



Retail traders, housing companies and mobility service: New partnerships for an integrated mobility management

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Background and Objective

Within the last decades the use of non-motorized and public transport modes have decreased constantly in Europe. The use of the private car for all purposes has increased. Nowadays in Germany over 50 percent of all vehicles traveled miles (VTM) are due to shopping and leisure activities; most of them are done by private cars. Regarding the overall environmental impacts of transport, these transports for shopping and leisure is responsible for a substantial part of local, regional and global damages like accidents, noise, air pollution, space consumption, habitat fragmentation and CO₂-emission.

Besides the increase in motorization reasons for this development came out of a change of infrastructure, on the supply side, concerning structure and sites as well as a change of consumer behaviour on the demand side. Similar to the US-model, but not with the same extent, shopping and leisure centers (urban entertainment center) have been developed close to main highways in the outlying districts of European cities. Due to their size and concepts they attract a large number of local, but also regional customers. Though they provide perfect accessibility for car drivers there is less access for public transport. Thus, this development goes along with broad effects on transport and environment, but also with the infrastructure and the economy of the city centres. Furthermore, the opportunities for shopping in the neighbourhood are decreasing.

Traditionally city centres and the neighbourhoods in European cities provide a highly dense structure. Due to this they are well served by public transport and provide easy access to non-motorized transport.

A sustainable development considering the economic, social and ecological dimension should be part of every development in these days. Due to the Agenda 21 on the local level there is a high responsibility to make a contribution to these goals. The described development in urbanized areas could be identified as a non-sustainable trend. Transport plays an important role in the overall development and the different dimensions have to be taken into account.

Besides environmental effects, the economical and social point of view to the development of non integrated sites for shopping and leisure are alarming. Households without cars or less availability of cars, like e.g. households of elderly people, low-income households, singles with children or disabled persons, have to deal with a decrease of quantity and quality of infrastructure and access, which means they have to spend more time and money for their daily live.

Taking the above mentioned development and problems concerning shopping and leisure into account a broad range of different stakeholders are involved in the actual debate. These stakeholders are e.g. transport planners, city and regional planners, neighbourhoods and city managers, representatives for business and trade, local retailers, public transport managers, agencies for consumer protection, environmentalists and social pressure groups.

In comparison to politicians and planning authorities, who's interests are to increase the quality of live for a large number of people in general, the private business on the other side aims to act most economically in order to make profit. Cause both groups have a common goal, the strengthening of the environmentally and socially better location, the perspectives and interests have to be combined. Measures have to be developed, which on the one hand help to achieve an environmentally and socially sustainable mobility and on the other hand improve private business. In this context the improvement of environmentally friendly transport is to promote the use of non-motorized and public transport. In order to develop these integrated multimodal transport solutions for a sustainable mobility, the development of new services and partnerships might be necessary.

One could distinguish between two general perspectives: The perspective, which addresses the infrastructure, respectively the target of shopping and leisure transport; and the perspective, which addresses the households, respectively the source of shopping and leisure. Both dimensions have an effect on the members of the partnership as well as on the choice of measures. The target oriented perspective tries to increase the accessibility of shopping and leisure infrastructure, which could be an improvement of the transport system

itself. Furthermore, services and information for environmentally friendly transport modes concerning customers could be upgraded. The source oriented perspective tries to influence the choice of transport mode before starting the trip (so called mobility management). The choice of transport mode is determined - besides purpose and target of the trip - by the availability, access and information about the transport system.

The presented paper provides a comprehensive approach for source-and-target related mobility services. New partnerships between house-owners and transport companies are an example for the source oriented perspective ("Mobility management for housing companies in Alsdorf"); partnerships between retailers and transport companies are an example for the target oriented perspective ("Shopping Services in the City Center of Bonn"). Through a co-operation between mobility companies and further local players, customer oriented but also efficient services could be designed. The government of North-Rhine-Westphalia is supporting both projects. The task is to develop new mobility services with new partners and to evaluate the benefit for the companies and the customer. Both projects are examples of new partnerships for the development and operation of mobility services. It will be shown, that the shopping sector as well as housing companies could be reasonable partners for transport operators and mobility services and could also benefit through this kind of new partnerships.

Source oriented tool of mobility management

Background

Alsdorf is a small sized municipality near Aachen, where a new housing district is developed for approx. 500 units. The area of interest where the pilot project takes place, covers about 40 ha and is situated in a former brown-coal district in the city centre. The access to the public transport system is given by a central bus stop and, in the forthcoming future, by a regional operating train stop as well.

Different investors agreed on a partnership with different mobility companies (e.g. Car Sharing, public transport, rail) to support, financial as well as organisational, the different opportunities for their future customers.

Since 1999 the Wuppertal Institute for Climate, Environment and Energy and the CAMBIO Aachen, the local Car Sharing company, are carrying out an order by the Ministry of Housing, Living, Culture and Sport of North-Rhine-Westphalia (Ministerium für Städtebau und Wohnen, Kultur und Sport der Landes Nordrhein-Westfalen), for research of the pilot project "Mobility-service-management for housing-economy in Alsdorf".

Aim of the project

The aim of the project is to create a win-win situation for all partners: The housing companies could provide an extra service for their tenants and could also reduce their expenses on parking space. Due to this project different transport companies get an access to many new potential users at once. Furthermore, this project provides good opportunities for a common marketing strategy.

The main focus within this project lies on the development and implementation of new partnerships for an integrated mobility management. Operators are retail traders, housing companies and mobility services. The process was organised and moderated by the Wuppertal Institute on behalf of the state government. The aim is to meet the consumers needs with new solutions for a sustainable mobility. Due to this, the main focus concentrates on those concepts, which promote a car-(owning-) independent mobility.

The project is divided into three phases:

1. Carrying out an analysis of existing cooperation between housing companies and transport services
2. Developing an "Mobility Service-Package" with different supplies and find financial solutions with various stakeholders
3. Evaluation of the existing services

Before going into the details it has to be mentioned, that the third phase of the project is not carried out yet. For reasons which will be described later on, the building of the housing has not started yet.

Due to this, the focus in the following paragraphs is on the results of the analysis and on the description of the new services considering the role of different stakeholders.

Project Results

The first step of the project was to carry out an analysis about the existing projects where transport companies and housing companies cooperate to provide a better service for their customers.

There are a few examples of good practices in cooperation. In Berlin, for example, a cooperation between the local public transport company and the housing company led to a new district-bus by extending the public transport system to the new housing district. This bus line operated between the district and the next underground stop in ten-minutes sequences between 6 a.m. and 10 p.m. seven days per week. Moreover, a special tenants-ticket for the public transport was invented to guarantee a reduction of ten percent of the ordinary ticket price to all tenants.

As another example a housing company in Bremen cooperated with the local Car Sharing-company to develop a new district close to the city centre. By offering different kinds of cars like small sized cars or mini vans, it was guaranteed to meet the different kind of demand for the tenants.

A third example of a cooperation between housing- and transport companies was in re-used building of an old hospital in Hamburg. It was invented a so-called "Car-pool" for all tenants, as a special kind of Car Sharing supply. Moreover, a time ticket for the public transport valued for one year was provided to all participants. Three city-bikes can be hired by the tenants as well and all organisational work was managed by a special administration bureau in the district.

The result of this analysis was, that despite some activities in this new field of cooperation, there is no actual project in Germany, in which a systematic integrated approach for mobility services is developed.

Based on the analysis the second step of the project was to develop a so-called "Mobility Service-Package" which consists on the different supplies for a car-independent mobility. This programme has to be developed in cooperation with the different mobility provider.

The aim is to create a win-win situation for all partners: The housing companies could provide an extra service for their tenants and reduce their expenses on parking space at the same time. Through this project the different transport companies get an access to many new potential users at once. Furthermore, this project provides good opportunities for a common marketing strategy.

These arguments lead to the creation of an integrated concept. As mentioned earlier the Wuppertal Institute moderated the process and developed the integrated concept with the different stakeholders. It was crucial, that the concept was developed by an independent organisation without own financial interest and as such could play an objective role as a moderator. On the other side, it was important to have a regional partner to use the existing contacts.

The "Mobility Service-Package" includes all different supplies, which are connected to mobility services within the development of the new location in the city centre of Alsdorf. It describes an infrastructure basic-supply with Car Sharing, Public-transport-tickets for tenants and special information services. Besides this basic-supply one can find additional services like a delivery service as presented in this paper. By starting with detailed planning the architectural and spatial requirements have to be considered and realised. Moreover, organisations and actors who support these ideas and who take responsibility have to be stated.

A special ticket for local and regional public transport should be introduced, which is included in the rent and could be used by all household members, an automatic Car Sharing-access without any further membership or additional fee should be provided, a special information service has to focus on the housing own district, a bicycle rental service station and a mobility manager who is responsible for all kind of services etc. should be implemented moreover.

The basic supply within this pilot project is, as mentioned before, the public transport and Car Sharing. It is important to include different project partners from those organisations from the early planning stages.

Infrastructure Supply	“Hardware“ Supply	“Software“ Services	architectural/ spatial requirements	Organisation/ actors
Car Sharing	Basic-supply “District-Car“: -small- & middle-sized cars; “de-luxe“-supply: -vans, -campers, -cabrios, -scooters;	incl.: car-washing, servicing, administration, rental-service monthly charge included in rent	parking- opportunities for car sharers and visitors	“District-Car“ with protection of caretakers or occupiers/ tenants
Rent a Car	- busses - transporters	special offers for rental	–	“District-Car“
Taxi	–	special offers with taxi- companies	taxi rank in small distance	“District-Car“ taxi enterprises
Public-transport- ticket	Special conditions for residents	part of lease, included in rent	stop for public transport with special arrangements, info-desks etc.	Investor Public-transport- companies City of Alsdorf
German Railway (Deutsche Bahn AG)	–	special offer for group-customers in abonnement	–	German Railway
Mobility manager to look after	- Mobility Manager as connection between housing and mobility		- flat for the Mobility Manager / caretaker	Investor “District-Car“ Rent-a-bike

As Car Sharing offers a special kind of personal mobility for all tenants, it is crucial to implement this service from the first day on. Although experience often showed that Car Sharing is usually not able to work in an economically efficient way during the first year after its implementation, there have to be found other solutions to keep this service running. One solution, which was found within the realisation of the Alsdorf-project, was to contact project partners like car-traders, who were able to rent those cars under special conditions (small and middle-sized cars for max. one year and 100 EUR per month as rent).

The Car Sharing service could be realized for more than only the two years of the pilot study, and due to the central location of the project-area in Alsdorf not only to the tenants, but also other to residents and small and medium enterprises of the surrounding could profit from it.

A special public-transport-ticket with special conditions for residents is the second basic supply for the pilot project. In November 1999 initiators of the project, as well as stakeholders from the local transport services came together and agreed upon this special transport ticket. The main feature of this ticket is its obligatorily combination to all flats, so that it is available for all residents, automatically included within the monthly rent. Users have access to the whole local transport net, including busses and trains. The ticket is valued 24 hours a day and functions as membership-card for many other borders as well.

Furthermore, the initiators and stakeholders of the local transport services agreed upon a forth reaching development and availability of this ticket after the two years of testing have run out.

For financing this ticket they decided to tie it to the square meter-prices of the flats, in such a way, that in the end the price per ticket and person with 100 EUR for one year was a similar amount as the ordinary monthly (!) transport ticket price.

Outlook/Further steps

As already mentioned before the whole project has been delayed for several months. The main reason for this is the actual housing situation, especially the demand for housing. The regional housing market is sufficient enough at the moment, so that there is less demand for housing at all. It has to be stressed, that there is no connection between the invented services for Alsdorf and less demand in that district. All operators still have a large interest in carrying out these new supplies of the pilot project.

Due to this an evaluation of the whole project, which should have been finished by now, has to be delayed, too. The Alsdorf-project needs to run a certain time until final results of acceptance can be concluded. Especially all results concerning the ecological influences and balance cannot be evaluated at this time.

First Conclusions

The "New partnership for an integrated mobility management" in Alsdorf is ment to be a pilot project for starting new forms of mobility-services. There is an acceptance of new services between provider and customers. The project is one of the first, which offers an overall integrated strategy. By this Alsdorf-project new partnerships between different companies like housing and public transport companies, can be established. Through this kind of new cooperation the acceptance of the housing district as well as the demand of Car Sharing and public transport means could be increased.

To full fill the economical dimension the project has to observe all persons involved and bring them together in a "win-win"-strategy, so that everyone earns profit out of the new situation. Concerning the social dimension one could stress the advantages for single parents or families with lower incomes out of these new concepts. By promoting special supplies like children seat or easy accessible cars, family-friendliness is supported.

The ecological dimension, that will appear by and during this project cannot be foreseen yet as the project has not run for a certain term. The introduction of Car Sharing e.g. does not only guarantee high mobility for the users, but provides less space consumption (less parking space) as well. Anyway, a final evaluation of emissions and energy consumptions concerning the public transport users, on the one side, and the new induced traffic, mainly by Car Sharing, on the other side, is necessary.

Target oriented tool of mobility management

Background

Bonn – the former German capital – is a middle-sized town situated at the river Rhine in the State of North-Rhine Westphalia with about 300.000 inhabitants. In comparison to other cities of this size, Bonn has a well-developed business community with a functioning city centre. The spending power of Bonn consumers is above the German average. The public transport company, the Stadtwerke-Bonn Verkehrs GmbH, runs busses and streetcars. In the year 2000, the company decided to develop a delivery service in the city centre of Bonn for local and regional households. Since October 2000, the project in Bonn is one of the first delivery projects in Germany, which is offered regularly, six days a week in the morning and afternoon by a public transport company. A financial program of the State of North-Rhine Westphalia – which is called "Service, Cleanness, Safety for a New Public Transportation in North-Rhine Westphalia" – for the promotion of services in public transport systems supports the project. The Wuppertal Institute and the consumer protection agency of North-Rhine Westphalia received the task to advice the project process.

Aim and function of the project

With this project the use of the public transport and shopping in the city center should be strengthened. In comparison to car-oriented shopping facilities, shopping in the city center is to a high extent environmentally friendly because of the dense and high-quality public transport service. Furthermore a delivery service should support the mobility of car-free households and special target groups such as elderly people or households with children. Until now, mainly seasonal offers especially during Christmas time have been run successfully in German cities. The concept for this new service with the brand name "Easy Shop" was developed in co-operation with the official representatives of the regional retailers'

association and the city marketing working group. The project should provide the following advantages (see following table) for the customers, the retailers and the transport company.

Customers	Public Transport companies	Retail trade
"Easy Shop" should enable all customers to go shopping without the need to carry heavy bags during the shopping tour or on the way back home.	With „Easy Shop“, local mobility companies should enlarge their services for regular and new customers.	For the inner-city retail trade, which can build up a delivery service of its own only with a high financial effort, "Easy Shop" should be a business-wide offer, which is practicable and economical.
Leisure time activities in the city after the shopping tour are unweightedly possible.	Instrument to tie regular public transport customers with an inexpensive additional service "goods transport" closer to the company.	"Easy Shop" is (up to now) exclusively offered in the city centre, so that the local retail trade may strengthen its position against retailers in the outlying districts.
Especially for elderly people, but as well for families, "Easy Shop" should enable shopping easier.	Gaining new customers, especially car drivers who have so far gone shopping with their car because of goods transport. "Easy Shop" in combination with the local public transport offers a comfortable alternative without the annoying search for a parking lot.	With "Easy Shop" customers who do not have a car available are able to buy more or heavier goods. Thus, "Easy Shop" might affect future purchase decisions.
"Easy Shop" should be far more comfortable for customers who usually go by train or bus, walk or cycle, especially when buying bulky or heavy goods.		

And this is how "Easy Shop" works: Every retailer in the City of Bonn could join the project. Therefore they have to sign a contract with the Stadtwerke-Bonn Verkehrs GmbH that they support the marketing in their shops and that they contribute to each delivery with a small amount of money. The shop-assistant should inform the customer about the service offered by the transport company, they have to note the customer's address and they have to order the driver. The logistical system is based on station wagons, running on natural gas, driven by staff of the public transport company. Owner of a regular ticket pay less for the service (2 Euro), car drivers pay more (5 Euro). The goods are delivered on the same day of the order if required. The goods are delivered anywhere within the borders of the public transport association the "Verkehrsverbund Rhein Sieg" and the City of Ahrweiler. More than three million people live within this area.

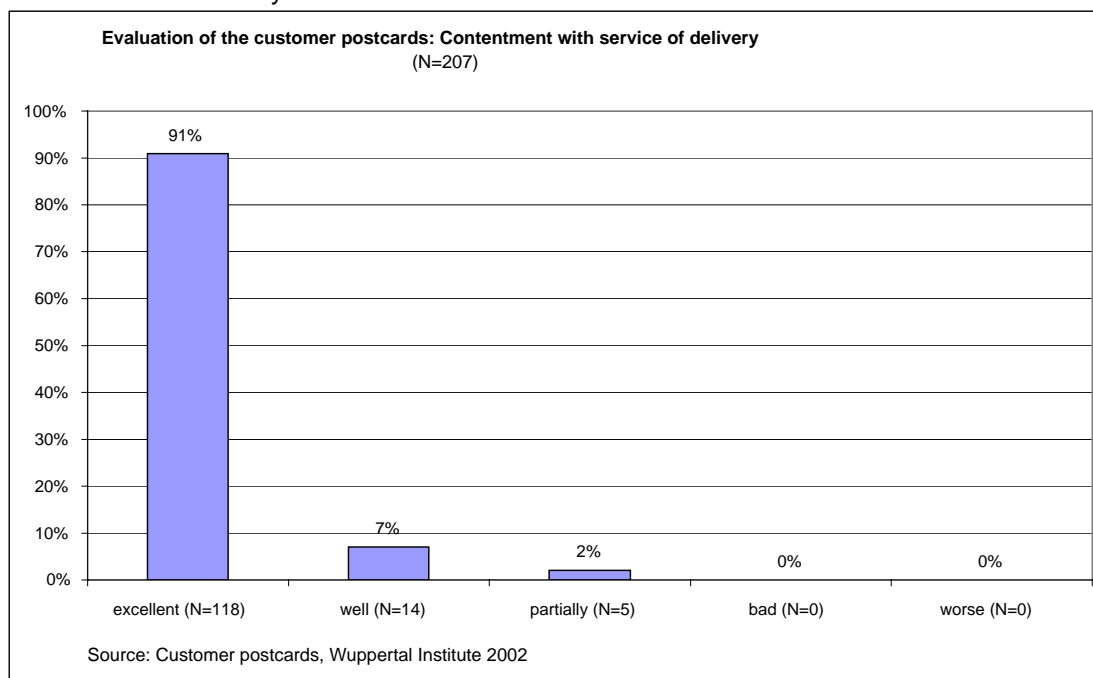
Evaluation of the project

The State of North-Rhine Westphalia supports the purchase of the delivery cars, marketing measures and the evaluation of the project. Aim of the evaluation is to proof the acceptance and contentment of the customer and the economical, environmental and social effects of delivery services for shopping mobility. The following table shows the main questions of the accompanying research.

Economic Efficiency	Design and Maintenance of Service Quality	Impacts on Transport Patterns	Mobility Prospects
Can a project like "Easy Shop" be offered economically efficient, from the point of view of the local transport company and the local retail trade?	How does a customer-orientated delivery service look like and how could it be realised?	To what extend does "Easy Shop" contribute to the reduction of transport impacts and to mitigate environmental damages (and thus helps to save energy and to reduce emission loads and the release of carbon dioxide)?	In what way does "Easy Shop" promote people using busses, trains, bicycles or their feet?
In which part of the production chain is an increase in productivity possible, and how could savings be achieved?	How can a business-wide delivery service be established in the mobility and service market for all retailers on long term?	Is there a transport shift caused by the delivery service in favour of environmentally friendly modes of transports (during the time of the project)?	Do those people, for whom an independent shopping tour may be strenuous or impossible without the help of an inexpensive delivery system, use the offer?
To what extend is a delivery service offered economically and accepted by the customers?	In which part of the production chain are problems or service deficits?	-	Which groups of society are the main customers of this offer and for what reasons?

Throughout the project, extensive user mobility data has been collected and in the beginning of this year a survey of customers of the delivery service and of households of non-customers has been realized (the survey has been finished this month). According to the ongoing survey of the project, following tentative findings, how the service has been used within the last 15 months, can be highlighted:

- Up to now sixty-eight retailers joined the project and signed a contract with the Stadtwerke Bonn Verkehrs-GmbH. About one third of them are dealing with garments. One of the largest German warehouses took part, as well and was ordered by far most of the deliveries. The participating retailers could be distinguished into different groups. Those, who were very active and by that used the service very often, than those, who used the service only temporarily, but were the largest group with most of retailers, and those retailers, who never used the service at all.
- Within the 15 months of survey, the delivery service was ordered 3518 times. Considering altogether 379 working days, 9.3 deliveries per day have been realized. Most of the deliveries took place from Monday to Friday; on Saturday less customers asked for the service.
- Regarding the frequency of deliveries per month, it became evident that the service follows the basic economic trends in retail where one can find a boom especially during Christmas (from October to January) and recession especially during summer (holiday). Within these months with less demand, there has to be paid more attention to special marketing measures.
- Based on the analysis of tickets used for the delivery, it could be said that more than two thirds of the "Easy Shop" customers are regularly customers of the local public transport company. About 10 percent of the customers do not hold a ticket, thus have come into the city of Bonn either on foot, by bicycle or by car. Altogether, "Easy Shop" seems to be mainly an offer for public transport customers. The whole marketing was mainly aimed at this group as well.
- Two thirds of the purchased and delivered goods had a value over 100 €. These results contradict the prevalent assumption, that public transport customers are the "worse customers" for the retail trade in the city, as they spent less money than people coming into the city by car.
- With each delivery, a customers' postcard was handed out, which could be returned to the Stadtwerke Bonn Verkehrs-GmbH free of charge. By this, 207 postcards were returned during the project and could be analysed. Altogether, the customers seem to be completely satisfied. About 90 percent consider the service as 'very good'. Over one third indicate that without "Easy Shop" they would have bought the same goods somewhere else outside the city of Bonn or not at all.



Outlook/Further Steps

In the second quarter of 2002, the detailed results of the mobility analysis, of the customer and household surveys and of the analysis of the customers' postcard will be available. During the project several aspects gained special interest. It became clear how important the amount of participating retailers is for a successful process, which means a high number of deliveries per day. As they are the ones to be responsible for offering the service to the customers, they perceptibly contribute to the usage of the service. It is the aim of the project partners to win as many retailers as possible for the project as well as the large wholesale warehouses of the city. Therefore one would need beside a marketing strategy a special strategy to address the retailers. Already now it could be stated that the partnership between the retailers, their representatives and the transport company was a success, which is indicated, by the high number of participating retailers. Nevertheless the number should be increased.

A successful marketing strategy is crucial for the implementation of a new service quality like this delivery service. Customers are not yet used to this kind of service during their shopping routine. The very complex process of the delivery has to be communicated as easily and comprehensively as possible to the customers. This is even more important as it became obvious, that the group of elderly people (60 years and older) are a key target group for this service. Based on the experience out of the customer survey and on the analysis of the customers' postcards, one can say that elderly people in particular have used the service and respond positively to it.

Further analysis will examine if there is a bundling effect and if the amount of kilometres for shopping could be decreased with "Easy Shop". If there is a large number of deliveries the application of a routing planning system seems to be quite important.

First conclusions

Although the evaluation of the delivery service in Bonn is not finished yet, several preliminary statements about the project process can already be done:

The delivery service functioned the way it was designed by the project partners and was accepted by the customers. The target rate of 10 deliveries per days was reached in this first phase of the project. The service receives a high contentment rate and makes the use of environmental friendly modes of transport much easier when shopping in the city of Bonn. This could be realized especially for groups who need special assistance for shopping and mobility in general (social dimension). The retail traders benefit from the service as they have no further costs when just participating. Only when the service is used, they have to pay a small part of the expenses. Obviously it was the usual practice that the retailers took charge of the entire sum, therefore the customers did not have to pay at all. Thus, the retailers obtain an increase in service quality, which could otherwise only be realized by establishing an own delivery service with much higher costs (economic dimension). For the local public transport companies, the delivery service is an additional performance and quality feature, which can strategically be used for marketing. The delivery service is a new field of work for the employees of the public transport company. Therefore, this field could be efficiently handled. The ecological balancing of the project will be done based on the customers' data and will be carried out during the next months. Without the cooperative approach of the project, the delivery service could not have been realized in this retailer and customer orientated form.

Results and conclusion

The described processes underline the possibility to build new partnerships for the development of new mobility services for a car-independent shopping and leisure mobility. In the following steps, the results of the two projects will be drawn on the background of the three dimensions of sustainability. Finally, the common experiences of the projects will be introduced.

The three dimensions of sustainability are differently addressed by the projects. Especially the social and the economic aspects emphasis the positive arguments. The final ecological effects have to be further evaluated.

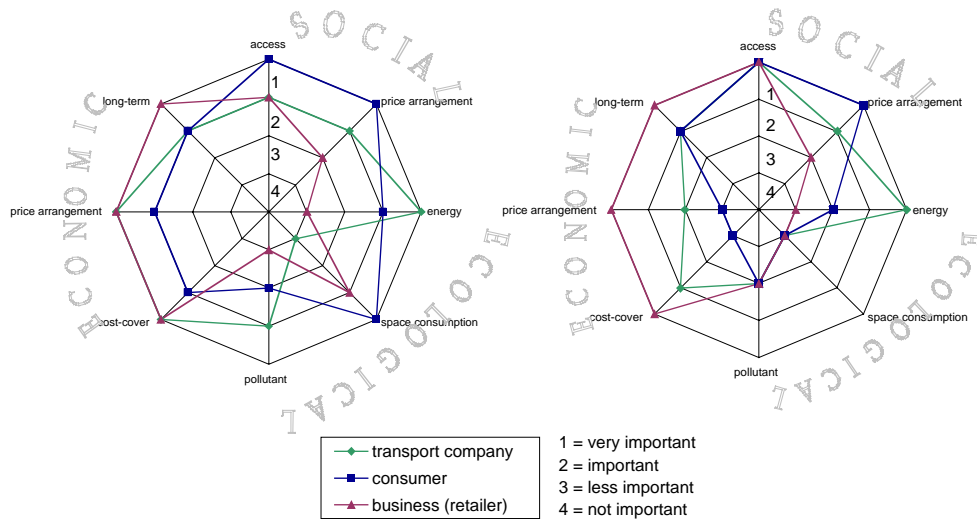
The following figure provides a summarized assessment which dimensions of sustainability will be covered by the identified stakeholders from a qualitative perspective. The 'stakeholder line' for the different actors (transport companies, business (housing companies, retailers), customer) shows the importance of each indicator. As far as the line is out in the outer rings,

the importance increases. Through this figure the different roles of the stakeholders within the projects are visualized. The indicator price is covered twice due to the social as well as the economic function.

Dimensions of sustainability and stakeholders' interests

Source oriented project: Alsdorf

Target oriented project: Bonn



As concluded earlier, in both projects the economic dimension is highly recognized by the different suppliers (retailers and housing companies as well as the transport companies). For the first group, the aspect of maximizing their profit and binding their customers by providing additional services is crucial. The transport companies have to take the social benefits for their customers into account as well.

The ecological dimension plays a more important role for the customer side and the transport company side than for the business. For the company the ecological benefits could be used as a part of their marketing strategy.

The building of new partnerships seems to be a successful strategy for a more sustainable transport system. The key stakeholders, depending on target or source oriented services, should be integrated into the whole process. Finally, the customer will decide about the success of the new partnerships in accepting and using these new services.