PROJECT

PROSPECTS

Procedures for Recommending Optimal Sustainable Planning of European City Transport Systems

**Funding:** European (5th RTD Framework Programme)

**Duration:** Feb 2000 - Jan 2003

**Status:** Complete with results

Background & policy context:

The project was conducted under Task 4.4.1, which established the LUTR (Land Use and Transport Research) programme. The task focused on strategic approaches and methodologies in urban planning towards sustainable urban transport. Its target was to develop planning tools, assessment methodologies and best practices aimed at managing future transport demand through integrated land use and transport planning.

PROSPECTS focused on the barriers identified in the parallel work by ECMT (European Conference of Ministers of Transport), which highlighted the problems of poor policy integration, institutional barriers and inter-institutional inconsistencies, lack of communication with interest groups, unsupportive regulatory frameworks, weaknesses in pricing and financing, inadequate analysis of alternatives, and wavering political commitment.

**Objectives:**

The principal objective of PROSPECTS was to provide cities with the guidance which they need in order to generate optimal land use and transport strategies to meet the challenge of sustainability in their particular circumstances.

The five sub-objectives were to:

- identify the decision-making requirements of cities;
- develop appraisal and evaluation tools;
- enhance forecasting and analysis tools;
- publish three guidebooks;
- and disseminate the findings.

The three guidebooks were a Decision-Makers' Guidebook, a Methodological Guidebook, and a Policy Guidebook.

**Methodology:**

The review of cities' decision-making requirements involved specifying a common set of objectives and indicators, reviewing past trends and future scenarios, identifying the full set of possible policy instruments, determining the current decision-making processes of cities and assessing the barriers to decision-making. All of these were developed initially with six core cities and then tested in a survey of 60 cities.

The development of appraisal and evaluation methods included the specification of an overall approach to appraisal to satisfy the objectives identified earlier, the enhancement and testing of a series of approaches to optimisation of integrated strategies, and the identification of good practice in public participation.

The work on forecasting and assessment tools commenced with a review of the requirements of such
tools to meet the decision-making needs identified earlier, and to provide information for the appraisal tools. Further developments were then made to three types of model: a policy explorer based on a hypothetical city, a sketch planning model which was developed for all six core cities, and current land use-transport interaction models in use in four of the six core cities.

The Decision-Makers' Guidebook provided an overview of the decision-making processes, advice on good practice and examples of the application of decision-support tools. It was published in six languages. The Methodological Guidebook provided fuller detail of the appraisal, optimisation, participation and forecasting tools, with worked examples of each. The Policy Guidebook is a web-based information source on the performance of the full range of policy instruments, based on a first principles assessment and a series of case studies.

Related Projects:

ARTISTS
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OPTIMA
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Parent Programmes:
FP5-EESD KA4 - City of Tomorrow and Cultural Heritage

Institute type: Public institution
Institute name: European Commission, Directorate-General for Research (DG Research)
Funding type: Public (EU)

Partners:
- Institute for Transport Studies, University of Leeds, UK
- Kungl Tekniska Hogskolan, SE
- Institute of Transport Economics, NO
- Institute for Traffic Planning ans Traffic Engineering, AU
- VTT Building and Transport, FI
- Universidad Politecnico de Madrid, ES
- David Simmonds Consultancy, UK
- MVA Limited, UK

Organisation: Institute for Transport Studies
Address: University of Leeds
Zipcode: LS2 9JT
City: Leeds
Contact country: United Kingdom
Telephone: +44-113-343-6610
Fax Number: +44-113-343-5334

Key Results:
The key results are represented by three Guidebooks: Decision-Makers' Guidebook, Methodological Guidebook and a Policy Guidebook.

The Decision-Makers' Guidebook covers the basic issues and describes respectively: the decision-making context, including the freedom which cities have to develop their own policies, the possible approaches to decision-making and their logical structure. Furthermore, the full range of land use and transport policy instruments as well as the barriers to be overcome in using the policy instruments are considered. Finally, these principles are illustrated by comparison with current practice in four case
study cities, and recommendations for improvements are drawn. The Decision Makers' Guidebook has since been updated to reflect the work completed elsewhere in the LUTR programme and in its coordinating project, PLUME. (http://www.lutr.net/)

The Methodological Guidebook is designed to support the Decision-Makers' Guidebook. It follows the same logical structure of planning but treats some of the issues in considerably more detail. Its audience will be the professionals who carry out the job. The Methodological Guidebook suggests performance indicators and how to present them; furthermore, it provides detailed advice on how to compute them, including the elements of cost benefit analysis, equity indicators as well as environmental and accident indicators. It presents a new strategic sketch planning model for predicting the changes in transport and land use systems over time, and describes novel approaches to the optimisation of transport policy strategies, which can be implemented with the sketch planning model. The overall message that can be distilled from the Methodological Guidebook is that there are numerous ways of improving the analytical parts of the planning process for sustainability. These methods are useful regardless of whether the city adopts the plan-led, consensus-led or vision-led approach to planning, or some combination of these.

The Policy Guidebook provides guidance on the performance of some 60 different policy instruments, covering the broad areas of land use, infrastructure, management and service provision, information, awareness and pricing. For each it provides a description, a first principles assessment, a series of case studies, a review of the potential contribution to transport policy in different contexts, and an indication of those policy instruments best able to complement it. The Policy Guidebook has been established as a

Policy implications

A summary of the recommendations for implementation of the strategies is presented below:
1) To define all the objectives that legitimately belong under the sustainability field. The suggested objectives are seven, as follows: economic efficiency, liveable streets and neighbourhoods, protection of the environment, equity and social inclusion, safety, contribution to economic growth and intergenerational equity.
2) To draw up simple performance indicators covering (almost) all objectives, so that all of the objectives legitimately belonging under sustainability may be taken into account in appraisal and evaluation phases.
3) To utilise all existing and emerging knowledge in selecting policy instruments to be tested and combining them into strategies in efficient ways.
4) To test the strategies, models should include the important links among transport, land use and the environment. Simple sketch planning models, also including the transport/land use link, will be useful at exploratory stages and for cities lacking the capability to develop a large scale integrated land use/transport model.
5) A comprehensive appraisal of the strategies sustainability, using the full set of objectives and their performance indicators, and based on the models output, can be feasible and not overly complex.
6) Constrained optimisation and other innovative methods are available to discover new strategies well performing with respect to all objectives, and to study trade offs between the objectives and the policy instruments.

STRIA Roadmaps: Smart mobility and services
Transport mode: Multimodal transport
Transport sectors: Passenger transport
Geo-spatial type: Urban