

Preliminary Overview over Requirements Regarding Tools and Methods Derived from LUDA Cases

Deliverable 4

Project Director: Prof. Dr. Bernhard Müller

Author:

USAL: Prof. Steve Curwell, Jemma Turner

November 2003

The logo for the LUDA PROJECT. It consists of a red rectangular box containing the text "LUDA" in large, white, bold, sans-serif capital letters, with the word "PROJECT" in smaller, white, bold, sans-serif capital letters directly beneath it.

Improving the Quality of Life in
Large Urban Distressed Areas

Project coordinated by
INSTITUTE OF ECOLOGICAL AND REGIONAL DEVELOPMENT, DRESDEN

Contributors:

IOER - Prof Dr. Bernard Müller, Dr. Carlos Smaniotto Costa, Patrycja Bielawska-Roepke,
Andreas Otto, Christiane Westphal, Sabine von Löwis

SUT - Prof. Maros Finka

SBE - Mark Deakin

IPAA - Nathalie Bonnevide

ULHT - Diogo Mateus

SMASH - Giles Verpraet

DIT - Prof. John Ratcliffe, Julie Gannon

DGGS - Prof. Dr. Jürgen Breuste, Aleksanda Kolpak

Dresden - Bruno Buls

Bratislava - Monika Smiralová

Edinburgh - Charlie Shanlin, Gerry Baker

Lisbon - Sandra Costa

List of Contents

1.	Introduction	4
2.	Standard reporting format for case study cities, reference cities and assessment methods and techniques.....	6
3.	Drivers for change	10
4.	Cross Analysis of the Six Case Study Cities	13
5.	Defining the Role of Assessment Methods and Techniques in Evaluating LUDA	19
6.	Short Descriptions of Master list of Assessment Methods and Techniques	22
7.	Critical Analysis of Assessment Methods and Techniques	27
8.	Conclusions and Next Steps	37
9.	Bibliography	40
	Annex 1: Cross-analysis of cities – table of results	43

List of tables

2.1	Results of the decision support matrix for the standard reporting format	9
4.1	Procedure for the selection of problems	13
4.2	Most common problems	14
4.3	Proportion of problems	15
4.4	Matrix summarising the extent to which problems affect the six cities	17
4.5	The overall situation of the six cities	18
5.1	The five main evaluation steps in relation to the CoSGOP approach	19
7.1	Evaluation steps in the Regeneration Process	29
7.2	The extent to which assessment methods and tools address sustainability issues	31
7.3	Spatial / temporal domains in terms of the extent of impacts	33
7.4	The classification of assessment methods and techniques	35
8.1	Master matrix	38

List of figures

4.1	Most common problems	15
4.2	The situation of the six case study cities	17
5.1	Venn diagram depicting the categorisation of assessment methods, tools and models	21

1. Introduction

The main objective of this report is to contribute towards an overview over different options of methods and tools, which municipalities can use in improving the quality of life in LUDA. These are derived from LUDA cases as well as from literature. The steps outlined in the chapters below provide a preliminary critical review of tools and methods that could be used to assess proposals aimed at improving the quality of life and to address the sustainable urban development issues in LUDA. This review of assessment methods and tools will be further elaborated in the next iteration and will form part of the comparative analysis for the sustainable evaluation of LUDA.

Summary of the work carried out for Deliverable 4:

- Standard reporting format has been produced which has been developed to ensure harmonisation of data collection across Work packages 2, 3 and 5.
- Master list of 44 assessment methods and techniques
- Preliminary classification using four matrix formats as a means of exploration towards the structure for selection of methods
- Identification of main drivers
- Cross-analysis of survey results from Work package 5 to identify common problems in the Case Study Cities

Besides this introduction the report contains 7 chapters.

Chapter 2 (Standard Reporting Format – draft version) establishes the main criteria to be used for reporting on the take-off phase of the Case Study cities and Reference Cities and for the critical analysis of assessment methods and techniques.

Chapter 3 (Drivers for change) identifies the relevant issues that drive the rehabilitation and development processes which may need to be assessed or evaluated.

Chapter 4 (Cross-analysis of the six case study cities) is important in identifying the common problems facing the LUDA cases, as well as establishing the problem situation of the 6 case study cities. This will establish a common language among the six cities and help to determine which methods and tools will be most effective in tackling the LUDA situation.

Chapter 5 (Defining the role of assessment methods and techniques in evaluating LUDA) seeks to outline the background to identifying assessment methods and techniques and understand the roles of the evaluation steps and associated assessment methods in accordance with the collaborative strategic goal oriented programming (CoSGOP) approach.

Chapter 6 provides short descriptions of assessment methods and techniques drawn from the master list developed by the EU-Research Project BEQUEST.

Chapter 7 (Critical analysis of assessment methods and techniques) looks at the different ways in which assessment methods and techniques can be evaluated in terms of their effectiveness in tackling the LUDA problem. This chapter starts to build on the work developed in Chapter 6 by categorising the methods and tools according to the main criteria identified by the decision support matrix.

Chapter 8 (Conclusions and next steps) will identify the next steps to taken forward in the next iteration, including the master matrix and associated tasks, the criteria identified in Chapter 6, which have yet to be considered, and a strategy for cooperation with the cities.

The preliminary work produced in this deliverable is a starting point for establishing an overall methodology to be used in the sustainable evaluation of LUDA. The next iteration will rely on firmer commitment from the Case Study Cities with particular consideration for the reporting on experience of the application of tools and methods in LUDA.

2 Standard reporting format for case study cities, reference cities and assessment methods and techniques

2.1. Integrated approach

The standard reporting was devised as a way of reporting on the main outcomes of LUDA take-off stage of the case study cities and reference cities, as well establishing the main criteria to be used for the critical analysis of assessment methods and techniques. The standard reporting format is particularly important for the Case Study Cities as a way of defining the requisites and rules to be followed in analysis, evaluation and rehabilitation, such as data sets, space and time, variables, processes and stakeholders, which will ultimately help establish the main requirements of the LUDA.

The University of Salford commissioned this format as a way of effectively coordinating datasets from the reference cities, case study cities and assessment methods. Although the construction of this format or 'research protocol' was not a recognised activity under the Work package 2, we felt it was important to coordinate the fields to be used for the Case Study Cities, Reference Cities and assessment methods in order to give way to transparency in the approach to research and analysis. The Standard Research Protocol is one of the contents of the Deliverable 11. This procedure will enable the comparable analysis of data obtained from Case Study Cities and Reference Cities, opening up a more complex image of the problem of LUDA, establishing the existing options for the redevelopment of LUDA and devising possible scenarios for the processes involved in the take-off and beyond. By establishing these common themes it is hoped that this will assist in disclosing the assessment methods and techniques to be used for different stages of the process and the issues that drive the rehabilitation process, as well as the rules followed in analysis.

2.2. Feedback from the partners

The draft version of standard reporting format has undergone a number of iterations since it has reached this position, as a result of feedback from a number of partners. The origins of this process structure lay in the combination of the fundamentals of Strategic Environmental Assessment and Sustainability Appraisal. The basis of these two approaches lay on the principles of strategic action for the sustainable well being of urban areas as a result of scoping, the development and evaluation of alternatives and scenarios, effective decision-making through deep-seated participation and consultation, and implementation and monitoring.

2.3. Standard reporting format – decision support matrix

The decision support matrix was commissioned as a way of obtaining feedback from all the partners as to which criteria should be kept in and which should be left out in terms of the pooling of data from the Case Study Cities, Reference Cities and assessment methods and techniques. Out of the fifteen partners in LUDA seven partners responded, the results of which are included in table 2.1. The decision was taken to include the criteria which accrued four or more endorsements, therefore representing the majority. Subsequently, the criteria which received less than four votes in each of the three domains, was omitted. These are

highlighted in yellow. The results of the Case Study Cities, Reference Cities and assessment methods are considered in turn.

2.3.1 Case Study Cities

The general consensus for the Case Study Cities was that the standard reporting format should stay as it is (see Annex 1), although there was some dissatisfaction with the 'issues' and 're-evaluation' fields which both received five votes out of seven.

2.3.2 Reference Cities

The main motivation for commissioning the decision support matrix was the concern from Work Package 3 as to the amount of information that would need to be collected from the Reference Cities. While the Case Study Cities are partners on the LUDA project, Reference Cities are not and therefore they have fewer resources to carry out this level of research.

The results from table 2.1 show that the Reference Cities are less inclined towards the collecting of background data and are more concerned with the "real issues" connected with stages 3, 4 and 5, which may ultimately have an impact on how the Case Study Cities approach the rehabilitation process. As many of the criteria relating to stages 1 and 2 have been rejected, it may be worthwhile consolidating these stages into the one stage of 'Diagnosis', giving way to 4 stages rather than 5.

There was some surprise that 're-evaluation' was not taken up by all the respondents, as it could be argued that this is one of the most important fields in relation to transferring valuable knowledge and experience from the Reference Cities to the Case Study Cities.

2.3.3 Assessment methods and techniques

The results of this domain are the most important in relation to Work package 2, in deciding which criteria should be used in the selection of assessment methods and techniques. Some of the criteria, which were picked out have already been used in the analysis of assessment methods and techniques, through the 3 matrices illustrated in Chapter 5, i.e. evaluation steps in the regeneration process; sustainability issues; spatial and temporal domains.

The criteria which have not yet been considered so far as part of D4 and were highlighted as part of the results of the decision support matrix include:

- funding resources, in terms of what finances will be needed to carry out the assessment methods and techniques
- SWOT analysis of assessment methods and techniques
- stakeholder analysis / management and partnership in terms who will carrying out the method(s)
- strategy, objectives and targeting in relation to assessment methods.
- consultation and participation – similar to stakeholder analysis with an emphasis on civic involvement
- review – really the generic term for the critical analysis of assessment methods and techniques

These will be developed in the next iteration, i.e. Deliverable 5: Methodology for the comparative analysis of sustainable evaluation of LUDA, through the use of questionnaires sent out to the city partners and the development of the type of matrices illustrated in Chapter 7. For further details see Chapter 8: Next Steps.

Table 2.1: Results of the Decision Support Matrix for the Standard Reporting Format

Standing Reporting Format criteria	Case Study Cities	Reference Cities	Assessment methods and techniques
1. Diagnosis	7	5	1
1.1. Background / start studies, i.e.	7	5	2
- Maps, cartography and cadastre	7	6	
- Aerial Photography	6	3	
- Photo Archive	7	4	
- Relevant bibliographic resources and studies	6	4	
- Past, present and planned projects – complementary to LUDA	7	6	3
- Legal Archive	6	2	1
- List of potential / actual partners	7	1	3
- List of possible / actual funding resources	7	2	4
- Data (issues)	5	2	2
2. Analysis	7	6	
2.1. Scope	7	3	3
- SWOT analysis	7	2	7
- Timescale of the proposal	7	4	4
2.2. Framework for cooperation	7	2	2
- Stakeholder analysis	7	3	6
- Management / Partnership	7	5	4
2.3. Methods used in the Diagnosis/analysis stages	6	5	6
3. Rehab programme formulation	7	6	
3.1. Strategy, objectives and targeting	7	7	4
3.2. Potential spatial extent of the rehabilitation process	7	4	4
3.3. Timescale of the rehabilitation process	7	4	6
3.4. Alternatives and scenarios	7	4	2
- Methods used in visioning	7	5	5
3.5. Appraisal and evaluation of alternative options	6	4	2
- Methods used in predicting	6	5	7
3.6. Review and Decision	7	4	3
- Consultation and participation	7	5	6
- Review	7	4	6
4. Implementation	6	7	
4.1. Methods used in implementing the proposal	6	5	5
5. Monitoring and re-evaluation	7	6	
5.1. Monitoring	7	5	3
5.2. Re-evaluation	5	5	3
5.3. Methods used in monitoring	7	6	7

3. Drivers for change

Formally described as “issues that drive the rehabilitation and development processes” in the LUDA technical annex, the term “drivers for change” is used here instead to stress the importance of these catalysts that will ultimately affect the future of urban areas. Four main drivers have been identified, the first three derive from the UK Urban Task Force (1999) report, “Towards an Urban Renaissance”, which in itself was instrumental in driving forward sustainable development, urban regeneration and urban design imperatives in England and has been used as a benchmark by some other European cities. The fourth is derived from work of BEQUEST project (2000).

3.1 Technical drivers

These refer in particular to the information age, i.e., the current process in the transformation from a carbon-based economy to one driven by cleaner knowledge-based industries. It was originally thought that these new type of “service industries” might lead to a mass-migration to rural areas linked by the information superhighway. On the contrary, to date, there is little evidence of such moves and the main hubs of economic activity remain in towns and cities. However pursuit of the Knowledge Economy remains a major EU policy objective (ref Lisbon Summit).

The growing emphasis on clean technologies has also meant that local authorities can put more time and effort into creating urban communities that offer better quality of life and where people want to live. Previous planning paradigms emphasised separation of work and home with associated suburban areas and transport requirements, but the current trend is for mix-use, which promotes the principles of incorporating work, home and leisure activities and thus reducing energy consumption and associated environmental impacts from transport. However current mobility expectations of citizens (i.e. in terms of private motor vehicles) remain as an important consideration in city planning.

3.2 Ecological drivers

The combined effect of population growth and further urbanisation is placing a tremendous strain on resources and the environment. Cities themselves rely on the balance of inputs, in terms of physical resources (e.g. 6 tonnes of building materials/person/annum in the UK) and the ability to dispose of outputs, in terms of waste products, to their associated hinterland. The need to respond to current demands without compromising those of future generations is driving forward the adoption of new technology in building, transport, water management and energy recycling has become a major concern of sustainable re/development of cities. As over 50% of the world’s population and nearly 80% of Europeans live in urban areas it is especially important that we improve the performance of these areas by reducing the consumption of raw materials and the production of waste. Citizens’ value system and quality of life expectations show increasing intolerance of poor environmental conditions however this tends to manifests itself in an expectation of local government action rather than change in individual behaviour – see social drivers below.

3.3 Social drivers

These drivers relate mainly to changing life patterns associated with increasing life expectancy and new lifestyle choices. Within the last century the 80-hour working week has been halved and life expectancy has doubled. The rate of infant mortality has been radically reduced which has resulted in a decline in the number of births, also due to changing priorities and expectations of women to be able to forge a career rather than bring up a family. There has also been an increasing trend towards one-person households. As a result of these changes, the amount of time devoted to leisure, culture and education is increasing. On the one hand this points to a more mobile consumer society with a population who are able to move freely between different residences with fewer ties to work or family. On the other hand, it suggests that more people will opt to remain at home, in which case adaptations will need to be made to keep up with changing requirements. Either way there will be more emphasis on lifelong learning, more flexible working hours and early retirement.

Local Agenda 21 has emphasised the importance of effective participation (and empowerment?) of citizens in decision-making that affects them. This has raised important questions regarding effectiveness of local democratic processes as well as a range of local concerns such as control of anti-social behaviour, crime and the associated fear of crime. Equity considerations are also paramount, e.g., accessibility. How can access for the poor, the young, aged and disabled be improved, in terms of physical, social and economic factors?

3.4 Political Drivers - the 'Regeneration Imperative'

The regeneration imperative has emerged as a result of the short-term socio-political and economic pressure(s) to correct a perceived 'loss of competitiveness' of any particular region, city or district due to a range of factors such as industrial decline, environmental degradation or social malaise. Commercial and political investment decisions are moulded by the availability of EU, national, regional and local re/development incentives which usually have very short-term time horizons. As a result economic policy measures are central to some potentially serious negative outcomes for urban regeneration and sustainable urban development in general. The interlinking of the socio-political and economic factors drive the normal pragmatic approach to setting spatial and time dimensions in the planning of projects. This has two outcomes. Firstly, the need for immediate action to utilize grants on offer to improve an area suffering serious decay and/or decline overrides consideration of longer-term environmental and social impacts of the redevelopment. Secondly political jurisdictions set inappropriate physical boundaries over which evaluation of economic, social and environmental impacts are assessed. For example environmental effects are better considered in terms of an entire river watershed rather than simply within the political boundary of the city where regeneration is planned. (BEQUEST, 2000)

To bring about effective change in LUDA a combination of 'top-down' leadership at local, regional and national government levels with 'bottom-up' action from coordinated citizens groups and NGOs is needed. It is very important that the three technical, environmental and social drivers are harnessed in a way that brings about the empowerment and inclusion of citizens in everyday decision-making and encourage the demise of the 'top-down' approach to governance characterised by the regeneration imperative and much of the planning in the last century.

3.5 LUDA Project Development - Drivers for Change

In order to enhance the picture of the drivers for change relevant to large urban distressed areas, more information and experience will be forthcoming from the reference cities (Work Package 3). As part of the standard reporting format for case study cities and reference cities, the "re-evaluation" section asks respondents to report on best practice, lessons learnt and drivers for change. Reference cities will be in a good position to report on drivers for change, as they will have already undertaken the take-off process of regeneration. However, due to setbacks regarding agreement to participate with the reference cities, work on these issues has been delayed. This has made the process of identifying more detailed drivers for change relevant to LUDA difficult and it is hoped that this will be resolved in time for Deliverable 5.

4. Cross Analysis of the Six Case Study Cities

4.1 Foundation of the analysis

In the original case study questionnaires sent out by the Municipality of Florence, participants were asked to rate each criterion in terms of its severity in the case study LUDA compared to the whole city and on a national level, i.e. higher, lower, worse, etc. The analysis table shown in Annex 1 has gone a step further by using this data to determine whether each criterion should be recognised as a problem or not in the case study LUDA, indicated simply by “YES” it is a problem or “NO” it isn’t a problem. This will help enable a comparative analysis of the six cities and promote cross-fertilisation. In order to reach these decisions a judgement has to be made using the assumptions in table 4.1.

Table 4.1: Procedure for the selection of problems

Rating	Criteria (Positive or Negative)	Problem – Yes or No
Higher	Positive	No
	Negative	Yes
Lower	Positive	Yes
	Negative	No
Better	-	No
Worse	-	Yes
Same Level	-	No

Although this table forms the basis for deciding which of the criteria constitutes problems for the LUDA, there are some discrepancies. For instance, at the outset, “same level” suggests there is not a problem but this does not take into consideration whether this particular criteria is a major problem on a city and national scale, in which case it would still be seen as a problem in the LUDA.

As well as this some criteria rely on subjective judgement, in particular those in the “social situation”, for example in some respects a lower occupancy of flats/rooms might indicate there is a low population with high out-migration whereas a higher occupancy may also be seen as a problem in the sense that this could imply a high proportion of poorer social groups who typically live in cramped conditions. As a result of these kinds of uncertainties the partner cities were asked to check-over the full table (Annex 1) in order to ensure the correct interpretation has been given.

Some caution has to be placed on this kind of analysis, as although it offers an insight into the type of problems facing the six case study cities, there is reliance on both the people who devised the original questionnaires and on the people who filled these out. In particular, have all the issues been covered? Are the people filling out the questionnaires relying on substantive quantitative data or subjective judgement?

It should also be pointed out that this is only a preliminary overview of problems affecting the six case studies and that the municipality of Florence will carry out a more in-depth analysis at a later date.

4.2 Most common problems affecting the six case study cities

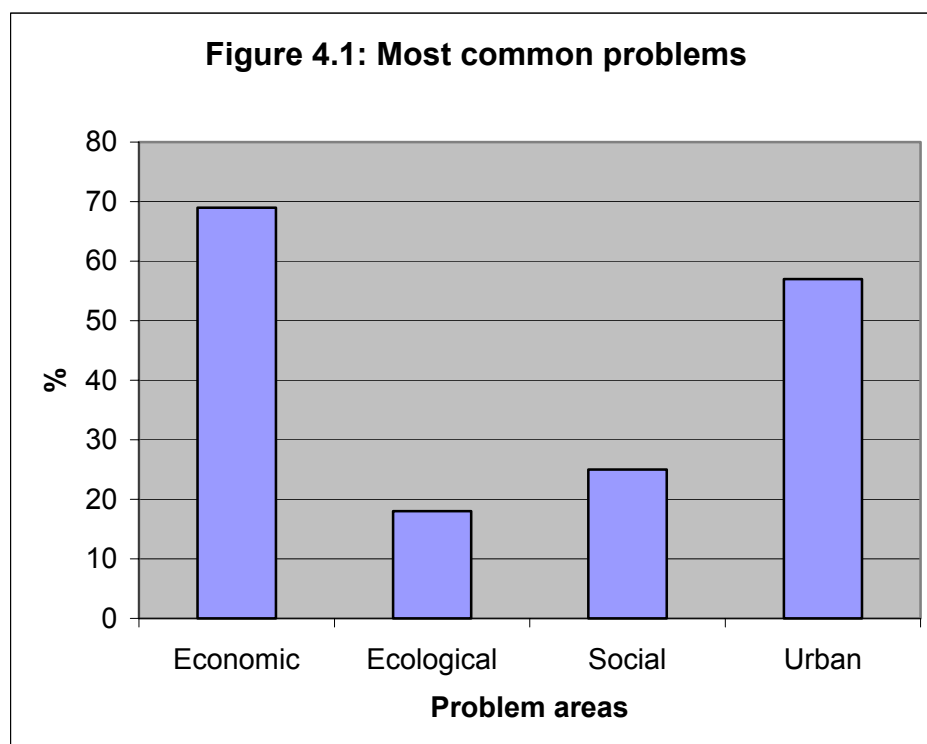
The most common problems in each of the four main areas of economic, environmental, social and urban can be determined by the extent to which they affect the six cities. For instance, if an issue affects five or all of the six cities then it can be assumed to be of a problematic nature. Alternatively if an issue only affects one or two cities then it is not believed to be problematic. Using this presumption table 4.2 lists the most common problems in relation to economic, environmental, social and urban aspects. These are also highlighted as blue in the table shown in Annex 1.

Table 4.2: Most common problems

Economic aspects: • Local commercial activity • Image Endogenous dynamic of economy • Dependency from outside • Investment (private and public sector) • Fluctuation of enterprises (in/out immigration) • Demand of retail goods and services • Supply of retail goods and services Land value / rental values • Range of local employment opportunities
Ecological aspects: • Emissions from local industry / households / traffic • Pollution of soil
Social aspects: • Level of income • Level of poverty • Level of social transfers • Costs of housing relative to revenue
Urban aspects: • Image / Perception from outside • Image / Perception from inside • Townscape / urban structure • Residential quality • Condition of buildings – Scope of renovation • Condition of buildings – Sanitary installations • Quantity and quality of social-cultural infrastructure • Quantity and quality of technical infrastructure

From this analysis it was determined that the issues listed here are the most problematic across the six case study cities. It is now important that the LUDA consortium work on creating solutions to improve the situation of these issues and agree on a set of assessment methods and techniques used in the analysis of these problems.

Figure 4.1 illustrates the proportion of common problems for each of the four areas. The chart shows that the economic situation has the highest proportion of common problems suggesting that this area is the most problematic.



4.2.1 Overall frequency of problems

Another way of determining which area is the most problematic is by assessing the overall frequency of problems affecting the six cities. The results in table 4.3 show that the economic and urban situations of the six cities are the worst affected areas.

The incorporation of the results from figure 4.1 and table 4.3, show that the economic situation is the worst affected area overall in relation to the six cities.

Table 4.3: Proportion of problems

Situation	% Problems	Rank
Economic	70	=1
Urban structure	70	=1
Social	62	3
Ecological	50	4

4.3 The situation of the six case study cities

Bratislava

Bratislava is seen as having the worst situation out of the six cities in terms of the **economic** situation, **ecological** situation and **urban structure**. The only area where Bratislava does not have the worst situation is the social field.

Dresden

Dresden's problems are more of a **physical, environmental** nature rather than of a social nature. In the ecological and urban fields, Dresden had the worst or second worst situation, whereas with the social situation the LUDA is ranked 4th. This would suggest that Dresden has a better chance of improving its situation in a shorter length of time through physical improvements, although the economic situation is still a major concern.

Edinburgh

In contrast to Dresden, Edinburgh's problems are more of a **socio-economic** nature. In both the economic and social situation Edinburgh ranks worst or equal worst out of the six cities, whereas with the ecological and urban situation the LUDA ranks equal 6th and equal 4th respectively. This suggests that Edinburgh needs a longer length of time to solve some of the more fundamental socio-economic problems that exist.

However it should be pointed out that problems relating to the urban fabric are still prevalent in the LUDA.

Florence

In stark contrast to Bratislava, Florence has the best situation in all the four areas except for ecological where the LUDA is ranked 3rd. This would suggest that the **ecological** situation is most problematic area, although deeper analysis may be required in order to pinpoint the exact nature of the problems that exist in the LUDA. For instance, particular problems in each of the four areas may be more acute than the other cities, e.g. immigration.

Lisbon

Lisbon's problems relate mainly to the **urban structure** rather than social or ecological domains. Like Dresden the number of economic problems is still quite high despite being lower down in the rankings (5th).

Valenciennes

Like Edinburgh, Valenciennes' problems are mainly of a **socio-economic** nature. However the number of problems relating to urban structure is still quite high despite having a ranking of equal 4th.

Table 4.4 and figure 4.2 reiterates the breakdown of problems affecting the six case study cities as has been reported above. In particular, for table 4.4 it is important to show the rank in each of the fields as this differentiates between the cities in each of the four fields. For instance, although the economic situation of Dresden appears to be as severe, there is a clear difference between the two cities with Dresden ranked three places below Bratislava.

Table 4.4: Matrix summarising the extent to which problems affect the six cities

(Rank)	Economic	Ecological	Social	Urban structure
Bratislava	=1	1	3	=1
Dresden	4	2	4	=1
Edinburgh	=1	=6	1	=4
Florence	6	3	6	6
Lisbon	5	=6	5	3
Valenciennes	3	4	2	=4

Key (percentage of problems):

76 – 100% **51 – 75%** **26 – 50%** **0 – 25%**

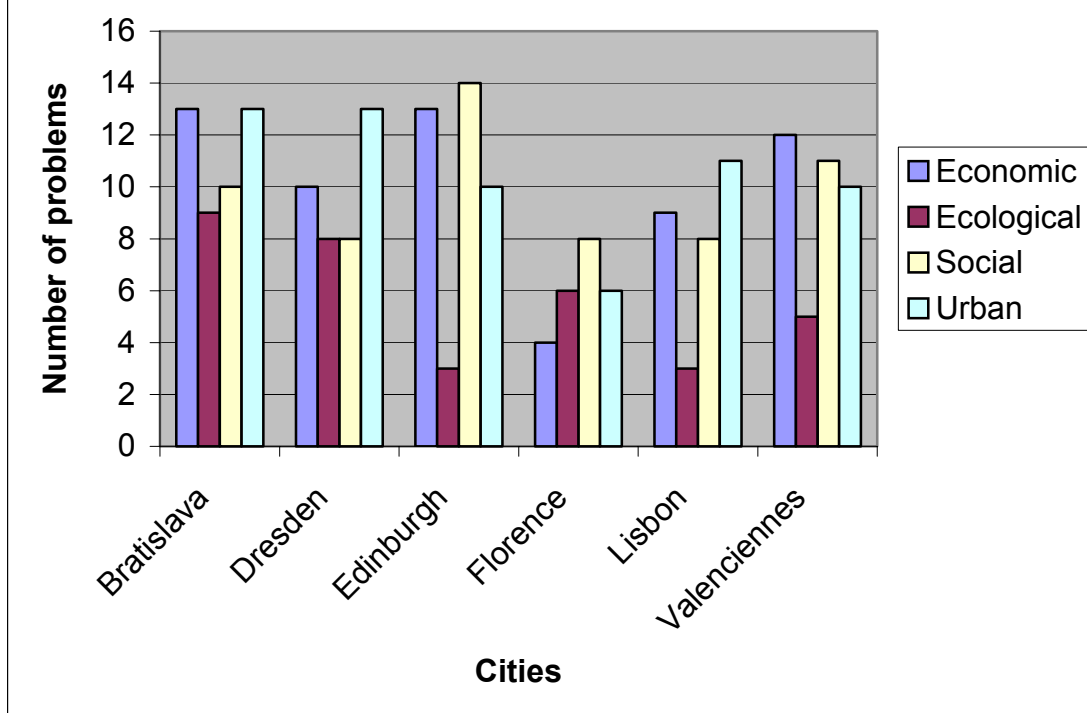
Figure 4.2: the situation of the six case study cities

Table 4.5: The overall situation of the six cities

City	Number of problems	Rank
Bratislava	45	1
Dresden	40	=2
Edinburgh	40	=2
Valenciennes	38	4
Lisbon	32	5
Florence	24	6

Table 4.5 shows the city to emerge as having the worst situation overall is Bratislava. As it can be seen in table 4.4, Bratislava also ranks top in three out of the four areas, i.e. Economic (=1), Ecological and Urban structure. In contrast, Florence has the best situation overall and is ranked 6th in all the areas except for ecological where it ranked 3rd.

5. Defining the Role of Assessment Methods and Techniques in Evaluating LUDA

This chapter seeks to outline the background to identifying assessment methods and techniques and understanding the roles of the evaluation steps and associated assessment methods in accordance with the collaborative strategic goal oriented programming (CoSGOP) approach.

The term 'Method' can be defined as:

"A procedure followed in order to accomplish a task. A mode of procedure; a (defined or systematic) way of doing a thing, especially (when specifying a word or words) in accordance with a particular theory or as associated with a particular person."¹

Although the fundamentals of this definition are correct this needs to be developed in order to fit with the objectives of the LUDA project. In particular, methods are used to better understand the situation and development of LUDA, and to provide useful decision-making aids to support public managers and administrative staff in analysing the problems and development options of LUDA. They will also help initiate sustainable rehabilitation and development of these areas through the active participation of the different stakeholders.

Table 5.1 shows how these methods can be categorised using the five main evaluation steps of the rehabilitation process (i.e. Diagnosis; Visioning; Predicting; Implementing; Monitoring), and attribute these to the **Collaborative Strategic Goal Oriented Planning** (CoSGOP) approach (LUDA, 2002).

Table 5.1: The five main evaluation steps in relation to the CoSGOP approach

Main Steps	CoSGOP stages
Diagnosis (<i>retrospective methods</i>)	1. Stakeholder analysis and formation of framework for co-operation 2. Analysis of problems and potentials* (including SWOT analysis, core problems regarding environmental, economic and social aspects)
Visioning (<i>prospective methods</i>)	3. Analysis of goals and alternatives (including elaboration of scenarios),
Predicting (<i>prospective methods</i>)	4. Programme formulation and negotiation (including strategy, objectives, priorities, activities, assumptions, indicators, inputs),
Implementing (<i>retrospective methods</i>)	5. Programme assessment, implementation and feed-back (including strategic impact assessment, ex-ante evaluation, monitoring and process review).
Monitoring (<i>retrospective methods</i>)	

*'Potentials' rely on prospective techniques.

As an outcome of the project, it is expected that all six partner cities with the support of the research team will carry out the CoSGOP approach which relate to the five main evaluation steps of diagnosis, visioning, predicting, implementing and monitoring.

¹ BEQUEST Glossary, www.research.scpm.salford.ac.uk/bqextra

The **Diagnosis** step, which relates to the first two stages of the CoSGOP approach, involves using retrospective methods that help benchmark the current situation or status quo of their LUDA. In particular the methods used in this step will help:

- define the outer boundaries of their specific LUDA and its functional position within the city and the city-region based on or considering a scientific approach;
- analyse the situation and identify the key problems of their specific LUDA (e.g. pollution, fragmented land-use, weak economic competitiveness, negative demographic trends, housing vacancies, cultural segregation and social exclusion) following a generally agreed upon methodology.

The **visioning** step, which takes on the goals and alternatives aspect of the CoSGOP approach, will help develop scenarios and a strategic concept for the improvement of the quality of life in the chosen LUDA according to the specific problems mentioned above. This will rely on the use of prospective or foresight methods and techniques such as multi-criteria analysis, scenario planning, prospective workshops, etc. The **predicting** stage, which also relies on using prospective methods, such as impact assessments, will employ the alternatives and scenarios developed in visioning to make predictions on how these options will evolve. Therefore some interplay will need to exist between the two steps of visioning and prediction in order to reach more accurate decisions on these future scenarios. This is based on the assumption that visioning relies on the use of qualitative, subjective techniques and predicting relies more on quantitative, scientific techniques, such as modelling.

This is followed by the **implementing** stage whereby retrospective methods are used to decide how the proposal should be implemented. Subsequent **monitoring** of the proposal, also using retrospective methods, will determine whether the rehabilitation scheme has been successful or not, and, depending on the outcome, help identify pitfalls, solutions and best practice of the six case study areas.

Once these categories are established it is important to differentiate between methods and techniques, which perform two different functions.

- 1) **Method** (for definition see previous page). This can be qualitative or quantitative and is typified by impact assessments, multi-criteria analysis and monetary assessments. Methods can be used in all stages of the rehabilitation process and sometimes rely on using a process approach, e.g. strategic environmental assessment.
- 2) **Techniques**. These are the tools by which the methodology is applied. These can be sub-categorised into tools and models:
 - a) **Tool**. This can be defined as a “product, concrete or abstract, used in applying a method. Instrument of logic for assisting analysis²”.

² BEQUEST Glossary, www.research.scpm.salford.ac.uk/bqextra

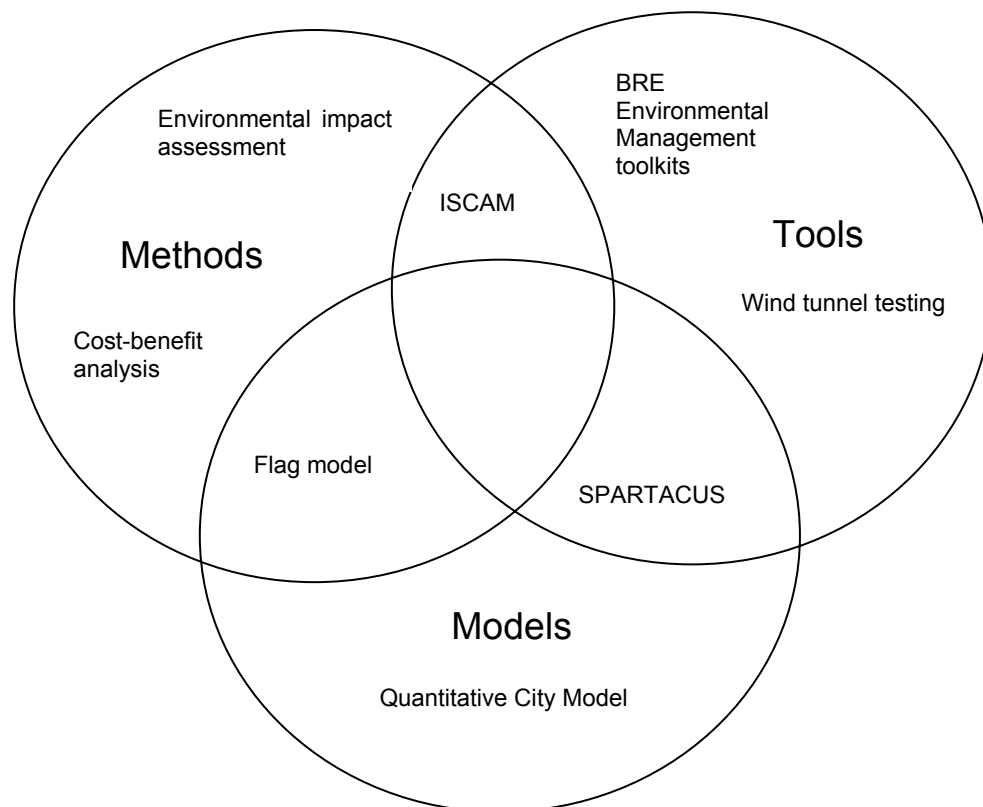
- b) Model.** This is a “simplified description of a system, process etc., put forward as a basis for theoretical or empirical understanding; a conceptual or mental representation of something³”

It is important to point out that certain methodologies are not so clear-cut and may fall into two or more of these categories. For example, the Flag model can be classed as a multi-criteria method and as a model. This type of crossover can be illustrated through the examples depicted in the Venn diagram in Figure 5.1.

It is clear that more models need to be discovered and explored under the LUDA agenda. As part of the list of assessment methods and techniques developed in Work package 2, no methodologies have emerged as being models in their own right. The Quantitative City Model shown below originally featured in the master list but was taken out because it was in the research phase and not yet marketable.

There is also a lack of methodologies to exist in the ‘triangle’ of the Venn diagram, which encompass methods, tools and models. Clearly more research needs to be carried out in order to find the ‘optimum’ in methods and techniques.

Figure 5.1 Venn diagram depicting the categorisation of assessment methods, tools and models



³ BEQUEST Glossary, www.research.scpm.salford.ac.uk/bqextra

6. Short Descriptions of Master list of Assessment Methods and Techniques

Analysis of Interconnected Decision Areas (AIDA)

AIDA is a speculative mathematical model, used as a means of making decision-making roles and responsibilities more explicit.

Analytic Hierarchy Process (AHP)

The Analytic Hierarchy Process (AHP) is a decision support tool that is often used in complex decision problems. The method allows users to reach a set of ratings for the decision alternatives by aggregating the relative weights of decision elements.

ASSIPAC (Assessing the Sustainability of Societal Initiatives and Proposed Agendas for Change)

Two types of Sustainability Assessment are considered as part of ASSIPAC: the Sustainability Assessment Check and the Sustainability Assessment Study. The Sustainability Assessment Check is a short study, screening the initiative for possible conflict with policies or visions for sustainable development. The Sustainability Assessment Study is a more in-depth examination of sustainability consequences of the initiative.

Availability of Public, Near-residential Green Spaces

In order to assess the availability of public, near-residential green spaces Berlin Municipality has used the following assessment techniques: Inventory analysis; appraisal of the suitability for recreation; survey of intake areas; calculation of the degree of availability; deduction of the housing type.

Brainstorming sessions*

Brainstorming sessions are an interesting way to involve people in the overall futures exercise. They provide an opportunity to exchange ideas and investigate different perspectives throughout the futures exercise through simple but effective dialogue.

BRE Environmental Management Toolkits

BRE's three Toolkits – for Schools, Local Authorities and Offices – guide organizations through the stages necessary to make reductions in their environmental impacts and save money.

Cluster Evaluation

Cluster evaluation looks across a group of projects to identify common threads and themes that, having cross-confirmation take on greater significance.

Community Impact Evaluation (CIE)

CIE takes account of the total costs and benefits on a community and brings out the incidence of such costs and benefits on the various community sectors.

Competence Trees*

Competence trees are special futures techniques that essentially allow an organisation, group or community identify and evaluate its specific skills and level of competency. The real benefit of applying this technique, however, lies not in its ability to highlight internal competences, but rather to enable the mobilisation of key people on the basis of these competences in an attempt to create and effectively achieve a shared future vision.

Concordance Analysis

A multi-criteria decision-making method to help the planner resolve often competing energy, environmental, fiscal, social, and economic goals.

Contingent Valuation Method (CVM)

Contingent valuation deduces the value of a product not on the basis of the effective observed behaviour of subjects on the market, but with reference to an artificially structured market (hypothetical market)

Cost Benefit Analysis

A judgemental technique in which a researcher compares all social and private costs and benefits of a programme with a view to determining whether the benefits exceed the costs, and if so by how much.

Cross impact analysis*

Cross impact analysis is quite a complex but effective technique that involves the development of a matrix in order to examine the interaction and interdependence of current and emerging trends, issues and events on each other. It is sometimes thought of as an extension of the Delphi survey in that it is used as an expert-opinion study.

Ecological footprint

Estimate of the land area necessary to sustain current levels of resource consumption and waste assimilation for a given population.

Economic impact Assessment

Economic impact assessment involves exploring and identifying the ways in which the economy in general, or local economic circumstances in particular, will be affected by a policy, programme or project.

Environmental Impact Assessment (EIA)

Initiatives for large-scale facilities and structures likely to cause significant environmental impacts are subject to the Environmental Impact Assessment Procedure in EU (and quite widely worldwide).

Flag Model

The Flag Model has been developed in order to assess the degree of sustainability of values of policy alternatives by means of normative limits. The model develops an operational description and definition of the concept of sustainable development based on critical threshold values.

Hedonic Analysis

Hedonic analysis is a powerful statistical tool that analyses the relationship between price and attributes in housing and other markets. One of the most common applications of hedonic analysis is generating price indices for housing and land. Increasingly, hedonic analysis is being used to derive price indices for more abstract "non-market goods", such as views, clean air, open space, or proximity to an industrial facility.

Horizon Scanning*

Horizon scanning is a technique that can be used to identify and monitor emerging issues and signals of change in the external environment by undertaking a systematic review of literature and other modes of communication. Areas such as society, demography, economy, environment, government and technology can be examined in order to obtain a sufficient and broad knowledge base. Horizon scanning is an essential element of almost every futures exercise and represents a suitable starting point.

Integrated Sustainable Cities Assessment Method (ISCAM)

ISCAM is a flexible toolkit for sustainability analysis and appraisal in any city or region. Its foundation is an 'integrated assessment' mapping method which links environmental, social and economic issues.

Life Cycle Analysis (LCA)

LCA is a systematic set of procedures for compiling and examining the inputs and outputs of materials and energy and the associated environmental impacts directly attributable to the functioning of a product or service system throughout its life cycle.

MASTER (Managing Speeds of Traffic on European Roads)

The MASTER Framework is a set of guiding rules and principles for evaluating the impacts of a speed management policy so that the socio-economic feasibility of the policy can be established.

Meta Regression Analysis (MRA)

MRA is where in a simple regression the dependant variable becomes the summary statistic (or regression parameter) of interest drawn from each study and the researcher creates a set of explanatory variables describing differences (or similarities) in the design of the studies under scrutiny.

Multi-Criteria Analysis (MCA)

MCA is a method that supports a decision-maker in analysing a problem and in finding and comparing various satisfactory solutions that have different properties.

Project Impact Assessment

An integrated assessment method used to assess the social, economic and environmental impacts of a development project.

Prospective Process Through Scenarios

The prospective process through scenarios is essentially about "future proofing present policy". This futures approach can be applied at many organisational levels including national, regional and local, and can be used as a futures method in addressing uncertainty in areas, such as urban development, faced with complex problems and testing challenges. The process involves a number of steps and utilises various techniques.

Prospective workshops*

Prospective workshops are a useful and effective way of encouraging public participation in the overall futures exercise. The workshops usually follow a standard set of steps which are centred on the particular needs and distinct characteristics of the project in question. The workshops provide a useful way of considering various issues, such as urban problems, through broad-based co-operation.

Quality of Life Capital Approach

The Quality of Life Capital method assesses plans, programmes, decisions and projects in terms of whether they maintain (and enhance) the environmental, economic and societal benefits of the people affected.

Regime Analysis

Regime Method is a qualitative multiple analysis, developed in the area of soft econometrics. The method does not require cardinal data, but only a classification of the criteria in increasing or decreasing order of importance. This is the main advantage of the method which is in fact applied within uncertain (planning or decision makers) contexts.

Risk Assessment Method(s)

The process of risk assessment is a socio-political process that involves bringing together available information about risks and hazards from experts and lay sources for the purpose of making decisions about an appropriate response.

Scenario Development*

Scenarios are vital tools focused upon by The Futures Academy and are fast becoming one of the most popular futures instruments used today. Scenarios essentially resemble a set of stories used to express multiple perspectives on possible future events. They have the power to break stereotypes, and therefore, can assist in producing better policy decisions today for the future. They represent one of the most fundamental steps in most futures exercises.

Semantic Differential

The Semantic Differential (SD) measures people's reactions to stimulus words and concepts in terms of ratings on bipolar scales defined with contrasting adjectives at each end.

Social Cost-benefit Analysis (SCBA)

SCBA aims at 1) identifying the actions that either minimise the social costs when outputs (objectives) are given or maximise the output (achievement of objectives) within a given budget; and 2) establishing the social distribution of the impacts.

Social impact assessment (SIA)

SIA is a method interested in assessing impact of policies, plan or projects on people. Its aim is to predict and evaluate those impacts before they happen.

SPARTACUS (System for Planning and Research in Towns and Cities for Urban Sustainability)

SPARTACUS is an indicator system and a decision support tool for assessing sustainability implications of urban land use and transport policies. It is based on the results of a transport land use interaction model.

Spider Analysis

Visualisation and rudimentary MCA technique.

An analytical tool for a qualitative benchmark analysis. Spider models are used to visualize the relative strengths and weaknesses of the selected alternatives for various locational criteria.

Strategic Conversations*

A strategic conversation is an informal but structured discussion on a particular issue or policy area that results in a clearer understanding of that issue. The conversation allows the participants involved to voice their opinions and ideas on the subject matter and can often result in the unveiling of obscure or previously unidentified issues that may play an important role in influencing the future.

Strategic Environmental Assessment (SEA) / Strategic Impact Assessment (SIA)

SEA has been defined as the environmental assessment of a strategic action: a policy, plan or programme. SEA developed out of the recognition that the environmental impact assessment of specific projects, whilst an extremely valuable device, does not allow sufficient scope for the examination of the effect of a combination of projects. A commitment to sustainable development requires that a strategic approach to the environment be adopted.

Survey Questionnaires*

Survey questionnaires are similar to the Delphi Survey in that they both seek to discover the opinions of a selected panel. However it differs from Delphi in that it does not seek to ascertain final consensus on the matter examined. Survey questionnaires, therefore, offer a more open approach to the Delphi survey and are the preferred option when carrying out this kind of exercise.

Sustainability Appraisal

Sustainability appraisal identifies and reports on the extent to which the implementation of the plan or strategy would achieve the environmental, economic and social objectives by which sustainable development can be defined.

SWOT analysis

Identifies the strengths, weaknesses, opportunities and threats of a plan, programme or project. This tool can be used at all stages of the redevelopment process.

System Dynamic Approach

A city can be viewed as a system whose purpose is to provide employment, housing, and other social benefits for its inhabitants. The systems approach to studying systems such as these emphasizes the connections among the various parts that constitute a whole. System thinking is concerned with connectedness and wholeness.

Visioning*

Visioning is a futures tool that essentially is applied, as its title suggests, in order to create a "vision" for the future. The main benefit of this technique is that it allows groups to imagine and consider their "preferred" or desired future. These visions can then be transformed into realities through the development of goals and action plans. Visioning, therefore, acts an essential technique in any futures exercise in order to promote the idea that in order to achieve the preferred future, it must first be envisaged.

Wind tunnel testing*

Wind tunnel testing plays a vital role towards the end of a futures exercise. Its main objective is to test the specific policies developed as a result of the exercise. The technique ensures the feasibility of all policies suggested and adds to the validity of the futures study overall. In the case where scenarios have been created for example, the policies produced on the basis of these would be wind tunnel tested against each scenario to assess their applicability and effectiveness.

* Techniques which are incorporated into the wider methodology of "Prospective Process Through Scenarios"

7. Critical Analysis of Assessment Methods and Techniques

This chapter looks at the different ways in which assessment methods and techniques can be evaluated in terms of their effectiveness in tackling the LUDA problem. Tables 7.1, 7.2 and 7.3 derive from selected criteria taken from the standard reporting format, as discussed in the previous chapter.

7.1 Evaluation steps in the regeneration process

Table 7.1 explores the extent to which the listed methodologies can be employed in the five evaluation steps of diagnosis; visioning; predicting; implementing; monitoring, as detailed in Chapter 5. Many of the methods and techniques shown in this matrix can be used in all five steps, which may imply that they are process methods, for example Strategic Environment Assessment. Alternatively this could suggest generic techniques that could be used to assist in all stages of the evaluation process, such as risk assessment techniques, SWOT analysis, brainstorming sessions, etc.

While the 'Visioning' stage relies predominately on the use of foresight techniques and multi-criteria methods, the 'Predicting' stage relies mainly on impact assessments.

7.2 Sustainability issues

Table 7.2 investigates the extent to which the listed methodologies address sustainability issues concerned with economic, ecological, social and urban dimensions. This categorisation of issues derives from the original questionnaires devised and sent out to the Case Study Cities and which are also relayed in the cross analysis of the cities in Chapter 4. It is important to have some consistency across the project, which is the main reason for keeping the categorisation of issues as it stands. IOER, as part of their work for Work package 1, is re-evaluating the structure and format of indicators, which will have repercussions for the standard reporting format and this issues matrix.

Many of the methodologies listed cover all the four issues but it is still important to consider which methods and techniques can be employed in a given situation. For example social impact assessment is often used to complement environmental impact assessment as a way of assessing both the environmental and social impacts of a proposal.

7.3 Spatial / temporal domains

Table 7.3 looks at the spatial and temporal extent of the impacts associated with the application of methods and techniques in the rehabilitation process. Urban development can take place at various spatial levels from the scale of the whole city down to that of individual buildings. Equally the environmental effects or other socio-economic implications can be felt from local to global levels.

The timescale of associated impacts can be felt on a short-term, medium-term or long-term basis. Although the actual physical development of an area may only be felt on a short-term basis, the impacts of assessment and the development process may result in a much longer

time-scale. For example, the impacts associated with environmental impact assessment can often take a longer time to resolve as they deal with environmental issues such as pollution.

7.4 The classification of assessment methods and techniques

While the previous three matrices derive from the criteria identified in the standard reporting format, table 7.4 classifies the assessment methods and techniques into multi-criteria methods; impact assessment methods; monetary methods; participatory techniques and data collection tools. This acts as an extension to the Venn diagram in Chapter 5, which started to look at the categorisation of methodologies into methods, tools and models.

By using the classification depicted in table 7.4, practitioners involved in the redevelopment of LUDA can get a better picture of what methods and techniques can be used in certain situations. Multi-criteria methods are usually used to assist in the decision-making process through the weighting of alternatives and scenarios; impact assessments are used to predict the impacts of a proposal; monetary methods are used to assess the financial viability of a proposal and to assist in deriving price indices for financial markets; process methods can form part of the overall evaluation procedure of a rehabilitation proposal; participatory techniques are used to assist in the decision making process; data collection tools are used to simply assist in the collection and analysis of cardinal data.

Table 7.1: Evaluation steps in the Regeneration Process

METHODOLOGY	Diagnosis	Visioning	Predicting	Implementing	Monitoring
Analysis of Interconnected Decision Areas (AIDA)					
Analytic Hierarchy Process (AHP)					
ASSIPAC (Assessing the Sustainability of Societal Initiatives and Proposed Agendas for Change)					
Availability of Public, Near-residential Green Spaces					
Brainstorming sessions					
BRE Environmental Management Toolkits					
Cluster Evaluation					
Community Impact Evaluation (CIE)					
Competence Trees					
Concordance Analysis					
Contingent Valuation Method (CVM)					
Cost Benefit Analysis					
Cross impact analysis					
Ecological footprint					
Economic impact Assessment					
Environmental Impact Assessment (EIA)					
Flag Model					
Hedonic Analysis					
Horizon Scanning					
Integrated Sustainable Cities Assessment Method (ISCAM)					
Life Cycle Analysis (LCA)					
MASTER (Managing Speeds of Traffic on European Roads)					
Meta Regression Analysis (MRA)					

METHODOLOGY	Diagnosis	Visioning	Predicting	Implementing	Monitoring
Multi-Criteria Analysis (MCA)					
Project Impact Assessment					
Prospective Process Through Scenarios					
Prospective workshops					
Quality of Life Capital Approach					
Regime Analysis					
Risk Assessment Method(s)					
Scenario Development					
Semantic Differential					
Social Cost-benefit Analysis (SCBA)					
Social impact assessment (SIA)					
SPARTACUS (System for Planning and Research in Towns and Cities for Urban Sustainability)					
Spider analysis					
Strategic Conversations					
Strategic Environmental Assessment (SEA) / Strategic Impact Assessment (SIA)					
Survey Questionnaires*					
Sustainability Appraisal					
SWOT analysis					
System Dynamic Approach					
Visioning					
Wind tunnel testing					

Table 7.2: the extent to which assessment methods and tools address Sustainability issues

METHODOLOGY	Economic	Ecological	Social	Urban
Analysis of Interconnected Decision Areas (AIDA)				
Analytic Hierarchy Process (AHP)				
ASSIPAC (Assessing the Sustainability of Societal Initiatives and Proposed Agendas for Change)				
Availability of Public, Near-residential Green Spaces				
Brainstorming sessions				
BRE Environmental Management Toolkits				
Cluster Evaluation				
Community Impact Evaluation (CIE)				
Competence Trees				
Concordance Analysis				
Contingent Valuation Method (CVM)				
Cost Benefit Analysis				
Cross impact analysis				
Ecological footprint				
Economic impact Assessment				
Environmental Impact Assessment (EIA)				
Flag Model				
Hedonic Analysis				
Horizon Scanning				
Integrated Sustainable Cities Assessment Method (ISCAM)				
Life Cycle Analysis (LCA)				
MASTER (Managing Speeds of Traffic on European Roads)				
Meta Regression Analysis (MRA)				

METHODOLOGY	Economic	Ecological	Social	Urban
Multi-Criteria Analysis (MCA)				
Project Impact Assessment				
Prospective Process Through Scenarios				
Prospective workshops				
Quality of Life Capital Approach				
Regime Analysis				
Risk Assessment Method(s)				
Scenario Development				
Semantic Differential				
Social Cost-benefit Analysis (SCBA)				
Social impact assessment (SIA)				
SPARTACUS (System for Planning and Research in Towns and Cities for Urban Sustainability)				
Spider analysis				
Strategic Conversations				
Strategic Environmental Assessment (SEA) / Strategic Impact Assessment (SIA)				
Survey Questionnaires*				
Sustainability Appraisal				
SWOT analysis				
System Dynamic Approach				
Visioning				
Wind tunnel testing				

Table 7.3: Spatial / temporal domains in terms of the extent of impacts

	Spatial Level								Time-scale		
	Global	National	Urban region	City	District	Neighbourhood	Estate	Building	Short-term > 5 years	Mid-term 5-20 years	Long-term < 20 years
METHODOLOGY											
Analysis of Interconnected Decision Areas (AIDA)											
Analytic Hierarchy Process (AHP)											
ASSIPAC (Assessing the Sustainability of Societal Initiatives and Proposed Agendas for Change)											
Availability of Public, Near-residential Green Spaces											
Brainstorming sessions											
BRE Environmental Management Toolkits											
Cluster Evaluation											
Community Impact Evaluation (CIE)											
Competence Trees											
Concordance Analysis											
Contingent Valuation Method (CVM)											
Cost Benefit Analysis											
Cross impact analysis											
Ecological footprint											
Economic impact Assessment											
Environmental Impact Assessment (EIA)											
Flag Model											
Hedonic Analysis											
Horizon Scanning											
Integrated Sustainable Cities Assessment Method (ISCAM)											

METHODOLOGY	Global	National	Urban region	City	District	Neighbourhood	Estate	Building	Short-term > 5 years	Mid-term 5-20 years	Long-term < 20 years
Life Cycle Analysis (LCA)											
MASTER (Managing Speeds of Traffic on European Roads)											
Meta Regression Analysis (MRA)											
Multi-Criteria Analysis (MCA)											
Project Impact Assessment											
Prospective Process Through Scenarios											
Prospective workshops											
Quality of Life Capital Approach											
Regime Analysis											
Risk Assessment Method(s)											
Scenario Development											
Semantic Differential											
Social Cost-benefit Analysis (SCBA)											
Social impact assessment (SIA)											
SPARTACUS (System for Planning and Research in Towns and Cities for Urban Sustainability)											
Spider analysis											
Strategic Conversations											
Strategic Environmental Assessment (SEA) / Strategic Impact Assessment (SIA)											
Survey Questionnaires*											
Sustainability Appraisal											
SWOT analysis											
System Dynamic Approach											
Visioning											
Wind tunnel testing											

Table 7.4: The Classification of Assessment Methods and Techniques

METHODOLOGY	Multi-criteria methods	Impact assessment methods	Process methods	Monetary methods	Participatory techniques	Data collection tools
Analysis of Interconnected Decision Areas (AIDA)						
Analytic Hierarchy Process (AHP)						
ASSIPAC (Assessing the Sustainability of Societal Initiatives and Proposed Agendas for Change)						
Availability of Public, Near-residential Green Spaces						
Brainstorming sessions						
BRE Environmental Management Toolkits						
Cluster Evaluation						
Community Impact Evaluation (CIE)						
Competence Trees						
Concordance Analysis						
Contingent Valuation Method (CVM)						
Cost Benefit Analysis						
Cross impact analysis						
Ecological footprint						
Economic impact Assessment						
Environmental Impact Assessment (EIA)						
Flag Model						
Hedonic Analysis						
Horizon Scanning						
Integrated Sustainable Cities Assessment Method (ISCAM)						
Life Cycle Analysis (LCA)						
MASTER (Managing Speeds of Traffic on European Roads)						
Meta Regression Analysis (MRA)						

METHODOLOGY	Multi-criteria methods	Impact assessment methods	Process methods	Monetary methods	Participatory techniques	Data collection tools
Multi-Criteria Analysis (MCA)						
Project Impact Assessment						
Prospective Process Through Scenarios						
Prospective workshops						
Quality of Life Capital Approach						
Regime Analysis						
Risk Assessment Method(s)						
Scenario Development						
Semantic Differential						
Social Cost-benefit Analysis (SCBA)						
Social impact assessment (SIA)						
SPARTACUS (System for Planning and Research in Towns and Cities for Urban Sustainability)						
Spider analysis						
Strategic Conversations						
Strategic Environmental Assessment (SEA) / Strategic Impact Assessment (SIA)						
Survey Questionnaires*						
Sustainability Appraisal						
SWOT analysis						
System Dynamic Approach						
Visioning						
Wind tunnel testing						

8. Conclusions and Next Steps

8.1 Summary of key outcomes

- **Master list of 44 assessment methods and techniques.** These were derived from the master list produced by the BEQUEST project and supplemented by further methods and techniques taken from literature. Short descriptions of these methods and techniques are provided in Chapter 6.
- **Preliminary classification** using four matrix formats as a means of exploration towards the structure for the **selection of methods**. The classifications used in the first three matrices, shown in Chapter 7, are derived from the selected criteria in the standard reporting format, i.e. evaluation steps, sustainability issues and spatial and temporal domains, each of which are important for deciding the methods to be used in any given situation relevant to LUDA. The classification undertaken in matrix 4 is separate from the first three matrices in that it attempts to outline the main purpose of the assessment methods and techniques in terms of the circumstances in which they are used. For example ‘monetary’ methods are used to address financial considerations of a proposal. Alternatively, ‘participatory’ techniques are influential for establishing communicative and collaborative processes of the visioning stage. Both analytical and procedural methods are important in evaluating the situation of LUDA in terms of assessing its associated goals, alternatives and impacts, which will ultimately aid the decision-making process. Procedural or process methods may be particularly significant in deciding on the ‘process model’ of LUDA.
- **Identification of the main drivers.** These were identified as technical drivers, ecological drivers, social drivers and political drivers, which can be identified as being key factors at the diagnosis phase, in terms of the main issues to be addressed. However, more research has to be carried out to ensure these drivers are specifically orientated towards LUDA and more specifically towards the ‘take-off’ phase of LUDA, as included in section 3.5 in terms of the work with the Reference Cities.
- **Cross-analysis** of survey results from Work package 5 to identify common problems in the **Case Study Cities** which helps to establish a common language. The economic situation came out as being the worst area overall across the six cities, closely followed by the urban structure. Similarities were also drawn between particular cities in terms of their problem situation. For instance, Edinburgh and Valenciennes were both shown to have mainly socio-economic problems, whereas Dresden and Lisbon showed signs of mainly urban distress associated with physical decline and poor image.

8.2 Next Steps

The following issues, which were identified as part of this report, will be taken forward in the next iteration, i.e. Deliverable 5.

8.2.1 Critical analysis of assessment methods and techniques

As discussed in Chapter 2, here are some of the issues that were identified by the decision support matrix which need to be tackled in the next iteration.

- funding resources, in terms of what finances will be needed to carry out the assessment methods and techniques
- SWOT analysis of assessment methods and techniques with emphasis on identifying strengths and weaknesses
- stakeholder analysis / management and partnership in terms who will carrying out the method(s)
- strategy, objectives and targeting in relation to assessment methods.
- consultation and participation – similar to stakeholder analysis with an emphasis on civic involvement

Table 8.1: Master Matrix

LUDA		Assessment methods	Evaluation stages					Issues							Totals
			Diagnosis	Visioning	Predicting	Implementing	Monitoring	Ecological	Economic	Social	Urban	- City	- District	- Neighbourhood	
Strategic	Policies	x ¹ y ¹ z ¹													
	Plans														
Operational	Projects	x ² y ² z ²													
	Programmes														

The master matrix shown as table 8.1 consolidates some of the issues considered in Chapter 7 and incorporates a strategic and operational approach to policies, plans, projects and programmes. This matrix will be explored in greater depth as part of Deliverable 5.

Tasks associated with the master matrix:

- Agree definition of policy, plans, etc.
- Classify assessment methods (A.M's) by policy, plans, etc.
- Consider expert group, focus group, Delphi techniques to be held in accordance with this matrix
- Add up A.M attributes (scores). Through this exercise the distribution of A.M's can be determined.

8.2.2 General

- More research into models that can be used in the rehabilitation of LUDA
- More research into finding the 'optimum' of assessment methodologies, i.e. those methods and techniques that crossover methods, tools and models, as represented in the Venn diagram illustrated in Chapter 5.
- Provide more detailed descriptions of methods and techniques than those shown in Chapter 6
- Information to be obtained from the piloting of reference cities in order to find the drivers for change relevant to LUDA
- Will seek greater commitment and feedback from the City Partners. Questionnaires will be used as a way of reporting on their experiences of the application of tools and methods in LUDA. Some of the questions will be adapted from the issues identified in 8.1.
- The City Partners agreeing a process model. This will be influential for the standard reporting format and the selection of methods, i.e. what methods to use at each stage in the process
- Finer grained analysis of Diagnosis / Visioning / Predicting as a way of better understanding the 'take-off' phase

9. Bibliography

- Barrett, J., (2001) Component ecological footprint: developing sustainable scenarios, Vol. 19, No.2, Beech Tree Publishing, Surrey
- BEQUEST (2001) *Final Report 2000-1*, Contract No. ENV 4 CT/97-607, EC Environment and Climate Programme (1994-1998), Research Theme 4: Human Dimension of Environmental Change, University of Salford, UK.
- BEQUEST (1999) 2nd Management Report 1997-99
- BEQUEST, 2001-02, Toolkit: www.research.scpm.salford.ac.uk/bqextra
- Curwell, S., and Deakin, M., (2002) Sustainable Urban Development: BEQUEST, In Building Research and Information, Vol. 30, No. 2, Spon Press, London
- Deakin, M., Curwell, C., and Lombardi, P., (2002) Sustainable Urban Development: the Framework and Directory of Assessment Methods, In *Journal of Environmental Assessment Policy and Management*, Vol.4, No.2, pp. 171-197, Imperial College Press, London
- Deakin, M; Curwell, S. and Lombardi, P (2002) 'Sustainable urban development: the framework and directory of assessment methods', *Journal of Environmental Assessment Policy and Management*, Vol .4, No. 2
- Deakin, M., Mitchell, G. and Lombardi, P. (2002) ' Urban Sustainability Assessment: a preliminary appraisal of current techniques', *Urbanistica*, Vol. 118: 50-54.
- EcEvoy, D., and Ravetz, J., (2001) Toolkits for regional sustainable development, In *Impact Assessment and Project Appraisal*, Vol. 19, No.2, Beech Tree Publishing, Surrey
- EU (2001) SEA Directive 2001/42/EC:
<http://europa.eu.int/comm/environment/eia/sea-legalcontext.htm>
- Hemphill, L., McGreal, S., and Berry, J., (2002) An aggregated weighting system for evaluating sustainable urban regeneration, In *Journal of Property Research*, Vol. 19, No. 4
- Hinloopen, E., Nijkamp, P, and P. Rietveld (1982) The Regime Method: a New Multicriteria Method, In: P. Hansen (ed.), *Essays and Surveys on Multiple Criteria Decision Making*, Springer, Berlin.
- Jiliberto, R., (2002) Decisional environment values as the object of analysis for strategic environmental assessment, Vol. 20, No.1, Beech Tree Publishing, Surrey
- Juslen, J., (1995) Social Impact Assessment: a look at Finnish experiences, In *Impact Assessment and Project Appraisal*, Vol. 10, No. 3, Beech Tree Publishing, Surrey
- LUDA (2002) Description of Work, IOER
- METREX (1998) A Pilot SWOT Analysis of Europe's Metropolitan Urban Areas, METREX Nice Conference, 25 to 28 March 1998:
<http://www.metrex.dis.strath.ac.uk/en/pastmeets/brussels2/swot.pdf>
- Morris, P., and Therivel, R., (1995) *Methods of Environmental Impact Assessment*, UCL Press, London
- Nijkamp, P., and Delft, A., (1977) Multi-criteria analysis and regional decision-making, Martinus Nijhoff Social Sciences Division, Leiden
- Nijkamp, P., and Ouwersloot, H., (1997) A Decision Support System for Regional Sustainable Development: The Flag Model, In Tinbergen Institute Discussion Papers from Tinbergen Institute, Econpapers, Stockholm

- Nijkamp, P., Rietveld, P., and H. Voogd., (1990) *Multicriteria Analysis for Physical Planning*, Elsevier, Amsterdam.
- Nijkamp, P., Torrieri, F., and Vreeker, R., (2002) A decision support system for assessing alternative projects for the design of a new road network: methodology and application of a case study, In *Int. J. Management and Decision Making*, Vol. 3, No. 2, Inderscience Enterprises Ltd
- Nijkamp, P., and Vreeker, R., (2000) Sustainability assessment of development scenarios: methodology and application to Thailand, In *Ecological Economics*, 33 (2002) 7-27, Elsevier Science B.V
- Ratcliffe, J., (2002) *Imagining Cities: Creating Future 'Prospectives' for Present Planning*, from the proceedings of CIB Tokyo Conference 2002, 25th – 27th September, DIT, Dublin
- Ratcliffe, J., (2002) *The Creation of a Built Environment Futures Academy: A Scoping Study*, Faculty of the Built Environment, DIT, Dublin
- Ratcliffe, J., and Stubbs, M., (1996) *Urban Planning and Real Estate Development*, UCL Press, London
- Ravetz, J (2000) *Integrated assessment for sustainability appraisal*, Research Briefing, CURE, University of Manchester
<http://www.art.man.ac.uk/PLANNING/cure/ISCAM/s-eiar02.pdf>
- Rivers, M., and Buchan, D., (1995) Social assessment and consultation: New Zealand cases, In *Impact Assessment and Project Appraisal*, Vol. 10, No. 3, Beech Tree Publishing, Surrey
- Smith, S., and Sheate, W., (2001) Sustainability Appraisal of English Regional Plans: incorporating the requirements of the EU Strategic Environmental Assessment Directive, In *Impact Assessment and Project Appraisal*, Vol. 19, No. 4, Beech Tree Publishing, Surrey
- Social Development Department (1995) *Guidance note on how to do stakeholder analysis of aid projects and programmes*, Overseas Development Administration:
<http://www.euforic.org/gb/stake1.htm#intro>
- Stockholm Environment Institute (2002) *Research and advice on Strategic Environmental Assessment*, SEI, Stockholm:
<http://www.sei.se/policy/SEA2.pdf>
- Stolp, A., Groen, W., van Vliet, J., and Vanclay, F., (2002) Citizen Values Assessment: Incorporating citizens' value judgements in environmental impact assessment, In *Impact Assessment and Project Appraisal*, Vol. 20, No.1, Beech Tree Publishing, Surrey
- Taylor, C., Goodrich, C., and Hobson, B., (1995) Issues-orientated approach to social assessment and project appraisal, In *Impact Assessment and Project Appraisal*, Vol. 10, No. 3, Beech Tree Publishing, Surrey
- Taylor, N., McClintock, W., and Buckenham, B., (2003) Environmental Decision-making: Social Impacts of out-of-centre shopping centres on town centres: a New Zealand case study, In *Impact Assessment and Project Appraisal*, Vol. 21, No. 2, Beech Tree Publishing, Surrey
- Therivel, R., and Minas, P., (2002) Measuring SEA Effectiveness: Ensuring Effective Sustainability Appraisal, In *Impact Assessment and Project Appraisal*, Vol. 20, No. 2, Beech Tree Publishing, Surrey

Toivanen, S., and Kallberg, V., (1998) Framework for assessing the impacts of speed, 9th *International Conference: Road Safety in Europe*, September 21-23, Bergisch Gladbach, Germany

Urban Task Force (1999) Towards an Urban Renaissance, DETR, London

Links:

Berlin Municipality, Availability of Public, Near-residential Green Spaces:

http://www.stadtentwicklung.berlin.de/umwelt/umweltatlas/ed605_03.htm

COST-C9 Action: Processes to reach urban quality:

<http://ecolu-info.unige.ch/recherche/COST-C9/#E>

University of Karlsruhe, Annex 31:

http://annex31.wiwi.uni-karlsruhe.de/MainFrame_tools_contents.htm

Contingent Valuation Method:

http://www.cbl.umces.edu/~dkingweb/contingent_valuation.htm#over

Cross impact method of forecasting:

<http://www.iit.edu/~it/cross.html>

Overview of impact assessment and enterprise development:

<http://www.enterprise-impact.org.uk/overview/index.shtml#SIA>

Quality of life capital approach:

http://www.qualityoflifecapital.org.uk/pdfs/report_6_substitution.pdf

Risk tools and techniques:

<http://www.waterbouw.tudelft.nl/public/gelder/citatie26b.pdf>

Spatial Informatics Group, Land value GIS (Hedonic analysis):

<http://www.sig-gis.com/Projects/hedonic.html>

Life cycle assessment: <http://www.gdrc.org/uem/lca/lca-define.html>

ODPM, Multi-criteria analysis manual:

<http://www.odpm.gov.uk>

Lichfield Planning, Planning for Development:

<http://lichfieldplanning.co.uk>

Ian Hamilton, Planning tools and GIS presentation:

<http://www.townplanning.sabah.gov.my>

Heise, D., Semantic Differential:

<http://www.indiana.edu/~socpsy/papers/AttMeasure/attitude..htm>

Centre for Urban and Regional Ecology (CURE):

<http://www.art.man.ac.uk/PLANNING/cure/research.html>

Annex 1: Cross-analysis of cities – table of results

Partner city Criteria	Bratislava	Dresden	Edinburgh	Florence	Lisbon	Valenciennes	Total Yes
Economic Situation							
Local commercial activity	YES	YES	YES	NO	YES	YES	5
Endogenous dynamic of economy	YES	YES	YES	NO	YES	YES	5
Dependency from outside investment	YES	YES	YES	NO	YES	YES	5
Investment (private and public sector)	YES	YES	YES	YES/NO (private lower, public higher)	YES	YES	6
Fluctuation of enterprises (in/out migration)	YES	YES	YES	NO	YES	YES	5
Demand of retail goods and services	YES	YES	YES	NO	YES	YES	5
Supply of retail goods and services	YES	YES	YES	YES	YES	YES	6
Land values / rental values	YES	YES	YES	YES	YES	YES	6
Enterprise start-ups	YES	NO	YES	NO	YES	YES	4
Vacant industrial, commercial and office space	YES	YES	YES	NO	NO	NO	3
Range of local employment opportunities	YES	YES	YES	NO	YES	YES	5
Level of unemployment	YES	YES	YES	NO	NO	YES	4
Spatial mismatch between people and jobs	YES	NO	YES	YES	NO	YES	4
Total number of Economic	13	10	13	4	9	12	61/88

problems							(69%)
Rank (Economic situation)	=1	4	=1	6	5	3	2
Partner city	Bratislava	Dresden	Edinburgh	Florence	Lisbon	Valenciennes	Total Yes
Criteria							
Ecological Situation							
Emissions from local industry / households / traffic	YES	YES	YES	YES	NO	YES	5
Pollution of air	YES	YES	NO	YES	NO	NO	3
Pollution of water	YES	NO	NO	NO	NO	NO	1
Pollution of Soil	YES	YES	NO	YES	YES	YES	5
Hazardous waste / contamination	YES	NO	NO Land Stability ex Mining YES	YES	YES	NO	3
Level of Noise	YES	YES	NO	YES	NO	NO	3
Decrease of biodiversity	YES	YES	NO	NO	NO	NO	2
Deficits in open space	YES	NO	NO	NO	NO	YES	2
Deficits in green space	YES	YES	NO	NO	NO	YES	3
Public access to green areas	NO	YES	NO	NO	YES	YES	3
Danger of natural disasters (e.g. flooding)	NO	YES	YES	YES	NO	NO	3
Total number of Ecological problems	9	8	3	6	3	5	33/66 (50%)
Rank (Ecological situation)	1	2	=6	3	=6	4	4

Key**Rank:**

1 = Worst situation

6 = Best situation

Most acute problems (problem affecting 5 or 6 cities)**Least acute problems** (problem affecting 0-2 cities only)

Partner city Criteria	Bratislava	Dresden	Edinburgh	Florence	Lisbon	Valenciennes	Total Yes
Social Situation							
Population change	YES	NO	YES	YES	NO	YES	4
Ageing of people (more older people)	NO	NO	YES	NO	NO	NO	1
Mortality	NO	NO	YES	NO	NO	NO	1
Immigrants, ethnic and minority groups as share of total population	NO	YES	NO	YES	YES	YES	4
Level of social segregation	YES	NO	NO	NO	YES	YES	3
Level of income	YES	YES	YES	YES	YES	YES	6
Level of poverty	YES	YES	YES	YES	YES	YES	6
Level of social transfers	YES	YES	YES	YES	YES	YES	6
Health conditions	YES	NO	YES	NO	YES	YES	4
Deficits in education	NO	NO	YES	NO	YES	YES	3
Level of criminality	YES	NO	YES	YES	NO	NO	3
Level of civic involvement	YES	YES	YES	NO	NO	NO	3
Level of civic commitment	NO	YES	YES	NO	NO	YES	3
Costs of housing relative to revenue	YES	YES	YES	NO	YES	YES	5
Population density compared to built up area	NO	NO	YES	YES	NO	NO	2
Occupancy of flats / rooms	NO	YES	YES	YES	NO	YES	4
Total number of Social problems	10	8	14	8	8	11	59/96 (61%)
Rank (Social situation)	3	=6	1	=6	=6	2	3

Partner city Criteria	Bratislava	Dresden	Edinburgh	Florence	Lisbon	Valenciennes	Total Yes
Urban Structure							
"Barrier" in cityscape	YES	YES	NO	YES	NO	YES	4
Image / Perception from outside	YES	YES	YES	NO	YES	YES	5
Image / Perception from inside	YES	YES	YES	YES	YES	NO	5
Townscape / urban structure	YES	YES	YES	NO	YES	YES	5
Residential quality	YES	YES	YES	YES	YES	YES	6
Vacancy in living + office space	YES	YES	YES	NO	YES	NO	4
Conditions of buildings e.g.							
- Scope of renovation	YES	YES	YES	NO	YES	YES	5
- Sanitary installations	YES	YES	YES	NO	YES	YES	5
- Size of flats	NO	YES	NO	NO	NO	NO	1
Ownership of land/buildings, e.g.							
- Heterogeneous ownership	YES	NO	YES	NO	YES	YES	4
- Public ownership	YES	YES	NO	YES	NO	NO	3
- Absence of landlords	YES	YES	NO	NO	YES	YES	4
Quantity and quality of social-cultural infrastructure	YES	YES	YES	YES	YES	YES	6
Quantity and quality of technical infrastructure	YES	YES	YES	YES	YES	YES	6
Total number of Urban problems	13	13	10	6	11	10	63/90 (70%)
Rank (Urban fabric)	=1	=1	=4	6	3	=4	1
Total number of Problems	45	40	40	24	32	38	219
Rank (Overall)	1	=2	=2	6	5	4	