

PROJECT

CATS

City Alternative Transport System

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Funding: European (7th RTD Framework Programme)

Duration: Jan 2010 - Dec 2014

Status: Complete with results

Total project cost: €3,965,705

EU contribution: €2,970,245



Call for proposal: FP7-SST-2008-RTD-1

[CORDIS RCN : 93669](#)

Background & policy context:

CATS set out to provide a new service for more efficient mobility in cities through a more balanced use of small clean vehicles and mass transport. This inclusive new transport system will be well adapted to the needs of people with reduced mobility, young passengers and tourists.

The CATS Project set out to contribute mainly to the EU-27 and 'zero accident' vision as well as to significant improvement of efficiency of the urban transport systems. Its results, integrated with other new innovations in the field of Cybernetic Transportation Systems (CTS) intended to bring a radical change in urban transportation. These environmentally friendly systems have the feasible potential of improving the current situations drastically, by offering solutions to the problems encountered today. They will yield much more effective organisation in terms of urban mobility, congestion and air pollution, noise, CO2 emissions, accessibility and safety. The outcome will be a higher quality of living and an enhanced integration with the spatial and societal developments.

Objectives:

CATS aim was the full development and experimentation of a new urban transport service based on a new generation of vehicle. Its major innovation is the utilisation of a single type of vehicle for two different uses: individual use or semi collective transport. This new transport service is aimed at filling the gap between public mass transport and private individual vehicles.

It is based on two operating principles: the self service concept where small and clean urban vehicles are offered on a short term rental basis and the flexible shuttle service where a variable length of vehicles convoy, driven by a professional driver, operates at fixed hours along a line on a permanent basis or on a case by case basis. Both of these principles are integrated in a single service (composed of vehicles and stations) called Cristal.

The CATS Project set out to yield the following impacts:

- Drastic reduction of energy dependency, pollutants and carbon dioxide emissions,
- Technological progress,
- Improvement of the urban mobility offer with substantial gain of time and comfort for travel, and
- Improvement of the urban quality of life.

Methodology:

CATS, based on the CRISTAL technology and system design and demonstration, developed an innovative strategy to test and introduce a clean urban transport system in three selected sites in the cities partners.

The project mainly focused on the following actions:

- To demonstrate that both Cristal system and the classic public transport network are complementary,
- To test all issues linked to station design and vehicle running in terms of urban integration, accessibility and environmental neutral effect of the system,
- To implement and to exploit services and innovative applications.

Parent Programmes:

[FP7-TRANSPORT - Transport \(Including Aeronautics\) - Horizontal activities for implementation of the transport programme \(TPT\)](#)

Institute type: Public institution

Institute name: The European Commission

Funding type: Public (EU)

Other programmes: FP7-SST-2008-RTD-1

Lead Organisation:

Gea J-M. Vallotton Et T. Chanard Sa

Address:

Rue de bourg 28
1001 LAUSANNE
Switzerland

Organisation Website:

<http://www.geapartners.ch>

EU Contribution: €705,699

Partner Organisations:

Institut National De Recherche En Informatique Et Automatique

Address:

Domaine de Voluceau- Rocquencourt
B.P. 105 LE CHESNAY
France

Organisation Website:

<http://www.inria.fr/>

EU Contribution: €247,676

Induct Sas

Address:

Chemin De Ronde 103
78290 Croissy Sur Seine
France

EU Contribution: €234,334

Eurometropole De Strasbourg

Address:

1 PARC DE L'ETOILE
67076 STRASBOURG CEDEX
France

EU Contribution: €124,002

Ploiesti City Hall**Address:**

REPUBLICII NO 24
100066 PLOIESTI
Romania

Organisation Website:

<http://www.ploiesti.ro>

EU Contribution: €41,640

Ecole Polytechnique Fédérale De Lausanne**Address:**

Batiment Ce 3316 Station 1
1015 LAUSANNE
Switzerland

Organisation Website:

<http://www.epfl.ch>

EU Contribution: €324,800

Agenzia Regionale Per La Mobilita Del Lazio**Address:**

via del Pescaccio 96/98
00166 ROMA
Italy

EU Contribution: €98,305

Lohr Industrie**Address:**

rue du 14 juillet 29
67980 Hangenbieten
France

Organisation Website:

<http://www.lohr.fr>

EU Contribution: €410,116

Europe Recherche Transport**Address:**

AVENUE FRANCOIS MITTERRAND 25
69675 BRON
France

Organisation Website:

<http://www.ert-sas.fr>

EU Contribution: €0

Technion - Israel Institute Of Technology**Address:**

Senate Building Technion City
Haifa 32000
Israel

EU Contribution: €181,905

Institut Francais Des Sciences Et Technologies Des Transports, De L'aménagement Et Des Reseaux

Address:

2, Avenue Du General Malleret-Joinville
94114 Arcueil
France

EU Contribution: €221,600

Universita Degli Studi Di Roma "la Sapienza"

Address:

Piazzale Aldo Moro 5
00185 ROMA
Italy

Organisation Website:

<http://dma.ing.uniroma1.it>

EU Contribution: €380,168

Key Results:

Clean, green and innovative transport solutions for cities

A new breed of urban public transport could fill the gap between mass and private transit options. An EU initiative introduced a novel urban transport system based on a new generation of vehicle.

The EU-funded <http://www.parc-innovation-strasbourg.eu/index.php/CATS-Project/welcome-...> (CATS) (City alternative transport system) project represented the final stages of development of a new generation of city transport vehicles known as Cristal. The Cristal system consists of small mobility units (vehicles) that can serve two purposes.

The first service is a self-service option whereby users can rent a clean urban vehicle over a short term. The second is a flexible service with a professional driver to shuttle users along a line at fixed time intervals.

Three European cities (Strasbourg (France), Formello (Italy) and Ploiesti (Romania)) were studied to determine their suitability for testing the vehicles. Project partners drew on the insights of transportation systems manufacturers, researchers, service providers and end users across Europe and Israel.

As Cristal vehicles could not be made available in time, other innovative vehicles were selected to be tested during the second phase of the project. NAVIA autonomous vehicle was chosen due to its similarities with the Cristal system in terms of capacity and operation principles. The lack of driver brought a new challenge to the project.

Demonstrations were carried out over a six-month period in Strasbourg and later in Lausanne. Following testing, the team gathered data to assess system performance and user acceptance of innovative technologies. They also studied the impact on mobility, acceptance, environment, transport patterns accessibility and attitudes towards alternative transport systems.

Findings showed that the system would best serve people with reduced mobility, young passengers and tourists. To reach a wider audience, outcomes were presented at a showcase in Ploiesti to improve citizen awareness of innovative transport systems.

CATS helped test and introduce clean and innovative urban transport systems in cities. Ultimately, it will enhance urban mobility, accessibility and safety while reducing congestion, noise and carbon dioxide emissions.

Documents:

 [Final Report Summary - CATS \(City Alternative Transport System\)](#)

STRIA Roadmaps: Smart mobility and services

Transport mode: Road transport

Transport sectors: Passenger transport

Transport policies: Societal/Economic issues

Geo-spatial type: Urban