Recommendations for car purchasing in Car-Sharing and company fleets
Deliverable 6.3

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More options for energy efficient mobility through Car-Sharing

Grant agreement No.: IEE/07/696/SI2.499387
1 Preliminary remark

This report on recommendations for purchasing new cars for a Car-Sharing fleet is mainly based on practical expertise gathered in the past 20 years by Car-Sharing provider cambio. Most of the recommendations were presented by cambio and discussed at the momo work-package workshop in Bremen in September 2009. The lists of requirements and recommendations do not claim to be exhaustive but they highlight many key factors that should be dealt with.

At first glance it may not always be obvious why certain recommendations should be considered since they may appear to be far from environmentally friendly, such as buying cars with air-conditioning. It is essential however to understand that the more efficient Car-Sharing becomes and the more attractive in terms of both price and comfort, the more new customers it will attract and the less private cars there will be on the roads.

Although the English version was intended as a mere extract, we decided to provide the entire deliverable as a document in English in order to make this interesting information available to a broader public.

Roy Traue, Bremen, October 2010
2 Which criteria to take into account?

Choosing the best car for a Car-Sharing fleet is not just a question of price comparison. Naturally, customers will always want to pay as little as possible, but they do expect a minimum degree of comfort. It’s worth bearing in mind that money saved on the purchase price may soon turn out to be a source of additional costs for maintenance or repair.

2.1 Customer requirements (small car)

The following list of top requirements for small cars in the lowest price class stated by Car-Sharing customers is mainly drawn from several customer surveys carried out by cambio over the last few years.

2.1.1 Flexibility of seat/boot design

Due to the high price transparency in Car-Sharing, customers tend to make most trips with cars in the lowest price class. However, their reasons for using these cars are many and varied, which is why high flexibility in terms of seat design is much appreciated. Make sure the driver’s seat can be moved backwards and forwards sufficiently and that the rear seats can be folded down individually. The handling should be easy and foolproof in order to avoid repair costs and down times.

2.1.2 Driving visibility

Car-Sharing customers enjoy having a variety of different types of car. However, a high percentage of customers do not use Car-Sharing often and, as a result, tend to be unfamiliar with the external dimensions of each type of car, which may cause difficulties, not to mention minor accidents, especially when reverse parking. Hence, good circumferential visibility is crucial as it can prevent such accidents and other minor scrapes. Driving visibility is therefore a major criterion for customers, fleet managers and financial controllers.

2.1.3 Volume (boot, rear seats)

Not only should the boot be easy to convert by folding the rear seat, the capacity is also a very important factor in the customer's selection criteria. The more you can pack in the boot, the less likely you are to require a larger, more expensive vehicle. In terms of the Car-Sharing service being family-friendly, this area is high on the list of young families who are travelling with baby buggies etc. for their children.

2.1.4 Short car

Cars of the lowest price class are often used for inner city journeys. Finding a parking space in the city is much easier with a short car and there is less chance of incurring minor parking damage.

2.1.5 Long-distance comfort

As stated above, there are many varied reasons for hiring small cars and it is important to bear in mind the needs of the lone, long-distance driver. This category of person often prefers to use a small car for long journeys which is why even the low-budget models should offer a minimum degree of driving comfort - high quality seating, air-conditioning, CD player, navigation system and so forth.

2.1.6 Five seats

It is highly recommendable to meet as many requirements as possible with one type of car (cf. topic 2.5.1). This is another good reason why the car assigned to the lowest tariff should have five seats (with head rests). Although most customers probably won’t expect this or even need it for an average trip, it will prove to be more cost-effective in the long run than providing an extra car type for this purpose. Recent trends are showing that customers increasingly appreciate having a small car with five seats that also has four doors.
2.1.7 Brand image
Since even small cars are used for business trips, the brand of the car is not a minor criterion. This is even more relevant for cars provided in the higher tariff classes. The car brand should have a good reputation – or at least not a bad one.

2.2 Fleet manager requirements
The following set of main requirements as stated by Car-Sharing fleet managers is limited to technical issues. The focus lies on decisions that make the operation of the fleet as seamless as possible with minimum disruption and down times. Other than the directly visible costs for repair and maintenance, it is vital to understand that each interruption of regular car-sharing activity incurs costs, either in terms of additional staff working hours and/or financial loss due to down times. For further financial aspects, please refer to chapter 2.4.

2.2.1 Compatibility with access technology
In state-of-the-art Car-Sharing, all cars are equipped with on-board computer technology allowing access to the vehicle either by smart card or mobile phone. Before deciding for one car model or another, it is recommendable to contact the access technology provider in order to ensure that the devices are compatible with the corresponding models.

2.2.2 Unpainted bumpers and side mirrors
As stated in chapter 2.1.2, different car types and infrequent car use are 2 main sources of minor damages and, as you would expect, it’s the “extremities” of the cars that are most affected. This is why the car seller or manufacturer should be asked to provide the cars with unpainted bumpers and side mirrors – even if the standard design includes a lacquer coating for these parts. Recently however, it is becoming increasingly difficult to obtain unpainted parts at all. Most bumpers, mirrors etc. are provided by sub-suppliers from car manufacturers and produced only in standard designs, i.e. coated with standard colours. Fleet managers should be aware of this should they choose to opt for a customised car colour.

2.2.3 Steel wheel and all year tyres
Alloy wheels may look nice but they can be damaged much easier than steel wheels, in addition to which they are more expensive and need to be cleaned more thoroughly. All Car-Sharing cars should therefore be equipped with standard steel wheels. All-year tyres are recommended although they cause slightly higher fuel consumption in summer. Since no season-related tyre change is required, the advantages in terms of down-times, organisation and stock-keeping are striking.

2.2.4 Warning sound when headlamps on
Cars at the lower end of the price range may not include this feature as standard equipment. However, a Car-Sharing fleet manager should not hesitate to incur additional expense for it if necessary. In the long term, it will be negligible in comparison to the repeated inconvenience and costs of down times caused by flat batteries.

2.3 Ecological aspects
Car-Sharing has a significant ecological impact per se. However, this impact can be even stronger if the fleet is composed of car models which have lower fuel consumption and lower emissions of pollutants and noise in comparison to similar models from other manufacturers. Selecting a more environmentally friendly car is a wise decision for Car-Sharing operators, also from an economical viewpoint: lower fuel consumption is of paramount importance since the travel fees per kilometre include the fuel costs. Also, in terms of marketing it can be interesting to buy eco-friendly models in order to match the requirements of a national eco-seal. For ex-
ample: the thresholds required to obtain the German eco-label "Blauer Engel" (blue angel) are, amongst others, an average fleet emission geared to the European fleet emission threshold of 130g CO\textsubscript{2} per km for a new car fleet (Regulation EC No 443/2009).

2.4 Financial aspects

For a comprehensive analysis of the financial aspects of car purchase there is one important initial criterion that the managing director of a Car-Sharing company cannot afford to overlook. It is of course necessary but in some cases not always wise to focus on the reduction of costs. The Car-Sharing fleet has to be composed of attractive cars and the service has to run seamlessly in order to attract and keep as many customers as possible. The bigger the company becomes, the more it will benefit from economies of scale which may become much more important than the saved costs in individual cases.

2.4.1 Purchase price and necessary equipment

Naturally, the purchase price is an obvious criterion for decision-making although the comparison should not simply be based on the standard catalogue prices. It is important to realise that pricing policy differs very much from manufacturer to manufacturer, particularly with a view to discounts, market development funds etc. Furthermore, the purchase price must include all the necessary equipment, which in some cases is already included and in other cases has to be paid over and above the cost of the car (see chapters 2.1 and 2.2). Sometimes it may also be worth choosing additional accessories which, although not necessarily essential to meet the needs of customers or the fleet management department, will have an important impact on the resale price.

2.4.2 Financing costs

The prospective resale price is also important in terms of financing. Banks accept the certificate of ownership (registration certificate pt 2) as collateral, but only up to a certain percentage of the purchase price deducted from the expected resale price which will thus influence the amount, the interest and the term of the credit.

2.4.3 Service costs

With a view to the resale price, it is essential to have the vehicle serviced as per the manufacturer's recommendations. It therefore makes sense to be well-informed about the frequency of servicing and the costs involved. A Car-Sharing operator should compare the individual service tasks as thoroughly as possible, always taking into account that the costs are composed both of working time and spare parts. However, the total cost of servicing a vehicle does not end there. Costs for repairs should be compared too and examined along with average values from breakdown statistics issued by national motoring clubs. Finally, it is worth finding out what the standard repair costs for accident related damages should be and to add these to the comparison.

2.4.4 Insurance and taxes

Whereas the comparison of the taxes to be paid is easy, the cost differences for insurance are not directly visible since most insurance contracts for bigger fleets only deal with units of insured vehicles, regardless of the car type, provided the purchase price stays below a certain threshold. The differences however become visible when using the car: too powerful an engine, a long braking distance and a limited circumferential visibility are the main causes for frequent damages and accidents which can be avoided by selecting a suitable car model.

2.4.5 Fuel consumption

As stated in chapter 2.3, lower fuel consumption has a powerful impact on the costs of a Car-Sharing company since the journey fees per kilometre include the fuel costs. With more economical cars, Car-Sharing represents better value for money for the distance covered and makes it even more attractive. This is not only an advantage whilst using the car, but also makes it easier to resell after a couple of years.
2.4.6 Resale price
Particularly for new car models, the prospective resale price is hard to predict. For top selling cars there is a certain probability that, within 3 years time, the depreciation will not differ too much from current statistics. A Car-Sharing operator should bear this in mind when attracted by special purchase price offers from “exotic” models or manufacturers. Other factors affecting the resale price are fashion trends, especially as far as colour is concerned, proof of regular service checks, a professional standard of repairs as well as features like air conditioning, sat-nav systems etc.

2.5 Strategic requirements
As well as the numerous criteria relating to requirements from customers and fleet managers, each Car-Sharing operator might have intrinsic reasons for selecting certain types of vehicle because of their company’s particular strategy. The following example illustrates this rather well.

2.5.1 “One size fits all” (variety vs. occupancy)
The fleet composition philosophies of various Car-Sharing operators differ significantly. Some provide a diverse range of car types to make the service more attractive for prospective customers. Others conclude that less car types are the key to both higher customer satisfaction and higher occupancy rates, hence making the service more cost-effective and ultimately more attractive for prospective customers due to lower fares. This applies even more because buying a large quantity of similar vehicles from one manufacturer leads to better purchase prices.
3 How to proceed?

Chapter 2 gave us an overview of what a Car-Sharing operator needs to know to optimise his decision for the purchase of one car model or another. The following rough guide outlines our ideas on how to gather this information and how to proceed with it. Please also refer to the flow chart at the end of this chapter.

3.1 Customer (online) survey -

It is important to interview as many customers as possible, not only with a view to selecting the right car, but also to achieve a high level of customer satisfaction in general. A poll exclusively carried out by internet gives clear results, saves paper and postage, as well as cutting out the need for extensive manual data input. The requirements stated in chapter 2.1 provide the basic criteria for examination. Particularly for car models in the lowest tariff class it is a good idea to relate the individual topics to a question about the importance of having as low a price as possible in this class. For automated processing, the answers should fit into a homogenous ranking. However, in order to collect new ideas beside the company’s own suggestions, it is crucial to permit free statements too.

3.2 Fleet manager enquiry

The bigger a Car-Sharing company becomes, the less the car purchasing manager will be in close contact with the problems at the grass-roots level of everyday fleet management life. It is thus highly recommendable to regularly collect the opinions from those staff members who deal with car-related problems and requirements on a daily basis. Six-monthly round table meetings are a refreshing diversion for the fleet staff and can be a source for targeted optimising of management decisions. The ideas gathered should be processed in a structured way and, together with already collected information, be integrated into an evaluation grid showing the relative importance of each subject.

3.3 Car-access technology compatibility check

Before entering price negotiations with car dealers or manufacturers, make sure all cars belonging to your pre-selection list are compatible with the products of your car access technology provider.

3.4 Car model research and evaluation

The fourth step combines the results gathered from customer and staff enquiries with the relevant catalogue information from car dealers and manufacturers. Moreover, the evaluation spreadsheet should contain the values related with the stated financial and ecological requirements. The fine art of extracting a list of, for instance, the top 5 car models, lies in assessing the clear financial aspects together with rather emotional perceptions such as brand reputation etc..

3.5 First Negotiations

After having selected the 5 (or 10 or even just 3) most interesting car models, it is time to contact the respective car dealers – or car manufacturers in the case of high order volumes. This can be done by direct on-site visits or by written calls for tender.

3.5.1 Approximate prices

In order to get at least an approximate idea of the asking price, it is important to provide the car dealer or manufacturer with accurate information about the number of cars to be purchased, the prospective cycle of car purchase/resale and the Car-Sharing company’s capitalisation, turnover and growth rates.
3.5.2 Necessary modifications
Some specific features required may not be included in the manufacturer’s standard price list but may be available on request (e.g. common steel wheels instead of alloy wheels). All features should be asked for: those which are absolutely necessary and also the ones which are nice to have.

3.5.3 Reliable delivery times
Currently, it is also most important to ask how reliable the indicated prospective delivery time will really be!

3.6 Test-cars in real operation
No more than three different car models should be short-listed after evaluating the feedback drawn from the first negotiations. One car of each model should be bought and integrated into the fleet in order to test it at real time conditions during a period of at least four weeks. For this purpose, it is advisable to hire the car from the dealer.

3.7 Customer survey and evaluation
After each trip, the customers who used the test cars should be questioned at length about their experiences and satisfaction with the car. The results should be evaluated and cross checked with the results of the theoretical evaluation.

3.8 Final negotiations
The “winner” of this multilevel evaluation will certainly be a highly appreciated car with a good cost-performance ratio. The final negotiations should target an even better price or the free provision of additional features or services.
3.9 Car purchase flow-chart

Fleet manager enquiry [3.2]

Preselection
(Internet / Catalogue)

Compatibility check
car access techn. [3.3]

Customer survey
[3.1]

Customers' criteria

Evaluation 1 [3.4]
(Basis: Criteria)

Dealer / manufacturer negotiations #1 [3.5]
(call for tender)

Evaluation 2
(Basis: tender)

Test cars in
real operation [3.6]

Fleet staff enquiry

Customer enquiry
[3.7]

Test winner

Dealer / manufacturer negotiations #2 [3.8]

Car purchase