

Parallel and related developments

Van Sharing

The initiative originated from the *Programme Agreements for air quality* coordinated by Regione Emilia Romagna which, by Resolution No. 2661/02, "Criteria for the implementation of infrastructural interventions in favour of sustainable mobility", implemented Ministerial Decree No. 60 dated 02/04/2002.

Afterwards, the Municipality of Bologna approved "MERCIO B02", i.e. the "Plan for the distribution and collection of goods within the city" and, as a completion of it, published a call for tenders for the implementation of the project named VAN SHARING.

GESTIONE SERVIZI INTERPORTO and TPS-TPV won the contract and carried out the project, by developing and supplying the Municipality with an IT system able to manage the organization of the city logistics and coordinate the activity of an entire fleet of METHANE propelled commercial vehicles working in the Bologna Limited Traffic Zone (ZTL).

This "Virtual Platform" is able to manage information on goods from different logistics operators and travelling to the ZTL of Bologna and is an essential support for the organization and optimization of services.

The cornerstone of the VAN SHARING per BOLOGNA project is the creation of an organizational and operational structure that is stable, efficient and able to offer services with the best quality/price ratio.

The solidity of the VAN SHARING per BOLOGNA project is ensured by the close collaboration between Gestione Servizi Interporto Bologna and a Consortium of transport operators which already distribute goods in the ZTL.

The shared purpose is the improvement of the environment to the benefit of those who live and work in the heart of the City. Achieving this purpose without charging the relevant costs on economic operators is the challenge we intend to face by just leveraging optimization and rationalization of means, rides and routes.

With the support of the suppliers BRAV and Cart, Atc has developed a system to book specially provided areas protected by parking sensors (similar to car sharing bollards) that interact with a multifunction totem able to visually and acoustically notify the illegal occupation of parking places as well as inform monitoring entities by computer.

Management of fleets

ATC offers a service of business fleet management through specially provided software and some automatic keys machines. A convention with the Municipality of Bologna has been already put into effect for the use of the first prototype of the keys machine AL30, an all in one device equipped with a PC and a key holding wheel managing 30 keys.

The software has been integrated with the Municipality Information Systems

Moreover, also a convention with the Municipality of Casalecchio di Reno has been put into effect, which adopts the most recent prototype with 15 transparent lexan points connected to a PC.

Each version of the software allows to book a vehicle by using a one-off personal code which opens the dispenser to take the requested key.

At the end of the ride, it is possible to enter the covered kilometres and the system, which can be installed locally or via Internet, allows to carry out reports and analyses.

Car pooling

Car pooling means sharing a car, usually owned of property, with other users. It is a matter of "giving a lift" to people belonging to a specific and organized group.

Many of us have had already spontaneous experiences of car pooling: the typical case is sharing a car to go to work with other colleagues. It is a way of using a vehicle which

reduces both costs and pollution, with the small inconvenience of giving a lift to colleagues agreeing with them upon the place and the time to meet.

In general, it is possible to share actual expenses or use the vehicles of the involved people by turns, thus creating a sort of crew. The environmental advantage is evident: one vehicle is used instead of 2 or 3.

The Municipality of Bologna supports car pooling by always allowing cars with at least 3 people on board to circulate in case of traffic bans. Together with a partner, ATC has developed specific software that allows to dynamically plan crews, even for just one round trip up to extended periods of round trips, with a limited effort to set the program.

By virtue of mobility management agreements, car pooling may benefit from discounts on the subscription for street parking.

Mobility Management

ATC contributes to the improvement of the territory mobility not only by directly carrying people or contributing to the management of stops, but also intervening to the benefit of individuals, entities and businesses to solve specific and concrete problems.

Mobility plans are tools that allow to understand the mobility problems of a specific area and intervene to reduce them with actions targeted and as much as possible eco-friendly. In general, the starting point is a specific questionnaire, whose analysis allows to understand the main problems of the subjects interested in the traffic and the accessibility of a specific area.

This first step is followed by proposals agreed upon with the principal and the Municipality aimed at informing the interested subjects on opportunities already existing or to be created for the use of public transport or low environmental impact means. If possible, interventions aimed at promoting eco-sustainable behaviours and improving the conditions of viability and parking are carried out in collaboration with the Municipality.

Moreover, specific services such as car pooling and car sharing are offered, measures in favour of bicycles and public transport users are studied and general information on the use of public means is increased.

At the same time, specific solutions are studied for existing situations in which public transport coverage is not optimum. ATC has already carried out some interventions in the past and others are being concluded.

Mobility management can be offered to single businesses or area mobility managers to support the mobility of entire city areas or zones.

The INFOSAT project (national financing)

The number of circulating vehicles on the road network is continuously increasing and the consequent levels of traffic congestion and environment impact can be reduced only by a more reasonable and aware use of transport means.

Wider streets attract more vehicles and the problem is not solved. Maintenance and management costs and, even more, secondary costs due to acoustic and atmospheric pollution, accidents, unproductive time wasted in the streets are "externalized", i.e. charged to the society.

The use of technologies of satellite navigation (GNSS) and wireless communication (UMTS, HSDPA, WIMAX) is recent and widespread.

This trend is favoured by the rapid evolution of these technologies and the consequent phenomena of the decrease in the cost of hardware materials, the miniaturization of hardware components and the easier use of devices.

THE INFOSAT SOLUTION - In this scenario and in line with European (52/2004) and national (PGTL – *General plan for transport and logistics of the Ministry of Transport and Navigation, 2001*) directives, the **INFOSAT Project**, promoted by the Italian Space

Agency (ASI) and developed by a team of private, public and university partners, led by NEXT Ingegneria dei Sistemi SpA, has proved to be able to give solutions or, better, technological tools to change the approach to the management of the demand, increasing the drivers' safety at the same time.

The INFOSAT PURPOSE is to exploit the quality of GNSS and wireless communication technologies and their mass adoption by applying them to ITS systems (Intelligent Transport Systems) so that they can represent a cornerstone for the optimization of resources, infrastructures and services, the improvement of safety factors and the creation of new added value services.

Atc role has been that of a test site for satellite navigation applications and access to the limited traffic zone and their control.

The Optipark European project

The Municipality of Bologna and Atc participated in the Optipark project (<http://www.optipark.eu/>) which ended in 2007, having as partners:

- SICE: "Sociedad Ibérica de Construcciones Eléctricas", Spain, Coordinator
- Allmobile, Switzerland
- University of Zurich, Switzerland
- ECORYS, Holland
- European Union Road Federation, Belgium
- POLIS – cities and regions networking for innovative transport solutions, Belgium
- The City of Baden, Switzerland
- The City of Bologna, Italy
- The City of Amsterdam, Holland
- The City of Bruges, Belgium
- The City of Madrid, Spain
- The City of Vilnius, Lithuania
- Interparking, Belgium
- Parkline, Holland

The role of the city of Bologna was that of a test site for a parking booking pilot project related to parking innovation.