SCATTER

Sprawling Cities And TransporT: from Evaluation to Recommendations

Deliverable 2: Work package 2

System Analysis of Urban Sprawl

by Experts, in the case cities

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This report is completed by one annexe presenting the detailed results of WP2 and WP3 for the 6 case cities : Bristol, Brussels, Helsinki, Milan, Rennes and Stuttgart

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EXECUTIVE SUMMARY

The first stage of SCATTER consists in the improvement of the understanding of the mechanisms behind urban sprawl and its impacts. In WP1 a state-of-the-art review of urban sprawl impacts and urban sprawl measurement techniques is carried out.

WP3 analyses, for each case city, the features and effects of urban sprawl, by performing a statistical analysis on a time series data base, covering a time period on which sprawl of urban activities (households, jobs, retail shops and other services) can be observed, as well as the related effects on the pattern of trip demand .

However, quantitative data analysis and simulation modelling can only partially disclose the interactions between causes and effects, factors and consequences. This means that these approaches can investigate only some of the relationships between all the elements involved.

The purpose of WP2 is to detect and understand the local events and rationale involved in the emergence of urban sprawl, its relevance in the decisional agenda of local authorities and experts, and the overall level of awareness of this particular urban phenomenon. Such goals are achieved by analysing interviews conducted with local authorities' representatives and experts in the six case cities of Bristol, Brussels, Helsinki, Milan, Stuttgart and Rennes.

WP2, by adopting a qualitative analysis approach based on semi-structured interviews, offers an in-depth and complementary understanding of the mechanisms of urban sprawl, notably the local and inherent events that triggers urban sprawl and the actual role of planning interventions. The results of WP3 should therefore be validated by this more descriptive, qualitative and systemic investigation.

This report first presents an overview of the methodological approach for the design on the interview framework and for the analysis of interviews results. Next it presents the general synthesis of all the interviews performed in the six case cities. Individual reports on each city based on the interviews synthesis and on the results of the statistical analysis are available as monographic annexes.

The synthesis is based on the concepts and categories (section 3 of the report), which have emerged during the interviews, some of which had not been predetermined in the interview framework. As a result the original areas of investigations (awareness and mechanisms of urban sprawl) have been redesigned into a) a general knowledge problem and b) factors determining location choices.

Another interesting aspect arising from the analysis of interviews is the necessity to structure further research and the design of policy measures around different typologies of urban sprawl. These are presented in the section 4 together with their relative spatial and functional patterns, impacts and possible mitigating or control policies.

The general synthesis has tried to identify and highlight mainly common factors and events leaving the description of local events and variation to the monographic annexes.

To summarise these common factors the following statements can be made:

Urban sprawl is mainly originating in situations when new demands arising for the increase in households' incomes are met mainly by the private sector. The housing

and land market and the lack of measures to control the increasing use of private means of transport are the main causes.

Sprawl is also perceived as relating mainly to housing rather than to an 'ill' structure of land-use distribution and planning. This is due to a tradition in planning analysis and practice that looks at spatial functions as alternative and mutually competing uses of scarce land. Although there is a call for mixed land-use planning as a possible solution in particular to the mobility problems induced by sprawl the attention to the possibility offered by economic and fiscal measures is still scarce. Costs and benefits have been since long investigated by the American literature but planning practice in Europe has focused mainly on the possibility to control sprawl by means of land-use and transport planning. To control the process and dynamics of urban sprawl is in so far very difficult, since often a mixture of the four different types of types of urban sprawl can be found. Finally, there is a need to define the 'proper institutional level' at which policies to control urban sprawl should be implemented. On this issue, the debate is still open. With this regards, local authorities should be supported in the definition of a knowledge framework and in the identification of best available practices and in the selection of which success factors could be suitably implemented in local contexts.

Several of the fundamental issues raised in this synthesis of the interviews will be dealt further in the work package 4, which tackles the policy measures aiming to limit or control urban sprawl, their efficiency, and the institutional barriers to their implementation.

1.   THE INTERVIEW FRAMEWORK

Several types of interviews are available in the literature of qualitative research methods. These can be classified by purpose of the interview and methodology as described in table 1.

	explore	describe
unstructured	**X**	
semi-structured	**X**	**X**
structured		**X**

Table 1. Types of interviews

A brief outline of the three main typologies of interviews is given below.

In many ways, the structured interview is like a questionnaire. Generally the investigator decides in advance exactly what constitutes the required data and constructs the questions in such a way as to elicit answers corresponding to, and easily contained within, predetermined categories which can then be numerically analysed. The main characteristics are the use of short, specific and closed questions and of pre-coded response categories.

Unstructured interviews do not follow a predetermined order of topics, but the researcher encourages the person being interviewed to introduce areas for discussion. With unstructured interviewing, even the questions are negotiable. This type of interviews is particularly useful to explore knowledge domains without having to set any predetermined boundary. Only the general goals of the investigation are planned.

With semi-structured interviews, the investigator has a set of questions on an interview schedule but the interview will be guided by the schedule rather than be dictated by it. Here, the ordering of questions is less important and the interviewer is freer to probe interesting areas that arise; the interview can therefore follow the respondent's interests or concerns. Semi-structured interviews allow a greater flexibility of coverage and enable the interview to enter novel areas and to produce richer data.

Given the exploratory purpose of WP2 and the necessity to elicit as many innovative aspects on the nature and mechanisms of urban sprawl, the semi-structure interview approach has been selected.

1.1. The design of the interview framework

As a preliminary action in the design of the interview framework and of the list of questions, the general theories and concepts to be investigated must be identified. General aims must then lead to a statement of more specific aims and these should be turned into an operationalised construct that is a set of practical issues or hypothesis to be investigated. This is probably the most difficult step in the design of the interview framework – everything, which follows, depends on how well the interview is initially conceptualised. Conceptualisation in this sense refers to the articulation of thoughts, ideas, or hunches and the representation of these in some objective form. Being urban sprawl a theoretical construct, its measurement, particularly in the context of a qualitative investigation, rests on the possibility to detect as many char-

acteristics and attributes as possible through which it can be observed and measured. It is for this purpose that the technique of concept mapping has been adopted.

Concept mapping is a type of structured conceptualisation, which can be used to develop a conceptual framework, which can guide evaluation, planning or the setting of the research framework. In the typical case, five steps are involved: 1) preparation and identification of the relevant framework of references; 2) the generation of statements; 3) the structuring of statements; 4) the representation of statements in the form of a concept map; 5) the utilization of maps. In this project concept mapping has been used to assist the operationalisation of the concept of urban sprawl.

Several approaches to concept mapping are available. The selection has focused on the work of Novak and Gowin (1984) who suggest that concept maps be drawn "free-hand" after an initial articulation of the major ideas and classification of them into hierarchical concepts. In a similar manner, Rico (1983) has advocated "free-hand" concept mapping or drawing as a useful method for developing a conceptual framework for qualitative research.

The results of WP1 have been used as the reference framework and the bank of information for the development of the map of concepts. Fig. 1 shows the concept map developed on the base of WP1. The map represents the key variables and variables' relationships that needed to be investigated in the interviews.

Fig. 1 Concept map of urban sprawl

2. METHODOLOGY OF ANALYSIS

The synthesis is based on a recursive process of contents (or text) analysis according to which elementary concepts found in the interviews' transcripts and relevant to the synthesis purpose are first selected and then grouped together into higher-level thematic categories. The latter are built during the analytical process on the basis of the map of relationships drawn by the interviewees among the different concepts. This methodology is especially appropriate for the analysis of semi- and unstructured interviews as those used in this project. The contents of each interview are treated as a different commentary of the same subject and during the analysis emerging themes, correspondences and contradictions can be detected. The final report however does not detail the interviewees' individual comments by means of references or quotations but it organizes and delivers their perspectives on the complex network of issues surrounding the concept of urban sprawl.

2.1. Content and conceptual analysis

Content analysis is a research tool used to determine the presence of certain words or concepts within texts or sets of texts. Researchers quantify and analyse the presence, meanings and relationships of such words and concepts, then make inferences about the messages within the texts, the writer(s), the audience, and even the culture and time of which these are a part. Texts can be defined broadly as books, book chapters, essays, interviews, discussions, newspaper headlines and articles, historical documents, speeches, conversations, advertising, theatre, informal conversation, or really any occurrence of communicative language.

To conduct a content analysis on any such text, the text is coded, or broken down, into manageable categories on a variety of levels – word, word sense, phrase, sentence, or theme – and then examined using one of content analysis' basic methods: conceptual analysis or relational analysis.

Traditionally, content analysis has most often been thought of in terms of conceptual analysis. In conceptual analysis, a concept is chosen for examination, and the analysis involves quantifying and tallying its presence. The focus is on establishing the existence and frequency of concepts – most often represented by words or phrases – in a text. The terms may be implicit as well as explicit. While explicit terms obviously are easy to identify, coding for implicit terms and deciding their level of implication is complicated by the need to base judgments on a somewhat subjective system. To attempt to limit the subjectivity, (as well as to limit problems of reliability and validity), coding such implicit terms usually involves the use of either a specialized dictionary or contextual translation rules. In the analysis of the interviews' transcript contextual boundaries were set by the definition of objectives.

The process of coding is basically one of *selective reduction*. By reducing the texts to categories consisting of a word, set of words or phrases, the researcher can focus on, and code for, specific words or patterns that are indicative of the research objectives.

Relational analysis, like content analysis, begins with the act of identifying concepts present in a given text or set of texts. However, relational analysis seeks to go beyond presence by exploring the relationships between the concepts identified.

The focus of relational analysis is to look for semantic, or meaningful relationships. Individual concepts, in and of themselves, are viewed as having no inherent meaning. Rather, meaning is a product of the relationships among concepts in a text.

2.2. Application of methodology

In total 26 interviews were carried out to local authorities representatives and experts in the 6 case cities. Figs. 2 and 3 show respectively the distribution of interviews among cities and the ratio between bcal authority representatives and experts in each city. In general, local authorities representatives have been selected for interviews on the base of their capacity to provide, altogether, an overall view of the study area. Where relevant, the interviews have tried to embrace different administrative levels (local, metropolitan, regional), thus supplying a wider range of perspectives and opinions on urban sprawl.
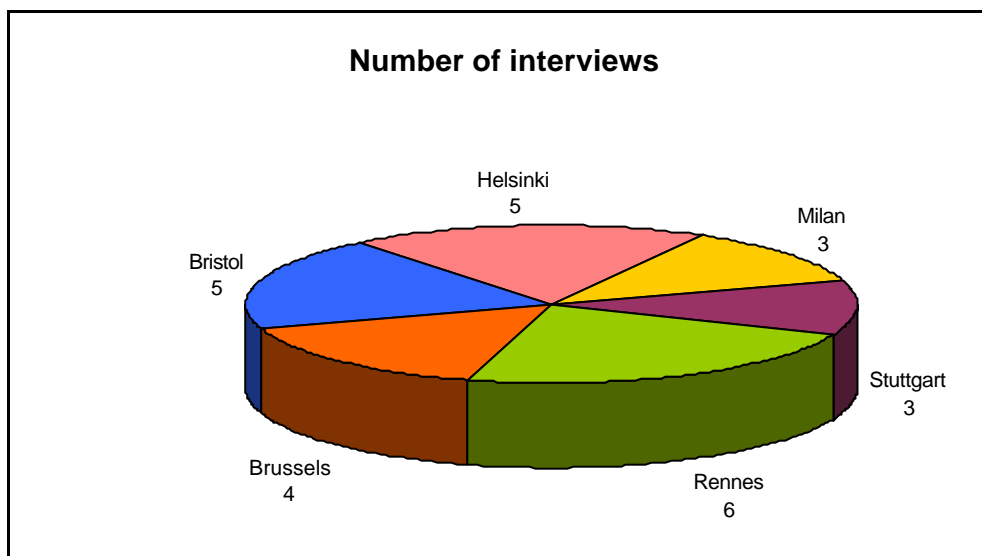

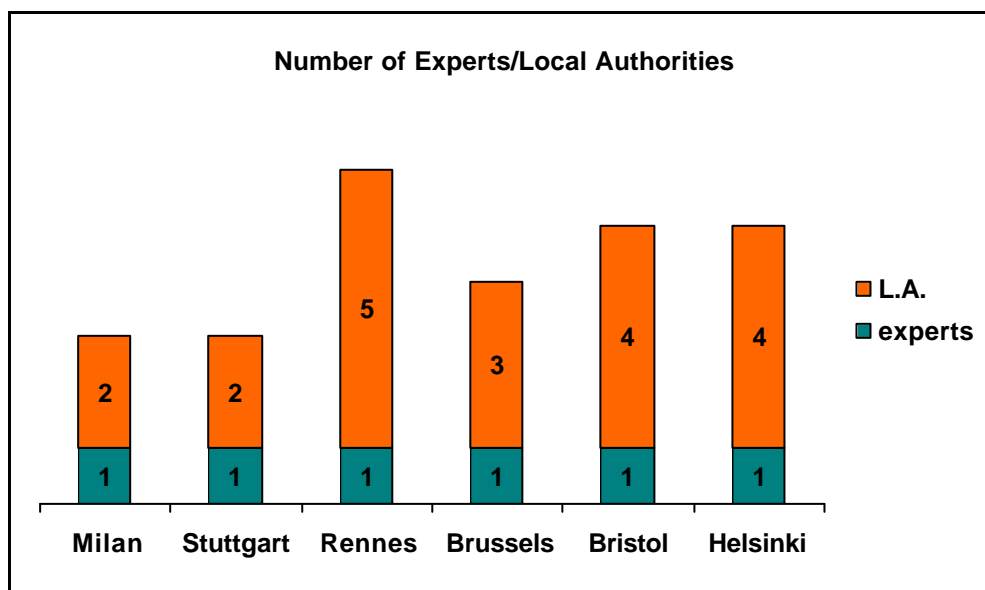*Fig. 2 Number of interviews in each case study area*

Fig. 3 Distribution of interviews between experts and local authorities representatives

The relational analysis approach has been first applied to each interview's transcript in order to build relationships among concepts found in different answers. Next, through 'cross-section' analysis, relationships among answers given to the same questions or set of questions (see annex A and B for the interview frameworks) have been investigated. The latter approach has been somehow hampered by the differences in the transcription methods adopted by the interviewers. However given the objectives of generality and comprehensiveness of the report, the results remain convincing and interesting.

2.3. The case cities

2.3.1. Brussels

The metropolitan area of Brussels (i.e. the study area) has about 2.9 million inhabitants. Its central part, which corresponds to an administrative entity, the Brussels-Capital Region, groups a little less than 1 million inhabitants, but the actual morphological agglomeration spreads beyond the limits of the Region. Beyond the suburbs, further in the hinterland, some medium-size secondary cities (Aalst, Leuven, Mechelen, Louvain-la-Neuve among others) are lying, which function more autonomously from Brussels.

The spatial structure of Brussels itself (the city) is quite typical. An old industrial axis along a canal surrounded by poor neighbourhoods of different ethnic communities with very few green spaces makes its way through the whole city, cutting it in two parts. Neglected during decades this area slowly begins to be renovated. On the other hand, the strong increase of administrative functions in the nineties introduced a speculative pressure on higher status neighbourhoods, making the cost of living increase. Out-migration of middle class families to the suburbs encouraged urban sprawl, commuting by car and traffic congestion on the access roads to the city. On the other hand, in the Brussels-Capital Region, the decline of population and the lowering of its average income increased the scarcity of the resources of the local authorities, essentially based on income taxes of residents, while a lot of public works must be done to adapt this central area to the increasing administrative functions.

On the whole metropolitan area, population and jobs globally increased between 1991 and 2001 (respectively by 3.7 % and 12.1 %), generating an increased consumption of space : the total built area increased by 18.1 % in the same period. Still in that period, the population density in the residential areas decreased and the land consumption per inhabitant increased from 1.65 ares to 1.89 ares. A crucial issue is whether such a high urbanisation rate is sustainable for the metropolitan area.

2.3.2. Stuttgart

The region of Stuttgart groups a total of 179 communities. The overall population of the region is about 2.6 million inhabitants. In its state capital, there are about 570.000 inhabitants concentrated. The region of Stuttgart is a regional economic and cultural centre. With an area of 3,700 km^2 this region is one of the most densely populated regions of the country. The development of the population in the Stuttgart Region during the last few decades is characterised by a strong growth in the periphery of the City of Stuttgart. The total population of the Stuttgart region has grown by about 3% since 1992, beside the enormous decrease in the scaled population of the City of Stuttgart of about 4.5% (599,500 inhabitants in 1992, and estimated 572.000 inhabitants in 2003). In addition, an enormous growth in industrial and business zones took

place in the peripheral zones, which, besides its traffic-generating impact on commuting and passenger transport in general, surely affects freight transport as well and has lead to a dramatic increase in population and workplace redistribution. Increasing demand for available floor space led to a disproportionate enlargement of the settlement areas and its corresponding land use and has led to out-migration of middle and high-income families. The result is a corresponding decrease of contiguous areas and a related increase of scattered areas (urban sprawl). Stuttgart represents an important traffic node within the Trans-European Network (TEN).

The region acquired its own political organisation in 1994 as the Verband Region Stuttgart and has a directly elected regional assembly. It has become a model for other regions in the state and in the Federal Republic itself. The central goal of the Verband Region Stuttgart is the co-ordination of policies among the independent municipalities.

2.3.3. Bristol

Bristol is the eighth largest city in the country (metropolitan population c. 700,000), and freestanding in functional terms. In recent years, the effects of deregulation, competitive attempts to attract and create new enterprise and greater responsiveness to consumer preferences have all led to a weakening of the grip of regional and local planners upon urban development. In the country, despite changing government targets for the re-use of 'brownfields' land, this has frequently led to urban sprawl. During the 1960s and 1970s the locus of manufacturing activity shifted to suburban sites, and a growing population was accommodated in suburban developments. During the last 20 years, retailing activity has been allowed to follow these pervious movements, with the result that the country has one of the highest incidences of out-of-centre retailing in the EU. During the late 1990s these centrifugal tendencies, coupled with a *laissez-faire* approach to urban planning, led to the development of a large number of peripheral out-of-centre shopping centres, similar in function (if not always in size) to the shopping malls of the USA.

2.3.4. Helsinki

Helsinki region includes both urban and rural areas. At the heart of the region lies Helsinki itself surrounded by three smaller cities. Together they form the metropolitan area. Additionally, included in the study area is a relatively large surrounding region with smaller cities and towns as sub-centres.

The metropolitan area has the largest concentration of people in Finland. The total number of inhabitants in the study area is over 1.6 million people (out of 5.2 million in the whole country). Of this, 1 million people live in the metropolitan area. The growth has been significant especially after the second world war and then levelling down in the seventies and eighties. In the 1990's the region was growing faster once again.

Helsinki region comprises about one third of the national GDP of Finland. In addition to its administrative status as the capital city and home for industry headquarters, the economy of the region is based on retail, wholesale and private services. The region, therefore, has a surplus in its trade with the rest of the country. While the traditional manufacturing industries have been declining, the share of high-technology industries and services has been growing. The large and concentrated traditional industries such as metal and paper are not typically located in the region. Consequently, the foreign exports are not so dominant as for the rest of the country. As a big concentration of population, the level of imports is high.

A sign of the structural change in the 1990s is the stratification of population and regions. The spread in income levels has increased along with the demand for the less educated labour force diminishing. The Helsinki Metropolitan area and its surroundings form a region that has been the most successful one in the country, but also within the region itself certain areas are prosperous while others are impoverished.

2.3.5. Rennes

The urban area of Rennes is located in the north-west of France (Brittany region). It covers 140 "communes" and represents a demographic weight of 521.000 inhabitants (1999).Between 1990 and 1999, its population has increased by 54.000 inhabitants (the third demographic growth at national level). As consequences, the land domination of the town of Rennes on its suburbs is been reducing for population and housing even if it stays true for employment. Business activities are located essentially in the central area and services are dominant in the local economy.

The urban area of Rennes has a superficy of 2,542 km^2 but densities differ a lot between the city core (4125 inhabitants/km2), the outer urban ring (283 inhabitants/km2), and the hinterland (81 inhabitants/km2).

This urban area can be also characterised by an historic tradition of politics partnership between mayors of the different towns in the metropolitan area. The regional administrative entity is a public cooperative body combining 33 administrative units, with a population of 320,000 (1990 general population census). It is now in charge, among others, of public transport and urban planning.

2.3.6. Milan

The metropolitan area of Milan has 3,8 million inhabitants. During the last 20-30 years, the municipality of Milan is being experiencing a constant loss of population which is accompanied by a radical process of de-industrialisation of the city (manufacture employees has been reduced to one third).

The de-industrialisation process does not affect the entire production sector. The metropolitan core is still very attractive for the new innovative, high tech activities, with natural vocation to research and with need of high specialised employees, for some "traditional" high tech industries (as tailoring, leather, jewellery, graphics and publishing) and for Commerce and Services To Business (Sectors related to banking and insurance)

The population of the city is now 1,3 million inhabitants on an area of 182 km^2. As in most important cities of industrialised countries, the phenomenon of the loss of population is statistically relevant. On the other hand, many municipalities in the hinterland have experienced an opposite tendency: most of all the historically rural ones in the south and in the west of Milan region.

Changes in the socio-economic structure of the whole area led (but it is still an ongoing process) to changes in the mobility patterns within, and sometimes outside, the metropolitan area: from a centripetal pattern (with focus on Milan) to a centrifugal one (with focus on the metropolitan area). Such changes were not supported by an efficient transport supply, except for the road network (with the building of the external ring roads), and public transport is still designed according to the "historical" radial patterns within the metropolitan area.

3. CONCEPTS AND CATEGORIES

As mentioned above the objectives of WP2 were to detect and understand the local events and rationale involved in the emergence of urban sprawl and its relevance in the decisional agenda of local authorities. According to this perspective interviews have been scanned in search of information that could be attributed to one of these two main sets of arguments.

Given the exploratory nature of the interviews and of the analysis methodology, new concepts, interests and concerns surrounding the issue of urban sprawl have had the possibility to emerge. This has lead to a redefinition of the original set of concepts and categories. In particular two areas of investigation have been selected: the available and advisable knowledge framework for the analysis and management of urban sprawl; the causal factors which have, according to the interviewees, influenced location (and relocation) choices in the case cities.

3.1. A knowledge framework for urban sprawl

The analysis of interviews has revealed a general concern about the knowledge framework that the SCATTER project has adopted. In particular, the geographical extent of the area of analysis, the spatial scale and the data sets (suggested in WP1 and analysed via statistical modelling in WP3) were often considered unable to represent the actual dimensions and mechanisms of urban sprawl.

With regards to the *spatial extent*, if it is obvious to assume that different scales reveal different spatial and functional structures, in the case of urban sprawl these differences seem to have a significant impact on its definition and explanation.

The extent used by SCATTER shows urban growth processes as a centrifugal dynamics. A monocentric structure emerges, based on concentric rings of decreasing density that have their core in the main urban centre. Urban sprawl is a local process of population dispersion and growing land consumption and infrastructure congestion. Causal factors can only be attributed to local events whereas demographic or economic trends act as a generic force of location dynamics.

Several interviewees suggest that a larger geographic extent of the areas of investigation be adopted. Such enlargement reveals more complex dynamics and interactions among the main and secondary urban centres of the region, which often lead towards a polycentric territorial structure. At this scale several and interesting explanatory factors emerge: the role of population and jobs redistribution processes; the role of conflicting and/or cooperating planning interventions among the involved municipalities; the impact of regional, national or even international infrastructures investment. Moreover urban sprawl ceases to be only the cause of negative impacts and becomes also a virtuous phenomenon promoting local development of small and medium urban centres.

Comments on the *scale of analysis* have mainly focused on the spatial resolution. During the majority of interviews, maps representing population and employment changes in the six urban areas have been used as a reference to elicit the discussion on causal factors of urban change. These maps are based on a subdivision of the areas by the smallest available census geographical unit, the same subdivision also been used by the statistical analysis in WP3.

According to the interviewees, this spatial representation cannot detect changes in the urban fabric, which are related to sprawling processes such as changes in the very small scale of land-use patterns, changes in the typology and quality of the built and natural environment, the evolution of rural-urban boundaries.

Finally concerns have been expressed also with regards to the census *data framework*. As a matter of fact descriptions by census and 'statistical' data are limited. Some phenomena involved in the emergence and in the structure of urban sprawl can only be described by 'other', sometimes unconventional sets of data. The actual structure of urban population and employment has changed in such a fashion that city users and daily commuters, illegal immigrants and temporary residents have as much impact in the dynamics of urban change as the permanent resident population. The former however are not taken into account in local or national statistic surveys.

3.2. The level of awareness of local authorities

To understand the level of awareness of local authorities with regards to urban sprawl, the analysis of interviews has focused on the relevance of the topic in the decisional agenda of planning offices and on the level of knowledge exhibited by the interviewees.

The former has been assessed by the attention given in the design of policy measures or planning interventions to issues such as mobility and congestion, land consumption and the quality of the urban environment. With this regards there is a growing consideration among individuals responsible (in different ways and at different institutional levels) for planning to problems such as the increasing congestion and traffic not only within urban centre but also in peripheral areas and in the surrounding regions. The necessity to provide for a better coordination of land-use and transport planning also at the neighbourhood scale as well as to control the production of the built environment to prevent land-use and social segregation and the impoverishment of the urban quality are perceived as crucial steps in the struggle against urban sprawl.

The latter is demonstrated by the above-mentioned concerns on the necessity of an improved knowledge and analytical framework for urban sprawl.

However, this generally high level of attention is hardly ever accompanied by a shared awareness that sprawling processes are careless of institutional boundaries. This is the source of undetected and unplanned processes of urban growth, which can lead to sprawl but also of institutional conflicts among the different local authorities affected. These conflicts, based on the competition among different areas and urban centres, which try to capture or reject population, employment, new development areas, wanted or unwanted land-uses are one of the main barriers for inter-institutional cooperation.

Almost all the respondents have proved sensitive to recognizing that a common understanding of what urban sprawl is and how it works is crucial to build a strategic, shared and far-sighted vision of the future of their urban areas and regions. These factors as well as the definition of the proper institutional level for decision-making are crucial to the success of any policy measure designed with the purpose to mitigate the impacts of urban sprawl.

The debate on the 'proper institutional level' is still open. Opinions collected through the interviews range from the definition of a metropolitan or regional authority with land-use and transport planning competences to the formula of voluntary bottom-up cooperation among local authorities, which has been successfully tested in some cases.

To conclude it is possible to affirm that both awareness and knowledge can be considered crucial elements without which efforts to design policy measures to tackle urban sprawl might not always produce the expected results.

3.3. Factors determining location and relocation

A second objective of WP2 was to understand the local events involved in the emergence of urban sprawl and its mechanisms. The analysis of the interviews has highlighted a wide range of factors responsible for the location and relocation choices of population and productive activities. For the purpose of the synthesis all identified factors have been grouped into four main categories: planning regulations and interventions, the changing structure of population and households, the structure of employment of the economic sectors and the negative externalities associated with urban agglomerations. Fig. 4 shows the weight, in percentage, of the four categories and of each factor within each category.
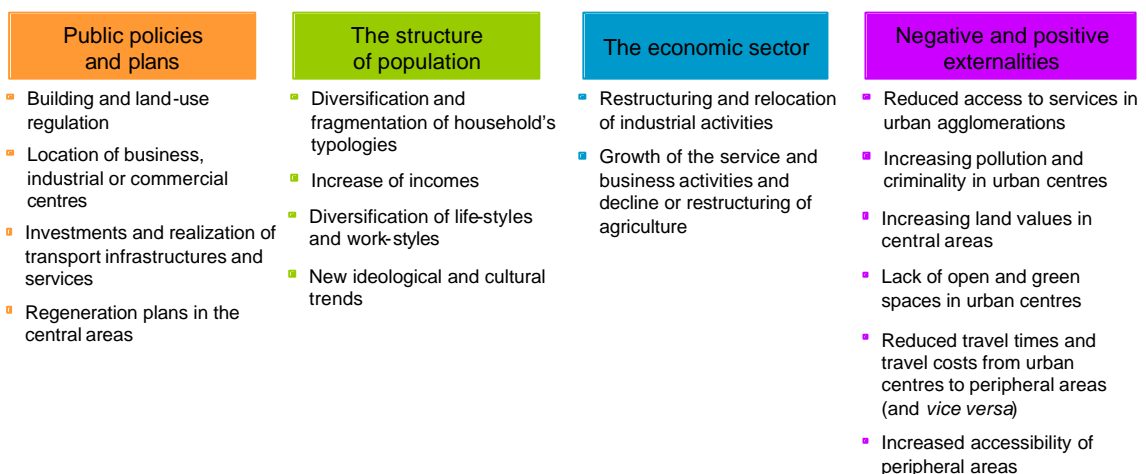
Public policies and plans	The structure of population	The economic sector	Negative and positive externalities
▪ Building and land-use regulation	▪ Diversification and fragmentation of household's typologies	▪ Restructuring and relocation of industrial activities	▪ Reduced access to services in urban agglomerations
▪ Location of business, industrial or commercial centres	▪ Increase of incomes	▪ Growth of the service and business activities and decline or restructuring of agriculture	▪ Increasing pollution and criminality in urban centres
▪ Investments and realization of transport infrastructures and services	▪ Diversification of life-styles and work-styles		▪ Increasing land values in central areas
▪ Regeneration plans in the central areas	▪ New ideological and cultural trends		▪ Lack of open and green spaces in urban centres
			▪ Reduced travel times and travel costs from urban centres to peripheral areas (and *vice versa*)
			▪ Increased accessibility of peripheral areas

Fig. 4 Causal factors of location dynamics

3.3.1. Planning regulations and interventions

In all the six study areas, public planning has played a significant role in determining the current spatial and functional structure. However a distinction is needed between:

– planning and building regulations and laws that have set opportunities and constraints and have influenced the behaviour of households and productive activities and their decision to change location

– more localised interventions such as new residential, industrial or business development areas and transport infrastructure that influence where urban growth can take place.

The first group includes regulations, laws and fiscal measures explicitly and implicitly restricting or promoting selected building typologies. This is the case for instance for regulations, which have limited the development of multi-storey buildings in central areas or have promoted low density residential development in suburban areas. This has effected not only the built landscape of cities but has modified the structure and distribution of land prices. These have increased significantly in central areas forcing especially residential developments in the suburbs.

On top of this, a general framework within which urbanisation and infrastructure costs of new low density developments were not privatised but borne by public authorities has further facilitated ex-urban locations.

The second group includes public planning interventions for the localisation of new development areas and infrastructure. The planned location of new business parks, industrial areas, residential suburbs or commercial centres in connection but not always in coordination with the extension or realization of transport infrastructure such as metropolitan rail systems and motorways and even airports have determined the direction taken by urban growth and is at the origin of spatial (and mobility) unbalances.

To the same group belong public decisions made on the realization of regeneration programmes, mostly aimed at revitalizing the core and historical areas of urban centres. These programmes however successful in their main goals, have impacted on the reallocation of urban functions and on the distribution of land prices between central and peripheral areas and therefore set the backcloth for further (re)location dynamics.

3.3.2. The changing structure of population and employment

It could seem quite obvious to assert that changes in demographic trends, in the structure of population and of employment and in the economic sector have an impact on location choices of households and productive activities. These are structural changes, occurring in all European territories and cities. Local and national cultural differences can produce local variations in these trends but processes of globalisation are nonetheless underway and they represent one of the main problematic nodes of urban policies.

The analysis of interviews, however, has revealed the preponderant role (50%, see fig. 3) played, according to the interviewees, by these changes among the set of causal factors of location processes. This is also mirrored, as reported in the sections dedicated to implemented and suggested policies to tackle the different typologies of sprawl, by the growing attention towards measures aiming at modifying individual location behaviours.

These trends can be linked to the emergence of new lifestyles and aspirations. Given the connections of these lifestyles to city life and residential patterns, they affect the distribution and composition of population across settlement systems and within urban regions.

The main changes in the demographic regime have occurred in Europe in the last thirty or forty years. These can be described as follows.

3.3.2.1.   Changing population profiles.

Three aspects have emerged in the composition of population as an effect of the change in the elements of population dynamics: developments in households' structure, ageing of population, increasing ethnic and racial diversity.
Household composition is today radically different from the past in all the six case cities. The most impressive features are the diversification and fragmentation of households' typologies due to the rising numbers of one-person households and the increase of lone parent families. Urban population is progressively ageing as a direct outcome of the trends in both fertility and mortality. Finally the ethnic composition of European cities is becoming more diverse, through international migration and as a result of subsequent family building by new settlers.

3.3.2.2.   Migration processes

Immigration has become an increasingly significant source of urban population growth. In the case cities immigration is responsible for significant percentage of population growth. Most of these migrants are coming from non-European countries: sub-Saharan Africa, Asia and Eastern Europe. Skilled labour migrants have a more cosmopolitan nature and usually short-term posting so as to being referred to as invisible migrants even though they do have a local and spatial impact.

3.3.2.3.   Changing attitudes and lifestyles

Higher incomes, welfare, the emancipation of women all contributed to the high instability in household patterns and the increasing dissociation between formal household structures and informal family structures. The most fundamental feature of this transition is a shift from more altruistic, collective attitudes to more individualistic, self-gratifying behaviours. This shift has been supported on one side by the emergence of new ideological and cultural trends with regards to living and housing environments and on the other side by a housing market eager to meet an increasing demand for individual housing typologies. The increase of family's incomes has been indicated in the interviews as the most important factor of growing rates of car ownerships and the latter, in its turn, as one of the factors that have facilitated urban sprawl.

In general the growing demands in terms of housing, services and quality of life that higher incomes have elicited in individuals and households have been scarcely met by the public sector but mainly by the private market. In the absence of sprawl-wise regulative and planning references the outcomes have been unplanned, scattered, segregated modes of urban growth.

Moreover all the aspects mentioned above have varying impacts on location choices and on the 'social ecology' of urban areas. Central areas of cities are becoming the preferred location of one-person households, elderly and sometimes immigrants. Young families with children often opt to locate in suburban areas where prices allow for more living space. Land-uses are becoming more and more separated on the base of planning approaches that are more sensitive to their incompatibilities than to the benefits of agglomeration and of multifunctional land use developments and the private actors bind their development interventions to the most profitable land-uses.

3.3.2.4.   The economic sector

The impacts of changes in the economic sectors can be ascribed to restructuring processes of industrial and agriculture activities and to the growth of the service,

business and commercial sectors. As for population, economic changes are on the one hand structural and global and on the other bent by local development processes, economic, social and cultural traditions. In this sense not all the case cities have displayed the same degrees of change. In some areas, agricultural and industrial activities remain relevant sources of incomes and the preservation of rural land is crucial. In other areas the business and serviced sectors have a local engine and are based on the development of small and medium enterprises, while in other areas exogenous forces have forced the shift from the industrial to the service sector.

However some common elements can be found. In all areas, the relocation of industrial sites has left dismissed areas and brownfields available for new developments. These, given the favourable locations in the proximity of the urban centre and of transport infrastructures have been mainly directed towards profitable land-uses, residential development not being one of them. Similarly the development of new service and business parks as well as of commercial centres have preferred highly accessible location close to infrastructure and played a significant role in setting the ground for further (and farther from the core of urban centres) residential areas.

3.3.3. Negative externalities of urban agglomerations

European cities are not at risk of the 'doughnut effect' that is common in the United States. Central areas are still vibrant and they continue to attract jobs and population. However, as mentioned above there is a 'natural' selection of which demographic (and ethnic) groups and productive activities can locate in the core areas. Therefore de-urbanisation processes are still strong and similarly selective and they can be credited to the growing negative externalities of urban agglomerations. A part from the increasing costs of life in the central areas of cities other factors are at the origin of out-migration such as increasing pollution and criminality, reduced access to public services such as schools and health centres and lack of open and green areas

4. FOUR PROFILES OF URBAN SPRAWL

Not all the functional and spatial patterns resulting from these location and migration dynamics have been described as urban sprawl by the interviewees. Four main typologies of sprawl have been identified and the following sections give a profile of each. Profiles comprise a description of their spatial and functional structure, the most relevant impacts and an outline of the policies that either have been implemented or have been suggested by the interviewees to mitigate and control the problems connected to each typology.

4.1. Sprawl as an emergent polycentric region

When observed at the regional scale urban sprawl is characterised by the emergence or development of secondary urban centres. Population and jobs migrate out of the main urban centre of the region and tend to relocate in existing urban centre where agglomeration economies offer clear advantages to urban modes of living and working. The type and intensity of relationships among centres (and between these and the main centre) therefore design a polycentric spatial and functional structure of the region.

Relationships among centres can be based on varying degree of intensity and functional specialisation, on a hierarchical distribution of functions or on horizontal and equipotential links. Polycentric urban regions can evolve in different ways:

− A centrifugal mode where the continuous growth of the monocentric node impose such diseconomies that the most affected production and functions are squeezed out to alternative centres which in the long run may rival the original centre.

− An incorporation mode where a large urban centre expands its urban field and incorporates smaller centres, which were to that point self-sufficient in terms of employment and services. The system forms a powerful catalyst for extra non-residential activities with a stronger challenge to the original centre.

− A fusion mode with the fusion of previously independent centres of similar size and importance. The improvement of transport links plays a major role in this mode.

The main negative impact is a general quantitative increase of mobility and especially on transport infrastructure towards the main urban centre. Congestion on radial routes, rings of traffic jams and reduced accessibility to the central areas have been identified. In these areas transport policies based on an increase of the supply of infrastructure have failed in their goal to decrease, in the long term, travel times towards the main centre. On the contrary they have in the short-term, facilitated mobility, which has resulted in a subsequent further increase of the length of trips and of congestion. In the long run these secondary impacts have overcome the initial benefits of such policies and, by improving accessibility, they have often created an incentive for new waves of urban sprawl.

In terms of development of new infrastructure, several interviewees have suggested that the attention be given to horizontal/peripheral links in order to strengthen functional and spatial interactions among all the centres of the polycentric region and not only interactions with the main centre.

Although increasing, mobility is still organised according to a systematic structure of origin/destination patterns and on an orderly system of existing infrastructure, which makes it easier for public transport projects to reach economically feasible density thresholds. As a consequence, accompanying measures to reduce the number of trips by private car have been implemented and suggested. The possibility to increase the share of trips using public transport rests on the ability of the adopted policies to move as many users as possible from one mode of transport of the other. With this regard, the analysis of interviews has shown that 'variables' other than land use and spatial patterns can be considered such as road-pricing, park-pricing, congestion charges, tax on CO_2 emissions which tend to impact and modify individual behaviours by privatising the costs of car usage.

These patterns of urban sprawl have also been described by their positive impact. In fact by redistributing population and employment urban sprawl promotes local development in small and medium size cities. These can offer a better environmental quality and accessibility, more and better local public services such as schools and health centres.

4.2. Sprawl as a scattered suburb

This typology of urban sprawl is characterised by infill process by which scattered and low density housing developments locate between centres or between transport infrastructures. The quality of housing and of the residential environment is high but there is a limited supply of public services, mainly composed of commercial centres making this type of sprawl similar to the American suburb. The impacts are mainly due to the scattered and low-density nature of these developments.

Accessibility is mainly provided by private means of transport because of the fragmented character of trips. The multiplication of origins and destinations of trips and their high diversification (almost randomisation), make it impossible to reach feasibility threshold for public transport.

Moreover the low density of these developments generates high levels of land consumption both for housing and infrastructures and higher urbanisation costs.

This type of sprawl is mainly the result of the transition from altruistic, collective attitudes to more individualistic, self-gratifying behaviours with regards to living and working. This is demonstrated that despite the lack of a sense of community and of urban identity, these residential neighbourhoods are still the preferred location of the majority of young families with children and a medium to high income.

Solutions are mainly directed at promoting more compact and mixed land-use development. This goals can be reached, as suggested by the interviewees, by a more strategic and coordinated land-use and transport planning and by the definition of building regulations, laws and fiscal measures which promote more dense developments.

Planning and land-use control should move away from a traditional approach that focuses mainly on the control and regulation of the demand of land towards a more rigid control also of the supply of development areas.

In this concern, building regulations which impose a minimum and maximum size of building lots, define building typologies and control the distribution of urbanisation

costs between private and public actors, can have a significant impact on density levels, on the balance between mono and multifunctional development and on the quality of the built environment.

4.3. Sprawl of peripheral fringes

Sprawl is not only about population groups who have and exploit the chance to relocate but also about those who have no other chance but to relocate because of the increasing costs of life in the urban centres. In some cases these population groups are represented by Illegal immigrants, students retired who do not have access to the residential suburbs described above. In other cases the process of peripheral growth that occurs in the first ring of available land around the main centre substitutes the previously described process of suburb formation and involves a wider range of types of population and households. This happens particularly in those situations where geographical, infrastructure or planning constraints limit accessibility to areas too far from the main centre. Anyhow peripheral fringes become the only possible location of these groups of population.

These take the form of the old public housing peripheries of the 50s and 60s and of the new peripheries, often poorly designed by a private sector seeking speculative interventions. They are characterised by higher densities than suburban developments and can be found not only around the main urban centres but also the secondary ones.

The obvious impacts are an increasing level of social deprivation or segregation and the degradation of the built environment. Possible solutions have been identified in regeneration programmes focused on peripheral areas rather than on the central areas of the main and secondary centres. In several cases, regeneration plans have also exploited an improved concern with regards to the coordination of land-use and transport planning at the neighbourhood scale.

4.4. Commercial strips and business centres

Another form in which urban sprawl manifests itself is the realization of commercial and service and business centres outside the compact city boundaries. These developments reflect the result of a planning approach that sees land-uses as mutually competitive and produce a system of market forces, which play a critical role in determining land price mechanisms. The location of these land-use functions follows a rationale based on accessibility, low cost of land and agglomeration economies. As a result these activities locate close to transport infrastructure like airports, ports, and motorways' junctions sometimes also in consequence of public or private/public planning decisions.

These developments generate induced mobility on main transport infrastructure. This is not only commuting but also 'random' mobility for leisure and shopping, hardly captured by public transport. High levels of land consumption are also a key feature due to the scarce attention of the public actor as a land provider. In fact the design of planning and fiscal measures to control the demand and supply of development areas is identified as one of possible solutions to the negative impacts of this typology of sprawl.

These areas also tend to attract further, unplanned housing development setting the ground for urban sprawl. These impacts, as suggested in the interviews, could be better controlled through the strategic design of commercial plans in coordination with transport and land use plans

5. CONCLUSIONS

One of the main difficulties faced in trying to build a synthesis of the set of interviews carried out within WP2 is the 'isolation' of structural and 'global' causal factors of urban sprawl from situated and local ones. As underlined originally in the literature review in WP1, local contexts (social, economic and spatial structure, planning systems, fiscal and regulative frameworks) play a significant role in the emergence of urban sprawl.

This general synthesis has tried to identify and highlight mainly common factors and events leaving the description of local events and variation to the monographic annexes.

To summarise these common factors the following statements can be made:
Urban sprawl is mainly originating in situations when new demands arising for the increase in households' incomes are met mainly by the private sector. The housing and land market and the lack of measures to control the increasing use of private means of transport are the main causes.

Sprawl is also perceived as relating mainly to housing rather than to an 'ill' structure of land-use distribution and planning. This is due to a tradition in planning analysis and practice that looks at spatial functions as alternative and mutually competing uses of scarce land. Although there is a call for mixed land-use planning as a possible solution in particular to the mobility problems induced by sprawl the attention to the possibility offered by economic and fiscal measures is still scarce. Costs and benefits have been since long investigated by the American literature but planning practice in Europe has focused mainly on the possibility to control sprawl by means of land-use and transport planning. To control the process and dynamics of urban sprawl is in so far very difficult, since often a mixture of the four different types of types of urban sprawl can be found. Finally, there is a need to define the 'proper institutional level' at which policies to control urban sprawl should be implemented. As mentioned above the debate is still open. With this regards, local authorities should be supported in the definition of a knowledge framework and in the identification of best available practices and in the selection of which success factors could be suitably implemented in local contexts.

Several of the fundamental issues raised in this synthesis of the interviews will be dealt further in the work package 4, which tackles the policy measures aiming to limit or control urban sprawl, their efficiency, and the institutional barriers to their implementation.

ANNEX A: INTERVIEW FRAMEWORK (ENGLISH VERSION)

Questions

A. Urban Growth

1. Can you tell me the brief history (10 years or so) of urban growth in the city of xxxxx?
2. Can you describe which have been the major "spontaneous" changes in the city? (Probe: structure, spatial distribution of activities, of residence, of jobs, of population, commuting, transportation network)
3. How would you describe the current spatial structure of the city and surrounding region? (Probes: scattered, leapfrog, linear, edge cities)
4. How would you describe the current land-use structure of the city and surrounding region? (Probes: mixed, segregated (commercial or residential poles), mismatched)
5. (Showing a map) Can you comment the information displayed according to statistical data on population, built up areas, other?
6. Why do you think these (land-use, spatial) structures have emerged? (Probes: have they been planned; other probes in table 1)
7. If you had to describe what urban sprawl means to you, what would you say? Prompt: what words come to mind? What images?
8. What do you think about urban sprawl in general? (Prompts: social segregation effect, environmental effects, mobility effects)
9. What do you think about urban sprawl with regards to the city of xxxxx and its surroundings?

B. Identity impacts

1. Can you describe the major problems/advantages that such changes have brought to the city of xxxxx? (Probe: environment, traffic, economic costs, financial costs, welfare. See table 2 for other probes)
2. How has commuting changed in relation to urban growth? (Probe: intensity, origin/destination, reasons, modal split)

C. Implemented measure

1. Can you briefly describe the planning, land-use and transport policies or plans currently implemented or about to be implemented in the city of xxxxx? (Probes: purposes of the plan/policy, which are the responsible regional, local authorities, quangos; which is the spatial extent of this policies, when were these policies implemented)
2. Would you like to mention any other policy or plan that has been or will be implemented and which you think might affect the structure and functioning of the city?
3. What do you think have been the main reasons to launch these policies?
4. What can you tell us about the decision-making processes involved in the design and implementation of these plans/policies? (Probes: who (individuals, institutions) was involved, when was the subject brought out)
5. Which have been the results of the implemented policies so far? (Probe: side-effects, correspondence between expected and actual results)
6. Have there been barriers or difficulties in implementing these policies/plans? (Probe: fragmentation of governance among several authorities, resistance from public, private, third parties, mismatch with other existing public policies/plans)
7. Which suggestions do you have to improve these policies?

8. Do you have any other suggestion on what the city of xxxxx should do to plan its future? (Probe: sector policies, change in administrative structure, improve knowledge on spatial and land-use structure)

9. One of the objectives of the SCATTER project is to design a monitoring tool addressed to local authorities, to monitor the evolution of sprawl and its effects. Practically, it will consist in a list of relevant indicators. What is your view on such a tool? (Probe: usability, integration with other tools, suggestions on indicators or variables)

Table 1. List of probes for question A.3

Explanation of sprawl emergence
Housing markets (housing prices lower in the periphery than in the core city)
Appeal of a rural ambiance
Appeal of low density settlements
Decrease of travel times and costs due to the extension of the highway network
Decrease of travel times and costs due to the improvement of public transport services (heavy rail, light rail) serving the suburban area and linking it to the city centre
Rejection of the core city due to damaged buildings, dirtiness, car traffic, lack of safety due to traffic, noise, air pollution, …
Rejection of the core city due to congestion
Rejection of the core city due to social problems
Development of economic poles in the outer urban area or delocalisation of companies from the core city to the outer area
Economic causes
Restructuring and relocation
Emergence of SME and decline of large enterprises
Development of an economic pole in the outer urban area
The growth of employment in particular localised industries like mining, defence and tourism
The restructuring of manufacturing industry and the associated growth of branch plants
The growth of employment in the public sector and personal services
The effect of economic recession on rural-urban and return migration
The first round in a new cyclic pattern of capital investment in property and business?
Demographic:
Increase of the total population of the city
Inherent changing in structure population
The expansion of commuting fields around employment centres
The concentration of rural population into local urban centres
The reduction of the stock of potential out-migrants living in rural areas
The acceleration of retirement migration
Change in age structure and household size and composition
Social:
Increase of household income
The emergence of scale diseconomies and social problems in large cities
The improvement of education, health and other infrastructure in rural areas
The change in residential preferences of working age people and entrepreneurs
Institutional/political:
The availability of government subsidies for rural activities
The success of explicitly spatial government policies; if yes, which one(s)
The growth of state welfare payments, private pensions and other benefits
Transport related events:
Improvements in transport technology
Improvement of sub-urban public transport service
Improvement of sub-urban road infrastructure
Application of specific transport measure; if yes, which one?

Table 2. List of probes for effects of sprawl

Public/Private Capital and Operating Costs

Infrastructure costs
Private residential and non-residential development costs
Public fiscal impacts

Transportation and Travel Costs

Vehicle/miles travelled
Travel and commuting times
Private v public transport
Household transportation spending
Congestion
Public costs for transportation

Land/Natural Habitat Preservation

Agricultural land
Farmland productivity
Farmland viability (Water Constraints)
Open space

Quality of Life

Aesthetic issues
Sense of community
Energy consumption
Air pollution
Crime rates
Costs of public and private goods and services

ANNEX B: INTERVIEW FRAMEWORK (FRENCH VERSION)

Questions

Croissance urbaine

<u>Constat</u>

1. (avec illustration cartographique) Pouvez-vous commenter l'information présentée concernant la population, l'espace bâti, ou autre?
2. Pouvez-vous présenter un bref historique (les grandes lignes, depuis environ 10 ans par exemple) de la croissance urbaine de la Région Bruxelles Capitale et de ses banlieues?
3. Pouvez-vous décrire les principaux changements "spontanés" de la ville? (c'est-à-dire en matière de structure, de distribution spatiale des activités, des résidences, de l'emploi, de la population, des navetteurs, du réseau transport)
4. Comment décrivez-vous l'actuelle structure spatiale de la ville et de ses environs? (structure dispersée / éparse, structure en "saute-mouton", structure linéaire, villes périphériques)
5. Comment décrivez-vous la structure actuelle de l'occupation du sol de la ville et de ses environs? (mixte, avec une ségrégation (pôles résidentiels ou commerciaux), mélangé)

<u>Causes principales</u>

6. Pourquoi pensez-vous que ces structures (spatiale et d'occupation du sol) ont émergé? (étaient-elles planifiées? Quels éléments de la TABLE 1 peuvent être considérés comme causes?)

Table 1 : Causes possibles d'un étalement urbain

1. Le marché immobilier (prix plus bas en périphérie qu'à l'intérieur de la ville).
2. Appel d'une ambiance rurale.
3. Appel de l'installation résidentielle basse densité.
4. Diminution des temps de parcours et des coûts de transport dus à l'extension du réseau autoroutier.
5. Diminution des temps de parcours et des coûts de transport dus à l'amélioration des services de transport public (rail lourd ou léger) desservant la région suburbaine et la connectant au centre ville.
6. Rejet du centre ville dû aux bâtiments dégradés, à l'insalubrité, au trafic croissant en voiture, au manque de sécurité due au trafic, au bruit, à la pollution atmosphérique, etc.
7. Le rejet du centre ville dû à la congestion.
8. Le rejet du centre ville dû aux problèmes sociaux.
9. Développement de pôles économiques dans l'aire urbaine extérieure ou délocalisation de compagnies du centre ville vers la périphérie.

Ou encore, par type :

Causes économiques
10. Restructuration et re-localisation.
11. Emergence des PME et déclin des grandes entreprises.
12. Développement d'un pôle économique, dans la région urbaine extérieure.
13. L'augmentation des emplois dans des secteurs à critères de localisation spécifiques tels que les entreprises minières, la défense et le tourisme.
14. La restructuration de l'industrie manufacturière et la croissance associée de filiales associées.
15. La croissance de l'emploi dans le secteur public et les services aux personnes.
16. L'effet de la récession économique sur les migrations ville-campagne et campagne-ville.
17. La première étape dans un cycle d'investissements dans la propriété et dans les affaires.

Causes démographiques

18. Augmentation de la population dans la ville.
19. Changements dans la structure de la population.
20. L'extension de l'aire des navetteurs autour des centres d'emplois.
21. La concentration de la population rurale dans des centres urbains locaux.
22. La réduction du stock de migrants potentiels des zones rurales.
23. L'accélération de la migration de retraités.
24. Changement dans la structure de l'âge et dans la taille et la composition des ménages.

Causes sociales

25. Augmentation des revenus des ménages.
26. Emergence d'économies d'échelle et de problèmes sociaux dans les grandes villes.
27. L'amélioration de l'éducation, de la santé et d'autres infrastructures dans les zones rurales.
28. Le changement dans les préférences résidentielles des actifs et des entrepreneurs.

Causes institutionnelles / politiques

29. La disponibilité de subsides gouvernementaux pour les activités rurales.
30. Le succès de politiques spatiales gouvernementales ; si oui, lesquelles?
31. La croissance des subsides à la population (comme le chômage), des pensions privées et autres.

Evènements liés au transport

32. Amélioration de la technologie des transports.
33. Amélioration des services sub-urbains de transport public.
34. Amélioration des infrastructures sub-urbaines d'autoroutes.
35. Application de mesures transport spécifiques ; si oui lesquelles?

Votre avis sur l'étalement urbain

7. Que pensez-vous de l'étalement urbain en général?
8. Que pensez-vous de l'étalement urbain au regard de Bruxelles et de ses environs?

Identifier les impacts

9. Pouvez-vous décrire les problèmes / avantages majeurs que ces changements ont apporté à la Région de Bruxelles Capitale et à ses banlieues, en considérant à la fois la ville et ses banlieues, dans les domaines suivants : (TABLE 2)

Table 2 : Liste d'effets possibles de l'étalement urbain

Coûts d'opération publics et / ou privés
1. Coûts d'infrastructure.
2. Coûts de développement privé résidentiel et non-résidentiel.
3. Impacts fiscaux publics.
Coûts transports
4. Véhicule/kilomètres effectués.
5. Durées des trajets et des navettes.
6. Transport privé – public.
7. Dépenses des ménages pour le transport.
8. Congestion.
9. Coûts publics pour les transports.
Conservation des habitats, des paysages
10. Terres agricoles.
11. Rendement agricoles.
12. Viabilité agricole (contraintes en eau).
13. Espaces ouverts.
14. Espaces naturels
Qualité de vie
15. Conservation de l'esthétisme.
16. Sens de la communauté.
17. Consommation de l'énergie.
18. Pollution atmosphérique.
19. Taux de criminalité.
20. Coûts des biens et services publics et privés.

10. De quelle façon est-ce que les trajets journaliers (de navetteurs) ont-ils changés en relation avec la croissance urbaine? (intensité, origines/destinations, motifs, choix modal)

Mesures mises en œuvre

11. Pouvez-vous décrire brièvement les politiques, mesures et/ou plans d'aménagement des territoires et de transport actuellement mis en œuvre ou prévus dans la Région Bruxelles Capitale et ses banlieues (Région de Bruxelles Capitale, Région Flamande et Région Wallonne), destinés à contrer l'étalement urbain? (c'est-à-dire, les objectifs de la politique, mesure ou du plan, les autorités responsables (régionales, locales ou des sociétés nationales de service public), quelle est l'extension spatiale de ces politiques, quand sont-elles appliquées)

12. Désirez-vous mentionner ou insister sur une politique ou une mesure en particulier qui a été ou sera mise en œuvre et qui affectera à votre avis la structure et le fonctionnement de la ville?

13. Quelles sont à votre avis les raisons principales de lancement de ces politiques ou mesures?

14. Que pouvez-vous détailler à propos des processus de décision entourant la conception et la mise en œuvre de ces politiques, mesures ou plans? (qui (individus, institutions) était concerné, quand le sujet a-t-il émergé?)

15. Quels ont été les résultats des politiques/mesures mises en œuvre jusqu'à maintenant? (effets secondaires, correspondance entre les résultats attendus et actuels)

16. Y a-t-il eu des barrières ou des difficultés dans la mise en œuvre, l'application de ces politiques, mesures ou plans? (par exemple, fragmentation de la gouvernance entre différentes autorités, résistance du public, du privé, d'un tiers, non-concordance avec d'autres politiques, mesures ou plans publics existants)

17. Quelles suggestions apporteriez-vous pour améliorer ces politiques?

18. Avez-vous une autre suggestion quant à ce que la ville de Bruxelles devrait faire pour planifier son futur? (au niveau des politiques, des mesures, des changements de structure des administrations, améliorer la connaissance en matière de structure spatiale et d'occupation du sol)

19. Un des objectifs du projet SCATTER est d'élaborer un outil d'observation de l'étalement urbain ("urban sprawl monitoring tool") adressé aux autorités locales, afin qu'elles puissent mieux contrôler l'évolution de l'étalement urbain et ses effets. En pratique, il s'agira d'une liste d'indicateurs pertinents. Quel est votre avis sur un tel outil? (utilité, intégration avec d'autres outils, suggestions d'indicateurs ou de variables)