North West Europe Interreg IIIB
Spatial Vision Working Group

Spatial Vision Study No. 1
Polycentric Territorial Development
(including urban-rural relationships) in NWE

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EXECUTIVE SUMMARY

1. The aim of this study is to make a practical contribution to the proposed Framework for Action. There are two main objectives: to prepare a clear statement on the context and challenges for polycentric territorial development in NWE until 2010 and beyond; and to make recommendations on appropriate future objectives for a NWE territorial co-operation programme and projects.

2. The Lisbon-Gothenburg Strategy to develop the knowledge economy whilst achieving sustainable development is the core overarching goal for the EU but its spatial development implications are not elaborated or well understood.

3. The spatial development characteristics of north-west Europe are dominated by a strong core of dense urban development, global command functions and knowledge economy activities. This concentration presents great challenges for sustainable development and there is evidence of continued polarisation of economic strength. However, the economic and quality of life performance of regions is not fully explained by the core-periphery model.

4. The most important spatial development trends for polycentricity in north-west Europe are connected to demographic change, large-scale migration (and the relationships between them) and enlargement. There is also increasing recognition of the significance of climate change on settlement patterns.

5. Many key actors see polycentricity as an abstract, complex and ambiguous concept that has dubious value as a policy tool. Many are also not convinced of the desirability of pursuing polycentric territorial development. Most key actors have given little attention to the transnational issues and to transnational polycentricity in particular.

6. National and regional policy documents do not make very extensive reference to transnational issues and polycentricity. Where they do, they most often concentrate on issues to do with physical infrastructure, sharing service provision and networking among city, town and regional governments. Few documents consider the spatial development implications of the knowledge economy, enlargement, migration and climate change.

7. Cross-border and transnational co-operation programmes primarily concentrate on the promotion of governance-related and institutional aspects of polycentric development, while INTERREG projects again address polycentricity mostly in terms of physical infrastructure connections and networks. Few projects deal with the spatial development implications of the Lisbon Strategy, demography, migration and enlargement. There are good examples of how INTERREG can be used to address co-operation among cities and towns.

8. The main barriers to transnational co-operation on polycentricity are differences in government and legal systems and procedures; the higher priority afforded to cross-border co-operation with near neighbours, physical infrastructure and competition among cities and regions; and the perceived abstract nature of the concept and urban bias of Interreg.

9. The geographical delineation of INTERREG areas at both cross-border and transnational level are thought to be inappropriate. The co-operation areas are perceived as too heterogeneous, combining areas with different problems and concerns and adding an additional administrative boundary. They strict definition of INTERREG areas is therefore seen as a barrier to more effective transnational working on polycentricity.

10. Strategic priorities for the future co-operation programme should address the spatial development implications of climate change, demographic change and enlargement; the need to support new approaches to spatial planning and a clarification of the spatial development (polycentricity) goals of the Community; the global performance of the NWE economy and particularly the transformation to the knowledge economy; providing good access to services for all; strengthening nodes and networks; and ensuring that ‘meshes’ and
rural areas are more fully integrated into networks and transnational spatial development thinking.

11. A number of strategic projects are proposed that could be developed co-operatively and comprehensively by the member states and regions to address the polycentricity issue and spatial development trends in the pursuit of the Lisbon-Gothenburg agenda. They include

- harnessing the hinterland effects of the global centres to spread the knowledge economy beyond its current concentrations;
- the creation of inter-regional spatial development programmes to create added value through co-operation on development corridors;
- seizing the wider transnational spatial development potential of the Channel Tunnel;
- co-ordinated action to manage urban growth and address sprawl and the conversion of rural to urban land; and
- joint planning actions for SME growth and innovation.

12. Current indicators for assessing the effectiveness of transnational and cross-border co-operation are very limited. General quantitative indicators for Structural Fund programmes do not address the important aspects of ‘mutual learning’, the territorial impact of projects; and contribution to the Lisbon-Gothenburg Strategy. Indicators should address the three dimensions of polycentricity – morphology, economic and social relations and governance; the costs and benefits of shaping spatial development patterns; the ‘softer’ outcomes relating to innovative practices and learning; and levels of co-ordinated policy and action at the transnational level.
1. INTRODUCTION

The main objective of the INTERREG IIIB NWE Spatial Vision Study No. 1 ‘Polycentric territorial development in NWE’ is to make a practical contribution to the work of the Spatial Vision Working Group and the ‘Framework for Action’. The continuation of the Spatial Vision process is expected

- to guide future strategic spatial planning in the regions and define common goals for territorial development across NWE;
- to have practical value in outlining future areas for territorial co-operation after 2006, and;
- to provide a framework for involving politicians and convince them about the added value of transnational co-operation.

This Spatial Vision Study on polycentric territorial development in NWE addresses two of the six challenges that were identified in the ‘Spatial Vision for North West Europe’ (2000), prepared under the Community Initiative INTERREG IIC, that is,

- the challenge of enhancing the global role of north-west Europe’s metropolitan areas; and
- the challenge to ensure more fairness in the distribution of prosperity throughout north-west Europe.

The objectives of study 1 can be presented as falling into two main areas:

- To prepare a clear statement on the context and challenges for polycentric territorial development in NWE until 2010 and beyond. This includes the identification of the key transnational issues for polycentric territorial development and their cartographic representation; the coverage of these key transnational issues in policy documents, cross-border and transnational co-operation programmes and projects; and the knowledge of these issues by key players in the field.
- To make recommendations to the Spatial Vision Working Group on appropriate future objectives for a NWE territorial co-operation programme, on possible cross-border and transnational projects and partnerships, and on data requirements, indicators and targets to meet monitoring requirements.

This final report responds to the eight questions set out in the Terms of Reference, and reports on the identification of the key transnational issues for polycentric territorial development, the results from the analysis of policy documents, plans and co-operation programmes and the discussions with key stakeholders. On the basis of the information collected and presented in this report, potential strategic objectives for a future co-operation programme are presented and supplemented with possible project ideas.
2. THE MEANING OF TRANSNATIONALITY AND POLYCENTRICITY

Transnationality

For the purposes of this study, transnationality means having a territorial effect in more than one country and needing co-operation across national borders beyond the immediate contiguous cross-border area for effective action.

- This is a ‘strict’ definition of ‘transnational’ – it excludes issues of common concern that do not require co-operation across boundaries.
- It does not exclude issues or projects that exist only in one country but which have an impact in others.
- ‘Effective action’ could be further specified with reference to the EU’s goals of cohesion, competitiveness (including the Lisbon Strategy) and sustainable development.

The project is also taking note of issues that do not meet the strict criterion of ‘having effect’ in more than one country, but where member states and regions think there are common spatial development concerns and potential benefit from transnational co-operation.

Polycentricity [1]

Polycentricity can be defined as an analytical concept (to help describe and explain the distribution of settlement and its growth); and as a normative concept (a policy goal to be pursued through government action). Drawing on the ESPON 1.1.1 Final Report [2] this study defines polycentricity

- normatively as promoting a balanced urban network at different spatial scales on the basis that this will meet social and economic objectives;
- analytically as the spatial organisation of settlements which has a distribution of complementary urban functions, levels of socio-economic integration, and political co-operation.

In both forms, polycentricity has three interrelated dimensions:

- morphological: the geographical distribution of physical development and activity across a network;
- socio-economic relations and flows: the sharing and movement among the network including labour, services, knowledge and social capital;
- governance: the presence of interconnected institutional arrangements, including organisations, procedures and instruments.

The nature of polycentricity and issues raised vary at different spatial scales. The ESPON 1.1.1 report, for instance, suggested three spatial scale categories:

- macro: north-west Europe and its position in the rest of the world; considering for example, the role of the global cities;

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1 The concept of ‘polycentric and balanced spatial development in the EU’ was promoted in the European Spatial Development Perspective (ESDP). The ESDP presented policy options on strengthening global economic integration zones; on strengthening a polycentric system of metropolitan regions, city clusters and city networks through closer co-operation between structural and transport policy; and on strengthening co-operation on particular topics in the field of spatial development through cross-border and transnational networks.

2 The ESPON Report has been used as a starting point for these definitions, but they have been further clarified and amended to take into account findings from this and other projects including the French Presidency (2000), ODPM (2003) Polycentricity Scoping Study and the NWE INTERREG IIIB POLYNET Project.
• meso: within north-west Europe considering for example, the potential for a more balanced accessibility to services within the transnational region;
• micro: regions within NWE, considering for example, where there is scope for urban networks within and across regions.

Urban-rural relationships

The tender specification for this study requested that urban-rural relationships should also be considered. The Spatial Vision Working Group has subsequently confirmed that it wishes to concentrate on the strict definition of transnationality. Most issues around urban-rural relationships do not meet this criterion (by definition) since they can be sufficiently tackled within nation-states, and do not necessarily require transnational co-operation to be effectively approached. However, the study has explored with key actors questions about the transnational aspect of urban-rural relations and has included findings on issues of common interest where urban-rural relations are mentioned.
3. WHAT ARE THE KEY TRANSNATIONAL ISSUES FOR POLYCENTRIC TERRITORIAL DEVELOPMENT AND URBAN-RURAL RELATIONS IN NWE?

Summary

- The Lisbon-Gothenburg strategy is the most important policy influence for European spatial development, but the spatial development implications are not well understood or emphasised by the strategy.
- The territorial emphasis of the Lisbon Strategy is mostly on transport infrastructure and its connection with delivering the knowledge-society.
- North-west Europe’s spatial development characteristics are dominated by a strong core-periphery form, and also great variation between centres of intense knowledge-economy activity and economically weak old industrial and rural areas.
- The relationship between the performance of places and their ‘core-periphery’ location is complex. Accessibility does not always determine economic performance, and population density of population and accessibility are not always closely related.
- Demographic change is one of the most significant challenges for spatial development in the EU, and certain population levels are necessary to maintain certain services.
- Enlargement will affect north-west Europe primarily through the eastward movement of the centre of gravity of the EU.
- The direction of policy and spatial development trends suggest many potential issues related to the polycentric structure of north-west Europe.

The key transnational issues for polycentric territorial development in NWE have emerged from a review of current EU policy; the ‘Spatial Vision for North West Europe’ (2000); empirical evidence (as presented for example, in the ESPON 1.1.1 report and the INTERREG IIIB POLYNET project); the INTERREG IIIB NWE CIP; and in discussion among the project partners.

We should note that we have interpreted the five year horizon for challenges set by the Spatial Vision Working Group in the sense of determining actions for the next five years but with an understanding of the issues to be addressed over the next 15 to 30 years.

This section examines

- the Lisbon-Gothenburg Strategy as the critical overarching goal for the EU;
- the wider spatial development context within which Lisbon-Gothenburg is to be realised; and
- the key transnational issues for polycentric development that arise from a comparison of the goals with the current spatial development pattern.

The changing EU policy context: the Lisbon-Gothenburg Strategy

This section briefly reviews the policy developments relating to Lisbon-Gothenburg since 2000 that will have a bearing on territorial development and polycentricity.

The Lisbon Council (2000) \(^3\) established a new strategic goal for the Union

*to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion (p.2).*

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\(^3\) Presidency Conclusions of the Lisbon European Council 23 & 24 March 2000
The main components of the strategy are more concerted action on developing the
knowledge economy, information society and R&D. At the heart of the strategy is the need
for improved co-ordination of policy and action at all levels, but the territorial dimension is
given very little attention.\[4\] The emphasis is on sectoral investments, the completion of
the internal market through liberalisation and other policies, and increased attention to education
and training for employment.

The main territorial component of the Lisbon Strategy is transport. The Strategy has given a
boost to a relatively small number of strategic infrastructure projects and reinforced the need
to tackle the transport problems at the transnational level. The strategy also points to
potential of information technologies for renewing urban and regional development and
reducing social exclusion. It calls on all countries to make high speed communications
networks available. The territorial dimension of this is not considered but clearly there are
implications for the very varied ‘digital network geography’ of north-west Europe.

The 2004 review of the Lisbon Strategy \[5\] called for a more energetic implementation of the
Agenda through integrated strategies. Most relevant to this study are commitments to

- improve investments in knowledge, education and training, and (transnational) research
  networks;
- investments to cut transport times and improve the quality and ‘generate a wider choice
  of where to set up business … in support of countries and regions lacking adequate
  infrastructures or with limited access to knowledge and innovation …’ (p.20);
- a new ‘railway package’ proposed to ‘open up international passenger transport services
  and improve [their] quality’;
- a call to member states to create and implement national plans concerning transport
  projects, research and broadband networks.

The Gothenburg Council (2001) \[6\] agreed on the Communication on Sustainable
Development \[7\] and added a third, environmental, dimension to the Lisbon Strategy (in
addition to economic and social renewal). It reiterates the need to decouple economic growth
and resource use and identified four priorities: climate change, transport, public health and
natural resources. Again the territorial dimension is given limited attention except for
extensive consideration of necessary changes to transport policies.

The first three priorities reflect the policy themes of the Transport White Paper 2000. \[8\] The
White Paper argues that increasing congestion, which is particularly acute in the core areas
of north-west Europe, is threatening economic competitiveness and goes hand in hand with
excessive isolation of the outlying regions. Congestion is exacerbated by bottlenecks, gaps
in infrastructure and lack of interoperability of modes and systems. By 2001 only one fifth of
the Community’s TENs transport priority projects had been implemented, with the lack of fit
between national systems and poor use of railways remaining a significant problem. The
conclusion was to concentrate on

- shifting the balance of transport to more sustainable options and in particular revitalising
  the railways with dedicated freight lines and concentrated investment in relieving
  bottlenecks and dealing with the traffic impact of enlargement;

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4 However, a study is underway under ESPON (Project 3.3: Territorial Dimension of the Lisbon-Gothenburg
6 Presidency Conclusions of the Göteborg European Council 15 & 16 June 2001, SN 2001/1/01 REV 1
7 A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development:
Communication from the Commission 15.5.2001, COM(2001) 264 final
• sea-motorways in the TEN transport, through better port services and connections with rail and inland waterways;
• waterway branches on the inland waterway network and harmonisation of its regulation;
• more selective investment to increase capacity (especially in non-road transport) concurrent with innovative policies on charging;
• stricter requirements on noise and pollution for airport development.

Since 2000 structural funding has been directed to supporting Lisbon priorities including innovation and entrepreneurship, and trans-European transport, energy and telecommunications networks. Particular emphasis is given to broadband infrastructures.

Despite the Lisbon Strategy and funding through Cohesion Policy, the Third Cohesion Report \[9\] concludes that wide disparities in wealth, employment and social conditions persist across the EU as a result of ‘structural deficiencies in the key factors of competitiveness - … physical and human capital, innovative capacity, business support and blighted urban and/or rural environment’.

The Conclusions of the Informal meeting of EU ministers on territorial cohesion (November 2004) observed that ‘the diverse potentials of the EU regions have not been sufficiently taken into account in the Lisbon Strategy’ so far, and argued that integrated spatial development approaches can enable regions to exploit their endogenous potential more effectively. The meeting ‘emphasised the need for strategic projects linking national and regional spatial strategies for the Lisbon Agenda and extending co-operation beyond the new external borders’ (p. 2). A synthesis document on ‘the territorial state of the Union’ is proposed for 2005.

The spatial development context for the study of polycentricity in NWE

The spatial analysis results presented in this section are based on ESPON and other relevant analyses, and illustrated through cartographic representations wherever appropriate. \[10\]

The ‘Spatial Vision for North West Europe’ (2000) \[11\] presented six challenges and explained the trends that gave rise to them. The trends for the two challenges that this project is addressing are:

- **the global role of north-west Europe**
  - the continuing dominant position of NWE in global command functions, but potential challenge from other global cities and the need for co-operation among the command centres;
  - the diversity of the settlement structure including global command centres, large polycentric urban regions, monocentric regions and more remote areas;

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10 In this discussion, maps are used to illustrate spatial development issues. However, we are aware that there is a tendency for issues that are relatively easily visualised and mapped to figure most prominently in discussions (for example, settlement hierarchies and transport routes). Other key transnational issues are more difficult to visualise (for example landscape and culture issues and aspects of the knowledge economy). The discussion tries to avoid an unbalanced treatment of all key transnational issues.
the contrast in the economic strength of the core and the periphery, and the strong influence of the global command centres (London and Paris) and other urban agglomerations in NWE, even in the relatively remote areas;

- the generally highly urbanised nature of much of the region leading to a policy emphasis on the management of urban growth and containment of urban sprawl.

- the relatively high standards of living but considerable variation, both within and between regions with concentrations of relative deprivation in both urban and rural areas, leading to emphasis in all countries on policies to support urban areas through physical improvement, and the provision of social and employment opportunities;

- the concentration of ‘growth sectors’ and the knowledge economy in the ‘core cities’, with some clustering also in favoured prosperous areas offering a high quality of life, suggesting more attention to supporting innovation, higher education and R&D across the region;

- the potential for rapid economic and social change in the industrial cities and networks of towns that have suffered from economic restructuring, especially through dispersal of economic functions from the core and the potential to capitalise on their endogenous potential, particularly skilled labour, technology, the quality of the environment, innovative capacity of firms and ease of communication;

- declining prosperity in some rural areas, especially in Ireland and France with rural depopulation and risk of greater out-migration.

Core and periphery
The common feature of these points is the major contrast between core and periphery within a relatively small region. On the one hand, there is a significant overlap between NWE and the European ‘core’, whether it is formalised as Brunets’ traditional ‘Blue Banana,’ the ‘Pentagon’ (the area delimited by Paris, London, Hamburg, Munich and Milan) or the ‘extended Pentagon’, including the UK’s Midlands, as proposed by ESPON 1.1.1. On the other hand, NWE comprises a number of peripheral maritime regions (i.e. Poitou, Brittany, Cornwall, Wales, Ireland and Scotland). The relations between core and periphery are central to the identification of transnational issues.

Accessibility, GDP and population densities
Road and rail accessibility in NWE is illustrated in Figures 1 and 2. Greater accessibility is found in the area around the Benelux and Rhine-Ruhr area and all regions north and west of this core. The more remote regions are from this core, the more disadvantaged they become in terms of accessibility, with Ireland and Scotland being the most extreme cases. The shape of the area with above average accessibility however, reflects geography, history and, in part, national transport policies. Due to French high-speed rail connections, a large proportion of the French western peripheries enjoy a level of rail accessibility above the European average, while in England, north-south accessibility predominates over east-west.
The rather different spatial distribution of GDP is shown in Figure 3. The greater accessibility of the French western periphery is not matched by the distribution of wealth. In contrast, there are areas of good GDP performance in relatively inaccessible locations such as the Irish and Scottish ‘peripheries’. Thus, whilst transport infrastructure density in the core area undoubtedly plays a very significant part in its economic performance, transport infrastructure improvements elsewhere do not appear to be sufficient to create more balanced development and core area functions.

Furthermore, high accessibility is not necessarily related to high population densities as shown in Figure 4. The axis stretching from southern Belgium towards southwest France has high accessibility with low population density. It should be remembered of course, that the accessibility improvements are relatively recent and population is much less mobile. Nevertheless, a city or region can perform well on GDP whilst having relatively poor accessibility. Similarly, high accessibility may not lead to population growth.

Whilst the above analysis provides a context for understanding transnational issues, the critical issues cannot be identified directly from the distribution of accessibility, people and GDP because none of these contexts are in themselves favourable or disadvantageous. The evidence presented above (although limited) shows that a city or region can be both core (for example, in the sense of higher living standards) and peripheral (for example in the sense of accessibility) depending on the perspective taken. This challenges the traditional core-periphery model. The evidence suggests that low accessibility can be overcome, and that low population densities can actually be a part of the peripheral region’s potential. The promotion of polycentricity (as a normative concept) must focus on the endogenous development potential of regions and how they can best be exploited.
However, density and concentration of the population are important for supporting core area functions in two respects: Population density (see Figure 5) is needed to support core functions and may fall below thresholds needed to provide services, such as hospitals and higher education. Population concentration (see Figure 6) is needed to support provision of highly specialised core area functions and increased productivity, and those regions without sufficient concentration may be at a disadvantage.
Figure 5: Depopulation areas (1995-2000)

Figure 6: Population concentration

Figure 7 shows a provisional synthesis of the previously mentioned dimensions (accessibility, population density and GDP levels). This Figure is a basis for discussion on the types of challenges for polycentric territorial development encountered in different parts of the NWE area. Alongside presented for comparison is Figure 8, the diagram from the 2000 Discussion Document.
While there continues to be significant diversity within north-west Europe (at a meso scale), there are other factors at macro level, such as the recent enlargement of the EU to 25 member states (and anticipated 27 members), that are expected to have significant spatial development effects in the old member states. The Third Interim Report (August 2004) of the ESPON project 1.1.3 on the ‘effects of enlargement on the polycentric spatial tissue’ suggests that while on average the new member states have more polycentric urban systems than the ‘old’ EU, the polarisation of the urban system in the Central and Eastern European member states has increased significantly since their transition to market economies and this is expected to continue. The western part of the EU, of course, experiences similar polarisation tendencies, though these might be more generally related to the effects of globalisation rather than enlargement in particular. The following Figure 9 shows an overlay of the Blue Banana and those regions that were identified in ESPON 1.1.1 as having potential for the creation of Polycentric Integration Areas (PIA) of more than 1 million inhabitants (cf. also appendices 1 and 2). The Figure shows that the number and extent of potential polycentric regions is greater on the Eastern side than on the territory of the ‘old’ member states. Thus, even if their economic performance is weak at present, in the longer term a shift of balance of the European territory can be expected. Regions with a demographic potential of this size can develop high level specialised services, and a supply
of hard and soft transport and communications infrastructure of sufficient quality for most industries. The corresponding labour markets should also be able to offer a wide range of specialised skills and competences.

Figure 9: The 'Blue Banana' compared with areas with a demographic potential of over 1 million inhabitants

There have been many concerns about east-west migration following enlargement and the possible impacts on labour markets. [12] A recent study on migration trends in an enlarged Europe, [13] however, suggests that on average only around 220,000 people intend to migrate each year from east to west over the next five years, and that the majority of these potential migrants are young, well-educated, single and increasingly female. However, there are much more significant trends of demographic change in the west, notably the increase in the dependency ratio, decline in population and an ageing society. Immigration from the new member states or further afield might thus be the only way to counteract the impending problems on the labour market and economic performance in north-west Europe.

12 Many old EU member states have therefore implemented transitional restrictions (of generally two years initially) for citizens from the new EU member states before they get full access to their labour markets.
Key transnational issues for polycentric territorial development in NWE – a framework for analysis

The key transnational issues are grouped in four categories (see section 2), of which two are of more substantive nature, and two of more procedural nature. In practice, there are strong interconnections among the categories:

- morphological aspects of polycentricity
- economic and social relations
- governance
- data and methods.

The issues are discussed under each heading with reference to the two Vision challenges: ‘enhancing the global role of north-west Europe’ and ‘more fairness in the distribution of prosperity’.

Morphological aspects of polycentricity

This aspect of polycentricity is about the geographical structure of urban development which includes both the physical structure and the distribution of activities. These aspects vary at different spatial scales: the macro scale (NWE in Europe and globally), the meso scale (within NWE), and the micro scale (within regions).

The ESDP calls for more ‘balanced development’ and identification of ‘alternative economic integration zones’. The context for this position has been elaborated in some detail in the 2000 Spatial Vision Document, ESPON Project 1.1.1, the Cohesion Reports and other studies.

At the macro scale, north-west Europe is characterised by the dominance of one global economic integration zone (which also applies to the whole of Europe) but there are challenges from other global centres, elsewhere in Europe and in the world. The economic strength of parts of the core has a very strong influence on urban and rural areas in the rest of north-west Europe, even to the relatively remote areas. The core area influences the wider region by, for example, the transfer of wealth and the provision of command and gateway functions. Potential alternative economic integration zones outside the Pentagon, described as Metropolitan European Growth Areas (MEGAs), have been identified in north-west Europe by the ESPON 1.1.1 report. These cover Dublin, Manchester, Bern, Luxembourg, Geneva, Antwerp, Rotterdam, Lille, Edinburgh, Glasgow, and Birmingham.

At the meso scale, north-west Europe has experienced the strongest economic growth in the EU 15. Growth has a strong core-periphery character, with a concentration in the ‘core area’ of the Pentagon, especially growth in dynamic sectors. There are great disparities in growth within the core, and generally greater differences in growth within countries than between them.

There is growth outside the core in some ‘favoured areas’, which is the result of a complex combination of local factors such as traditional strength in economic sectors, knowledge infrastructure, good quality of life and intense public intervention. The old industrial centres are still characterised by the effects of economic restructuring and decline, though they offer some endogenous potential. Some areas of north-west Europe are relatively remote; they have poor economic growth, little urban development and declining populations (see also economic and social relations below) and are at risk of greater out-migration and declining prosperity.

However, the critical transnational issues cannot be simply ‘read’ from this pattern of growth and decline. More detailed analysis conducted for ESPON 1.1.1 shows that whilst the
general patterns are of concentration and polarisation, there is no simple relationship among economic wealth, infrastructure/accessibility and population (see above).

At the micro-scale, urban-rural interdependencies are increasing, partly as a result of the spatial deconcentration of economic activities and the expansion of city hinterlands. These are, for the most part, national and regional issues. However, there are three aspects which may have a transnational dimension. First, the influence of large cities is spreading with extended ‘travel to’ areas and improved accessibility, especially in the light of impacts of new high speed rail infrastructure and regional air connections. This has promoted long distance and ‘weekly’ commuting, some of which is transnational. Second, competition among cities and regions at the international level may be leading to an erosion of standards and policies in the management of urban growth – or ‘environmental dumping’. This is already effectively happening as some eastern European states have much less well established planning and environmental management systems and thus effectively lower standards. Third, there is a suggestion that short stay visitors travelling from urban areas in one country to rural areas in another are a form of transnational urban-rural relations.

In summary, north-west Europe is strongly characterised by an unbalanced distribution of population, economic growth, urban development and infrastructure. Disparities are growing with evidence of a polarisation of investment. Current policy responses in member states and regions vary with recognition of the negative consequences of current trends but also the difficulty of influencing them with intervention. However, the generally highly urbanised nature of much of north-west Europe, especially the core, has led to a policy emphasis on the containment of urban sprawl, although again this varies from region to region.

The priorities for discussion of physical and morphological aspects of polycentricity are:

- **How can transnational co-operation assist in maintaining the strong position of global command functions in north-west Europe?**
- **Where are the costs of polarisation experienced in terms of, for example, increasing congestion, pollution and pressure on environmental resources?**
- **Is there a transnational dimension to the ‘economic hinterland’ effects of the global economic command centre(s) (London and Paris), where and how are these effects experienced? How can they be addressed to the benefit of other regions?**
- **Where is there potential for alternative economic integration zones? Has the ESPON project correctly identified the potential alternative economic integration zones – i.e. the MEGAs? What transnational co-operation is needed to facilitate the global and European role of MEGAs?**
- **What is the potential for second and third order centres to act as counterweights and what transnational actions might support this?**
- **What infrastructure requirements are linked to realising the potential of the MEGAs or other alternative economic centres, in terms of physical connections (high speed rail, motorways of the sea, airports, digital infrastructure)?**
- **Where is the transnational component of large scale migration concentrated?**
- **What national and regional ‘growth strategies’ have a transnational dimension, for example, the proposed inter-regional growth corridor ‘Northern Way’ in England, or the Flemish Diamond? What is the potential for complementarity and synergy between these national and regional initiatives at the transnational scale?**
- **Where are urban-rural relationships operating at the transnational level and with what consequences?**
**Economic and social relations**

The geography of development and activities is closely linked to economic and social relations among cities and regions. The enlargement of the EU, globalisation, demographic trends and the increasing use of ICT (the 'network society') all strongly affect spatial development patterns across the territory and the movements and locational preferences of individuals and companies.

The new economic structures of the network society are the joint product of technological innovation, political-economic restructuring and new enterprise strategies. One indicator of this change in socio-spatial relationships is the rise in mobility, and the most direct consequence for planning is that in a network structure 'proximity' may become less relevant for social organisations than 'connectivity'. Technological innovation in transport and transport management has resulted in the speeding up of movement and the 'shrinking of space', though sometimes with large interregional differences. The increasing use of ICT has led to a revolutionary change in the organisation of production processes, allowing for a spatial separation of functionally interdependent activities through complex logistics systems, thus contributing further to the erosion of proximity. Since distances are increasingly measured in time, locations and places that are well connected in terms of logistics and transport technologies may be more attractive for investment than those that demonstrate only physical 'nearness'.

Yet, while the development of ICT was expected to lead to a 'democratisation' of the territory and an alignment of core and periphery, in reality the differences between the densely populated parts of north-west Europe and the more peripheral areas have often been more intensified or may have led to a more diverse pattern across the territory. More peripheral parts of north-west Europe are generally less well connected in terms of provision with new ICT services than metropolitan areas. It is still the case that physical interrelations or physical proximity often make densely populated areas more desirable as locations for businesses.

In the context of the Lisbon strategy (2000) the increasing share of knowledge-based economic sectors and the growth of highly specialised services (the fourth sector economy) in the GDP of north-west European countries has significant spatial development implications. Universities, research centres and other knowledge-based economies have different land use requirements (in terms of location and quantity of land) than manufacturing industries. The quality of the environment and the relative proximity to a large number of potential high-qualified workers and clients for knowledge-based services implies that increasingly towns and cities in beautiful landscape settings, or even the surroundings of urban areas, become the centre of attention, whereas old-industrial areas continue to experience problems related to their restructuring.

The increase in knowledge-based economies also implies greater flexibility for staff, and the possibility to work from wherever and whenever rather than being bound by a production site. As noted above, there is a tendency already for an increasing division of work and residence, with for instance key workers living in France and Spain and commuting to their workplace in London or Dublin on a weekly basis while teleworking for the rest of the time.

Most of the challenges for spatial development arising from demographic change affect parts of the territory differently. Globalisation and an increasing exposure to international competition, the slimming down of government functions or publicly owned or controlled activities, and the geographic mismatch between jobs and workforce lead to both decreasing regional socio-economic development differences between countries and increasing

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differences within countries. Winners from these trends tend to be attractive areas around metropolitan centres and larger cities and towns, whereas the extreme periphery, rural areas or mono-industrial cities with a significant dependence on a limited number of industries or with an over-dependence on the public sector face an increasing decline in population and economic performance. Nevertheless, many of the challenges stemming from demographic change have a clear transnational (or even international) dimension and would benefit from transnational co-operation. Europe as a whole, for example, is becoming increasingly marginalised as global population growth is mainly driven by demographic increases on the African continent, Asia and South America. Many European countries (for example, Germany and the UK) are actively engaged in national debates on demographic change, and the need to counteract the causes of trends rather than making adjustments to the effects that the ageing population and the depopulation of rural and more peripheral areas have on the maintenance of services and infrastructure. [17]

Besides the effects of natural population change, the freedom of movement guaranteed by the Single European Market in the enlarged European Union, and increasing globalisation of economies have resulted in significant migration trends. [18] The approach to immigration in order to counteract ageing and declining populations in Europe is of increasing political interest in many European countries. The ‘brain-drain’ of highly-qualified workforce from European countries to other parts of the world (such as North America and Japan), where working conditions are perceived as more favourable, will require a coordinated European strategy. The northernmost Nordic countries are experiencing the worst population losses in the EU, with migration movements from North to South being of major concern. These trends are only mirrored by significant population migration from the east of Germany to the western part of the country. Large-scale migration tends to be mainly influenced by differences in the economic and labour market situation, whereas small-scale migration (suburbanisation effects) are mainly influenced by differences in housing quality and quality of life aspects.

Globalisation, the enlargement of the EU and the Single European Market mean that businesses, as well as individuals are now increasingly ‘footloose’. The challenges for spatial development in north-west Europe that emerge from this are matching increasing labour mobility within the European territory and worldwide with the mobility of capital and investments. The Europe2000+ report has already noted the spatial implications arising from the lack of coherence between the location of jobs and housing across the territory. [19] There might be a role for transnational co-operation on spatial planning to create more sustainable (less volatile) jobs, or to possibly stimulate a higher mobility of the workforce across the EU territory by removing differences in welfare systems and other obstacles, thus making international mobility easier for those who wish to gain work experience in other parts of Europe.

The turn towards knowledge-based economies in north-west Europe implies that the innovation capacity of economies and societies is a crucial location factor for external inward investment and endogenous growth. The spatial challenges for north-west Europe arising from this are mainly related to the increasing discrepancies between the economic performance of the command centres and the rest of the territory. This might imply the potential for the support for transnational ‘innovation centres of excellence’ in north-west

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17 For example: Bundesministerium für Verkehr, Bau- und Wohnungswesen; Bundesamt für Bauwesen und Raumordnung (2004) Herausforderungen des demographischen Wandels für die Raumentwicklung in Deutschland. Berlin, Bonn: BMVBW, BBR
Europe in order to counter-balance international polarisation and agglomeration tendencies and support the equal distribution of economic functions across the territory.

Economic clusters are argued to be of growing significance in the economic potential of regions. There are examples of successful regional milieux (‘Third Italy’, Baden-Württemberg, Cambridge Silicon Fen) where clusters of SMEs and research institutes have led to economic success for the region overall. Thus, there may be a case for supporting economic clustering at transnational level, both to support economic competitiveness and to achieve more balanced development transnationally. The question therefore arises whether such an approach can also be promoted at transnational level in the context of knowledge economies, and the barriers that would need to be overcome to facilitate transnational co-operation for SMEs, universities and research centres.

In order to support the role of urban centres in the urban hierarchy, there should be increasing emphasis given at transnational level to their connectivity in respect of service provision. This implies that services of general economic interest (SGEIs), health care facilities and other services should be provided for the population that can access these, no matter on which side of administrative boundaries.

The priorities for discussion of transnational issues for economic and social relations are:

- Where is the potential for transnational connectivity of urban centres for the provision of services of general economic interest (e.g. health care facilities)?
- Where is there a transnational dimension to the dispersal of economic activities and how can it be addressed?
- How can the innovation capacity of the core cities be shared with other regions in a polycentric model?
- Where is there potential for cross-border and transnational economic clustering? To what extent is the potential for networking among research institutions, businesses and other actors hindered by national and regional boundaries?
- What are the main patterns of transnational labour migration and where are there growing imbalances of economic growth and potential for growth and labour?
- Where are the critical issues of demographic change including ageing and migration experienced? How can transnational co-operation contribute to addressing them?

**Governance**

Discussion on polycentricity tends to focus on physical development patterns and economic connections, but the relations among institutions is equally important. The word governance is used here specifically to indicate that the issue goes beyond formal government to include other institutions in the community and private sectors.

European integration and globalisation are leading to increasing interdependencies within and among governments. The key issue is the extent to which cities and regions are able to co-operate in building capacity, providing services and opportunities and reducing counterproductive competition.

At the transnational level such initiatives will be particularly difficult because of great variation in arrangements among countries and regions. We must recognise the very different forms of constitution in the countries of north-west Europe and the forms of government that result: from federal, through strongly regionalised to unitary. As a consequence, competences for policy and action on spatial development vary. There is no doubt that this has proved to be an issue for transnational co-operation through INTERREG and other initiatives.
There are three forms of co-operation that are interconnected – vertical among levels, horizontally among sectors, and geographically across administrative boundaries. Many publications have pointed to the growing significance of multi-level governance and the need for better vertical relationships among tiers of administration. The well known tendency to regionalisation in Europe has resulted from devolution and a reorganisation of competences in some member states. Considerable differences remain, however.

Horizontal co-ordination becomes more important with the growing fragmentation of ‘interests’ involved in spatial development. Privatisation of government functions has led to more emphasis on the private sector. Other sectors of government too, are now more actively and consciously involved in the development process. Citizens’ expectations and demands for participation in government increase and interest groups become stronger and more organised. The result is the need for partnership arrangements on all aspects of spatial development. The question of whether there is a transnational dimension to inter-sectoral partnership working may be a particularly important option for building up capacity in regions that have weaker endogenous potential.

Within member states there is a concern with the adequacy of cross-sectoral co-operation among departments of government and with other agencies and interests, particularly in relation to co-ordinating regional policy (and the Structural Funds), transport, environment, agriculture and other sectors. There is a transnational dimension to this cross-sectoral co-operation. For example, investment in one country through the Structural Funds may impact on another sector, positively or negatively, in another country.

The boundary issue will continue to be a problem for spatial planning. Whilst economic and social problems tend to be most acute at the boundaries of administrations, this is just where co-ordinated strategies and actions are often weakest. Relatively few regional planning instruments in north-west Europe address cross-border or transnational issues in any meaningful way, and where they are addressed it tends to be only in relation to providing continuity of transport investments across boundaries.

The proposed Objective 3 Territorial Co-operation objective of the post-2007 Structural Funds Programme will provide increased opportunities for collaboration and the creation of transnational governance arrangements and bodies, and joint preparation of strategies.

The priorities for discussion of the governance aspects of polycentricity are:

- What has been the transnational impact of the privatisation and liberalisation of services?
- Where are there opportunities to replace competition among cities at the transnational level with complementarity through urban networks and partnerships and on what particular issues?
- Where does the capacity of national and regional institutions to engage in transnational co-operation in support of polycentricity need to be strengthened and how?
- Where can transnational and cross-border institutional structures be strengthened, particularly in relation to the proposal for a legal form of transnational institutions under the Structural Funds post 2007?
- Where are cross-border and transnational spatial development strategies in operation and where might they be prepared to address shared problems elsewhere?
- Where is there potential to create transnational partnerships that help to improve the capacity of regions, either between those in proximity or linking core and peripheral regions?
**Data and methods**

Finally there are some questions related to the availability of data and information:

- *Where are new methods of analysis being employed in spatial planning that have a transnational dimension?*

- *To what extent are there limitations on transnational co-operation through problems with data availability and compatibility?*
4. WHAT IS THE DEGREE OF KNOWLEDGE OF THESE ISSUES BY KEY PLAYERS IN THE FIELD? WHAT ARE THEIR VIEWS ON THE FUTURE OF TRANSNATIONAL ISSUES AT STAKE? [20]

Summary

- There is great variation in understanding ‘polycentricity’ as an analytical concept and about its value as a policy tool. It is seen as an abstract, complex and ambiguous concept.
- Most key actors had not given attention to transnational issues generally and polycentricity at the transnational level in particular.
- There are considerable doubts about the claimed benefits of a polycentric structure and the potential to influence market trends on some issues. Similarly, exchanges of experience on some key issues was thought not to relate to particular transnational regions or places.
- Key actors identified critical issues that should be addressed (but don’t necessarily see this as part of the polycentricity issue) including climate change, demographic change, and migration.

There is significant variation among member states in how far the normative concept of ‘polycentricity’ has been taken up in national and regional policy documents. While on the one hand, the concept is firmly established in spatial planning systems in Germany, the Netherlands and Switzerland, [21] in other countries, most notably the UK, recent national level policy instead promotes the stimulation of economic growth in certain parts of the country. In Belgium the concept of polycentricity is considered as rather abstract with limited evidence of practical added value, despite the existence of an official concept of urban network in Flanders (the ‘Flemish Diamond’), enlarged in the Second Benelux Structural Outline to the trans-regional concept of ‘Belgian Central Urban Network’ (which includes the ‘Walloon Triangle’ as well as Brussels and the Flemish Diamond). Other countries, such as Ireland, Luxembourg and France, have a clear reference to the normative dimension of polycentricity in their current national policy, though many questions remain about how this concept can be applied and implemented in practice, and at different spatial scales, and the tension between polycentricity, territorial cohesion and competitiveness. [22]

The inclusion of the normative concept of polycentricity in spatial policy does not mean that the concept and the desirability of pursuing a polycentric territorial development are

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20 The information presented in this section was collected through qualitative interviews with key stakeholders in regions covered by the North West Europe programme. In six of the countries, national workshops were held (in collaboration with representatives from Studies 2 and 3), and in Switzerland and Luxembourg, interviews were undertaken; see Appendices 3, 4 and 5.

21 Although the normative concepts which promote a more balanced territorial development are more generally known as ‘concentrated-deconcentration’ (Netherlands) or ‘decentralised concentration’ (Germany) or increasingly the promotion of ‘urban network’ ideas (Switzerland, Netherlands), rather than under the term ‘polycentricity’.

22 The aim to achieve a balance between the twin EU objectives of competitiveness and cohesion has become more pronounced in the context of the EU enlargement over recent years. On the one hand, there is clearly pressure for the EU to concentrate available funding on promoting European growth and competitiveness, in pursuit of the Lisbon agenda, through investment in research and development (R&D), innovation, higher education, skills and networks. On the other hand, there is concern at the potential downgrading of EU support for ongoing structural change in industrial and rural regions, and the effects this may have on increasing regional inequalities with related social and economic problems. The Third Cohesion report emphasises the need to reduce disparities in order to accelerate growth, thus presenting the objectives of cohesion and competitiveness as being inextricably linked. However, many questions remain in practice about how this can be achieved, and about the appropriate level of scale to support cohesion versus competitiveness objectives in order to achieve a more polycentric and balanced development overall.
uncritical. In the Netherlands, for example, it appears to be commonly accepted that while the current spatial structure is essentially balanced and polycentric at different spatial scales (i.e. the analytical component of polycentricity), the normative dimensions of the concept are considered to be much more controversial and carrying internal contradictions. The workshops in the Netherlands and also in Ireland, for example, saw a discussion about the different implications of polycentric territorial development at different spatial scales – reflecting the Lisbon-Gothenburg strategy - where polycentricity at national or transnational level is seen to improve the competitiveness of regions and national economies, whereas at lower spatial scales the main concerns might be related to inter-regional balance and territorial cohesion. In line with these significant differences between countries, in some case actors expressed a demand for a clearer distinction between polycentricity as a normative or an analytical concept.

There is also a difference between different countries in how far the ESDP and the wider NWE context are considered in planning policy and practice. While some countries, such as Ireland and France make frequent reference to the ESDP and its concepts and generally are more engaged in the ‘European dimension’ to spatial development, other countries, such as the UK, are less engaged in this debate and the identification of the transnational dimension in national and regional planning. Participants in Ireland were able to give a number of examples of where decentralisation and/or relocation of mid-level service functions to cities and towns outside the Dublin/Belfast corridor was underway to contribute to a more balanced development. In Belgium, some key actors considered the concept of 'Belgian Central Urban Network' as important to more strongly promote polycentric territorial development.

Thus, if polycentric territorial development is to be included in a future transnational co-operation programme, then a clear definition of the concept for the various levels of scale needs to be agreed, and its benefits and added value need to be communicated more effectively in order to secure widespread support for its implementation.

Overall, the workshops and interviews revealed that across north-west Europe, key actors had not yet given much attention to the key transnational issues affecting their territories. While the transnational issues that were identified as part of the study and discussed in the workshop were all accepted as relevant (though with partly different emphasis in the different countries), the majority of actors, in all countries, found it easier to discuss issues that were perceived as more closely related to their everyday work, such as sectoral aspects or issues of national concern. Furthermore, it appeared more difficult for many participants, certainly in the Netherlands and Belgium, to identify key transnational issues with a clear relation to polycentric territorial development, than to identify transnational issues for co-operation in the areas of environment, transport or legislation. This is because the concept of polycentricity is still regarded by many as very complex and therefore a sectoral approach seems often easier.

In addition, many actors considered it difficult to demonstrate the added value of transnational co-operation on polycentric territorial development, and the claims made that this will lead to, for example, better economic performance, better accessibility, environmental sustainability etc. According to some, the further integration of markets in Europe is much more important for sustaining economic growth than polycentric territorial development, while others voiced their concerns about the splintering, dispersive effects of pursuing polycentric spatial development at the regional level and the consequent environmental costs. Some recently published images of NO2 concentrations (resulting from traffic and industrial activity) in the European atmosphere indeed suggest that regions with a polycentric make-up (i.e. Randstad Holland, Belgium, RheinRuhr, Northern Italy) are among the worst performing of Europe (see Appendix 6) – a matter which was much discussed at

23 For example, existing links between Letterkenny and Derry; the 'Midland Triangle' and the 'Atlantic Gateway' (Cork-Limerick/Shannon-Galway-Waterford-Sligo).
the workshop in the Netherlands. Some participants at the Dutch workshop went as far as to say that if the value of pursuing polycentric territorial development boils down to the promotion of a more territorially balanced development only, it loses much of its appeal for them, as they regard the aim of levelling out interregional differences through spatial policy more or less outmoded. In connection with this, the Dutch workshop discussed the need to sharpen the definition of ‘transnationality’ by adding that the issue should have a territorial effect on the main spatial structure and functioning of more than one country, in order to create a clear distinction with issues of which the effects remain limited to border regions only (cross-border effects).

Even though, the need for continuing co-operation on issues of more common nature (based upon a shared interest in a specific theme) instead of on truly transnational (spatial) interdependencies was highlighted by many key stakeholders across north-west Europe. At the Dutch workshop, representatives from the city of Amsterdam, for example, pointed out that there is little benefit in seeking a cooperative arrangement with London on the existing interdependencies between both cities’ financial centres; the argument being that there is no use in trying to affect international market forces by such arrangements. At the same time, however, the city does maintain relationships with cities in Scandinavia and the accession countries to exchange knowledge and experiences in, for example, the fields of housing, urban renewal strategies or planning strategies.

In other countries, certain emphasis was given to individual key issues which are currently of exceptional significance for spatial development in a national context. For example, demographic change and ageing with its clearly transnational spatial impacts, as well as the significant spatial effects of depopulation of rural areas were discussed at the German workshop. In Belgium, there was a discussion of the various aspects of migration, as well as of more ‘governance’-related issues related to the link between a polycentric approach at a higher spatial scale and the intra-urban scale.

Furthermore, a number of issues were raised by key actors across the different countries that were not explicit in the list of polycentricity issues arising from the literature review. These were

- the overarching challenge of global warming (implicit in other issues) and its likely long-term consequences in terms of changes in energy supply, limitations on energy use, the increasing need to conserve energy, environmental effects including sea level rise;
- the knowledge economy and the critical role of higher education and research institutions in economic development, and particularly the potential for combining transnational networks of research centres with networks on spatial development;
- rural issues in general and the consideration of the implications of the ‘polycentricity concept’ for very small settlements and the spaces between co-operation networks.

These issues are potentially of high significance for a future transnational co-operation programme. The relationship between climate change and polycentric development is mutual, and therefore crucial for the promotion of the concept. Climate change has clear effects on settlement patterns (e.g. through sea level rise, which is expected to affect many low-lying urban areas in NWE; or through the expected impacts on energy policies and oil prices, which will have significant effects on transport relations and foster proximity considerations). At the same time, however, the distribution and density of settlements in the territory have an effect on energy use and levels of pollution (cf. Appendix 6), and thus ultimately affect climate change. Sustainable, energy efficient settlement patterns therefore need to be promoted from a climate change perspective, and more research is needed on the extent to which polycentric settlement patterns at different spatial scales are more or less sustainable.
The EU-wide goal of developing the knowledge economy has considerable implications for spatial development and planning and co-operation on this at the transnational scale. Recent studies on innovation in Europe have shown that among the ten current ‘outperformers’ in the EU, six are located within north-west Europe. These are Noord-Brabant (Eindhoven), East of England and Cambridge, Île-de-France, Bavaria, the South East of England and London, and Baden-Württemberg (Stuttgart). Knowledge economy activity is concentrated and there is evidence of further concentration in particular cities and regions, and a bias to urban areas. The changing property, infrastructure and land needs of the knowledge economy also have direct implications for spatial planning, (although this is not yet recognised fully in spatial strategies). Regional development policies seek a more dispersed spatial pattern of knowledge economy activity that requires a spatial planning approach co-ordinating policies for economic competitiveness, skills, housing, transport, planning, and IT infrastructure. In places this will need to involve cross-border and transnational co-operation. Universities and research institutions will play a critical role in developing the knowledge economy, but spatial strategies are not yet well co-ordinated with research development policies. At the regional level there is considerable scope to link research activity with SMEs and other economic actors, and to facilitate economic clusters. Added value could be gained by more transnational co-operation on the spatial distribution of research activity; the hard and soft infrastructure which facilitates its development; and the creation of economic clusters among high tech companies. One existing example of co-operation is underway among universities in the Grand Région Saar-Lor-Lux+ (see Appendix 7). Other recent projects which seek to strengthen the role of cities in the knowledge economy are STRIKE (Sustainable Towns and Regions in the Knowledge Economy), funded under URBACT, and the ELAT project (Eindhoven, Leuven, Aachen Technology Triangle), which is funded under INTERREG IIIB NWE.

There was much support for a better consideration of rural issues, and the ‘urban bias’ of the ESDP and the INTERREG IIIB North-West Europe programme were of significant concern, especially for actors in the more sparsely populated areas of this diverse co-operation area. The typology as suggested in Figure 7 shows that the issues across the territory vary, and that therefore co-operation requirements for polycentric territorial development in the ‘peripheries’ or the ‘empty diagonale’ have to be fundamentally different to those in the ‘core’. This also relates to the appropriate level of scale for co-operation, as co-operation potentials and requirements in the ‘core’ of NWE might be of higher relevance at a macro scale, whereas the meso or even micro-scale might be the more appropriate level for consideration of collaboration initiatives in the more peripheral parts of NWE which lack a critical mass in terms of population for the provision of certain services.

In the majority of cases, key actors were reluctant to identify the location of issues or possible projects on the maps that were used as discussion aids. In some workshops, for example the Netherlands, France and Belgium, participants even questioned the possibility of presenting transnational issues on maps, because these are perceived as lacking a spatial reference in many cases, or as being mainly conceptual and therefore not a priori connected to particular places. For example, a transnational co-operation project between cities and regions on the question of how to stimulate the development of knowledge intensive urban and regional economies could as well be between a selection of Dutch, Belgian and German cities as between, for example, Amsterdam, Madrid and Prague. While this can be accepted to a certain degree, the argument might also be related to the fact that many actors have not started to think about some of the issues in wider European terms, and undoubtedly there are several other issues which could be clearly spatially defined, such as for example air pollution in the most densely populated parts of NWE (see Appendix 6) or the spatial

Other relevant studies are for example: van den Berg, L.; Pol, P.; van Winden, W.; Woets, P. (2004) European Cities in the Knowledge Economy. The cases of Amsterdam, Dortmund, Eindhoven, Helsinki, Manchester, Munich, Münster, Rotterdam and Zaragoza. Euricur
dynamics in intermediate zones. In other countries, for example Ireland, there was significant
discussion about the need to clearly identify the hierarchy (priority) and scale of issues to be
visually represented. The visualisation in Figure 10 below is therefore a combination of the
(sometimes reluctant) drawings of participants and the interpretation of the study 1 team
workshop leaders. The Figure shows the main agglomerations and potential polycentric co-
operation zones in north-west Europe, which are based on discussions held in the different
workshops and interviews.

![Figure 10: The main agglomerations and potential polycentric co-operation areas – as
tidentified by key stakeholders in north-west Europe](image-url)
5. WHAT IS THE DEGREE OF COVERAGE OF THESE ISSUES BY EXISTING PLANNING DOCUMENTS AND STRATEGIES?

Summary

- The most common general ‘theme’ related to polycentricity is *connectivity* among urban centres, in terms of physical connections, access to services and co-operation among city governments.
- Whilst the knowledge economy and regional disparities appear to be important transnational issues, relatively few policy documents address these topics, and even fewer consider enlargement.

A list of key national and regional planning documents was identified for each member state in consultation with the Spatial Vision Working Group. The list of the documents examined is shown in Appendices 8, 9 and 10. These included:

- the main strategic plans and policy documents at national and regional levels in the eight countries covered by the programme;
- cross-border and transnational co-operation programmes;
- a sample of INTERREG IIIB project reports.

The contents of the documents were compared with the list of issues outlined in section 3. An MS Access database questionnaire was used to gather and analyse the findings. A user manual was prepared to ensure consistency in the coding of data from the documents.

The transnational polycentricity issues mentioned in the documents

Altogether 83 policy documents, strategies and legal documents at national and regional level in the eight countries covered by the programme were analysed.

Generally, explicit consideration of transnational issues is not prominent in national and regional policy documents, and there are few references to specific proposals with a transnational or cross-border character. Sometimes the national and regional policy issues have an implicit transnational dimension (and this has been recorded where it occurs). There is no benchmark against which to measure the extent to which transnational issues may be mentioned, but the impression is that the transnational dimension is given very limited attention in national and regional policy.

Reference to transnational issues in the policy documents is recorded by the lists of key transnational issues set out in section 3. The findings are shown in Figure 11. The main general issue across all three dimensions of polycentricity (morphology, socio-economic relations and governance) is *connectivity* among urban centres. This issue is raised in connection with infrastructure requirements to link economic centres in order to realise their potential; access to services through co-operation among cities, and co-operation among city governments in networks and partnerships.

Other prominent issues in policy documents are logistics and distribution; cross-sectoral initiatives (e.g. transport and urban development) across borders; the role of second and third order cities as counterweight economic centres; and building the capacity of institutions to engage in transnational working. Furthermore, issues related to the economic competitiveness of regions and nation-states, and most closely related to the Lisbon Strategy, such as the dispersal of economic activity as a result of the knowledge economy / more flexible labour market relations / increase in knowledge-based economic activities;
growth of the 4th sector economy through highly specialised services; and regional disparities as a result of economic restructuring are also frequently mentioned in national and regional policy documents and strategies.

Figure 11: The frequency of transnational polycentricity issues in national and regional policy documents

The issues that seldom arise in policy documents are mostly to do with demography including structural population changes such as ageing, large scale migration, cultural diversity and segregation, and the ‘brain drain’ effect. These are all issues which figured prominently in the discussion of the issues that are likely to be of transnational significance in the future (cf. section 3). The potential effect of enlargement on polycentricity is not in evidence. A transnational perspective on urban and rural relationships was not found.

Some categories also closely related to the Lisbon Strategy, such as the use of information and communications technologies and liberalisation of markets; and the potential effects on labour mobility and long distance commuting from home to work, which are expected to be of increasing transnational relevance in future, were not prominent in the policy documents. However, they were more in evidence in particular countries, especially the UK and Ireland.
In many of the issues mentioned, the link between polycentricity, transport and accessibility is very strong, indeed it is difficult to separate them out. There are also strong connections between polycentricity and the environmental and cultural issues, for example, in the consideration of the environmental implications of the polarisation of growth and congested urban areas and the relationship between migration and its effects on regional cultures.

**Variation among member states in identification of issues**

There is significant variation in the identification of transnational polycentricity issues in the policy documents. Figure 12 gives an overview of the findings for each country. It should be noted that the findings give only a general indication of the priorities for each country since they are based on the proportion of policy documents that mention a particular issue. They are nonetheless interesting.

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The Figure illustrates the general point that relatively few policy documents address transnational issues. Most consideration is given in almost all countries to the physical infrastructure connections. Ireland gives more attention to ICT issues and the UK gives more attention to the role of second and third order centres. Luxembourg gives more attention to instruments for supporting transnational co-operation. These differences from the norm are all supported by the geography and recent history of these countries.
6. TO WHAT EXTENT HAVE POLYCENTRICITY ISSUES BEEN ADDRESSED BY FORMS OF CO-OPERATION?

**Summary**
- Cross-border and transnational co-operation programmes address mainly transnational issues related to governance and polycentricity, such as co-operation among cities, cross-sectoral initiatives, instruments to support transnational co-operation, and the capacity of institutions to engage in cross-border or transnational co-operation.
- INTERREG projects address polycentricity mostly in relation to connectivity among urban centres, particularly in developing networks among cities and physical infrastructure connections. There are far fewer projects dealing with issues related to the Lisbon Strategy such as the use of ICT and economic activity, enlargement, or issues related to demography and migration.
- A number of INTERREG projects were suggested as providing examples of how polycentricity can be addressed, especially in co-operation among cities in creating joint instruments or strategies or exchanging experience on city networking.

**The coverage of polycentricity issues by cross-border and transnational co-operation programmes**

Altogether 47 cross-border and transnational co-operation programmes and documents were examined. These are listed in Appendix 9. The following Figure 13 gives an overview of the transnational issues that are considered in these co-operation programmes.

Besides physical connections between places, the main emphasis in co-operation programmes lies on the promotion of ‘governance’ related aspects such as co-operation among cities, cross-sectoral initiatives, instruments to support transnational co-operation, and the capacity of institutions to engage in cross-border or transnational co-operation. Increasingly, issues related to the Lisbon agenda are also mentioned in the co-operation programmes. These relate to the increasing use of Information and Communications Technologies; transnational logistics issues; and the dispersal of economic activity as result of the knowledge economy; more flexible labour market relations or an increase in knowledge-based economic activities.

Again, however, those issues that have only frequently come to the forefront of debate, such as demographic issues related to large-scale migration, ageing and ‘brain drain’, or the transnational effects of the privatisation and liberalisation of sectors and services are only considered in a very limited number of programmes. Undoubtedly, a review of the programme documentation for these co-operation areas should pay more attention to these issues of potentially high transnational significance.
Figure 13: The frequency of transnational polycentricity issues in cross-border and transnational co-operation programmes

The coverage of polycentricity issues by INTERREG projects

The number of current INTERREG IIIB projects that address the transnational polycentricity issues identified in this study is summarised in Figure 14. A full list of the 32 projects is given in Appendix 10.

The coverage of polycentricity issues by INTERREG projects mirrors the issues mentioned in the policy documents. Connectivity among urban centres is a major feature whether in terms of co-operation among local and regional governments, physical infrastructure connections or connectivity to assist in the delivery of services. Issues to do with demography and migration, the use of ICT and the changing distribution of economic activity are much less in evidence. The one significant difference between issues raised in policy documents and the coverage by projects is that projects give much more attention to the growth of the fourth sector, although on closer inspection this appears to be more to do with tourism than the knowledge economy.

In line with the transnational issues promoted in the co-operation programmes, many projects are also concerned with more governance-related and institutional aspects, such as
co-operation among cities; instruments for transnational working; or the capacity of institutions. As such, the projects present an interesting combination of issues promoted in national and regional policy documents and strategies, and cross-border and transnational co-operation programmes. This reflects the reality of project work, which on the one hand have to respond to the requirements set out by the funding programmes, yet on the other need to tackle issues of concern within countries and regions.

**Figure 14:** The frequency of transnational polycentricity issues in transnational and cross-border co-operation projects

Several INTERREG projects were mentioned by participants in the workshops and interviews as good examples of how transnational co-operation is addressing polycentricity. For example:

- the INTERREG IIIb project ELAT, a co-operation between Eindhoven, Leuven and Aachen which aims at the development and implementation of a joint innovation strategy for this ‘technology triangle’ of knowledge institutes, business and public authorities at national, regional and local level;
• the EUROPOLIS project, which is concerned with the creation of urban and territorial qualification tools;

• the INTERREG IIIB North Sea Region project TOWN-NET, which seeks to share knowledge on methods of strengthening the complementarity of adjacent cities;

• the INTERREG IIIC project CENTURIO, which seeks to enhance institutional capacity to inter-regional and transnational co-operation through the exchange of European policy officers.

Also a number of other initiatives operating at the national and/or cross-border level are addressing polycentricity, notably:

• the city network of Rouen-Caen-Le Havre in the Seine estuary and between the cities of the ‘Sillon Lorrain’ (Lorraine corridor), as well as other cross-border co-operation networks (see Appendix 11) in order to counteract the metropolisation of the Greater Paris region;

• the integrated urban planning document (SCOT – Schéma de cohérence territoriale) based on travel-to-work areas in the Northern part of France which involved co-operation with planners from the Netherlands; and

• the Saar-Lor-Lux+ \(^{25}\) Grand Region’s projects for the ‘European Capital of Culture’.

We therefore conclude that there a small number of projects that have demonstrated the potential of INTERREG projects to address polycentricity issues. However, the projects tend to follow closely the concerns of national and regional policy documents and co-operation programmes rather than responding to new developments and pressures in an innovative way. This results in a bias towards projects concerning physical connections and general networking. Much less consideration has been given so far to the Lisbon-Gothenburg agendas, the knowledge economy, the role of ICT and related economic development issues; demographic change; and the impacts of enlargement. The explanation is in part to do with the timing of project development and perhaps the visibility of the Lisbon agenda in national and regional policy. There would appear to be a strong connection between national policy priorities (which give only limited attention to transnational issues) and the INTERREG projects that come forward.

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\(^{25}\) The Grand Region consists of Luxembourg and neighbouring regions in Germany, France and Belgium.
7. THE MAIN BARRIERS TO TRANSNATIONAL CO-OPERATION ON POLYCENTRICITY

**Summary**

- There are significant perceived barriers to transnational co-operation that will affect attention given to polycentricity, including the complex procedures for application and project management and the different regulatory frameworks and distribution of competences among member states.

- Eight main reasons are given for the unsatisfactory attention to polycentricity issues:
  - variation in government and legal structures;
  - the relative priority given to cross-border issues;
  - the political priority given to physical (infrastructure) outcomes;
  - the high resource and expertise demands;
  - the urban bias of the polycentricity concept and the INTERREG programme;
  - the perceived abstract nature and limited added-value of polycentric development at transnational level;
  - the defence of national interests in economic and political spheres allied to the traditional competitive position of regions and cities; and
  - the lack of involvement of important public and private sector service providers.

- Key actors generally think that the current definition (positioning) of INTERREG IIIA boundaries is a barrier to the creation of projects addressing some cross-boundary issues linking city with city. Transnational regional boundaries of IIIB programmes prevent creation of appropriate project partnerships to address important issues, for example, relating to enlargement. More co-operation on a thematic basis was widely advocated.

The identification of barriers to transnational co-operation was mainly based on the discussions with key stakeholders in interviews and workshops, but some of the documents examined also mentioned both the problems and potential of co-operation across borders. It should be noted that the barriers are obviously not insurmountable, but these are the issues on which much progress needs to be made.

**The eight main barriers to transnational co-operation**

*Variations in government and legal structures and processes.*

It is widely recognised that transnational co-operation faces problems arising from differences in the organisation and competences of government administrations. North-west Europe exhibits considerable variety in the fundamental organisation of government from the more unitary nations to the federal. An illustration summarising the main variations in government structure is given in Figure 15. However, it must be remembered that the actual situation is much more complex with significant variations in the distribution of competences within countries. For example, in Switzerland the German speaking cantons have more autonomy than the French speaking cantons. Variation in the regulatory frameworks of countries and regions means that a particular process or strategy may be compatible with the existing framework of one country while it may be incompatible with that of another country.
Figure 15: Regionalisation in NWE

A comparison of the governmental systems in each country and the views of key actors suggest two key issues for transnational co-operation:

- the capacity of regional level institutions to engage with regions in other countries and/or
- the existence and capacity of co-operative arrangements among local authorities which may provide a larger platform from which to engage in transnational co-operation.
This is linked to other points about the significant resources and expertise (capacity) that are needed to engage in transnational working (see below) and the creation of strategies at the regional level which can identify planning and development issues of transnational significance.

Where regions are large and have strong competence there are more opportunities to engage at the transnational scale and the experience of the Belgium regions and the German Länder bear this out. Here, ‘regions’ play a strong role in cross-border collaboration networks such as the Saar-Lor-Lux and Euroregions. For the other countries of north-west Europe, respondents suggest that regions are likely to find more difficulties in engaging transnationally because of a more narrow range of competences and less capacity. For example, Dutch provinces are much smaller and this is considered a disadvantage in regional co-operation. There is an informal and ‘low key’ form of inter-provincial co-operation in Landsdelen which may offer opportunities for more appropriate scale collaboration on polycentricity related issues.

Where ‘regional governance’ is made up of indirectly elected members and/or associations of local authorities there is also the need to reach agreement among and be accountable to, the constituent bodies, which can make for very complex planning and reporting arrangements. For example, in England, regional bodies outside London are established by co-operation among many local authorities and other business and civic actors. They have limited capacity, although there is a general tendency for increased administrative capacity at regional levels, and informal arrangements do not necessarily preclude effective co-operation. In Ireland, long standing regional competences for and experience in co-ordinating structural fund spending has lend some support to regions engaging in the INTERREG programme.

At the local level, small local authority units generally lack the critical mass and thus the capacity to engage independently in transnational co-operation. There is a need for inter-authority working, even to some extent in England where the local authorities are relatively large. Groupings of local authorities for other purposes such as to create critical mass for service delivery is very common and particularly well established in France. These groupings sometimes provide a platform for transnational co-operation and there is more potential here. For example, in parts of Germany there are associations of local authorities at the regional level where collaboration has been encouraged as a response to international place competition and to secure national investments. These local authority co-operation networks also work transnationally, for example the QuattroPole co-operation initiative among Saarbrüken, Trier, Metz and Luxembourg, and the Rijn Schelde Delta.

There is some evidence of the building of inter-authority institutions also for functional regions such as national parks or river catchments and for informal ‘associations’ of local authorities in city networks or across urban-rural regions such as the ‘urban communities’ in Wallonia and the regional city networks and city-regions in Holland. In Ireland, the National Spatial Strategy has designated a number of population centres for improved linkages to achieve critical mass to act as ‘gateways’, and possibly in the longer term to become city regions, for example the Athlone-Tullamore-Mullingar area of the Midland Region. In England, inter-regional networks have been formed linking the regional bodies and identifying city-regions for informal strategic planning purposes. There are also groupings of particular types of authority, for example the G4 group of largest cities in the Netherlands.

These varied arrangements for building the capacity of governments to engage with service delivery and strategic planning at an appropriate level offer considerable potential as platforms for transnational working. One example is the long tradition of transnational co-operation between municipalities around three cross-border agglomerations involving Luxembourg, Belgium and Germany. However, from discussions with key actors and examination of documents, it is apparent that the transnational dimension (and to a lesser
extent the cross-border dimension) to strategic planning issues is seldom addressed in their plans. There are examples of transnational working by inter-authority groupings but our assessment is that these are the exception rather than the rule, and few such organisations are systematically considering the transnational dimension.

The reasons may be self-evident. The legal status of such organisations may be weak and may be questionable for working at the transnational level. There may be little attention to the transnational dimension in the ‘terms of reference’ for such organisations. They have relatively limited resources for difficult co-ordinating tasks. In addition, they are already complex partnerships, thus working transnationally means dealing with exceedingly complex administrative and reporting arrangements.

Co-operation networks are not limited to formal government. Business co-operation networks such as the ‘Grand Région’ (Saar-Lor-Lux) and for the metropolitan area around Lille; or representative bodies such as the German Chamber of Industry and Commerce (Deutscher Industrie-und Handelskammertag) may provide a basis for transnational co-operation. However, whilst they may be playing important roles in international networks, they have only very limited engagement with INTERREG and in some cases with governmental networks generally.

Priority to cross-border issues

Cross-border co-operation is best established between neighbouring regions where there are pressing and common concerns to be addressed. Many key actors commented on the continuing need for cross-border co-operation, in particular in the closely interlinked areas of Benelux, France and Germany. Where there is strong cross-border activity, there seems to be less scope for additional co-operation at higher transnational spatial scale. For example, key actors from Luxembourg seem to be predominantly occupied with co-operation efforts in the Grand Région Saar-Lor-Lux+, which, although long-standing, continues to require much attention and negotiation between countries. Co-operation with countries further away, such as UK and Ireland, is therefore given significantly less attention. This point is linked to the great variation across NWE in the experience of institutions and actors with transnational and cross-border co-operation.

Priority to physical outcomes

National and regional priorities (as noted above) relate mostly to physical (concrete) outcomes, and the organisation of funding and other resources to deliver them. Because INTERREG provides only limited financial resources to implement physical infrastructure, it is of lower priority. The ‘visibility’ of project outcomes might be important in order to gain support from politicians (certainly at local level) for transnational co-operation. This comment should, however, be considered against calls for more possibilities on soft actions such as exchange of experience and best practice, and the changing policy context which puts more emphasis on knowledge and skills in delivering economic and social development.

Resources, expertise and institutions

Key actors report that transnational co-operation makes particularly severe demands on staff resources and expertise at different levels of government that are difficult to meet. Therefore, in some countries, involvement of government officials in international meetings, committees and task forces is very limited. So too is the capacity to harvest the results of transnational co-operation and effect administrative changes based on the lessons learnt. The context for
this is that there are no specific instruments or institutions for transnational co-operation, and so very limited dedicated resources or institutional arrangements. Transnational working usually relies on national and regional officials that are otherwise engaged with national and regional issues and procedures. Some actors, including those from the Grand Region Saar Lor Lux+ and France, called for specific instruments to support transnational co-operation. A possible solution proposed was a cross-border or transnational institution with administrative autonomy and financial independence to promote and coordinate transnational co-operation. The proposals in the draft regulations on the reform of Cohesion Policy for the instrument supporting the ‘European Grouping of Cross-border Co-operation’ (EGCC) might provide the answer to these calls at cross-border levels, though the potential difficulties for transnational co-operation at a scale such as north-west Europe might be more challenging.

Urban bias

Several actors commented on the 'in-built advantage' of institutions in the more urbanised parts of NWE to participate in the current transnational co-operation programme, and the significantly greater difficulties of rural or more peripheral authorities to get involved. This is not only related to the somewhat 'urban focus' of the NWE programme, but also to the greater limitations of staff and financial resources in rural areas, exacerbated by the more difficult physical accessibility needed to initiate or be involved in co-operation. This concern about the lack of critical mass for co-operation in the more peripheral parts of NWE is also highlighted as one of the significant barriers to effective transnational co-operation in the policy documents.

Abstract nature of polycentricity at transnational level

Many key actors have commented that transnational issues are more difficult to understand and are perceived as more abstract and outside the direct influence and day-to-day concerns of policy makers. This is particularly so for the notion of polycentricity in comparison to say, transport connections. If transnational co-operation is to be supported in future, its potential and value added for institutions and actors will need to be demonstrated. Further examination of the 'costs of non-coordination' might be helpful. The link to political accountability is very important here: politicians and officials focus almost entirely on regional or local issues, where the benefits are more immediately obvious, rather than transnational co-operation where they are not. The effective co-ordination of policies within regions and member states is seen as a major challenge, to which the transnational dimension simply adds another complication but without immediate benefits. Some participants even went so far as to doubt the feasibility of projects that would try to achieve the coordination of local and regional policies at the transnational level, for example in pursuing the complementary development of urban and regional economies. [26]

These findings on the 'barrier' presented by perceptions of the polycentricity concept are supported to some extent by findings from the POLYNET INTERREG IIIB project. The 'flexibility' and 'multifunctionality' of the concept of polycentricity was established in this project that examined spatial dynamics and flow patterns in eight polycentric mega-city-regions in NWE. [27] The project brought to light an interesting array of uses of the concept of

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26 This can be illustrated by the comment of one participant in the workshop in the Netherlands, who said that 'if actors do not even manage to co-operate effectively on concrete and sometimes urgent problems within their own regions, how can we expect them to co-operate on issues that often are far less concrete and less urgent at the transnational level?'.

27 In the first phase of this study, it was demonstrated that the morphological make-up and the shape of relational patterns in each of the city-regions differs greatly. History matters in the explanation of this variety. Whereas the present polycentric form and functionality of for instance the Randstad and the RheinRuhr are very much the result of a gradual fusion process between historically distinct cities of more or less similar size, polycentricity in
polycentricity in regional spatial policymaking. Perhaps the strongest contrast is between on
the one hand regions that see the concept as an answer to problems of spatial imbalance
and congested cores and, on the other hand, regions that associate polycentricity (at the
regional level) with fragmentation and (economic) inefficiency. They are concerned with
trying to overcome the alleged disadvantages of a polycentric spatial setting. In all cases,
however, polycentric policies seem to be based upon belief rather than on certainties. Little
evidence is generally presented either to support the claim that a more polycentric spatial
development will produce certain gains for example in terms of sustainability or economic
efficiency or, on the other hand, to make clear that a region’s current polycentric make-up is
really doing damage to its competitive performance or anything else. POLYNET concluded
that polycentricity is very much a ‘fuzzy’ concept and while this may be seen as a strength, it
could also be an invitation to academics and policymakers alike to put more effort in the
clarification of the concept and its social, economic and environmental implications.

Defence of national economic interests

More specifically, key actors felt that that there are limitations to transnational co-operation
activities which interfere with the political or economic interests of nation-states or regions.
The tradition of intense competition among regions and urban centres is dominant. Co-
operation may therefore be more acceptable for ‘softer’ themes such as culture or tourism.
The priority may be to concentrate on those issues of truly transnational concern, where
subsidiarity and sovereignty considerations are less critical. This means that it may be more
difficult to establish project partnerships which address economic development aims and
spatial development (including those of the Lisbon Strategy).

The polycentricity concept may also challenge national policies supporting the main urban
centres because it is perceived to be promoting a more even distribution of economic activity
and service provision which could damage the main centres. Underlying this is a
fundamental question: How does polycentricity as a policy goal relate to national and
regional economic growth strategies (and markets) which may favour further concentrations
of growth? Key actors report that national and regional politicians and officers still take a
predominantly national and/or regional perspective. They do not take a wider European
perspective when addressing policy issues. Workshop participants reported that there
continues to be much competition at local and inter-regional levels, supported by political
rivalries, historic differences and attention to market forces in directing economic growth.
There is recognition that there is potential to address economic competitiveness overall
through transnational co-operation, but regional and ‘competitive thinking’ significantly
reduces the willingness to co-operate on some issues.

Involvement of public and private service providers

Finally, it is widely recognised that transnational co-operation is of much less value unless
some key service delivery actors are involved. Public (planning) authorities often have limited
influence over the activities of private (and public) sector companies that provide important
services, for example, rail and freight transport companies, airports and telecommunications
providers. Their lack of involvement in the INTERREG programmes is thought to be a barrier
to further transnational co-operation. French actors, for instance, felt that interventions at

regions such as England’s Southeast, Ile de France and Frankfurt/Main is rather the result of a diffusion process
originating from the regions’ dominant cores. The resulting polycentric configurations are defined by different
patterns of intra-regional relationships (some being strongly criss-cross and others still following a core-periphery
pattern) and also the regions’ major problems and challenges, next to showing some similarities, vary greatly in
result.
European level would be necessary in order to coordinate the activities of public and private actors for an integrated spatial development.

**Other barriers**

Respondents and documents also mentioned some general disincentives to involvement in INTERREG, including the complexity of the rules and regulations, the bureaucracy involved and the costs of application and management. Application requirements are considered to be particularly complex. The management of transnational co-operation projects is considered a huge task that makes great demands on the managing organisation. It is increasingly difficult to find organisations that are willing to take on this role. Responses to these problems have focused on contact points who can give information, provide support and assist with the development and implementation of projects. Additionally, interviewees identified a need for training of practitioners and public sector administrators involved in transnational co-operation projects.

Other issues relate to the obvious culture and language differences; and the problem of the availability and compatibility of relevant data. A particular problem for parts of NWE is the ‘natural barrier effect’, for example, the River Rhine or Lake Constance in Switzerland.

**The definition of cross-border and transnational co-operation areas**

The attention of key actors is predominantly occupied by problems presented within national and regional administrative borders, and to some extent co-operation with immediately adjacent regions in cross-border areas. There is thus a general lack of consideration of truly transnational issues by many key actors interviewed for this study. This is a major constraint on developing the transnational perspective on spatial development. However, some actors thought that solving persisting cross-border problems first are key to wider transnational co-operation. This suggests that there might be a stronger linkage between cross-border and transnational co-operation activity.

**Cross-border areas**

Key actors recognise cross-border polycentricity issues more readily than transnational issues. Nevertheless, they were critical of the ‘zoning’ (area boundaries) of the current INTERREG IIIA programmes. For example, Luxembourg is for the purposes of INTERREG IIIA divided into two programmes, which is perceived as a rather artificial split which hinders many joint-Luxembourg co-operation activities. The Ireland-Wales INTERREG IIIA programme was thought to combine two areas with a very different geographical context and thus fundamentally different issues, i.e. the metropolitan area of Greater Dublin with the peripheral and predominantly rural parts of West Wales. Whilst it was thought that the programme had provided a valuable basis for co-operation on, for example, short sea shipping, it did not allow for co-operation between Dublin and its nearest metropolitan neighbours in the UK such as Manchester and Liverpool. Similarly, West Wales has common issues that might be better addressed with Western Ireland (cf. Figure 16).
Figure 16: Possible cross-border/transnational co-operation areas as defined by key stakeholders

Transnational regions
At the transnational level the commonly held view of key actors is that the current definition of transnational regions
- is not fit for purpose for co-operation on many significant issues, because it simply replaces one boundary (and its problems) with another;
- artificially restricts the ability to build meaningful partnerships and prevents inclusion of partners from outside NWE which would be beneficial, particularly the new member states;
- lacks a ‘transnational identity’ and rationale in relation to the substantive transnational spatial development problems that regions face, including for example, the mobility of
command structures beyond NWE, the impacts of demographic change and migration (for example, retirement to the south of Europe and labour migration in from the east).

The definition of alternative ‘sub-regions’ of co-operation was suggested to be based on a stronger ‘regional identity’ and common concerns. Two specific examples were cited: the area including South-West Ireland, Wales and Northern France; and a ‘Celtic area’ across Wales, Ireland and Brittany (see Figure 16 above).

However, there is strong interest to continue work on smaller projects which would achieve tangible results. Their role is seen as ‘demonstration projects’ which could be used to test the benefits of transnational co-operation and thus influence politicians and decision-making at national, sub-national and regional levels. This continuing interest in ‘soft’ actions and smaller projects stands in stark contract to the Commission’s draft regulations for the Cohesion Policy reform[28], which promote large and more strategic projects, and is something that needs to be considered for the next funding programme.

**Thematic transnational co-operation**

Many key actors highlighted numerous concerns related to more thematic co-operation. Exchange of experience or sharing of best practice on issues of common concern was emphasised by the majority of key actors as being one of the main advantages of transnational co-operation. Many actors felt that limiting co-operation to a strict definition of transnationality would severely restrict their involvement in and potential benefits of the programme.

These considerations clearly affect the scope of possible strategic objectives and the suggestions for project ideas to meet these.

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8. WHAT STRATEGIC OBJECTIVES SHOULD BE INCLUDED IN A FUTURE NWE CO-OPERATION PROGRAMME?

Proposed strategic objectives have been derived from a synthesis of
• the changing EU policy context, particularly the Lisbon-Gothenburg Strategy;
• the analysis of plans and policy documents and existing co-operation programmes and projects;
• discussions with key actors.

The following strategic objectives are suggested:

The overarching objective of achieving a more cohesive, balanced and sustainable development of the Community territory, while at the same time contributing to the overall competitiveness of the NWE area in a globalised world.

Ten sub-objectives are identified to support this objective, and to structure the potential project ideas in the following section. While these ten objectives might at first sight seem partly contradictory, they have different implications at different levels of scale (macro, meso, micro):

➢ To assess the implications of climate change for spatial development patterns and develop long term strategic responses.
  a. To compare and co-ordinate spatial planning policy and actions for climate change.
  b. To develop rules and regulations that contribute to an EU-wide reduction of air pollution (physical dispersion of pollutants and competitive concerns related to ‘environment dumping’) while allowing adaptation to specific local and regional conditions.
  c. To address the impact of the changing energy policy, the provision of renewable energy and future constraints on energy supply on settlement patterns and economic competitiveness.
  d. To create new economic activity that contributes to environmental sustainability and healthy urban environments.

➢ To effectively respond to the transnational spatial impacts of demographic change.
  a. To respond to the implications for education and the labour market from demographic change (supply and demand of skills across the territory).
  b. To address structural changes in the population relating to concentrations of elderly population and the loss of young people.
  c. To manage the impacts of large scale migration through immigration; temporary labour supply and retirement.
To engender new approaches to spatial planning that look beyond administrative and sectoral boundaries and embrace the fundamental objectives of the Community.

- To strengthen the political commitment and priority given to European spatial development and transnational co-operation at all levels of government through initiatives to raise awareness among policy makers and training and education of planning professionals which promote the cross-sectoral and European dimensions to spatial development.
- To clarify and align the normative concept of polycentricity at different spatial scales (from European down to local) by reaching a political agreement between member states that will allow coordinated action at all spatial scales.
- To develop common tools, such as: an agreed terminology on polycentric territorial development; harmonised data and indicators on European spatial development; innovative and commonly agreed approaches to visualisation; tools to measure the impacts of co-operation efforts in contributing to a more polycentric development; a monitoring system for positions of cities in the European urban hierarchy to guide co-operation initiatives, and harmonised norms, plans and standards, for example, in airport development and ‘environment dumping’.
- To expose the increasing discrepancy between the ‘functional regions’ (economic influence areas, functional interdependencies) and the administrative governance areas in order to achieve a more coherent approach to polycentric territorial development.

To promote a better understanding of and practical responses to the spatial impacts of enlargement on the polycentric urban structure in north-west Europe.

- To address the impacts of enlargement on the transnational labour market, transport implications and rural development,
- To examine and address the long term consequences and potentials of enlargement of the EU on transnational spatial development and ‘the changing centre of gravity of the EU’.

To support the improved global performance of the economy of the Community.

- To strengthen the polycentric structure within NWE in order to enhance its international economic competitiveness.
- To promote a more integrated European labour market, including addressing the challenges arising from a division of work and residence due to differences in employment possibilities, taxation of income, and costs of living and housing in cross-border regions.

To promote the transformation to an innovative and knowledge-based economy (implying an emphasis on ICT, R&D, thematic knowledge networks etc).

- To develop transnational knowledge networks through co-operation among universities, research institutions and industry.
- To promote the development of knowledge-intensive economies and creative industries.
To achieve good access for everyone to services and opportunities across the Community territory.

- To co-ordinate national and regional transport policies with spatial development strategies, and activities from the public and private sector, according to a commonly agreed vision of polycentric development at the European level.
- To make more efficient use of existing transport infrastructure capacity as means to more sustainable travel patterns and a reduction in land consumption (incl. logistic improvements and environmental concerns such as pollution).
- To anticipate and respond to the changing circumstances for transport due to shifts in energy policy and changing consumption patterns.
- To respond to the different needs for infrastructure and accessibility across the territory, incl. developing a spatial approach to logistics and freight.
- To make provision for alternative development corridors to tackle congestion on the main transport axes.
- To coordinate transport connections in cross-border agglomerations more efficiently (e.g. Geneva, Basle, Constance).

To strengthen nodes and networks: stimulate co-operation between cities and towns.

- To achieve a balance between co-operation and competition between cities and towns (reflecting the different levels of scale and interaction) in order to strengthen the European urban system overall.
- To strengthen city partnerships at strategic level (e.g. city partnerships, e.g. Caen-Rouen-Le Havre), urban networks, clusters and development corridors.
- To identify and help to realise the potential of cities outside the main metropolitan areas and ensure that the 2nd and 3rd order cities and towns plan in a complementary way and are well connected both at national and at transnational levels.
- To strengthen the role of second and third order centres in urban networks as counterweight economic centres (e.g. in existing partnerships between cities in Normandy).
- To examine and develop the potential (including gateway function) of second-order cities in border regions which may have an important strategic position but which are peripheral from a national perspective (related to the emergence of regional airports as increasingly important European transport nodes).
- To develop new forms of urban governance that can assist in developing complementary functions, for example, Eurodistricts.
To strengthen the meshes\(^{29}\): ensure the integration of rural areas with networks of urban centres to ensure their complementary spatial development.

a. To identify the rural dimension to polycentricity, particularly the spatial dynamics and tensions in intermediary zones (i.e. the areas in between NWE's major urban agglomerations).

b. To promote a better understanding of the interaction of urban and rural areas in local economies.

c. To promote more efficient management of transnational large-scale landscape areas (e.g. the Alps).

d. To strengthen rural areas as regards their future role in decision-making and benchmarking between different strategies across national borders.

To strengthen urban-rural relationships that contribute to a balanced development of the NWE territory overall.

a. To promote an efficient and coordinated management of urban growth and containment of urban growth across the territory.

b. To address the pressures through ongoing urbanisation on remaining open spaces, including the protection and development of free and open spaces (i.e. non-developed areas, natural and agricultural landscapes).

c. To address the challenges from relations between centres and their hinterland across national borders (e.g. Zurich, Geneva, Basle; or Jura, Belfort and Besancon).

d. To effectively manage cross-border metropolitan areas (e.g. Geneva), with a view to harmonising political, cultural, and environmental / planning and development standards.

e. To effectively manage agglomeration areas across regional borders (inter-municipal co-operation).

\(^{29}\) ‘Meshes’ describe the spaces between lines and nodes in a network.
9. WHAT PROJECTS COULD CONTRIBUTE TO CONTRIBUTE TO THE STRATEGIC OBJECTIVES?

Most key actors were not able to identify strategic projects that would require the co-operation with other countries and could have a significant impact on their national and regional territories and policies. Where they did identify project ideas they were only able to give very general comments on potential project partners. There were few exceptions. This is surprising, especially for areas where there is long-established co-operation, and where the identification of more concrete project examples of relevance for the wider NWE area could have been expected.

The NWE Spatial Vision Working Group has requested a summary of transnational ‘strategic projects’ for north-west Europe that would address the issues raised in this study. The proposed five strategic projects have been prepared through inductive reasoning by the study team following examination of:

- the changing EU policy context for spatial development, particularly the Lisbon-Gothenburg Strategy;
- spatial development trends in north-west Europe;
- the analysis of existing national and regional plans and sectoral policy documents in the member states;
- the objectives of existing INTERREG co-operation programmes and previous and current projects funded under the INTERREG initiative;
- detailed discussions with more than 140 ‘key actors’ in the north-west region through workshops and/or interviews.

In addition to these transnational ‘strategic projects’, numerous other project ideas emerged from the analysis of policy documents, plans and programmes and the discussions with key stakeholders, that would contribute to achieving the strategic objectives (section 8). Most of these are concerned with issues of common concern, and would benefit from transnational co-operation through the exchange of experience and mutual learning. These additional project ideas are presented in Appendix 12.

1. Harnessing the Hinterland Effects of the Global Centres

In NWE the new knowledge economy for the EU is being built mainly in the core metropolitan areas and a few other favoured centres of innovation. If the objectives of the Lisbon Strategy are to be realised there must be much wider diffusion of the knowledge economy and innovation activity to the surrounding regions. The Lisbon Strategy sees this mostly as a transport problem but a coherent spatial development approach is needed.

The concentration of knowledge activity in the metropolitan areas is closely linked to national and international in-migration of young skilled people, the concentration of investment in infrastructure and strong spatial development pressures. The global cities are where the knowledge economy is most dynamic – there is a constant refreshing of the intellectual capital of the cities, maintaining a critical mass of talent, creativity and innovation.

There is strong evidence of a ‘ripple effect’ from the metropolitan areas out to the immediately neighbouring regions, as young skilled people migrate out from the cities later in life. Whilst this effect is strong, it is not very widely spread. There is a need for the second order cities and network of smaller towns beyond the ‘ripple effect’ to connect into the knowledge economy dynamic of the main centres.

A transnational action project could
• establish linkages out from the global centres to areas that demonstrate potential for knowledge economy development beyond the immediate impact area, by, for example, more aggressive marketing of regional opportunities in the global centres through ‘regional offices’, linked to concentrated infrastructure development in selected locations (ICT, housing, etc).

• facilitate the movement of international in-migrants out to regions transnationally by providing information and support for integration and settlement (and thus prevent brain drain to other global centres);

• establish co-operative practices on international in-migration among the main centres in both attracting and settling migrants;

• assist and provide incentives for governance networks of towns in potentially favourable locations for knowledge economy development to co-operate in spatial development and other policies to facilitate connections with the main centres.

2. Inter-regional spatial development programmes

Numerous policy documents have cited the economic potential of the ‘development corridor’ effect, particularly in NWE where it could be aligned to existing and planned multiple transport axes in areas of dense connectivity. This potential continues to be stifled by competition among regions and cities, even within member states. They continue to compete fiercely, often for the same type of investment and market themselves on similar attributes. This competition is fuelled by member state policies and may be supported from the EU Cohesion Policy.

Whilst competition among centres may be a force for innovation and positive action, there is an urgent need to develop more effective co-operation on inter-regional development programmes that maximise the overall benefit to NWE and the EU, makes best use of existing infrastructure and skills, and limits the wasteful element of competition among the regions.

There is a need to promote development ‘corridors’ in particular where there is considerable potential for co-ordinating the regional strategies of the areas that have potential for economic growth and provision of services (in ESPON terms, these are the polycentric integration zones). Effective transnational co-operation within these corridors would help to create more balanced development of the territory and maintain and create polycentric urban structures. Several potential ‘corridors’ could be considered, of which the following four are examples (see Figure 17):

• the corridor from Dublin and east Ireland coast to Belfast and across to the Northern Way of England (North West, Yorkshire and the Humber and North East, possibly with an arm to Strathclyde) and across to continental Europe and the east;

• Randstadt – Rhine Ruhr – eastern Europe;

• Frankfurt-Stuttgart-Rhein/Neckar – Strasburg – Zürich-Basel;

• ArcManche Regions.

Within these corridors, transnational action could be taken to

• provide incentives for testing the complementarity of regional development and spatial strategies and seeking opportunities for mutually beneficial co-operation;

• reward co-operation with selective investment in critical hard and soft infrastructure to help realise the corridor concept;

• create added value from other EU Cohesion Policy and national and regional policy;
maximise the economic and social benefits of existing and new transport and other infrastructure through spatial development strategies;

create an inter-regional knowledge transfer network linking business and research support providers already existing in the regions.

The emphasis would not be on creating new instruments and procedures but on ensuring more complementarity of existing spatial and sectoral planning instruments, and thus creating more inter-regional and transnational cohesion.

Figure 17: Examples of transnational corridors with considerable potential for coordinating regional strategies in north-west Europe
3. Channel Tunnel

The Channel Tunnel has had a major impact on spatial development in NWE. Its effects are particularly evident in Lille and other nodes on the high speed network. It has begun to create some long distance commuting among the main nodes and has certainly affected transport modes between the cities. It will have a profound effect on patterns of spatial development and economic activity. Whilst some areas are benefiting from the new infrastructure, others are suffering from the by-pass effect or the potential is not being realised.

There has been collaboration on the spatial development effects of the Channel Tunnel, though most co-operation has been within the transport sector and at the cross-border level. However, the effects of the Channel Tunnel go well beyond the cross-border area in one direction as far as Ireland and in the other to the new member states. There is a need to ‘grow’ the cross-border co-operation and link it into the wider transnational considerations and also to extend it beyond concerns with transport networks to engage more firmly with spatial development at the transnational level.

Figure 18: The Channel Tunnel: a potential instrument for wider transnational integration
A transnational action project (cf. Figure 18) could

- build on the positive effects at the cross-border level and take action to realise the potential in the wider transnational region and seek a wider distribution of benefits;
- anticipate and take action to address the negative ‘by-pass’ effects in the ‘meshes’ — the spaces between nodes, and take action to secure spin-off benefits or limit the damage to other secondary centres that are not well connected;
- take action to use the potential of the Tunnel and transport network to create more integrated labour markets and labour mobility in areas of high demand for the knowledge economy;
- consider jointly and from a transnational perspective, the potential for the second crossing strategy – involving all those affected, from Ireland to Switzerland and new member states, in planning, financing and realising benefits.

4. Action project to manage urban growth

The core area of north-west Europe has by far the greatest concentration of urban uses in the EU with very high urban densities. Despite widespread recognition of the dangers of continued expansion of urban areas and the need to prevent further concentration of development and urban sprawl, the steady conversion of land from rural to urban uses continues. There is a relative polarisation of growth around the major metropolitan areas and away from old industrial areas and some rural areas. National and international in-migration to the metropolitan areas is responsible for much of the growth. This growth may not always be accommodated in the most effective way. This is true even for areas that are not the focus for new growth and despite stable or even falling populations. Some rural and relatively peripheral areas too are subject to extensive development of new housing sometimes connected to second home ownership and speculation. Furthermore, the ‘fourth economy’ activity has new requirements in relation to land, property and location which may not be well served by existing development plans.

There is considerable variation in the extent of urban sprawl across NWE. For example, Germany converts more greenfield land than the UK each year per head or per unit of GDP, but the problem is very much shared among the member states. Urban development in NWE has a global impact and the member states share responsibility for ensuring that the land resource (or space resource) within the region is used efficiently and that more of the environmental impact of development in NWE is contained within the region. The consequences are also severe within NWE, with overheating of housing markets in some areas leading to severe difficulties in the affordability of housing coupled with a surfeit of housing and housing market collapse in other areas.

However, effective action is compromised by competition among the member states and regions which limits the acceptability of measures to manage urban growth and prevent sprawl. This has sometimes been described as ‘environmental dumping’. The member states and regions face a dilemma, on the one hand wishing to apply restraint and more effective management of urban growth, whilst on the other not wishing to divert growth away to other countries and regions. Furthermore, the argument is often made that restraint in any part of NWE will simply send the proposed investment to other parts of the world rather than elsewhere in NWE.

Joint action on a number of fronts could help to build a common and more effective approach to husbanding the land resource in NWE. It would also contribute to more balanced development by co-ordinating the use of land and property resources beyond the core across national boundaries. The action project could:
• build agreements on the extent and nature of the problem and a shared commitment to tackling the problem with an action plan;
• set common targets and indicators for the conversion of greenfield land and the reuse of brownfield land which are specific to the highly urbanised nature of NWE and the global cities;
• harmonise spatial planning policies on greenfield land conversion which would provide a model for the rest of Europe;
• monitor the urban growth management transnationally by harmonising data definitions; and
• partner the demand for land with the supply of brownfield sites across national borders.

5. Spatial planning for SME growth and innovation

The number and growth of SMEs is critical to the economic success of the EU and will make a major contribution to the Lisbon Strategy. National and regional governments have extensive programmes of business support for SMEs including facilitating links between universities/research centres and industry/entrepreneurs. Research activity in universities and large firms is internationally networked in discipline communities (supported by EU Framework Programmes) whilst SMEs tend to operate more locally within particular labour markets. North-west Europe plays the major role in research and innovation, but this activity (like other development) tends to be concentrated in the core metropolitan areas. Some relatively peripheral areas have been successful in SME activity and much of this in the knowledge economy sectors (as in Ireland). National boundaries present barriers to linking research capacity and SMEs and to the clustering of SMEs.

The development of transnational support for SMEs could make a considerable contribution to economic competitiveness, by helping to foster the growth of SMEs and retain them in the EU. It would also help to develop SME activity in the outer zones of NWE and thus contribute to more balanced development. There is a particular need to link SMEs in the outer zones of north-west Europe to expertise in the central core.

Transnational support would enable SMEs to access research and intellectual capacity, skills and land and premises more easily beyond the region or member state. It would
• connect the research support services operating within national and regional boundaries through a combined database of research activity and other services;
• provide a central service to ‘innovation islands’ beyond the core through regional business support networks;
• examine the potential for and help to develop transnational clusters of businesses and research institutes; and
• provide a search facility for land, premises and labour market support within the whole of NWE.
10. WHAT RELATED BASELINE INFORMATION, INDICATORS AND TARGETS CAN BE USED TO MONITOR THE ACHIEVEMENTS OF A FUTURE NWE TERRITORIAL CO-OPERATION PROGRAMME?

There are currently no commonly accepted indicators that would allow measurement of transnational or crossborder co-operation between different levels and sectors of government and with the private sector. Yet if the success of transnational co-operation is to be evaluated more coherently in future, a debate on indicators and data in this respect will be needed. Quantitative indicators, as generally used for mainstream Structural Funds but are increasingly seen as unsuitable to evaluate and measure the more qualitative outcomes of transnational co-operation. Taylor et al. have argued that prescriptive and quantitatively biased approaches are not suitable to capture the diversity of ‘intangible effects anticipated from INTERREG actions’. [30] Likewise, there will need to be agreed definitions and indicators to assess certain aspects related to polycentric territorial development, e.g. ‘influence areas’ or ‘economic hinterlands’ of major growth poles, which will be crucial to assess the application of the concept of polycentricity in future.

A call for proposals was recently launched by the INTERACT programme on ‘Indicators for monitoring transnational and interregional co-operation programmes’. The INTERACT call puts much emphasis on a ‘social capital’ approach, which focuses on social connections and networks based on trust, mutual reciprocity and norms of action. However, there might also be other relevant aspects for the development of relevant indicators to monitor transnational co-operation on polycentricity. These are, for example, approaches that have been discussed in European integration literature on network governance and on epistemic communities. The network governance approach is based on self-interested actors learning to perceive their common interests. [31] Mutual learning processes and perceived similar problems therefore play a very important role, but it has been pointed out that the willingness to participate in problem-solving also significantly depends on the ‘match’ of systems and thus the transferability of solutions. [32] The idea of epistemic communities as proposed by Haas (1992) is concerned with the question of how ‘knowledge’ is used in policy- and decision-making processes in uncertain and complex contexts, and with the question of who brings in that specialist knowledge. [33] According to Haas, ‘epistemic communities’ are characterised by a shared set of normative and principled beliefs, and the stronger the internal coherence within the group in this respect, the stronger their potential influence on policy innovation, policy diffusion and policy persistence. A clearly defined problem, and communication both within the group, as well as with colleagues in other (transnational) organisations or through conferences and publications are seen as very important for both the re-evaluation of current policies and actions and the proposal of new alternatives. Adler and Haas (1992, p. 386) have pointed out that

> various political groups and institutions may learn different lessons or interpret reality differently. It is therefore crucial to know who learns what; whose learning gets translated into policy and why; whose learning gets a chance to affect other countries; and how political processes determine whose interpretations of reality are more viable in a particular historical context. At the international level, the capacity of interacting institutions in different countries to learn, share norms and practices, and effectively modify their behaviour depends on the diffusion and case-and-effect understanding

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from country to country. The importance of these understandings lies not merely in being true, but in being shared. ([34])

The monitoring requirement of a future transnational co-operation programme will have to combine quantitative indicators – building on the experiences of current INTERREG IIIB programmes – with qualitative indicators. Indicators for a new territorial co-operation programme should allow an evaluation of the effects of mutual learning and policy influence for polycentric territorial development. They must address the strategic objectives identified above relating to the transnational spatial impacts of climate change, enlargement and demographic change on settlement patterns, economic development and service provision aspects of polycentric territorial development, and the need for new techniques and responses to prompt a change in mindset and promote co-operation between places and complementary relationships with rural areas.

In order to evaluate the effects of mutual learning – seen as one of the main outcomes of transnational co-operation – it has been suggested that we should examine whether learning and influence might have taken place anyway; whether they might have easily been achieved in other ways; whether the transnational learning process could have been improved; and the influences that are directly traceable to the project. In order to move from individual learning (by those directly involved in the co-operation project) to institutional learning (which can support policy changes), the involvement of senior policy makers in transnational co-operation projects would be very important. Furthermore, there needs to be generally much emphasis on communication, both in a structured way (to prompt reflection on the project objectives and outcomes) as well as in more informal networks, which have the potential to foster more innovative approaches outside normal frames of reference. ([35])

Besides an evaluation of the added-value of the process of transnational co-operation, however, it is equally important to concentrate on the territorial impacts of projects, as they contribute to achieving the programme objectives. There are three issues that affect these two inter-related aspects of transnational co-operation: ([36])

- the geographic or spatial scale at which influence is exerted;
- the evaluation rationale: the purpose of evaluation and the actor perspective;
- the conflicting time scales.

Clearly, the definition of appropriate indicators to measure the achievements of a transnational co-operation programme for polycentric territorial development depends on the definition of ‘transnationality’ applied, and on an agreement on the objectives of polycentricity and its implications at different spatial scales. The definition of a clear problem, which can only be solved at transnational level implies a strict definition of transnationality – thus, subsidiarity principles are respected and competition between places is potentially lower. However, experience has shown that in reality many actors show more willingness to cooperate on issues of common concern. Furthermore, it appears that experience is more easily transferred transnationally, and thus mutual learning fostered, if the identified problems

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35 C. Colomb (UCL) in a seminar to the Faculty of the Built Environment, University of the West of England, Bristol, on 18 May 2005. Quoting the SAUL project evaluation initiative ([http://www.saulproject.net/saul/evaluatingSAULinfluence.jsp](http://www.saulproject.net/saul/evaluatingSAULinfluence.jsp)).
36 C. Colomb (UCL) in a seminar to the Faculty of the Built Environment, University of the West of England, Bristol, on 18 May 2005.
and proposed actions in participating regions are similar in nature and the systems 'match' to a certain degree. [37]

There is a need to promote polycentric development as a possible way of combining the Lisbon and Gothenburg agendas. For example, it will be important to demonstrate the contribution that polycentric territorial development can make to economic competitiveness whilst respecting environmental sustainability. Although much work has been undertaken on polycentricity, or more generally the relationship between urban form and economic performance, much of this work again focuses on quantitatively measurable aspects. [38] The ESPON 1.1.3 report, for example, suggested an approach to measuring polycentricity according to three dimensions: the size or importance of cities (population, economic activity); their distribution in space or location; and the spatial interactions or connections between them. Furthermore, the report proposes indicators on regional specialisation (which describe changes occurring within regions and how these changes relate to regional performance) and geographic concentration (which describe territorial structures and changes occurring between regions and the wider geographic scales in terms of trends towards concentration or dispersion). [39]

In the perspective of the Lisbon agenda, there is a need to focus on economic cost of monocentric urban patterns and sprawl. An indicator of time lost due to traffic congestion would provide one such cost. Overheating housing markets also have a social cost, as certain categories of workers are forced to move further away from their place of employment and face higher commuting expenses. In some cases, this can lead to recruitment problems in the core metropolitan areas: mapping such aspects in a trans-national, comparative perspective would improve the visibility of the issues linked to the polycentricity/monocentricity debate.

Different kinds of settlement patterns also have specific social and economic costs. From the perspective of individual economic actors and investors, peripheral housing developments and commercial offices concentrated around road networks nodes in outer suburban areas may appear as rational economic choices. Such patterns lead to the spatial dissociation of housing, jobs and commercial offers, which in turn necessitates building and maintaining the infrastructure connecting these different functions. These specific costs need to be further investigated, as a component of the social cost of urban sprawl.

In the perspective of the Gothenburg agenda, it would be important to quantify the reduced potentials for collective transportation in settlements that are not organised polycentrically. This would be based on the hypothesis that, in the absence of secondary centres structuring the settlements, and of a concentration of employment opportunities in a reduced number of main nodes, collective modes of transportation are difficult to implement. Compiling national studies on commuting patterns, and on the dependence on individual car as the main mode of transportation could allow for a more detailed understanding of the challenges and options in this respect. Another, more synthetic approach would focus on the energy efficiency of different types of metropolitan areas, based on commuting movements and on the means of transportation which are being used, as compared to the total population and production of wealth.

In order to justify the financial commitment of the member states to the programme, there also needs to be scope to assess the fit of Programme objectives with national and regional

37 C. Colomb (UCL) in a seminar to the Faculty of the Built Environment, University of the West of England, Bristol, on 18 May 2005. Quoting the SAUL project evaluation initiative (http://www.saulproject.net/saul/evaluatingSAULinfluence.jsp).
spatial strategies. Mechanisms to ensure this could be a national or regional match-funding scheme, such as the one promoted by the UK Office of the Deputy Prime Minister (ODPM) in 2003, which ensured an assessment of the project application’s ‘fit’ with national and regional spatial planning priorities prior to submission of the application to the INTERREG Secretariat.

The continuing problem of lack of comparable data for spatial development at the European level has been identified by many key stakeholders, and a move towards more qualitative indicators will also result in different data needs that can capture the ‘softer’ and more innovative outcomes of transnational co-operation on polycentric territorial development. The problems, however, also extend to common indicators and definitions. For example, differences in the definition of ‘agglomeration area’ often lead to practical problems in managing crossborder metropolitan areas such as Basel or Geneva. Other actors highlighted the fact that different countries continue to use different criteria to measure unemployment, which significantly complicates international comparisons on the basis of key socio-economic indicators. The collection of data, which could be used at European level, is often hindered through changes within nation-states, be it because administrative boundaries are altered (as in the UK) or because different data collections and indicators are initiated and used.

Some participants at the workshop in the Netherlands suggested the use of a 'spatial information monitoring system' by, for instance, taking further the ESPON polycentricty study on the delineation of urban areas in general and the classification and analysis of so-called Metropolitan European Growth Areas (MEGAs) in particular. A continuous monitoring of the development of these areas (including the development of their economic profile and position in the European hierarchy) may help to better understand the European urban system and the progress on polycentric territorial development throughout the territory. This point was supported by key actors in Ireland and the UK, who asked for the collection of spatial data that can support evidence-based policy making at the transnational and European level.

The list of MEGAs identified by the ESPON polycentricity study could be used as a starting point and source of inspiration for a benchmarking system of metropolitan areas in NWE. This would imply that strategic decisions are made to define indicators of economic, social and environmental performance, which reflect the policy objectives for the area. The objective should not necessarily be to establish a ranking, but to identify strengths and weaknesses in different metropolitan areas, for example in terms of economic development, knowledge production, social welfare and quality of life.

If trend data are to be taken into account, one has to consider that the growth or decline of metropolitan areas is also accompanied by changes in their spatial extent. In general, both commuting areas and settlement areas tend to expand in the main metropolitan areas. These two dimensions of metropolitan growth (economic/demographic and spatial) need to be taken into account simultaneously to understand spatial trends in NWE.

There also continues to be a need for an improved understanding of how European spatial development aspects can be cartographically represented in the most efficient way. There needs to be a better understanding of the role of GIS and spatial analysis versus more generalised representations. Key actors in France, in particular, also expressed an interest in the use of a scenario technique at transnational level, e.g. showing the NWE territory without co-operation (‘the costs of non-coordination’) versus the spatial trends following improved co-operation at transnational scale. This was seen by French key actors as a useful tool to stimulate discussion about appropriate strategic projects and the necessary partnerships to implement them.

There are also data needs that stem from recent policy developments and the changing spatial development context. For example, there is an urgent need to collect harmonised data on the various spatial impacts related to ICT development and use (e.g. information on the actual use of broadband across the territory, or the impact of ICT services on reducing the need to travel). Related to this, there is currently generally a lack of understanding
(including indicators and data) to coherently measure and assess the impacts of the ‘network society’, i.e. functional relationships, flows between places and network activities. Data continue to be collected on the basis of administrative boundaries and physical connections, with hardly any attention given to the interdependencies at different levels of scale.

The increasing significance of demographic change for spatial development in Europe implies that more attention will need to be given to the collection of comprehensive and comparable data sets on aspects related to the age structure of population, transnational migration flows, time-series of demographic data over long time period (from 1950 onwards) to compare demographic trends transnationally, and the collection of comparable demographic data at local level (NUTS 5) in order to identify demographic dynamics within specific regions and urban areas.

Given the increasing emphasis on the provision of access to Services of General Economic Interest (SGEIs), more comprehensive and comparable data will be needed on the regional accessibility (beyond administrative boundaries) to these services, such as hospitals and higher education institutions.

We have also identified remote rural areas in NWE, where demographic decrease and ageing population are possible threats. The cost of maintaining public services in these areas increases dramatically when the critical population mass necessary for cost efficient service provision is no longer available. It would therefore be important to quantify these critical levels of population mass for different types of services, and to identify areas where the total population within commuting distance is below these thresholds.

But even data sets which appear well established within member states and at European level continue to have some shortcomings and to a certain extent limited comparability. For example, the availability of real-GDP time-series at NUTS 3 level (i.e. based on fixed-price GDP and taking into account the different purchasing power standards (PPS) in NWE countries and inflation rates) would be of high significance in order to effectively compare economic performance and economic growth transnationally.

There are major challenges connected to the compilation of the above mentioned indicators. The lack of comparative analyses on the social and economic costs of monocentric over-concentration and urban sprawl, and the conversion of rural to urban land uses nonetheless needs to be addressed, as it is a main obstacle to the development of a more concrete and substantial polycentric territorial policy agenda.

The transnational dimension is of primary importance in this perspective, as it allows researchers and decision makers to confront varying existing urban structures. Two main advantages are connected to this: on the one hand, one can isolate the effects of poly- or monocentricity from the effects of other nationally specific parameters through transnational comparisons. On the other, the confrontation of the range of possible solutions is enlarged through the confrontation of different systems and solutions.

In order to monitor achievements from territorial co-operation programmes in future, it needs to be ensured that the relevant data collection systems and databases are in place from the initiation of the programmes, and reflecting the indicators defined at programme level. Under the current INTERREG programmes, many problems were caused by the lack of availability of a common system across the different co-operation programmes, and the fact that systems and databases were still being set up while the majority of funds had been committed already and many projects were underway. There need to be efficient mechanisms in place that allow the aggregation of information collected to monitor project achievements at the programme level, but the current funding programmes have been
hampered by lack of coordination of ‘evaluation timetables’ which do not ‘match’ the timescales of project partners and programmes. \[40\]
11. CONCLUDING REMARKS

The survey of documents and the workshops and interviews suggest that the transnational dimension to policy and action is often not a priority for key actors. Whilst the actors have shown enthusiasm for engaging further in transnational co-operation, there is little consideration of transnational spatial development and polycentricity issues in national and regional governments. Where issues are addressed that go beyond the member state or region, they tend to be considered mainly as cross-border issues. The wider implications of spatial development beyond north-west Europe (the macro scale) hardly figure at all.

Most of the issues and the project ideas that have been mentioned are concerned with common issues and the exchange of experience, and they arise from concerns about problems experienced within the member state or region. The member states and regions have done little to identify where transnational issues arise or how co-operation could assist in responding to them.

National and regional borders are a major constraint on thinking about spatial development and polycentricity except in cases where there are obvious cross-border connections. There is much to be done to investigate the transnational dimension of domestic issues, to break down the barrier created by administrative boundaries and to link regional, national, cross-border and transnational policy analysis.

In summary, there currently seems to be a stronger normative-based, top-down, approach to polycentric territorial development instead of a problem-oriented, bottom-up, perspective, which would involve the identification of urgent problems that require transnational co-operation. Yet, spatial development trends show that there are numerous, and ever increasing, issues for polycentric territorial development that require transnational co-operation in the context of globalisation, climate change and changes to energy policy, demographic change and reflecting the effects of the knowledge-based economy. Thus, the gap that materialises with regard to the ‘spatial reality’ and the awareness and willingness for transnational co-operation of key actors at present is possibly to a large extent affected by the lack of clear communication of the benefits that a more polycentric territorial development would offer, and the actions needed to promote the concept at all levels of scale.

Thus, the connection of transnational co-operation and polycentricity to the everyday reality of key actors needs to be much clearer. This suggests a broad field for research and action in order to improve this connection, not only by trying to make polycentricity a more ‘popular’ concept and by removing barriers to its implementation, but also by questioning its relevance according to the scale, the spatial structure, the cultural uses, and so on. This would imply a clarification of the areas where co-operation at transnational level can contribute to sustainable development and increase economic competitiveness both of NWE as a whole as well as of individual regions within the area.