MANAGING CAR USE THROUGH THE BERLIN TRANSPORTATION DEVELOPMENT PLAN

Presentation by
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Introduction

I. Berlin today

II. Why is Management of Car Use necessary?


IV. Conceptional Approach to Car Use Management: 4 Pillars

V. Implementation of Mobility Strategy (since 2003)
I. Berlin today

- population: 3,4 million inhabitants (city); 4,3 million (metropolitan area): population stagnating but migration towards the fringes
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Area: 889 km²
Inhabitants: 3.4 million
Employees: 1.5 million
Private cars: 1.1 million

(inhabitants region Berlin: 4.3 million)
I. Berlin today

- population: 3.4 million inhabitants (city); 4.3 million (metropolitan area): population stagnating but migration towards the fringes
- favourable polycentric city structure
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The Polycentral Structure

- Zentrumsbereich City West
- Zentrumsbereich Historische Mitte
- Hauptzentrum
- Besonderes Stadtteilzentrum
- Stadtteilzentrum
- Ortsteilzentrum
- Fachmarktgüterzentrum
- Zentrenrunder Stadtteil mit höchster / höherer Urbanität
- Zentrenrunder Stadtteil mit ausgeprägter Urbanität
- Wichtig
- Ausfallstraße
- Fernbahnhof

Berlin
im Auftrag der Senatsverwaltung für Stadtentwicklung - Abt. 1
Z-PLAN
Berlin August 2003
Atelier für Raumanplanung, Städtebau und Architektur
I. Berlin today

- population: 3.4 million inhabitants (city); 4.3 million (metropolitan area): population stagnating but migration towards the fringes
- favourable polycentric city structure
- economy: continuing deindustrialisation, slow growth of service industries, 18% unemployment, budget crisis
- modernised efficient transport infrastructure, growing transportation demand, adapted mobility patterns
II. Why is Management of Car Use necessary?

- growing private car traffic affects the urban living conditions negatively (congestion at peak hours, environmental burdens)
Increase in Road Traffic 1990 - 2000, forecast (schematic)
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Average Traffic Load on Berlin’s Arterial Road Network per Working Day

Quelle: Senatsverwaltung für Stadtentwicklung
Kartographie: IVU Traffic Technologies AG
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Traffic Quality Evaluation on Berlin's Arterial Road Network

(6:00 bis 9:00 Uhr; ferienfreie Zeit)

- section obtaining recurrent congestions
- section obtaining reduced traffic quality
- section obtaining undisturbed traffic quality
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Air Pollution
Nitrogen Dioxide
1998
(NO₂)

- unter 20 µg/m³
- 20 bis 30 µg/m³
- 30 bis 40 µg/m³
- 40 bis 50 µg/m³
- 50 bis 60 µg/m³
- über 60 µg/m³

Grenzwert: 40 µg/m³
II. Why is Management of Car Use necessary?

- growing private car traffic affects the urban living conditions negatively (congestion at peak hours, environmental burdens)
- car traffic is growing because of
  ⇒ continuously growing trip length of daily trips: substitution of non-motorised through motorised trips
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Frequency distribution of trip length (all trips)
II. Why is Management of Car Use necessary?

- growing private car traffic affects the urban living conditions negatively (congestion at peak hours, environmental burdens)

- car traffic is growing because of
  - continuously growing trip length of daily trips: substitution of non-motorised through motorised trips
  - car traffic is faster than public transport
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Accessibility towards the Nearest Central Areas on the Berlin Transit Network 1998

Mittlere ÖV-Reisezeit (TVZ) einschl. Zugangs-, Parksuch- und Abgangszeiten
- unter 20 Minuten
- 20 bis unter 30 Minuten
- 30 bis unter 40 Minuten
- 40 bis unter 50 Minuten
- 50 bis unter 60 Minuten
- 60 bis unter 70 Minuten
- 70 Minuten und länger

Zeichenerklärung:
- Untersuchungsnetz
- Teilverkehrszeilen
- Zentrumsbereiche
II. Why is Management of Car Use necessary?

- Growing private car traffic affects the urban living conditions negatively (congestion at peak hours, environmental burdens).

- Car traffic is growing because of:
  - Continuously growing trip length of daily trips: substitution of non-motorised through motorised trips.
  - Car traffic is faster than public transport.
  - Affluent private and public parking space in inner city attracts private car traffic.
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Private Parking Space in the City Centre of Berlin

Größe und Anzahl der Objekte
- 501 bis 2.500 (7)
- 251 bis 500 (18)
- 81 bis 250 (75)
- 31 bis 80 (114)
- 11 bis 30 (144)
- 1 bis 10 (71)
- Sep. vor 1991 (30)

Abbildung:
Dez. 2001 Maßstab 1:16000
II. Why is Management of Car Use necessary?

- growing private car traffic affects the urban living conditions negatively (congestion at peak hours, environmental burdens)
- car traffic is growing because of
  - continuously growing trip length of daily trips: substitution of non-motorised through motorised trips
  - car traffic is faster than public transport
  - affluent private and public parking space in inner city attracts private car traffic
- Public transport must be defended because
  - motorization is low: only public transport safeguards “mobility for all”
About 50% of Berlin households do not endue a private car.
II. Why is Management of Car Use necessary?

- **growing private car traffic affects the urban living conditions negatively (congestion at peak hours, environmental burdens)**

- **car traffic is growing because of**
  - continuously growing trip length of daily trips: substitution of non-motorised through motorised trips
  - car traffic is faster than public transport
  - affluent private and public parking space in inner city attracts private car traffic

- **Public transport must be defended because**
  - motorization is low: only public transport safeguards “mobility for all”
  - “European structured city” with high urban living quality is founded on public transport
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The Historic City Centre Structure before Wartime Destruction

The Historic City Centre Structure 2000

urban space/person

Mass Transit

urban space/person

Private Cars
II. Why is Management of Car Use necessary?

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  - continuously growing trip length of daily trips: substitution of non-motorised through motorised trips
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- Public transport must be defended because
  - Motorization is low: only public transport safeguards “mobility for all”
  - “European structured city with high urban living quality is founded on public transport
  - only growing public transport demand allows reduction of subsidies for public transport
Passengers and Subsidies for Operation in Local Public Transport

- **Passengers (mill.):**
  - Year: 1991 to 2010
  - Aim:

- **Subsidies (mill. €):**
  - Year: 1991 to 2010
  - Aim:

**Legend:**
- Blue line: passengers
- Red line: subsidies for operation
III. Development of a Mobility Strategy for Berlin

- co-operative and consultative procedure; result: high acceptance
Consultative Procedure: The Procedure is Important for the Result
III. Development of a Mobility Strategy for Berlin

- co-operative and consultative procedure; result: high acceptance
- content of the integrated strategy “Mobil 2010 Berlin”
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Analysis and Projections

Vision (integrated)

Goals
(12 Quality Goals, 4 Dimensions)

Strategy
(6 Partial Strategies)

Measures
(5 different Categories)

Infrastructure
Long-Term Options
III. Development of a Mobility Strategy for Berlin

- co-operative and consultative procedure; result: high acceptance
- content of the integrated strategy “Mobil 2010 Berlin”
- 2 out of 6 “partial strategies” directly relating to car use management (“environmental combination”, “inner city”)
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- Freight Traffic
- Environ-mental Combi- nation
- Health and Safety

- Fringe City
- Inner City
- Access to Berlin
IV. Conceptional Approach to Car Use Management: 4 Pillars

replacement of car trips by alternative modes:

- **Better public transport by**
  - improvement of public transport network
  - increased speed (priority bus lanes, priority signalling)
  - better organised connecting points
  - product improvements
  - introduction of competition in public transport market

- **better conditions for bicycle riding by**
  - better lanes, improved safety, better parking facilities
  - combination of public transport and bicycle riding
  - better information
IV. Conceptional Approach to Car Use Management: 4 Pillar

discouragement of private car use by

- extension of paid parking zones and higher fares
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Extension of Parking Management

- **Existing parking management area**
- **Potential enlargement area**
IV. Conceptional Approach to Car Use Management: 4 Pillars

Discouragement of private car use by

- extension of paid parking zones and higher fares
- limitations for building of private parking space in inner city areas
- speed limitations and enforcement (73% of urban streets 30 km/h limitation)
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Speed Levels and Limits
IV. Conceptional Approach to Car Use Management: 4 Pillars

discouragement of private car use by

- extension of paid parking zones and higher fares
- limitations for building of private parking space in inner city areas
- speed limitations and enforcement (73% of urban streets 30 km/h limitation)
- reduction of street capacities in inner city area
### Managing Car Use through the Berlin Transportation Development Plan

<table>
<thead>
<tr>
<th>Today</th>
<th>After Reconstruction</th>
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<tbody>
<tr>
<td>ca. 55.000 - 65.000 cars / day</td>
<td>ca. 35.000 - 40.000 cars / day</td>
</tr>
<tr>
<td>street profile 50 - 60 m</td>
<td>street profile 44 / 38 m including tra</td>
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IV. Conceptional Approach to Car Use Management: 4 Pillars

diversion of through-traffic mostly by signalisation and reconstruction of junctions
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Deviation of Through Traffic

- Unloading from spacious areas
- Inner city through traffic
- Unloading from spacious through traffic
V. Implementation of Mobility Strategy (since 2003)

- “mobility programme 2006”: budgeted action programme with detailed measures

- core elements:
  - Berlin bicycle plan: 35 measures to stimulate bicycle-riding, to raise modal share from 10% to 15%
  - demand oriented reorganisation of public transport: new “metrolines”
  - decentralisation of parking management: new responsibilities and incentives for districts
  - comprehensive intermodal traffic management (new infrastructure and new authority)
Thank you for your Attention