momo

more options for energy efficient
mobility through Car-Sharing

momo Car-Sharing
More options for energy efficient mobility through Car-Sharing

Grant agreement No.: IEE/07/696/SI2.499387

Deliverable 5.3.
Guideline for municipalities and governments

Author: Jan Vanhee, BBL Belgium
Co-authors: Motiva, bcs, CRES, IME, cambio Germany, UITP and Taxistop

TABLE OF CONTENTS

Chapter 1: What is car-sharing?

1.1. Description

Car-sharing is a form of transport by which several persons in turn make use of one or more collective cars. This can be arranged both by the parties mutually and by a car-sharing provider (source: Autopia and Cambio Flanders). In the European MoMo project 'More options for energy-efficient mobility through car-sharing' – the partners came up with the following definition for car-sharing:

"Car sharing is defined by its environmental and social purpose, rather than business and financial objectives. Car sharing is a service designed for local users in support of community transit and environmental goals. Its mission, vision and values lead to actions aimed at decreasing individual car ownership, reducing vehicle miles travelled, improving urban land use and development, providing affordable access to vehicles for all citizens – including those less able to afford car ownership - as well as motivating residents to walk, cycle and take public transportation, and decreasing dependence on fossil fuels while reducing the emission of greenhouse gases.

Car sharing is a membership based service available to all qualified drivers in a community. No separate written agreement is required each time a member reserves and uses a vehicle. All Car sharing organizations offer members access to a dispersed network of shared vehicles 24-hours, 7 days a week at unattended self-service locations. Car usage is provided without restriction at rates that include fuels, insurance and maintenance and are directly

proportional to usage providing an affordable alternative to car ownership, which is its key goal. Car sharing is primarily designed for shorter time and shorter distance trips as an extension of the transportation network, providing a public service designed to enhance mobility options. Longer trips may be available to encourage replacement of car ownership with car sharing. Car sharing organizations help members save money over the cost of individual car ownership by encouraging members to drive less often, plan trips more, use other modes of transportation more, and drive fuel efficient vehicles when a car is needed."

Most individual car owners use their car little in proportion to the time and the expenses they invest in it. Moreover they often use the car for trips for which a good alternative is available, simply because the car is parked in front of the house and the fixed costs have been paid anyway. Car-sharing is based on the view that a car is a useful and practical tool that must be used in a well-considered way, efficiently and selectively. The car is, after all, not the most sensible choice for every trip. Accordingly, car-sharers avoid the disadvantages of both individual car ownership and being carless. Car-sharing is one of the forms of shared car use as well as, for example, carpooling and hitchhiking. There is often confusion between 'car-sharing' and 'carpooling'. With car-sharing the same car is used by several people IN TURN at another time, while with carpooling the car is used by several people TOGETHER at the same time. Car-sharing differs from standard car rental because car-sharing assumes a commitment to regular use and availability of the car. In short, it is an elaborate alternative to individual car ownership. Furthermore, car-sharing has greater flexibility (e.g. the possibility to reserve the car for a few hours), another pricing system and the car is usually available closer to home.

Some figures at a glance

One shared car replaces 4 to 8 private vehicles (source: MoMo project, www.momo-cs.eu)
On average, a car is motionless for 23 hours a day (95% of the time!)
Extra figures for Flanders:
- 17% of Flemish families do not own a car
- In Flanders a car does on average 15.900 km a year. At least 1 car in 8 covers less than 5.000 km a year and 32% of vehicles does less than 10.000 km/year
- The average budget for transport per household in Flanders: 4.581 euro/year of which 297 euro goes to public transport and bicycle and 4.284 euro to car transport
(sources: Travel Behaviour Research Flanders 4, 2008-2009; FPS Economy, Self-employed and Energy: Household budget 2008)

1.2. Advantages

For the user who wants to car-share there are many advantages:

- Cheap: the car-sharer pays only when actually using this facility. You do not have to buy a car and the costs are shared
- Practical: one or more vehicles available 24 hours on 24 and the practical responsibilities (MOT test, car wash, etc) which come with a car are shared. At Cambio the user doesn't even have to undertake any tasks at all
- Transparent: because the user regularly gets a detailed bill, he/she knows exactly what the car actually costs as opposed to individual car owners
- Healthy and good for the environment: users deal with car use more consciously, mostly driving less by car and often opting for public transport, going on foot or cycling
- Social: in private car-sharing, car-sharers get to know new people in the neighbourhood, a fun way to become acquainted with them.
- Time-saving: users do not have to assume responsibility for the practical worries that a car entails.

For municipalities and cities there are some additional advantages:

- Local authorities that also make use of car-sharing for their business travel - see chapter 2 - also enjoy the advantages listed above
- Cost-reducing: As a shared car replaces on average 4 to 8 private vehicles, less space is needed for the construction of parking places and their maintenance (or: for arranging and maintaining parking places), which signifies a cost saving.
- Space-saving: Moreover, the extra space that is freed up can be used for neighbourhood beautification work such as laying out parks, creating playgrounds and building bicycle stands, etc.
- Good for the environment:
  - Less car use means fewer emissions. Research on Cambio users in Brussels (Taxistop, 2010) showed that 18% of the respondents got rid of their own car after joining Cambio. In addition, 11% of respondents replied that they would certainly have bought a(nother) car if they had not started car-sharing. Finally, the survey showed that users make more use of other sustainable modes of transport after starting car-sharing: 25% of the respondents makes greater

use of bus or tram, 22% is taking the train and 19% is riding a bike more often and 28% walk more. Car-sharers use more rationally the available cars and choose more easily the most suitable transport means or system

o Positive eco-balance: 15% of the total energy consumption in a car's life-cycle comes from its production, so producing fewer cars is good for the environment

o A study of the Swiss Federal Energy Agency1 demonstrates that each active user of car-sharing yearly produces approximately 290 kg CO2 less.

- The strengthening of the social cohesion in neighbourhoods and districts

Chapter 2: Different forms of car-sharing

2.1. Car-sharing by providers (professional car-sharing)

2.1.1. How does it work?

Car-sharing via a car-sharing provider is a system by which a number of cars in various places in the municipality are made available by an external organisation for its member residents. For a fee, a system member may use one of these cars whenever he or she needs one. The cost depends mainly on the use - there are almost no fixed costs - and the individual user is not responsible for the maintenance of the car, the insurance and other (administrative) fuss.

Users choose a tariff formula based on their expected use. If they wish to use a car, they make a reservation in advance, either by telephone or via the online reservation module (both channels 24/24 and 7/7). At the reserved time, they collect the car at the pick-up/drop-off point. Access to the car is made possible by means of a smart card available to each user. After the ride, the car is again left at the pick-up/drop-off, ready for the next user. At the end of the month users receive a bill based on the monthly use.

A car-sharing organisation wants to offer the concept of shared car to a broad public as a high-quality alternative to private car. Anyone who parts with his own car, after all, wants an alternative that is reliable and user-friendly ("mobility guarantee").

The following criteria are applied internationally to guarantee the social relevance of the concept of car-sharing (e.g. Blue Angel Concept Germany and German definition of Car-Sharing):

- the cars are parked in the users' immediate vicinity
- the vehicles are available day and night
- the costs for participants largely depend on the use of the car (except for an entry and subscription payment)
- the system is easily accessible and simple to use
- short-term hire is possible
- tariffs are made to ensure longer rides as well as short trips, so that private cars can be replaced completely by the Car-Sharing service which results in a long-term relationship between provider and user
- there is cooperation with public transport providers
- the user can choose from different types of cars
- it is a young fleet

2.1.2. Providers worldwide

In the Netherlands some 7 car-sharing companies are operational, including Wheels4all, ConnectCar, Greenwheels and StudentCar. In Germany there are 130 different Car-Sharing services. The largest operator in Europe is 'Mobility' which is active in Switzerland. After more than 20 years the company has approximately 100,000 members and 3,000 affiliated companies. The largest car-sharing provider worldwide, Zipcar, is situated in America. Zipcar has over 400,000 members with 9,000 vehicles at more than 4,000 locations. In Belgium, there is the provider Cambio, currently present in over 20 cities and municipalities across the

country. More than 11,000 people use it, both on a private basis and for professional reasons. Recently in 2011, a new car sharing provider started in Brussels under the name Zen Car. Zen Car offers 20 electric cars and 40 pick-up/drop-off points (www.zencar.eu). For an overview of Car-Sharing development in Europe: see WP2 report.

With some new initiatives, such as the company Car2go (2011: active in Austin-Texas, Ulm and Hamburg), one can leave the vehicle at a drop-off point other than the pick-up point, this in contrast to traditional car-sharing. Nor does Car2go charge a mileage rate but focuses on the service life. Some strongly doubt whether this form of mobility can also be called car-sharing, for fear urban trips done normally by bicycle or public transport will now be effectuated by car.

2.2. Car-sharing via private car-sharing groups

2.2.1. General description

If the shared car is owned and run by private persons, we speak of private car-sharing. Sharing the car takes place on the initiative of individual or grouped users, who mutually conclude contracts. This method appeals more to do it yourself-enthusiasts and is also the only possibility in places where no ready- to-use systems such as Cambio are offered. In Flanders various small initiatives have existed for years. In 2011, Autopia's database comprises some 150 private car-sharing initiatives. The size varies from two households sharing one car to 30 households sharing 4 cars. It is possible, in principle, to have private car-sharing anywhere.

Remark: In Germany – they make an extra division for this kind of car-sharing: car-sharing organised by volunteer organisations (see momo fact sheet number 9) and sharing cars among neighbours (see momo fact sheet number 10) without an organisation.

2.2.2. Definition

The definition of private car-sharing is: a group of households that systematically use a commonly used vehicle:

- Different households: they are not relatives (spouses, parents and children) who share a car, but neighbours, colleagues, friends, (non-cohabiting) relatives or even total strangers who find each other through, for example, Autopia Flanders
- Commonly used car: it concerns a car where the persons are jointly responsible
- Systematic: it does not concern people who occasionally borrow a car from someone, but a fixed system that provides an alternative for individual car ownership

2.2.3. Characteristics of private car-sharing

Private car-sharing has to the following characteristics:

- Self-management: there is a task allocation or rotation among the group members with respect to maintenance, administration, etc. There is a lot of consultation and mutual control; they work on the basis of mutual trust too
- Small-scale: car-sharing is limited to the level of the local car-sharing group. Occasionally, cooperation between different groups can arise
- Social surplus value: car-sharing implies social contact between the car-sharers. As most car-sharing is district-organised, it also contributes to the social cohesion within a neighbourhood or district
- Non-profit: the real costs are shared according to a predetermined chart of accounts. The system is self-sufficient and does not produce profit. Any surpluses are used to share joint costs for the car such as maintenance, insurance, etc.

- Adapted to needs: each car-sharing group develops a formula tailored to the members' specific needs and desires. No ready-made product is put on the market for which clients are sought. Each car-sharing group has its own unique activity
- Inexpensive: private car sharing does not require large investments. There are no staff expenses, no 24-hour telephone exchange, no sophisticated IT applications for access to the car, reservation or accounting and, in principle, second-hand cars can be driven. Depending on the situation within the group and its needs and desires, a car-sharer can participate in private car-sharing in various ways. The different formulas are dealt with further on in this guide.

2.2.4. Example Flanders: Autopia, support point of private car-sharing

For several years now the non-profit organisation Autopia has been an authority in terms of support and organisation of private car-sharing. Since the founding in late 2003 the organisation has developed various tools to support private car-sharing: standard contracts, charts of accounts, online booking calendars, etc. In addition, they negotiated with insurance companies on a car-sharing policy and a technical assistance insurance tailored to private car-sharers.

2.3.   Other forms of car-sharing

2.3.1. Sharing municipal vehicle fleet with residents

2.3.1.1.   Autonomous municipal vehicle fleet management

Many local authorities manage their own vehicle fleet. These cars are often used only during office hours. A survey of a number of municipalities showed that the cars are used very little compared to private cars. Example Flanders: an average Flemish car does about 16 to 17 thousand km per year, while a municipal vehicle in smaller municipalities usually drives no more than 10 thousand km /year. The costs of a municipal vehicle fleet, therefore, are relatively high. By sharing the fleet with residents of the municipality outside office hours and on weekends, these costs can be reduced.

2.3.1.2.   Management by car-sharing provider

Even if we choose to start car-sharing via a car-sharing provider we can think about various possibilities of sharing the municipal fleet.

There are two options:

Option 1 - Contribution of the municipal fleet to the car fleet of the car-sharing provider. In consultation with the car-sharing provider, certain agreements with respect to maintenance, cleaning, insurance of the vehicles, fuelling procedures, etc must be made (see example of Esslingen/Ostfildern in fact sheet number 7)

Option 2 – (Partial) reduction of the municipal fleet and (partial) switchover to the car fleet of the car-sharing provider. The required contribution from the municipality is minimal in the latter: the municipality joins in with the car-sharing provider and makes use of the latter's fleet and services (see fact sheet number 4)

2.3.2. Car-sharing in new housing estates

Residents of cities and densely populated areas with both heavy traffic, parking problems and a good public transport network are an important target-group for car-sharing. At other locations with less pressing mobility problems where people already own a (second) car, the switchover to car-sharing is often a high threshold and it is not easy to change habitual behaviour.

Besides the abovementioned group, future residents of (large-scale) new construction projects also form an important target-group, provided that car-sharing is integrated into these projects at the start. This offers many advantages to all partners:

- The project's attraction increases for potential buyers
- Potential residents/buyers can schedule the mobility product "car-sharing" in their future mobility pattern, which increases the chance of adequate use of the shared car(s)
- Fewer parking spaces are required for (second) cars, which entails fewer costs, an interesting argument for the body that bears the costs (construction company or municipality)

In an ideal situation the new "residents" (individuals / companies) receive, immediately on the signing of their housing contract, the mobility option "car-sharing"
offered as an annex to the deed.

Example: City of Bremen – Neustadt area

Many European cities have already planned and realised new developments that include Car-Sharing in order to reduce the space requirements and costs that would otherwise be incurred with conventional parking provision – without limiting the residents' mobility options. In Bremen, this principle was implemented early on for the Beginenhof development project, which was located in the Bremen Neustadt area with good public transport connections. This 2001 development has a ground-level publicly accessible Car-Sharing station. In return, as a model case, the legal requirements for parking were reduced. There are no parking problems in the neighbourhood caused by this new development and a scientific evaluation shows that the Car-Sharing service is used by the tenants and that the number of privately owned cars was reduced. The Car-Sharing station is also used by other residents of this neighbourhood and is seen as an enrichment of the mobility services offered in this area.

Example: ABC Project Flanders

In 2010, four partners in Flanders (Autopia, Bostoen, Bond Beter Leefmilieu and Cambio) signed an agreement on an innovative car-sharing project in Flanders, the ABC Project. In future construction projects carried out by the building contractor and promoter Bostoen, a shared car is placed in the new housing estate for the benefit of the residents of this neighbourhood. Those who buy a plot automatically become co-owner of the communal car. Car-share provider Cambio provides the onboard computer and the reservation system for the shared car. Autopia vzw (non profit organisation), the Flemish support point for private car-sharing, is responsible for informing the residents, for guiding the car-sharing organisations and for the administrative follow-up during the first year of operation. Bond Beter Leefmilieu is responsible for coordinating the start-up of the project.

Just as with Cambio, residents can reserve the car by phone or online. Each user has a smart card giving access to the car. Users pay a fixed rate per kilometre driven and per hourly use. In April 2011, a first pilot project started on a Bostoen allotment in the municipality of Eke (Nazareth).

Example: Carfree housing pilot in Italy

In 2011 (from January to June) the Italian Ministry of Environment, in collaboration with Iniziativa dei Comuni per il Car Sharing (ICS, the umbrella organization of Italian Car-Sharing network), Roma Servizi per la Mobilità (Car-Sharing local operator in Rome) and Rèdais (Real Estate Development Advanced Integrated Services) signed a specific protocol of agreement and started a specific pilot project in Rome. The scope of the activity was to start the first car free housing experience in Italy. The selected building for this important pilot project is a new building completely eco-friendly that hosts more than 100 families, located in the centre of Rome. The pilot project was managed by Roma Servizi per la Mobilità with two cars and involved more than 250 people. Due to the success of the action, the service will be carried on by Roma Servizi per la Mobilità and Rèdais.

2.3.3. Car-sharing and companies

Besides private persons, companies can also respond to the offer from car-sharing providers. At smaller organisations and companies the employer prevents the employee from having to go on business trips with his or her own car. Employees do not need to have a car

at their disposal for business travel. As regards larger companies and organisations, bringing in the shared car – just as in municipalities – would not replace their own fleet but supplement (or partly replace) it. In this way little-used cars can be disposed of or the company can avoid the purchase of extra vehicles. The shared car is brought into the company as a pool vehicle that is either reserved in function of the needs or exclusively assigned to this company during certain well-defined periods.

2.3.4. Peer-to-peer car-sharing

In recent years a new form of car-sharing has come into existence based on the activity of private car-sharing groups and the car-sharing providers' system. With this peer-to-peer car-sharing each owner can bring his vehicle into a car-sharing system and allow others to use it at a previously agreed cost price (mileage rate and/or hourly rate). A company or organisation acts as an intermediary between car owners and users and provides compensation to the car owner for use of his or her car by a member of the car-sharing system. Ideally, this is supported by customised software installed into the shared cars and through which user identification and billing are done.

Some examples of peer-to-peer car-sharing: WhipCar (England), RelayRides, RentMyCar and Spride Share (U.S.A.).

Chapter 3: Preliminary stage: starting up car-sharing

3.1. Municipal view of car-sharing

Car-sharing should be part of the municipality's global sustainable mobility policy. Car-sharing is also one of the components of a sustainable mobility policy and may be considered as the link between public transport and private car(s) and private car(s) ownership. Drawing up a separate car-sharing plan is therefore recommended. In article 3.2.3.1. a German example of the city of Bremen is discussed. In Chapter 5 we focus on the position that car-sharing occupies in the global (mobility) policy of the municipality.

3.2.   Potential in my municipality?

3.1.1.   Car-sharing for every municipality

Car-sharing is generally accepted as a transport option in larger cities. In smaller cities and municipalities, the concentration of people willing to organise their mobility without private cars is lower than in larger cities. Furthermore, in smaller towns and municipalities there are fewer traffic-jam and parking problems and it is economically less profitable to organize car-sharing through car-sharing providers.

A city or municipality does not need to be big to participate in car-sharing. Every city or municipality resident who can plan its car use can participate in car-sharing. There are numerous possibilities as a city or municipality to play a role in initiating or promoting car-sharing:

- Whether it concerns private car-sharing or car-sharing via providers, the municipality can always have an important role to play in sensitising the population

- As for the providers system, the municipality can absorb the economic risk from car-sharing providers' start-ups by guaranteeing a minimum use of the car-sharing vehicles. For business travel, the municipality itself can also use the cars from the car-sharing provider

- The municipality can opt to share (part of) the municipal fleet with the residents (see item 4.3.).

- For private car sharing, the municipality can organise information sessions

3.1.2.   Survey in the municipality

To estimate the potential of car-sharing in the municipality, it can organise a survey among its residents. This survey provides a gauge of topics such as:

- knowledge of (various forms of) car-sharing
- the interest in the systems and willingness to participate
- the existing car-sharing initiatives in the municipality
- existing potentials to initiate a car-sharing service

3.1.3. Including car-sharing in the municipal policy planning

In order to establish car-sharing it is advisable to include it in the municipal policy planning. This may be done in general terms in which the municipality is committing itself to develop car-sharing on its territory, but formulating goals would be even better.
Example Flanders: car-sharing explicitly has been included in the policy planning of the city of Antwerp: it is stated that the city shall promote car-sharing and that the objective consists of creating at least one pick-up/drop-off point in each district of the city.

3.1.3.1. Example: Car-sharing action plan of the German city of Bremen

The German city of Bremen, coordinator of the European momo project, is one of the pioneers in the field of car-sharing. Bremen has over 6.000 car-sharers (population around 550.000 inhabitants, info spring 2011). This number of car-sharers caused the disappearance of about 1.500 private cars in the city. To give an idea of the cost saving: the city calculated that storing 1.500 cars in an underground car park would signify a cost of 20 to 40 million euro.
In 2009, the city council approved the implementation of the "car-sharing action plan" that has the ambition to reach 20,000 car-sharing residents by 2020. To this end, the city is taking several measures such as:

- development of a network of pick-up/drop-off points
- integration of car-sharing in public transport
- integration of car-sharing in new urban development projects and densely populated areas with parking problems
- encouraging the use of car-sharing by companies
- using shared cars for business travel by the city staff
- increasing awareness for car-sharing for specific target groups

The full action plan, can be found in the Annex.

3.1.3.2. The Italian support program

Within Europe, Car-Sharing enjoys its most comprehensive state support in Italy. Because of persistent environmental problems in large Italian cities, national programmes were approved as early as 1998 for the development of environmentally-friendly mobility services in cities, including Car-Sharing. The programme – and thus national support for Car-Sharing – is the responsibility of the Italian Environment Ministry. Its first concrete achievement was the establishment of the national coordination point Iniziativa Car Sharing (ICS). The intention of ICS was both to advance the development of Car-Sharing services in Italian cities, and also to ensure that a unified technology system and service are made available nationwide, thus ensuring the interoperability of the various services in the cities and regions.

In the start-up phase of each individual Car- Sharing service – generally organised by local authorities, sometimes in collaboration with the local transport operator – ICS assumed up to 50% of the investment cost. Up to now, the Italian Environment Ministry has invested approximately € 9 million in the development of Car-Sharing. This state support for the development of Car-Sharing in Italy has meant:

- a close formal support for Car-Sharing is given through city governments and the provinces,
- the integration of Car-Sharing with public transport is ensured,
- all Car-Sharing services that are supported by ICS function using the same Car-Sharing system technology
- Car-Sharing nationwide is politically supported as a means of reducing environmental damage in cities.

Chapter 4: Launching and supporting car-sharing

4.1. Car-sharing via providers and private car-sharing groups

The municipality can consider to support a car-sharing provider who wishes to offer a car-sharing service to the residents. It is important that the council considers whether the provider meets the criteria for 'car-sharing' (see article 2.1.1.).

This support can be given in the following forms:

- **Include car-sharing into local policy:** those who share a car soon notice the impact it has in several fields: financial savings compared to private car ownership, more use of public transport and bicycle, strengthening of social cohesion, etc. Car-sharing is joining in with various other policy areas, as a result of which the support within the local council policy may increase. The greater the support within the policy, the greater the potential for getting car-sharing off the ground. That's why it is of paramount importance that the decision to support private car-sharing is embedded in the local policy through, for example, a decision made by the bench of Mayor and Aldermen

- **Image enhancement**: by supporting the initiative as a local authority, the municipality wants to help enhance the image of car-sharing and make consumers aware of the concept's social relevance.

- **Providing parking places** (in countries where municipalities are responsible for parking policy): crucial to the operation of a car-sharing organisation is putting pick-up/drop-off points at disposal. After all, unlike private car-sharing groups, it is a matter of a larger group of users who do not necessarily know each other. The concept has also been developed in such a way that the users are not mutually dependent on each other in order to reserve or lend the car, etc. This means that the user must know where he/she can pick up and drop off the car. The shared cars have their own pick-up/drop-off point that the municipality can make available. The municipality is also responsible for arranging and maintaining these pick-up/drop-off points so they are recognisable as car-sharing points and are also protected from illegal parkers.

- **Communicative support and promotion**: the municipality supports the start-up communicatively through articles in the council newspaper and on its website. The municipality is also a pioneer in promoting car-sharing among its own personnel through a staff newspaper, internal mailing, posters in the departments, training sessions for civil servants, etc.

Other original ideas:

- As regards promotion, the city of Bremen has designed a number of postcards. Look at some examples below. Materials were also distributed in schools. An illustrated children's book on car-sharing was made for toddlers
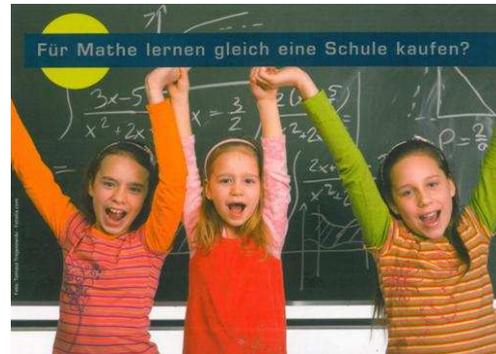
- Organising car-sharing parties: in 2010 Autopia and Bond Beter Leefmilieu (Federation for a Better Environment) launched a new concept for promoting car-sharing: the car-sharing party. The idea is simple. A group of interested neighbours, friends or family invites a car-sharing master - by analogy with the Tupperware party - to explain about car-sharing in a living room. Specific attention is given to starting up a private car-sharing group: one of those present will share his car with the others. Car-sharing masters have followed special training at Autopia and are experts in the field of car-sharing. Each organiser of a car-sharing party receives an information package on private car-sharing. This methodology enjoyed great immediate success and since the start has been a stayer in Autopia's supply. After the party, a private car-sharing group is actually established in 70% of cases. One of the explanations is undoubtedly the bond of trust that already exists among the participants in a car-sharing party.

- **Maintenance of vehicles**: depending on the agreements concluded, it can be determined in consultation that the municipality is responsible for guaranteeing the cleanliness of the cars. Indeed, lack of local staff makes it less likely that a car-sharing provider will take on this task. The car-sharing organisation is responsible for the technical condition of the cars.

- **Information sessions**: it is possible that an employee of the municipality can act as a local contact person and be responsible for giving information sessions to new users.

- **Financial support / own participation**: depending on the agreements concluded, the municipality can be asked to guarantee a minimum purchase of the system. This implies that, in case the vehicles are insufficiently used, the municipality guarantees a minimum turnover and finances any deficiencies. This depends on the operation context (the car-sharing provider receives, for example, financial support from regional authorities or this organisation must be able to support itself, etc).

In order to play a pioneering role and stimulate the use of the cars, the municipality itself can participate in the initiative for (part of) its municipal employees. By using its own services the municipality can (partially) recover costs possibly arising from the guaranteed minimum turnover. In addition, savings can be made on the purchase of carpool vehicles.

- **The municipality brings car-sharing onto the street scene, through:**

  o message signs at pick-up/drop-off points
  o campaigns, e.g. per extra shared car a tree is planted or a bicycle rack erected
  o extension of the reserved parking spaces for car-sharers
  o pilot play area project for streets where several families participate in private car-sharing. The resulting vacant space is set up as a play area.

- **Involving relevant partners and local (civil) society:**
  o Users: by involving existing private car-sharing groups or candidate car-sharers in the organisation or promotion of car-sharing, the basis for car-sharing increases. The story is more palpable when existing car owners are allowed to speak.
  o Local organisations, neighbourhood committees, residents' or local environmental associations have their own network that can be accessed for promotion and sensitisation. Many organisations devote considerable attention to a traffic-livable neighbourhood and are receptive to initiatives such as car-sharing.

o Companies, organisations, schools, universities: many people live within walking or cycling distance from their work yet drive to work, or have a car parked in front of their house. These companies or organisations are often receptive to the idea of making car-sharing known among their employees or even to fit it into the company transport planning.

o Other public bodies: some provincial authorities provide financial support for specific projects. For smaller municipalities it may be interesting to combine forces and start a campaign together.

- **private car-sharing: the municipality provides benefits in kind for car sharers:**
  o free resident's card valid throughout the municipality's territory
  o fiscal advantages on municipal taxes
  o car-sharing families receive a reduction or a free public transport pass which is payed by the municipality

All mentioned forms can be applied for car-sharing via car-sharing providers and for private car-sharing. A city or municipality may, of course, opt to combine and support both systems.

4.2. Good practises
(source: momo car-sharing fact sheets)

Italy - support of local councils in Italian cities
In Italy, many communities and regions participated in the founding of their regional Car-Sharing providers. This was pushed forward by the national coordination point for the development of Car-Sharing, the Iniziativa Car Sharing, and its support through the Italian Environment Ministry. In several cities, communities are directly involved in the regional Car-Sharing organisation. Political support can be seen in the preferential treatment given to Car-Sharing vehicles in many Italian cities:
- They have unrestricted access to the low emission zones in city centres – established because of poor air quality levels. Regular car traffic may enter only within given time limitations.

-   Car-Sharing vehicles may use reserved bus lanes, bringing them through the worst congestion areas of the city easier.
-   They can park free of charge in the "blue zones" of the city centre.

Examples of such political support through local transport policy are found in Turin, Venice, Bologna, Rimini and Modena. In addition, the councils in many Italian cities use Car-Sharing for their employees' business travel.

The city of Münster in Germany

Since 2002, the city has worked with the local Car-Sharing provider, Stadtteilauto CarSharing Münster GmbH. At that time, a large Car-Sharing station was established at City House 3, where many of the council's technical offices are concentrated. The 13 Car-Sharing vehicles stationed there are available for the exclusive use of council workers on workdays from 8 am to 4 pm, after which they become part of the publicly available Car-Sharing fleet. Since 2004, a similar arrangement has existed at City House 2. In a parallel process, rationing of parking for council workers on council property was established and permission to use personal vehicles for business purposes was drastically reduced. As a result of these measures, the council of Münster has saved approximately € 370,000 per year in transport costs.

Municipal Car-Sharing planning – example: Bremen, Germany

In 2009, the city council approved the implementation of the "car-sharing action plan" that has the ambition to reach 20,000 car-sharing residents by 2020. To this end, the city is taking several measures. The full action plan, can be found in the Annex.

Flanders: different examples of city support

In Flanders, most of the cities with a car-sharing provider give support by arranging and maintaining special reserved parking spaces, giving free parking cards, communicate the initiative to inhabitants, ...

In the cities of Leuven, Mechelen and Antwerp, private car-sharers can apply for resident's cards in order to have free parking. Moreover, permanent pick-up/drop-off points can be requested. Leuven and Bierbeek pay the Autopia membership fee for the private car-sharers. Sint-Niklaas provides a noon lunch for the personnel / staff, in the course of which Autopia explains the concept of private car-sharing.

4.3. Sharing the municipal fleet with the residents

4.3.1. Autonomous management of municipal fleet

There are many local authorities who possess and manage their own fleet. These vehicles are often used during office hours only. The own municipal vehicles are relatively expensive since they are usually less used than the average car. Sharing these cars with the residents is the solution for operating in a money-saving way to promote sustainable mobility in the municipality.

4.3.1.1. Tasks and expectations of the municipalities

To share a private car with the residents it is important that all municipal departments are aware of the initiative. However, it would be better to appoint one municipal department that assumes a coordinating role. Especially at the promotional stage various other departments can render their assistance.

In cooperation with the municipality, Autopia (Flanders) provides a contract and regulations adapted to the municipality. Autopia also takes care of the necessary support tools such as an online reservation system, charts of accounts, car-share insurance policy, etc. At the municipality's request it can be considered whether the settlement can be done by Autopia.

Once the contracts and regulations are finalised, the municipality shall have to promote its initiative through as many channels as possible. Interested residents can register through the municipal service desk (or another municipal department). They pay a deposit, complete a registration form and provide a copy of their driver's license.

4.3.1.2. Accompanying measures

- Have the contract and regulations approved by the bench of Mayor and Aldermen
- provide a highly visible permanent pick-up/drop-off point so that car-sharing is present in the street scene
- Involve schools in your communication: give every pupil a parents letter in which the municipality's initiative is announced
- Give a press conference to spread the initiative, for example, on the first use of the car, the first registration, or let the mayor make the first ride.

Since October 2010, the municipality of Schelle in Flanders has been sharing one of its three vehicles outside office hours and during the weekend.

4.3.2. Management by car-share provider

4.3.2.1. Description

Option 1 - Contribution of the municipal fleet to the car fleet of the car-sharing provider

The municipal fleet is often characterised as a fleet that does relatively low mileage, but especially a fleet that is only used during the week and office hours. In the evening, at night and at weekends these vehicles mostly remain stationary in the municipal car park. A possible track is to make the vehicles available at these times to the municipality's residents by putting them available into the car-sharing provider's reservation system.

Advantages:

- partial recovery of costs incurred
- vehicles, purchased with public funds, are partially put available again to the residents
- through the integration of the car-sharing provider's reservation system, the entire process (from reservation to billing) can run automated without any input from the municipality's staff or resources
- through the integration into the car-sharing provider's reservation system, the municipal fleet can also easily be brought in as an internal car pool during the week (use of provider's reservation system to organise internal bookings)
- on possible putting into use of electric vehicles, the municipality can rely on specifically developed reservation tools that are required on bringing in these cars as car-pool vehicles (battery management, etc)

Disadvantages:
- shared use by the municipality and the car-sharing provider means that special arrangements must be made for practical matters such as insuring the vehicles, maintenance, etc. In short, a series of practical 'problems' that need to be cleared in order to be able to offer both the city and the car-sharing system user acceptable quality.

Option 2 - (Partial) reduction of the municipal fleet and (partial) switchover to the car-sharing provider's fleet

The disadvantages with option 1 mean that this second option is often chosen: the municipality reduces its own fleet and switches over for a part of its business trips to the car-sharing provider's fleet.

As in option 1, this can be cost-saving for the municipality and furthermore this track contains the additional advantage that the municipality can completely outsource the management and maintenance of these vehicles. An extra advantage: unlike the municipal fleet of which the vehicles are driven relatively seldom and which are not quickly replaced, an average sharing car has relatively high annual mileage rate, that is why he can be replaced at a relatively young age (in principle after 4 years maximum). This means that the municipality has young cars with low emissions and high ecoscore.

4.3.2.2. Examples of sharing the municipal fleet through Cambio Flanders

As regards option 1 (contribution from the municipal fleet to the car-sharing provider's fleet), there are no known operational examples today. However, the following brain teaser was launched in a number of Cambio cities, particularly within the framework of a possible purchase of electric vehicles by the municipality. Furthermore, the city of Antwerp can be cited as an example regarding the political decision level. When looking for a supplier to provide vehicles for the city fleet, the city council explicitly expressed the desire to make these vehicles accessible to Cambio users outside office hours. Concretely it concerns a long-term commitment to integrate in the run 40 vehicles from the city fleet into the Cambio fleet. This decision did not lead to concrete realisations. However, at present, within Option 2, the possibility of opening a reserved Cambio pick-up/drop-off point within the car park of the council new offices (called 'Den Bell') is being examined. This could result, possibly in another phase, in the integration of part of the city fleet present there in the Cambio fleet.

Option 2 was quite often applied in the past. In Flanders, Antwerp was a pioneer in this respect; Ostend, Turnhout and Lier also serve as a good example.

Antwerp: weighed up and positively evaluated
For two years the city of Antwerp tested the Cambio system at its location on the Desguinlei 33 in Antwerp. Various departments at this location had access to the Cambio system. For this purpose, a pick-up/drop-off point was set up in the car park of this office building. Follow-up was done through the city's Vehicle Centre. This test, however, did not take place without engagement for the city departments concerned.

In consultation with the Vehicle Centre, their own vehicle fleet at this location was partially reduced. Conclusion after 2 years: the cooperation was not only rated qualitatively positive, but also financially beneficial. The use of Cambio not only saved the city money, but it was no longer responsible for the maintenance, cleaning, etc. of the vehicles. Based on these

results, it was decided to resume the collaboration with Cambio again, now that all the city departments are concentrated in the Den Bell buildings.

Chapter 5: Accompanying measures

5.1.   Car-sharing as part of the general (mobility) policy

Car-sharing should be part of the municipality's global sustainable mobility policy. Car-sharing is one of the components of a sustainable mobility policy and may be considered as the "missing" link between public transport and private car(s) ownership.
This is particularly true in a context where the main challenge municipalities are facing is to reduce the number of private cars and consequently implement a global mobility policy that makes it possible to live and move around in the city without having to own a car.

But besides the municipality's mobility policy there are numerous other areas of which car-sharing is a component . Therefore car-sharing is one of the links in the municipality's **parking policy**. In the Vademecum Duurzaam Parkeerbeleid (Guide to Sustainable Parking Policy) issued by the Flemish government (2007) the following passage can be found: "The principle of car-sharing by which different users share a car together on private initiative or through a car-sharing company (as Cambio for example) enjoys increasingly more success, and should certainly be supported through the parking policy. The fact is that via car-sharing systems, car ownership can decrease as a result of which, in the long term, parking space can be cleared and used for other purposes."

In the **field of environment and energy**, car-sharing contributes to a more rational use of cars, less mileage and therefore a reduction in harmful vehicle emissions (CO_2 reduction, particulate matter). A study of the Swiss Federal Energy Agency[1] demonstrates that each active user of car-sharing yearly produces approximately 290 kg CO_2 less.

Car-sharing also offers new opportunities for traffic facilities in new housing projects in the field of **environmental planning**. By giving car-sharing a prominent place, fewer parking space is needed and more space can be freed for other purposes.

Car-sharing can also be included in the municipality's **internal mobility policy** in which staff use shared cars for business trips.

Neighbourhood-oriented and private car-sharing initiatives strengthen the **social fabric**. By making mutual agreements, the social contacts in the neighbourhood are strengthened and the participants build up a collective responsibility.

Finally, in the field of **economics** the municipality can stimulate traders and companies to use the shared cars in the municipality. Local traders are also most likely to often receive car-sharing visitors as these opt for shorter distances bridgeable on foot, by bicycle or public transport and using the shared car for shorter distances since the ride is cheaper then.

5.2.   Example: Car-sharing and parking policy in Flanders

A sustainable parking policy attempts to reduce unwanted car use and brings about the selective access (on foot, by bike, by public transport) of (urban) centres. Sustainable parking policy is an explicit objective within the revised mobility covenant policy of the Flemish government. The municipality has full responsibility regarding parking policy. In the core responsibility debate, the parking policy was described as a municipal core responsibility. This policy is part of the municipal mobility plan and fits within the environmental vision(s) as well as the mobility vision(s) of the higher authorities.

Car-sharing has a place in a sustainable parking policy too. In fact, through car-sharing systems car ownership can decrease, as a result of which, in the long run, parking space is freed up and used for other purposes.

In chapter 4 it was raised that a municipality can stimulate car-sharing by providing special parking spaces for shared cars. These special parking spaces are indicated by the road-sign "E9a", with 'Car-sharing' displayed on the supplementary traffic sign. This sign indicates that parking is reserved for vehicles in which the parking card for car-sharing is put on the inside of the windscreen (or, if no windscreen, on the front of the vehicle).

The 'parking card for car-sharing' is a municipal parking card, specifically for car-sharing (Royal Decree, December 1, 1975, Art. 2.51-2.53, Ministerial Decree, January 9, 2007 concerning the municipal parking card). The parking card for car-sharing may relate only to vehicles that are used for car-sharing through the mediation of an association for car-sharing, or to vehicles that are made available by an association for car-sharing to several of its members.

In addition, specific parking places can be reserved by car-sharing companies that use specific signs and markings for this purpose. Finally, the municipality can decide to allow the cars of the car-sharing provider to be parked free of charge throughout the municipality's territory, whether or not by delivering a parking card for the vehicle in parking zones of the city.

The same favourable measure may also be granted to private car sharers through a parking card. Besides the legal arrangement, the indicated parking places also have an effect on the promotion of car-sharing in the municipality or city and on attracting new car-sharers.

5.3. Car-sharing and parking policy in (new) areas to be developed

To determine the number of parking places and the parking needs of homes one usually looks at the car ownership of households. Municipalities can themselves draw up local parking standards to determine what the desired parking demand is for, for example, new residential areas.

The choice between a narrow or a broad standard depends on the effect that one wants to achieve. When choosing a narrow parking standard – which means that there is a low number of parking places/living unit, the municipality wants to counter undesirable car use

and sufficient alternatives must be available. Besides narrow or broad parking standards, minimum and maximum standards are also discussed.

Municipalities that impose parking standards usually opt for minimum standards. From the perspective of a sustainable parking policy, imposing maximum standards is a better choice. A shared car replaces at least 4 to 8 private cars and ensures that fewer parking spaces need to be provided in residential areas and that the parking standard may be reduced:

- When the municipality is responsible: the municipality should provide fewer parking spaces
- When, for example, property developers are responsible: property developers can be stimulated by the municipality to create car-sharing places and to collaborate with, for example, car-sharing providers. In return, a lower parking standard is imposed to the property developers (= less parking places) which means a cost saving for them.

Sources

Publications:

- Vereniging voor gedeeld autogebruik, www.autodate.nl
- Autopia vzw, 'Autodelen, een handleiding voor doe-het-zelvers', 2005, 56 p.
- Vlaamse overheid departement Mobiliteit en Openbare werken, afdeling Beleid Mobiliteit en Verkeersveiligheid (2007), 'Vademecum Duurzaam Parkeerbeleid', 307 p.
- Vlaamse overheid, 'Onderzoek verplaatsingsgedrag 4 Vlaanderen', 2008-2009
- Freie Hansestadt Bremen, 'Action plan Car-sharing for Bremen', 2010
- MoMo-project team, 'Annex I Description of the Action' – IEE MoMo-project, 65 p., 2008
- Autopia vzw, 'Praktijkboek voor lokale overheden: "Autodelen in beweging zetten", 37 p.
- Momo fact sheets
- Momo WP2 report

Websites:
- Cambio, www.cambio.be
- Autopia, www.autodelen.net
- Bond Beter Leefmilieu, www.bondbeterleefmilieu.be
- Iniziativa Car Sharing, www.icscarsharing.it
- Europese project 'More options for energy efficient mobility through car-sharing', www.momo-cs.eu
- Bundesverband car-sharing Duitsland, www.carsharing.de
- Mobility Zwitserland, www.mobility.ch
- Zipcar Amerika, www.zipcar.com
- www.autodelen.net
- Car2go, www.car2go.com
- Vlaamse overheid, www.mobiliteitsplanvlaanderen.be
- Zencar, www.zencar.eu

Annex 'Action plan "Car-Sharing for Bremen'

1. Starting point

In its "Principles for Urban Development," [1] the City of Bremen has set the objective to be an attractive and innovative economic area and to offer lively neighbourhoods with a high quality of urban life. To reach this goal, public street space has to fulfil both transport, ecological, and social functions – which are often in competition with one another as the space is very limited. Bremen has a vital interest in a very efficient use of public space. Besides the already well developed network of bus, tram and bike routes, a dense network of pedestrian paths and good interregional connections, Bremen also has a focus on the service of Car-Sharing.

Bremen's "Principles for Urban Development" puts Car-Sharing in Bremen with reference to transport, the environment, and urban lifestyle. For the year 2020, at least 20,000 Car-Sharing customers shall be achieved – which means nearly quadrupling the current number of about 5,100. This target seems ambitious, but is realistic when compared to the City of Zurich, which today has a population of approximately 380,000 and more than 16,000 Car-Sharing customers.

Car-Sharing serves the mobility needs of private households, and is also part of optimised fleet management for companies and administrations for an efficient mobility management.

The activities already carried out in the field of Car-Sharing have helped Bremen obtain some external funding for projects in the wider field of mobility management. In addition, Car-Sharing was the key to Bremen's selection as an exhibitor at the 2010 World Exposition in Shanghai whose theme is 'better city, better life'. With the theme of Car-Sharing, Bremen was selected in an international competition as one of three showcases in the field of transport for the 'Urban Best Practice Area'. Car-Sharing has the potential to be an important element in solving transport problems in the densely built megacities of Asia and Latin America. Internationally, the development of Car-Sharing is often associated with Bremen and its (also international) Car-Sharing operator cambio. With the ongoing European project "momo Car-Sharing" ("more options for energy efficient mobility through Car-Sharing"),[2] also coordinated by the City of Bremen, there is a good framework for accompanying activities in Bremen.

With this background, the support for the development of Car-Sharing in Bremen will be intensified in the EXPO year 2010.

2. Environmental relief through Car-Sharing

Large cities worldwide suffer under the enormous space demand of cars. And it's not just moving traffic that's a problem; car parking is an even bigger problem in urban areas.

By sharing the fleet of approximately 130 cars, the more than 5,100 users of Car-Sharing services Bremen[3] have removed about 1,000 cars from the roads. To achieve the same relief of public street space by underground parking or garages, about 12-25 million Euro would have to be invested.
Besides relieving public space – the most important aspect from the perspective of the city – Car-Sharing supports clean air policies, noise abatement and climate protection.

With Car-Sharing, cars of various sizes are available, meeting the specific needs of each journey. As smaller cars (with lower consumption) cost less than larger car types, there is

a built-in incentive to optimise car selection: a small car for a trip into the region, an estate car for a family trip or to transport bulky items.

The average age of Car-Sharing vehicles is also much lower than that of private cars in Germany meaning that the potential for environmental relief through lower emissions and reduced noise levels can take effect much more quickly. For instance, total CO_2 emissions of German Car-Sharing cars are about 16% below those of all newly-registered German cars[4]. In 2007, the fleet of the Bremen-based Car-Sharing operator cambio had average emissions of 129 g of CO_2/km – in comparison to the 169 g of CO_2/km average of new private cars in Germany. The latest model of cambio cars (Ford Fiesta ECOnetic) emit only 98 g of CO_2/km.

Furthermore, Car-Sharing users are more rational in their transport patterns; they drive less and use public transport and the bike more. Where you find an attractive network of public transport, Car-Sharer use it more, and also walk and cycle more. A survey of the Swiss Federal Agency for Energy[5] indicates that every active Car-Sharing user saves about 290 kg CO_2 emissions annually.

Apart from public transport operators, local retailers can benefit from Car-Sharing. In the question of whether to go grocery shopping nearby or drive to a shopping centre in the periphery, Car-Sharing users are much more aware of the real costs of every trip than the average car owner.

3. Definition criteria

Although it has existed in Germany since 1989, there is still no legal definition of Car-Sharing. In order to give municipalities and transport authorities a neutral means of quality assurance when collaborating with Car-Sharing operators, Bremen initiated a certification process within the framework of the official German Environmental Label "Blue Angel"[6] in the Standing Committee of the Ministers of Environment[7]. Since 1999, the official environmental label has defined criteria for very environmentally friendly Car-Sharing. These are:
  - Market based, public offer of Car-Sharing (i.e. not private "community cars")
  - 24/7 access to the cars (as a requirement for being a real alternative to private carownership)
  - Usage-based billing according to mileage and time of use (as an incentive to drive less)
  - Requirements for fuel efficiency (and thus CO_2 emissions), for Euro emission standards and noise emission levels of the vehicle fleet (to ensure a high environmental standard).

The label-granting agency, RAL Deutsches Institut für Gütesicherung und Kennzeichnung e.V., inspects compliance with these requirements – as it does with all "Blue Angel" ecocertification.

In developing the intermodal on-street Car-Sharing stations ("mobil.punkt"), these quality requirements are used to define the quality requirements for allowing a Car-Sharing operator to use public street space. All potential Car-Sharing operators in Bremen will be dealt with according to the same quality requirements, ensuring benefit for the public.

4. Elements of support for Car-Sharing in Bremen

4.1 Integration with public transport

Car-Sharing supplements public transport. With 24-hour access to Car-Sharing vehicles, in areas with good cycle and public transport infrastructure, the ownership of a private car becomes dispensable for most Car-Sharing customers. The combination of walking, cycling and public transport are a cost-efficient, fast and convenient option for most trips; these are extended expediently by taxi and Car-Sharing. Car-Sharing and public transport create a win-win-situation, with benefits both for the environment and urban development. With the transparent, kilometre-based invoicing of Car-Sharing, the benefits of doing the grocery shopping nearby instead of driving to a peripheral shopping centre are visible. In June 1998, following the good example of Switzerland, the first German collaboration between public transport and Car-Sharing started with the "Bremen Card plus AutoCard".

Since then, other transport associations have expanded their services beyond the conventional public transport modes. In addition to integrated seamless ticketing from A to B, public transport services can be supplemented by Car-Sharing and taxi services when, for example, train or bus services are not available in certain areas or at certain times, or when a car is needed for a special shopping trip. A public transport ticket that also includes taxi and Car-Sharing provides the key to flexible and convenient intermodal mobility. It means that customers don't have to check schedules and prices for individual services but can use the "mobility card" for the transport mode that best fits the need: an integrated mobility service.

GVH, the regional transport association of Greater Hanover currently offers the most extensive seamless integration of public transport and Car-Sharing in Germany with "HANNOVERmobil". For €6.95 a month, HANNOVERmobil customers get an additional service package, including a 25% discount card for German Rail ("BahnCard25") and access to the local Car-Sharing service. They also receive a 20% discount on taxi services in Hanover, as well as the option of cashless payment. The monthly fee and the costs for taxi rides and Car-Sharing use are deducted from the customer's bank account by direct debit and every customer receives a detailed "mobility invoice."

In Brussels, the local public transport operator advertises broadly for the local Car-Sharing service (cambio). They indicate Car-Sharing stations at public transport stops and on maps, and "combo deals" are a visible part of their advertising and customer information. The number of customers in Brussels increases annually by about 50%, much more than in any German city (including Bremen) and after only six years of operation already has more than 4,000 customers.

4.1.1 Activities in Bremen

The "package deal" offered by VBN/BSAG (the local and regional public transport providers) and cambio (the local Car-Sharing provider) will be promoted more extensively again in 2010. The presentation of Bremen's Car-Sharing at the 2010 world EXPO in Shanghai is a golden opportunity to raise public awareness of the existing combination of public transport and Car-Sharing services and to reach potential new customers with new service packages. In addition to the current "BOB-card" which allows for unlimited public transport use with a post payment system, future packages should include taxi and Car-Sharing services.

Taking from the positive experience in Brussels, more information should be provided to potential Car-Sharing customers; as in Brussels, maps of the public transport network should indicate the location of Car-Sharing stations, and customer information sources

should inform about the service package that combines public transport and Car-Sharing.

4.2 Integration of Car-Sharing in new developments

The new Principles for Urban Development, "Bremen! Liveable, urban, connected" emphasises the role of environmentally-friendly and efficient mobility for the citizens of Bremen.
The 1939 "Imperial Regulation on Parking," and all of its regulatory successors, have required that car parking must be provided "for the expected generated traffic to or from a building." But in contrast to most other federal states, Bremen's building regulations also include a special paragraph for bike parking.

The provision of car parking is particularly technically complex and costly in the inner city areas. The average cost of a parking spot is calculated in such areas at between €12,680 and €20,450,[8] and underground parking can cost even more.

By integrating Car-Sharing into the planning of new developments, construction costs can be reduced, new options in urban design can be realised and transport services can be improved. Many European cities have already planned and realised new developments that include Car-Sharing in order to reduce the space requirements and costs that would otherwise be incurred with conventional parking provision – without limiting the residents' mobility options. In Bremen, this principle was implemented early on for the Beginenhof development project, which was located in the Bremen Neustadt area with good public transport connections. This 2001 development has a ground-level publicly accessible Car-Sharing station. In return, as a model case, the legal requirements for parking were reduced. There are no parking problems in the neighbourhood caused by this new development and an academic evaluation shows that the Car-Sharing service is used by the tenants and that the number of privately owned cars was reduced. The Car-Sharing station is also used by other residents of this neighbourhood and is seen as an enrichment of the mobility services offered in this area.

4.2.1 City of Bremen Activities

The Bremen State Building Regulations are currently being updated. Since the question of public street space – including local regulations – must to be addressed by plans at the local level, the amendments will shift the legal power of car parking regulation to the municipal level. [9] The municipalities will have to decide through a local regulation whether, and to what extent, there is an obligation to provide car parking. The hitherto existing state regulation requiring a certain number of parking spots is valid only for a transition period. Thereafter the old regulation will only govern the application of one-time payments that must be made in lieu of the building of car parking spots.

Building on the positive experience of reduced car parking demand through the integration of Car-Sharing in new developments, Car-Sharing should be used more intensely in the upcoming regulations. At appropriate locations, Car-Sharing can reduce or even replace the obligation to provide car parking. Car-Sharing stations should be publicly accessible and, if possible, at ground level. Within the framework of the new local regulations, each Car-Sharing vehicle could reduce the number of car parking spots by, on average, four cars.

According to both the existing and the draft revision of the State Building Regulations, the one-time payments (payments made in lieu of building a parking spot if it is determined that the parking spot is not needed) can also be used for the construction of Car-Sharing stations. Car-Sharing is able to reduce the demand for parking and thus also relieve the demands on public space.

4.3 Integration into urban renewal

Car-Sharing stations in public street space

In the densely built inner city areas which lack parking space, Car-Sharing has a great deal of potential, but in order to tap this potential, it is necessary to provide Car-Sharing stations nearby, which, in many areas, means in public street space.

The official eco-label "Blue Angel" for Car-Sharing (RAL UZ 100) makes reference to this situation „Car sharing agencies entitled to use the environmental label could be conceded privileges by the communities, for example, by establishing car sharing stations on public roads". [10] In 2003, the first model projects of Car-Sharing stations in public street space were inaugurated in Bremen. Two years later, the assessment showed that in a range of 500m walking distance, 95 private cars had been replaced by a total of ten Car-Sharing vehicles at these two 'mobil.punkt' stations. In 2006, the German Motor Club (ADAC) recognised Bremen for this idea in its city competition "Improving air quality, maintaining mobility." [11] In 2008, the federal minister for Transport, Building and Urban Affairs awarded Bremen's 'mobil.punkt a Best Practice Award for improving urban neighbourhoods. [12]

At the federal level, Bremen hosted two parliamentary evenings in Berlin (2004 and 2008) to promote a revision of the German Road Traffic Regulations. The objective was to achieve a legal framework for on-street Car-Sharing stations at the federal level. With specific reference to the Bremen 'mobil.punkt' Car-Sharing stations, the German federal parliament (Bundestag) proposed a revision of these regulations in 2006. The Federal Minister for Transport drafted a revision but, based on objections from the Minister for Economy, there is currently no revision of the legal framework in sight which would allow regulations similar to those that allow taxi ranks. In its session on 3 April 2009, the Federal German Chamber of the States (Bundesrat) adopted a resolution from the states of Bremen and Saxony that urges the federal government to revise without further delay the German Road Traffic Regulations and the German Road Law in reference to on-street Car-Sharing stations.

Other European countries (e.g. the UK, the Netherlands, Belgium, Italy, Finland) have successfully implemented such regulations and road signage to relieve the demand on urban street space.

4.3.1 City of Bremen Activities

It is an urban development and transport planning objective in Bremen to better exploit the potential of Car-Sharing in the city, including adding further 'mobil.punkt' stations in public street space in densely-built urban neighbourhoods with high demand. This particularly concerns the inner city area (the neighbourhoods of Östliche Vorstadt, Schwachhausen, Neustadt and Walle). Currently, seven additional 'mobil.punkt' stations are in the midst of administrative procedures that will provide 25 Car-Sharing vehicles in the affected neighbourhoods. As well, the three existing 'mobil.punkt' stations will be expanded from the current 15 Car-Sharing vehicles to 25. Both measures should be implemented by 2010.

Bremen, both as a city and as one of the German federal states, continues to advocate for the revision of the federal Road Traffic Regulations and the Road Law for a framework for Car-Sharing stations in public street space.

4.4.   Car-Sharing and Fleet Management (Public Administrations and Businesses)

Businesses are an important target group for Car-Sharing. Car-Sharing can optimise companies' fleet management by providing more flexibility and choice without increasing

basic costs. On the other hand, from the perspective of the Car-Sharing operator, a mix of private and business customers creates a more balanced use of the vehicles (both during business hours as well as non-work hours). In this way, vehicle use can be increased by as much as 45%, maximising the efficiency of each vehicles.

Easy-to-understand fee schedules and an increasing cost consciousness by companies is creating more business users of Car-Sharing. This includes both large companies and small start-up enterprises. The increasing interest in Car-Sharing indicates that it is a winwin situation for both the environment and the economy.

The integration of Car-Sharing into fleet management for both companies and public administrations offers potential as:
- various types and sizes of vehicles are available (including vans and minibuses), creating more flexibility to meet demand
- at times of peak demand, users have extra vehicles at their disposal
- cars can also be used for short periods (as little as one hour)
- users have access to Car-Sharing vehicles at other stations and in other cities (cambio operates in Bremen, Bremerhaven, Berlin, and Brussels)
- all vehicle maintenance is done by the Car-Sharing operator
- vehicles are available with winter tires, towing attachments, etc.

The technology used also allows for other functions such as open-ended reservations, automatic cancellations, etc.

There are interesting combinations for business travel as well, for example in combination with rail for long distance journeys. The cambio smart card provides access to the entire cambio network in Germany and Belgium and for partner agencies. Similarly, access to the Car-Sharing service of German Rail works for their entire Car-Sharing network.

4.4.1 Car-Sharing Use in the Public Administration

The use of Car-Sharing within the Bremen public administration has been the subject of a debate in the Bremen Parliament and of an application in the Committee for Construction and Transport and in the Committee for Environment and Energy.[13]

Bremen's Senate Department for Environment, Construction, Transport and European Affairs carried out a survey in 2009 to which 84 of 123 departments, agencies and other public bodies responded. Currently there are only eight departments and public agencies using Car-Sharing. Reasons stated for not using Car-Sharing included cost, the use of privately owned cars, and having no needs for cars at all. Many departments were not aware of Car-Sharing and thus had not considered it. Some departments are currently looking into Car-Sharing and are considering changes to their fleet management.

The survey indicates that almost no full-cost accounting of fleet management has been carried out that considers all relevant costs. In some cases, even fuel costs were forgotten. A full-cost calculation of the use of private vehicles for administration purposes should include:
- the cost of providing or reimbursing parking (including rented parking spaces or income relinquished that could have been earned by renting the space to a third party)
- time and staff costs for administration of fleet vehicles (including time for bringing the car to maintenance and data analysis of log books)

4.4.1.1 City of Bremen Activities
There is still potential to be exploited to improve fleet management efficiency of local authorities through Car-Sharing. In particular, the use of city-owned cars and of private

vehicles for job purposes should be calculated using full-cost accounting.

Within the context of the state of Bremen's move towards socially and environmentally responsible procurement, a principle should be integrated, stating that before the procurement of any new car, and before any contracts are signed for professional use of private cars, a comparison with Car-Sharing should be carried out as a potentially less expensive and more environmentally friendly option. Comparisons must include all costs incurred by departments from the business use of private cars. This includes subsidies for parking as well the administrative costs of maintenance. The target is to at least double the number of departments using Car-Sharing.

The Senate Department for Environment, Construction, Transport and European Affairs offers information about Car-Sharing to other departments, public bodies and state-owned companies, providing details on the practicalities, lessons learned, and cost comparisons.

4.4.2 The Use of Car-Sharing in the Business Sector

Car-Sharing can be used to supplement and optimise a business's own fleet or even as an alternative to a company fleet. A growing number of enterprises are optimising fleet management in order to reduce costs and minimise environmental impacts. Car-Sharing contributes to a company's fleet management in the context of climate protection and environmental policies – as targeted by Bremen's "Principles for Urban Development."

4.4.2.1 City of Bremen Activities
In the EXPO year 2010, Car-Sharing information and consultation for the business community in Bremen should be increased. A programme of the German Energy Agency (dena), "efficiently mobile," offers a platform for greater integration of Car-Sharing into efficient, environmentally-focused mobility management. On the national level, dena mobility management can further exploit the potential in the model region Bremen. The objective is to organise convenient, intelligent, and sustainable mobility and to promote it publicly. The guiding principle is one of multi-faceted marketing and systematically providing information and consultation. Among other things, the programme "efficiently mobile" thus aims to motivate companies in Bremen that are already using Car-Sharing to in their fleet management participate in competitions and to take advantage of consultation services.

The programme "efficiently mobile" is supported by the "try for the environment initiative" ("initiative umwelt unternehmen"), which is financed by the Senate Department for Environment, Construction, Transport and European Affairs. The coordinating body, RKW Bremen GmbH, has, itself, been using Car-Sharing for several years. An important element of the initiative is the "try for the environment partnership" ("partnerschaft umwelt unternehmen") which has been in operation since 2003. Its 100+ member companies with approximately 55,000 employees offers an excellent link to help integrate Car-Sharing into efficient and environmentally focused fleet management.

In partnership with the Car-Sharing operator cambio, the Bremen Chamber of Commerce has also carried out a number of information workshops on Car-Sharing. cambio provides information on the principle of Car-Sharing and businesses currently using Car-Sharing report on their practical experience. The activities should be reinforced and further multipliers (such as the Bremen Workers' Council) should be involved in the future.

4.5 Public Relations
Understanding of Car-Sharing among the general public – both in Bremen and elsewhere – is still poor. In particular, people are unaware of how Car-Sharing actually works in practice.

For that reason, public relations and media work is critical. EXPO 2010 in Shanghai and the EU momo project offer a context in which to provide more information about Car-Sharing in Bremen.

4.5.1 City of Bremen Activities
The local media will be contacted to support accompanying activities at the local level in Bremen during the 2010 EXPO.

Via the European momo-project, Car-Sharing will be presented in Bremen through events, leaflets and a momo-produced video in order to reach a broader audience.

For teaching purposes at schools in Bremen, materials will be provided for both teachers and pupils, including reports, power-point material, videos, and background information on environmental impacts, etc.

For the pre-school age group, an illustrated children's book ("Pixi book") has been created and will be disseminated within the context of the momo project at schools and kindergartens.

Endnotes

[1] „Leitbild zur Stadtentwicklung" – see http://www.komm-mit-nach-morgen.de (in German)

[2] Co-financed in the EU Program "Intelligent Energy for Europe," duration 10/2008 – 09/2011, s.a. www.momo-cs.eu

[3] State of August 2009, cambio-customers in Bremen (city of Bremen)

[4] Maertins, Christian (2006): Die intermodalen Dienste der Bahn: Mehr Mobilität und weniger Verkehr? Wirkungen und
Potenziale neuer Verkehrsdienstleistungen. WZB Discussion Paper SP III 2006-101. Berlin

[5] Haefeli, Ueli; Matti, Daniel; Schreyer, Christoph; Maibach, Markus (2006): Evaluation Car-Sharing. Schlussbericht. Im
Auftrag des Bundesamtes für Energie (Swiss Federal Energy Agency). Bern

[6] See http://www.blauer-engel.de/en/products_brands/search_products/produkttyp.php?id=34 (English version)

[7] Conference of the Ministers for Environment of the 16 German states and the Federal Minister for Environment („Umweltministerkonferenz")

[8] § 3 Bremer Ortsgesetz über die Ablösung von Kraftfahrzeugstellplatzverpflichtungen (Ablöseortsgesetz), vom 16. 10.2006

[9] The State of Bremen consists of the cities of Bremen and Bremerhaven

[10] Introduction to the certification criteria for eco-label RAL ZU 100 (February 2007 edition), RAL Deutsches Institut für
Gütesicherung und Kennzeichnung e.V. http://www.blauerengel.
de/en/products_brands/search_products/produkttyp.php?id=34

[11] ADAC Städtewettbewerb „Luftqualität verbessern – Mobilität sichern"

[12] „Gutes Beispiel der Verbesserung von städtischen Quartieren"

[13] Beschluss der Bremischen Bürgerschaft (Stadtbürgerschaft) vom 08.04.2008 zum Antrag der Fraktionen
Bündnis 90/Die Grünen und der SPD (Drucksache 17/74 (S) vom 12.02.2008 – s.a. Bericht der Verwaltung dazu
in der Deputation für Bau und Verkehr (L) 05.02.2009 sowie Deputation für Umwelt und Energie (L) 12.02.2009