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Public Transport: Key Element and Motor of a Forward-Looking Mobility Alliance

Working Group "Multimodal Mobility Offers"
of the VDV Committee on Strategy



Public Transport: Key Element and Motor of a Forward-Looking Mobility Alliance

Mobility is absolutely essential in our modern society, but due to the requirements for a sustainable development we face big challenges as transport is still very dominated by the motorised private transport. It is the intention:

- to reduce the consumption of fossil energy sources and to increase the energy efficiency,
- to avoid harmful environmental influences (above all climate warming, air pollution, noise emission, land consumption),
- to ensure public investments, affordability and social inclusion.

Public transport is and remains the right solution for many of these challenges, but it is a mass transport mode, which means that it cannot meet each individual need for mobility suitably. From the customer's point of view it is therefore necessary to combine public transport with further mobility offers.

The vision: Multimodal on the way

Peter R. lives with his family in a big city. He uses the mode of transport that suits him best for each way. He goes to work by tram, rides his bike when he has a few things to do in the city and goes by car from the car sharing company when he shops in a do-it-yourself store. At weekends he goes by ICE on city tours. Sometimes he allows himself to go by taxi. He does not need a private car any more.

Peter R. is happy. In the past he used his private car for nearly all ways. Today the flexible mix of modes of transport does not only make him more mobile, it also saves him the costs for a private car. And his friends are impressed when he drives up in an electric car, combines rail and bike or shows how easily he can book everything via his smartphone. His mobility behaviour has changed thoroughly: Most often he is on his way by bus, rail or bike. Of course, he also goes by car, but as he has to pay for each trip, he only uses the car if it is really meaningful.

All these services are accessed via the "mobility package" offered by his public transport company. Instead of finding the individual services, examining each provider and concluding individual contracts, he enjoys mobility from a single source. He uses what he wants to use, profits from discounts and only pays for the services that he has actually made use of. If he has a question or if there is a problem, he has a local contact – and at the end of the month he receives a transparent invoice for the mobility services. Everything is debited conveniently from his account.

Use not own – this motto has changed his mobility behaviour completely. And just as he does not want to do without his smartphone anymore, he does not want to do without his flexible mobility package. And it has been like that already for a long time.

From a Public Transport Association to a Mobility Alliance

In Germany public transport associations have a long tradition. Whether by bus, tram or train – the customer can use all public transport modes in a region with only one ticket. Public transport associations are a success because they make the public transport offers more attractive: The services are coordinated and marketed jointly, and the customer receives an offer from a single source.

But public transport alone does not offer complete mobility in a region. The customers need further modes of transport – and for many customers it is a matter of course that the car is one of them. Therefore, it is obvious to expand the successful concept of the classic public transport association to an “environmental alliance¹” in future and to provide complementary offers. This step means that an extensive “mobility alliance” consisting of bus and rail, car sharing, taxis, bike hire systems and other services as well as integrated customer products (“mobility package”) has to be developed.

The objective: Best possible combination of the modes of transport and modal shift to public transport

If the various kinds of offers are united to a comprehensive mobility alliance, it will be possible or easier to combine and use these offers flexibly. The customers can mix their optimal modes of transport from an array of mobility options. However, it has to be borne in mind that not only access obstacles, but above all the existence of a private car and the resulting car-oriented routines of use make up a major obstacle to such multimodal selection behaviour.

Therefore, it is important to develop and make offers accessible that make it superfluous to own a private car, but simultaneously provide the desired (car) mobility for the customers.

Thus, the customer-oriented combination of offers provided by a mobility alliance has

- to simplify and improve the mobility for the citizens and
- to change the mobility behaviour of the citizens towards flexible and environmentally conscious selection of the mode of transport by way of attractive all-inclusive offers.

This means that the mobility alliance shall not influence the selection of the mode of transport via prohibitions and control measures, but via development of the possibilities and via the customer’s direct benefit in support of the environmental alliance.

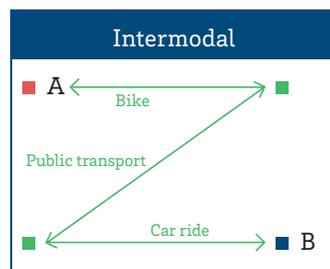
¹Environmental alliance: Private transport on foot or by bike as well as public transport

Public Transport as Key Element and Motor

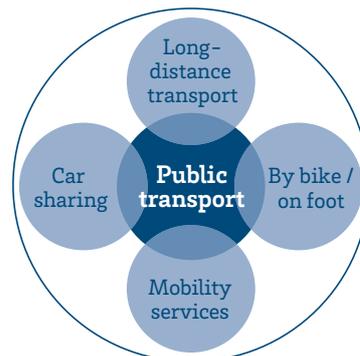
The VDV is of the opinion that public transport makes up the key element of such an inter- and multimodal mobility alliance due to its network features and its sales organisation. Simultaneously, the public transport providers can be the motor of such a development. From a strategic point of view, the provider of integrated offers develops to a kind of “mobility provider”, which organises and bills extensive mobility for its customers, but without having to produce all these services itself.

The strategy of multimodal networking with strong public transport as the key element is an option both in urban and in rural areas. It is the objective to develop attractive all-inclusive offers and thus to contribute to modal shift. Due to the demographic transition such networking is also possible in areas with low demand. The combination of existing vehicles and services and public transport helps to create or keep up a useful basic mobility offer that can also be financed.

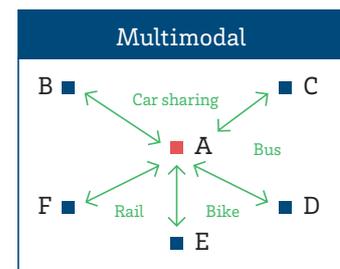
Intermodal and multimodal networking of public transport



Intermodal
Interlinking various modes of transport on the way from A to B



Mobility platform



Multimodal – Variation of the mode of transport depending on the situation (different modes of transport on the way to B, C or D etc.)

Multimodal networking is also in the interest of the municipalities, which are often the principals of public transport and the owners of the transport companies. Only if public transport is networked, will it be possible to ensure environment-friendly, efficient and integrated mobility in future from the point of view of provision for elementary requirements. The municipalities and the transport companies have to fulfil this task together. Therefore, the below description of the situation and the worded requirements have been harmonised with the “Deutscher Städtetag” (German Association of Cities), the “Deutscher Städte- und Gemeindebund” (German Association of Towns and Municipalities) and the “Deutscher Landkreistag” (German County Association). Although the associations do not have identical requirements in every detail, there is a high degree of compliance as regards the analysis and the basic strategy.

Present Situation, Trends and Developments

At present, the transport market is characterised by quite a few new trends and developments, which provides unique chances of shifting to public transport and strengthening the market position of public transport.

Variety: People see an ever broader range of modes of transport and mobility services and break with their routines of use.

- Attractive public transport, car sharing, bike hire systems, electric bikes, Internet-based arrangement of ride sharing, long-distance buses etc. are offers that (are going to) create new possibilities and new habits.

Change of attitudes:

People are getting more open to pragmatic use of the modes of transport.

- The importance of the private car as a status symbol and the focusing of many people on the car has decreased considerably. For the first time in history young adults drive less by car than their parents' generation. Simultaneously, there is a trend towards combining the modes of transport as needed.

Internet and smartphone: People are more and more often online when they are on their way, the smartphone develops to a personal "mobility office".

- The (mobile) Internet makes it possible or easier to use new mobility services, which increases the requirements for flexible use of the modes of transport and real-time information. Simultaneously, the Internet facilitates trends like "networking", "use instead of own" and "sharing".

Energy turnaround and climate protection:

No energy turnaround without transport turnaround!

- As nearly the entire transport by car depends fully on oil, the transition from fossil to renewable energy, which is promoted by politics and society, requires considerable changes and mobility alternatives. Accordingly, not only the drive technology, but also the structures of use have to be changed. It is not possible just to replace the present car and its present structure of use by the electric car.

Mobility budget: People need affordable mobility.

- On the one hand, the costs for mobility have been increasing above average for years. On the other hand, there are more and more low-income earners and the period between education and a well-paid full-time permanent position is longer nowadays.

If you want to promote multimodality, you need good public transport as a basis!

- **The new transport services like car sharing and bike hire can only be successful in synergy with good public transport. Bus and rail are the primary system and make up the basis for successful development of new offers.**

Attractive and efficient public transport is an absolutely essential condition and the starting point for the networked, multimodal transport systems of the future. This applies both to urban and rural areas.

- **The logical development of the present transport associations goes towards a comprehensive mobility alliance.**

This mobility alliance arises by networking public transport with other modes of transport and other mobility services. It is the objective to achieve harmonised offers, one ticket for everything, comprehensive information not only about public transport, but about the varying mobility demands.

- **The transport companies and the transport associations have very good prerequisites for the role of “director” of networking:**

- They have a broad customer basis, which is interesting to providers of complementary services. In turn, these complementary services also broaden their customer basis.
- It is their original business to offer, organise and network mobility services.
- They know the local situation and are networked with many actors, politics and the administration.
- They are already now a motor of sustainable mobility: climate- and resource-friendly, sustainable and meaningful from a macroeconomic point of view.
- They profit directly if there is a modal shift towards public transport because their ticket returns are increased in that case.

- **The combination of different mobility services under the umbrella of public transport is particularly useful for the customers and the general public, but also for new providers.**

- The customer profits because his mobility is improved and becomes less expensive as he finds the best mode of transport for each way and can fall back flexibly on a broad range of offers and save fixed costs, which can make it superfluous for him to own a car at all or to own two cars.
- The general public profits because the selected mode of transport changes in favour of the environment and towards reduction of the number of passenger cars privately owned if the car-oriented routines are left and there is flexible access to the mobility alternatives. Moreover, the participation in society is improved for people who do not own a car. If the total number of cars is reduced due to multiple uses, road and parking spaces will also be free again for another use.
- The providers of new services profit from the cooperation with the transport companies and the transport associations as it will be easier for them to address new customers and place their products. Transport companies and transport associations have decisive access to the customers.

- **The networking of mobility offers for everyone needs pioneers who can implement this challenge purposively.**

Transport companies and transport associations are going to meet this challenge in cooperation with the municipalities by developing to leaders of the networking:

- They provide the necessary primary system with an attractive public transport offer.
 - They present themselves as comprehensive mobility providers to the customers as they also provide the organisational backbone function.
 - They are predestined to take over this very complex task in the interest of the municipalities and the general public.
 - The electric public transport and the CO₂-free multimodal system components can promote the concept of the future CO₂-free mobility.
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- **Transport companies and public transport principals profit from the positive effects of multimodal offers:**
 - Public transport is strengthened per se by the new image as a provider of new innovative all-inclusive offers.
 - Customers are tied to and gained for the core business of public transport, i. e. more tickets are sold and the customer loyalty is increased due to the positive effects of the offers on the customers' mobility behaviour. Multimodal thinking promotes the use of public transport.
 - There will be returns from the operation and sale of complementary services as well as from the operation of a marketing platform.
 - The market position of public transport will be strengthened.

Multimodal Mobility Components

The central element for networking the complementary offers is a multimodal mobility platform, which provides information, booking, access and invoicing.

Ideally, the customers have the following possibilities, e. g. with their smartphones:

- Information before the journey about the various alternatives (e. g. to compare prices and journey times)
- Booking of the selected service (e. g. calling a taxi or booking a ticket)
- Use of the service (e. g. unlocking a car-sharing vehicle or going by public transport)
- Information during the journey (e. g. about the actual position, delays, connections, alternative routes/modes of transport, parking spaces, barrier-free travelling, stations)
- Payment of the costs for the journey (e. g. by debiting the account)

Car sharing is a central instrument by the expansion of the core services of public transport to a comprehensive mobility alliance:

Car sharing makes mobility by car possible as desired by the customer and for certain purposes without simultaneously stimulating to only going by car. Thus, public transport and car sharing supplement one another ideally.

Car sharing is developing very dynamically at present and will get more and more important.

On the one hand, the present providers gain new customers constantly. On the other hand, new providers and new kinds of offers (one-way/free-floating offers) enter the market. In that way the offers get more attractive and in parallel more attention is paid to the car-sharing offers by the people and the actors in the community. Positive effects (reduction of the number of private cars, modal shift to the bike and public transport) have repeatedly been proved for the classic station-bound car sharing system. Such positive effects are still to be proved for the new free-floating offers, but they are likely to occur.

The bike is an important element of the mobility alliance, and it will get even more important.

Up to now, most bikes are privately owned. Therefore, the multimodal networking should not only focus on bike hire systems, but also on the general encouragement of cycling, inclusive of good combinations with public transport (good possibilities of parking at stops, bikes on public transport). Bike hire systems are a complementary element and support the realisation of the mobility alliance.

The taxi should be more intensively integrated as a complementary offer.

Up to now, the cooperation between public transport and the taxi business has been nearly exclusively restricted to provision of the service (e. g. call taxi by way of compensation for line-service transport) and has left out the customer aspect. However, as an element of the mobility alliance the taxi increasingly takes over important functions for the customer. If the taxi is integrated into the all-inclusive package, the high fare obstacle is also modified. The taxi can be integrated positively e. g. as the premium product "car with driver".

The public transport sector offers the "eTicket Deutschland" as well as "Touch & Travel" as the access basis to the services of the mobility alliance.

In practice, the smartphone is going to increasingly establish itself as the front end for information, booking and payment. However, in the foreseeable future the smartcard will also be an essential access medium as a supplement/alternative.

Requirements for Politics

The development and the success of a forward-looking mobility alliance require positive frame conditions. The questions are how the networking can be expanded and how the offers can be supported legally, financially and organisationally. All levels of the state are in demand.

The relevant benchmark should be whether these offers have a verifiably positive effect on the selected mode of transport (shift to the environmental alliance) and, if relevant, whether the offers are provided in cooperation with public transport. Therefore, one-sided measures promoting electric cars, e.g. the release of bus lanes or free parking spaces in the city, are counterproductive as the environmental alliance will suffer as a result of these measures.

The VDV and its members want to continue to contribute to developing sustainable mobility in the towns, cities and regions. We see ourselves as the motor for affordable, environment-friendly and social development of transport in Germany. We are going to speed up the integration of complementary offers within public transport, inclusive of differentiated handling, car sharing, bike hire, taxis and complementary services, within integrated mobility platforms over the next few years adapted to the local situations. For this purpose there have to be frame conditions that make it possible for us to do so and that support the initiatives. Such frame conditions are:

- **a regulatory framework,**
- **support programmes for standards and pilot projects as well as**
- **purposive planning instruments,**

which we propose for the towns, cities and municipalities, the German Länder, the Federal Government and the EU as the common objectives with concrete measures.

Towns, Cities, Counties and Municipalities

Regulatory framework

- Clear expansion of the parking space management, also out of the inner city.
- Further development of the municipal regulations concerning parking spaces aiming at being able to reduce the number of the specific parking spaces for passenger cars by way of mobility management measures, by identifying parking spaces for car sharing, by way of public transport tickets for lessees, job tickets, mobility packages etc. and thus to create incentives to lessees/lessors and customers/ sellers.

Support programmes for standards and pilot projects

- Financing or co-financing/support of cycling and/or combined use of public transport and bike, i. e.
 - Bike+Ride development programmes
 - general support of cycling
 - (further) development of public bike hire systems
- Financial commitment and granting of rights should always depend on whether the multimodal offers can be organisationally and technically integrated into the (e)Ticket system of public transport.

Purposive planning instruments

- The know how of mobility and customer approach is often bundled with the public transport companies of the towns, cities, counties and municipalities as they are responsible for the planning, the customer information, the sale, the customer centres and the infrastructure. Therefore, they are entrusted with the preparation of multimodal mobility platforms on the basis of the local public transport, which have to be connected or networked on the basis of uniform standards.
- General recommendations on the support of car sharing and bike hire systems in combination with the public transport offer and the public transport network.
- Preparation of municipal car sharing action plans (e. g. in Bremen).
- Support of transport companies with the realisation of mobility stations at public transport junctions.
- The strategy and measures of multimodal sets of measures are to be integrated into each transport development plan, public transport plan, clean air plan, noise abatement plan and land development plan on the basis of the “public transport key element”.
- Redesigning of roads so that public transport and the non-motorised road users get more space (again) and so that the amenity values are improved on the roads.
- Strengthening of public transport within the urban transport management as the key element of multimodal mobility, especially in the form of structural and road-organisational measures speeding up public transport as well as quality management of the light signals at the junctions.
- Preferential erection of parking spaces for car sharing and bike hire stations in public streets at public transport stops. Public parking spaces shall develop from being used temporarily by single persons to being used/shared by the general public.

German Länder

Regulatory framework

- Support of parking spaces for car sharing in public areas and interpretation of future Federal regulations in favour of car sharing (station-bound and free-floating), especially in case of concepts in which public transport is integrated.
- Amendment of the laws of public streets and roads of the Länder as well as of the building regulations of the Länder towards abolition of the present legal obstacles to the erection of bike hire stations and reserved car sharing parking spaces in public areas.
- Amendment of the legal conditions (building regulations of the Länder) for the issuing of parking space orders and orders restricting parking space aiming at being able to reduce the number of specific parking spaces by way of mobility management measures, by identifying parking spaces for car sharing, by way of public transport tickets for lessees, job tickets etc. and thus to create incentives to lessees/lessors and customers/sellers.
- Provision of an experimental clause for car sharing and the required numbers of parking spaces for co-financing of multimodality by private builder-owners with simultaneous reduction of the required number of parking spaces (see above).
- Provision of fewer parking spaces for new buildings and working places due to a requirement for parking spaces for car sharing.
- Abolition of all restrictions concerning the use of Park+Ride facilities for reserved car sharing parking spaces for P+R facilities already supported and to be supported.
- Strengthening of the multimodal offers with the core function of a high-quality public transport offer by the development and approval of land development plans, clean air plans and noise abatement plans aiming at reducing the motorised private transport.
- Provision of experimental clauses for subsidy programmes as well as for the laws of public roads and streets and the right to use roads and streets.

Support programmes for standards and pilot projects

- Provision of funds for development of the cycling systems and bike hire systems as well as for development of Bike+Ride facilities.
- Creation of financial instruments for co-financing of solutions for “(e)Ticket Deutschland” inclusive of Touch & Travel with solutions for integration of multimodal offers.

Purposive planning instruments

- Aiming at developing Bike+Ride so much that it covers as large an area as at all possible (at stops for networking and for increase in attractiveness).
- Support of integrated information and sales platforms of public transport companies at local, regional or Land-wide levels.

Federal Government

The Federal Government should speed up the realisation of multimodal and thus area- and environment-friendly mobility considerably within its scope of competence. Below some examples of decisions by Federal ministries are mentioned:

Regulatory framework

- Federal Ministry of Transport, Building and Urban Development: Amendment of the law aiming at allowing privileged parking spaces in public areas for car sharing vehicles and considering both the requirements of station-based car sharing offers and free-floating offers (e.g. fixed assignment of parking spaces to the vehicles of a provider and free use, possibility of protecting these parking spaces from illegal parkers).
- Provision or expansion of experimental clauses for subsidy programmes as well as for the laws of public roads and streets and the right to use roads and streets.

Support programmes for standards and pilot projects

- Federal Ministry of Transport, Building and Urban Development: Support project with model character for the redesign of roads and streets with ambitious urban integration of bike hire stations and bike parking facilities.
- Federal Ministry of Transport, Building and Urban Development/Federal Ministry of Economics and Technology: If electric mobility is supported, only passenger cars in closed fleets with short ranges should be supported within the scope of public transport. Particularly car sharing vehicles and taxis are to be included in the subsidy programmes.
- Federal Ministry of Transport, Building and Urban Development: Provision of a budget for the support of cycling systems, bike hire systems and innovative Bike+Ride facilities.
- Federal Ministry of Transport, Building and Urban Development/Federal Ministry of Environment, Nature Conservation and Nuclear Safety: Placing of an order for a study on the future potentials of networking multimodal offers around public transport with the building and real estate industry.
- Federal Ministry of Environment, Nature Conservation and Nuclear Safety/Federal Environment Agency: Evaluation of the environmental effects of multimodal mobility and examination of assumptions and models (e.g. "tremod").
- Federal Ministry of Transport, Building and Urban Development: Support of a further "public transport IT offensive", erection of networked, comprehensive multimodal information and booking platforms on the basis of uniform technical standards, development of the "eTicket Deutschland" inclusive of Touch & Travel as a multimodal access basis. The eTicket funding initiative should be revived. The support should include the creation of interfaces to car sharing and bike hire systems, Bike+Ride facilities and other kinds of mobility services.
- Federal Ministry of Transport, Building and Urban Development/Federal Ministry of Economics and Technology: Support project for the integration of multimodal transport into the intermodal transport control systems (ITCS) of public transport.
- Federal Ministry of Transport, Building and Urban Development/Federal Ministry of Economics and Technology: Creation of possibilities of supporting the modernisation of the existing intermodal transport control systems (ITCS) of public transport or purchase of new multimodal transport control systems for the integration of multimodal transport into the control systems of public transport.
- Provision of possibilities of supporting communication and marketing measures to introduce multimodal transport behaviour and support its acceptance in the general public and/or support of a nationwide campaign.

Purposive planning instruments

- Federal Ministry of Transport, Building and Urban Development/Federal Ministry of Environment, Nature Conservation and Nuclear Safety: Integration of multimodal mobility offers and their relief potentials into national environment and transport programmes (climate protection strategy, all kinds of transport development programmes, urban development etc.).

European Union

Support programmes for standards and pilot projects

- The European Union is requested to finance a coordination office for a period of five years on the subject of “multimodal networking of public transport”, e. g. with the European association UITP (International Association of Public Transport). This exchange can be based on the already existing member group “Combined Mobility Platform” of the UITP and provide added value and faster spread of the activities of the early adopters in the member states in which multimodal offers are not so widespread yet by way of Internet platforms, conferences and technical assistance.
- The EU is requested to support the integration of multimodal mobility offers on the basis of efficient public transport according to pragmatic principles and the criterion of effect on the transport within the scope of their support programmes.
- As an expansion of the mobility management and at the interface to transport management public transport has to be supported increasingly by the expansion to car and bike sharing as well as to alternative ecological mobility offers as a measure for improvement of the environmental situation.
- The research projects and exchange platforms around multimodality supported by the EU so far (e. g. European Platform on Mobility Management [EPOMM]) have turned out to be an important basis for an inventory and the exchange of information among specialists. In future, mainly concrete financial investment aids for software supporting sales and information platforms, for intelligent software for the networking of the single operators as well as for state-overlapping and comparative measurement and research of efficiency will be needed to stimulate and evaluate implementation projects.

Further information on the subject is found on the home page of the “Verband Deutscher Verkehrsunternehmen” (Association of German Transport Companies) under www.vdv.de.

Forecast

This position paper of the Association of German Transport Companies is the first paper that deals fundamentally with the subject of "multimodal mobility". It does not claim to finally discuss the topic in all facets and details. It is the objective of this paper to inspire the discussion in the public transport sector, with the political actors and the authorities at all levels of the state and in the EU and – above all – with the new mobility partners. The future of mobility is discussed in light of environmental and financial challenges as well as the demographic transition.

The new quality of multimodal mobility is based on the present, technically possible networking of all existing public mobility offers and on the expansion of these offers. Thus, offers of any kind of mobility desired by the customer can be ordered as the situation demands. In that way the customers gain a practical added value as against the non-networked individual offers.

Networking lives from cooperation. The very different kinds of offers being complementary to one another require the teamwork of all actors as well as modernisation of the legal and financial conditions. The opportunities have to be used now jointly.

Association of German Transport Companies (VDV)
Kamekestrasse 37-39 · 50672 Cologne/Germany
T +49 221 57979-0 · F +49 221 57979-8000
info@vdv.de · www.vdv.de

Contact

Dr. Till Ackermann

T +49 221 57979-110 · F +49 221 57979-8110 · ackermann@vdv.de