

PROJECT

## ARTISTS

### Arterial Streets towards Sustainability

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

**Duration:** Dec 2001 - Nov 2004

**Status:** Complete with results



#### Background & policy context:

Arterial streets present a particular challenge to sustainable urban planning, because they attempt to meet four, often conflicting functions:

- they provide a major channel for movement between different parts of the city;
- they provide access for employees, customers and deliveries;
- they represent a major public space that is visually dominant, culturally charged and of great importance for social interaction;
- they represent "the garden" for many residents.

Conventional guidance on the design and management of urban roads and streets has tended to focus on either arterial roads or local access streets. There is currently a lack of a clear, consistent approach to the design of arterial streets, which combine both significant through traffic and urban place functions.

#### Objectives:

This project aims to set out an approach to the design and management of arterial streets from a people-oriented perspective. This means that:

- as users of the street, people – rather than vehicles - are taken as the starting point for the analysis and redesign of street-space;
- as local stakeholders, people are taken into account and included in the design and management process.

In addressing people's use of streets for a diversity of urban functions – and not just motor traffic movement - the aim is to achieve streets that offer a more positive contribution to sustainability, in all its economic, social and environmental dimensions.

In other words the objectives of the project are to improve the basis for decisions regarding reconstruction of arterial streets, taking into account a broad set of social, economic and environmental factors, and to develop Best Practice Guidelines for city authorities throughout the European Union. This will enable re-design of arterial streets in such a way that the physical environment of the corridors will improve while contributing to the implementation of more sustainable urban transport systems.

#### Methodology:

The project comprises the following parts:

- developing an evaluation model;
- identifying and classifying the current problems;
- carrying out comparative studies of main streets in European cities, 40 streets in 9 countries;
- developing methods to produce alternative solutions for main streets;
- developing models for active actor-participation;
- providing supervision and guidelines to town planners and decision-makers.

All traffic user-groups are considered in the project (pedestrians, cyclists, public transport passengers, motorists and delivery traffic), as well as all movements on, along and across the street and parking.

An important point of departure is to deal separately with different parts of the street with different

prerequisites. Hence, the solutions will not be the same for the whole length of the street if prerequisites differ contrary to the current classifications.

Considerable weight is given to developing methods for the participation of actors and the testing of developed methods in the demonstration project.

Actor-participation has occurred in the form of interviews and focus groups to identify the problems and needs and to formulate visions for the future. The focus groups consist of the various actors that are affected (e.g. residents, entrepreneurs and transporters).

Practically the same groups have also been engaged in developing and testing methods to find alternative solutions for main street problems. To this end, several tools have been developed to facilitate the visualisation of various solutions.

The working materials consist of posters of before and after-situations in several already reconstructed main streets, files with information on, and photographs of, about 30 design elements including scale models in transparent plastic. Participants can build up alternative designs of separate street sections with the help of these plastic elements. Subsequent evaluation has shown that participants consider this work to be of a positive nature at all times.

Successively these alternative solutions for main streets are discussed at a seminar where, apart from the already participating actors, other interest groups, civil servants and politicians take part as well. The advantages and disadvantages of each solution is discussed from the interest-pe

### **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:**

Belgium:

Free University of Brussels - Centre for Economic and Social Studies on the Environment

Denmark:

Atkins Transport planning; City of Copenhagen - Department of Roads and Parks; Danish Transport Research Institute

Germany:

City of Freiburg - Department of Transportation Planning; Kaiserslautern University of Technologie - Institute for Mobility & Transport

Greece:

Aristotle University of Thessaloniki - Department of Civil Engineering; Municipality of Kalamaria - Technical Department

Hungary:

Endresz

Portugal:

Faculty of Engineering of the University of Porto - Civil Engineering Department

Spain:

INTRA S.L. - Traffic Engineering; Municipality of Girona

Sweden:

Lund University - Department of Technology and Society; City of Malmoe - Department of Public Work

United Kingdom:

Transport for London - Street Management; University of Westminster - Transport Studies Group

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## **Key Results:**

The project main output was the report "Arterial Streets for People: Guidance for planners and decision makers when reconstructing arterial streets."

This project has drawn on a series of street case studies in seven European countries, as well as learning from research and practice elsewhere.

The report is aimed primarily at city authorities and other policy makers, practitioners and consultants with responsibility for the design and management of streets. It gives general guidance on concepts and techniques, at a certain level of generality, which would need to be translated into practice appropriate to the national or city context.

This report suggests principles and demonstrates processes that may be used to conceptualise and classify arterial streets, set objectives for street management, generate design options, involve the public in participatory design processes, and select the best options for onward design. Implementing some of the principles could imply that national or city authorities would need to substantially change their current approach to street design and management, while others may already conform with many of the principles set out here. The report has been devised to present an integrated suite of principles and techniques, though these could be individually selected for adoption in different circumstances.

The content of the report is:

- an illustration of the main principles which underpin the approach;
- a detailed illustration of how public participation may be used to influence the design and management of arterial streets;
- a framework for the functional classification of streets that serves to guide the prioritisation of different roles of each individual street;
- explanation of the project stages involved in the redesign process;
- recommendation for follow-up of the ARTISTS project e.g. the need for demonstrating and making the new approaches operational.

## **Technical Implications**

None

## **Policy implications**

With ARTISTS some fundamental challenges are expressed that have to be demonstrated in real life and tested empirically.

1. The project advocates a "people-oriented approach". This implies that people should be taken into account, not (only) vehicles, and all people should be actually counted. To operationalise this, it is recommended, for example, that road authorities always actively attempt to monitor street flows by counting the people inside the vehicles, not just the vehicles, as well as counting pedestrians and cyclists as full worthy users of the street. A future task would also be to explore new indicators for people movement and intensity and other types of activities (not transport related).
2. This project draws attention to the scarcity of urban streetspace, and the need to share it "spatially and temporally". A future task for authorities could be to explore the possibility of explicitly "calculating" the share of space and time given to different users, though a combination of area, signal time, time for parking and servicing, and bearing in mind time taken for different modes at different speeds, etc.
3. A new "functional street classification" system is suggested by the project. To operationalise this, the functional classification approach implies that authorities should, at least, (re)consider how their street classification is currently done, and how closely it might be related to link status, and consider if they can introduce the new place dimension. The overall classification process and the introduction of place status involves stakeholders' views and the engagement of the urban planning department in the discussion. With a street classification system including all streets in the city, it will be possible to in a city perspective decide how much motorised traffic the city can bear and which parts of the city that are best suited to take this traffic. With a holistic perspective it will also be possible to better handle the migration of traffic when streets are redesigned. The migration will be planned rather than an uncontrollable side effect.
4. Indicators for sustainability must be elaborated further on. Most sustainability indicators are still on link status. Local application will produce valuable contributions on place status indicators.

5. Design and decision makers now have to use stakeholder participation themselves in order to get own experience and to be able to propose the use hen

Documents:

 [ARTISTS - Final Report.pdf \(Final report\)](#)

**STRIA Roadmaps:** Network and traffic management systems, Smart mobility and services

**Transport mode:** Multimodal transport

**Transport sectors:** Passenger transport

**Geo-spatial type:** Urban