

The increasing development of carsharing in France

Robert Clavel – CERTU- Project manager

Mailis Floriet - Ville de Paris – Mission manager

Introduction

Carsharing schemes (or car clubs in the UK) can be defined as being a ‘pay-as-you-drive’ club, that offers members access to a vehicle without ownership. For policy makers too, there are a number of benefits from carsharing as it can promote the use of existing public transport systems; enhance mobility for the less well off; encourage higher density development; reduce energy use and emission levels from the transport sector; reduce the need for additional highway and parking capacity. Yet despite these numerous advantages, carsharing remains a relatively marginal mode of transport in many countries. The first large scale scheme began operating in Switzerland in 1987, and worldwide in 2007 there were still only roughly 350,000 members with 11,700 vehicles in 600 cities in 18 countries (although the trend does appear to be increasing exponentially)¹.

The aim of this paper is to investigate the development of carsharing in France, from its relatively late beginnings through the present and into the future. We’ll firstly make a definition of carsharing by describing the advantages and inconvenients. Secondly we’ll report the current position of carsharing schemes in France by presenting the different services, in particular the case of Paris where there is a strong will to develop carsharing. Thirdly, we’ll explore the future direction of carsharing in France by identifying the factors that can influence the development of carsharing schemes.

1. Definition of the concept

The basic idea of carsharing is that users share rather than own a car. Sharing a product has two implications. It performs a social function, because it requires the interaction and regulation of participating people, and it indicates that the participants can benefit in terms of

¹ Shaheen, S. A. and Cohen, A. P., Worldwide carsharing growth: An international comparison, *Transportation Research Record*, Journal of the Transportation Research Board, 2007

economic value of efficiency. In the broader sense the term carsharing denotes various empirical modes of operation. The meaning ranges from informal sharing within the neighbourhood, regulated by the unwritten laws of reciprocity, to the exclusively market orientated forms of renting or leasing cars.

In the narrower sense carsharing is characterised by an organisational structure, which offers a collectively owned car-park, usually distributed at several stations (most often in underground parkings) in urban residential areas. In order to participate the client of a carsharing organisation has to entry a deposit and sign a membership contract. Afterwards the client can book by telephone (or via Internet) a car, arranging pick-up time, duration and desired pick-up points. Each individual use is charged to a monthly balance, based on two components, hours of use and kilometres driven, with the rate varying according to type of car and the booked period of time. The service is accessible 24h/24, 7 days/7 without the constraints of private car (insurance, maintenance, fuel, parking).

In comparison to rental services, carsharing organisations offer some favourable features, which enables the user a more spontaneous access on the car :

- Stations near to of users homes (Car rental render only some central stations);
- Possibility of booking at every moment ;
- Booking times from 1 hour - or even the half-hour - upwards (Car rentals minimum period is one day).

Carsharing intends to substitute for private vehicle ownership and reduce car use. Unlike taxi or rental cars, which also render a car service, carsharing aims to be an everyday alternative for private car ownership, at least for those who have no car of their own or drive less. Carsharing has some comparative advantages against car ownership:

- It is cheaper than car ownership for infrequent drivers;
- It makes car costs more transparent;

- It offers different vehicles models;
- The client does not have to concern about the maintenance and insurance of the car or about buying a new car someday.

Carsharing users don't drive as much with a shared car as with a car of their own. This is because carsharing is mostly regarded as less convenient and because of the relatively high proportion of variable costs for carsharing usage. As carsharing organisations replace and reduce private car use they claim political support from urban policy makers and want to be regarded as part of public transport. But this means also that a carsharing organisation cannot act like any other market actor. In addition to pursuing the aim of market growth it has to ensure a reducing net effect on car use, otherwise it may lose its political assistance.

Carsharing organisations consider their vehicles as an alternative to a private car, but it is in fact only appropriate for people who don't have a regular demand on car use. Users of carsharing always have a high use of other means of transportation, except when carsharing substitutes for a second car. Carsharing is meant to close the gap, when public transport does not offer a satisfying service or when walking and cycling are not convenient. In addition carsharing is not the best choice for every trip which are made by car. Rental cars are appropriate for long distance trips, while taxis are preferable for short one-way trips. Thus carsharing will be mostly used for leisure, shopping, transport needs and short to medium distance weekend trips

2. A large set of services²

The first carsharing scheme in France was trialled in 1971, by Procotep in Montpellier. This experience failed because of legal barriers, and because a lack of quality control and efficient management did not provide a sufficiently good quality of service. This was followed by Praxitèle in Saint-Quentin-En-Yvelines, which was an experiment using electric cars that ran from October 1997 to July 1999. It aimed at testing the self-service electric car concept (prototype) and analyzing the size and organization of the resources, the challenge facing the management and organization of service provision. It concluded that the concept of shared cars was mature for local use and widely differentiated clientele. However, it also encountered difficulties in accurately forecasting demand levels and faced fixed costs that were too high.

More successfully, the first surviving services were implemented in La Rochelle (Liselec) with electric cars, and Paris (Caisse Commune) both in 1999. Subsequently, schemes have been established in Clermont-Ferrand (Club ma voiture, 2000), Strasbourg (Auto'trement, 2001), Bordeaux (Autocomm, 2001), Marseille (Autopartage-Provence, 2002), Rennes (CityRoul, 2002), Lyon (Autolib, 2003), Grenoble (AlpesAutopartage, 2005), Montpellier and Nîmes (Modulauto, 2005), Paris (Carbox, 2006), Lille (Lilas, 2007), Paris (Mobizen and Okigo, 2007), Antibes (CitéVu, 2007), Nantes (Marguerite, 2008), Narbonne (Librauto, 2008), Poitiers (Otolis, 2008), and Toulouse (Mobilib', 2008).

² L'autopartage en France et en Europe – Etat des lieux et perspectives, Certu, 2008
<http://www.innovations-transport.fr/L-autopartage-en-France-et-en?lang=fr>



Figure 1: Towns with carsharing services in April 2008

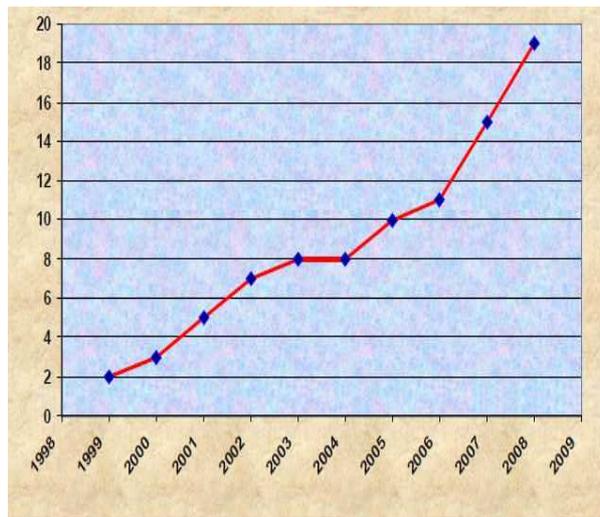


Figure 2: Number of services created each year

Clearly the year 2007 has been the most important year so far with more than nine schemes established. Most of these operate between 10 and 30 vehicles, while the more established

schemes in Strasbourg, Paris and La Rochelle have more than 50 vehicles. The Caisse Commune in Paris now has over 100 vehicles. In line with these figures, the majority of schemes have between 1 and 15 carsharing stations (with the largest in this group having between 10 and 15 stations). The exceptions are in Strasbourg and Paris which have more than 20 stations. Typically across France, each station houses between one and four vehicles. Interestingly, the survey found that some 11% of vehicles are electric and 4% run on CNG, while the remainder are petrol and diesel.

In April 2008, there were 9 400 members of carsharing schemes in France (i.e. between ten and 30 members per vehicle), thus a 57% increase from 2007. Of these, the Caisse Commune in Paris has 3,100 members and Autotrement in Strasbourg has 1,200. Meanwhile the well established provincial schemes (more than five years old) have memberships of between 350 and 600, while the most recent networks typically exhibit between 100 and 250 members. Typical carsharing members are aged between 30 and 45 years old, and half of users are from professional or white collar backgrounds. The average time of trip is 5 hours for an average distance of 50 km.

From the operator perspective, twelve of the schemes are privately operated (designated “SAS”, “SARL”, “SA”) while the local authority is a facilitator/supporter. Four schemes are SCIC – a public/private structure first designated in 2001 whereby the organisation pulls together wage-earners, users, volunteers, and local authorities within a territory to provide goods and/or services to respond to collective needs, and so create a social utility which is recognised by the Prefect and thus able to benefit from public assistance (e.g. grants from local authorities). Here, the local authority tends to be the initiator of the carsharing operation. One example is in Lille where the operator Lilas is a SCIC composed by Keolis, the Municipality of Lille, firms from the socially responsible economy, Caisse Commune (Parisian carsharing firm operator), wage-earners, and users. The other three schemes are as follows:

- In Lyon, the parking management company Lyon Parc Auto operates carsharing and is a SEM – i.e. a firm where the capital is held in majority by one or several local authorities;
- The scheme in Poitiers is operated by Otolis which is an EPIC – a public structure which provides an industrial and commercial service that cannot be fulfilled commercially by private firms;

- Alpes Autopartage in Grenoble is an association with a not for profit structure. Here, the local authority is a facilitator and supporter.

In terms of pricing structures, all of the schemes (apart from Mobizen in Paris which has only hourly-fees) have ‘fares’ based on monthly fees (on average 10,50 euros), plus a time-based fee (3,20 euros/hour) and a distance fee (0,28 euros/km).

Eleven of the 19 schemes are members of the *France Autopartage* network. This is a private organisation that was created in 2000 which aims to facilitate the development of carsharing in cities across France by providing technical assistance to operators and standardising some operational elements (France Autopartage, 2008). This allows:

- A common system of information management: membership databases, reservation planning software, Smart Card vehicle access systems, and automatic billing;
- A national call centre for booking and assistance 24 hours a day, seven days a week, 365 days of the year;
- Joint member services : allowing interoperability, preferential rates, etc.

Meanwhile insurance companies such as MACIF³ have recently developed attractive insurance products for eco-friendly transport modes (e.g. carpooling, clean vehicles, etc) and particularly carsharing vehicles. In addition, so far half of the carsharing schemes have developed joint ticketing partnerships with operators or local public transport services.

The lack of a clear definition of what carsharing is has dissuaded local authorities from supporting the mode and has led to a series of regulatory issues. These regulatory issues are as follows :

- There is a question as to whether carsharing is a form of public transport or not;
- There are issues to do with carsharing competes with taxis and rental cars;
- There are issues to do with how local authorities can offer incentives; and
- There are issues to do with whether carsharing vehicles can be allocated on-street and/or

³ <http://www.roulonspourlavenir.com/>

publicly owned off street parking spaces.

3. The case of Paris : a will to develop carsharing⁴

In Paris, the need to promote carsharing has been recognised since 2000 in the publication of the Urban Transport Plan of Ile-de-France. In the Transport Plan of Paris local authority, it is also expected to “encourage the development of new collective use of car”. The development of carsharing is considered as complementary to the use of other alternative transport modes, to promote sustainable mobility.

3.1 The parisian carsharing accreditation scheme

In february 2007, the city of Paris has implemented a carsharing accreditation scheme named “Autopartage Paris” . The aim of the municipality was to promote quantitative and qualitative development of carsharing : increase number of stations and users, improve density of the network and visibility of offer, and to guarantee quality of service;in a way that allows a coherence between services characteristics and goals of motorized trips control.

This accreditation scheme is inspired from a national charter⁵ on carsharing supported by GART and ADEME in 2005 which provides a carsharing standard. The national Charter consists of 10 recommendations for a carsharing of “general interest”. According to to this pioneer charter, carsharing is easy to use, simple, affordable, reliable and environmentally friendly. It is different from car rentals.

The parisian accreditation scheme is in accordance with this charter and is composed of different criteria concerning environmental values and quality of service. The label award is given by a special committee composed of ADEME, CERTU, regional environmental agency (Arene), and the local authority services. The committee checks up if the service proposed by

4

http://www.paris.fr/portail/deplacements/Portal.lut?page_id=8158&document_type_id=4&document_id=35956&portlet_id=19548

⁵ <http://www2.ademe.fr/servlet/KBaseShow?sort=-1&cid=96&m=3&catid=16314>

private carsharing operators is suitable to the label. Judgement is submitted to the Mayor of Paris, who issues accreditation to an operator.

In practice, the criteria of the label concern the flexibility of the service. Thus, the operator must guarantee at least 80% of the reservations; provide easily accessible vehicles (i.e. establish a minimum reservation time of 15 minutes); base its fare structure on both trip time and trip distance; develop solutions to encourage the use of public transport and soft modes; and use environmentally friendly vehicles (<140g CO₂/km).



Figure 3 : Label Autoparage Paris' logo

The lifespan of the label is 18 months.. Renewal of the label gives to the City of Paris the opportunity to reinforce (or change) its criteria. For example, the level of CO₂ emission should decrease from 140gr/CO₂ in 2007 to 120gr/CO₂ in 2010..

The City of Paris accreditation scheme approach was innovative in France. In fact it's the first french city which has several car sharing operators. In this way, the accreditation sheme was a tool to promote carsharing in a city where it is provided by multiple operators. Moreover the parisian users represent half of the french carsharing users. So far though, the label only exists in Paris. The proposition of law "national commitment for the environment" of "Grenelle de l'Environnement" plans to create a national label, but it has not been yet adopted.

In return to the accreditation scheme, the operators are able to receive different measures to support car sharing development :

- Communication on carsharing: the local authority communicate on carsharing principles, not on the commercial features;

- Rate reduction for public off-street parking areas;
- Provision of designated parking bays to operators. These on-street parking areas are made available for carsharing, as it is the case for the bikesharing service “Vélib”. The operator pays a charge per bay. The choice of on-street parking areas makes carsharing more easily available and provides the Parisians with greater diversity of means of transport.



Figure 4 : On-street parking areas

The label has been attributed to five carsharing operators since february 2007. At the beginning, two compagnies operated carsharing in Paris : Caisse Commune, founded in 1999 and pioneer of carsharing in France, and Mobizen founded in 2007, a start-up. Their succeeding development has been followed by major companies in the field of car rentals. In july 2007, a new operator of carsharing was born named Okigo: a joint-venture between the car hire company Avis and the park facility operator Vincipark. A few months later, the car hire Hertz has found the company ConnectbyHertz with a carsharing offer different from his

traditional car hire offer. At the same time, Caisse Commune has become a subsidiary of Transdev and Mobizen of Veolia Transport. The fifth carsharing operator which name is Carbox is dedicated to companies.

The five Parisian operators have implemented more than 150 carsharing stations and their 350 vehicles are used by 6000 members, in September 2009.

Companies	Rates
Caisse Commune	Subscription: 12 € / month + 5 € by booking + 1.99 to 2.99 €/ hour + 0.27 to 0.44 € / km
Carbox	Business : rates per hour and km Individual : rates per period of time (between 12PM and 2 pm; between 6pm and 9.30 am; week-end) + per km
Connect by Hertz	Subscription: 10€ /mois + 4€ /hour + 0.35€/ km
Mobizen	9 €/hour 200 km by booking (after 0,50€ per km).
Okigo	Subscription: 9,9 € /mois + 4€/ hour + 0.35€/ km OR 6€/hour + 0.5€/ km

Figure 5 : Example of rates (August 2009)

3.2 A survey about behaviours and representations

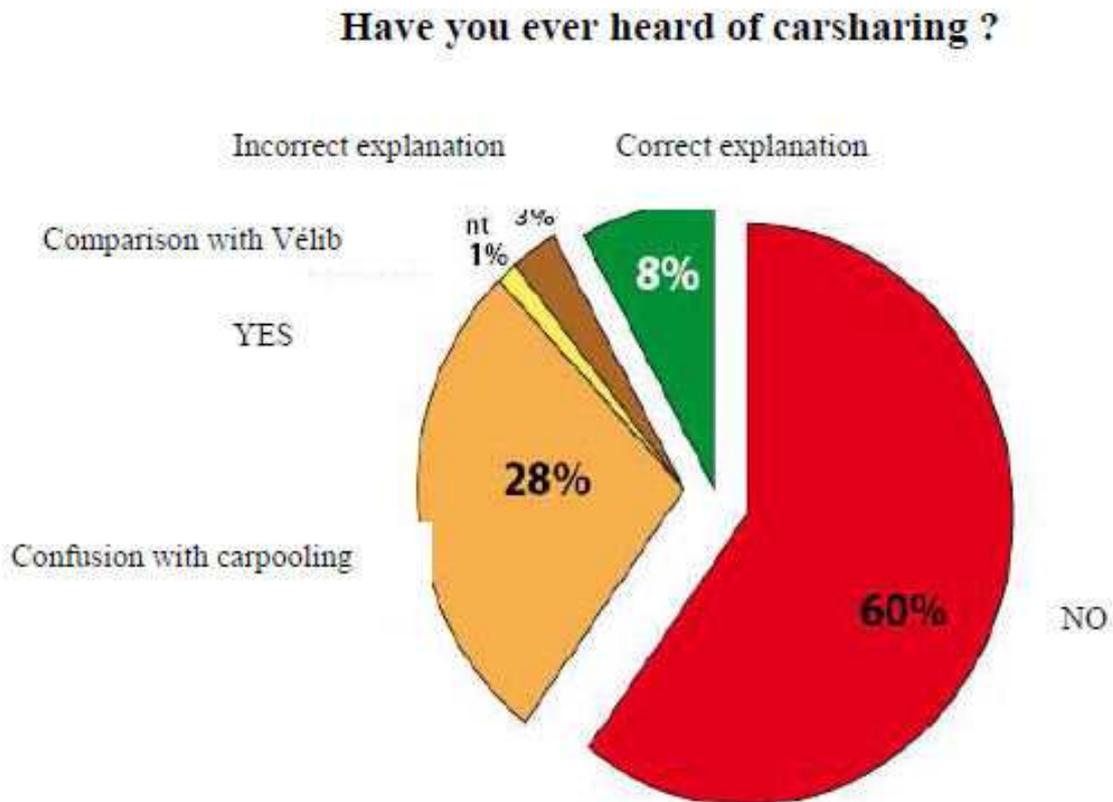
During autumn 2007, the city of Paris and the national environmental agency (ADEME) led a study on carsharing users and potential users. The aim of the study was to analyse users' behaviour and potential users' representations. This study was constituted of :

- a telephonic poll of 1001 Parisians representative of the population
- carsharing users questionnaire (Caisse Commune, Mobizen, Okigo) : 573 answers,

- 10 qualitative interview with carsharing users,
- 30 qualitative interview with representatives of companies.

3.2.1 Representations of carsharing among non-subscribers

The results demonstrated that carsharing was unknown by the Parisians with 60 % of the population who have never heard about carsharing and 28 % make the confusion with carpooling. The highest socio-professional categories were the most numerous to give the right definition (14% against 8% in average). At least those who didn't have a car were less informed than those who had one (63% against 58%). This results suggests that marketing efforts need to be stepped up significantly.



Source : Parisian survey, Paris municipality, Ademe, 6T, 2007

Figure 6 : Representations of carsharing among non subscribers

Once carsharing was explained, 40% of parisians declared that they could be interested to use this service. People would use carsharing to visit friends or family in suburban areas or to buy cumbersome objects. The most important criteria to use carsharing was the price (60%) and

the easyness of booking (26%).

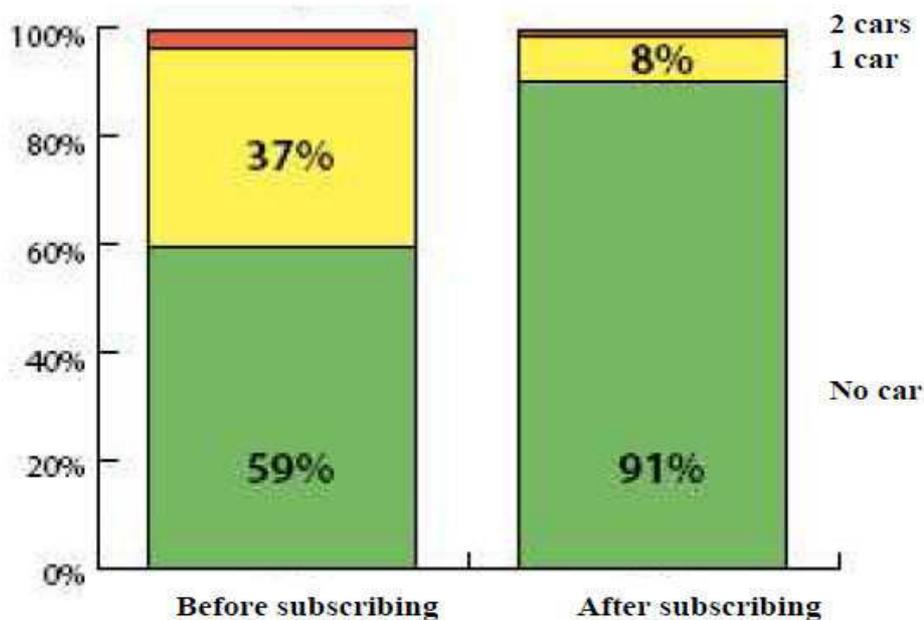
Among reasons for not having the intention to subscribe the most important was the fact that they already had a car (27%) or that they didn't feel the need (16%) to own a car in Paris.

In fact 26% of people declared that they had ever thought to get rid off their car, mainly for financial reasons (40%) and parking difficulties (18%).

3.2.2 Actual subscribers'profiles

The study demonstrates that parisians users were young (35-44 years old), 64% were men and their main feature was the highest socio-professional categories prevail : 77% had a upper diploma. In fact in Paris, the graduated represents only 27,1% of labor force.

Using carsharing has a huge effect on the motorization rate: before joining carsharing 37% of the sample owned a car, after only 8% of the sample own a car. Joining carsharing has an impact on miles driven with a reduction by 60% with 590 kilometers driven by month before joining and 200 kimometers after.



Source : Parisian survey, Paris municipality, Ademe, 6T, 2007

Figure 7 : Subscribers'rates of motorization

Users have joined carsharing after a change of life like new job, children, wedding, or relocation. The initial motivation is to leave the possession of car for an occasional use (particularly to go out of Paris at certain times or to go to areas with poor public transport offers), and to avoid constraints (congestion, difficulty of parking, stress, etc).

The information about carsharing offers come generally from the “rumour” (friends, radio, etc). Carsharing users are people who also combine its use with public transport, bike, traditional renting.

Because carsharing has a few number of users in Paris, the quality of service and cleanliness of vehicles are highly respected. With a huge development of carsharing, current users are afraid of a degradation of quality service, cleanliness of vehicles, availability etc..

Concerning the professionals, their motivations for having subscribed are : the cost and the easiness compared with traditional renting, more security than with motorbike. Carsharing has a potential for trips where public transport or bike aren't pertinent, or to carry cumbersome objects. The biggest part of trips are between Paris and the suburbs. Among the problems are mentioned : the problem of the distance between the firm and the carsharing station, the lack of punctuality of certain clients to return the vehicle and sometimes the lack of cleanliness of vehicles.

The biggest companies consider that carsharing isn't adapted to their constraints. However the small firms see several advantages in particular the reduction of parking areas, costs and the possibility to avoid the management of private fleets, which is expensive and takes a long time.

4. Elements of perspectives

From an **information perspective**, it is clear that more effort needs to be made to ‘spread the word’ about carsharing schemes at both at the user and the institutional levels. This would need to be done by individual schemes at the local level, but also in the form of awareness raising through advertising, news items, promotional events, and through policy guidance notes nationally. Such an approach would be helped by the moves to properly define what carsharing is.

A **juridical** analysis in 2007 shows that carsharing can correspond to the criteria of general interest : “carsharing activities respond to the criteria of general interest because they contribute to the protection of the environment, encourage the right of transport for everybody, and they are a complement to the public transport service”⁶. However, to be considered as a public service – which is not the case for the moment in France – a carsharing service would need to be organized by the public authority which can run the service by itself or delegate the activity. In the last case every operator would be able to respond to the bid for offer, providing it had the professional and financial capabilities. To address the regulatory issues, the proposition of law « national commitment for the environment » of “Grenelle de l'Environnement” plans a series of actions based on the Roland Ries proposition that aims to clarify the regulatory context facing carsharing. These include:

- Defining the activity of carsharing” : “The activity of carsharing is the common use of a fleet of vehicles by subscribers. Each subscriber can use a vehicle without a chauffeur for the trip of his choice and for a short time”;
- Creating a national ‘carsharing label’ awarded to carsharing operators who respect a certain number of conditions (way of access to the service, environmentally friendly vehicles, etc) ;
- Modifying the General Code of Local Authorities to allow/encourage local authorities to allocate parking spaces on the road (public surface) for carsharing vehicles;

⁶ PREDIT, Pour un développement de l'autopartage à grande échelle-Rapport final, JONCTION, Mars 2007

- Suggesting to local authorities that they consider carsharing when developing their Urban Travel Plan.

Such a package of measures is intended to create a favourable context for the development of carsharing as a credible alternative of transport.

It also seems likely that **partnership** working between car rental companies and parking providers will continue to develop, while the links to mobility agencies, public transport operators and shared bicycle operations remain to be exploited in terms of service integration e.g. combined ticketing arrangements, and physical positioning at public spaces at key transport interchange points.

Attracting employer organisations as clients also represents a means of increasing vehicle usage throughout the day, during working hours – typically a period when use by residents for example is fairly low. Benefits for the employer include : reduced need for a pool car fleet, reduced parking problems and an improved environmental image.

When considering financial ways forward, one way of overcoming the viability of ‘small scale schemes’ is to encourage operators to look for **cooperation at a national scale** to allow economies of scale to be generated for back office functions, buying vehicles, insurance and so on. Meanwhile companies would continue to develop services in large cities as now. This is in response to experience in Switzerland where carsharing did not become viable for several years and where currently there is only one company that operates on a national scale.

In terms of **spatial development**, the development of carsharing on the whole agglomeration can be operated in several means :

- The centre of towns concentrate economic and commercial activities, plus an important density of population which has told its interest for a carsharing offer (ex : shoppers, students, residents). So centre towns represent the first zones of development for carsharing. Two conditions are important : an easy access for users, an involvement of municipality in its management (for example as a client);
- The train-stations have a potential because they are located at the intersection of

several types of trips (urban, suburban, national, regional) and transport modes (bus, regional trains, taxi, car renting, bike). Thus carsharing can represent a complementary offer.

- Social housing areas are sectors where carsharing can be an opportunity to allow a specific population to have access to individual mobility (in particular when looking for job or training). However a social help will be necessary to facilitate the access ;
- Around economic and university activities areas, strong partnerships can be implemented with firms or other actors.

Conclusion

The main factors necessary for the successful development of a carsharing scheme would seem to be the existence of a sufficiently large potential market of carsharers coupled with the non-existence of a series of informational, regulatory and fiscal barriers.

There are certain barriers making that carsharing in France remains relatively undeveloped when compared with some other European countries such as Switzerland, Netherlands and Germany. Indeed, the concept is relatively new and there are still an ignorance about carsharing, a lack of national political support and legal issues to deal with, in particular the lack of a definition of carsharing. Besides, concerning operational reasons, most carsharing schemes currently in France are still too small to be commercially viable.

However, as for the future, it does now seem that with the recent political backing for the concept together with the proposed legal changes, that some of the major barriers preventing the mainstreaming of carsharing in France have been removed and that the rapid growth in the numbers of operators, members, stations and vehicles is set to continue. It remains to be seen whether this growth will continue on its current apparently exponential path or fall away again to follow a steadier more incremental evolution. It appears necessary to develop communication on the concept of carsharing, which will open this service to population different from the traditional car sharing users.