TOWN
Small and medium sized towns in their functional territorial context

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1. National context

Flanders was chosen as a case study area due to its complex spatial nature of urban settlements and high densities. It is a region in a federal (smaller) state that has autonomy in the competence of spatial planning. The Lau units are rather large in comparison with the other case studies. The region also includes a coastal area, which is densely populated.

In according to the definition of the TOWN project, almost the entire Flemish territory consists of SMSt's (cf.Figure 1, in which all Flemish laus with a population between 5000 and 50000 are shaded). This complexity leads to an active discussion on the actual and desired spatial structure of urban settlements, and how this territory is networked.

The chapter starts with a brief overview of the literature, which focuses in this stadium on the literature dealing with morphological and functional approaches of urban structure. References to concrete definitions of SMSTs and the demarcation of residential cores, as far as they are instigated by the academic world, will be discussed in this first subchapter. The next subchapter will deal with the way in which this academic literature is related to and used by national and regional policy, with focus on spatial planning. In a last subchapter attention will be given to the administrative subdivision of the Flemish (and Belgian) territory, and ends with some specific comments on how to deal with these specificities in the morphological and functional parts of the SMST analysis.

1.1 SMSTs in national/regional settlement system: literature overview

In Flanders and Belgium, a wide array of literature exists concerning SMSTs and the larger urban systems they are part of. Different "families" of bibliographic references can be found: a set of primary references (mostly in Dutch):

- Dealing with the hierarchy of towns in Belgium, which can be considered as an operationalization of Christaller in the Flemish context (Saey, 1973) and as a functional method to delimit different classes of towns based on the presence of services of general interest (Sporck, 1966; Goossens and Sporck, 1985; Van Hecke, 1998; Van Hecke et al., 2009; Loopmans et al., 2010);

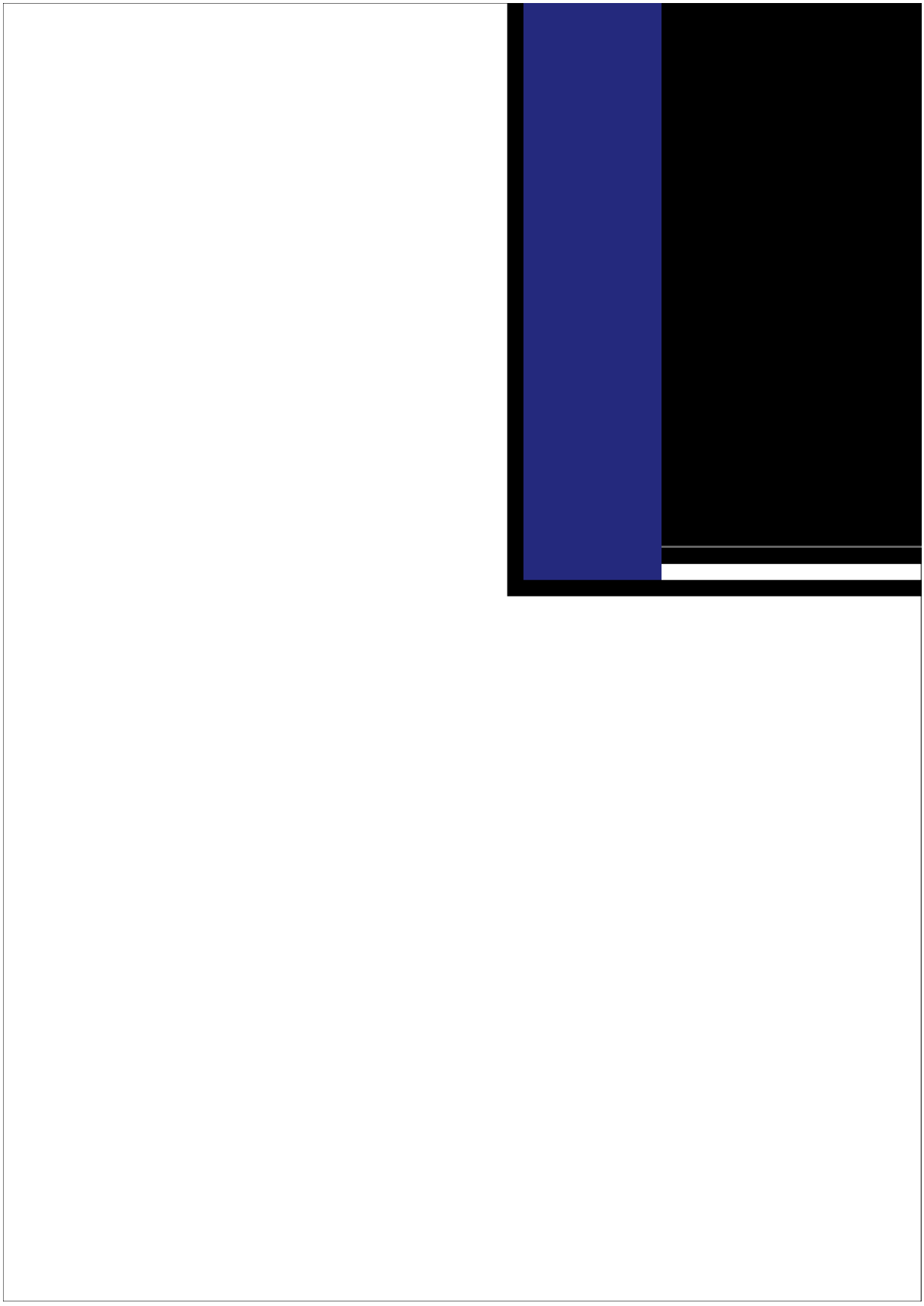
- The operationalization of a morphological delimitation of "residential cores" ("woonkernen") in Flanders (Halleux et al., 2009);

- The delineation of urban conurbations in Flanders and Belgium (Van der Haegen et al., 1996; Van Hecke, 1998; Van Hecke et al., 2009)

- Providing interesting overviews of explanatory factors behind urban development in Belgium/Flanders and differences with other countries (De Meulder et al., 1999; Dehaene and Loopmans, 2003; Kesteloot, 2003; Antrop, 2004).

A core set of secondary references was collected dealing with the interrelationships between urban structure and other relevant themes: social interaction and social capital (Lannoo et al., 2012; Neutens et al., 2012); urban and economic structure (Houvenaeghel and Vanhaverbeke, 1997; Decrop, 2002); tax competition (Van Parys and Verbeke, 2006), cultural amenities (Caron, 1998).

Figure 1 – Population in Flanders



Moreover, as a result of the complex Flemish spatial structure and different possible spatial concepts to understand and plan the urban environment, a third set of references deals with those academic discourses: the disappearance of the urban-rural dichotomy in the Flemish context (Vanhaverbeke, 1999; Cabus and Vanhaverbeke, 2003), the “nebula city” (Dehaene and Loopmans, 2003), the “raster city” (Boudry, 2003). (Parys et al., 2011) provide an interesting overview of spatial concepts considered in Flemish context. To conclude this subset, the polycentricism and network concept is discussed in (Cabus and Vanhaverbeke, 2006) and the position of the Flemish Diamond in a wider European context in (Dieleman and Faludi, 1998; Albrechts and Lievois, 2004).

Finally, the most important documents/references of strategy making and spatial / urban policy are included in the reference list (Boudry, 2003; Ministerie van de Vlaamse Gemeenschap, 2004; De Peuter et al., 2011; RWO, 2012).

As stated above, a rich literature exists on the conceptualization and operationalization of morphological residential areas, functional hierarchies and urban conurbations in Belgium. They will be shortly outlined in this section, however also deepened in the subsequent chapters (chapters 2, 3...).

To conclude the chapter, reference will be made to the “Belfius-indeling”, which is a classification of Flemish administrative units/municipalities in 16 clusters based upon the results of a socio-economic analysis.

1.1.1. Definition of and demarcation of residential cores in Belgium

In preparation of the census of December 31, 1970, 2585 Flemish municipalities[1] were further subdivided into 14844 statistical sectors by H. Van der Haegen. The intention was to obtain a more fine grained spatial classification in order to review the diversity within the same municipality. On the moment of demarcation, the statistical sectors were consistent with social, functional or morphological homogeneous wholes. In this way, a distinction was made between residential or morphological agglomerations, industrial areas, commercial districts, social housing ... Moreover, there was also a distinction between "contiguous urban" areas, with a high population density and continuous development, and sectors with a "scattered habitation". According to the definition of the NIS (Van Der Haegen et al., 1981) a residential or morphological agglomeration is *"the landscape portion contiguously built up by houses with their gardens and courtyards, public buildings, small industrial or commercial equipment including the intervening roads, parks, sports grounds, etc. It is bordered by farmland, forests, heaths and uncultivated land, between which possibly a "scattered habitation' takes place. Both towns, villages and hamlets can form the base of those settlements, but they can also take the form of ribbon development, which happens frequently in our country".*
A direct application of this granular areal patchwork is the ability to delineate those residential (or morphological agglomerations) on a more detailed scale level than local, provincial or regional administrative boundaries. (Halleux et al., 2009) It will also be used as a basis for evaluating the morphological demarcation of the smst’s in the Flemish case study (cf. Paragraph 2).

1.1.2. Demarcation of urban hierarchies in Belgium

The basis of the "hierarchy of the nuclei" model in Belgium is the theory of "central places", which was developed in the 30s by the German geographer Walter Christaller. Based on the pattern of

[1] This was before the merger of 1977, in which the number of municipalities in Belgium was greatly reduced. See also paragraph 1.3.

settlement in Southern Germany Christaller suggested that in a homogeneous space, automatically a hierarchical settlement system is created with a "geometric" distribution of health care centers (cities) of different levels. The distances between centers of the same level and the extent of their influence are similar and proportional to their level. Politically, this model is most rigorously applied in Sweden. It laid the foundation of the municipal reorganization in the 70s, within which each new municipality corresponded to a city and its catchment area. They even tried to conformize the real settlement pattern to the model (Parys et al., 2011).

Urban organisation in Belgium was researched for the first time during the 1960s within the context of the National Atlas of Belgium (Sporck, 1966). In this study the hierarchy was defined on the basis of research into relationships of dependency on certain centres for various different needs. The everyday, occasional or more specialised needs of the inhabitants of each municipality are met by centres of growing functional importance, which offer services at an increasingly high level. The definition of such a hierarchy is therefore based on resident surveys. Another approach to defining the urban hierarchy consists of analysing the facilities available in towns and cities, whereby a rating is given for the quantitative level of each function (the number of cinemas) or for the qualitative level (University, provincial capital, post sorting centre). These ratings are awarded on the basis of the quantity and quality of facilities. This facility based method was developed for the first time within the National Commission for Town and Country Planning in 1977 (Goossens and Sporck, 1985). The value of this method lies in the fact that it is based on objective information which is measured in the same way for all towns and cities.

The same methodological approach was repeated during the 1993-94 period, when a new survey was carried out in all Belgium's municipalities and a ranking of cities based on existing facilities (Van Hecke, 1998). On the basis of the ranking by facilities score, and taking into account the limitations and the various indicators or relationships set out above, it is determined which municipalities can be classified as towns or cities. They are then placed in categories, taking into account all the scores and indicators which are used. The studies from 1965 and 1977 distinguish between comparable levels, which were also used in this update, but their precise meaning may differ to some extent due to the method used and the geographical dynamics. The boundaries of the levels are defined on the basis of the divisions which occur in the ranking of the facilities scores, together with the minimum cut-off values for other indicators (the importance of external flow, quantitative facilities per inhabitant, importance of provision for the local population etc.)

The different levels are:

- Large cities
- Regional cities
- Small towns
    - small towns a
    - small towns b
    - small towns c

While the division between regional and small towns does not raise any major problems, distinguishing the lower threshold for small towns is not so easy. The starting-point in defining the scope of the small towns is that the least well equipped small town should achieve 1/3 of the facilities score of the leading group of best equipped small towns. Municipalities which fall within the 1/3 - 1/4 band are retained, provided they achieve high values on a number of other scores, and in particular provided they exercise an inter-municipality influence, i.e. they have a sphere of influence. Table 1 refers to the classification of Belgian municipalities according to their hierarchical level and it also indicates the weighting of each level in terms of population and employment.

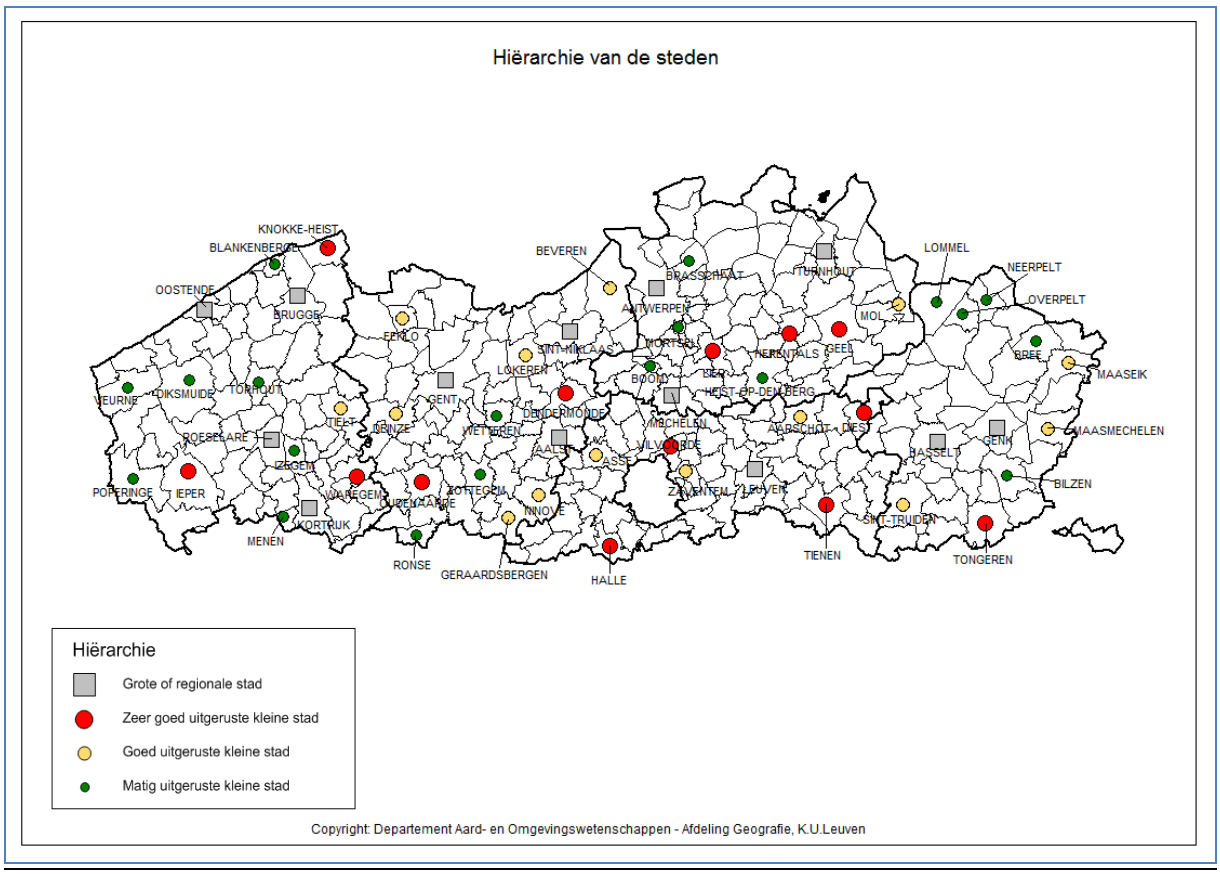
Table 1 – Classification of Belgian municipalities by hierarchical level; population and employment

	Number	Median facilities score	Population 1997 * 1000	Pop. 1997 %	Employment %
Large cities	5	26.20 (100)	1,207	11.9	23.8
Regional cities	17	9.80 (37)	1,208	11.9	16.8
Small towns a	*31*	*4.20 (16)*	*1,029*	*10.1*	*12.3*
Small towns b	*18*	*2.90 (11)*	*330*	*3.2*	*3.1*
Small towns c	*32*	*2.40 (9)*	*763*	*7.4*	*6.0*
Small towns	81		2,122	20.7	21.4
Non-urban municipalities	486		5,634	55.4	38
Total	589		10,170	100	100

Source: (Van Hecke, 1998)

It is clear from the various indicators that there are two very large cities and three large cities, namely Brussels and Antwerp on the one hand and Ghent, Liège and Charleroi on the other. The figures are certainly influenced by the administrative dimension of the city, namely the city centre municipality. This explains why Brussels does not score any higher than Antwerp. Charleroi is clearly the smallest of the five, and it can be described as a 'large city with fewer facilities'. The five large cities each form the centre of an urban region. (Van Hecke, 1998).
The method of urban hierarchies was updated most recently in 2010, (Loopmans et al., 2010) in the context of the actualisation of the Spatial Structure Plan of Flanders (
Figure 2).

Figure 2 – Hierarchy of urban cores in Flanders (Loopmans et al., 2010)

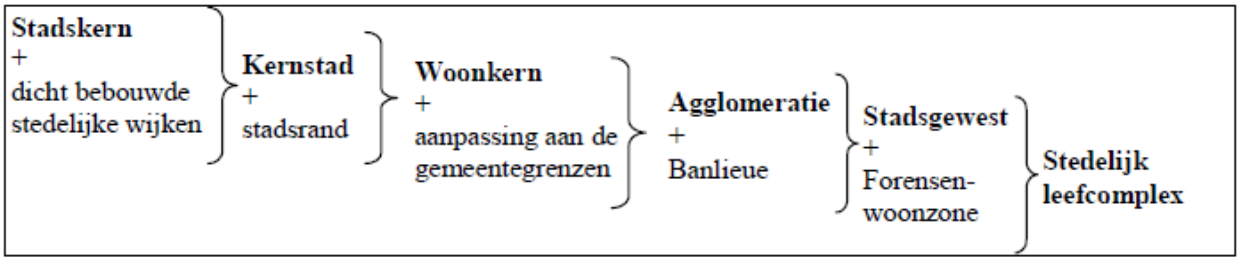


Source: (Loopmans et al., 2010)

1.1.3. Delineation of urban regions in Belgium/Flanders

The concept of "metropolitan area" was introduced in 1925 by Burgess, based on his observations on the development of the urbanization of Chicago, in which he distinguished concentric rings with a specific housing typology and functions. This concept was developed in Belgium by Van der Haegen and Van Hecke (Van Hecke et al., 2009). Within the urban areas, three concentric zones can be distinguished: the (historic) core city, around it the (more or less contiguous) morphological agglomeration and there around the "banlieue" with the non-contiguous residential neighbourhoods. Around the city region or city conurbation is their commuter residential zone, with municipalities where at least 15% of the workforce commutes to the relevant agglomeration. Conurbation and commuter residential zone form the so-called "urban living complex" (cf. Figure 3). According to the authors, *a minimum size of 75,000 inhabitants is required for full urban region formation*.

Figure 3 – Full structure of the "urban living complex" (Van der Haegen et al., 1996)



Source: (Van der Haegen et al., 1996)

The 'city region', called **urban conurbation** from now on, consists of several sections, each with their own characteristics and strong mutual relationships. Concrete criteria are used to distinguish the different parts from each other and are all based on (Van Hecke et al., 2009).

The first one is the "**core city",** consisting of the inner city and the 19th century expansions. The inner city is where the decision and activity core of the whole city is situated (the CBD) and shows the largest concentration of region-related retail and services. The town is embedded in a pattern of densely built urban districts which, in the Western European context usually correspond to the whole of the Old Town and the nineteenth-century extensions. It is a multifunctional area which mainly residential buildings, but also activities such as trade, crafts, schools, hospitals and industry can be found in multifunctional environments. The core city is the most densely built up and central area of the urban conurbation. In the delineation of core cities in 1981, the following criteria were used which have to be met in the statistical sectors (cf. also paragraph 1.1.1):

- Population density is at least 50 inhabitants/ha (1 point);
- Share of single family dwellings: 85% max in regional cities, in large cities 50% max (1 point);
- Share of dwellings built before 1945 is at least 30% (2 points);
- Share of dwellings smaller than 45m² at least 10% (1 point).

To be considered as part of the core city, a SS has to score 4 out of 5 points.

The core city is surrounded on all sides by the **outskirts ("stadsrand")**, mainly consisting of a less dense, but still unbroken pattern of twentieth-century buildings. The main function is residential with a considerable part of preserved green space. Secondary commercial and service possibly occur, particularly in the vicinity of larger cities. These are usually old town cores integrated in the expanding city. Grouped into uniform zones one finds industrial areas and transportation infrastructure. In the suburbs, the continuity of the building is not broken. The morphological

agglomeration or "residential core" ("woonkern") includes the core city and the outskirts. It is the part of the landscape which is contiguously built up with houses, public buildings, industrial and commercial equipment, including the intervening roads, parks, sports etc. The urban residential area is bordered by a zone consisting of farmland, forests, fallow and uncultivated land and scattered dwellings.

The **core city + the outskirts ("stadsrand") form the residential core or morphological agglomeration**. For the delimitation of the morphological agglomeration, digital orthophoto plans were used and the *UN methodology was followed (Le Gléau et al., 1997). The distance of 200 meters was used as a cut-off value between built up areas*[2].

Since the delimitation of the residential core happened on basis of aerial photographs, the borders do not coincide with those of the statistical sectors. A fortiori, the borders of the morphological agglomeration do not coincide with the municipal borders (Lau), which are however administrative borders on which policy is based and most data are available. ***Hence the operationalized agglomeration means an correction of the residential core towards the Lau borders****, in which the following criterion is used: if more than 50% of the population of a Lau live within the statistical sectors which are part of the morphological agglomeration, then the whole Lau is included in the operational agglomeration. If not, the municipality is excluded and also the corresponding statistical sectors which were part of the morphological agglomeration.*
The "banlieue" is the outer ring of the urban conurbation. It consists of a belt of municipalities with close functional ties towards the core city and agglomeration. *The municipalities of the banlieue are defined based on an amalgam of criteria related to population increase, income, migration, work and school commuting, and share of built-up area/ evolution of built up area*[3].

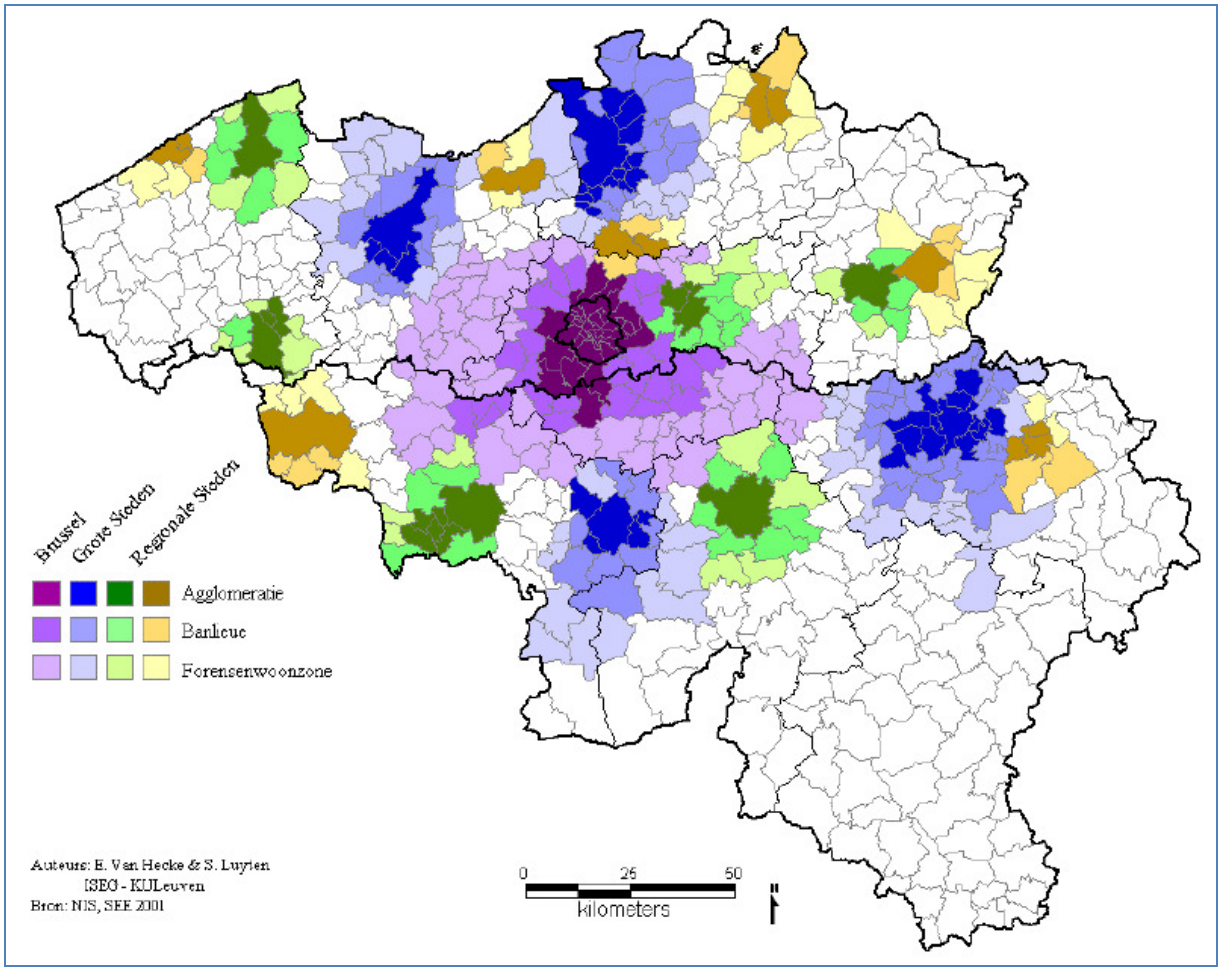
To conclude, the urban conurbation is enlarged to the "urban living complex" by the outermost belt, the "commuters living area" ("forenzenwoonzone"). *These are the municipalities for which the share of commuting towards the core city and agglomeration is at least 15% of the total.*

The most recent update of the urban conurbations, based on the Census data from 2001, results in 12 urban districts in Flanders and Brussels: 3 metropolitan (Brussels, Antwerp and Ghent) and 9 regional urban districts (Bruges, Genk, Hasselt, Kortrijk, Leuven, Mechelen, Oostende, Sint-Niklaas Turnhout). (Figure 4)

[2] Note that this is different than the treshold value for Belgium mentioned in the SMESTO-report (p. 45). Here the cutoff value of 250 meter was mentioned, based upon DECROP, J. 2002. *Agglomération et dynamique des activités économiques dans les villes belges : une approche spatiale et sectorielle,* Bruxelles, Bruxelles : Bureau fédéral du plan, 2002. The reference that is used here is: VAN HECKE, E., HALLEUX, J.-M., DECROLY, J.-M. & MÉRENNE-SCHOUMAEKER, B. 2009. Woonkernen en Stadsgewesten in een Verstedelijkt België. *Sociaal-Economische Enquête 2001 Monografieën.* Brussel: FOD Economie, K.M.O., Middenstand en Energie.

[3] For future reference, cf.p.94 in VAN HECKE, E., HALLEUX, J.-M., DECROLY, J.-M. & MÉRENNE-SCHOUMAEKER, B. 2009. Woonkernen en Stadsgewesten in een Verstedelijkt België. *Sociaal-Economische Enquête 2001 Monografieën.* Brussel: FOD Economie, K.M.O., Middenstand en Energie.

Figure 4 – Belgian metropolitan areas in 2001 (Van Hecke et al., 2009)



Source: (Van Hecke et al., 2009)

1.2 National/regional definition of SMSTs

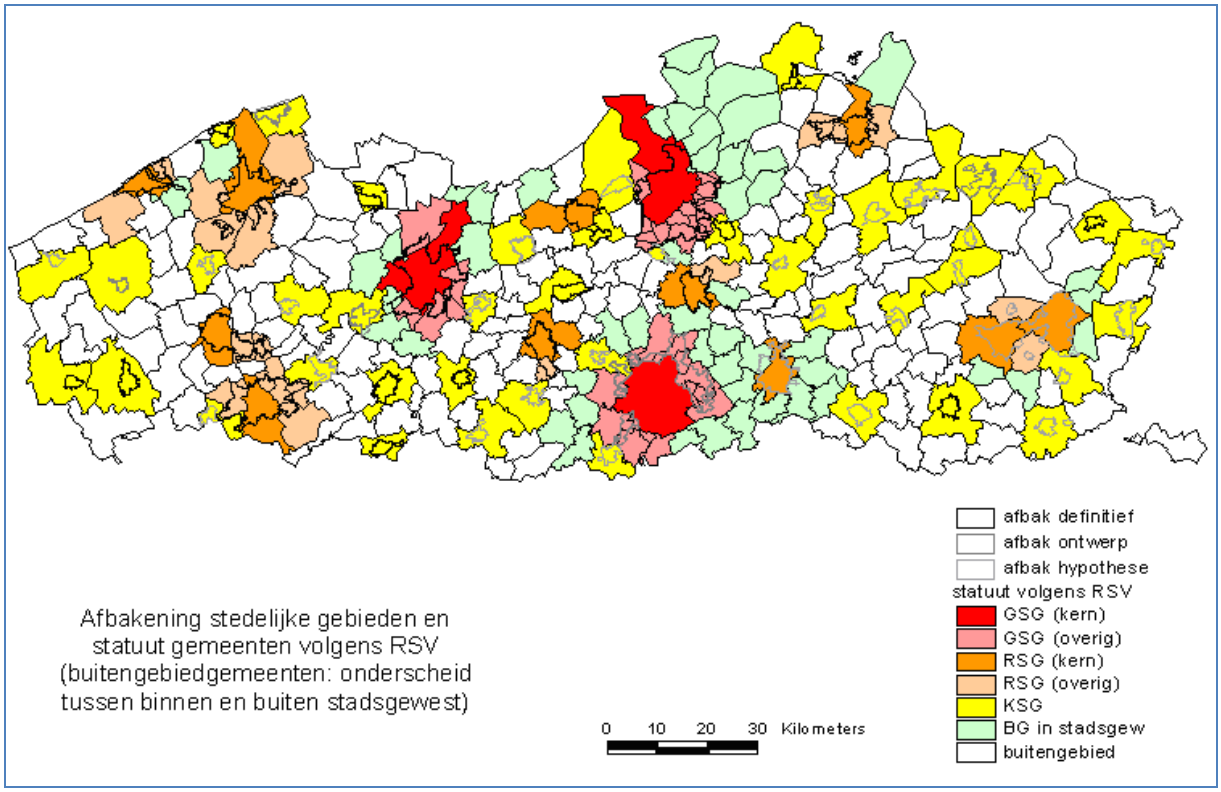
The former part provided a first “state-of-the-art” overview of SMST-related definitions in academic discourses. In this part more attention is directed to the way in which the academic discourse was translated in national / regional policies.

The first delimitations of urban hierarchies in Belgium were used for the establishment of national programme of spatial planning and town and country planning (Sporck, 1966; Goossens and Sporck, 1985). Later, the hierarchy of Van Hecke and Van der Haegen was the basis of the selection of the urban areas in the Spatial Structure Plan of Flanders (1997). The major and regional cities remained unchanged, except that Hasselt and Genk are considered jointly in the RSV as a bipolar regional urban area. Brussels itself is obviously not in the Flemish selection, but the Flemish suburbs of Brussels were selected as part of the Flemish Urban Area around Brussels (VSGB). As far as the small urban areas were concerned, some minor differences existed.

All urban areas had to be precisely defined (a process that is still in progress); all areas outside form the "outer area" (“buitengebied”) (cf. Figure 5). The distinction between urban and rural areas is a key element in the principle of "deconcentrated clustering" pursued by the RSV. Additional housing should be concentrated within in the urban areas and the residential cores in the countryside. At

least 60% of the Flemish housing are needed over the 1992-2007 period (approximately 400,000 additional dwellings) and should be absorbed within the urban areas.

Figure 5 –Delimitation of urban areas and statute "municipality" in Flanders (Parys et al., 2011)



Source: (Parys et al., 2011)

The methodology of urban hierarchies gave rise to a division of municipalities in the urban-rural typologies, which meant specific "duties" related to housing, and commands / prohibitions relating to the development of economic activities. Currently underway in the Flemish Administration for Planning, now called "Ruimte Vlaanderen", is the translation of the Green Paper "Flanders in 2050: Human scale in a metropolis? Spatial Policy Plan" (RWO, 2012) in a White Paper. Here the strategies and visions, brought forward in the Green Paper, will be translated into concrete targets and related instruments. It can be expected that this implementation will also reflect on how the dialogue between regional government and local governments (municipalities) will be achieved: will this be achieved in a top down approach using demarcations and top-down imposed targets, or may be developed in a way that gives room to local initiative? Currently active consideration is been given to the way in which the first objective "Metropolitan Appeal" will be further concretized in the elaboration of 4 top metropolitan regions (the hypothesis is centrally Flanders, the Coastal area, region Kortrijk-Lille and MHAL region). The second objective, "Human Scale" thinks in terms of three types of urban space: "urban areas", "high-quality public transport nodes" and "nurturing cities". The way both strategies spatially overlap, or how they will respond/relate to the RSV methodology which was based on the functional urban hierarchies, is not clear but discussed at this very moment. The discussion will be very important for and relevant to the performance of SMSt's in the development of Flanders.

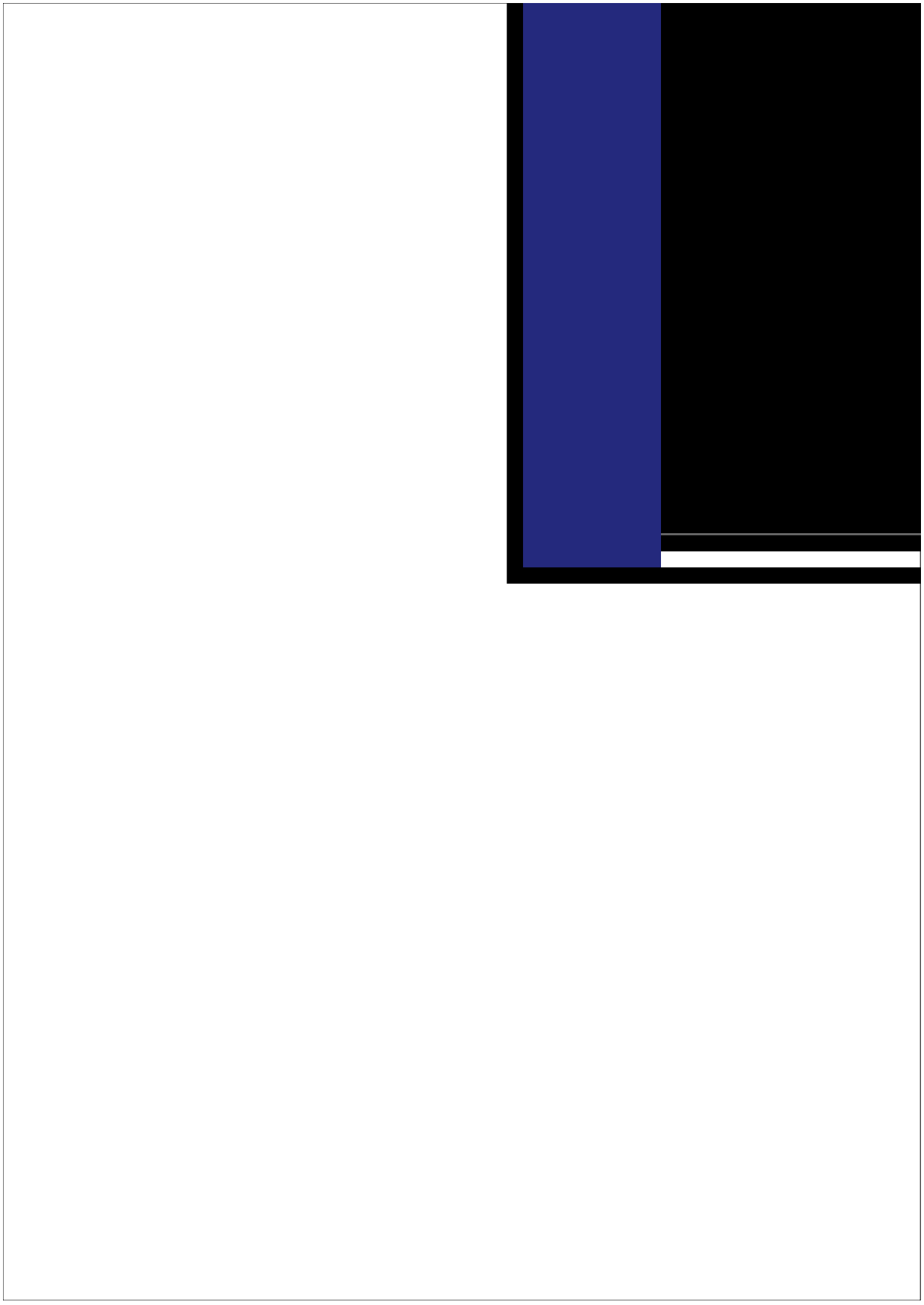
1.3 Territorial organization of local government system

The administrative division of Flanders is the governmental and administrative division of Flanders. The region is part of the European Union and of the federal state of Belgium and is divided in three regions and three communities. Officially there are two Flemish entities, namely the Flemish Region and the Flemish Community. Both entities were joined as far as legislative power and executive are concerned, which are embodied in the Flemish Parliament and the Flemish Government.
The region is further divided into 5 provinces (Nuts2), 23 administrative districts (Nuts 3, called "arrondissementen" in Dutch) (including 1 Brussels) and 327 municipalities (of which 308 in Flanders and 19 in Brussels). The Flemish Community is also represented in the bilingual Brussels Capital Region in the regional government and the Brussels parliament.
On the eve of the industrial revolution, the land was already divided in relatively small parcels and densely dotted with farmsteads and hamlets, towns and cities. Shortly after the Belgian independence, the introduction of the municipal law (1836) gave a specific meaning to this crowded landscape of villages, towns and cities. The law placed all settlements of any size in terms of governance on an equal footing by granting them the statute of municipality. The municipal autonomy became a basic principle of the Belgian government and defined the administrative interests of the entire territory, this to the detriment of the city on a moment that it just gained economic importance. (Dehaene and Loopmans, 2003)

After this initial demarcation, a couple of municipal fusions took place but they were altogether modest and aroused little resistance. However, on 1 January 1977, the number of Belgian municipalities reduced from 2359 to 596. The merger was imposed in a relatively short time and went against the wishes of many municipalities. This resulted in a bitter opposition to the plans in some municipalities, which were incidentally only occasionally successful. Even before 1970, the conclusion was that scale mergers were necessary to make municipal governments vigorously enough and in order to have sufficient resources to support a full local policy. The intention for larger mergers was included in the government declaration of the Government G. Eyskens (1968-1972), a coalition of Christian Democrats and Socialists (De Ceuninck, 2009). The territorial differences before and after the big merger of 1977, are depicted in Figure 6 , together with the NUTS3 and NUTS2 subdivisions.

This principle of municipal autonomy and the mergers of 1977 are very important for 2 reasons: firstly, it explains the municipal autonomy in the implementation of strategic spatial planning principles and the necessity to study local initiatives in urban / municipal networks and the formation of policy. Secondly, it explains the morphological "patchwork" of built up areas within the Flemish territory, but also the structural presence of different morphological smst's (being the cores of the Belgian municipalities before 1977) within one lau boundary.

Figure 6 – Administrative subdivisions in the region of Flanders



1.4 The “Belfius-indeling”: classification of Flemish municipalities based on socio-economic criteria

The development of the “Belfius” classification (Dessoy, 2007) has been a statistical exercise with the underlying goal to group municipalities with a similar socio-economic environment in classes which are as homogenous as possible. In this particular research, the classification aimed at the provision of a suitable referential framework to compare the financial capacity of municipalities.
Indeed, each municipality has its own socio-economic context. The income level of the population, economic dynamism, the demographic trends affect directly or indirectly both the revenue and expenditure of the municipalities.

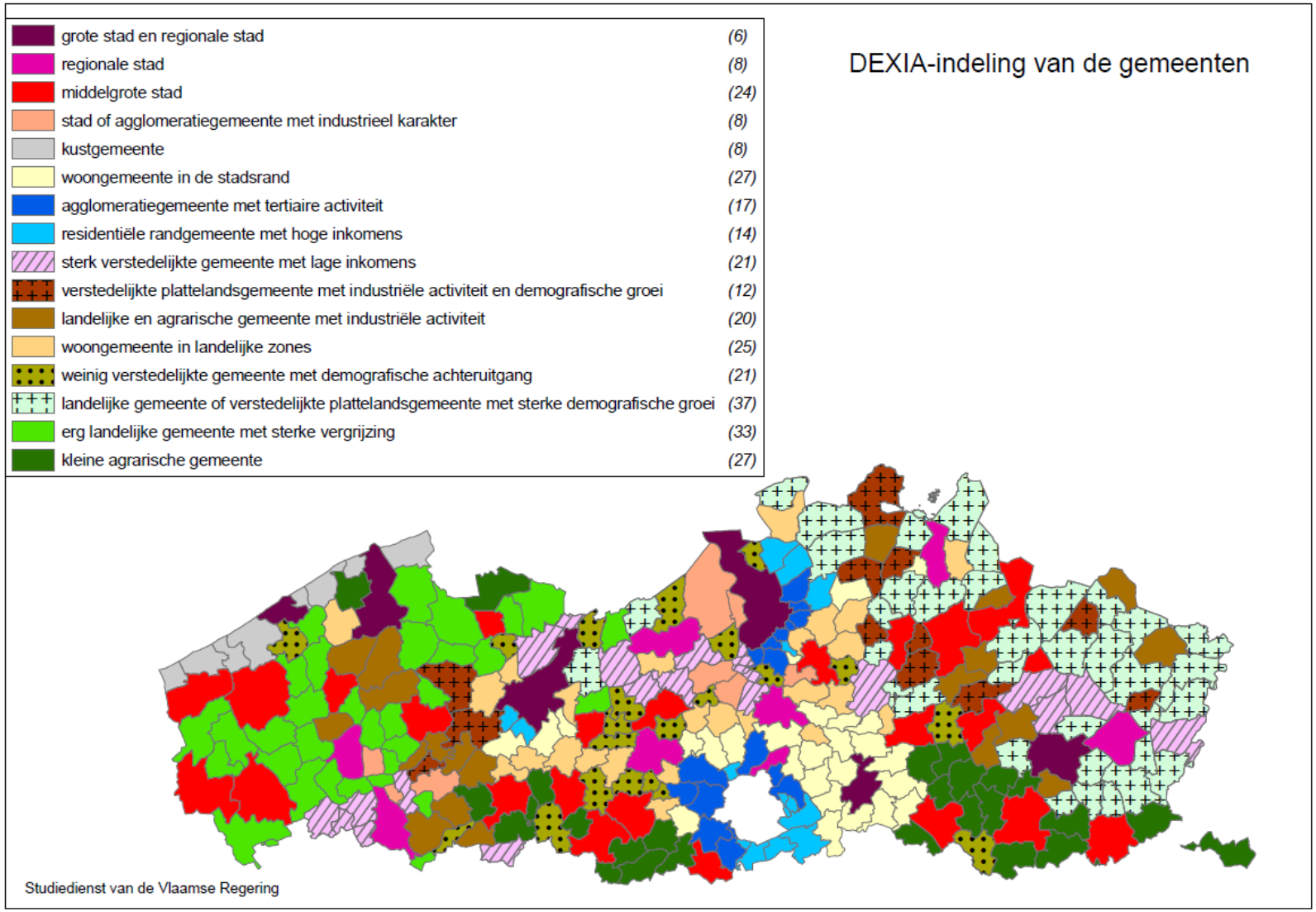
The preparation of the typology of municipalities begins with the creation of a socio-economic database with information on all municipalities, more than 150 variables collected from official statistical sources which characterize the territory, population and economic activity of the 589 Belgian municipalities. The typology of municipalities is constructed via two consecutive data processing steps.
The factor analysis is a classical inductive method used in the first place to reduce the number of initial variables, and gathers as much as statistical information as possible in a smaller number of synthetic variables (factors). Then a cluster analysis is applied to this smaller set over variables and groups the observations (municipalities) with a homogeneous socio-economic environment.
This double statistical processing is performed for each of the Belgian regions – Flanders, Brussels Region and Wallonia. The approach yielded 16 clusters of municipalities in Flanders , 14 in Wallonia and Brussels 5 , which corresponds to an average of about 20 municipalities in the Flemish and Walloon clusters (against only four municipalities of the Brussels clusters) .
These categories of municipalities are primarily different in relation to living standards and socio-professional status of the population, urbanization rate , both "morphological " (importance of built up area) as " functional" (attraction , central function) aspects , in the interest of economic activity (industry, tertiary industry , tourism) and demographic dynamics (natural balance and migration , degree of aging of the population) . For an overview of the different groups and a cartographic representation of Flanders, reference is made to Figure 7 and Figure 8.

Figure 7 – Belfius typology of 16 clusters in Flanders: an overview

1	Residential municipalities	Incomes > regional average
1.1	Cluster V2	In rural zones
1.2	Cluster V1	In the suburbs
1.3	Cluster V10	Agglomerative municipalities with tertiary activity
1.4	Cluster V11	Residential suburbia with high income
2	Rural municipalities (or urbanized rural municipalities)	Urbanization < regional average
2.1	Cluster V9	Small agricultural municipalities
2.2	Cluster V3	Very rural municipalities with strong ageing
2.3	Cluster V12	Rural or urbanized countryside with strong economic growth
3	Municipalities with a concentration of economic activity	Industrial tertiary activity > regional average
3.1	Cluster V4	rural and agricultural municipalities with industrial activity
3.2	Cluster V13	Rurban municipalities with industrial activity and demographic growth
3.3	Cluster V8	Cities and agglomerations with an industrial character
4	Semi urban or agglomerated municipalities	Income < regional average
4.1	Cluster V6	little urbanized municipalities with demographic decline
4.2	Cluster V7	Strongly urbanized municipalities with low income
5	Centrum municipalities	Centrum function > regional average
5.1	Cluster V5	Medium sized cities
5.2	Cluster V14	Regional cities
5.3	Cluster V15	Big and regional cities - capitals
6	Touristic municipalities	Touristic activity > regional average
6.1	Cluster V16	Coastal municipalities

Source: translated from (Dessoy, 2007)

Figure 8 – Belfius typology: cartographic representation of Flanders



2. Morphological and functional typologies in Flanders and Brussels Area

This chapter links the case study analysis to the pan-European geomatic analysis conducted in RA2. It has the double objective of testing the validity of the work conducted in RA2 regarding the identification of SMSTs, and accordingly feeding back this information to RA2 for correction and revision. Secondly the validity of the RA2 methodology will be discussed within the Flemish context. The second part of the chapter 2 will be dedicated to the functional analysis of the Flemish settlement system, based upon the methodology proposed for all the case studies in RA4. In the last part of the chapter, the choice of case studies will be outlined and brought into relation with the morphological and functional analysis.

2.1. Morphological analysis: validation of polygons

In RA2, a methodology was developed for the demarcation of urban settlements based on morphological criteria. Within the case studies, a validation was requested of the correct morphology SMSTs / HDUC polygons, whether the delimitation of SMSTs and HDUC effected on purely geomatic grounds matches to an acceptable degree the actual extension of urban settlements with given characteristics in terms of population size and density. Another task was to append the "names" and/or other national/regional codes to the morphological units.

The quantitative discussion of the amount of polygons for which modifications were suggested and which kind, is also accompanied with a qualitative discussion on some general observations made when confronting the general map overview of settlement grids with actual knowledge of the Flemish situation. Figure 9 is the result of a first exploratory analysis in ArcGIS based on the RA2 polygons. The map symbology is chosen in such a way that the results of the different typologies can be viewed simultaneously.

2.1.1. Discussion

Based on Figure 9, it is possible to point out some discrepancies between the classification of SMST polygons based upon the RA2 methodology and the actual Flemish situation. Notably, these discrepancies highlight mostly some very specific aspects of the spatial structure of Flanders.

First each province will be discussed separately, in order to compare the RA2 typologies with the actual situation. Then we will conclude with a summary of the results for the whole of Flanders.

In the province of West-Flanders, The high density urban clusters fit the actual situation pretty well, although the morphological map accounts for a difference between the North and South: Ostend and Bruges are relatively compact clusters surrounded by very small towns, high- and low density small towns. In the south, however, the cities of Kortrijk and Roeselare seem rather part of a more widely spread urban cluster, which is part of the larger metropolitan area of Lille. The high density large SMSTs can be found along the coast line or at the border with France, and the combination Maldegem-Eeklo. This analysis can be further validated when studying a map of the population density of Flanders (Figure 10).

Figure 9 – SMST typology applied in Flanders

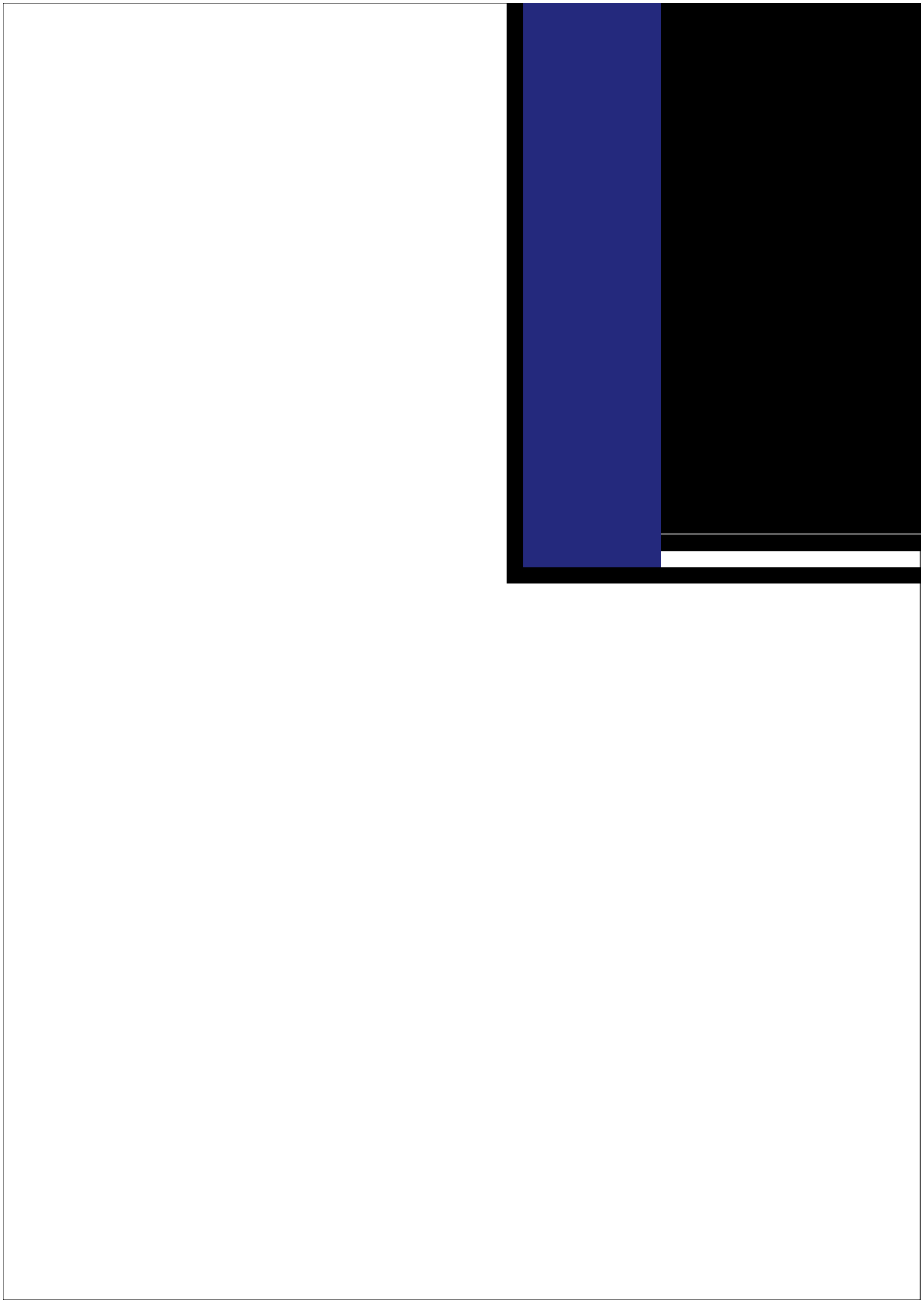
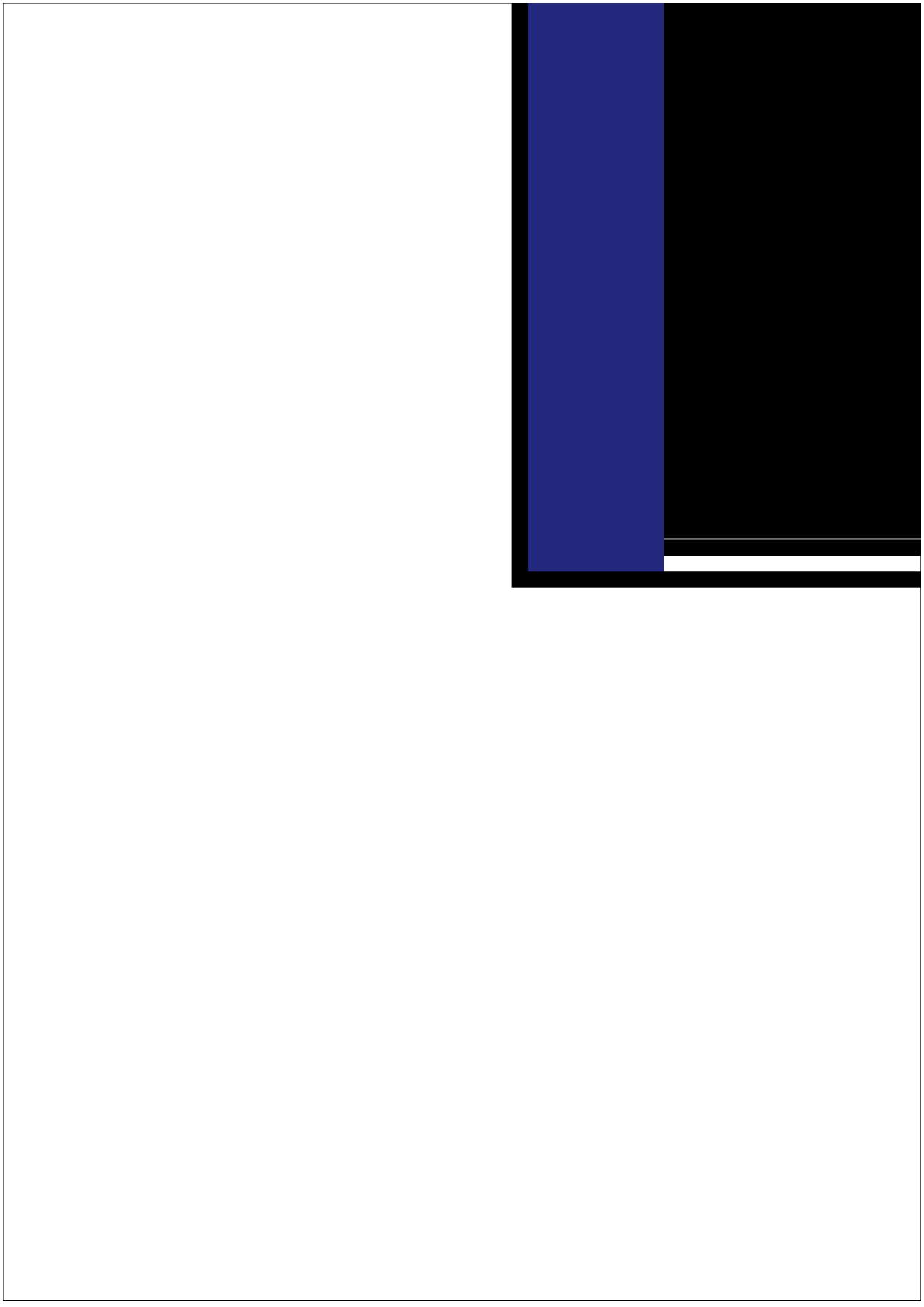


Figure 10 – Population 2011 and population density in Flanders



When looking at East-Flanders, the city of Ghent, which is considered as one of the largest urban agglomerations of Flanders, is classified as a large SMSTs. This is also the case for Sint-Niklaas. On the other hand, a fairly large amount of East-Flanders is characterized as high density urban cluster. This is part of a larger observed phenomenon, t.i. the presence of the "Flemish Diamond". The Southwest-area of East Flanders, the "Vlaamse Ardennen", shows a more polycentric structure of medium and small towns, with Oudenaarde, Ronse and Zottegem as important nuclei. In Antwerp, the influence of the Flemish Diamond is also visible. Not only Antwerp itself - which is an obvious result - is classified as an urban cluster, but also the area in the South of Antwerp, surprisingly strictly following the borders of the so-called Flemish Diamond. Turnhout is classified as an urban cluster, although this was is not the case based on the population figures. It seems that Turnhout, not by itself, but together with the surrounding municipalities is considered as an urban cluster. The rest of Antwerp looks like a polycentric structure consisting of small towns with different total population and density characteristics.

Although based on population levels Hasselt and Genk (Limburg) seem to be larger cities, the method does not define them as such. Rather, they are classified as large SMSTs. Next to them, however, the region of Beringen-Heusden-Zolder is also labelled as a large SMSTs.

The only region in Limburg defined as an urban cluster is the cross border area with Maastricht and Sittard-Geleen.

Obviously a substantive part of Vlaams-Brabant is classified as an urban cluster, with Brussels and immediate surroundings, although the Ra2 methodology reveals some differences in population patterns in different directions around Brussels. It is hypothesized that the differences are explained by the location of motorways and train lines. It is curious, however, that Leuven is classified as a large smst, although the population of Leuven exceeds a population of 50000. The rest of Vlaams-Brabant shows a polycentric structure of small towns, which is in line with reality.

To summarize the first exploratory analysis, the case of Flanders is especially interesting to assess the methodology's value in distinguishing between large, small and medium towns on one hand and urban clusters on the other hand. Due to the fact that almost all Flemish municipalities are between 5000 and 50000 in population, but also due to the high morphological interconnectivity between the municipal cores by means of ribbon development alongside the motorways, these separate municipalities form an urban cluster in the morphological analysis. What is even more interesting is that the large urban structures as defined in the Ruimtelijk Structuurplan Vlaanderen are clearly visible on the map - Flemish Diamond, Lille metropolitan region, Brussels agglomerative region, border area with Maastricht. Moreover, in some cases municipalities that are situated alongside major motorways (examples are the E17 connecting Ghent and Antwerp), are morphologically agglomerated and hence classified as smst's, although it is not sure that they will be classified as such in a functional analysis.

On the other hand some cities that are classified as an urban center based upon population within their administrative borders (>50000), are large SMST’s according to the RA2 analysis. As stated in the methodological report of RA2, “it should be noted that this basic typology includes among SMST also urban area that have more than 50,000 inhabitants. As the specs for this project explicitly mentions a population range for urban areas between 5,000 and 50,000 inhabitants as identifier of small and medium towns, a first enhancement oriented at a better understanding of population settlements introduces the subcategory of “large SMST” as those SMST that have more than 50,000 inhabitants, though having a total population density below the 1,500 inhabitants/sq km threshold of large urban areas (see Table 2)”. Which means, the areas are not smst’s based on total population criterion but on population density criterion.

In the case of Flanders, the morphological structure will have to be confronted with the functional characteristics of the municipalities to be able to better define the small and medium towns. Generally speaking, and based upon the Flemish case the morphological method could be improved taking into account ribbon developments alongside important infrastructure lines, but on the other hand it can be assumed that this is a typical Flemish phenomenon not detectable in other case studies and a unique characterizing feature.

2.1.2. Results of the validation

In line with the previous discussion about the typical ribbon development of the Flemish region, in a first analysis of the polygons it seemed that almost all polygons should be modified and expanded with grids adjoining to it (=error code = 1).

In a second stage it was decide to add a more objectified criterion, t.i. the use of an extra GIS layer consisting of "woonkernen" used as a base of reference (this are the built up cores available in Multinet, situation 2006). In cases in which the boundaries of those residential cores differed for more than 50% with the grids used in the SMSTs polygons, the advice was given to add the grid/abolish it.

In total 135 smst's were analysed, the advice was given to make modifications in 67 cases: (68 polygons, or =50%, were to remain unchanged:

- The polygon should include other contiguous grid cells (indicate which ones in the field on the left): 32 or 24%;
- The polygon should not include some grid cells (indicate which ones in the field on the left): 14 or 10%;
- The polygon should be joined with other polygon(s) of the same or different class (indicate code of other polygon(s) in the field on the left) : 12 or 9% ;
- The polygon should be split in different polygons (indicate criteria for separation in the field on the left) : 4 or 3%
- Wrong classification (indicate correct classification within basic typology 1, based on real population and density data for built-up area - quote source) 3 or 2% ;
- Other (provide details in the field on the left): 8 or 6%.

The sms'ts that were wrongly classified, are actually Gent, Leuven and Hasselt-Genk. The polygons with other points of attention (code = 6) were the polygons that fell mostly in the neighbouring countries, so in fact not belonging to the case study area.

2.1.3. Naming of the SMST polygons

To complicate a correct procedure of naming the smst polygons, it occurs very regularly that within one lau in Flanders more SMST centers exist. This can be explained by the fusion of municipalities in 1977 (cf. Paragraph 1.3): before this fusion the residential and built up structure consisted out of separate municipalities with their own residential core, now within the larger administrative municipal border of the Lau2. To complicate the situation, several situations existed in which two former residential cores at both sides of municipal borders were considered to be spatially contiguous but the RA2 methodology. To name the SMSt's, use could be made of the reference layer "bebouwde_kernen_2006" (Multinet), in which the residential cores were named according to their borough names.

2.2. Functional analysis: the case of Flanders and Brussels Area

As a basis for the functional analysis in Flanders data were used for 2001 on Lau-level. It was not possible to work with data for 2011 since commuting data are not available (yet) for that period. Commuting data, as well as the other data needed for the analysis, were drawn from the "Socio-Economische Enquête 2001" (SEE 2001). After 2001, the decision was made to abolish the census, leading to the development of alternate methodologies since then. The WSE (Steunpunt voor Werk en Sociale Economie) is developing a methodology based upon other readily available data sources, but momentarily only on a differentiation level that is very similar to Nuts3 (since the data are not reliable on Lau level as a result of methodological issues). Probably the methodology will improve in the next publication round of commuting data (spring-summer 2013).

In this part concerning the functional analysis, methodology will only be discussed if the choice was made to deviate from it in the Flemish case, or where the methodology was followed but can prove to be problematic in the Flemish case.

It was decided to include Brussels in the functional analysis, since the dominant role of the capital city in the Flemish commuting pattern, and also the geographical shape of Brussels is completely surrounded by the Flemish region. This means that there are 308 + 19 = ***327*** municipalities in total.

2.2.1. Formation of microregions

2.2.1.1. Identification of job centres

The first step is the identification of those settlements that play the role of job centres. A Job centre is defined as LAU2 (or smaller spatial unit corresponding to town settlements) with at least 1000 jobs, which is, at the same time, the main commuting destination for at least one other LAU2 (settlement) (= the destination of such commuting flow from other LAU2 which is maximal (dominant) among the set of all flows outgoing from this LAU2);

For the assessment of the n° of jobs per municipality it was decided to use the commuting matrix for 2001 directly. In this matrix, the amount of jobs per municipality is in its definition the no. of working people commuting to that municipality out of their place of residence, summated for all municipalities in Belgium. The amount of jobs calculation was performed on Flanders (308 Lau) and Brussels (19 lau). **268 Lau of 327** (or 82%) had more than 1000 jobs in 2001.

It can be discussed whether another cut-off value could be used to delimit the job centres, taking for example into account the varying size of Lau in the different case studies. For example, job density could be used as a parameter instead of the total amount of jobs. However, the directions of the global methodology were followed (threshold value: > 1000).

Confronting the analysis of Laus being a main commuting destination of any other Lau, **149 job centres (or 45%)** were selected in Flanders/Brussels, which serve as initial seeds for the protomicroregions.

2.2.1.2. Delimitation of microregions

Not every job centre however, is strong enough to form its own microregion. Therefore, we continue with the delimitation of microregions and their respective urban centres.

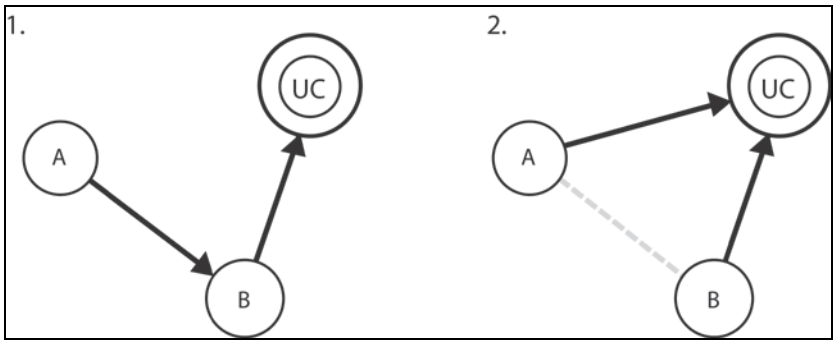
Regionalization process into microregions could be split into three subsequent stages:

- Delimitation of "proto-microregions": integration of settlements to the job centers according to direction of maximal (major) flows from each LAU2. Each settlement will be assigned just only to one centre/functional region.
- setting up the minimal threshold value for proto-microregions population size, dissolving proto-microregions with population below the threshold;
- territorial consolidation of proto-microregions, final delimitation of micro-regions

2.2.1.2.1. Delimitation of proto-microregions (PMRs)

Having the set of urban centres, LAU2 are to be linked to the centres via the criterion of the strongest commuting-to-work flow. If the largest flow from LAU2 is not directed to one of the identified urban centres, the LAU2 is linked to a job centre indirectly. If the main commuting destination B of LAU2 A is not an urban centre, then LAU2 A is linked to the urban centre UC that is the main commuting destination for municipality B (see Figure 11). This approach results in proto-microregions (PMRs) delimitation.

Figure 11 – Assignment of Lau2 to urban centres



The NIScodes of the Lau were altered to delimit the new protomicroregions in the database. After this database processing step the protomicroregions are formed in ArcMap using the dissolve geoprocessing tool. Obviously there were 149 job centres, which means **149 protomicroregions formed in Flanders/Brussels.**

2.2.1.2.2. Population threshold for protomicroregions

Proto-microregions should be treated as preliminary representation of a microregional pattern. However final microregions should fulfil the criteria of minimal population size and territorial integrity. It is advised to use some kind of histogram (frequency) analysis to find a reasonable threshold value applicable in the case-study region. Applying defined minimal population to the set of PMRs some proto-microregions will fall under the line – they have to be dissolved and spread over other proto-microregions. When attaching the dissolved PMR municipalities to the larger PMRs, several aspects should be taken into account, such as commuting directionality of their original job centre or other significant commuting flows of municipalities. In the Czech case the threshold of 6000

inhabitants was used. This threshold is contestable in the Flemish case, since the relative large shape of the lau's and the big population density. Concretely, following the guideline would have excluded only two protomicroregions: one with 1873 population, but situated in Wallonia (so outside the case study area); one, Lendelede (West-Flanders), with a population very near to 6000 (5491).

Thus the choice was made to analyse the smaller protomicregions in a qualitative way, meaning studying their relative location within Flanders and morphological shape of the microregion (based upon the morphological analysis). Based upon that analysis, 9000 pop was used as a cut-off value.
This resulted in **134 microregions in Flanders and Brussels.**

2.2.1.2.3. Territorial consolidation of microregions

The microregions were further assessed by their territorial compactness. The following microregions were not compact:

- The microregion of Aalter (NIS=44001) is intertwined with the microregion of Ghent (44021). In order to obtain a geographically compact area, both were combined in one microregion of Ghent.

- The same situation could be observed in the cases of the microregions Hasselt (71022) and Genk (71016). The municipality of Bilzen is a part of the microregion of Genk, but they are not geographically contiguous. In order to conform to the methodological guidelines, it seems most logical combining the microregions of Hasselt and Genk. In any case, they are considered to be a bipolar city in the RSV.

- The same situation existed with the microregions of Anderlecht (21001) and Brussels (21004). Anderlecht was added to Brussels to make the former geographically compact. However, some other modifications were necessary to the microregion of Brussels itself.

In order to transform Brussels to a compact microregion, actually some very important microregions in Vlaams-Brabant containing medium sized cities had to be assigned to the Brussels Area. (e.g. Halle, Ninove…) Those microregions were assigned to the Brussels area to be concordant with the methodological guidelines, but this can be considered as an oversimplification in the Brussels case. Its non-compactness is in fact very well explainable by the long reach of commuters working in the capital city, but nevertheless the presence of microregions inside this influential sphere which are rather internally autonomous.

2.2.2. Assessing the typology of microregions and mapping

Following the project guidelines to set up the typology of Flemish microregions, there are some peculiarities of the Flemish situation which are symptomatic of the Flemish polycentric structure and can be explained by the spread out (and dense) population and the good overall accessibility of the case study area.

Firstly, the category of "Isolated town" or "Autonomous" does not exist in the Flemish situation. Neither does the category Aglo_SMST. This is because of the strong networked nature of the microregions not classified as a large city. All microregions that are not agglomerated towards a large city or networked to it are either networked as a source or as a destination.

Secondly, there are quite some cities in Flanders that should be large cities taking account of the population of the microregion (and in many cases and compared with other research of urban hierarchy within Flanders, they are also considered being "large" or "regional cities"), but they are not according to the functional methodology since they do not reach the functionality threshold of 2. Those cities are: Aalst (f=0.33), Sint-Niklaas (1.53), Mechelen (1.82), Sint-Truiden (1), Tienen (0.66), Ieper (1.69) and Zaventem (0.5). The phenomenon was analyzed into more detail and it seems that those cities do not reach the threshold of 2 since they are all embedded in very strongly networked surroundings (as is in fact, the majority of Flanders). This results in the fact that all microregions which commute towards them, are also commuting to other microregions with the result that the total functionality threshold does not exceed 2.

Anyway, since the two methodologies are intrinsically on different criteria – this methodology is mainly based on commuting properties whereas urban classifications within Belgium tend to be based on the presence of services of general interest, it was decided not to change the threshold values dramatically to be able to include all cities considered as large cities in other typologies, Mechelen being the only exception, since it is the fifth largest Flemish city based on population figures. So, the actual functionality threshold used in the case study analysis was 1.82.

2.3. Choice of case studies

The aim of case study choice was to pick three different types of town in the case study region, for which there is at least one comparator in another national context. Based on the functional analysis (of commuting patterns) it was requested to choose at least one isolated town, one agglomerated town and one networked town. However, isolated towns are nonexistent in Flanders, and because of the strongly networked nature of Flemish towns, the choice was made to select one agglomerated town and two networked towns.

Another issue is that Flanders is a very particular case, and also chosen for its complex urban structure and dispersed nature. The Structure Plan of Flanders acknowledges this situation in its spatial structure sketch (“ruimtelijke structuurschets”) (Ministerie van de Vlaamse Gemeenschap, 2004). An urban core area can be defined which is named the Flemish Diamond, which could be considered in morphological terms and terms of population density being a large dispersed urban area, but in which municipalities still operate independently devising and funding local policies.
The South-western area of Flanders, together with the Kempen and the Eastern part of the Flemish Diamond, are still considered to be rather open areas in which rural functions largely dominate. It can be hypothesized that in those regions the residential structure has been less dominated by this dispersed urbanization and rather traditional structures can be found there.

Figure 12 – Map of significant commuting flows in Flanders and urban centers (2001)

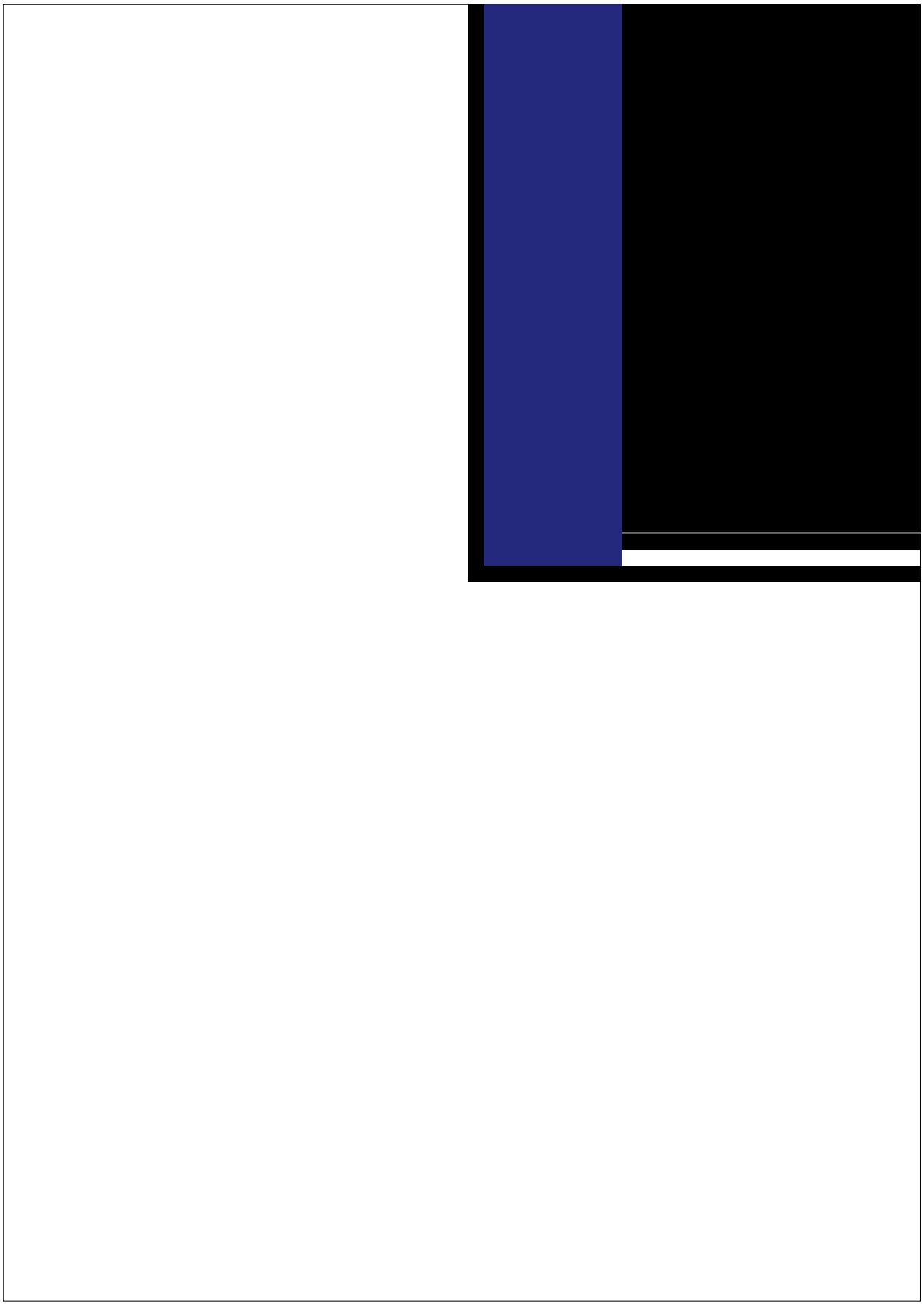
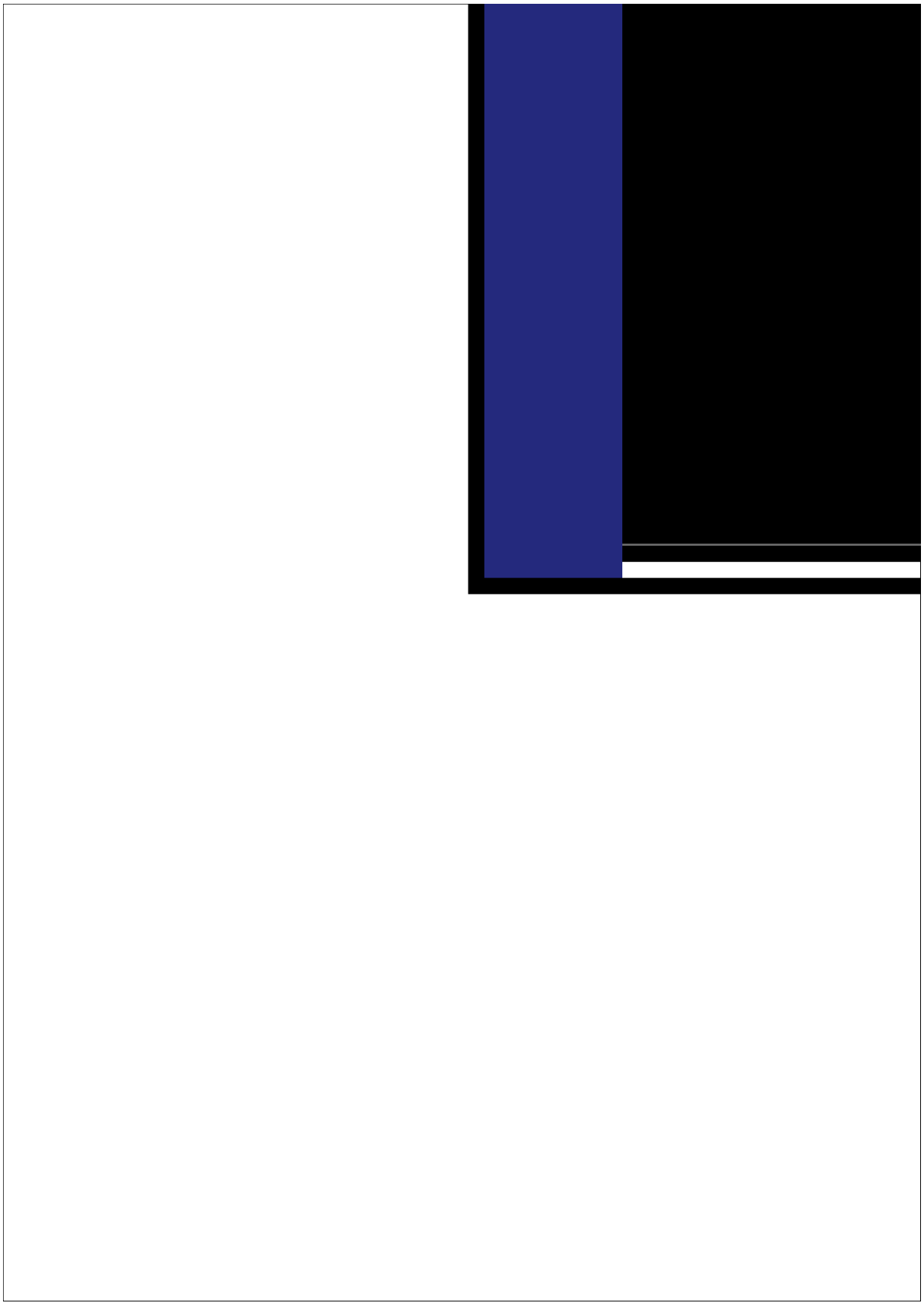


Figure 13 – Typology of microregions in Flanders

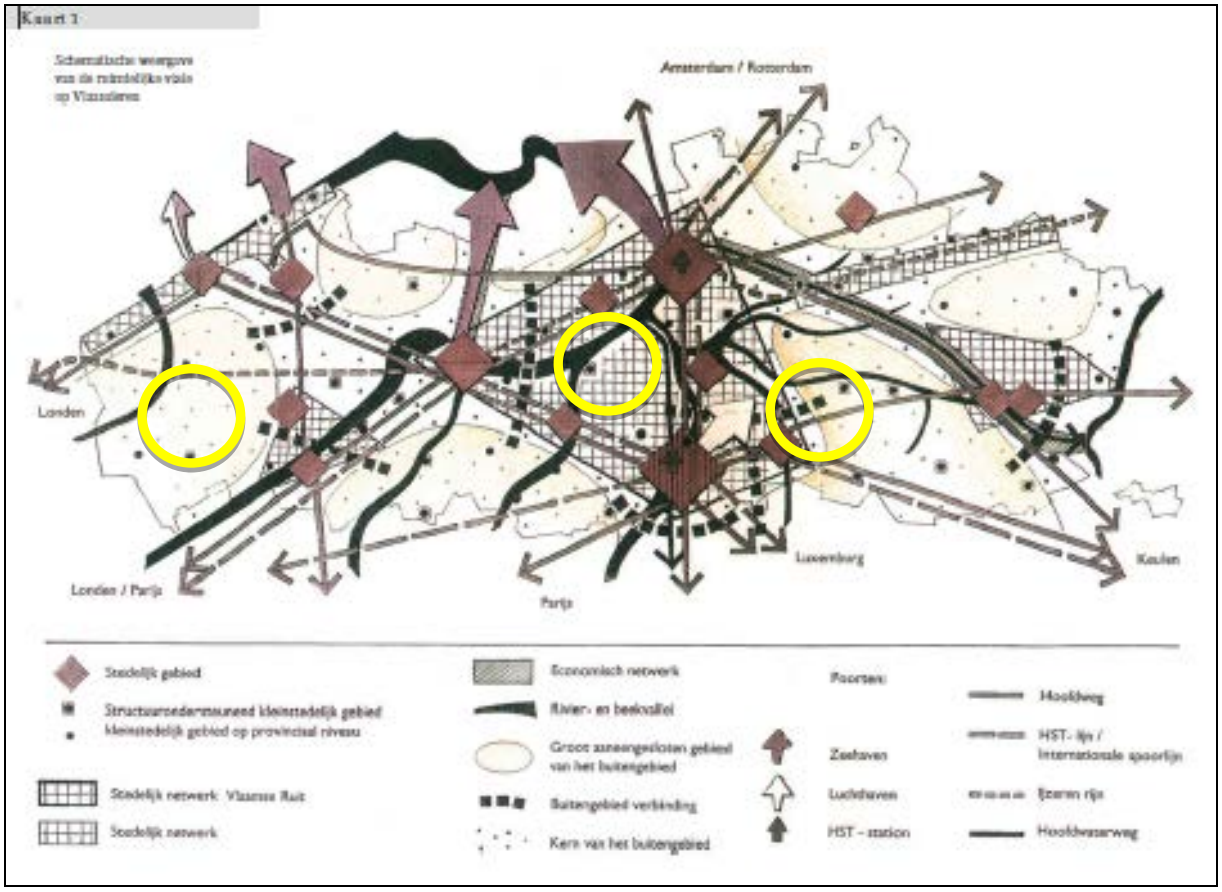


Evidently, on the border in-between both peri urban areas exist, which feel the urban pressure but still contain some large continuous open spaces. It can be hypothesized that those municipalities face the challenge to foster development of built op space (residential and economic developments), but also the protection of open space and natural areas.

Taking into account the functional typology of microregions and this larger spatial structure, the choice was made to:

- pick at least one agglomerated microregion within the Flemish Diamond to account for this peculiarity,
- one networked microregion as a destination within the open areas (in the RSV labelled “buitengebied”) and can be considered as one of the sole case reflecting the traditional structure of an urban centre serving a rural hinterland;
- and in conclusion to choose a networked microregion towards a large city, which is situated at the border of the Flemish Diamond.

Figure 14 – Schematic representation of the spatial vision on Flanders (RSV 2004) and location of the case studies



Source: (Ministerie van de Vlaamse Gemeenschap, 2004)

3. Territorial performance of SMSTs

3.1. Socio-economic characteristics of SMSTs and their position in national/sub-national settlement system

This part is a combination of qualitative and quantitative analysis. It describes the profile of the town, which is based on the original combination of the three models addressed in the socio-economic literature overview: residential, productive and knowledge economy.

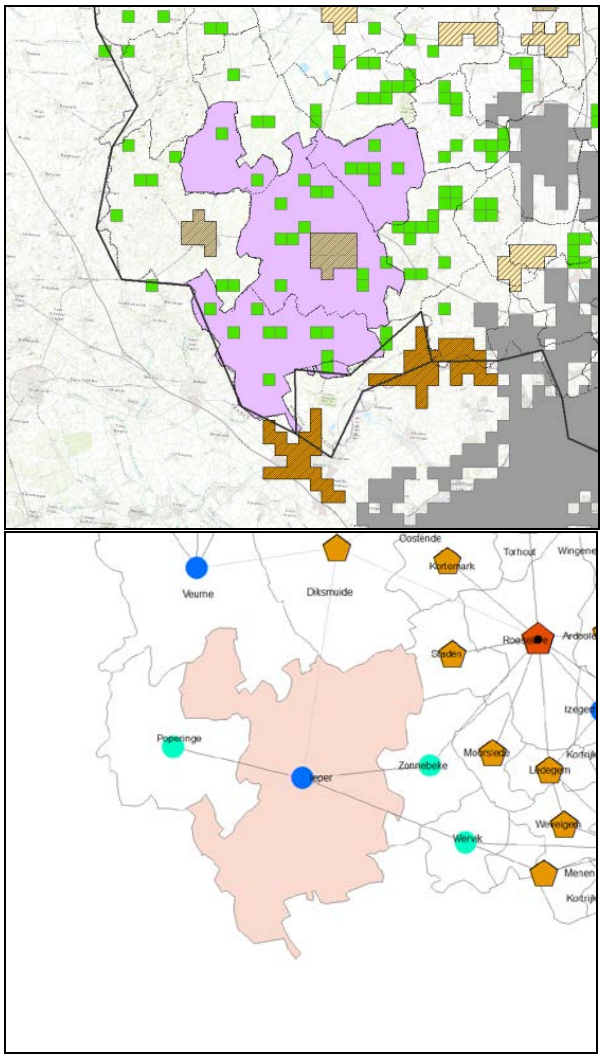
3.1.1. Ieper

Ieper is a networked microregion in the province of West-Flanders (NETW_SMST_DEST); it is one of the only examples of a Flemish town which fulfils the role of a functional centre in a relatively large agricultural hinterland and can be considered to be the "capital of the Westhoek". Based upon a study of Loopmans et al (2010) on the level of services of general interest, the city is characterised as "a very well equipped town". According to the Belfius typology, Ieper is part of cluster 5, which means "Middelgrote stad" (medium sized city).

In the morphological analysis, Ieper is characterized as a small, high density SMST, surrounded by very small towns (VST) within the rural area of the Westhoek. This is consistent with the functional analysis. In relationship to Flanders, Ieper is part of the peripheral area of the Westhoek, and is poorly accessible compared to other, more central parts of Flanders. Ieper is too far from Lille Metropolitan Area to be really a part of it. Hence, Ieper looks for modes of cooperation with the area of Dunkerque.

When taking into account the map of metropolitan areas (Figure 4), Ieper is not a metropolitan area nor is part of another metropolitan area. This is also consistent with its peripheral character and weak link to the urban regions within Flanders.

Figure 15 – The position of Ieper in the morphological and functional analysis



3.1.1.1. Population – density

According to the "Gemeentelijke profielschets Ieper", the administrative lau had a total population of **35108 on January 1st, 2001 and 35102 in 2011.** As shown in Figure 16, there is no marked population growth in the last 10 years. The population projections for Flanders/Belgium also reflect no population growth in Ieper until 2020, which is in sharp contrast with the projections for Flanders in general and also the average projected population growth for municipalities in Belfius-cluster 5 (medium sized cities).

Figure 16 – Ieper: population and population growth, compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders

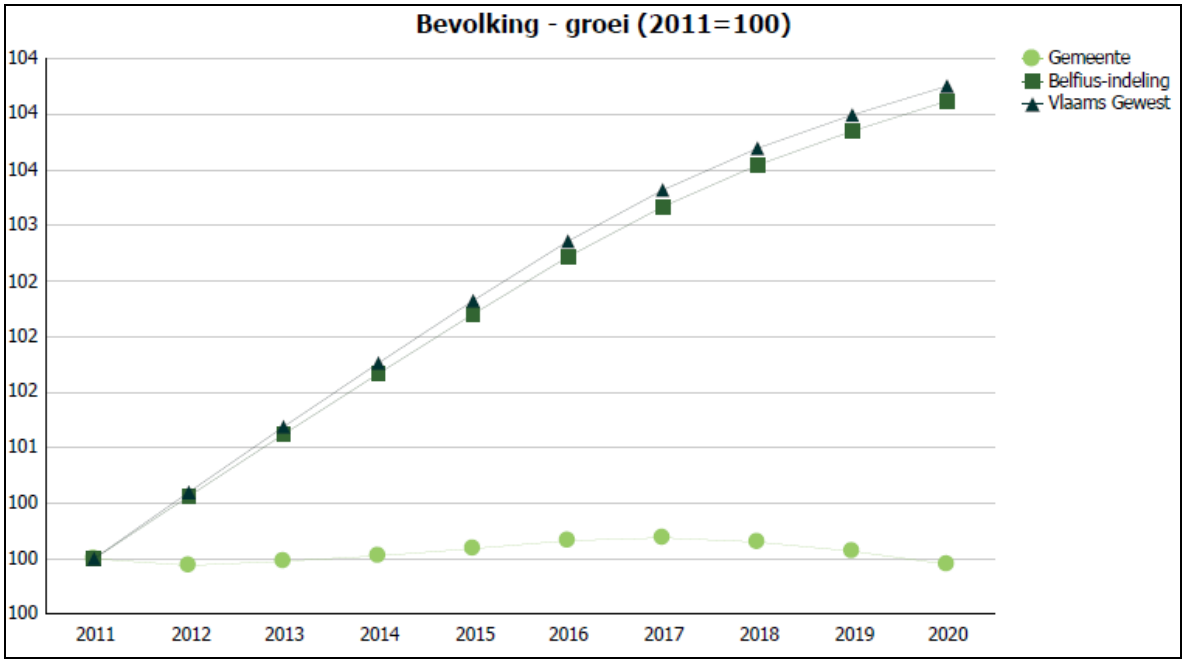
	Ieper										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	35.081	35.089	35.021	34.949	34.897	34.919	34.812	34.828	34.962	35.102	35.087
Groei (2002=100)	*100,0*	*100,0*	*99,8*	*99,6*	*99,5*	*99,5*	*99,2*	*99,3*	*99,7*	*100,1*	*100,0*

	BELFIUS.Middelgrote steden (Cluster V5)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	643.286	644.922	647.077	649.774	653.946	657.138	661.285	665.522	669.432	674.377	679.201
Groei (2002=100)	*100,0*	*100,3*	*100,6*	*101,0*	*101,7*	*102,2*	*102,8*	*103,5*	*104,1*	*104,8*	*105,6*

	Vlaams Gewest										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	5.972.781	5.995.553	6.016.024	6.043.161	6.078.600	6.117.440	6.161.600	6.208.877	6.251.983	6.306.638	6.350.765
Groei (2002=100)	*100,0*	*100,4*	*100,7*	*101,2*	*101,8*	*102,4*	*103,2*	*104,0*	*104,7*	*105,6*	*106,3*

Source: "Gemeentelijke profielschets Ieper", Studiedienst Vlaamse Regering, 2013, p. 3.

Figure 17 – Projected population for Ieper (until 2020) and compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders



Source: "Gemeentelijke profielschets Ieper", Studiedienst Vlaamse Regering, 2013, p. 3

Ieper administrative lau is 130.61 sq km; this means a population density of 269 inhabitants/sq km in 2001, but also in 2011. It is clear that the population density is lower than the average for cluster 5 "medium sized cities", and considerably lower than the population density for the whole of Flanders (cf. Table 2).

Table 2 - Ieper: population density 2000 - 2012, compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders

	Ieper												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	35.071	35.084	35.081	35.089	35.021	34.949	34.897	34.919	34.812	34.828	34.962	35.102	35.087
Totale oppervlakte in ha	13.061	13.061	13.061	13.061	13.061	13.061	13.061	13.061	13.061	13.061	13.061	13.061	13.061
Bevolkingsdichtheid	*269*	*269*	*269*	*269*	*268*	*268*	*267*	*267*	*267*	*267*	*268*	*269*	*269*

	BELFIUS.Middelgrote steden (Cluster V5)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	640.987	641.692	643.286	644.922	647.077	649.774	653.946	657.138	661.285	665.522	669.432	674.377	679.201
Totale oppervlakte in ha	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503
Bevolkingsdichtheid	*359*	*359*	*360*	*361*	*363*	*364*	*366*	*368*	*370*	*373*	*375*	*378*	*380*

	Vlaams Gewest												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	5.940.251	5.952.552	5.972.781	5.995.553	6.016.024	6.043.161	6.078.600	6.117.440	6.161.600	6.208.877	6.251.983	6.306.638	6.350.765
Totale oppervlakte in ha	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225
Bevolkingsdichtheid	*439*	*440*	*442*	*443*	*445*	*447*	*450*	*452*	*456*	*459*	*462*	*466*	*470*

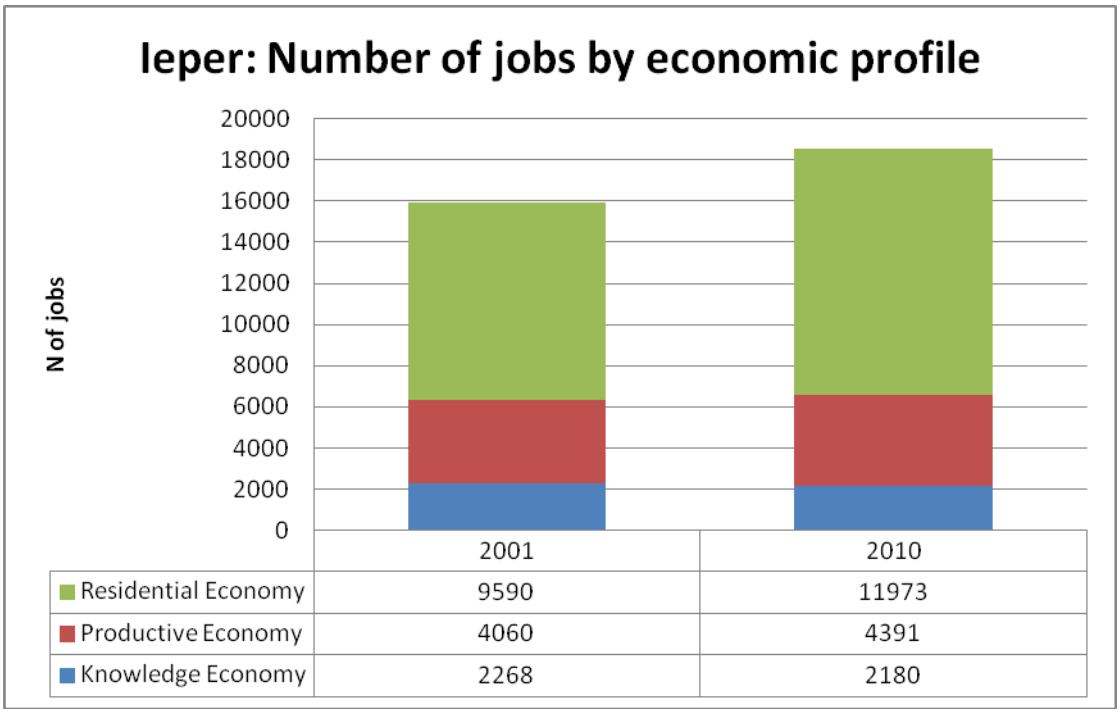
Source: "Gemeentelijke profielschets Ieper", Studiedienst Vlaamse Regering, 2013, p. 45

The total population of the microregion of Ieper, which consists of 5 lau's, was 55672 inhabitants in 2001 (the year used as a reference year for the formation of microregions).

3.1.1.2. Economic profile

The employment statistics were classified according to the subdivision residential – productive – knowledge economy for the years 2001 and 2010. When analyzing the economic structure in 2001, we see that 2268 or 14% of the job supply was provided by the knowledge economy in 2001, while 4060 jobs (25%) in the productive economy and 9590 jobs in the residential economy (60%).
The graph for 2010, however, shows an increase in the productive economy of 8%, an increase in the residential economy of 31%, and but a decrease in the knowledge economy of 4%. Globally, employment has risen in Ieper with 16% (see also Table 9 and Table 10).

Figure 18 – Ieper: economic profile 2001 – 2010



This decrease in knowledge economy can be explained by the bankruptcy of Lernaut & Hauspie in 2001. Lernout & Hauspie Speech Products, or L&H, was a leading Belgium-based speech recognition technology company, founded by Jo Lernout and Pol Hauspie in 1987, that went bankrupt in 2001 because of a fraud engineered by management. The company was based in Ypres, Flanders, in what was then called the Flanders Language Valley (mimicking the Silicon Valley). Also related companies had settled in the area and created a knowledge economy cluster. But we have to add that this only accounts for 60 employees in total. In general, the knowledge economy can be explained by the amount of schools in the area.

This means that the knowledge economy is not developed in that extent that it could have been. Even so, some small companies exist in the region like Melexis (development of semi-conductors), Transix (an international player in truck, trailer, driver, cargo and order management), and little software and web design companies, communication & PR....

The fact that the productive economy hasn't diminished greatly in the last 10 years and has even known a certain growth (in contract with the whole of Flanders which has known a decline in the productive economy of 2%), can be explained by the important presence by agriculture on one hand and of processing industries based on agricultural products.

Agriculture remains an important economic factor for the city and region, although the sector seeks to evolve and overcome the difficulties by developing side activities such as agricultural education and agricultural tourism. Large agricultural processing industries are to be found such as Penguin, Ijsco (frozen products), Westvlees, Clarebout Potatoes, milk processing products ...although less so on Ieper territory but in the immediate hinterland.

Some important multinational players are established in the municipality, such as Picanol (high-tech weaving machines providing for 200 jobs), McBride (specialized in household and

personal care products), Sitra Group (a national and international transport company which specialises in the transportation of food products).
The importance of the residential economy is not surprising since the important central function the city provides for the surrounding rural area, e.g. providing schooling, healthcare with an important hospital and psychiatric health care facilities,...the growth in the last 10 years can be explained in a great extent to the growth of tourism related services. Moreover, Randstad Belgium is a very important provider of jobs in the human resources sector.
The region also knows some important companies in construction, such as Valcke Ieper (which produces precast concrete).

The importance of different groups of services of general interest is also explained in the next paragraph.

3.1.1.3. Services of general interest

As explained in chapter 1, the urban classifications within Flanders and Belgium are very strongly based upon the presence of services of general interest.

Looking at the classifications of urban hierarchies, Ieper was classified respectively as a well equipped small town (Goossens and Sporck, 1985), a well equipped small town (Van Hecke, 1998) and a very well equipped small town (Loopmans et al., 2010). The report gives a ranking of all municipalities in the different groups of services of general interest, and the evolution between 1997 and 2010, in relativity to Antwerp (=1000). This means that the equipment scores say something about the change in relative position towards Antwerp, but this is no indication of absolute growth of this equipment group in the municipality. The reason why (Loopmans et al., 2010) did not tabulate indices to account for absolute growth, is because this part of the analysis was an update for an established methodology in 1997. In their opinion, some of the variables used to construct the equipment score per function group, have lost their relevance anno 2010. Hence, it would be a false idea that a rise in equipment score represents actual growth (for example: number of internet connections). Thus, it would be safer to only look at the relative changes in ranking in the table. The table shows that Ypres has strongly improved its ranking towards health care facilities, but has lost significant positions as far as sports, recreation & horeca and retail.

In the Belfius classification, Ieper is a part of cluster 5, the “Medium sized city” (“middengrote stad”). Cluster 5 is part of the subgroup Centrum municipalities, which distinguish themselves from the other cluster subgroups by their big attractiveness – centrum function. (Dessoy, 2007) This cluster consists of 24 small towns (20 000 to 30 000 inhabitants according to (Dessoy, 2007)). Typically they combine a strong central role with a major economic activity (especially in the tertiary sector). The grade urbanization varies, but is generally limited (except Halle and Dendermonde), while the average income and socio-professional character is significantly lower than the regional average (negative scores for factor 2, except Zottegem). In these cities, the aging is also higher than average at regional level and the demographic evolution less favourable than in the other municipalities in the region.

Interestingly, the cities of the “Westhoek” contrast somewhat with the other cities of the same cluster by the significantly lower incomes. In contrast, the natural component linked to

the demographic evolution (factor 8) then there is very high, while it is negative for most other cities in the cluster.

Table 3 – Equipment scores of the city of Ypres for different function groups and evolution 1997-2010

Ypres	2010		1997	
	Ranking	Equipment score (Antwerp = 1000)	Ranking	Equipment score (Antwerp = 1000)
Health care	15	190,1	35	205,2
Sports, recreation and horeca	27	362,5	17	723,2
Counter function	12	248,4	13	181,9
Government	10	437,3	17	386,3
Culture	17	133,7	15	128,3
Education	34	75,1	34	65,6
Traffic	83	124,82	Na	
Retail	36	108,78	22	115,6

Source: (Loopmans et al., 2010)

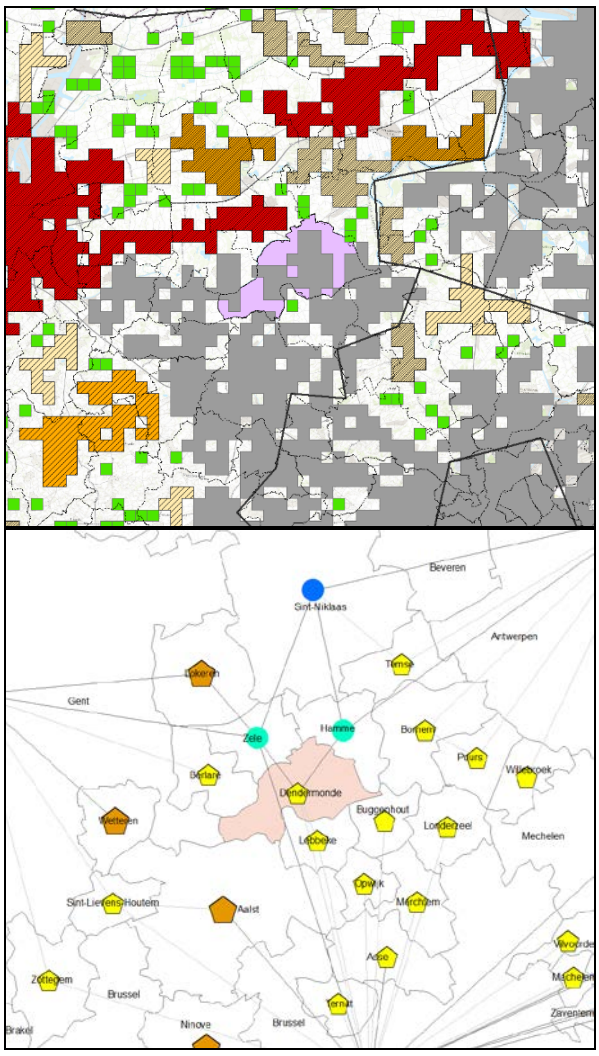
Table 4 – Socio-economic profile of the typology-subgroup "Centrum Cities"

	Typologies		
Indicators	Medium cities (V5)	Regional cities (V14)	Large and regional cities (V1
N	24	8	6
Average population	27074	61587	172345
F1: Ageing (+)	+	++	+++
F2: Standard of living (+)	-	--	-
F3: Urban (+) / Rural character (-)	avg	++	+++
F4: Urban attractiveness - equipment score (+)	++	+++	+++
F5: Tourism / real estate development (+)	avg	-	+
F6: Tertiary activity (distribution, transport...) (+)	+	++	+++
F7: Industrial activity (+)	avg	Avg	--
F8: Natural accres (+)	-	Avg	--
F9: Immigration (+)	-	Avg	Avg
F10: Border Labour / Foreign population (EU) (+)	avg	+	+

3.1.2. Dendermonde

Dendermonde is, according to the FA, an agglomerated microregion (AGLo-LC). However, according to Loopmans et al, the city is characterized as a "well equipped" town.
In the first version of the morphological analysis, the city was part of the high density urban cluster of Brussels and surroundings, but this can be explained by the important morphological sprawl within the Flemish Diamond. In the interim Report, a map is included distinguishing within the HDUC the urban core from the urban fringe. Dendermonde is mostly fringe of the Brussels agglomeration.
Dendermonde is a medium city in the very center of the Flemish Diamond, more specifically on the gravity point of the triangle Brussels-Ghent-Antwerp. It is very well accessible by public transport, although the city is relatively far from the major motorways. There are no rural remote areas in the vicinity which could be coping with a shortage of amenities.
When taking into account the map of metropolitan areas (Figure 4), Dendermonde is a part of the commuting area of Brussels. This is also consistent with the classifications if the morphological and functional analysis.

Figure 19 – The position of Dendermonde in the morphological and functional analysis



3.1.2.1. Population – density

According to the "Gemeentelijke profielschets Dendermonde", the administrative lau had a total population of **43.034 on January 1st, 2001 and 44357 in 2011**. As shown in Figure 20, the population grew in the last 10 years with 3 percent. This is lower for the Flanders average and also a bit lower than the population growth within the Belfius cluster "Medium sized cities".
The population forecasts (Figure 21) are also projecting this growth rate of 3% into the future (2020). This growth is a bit higher for the "Medium cities" and Flanders as a whole.

Figure 20 - Dendermonde: population and population growth, compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders

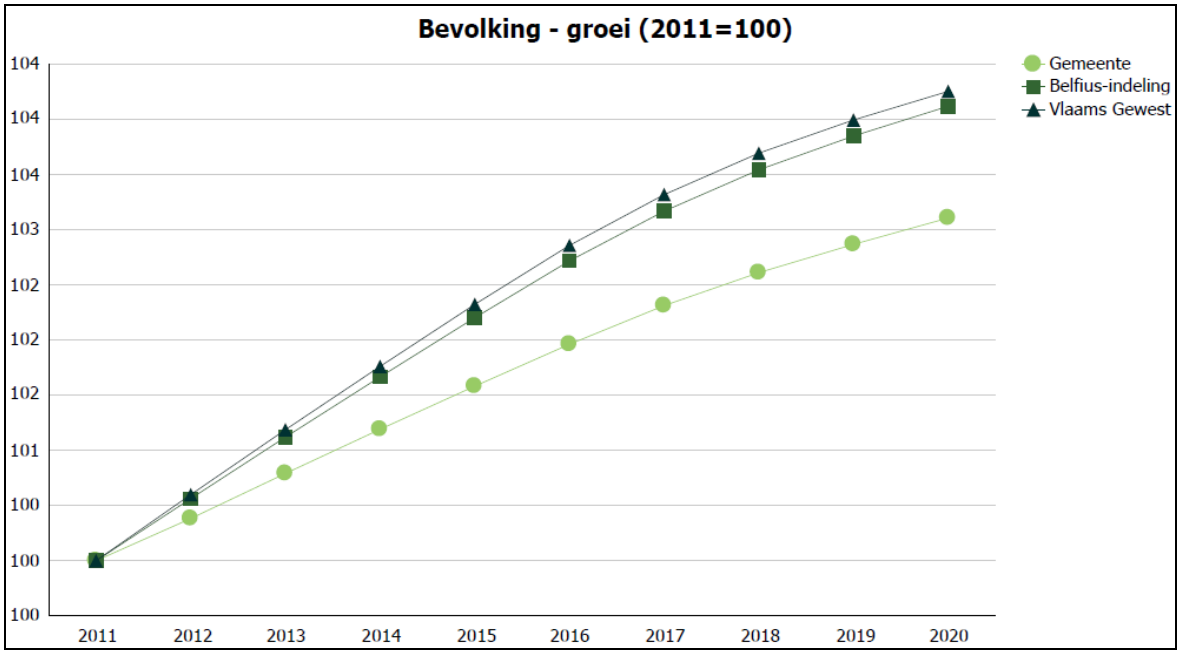
	Dendermonde										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	43.168	43.136	43.043	43.081	43.347	43.521	43.618	43.931	44.095	44.257	44.484
Groei (2002=100)	*100,0*	*99,9*	*99,7*	*99,8*	*100,4*	*100,8*	*101,0*	*101,8*	*102,1*	*102,5*	*103,0*

	BELFIUS.Middelgrote steden (Cluster V5)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	643.286	644.922	647.077	649.774	653.946	657.138	661.285	665.522	669.432	674.377	679.201
Groei (2002=100)	*100,0*	*100,3*	*100,6*	*101,0*	*101,7*	*102,2*	*102,8*	*103,5*	*104,1*	*104,8*	*105,6*

	Vlaams Gewest										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	5.972.781	5.995.553	6.016.024	6.043.161	6.078.600	6.117.440	6.161.600	6.208.877	6.251.983	6.306.638	6.350.765
Groei (2002=100)	*100,0*	*100,4*	*100,7*	*101,2*	*101,8*	*102,4*	*103,2*	*104,0*	*104,7*	*105,6*	*106,3*

Source: "Gemeentelijke profielschets Dendermonde", Studiedienst Vlaamse Regering, 2013, p. 3.

Figure 21 - Projected population for Dendermonde (until 2020) and compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders



Source: "Gemeentelijke profielschets Dendermonde", Studiedienst Vlaamse Regering, 2013, p. 4.

Dendermonde administrative lau is 55,6 sq km, which means that the population density has slightly evolved from **773 inhabitants / sq km (2001) to 795 inhabitants/sq km in 2011** and 799 inhabitants/sq km in 2012 (Table 5). This shows already a complete different picture than the one of Ieper.

The functional microregion of Dendermonde coincides with the administrative municipality of Dendermonde, so population and density figures are the same.

Table 5 - Dendermonde: population density 2000 - 2012, compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders

	Dendermonde												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	43.137	43.034	43.168	43.136	43.043	43.081	43.347	43.521	43.618	43.931	44.095	44.257	44.484
Totale oppervlakte in ha	5.567	5.567	5.567	5.567	5.567	5.567	5.567	5.567	5.567	5.567	5.567	5.567	5.567
Bevolkingsdichtheid	*775*	*773*	*775*	*775*	*773*	*774*	*779*	*782*	*783*	*789*	*792*	*795*	*799*

	BELFIUS.Middelgrote steden (Cluster V5)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	640.987	641.692	643.286	644.922	647.077	649.774	653.946	657.138	661.285	665.522	669.432	674.377	679.201
Totale oppervlakte in ha	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503
Bevolkingsdichtheid	*359*	*359*	*360*	*361*	*363*	*364*	*366*	*368*	*370*	*373*	*375*	*378*	*380*

	Vlaams Gewest												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	5.940.251	5.952.552	5.972.781	5.995.553	6.016.024	6.043.161	6.078.600	6.117.440	6.161.600	6.208.877	6.251.983	6.306.638	6.350.765
Totale oppervlakte in ha	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225
Bevolkingsdichtheid	*439*	*440*	*442*	*443*	*445*	*447*	*450*	*452*	*456*	*459*	*462*	*466*	*470*

Source: "Gemeentelijke profielschets Dendermonde", Studiedienst Vlaamse Regering, 2013, p. 45.

3.1.2.2. Economic profile

According to the surveyed respondents the story of the Dendermonde is based on an economy of endogenous growth of family businesses which are already established in the region for a long time. Dendermonde is not found to be as attractive to multinationals because of the perception of poor accessibility. The president of the DDS illustrated this by pointing out that Wetteren – which is much closer to the E17 - seems to be much more attractive as a location for economic settlement.

The challenge in the region is the procurement of suitable and sufficiently extensive plots for internal business relocation and growth. This is because companies often do not find the room for expansion in situ.

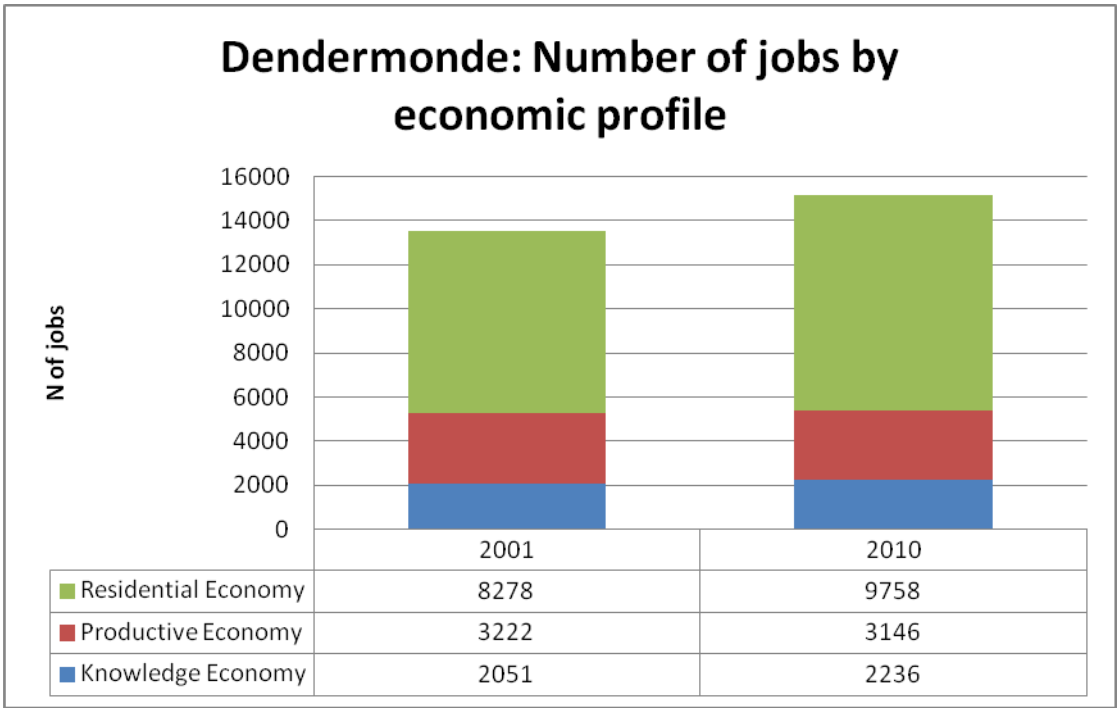
In Dendermonde, total employment grew between 2001 and 2010 with 12 %. This actually means that employment grew faster in that period than population, and also that employment has grown faster than in Flanders as a whole.

The historical sketch (paragraph 3.2.2.1) already mentioned the current importance of Dendermonde as a central service function for the hinterland. This translated into concrete numbers in Figure 21: 9758 jobs or 65 % of total employment is found in the residential

economy. When the economic profile is compared to the one of the medium sized cities and Flanders in total (which are rather similar) (see Table 6), we conclude that residential economy in Dendermonde has a higher share of total employment, and consequently the share of knowledge economy and the productive economy is slightly lower.

In general, the economic profile of the city has remained fairly stable in the last 10 years: the residential economy has increased by 18%. In the knowledge economy we observe a growth of 9%, while in the productive economy a decrease of 2.5% (see also Table 9 and Table 10).

Figure 22 - Dendermonde: economic profile 2001 - 2010



The absence of major shifts in the economic profile is confirmed in the interviews. The largest employer in the productive sector is VPK (producer of paper and packaging materials), with 500 employees, and has remained fairly stable over the last 10 years. Some other important companies have restructured in the last 10 years, resulting in a loss of employment. This is the case in the productive company Philips (manufacture of electronic components), but also in Desco Plumbing & Heating which is more to be considered as a part of the residential economy. Next to VPK other producers are present in the region specialized in the manufacture of paper and cardboard, carpets and rugs - sectors that recall the specializations during the industrial revolution - and transport and storage. In any case, there are no major industrial players located on the industrial terrains and no possibilities for expansion. This means that the productive economy is at its limits.

The high proportion of residential economy in Dendermonde is explained by the different groups of general and governmental services. The largest employer is the hospital sector (998 jobs), temporary employment agencies, and health care for elderly and disabled, and evidently the court of justice offers considerable employment in the municipality.

The growth in the residential economy can be explained by a significant expansion of the St. Blasius Hospital , the construction of new nursing homes and a further strengthening of the school network within the. Moreover, the respondents argue that the important urban

renewal movement of the last 10 years resulting in a revival of the urban cores, has brought in some additional activities, such as culture, catering and commercial functions.
Not present in Dendermonde is a knowledge economy in the form of spinoffs of local polytechnic schools. The presence of the knowledge economy in Dendermonde in the statistics is mainly due to employment in the education sector. Dendermonde is highly developed in terms of education, both primary and secondary schooling and higher education. The city also has many facilities for arts education.
Globally speaking, the industrial and service sectors in the region are mainly developed out of endogenous growth of small local craft businesses. Examples are Ontex (Ontex is the European market leader in hygienic disposables for the private label sector), Macharis (transport), Veldeman painting, ...As a matter of fact all companies in Dendermonde which are established on the new industrial sites, are local businesses that have grown .

Philips is the only multinational which settled in the town and performs large-scale production. DDS has already been trying for 15 years trying to get new multinational companies to the area, but this proves not to be successful. In practice it is felt that, within the working area of the DDS, there more interest for municipalities which are located closer to the E17 (connection Ghent – Antwerp). This perception of poor accessibility is also evident here .

3.1.2.3. Services of general interest

Looking at the classifications of urban hierarchies, Dendermonde was classified respectively as a well equipped small town (Goossens and Sporck, 1985), a well equipped small town (Van Hecke, 1998) and a very well equipped small town (Loopmans et al., 2010).

Generally speaking, Dendermondeh as fallen behin in the ranking of Flemish municipalities as far as almost all concerned function groups, except for culture, which can be explained by the impuls given by the cultural centre Belgica.

Table 6 – Equipment scores of the city of Dendermonde for different function groups and evolution 1997-2010

Dendermonde	**2010**		**1997**	
	Ranking	Equipment score (Antwerp = 1000)	Ranking	Equipment score (Antwerp = 1000)
Health care	26	128,7	16	319,6
Sports, recreation and horeca	31	336,7	25	592,3
Counter function	20	168,8	14	178,5
Government	13	416,9	11	467,5
Culture	19	125,2	32	75,7
Education	30	84	20	86,8
Traffic	19	272,09	15	367
Retail	25	128,22	24	111,2

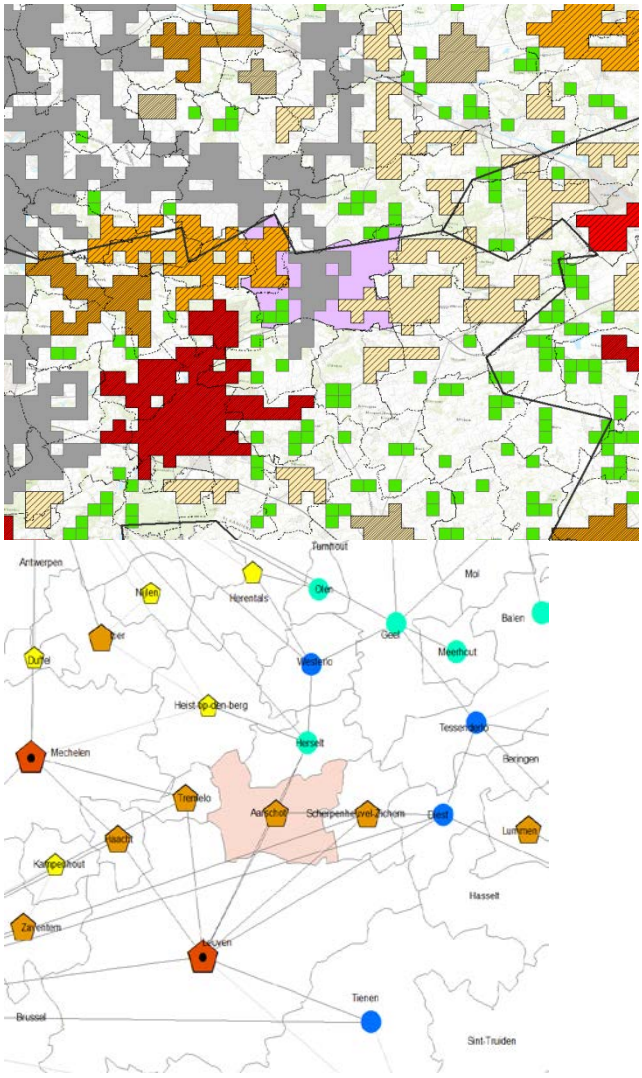
Source: (Loopmans et al., 2010)

In the Belfius classification, Dendermonde is a part of cluster 5, the “Middengrote stad”. For an interpretation of this cluster, reference is made to paragraph 3.1.1.3.

3.1.3. Aarschot

Aarschot is, according to the FA, a networked microregion towards a larger city, Leuven **(NETW_LC)**.
According to the morphological profile, **Aarschot** is part of the **HDUC** around Brussels. In the Interim report on p. 43 this is corrected and Aarschot consists of mainly fringe, and is also the eastern border of the HDUC.
Aarschot is a medium city bordering the Flemish Diamond, very well accessible, but also near to the Hageland which has a more rural character. The strong functional connection with Leuven is not only shown by the networked character in commuting (cf. FA), but also by migration movements of young families outward Leuven towards the area.
Although the city has an important link to the regional city of Leuven on one hand and has a "gate function" towards rural Hageland on the other, Aarschot is not the only city with a certain size in the wider area nor is it the only service center. There are also Diest and Tienen, which means that we can rather speak of a mutually networked structure of small to medium-sized cities. Within this region the market area of Aarschot is to be defined by a radius of 10-15 kilometers. (according to the major of Aarschot). It is important here to underline the specific situation in Flanders, characterized by a very dense network of small cities and a widely densely populated area; in these terms it is not abnormal to use these short distances in the operationalization of spheres of influence.

Figure 23 – The position of Aarschot in the morphological and functional analysis



3.1.3.1. Population – density

Aarschot has a population of 28636 within the microregion, which coincides with the lau. Population growth 2001-2011 is 3,5%. Aarschot administrative lau is 62,51 sq km, which leads to a population density of 458 inhabitants / sq km.
According to the "Gemeentelijke profielschets Aarschot", the administrative lau had a total population of 27.663 **on January 1st, 2002 and 28636 in 2011**. As shown in Figure 24, the population grew in the last 10 years with almost 4 percent. This is lower for the Flanders average and also a bit lower than the population growth within the Belfius cluster "Medium sized cities".
The population forecasts (Figure 25) are also projecting this growth rate of 2% into the future (2020). This growth is a bit higher for the "Medium cities" and Flanders as a whole.

Figure 24 - Aarschot: population and population growth, compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders

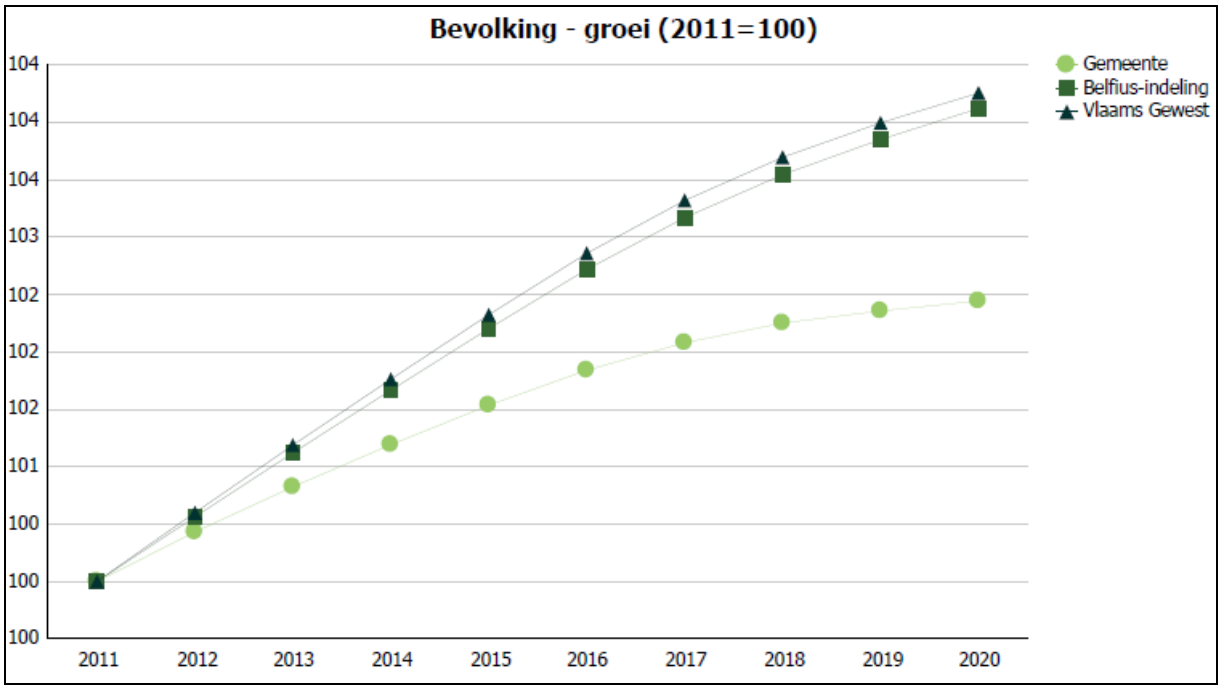
	Aarschot										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	27.663	27.664	27.701	27.831	27.864	28.021	28.129	28.223	28.405	28.636	28.755
Groei (2002=100)	*100,0*	*100,0*	*100,1*	*100,6*	*100,7*	*101,3*	*101,7*	*102,0*	*102,7*	*103,5*	*103,9*

	BELFIUS.Middelgrote steden (Cluster V5)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	643.286	644.922	647.077	649.774	653.946	657.138	661.285	665.522	669.432	674.377	679.201
Groei (2002=100)	*100,0*	*100,3*	*100,6*	*101,0*	*101,7*	*102,2*	*102,8*	*103,5*	*104,1*	*104,8*	*105,6*

	Vlaams Gewest										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	5.972.781	5.995.553	6.016.024	6.043.161	6.078.600	6.117.440	6.161.600	6.208.877	6.251.983	6.306.638	6.350.765
Groei (2002=100)	*100,0*	*100,4*	*100,7*	*101,2*	*101,8*	*102,4*	*103,2*	*104,0*	*104,7*	*105,6*	*106,3*

Source: "Gemeentelijke profielschets Aarschot", Studiedienst Vlaamse Regering, 2013, p. 3.

Figure 25 - Projected population for Aarschot (until 2020) and compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders



Source: "Gemeentelijke profielschets Aarschot", Studiedienst Vlaamse Regering, 2013, p. 4.

Aarschot administrative lau is 62,51 sq km, which means that the population density has slightly evolved from **441 inhabitants / sq km (2001) to 458 inhabitants/sq km in 2011** and 460 inhabitants/sq km in 2012 (Table 7).
The functional microregion of Aarschot coincides with the administrative municipality of Aarschot, so population and density figures are the same.

Table 7 - Aarschot: population density 2000 - 2012, compared with other municipalities within the Belfius typology "Middengrote steden" and Flanders

	Aarschot												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	27.495	27.551	27.663	27.664	27.701	27.831	27.864	28.021	28.129	28.223	28.405	28.636	28.755
Totale oppervlakte in ha	6.251	6.251	6.251	6.251	6.251	6.251	6.251	6.251	6.251	6.251	6.251	6.251	6.251
Bevolkingsdichtheid	*440*	*441*	*443*	*443*	*443*	*445*	*446*	*448*	*450*	*451*	*454*	*458*	*460*

	BELFIUS.Middelgrote steden (Cluster V5)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	640.987	641.692	643.286	644.922	647.077	649.774	653.946	657.138	661.285	665.522	669.432	674.377	679.201
Totale oppervlakte in ha	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503	178.503
Bevolkingsdichtheid	*359*	*359*	*360*	*361*	*363*	*364*	*366*	*368*	*370*	*373*	*375*	*378*	*380*

	Vlaams Gewest												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Totale bevolking	5.940.251	5.952.552	5.972.781	5.995.553	6.016.024	6.043.161	6.078.600	6.117.440	6.161.600	6.208.877	6.251.983	6.306.638	6.350.765
Totale oppervlakte in ha	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225	1.352.225
Bevolkingsdichtheid	*439*	*440*	*442*	*443*	*445*	*447*	*450*	*452*	*456*	*459*	*462*	*466*	*470*

Source: "Gemeentelijke profielschets Aarschot", Studiedienst Vlaamse Regering, 2013, p. 45.

3.1.3.2. Economic profile

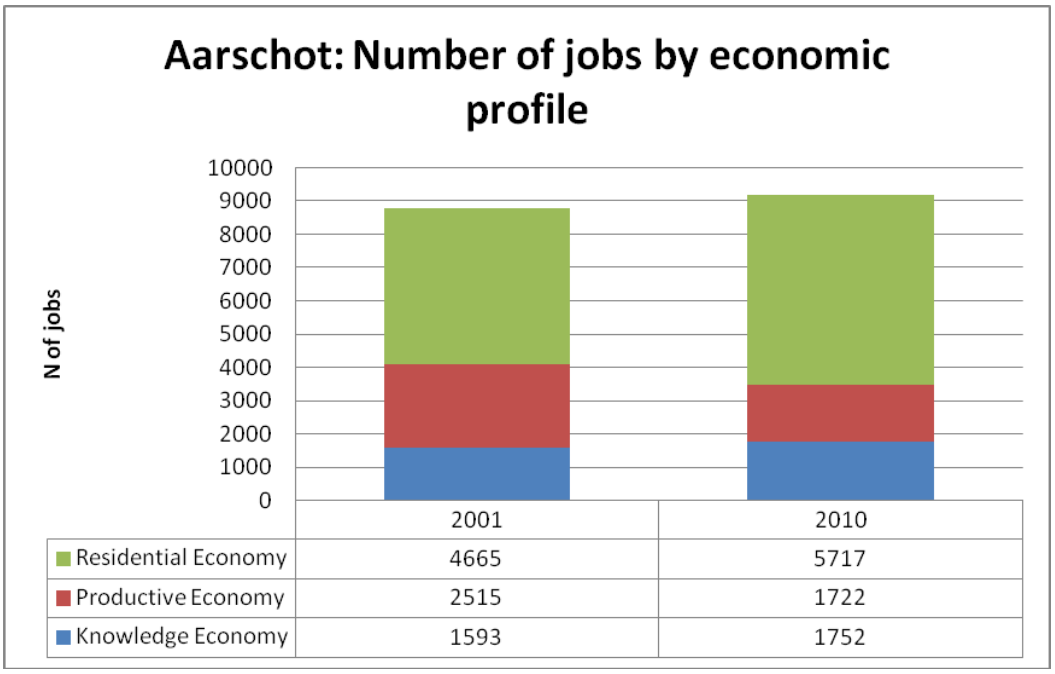
It appears to be a general phenomenon of the case studies that the residential economy is predominant. This is obviously due to the central function of Aarschot and will also be reflected in subsequent analyzes (SWOT and services of general interest), but as can be seen in Table 9, this is also a Flemish general phenomenon.

In 2010 Aarschot knew 5717 jobs in the residential economy; this is 62 % of total employment in the municipality. The productive economy is responsible for 1722 jobs or 19 %, while the knowledge economy provides 1752 or also 19 % of the total employment.

If these proportions are compared with the averages for Flanders and the averages for the cluster central municipalities (which are themselves very close together), we see that the share of residential economy in Aarschot ratio is higher, the productive economy relatively lower, but that the share of the knowledge economy in Aarschot is higher than for the medium sized cities and for Flanders (see Table 9 and Table 10).

Looking more specifically at the evolution between 2001 and 2010, we notice that the absolute number of jobs has increased by 4.8 %, which is actually at faster rate than the population growth. Within the specific economic profiles the knowledge economy grew by 10 %, the residential economy by 23%, but the productive economy declined with 31 %. If we compare this with the relative growth rates for Flanders it can be noted that in Aarschot the knowledge slowly swelled, the residential economy grew faster, and the productive economy knew a much stronger decline than average.

Figure 26 - Aarschot: economic profile 2001 - 2010



It is not easy to find an explanation of these changes by means of a comparison of the RSZ employment statistics of 2001 and 2010, since a fundamental transformation took place in the NACE classification in 2008. This causes serious complication in the juxtaposition of detailed economic sectors .

What we do know from the interviews concerning the productive sector, is the important role of Duracell as an employer in the town, but that job figures already declined significantly from (from 1000 to about 750). Recent restructuring plans of the multinational (2013) will most probably lead to further job losses . Next to this it seems that a specific

economic sector - maintenance and repair of machines – which was still responsible for 437 jobs in 2001, totally disappeared in the list of 2010.

During the interview, some other sectors in de productive economy were mentioned to be important in Aarschot: these are logistics and distribution and storage facilities such as a logistic center of INBEV, the production of swimming pools,….

The relatively good position of the knowledge economy can be explained by the large share of employment in primary and secondary schooling, but also in technical, vocational and specializes secondary education. Plans exist to strengthen the knnowledge economy in the development of the new industrial area near to the Station, Nieuwland, possibly in cooperation with the KULeuven (cf. further).

The growth of the residential economy can be explained by an increase in services of general interest, but also the important position that the city holds in the healthcare sector . Mental disability care "Huizen Eigen Haard"with sheltered workshops is the second most important job source in Aarschot. The municipality also provides residential and outpatient services for the disabled, but also people with psychiatric problems , drug and alcohol addicts are highly developed in Aarschot. The town also has a very important job in the employment agencies.

During the interview rederence was made to the important presence of garages and car retail: almost all car brands are present on the industrial terrain.

3.1.3.3. Services of general interest

Looking at the classifications of urban hierarchies, Aarschot was classified respectively as a "zwak uitgerust kleine stad en grote hoofdzakelijke zelfvoorzienende stad" (Goossens and Sporck, 1985), a well equipped small town (Van Hecke, 1998) and a well equipped small town (Loopmans et al., 2010).

Generally speaking, Aarschot has fallen behind in the ranking of Flemish municipalities as far as almost all concerned function groups, except for education, government, counter function and health care.

Table 8 – Equipment scores of the city of Aarschot for different function groups and evolution 1997-2010

Aarschot	**2010**		**1997**	
	Ranking	Equipment score (Antwerp = 1000)	Ranking	Equipment score (Antwerp = 1000)
Health care	64	54,1	66	120,6
Sports, recreation and horeca	75	227,5	24	595,9
Counter function	17	189,9	29	94
Government	39	158,6	41	112,1
Culture	26	100	13	151,5
Education	25	93,2	28	71,4
Traffic	20	270,6	11	410,6
Retail	67	70,45	46	85,2

Source: (Loopmans et al., 2010)

In the Belfius classification, Aarschot is a part of cluster 5, the "medium sized city". To interpret this classification, reference is made to paragraph 3.1.1.3.

3.2. Socio-economic and demographic performance of SMSTs based on local respondents

This subchapter sketches the historical development of the case studies, which help to a certain extent to explain the actual position of the city and its performance. Performance of towns is further concretized by performing a concise SWOT analysis based on the interviews with local respondents and, if possible, existing reports/research projects. In a last paragraph we will recapitulate the findings of this chapter and make a first comparison between case studies, in order to discuss the possible quantitative criteria to assess performance of Flemish medium towns.

As far as the functional roles the case studies play, they are rather similar. This is partly the result of the criteria which were used for the choice of case studies, being diversity in morphology and a functional typology based on commuting patterns. As far as centrum function is concerned, they have a similar role, although it is interesting to see the differences in wider geographical situation, since this determines the conditions and constraints one has to react upon in policy (the institutional and governmental context of the different case studies will be discussed in chapter 4 .

3.2.1. Ypres

3.2.1.1. Ypres: historical development

Ypres has an eventful and fascinating history with periods of enormous power and wealth, but also times of great sadness and poverty, each with their specific impact on the spatial development of Ypres and her hinterland. This historical survey clearly highlights the central role which the town of Ypres has always played: either as a world center, then a regional center with successively mainly economic (and financial) function, agricultural function, trading function, military function and central service function for his immediate environment. (WITAB, 2000), p. 17-24

Until about the 10th century, the area around Ypres mainly covered with natural forest around Ypres, which originated in the 8th-9th century as an Agricultural settlement. In addition, the Ypres territory was intersected by two different Roman roads to the important Roman centers (such Cassel) and other major settlements.

The first major development period took place **from the 12th century to the 13th century.** During this period, the original natural landscape was brought into culture by the transformation of forest, heath, marsh and peat into fertile agricultural land. This lead to the formation of a cultural landscape which still exists to date in Ypres, but which has also been a crucial period in the landscape and settlement history of Flanders as a whole.

The region of 12th century Ypres must have known already a (rather dense) built-up area in a wreath of villages and hamlets around the rapidly growing city. The rapid growth of Ypres in the 11th - 12th century was also predominantly achieved by immigration from the countryside indicating a relative overpopulation of the Flemish countryside in the 12th century which gave Ypres to opportunity to develop from a small Agricultural centre towards an international trade centre at a phenomenal pace.

In the 13th and 14th century, the County of Flanders developed into an important trading center where the Flemish cities were among the largest in Western Europe (Bruges, Ghent, Ypres, Antwerp, Mechelen, Brussels and Leuven each had more than 10,000 inhabitants). Nowhere in Western Europe such an important density of 'big cities' centers and industrial (textile) existed. Ypres and the "Westhoek" in general was more centrally located in the 13th-14th Young "Flanders" as in the Flanders of today. Also because of its location on a river (the Ieperlee) and on the main road Lille-Bruges, Ypres was able to develop as a major power in Europe, mainly based on the cloth industry and trade. Between 1140 and 1380 the power of Ypres was at its peak, with a population of 40000 in the year 1260, at that time a world-class city.

In 1383, the area around Ypres was destroyed during the famous "Siege of Ypres". Thereafter, the powerful and central function of the city declined rapidly. The cloth industry faded away due to the competition of English cloth. This led to a sharp economic downfall associated with strong population decline (partly as a result of plague epidemics and famine) from 40,000 in 1260 to 10,700 residents in the early 15th century and 7600 at the end of the same century. Since the 14th century Ieper would never have the same significance.

Moreover, during the **17th and 18th century** Ypres became a strategic place in a widely contested border area during the European power struggle. The city was rebuilt by its successive occupants to a huge fortress and evolved into a military stronghold, which commercial and industrial activity was geared to the military-industrial device and limited to the needs of the military garrison. Throughout the centuries Ieper degraded from a world trade center to a local center of regional trade and cottage industries (including lace) in the middle of an agricultural hinterland.

In the **19th century**, industrialization brought Ypres small industries such as bleach fields, a ribbon weaving factory and lace confection. During the 17^{th} – 19^{th} century, Ypres also sought to constantly improve its accessibility and interconnection but water and rail, out of the constant desire to revive its successful medieval period.

Especially **in the 20th century,** the Ypres landscape has changed dramatically, in first instance by the devastation of World War I, then by the reconstruction and industrial development by means of a succession of five-year plans.

The **First World War** meant to the town of Ypres the tragic nadir of its history. Ypres was the centre of the front line ('the Ypres Salient' or 'salient '). The four-year siege of Ypres resulted in 1 million dead, wounded or missing people and a devastated city and region. Practically all residential areas and the forested hills were completely destroyed and the Ypres landscape was transformed into a moonscape of bomb craters. Despite the faithful reconstruction of the city and the villages according to their original structure, the First World War is still very strongly present in the Ypres landscape of today. Approximately 150 military cemeteries, many relics, museums and war monuments, of which the best known example is the Menin Gate, and a number of bomb craters are the silent witnesses of the blackest page in the history of Ypres.

After WW1 the UK even wanted to preserve the town in its ruined state and preserve it as one large outdoor monument as a witness to the terrible war. The Ypres population and Belgian population, however, were against it and expressed the wish to rebuild the city and move on. The complete reconstruction of the devastated city has lasted more than 40 years.

The period immediately after the First World War was characterized by a reconstruction of

the devastated city and a strong immigration movement. Since the reconstruction as a residential centre had not been accompanied by economic reconstruction, Ypres was characterized by a strong outward movement of border and seasonal labour and also an outmigration movement, which continued until after World War II. In order to reverse this negative spiral, the city implemented a number of ambitious five-year plans which started in the Sixties. These plans pursued the industrialization of the "Westhoek", concentrated in the urban cores, accompanied by the development of economic infrastructure at an accelerated pace. The economic function of the region was deliberately concentrated in Ypres near the A19 and in Furnes near the A18. The merit of those programs was the strategic and spatially concentrated manner in which the region was supported to gradually develop and improve itself and more generally, lead to an economic revival of the "Westhoek".

These plans concentrated on different sectors of the economy: not only the economic fabric was reinforced by the development of business parks and industrial centers and by an improvement of the road infrastructure, there were also funds put forward to strengthen the agricultural structure, water collection and purification, and also tourism.

The great efforts made for the expansion and adaptation of the road network, which improved the accessibility of Ypres and the surrounding nuclei, not only resulted in a large space intake for economic activities (e.g. Industrial Zone Ieperleekanaal) but also resulted in an enhanced attractiveness towards residents. This accessibility paired with the democratization of the car are the key success factors for rural residential model: living in a quiet, traffic safe, rural environment.

An important spatial development which characterises the whole of Flanders has been the emergence of large scale shops and local businesses located along main traffic arteries, which makes them easily accessible and with ample parking space. In addition, these companies not located within the core built up area have much more possibilities for spatial expansion. However, by a foreseeing planning policy Ypres has never experienced such a dispersal of trading functions in peripheral areas. Until today, this permits a concentration policy of retailing and has not jeopardized the inner city shopping complex.

3.2.1.2. Ypres: SWOT analysis

When asked to highlight the strong and weak points of Ieper issues concerning mobility, socio-economic issues and citizenship were mentioned.

Weaknesses

Although its location near the A19 and the Ieperleekanaal is considered as an element of good accessibility and the city has ample parking space, the overall **peripheral position** of Ieper towards the rest of Belgium is clearly considered a weakness. This peripheral position is also augmented by a poor accessibility by rail. Although the Southern region of the province of West-Flanders tries to compensate for its peripheral position by looking for connections and cooperation in the Lille Metropolitan Area, Ieper is considered to be too far from the metropolitan core to actually capitalize on cooperation.
The remoteness of Ieper will probably remain an important handicap, even in comparison to other nearby cities and regions such as Roeselare, Kortrijk, which are already far better connected.

This peripheral position towards the core area of the country and the big universities, results in a considerable brain drain of high skilled professionals leaving the area after the university to find job opportunities elsewhere, which is considered locally to be one of the big challenges to face and a trend to reverse. Evidently, this brain drain greatly impedes the development of a sector of highly qualitative services in the area.

The shortage of some specific amenities or conditions which are necessary to attract to keep this demographic group in the area will certainly not help the matter; factors which are mentioned in the City Marketing Plan of the city are: insufficient supply of housing, lack of employment opportunities for highly skilled, lack of higher education institutions, and insufficient child care, sports and cultural facilities. (Beernaert et al., 2008)

Related to economic dynamism also the shortage of large investors and a limited innovation capacity and renewal are mentioned. It is not always deemed easy to foster development caused by the relatively many constraints put forward by spatial planning.
It is also difficult to find new interested parties to repopulate the business park Ter Waarde, which was the former Flanders Language Valley. This causes (or is caused by?) deterioration of buildings on the site.

Other mobility issues on micro level are the overload of buses in the downtown of Ieper, and the poor accommodation of the industrial terrains towards cyclists and pedestrians.

The City Marketing Plan also mentions some image problems, related to attractiveness towards residents and visitors: the label of "peace city" is deemed as insufficiently attractive towards own residents and the city is showing insufficient strength in the field of modern art and modern architecture. In conclusion, the city does not host any major event.(Beernaert et al., 2008)

Strong points

Notwithstanding, the residential pride of the citizens who do reside in the town and the strong sense of community, are considered as **strong points** of Ieper. This is explained by the schizophrenic nature of Ieper as an urban centre – a medium town without the problems normally associated with a large city (poverty, congestion, unsafety). This sense of community is enhanced by a strong presence of associations, a feeling of social cohesion.

This aspect of a safe city is also mentioned in (Beernaert et al., 2008), and also mentions other elements of a good quality of life such as the vicinity towards open space, rural and green environment and a necessary facilities at short distance, affordable housing and a balanced mix between property and rental housing market. The plan also mentions a wide array of services of general interest: city library, extensive and high quality offer of cultural and sport facilities, high quality education, high quality and accessible health care, good quality seniors' care.

An environmental strength is the strong spatial connection and adjacency of the city with the surrounding open area, which provides an attractive living environment. This environmental aspect could be greatly enhanced by the development of the ecological residential area "De Vloei" (further)

The city, which has a strong historic character, has also shown a strong growth in tourism related services during the last years, especially regarding catering and accommodation functions, but also touristic core attractions, for example the Flanders Fields museum which was completely refurbished and reopened in 2012.

As also mentioned in paragraph 3.2.1.1, the inner city shopping complex of Ieper has not felt the competition of large scale commercial developments in locations close to the important traffic arteries. This leads to good quality shops, a sociable and compact shopping city, concentration of chain stores in two designated locations, good mix between chain stores and local merchants.

With respect to economic development in general, the industrial land that is available, is well affordable.

3.2.2. Dendermonde

3.2.2.1. Dendermonde: historical development

The history of Dendermonde, a fortified town on the Dender and Schelde estuary, goes back to the Neolithic period. In the Iron Age and after the Gallo-Roman and Frankish period the people settled preferably on the sandy hills on both sides of the Dender. Probably by the end of the Frankish period, the population concentrated further in the actual city center.

The emergence of the political 'Land of Dendermonde' can be situated in the **10th or first half of the 11th century**, when the Count of Flanders, captured the region between Dender and Schelde at the expense of the German emperor. He supposedly gave a part of this captured land to one of his major helpers in battle. These later Lords of Dendermonde further established the territory as a Herrschaft and protected their rights by building a castle on the island near the estuary of the Dender. After the foundation of the a roman church in the 11th century the city developed further and experience a major flowering period.

During the **12th and 13th century** the settlement developed into an important local trade and cloth center, which in 1233 received its town charter of Robert of Bethune. Since 1348 Dendermonde belonged to the Flemish counts and later the Dukes of Burgundy and Habsburg emperors. The city had four gates with connections to surroundings important cities such as Ghent, Malines and Brussels.

For economic and political reasons Dendermonde got involved in a series of conflicts between the mighty city of Ghent and the Flemish counts **(14th century).** Devastation and economic sanctions resulted out of it and caused a slow economic decline. After the iconoclasm of 1578 and the reconquest of Dendermonde by Alexander Farnese, a period of restoration followed. In the second half of the 17th and beginning of the 18th century, this respite, however, was again broken by a series of devastating wars and sieges - as the city was shot in ruins in 1706 by the Duke of MarlBorough.

Peace and prosperity only returned around the middle of the 18th century, when the first paved roads were constructed and new industries were introduced. Joseph II wanted a radical break with the past and therefore ordered the demolition of the old city walls, so by the end of the 18th century, Dendermonde was for the first time in centuries an 'open city'. This openness, however, ended again in the 1820's, when Dendermonde was forced into a status of military fortress and garrison city for strategic reasons.

At the beginning of the **19th century** the city had 5000 inhabitants. In the course of this century Dendermonde knew an intense period of industrialization, in spite of its oppressive

walls. Dendermonde was also after Brussels and Mechelen, the third city on the European continent that had a railway connection. Dendermonde grew into a small textile town. In addition to cotton, there was also a significant production of oil, tulle, paper, ropes and cables. For transport Dendermonde appealed to the rail connection and the port. Dendermonde also grew into a commercial, educational, administrative and legal center of regional importance – under the reign of Napoleon, Dendermonde received a court of First Instance. The city counted 10000 residents at the end of the 19th century.

All this came to an end in September 1914, when the city was systematically put to fire by the German army. Numerous public buildings were lost, 1252 houses totally destroyed and 889 seriously damaged. When the reconstruction was completed by the end of the Thirties, World War II broke out. Later, in the years 1950-1970 the traditional industry disappeared and the city of Dendermonde was mainly developing as a commuter municipality primarily towards Brussels. The negative tide only turned in the seventies as a result of two successive municipal mergers (1972, 1976), the establishment of the intercommunal cooperation DDS (1970) with the goal to foster regional economic growth, the development of the industrial terrain "Hoogveld" and a series of important infrastructural undertakings. This enabled Dendermonde to grow back into a thriving regional center with about 43,000 inhabitants.

Currently the city acts as a strong attractor to the surrounding communities by the large number of shops, the presence of many schools for general and art education. Moreover, the city is the capital of a judicial district, including Sint-Niklaas and the region of Aalst.

In summary, because of his former position of fortress - and garrison town and the catastrophe of 1914, Dendermonde has not succeeded in becoming a big city, despite its convenient location. Another reason will be the competition with surrounding cities.

3.2.2.2. Dendermonde: SWOT analysis

Strengths

Dendermonde is very conveniently situated as the focal point of the triangle Brussels, Antwerp and Ghent, with the consequence that it can attract commuters to these towns, many people and many companies are located in the region that supply to these 3 major cities. Another strength is the location of the Dender and Schelde, which means that there is potential to optimize water base industrial activity.

As already reflected in the analysis of the economic profile and services of general interest, Dendermonde appears to have a very strong public and governmental function both in the education sector, but also in health care, temporary employment agency sector, and the legal position of the city (cf. Paragraph 3.2.2.1 on the historical development of the town).

The city is very well connected by public transport and passenger rail, which is a positive location factor for people are settling in the area and commute to Brussels - Ghent-Antwerp. The borough of Sint-Gillis, located close to the station, originated initially as an official's - and commuting town by rail to Brussels. The borough Grembergen is more focused on Ghent and Antwerp, since from this borough the connectivity to the highway E17 is in fact the smoothest of the whole municipal territory. This also means that both boroughs are the fastest growing and rejuvenating areas of Dendermonde.

Another asset of the city is the presence of green areas in the region, even very close to the city center. The green areas there are the remnants of the former city fortifications. This

combined with the presence of the Dender and the popular "housing on the waterfront concept", makes it a pleasant and attractive area to live.

Weaknesses

Although conveniently located within the Flemish Diamond and very well connected by rail, the connectivity for road transport is less efficient. The area is an "impregnable fortress", as it is very difficult to get to the center from the edges of the triangle E17 (Antwerp - Ghent), A12 and E19 (Antwerp - Brussels) and the E40 (Brussels - Ghent). The roads are not well equipped for fast through traffic. The situation could improve by the addition of a "missing link" in the area with the impregnation of the N41, by which a smooth north-south connection could be added in the area. However, its realization is difficult and the debate is ongoing for over 30 years. As long as this connection is not achieved , one remains in a situation with an important traffic flow of persons and goods passing through the town centers and residential cores, schools and services, via badly adapted road infrastructure. This naturally results in negative perceptions of companies (multinationals) on the accessibility of the city for the location of their company, but it also strengthens awareness of the local government that an improvement of the road infrastructure is conditional for any other socio - economic development (space for businesses , housing , ...)
The morphological analysis indicated that indeed the Flemish Diamond is a densely populated area (it is considered to be part of the large urban area of Brussels), a situation that is simply typical of a large part of Flanders and therefore does not make the case Dendermonde always comparable to other foreign cases. This raises many issues of spatial congestion, namely the lack of available space for new developments (see also Section 3.1.2.3). The difficulties to mobilize space for residential development – can also be explained by the large share of land owned by private individuals or private project developers. As already been mentioned, the space use of economic activities has reached it saturation point. This has the consequence that land is very expensive: e.g. DDS (the intercommunal partnership sells residential plots at Wetteren (north of Dendermonde) to €160euros/m² while the private sector has a proce setting of € 240/m². In industrial zones the differences are even bigger: SMEs zones run by private companies sell for 150 Euros / m² while DDS sells only at € 40 / m².....

3.2.3. Aarschot

3.2.3.1. Aarschot: historical development

For the description of the historical development of the city of Aarschot , we must fall back on the Municipal Structure Plan of Aarschot (Planning, 2005). However, this document used historical maps as a source material to sketch historic evolutions. This results in a text that mainly lays emphasis on morphological and land use changes, and less on the socio – economic and political context in which these changes are situated.

Aarschot was first mentioned in **1107** as Arescod. This name is derived from the Germanic and means "a wooded patch of high ground, protruding in a swampy terrain". This statement fits perfectly in the topography of Aarschot. The first agricultural settlements date back to the Iron Age (750-450BC) with the immigration of the Celts. After the domination by Rome, it was the Frankish immigration that severely determined the cultural landscape in Flanders. The Frankish settlements were located in the vicinity of valleys on drier and

relatively fertile soils. Around the settlements the fields for common cultivation were situated. Around this time the first forests and meadows were mined.

The High Middle Ages were characterized by a large movement of cultivation. The population increased strongly in the **11th and 12th centuries**, so that new land reclamations were needed. The reclamation of this period was characterized by an individual approach, which yielded a scattered habitation image. This was done by small farmers on the one hand in a spontaneous and unplanned way and on a systematic basis by wealthy landowners on the other hand. The cultivation pattern within the Hageland was strongly influenced by the topography and water resources. The ridges and the hilly landscape of the Kempen remained relatively densely forested. The cultivation period however did not prevent the subsistence of great heaths and smaller relics until after the Middle Ages. In that period (1200) the city of Aarschot grew into a county with the first ramparts on the southwest side.

In the **13th century** Aarschot was an economic hub thanks to a boom in trade and industrial activity. In the late Middle Ages Aarschot had a thriving textile industry. The existing land- and waterways played an important role in this development, and especially the Demer. For the purpose of shipping and driving water mills, water channelling was already carried out in that time.

In the **18th century** a second large cultivation period emerged, driven by population growth. Large landowners transformed heath mainly in coniferous forest, small owners to farmland.
Although the region knew already a lot of trade and industrial activity at the end of the 18th century, the main activity of the population was still farming, and this determined the spatial organization of the settlements.

Along the great rivers a continuous area with marshy meadows existed. Two of these areas, the “Demervallei” and “Herseltse Loop”, run parallel to each other along the east-west axis. The Motte Valley with its north-south orientation, meets with the Demervallei. This is a wide stretch of marshy land, which served as extensive hay land (meadows) and stood in the winter under water.

The degradation of all rural fortifications and ramparts in **1782** was the impetus for slow expansion of the built up area of Aarschot. In this period there was the emergence of ribbon development within the region. Generally, a confrontation of the buildings with the first pitch line (15m) outside the alluvium is a clear reflection of the building logic which was used at that time. Water Sick grounds were systematically excluded.

In the **19th century** a lot of infrastructure works were carried out. Paved roads were (re)constructed; straight connections replaced old roads or were added on new locations.

The Demer was straightened out of the inner city. Finally, the railway was built with the station.
Many heaths have disappeared due to natural storage (forest growth). Agricultural development cause further fragmentation of the woodland.

From the **20th century** there has been a steady decline in the proportion of cultivated agricultural land, partly associated with increased farming (poultry farms), but also with an increase in the residential areas and forestry . The great expansion of new residential areas came after 1950. The planting of orchards knew also a peak in the 50s – although actually only half of its area remains. The construction of an industrial zone between

“Betekomsesteenweg” and the new “Ter Heidelaan” is a fact. Between the Demer and Leuvensesteenweg the artisanal zone “Nieuwland " grows further. In order to relieve traffic through the city, the eastern and western bypasses are built.

From the **60s** the landscape of the Demervallei changed thoroughly. The Demer was further straightened, deepened and built between higher dikes. The relationship between the river and its valley was broken. As a result, the water was not retained during the summer in the valley and the water level dropped considerably, causing a disruption in the water balance and dehydration. Nature and agriculture were in trouble, denominations lost their natural fauna and flora and were used for improper purposes (landfill, weekend, fishing,). The recent floods (autumn 1998, and others) have once again underlined the importance of an integrated approach to water management.

3.2.3.2. Aarschot: SWOT analysis

The information of the interviews is complemented by a SWOT analysis in the Municipal Structure Plan of Aarschot (Planning, 2005).

Strengths

The good relative position towards Leuven is considered as a strong asset of Aarschot, and is also played out in policy (see Section 4.1.3). The city boasts on the attractive environment, with a rich range of natural (the green belt and protected landscape of the Demervallei) and cultural heritage elements. This makes the area attractive to both residents and businesses.

This also translates into a population increase of youth or young couples who migrate from Leuven (amongst others) and are looking for an affordable and high-quality living environment. On the other hand, this population group pushed out from their origins – Brussels and Leuven, since it has become impossible to find affordable housing.

Being a well-equipped city Aarschot, together with Diest, holds an important regional position and is a center for education, trade, socio-medical care, culture. The city also has many facilities focused on sport and youth.

Moreover, the city is easily accessible from Brussels and Leuven both by public transport (Aarschot is situated on a railway crossroads of interconnecting railway lines from Leuven to Brussels, Antwerp to Lier and Hasselt to Diest) and via the motorway (A2), which applies in particular to the industrial zone of the city. The city center is also enclosed by the ring directly connected to the N223 motorway. There is also ample parking space directly adjacent to the shopping district. The railway station is centrally located between the industrial area and the residential area.

Aarschot has a thriving and expansive regionally oriented activity. There is also a well-developed shopping image, albeit rather at local appearance level. With regard to agriculture, the increasing size of holdings has fostered the viability of farming enterprises. The horticulture sector is also present: some slopes are suitable for fruit production. There are also some important auctions and experimental gardens in the area.

The Demervallei is one of the most important natural complexes of Flemish Brabant (and also a European Habitats area) and is enclosed with various cultural landscapes which

continue almost until the built up area. The region has a high experience value because of the present relief.

Weaknesses

Primarily, the respondents mentioned a similar phenomenon as in Dendermonde, namely the problem of space shortage: how can all these land claims be combined within a limited area, in which notably the Demervallei takes up considerable space and which prohibits further development? – The valley is classified as a European protected area.

Furthermore, one of the benefits of Aarschot was its regional position, but this also has its negative sides: Aarschot is experiencing competition from the other nuclei in the Demer valley. Within this settlement chain the various nuclei are too close together, so that none of these cities can grow to a higher level. Besides, the way those nuclei are developing along the paved roads causes clogging of open space. This is due to the significant immigration which is primarily focussed on the borough towns, and much less on the city Aarschot itself.

The ribbon development along the roads with a traditional transport and traffic function, both as a result of residential developments and large shopping complexes, causes traffic safety issues and threatens the viability of these roads.

With regard to economic development, the major problem is the lack of available terrains for industrial development, although the high demand of companies who want to settle in the area, or who want to expand their activities and are consequently in search for more available space. The main explanation for the lack of newly developable new industrial land, the green belt of the Demervallei which occupies a large part of the Aarschot territory and enjoys a high protection status as European Birds Directive habitat area. Which each planned extension, proof has to be provided that the development will have no effect whatsoever on the habitat, which the municipality was not able to provide. Because of the scarcity of additional industrial land, the industrial land prices inflate considerably. This is not only the case in Aarschot, but can be observed in the whole province of Vlaams-Brabant.

Agriculture is in trouble partly due to the fragmentation of the farmable land and the relatively old farming population without succession. Moreover, farmland is sandy, with overall moderate quality. A threat to the shopping area in the city center is the limited capacity of the clientele within the city center (aging population, many singles, and lower incomes).

The valuable open space of the Demervallei is also not unchallenged: the valley suffers from withering due to the infrastructural changes of the past (see also Section 3.1.3.1), which has caused quality loss of the natural habitat. Moreover, the hillsides are being built up with residential development because of the panoramic view over the Demervallei (Langdorp). The woods north of the railway to Diest are internally eaten away by the implantation of second homes.

3.2.4. Performance of Flemish case study towns: which criteria to use?

The case of **Ypres** is a rather traditional case of a medium sized city which functions in a rather large microregion consisting of very small towns. The population density of the area is the lowest of all case studies (269 inhabitants/sq km). The wider area has a rural character, and the relatively eccentric position towards the Flemish Diamond results in a brain drain of high skilled people, since general services in their regard are not present. Nevertheless, Ieper has a tourist dimension to play out to use as a lever for the development of services of general interest (cf. Chapter 4).

The population figures for Ieper show a stagnation of population, so a brain drain should have to result in an ageing of the population. This means no quantitative, but a qualitative change in age composition. This means that as a measure of success, not only the absolute population growth could be taken into account, but also the "greening" of the population. This could for example be measured by the average age of population; although this indicator does not necessarily take into account the family structure – since families with young kids are the target group.

The analysis of RSZ figures (which do not account for self-employment we have to add) shows a growth of employment of 16%, which is the highest of all case studies (cf. Table 10). Ieper is the only case study which shows a decline in knowledge economy in the last 10 years, but on the other hand a rise in the productive economy. Also, Ieper has the highest growth rate of all case studies in the residential economy. However, local government stated that there is a lack of high skilled job opportunities, which could again be an extra indicator to measure the desired job growth. The government of Ieper also spoke of the necessity to attract job intensive economic sectors. This could mean that, next to absolute job growth, the share of high skilled jobs could be a valuable indicator to measure performance, even so as the average employment per company.

The SWOT analysis also spoke of a shortage of services of general interest, but this will need a more advanced analysis in e.g. the amount of services per inhabitant. We could then think of a varied indicator set related to different amenity groups and related to the different demographic strata. Some indicators to measure degree of services were proposed in (Lievois et al., 2011), such as share of child care amenities per infant, relative amount of rest homes beds,....

In summary, Ypres can be classified as a case which is successful in developing job opportunities, but is stagnating in terms of population. Success in its case would be to reverse the brain drain, by a mix of strategies (cf. Chapter 4).

Aarschot's wider geographical situation is nicely depicted in Figure 14, namely on the verge of the densely populated Flemish Diamond, closely situated to Leuven, but on the other hand situated in the Hageland, one of the remaining traditional rural areas in Flanders. This relative location, also within the Demervallei, represents a challenge in combining all these functions and realities, also with a high demand for residents and companies to settle in the area.

Aarschot is the first case study of the three to experience "pressure", pressure out of the urbanized area of the Flemish Diamond and especially cause by its good accessibility towards Leuven, Brussels and Antwerp. The population density in the area is 458 inhabitants /sq km.

The population figures for Aarschot show indeed a growth between 2001 and 2011of 4%, which confirms the observation of the respondents. The observation that those are amongst other young people and young families coming from Leuven should be confirmed by a relative high share of this age group, this should be confirmed by the demographic analysis in RA3.
However, some nuance should be added since Groep Planning observed that this demographic group is mostly migrating to the boroughs and that in the city centre, there is a higher share of elderly people, single households with lower income (Planning, 2005). Next to the indicators already selected in paragraph 3.2.1, average income could be another relevant indicator, although this is not a direct policy objective the city (cf. Chapter 4).

The analysis of RSZ figures (not taking into account self-employment) shows a growth of employment of 5%, which is the lowest of the case studies and also lower than Flanders average.
Aarschot has the highest growth in knowledge economy of all case studies – but not higher than the average of Flanders. It has the highest decline in productive economy. This seems in line with the SWOT analysis of the Structure Plan Aarschot, noting that Aarschot is only able to establish a regionalized economy, which is besides considered as an asset by (Planning, 2005). The residential economy in Aarschot is growing substantially however.

In the case of Aarschot is could be interesting to monitor the job growth in the knowledge economy sector, since its strategic location towards Leuven and spill over effects. Although, the interviews show that ”knowledge economy” is interpreted by the respondents in a much narrower way as by the cqse study guidelines. The inclusion of primary, secondary and higher education and this biases the results very much, especially in the case of a town with a strong centrum function such as Aarschot. The categorization of the knowledge economy sectors should be narrowed.

In summary, Aarschot can be classified as a case that is steadily growing in jobs and population, but not especially high; spectacular growth will not be possible caused by spatial competition (abundance of cores of the same hierarchy in the immediate vicinity). Moreover, the shortage of available land shows an amount of saturation which Aarschot tries to solve by finding alliances with surrounding municipalities and the elaboration of a sub regional strategic approach.
Finally, **Dendermonde** is the most “controversial” case study in this research. This is because Dendermonde is in fact in the morphological analysis, not a medium or small town, but a part of the highly densified urban cluster around Brussels. The functional analysis classifies Dendermonde as an agglomerated microregion towards Brussels. We now find ourselves in the center of the scattered, urbanized area of the Flemish Diamond, the population density has risen to 795 inhabitants per square kilometres, and population is 44357 inhabitants.

This shows that Dendermonde experiences the same problems of pressure than, for instance, Aarschot, but differs from Aarschot in the way that accessibility by road is not very well, and the city finds itself in an area of even higher spatial competition in which all municipalities are competing with each other, and where the saturation on the built environment is very high.

The population figures for Dendermonde show indeed a growth between 2001 and 2011of 2%, so this can almost be considered as a stagnation. When talking to the respondents, they explicitly stated that a population growth can be considered as a measure of success, since it

shows a present dynamism in the region. This does not mean that qualitative growth was not mentioned: the representative of the DDS also mentioned the need to attract young people and young families, since they present the largest dynamism in case of workforce, need for services, etc.

The RSZ figures show a growth of employment of 12%, which is lower than Ieper, but still higher than the average for the medium sized cities and higher than Flemish average. As far as economic profile is concerned, Dendermonde has a growth in the knowledge economy which is comparable to the average for medium sized cities, but lower than Flemish average. Also here this growth can be explained especially by education. The production economy is in slight decline, but in line with the Flemish average. The residential economy is growing at a faster rate than the Flemish average, but this is a situation observable in all our case studies.

What is observable however, actually in all the case studies is that population growth and job growth is not necessarily a direct indication of attractiveness of cities. Respondents in Dendermonde and also Aarschot stated that growth is only possible after the establishment of new residential developments and residential areas/business parks. The ease by which these can be developed is dependent upon procedural inertia, but also by available space. The Flemish cities are very illustrative for this since some of them seem to have reached saturation point. So in a way this is a plea to include, in each model for the forecast of "success of medium sized cities", also some factors which represent constraint, not only spatially, but also procedurally. A proposed indicator to measure this spatial pressure could be prices per m² for residential and industrial plots.

To conclude, it shows that our 3 case studies have a faster employment growth than population growth, which confirms their status as a job centre and which means that commuting is taking place out of other places towards the municipality.

In conclusion, relevant indicators for the performance analysis of small and medium towns based on the analysis of 3 Flemish case studies (of quantifiable and data are available), are:

Related to population structure:

- Absolute population growth;
- Average population age;
- Share of families with young kids;

Related to economic growth:

- Absolute job growth;
- Growth per economic profile;
- Share of high skilled jobs
- Average employment per company.

Related to services of general interest, amenities related to the relevant target group:

- Share of child care amenities per infant;
- Relative amount of rest homes beds

But also some indicators representing spatial and procedural constraints:

- Average price/m² for residential plots;
- Average price / m² for industrial plots;
- Procedural inertia (indicators to be proposed).

Table 9 – Economic profiles of the three case studies and comparison with Belfius-cluster "medium sized cities" and the Flemish average (in absolute terms and in percentage on total amount of jobs, 2010)

	Knowledge Economy	Productive Economy	Residential Economy	Total	Knowledge Economy %	Productive Economy %	Residential Economy %
Aarschot	1752	1722	5717	9191	19,1	18,7	62,2
Dendermonde	2236	3146	9758	15140	14,8	20,8	64,5
Ieper	2180	4391	11973	18544	11,8	23,7	64,6
Medium sized cities	42041	59854	158053	259948	16,2	23,0	60,8
Flanders	372919	506495	1298544	2177958	17,1	23,3	59,6

Source: RSZ, 2010.

Table 10 - Absolute amount of jobs in the different economic profiles and in total, evolution 2001-2010

	2001	2010	Growth 2001-2010
Knowledge Economy			
Aarschot	1593	1752	10,0
Dendermonde	2051	2236	9,0
Ypres	2268	2180	-3,9
Medium sized cities (Belfius V5)	38262	42041	9,9
Flanders	322177	372919	15,7
Productive Economy			
Aarschot	2515	1722	-31,5
Dendermonde	3222	3146	-2,4
Ypres	4060	4391	8,2
Medium sized cities (Belfius V5)	61600	59854	-2,8
Flanders	516545	506495	-1,9
Residential Economy			
Aarschot	4665	5717	22,6
Dendermonde	8278	9758	17,9
Ypres	9590	11973	24,8
Medium sized cities (Belfius V5)	135215	158053	16,9
Flanders	1151501	1298544	12,8
Total			
Aarschot	8773	9191	4,8
Dendermonde	13551	15140	11,7
Ypres	15918	18544	16,5
Medium sized cities (Belfius V5)	235077	259948	10,6
Flanders	1990223	2177958	9,4

4. Policy analysis

This chapter is structured per case study, with a bottom to top approach. The analysis starts with an analysis of the local response on challenges identified in chapter 3. The municipalities are dealing with these challenges through local policy levers and funding, or if this is not possible, look for above-local regional cooperation strategies to "gain economies of scale". In the case of Flanders, this is also fostered by the intercommunal structures. And, finally, the search of regional, national and especially European leverages to reach their intended goals is of special interest to this analysis.

4.1. Local development policies and practices of SMST's

4.1.1. Ieper

As has already been pointed out in the previous chapter, Ypres sees itself as the capital of Flanders Fields – de "Westhoek". Ieper has a fairly traditional role as service center of a large hinterland, which is not the case in most parts of Flanders. In Flemish standards, this region could be considered as one of the more isolated regions.
Ieper is striving for recognition for this nurturing and central role and wants to be acknowledged as the 14the Flemish "centrum city". This is a policy typology of 13 cities which can rely on Flemish funding for projects related to urban development and the provision of general services.

4.1.1.1. Challenges and strategies

The challenges and strategies were presented to a representative of the municipality of Ieper (Dominiek Dehaene, alderman of Spatial Planning). We could not revert to a municipal policy plan to perform this analysis, since the new councils are busy with the development of the new policy after the municipal elections of October 14, 2012.
Broadly speaking, the major challenges and strategies of the municipality are: dealing with its peripheral location and position near the French border (for a discussion of this topic, refer to the following section 4.1.1.2 on policy networks and partnerships in the wider region), counteracting the brain drain and rejuvenation of the population. To attract younger families to the city, obviously adapted housing policies are needed, services of general interest have to be developed in an adequate manner, and employment should be augmented and made appealing by attracting new business to the area.
Within these strategies however, the starting point is to keep the scale of Ypres and direct attention to aspects such as local identity, pride, social cohesion and community life, and to detect and tackle problems which are traditionally more associated with larger cities, such as poverty timely issues continued attention, insecurity,.....in a swift way.
Following the commemoration of the Great War 14-18, tourism is also an important point of attention within the current legislature.
The following discussion also shows that it is a challenge for the region to find available space for the achievement of these objectives, all within a context of higher policy instruments and regulatory space.

4.1.1.1.1. Housing policy

The global strategy is the development of active policy instruments to attract single starters and young families with children by giving them opportunities on the housing market.

An important impetus for the development of a spatial housing policy is the current revision of the Municipal Structure Plan. New elements are the incorporation of the quantitative targets (by 2013, 2017, and 2022) defined in the Provincial Structure Plan of West Flanders. Another difference with the past is that within the "outer area" (Flemish policy term “buitengebied”), the municipalities are now allowed to indicate those parishes which have to account for hits growth and to which extent. Doing so the municipality is able to deal strategically with a territory in which some cores are already saturated, while others still have many expansion opportunities. This does not mean however that there is not attention on growth within the center of Ypres, which will be deployed through infill and expansion projects.

In the past, Ypres was trying to offer building lots on the outskirts of the city, at rather slow process to attract young families. However, it proved very difficult to make this land available and to offer to those interested, which resulted in considerable delays and eventually, the movement of the interested parties to other locations (we suggest as an important contextual factor in Flanders which may differ from other case studies, namely that the vast proportion of the land is in the possession of individuals, and not governmental property).

Currently, the residential project "De Vloei" (http://www.devloei.be/nl/) – an ecological residential area with 256 units – is an important impetus to shape the housing policy of Ypres. The project focuses attention to affordability, but also sustainability. In cooperation with the WVI (the intercommunal partnership in the region, see paragraph 4.1.1.2.1), a sustainability memo was prepared with an overview of operational sustainability aspects. Then, in the specific project the trade-off was made of what points were to be developed and to what extent. An array of practical solutions is offered to underline the sustainability of the individual residential units while also laying the emphasis on collective forms of living by sharing space. For example, the private gardens rightly behind houses turn after a distance into a collective garden with mixed usage. It uses common parking areas, where residents deposit their car after they unload groceries next to their house. The rainwater is collected and disposed above ground in “wadis” or collectors. An energy level of E40 is achieved, which is lower than the E70 that is currently imposed by Europe.

De Vloei is jointly owned by the city of Ieper, the VMSW (Flemish Agency of Social Housing, developer of the project), the WVI, VLABO (a Flemish non-profit organization dedicated to the realization of affordable and quality housing in Flanders) and private developers. The fact that VMSW builds the project also indicates that 20% of the number of homes is for social rent and for social ownership. In any case the project is appealing: 200 couples have already shown their interest and 60 of them are effectively on the list to buy a house or a plot. Given the long waiting lists for social housing, it will not be difficult to fill in this supply. The project, however, is already behind the proposed timing caused by all kinds of Flemish procedures. The project must be advised upon by various administrations, but one gets conflicting advice, even inside the same administration.
Another answer is the provision of job opportunities.

4.1.1.1.2. Provision of services of general interest in a wider area

For the further development of amenities in Ypres and he area of the Westhoek, many different types of partnerships are established, with the primary aim to get the financial resources to the area for further development of services of general interest. Please refer to section 4.1.1.2, where these networks are further treated.

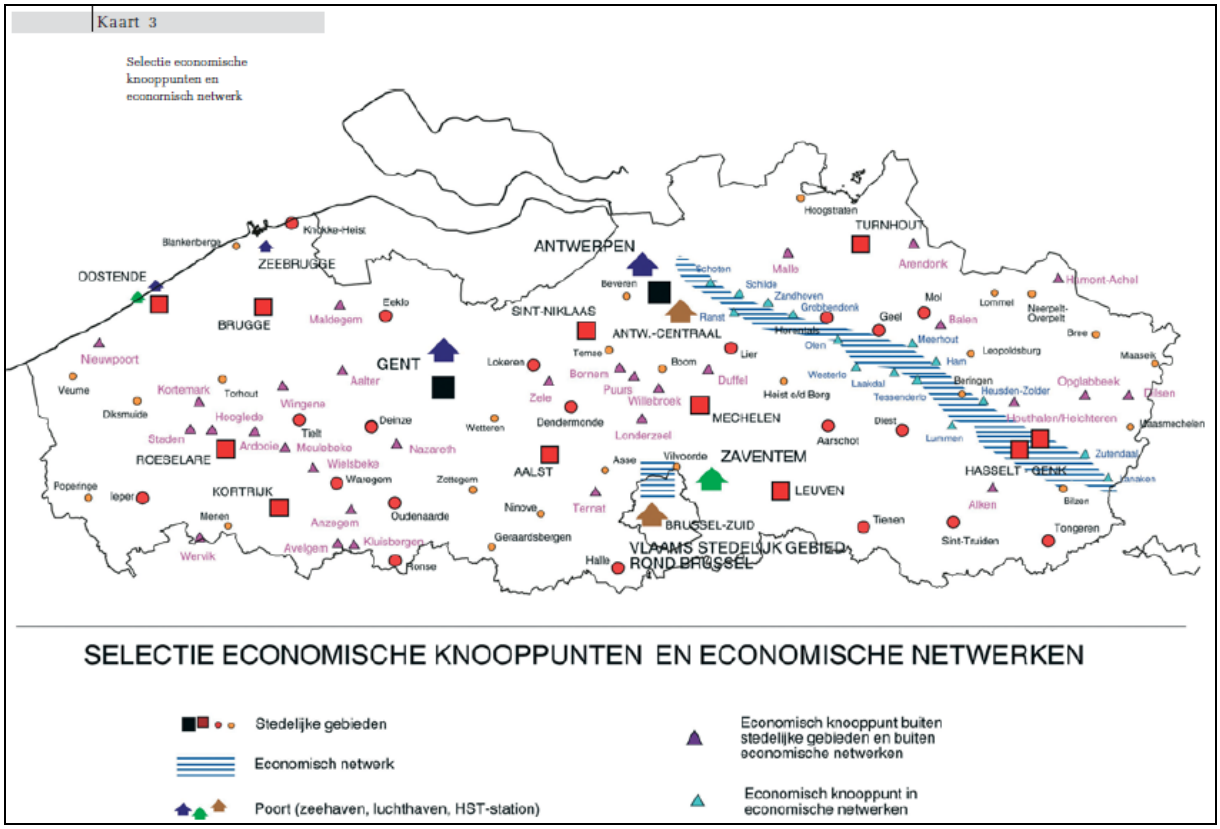
4.1.1.1.3. Provision of new job opportunities / economic development

Ypres follows a general strategy to attract new (and preferably labour-intensive) companies through the procurement and equipment of new business parks within the region and the further development of existing ones (site Ter Waarde, cf. further).
Finding these new business areas within the municipality has been a long process. The original intention was to extend the existing industrial terrain with 49acres, but this was not possible due to the fact that this happened to be historical grounds of the First World War. Then new opportunities were sought and found on the site Reigersburg, with a first extension of 35 hectares. Over time there will be some other possibilities for expansion.

WVI has clarified the regional situation in relation to the wider spatial planning instruments in Flanders. In the past there was surely a shortage of industrial sites in the region, but after the establishment of the Structure Plan of Flanders in the 90's, Ieper had to await the subsequent definitions, demarcations and regional targets within the provincial structure plan. The next step was the design of municipal structure plans and spatial allocations. Now this process has ended, and leads to the creation of a significant reserve of industrial land in Ieper, but also in other small urban areas in the region (Poperinge, Veurne, and Diksmuide). Next to the provision of space for local companies, those towns have also the task to accommodate for companies which operate on a regional – provincial level (see Figure 34)

In addition it is a challenge to find new purposes for the business park "Ter Waarde", the former Flanders Language Valley. Although the terrain and buildings will be partly used for the relocation of some urban services (city hall, social services, police), it remains extremely difficult to find interested candidates.

Figure 27 – Economic development nodes and networks as defined in the RSV



Source: (Ministerie van de Vlaamse Gemeenschap, 2004)

There is no direct policy to neither attract nor repel certain economic sectors. One tries, however, to assign some specializations to specific industrial locations, in line with Flemish strategies, such as e.g. water-related activities next to canals or rivers. In any case, the story of Lernout & Hauspie has shown the region not to lay too strong an emphasis on a particular development direction and a particular theme. After the bankruptcy of Lernout & Hauspie it now appears very difficult to give a redefinition to the derelict terrain.

However, WVI helps the municipalities to develop location criteria per industrial terrain, e.g. origin of the company (local or not), intended amount of jobs,...this can result in the exclusion of certain types of economic activities, as eg soil and demolition which is a very unpopular sector (very extensive in terms of space use and little employment, added value) .

The creation of an office market and the provision of appropriate infrastructure is in Ypres much less of an issue. If there would be interest for such kind of development, the site of Ter Waarde would already be totally redesignated. However, a possibly demand in that direction is anticipated by the reservation of one lot per industrial terrain for a common building with smaller units.

4.1.1.1.4. Using Tourism and recreation as a leverage for development

In the next legislature the 100-year anniversary of WWI (1914-18) will take place. As Ypres and environment obviously played a pivotal role in this war, several initiatives are being planned but always with an eye for serenity and avoiding "flat commerce". Ieper prefers to speak of "peace tourism “instead of "war tourism”.
As far as development of tourism infrastructure is concerned, the transformation and renewal of the Flanders Fields Museum has already taken place in 2012. To support tourism even further, a considerable number of hotels and B&BS added to the already existing accommodation in recent years. De hospitality industry and local trade are already responding to the theme in a sensible way.

Ypres wants to take on a role of peace ambassador by pointing out some universal problems intrinsically linked to (e.g. refugees), by focusing on the different ethnic groups which fought in the war, by laying emphasis on war photography, and now 100 years ago ....

4.1.1.1.5. Inclusive policy

Ieper has the ambition to conduct an inclusive policy, which means that attention will be given to all targets groups, not only to families with young children. Tackling poverty happens in the first place by the OCMW PWC and the signalling function of the “huisvestingsmaatschappijen” (responsible for the designation of social housing). The goal is that policy will be continued. Currently poverty related issues are comparable to other comparable cities.

As a chairman of the local social housing agency (“Sociale Huisvestingsmaatschappij”), Mr. Dominiek Dehaene provides further insight into the policy strategies for the support of single starters.
The housing company that now combines the powers relating to social rental housing and owner-occupied social housing (which is not the case in the rest of Flanders), seeks to give to young people at the beginning of their career, the opportunity to buy social housing, since they are not allowed to do that anymore with a higher income and when starting a family.

Through this strategy, it is avoided that those people do not find opportunities later in the private housing market.
According to the respondent, this strategy creates no displacement effects in the market for social housing. For the social rental market there is a problem, as can be noted that population segment which has to resort to the social rental market, is increasing. This phenomenon is only exacerbated by the Flemish strategy to drive psychiatric patients out from psychiatric institutions and switch to home care in social housing (we also need to mention here that the proportion of social housing in the total housing in Flanders is lower than in other countries). The respondent raises no objection to this strategy in itself, but states that then new opportunities should be created in terms of social housing.

4.1.1.2. Policy networks

The interviews show a wide variety of supra- municipal, regional partnerships exist within the Flemish policy context. The scope of this project is too limited to give an in-depth analysis of the objectives and competence distributions of all these groups of actors but the ambition is to provide a concise overview per case study municipality.

Within the Weshoek and the broader context of West Flanders, the importance of inter-municipal and regional cooperation is certainly recognized. Of course, each municipality is also concerned with its individual interests, but if mutual reinforcement is required it will be also accomplished. This happens e.g. in context of tourism, "selling the wider region," but also to defend common interests towards higher authorities.

This can not only be explained by the existence of a strong regional identity within the Westhoek but also the perception of being a disadvantaged region, ignored by central government ("Brussels"). On the other hand, the region has done a serious catch up movement in the last few decades. The Westhoek was still a purely agricultural region then, now a lot of progress is made both socially and economically. And despite this perception of neglect, there is a strong regional impetus to handle matters themselves.

4.1.1.2.1. Intercommunal partnerships

The intercommunal partnership is a common organizational structure in Flanders. Although they were not always founded for the same reason - some intercommunales arose top-down, other bottom-up, or their geographical working area varies severely in size and/ or in internal diversity, the targets and goals of the intercommunales are highly similar.
The WVI covers all West Flemish municipalities with the exception of the municipalities around Kortrijk who joined up in the intercommunale Leiedal. WVI emerged in 1964 as a partnership of 54 municipalities and has now 80 employees. The initial goal was to join up forces in the field of spatial planning, since in that period the resources did not exist in the municipalities nor the manpower or expertise. The WVI also focussed on the design of special construction plans (BPA's, "Bijzondere Plannen van Aanleg"), the development of housing projects and business parks, all in service of regional economic development.

As such, the WVI has executive task to develop and design as a support to local authorities regarding housing, environment, planning , business parks , but in addition they also have the ambition to take up some other issues / challenges various participating municipalities are faced with, and to lift them up to a higher level (for example, the conversion of churches) .

Another task is capacity and knowledge building, which is achieved by bringing the municipal officials together, 4 times a year, to discuss topics such as up spatial planning, but also the environment, mobility, and a host of other topics.

The WVI focuses strongly on the development and construction of industrial parks, mostly from its own resources, or is done partly through Flemish funding. The Flemish government is a major funder for development of business parks, although the Flemish Government would have plans to reduce the subsidy scheme for Greenfield developments and primarily focus on Brownfield developments.

The WVI is less concerned with housing development since many private developers are active on this market. In some cases, the municipalities wish to play a more leading role with respect to pricing, preferred partnerships….in which cases WVI provides support. The residential project De Vloei is a good example.

Each 5 years, the WVI develops a strategic plan. The last one covered 2007 to 2012, which means they are currently working on a new one. The WVI is almost entirely self-sufficient and acquires its own resources as a result of the sale of industrial terrain to companies and by offering paid services. At a specific time in the past, the municipalities have bought a stake in the "company", which they still possess.

It should be noted that the WVI is a very large intercommunale, with a very large internal regional diversity. Within their working area the Flemish coast can be found, but also the city of Bruges and the polder landscapes of West-Flanders. To ensure that the interests of the smaller regions are defended in a sufficient way, smaller regions are organizing the so-called “burgemeesteroverleg” (council of mayors).

4.1.1.2.2. Councils of mayors and “Westhoekoverleg”

The “Westhoekoeverleg” is a council of mayors with a long tradition. They are cooperating around some themes and challenges and attract political attention to the region towards higher authorities. But the organization works more structurally through specially assigned personnel, and brings in a similar way as the WVI does but then focuses on the Westhoek itself (for more information see http://www.westhoekoverleg.be/).

Gradually, the model of the “Westhoekoverleg” is replicated in other regions within West-Flanders. The WVI provides logistic support with coordination, organizations of the meetings and providing minutes.

4.1.1.2.3. Other modes of cooperation

During the analysis of Ypres other thematic partnerships were detected or alliances working on regional development. Examples are:

- “Vereniging van Vlaamse Huisvestingmaatschappijen” (www.vvh.be), the umbrella organization of Flemish social housing in the rental sector. Through this umbrella , it is possible to exchange strategies and know ;

- RESOC “Regionaal-economisch overlegplaform (http://www.ersv.be/nl/85), according to the WVI the organ which devises strategies concerning regional socio - economic development (with less attention to spatial planning), while the WVI

provides the executive work in the field. There is a separate section for the Westhoek.

- Provinciale Ontwikkelingsmaatschappij (http://www.pomwvl.be/). This provincial agency is also working on economic activity, although more focused on supporting individual companies as far as funding schemes are concerned and the establishment of a location policy.

4.1.1.2.4. Lille metropolitan Area - EGTC West-Vlaanderen / Flandre – Dunkerque – Côte d'Opale

The Westhoek region has a long border with France. This immediate presence of this French partner is a fact that local governments cannot ignore. “Westhoekoverleg” supports cities and towns in developing desirable and useful relationships with the French partners. “Westhoekoverleg” does so in several ways. We mention the cooperation with Lille Metropolitan Area and cooperation within the EGTC West Flanders: Flanders - Dunkerque - Côte d' Opale.

The district of Ypres is an integral part of the working territory of the Lille Eurometropolis. The link with the Westhoek region occurs on three levels:

1 / The West - Flanders Intercommunal organization (WVI) provides a representation of the municipalities of the districts Ypres, Roeselare and Tielt in the general meeting of the Eurometropolis.

2 / All mayors of Ypres district are part of the mayor conference which is founded under the auspices of the Eurometropolis;

3 / In the various (political) thematic working groups of the “Eurometropole”, (political) representatives of the Westhoek region are active.

Although partnerships surely exist at political level, the interviewed representatives of the city and the WVI doubt the extent to which the Westhoek can get an economic spinoff by the relocation additional economic activity out of France. What does happen is that suppliers within the region establish contacts with North French companies, but it's not that French companies seek to settle in this region. In the field of tourism and recreation more benefit is seen in cooperation to redirect tourists from Lille towards Flanders Fields and Ypres.

The acronym 'EGTC' stands for 'European Grouping of Territorial Cooperation'. It allows public entities of different Member States to get together under a new entity with full legal personality. The EGTC West-Vlaanderen / Flandre – Dunkerque – Côte d'Opale results from a partnership between France and Belgium, involving around 2 000 000 inhabitants in a 7 000 km²'s area. (https://portal.cor.europa.eu/egtc/en-US/CoRActivities/Pages/West-Vlaanderen--Flandre-%E2%80%93-Dunkerque-C%C3%B4te-d%E2%80%99Opale.aspx)

This EGTC has been created as an acknowledged legal entity to define strategies, actions and programs in the cross-border region, in order to meet the needs of its inhabitants. In 2012, the budget of the EGTC West-Vlaanderen / Flandre – Dunkerque – Côte d'Opale was 280 381 EUR. It is made up of financial contributions from the members (50% FR; 50% BE).

In 2012, the EGTC implemented several projects:

- The EGTC was project leader of the Interreg IV A project “Cross-border cooperation West Flanders/Flandre-Dunkerque-Côte d’Opale”. This project aimed at developing thematic to stimulate cross-border cooperation in the region. The total budget of the project was 360 000 EUR, including 215 000 EUR of European contribution.
- The EGTC was project partner of the Interreg IV A project “TransSport”. The project aimed to develop a cross-border dynamic platform (website) that will list and map all sports infrastructure, centres and associations in the cross-border region. The global budget of the project was 600 000 EUR, and the EGTC contribution 49 000 EUR.
- The EGTC was also project partner in the Interreg IV A project “300 years of frontiers”. The project planned to set up a whole range of cultural and festive events, activities and projects for the birthday of the Treaty of Utrecht (1713-2013). The global budget is 1 200 00 EUR and the EGTC contribution 52 000 EUR.
- The EGTC is also following the realisation of 7 Interreg projects labelled by the EGTC (in all of these projects, at least one member of the EGTC is taking part as project partner or project leader).

In December 2012, the EGTC approved the working program of 2013 and 12 thematic working groups will be implemented in 2013.

The EGTC West-Vlaanderen / Flandre – Dunkerque – Côte d'Opale does not have any specific staff.

Cooperation within the EGTC is fruitful in terms of the development of services of general interest (culture, education, leisure ...), but is also taking initiative to complete public transport on both sides of the border, especially towards the concentrations of economic activity. This is necessary because of the important border labour in this region.

Although the EGTC itself is funded by the two participating countries on a 50%-50% basis, additional cooperation initiatives and project tenders out of the EGTC are attracting European funds to the region.

4.1.1.3. Means

4.1.1.3.1. Local finances

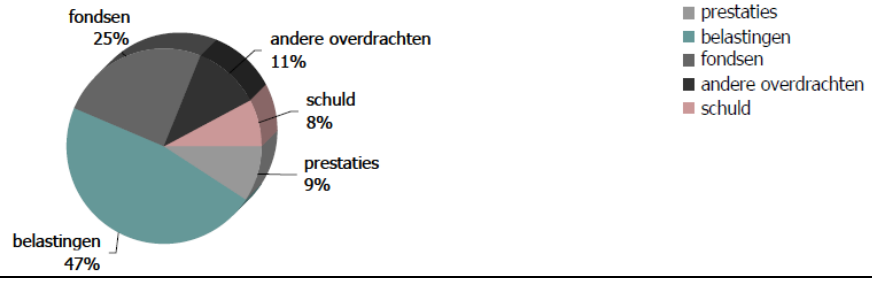
In Figure 28 and Figure 29, local revenues and expenses per inhabitant are depicted for Ieper in the period of 2006-2011.

When we compare Ieper with the municipalities of Cluster 5 (the medium sized cities) and the whole of Flanders, the total revenues per inhabitant are somewhat lower than for the medium sized cities (medium sized cities in 2011: 1295 €), and much lower than for the Flemish average (in 2011: 1261€ for Ypres while 1456€ for the Flanders).

Figure 28 - Ieper: local revenues per inhabitant (2006 - 2011)

		Ieper					
		2006	2007	2008	2009	2010	2011
Ontvangsten gewone dienst	prestaties	61	90	100	101	106	116
	belastingen	497	539	509	578	592	594
	fondsen	249	266	293	303	318	312
	andere overdrachten	195	196	161	154	156	142
	schuld	212	107	190	144	122	98
Totaal		*1.214*	*1.197*	*1.254*	*1.280*	*1.294*	*1.261*

Procentuele verdeling van de ontvangstenposten gewone dienst

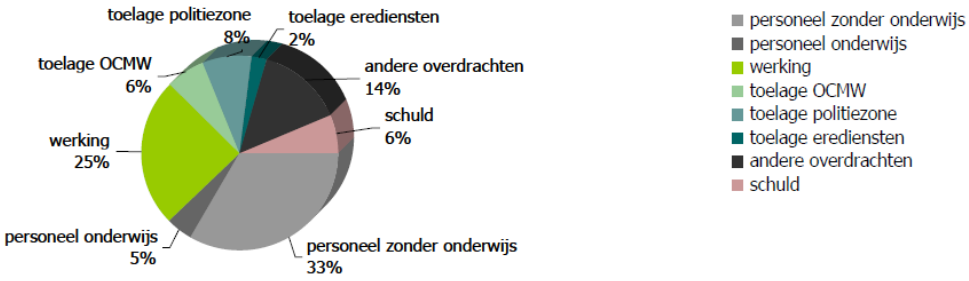


Source: "Gemeentelijke profielschets Ieper", Studiedienst Vlaamse Regering, 2013, p. 20

Figure 29 – Ieper: expenses per inhabitant (2006 – 2011)

		Ieper					
		2006	2007	2008	2009	2010	2011
Uitgaven gewone dienst	personeel zonder onderwijs	344	354	351	344	359	354
	personeel onderwijs	47	48	55	57	58	48
	werking	183	217	211	230	323	262
	toelage OCMW	59	59	65	66	67	69
	toelage politiezone	78	78	78	81	83	84
	toelage erediensten	24	20	26	25	25	26
	andere overdrachten	114	117	114	109	145	151
	schuld	112	106	91	80	71	68
Totaal		*961*	*999*	*992*	*992*	*1.130*	*1.062*

Procentuele verdeling van de uitgavenposten gewone dienst



Source: "Gemeentelijke profielschets Ieper", Studiedienst Vlaamse Regering, 2013, p. 26

When we look at the expenses per inhabitant, we see 1062 € per inhabitant in 2011 for Ypres, while
1245€ for the medium sized cities and 1376€ for Flanders as a whole.

In conclusion, the income per inhabitant is lower than the Flemish average, but the expenses are also far lower.

The representative of the city government of Ypres reported a similar problem as the large cities as far as the spatial income structure of the municipalities is concerned, although on a slightly smaller scale. Ieper plays the role of service center for its wider environment, but misses the tax income received by the surrounding sleep villages / towns. Moreover Ieper has a number of specific problems related to a different cost structure by a relatively small and aging population, the rural character of Ypres with large agricultural areas and common rural roads which have to be maintained by the municipalities.

However, in political terms Flanders is still very far from the idea that financial shifts should be possible towards Ypres to be able to maintain the right service level. Ypres is not the city in South West Flanders with a centrum function and who is struggling with this problem - Tielt is for example in the exact same situation, but Roeselare and Kortrijk have the policy statute "centrumstad", which makes them eligible for Flemish funds within the policy competence "Urban Policy".

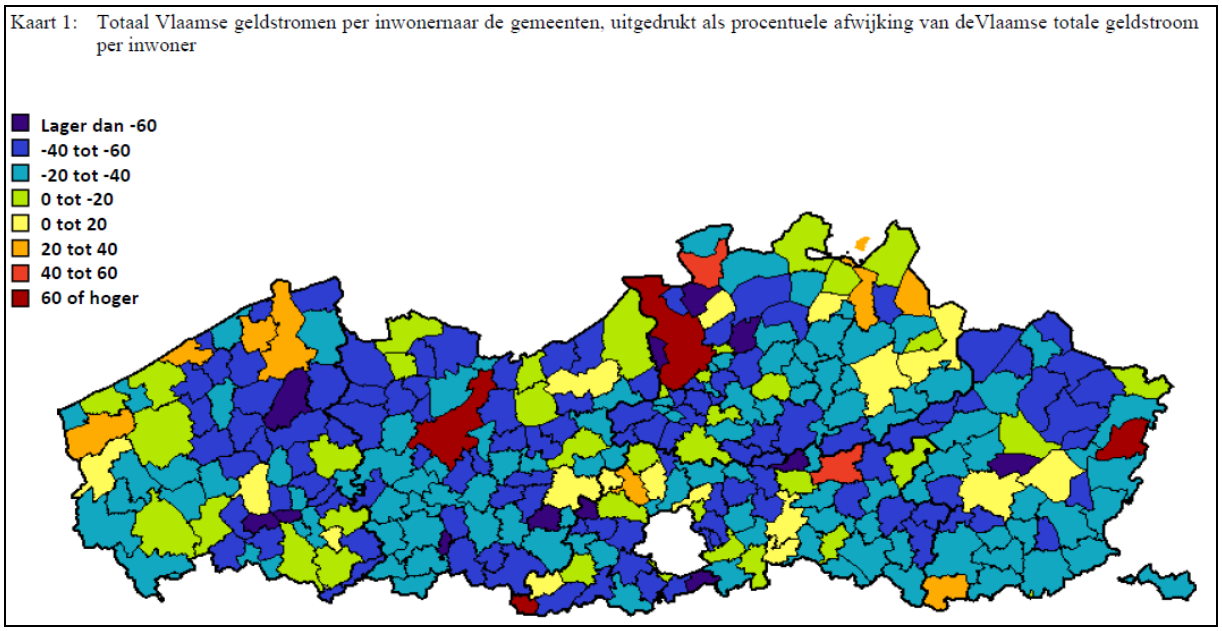
In other words, one can speak of a structural problem as less tax revenue is realized from bottom-up, but also less possibilities from the top since important Flemish funding programs are missed out.
The respondent of the WVI also emphasizes this issue and regrets that this financial aspect of cooperation - redistribution within a supra-municipal area does not draw more attention at the Flemish level. This would in any case benefit some integrating themes such as urban planning, environment … but would also allow the smaller cities to take up their nurturing role effectively. Currently Flemish changing strategies cause fragmentation in initiatives, not only spatially but also financially and spatial developments do not happen so much in a coordinated and synergistic way. The typical example cited is the strategy that each municipality can develop its own regional business terrain, which each individually entails a significant price tag entails. If funds would be pooled to develop one common business park on a strategic location, easily accessible by public transport, efficiency would be enhanced. But the same remark applies to other common facilities such as sports, culture...
Currently, the only alternative is the mobilization of European funds.

4.1.1.3.2. Regional funding (Flemish government)

To get an idea of the capacity of Ieper to attract Flemish funding, reference is made to Figure 30, which shows that Ypres attracts 20 to 40 percent less than the Flemish average (Christiaens et al., 2013).

The WVI looking for Flemish subsidy funds to see from which canals it can benefit. There are many channels to realize projects e.g. specifically for the development of housing projects, or from LNE for environmental and nature. These Flemish funds are mainly made available in the context of project calls.

Figure 30 – Total money flows towards the municipalities, source Flemish Government, in percentage deviation of the total Flemish money flow per inhabitant



Source: Christiaens et al, 2013, p. 12.

4.1.1.3.3. European Funding

In relationship to European funding, the province of West Flanders has a long tradition in European funding, especially in Interreg context. Added to that, the border are of the Westhoek , next to the Kortrijk Region, can profit from the specific INTERREG programs which foster cross border cooperation.

In Flanders, this area was also in the previous INTERREG programs one of the few who managed to draw funds regarding the development of villages, refurbishment of public space through the use of structural funds for Objective 1 areas.

EGTC has already been mentioned in paragraph 4.1.1.2.4.

Another project which that was realized in part with European funds, is the residential project “De Vloei”, which is framed within the Interreg IVB project "Future Cities" concerning climate change adaptation. (http://www.future-cities.eu/). Respondents also mentioned the project “De Neerstad” as partly funded with European subsidies. This project was a reconversion of the Picanol industrial site to house two urban art schools, the library and the city archives. Although, this claim could be confirmed by further research, except for the indication that it was a PPP partnership.

In general, the region focuses its attention towards European funding, and there are sufficient capacity / supportive channels to explore and follow up the European grant programs. The general principal is that if European funds are available and one is eligible, the possibilities will be studied, but it has to be project based. This mobilization capacity, however, is not present in the city of Ypres itself. According to them, mostly European funding is secured for the larger projects which are controlled by WVI or the province. According to the WVI this could hardly be otherwise, as a commune cross- initiative is required to be able to attain a project on European level.

The WVI now awaits the specific themes to be launched in the new European program which is currently being written.

4.1.2. Dendermonde

At this moment, Dendermonde is drawing out the policy lines for the current legislature. Dendermonde had many challenges to face, related to the aspect of mobility, housing, economic development and tourism and recreational development. Nevertheless, it will be necessary to make some very clear and strategic choices, since like in the other municipalities, Dendermonde has not escaped the effects of the financial crisis and the problems on its financial situation. For example, many municipalities have already been forced to lay off a high proportion of staff as a result of the crisis…..

4.1.2.1. Challenges and strategies

Dendermonde invests on the attraction of young families with children towards the area. It is important to invest in the attraction of families with young children as they give oxygen to the city and the local economy. But also purely based on city finances this young dynamic population is primordial to generate the necessary revenue, which the government can invest in the development of services for the other age groups.

In the past 10-20 years there have been many urban renewal projects in the center of Dendermonde, as in other Flemish cities, such as refurbishment of the Grand Place, initiatives on the Dender, the construction of the new library, the cultural center…which has enhanced its attractiveness towards residents and visitors. As is argued by the former alderman of spatial planning, Mr. Bart Van Malderen, a strong point of the town is in fact that it has succeeded to attract an important share of population without large scale residential Greenfield developments, a population growth which has proven to be 1000 inhabitants higher than was predicted used in the RSV.

The pursuit of more jobs in their region remains an important goal, in order to give employment opportunities to the local inhabitant to minimize the amount and average distance of commuting flows. The city does however not implement policies to focus on or avoid certain types of economic development, although the companies have to be solvent and space intensive (enough job potential / sq m). This can be explained by the very long time needed to implement new industrial terrains. A special attention point is to provide for amenities for very small companies (KO's). The DDS (intercommunale) regrets the absence of a more region wide spatial and socio-economic strategy.

As already stated in the SWOT-analysis in chapter 3, the local government is also very aware that an improvement of the road infrastructure is conditional for any other socio - economic development (space for businesses, housing ...).

4.1.2.1.1. Improvement of mobility in the wider region

The mobility challenge n the region of Dendermonde has already been mentioned previous chapter with the SWOT analysis.

Firstly, the impregnation of the N41 should ensure that a lot of traffic which is now situated in or near to the city center is derived. Moreover, the accessibility of the industrial terrain of Dendermonde, Hoogveld will improve considerably since it is situated on the route of the N41.

Other strategies to limit and structure the traffic flow in the region and towards Dendermonde is to make some local and strategic improvements on the road network to reduplicate different kinds of traffic flows – commuting, transit and flows toward the economic locations.

Besides the improvement of transport infrastructure for traffic, it is also considered very important to build a strong and flexible public transport network, e.g. by ensuring a smooth passage of buses by separate bus lanes at strategic places. The master plan in the vicinity of the station (for further discussion see Section 4.1.2.1.4) would enhance its role as an intermodal transport node of rail, car, and bus and bicycle traffic.

Moreover, some additional initiatives exist, such as e.g. the promotion of car sharing and free public transport towards the center of Dendermonde on Mondays and Saturdays, the main market day and shopping day respectively. In this way, local commerce is supported.

4.1.2.1.2. Residential developments for different target groups

The population and age structure varies across the different boroughs of the city of Dendermonde. The city center itself has the tendency of ageing since there is an inward movement of seniors out of the boroughs: they sell their typical sixties/seventies subdivision housing and look for an apartment in the city center, where all the necessary services are in the immediate vicinity.

The population of working age are mostly concentrated in the districts of Sint-Gillis and Grembergen, where recently building lots are subdivided and sold. The fact that in those boroughs the growth of young families is the strongest is perfectly indicated by the lack of capacity in local primary schools. This results in the fact that families are obliged to send their children to primary schools in the center of Dendermonde.

In the boroughs of Appels, Schoonaarde and Baasrode the evolution in population structure and related dynamism is somewhat more diffuse: although the population was systematically aging and no significant developments towards new housing were detected for a long time, a movement towards rejuvenation of population and renovation of building stock is observable in the last years.

One begins to detect the symptoms of renovation in the centre of Dendermonde as well. The inward movement of seniors was already explained, but a renewal of residential tissue is also observable in the districts of the 50's and 60's, accompanied with a younger and more dynamic population.

Of course the possibilities of residential expansion are not limitless, so the city has focussed on the renewal of existing housing stock and by doing this, has found solutions for intensification. By this renovation strategy, it was possible to realize a population growth. Next to small scale renovation, two larger scale residential projects are in process of development in residential expansion areas: Elsbos and Vlietberg, both in Sint-Gillis. They will provide for 900 extra dwellings in the municipality.

In addition to providing housing units for young people, another challenge is the provision of adapted housing and facilities for the senior population.

The OCMW exploits some nursing homes in Dendermonde, but one also sees the effects of a change in policy in which the movement of elderly people to a nursing home is delayed as much as possible. Therefore, different concepts of adapted housing are being developed, with associated services and home care. An important partner in these developments is the social housing sector.

The largest project currently under construction, is in the center of Grembergen on the site of a former village school. Next to the existing nursing home, flats are built which are adapted to the elderly and from where it is possible to make use of the services provided to the nursing home, such as pedicures, meals, entertainment. The development is also, very intentionally, situated right in the town center of Grembergen which makes it easily accessible with public transport and in the vicinity of necessary amenities such as a grocery ...But there have been other small-scale projects in the boroughs of the city, always at strategic and accessible locations to provide housing for the elderly. All small scale projects together are responsible for a significant growth of housing for this specific target Group. There are however not only projects initiated by the public sector; also some development by private developers are seen in the center of Dendermonde, on the site of a former school and on the site of a former storage building / garage. Here luxurious apartments are designed for the slightly more affluent elderly. Internal services are provided such as meals, a library and a fitness area.

4.1.2.1.3. Economic development

The spatial economic structure and spatial challenges/strategies related to it can be summarized by 2 different types of locations: on the one hand as issues and strategies, initiatives…related to the industrial terrains/business parks and secondly, the need to offer alternative solutions - outside the industrial terrains - for the development of very small enterprises (sole proprietorships). We first discuss the challenges and issues related to the industrial terrains, where the central problem is the scarcity of additional expansion potential.

Developing new industrial subterrains within the larger industrial zone “Hoogveld” - managed by the intercommunal partnership DDS - is a long term process. Currently, the DDS has managed to release terrain "J" and is in the process of selling the lots. The establishment of another site "I" is currently noose because of legal problems, which are very difficult to solve. Besides those two subterrains, Hoogveld is saturated and additional extensions are no longer possible.

In addition, the role of the DDS is to look for new locations for business, which is very difficult in the context of Dendermonde. Greenfield development has become almost impossible by their potential effects on natural environment and liveability issues. Therefore, one is obliged to start focussing on Brownfield developments. An example of the latter is the project " Van de Voorde ", see below)

The context of Dendermonde within the RSV is similar to the case studies Ypres and Aarschot which means that space has to be reserved for regional economic development. The provincial structure plan sets the targets for the municipalities, which was around 60

hectares for Dendermonde for regional business development. However, it appears impossible to find ways to achieve this. The director of the DDS does not agree with the procedure of this mathematical approach and a top down imposition of spatial quota for regional business, especially in the case of Dendermonde where the locally grown businesses are so important and are also demanding for expansion.

However, one new industrial terrain development initiative can be found in the borough of Baasrode next to the Schelde, which is the project “Oude Briel”. In the framework of the municipal structure plan of Dendermonde and the demarcation process of urban area (which defines the locations in which residential and economic development is possible), it was decide to make a separate and comprehensive study on a possible industrial park on the river Scheldt in Baasrode. After a formulation of the vision, it was the ambition to operationalize is in a realistic, achievable plan. In order to achieve this, a partnership was set up between the Province of East Flanders, the Provincial Development Agency (POM) and “Waterwegen en Zeenakanaal” (Waterways and Sea NV). The study chose for the areal transformation into an industrial waterfront because of its location on the Scheldt and the huge potential for water-based activity. Inland river transport is seen to have a large potential in the future and has several important advantages: it is environmentally friendly, cheap, fast and on time. It is not the intention to transform Baasrode into a harbour, but to stimulate the companies within the terrain to make as much use as possible of the River for the delivery of goods and products. When drawing up the development plan is an improvement of quality of life in the area is one of the major goals: this means the provision of green buffers, safe bicycle paths and possibly the construction of a new access road to improve the accessibility of the site. As such, the project “Oude Briel” provides an opportunity to deal with the actual mobility problem onsite and on the wider environment in a sustainable way. (www.oudebriel.be, consulted on October 26, 2013).

A second challenge related to economic development in Dendermonde is finding spatial solutions for small enterprises. In the new policy plan of the DDS for the coming years it is stated that the intercommunal partnership will focus on this challenge in an experimental way – which means no business as usual. For very small businesses it is unfeasible due to the current construction standards of minimum width - depth of a plot, to acquire a property on an industrial terrain (in any case, start up companies are not allowed there). Therefore, it is thought more likely to develop specific sites, such as an apartment building for enterprises, where the company has the option to buy a unit instead of renting it – the latter being the common practice in the traditional office market.

In this context, a new project started up very recently. Since Greenfield development is almost impossible in Dendermonde, the chose to explore the possibilities of Brownfield development. In Grembergen, at the mouth of the Dender and the Scheldt, the site Van de Voorde was heavily polluted in the past by industrial activity. The OVAM (Public Waste Agency of Flanders) has bought the area for a symbolic euro and has begun with rehabilitation and sanitation. The DDS has a cooperation agreement with OVAM to buy this land and to start a project on to house small start-up companies. The projects would also include some conference facilities on the site.

On the question to the Director of the DDS whether a strategy is followed to attract specific economic sectors to the area, sector strategy is followed in Dendermonde, the answer is no for different reasons. It is extremely difficult to actually implement such a strategy in a situation where it takes 10-15 years to realize an industrial terrain. These term is no in line with the fast pace in which the economy evolves. Moreover, he is suspicious of "fashion

trends" in economic development, such as “the creative economy”. He does not believe that a long term spatial economic strategy can be built on it. Presumably, this reserve is also dictated by the overall difficulty to find business locations in the area and the need for local companies to find opportunities to expand.

What does happen to some extent is the definition of what “undesirable development” is and what cannot be implanted within the industrial terrains, for example: large-scale commercial activities (e.g. car showrooms,…), specific economic activities such as storage and excavation companies which either generate a lot of traffic, or provide little added value in terms of job opportunities per areal unit.

4.1.2.1.4. Master plan station area Dendermonde

The Master Plan on the station area of Dendermonde is a classic example of what the NMBS (national railway company of Belgium) has also developed in other cities of comparable scale or higher, such as Mechelen, Bruges, and Roeselare ...The plan is to fully redesign the area in the next decade. The town of Dendermonde, NMBS Holding, Infrabel and “De Lijn” (Flemish Bus Company) are working together on the development of an integrated vision for a qualitative and sustainable project. The process started with a feasibility study which resulted in a master plan design. However, this master plan is not complete and should be further discussed and refined. This should then result in a draft design, which will probably be ready for execution in 2018 (www.dendermonde.be, consulted on October 25, 2013).

The objectives of the master plan can be summarized as follows:

- Until today the station near Dendermonde is an underutilized urban area which leaves no room for the necessary adjustments to operate as a regional transport hub. Therefore, the choice has been made to structurally change the design of the area, but also its functional role: not only as a transport hub, but also as a residential and work environment – offices, located conveniently near to the station. For example, a protected greenscape which is actually a derelict area very near to the station will be transformed into a park space, an urban development with underground parking garage.

- Another ambition it to untie the mobility knot around the station, resulting in a station environment with smooth and safe traffic flows. The priority is the establishment of comfortable and safe connections for pedestrians and cyclists. An important part of this is to lift the physical barrier which is now created by the rail tracks between the town centers of Dendermonde (front of the station) and Saint - Gilles (rear) by a bridge.

- The project will also give attention to the development of green spaces at both sides of the station, which makes it attractive for residents. “Greening” of the station area is also desirable in a geographically broader perspective, since this area is now the only "missing link" in the green belt that surrounds the city center of Dendermonde. This will be achieved through the transformation of a paved lot behind the station to a green link, which also should encourage cyclists in that area. It is also hoped that this strategy will results in a deviation of cyclists towards these green links towards the city center, instead of taking the more traditional route through the commercial

center of the city and some dangerous crossroads. As reminded, this can be very important in the Dendermonde case which has a strong supply of schools and has a major traffic flow of cyclists in the morning and afternoon.

- The current station building of Dendermonde, dating from World War II will be completely demolished and replaced by a new, modern station building, which will be directly connected to the pedestrian bridge above the platforms. The existing platforms will be renewed. Adjacent to the station building a large bicycle parking is planned with a capacity of 1000places. The NMBS is also planning an underground parking for about 800 cars. "De Lijn" has plans to completely renew the existing bus station.

However the financing of the project still has to be formalized, total investment cost is currently estimated at 40 to 60 million Euros. The national institutions NMBS and Infrabel will provide for more than three quarters of this amount. The rest will be provided by "De Lijn" and the city of Dendermonde.

4.1.2.2. Policy networks

As in the other case studies, this subchapter will start with a description of the intercommunal partnership in the region, since their important role in the establishment of policy networks in a wider area. But, in opposition to the other case studies, this description will not be followed by a summary of other regional and thematic networks, since it has been observed that the tradition of cooperation does not exist in the region, at least certainly not to the same extent as in Ypres or Aarschot region. The interview respondents had very specific views on the reason and explanations, but also on what is needed to tackle these problems. This discussion will also continue in the next paragraph dealing with grants and funding, since the general atmosphere and tradition in (lack of) cooperation and rather "introverted position", goes further in the attitude towards the mobilization of external grants and funding.

4.1.2.2.1. The intercommunal partnership DDS

The intercommunal partnership DDS was founded in the 60s, in the wake of the "Key Plan of Gaston Eyskens on regional economic expansion". In this plan, national deprived development areas were designated in which the impulse was given to the municipalities to unitely tackle the socio-economic problems of the region. The municipalities were given extra leverage to deal with those issues by giving them expropriation power.

The town of Dendermonde knew many social and economic problems at that time, with ageing population, dilapidated neighbourhoods with small homes, deprived of any comfort. If the average income of the different Belgian regions was observed, the region of Dendermonde was on the same level as the region Westhoek or the poor Walloon districts of Hainaut. A group of enlightened politicians from the region along with businessmen gathered together, united in a committee to tackle the welfare problems in Dendermonde. This committee grew into the intercommunal partnership of DDS (Dender – Durme – Scheldt which are the 3 major rivers in the region).

The role of the DDS has changed over the years. Previously the DDS had a strong advisory role and was the leading voice for everything related to economic development and regional prosperity. Then the focus shifted to the executive part of development, namely the activation of land for economic activity - the industrial - and for residential development. Yet in recent history there have been several initiatives which stimulated strategic thinking. For example, in the 90s subsidies were freed up under the "Impulse Area Policy" of Norbert De Batselier, to be used for regional economic development. Although the current director of the DDS has his doubts whether it was money well spent, he acknowledges the importance of the mobilization and gathering of different stakeholders initiated by this, to think about economic development in the region. Very shortly after this, the VZW "Strategisch Plan Regio Dendermonde" was founded, instigated by another Flemish initiative in which a region had the opportunity to establish a charter in which it stated to cooperate in service to growth and prosperity. In the charter 7 concrete projects were defined in which this development would be operationalized and achieved, and spatially translated. This association was later abolished since this role was being taken over by the RESOCs (Regionaal Sociaal-economisch overleg Comité). Since the 90s, however, the initiatives to strategically think about regional development in the Dendermonde region decreased in intensity.

The objectives and action areas of DDS are very similar to those of the other intercommunal partnerships studied in this report (WVI and Interleuven), although the focus is on execution of policy documents established by other institutions. Originally, the DDS was also responsible for waste collection and disposal, since public health was also a very important societal attention point in that period. These activities split off in a separate intercommunal partnership VERKO (this also happened in Interleuven, see Section 4.1.3.2.1). However in the current socio-economical context, VERKO lays more emphasis on environmental issues, sustainability and recycling materials.

The thematic areas of operation include the stimulation of living, working and recreation within in a quiet green area.

The policy of DDS regarding industrial development has already been depicted in section 4.1.2.1.3.

Regarding residential developments, less concrete projects can be found within the municipal territory of Dendermonde. Generally DDS has realized 10% of the total available housing in the Dendermonde - Wetteren region since its founding in 1970. Even today it remains an important pillar activity: to enable affordable and comfortable housing, whether rental housing/ apartments or plots. Priority to Young starting families is given in the sale of residential allotments. The only actual project, however, is in Wetteren (not on territory Dendermonde, but within the scope of DDS). The DDS does not have the tradition to focus on social housing because here especially the social housing sector or private players are active (see section 4.1.2.1.1), although the Land and Property Decree ("Grond- en Pandendecreet") is urging them now to cooperate with social housing in the development of residential projects within "residential expansion areas" (in Flemish policy terms called "woonuitbreidingsgebieden", orginially spatially demarcated in the Flemish "gewestplan" and by recent decree with the obligation to provide at least 10 %, maximum 20 % of social housing when developed). A small initiative in the center of Dendermonde the DDS is very proud of is the purchase of seven homes within the beguinage, World heritage site. In the past, restoration of the beguinage was effectuated by the vzw Begijnhof Committee with the receipts of the annual "Begijnhoffeesten". However, its last edition was in 2005. Currently

the association has no more money to implement restoration. Through this acquisition, the DDS wants to make its contribution. The houses will be restored and presented to a wide audience in an affordable way. This is a nice infill project and fits perfectly into the objective of the DDS of affordable housing.

With regard to tourism and recreation the only project of the DDS is Nieuwdonk recreation area, located outside the territory of Dendermonde. The DDS recognizes that it is difficult to play a role in this sector and activity and refers to the provincial and regional (Flemish) tourism organizations.

4.1.2.2.2. Interregional cooperation: a less obvious practice in the Dendermonde region

The instigating role in the organization of interregional cooperation which is played by WVI and Interleuven seems absent here, or to a lesser extent.

Nevertheless, in the preparatory stage of the multiannual policy plan of the DDS, which is congruent with the municipal legislative periods, the municipalities and other stakeholders groups (unions and employers' organizations) are consulted. In this phase concrete strategies and projects are identified which have to be agreed upon by a sufficiently large group of municipalities and which should bring prosperity to the region. But beyond that the coordinating role of the DDS is confined to the operational implementation of projects, not in the phase of vision or preparation of strategic documents. Rather, the strategic documents of other organizations are consulted and screened and select projects for operationalization for which they have the means and the expertise. On the other hand there is the bottom-up approach: by establishing close contact with local stakeholder groups one identifies problems and challenges on the field, and based on that DDS tries to take action (an example is the need of space for very small starting enterprises). Interregional cooperation seems much less to be initiated out of the mayor consultations than is the case in the other case studies, Ieper and Aarschot.
The Director of the DDS regrets the actual lack of strategic thinking which was present 15 years ago, and inside and outside the DDS there has been criticism that the focus on solely execution has become too large. The question however is whether the DDS can be blamed solely for this. Although more in depth research would be needed and more thorough comparison of the intercommunal partnerships within Flanders, a cautious hypothesis is begin made that Dendermonde region is less imbued with the necessity of cooperation, an awareness that is indeed present in the Westhoek and Interleuven region.

But the participating municipalities seem primarily concerned with development in their own territory and are defending their local interests on a political level towards central government. A good example is the debate surrounding industrial terrains: mayors and local authorities still focus very hard on developments of terrains within their own municipality, although Mr. Verwaeren observes clearly that company managers do not think in these terms of boundaries. For example, on the industrial terrain of Dendermonde many companies are located which are originally from Lebbeke (the adjacent municipality) and many inhabitants of Lebbeke are working there. However, the idea of common industrial terrains, which was also suggested of the representative of WVI and on which Interleuven is doing a research project, is in the Dendermonde region very far away…

The former alderman of spatial planning Bart Van Malderen has another explanation for this reduction of strategic thinking and decrease in consensus within the intercommunale. An important aspect of common strategy was initiated by the social partners who were present in the intercommunals and had a voice there. Today this voice is rather being rather shunned within the intercommunal organizations, which means that de decisive power is solely falling onto municipal authorities who look to their own interests.

This discussion will be continued in the next paragraph on "means", since these observations also seem to have consequences on the capacity to attract external funding towards the region.

4.1.2.3. Means

4.1.2.3.1. Local and inter-communal finances

In Figure 31 and Figure 32, local revenues and expenses per inhabitant are depicted for Dendermonde in the period of 2006-2011.

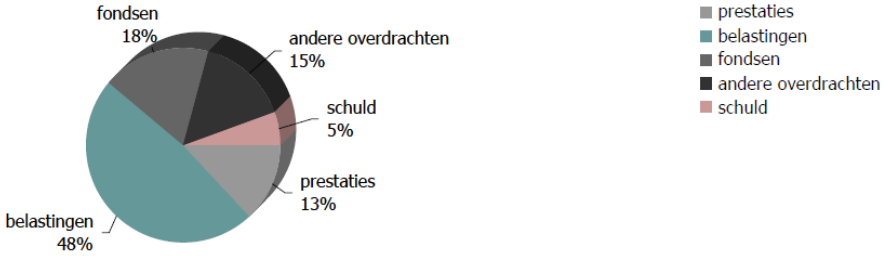
When we compare Dendermonde with the municipalities of Cluster 5 (the medium sized cities) and the whole of Flanders, the total revenues per inhabitant are € 1317 in 2011 and as risen since 2006 with €128 per inhabitant. If we compare these numbers with those of the medium sized cities (medium sized cities in 2011: 1295 €), and the Flemish average (in 2011: 1261€ for Ypres while 1456€ for the Flanders), they are roughly the same. When we look at the expenses per inhabitant, we see 1263 € per inhabitant in 2011 for Ypres, while 1245€ for the medium sized cities and 1376€ for Flanders as a whole.

In conclusion, the income per inhabitant is similar than the Flemish average, but the expenses are a little bit lower. However, Dendermonde can be considered as the average example of medium sized cities.

Figure 31 - Dendermonde: local revenues (per inhabitant)

		Dendermonde					
		2006	2007	2008	2009	2010	2011
Ontvangsten gewone dienst	prestaties	122	121	115	150	153	171
	belastingen	522	567	561	618	639	633
	fondsen	194	201	220	231	237	238
	andere overdrachten	189	200	185	195	200	203
	schuld	161	122	99	105	88	71
Totaal		*1.189*	*1.211*	*1.180*	*1.299*	*1.317*	*1.317*

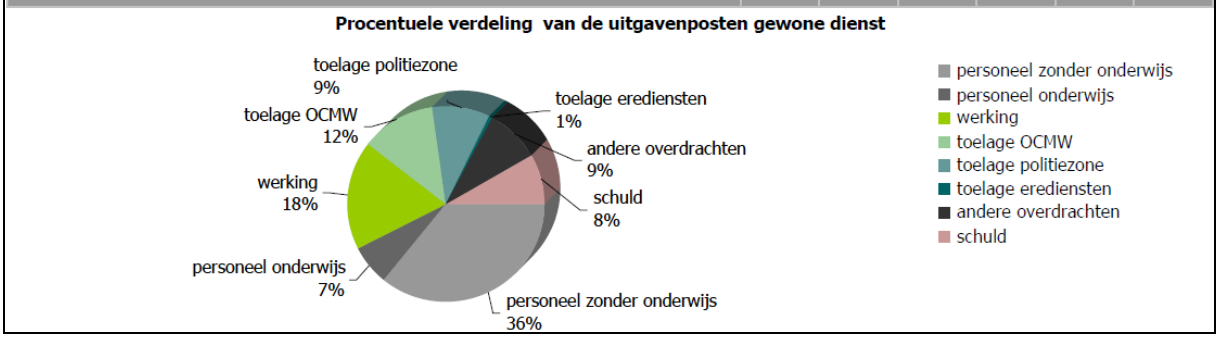
Procentuele verdeling van de ontvangstenposten gewone dienst



Source: "Gemeentelijke profielschets Dendermonde", Studiedienst Vlaamse Regering, 2013, p. 20.

Figure 32 – Dendermonde: expenses per inhabitant (2006 – 2011)

		Dendermonde					
		2006	2007	2008	2009	2010	2011
Uitgaven gewone dienst	personeel zonder onderwijs	365	372	378	393	414	453
	personeel onderwijs	72	74	76	81	82	84
	werking	167	168	174	197	206	227
	toelage OCMW	137	137	142	147	152	157
	toelage politiezone	76	101	108	118	121	117
	toelage erediensten	8	7	8	8	7	7
	andere overdrachten	118	92	97	106	116	113
	schuld	116	111	109	118	105	105
Totaal		*1.060*	*1.062*	*1.093*	*1.169*	*1.205*	*1.263*



Source: "Gemeentelijke profielschets Dendermonde", Studiedienst Vlaamse Regering, 2013, p. 26

Within the organization DDS 15 full time equivalents were active in 2012. DDS is, like the other local authorities, self-sufficient. At its creation in the 70 each municipality made a contribution which resulted in seed money totalling € 1 million. These funds are primarily used to execute projects which should generate a return on investment, for example in the design and sale of industrial and residential projects ...this has resulted in an actual capital accumulation of € 11 million.

This method, according to the director of the DDS certainly has its drawbacks, since there is the tendency of business-as-usual, only betting on projects which are certainly profitable. In this way, experimentation and establishment of new projects, practices….is excluded. He believes that the funding involved would indeed need to be reviewed, along with the strategic operation of the DDS. He wants to convince the municipalities to restart envisioning and strategically thinking and to introduce "experiment" in regional development. But he states that this also should mean that municipalities should take financial responsibility.

Yet Mr. Van Malderen states that many urban renewal projects have been effectuated without external funding: the reconstruction of the "Grote Markt" (the "Grand Place" of Dendermonde), the construction of a new modern city library, ...On the other hand there are some major challenges in the city and around it that prove very difficult to solve, also because, in his view, an overall vision is lacking. The best example of this is the discussion on the relocation of the urban prison, which is now right in the city center and completely unadapted to modern standards. As a result of this, the city of Dendermonde reached the international news by the outbreak of 28 prisoners, right in the city centre. There are plans to give a new function for the actual prison building and relocate the prison to a Greenfield

development in the outskirts of Dendermonde inner city, but this meets with much protest from the local residents.

The Director of the DDS declares hardly to apply for grants and admits to have the reputation in the wider region as opposed to subsidies. He defends this position intake by stating that grant programs are dictating the specific agenda of the projects and by avoiding this, one can freely decide on actual project development. It is not that subsidies completely denied, but he prefers to look at the problem first and look for the funds later. If they are aware of the presence of grants and funding programs that specifically address these local needs, he would apply. But the time investment to screen eligible programs and applying for them is perceived as too large, partly due to a lack of transparency in the various grant programs. He even declares that grant programs are deliberately complicating the application process to avoid that too many candidates would apply for a limited pot of resources.

On the other hand he observes that regional organizations have money left and do not know what to do with it. He regrets then the fact that creativity with these remaining funds often does not go farther than commissioning research projects. He advocates a combination of these individual surpluses to be able to obtain a critical mass to perform a meaningful project.

On the other hand DDS stated to have € 11 million available to spend on meaningful and concrete projects within the region, but that there is no demand for it.

4.1.2.3.2. Regional funding (Flemish government)

To get an idea of the capacity of Dendermonde to attract Flemish funding, reference is made to Figure 30, which shows that Dendermonde attract 0 to 20 percent less than the Flemish average (Christiaens et al., 2013).

The aldermen of spatial planning deplore that Dendermonde falls just beneath the Flemish policy category of “centrum city”, making them miss this subsidy scheme of the policy competence “Stedenbeleid”. But on the other hand, it is admitted that there is neither tradition nor capacity in Dendermonde to actively explore the various funding channels and try to mobilize these opportunities. On the contrary, the city government has a strong wait and see attitude towards this, in spite of recent initiatives for capacity building in screening all existing European grant programs for feasibility and applicability. This initiative however died out by the lack of will and capacity to take this structurally forward.

This does not mean that no external (Flemish or federal) public investment is drawn to the region. The master plan of the station area, for example is a collaboration with national institutions such as the NMBS (national railway company) and "De Lijn" (Flemish Bus Company). The whole project of the refurbishment of the Downtown Dender stream was collaboration with “Waterwegen en Zeekanaal nv”, a Flemish institution for the sanitation of the “Van De Voorde” site arrangements have been made with OVAM. Investments have been and will be made in road safety in collaboration with “Agentchap voor Wegen en Verkeer” (AVW) and more concretely in the rearrangement of some dangerous mobility nodes and the reconstruction of the Mechelsteenweg (an important traffic - access road between the city center and Hoogveld, but also the location of a large scale commercial

strip). By these experiences, the local government officials learn to capitalize on these existing networks and mobilize them for new projects.

4.1.2.3.3. European funding

The importance of capacity building and the development of networks are certainly recognized by Mr. Van Malderen, which hitherto insufficiently happened, based on an on advance opinion that one would not be successful. Nevertheless he clearly recognizes the importance of European grant application. Although within the DDS the opinion exists that European themes are too much confining for the actual projects, Mr. Van Malderen argues that this safe position is only possible as long as there are no major local economic shocks which could completely destabilize the financial situation of the city, e.g. the departure of a major economic player and job provider (VPK for example), the continuing crisis,....On the positive side European funds could be used to bring some contextual or environmental factors, on which the city does not score well, onto a higher level.

Mr. Tas, the actual alderman of spatial planning, highlight the ambiguous character a city as Dendermonde has within field of European funding programs, namely the medium-sized city. One is "noch mossel noch vis", which is a Dutch expression to indicate that they fall in-between: they have a certain level of development and are clearly an urban centre within the Flemish Diamond, which makes that they cannot be considered as a rural or peripheral area, but on the other hand they do not have that level of metropolitanisation which makes it eligible for urban development grants. He clearly recognizes the importance of cooperation across borders and sectors and thinking out of the box, but he also agrees that this would have to imply a fundamental change of mentality within the existing institutional landscape of Dendermonde. And this does not happen overnight. He also stated that the attraction of European funding in itself is a very difficult exercise which requires specialization and investment – this needs to be a clear choice from the local government. They are aware of the fact that in other cities, municipalities or intercommunal partnerships this choice has clearly been made.

One is also fully aware of the fact that it could be different: in other intercommunal partnerships in East Flanders other strategies and attitudes are observed: the intermunicipal partnership “Interwaas” (which is a region in the North of Dendermonde, next to the Dutch border), for example, has a very strong tradition in drawing external funds towards the association of municipalities. Sint-Gillis-Waas, a municipality in the Waasland next to the Dutch border, has succeeded to recruit financial means for the restoration of a piece of military heritage (Spanish ramparts) which is now tourist attraction for cyclists. Within Interwaas, the individual municipalities realize that even if one particular project is not favouring their interest, everyone will be addressed eventually.

In conclusion, the lack of tradition and capacity building is a major reason why Dendermonde environment and its wider region are not mobilizing European funds in a structural manner. As far as Flemish funds are concerned, the first steps have created and networks are expanding. What was surprising, however, that none of the talks mentioned the capacity building or informative role of higher government bodies such as the provincial level of East Flanders ... which was mentioned in Ypres and Aarschot.

On the other hand the interviews give the strong impression that there is no awareness in the region of importance of cooperation and strategic thinking. On the contrary, an introverted business-as-usual approach seems predominant. As a result many opportunities

and impulses from above are missed out. The fact that the DDS is not able to take up its role as an initiator and mobilizator of subsidized projects of European scale, is explained by its strong executive role, but also its composition, in which the voice of the social partners has been reduced in importance compared to the voice of the municipal governments. The latter do not seem to expect from DDS nor encourage it to do strategic thinking, nor to convert the profits of the organization into the development of cooperation structures.

4.1.3. Aarschot

Aarschot copes with similar problems to Dendermonde (demand for housing and business locations) and a specific targets imposed by the RSV regarding more housing and business parks. Even more, an important nature reserve, the Demer valley is situated within the area which further complicates the search for housing and business locations. Aarschot responds to the problems with 3 thematic Master plans: one related to built and natural heritage ("'s Hertogenmolens en Amer"), another is a residential project on a derelict industrial area ("De Torens"), and the last one related to economic development "Aarschot op Sporen". This last project aims at the development of a business park, well accessible by public transport. Aarschot has commissioned a research to investigate the possibilities and interested economic sectors. One of the strategies is to complement the knowledge and R&D activities in Leuven.

4.1.3.1. Challenges and strategies

Basically Aarschot is at the same policy cycle than the other case studies. After the elections of October 14, 2012, it is now fully engaged in the development of the policy plan of the new legislature. Although, the importance of continuity in mission statement and policy is strongly underlined by the mayor of Aarschot. This policy must also be internally consistent and fitting into a larger story which appeals; this is primordial to attract funds toward the city.

It is not always easy to consequently operationalize this mission in a context where the Flemish cities and municipalities come increasingly under pressure in financial terms, so several objectives and actions will have to be tackled within a financially termed planning. Quite a number of developments have already been launched in the past or deployed further in this very moment.
Overall, one has the ambition to promote Aarschot further as a culture city.

Aarschot is currently working on the development of three master plans, each linked to a central theme and following from an overarching strategic plan, which can be regarded as decisive for the long - term policy of the municipality. These master plans were started in 2003 and will be developed over a period of 10-15 years and are also related to three main "carriers" within the city , namely the Demer (nature and heritage), the railway (economic development) and the former historic city wall, which connects the residential tissue. That they are successful in this strategy, they claim, is demonstrated by the awards obtained from the Flemish Government which show recognitions, but also in total a grant of 4 million euro to help with the realization of these projects. These grants were obtained in the Flemish program and project call "Thuis in de Stad" ("at home in the city").

Next to this, Aarschot is also looking for supracommunal cooperation on various issues, but the trichotomy housing, nature/heritage/environment and economy is also present here. Please refer to section 4.1.3.2 concerning policy networks.

4.1.3.1.1. Densification of economic activity in the project "Kop Van Nieuwland" business park

In the previous chapter mention was made of the inability of the municipality to free up land for industrial development. However Aarschot has also been assigned as a development

pole for regional economic activity, according to the RSV and the Provincial Structure Plan. Originally Aarschot had to find 25 hectares, but this target was increased by 20 hectares when it appeared that no room was found in the Brussels agglomeration for additional development. Anyhow, after a long search it proved to be impossible even to find the minimum target of 25 ha.

The city has come to terms with this situation and started to devise a strategy for optimalization of the existing industrial park. This means densification and intensification of space use in the project “Kop van Nieuwland”, the site of a former concrete factory of 6ha, purchased with help of Interleuven and the POM (provincial development company). A public-private partnership was established to realize 50000 square meters of net floor space.

The private consultancy bureau Cushman & Wakefield is currently performing a wide market survey to gauge interest - one wants to determine whether it is possible to attract some large companies or multinationals, or other types of economy operating at a supralocal scale, in order to adapt the concrete design of the project to these interests. Will there be built for one large company or several medium sized companies, or will the focus be on several small companies? Another idea is to provide for a flexible infrastructure, in which it should be possible for a small business to gradually grow within the same building. Whatever the scope of the company, the ambition is to attract companies with a high capacity of job creation as the area is located next to the station. The broader master plan also strives to enhance accessibility of the site for other alternative modes of public and alternative transport (bicycles, buses…)

The project does not necessarily aim for the development of an office market, but there are ongoing talks with the KULeuven to expand the knowledge economy in a wider region within the quadripool Leuven Tienen, Aarschot – Diest.

The wider master plan project "Aarschot op Sporen” (“Aarschot on Tracks”) received from the Flemish Government a grant of 2 million Euros.

4.1.3.1.2. A wave of residential development in the pipeline

Just like Ypres and like many Flemish cities, Aarschot is focussing its housing policy on the attraction of young families. The demand exists, since young families are looking for affordable housing expelled from Brussels and Leuven. Extra initiatives are needed, since Aarschot as well feels the pressure on the housing market by rising prices. Hence Aarschot aims for new residential development projects, giving room to this migration but also to give the opportunity to the local audience.
Thus some lots are only offered to people who live and work in Aarschot. In total, these initiatives will lead to an increase of 1000 housing units in Aarschot in the coming 6 years.

Concretely, this is achieved in 3 large residential projects – one already in phase of realization, other in an earlier design stage – but the common aim is the creation of affordable housing. This is done both by compaction within in the city center, and by mobilizing some “residential expansion areas” (in Flemish policy terms called “woonuitbreidingsgebieden”, orginially spatially demarcated in the Flemish “gewestplan” and by recent decree with the obligation to provide at least 10 %, maximum 20 % of social housing when developed). Yet agreements have been made with the private partners to offer at least 80% of the remaining offer at affordable prices. For example, in the

“Poortveld” project is should be possible to offer smaller homes of 100 square meters and a garden of 2 acres, at the price of 200000 Euros.

Within the projects the buildings meet the highest energy efficiency standards and much attention is drawn to public parks and public spaces. There are also imposed conditions in terms of facilities in the district itself, for example in the “Torens” project a children’s day care is planned, in “Poortveld” a nursing home and service flats for the elderly. In the third large housing project, which is still in draft form, a relocation of the day care hospital is maybe possible. In summary, the ambition is to create multifunctional spaces in which provisions for certain target groups are already offered. Specifically in “Poortveld”, a share of the development is intended for the disabled and mentally disabled.

4.1.3.1.3. Development of natural and cultural heritage in the Demer valley

"'S Hertogenmolens and Amer " was the first master plan developed in the city of Aarschot. The Flemish government decided in 2005 to award a grant of 2 million euro to the urban renewal project. Mobilizing this funds and own resources and with the help of private partners, the city has managed to restore 's Hertogenmolens and refurbish the quay of the Demer.

The mill was a piece of cultural heritage from the 16th century that was totally in ruins, but now restored and transformed into a hotel -restaurant with several conference rooms. The second aspect of the project was the reorganization of the Demer and the embellishment of the quays into the center of the city.

The city won several awards with the project, such as the Europa Nostra Prize and Flemish architectural prizes.

4.1.3.2. Policy networks

As in the case studies Ypres the intercommunal partnership is an important initiator in initiating common, cross-community initiatives and the mobilization of funding. Therefore, the operation of Interleuven is briefly outlined, and the projects that are developed based on European and Flemish subsidies are highlighted. This will be addressed in the first subparagraph.

However, it is striking that the city government of Aarschot is also very active in the development of thematic networks. Remarkably, every other regional partners are involved, depending on the relevant geographic scope by each theme. These networks are discussed in Section 4.1.3.2.2.

4.1.3.2.1. Intercommunale Interleuven

Interleuven is, similar to the WVI, an intermunicipal association, has been founded almost 50 years ago. It was initiated top-down from the province, and one of the first objectives of the intercommunal organization was a need for the collection and treatment of household waste, but the director also had the ambition to work in regional socio-economic development. In the development of housing projects and industrial terrains, Interleuven

had collected expertise in planning, design, spatial frameworks, out of which rose the idea to put this at the service of the municipalities. The employees of Interleuven now work as additional staff for the municipalities, possibly to replace the municipal officials during absence, or to supplement the municipal expertise with respect to housing, environment, economic activity and spatial planning. In most municipalities Interleuven is also manager and developer of the local industrial terrains and in some municipalities it also supports residential projects in design and implementation.
10 years ago the activities concerning the gathering and treatment of household waste were placed in a separate intercommunal partnership and became “Ecowerf “.

Since the larger cities like Leuven, Aarschot, Tienen and Diest have their own expertise; they make relatively less use of the services of IL compared to the smaller municipalities. Interleuven collaborates perhaps the least with Aarschot, except with regard to the development of the industrial terrain “Kop van Nieuwland” (see Section 4.1.3.1.1). For other projects Aarschot is rather turning to private external consultancy bureaus, which was also confirmed by the mayor of Aarschot.

Interleuven is also instigating research work. An example is the project “Grenzeloze logistiek” (“Logistics without Borders”), funded by EFRO and Interreg Vlaanderen-Nederland, but also by a number of Flemish policy partners and programs. The theme is the development of sustainable economic activity around the canal Leuven-Mechelen (which is not on Aarschot territory). Another example is the research project on inter-municipal industrial parks, which is also funded by the Flemish government.

However, does not only mobilize funds do research projects, but also for concrete realizations in the field. Two actual projects are BLISS and Eco2Profit.

BLISS is an acronym for 'Better Lighting in Sustainable Streets'. It is a European project in which Interleuven participates along with a selection of municipalities in the Leuven region. The project runs from early 2009 to late 2013. The aim of the project is to test new systems for public lighting. The new systems must be energy efficient but should at the same time be experienced as better by the public and users (e.g. industrial). The people need to feel as safe as before so new installations may not cause more accidents or crime (www.interleuven.be, consulted on 21 October 2013).
This project is funded by the European Program “Future Cities” (INTERREG 4B). Projects allocated under this program should contribute to the reduction of CO^2 emissions this are focussing on mitigation strategies. The project should lead to insights and advice which is useful to take adjustments to public lighting systems in other regions of the participating countries and the EU as a whole. There is much attention to the dissemination of results.
Four European partners participate in the project; each executes a number of subprojects in order to exchange very specific information. Interleuven will work with the municipalities towards the implementation of energy efficient lighting in both residential projects and at industrial sites. For example, in relevance to our specific case study, energy-saving initiatives will be done taken in the project “Kop van Nieuwland” in Aarschot. End March 2013 the program secretariat approved the application for project change of Interleuven in which additional sites were proposed. This meant e.g. green light for the implementation of new public lighting systems in the city park of Aarschot.

The second project related to BLISS is **Eco2Profit**, or the INTERREG project “Broeikasgasreductie en duurzame energie op bedrijventerreinen” ('greenhouse gas reduction and renewable energy on industrial sites' or Eco2Profit (Interreg Vlaanderen-

Nederland). This project is fits also in the European objectives to achieve a reduction in emissions of greenhouse gases by 20% in 2020 in comparison with 1990. Moreover, since the Ministerial Decree of October 1, 2007, of the Flemish Government, new industrial terrains are obliged to be CO2 neutral. Besides Interleuven and POM Vlaams-Brabant another seven partners from the border region Flanders-Netherlands participate in the project: Antwerp POM, POM East and West Flanders, POM Limburg, OCW and LIOF, RMD and Park Management. The project runs from March 31, 2010 to September 30, 2013 (www.interleuven.be, consulted on 21 October 2013).

Evidently, Interleuven is always interested in and actively looking for comparable opportunities since external funds can be used as investment cost of new lighting systems, which have a cost reducing effect for the municipalities afterwards because of the lower energy price tag.

Another recent focus within the operation of Interleuven, which can also be observed in the case of WVI, is the establishment of regional cooperation. The impulse towards this initiative was given by the state reform of minister of internal affairs Geert Bourgeois and the "Regioscreening", but these initiatives do also originate from bottom-up. For example, the city of Leuven realizes that it is no longer possible anymore to allocate necessary growth within its own territory. Moreover, certain themes such as mobility are issues which have to be dealt with across administrative borders, so this means they are starting to cooperate with the neighbouring municipalities. Also the concept of economic network city is explored in the Quadripole Leuven Tienen, Aarschot – Diest. This will be further explained in the next section.

In addition to development around the major city of Leuven and medium-sized cities, IL is also aware of the smaller, rural municipalities and their common problems / challenges which could be tackled jointly. IL established a form of regional cooperation, which is driven by a committee of mayors, four deputies of the Leuven arrondissement and a representative of the KULeuven – as initiative this is very similar to what is currently happening in West Flanders e.g. in the "Westhoekoverleg".

The intention is to get together a few times a year and discuss possible projects. These dossiers should have a regional focus, they may be initially suggested by only one or two municipalities but they must bring added value to a larger area and if the project is selected, the entire partnership promises to give full support, e.g. In the defense of the project towards higher political authorities.
Initially IL wanted to support the discussion by the provision of a framework of regional typologies within the arrondissement of Leuven, but the mayors felt that it was not necessary to fix this in advance and to asses, project by project, the relevant geographical or thematic scope.
Interleuven acts as a consultation and work platform for it operation.

It is still too early to say how this initiative will be planned further in time and which strategic character it will have. The initiative has only just started in April 2013 and had the first meeting in June 2013.

Interleuven also operates within a strategic long-term planning and is now evaluating the former plan and developing the next one (period 2014-2018).

The organization received a single financial contribution from the municipalities at the founding of IL, but is now self-sustaining based on the revenues of the business and residential projects on the one hand, and the hourly wages of other service activities on the other hand.

A second intercommunal partnership grew out of the womb of Interleuven, namely the IGO, which is more concerned with the social sector, culture, rural development, and management of green areas. In this last initiative, they are enabling people who do not find easily other opportunities at the labour market.

4.1.3.2.2. Intermunicipal cooperations around Aarschot

The analysis of policy initiatives in the city of Aarschot already demonstrated the strategic approach within the municipal territory. These initiatives are focused on 3 themes, housing, economic activity and cultural and natural heritage. These are also the central themes in collaborations above municipal level. These are outlined below.

The mayor of Aarschot explains that these partnerships are all relatively recent (last 10 years) and bottom-up initiatives. He also underlined the necessity to combine forces, especially in times where the municipalities are under great financial pressure.

As far as **housing policy** is concerned, two cities, Scherpenheuvel-Zichem and Aarschot, decided in 2010 to work on a housing policy together and founded the association “H-Aar-Scherp”. IGO acts as project operator and is part of the interlocal association. The project was made possible thanks to Flemish, provincial and urban resources and started on January 1, 2011. The association is operating with 4 FTE. Currently, the municipality of Diest joined the partnership and the project is renamed "Wonen aan de Demer."

The association focuses on provision of information to people who are looking for a property in the wider region. Further, various common issues/challenges related to housing policy are identified. It is possible to exchange information and financial resources within the organization. Additional services are also offered, e.g. legal support for tenants.

In the context of **economic activity** the possibilities are being explored to forge alliances within the Quadripole (Leuven Tienen, Aarschot-Diest) to economically develop the Hageland region. To what extent each town within the network is able to develop its specialties, but also contribute to the synergy of the greater region? The KULeuven is an important player in those discussions and although its engagement does not result in actual commitments yet, the initiative provides opportunities for the future with regard to the development of the knowledge economy. Thus, the concept of network city is launched, although it probably will take some more years to get actual cooperation.

The representative of the IL does add some critical comments on this. She does not believe in the development of core knowledge economy and actual R&D Operations on sites located outside of Leuven, since the developers still attach much importance to physical proximity of universities and professors. It is more likely for the first line of production to occur in other sites within the quadripole, when the "distance" to scientific research has become a little bit longer, literally and figuratively. As proof of this reserve towards actual relocation of R&D activities she points out the Bio-Incubator in Tienen, which is not so easy to fill in. In addition, the KULeuven has to consider carefully not dispersing and scattering their R&D activities too much throughout the territory. This should be well thought out and addressed in a spatial strategy.
Moreover, it is not appropriate to lay an overly strong emphasis on knowledge economy alone. The whole province of Vlaams-Brabant encounters a strong deficit of available space.

One must also be able to provide affordable opportunities to local entrepreneurs. Finally, a one-sided development towards the knowledge economy, also rules out a large part of the population, even in a relatively highly educated labour market of the Leuven region.

With respect to **nature development and tourism and recreation**, it is worth noting the Merode Project. This is rather an originated from the province of Antwerp (the Kempen) and started with the purchase of the forests of the Merode in Westerlo, at a distance of 15 kilometres from Aarschot. Initially Aarschot was not involved in the project, but since the Demer valley's landscape is spatially associated with these forests, the project was gradually given a wider geographical interpretation as being the whole area between the rivers Demer and Nete. Meanwhile, the Merode Project area is a partnership of 10 municipalities, 7 in the province of Antwerp and 3 in the province of Vlaams-Brabant.
The aim is to enhance nature management and development within the area and to exploit it touristically and recreationally as one spatial whole. One thinks of giving support to local B&B's, horse riding facilities and similar ecotouristic activities. On the other hand, attention will also be directed towards the upgrade of to cultural heritage in the region (including many spiritual heritage resources). The project is cooperating with the Flemish level in the form of the Flemish Land Agency (VLM). Obviously the partnership will not confine itself to envisioning, but will also work together in the search for funds, possibly European.

Finally we mention a thematic partnership initiative with regard to the **commemoration of World War 1**. Leuven, Aarschot, Dendermonde and 1 other Flemish and four Walloon martyr cities are working together to establish some common projects purely in function of the commemoration of the war, across the language borders. The objective is the mobilization of Flemish, federal and European funds.

4.1.3.3. Means

4.1.3.3.1. Local finances

In Figure 33 and Figure 34, local revenues and expenses per inhabitant are depicted for Aarschot in the period of 2006-2011.

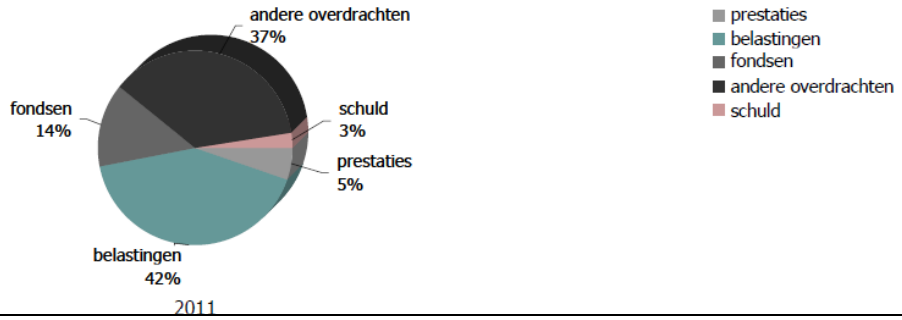
When we compare Aarschot with the municipalities of Cluster 5 (the medium sized cities) and the whole of Flanders, the total revenues per inhabitant are € 1688 in 2011 and have risen since 2006 with €115 per inhabitant. If we compare these numbers with those of the medium sized cities (medium sized cities in 2011: 1295 €), and the Flemish average (in 2011: 1261€ for Ypres while 1456€ for the Flanders), Aarschot revenues per inhabitant are much higher. When we look at the expenses per inhabitant, we see 1597 € per inhabitant in 2011 for Aarschot, while 1245€ for the medium sized cities and 1376€ for Flanders as a whole. In conclusion, the income per inhabitant is much higher than for the medium sized cities as a whole and the Flemish average, so are the expenses.

Figure 33 - Aarschot: local revenues (per inhabitant)

Ontvangsten gewone dienst (in euro per inwoner)

		Aarschot					
		2006	2007	2008	2009	2010	2011
Ontvangsten gewone dienst	prestaties	67	46	75	80	68	87
	belastingen	594	624	615	706	703	705
	fondsen	192	199	217	232	233	232
	andere overdrachten	548	568	575	606	602	619
	schuld	172	98	87	65	52	44
Totaal		*1.573*	*1.534*	*1.569*	*1.689*	*1.659*	*1.688*

Procentuele verdeling van de ontvangstenposten gewone dienst



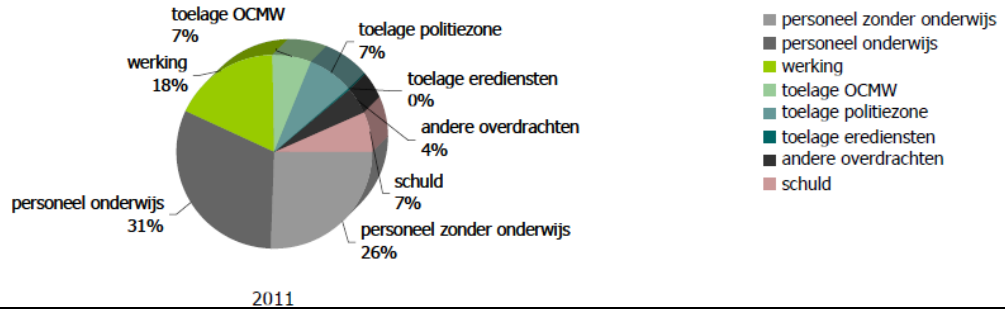
Source: "Gemeentelijke profielschets Aarschot", Studiedienst Vlaamse Regering, 2013, p. 20.

Figure 34 – Aarschot: expenses per inhabitant (2006 – 2011)

Uitgaven gewone dienst (in euro per inwoner)

		Aarschot					
		2006	2007	2008	2009	2010	2011
Uitgaven gewone dienst	personeel zonder onderwijs	330	342	363	381	386	408
	personeel onderwijs	422	442	469	477	491	502
	werking	233	238	254	273	283	282
	toelage OCMW	82	87	100	102	104	105
	toelage politiezone	80	106	101	115	113	117
	toelage erediensten	4	4	8	5	3	5
	andere overdrachten	62	46	81	95	70	71
	schuld	161	156	147	128	133	107
Totaal		*1.374*	*1.420*	*1.523*	*1.576*	*1.582*	*1.597*

Procentuele verdeling van de uitgavenposten gewone dienst



Source: "Gemeentelijke profielschets Aarschot", Studiedienst Vlaamse Regering, 2013, p. 26.

Aarschot has the same general problem that was also mentioned by Ypres: small and medium-sized municipalities cope with financial problems, just as the larger cities, so they have to gather other subsidies themselves. Aarschot is no "centrumstad" but falls not far below this threshold. Yet they have a very important function to provide for facilities towards the hinterland. These cities are somewhat forgotten, not only by Europe but also by

Flanders. The representative of Interleuven mentions the importance of a strong mayor who can use its network to mobilize opportunities.

4.1.3.3.2. Regional funding (Flemish and federal government)

There are however other Flemish possibilities for the mobilization of funding. That Aarschot is very successful in attracting those grants is demonstrated by the report "Overzicht en verkennende analyse van de Vlaamse sectorale geldstromen naar de Vlaamse lokale en provinciale besturen" (Christiaens et al, 2013). This is shown in Figure 38, which shows that Aarschot was able to draw 40 to 60% more grants inwards the municipality compared to the This is particularly 42%, and thus is Aarschot in sixth place, only preceded by Antwerp, Ghent, Bever, Dilsen-Stokkem and Kalmthout. For example, it made use of a specific program of the Flemish Competence of "Urban Policy", "Thuis in de Stad", to gain those subsidies (cf. paragraph 4.1.3.1.1 and paragraph 4.1.3.1.3).

4.1.3.3.3. European funding

For the Aarschot project "Kop van Nieuwland", support was offered from the European Regional Development Fund, which focuses on sustainable economic development. The project puts a strong emphasis on sustainable mobility: Kop van Nieuwland aims to be a business park easily accessible by public transport. Furthermore, the construction of a bridge over the railway tracks solves a missing link in terms of accessibility for pedestrians and cyclists and has the function to interconnect the two parts of the town – the town centre and the part at the rear of the station.

The refurbishment of the public domain in project area was realized with the help of an INREG project in partnership with 11 Flemish and Dutch cities, comparable in scale and with similar challenges, and had the goal of improve the public domain in station areas. In the first half of 2013 the project was completed, and resulted in a publication which provides solutions for other municipalities to learn from.

Regarding support in the search for grants and funding, the mayor of Aarschot and the official of planning and urban design mention the province of Flemish Brabant as key actor, very active in the mobilization of European funds towards the area. In the special context of Aarschot the personal factor plays a role too: the deputy within in the province is residing in Aarschot.

Also Interleuven focuses on capacity building regarding subsidy channels. Some internal employees do the follow-up on Flemish and European calls, but the organization also cooperates with an external expert who Works on freelance basis. He has an excellent good view on the activities of Interleuven and on the other hand extends very good contacts within the European network. He not only follows the European calls for projects, but also looks at the European networks which form around a specific call for projects and disseminate this information towards IL.
However, IL is to some extent selective in the project calls it chooses to apply for, since the application process is very labour intensive. Therefore a project call must perfectly match the goals ad initiatives which would have been taken anyway and from which the partners (municipalities) can benefit. Some examples of European projects were provided in paragraph 4.1.3.2.1.

5. Conclusions – Policy recommendations

5.1. Summary of the analysis

Flanders was initially chosen as a case study area due to its complex spatial nature of urban settlements and high densities. It is a region in a federal (smaller) state that has autonomy in the competence of spatial planning. The Lau units are rather large in comparison with the other case studies. The region also includes a coastal area, which is densely populated. We choose to emphasize this in the beginning of the conclusion since obviously this is an important explanation for the project results and has to be taken into account in the interpretation of the morphological and functional analysis in Flanders. We also draw the reader's attention to the fact that the Flemish territory is divided into 308 municipalities with an average area of 51.8 km ² and each with an administrative sovereignty. This is important to frame some elements with respect to the performance of the case municipalities and policy challenges.

The case of Flanders is especially interesting to assess the methodology's value of the **morphological analysis** in distinguishing large, small and medium towns on one hand and urban clusters – very small towns on the other hand. This is due to the fact that almost all Flemish municipalities are between 5000 and 50000 in population. The high morphological interconnectivity between the municipal cores by means of ribbon development alongside the motorways however, causes these separate municipalities to be combined in SMSTs but also in urbanized clusters (and thus, not considered as SMSTs although they actually are within the Flemish context). What is even more interesting is that the large urban structures as defined in the “Ruimtelijk Structuurplan Vlaanderen” are clearly visible on the map - Flemish Diamond, Lille metropolitan region, Brussels agglomerative region, border area with Maastricht. On the other hand some cities that are classified as an urban center based upon population within their administrative borders (>50000) and which are also considered being large cities in Flemish urban and spatial planning policy, are large SMSTs according to the RA2 analysis, but this is conform to its methodology. Generally speaking, and based upon the Flemish case the morphological method could be improved taking into account ribbon developments alongside important infrastructure lines, but on the other hand it can be assumed that this is a typical Flemish phenomenon not detectable in other case studies and a unique characterizing feature.

As far as the **functional typology** of microregions is concerned, the first notable observation is that the category of "Isolated town" or "Autonomous" does not exist in the Flemish situation. Neither does the category Aglo_SMST. This is because of the strong networked nature of the microregions not classified as a large city. All microregions that are not agglomerated towards a large city or networked to it are either networked as a source or as a destination. Secondly, there are quite some cities in Flanders that should be large cities taking account of the population of the microregion (and in many cases and compared with other research of urban hierarchy within Flanders, they are also considered being "large" or "regional cities"), but they are not according to the functional methodology since they do not reach the functionality threshold of 2. Those cities are: Aalst (f=0.33), Sint-Niklaas (1.53), Mechelen (1.82), Sint-Truiden (1), Tienen (0.66), Ieper (1.69) and Zaventem (0.5). The phenomenon was analyzed into more detail and it seems that those cities do not reach the threshold of 2 since they are all embedded in very strongly networked surroundings (as is in fact, the majority of Flanders). This results in the fact that all microregions which commute towards them, are also commuting to other microregions with the result that the total functionality threshold does not exceed 2.

Regarding the **choice of the case studies**, they relied on a variety of geographical situation in Flanders and varying relationship towards the existing urban and rural structures within Flanders, in combination with a variety of typologies of microregions. As outlined in the former paragraph this typology was based on commuting patterns and not on the presence of services of general interest or centrality of the municipality based on other socio - economic criteria. In retrospect, this resulted in a choice of three municipalities that are classified as "medium sized cities" (according to the Belfius classification which is based on a set of socio -economic criteria) and thus cannot be compared nor analyzed in their fundamental different size nor varying service function for the surrounding area. Nevertheless the qualitative analysis shows some interesting differences regarding some other contextual factors, such as the broader positioning within Flanders and the resulting "spatial pressure" which serves as a huge constraint for spatial development and growth of population and economic activity. Moreover, other contextual factors such as institutional framework and policy processes acts as either stimulators or inhibitors to the capacity of towns to address local challenges and mobilizing funds to achieve them. Our cases also suggest that a broader local or regional identity or mentality can give wings to or greatly hamper a successful mobilization of external resources - as well as European funding.

If we compare the **performances** of the municipalities and the strengths and weaknesses, some common policy challenges stand out due to their similar centrality. Because of their role of nurturing city for their hinterland, they need to keep the range of facilities on level but since they have just not enough critical mass to be considered as a “centrum city” in Flemish policy terms, get fewer resources. A positive aspect they have in common is that the medium-sized city is being considered as a pleasant environment to live through its friendly character compared to large cities, and the presence of amenities combined with the presence of green areas near to the city center. The economic profile of all case studies is characterized by a strong abundance of the residential economy, which is not surprising by their centrality towards their hinterland.

On the other hand, some specific challenges and policies are strongly related to the position within the larger Flemish urban system and the few rural systems still present in Flanders.

Thus **Ypres** knows the least spatial pressure of the 3 case studies. The city is situated in a predominantly rural area, not properly connected by railway with the urban core area of the country, better accessible via motorway, still located in the periphery according to Flemish perception. This results in an observed brain drain towards these central areas, but also in the challenge to lure businesses to the city and to convince them of the comparative advantage of Ypres. This lack of space pressure, at least in comparison with the other case municipalities, results in a relatively large reserve of industrial land to fill in for economic activities. In broader economic context Ypres is at too far a distance from Lille Metropolitan Area to take full advantage of its spinoff effects. To give the economy a boost Ypres follows a strategy regarding the development of tourism, urban cultural tourism, but also the war tourism in the area.

Secondly, **Aarschot** is situated on the verge of urban Flanders and the traditional rural landscape of Flanders of Hageland, which anyway results in an important spatial pressure since the territory both faces a great demand from out migrating population from the urban core and increasing pressure for economic activities forced out from the highly pressurized Brussels suburbs, but the inability to meet this spatial demand by the presence of high environmental standards as a result of an European bird habitat area. The policy response is

spatial densification of economic functions and the creation of new residential developments, with the help of master plans. The city also has a strong social function by the presence of nursing facilities and homes for the disabled and other groups to be reintegrated into society. Although the city is successful in the realization of new developments in order to absorb this population and companies the town is also aware of the impact of the crisis on the municipal treasury. In broader spatial context the town tries to take advantage of its location relative to Leuven, but also forges other spatial alliances depending on the specific theme (economy, housing, nature and recreation).

Dendermonde, located in the middle of the Flemish Diamond, has been chosen as a case study even though she was, according to the morphological analysis, part of the highly densified urban cluster of Brussels. However, this ignores a (specific Flemish ?) issue of a patchwork of agglomerated communities towards a large city within the Flemish Diamond, but still sovereign communities. So even if in analytical or methodological terms this whole area can be considered as a metropolitan area, this is certainly not the case in the minds of local policymakers. Dendermonde is faced with very similar challenges as Aarschot, namely the provision of housing, facilities and the search for space for economic activity and a similar approach to spatial densification and Brownfield development, but has the extra challenge to improve mobility in this spatially congested and saturated environment. However, the large difference with Aarschot and also with Ypres, is that the conviction that goals can be achieved through cooperation across municipal borders and mobilization of external funds is not present - yet. This gives the impression that, unlike the networked communities around the vicinity of Aarschot where strategic alliances are formed to act as mutually enforcing, the Dendermonde region with its patchwork of agglomerated municipalities can rather be seen as a competitive field of sovereign communities defending individual interests.

Intercommunal partnerships appear to play a very important role in the development of these spatial strategic alliances, but do not always take a similar initiative or get sufficient freedom of the participating municipalities to initiate this strategic approach and to mobilize external funds for the development of innovative projects.

Finally, the various cases also pointed in that direction that a clear local or regional choice for the mobilization of external funds is required, coupled with the establishment of policy networks and capacity building in the regional, federal and European funding landscape.

5.2. Policy recommendations

The analysis of the three case studies shows the importance of medium sized cities in Flanders for the provision of services for their wider environment, but the exclusion of this category of towns in comparison to the “centrumgemeenten”, which are just higher situated within the urban hierarchy. As already was pointed out in the first chapter, the initial methodologies or urban hierarchies (Van Hecke, 1998) gave rise to a division of municipalities in the urban-rural typologies, which meant in spatial planning terms specific “duties” related to housing, and commands / prohibitions relating to the development of economic activities. The category of medium towns analyzed in this report are classified as urban area in the RSV to attain these goals, but are not considered to be a “centrumgemeente” missing out important funding of the Flemish Urban Policy competence. Moreover, Aarschot and Dendermonde show that it is very difficult to meet the top down imposed goals of residential and economic development related to their

specific status within the urban hierarchy in a spatial context of saturation and Flemish context of privately owned land giving them less leverage to actually attain these goals.

It still remains to be seen how the new Flemish Policy Plan of Spatial Development will look at the Flemish residential structure, whether this will be in a classical hierarchical way or with the use of different concepts. However, the discussion will be very important for and relevant to the performance of SMSTs in the development of Flanders.

As far as the mobilization of European funding is concerned, the role of intercommunales seems very important, but also the provincial level can play a very active role in capacity building and the support of local communities or regional alliances to take advantage of European Funding. Although it is to some extent premature to draw general policy recommendations on the basis of three case studies, it seems that towns are able to take advantage of European Funding and choose for those policy Programs which are best suited to their relative location in a wider geographical context. For example Ieper can take most profit of those European Funding Programs which favour cross border cooperation (Interreg IVA), whereas the Leuven Region is looking for other programs within Interreg IVB (transnational cooperation), such as Future Cities, and EFRO. The example of Dendermonde shows, however, that a group of municipalities still has great reserve to the mobilization of European funds due to the labour intensive character of the administrative requirements to submit these kind of projects, but the analysis was not complete enough to assess the best governance level to down barriers. Is it the local community who has to invest in capacity building or is this ideally a role for intercommunal partnerships or the provincial level? Could Europe play a specific role in this by making the different funding possibilities more transparent? The example of Interleuven who works with an independent freelance expert shows that this is still all very specialist matter and the municipalities stated that it is difficult to find projects for which they are especially eligible. Some specific European initiatives to increase transparency towards local communities or integrating policy bodies (in the Flemish case the intercommunales) could be worthwhile, although the local regions should also be aware of the importance of cross communal cooperation to bring the wider region to a higher level and the importance of capacity building to fully take profit of the regional, national of European funding opportunities.

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Interviews

Ieper

Dhr. Dominiek Dehaene, Schepen Ruimtelijke Ordening, Stad Ieper (22 Mei 2013)
Dhr. David Vandecasteele, Coördinator Cel Ruimtelijke Planning en Mobilitiet, WVI (27 Mei 2013)

Dendermonde

Dhr. Kris Verwaeren, Algemeen Directeur DDS-VERKO (21 Mei 2013)
Dhr. Niels Tas, Schepen Ruimtelijke Ordening, Stad Dendermonde (14 Juni 2013)
Dhr. Bart Van Malderen, voormalige Schepen Ruimtelijke Ordening, Stad Dendermonde, nu Vlaams Parlement (14 Juni 2013)

Aarschot

Mevr. Laurence Poleunis, (28 Mei 2013)
Dhr. André Peeters, Burgemeester Stad Aarschot (27 Mei 2013)
Dhr. Geert Wijns, Hoofd Stedenbouw (27 Mei 2013)

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