

Contacts

Acronym: CATS

Name of proposal:
cityalternativetransportsystem

Grant Agreement N°: 231341

Instrument: Collaborative Project
(Small of medium-scale focused research project)

Total cost: 4 163 830 €

EU contribution: 2 970 245 €

Call: FP7-SST-2008-RTD-1

Starting date: 01/01/2010
Ending date: 31/08/2014

Duration: 54 months

Objective: Ensuring Sustainable Urban Mobility

Research domain:
New Transport and Mobility Concepts

www.parc-innovation-strasbourg.eu/CATS-project

Project Coordinator
GEA Vallotton et Chanard SA
Architectes - Urbanistes FSU
Rue de Bourg 28, CP 6326
1002 Lausanne, Suisse
Tél. + 41 21 310 01 40
Fax + 41 21 310 01 49



Partners

Transportation systems manufacturer
INDUCT, Solutions de mobilité, France
LOHR Industrie, France

Research institutes

CTL - Sapienza University of Rome, Italy
EPFL - Ecole Polytechnique Fédérale de Lausanne, Switzerland
INRIA - Institut National de Recherche en Informatique et en Automatique, France
TECHNION - Institute of Technology, Israël

Services provider and Project coordinator

GEA - J.M. Vallotton et T. Chanard,
Architectes - Urbanistes FSU, Suisse

End-users:

European cities and their public transport operators
Strasbourg:
Communauté urbaine de Strasbourg, France
Formello: City of Formello, Italy
Ploiesti: Ploiesti City Hall, Romania

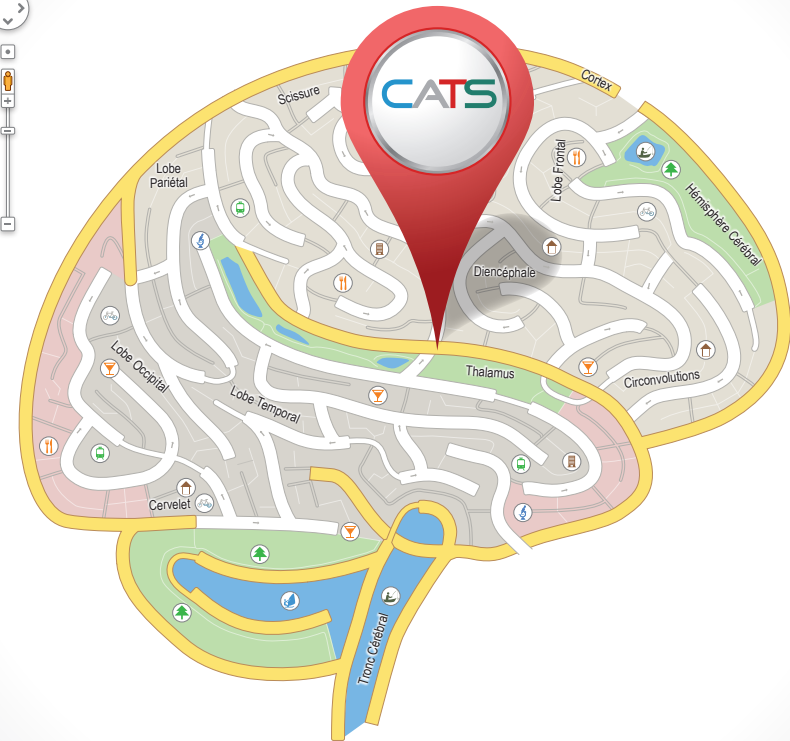
Project Management

ERT - Europe Recherche Transport, France

Supported by funding under the Seventh Research Framework Programme of the European Commission

CATS* intelligent transportation

*City Alternative Transport System



CATS [more details](#)

SST - "Ensuring Sustainable Urban Mobility"
New Transport and Mobility Concepts



European
Commission



CATS' aim is the full development and experimentation of a new urban transport service based on a new generation of vehicles.

Its major innovation is the utilisation of a single type of vehicle for two different uses: collective transport or on demand system.



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:

o the on demand concept

where small and clean urban vehicles are offered,

o the 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 goal of this new service is a more efficient mobility in cities through a more balanced use of small clean vehicles and mass transport. This inclusive new transport system is well adapted to the needs of people with reduced mobility, young passengers and tourists.



In order to the CATS framework, four NAVIA vehicles will be made available by INDUCT to the project for experiments.

The CATS project will investigate through an in depth mobility needs analysis, on-site demonstration and showcases, the impact of the introduction of such a new system in three different European cities (Strasbourg FR, Ploiesti RO, Formello IT).

The impact on environment and especially on CO2 emissions, as well as the acceptance and the evaluation of market take-up of the system will be studied. CATS will improve the design and manufacture of the NAVIA transport system via a detailed definition of its operating principles and by a design of its urban settings (stations, infrastructures), in accordance with cities and citizens needs.

A full evaluation plan is then foreseen as well as transferability assessment. Such a system will be tested in real operating conditions.

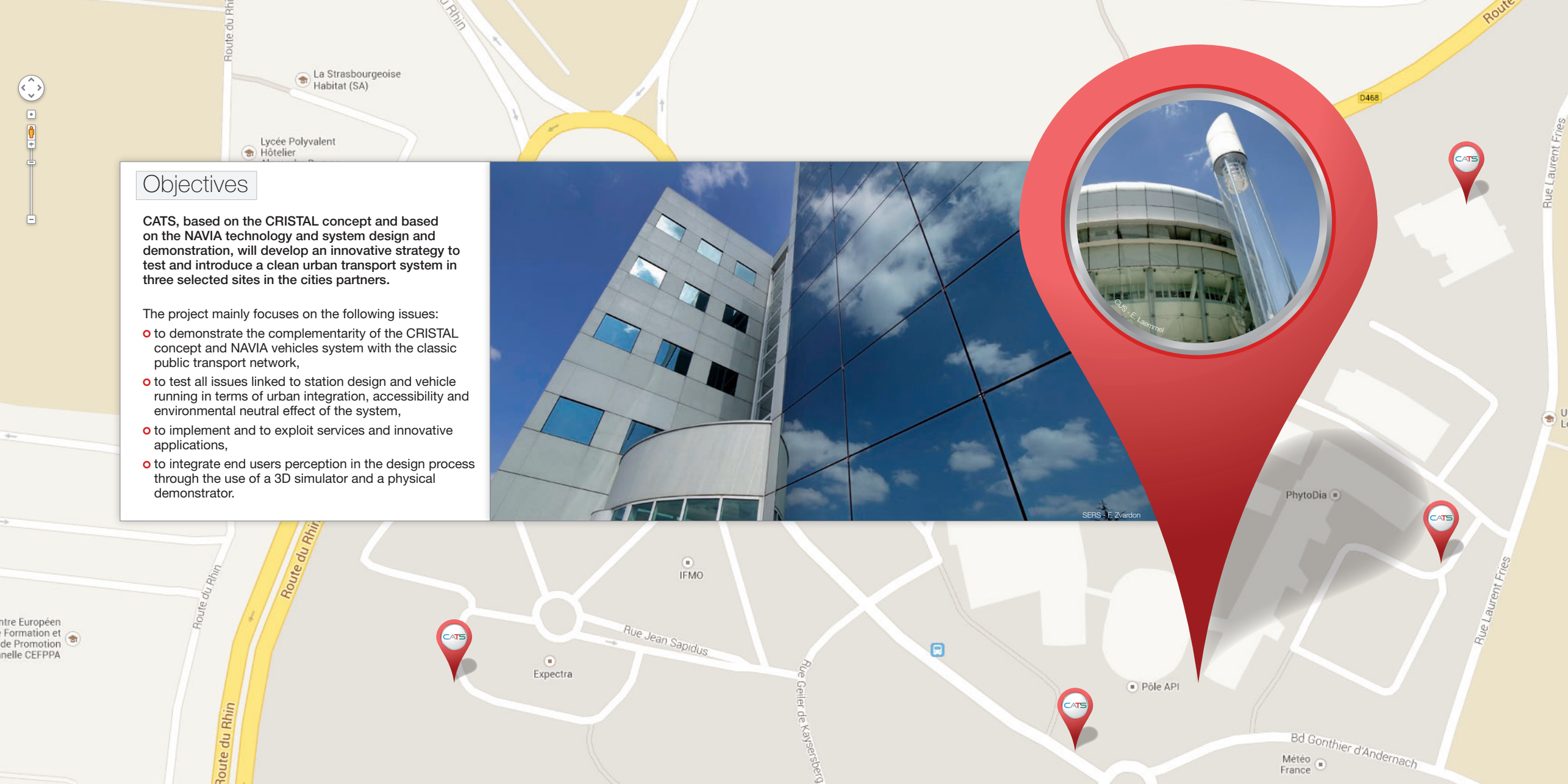


Objectives

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

The project mainly focuses on the following issues:

- to demonstrate the complementarity of the CRISTAL concept and NAVIA vehicles system with the classic public transport network,
- 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,
- to integrate end users perception in the design process through the use of a 3D simulator and a physical demonstrator.





Description of the work

The project is divided into 7 work packages (WP) of which 5 are technical work packages (WP1-5):

WP0 is dedicated to the management of the project. It deals with administrative and technical management of the project and also deals with quality control and ethical issues within it.

WP1 deals with the task of determining especially for Strasbourg the most appropriate operational site and also predefines the best implementation of the Cristal system.

WP3, WP4 and **WP5** develop methodologies in order to optimise the best implementation of the Cristal system in the city based on WP1 recommendations.

WP2 designs the operating principles of the transportation system for the 2 modes which are self service and variable convoy of urban shuttle. Simulation tools are used to design and to evaluate the operating principles.

WP3 consists in designing the stations and in defining the services and the use of the stations, based on WP1 and WP2 results.

After obtaining the results by the 3D demonstration of static integration and 3D demonstration of operating system, the demonstration in real conditions, a showcase and exhibitions are performed in the WP4. The on-site demonstration is the final step of the innovative transport development: test will be made with vehicles NAVIA provided by Induct Technology .

The impacts and the success of CATS project are evaluated by using different indicators in **WP5** and it also answers to the citizen's experiences of the NAVIA technology.

The objective of the **WP6** is to prepare and support the exploitation and dissemination of the results of the project by:

- providing the interface to the EU services and external actors,
- offering the strategic interface for the project with reference to the EC policy issues,
- widely disseminating project concept, developments and findings to all key actors in the field in an interactive way, integrating their feedback at key points of the specification, design, development and evaluation work.
- issuing exploitation plans for key project results.

Expected Results

The results of the CATS Project will contribute mainly to the EU-27 and “zero accident” vision as well as to achieve significant improvement of efficiency of the urban transport systems. These, integrated with other new innovations in the field of Cybernetic transportation Systems (CTS) intended to bring a radical change in urban transportation.

These environmental 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 organization in terms of urban mobility, congestion and air pollution, noise, CO2 emissions, accessibility and safety.

The result will be a higher quality of living and an enhanced integration with the spatial and societal developments.

In summary, the CATS Project is intended 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,
- improvement of the urban quality of life.



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