



1. join



2. reserve



3. unlock



4. drive

CAR SHARING

Deliverable 9.2 of the Success Project

Authors: Dominique Breuil
(Ecole d'Ingénieurs de Génie des Systèmes Industriels, EIGSI)
Ian Barratt (Lancashire County Council, LCC)

Editor: Anna Trentini (EIGSI)

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FOREWORD



Jean YATES, Emil CALOTA, Denis LEROY

As senior political representatives of the SUCCESS cities we have been personally involved in the project from its beginnings as a Proposal submitted to the CIVITAS Programme in 2004. We have been honoured to take part in the second phase of CIVITAS and we have been pleased to see how well the plans have been implemented in our cities and how our citizens have benefited.

The rich cooperation that has been the hallmark of SUCCESS, both between the cities and between local partners in each city, has resulted in greater understanding and mutual respect between different organisations and different cultures. This will have long-lasting effects that will benefit all who have been involved in the project.

We have been pleased to cooperate with the European Commission and the wider CIVITAS family, and have contributed to the CIVITAS Political Advisory Committee.

We trust that this document will provide useful lessons for others considering the adoption of measures similar to those that we implemented in the SUCCESS project.

Denis Leroy, *Communauté Urbaine de La Rochelle, Vice Président en charge des transports*

Jean Yates, *Lancashire County Council, County Councillor*

Emil Calota, *Primaria Municipiului Ploiesti, Mayor*

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1 SUCCESS PROJECT

SUCCESS (Smaller Urban Communities in Civitas for Environmentally Sustainable Solutions) is a 4-year project, within the European Research and Demonstration Programme CIVITAS II, with 12 partners including local authorities, transport companies, universities and experts from La Rochelle (FR), Preston (UK) and Ploiesti (RO). The main objective of SUCCESS is to demonstrate that, with an ambitious package of mobility and traffic management measures, significant results can be provided regarding sustainable transport and energy policy in small and medium sized cities. SUCCESS addresses technical, social, environmental and economic aspects of an integrated mobility strategy. As a demonstration project, SUCCESS involves extensive investment in the participating cities, along with a large range of stakeholders and integrated packages of demonstration measures. Several actions have been engaged in each city ranging from controlled access zones to biofuels, from real time information systems to alternative modes for transport, from cycle and walking paths to integrated ticketing. In total, more than 50 different projects have been set up involving a large number of stakeholders leading to a very wide scope of sustainable mobility management and implementation.



The main goals of SUCCESS are :

- To demonstrate that vehicles using clean and alternative fuels can be an efficient choice for urban transport
- To demonstrate that, with an ambitious package of mobility and traffic management measures, significant results can be seen regarding sustainable transport and energy policy
- To demonstrate that accession countries, soon to be new member states, can learn from our previous mistakes and contribute to urban collective transport issues, while implementing at the same time actions promoting alternative transport modes
- To contribute deeply to many different related research and assessment activities such as new, all-inclusive training and communication initiatives supporting the project objectives

La Rochelle, Preston and Ploiesti represent well the medium-sized cities in Europe. Most of medium sized cities are built around an historical city centre. This city centre is quite often rich with several types of shops as well as craftsmen and small industries, with other commercial or tourist areas scattered around in the city. Commercial and industrial zones have grown up in the surrounding areas and are accessible within a short time.

Regarding transport, the main characteristics of such cities are their small surface area, the human size of relationships and their small investment capacity. Buses often provide the main form of public transport.

Medium sized cities generally have a low demographic density, with the population often spread over a large area, sometimes in surrounding small towns which are included in the "life zone". On the one hand this means short travel times, good accessibility and freedom for travelling, but on the other hand it makes collective transport very difficult to organise.

In such cities, relationships between citizens and between citizens and politicians are closer. The proportion of inhabitants involved in the city life is quite often higher than in larger ones: through different associations and clubs, inhabitants come to know each other more easily and have often direct access to politicians involved in these motors of the city life. So the city culture is more widespread and is shared by a many inhabitants.

Smaller cities have in general lower investment capacity; this capacity is not proportional to size and it is sometimes difficult for the local authority to raise financial levers to fund projects.

1.1 The Project Consortium Cities

PROJECT CO-ORDINATOR :

Communauté d'Agglomération de La Rochelle (CdA), FR

PARTNERS :

Ville de La Rochelle (Ville de LR), FR

EIGSI, Ecole d'Ingénieurs de Génie de Systèmes Industriels, FR

Lancashire County Council (LCC), UK

Preston Bus Ltd (PB), UK

Transport and Travel Research Ltd (TTR), UK/FR

Preston City Council (PCC), UK

South Ribble Borough Council (SRBC), UK

Primaria Municipiului Ploiesti (PMP), RO

Regia Autonoma de Transport Public (RATPP), RO

Universitatea Petrol-Gaze Ploiesti (UPGP), RO



1.2 La Rochelle

La Rochelle lies on the Atlantic Coast of Western France. The Urban Community of La Rochelle includes 17 surrounding towns and La Rochelle itself. 160,000 inhabitants live in this area of 20,650 hectares and the total population may reach 250,000 people in summer. Based on a strong maritime heritage with several ports (commercial, leisure, fishing), the economic dynamism of the Urban Community of La Rochelle is the main factor of evolution of the city and the foundation of the urban strategies among which policies in favour of the framework of life and urban ecology (sustainable transport and protection of the landscape) stand in first position.

The Urban Community of La Rochelle has been involved for several years in improving urban transport and more specifically in introducing clean vehicles, developing new concepts for sharing vehicles, bicycles, in implementing Park + Ride, and even starting the "car-free day". Clean transport is not the only environmentally friendly improvement introduced in the town. Other actions have already been started to make the city one of the best in the country for environmental issues. Among these are "master planning" for wind turbines in urban areas, an observatory for air quality (ATMO existing since 1976), coastal protection studies (with La Rochelle University) and littoral management, electric boats for collective transport in the harbour. So SUCCESS is clearly part of the global environmental strategy of the local authority for improving quality of life in all of the city's communal areas.

1.3 Preston

Preston is England's newest city – city status was granted in 2002. It has a population of 129,000 plus suburban areas in South Ribble (combined population 250,000). Preston is the administrative capital and largest commercial centre of Lancashire in the North-West of England.

Preston is, however, an ancient place, receiving its Charter in 1179 - its historic Preston Guild is celebrated every 20 years with the last celebration in 1992. Preston has a strong economic and retail base. The area is also on the threshold of major regeneration, which will see a transformation of Preston's inner urban areas. This transformation is community-led with the Council and its key partners giving full support. The Council - in partnership with the private sector - is also working on a multi million pound scheme to redevelop Preston's City Centre through better retail, transport, housing, office, leisure and other mixed uses. Preston's student population is acting as a major catalyst too. With over 30,000 students, the University of Central Lancashire in Preston is the sixth largest and one of the fastest growing Universities in the UK.

Preston is already a UK leader in the field of transport telematics through its involvement in the UK UTMC programme and Lancashire County Council was recently awarded the title of UK Local Transport Authority of the Year 2004. The planned major regeneration of the city centre has created an opportunity for SUCCESS to support a step-change in the provision of sustainable transport systems within the city.

1.4 Ploiesti

Ploiesti City is located in the south of Romania 60 km north of Bucharest, the capital of Romania. Ploiesti is the capital of Prahova County and is located south of the Sub-Carpathian hills and north-west of the confluence point of two main rivers, Prahova and Teleajen. The municipal economy is characterised by a concentration of large and very large businesses. The population of Ploiesti went from 56,460 as indicated by the December 1912 census returns, up to 252,715 in January 1992. At the end of the year 2001, the population had slightly reduced to 248,688.

Ploiesti City (5,844 ha) is intended to become the nucleus of a metropolitan area, which will include some nearby villages adding around 70,000 new inhabitants to the administrative area. The road network has a radial-ring structure and extends from the city to the neighbouring villages. The municipal roads comprise over 800 streets with a total length of 324 km. East and West ring belts mean around 5,300 vehicles transit Ploiesti each day.

Ploiesti is situated at the crossing of the European Corridors IV and IX.

Ploiesti is a railway hub providing connections between Bucharest, Transylvania and Moldavia. The city has several railway stations for passenger and goods transportation.

Ploiesti is also an important national and regional motorway hub. The municipality lies at the confluence point of the North-South and East-West axes, respectively at the crossroads of Transylvania-Bucharest (Danube River or the Black Sea) and Moldavia-Oltenia (the sub-Carpathian connection).

The local transportation company RATP, which is municipality owned, provides connections to all areas within the city. The municipal vehicle fleet comprised 193 buses, 62 trams and 10 trolleybuses carrying about 70 million passengers annually.

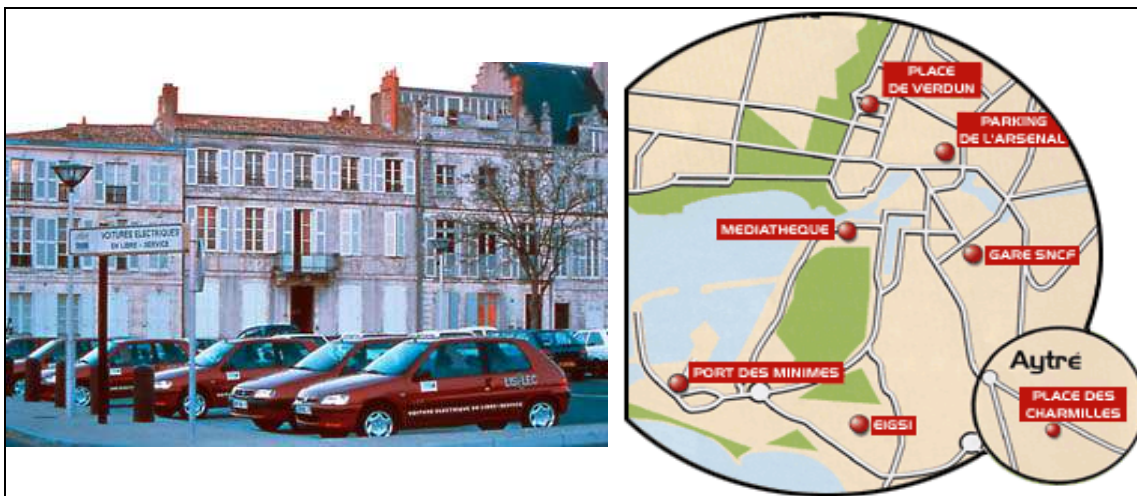
2 LA ROCHELLE

2.1 A NEW CAR SHARING FLEET AND A CARPOOLING SERVICE

2.1.1 City Context

CARSHARING

Since 1999, a self service car sharing has been running in La Rochelle. 50 electric cars Peugeot 106 or Citroen Saxo are dispatched on 7 stations localised in the south west of the city and the city centre.



Liselec in La Rochelle

This was an experimental car sharing system which brought 2 innovations at the time:

- the car sharing in a medium size city as a complement to public transport;
- the use of electric cars.

LISELEC organisation was entirely managed by the La Rochelle Urban Community which financed the difference between subscriptions and revenues, and the exploitation costs (this comes from the experimental aspect of the whole organisation).

This first phase was coming to the end and it was decided to benefit from the CIVITAS opportunity for changing/improving car sharing in La Rochelle.

CARPOOLING

Pertaining to the carpooling, such a service has never existed in La Rochelle before, and it has been implemented through the Civitas Success Project's efforts. Carsharing is a strategy that, like some others, has emerged to combat traffic delays in the face of heavy peak demand. The La Rochelle Urban Community considers the carpool service as a promising demand management strategy to reduce traffic congestion. Differently from the System management strategies, such as ramp metering, that are used to maximize the efficiency of existing infrastructure, car sharing is a Demand

management strategy, that strive to reduce travel demand by providing alternatives to travel and by increasing vehicle occupancy.

2.1.2 City Objectives

The main objectives of the Urban Community were to:

- decrease the number of vehicles in the city, mainly the polluting vehicles;
- decrease the vehicles parked in the city; the objective is to reach an equivalent to 400 vehicles not parked/ day (current estimate is 200 with LISELEC);
- increase the car sharing to a larger area in the city. The objective is to include the maximum number of areas in the urban community, which is in balance with the operating costs and the subventions the Urban Community is ready to put in the system;
- increase of yearly users (objectives 2000 in 5 years);
- reduce the CO2 emissions and GES;
- improve the security of citizens, residents or part time ones;
- promote the usage of clean vehicles for the whole population.

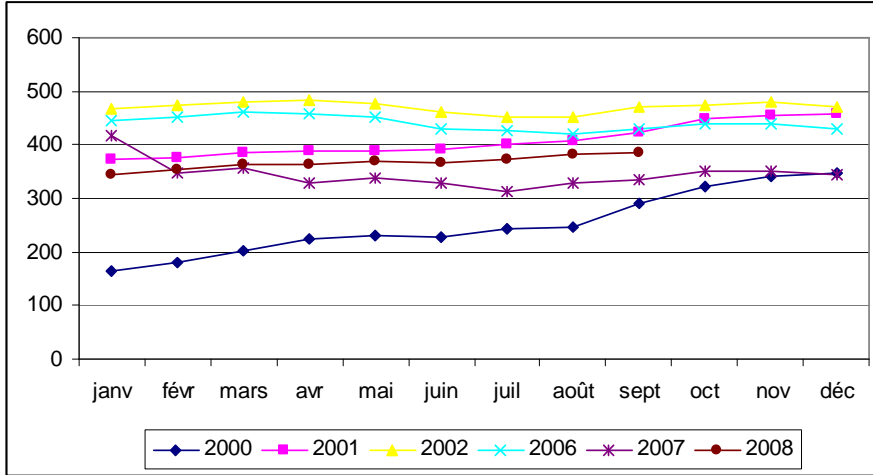
In order to reach these objectives, the La Rochelle Urban Community began to:

- define the global organisation of a new car sharing system on the urban community territory, integrated in the global passenger transport system, using up to date vehicles and technologies;
- find a contractor who will operate and develop the system according to the previous specifications and in cooperation with the urban community ; this also means controlling and if necessary improving the operation modes;
- enhance, from the design and the exploitation phases, a methodology which will help the design and the deployment of equivalent car sharing systems in medium sized cities in Europe;
- trial a carpool service.

2.1.3 Achievements

The main results of the project are:

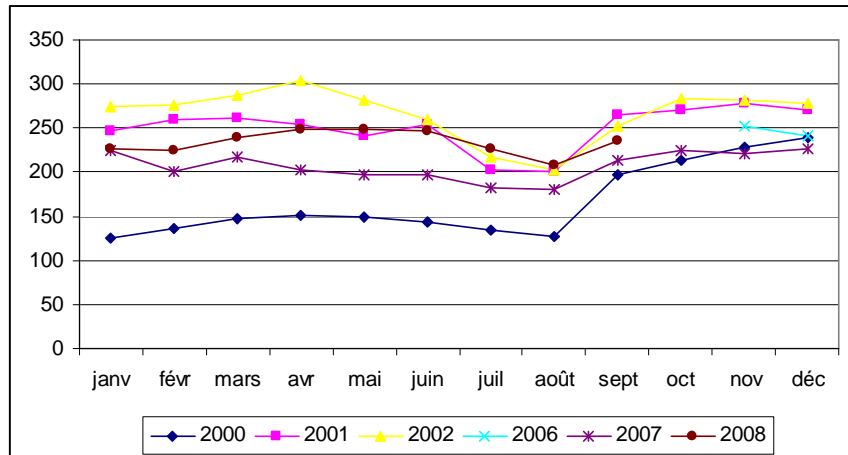
a) The increase of LISELEC customers.



Evolution of number of customers per year

The average number of subscribers was 445 in 2006; due to the encountered technical problems, this number went down in the first months of 2007 (average of the year 340). This trend was reversed one year later and as shown below the number is growing.

The actual users curve confirms that a large part of the subscribers are students and citizens of La Rochelle who take holidays in summer; it shows also that there are few tourists subscribing during this period.



Number of actual users per month

b) *The extension of the LISELEC stations number by:*

- the development of a design aid tool which allows to predict a profitable organisation according the foreseen customers and the strategies of the local authorities;
- An associated methodology, to help designers of car sharing systems to evaluate different configurations and organisation of the future car sharing in the city.
- the creation of a virtual station mode for the whole hypercentre of the city.



Blue: existing Red: future

c) *The integration of LISELEC in the global transport system in La Rochelle with a new unique identity for ALL public transport modes*

The new network offer in La Rochelle is called “Yélo”. First Yélo aims to achieve complete multimodality: with a unique smartcard users can access buses, self-service bikes, park-and-ride, boats, time-shared electric cars (LISELEC) or other modes of transport. This comes with a simplified pricing system tailored to all user categories (*cf- measure 7.2*). In that context, the new single smartcard which has been developed through this measure is key to identify all the modes of transport included in the Yélo offer, underscoring their unification and thus the possibility of using all of them with a single card.



d) The increase of clean vehicles' usage for the whole population.

Two types of clean vehicles were experimented and are currently used in LISELEC:

- 3 GEM cars which introduced a quite different approach to urban transport;
- 3 Berlingo, electric utility vans shared with ELCIDIS platform (see measure 10.1) to answer a demand for goods transportation by craftsmen, shopkeepers and even citizens.



One of the new vehicle : GEMCAR



Car sharing for goods transport

Other vehicles have been tested (the Aixam in July 2008); but this vehicle did not meet the requirements for car sharing use in an urban environment. The Think vehicle will be tested at the beginning of 2009.



the Aixam vehicle: tested in July 2008



The Think car to be tested in 2009

- e) A design aid tool which allows to dimension a profitable organisation according the foreseen customers and the strategies of the local authorities;
- f) The creation of a carpool service with a dedicated website. Also to increase the number of employees using carpooling for their work-home travels.

2.1.4 Implementation and operation actions

2.1.4.1 Preliminary Study

An initial analysis and review of the existing system was commissioned. This aimed to define the extended strategy to be set up in order to continue the LISELEC system. The main results concerned the following points:

- The area covered by LISELEC was too small, only 1/3 of the city was potentially concerned by this transport opportunity ; this was potentially a severe limit to the profitability of the organisation;
- The management by the city introduced barriers since administrative constraints restrained the commercial development;
- The technologies used for the supervision and the cars were becoming out of date and quite difficult to maintain which could lead to difficulties in a near future;
- Then new exploitation conditions should be set up in order to continue LISELEC.

All these conclusions lead to the decision to find an independent operator to manage the day to day implementation of LISELEC. The next step was then to organise a specific call for tender.

2.1.4.2 Call for tender

This task was a very important issue in the process of re-launching the LISELEC activities. Since one of the main reasons for the system not functioning correctly was linked to the operator, it was necessary to find a company which will be really involved in the rebirth of the platform.

The first point was to find the best appropriate way to establish a perennial relationship between the operator and the Urban Community. An innovative partnership was set up, for the first time in France in this domain: the "Délégation de Service Public"; this type of contract allows the authority to delegate the operation of a public service to a private company. It was done at the same time for 3 new mobility services: LISELEC operator, Urban Freight management (ELCIDIS) and Electric and Hybrid buses operator in La Rochelle. So the same company would have the responsibility over these 3 areas. Apart from the obvious commonality of electric motorisation, other convergent points could be examined, such as for the goods transportation, the use of buses at non peak hours for transporting goods, the sharing of vans between ELCIDIS and car sharing subscribers,.....

According to the French law, the tender lasted 10 months:

- First declaration of interest call was launched in December
- Specification book was realised between September and January
- It was sent to the short listed companies in February
- Answers to the call arrived in April
- Negotiations and adaptations went up to the end of July
- The choice was made public in September.

The operation started on the 1st of November.

2.1.4.3 Technical actions

In order to set up a new improved and profitable organisation several technical actions were launched:

- The definition of new principles. LISELEC was based on a one way travel which made it difficult to balance in real time the number of vehicles available at each station; this induces extra costs which penalised the profitability. So price incentives have been set up to promote the use of the return travels: users pay less if they bring the vehicles back to the station from which they departed. This was also in line with the results of surveys and practices which showed that the majority of users came back to the origin of their travel. Surveys were conducted in order to have a good view of the requirements and wishes of users and potential customers on the area of La Rochelle. Several target groups were studied, defined according their nature (students, residents, tourists,) and the location in the city (different zones).
- A new supervision system was studied allowing more efficiency and more functionality for the customers as well as the operator. The main changes lead to:
 - Central booking and help desk;
 - GPS follow up of vehicles;
 - Real time connection with the car, allowing the user to alert the Central from anywhere;
 - Smartcard system to login the car;
 - The implementation of new station;
 - In the future the possibility to connect the users through SMSs.
 - Although there are not many opportunities, new vehicles were tested; the first implemented were the GEMCARs which brought a new approach of urban transport.
 - The integration of LISELEC in the global transport system in La Rochelle to complete the Public transport facilities; this integration concerns:
 - The use of the same smartcard to enter the vehicles as to use the buses and other transport facilities ; this went along with tariffs integration
 - The availability of vans to transport goods
 - The physical integration, i.e. the availability of vehicles at bus lines ends or P+R car parks
 - The Business Travel Plans to involve enterprises and administrations in the development of car sharing among their employees, for business or private travels
 - The development of a decision aid software tool; this lead to the definition of a methodology and a software tool based on XL which helps local authorities in the definition of a car sharing system suitable for their cities. These according several criteria such as :
 - Local authorities strategies (social, environmental, economical aspects)
 - Area covered and links with other transport resources
 - Management policies and speed of the deployment

2.1.4.4 Implementation of Carsharing

The implementation went along several phases which were coordinated by a special Steering Committee which comprised of politicians and technicians from the transport department of La Rochelle, representatives of the operator's company and from EIGSI.

System specifications

These specifications concerned the various technical actions mentioned above as well as the improvements of the old system (see below). For each, a detailed implementation was realised showing resources and costs.

Updating the old system

Before launching the new tools and during the call for tender and specification phases, it was necessary to make the current LISELEC function in order to keep customers and to prepare the implementation of the new organisation. Several maintaining actions were engaged concerning:

- The vehicles from technical aspects such as the management of the ageing batteries to more customer oriented aspects like the facilities in the car;
- The supervision system in which several parts had to be replaced in order to keep it going;
- The stations which had to be renovated;
- The introduction of new cars.

Deployment of new organisation

The new organisation was launched progressively according to the planning of the technical actions mentioned above.

2.1.4.5 Implementation of carpooling

A carpool service has been implemented via the creation of a website (www.covoiturage17.com), in partnership with the urban communities of Rochefort and Plaine d'Aunis. The carpool website has been promoted in special event such as the Trade Fairs, Student Fairs, the European Mobility Week act...



Legal aspects have been considered in order to draw up a charter of good conduct between the users of the service, the service itself and the Urban Community of La Rochelle. Moreover, the systematic verification of the driving licence and automobile insurance has been cancelled providing the service with more spontaneity.

2.1.4.6 Promotion of carsharing and carpooling

Several promotion actions were engaged concerning:

- the customers to fidelise them, with direct incentives;
- prospects and potential users through adverts in several media and maritucularly the cars;
- organisations through the Business Travel Plan campaign organised by La Rochelle Urban Community.

2.1.5 Conclusions

CARSHARING

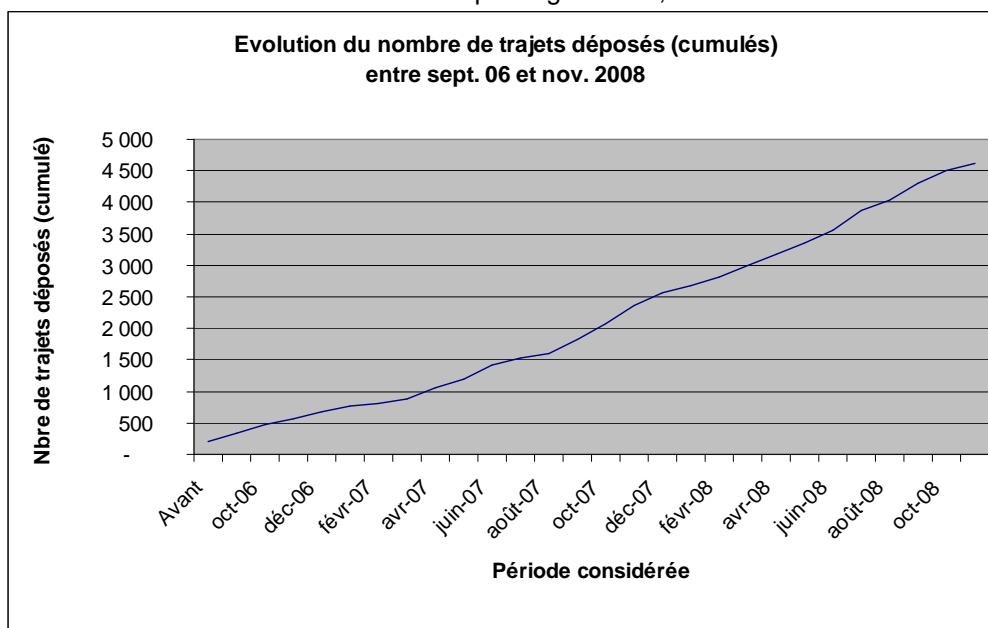
Several studies followed by experimentations in real conditions were conducted to find a simpler pricing strategy to meet, as much as possible, the customer's needs: adapted pricing offer distinguishing "one way" and "return" trips; subscriptions for short or long duration, in connection with other transport modes of La Rochelle Urban Community, In fact, one of the biggest problems with carsharing is the lack of making one-way journeys. It means that those needing to go a short distance for the day it can cost 50 euro or more, depending on your carsharing outfit. If this problem can be solved, then people will open the floodgates to new people who want to carshare.

Furthermore, there are still many difficulties to find new homologated electric vehicles in France, and, at the same time, the obsolescence of the vehicles is, more and more, a reality.

In the same manner, we all know that Car Sharing is the "missing link" in our urban transportation systems. The biggest determinant to vehicle use is vehicle ownership. Car Sharing helps people kick the car-owning habit, without the requirement not to have access to a car, and with the financial reward of saving money. Car Sharing should be an important option in every major urban centre. While not a magic wand to solve all traffic and air quality problems, especially commuter-related issues, it is an important new tool that can deliver real benefits quickly from primarily market-based capital. Anyway, we have to remind that an effective use of car sharing is possible only if public policy assure a combined mobility system in the city: a combined mobility can be ensured only if is really possible to combine busses, trains, trams, bicycles and cars easily and in any sequence. For this reason, we consider as a success, the redefinition in La Rochelle Urban Community of a global PT network, based on one territory and managed by two key operators.

CARPOOLING

With more than 4600 travels submitted in the carpooling website, this service has a real success.



Surveys carried out in order to measure the satisfaction of the users of the service turned out to be positive: a 30% of the users are satisfied about the website and a 60% are quite satisfied. This study revealed that people use the carpooling service mainly for economical and ecological reasons. A 70% uses it for home-to-work travels.

3 PRESTON

3.1 PROMOTION OF CAR SHARING¹ AND CAR CLUBS²

3.1.1 Context

Preston City Centre has a high level of car use, but recent research carried out as part of the CIVITAS SUCCESS project Work Package 9.3 has identified car sharing/club as a potential solution for some sections of the public. South Ribble has car ownership and use levels that are particularly high and comparable to West Coast America.

Car clubs have been established with some degree of success throughout the UK and in some cases in towns and cities that are comparable in both geography and population to Preston. Often these clubs operate as solely commercial enterprises with no financial input from transport or planning authorities.

There are no car sharing/club facilities in the Preston CIVITAS area, but a few privately owned car pools are run by the larger businesses. It is therefore believed that a car club service could be introduced to serve the general public, businesses, higher education establishments, major healthcare providers and new residential developments within the city.

3.1.2 City objectives

For the local authorities in Preston, car sharing and car club objectives are :

- Demonstrate the viability of a car club scheme in central Preston linked to local employers, educational establishments or new residential areas. Promote the concept of car clubs, with the aim of one or more car clubs being established. (Change users' behaviour with regards to owning and using vehicles)
- Change users' behaviour with regards to owning and using vehicles.
- Increase car sharing for journeys both wholly within the city and crossing city boundaries.
- Reduce single-occupancy car journeys.

¹ **Car Sharing** in the United Kingdom is used to refer to ride sharing and mean the shared use of a car for a specific journey, in particular for commuting to work, often by people who each have a car but travel together to save costs (like carpooling)

² **Car club** is a different expression, used in UK, to *named a carsharing organisation*

3.1.3 Achievements – Car clubs

With the backing and support of Lancashire County Council, Preston City Council and The University of Central Lancashire it was hoped that a car club provider would be prepared to operate in Preston. After a tender/expression of interest exercise, advertised nationally, only one organisation expressed an interest in operating in the city. After long negotiations the interested organisation decided that a major financial 'grant' would be needed in order for them to operate successfully. This grant was outside the reach of the three parties and negotiations came to a conclusion.

As there was still interest in taking the car club forward the partnership engaged with another supplier who was new to the UK market, outside London. A financial model was presented but this still required considerable support and input from the partnership and it was not pursued by either party.

Several target groups have been identified, some of them were already well known (like students or shopkeepers) new ones have been considered:

- Local businesses.
- University.
- Hospital.
- New residential developments.

Other options have been explored such as multi-organisation car pools which is still a possibility, using the sharedwheels branding.

3.1.4 Implementation and operation actions – Car clubs

Attempts to implement the measure were carried out in the following stages:

Stage 1: Expressions of interest - Adverts placed in trade press, November 2006.

Stage 2: Expressions of Interest sought (February 07 - April 07) – Letters describing the scheme requirements were sent to 5 CarPlus (www.carplus.org.uk) accredited commercial car club operators operating in the UK and proposals were sought from interested operators.

Stage 3: Proposal details presented (May 07 – Jan 08) – Two operators presented their proposals to LCC, PCC and UCLan representatives to establish and operate 6 cars, initially, in Preston with 2 cars based at each partner's site.

Stage 4: Business models evaluated (June 07- Jan 08) - Two different business models were presented and evaluated; one based on a Guaranteed Revenue Scheme (GRS) per car per month and the other based on capital requiring up-front financial support from the partners. Both schemes were deemed impracticable for Preston because of the large financial commitment required.

Stage 5: Alternatives investigated (Feb 08 – March 08) – A proposal from a recently formed Community Interest Group was received and evaluated. This was also a GRS and whilst the scheme was deemed achievable the operator lacked operating experience and financial support.

Further discussions have taken place with the Community Interest Group who have since received supportive funding from the DfT. A revised plan has been presented which is more financially acceptable to the partnership. This will provide each partner with a pool car facility Monday to Saturday daytimes and the City area with a Car Club in the evening and at weekends. This proposal is being considered and a business case is being developed by all parties but is unlikely to be in place within the CIVITAS SUCCESS timeframe.

Car Club not established within the timescale of CIVITAS SUCCESS – Neither of the commercial operators was deemed suitable for Preston. The GRS required revenue per car per month which was at a level that was felt to be unrealistic for Preston. The capital based model required a significant financial input from the partners towards the establishment of the car club which the partners felt could not be justified.

3.1.5 Conclusions – car clubs

Partnership - the County Council, City Council and the University working in partnership was seen positively throughout the project and all three partners have stated that they are keen to continue to work together towards a viable solution for Preston.

Central funding - Until funding is provided by the DfT for establishing and operating car clubs in smaller cities in the UK, commercial operators will not be forthcoming, unless funding is provided at the local level and this public spending can be justified to residents.

Small, locally run car clubs, with restricted membership for partner organisation employees only, can be established using the telematics available or existing pool car facilities at organisations for booking and accessing vehicles, before being rolled out to the public.

The final proposal from the Community Interest Company is being reconsidered with a positive view for the future development of a jointly operated car club in the city. The business case is being developed but it is unlikely to be delivered within the timescales of the CIVITAS Success project, but CIVITAS has brought the partnership approach to fruition.

3.1.6 Implementation and operation actions – Car Sharing

Prior to 2005 Lancashire County Council developed some car sharing software that could be utilised on individual companies intranet sites including that of Lancashire County Council. As requirements for the software developed it was felt it was beyond the initial scope of the product to continue to develop it internally and a supplier was sought to procure the software that could be developed for intranet and internet sites.

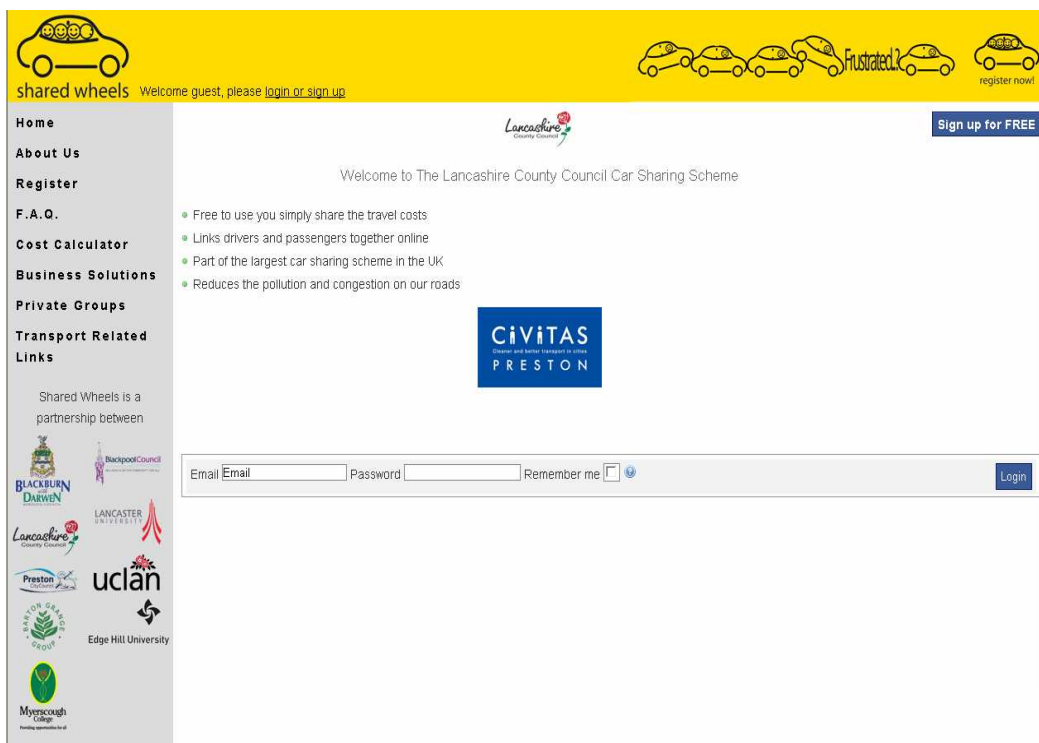
The implementation plan for the development of Car Sharing was as follows:-

Stage 1: Develop a partnership: Create a partnership with Lancashire County Council, Blackpool Council, Blackburn with Darwen Council and Lancaster University, who all had a desire to procure software as part of their travel planning strategies. Economies of scale and a common brand were seen as a stronger promotional tool in the area.

Stage 2: Evaluate business models: Interviews took place with 3 prospective suppliers of suitable software to ascertain which was most suitable for the partnership.

Stage 3: Select suitable supplier based on cost and experience of car sharing web site developments and coverage throughout the UK to ensure the most suitable site was chosen.

Stage 4: Develop brand: once a supplier had been procured a launch plan was developed between partners: Brand identity and image developed along with name. www.sharedwheels.co.uk.



Stage 5: Marketing: A marketing plan was developed for the site and launched covering the CIVITAS area and also region and nationally as part of the wider liftshare.com site. This plan was focussed on major employer in the area including Lancashire County Council, Preston City Council, and major health employers. Targeted leaflets, flyers and drinks mats were distributed.

Promotion of the website was especially relevant with the development of Business Travel Plans in the CIVITAS area.

Stage 6: Ongoing works: ongoing marketing support and advertising has continued for the site to develop users. Targeted marketing has taken place in 2008 in the CIVITAS area. A radio advert was aired throughout January 08 and a considerable number of new users registered with the site. A further short radio campaign is being actioned in December 08 to generate additional registrations. To coincide with National liftshare day, in June 08, a range of air fresheners were produced that were distributed to businesses and made available free of charge via the website.

Example of the Marketing – Air Fresheners June 2008



A car (pooling) sharing system was set up in Lancashire (covering Preston) as part of the SUCCESS project. It is operated on behalf of Lancashire County Council and other organisations by the company Liftshare.

There are now almost 2700 registered users at <http://www.Sharedwheels.co.uk>. The car sharing website has been promoted in conjunction with Business Travel Plan services of Lancashire County Council.

3.1.7 Conclusions – car sharing

www.sharedwheels.co.uk has been a success as it is built on a partnership and is part of a wider network of car sharing schemes throughout the UK. It has been successfully marketed in the CIVITAS area but this marketing support will be required to continue if it is to continue to grow and generate of reduction of single occupancy car journeys into cities. It must also be marketed in new and imaginative ways and be developed to include more leisure car sharing opportunities utilising the website to its full potential.

4 GENERAL CONCLUSIONS

Some regards on the carsharing experience

Carsharing refers to automobile rental services intended to substitute for private vehicle ownership. It makes occasional use of a vehicle affordable, even for low-income households, while providing an incentive to minimize driving and rely on alternative travel options as much as possible. It requires these features:

- Accessible (i.e., located in or near residential neighbourhoods).
- Affordable (reasonable rates, suitable for short trips).
- Convenient (vehicles are easy to check in and out at any time).
- Reliability (vehicles are usually available and have minimal mechanical failures).

Carsharing is a middle option between having no vehicle and owning a private automobile. The table below compares personal transportation options. Carsharing offers medium convenience, and has low fixed costs and high variable costs. Private vehicle ownership offers the most convenience, has the highest fixed costs and lowest variable costs. Conventional vehicle rental businesses are not intended to substitute for private vehicle ownership. They are located at transportation terminals or commercial centres and priced by the day, and so are relatively expensive for individual short trips. They generally have high daily rates but low variable costs. Taxis are relatively convenient and have no fixed charges but the highest variable charges. Public transit has moderate to low convenience (depending on location), modest to low costs.

Vehicle Use Options Compared: convenience and price of five common travel modes

Criteria	Carsharing	Private Ownership	Conventional Rental	Taxi	Public Transit
Convenience	Medium	High	Varies	High-Medium	Medium-Low
Fixed Charges	\$100/yr	\$2,000-4,000/yr	None	None	\$600/yr max
Time Charges	\$1.50/hour	None	\$20-40/day	None	None
Mileage Charges	20-40¢	10-15¢	5-10¢	\$1.00	21¢

Source (TDM Encyclopaedia Victoria Transport Policy Institute)

How it is implemented

Carsharing organisations can be cooperatives or private businesses. Cooperatives sometimes receive grants to cover start-up and administrative expenses. Some Carsharing services are established at multi-family residential cooperatives as a service for users. Station cars are often implemented by public transit agencies. Governments can provide various types of support and incentives to help develop Carsharing services, including promotion, funding, favourable parking policies, incorporating Carsharing into public organisations and development projects, and favourable taxi.

Benefits and costs

Benefits include:

- Increased consumer choice and financial savings.
- Increased affordability for lower-income drivers who occasionally need a vehicle.

- Reduced per capita annual mileage, resulting in reduced congestion, road and parking facility costs, crashes, pollution and energy use.
- Reduced residential parking requirements and support for higher density residential development.

Costs are primarily related to start-up and administrative costs of Carsharing organisations.

Benefit Summary Rating from 3 (very beneficial) to –3 (very harmful). A 0 indicates no impact or mixed impacts.

Objective	Rating	Comments
Congestion Reduction	2	Reduces total automobile use.
Road & Parking Savings	2	Reduces total automobile ownership and use.
Consumer Savings	2	Reduces total transportation expenditures.
Transport Choice	3	Makes driving more affordable.
Road Safety	2	Reduces total automobile use.
Environmental Protection	2	Reduces total automobile use.
Efficient Land Use	2	Supports reduced automobile ownership.
Community Livability	2	Reduces total automobile use.

Source (TDM Encyclopedia Victoria Transport Policy Institute)

Equity impacts

Carsharing is generally available to anybody who meets basic requirements, although only people who live in neighbourhoods with such services are likely to use it. Carsharing services may require subsidies to become established. Carsharing tends to increase equity by improving the mobility options of people who are transportation disadvantaged, and by allowing lower-income drivers significant financial savings compared with vehicle ownership (Bonsall, 2002). It can help provide basic mobility under some circumstances.

Equity Summary Rating from 3 (very beneficial) to –3 (very harmful). A 0 indicates no impact or mixed impacts

Criteria	Rating	Comments
Treats everybody equally.	1	
Individuals bear the costs they impose.	-1	May require subsidies to become established.
Progressive with respect to income.	3	Benefits lower-income drivers.
Benefits transportation disadvantaged.	1	Benefits some transportation disadvantaged people.
Improves basic mobility.	1	Improves occasional access to an automobile.

Source (TDM Encyclopaedia Victoria Transport Policy Institute)

Applications

Tends to be most effective and appropriate in higher-density, lower- and middle-income residential areas where there are good alternatives to driving. It can also be implemented in commercial centers and industrial parks

Application Summary: ratings range from 0 (not appropriate) to 3 (very appropriate)

Geographic	Rating	Organisation	Rating
Large urban region.	3	Federal government.	1
High-density, urban.	3	State/provincial government.	2
Medium-density, urban/suburban.	2	Regional government.	2
Town.	2	Municipal/local government.	3
Low-density, rural.	1	Business Associations/TMA.	3
Commercial center.	3	Individual business.	3
Residential neighbourhood.	3	Developer.	2
Resort/recreation area.	3	Neighbourhood association.	2
		Campus.	2

Source (TDM Encyclopaedia Victoria Transport Policy Institute)

Relationships with other transportation demand management strategies

Carsharing supports and is supported by Transportation Demand Management TDM strategies that increase consumers travel choices such as Transit Improvements, Ridesharing and Nonmotorized Transport, and by land use management strategies such as Transit-Oriented Development, Location Efficient Development, Car-Free Housing, Taxi Improvements and Campus Transport Management that create less automobile-dependent communities. Parking Management can allow residents who do not own an automobile to avoid paying for parking they do not need, which increases the consumer savings that result from Carsharing. Vehicle Costs describes the full costs of owning and operating an automobile, and the cost savings that can result from reduced driving. An integrating carsharing and public transit planning and marketing activities is recommended.

Stakeholders

Local and regional government agencies and non-governmental organisations can help establish Carsharing organisations, and support complementary TDM strategies. Carshare programs can be incorporated into various types of developments. State and provincial governments can help overcome problems obtaining vehicle insurance. Businesses and cooperatives can provide Carsharing services.

Barriers to implementation

A major barrier is the need to establish and maintain a critical mass of users (typically 30 members or more) in individual neighbourhoods. Carsharing cannot develop until enough potential users in each area are familiar with the concept, understand how it can benefit them, and are willing to commit themselves to a Carshare organisation. This often requires education and marketing. Carshare organisations often require seed money to become established.

Lessons learnt

- Structure Carshare organisations to meet the needs of the community. Larger cities can support much larger Carsharing organisations than smaller communities.

- Implement Carsharing in conjunction with other TDM programs that improve transportation choices. It is particularly appropriate as part of transit encouragement efforts.
- Find ways to minimize administrative and overhead costs.
- Provide a variety of pricing options to serve different types of users (infrequent, frequent, extended trips).
- Structure rates to include both time and mileage fees, so the organisation will not lose money with either a high-mileage trip during a short rental period, or low-mileage trip during a long rental period.
- Develop partnerships with organisations that are interested in reducing vehicle ownership, promoting public transit use, or providing occasional vehicle access to a particular group.
- Use innovative marketing.

Some regards on the carpooling experience

Carpooling has minimal incremental costs because it makes use of vehicle seats that would otherwise be unoccupied. It tends to have lower costs per vehicle-mile than public transit because it does not require a paid driver and avoids empty backhauls. However, *carpooling* is generally only suitable for trips with predictable schedules such as commuting or attending special events.

Comparing Travel Modes Different modes have different attributes. Modes with paid drivers tend to have relatively high operating costs. Vanpooling and carpooling have low cost per passenger-mile, but are only suitable for prescheduled trips, such as commuting.

	Driver	Vehicle Ownership	Vehicle Size	User Schedule Flexibility
Conventional Public Transit	Paid	Public	Large	Flexible
Paratransit	Paid	Public	Medium	Some flexibility
Vanpool	Unpaid	Group Rental	Medium	Inflexible
Carpool	Unpaid	Personal	Small	Inflexible
Taxi	Paid	Business	Small	Flexible

Source (TDM Encyclopaedia Victoria Transport Policy Institute)

Carpooling is one of the most common and cost effective alternative modes, particularly in areas that are not well served by public transit.

Carpooling tends to experience economies of scale: as more people use the service the chances of finding a suitable carpool or vanpool increase significantly. As a result, success depends on promotion programs that encourage a significant portion of potential users to register for possible participation.

Carpool programs typically provide carpool matching, vanpool sponsorship, marketing programs, and incentives to reduce driving.

Carpool incentives may include [HOV Priority](#) (e.g., HOV highway lanes), preferential parking spaces, and awards. Some employers offer [Commute Financial Incentives](#) such as a cash payment to employees who carpool, or a voucher that covers vanpool fees, provided as an alternative to a free parking space. Because they have significant economies of scale (the more people who register, the more effective they are at successfully matching riders), it is helpful if one well-publicized ride matching program serves an entire geographic region.

How it is implemented

Carpool programs can be implemented by an individual employer as part of a [Commute Trip Reduction](#) program, by a [Transportation Management Association](#) or a [Campus Trip Management](#) program, a transit agency, or by a regional transportation agency. [Marketing](#) can inform potential carpoolers about the service.

Larger ride matching programs use computerized partner matching systems that take into account each commuter's origin, destination, schedule, and special needs. Smaller programs may simply match potential partners by hand, or use ride notice boards.

Travel impacts

Experience indicates that carpool programs typically attract 5-15% of commute trips if they offer only information and encouragement, and 10-30% if they also offer financial incentives such as parking cash out or vanpool subsidies.

Carpool programs that include incentives such as [HOV Priority](#) and [Parking Cash Out](#) often reduce affected commute trips by 10-30%. If implemented without such incentives travel impacts are usually smaller.

Benefits and costs

Carpooling can reduce peak-period vehicle trips and increase commuters travel choices. It reduces congestion, road and parking facility costs, crash risk and pollution emissions. Carpooling tends to have the lowest cost per passenger-mile of any motorized mode of transportation, since it makes use of a vehicle seat that would otherwise be empty. Carpooling provides consumer financial savings (as estimated in the table below), and time savings if there are [HOV Priority](#) facilities. Crash risk declines due to fewer vehicles on the road.

Carpooling program costs consist primarily of administration expenses.

Carpooling may encourage urban sprawl by making longer-distance commutes more [affordable](#). Transit agencies sometimes consider rideshare as competition that reduces transit ridership. For this reason it is important to track the travel alternative that rideshare passengers would otherwise use.

Applications

Carpooling programs can be appropriate in most geographic areas, and tend to be particularly effective at serving relatively dispersed, suburban destinations. They can be implemented by businesses, [Transportation Management Associations](#) and other business organisations, local and regional governments. Regional programs are best, because they create a larger pool of potential users than ride matching at a worksite or local level.

Stakeholders

Carpooling programs require support by transportation and sometimes transit agencies, by [Transportation Management Associations](#), or by individual employers. It may involve adoptions of special policies by employees and labour organisations to accommodate and support ridesharing and flexitime.

Barriers to implementation

Carpooling programs require sufficient funding to provide efficient matching services. Effectiveness depends on appropriate incentives: HOV facilities, financial subsidies, parking management, and marketing. Marketing efforts may be needed to inform potential ridesharers about this option.

Lessons learnt

Several ways of improving and increasing vanpooling have been identified:

- Ridesharing should be implemented as part of a comprehensive TDM Program.
- Ridesharing programs should include ridematching services, HOV priority, and other Commute Trip Reduction strategies, such as Commute Financial Incentives.
- Ridematching services should cover a large geographic area (such as an entire region) in order to create the largest possible pool of users.
- Transportation agencies, businesses and employees should all be involved in planning Rideshare Programs.
- Provide incentives to attract and retain rideshare users, such as mileage-points and Vehicle Insurance Discounts.

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Project Coordinator

Jean Marie GRELLIER, Directeur du service Transport et Mobilité,

e-mail: Jean-marie.grellier@agglo-larochelle.fr

La Rochelle Urban Community Site Manager

Matthieu GRAINDORGE, responsable projets européens, service Transport et Mobilité

e-mail: matthieu.graindorge@agglo-larochelle.fr

Preston Coordinator

Stuart WRIGLEY, Director Strategic Planning & Transport,

e-mail: Stuart.Wrigley@env.lancsc.gov.uk

Preston Site Manager

Christopher Hadfield,

e-mail : Christopher.Hadfield@lancashire.gov.uk

Ploiesti Coordinator

Cozia-Roxana GEORGESCU, Head of European Integration Department,

e-mail: pci@ploiesti.ro

Ploiesti Site Manager

Milena PERPELA, European Integration Department,

e-mail: al21@ploiesti.ro

Project Advisor

David BLACKLEDGE, Corporate Director

e-mail: david.blackledge@ttr-ltd.com

Project manager

Marie LAUNAY, Directrice Euro Project Consult,

e-mail: marie.launay@europrojectconsult.eu

Technical Coordinator

Dominique BREUIL, Directeur de la Recherche,

e-mail: dominique.breuil@eigsi.fr



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