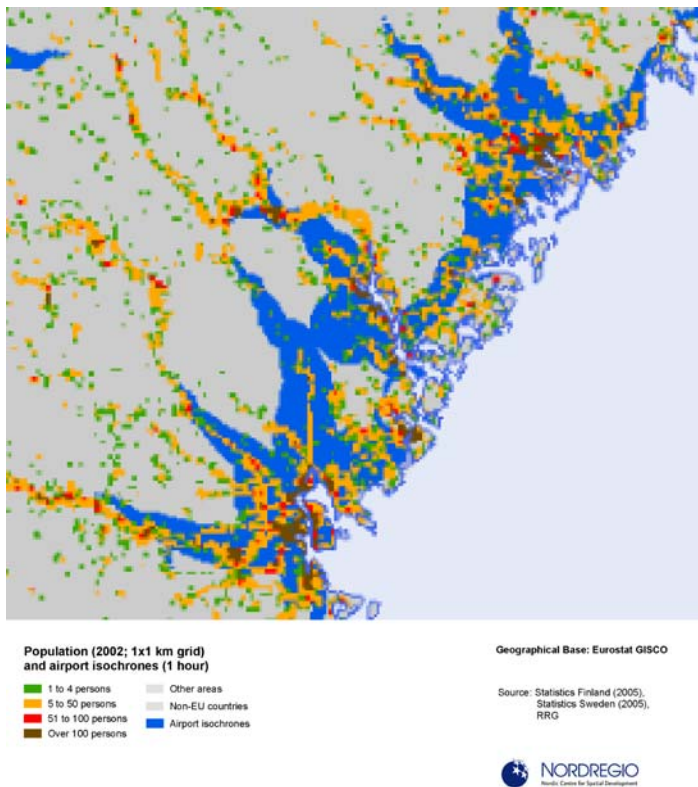
Functional Urban Areas

The analysis of commuting patterns is traditionally done by using the municipal level, and is realised by the NUTEK agency. The identification of the Labour Market Areas is realised in two successive phases: first, the identification of the centre of each LMA, and then its attributed 'hinterland'. The centre municipalities are identified by using two parameters: first, less than 20% of the municipality's active population shall be commuting outside the municipality for work; and the commuting to any other specific municipality shall be below 7,5% of the total municipal out-commuting pattern. Then, the other municipalities are included in the LMA of the centre municipality to which the commuting flows are the highest. Interestingly, because the basis for the analysis is the municipal level, it presupposes that each part of the municipality is belonging to a unique LMA, which is not always true if we could look at the commuting pattern between settlements close to the municipal boundary. Moreover, LMA are mutually exclusive, i.e. a municipality cannot belong to two or more LMA.

But LMA are not useful as such for describing the urban phenomenon, but it is interesting when analyzing the interdependencies with other entities and the economic specialization of the LMA.

However, other types of analyses have been performed for the elaboration of transport projects, such as *Botniabanan* or *Ådalsbana*, using road and rail networks in order to describe more precisely the extent of the commuting areas from the main urban centres (in an almost same way as the FUAs defined in ESPON 1.1.1.). Such functional areas are very interesting when describing the accessibility to certain types of services (hospitals, universities, airports...). The population integrated in such areas is somehow describing the total population potentially accessible to each main town. Thanks to it, it is possible to describe the town not only endogenously (it own size) but also exogenously (total population accessible within a commuting distance).

Figure 20: Settlement pattern and 60 minutes isochrones around regional airports

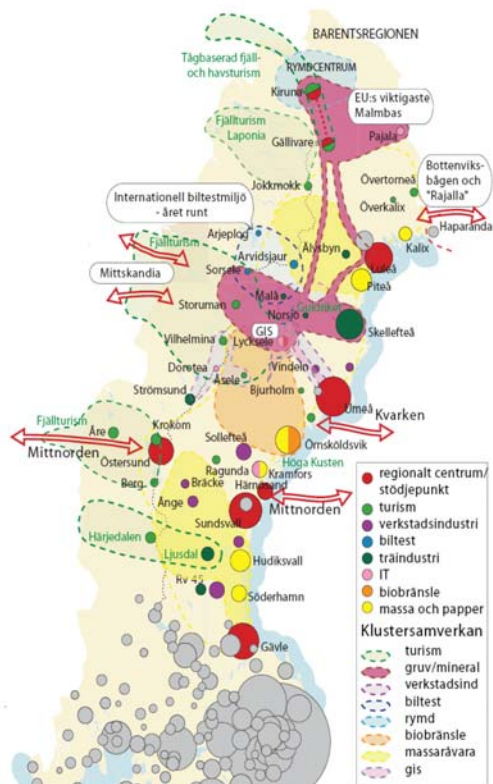


Inversely, such functional areas can be useful in order to describe the areas that are at a commuting distance from the main services facilities (airports, hospitals, universities, retail centres...). The centre of the area is the facility itself, and not the urban centres. Here is the example of the 1-hour isochrones around the regional airport of Västernorrland.

The functional areas are thus also tightly linked with the evolutions in the transport infrastructure, as they consider travel-time instead of pure physical distances.

specialisation would be in “engineering or manufacturing industry”. Örnsköldsvik would, on its part, included in the bio-fuel cluster, with also a specialisation in paper-pulp. In the case of Örnsköldsvik, the cluster vision is stressing its current strengths whereas it stresses the weaknesses, or the lack of economic strengths, of Sollefteå.

Figure 22: Development of economic clusters in the region



Source: Infraplan AB

	Administrative area	Continuous settlement area	Functional Urban Areas	Urban influence area
Relevant to the delimitation of the town?	x	✓	x	x
Correspond to urban realities?	?	✓	✓	x
Extensive data available?	✓	x	?	x
Map delineating the area?	✓	✓	✓	✓

✓ Confirmed x Not confirmed ? Information cannot be given

8.1.3 Policy section

Governance aspects

The Region, a platform for co-operation

The main public actors at the regional level are the County Administrative Board (*Länstyrelse*) and the elected regional assembly (*Landsting*). The main prerogatives of the regional level are mostly concerning public health, cultural institutions, regional development strategies and public transport. In fact, as the regional level has little power compared to the national (state) and local (municipal) ones, the region is also often acting as a platform for co-operation between the different administrative levels.

One of the main duties devolved to the regional level (*Länstyrelse*) is thus to build a Regional Development Plan (*Regional Tillväxt Plan*) in collaboration with the regional political body, but also all the municipalities of the region as well as other important tier actors, such as the committee of municipalities (*Kommunförbundet*), work union (*LO-Distriktet*), Entrepreneurs Organisation (*Företagarnas Riksorganisation*) or university (*Mitthögskolan*). As described here above, the regional level is working in close partnership with a wide array of actors, whether they are public, private or non-governmental. Plans are often tackling economic and transport issues. Indeed, even if local transport network is the duty of the municipalities, the regional transport networks are dealt with at the regional level. But the transport plan is mainly working as a way for the municipalities to integrate their transport development initiatives in order to improve the overall accessibility within the region but also with other regions. For instance, the regional plans are stressing the need for municipalities to integrate the regional issues and concerns in their municipal plans.

The municipalities

In the Swedish political system, as in all of the Nordic political regimes, the local authorities are allocated extensive powers. The political leadership is very strong at the municipal level, as it is a cornerstone of the development of the Swedish political model. The main prerogatives of the municipalities are linked to cultural activities, local transport systems, environment and supply of basic commodities (water, electricity, sewage and waste). The municipal level has also substantial legislative powers especially on social issues, education or town and territorial planning. Besides the elected political leadership, the other main actors can often be found in the private sector, but this highly depends on the municipal economic structure, which are often dependent on specific industries. For instance, in Örnsköldsvik, the long industrial tradition of the municipality has enabled the development of a strong partnership between the public authorities on the one hand and the private actors on the other hand, in order to deal together with municipal issues. In the case of Sollefteå, the former strong domination of the economic activities by the military garrisons led to an enhanced influence of the public sector on the municipal issues.

The strong decentralisation of rights and duties to the municipal level makes this level as well more sensitive to exogenous economic factors (down-sizing, closure of factory), but it increases also the possibilities for the municipality to adapt to new pre-conditions and to make investments at the very local level. In brief, it enables the municipalities to play a more proactive role in the development of their territory.

Co-operation as a new system of governance

However, if the municipalities have a large array of duties on their territory, they are also increasingly involved in co-operation with other territorial entities, but mostly on the basis of specific projects. An example of co-operation is the Botniabanan project, already largely discussed in the previous chapters. The need for collaboration in that case comes from the large scale and long-term dimensions of the project, which will impact the development of the region and its municipalities. The co-operation panel was composed of the local authorities at stake, as well as the region, the sectoral agency (*Banverket*) and other interest groups. As the municipalities are responsible for drawing their territorial development plan, collaboration on the Botniabanan was needed in order to make sure that the different municipal plans would fit one another, and therefore preventing inconsistencies.

Even if municipalities have a large decisional capacity over their territory, they are often too small or lacking specific fundings in order to handle properly their duties notably as regards the provision of public services. In response to this concern, the development of networks of municipalities on specific issues is often fostered. For instance, in Sollefteå, the provision of education is tightly linked to institutions located in other towns. First of all, some few specific courses from the University of Umeå are provided in Sollefteå. Second of all, Sollefteå and other inland municipalities have developed a network, *Akademi Norr*, intending to provide higher education courses through collaboration. This latter stresses the need for the small municipalities to collaborate in order to reach a certain 'critical mass' that would enable the good and efficient provision of certain types of services to persons. Network of municipalities is also the concept used for the University of Mid-Sweden, *Mittuniversitetet*, with courses provided in Örnsköldsvik, Sundsvall, Östersund and Härnösand.

Prevailing challenges and options of development

The development of the two Swedish SMESTO, and more generally of the northern parts of Sweden, has been mainly focused in the latest 50 years on the exploitation of the natural resources of the region. The focus on these types of activities have enabled those regions to reach a good economic standard, the high ranking of the Västernorrland region as regards GDP per capita in Sweden being one of the clearest evidence. However, the economic changes that occurred in the 90s, from the deep economic crisis in Sweden to the large development of new technological sectors, have put into question the sustainability of an economy mainly based on traditional activities.

Moreover, the peripheral situation of the SMESTO, in both European and national terms, makes it more difficult for them to reach larger markets. The long distances

between the towns and the large extent of their hinterland is also restricting their possibilities to efficiently interact with other towns.

If those preconditions, whether economic or geographical, are clearly posing serious challenges and threat to the development of the SMESTO and the region, they are often seen as a possibility to make positive changes that will impact the future development of the region.

Indeed, in echo to the Regional Growth Policy (*Regionaltillväxt Program*) formulated at the national level, there is a regional consensus on the major improvements that should occur for the positive development of the region, and thus the SMESTO. Policies are mainly aimed at improving the potentialities of the local labour markets, both by widening them (territorially larger) and deepening them (more specialisation focused on added-value economic activities). Those policies are mainly achieved by two emblematic developments.

First of all, the focus should be put on the development of new, or the regeneration of old, transport and IT infrastructure in the region. The *Botniabanan* project is one of its cornerstones. The purpose is to decrease the travel-times between the main urban settlements in the regions and consequently make the Local Labour Markets more intertwined, fostering a greater pooling of the local human capital on a regional basis.

Second of all, the emphasis is also put on the improvement of the higher education facilities as well as the accessibility of those facilities to the widest population possible. Concerning this very thematic issue, and as mentioned earlier in this chapter, the accent is strongly put on the development of networks of towns. The consequences of this renewed educational policy are expected to be twofold: first, to improve the global educational level of the northern parts of Sweden, which is often below the national average; second, to foster the development of industrial clusters based on excellence in a particular sector, as well as the spillover effects from universities to the local labour markets.

Hypothesis	Confirmation?	Comments
1	×	Örnsköldsvik is specialized in pulp and paper production as well as manufacturing, but those activities are highly dependent on the natural resources found in the hinterland. Sollefteå has no particular specialisation despite its rank as the biggest producer of hydro-electricity in Sweden.
2	✓	Globalisation of industrial competition is an important exogenous factor for regional development. As mainly export-oriented, the manufacturing industry of Örnsköldsvik is also a sensitive issue for the town's development.
3	✓	The towns of Örnsköldsvik and Sollefteå have lost substantial population between 1995 and 2000 (respectively 1,100 and 500 inhabitants). Main social problem is linked to gender. Difficult for women to find a good job in highly men-focused labour markets.
4	✓	Close proximity to services is seen as an asset for both SMESTO. Proximity to nature is also very important.
5	✓	For Örnsköldsvik, downsizing in the manufacturing industry (minus 4,300 jobs) during the 90s has been a major problem. Closing of military garrisons in Sollefteå (minus 700 jobs) has been also a major downturn for the town.
6	?	Sollefteå has no particular specialisation, but it not particularly diversified either. The strong specialisation of Örnsköldsvik makes it more competitive, but also more vulnerable to external demand of its goods.
7	✓	The development of the Botniabanan will help enlarging the Labour Markets Areas for both SMESTO, which will increase the possibility of spillovers. The development of clusters in different parts of the

Hypothesis	Confirmation?	Comments
		region will help reaching a critical mass for developing innovative economic activities.
8	✓	SEMSTO are facing structural problems. Sparsity and long-distances between towns are a structural hinder for economic development. Dependency on public sector (Sollefteå) and traditional industries (Örnsköldsvik) are also important issues.
9	?	
10	?	
11	✓	The development of tourism, especially linked to the rich natural landscapes of our SMESTO, is increasing in importance. The classification of the <i>Höga Kusten</i> (High Coast) area as world heritage will help the development of the tourism industry in the region. Rivers, lakes and mountains are good pre-conditions for adventure tourism.
12	✗	At the local scale, the SMESTO are of high importance for instance for the provision of services to persons for their wider hinterland. On the other hand, the position of Örnsköldsvik between the larger town of Umeå and Sundsvall has prevented some functions to be developed, which makes the town dependent on the latter.
13	✓	Depopulation, ageing and sparsity are structural problems that make public service provision either more difficult or more expensive.
14	✓	In Örnsköldsvik, the public authorities and local private actors are traditionally collaborating for solving the municipality's issues. Specialisation, in that sense, makes the public authorities more dependent on few powerful private actors.
15	✓	It is maybe not the case at the present time, but it is the motto behind 'network of cities', and the <i>Botniabanan</i> project in particular, improve the agglomeration effects for the economic development without engendering the negative externalities.
16/16a	✓	SMESTO are losing especially its young population. But the 'brain drain' is happening when young people are going to another town (Umeå, Sundsvall, Stockholm) for studying. Then, they often get a job there and hardly come back to the SMESTO. A consequence is thus the shortage of highly educated in SMESTO, as well as the lower average income.
17	?	
18	✗	Lack of critical mass and connections with other towns limits the possibilities for innovation. The envisaged development of regional clusters could be the answer.
19		
20	✗	
21	✓	Due to the <i>Botniabanan</i> , the relations between SMESTO and bigger towns are expected to change, but there is no empirical evidence yet.
22	✓	Direct competition with other regional SMESTO should be avoided due to extensive collaboration around common projects, building a 'network of towns'.
23	✓	
24/24a	?	SMESTO in the region are not so physically close. The towns will be necessary for serving their hinterland.
25/25a	✓	SMESTO should be seen as gateways to the local markets, both in terms of goods and labour force.
26	✓	Development of an international strategy at the regional level, strongly involving the municipalities. Active lobbying at the EU level (Mid Sweden region).

✓ Confirmed ✗ Not confirmed ? Information cannot be given

8.1.4 Source of information

The information and illustrations contained in this case study report have been extracted from:

- Masterplan of the municipality of Sollefteå
- Masterplan of the municipality of Örnsköldsvik
- Vision Västernorrland 2010 – Strategi för en hållbar regional utveckling
- Underlagsrapport Tätorter i nätverk (Urban centres in network), Banverket 2002
- Regional utveckling och utvecklingstendenser i Västernorrlands län 2004 (Regional development and trends in the region of Västernorrland), County Administrative Board Västernorrland, 2005

Botniabanan – ett samhällsbyggnadsprojekt (Botniabanan – A spatial planning project)

International strategy of the county of Västernorrland, County Administrative Board, 2002

Regional funktionsanalys (Regional functional analysis), Georange, 2005-11-28

Tillväxtprogram Västernorrland 2004-2007 (Programme for economic growth), County Administrative Board, 2004

Länstransportplan 2004-2015 (Regional transport plan), County Administrative Board, 2004

Other information found on the municipalities' websites:

www.sollefteå.se

www.ornskoldsvik.se

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