

2010 Annual Polis conference
Innovation in transport for
sustainable cities and regions
Dresden, 25-26 November 2010

Alternative means of public transport infrastructure funding –
Experiences from the U.S. and lessons for German cities

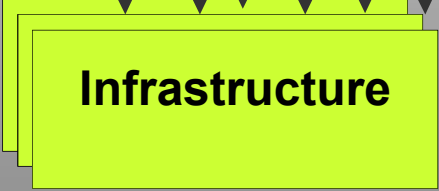
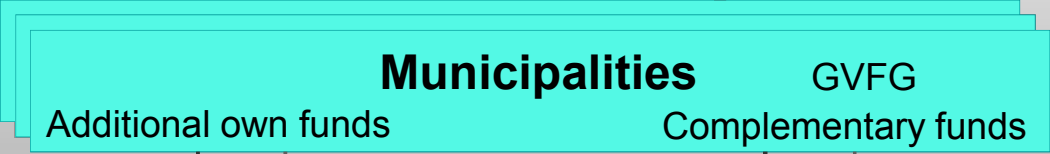
Oliver Mietzsch, Head of Transport Unit, German Association of Cities

Content



- Background information on PT funding in Germany
- Transit-Oriented Development and land value capture
- Public-Private Partnerships
- Case studies from the U.S.
 - Seattle
 - Portland
 - San Francisco Bay Area
 - San Diego
 - Chicago
 - Denver
- Lessons for German Cities
- Conclusions

Background information on PT funding in Germany



Aarrow size corresponds with funding volumes

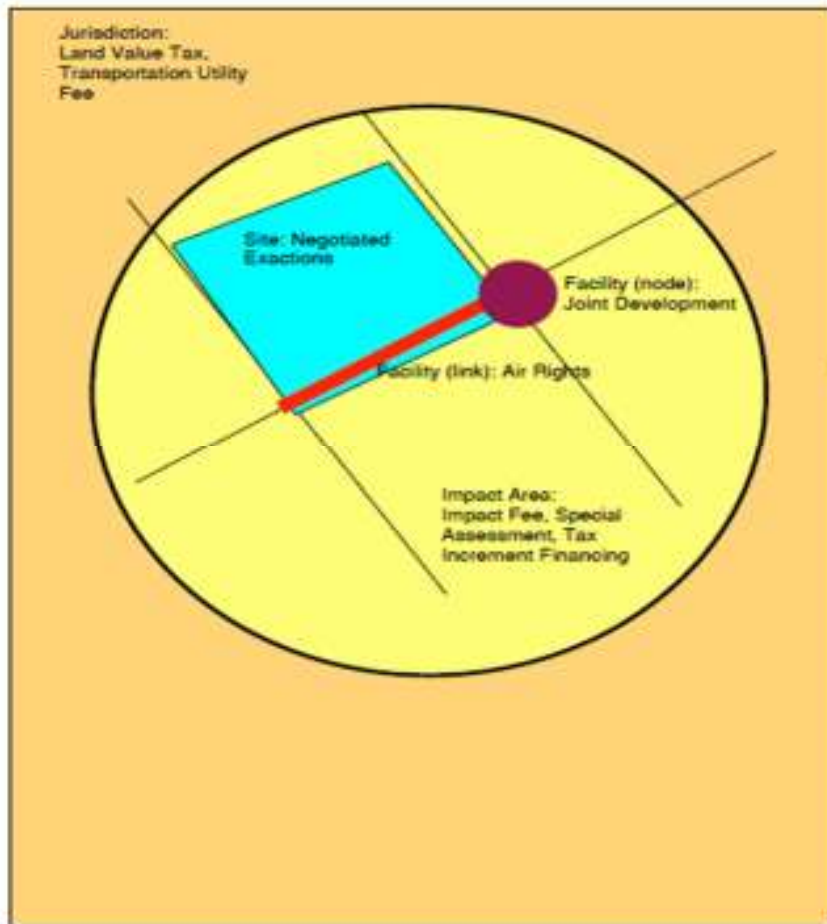
GVFG = Gemeindeverkehrs-Finanzierungsgesetz (Act on Federal Government Aid to Improve Transport at the Local Level)

RegG = Regionalisierungsgesetz (Local Public Transport Regionalization Act)

Original source: Roennau (Adaption by O.M.)

Transit-Oriented Development and land value capture

Figure 2: Value capture policies classified by spatial effects



Transportation infrastructure significantly increases the value of real estate alongside the tracks (street car) as well as at stations (subway, rail).

Case studies from Portland, OR, San Francisco, CA, but also Hong Kong and Seoul have shown, that conversion of former freeways into urban amenities with good public transit facilities coincide with higher land prices.

Public-Private Partnerships



Exhibit 3.1: Summary of PPP Impacts on Selected Transit Projects since 2000

Project (PPP Approach)	Project Cost	Project Timeframe	Project Quality	Funding Sources
Denver T-REX Southeast Corridor LRT (DB)	<ul style="list-style-type: none"> Project completed within budget. Estimated building materials cost savings. 	<ul style="list-style-type: none"> 22 months saved due to design-build. 	<ul style="list-style-type: none"> Meets agency's usual design standards. 	<ul style="list-style-type: none"> N/A
South Florida Commuter Rail Upgrades (DB)	<ul style="list-style-type: none"> Slightly higher costs for DB than estimated for DBB delivery approach. 	<ul style="list-style-type: none"> 4-6 years saved by completing upgrades as one project. 	<ul style="list-style-type: none"> Higher quality design and construction. 	<ul style="list-style-type: none"> N/A
Minneapolis Hiawatha Corridor LRT (DB)	<ul style="list-style-type: none"> Completed within budget as amended. Estimated \$25-38M in over-head savings from design-build. 	<ul style="list-style-type: none"> 1 year saved due to design-build. 	<ul style="list-style-type: none"> Meets agency's usual design standards. 	<ul style="list-style-type: none"> N/A
Hudson-Bergen LRT MOS-1 & MOS-2 (DBOM)	<ul style="list-style-type: none"> Insulated from capital & O&M cost overruns through risk transfer. 	<ul style="list-style-type: none"> 1-2 years saved due to DBOM approach. 	<ul style="list-style-type: none"> O&M portion of DBOM provides incentives for quality product. 	<ul style="list-style-type: none"> N/A
Portland MAX Airport Extension (DB & JD) – with PFC Funding	<ul style="list-style-type: none"> Completed within budget. \$10-15M in building materials cost savings. 	<ul style="list-style-type: none"> Estimated 3+ years saved due to PPP. Construction ended 9 weeks early. 	<ul style="list-style-type: none"> Meets agency's usual design standards. 	<ul style="list-style-type: none"> Up-front private funding of \$28M, 23% of project cost.
WMATA Largo Metrorail Extension (DB)	<ul style="list-style-type: none"> Completed \$1M under budget. Overhead cost savings from fewer contractors. 	<ul style="list-style-type: none"> Estimated 2 years saved due to DB. 	<ul style="list-style-type: none"> Innovative and cost-effective design lead to life-cycle cost savings and higher quality product. 	<ul style="list-style-type: none"> N/A
BART Oakland Airport Connector (DBFO) – with PFC Funding	<ul style="list-style-type: none"> Slightly higher cost for private financing. Reduced estimated cost for O&M as DBFO. 	<ul style="list-style-type: none"> Project may otherwise never occur without DBFO. 	<ul style="list-style-type: none"> DBFO provides incentive to build higher quality project. 	<ul style="list-style-type: none"> Up-front private funding for 50% of estimated \$352M project capital cost.

Major Types of PPPs in Transit according to the role the private sector plays:

Greater Private Sector Role

- Build-Own-Operate (BOO)
- Design-Build-Finance-Operate-Maintain (DBFOM)
- Design-Build-Finance-Operate (DBFO)

Lesser Private Sector Role

- Build-Operate-Transfer (BOT)
- Design-Build-Operate-Maintain (DBOM)
- Design-Build (DB)

Case studies – Seattle

King County largest county in WA state with more than 2,100 square miles surface, 1.9 million inhabitants, 39 cities, Seattle is by far the largest one with 600,000 residents (ranked 1st in ULI's 2009 "Emerging Trends in Real Estate" report)

Seattle streetcar runs a 1.3-mile route from downtown retail core to South Lake Union district: half of initial \$52 million capital investment paid by private property owners, thereby attracting 7,500 new housing units and more than 2 million square feet of commercial projects (1.3 million square feet under construction)

Line	Route
Orange Line	70th & Sand Point Way - Magnuson Hospital
Purple Line	Roosevelt Commons - Hospital
Green Line	Building 1 - Pacific Place - Met Park West Roosevelt Commons - Hospital
Magnuson Park	Parking lot service
Church/Archives	Parking lot service
E1	Parking lot service

Revised October 2009

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Case studies – Portland



Portland has a population of 582,130; most environmentally friendly or "green" city in the U.S.; Oregon's most populous city with approximately two million people living in the Portland metropolitan area.

Portland Streetcar started operation in 2001; total construction costs were \$103.15 million: \$21.50 million from property owners (LID), 20% financed by TIF from the City's urban renewal agency, 20% from Federal grants including HUD.

TRIMET's (the sole transit agency for the three regions involved) annual PT budget of \$4 million is not sufficient to keep up with demand (on average \$300,000 grant for developers to increase density to attract more passengers).

Case studies – San Francisco Bay Area



Projections for next 25 years:

- Increase in TOD households of 250,000, adding to currently 600,000 households living within a half-mile of PT;
- Increase in demand for new jobs near transit of about 800,000 (= 40% of all new jobs expected to be created)



Case studies – San Diego

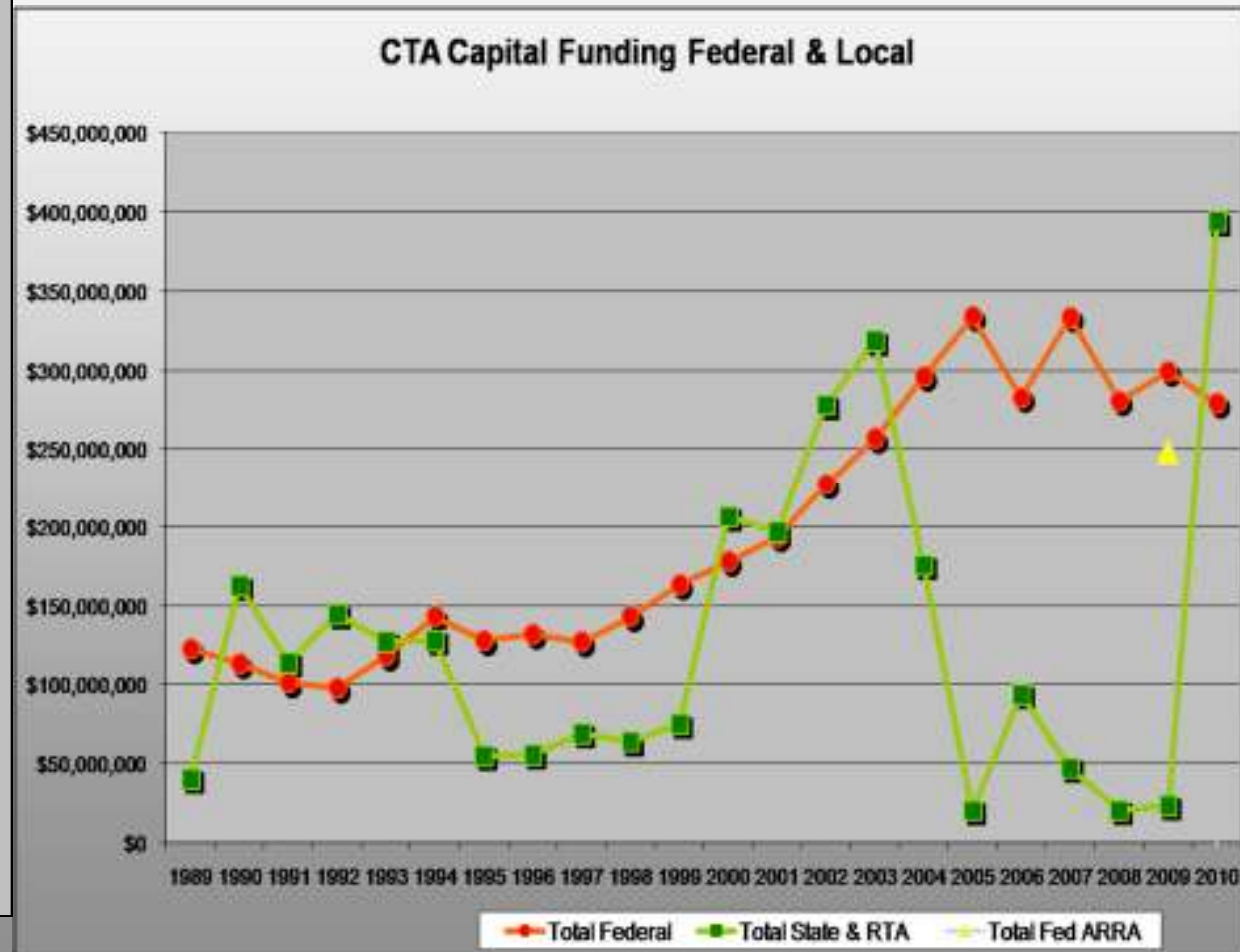
TransNet is a half-cent sales tax for local transportation projects that was first approved by voters in 1988, and extended in 2004 for another 40 years (= additional \$16 billion). It has been instrumental in expanding the region's transportation system, but is not sufficient in view of projected demand.



2030 Regional Transportation Plan expects within next 25 years more than one million new residents, 465,000 new jobs, and 290,000 additional homes. New funding sources such as $\frac{1}{4}$ to $\frac{1}{2}$ cent new sales tax, parcel tax or payroll tax could provide \$205 million, but would require two-third majority.

Case studies – Chicago /1

Public funding of CTA infrastructure and operation has dramatically declined from estimated \$723 million at the start of FY 2009, leading to a projected deficit of \$300.9 million in the 2010 budget. This shortfall is due to shrinking tax revenues (sales tax, real estate transfer tax) because of the bad state of the economy.



Case studies – Chicago /2

Financing the operating budget at the expense of capital investment adds to the already existing backlog in maintaining the given transit infrastructure in a state of good repair (this alone requires \$6.8 billion), let alone projected network expansions (requiring another \$4.3 billion). To overcome funding restrictions, CTA has embarked on a \$100 million joint development capital investment project (smart card) to renew its fare infrastructure, thereby cutting operating costs by \$10 – 15 million per year. The attraction of private capital investment is met with resistance by work force and public because of long standing history of public funding and bad experiences with private involvement concerning parking fee collection.



Case studies – Denver

- Due to fiscal restraints, only the Eagle P3-program (East Corridor to DIA, Golden Line corridor to the West, a segment of the Northwest Rail Corridor, and a commuter rail maintenance facility) will be constructed in the foreseeable future
- Eagle P3 involves a DBFOM contract, worth \$2.2 – 2.4 bln (\$1 bln. from Federal grants, \$1 bln. from the private contractors, rest to be paid by RTD out of sales tax according to a popular vote in favor of sales tax increase in 2004); contracting period: 46 years
- Eagle P3 the only remaining PPP to be eligible under the Penta P-program (New Starts)

COMMUNITIES

FASTTRACKS



- Private capital investment in PT infrastructure is desperately needed, due to shrinking tax revenues because of current economic crisis and fundamental changes in the underlying taxation (less fuel consumption generates less tax revenues etc.).
- Private involvement in PT infrastructure funding in principle can take two forms: Voluntary contributions or legal requirements.
- TOD is the most obvious (and probably most promising) tool to capture land value, because it appeals to the economic self-interest of property owners.

Lessons for German Cities/2



- LID or BID are legal instruments to capture land value: LID are administered by the city, BID are administered by local property owners.
- PPP is probably most needed in aging PT systems, however people and business are usually not aware of public funding shortfalls and are somewhat hostile to private engagement in PT infrastructure funding.

Private funding of public transport infrastructure is a matter of necessity!

Neue Finanzierungsinstrumente für die ÖPNV-Infrastruktur
Non-Fiscal Instruments of Public Transit Infrastructure Funding
Oliver Mietzsch

The alternative passenger-motivated (ÖPNV) in Deutschland leidet zunehmend unter finanzieller Ausweitung insbesondere im Hinblick auf die Halteeinrichtungenstruktur. Dies hängt mit einem Rückgang des allgemeinen Steuereinkommens als dem wichtigsten Finanzierungsinstrument für den ÖPNV zusammen. Deutschland muss sich daher nach ergänzenden alternativen Finanzierungsquellen umschauen, dazu gehören die Abschöpfung von Kosten einer guten Fahrgastvermittlung im Zuge von Kundenorientierungsmaßnahmen, der Einsatz von ÖPNV-Infrastruktur als Öffentlich-Private Partnerschaften (ÖPP). Die wichtigsten Themen vorliegen sind: Welche Schritte sind erforderlich, um innovative Finanzierungsinstrumente, die im Hinblick darauf konzipiert sind, die öffentlichen ÖPNV-Infrastrukturprojekte schneller und wirtschaftlicher auszuführen zu realisieren?

Against the background of alternative ÖPNV-Infrastrukturprojekte in Seattle (Washington), Portland (Oregon), der San Francisco Bay Area und San Diego (California), konnte der Autor einige Möglichkeiten auf Deutschland übertragbare Finanzierungsinstrumente zur ÖI beschreiben, die es wert wären, genauer untersucht zu werden.

Das Prof. Oliver Mietzsch, Jg. 1962, hat nach einer habilitationen Ausbildung Politikwissenschaft, Jura und Volkswirtschaft an der Philipps-Universität Marburg/HR, der London School of Economics and Political Science sowie der Freien Universität Berlin absolviert. Nach beruflichem Studium im Eisenbahnen-Parlament hat er verschiedene Positionen inne in den verschiedenen Landesparlamenten, seit 1998 ist er der Stellvertreter des größten kommunalen Spitzenverbands in Deutschland.

Public transit systems in Germany are becoming increasingly strapped for funds to support needed infrastructure investments, as traditional funding sources are no longer available. Fiscal declines, therefore, indicate that Germany needs funding of alternative methods of financing, especially public-private partnerships and land value capture policies that take advantage of transit-oriented development strategies. The United States has been at the forefront of many of these innovative financing approaches for many years and could provide valuable lessons for Germany as it seeks for solutions including novel transit infrastructure.

Through a detailed examination of alternative financing strategies employed in Seattle (Washington), Portland (Oregon), the San Francisco Bay Area and San Diego (California), Chicago (Illinois) and Denver (Colorado), the author identifies a number of potential strategies that might be applicable in the German context and sets them forth for further consideration.

Das Prof. Oliver Mietzsch, Jg. 1962, completed training as a commercial economist, then studied Political Science, Law and Economy at the Philipps University Marburg/HR, The London School of Economics and Political Science, and the Free University of Berlin, after working in both the European and German parliaments. He joined the German Cities Association in 1998, where he stays till the present day since 1998.



Oliver Mietzsch - Neue Finanzierungsinstrumente für die ÖPNV-Infrastruktur
Non-Fiscal Instruments of Public Transit Infrastructure Funding

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Neue Finanzierungsinstrumente für die ÖPNV-Infrastruktur
Erfahrungen aus den USA und Lehren für deutsche Kommunen

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