

Editorial

Demographical change is one of the „Mega Trends“, the industrial developed countries have to deal with. In the coming years, the increasing share of elderly people will influence the characteristics of the passenger transport systems.

But also the specific requirements of persons with physical impairments need to be considered by transport operators and the supply industry.

Last but not least the legislation more and more demands for the improved access of public transport means for persons with reduced mobility – the Technical Specifications for Interoperability (TSI) provide appropriate practices for the future European Railway System, for instant.

Mobility providers, suppliers and research institutes based in the Berlin-Brandenburg region contribute to the development of transport systems that cope with the demands of persons with reduced mobility (PRM).

In the issue of TSB-FAV's newsletter you can read about selected projects and institutions relevant in that field. One international project with specific focus on PRM issues – the EUPAX working area of the integrated railway project MODTRAIN – had already been treated one year ago. For information about this particular project and for all other issues – please feel free to contact us.



Thomas Meissner
Managing Director
TSB-FAV

TU Berlin activities in the “easy.going” project

Barrier-free

The “easy.going” TransferNetwork – barrier-free mobility in Berlin-Brandenburg



Barrier-free mobility will become increasingly important as society ages. On the one hand, barrier-free mobility ensures that an ever-growing section of the population can be in full control of their lives. On the other hand, everyone benefits because convenience is enhanced. The demand for barrier-free products and services will thus rise considerably. Barrier-free mobility means that everyone has access to both the structural environment as well as the transportation system without any outside help (a “design for everyone” concept).

Small and medium-sized enterprises (SMEs) play an important role in implementing individual solutions. It is precisely these solutions that are frequently necessary when it comes to barrier-free mobility. However, SMEs generally have limited resources for research and development.

This is addressed by the project “easy.going” – TransferNetwork barrier-free mobility in Berlin-Brandenburg, prize winner of the innovation competition “Industry meets Science”, funded since 2008 by the German Federal Ministry of Transport, Building and Urban affairs. Aim of the project is to familiarise small and

medium-sized enterprises (SMEs) in the region with barrier-free mobility as an interesting area of development for innovative and forward-thinking products and services.

This is happening by means of a newly developed transfer model, the scalable innovation model. Two pilot projects are planned within the project time-frame:

- ▶ **"Barrier-free access to regional and long-distance trains"**
- ▶ **"Barrier-free information solutions for travellers"**

These pilot projects will be carried out by students together with the SME partners and research facilities. The idea is for a network to be created upon conclusion of the project in 2010 that encourages the exchange of ideas about barrier-free mobility between the private sector and scientific institutions.



Barrier-free information solutions for travellers



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transformat – location based media

transformat

transformat works on the field of location based media as software developer and solution provider. Clients are tourist and cultural institutions i.e. Museums, Cities and National Parks.

In the year 2003 transformat was founded as spin-off from the Bauhaus University Weimar. Since then numerous guide projects have been implemented i.e. Multimedia-Guides for Museums, GPS-Guides for Cities and Parks, GPS-Citygames and special Guides for handicapped people.

transGo Guide System

From the visitors point of view transGo is just a little device in his hand, which provides automatically the information required. But what's behind is a multi-functional modular system consisting of software and hardware modules. These modules link location, information and user interface towards exciting, interactive mobile applications for culture, tourism and business. transGo combines devices with location technology like GPS, RFID or WLAN with information and provides access for all audiences.

Barrier-free Guide at Hallig Hooge

The first GPS Multimedia Guide for blind tourists was implemented by transformat in 2008 at the island



GPS is another component that makes independent exploring possible for blind or disadvantaged visitors

Hallig Hooge. The System offers an accessible interface for blind visitors with automatic descriptions of countryside, interesting places and history of the island. It supports the DAISY-Format for fast navigation within the audio descriptions.

In a second stage starting in spring 2010 the system also supports blind tourists in orientating themselves with waypoint distance information via speech synthesis.

Barrier-free Guide at National Park Hainich

Since 2002 the National Park Hainich committed to barrier-free natural experience. The Brunstal trail is an early example. His Special configuration, a physical guidance system and Braille signs make the path widely independently usable for persons with disabilities – especially blind visitors.

The latest project aims to make the independent exploring of the path even easier for blind and visually disadvantaged visitors with an innovative form of guidance. With a palm-size pocket computer, so-called PDA (personal digital assistant), the visitors get information on their location.

Using GPS, the global positioning system, the PDA recognizes the location of the visitor similar to navigation devices for cars. Detailed environment descriptions start automatically and are enriched with background information about the Brunstal and the National Park Hainich. The visitor also receives precise orientation hints from station to station.

A distinctive feature is a pen sized RFID-Device, which is connected wirelessly with the PDA. By touching with this pen the visitors get detail



Innovative form of physical guidance at National Park Hainich

information on the exhibits along the path. The exhibits are therefore equipped with appropriate RFID labels.

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TU Berlin – Area of integrated transportation planning (TU IVP)

Research

The area of integrated transportation planning looks at the overall transportation system and the interdependencies between transportation, regional structure, environment, technology and business.

The goal is to come up with concepts for shaping mobility in a way that structures the economic cycles and societal participation with the view to the long-term by preventing travel, when possible, reducing negative consequences and using as few resources as possible for traveling that are necessary.

The area of integrated transportation planning thus plays a central and integrative role in transportation theory and research. Due to its complex nature in relation to society, transportation can only be captured and structured through a comprehensive but also

inter-sectoral analysis of the societal determinants (social, economic, environmental and political conditions, human needs and behavioural patterns).

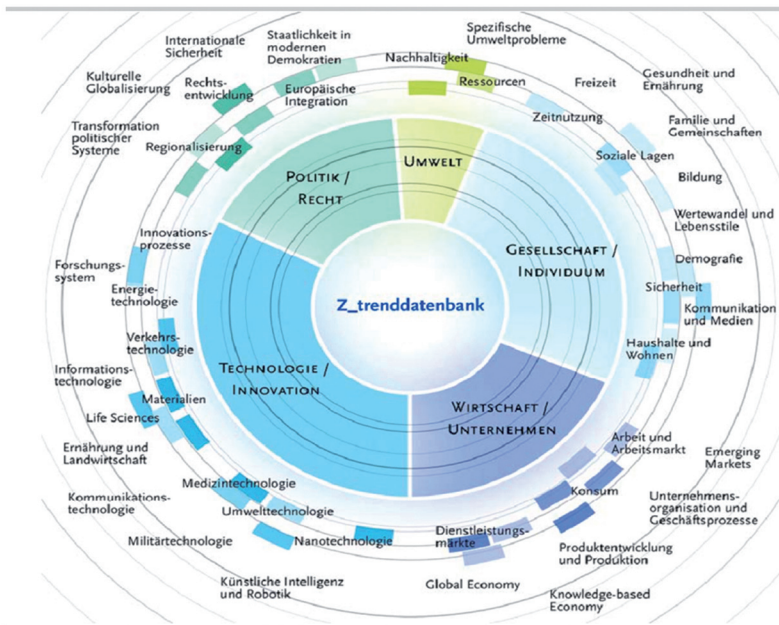
In addition, its many sub-systems (e.g. impact of types of transport available) and the interaction with adjacent areas (regional structures, business location development, production processes, recreational activities, etc.) have to be taken into account.

Consequently, transportation must be seen within the overall context of societal processes and changing mobility needs. The range of methodological instruments used to describe the emergence, impact and structure of transport activities is being further developed as part of this process.

Research is guided by a demand-oriented perspective that considers consumers as the engine for sustainable development and actors in environmental policy.

The research of TU IVP focuses on three topics:

- ▶ **Actor research and mobility routines** as the subject of research on the causes of travel. The motives for people's travel are analysed. Special attention is paid to recurring patterns of behaviour and the issue of how these mobility routines can be influenced.
- ▶ **Future-oriented research and invention generation.** The goal is to predict trends in society and technology and to



Aspects considered for mobility research (Source: z-punkt)

derive future requirements profiles for participants in transportation networks.

- ▶ **International mobility and transportation research.** Global trends in transportation development and transport planning concepts are analysed. The acceptance and implementation of innovative transportation services is also evaluated as part of research projects.

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Upcoming Events

- ▶ Arbeitskreis Verkehrstelematik
 10 November 2009
 Info: mpodbregar@fav.de
- ▶ Arbeitskreis Bahnsystemtechnik
 3 December 2009
 Info: cheinrich@fav.de
- ▶ Deutsch-französische Experten-
 tagung zu Elektromobilität
 7 December 2009
 Info: mhemmerling@fav.de
- ▶ e-Ticketing für den ÖV
 9 December 2009
 Info: www.fav.de