Bahn.Ville: Implementing Transit-Oriented Development.
Experiences of 10 years of French-German action research

Prof. Dr.-Ing. Gebhard Wulfhorst
Technische Universität München
Chair of Urban Structure and Transport Planning

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Bahn.Ville – the approach of the program

Attractive regional rail supply

Transit-Oriented Development

Processes of integrating land-use and transport development in urban regions

Station development as node and place
Bahn.Ville: The background and objectives (« 10 years of research and action »)

- A first project phase (2001 – 2004) has studied integrated concepts and successful processes by best practice analysis and case-study surveys (Bonn, Bodensee, Strasbourg, Nantes).
- Recommendations have been published in 2005 [www.bahn-ville.net](http://www.bahn-ville.net)

A second project phase (2007/2008 - 2009/2010) focused on the implementation of the Bahn.Ville approach, on the development of tools, exchange of experiences, the development of knowledge, transferable results by application in operational processes (action-research).

- A French-German Conference in Frankfurt was held in July 2010.
- An International Expert Workshop was organized in Marne-la-Vallée in March 2011.
- The BUFTOD conference in Paris in April 2012, gathered an international scientific community around TOD.
Bahn.Ville – quality criteria

- An attractive regional railway supply
- A transit-oriented urban development
- High quality neighbourhood networks
  - Easy access to the station and the train for all
    (at the station, everybody gets pedestrian …)
  - High quality intermodal services for the bike
    (B+R, Bike on board, public bikes, …)
  - Direct links to pedestrian axis and cycle networks
  - Social safety, vital public space, lighting, orientation, …
  - Density, diversity, design: Urban qualities in the direct surrounding
- Quality links to the corridor
- Integrated planning processes
- Commitment for a common future
- **An attractive regional railway supply**
  Competing the private car on major regional corridors
  Providing attractive, comfortable links
  (destinations, material, frequencies, operating hours)
  Marketing of railway supply as a regional location factor
  Information and Consulting for target groups (incl. Incentive surveys)

- **High quality neighbourhood networks**
  Easy access to the station and the train for all (at the station, everyone is a pedestrian …)
  High quality intermodal services for the bike (B+R, Bike on board, public bikes, …)
  Direct links to pedestrian axis and cycle networks
  Social safety, vital public space, lighting, orientation…
  Density, diversity, design: Urban quality in the immediate surrounding

- **Integrated planning processes**
  Interdisciplinary communication and development (Urbanism-transport-economy-landscape-land management …)
  Local commitment to regional issues
  Involvement of public authorities, stakeholders and users

- **A transit-oriented urban development**
  Focussing spatial development around the rail network (accessibility)
  Using brownfields for urban revitalisation / inner development
  Attractive design of stations and surrounding (as an urban place)
  Location choice consulting of new residents and firms
  Location-based mobility management (PDE, households, …)

- **Quality links to the corridor**
  Coordinated timetables, connections ensured, dynamic user information
  Common fares and integrated ticketing in the public transport sector
  Regional concepts and local arbitrage of P+R facilities
  Public service and basic accessibility by flexible public transport (paratransit, car-sharing, guaranteed ride home, …)

- **Commitment for a common future**
  Creating common background for planning (data, analysis, workshops): develop a common language and cooperative working habits
  Ensuring flexibility and authority of the regional planning instruments (SCOT, RegFNP)
  Quality of inter-communal cooperation, esp. with respect to land-allocation and investment
  Investment and operation by appropriate financing and funding schemes
Neighbourhood mobility – facilitate the access!

- Analysis on the base of observations and user surveys on their way to/from stations:
  - Importance of the quality of single sections of the walking routes
  - Importance of a fast, direct and attractive access.

- Integration into local planning processes (implementation of new transport services/land-use development)

Example of Friedrichsdorf, Rhein-Main region, Vogel et al. 2010
Walking axis and their segments

Example of Friedrichsdorf, Rhein-Main region, Vogel et al., 2010
Quality criteria for satisfactory walking conditions

- Comfortable **networks** – fluidity
  “… without interruptions, obstacles, detours”
- Traffic **safety** and social security
  “… in peace and without any danger”
- Quality of **public spaces** - atmosphere
  “… in a nice environment”
- User-friendly **facilities** - offer of services
  “… walking along useful services and shops”
- Station as a **destination** - readability
  “… towards a destination clearly identifiable and which can be easily spotted from a distance”

Developed by Vaclav Stransky, see WCTR paper: L’Hostis, A.; Wulfhorst G. et al., 2010
Anforderungen aus Nutzersicht an “walkability”

• Grundanforderungen an die Netz- und Ausstattungsqualität der Fuß- und Radwegeinfrastruktur (keine „goldener Bordsteinkanten“):
  – direkte, sichere Wegeführung ohne Unterbrechungen, Hindernisse und Umwege,
  – ausreichende nutzbare Breite und Barrierefreiheit,
  – einfache Orientierung sowie
  – ein attraktives städtebauliches Umfeld mit ergänzenden Nutzungsangeboten;

• Komfortkriterien im Wegebau und der Wegeausstattung sowie die Gewährleistung eines hohen subjektiven Sicherheitsempfindens;

• Betrachtung durchgängiger Wegeachsen:
  – Defizite in einzelnen Teilabschnitten, wie beispielsweise mangelnde Begreifbarkeit/ Orientierung/ Sicherheit an Knotenpunkten oder Plätzen wirken sich sehr ungünstig auf die Wahrnehmung der gesamten Achse aus

• Nutzungen entlang des Weges wie an einer Perlenschnur …
  – Abschnitte auf der Hälfte des Weges zwischen Ausgangsstandort (z.B. Wohnung) und Ziel (z.B. Bahnhof) sind häufig besondere „Durststrecken“
  – besondere Aufmerksamkeit auf belebende bzw. zum Verweilen einladende Elemente zu legen, welche die Wegstrecke in ihrer Wahrnehmung „verkürzen“
Integrated planning processes

Analysis of strength and weaknesses

Key elements
- Width of sidewalks
- Pedestrian crossing

Source/Photos: Pretsch, 2009
High quality neighbourhood networks

Accessible areas in:
- 5 minutes
- 10 minutes
- 15 minutes
- Station
- Railway

Land utilization:
- Residential
- Business
- Mixed

Train station
Activity zone

Walking accessibility in Uasgen

Bahn.Ville – selected experiences

Gebhard Wulfhorst/Thomas Stoiber, 17/10/2009
Accessibility today: Population potential

N° of inhabitants within reach of 60 min (Public Transport + Walking)
Local links and regional accessibility

Accessible areas in:
- 5 minutes
- 10 minutes
- 15 minutes
- Station
- Railway

Land utilization:
- Residential
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- Mixed

Train station
Activity zone

Walking accessibility in Uasingen:

Gebhard Wulfhorst/Thomas Stoiber, 17/10/2009
Accessibility tomorrow: Population potential

N° of inhabitants within reach of 60 min (Public Transport + Walking)
Accessibility gains: Added population potential

N° of additional inhabitants within reach of 60 min (PT + Walking)

Additionally accessed population:
- 0 - 10,000
- > 10,000 - 50,000
- > 50,000 - 100,000
- > 100,000 - 200,000
- > 200,000

Train station

Activity zone
Transfer of knowledge and methods
Slow modes network based analysis in Munich
Potential of inhabitants in existing and improved service areas

Taking opportunities to improve the neighbourhood mobility

- Observing
  ➔ Share and create information
- Simulating
  ➔ What would happen if…
- Monitoring
  ➔ Alert the actors of opportunities
General Conclusions – Analysis  (from expert seminar, Marne-la-Vallé, 2011)

• **Transit-Oriented Development**
  TOD relies on the 3 Ds – density, diversity, design – that have to be organized towards the rail-supply, not only as adjacent development or in one location, but differentiated along a corridor, on the strategic level of the urban region.

• **Sustainable Development**
  In order to compete the private car or at least to co-exist until energy and travel costs, climate related restrictions etc. arise / or / in order to prepare a post-carbon era … to foster global sustainability in the future … today strong policy decisions have to be made (quickly) … also in order to overcome local resistances, institutional boundaries, disciplinary limits, funding pre-conditions. Beyond transportation issues themselves, sustainability here is focusing the idea of livable cities. Providing and maintaining options and choices – in mobility behavior – is a crucial issue.

• **Walking as future urban transport mode**
  Life begins when people meet. Walking, walkability, neighborhood mobility is probably one of the most important factors of success for TOD, involving the pedestrian network, the small scale activity locations and last but not least the quality of public space.
General Conclusions – Vision  (from expert seminar, Marne-la-Vallé, 2011)

- **New utopia for urban regions**
  We need a new utopia to develop urban regions as a system – and to re-build the institutions to deal with.

- **Pro-active transportation policies for poly-centric regions**
  Strategic long-term choices of urban development should be led by pro-active transportation policy, involving the relevant public bodies and private stakeholders. A clear choice has to be made towards a poly-centric rail-based territorial structure; building roadway capacity in parallel will be contradictory.

- **Innovative solutions for the next generation**
  We should also believe in the self-organized emergence of innovative solutions based upon the creativity of people. Societal change might especially be relevant in the context of demographic trends and lifestyle settings.
General Conclusions – Strategy  (from expert seminar, Marne-la-Vallé, 2011)

• **Don’t stop to begin.**
  Any improvement is an improvement.

• **Develop scenarios for systems by accessibility models**
  We should develop scenarios based upon specific assumptions and measures in order to show the potential and impact of integrated strategies on all different levels (from regional rail service by urban structure until the street layout, …) Accessibility instruments and system modeling will be very useful to show the contrasting possible futures and the feedback over time.

• **Cooperate for financing sustainable projects**
  For successful implementation financing of the most promising projects – across all modes – is crucial. A strong cooperation of the relevant stakeholders needs to be organized in order to prepare tackling this challenge.

• **Don’t wait.**
  The time is now, the place is here.