

Financing Public Transport in Germany

Part C: Case Study Berlin



Report to the Work Group on Green Travel under the China Council for International Cooperation on Environment and Development

Dr. Axel Stein, Dipl.-Ing. Diana Runge

The presentation is split into three parts

PART A: History and Current Regulations

PART B: Case Study Frankfurt

PART C: Case Study Berlin

Structure

Case Study Berlin

1. Institutional set-up

- Politico-administrative structure
- The “Centre of Public Transport Berlin (CNB)”

2. Size and quality of the public transport system

- Public transport network
- Regulations to guarantee quality standards
- Data on the service provision and service quality

3. Financing of the public transport system

- Revenue
- Expenditure
- Compensation of deficits

1. Institutional set-up

Politico-administrative structure

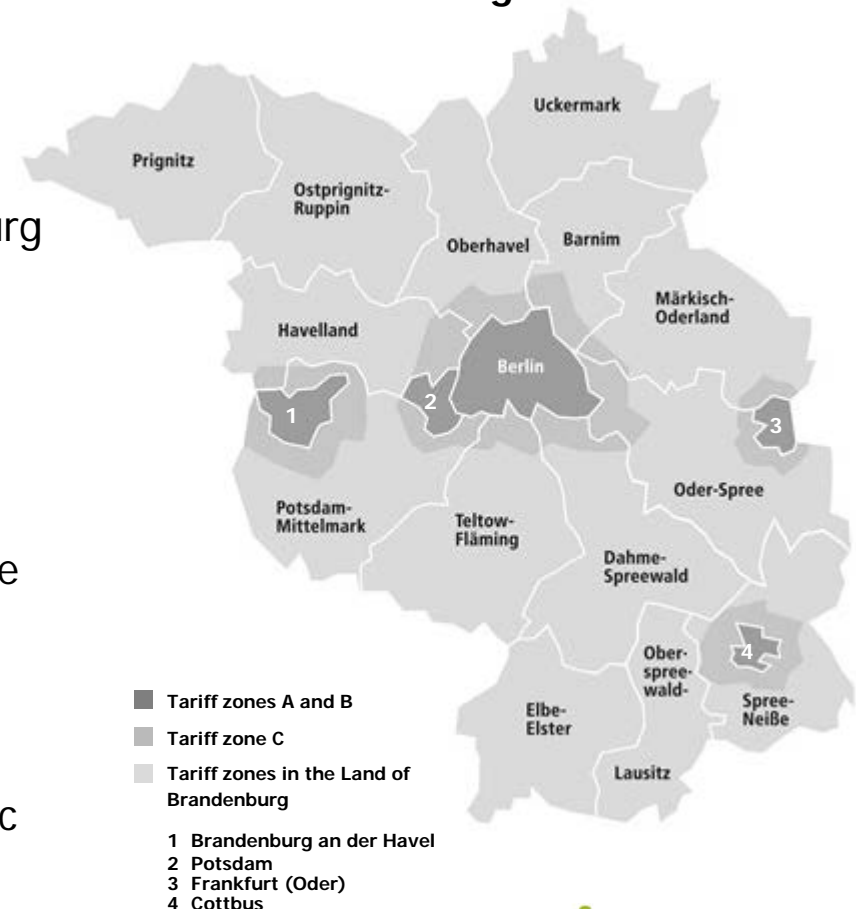
Special characteristics of Berlin

- Capital and largest city in Germany
- City **and** federal state
- Intensive interactions with the surrounding federal state of Brandenburg (transport, economy, etc.)

Transport planning in Berlin

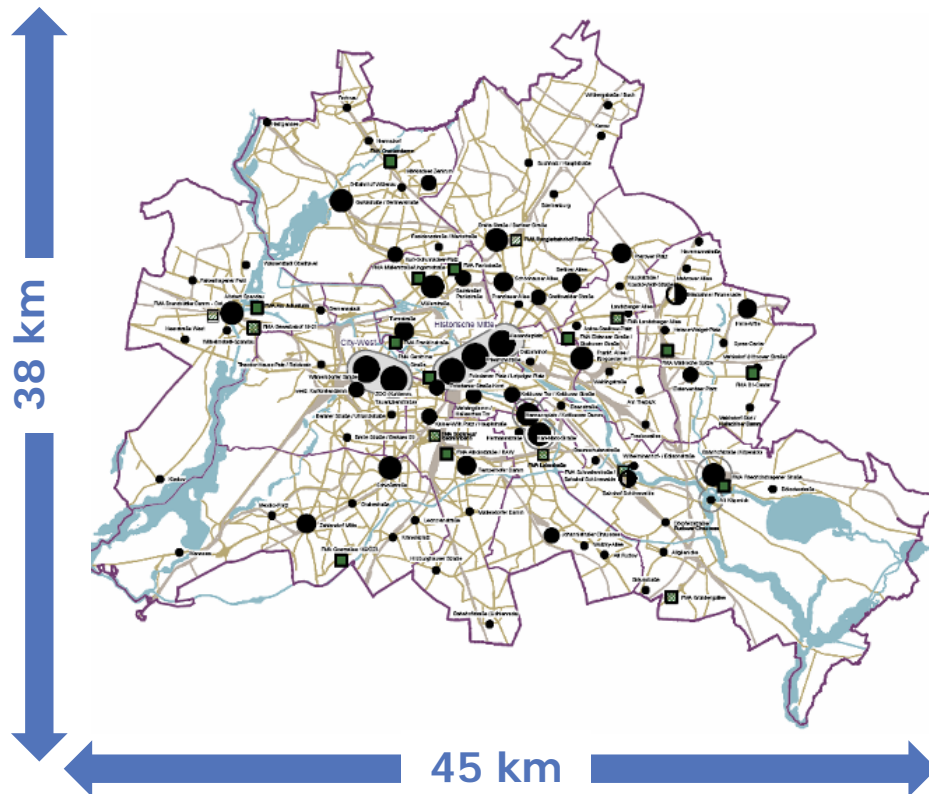
- High transport demand generated by local citizens, commuters and tourists
- Transport planning and organisation are subject to close co-operation with the surrounding federal state
- Senate Department for Urban Development is responsible for strategic and applied transport planning

Transport Association Berlin-Brandenburg



1. Institutional set-up

Key figures of Berlin



- Surface Area: 892 km²
- Inhabitants: 3,515,473*
- Number Employed: 1,706,000*
- Unemployment Rate: 13.3%*
- Motorisation: 324 cars/1,000 inh. **
- 45% Car-free Households**
- Low Commuting Rate
(183,000 inbound/73,500
outbound)*
- Polycentric City/Short Journeys

Source: Map: Senate Department for Urban Development and the Environment ("Senatsverwaltung für Stadtentwicklung und Umwelt"), Berlin; Data: * Office for Statistics ("Amt für Statistik"), Berlin-Brandenburg
** Senate Department for Urban Development and the Environment, 2008

1. Institutional set-up

Actors and responsibilities

Strategic level

- Public Transport Authorities (PTA)
 - Berlin: Senate Department for Urban Development and the Environment (SenStadtUm) for all public transport services
 - Brandenburg: Ministry for Infrastructure and Agriculture (MIL) for rail and regional buses), Counties/District Administrations for local buses

Tactical level

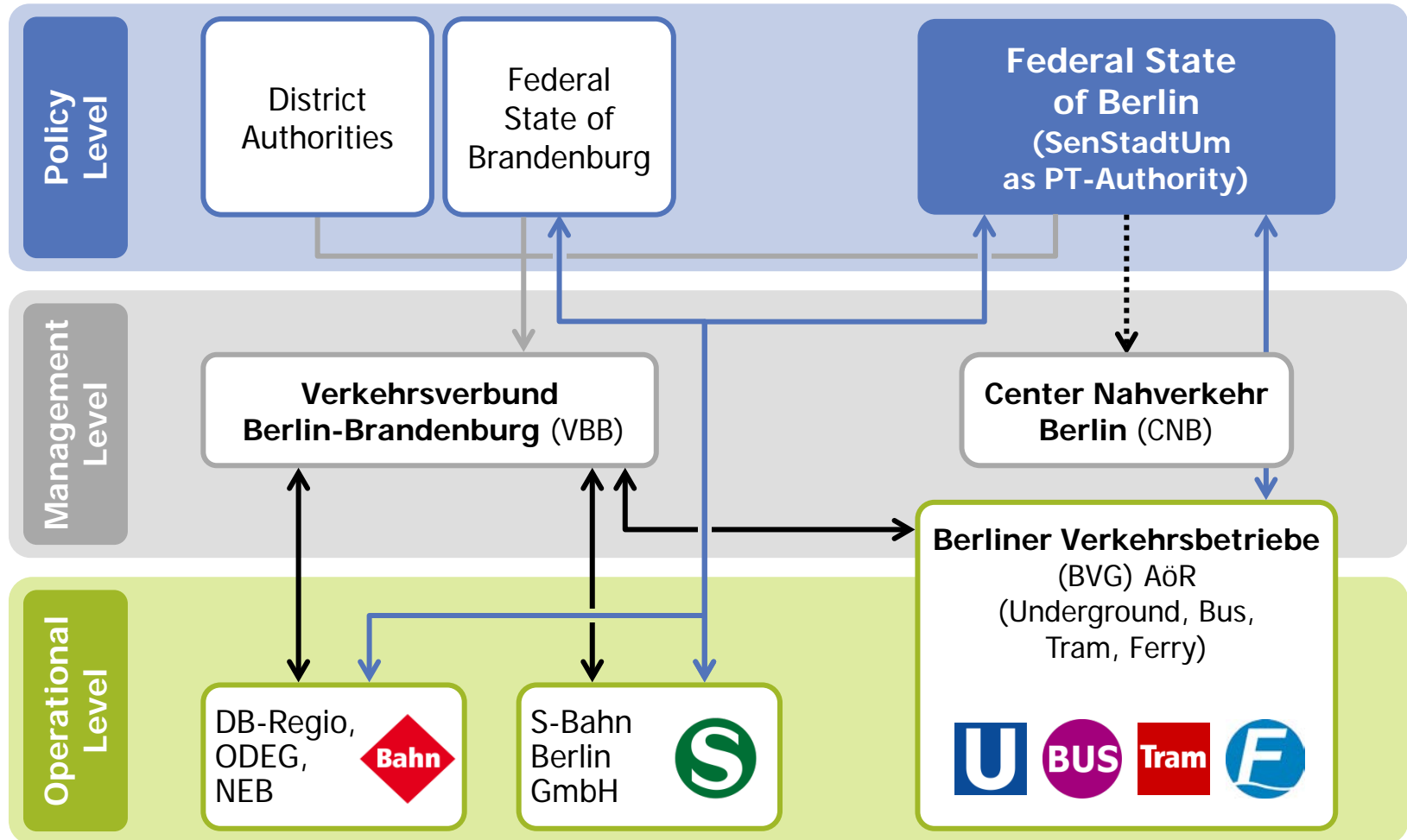
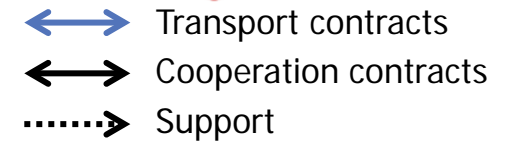
- Transport Association (VBB) supports
 - Berlin and Brandenburg in planning/organising S-Bahn and regional rail services
 - Counties/district administrations in planning local bus services
- Centre for Local Public Transport Berlin (CNB) supports city of Berlin in managing and planning local public transport services run by the BVG.

Operational level

- Transport contracts are in force between the responsible PTA and the operators.

1. Institutional set-up

Actors and responsibilities



1. Institutional set-up

Responsibilities of SenStadtUm as PT-Authority

Tasks

- Ensuring adequate public transport provision as a service of general interest
- Transport as service of general interests must be planned and financed by the PT-Authority

Ensuring mobility requirements are met
(clients/non-clients, spatial and temporal accessibility etc.)

Social Interests
(handicapped, less-well-off, etc.)

Transport requirements
(public Transport/private Transport, overall transport situation)

Environmental Aspects
(direct environmental effects, changing modal split etc.)

Urban Development (PT as a locational factor, development of deprived areas)

Planning

- Integrated transport development plan
- Local public transport plan

General specifications

- Timetables
- Quality standards
- Vehicle standards
- Tariff/marketing
- Communication

Implementation

- Transport contracts

1. Institutional set-up

Split of responsibilities between SenStadtUm and CNB

Political, technical and official duties remain with **SenStadtUm**, but

- the transport contract (with the BVG) extends influence,
- the transport contract extends responsibilities,
- the transport contract extends tasks and workload.

(External) support was **needed**:

- European calls for tender in 2007 and 2012
- Center Nahverkehr Berlin (CNB) won the bid
- CNB's tasks are:
 - continuous optimisation and improvement of transport supply,
 - performance based controlling of transport contract,
 - enhancement of quality control methods,
 - update of the local public transport plan (every 5 years).

- CNB is a consortium comprised of KCW and VBB
- The team consists of 10 planners, engineers, controllers and lawyers

1. Institutional set-up

Background of the transport contract between Berlin and BVG

Situation before 2008

- BVG planned and operated underground, tram and bus services autonomously.
- Formally, SenStadtUm had no authority regarding transport characteristics.
- BVG was not obliged to comply with standards and criteria for public transport set by SenStadtUm.
- BVG received payments based on an business contract closed in 1999. The aim of the contract had been to increase competitiveness of the operator. Aims for transport development were not equally relevant.

Legislative Changes

- The business contract was due to expire at the end of December 2007. A new contract had to comply with changed legislation, based on European Directives.
- Legislation required the clear definition of performance and financing parameters.

Situation after 2008

- Following extensive negotiations, the transport contract entered into force on 1st January 2008. It is due to expire on 31st August 2020.

1. Institutional set-up

Contents and principles of the transport contract

Performance criteria:

- Defined transport volumes for each transport mode
- Set quality standards for main criteria (e.g. reliability, punctuality)
- Specified standards for operation and maintenance of infrastructure

Based on the
Local Public Transport
Plan (NVP)

Initially: 75 Mio p.a. for
transport services,
175 Mio p.a. for
infrastructure maintenance

Financing criteria:

- Fixed budget for compensation payments
- Controlling and reporting mechanisms
- Incentives for improving performance (bonus-malus regulations)

Based on the
"money-for-service"
principle

Structure

Case Study Berlin

1. Institutional set-up

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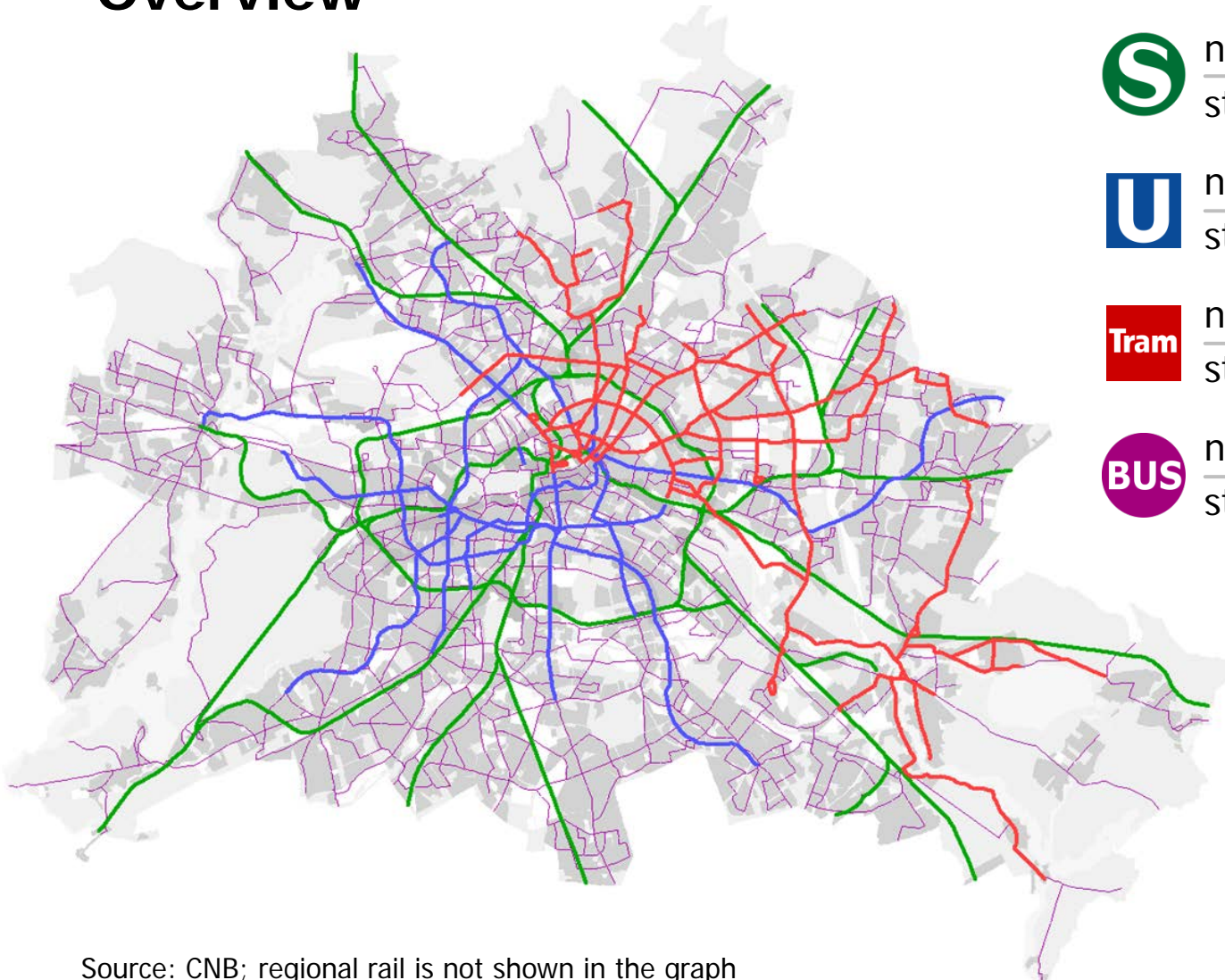
2. Size and quality of the public transport system

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Public Transport Network Overview



S network: 257 km;
stops: 133

U network: 145 km;
stops: 173

Tram network: 190 km,
stops: 374

BUS network: 1,180 km,
stops: 2,482

Source: CNB; regional rail is not shown in the graph

13

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Public Transport Network

Facts and figures

	Regional rail	S-Bahn	U-Bahn	Tram (out of which metro lines)	Bus (out of which metro express lines)
Network km	213 km	257 km	145 km	186 (105)	1,095 (200 176)
No. of stations	21	133	173	374 (227)	2,482 (522 237)
No. of routes	17	15	10	24 (9)	158 (17 13)
Route length km	172	483	146	303 (126)	1,748 (218 183)
Transport volumes (vehicle km)	5.8 million	28.9 million	20.3 million	20.0 million	88.7 million
Passengers p.a. (2011)	21 million	376 million	496 million	167 million	388 million
Operator(s)	DB Regio, ODEG, NEB	S-Bahn Berlin GmbH	BVG	BVG	BVG

Regulations to guarantee quality standards

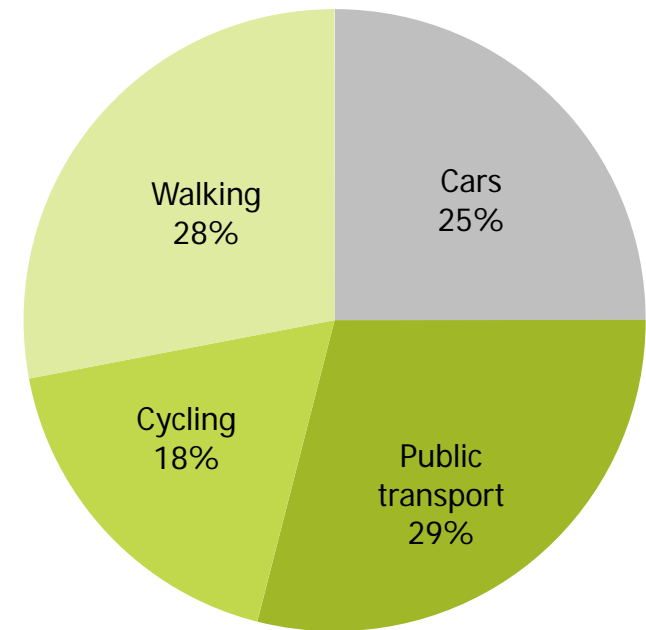
The Integrated Transport Master Plan

Main document on the strategic level: Integrated Transport Master Plan

("Stadtentwicklungsplan Verkehr")

- sets out strategic goals for the long-term development of the overall transport system
 - Ensure equal mobility chances for all,
 - Decrease air pollution and noise emission,
 - Further increase of public transport use (2008: 27 % modal share)
 - Increase efficiency of public transport while safeguarding quality of services,
 - Increase public participation and institutional co-operation.
- These strategic goals are "translated" and detailed out for PT in the Local Public Transport Plan (NVP).

Modal split targets 2025



"Environmental Alliance": 75%

Regulations to guarantee quality standards

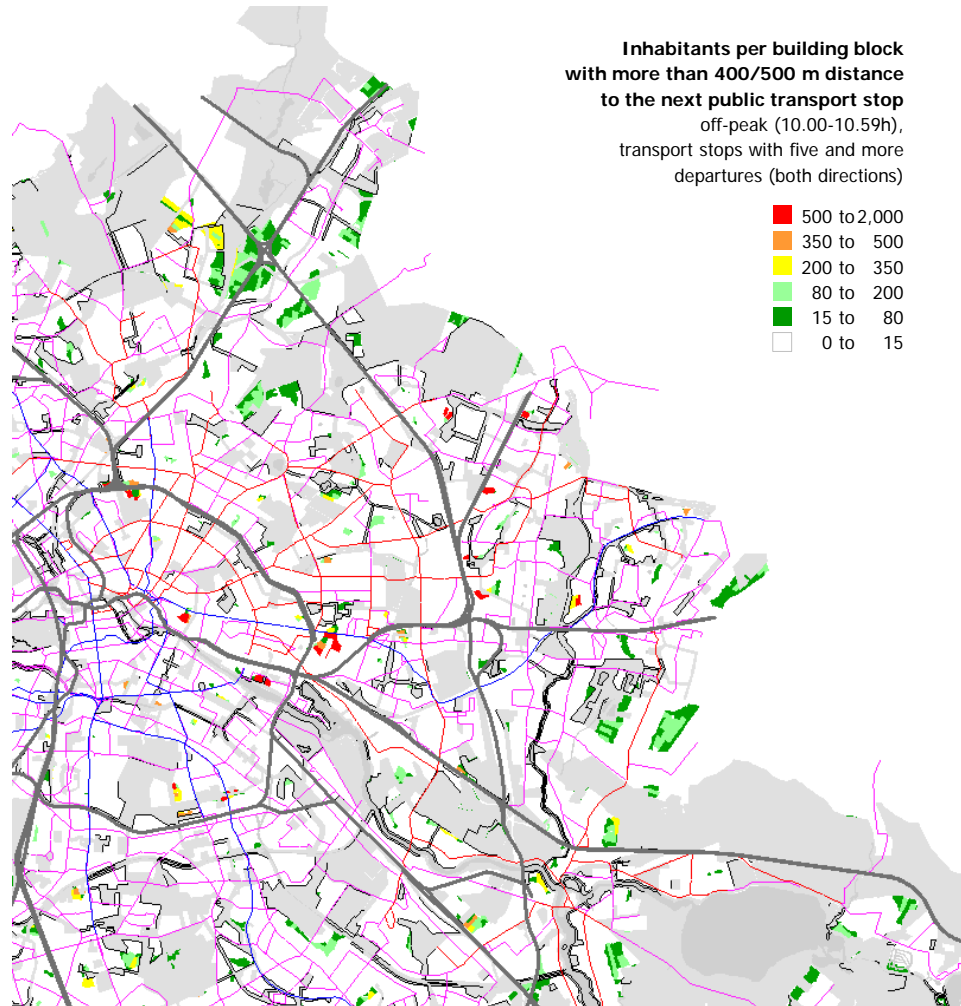
The Local Public Transport Plan

Basic document on the tactical and operational level: Local Public Transport Plan (“Nahverkehrsplan”, NVP)

- The NVP is the legal instrument for PT-development, politically adopted and binding for the city and the operators.
- It details out transport volumes and service qualities, including accessibility standards etc., thus “translating” the more abstract goals of the Integrated Transport Master Plan into operational termini.
- Standards and requirements set in the NVP become effective via a defined “link” into the transport contracts.
- The NVP is valid for four to five years and requires a regular update.

Regulations to guarantee quality standards

Accessibility standards



Source: CNB

17

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Maximum distance to next PT stop/station:

- 300/400m in high density areas
- 400/500m in low density areas

Objectives of Local Public Transport Plan:

- at least 80% of population within 300m radius
- at least 96% of population within 500m radius

Monitoring result

- objective achieved, but: slight deterioration in recent years
- main reason: new housing developments not linked to PT-network

Regulations to guarantee quality standards

Quality criteria of the transport contract

- Transport contract contains same quality criteria as Local Public Transport Plan. These therefore become binding to both, the State and the transport operator.
- Financial compensation is subject to performed transport supply:
 - Agreed transport volumes and qualities of transport provision must be met.
 - Non- or misperformance is sanctioned ("malus").
 - Over- or better performance is rewarded ("bonus").
- Controlling of transport performance:
 - BVG reports regularly on delivered transport services and achieved qualities.
 - SenStadtUm (with support of CNB) inspects completeness and plausibility of reports, carries out sample checks, may demand access to raw data.
 - Following final controlling and approval the exact amount of compensation payments is determined.
- Enhancement of quality control methods is agreed upon and is currently being carried out.

Regulations to guarantee quality standards

(Some) quality criteria of the transport contract

	Definition	Target-value	Malus	Bonus
Reliability	Scheduled services take place	- Bus: 99.8 % - underground, tram: 99.7%	Services that did not run are not being paid for	--
Punctuality	Service departs - No more than 3.5 min behind schedule - No more than 1.5 min before schedule	- U-Bahn: 97 % - Tram: 91% Bus: 87%	If performance falls below: - U-Bahn: 95 % - Tram: 89% - Bus: 85% for every 0.5% shortfall 220,000 € will be deducted from payments	If performance exceeds: - U-Bahn: 98.5 % - Tram: 94% - Bus: 90% for every 0.5% overperformance 220,000 € will be added to payments
Dependable connections	Maximum waiting time 5 minutes at defined stations / connecting points.	- underground: 99 % - bus, tram: yet to be determined	Passenger satisfaction; Malus and bonus are yet to be developed	--

Source: <http://www.cnb-online.de/Qualitaetsvorgaben.636.0.html>

Regulations to guarantee quality standards

Quality criteria for infrastructure

Performance requirements: transport infrastructure

BVG has to ensure quality of infrastructure to such a degree that

- ... transport volumes may be provided as agreed in the contract
- ... the state of technology is being maintained
- ... cost-effectiveness (life cycle) is being retained.
- ➔ „good state“ of infrastructure throughout the entire contract duration.
- ➔ no „investment backlog“ at time of contract expiry

The following tasks are assigned to the BVG:

- BVG decides on use of the fixed budget according to the contract.
- BVG reports on / delivers data to document in how far objectives have been met
- Quarterly meetings are being held with SenStadtUm on implementation control.
- Annual meetings are held with SenStadtUm to compare and decide on investment priorities and coordination of major projects (> 2,5 million €)

Regulations to guarantee quality standards

Methods of performance and quality control

Transport services

- BVG delivers electronic data on vehicle kilometers driven to SenStadtUm (or CNB respectively).
- The data is being validated and checked against own sources of information (passenger complaints, random samples etc.).

Transport quality

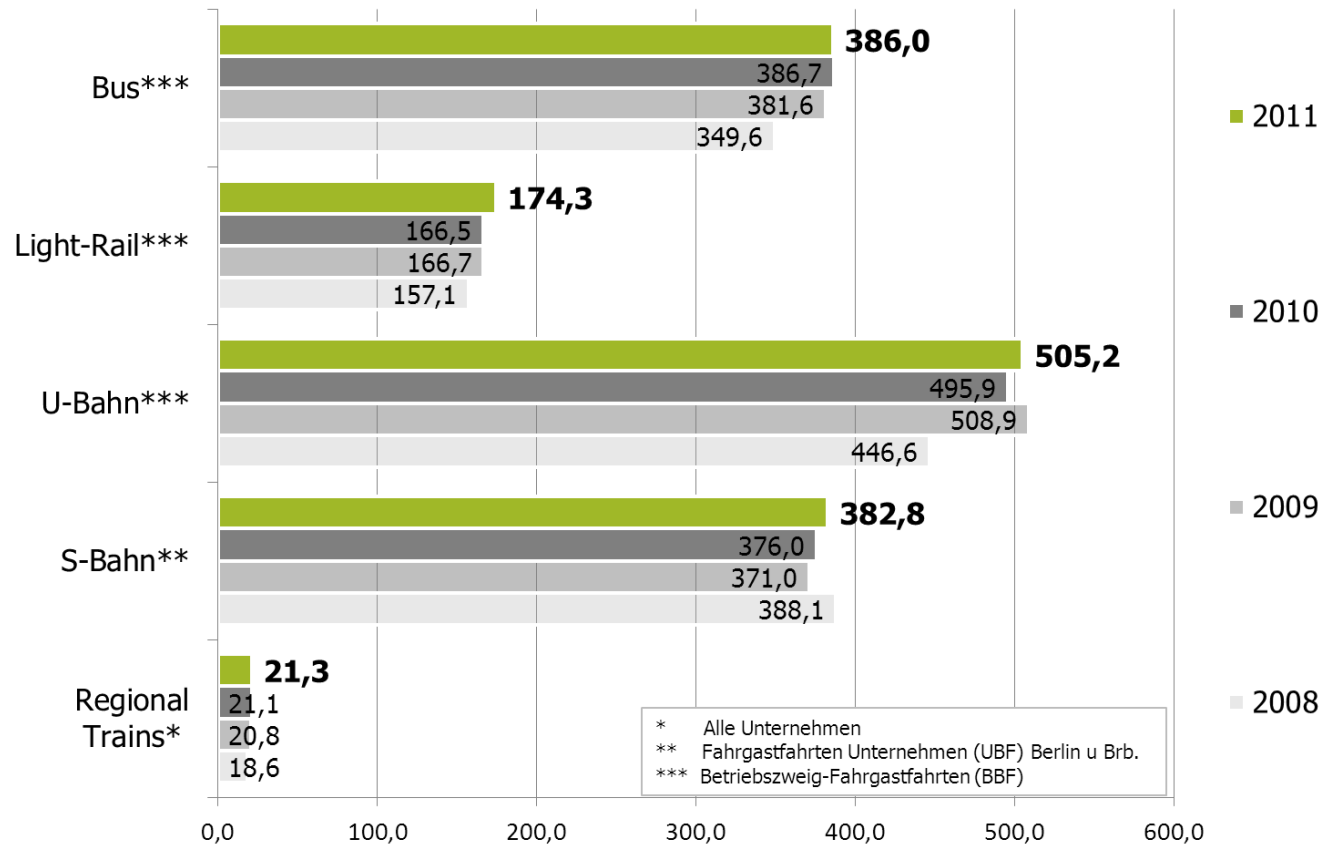
- for all criteria passenger satisfaction is measured (“subjective control”),
- whenever possible and reasonable the quality criteria are measured on technical / operational basis (“objective control”).

Infrastructure

- BVG delivers reports on infrastructure quality, on use of financial resources provided by Berlin and on fixed assets.

Service provision and service quality

1st results: Passenger numbers have increased for all modes



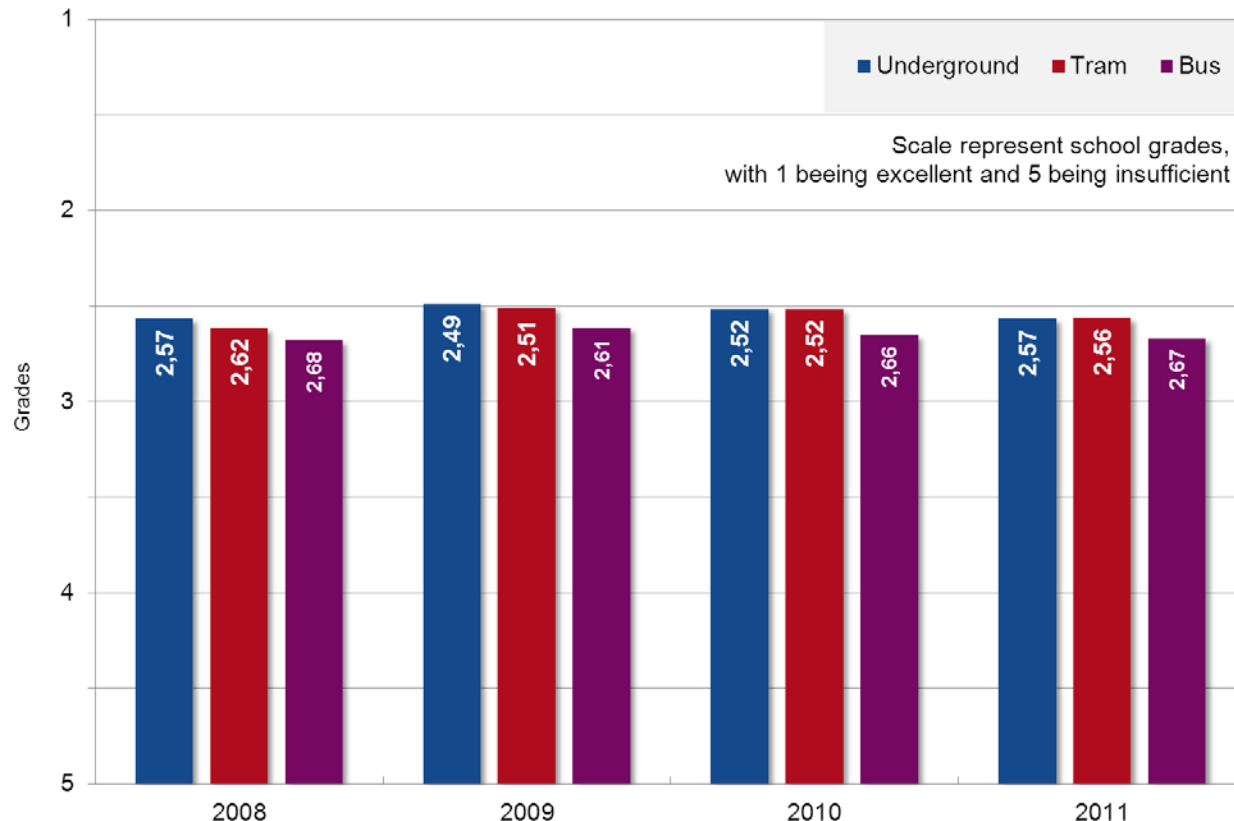
Source: CNB, based on operators' reports

22

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Service provision and service quality

2nd results: Passenger satisfaction is high and remains relatively stable over time

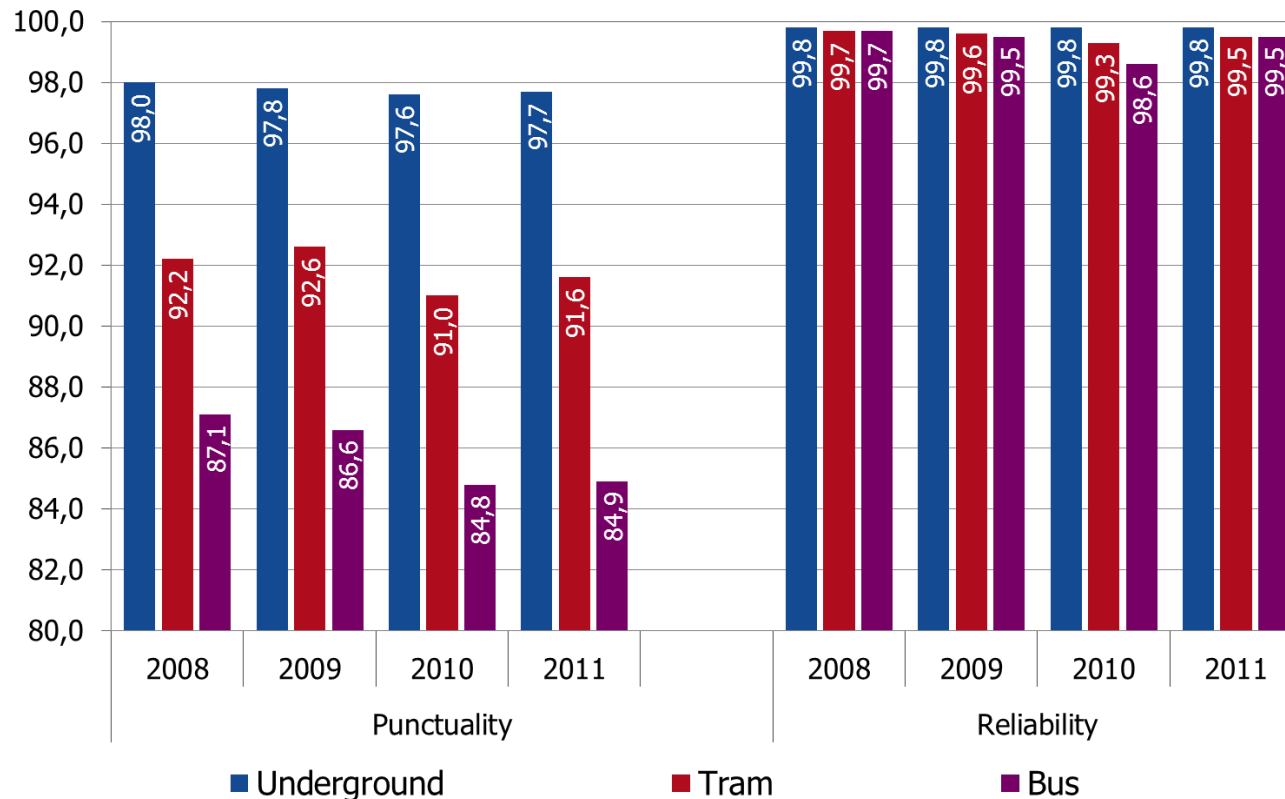


Source: Quality of Public Transport in Berlin – Annual Report;
available online: <http://www.cnb-online.de/Jahresberichte.597.0.html>

Service provision and service quality

3rd results: High service quality, but some warning signs

Punctuality and reliability 2008 – 2011 (in percent)



Source: VBB qualitative assessment ("Qualitätsbilanz") 2011; data provided by BVG and CNB

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Financing of the public transport system

Revenues

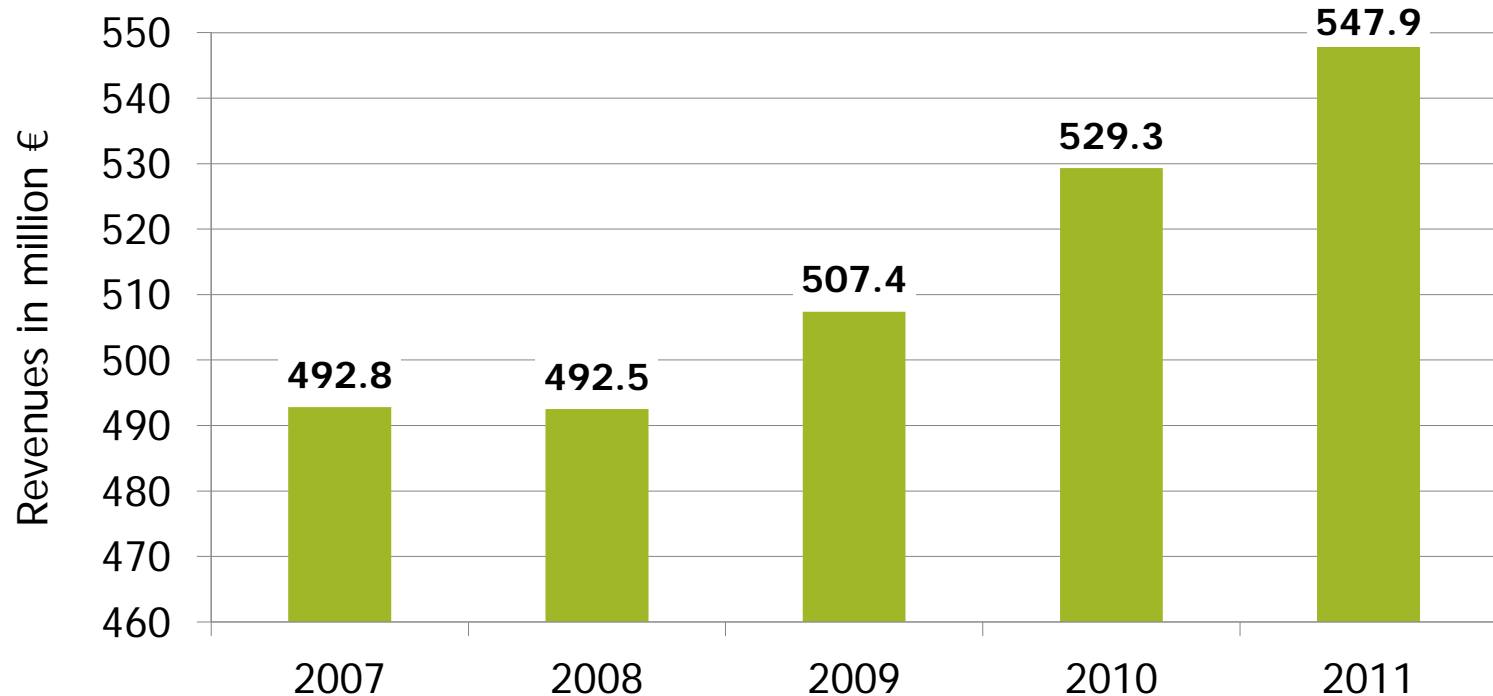
Transport operators' revenues are derived from different sources:

- Revenues from ticket sales
- Revenues from advertisement, rental income from shops in stations
- Compensation payments by the federal state(s)
 - The amounts and rules for payment are laid down in the transport contracts between the operators and the federal state(s).
 - As a result of the different procedures applied for the closing of the contracts (i.e. tendering procedures for rail, inhouse-awarding of contract for BVG) the contracts differ with regard to the pricing and payment mechanisms (i.e. kilometre pricing, bonus-malus regulations)
- In addition, there are special grants/investment schemes for infrastructure and (partly) vehicles.

Payments to the Public Transport System

Revenues from ticket sales – BVG only (1)

BVG revenue from ticket sales



Steady increase of ticket revenue due to both,
increase in number of sold tickets and increased ticket prices

Source of data: Annual report BVG 2008-2012

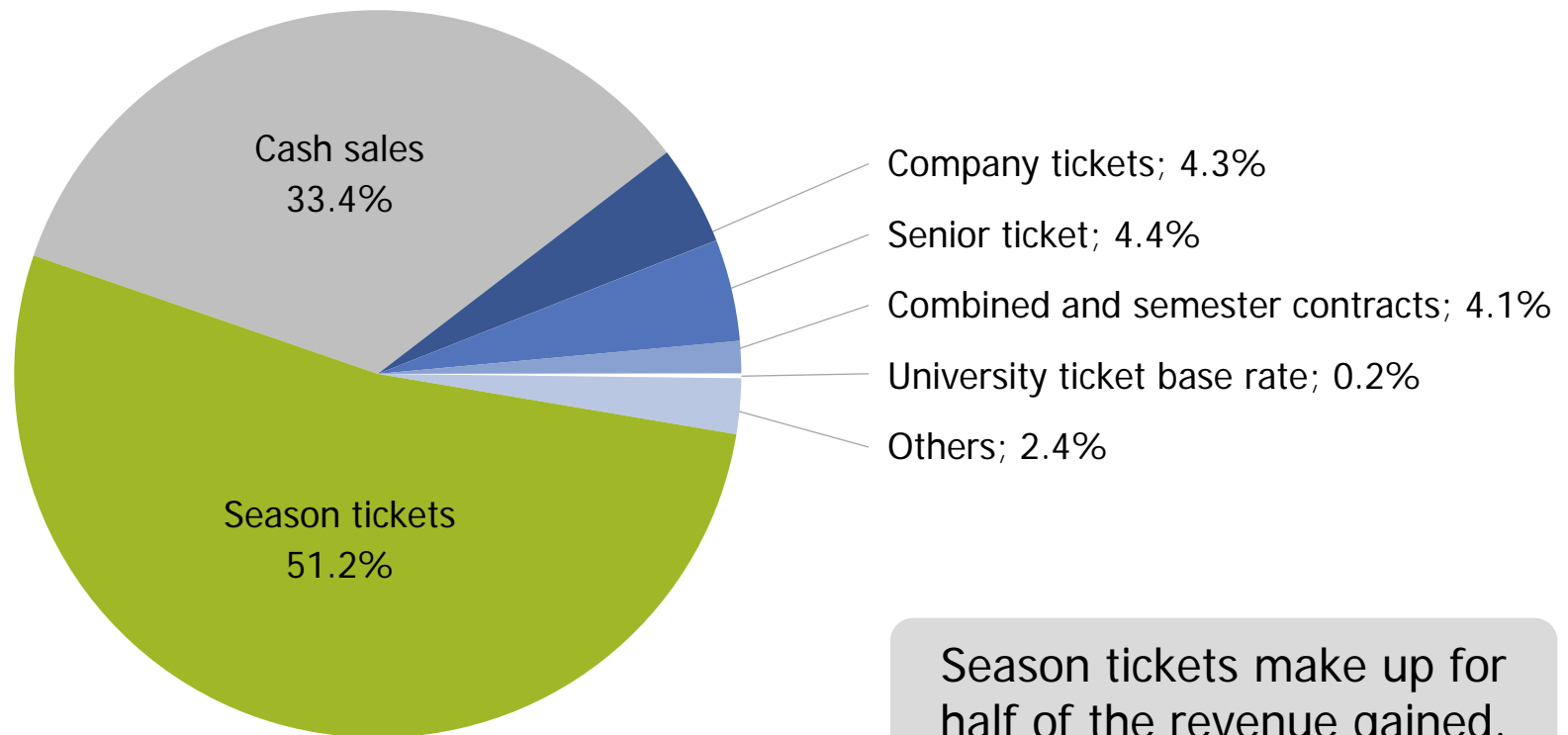
27

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Payments to the Public Transport System

Revenues from ticket sales – BVG only (2)

Proportion of tariff groups on revenues from ticket sales in 2011:



Source of data: Annual report BVG 2008-2012

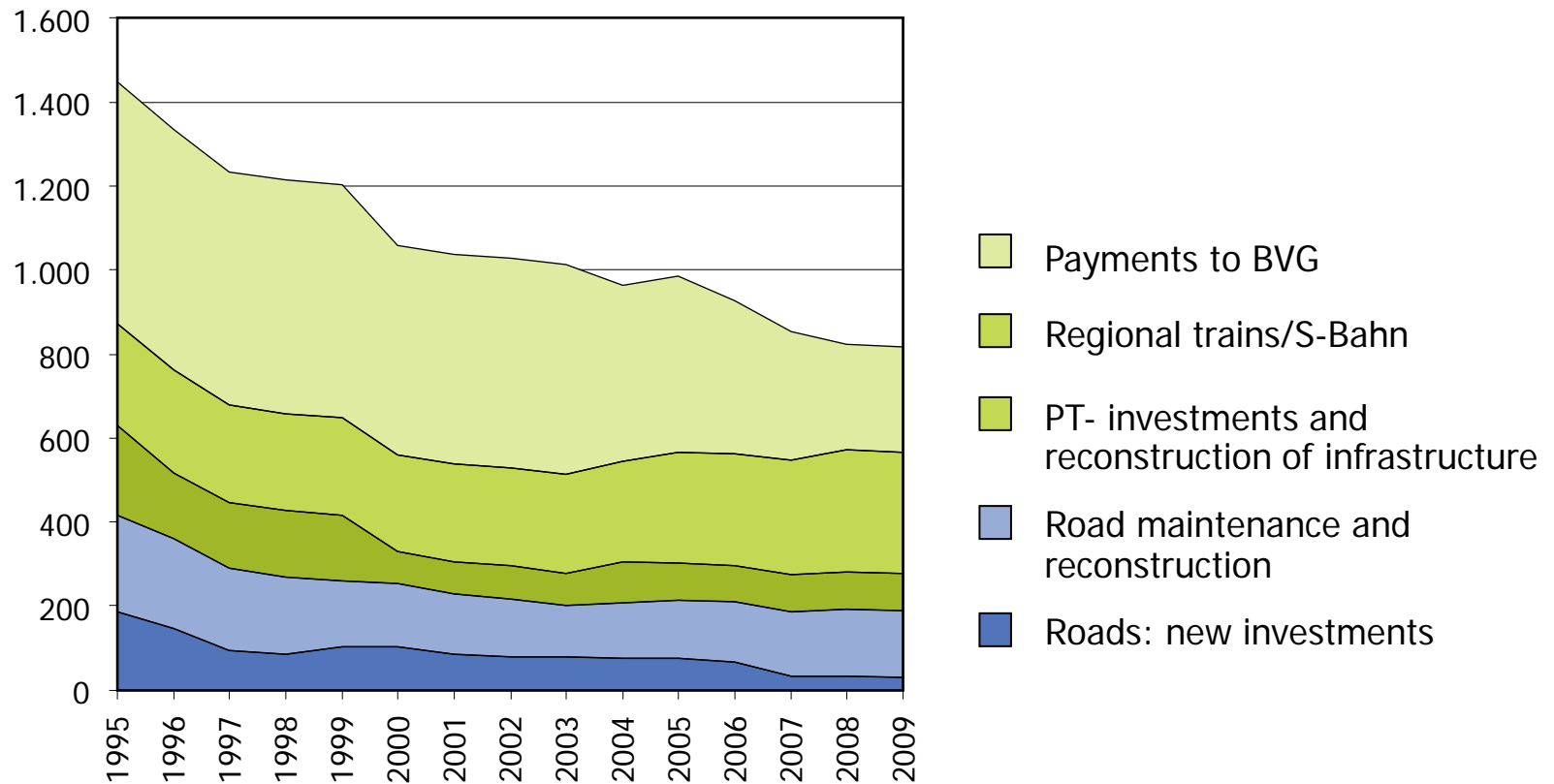
28

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Financing of the Public Transport System

Public Expenditure: Review (Overview)

Transport spending by the city of Berlin (federal state budget)
1995 – 2009 (in million € at respective current prices)



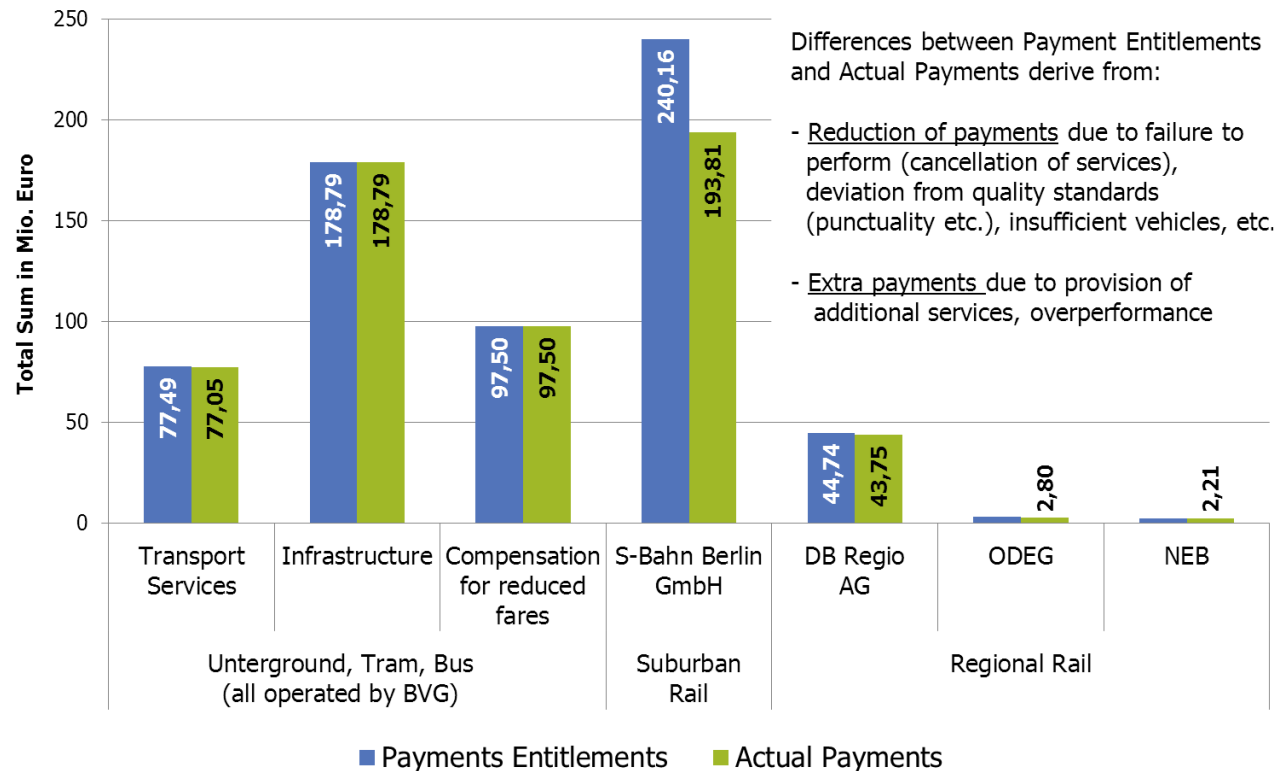
Financing of the Public Transport System

Public expenditure: review (explanatory notes)

- Transport spending has been gradually reduced in the past.
- The current budget is secured, yet fixed.
- Increases in the near/mid future are unlikely, because:
 - there is a general obligation to reduce federal state debt,
 - the growth in economic strength does not equally translate into tax incomes,
 - there are considerable investment needs in other fields of political interest (health, schools, housing etc.),
 - national funding is being reduced.

Financing of the public transport system

Compensation payments from the Federal State of Berlin to transport operators in 2011



In 2011 public expenditure for public transport services and infrastructure maintenance added up to a total of about 596 million €.

Source of data: Local Public Transport Report of the Land of Berlin 2011; available at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/oepnv/qualitaet/index.shtml

Financing of the Public Transport System

Public Expenditure: Basic Principles

There is a considerable difference between payment entitlements and actual payments:

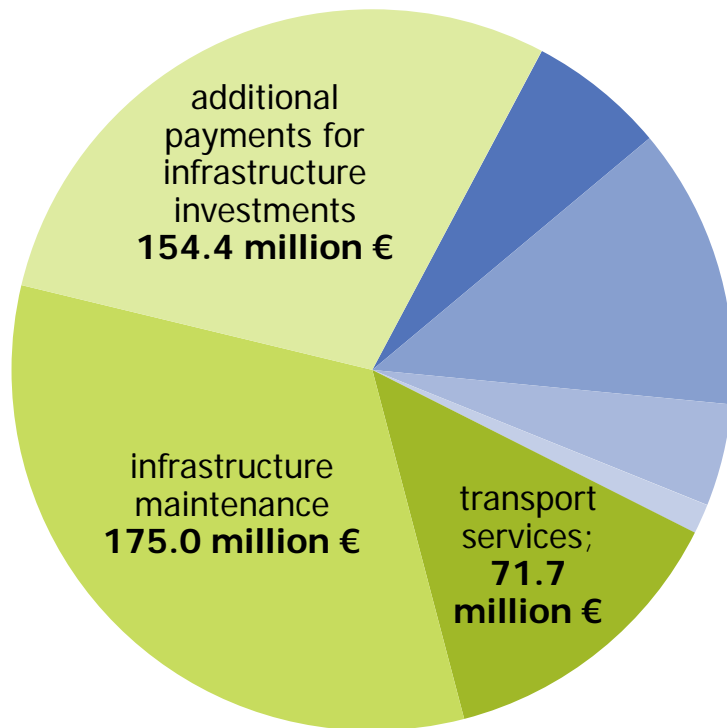
- Payment entitlements:
 - Amount of compensation the operators may receive if their performance equals the requirements of the transport contracts (quality and quantity).
- Actual Payments:
 - Amount of compensation the federal State of Berlin pays to the operators based on their actual performances.

For Example:

- In 2011 the BVG would have been entitled to payments of 77.49 million € if they had delivered transport services in quantity and quality as described in the transport contract.
- In 2011 the BVG received actual payments of 77.05 million €, which included
 - reductions due to services which were not delivered sufficiently and
 - extra payments for additional services and over performance regarding quality (i.e. high passenger satisfaction with low-entry bus services).

Payments to the Public Transport System

Compensation payments: different sources, different objectives



Payments by SenStadtUm*

Payments by SenWTF**

Refunding of retirement payments; **32.7 million €**

past obligations

Compensation: reduced fares for school kids; **67.1 million €**

Compensation: reduced fares for disabled people; **24.4 million €**

social objectives

Compensation: reduced fare for low-income groups; **7.1 million €**

* Directly transport related, partly including national funds

** SenWTF: Senate Department for the Economy, Technology and Research

Source of data: Local Public Transport Report of the Land of Berlin 2011; annual report BVG

Contact

Dr. Axel Stein, Dipl.-Ing. Diana Runge
Consultants

KCW GmbH

Berlin

Bernburger Str. 27

10963 Berlin

Fon: +49 (0) 30/40 81 768 – 88

Fax: +49 (0) 30/40 81 768 – 61

Mail: stein@kcw-online.de

Web: www.kcw-online.de