

Prof. Dr.-Ing. Gerd-Axel Ahrens

State of the art of ,Integrated Transport Planning‘

Praha, September 2013

Planning

- **Muddling through?!**
- **Fulfilment of demand?!**

or

- **On the basis of analysis**
- **Using methods**
- **Using time**
- **Following intentions**
- **Achieving goals**
- **A learning process, gaining experiences and insights**
- **Solving conflicts**
- **Searching for consensus, finding compromises**
- **Weighing pros and cons**
- **Using scientific methods**
- **Making value oriented political decisions**

Technical guidelines: from the „General Traffic Plan“ to the „Mobility Master Plan“

1. General Traffic Plans (1969)
(Merkblatt Generalverkehrsplanung der Gemeinden (MGVP) 1969)

2. Goal oriented planning process (1979)
(Rahmenrichtlinien für die Generalverkehrsplanung (Ra Ri GVP) 1979)

3. Integrated Mobility Planning (1985/2001)
(Leitfaden für Verkehrsplanungen 1985/2001)

4. Sustainable Mobility Development Plans (2013)
(Hinweise zur Verkehrsentwicklungsplanung 2013)

On European level:

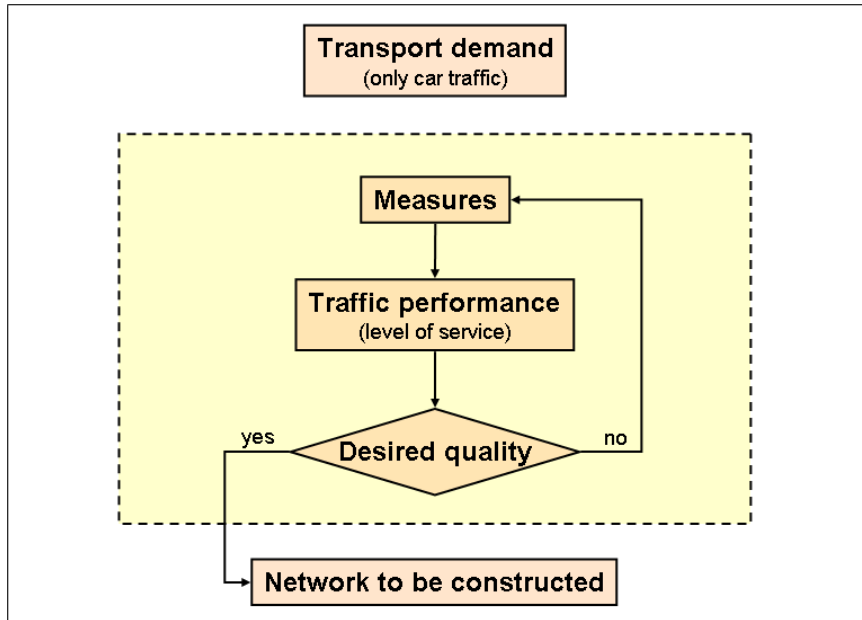
„Sustainable Urban Mobility Plans (SUMP) = Stadtmobilitätspläne“

New threats and requirements for mobility planning

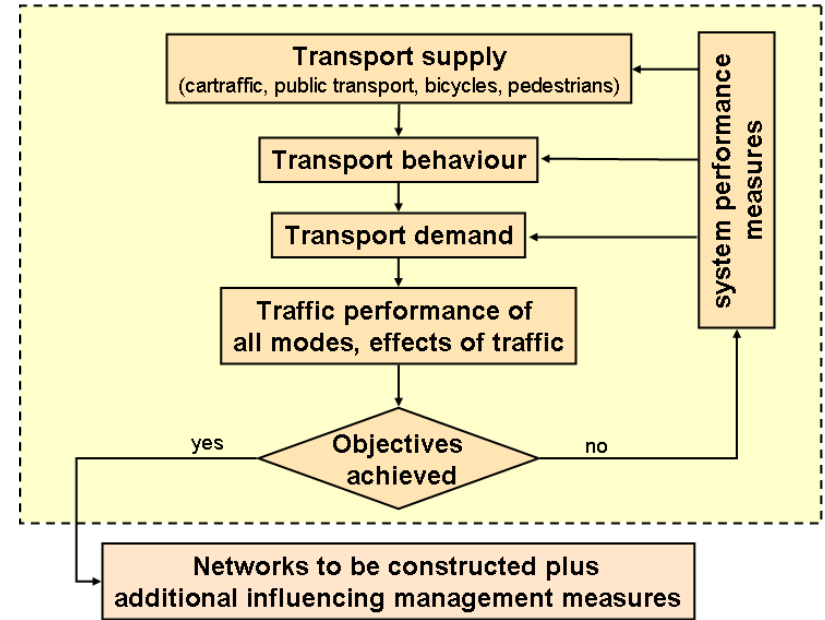
- **Population of 10 Billion world wide**
 - **Demographic change, losses and gains of population**
 - **Urbanisation**
 - **Climatic change**
 - **Energy supply**
 - **Environmental awareness, change of values**
 - **Increasing multi modality**
 - **Noise and clean air acts**
 - **Electric vehicles**
 - **Communication technologies**
 - **Increasing commercial traffic world wide**
 - **Participation and cooperation**
 - **Social aspects, inclusion/exclusion**
 - **Maintenance and replacement of old infrastructure**
 - **Financial requirements will grow**
 - **Public man power and ressources in public administration decrease**
 - **Legal control of demand and effects of public infrastructure**
- **Dynamic system requires integrated coordination and planning**

Demand oriented planning versus influencing approaches

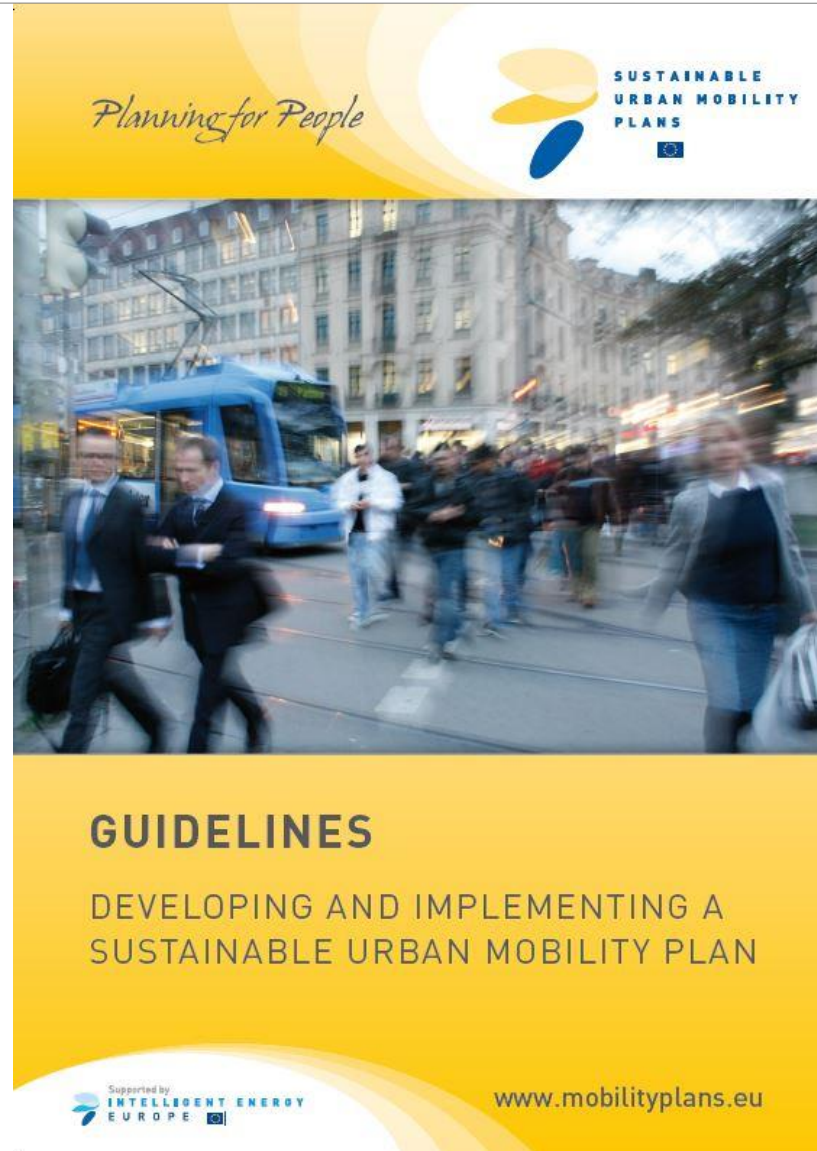
Demand oriented planning



Influencing planning

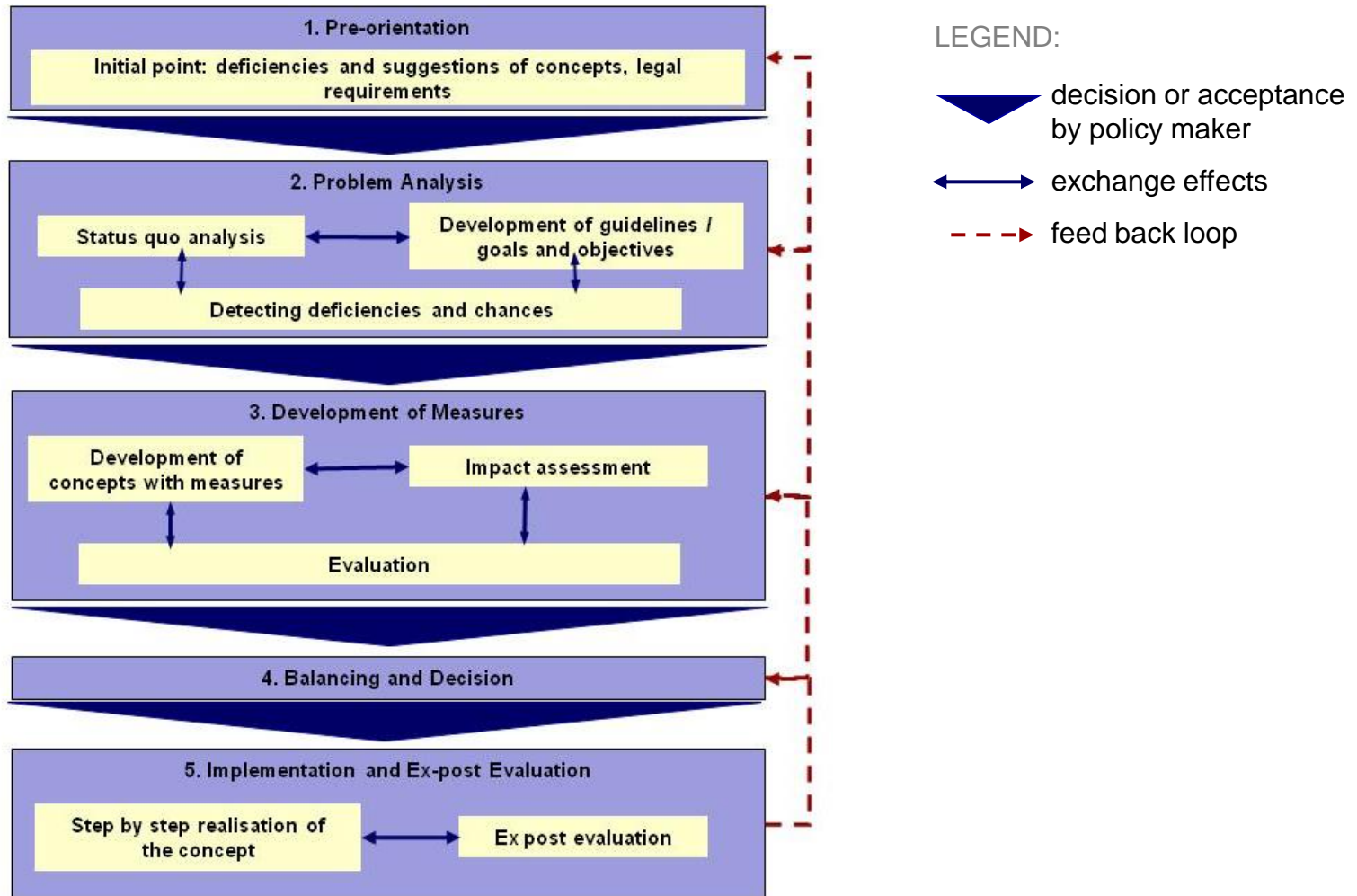


European Union requires Sustainable Urban Mobility Plans (SUMP)



Source:
http://www.mobilityplans.eu/docs/SUMP_guidelines_web.pdf

Goal oriented integrated planning process



Source: FGSV: Leitfaden für Verkehrsplanung, Köln, 2001

SUMP – Process with the same messages

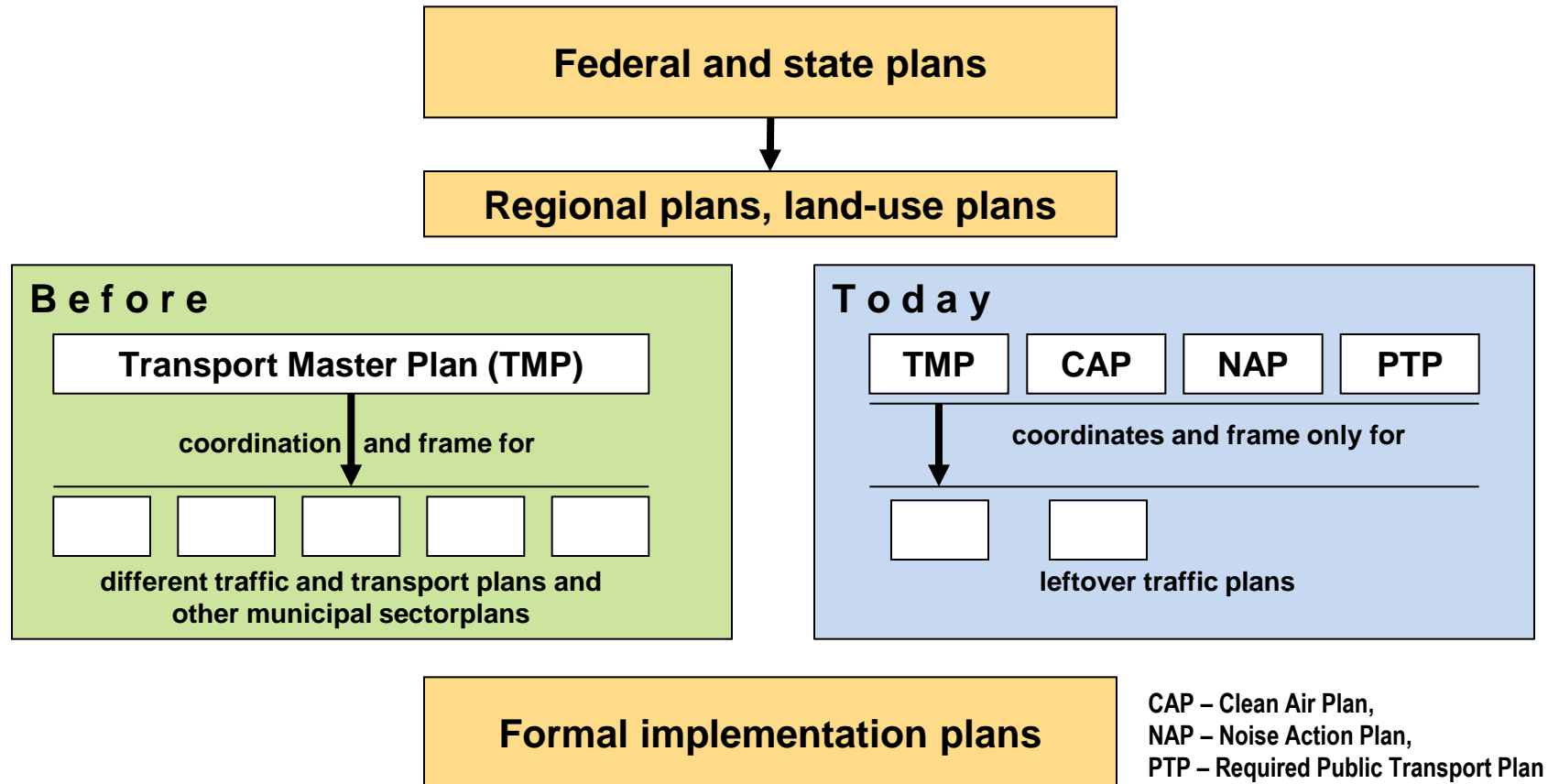


Characteristics of SUMP and integrated transport planning:

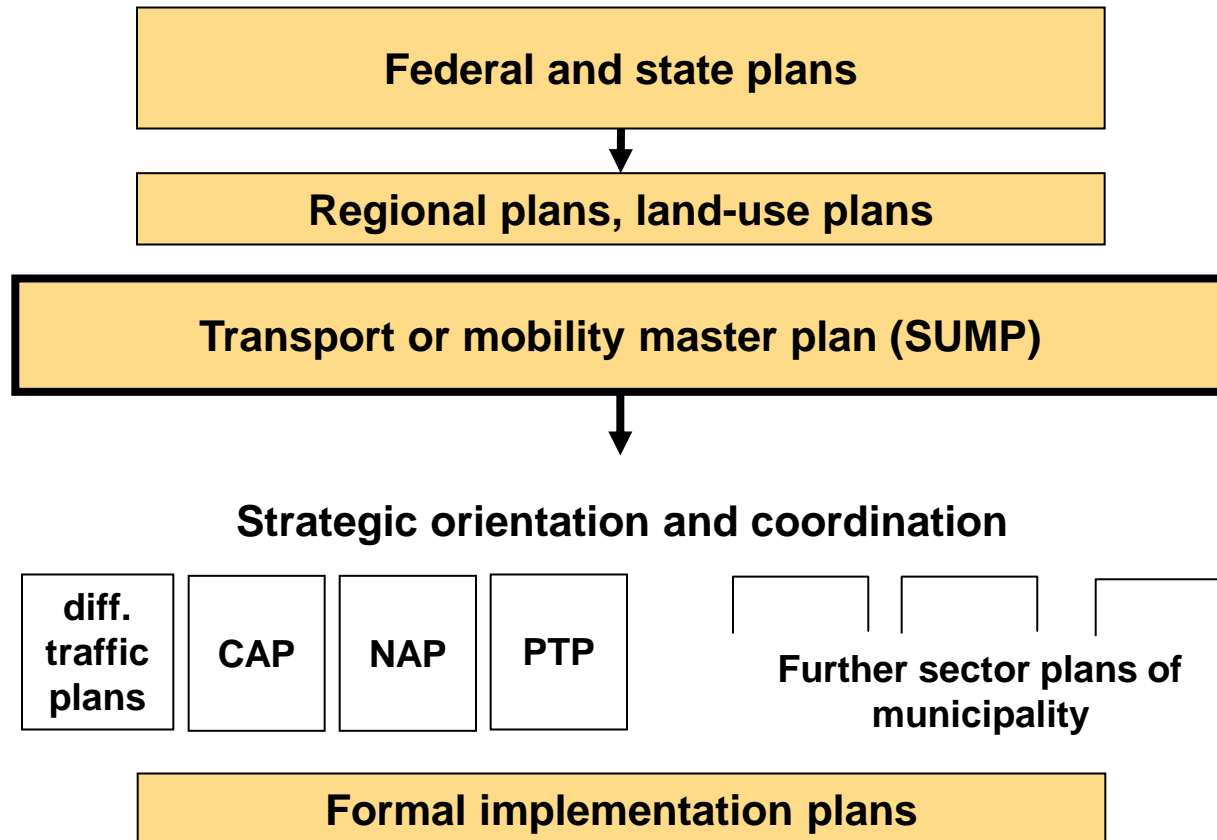
- Continuous process
- Cooperation and participation
- Clear goals and strategies
- Goal oriented control of demand
- Use of scenario techniques
- Integrated hard and soft measures
- Quality management: Evaluation and control of success

Source: Rupprecht Consult on www.mobilityplans.eu, Guidelines

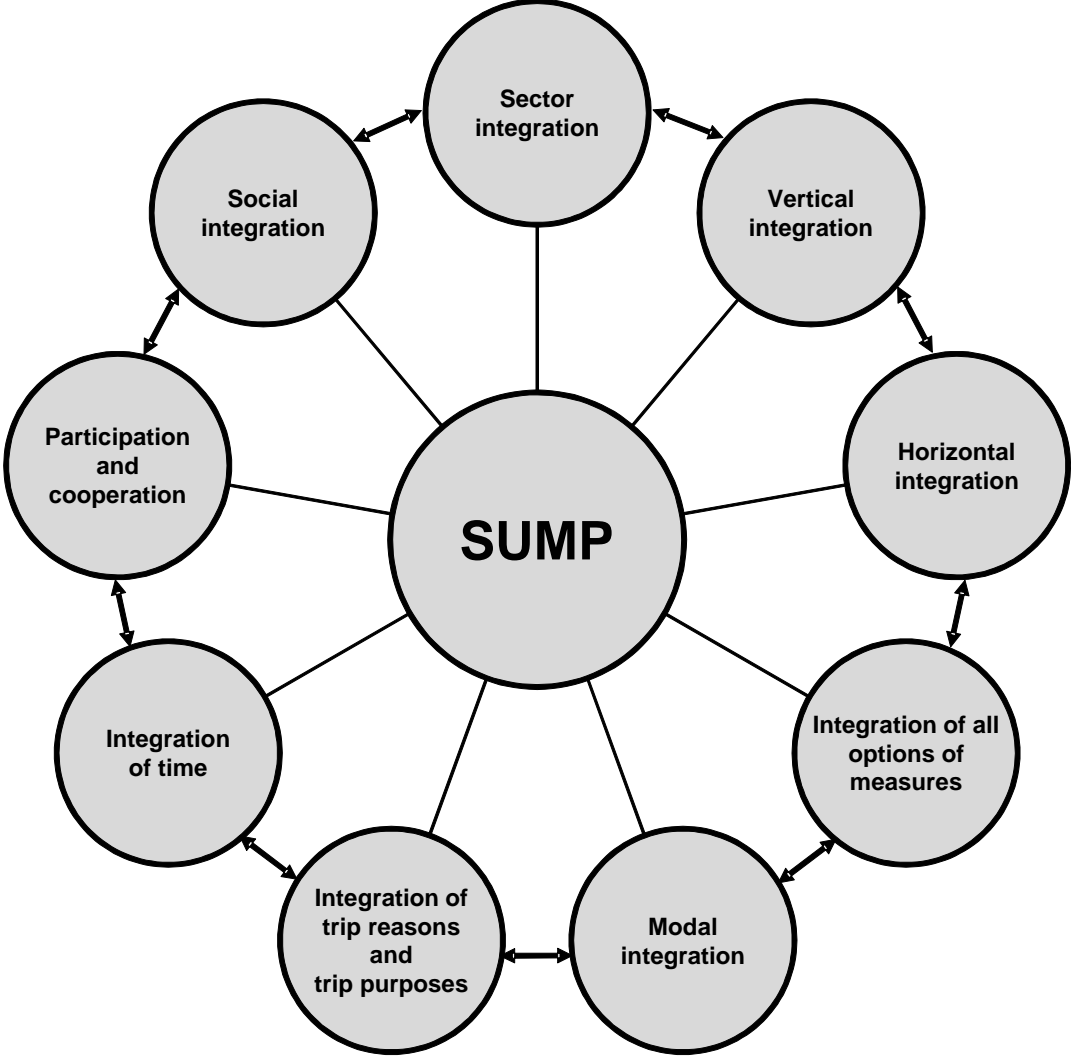
The role of transport master planning before and today



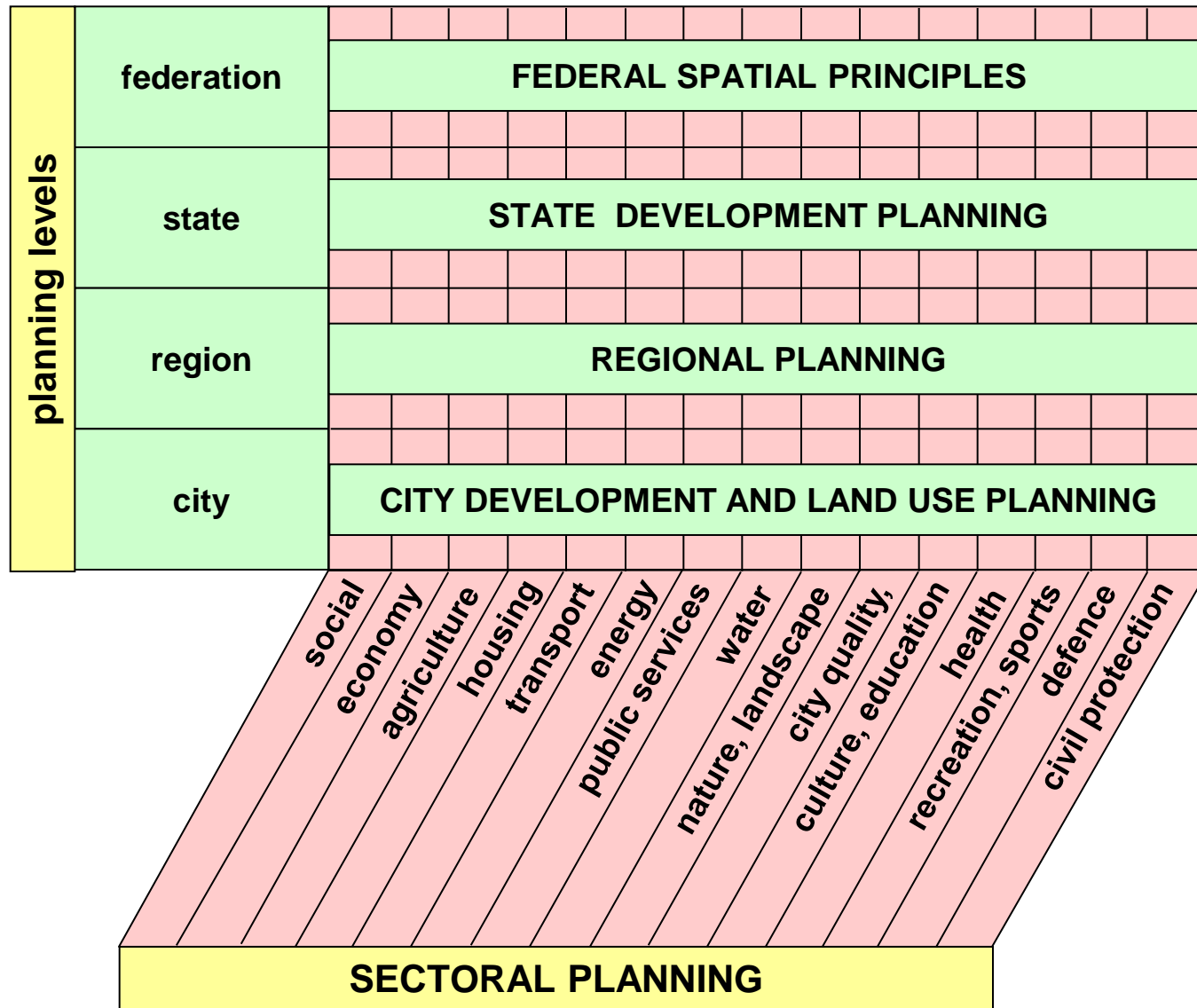
SUMP – strategic and coordination tool



Consideration of aspects of integration as a quality indicator



Vertical and sector integration



Round table with neighbouring communities in Dresden



Quelle: www.ro-dresden.de, Karte „Sachsens neue Kreise“

Nachbarn/Regionen

- Landkreis Bautzen
- Landkreis Meißen
- Landkreis Sächsische Schweiz-Osterzgebirge
- SMWA
- LD Dresden
- Straßenbauamt Meißen-Dresden
- Straßenbauamt Bautzen
- VVO
- MDV Mitteldeutsche Verkehrsverbund GmbH
- Verkehrsverbund Oberlausitz-Niederschlesien GmbH
- Euroregion Elbe/Labe
- Regionaler Planungsverband Oberes Elbtal/Osterzgebirge
- Regionaler Planungsverband Oberlausitz/Niederschlesien

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VEP 2025+

Landeshauptstadt
Dresden

Stadtplanungsamt



Source: Mohaupt, M.: City of Dresden 2025 plus, sustainable urban mobility plan (SUMP), Annual POLIS conference 2011, 29. November 2011, Brussels

Range of integrated measures of mobility planning

0. Land use planning

- Determination and control of land uses to reduce traffic demand
- New developments in "integrated" zones or areas with public transport access

1. Engineering

- Construction of routes and transport facilities for all modes, multi and inter-modal use
- Vehicle improvements
- Information technology, e. g. multi modal navigation systems

2. Economy

- Taxation (vehicles, energy, ...)
- User-financed systems
- Road pricing
- Fares
- Land value capture
- Parking management

3. Enforcement

- Legislation, emission and other standards
- Access restrictions, car free zones, emission-control zones
- Speed limits
- Safety control
- Traffic guidance and control
- Police enforcement, fixed quotas

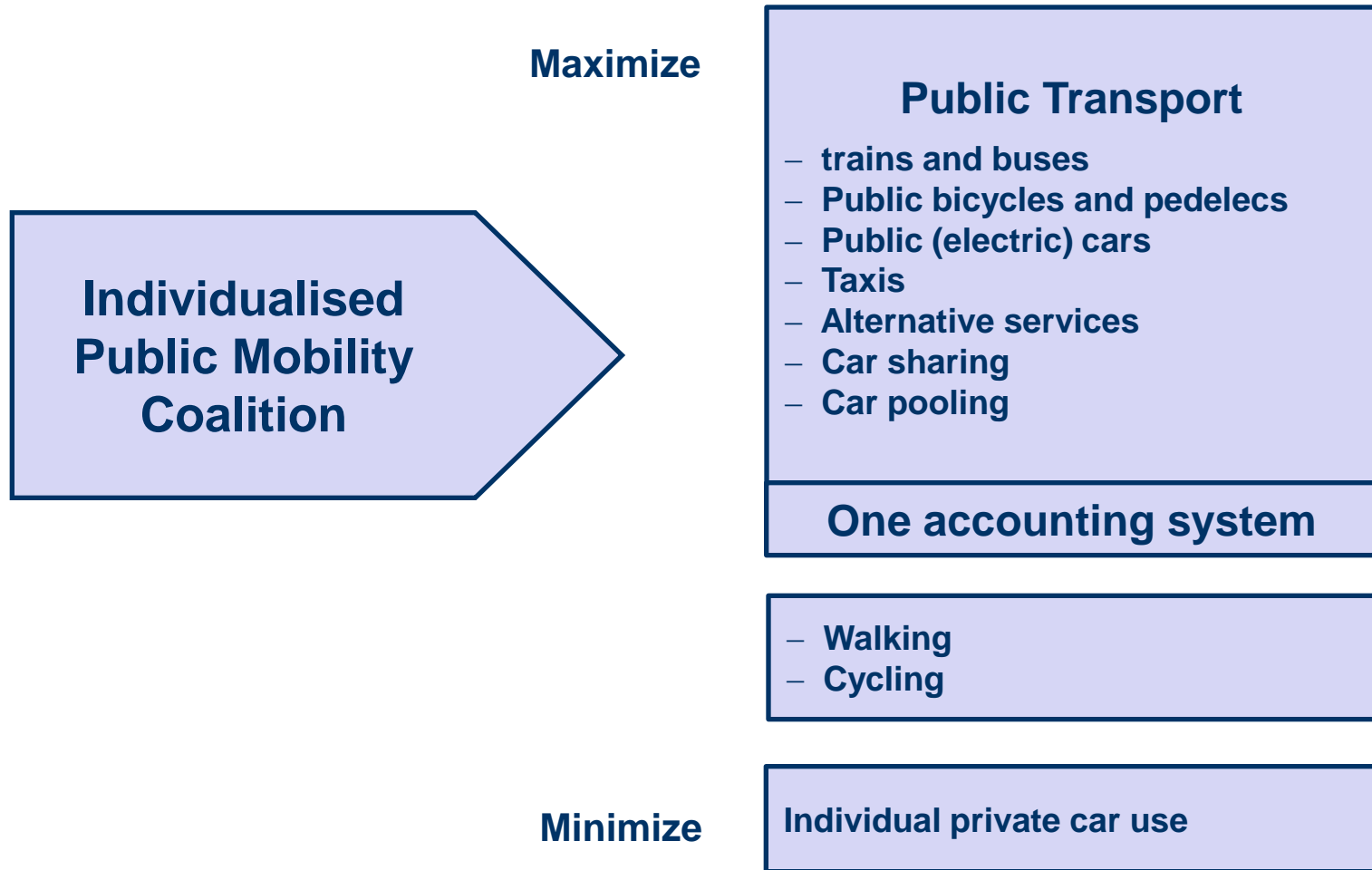
4. Education, Information

- Transport behaviour issues in school
- Driver education
- Public awareness, public relations
- Mobility Management on all levels
- Involvement of media
- Public participation

5. Organisational and logistic measures

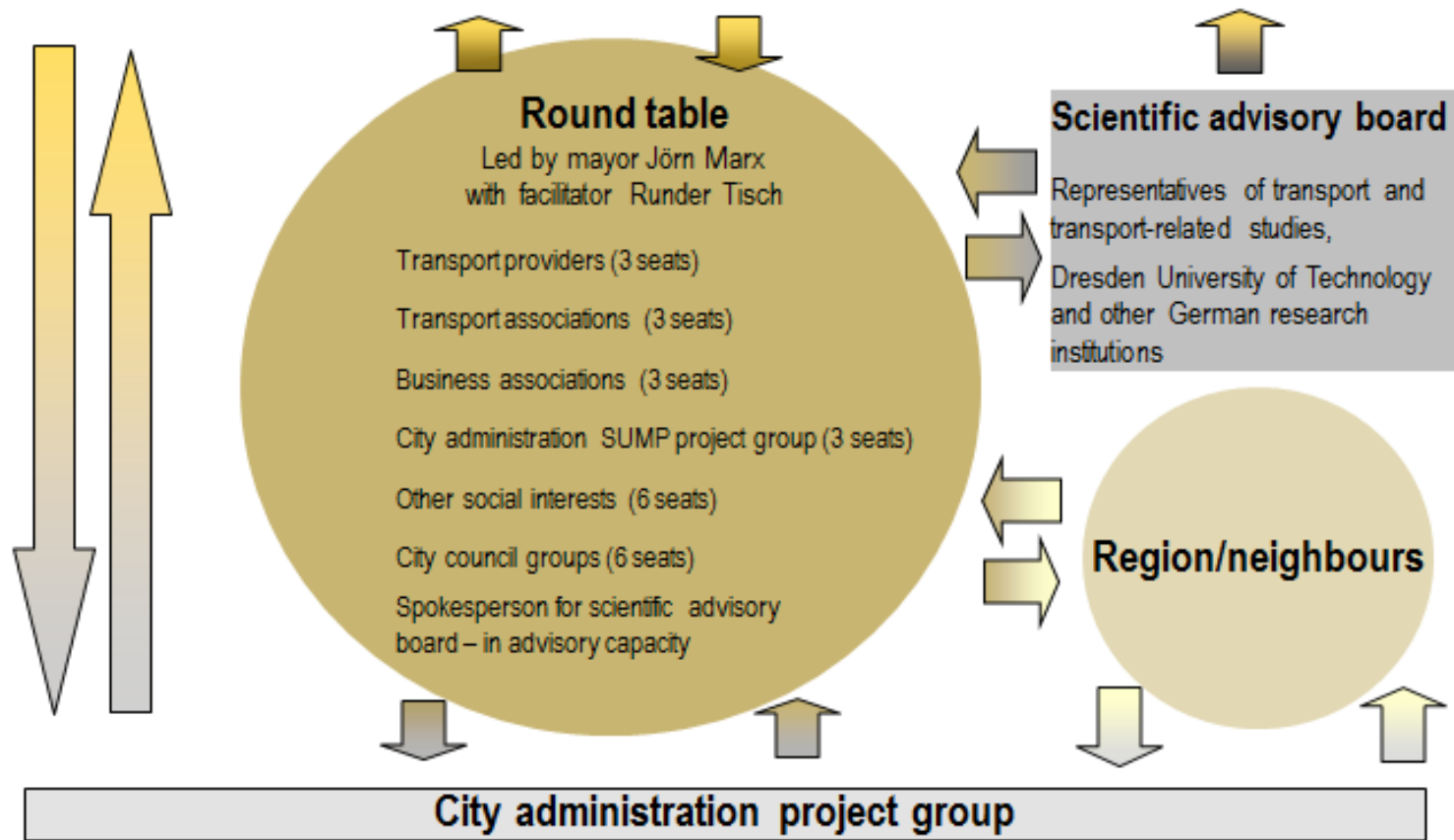
- Improved efficiency (car-sharing, car-pooling, ...)
- Differentiated supply also for inter and multi-modal use
- Incentives, privileges for best practice approaches

The new mobility coalition



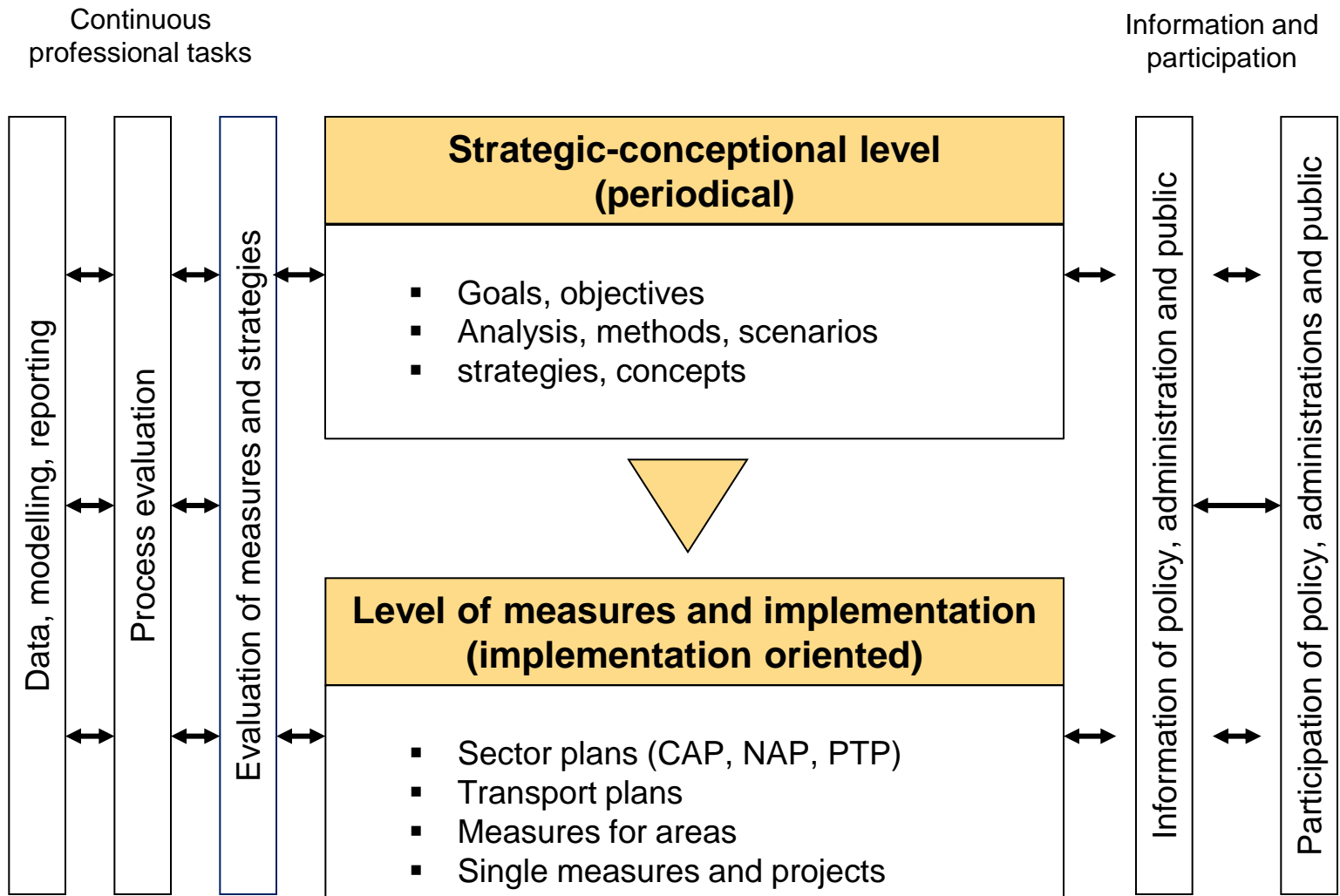
SUMP Dresden 2025+ – Communication and cooperation

Steering committee led by mayor Jörn Marx
Representatives of city council groups, heads of department, City of Dresden officials, councillors, project managers, round table facilitators

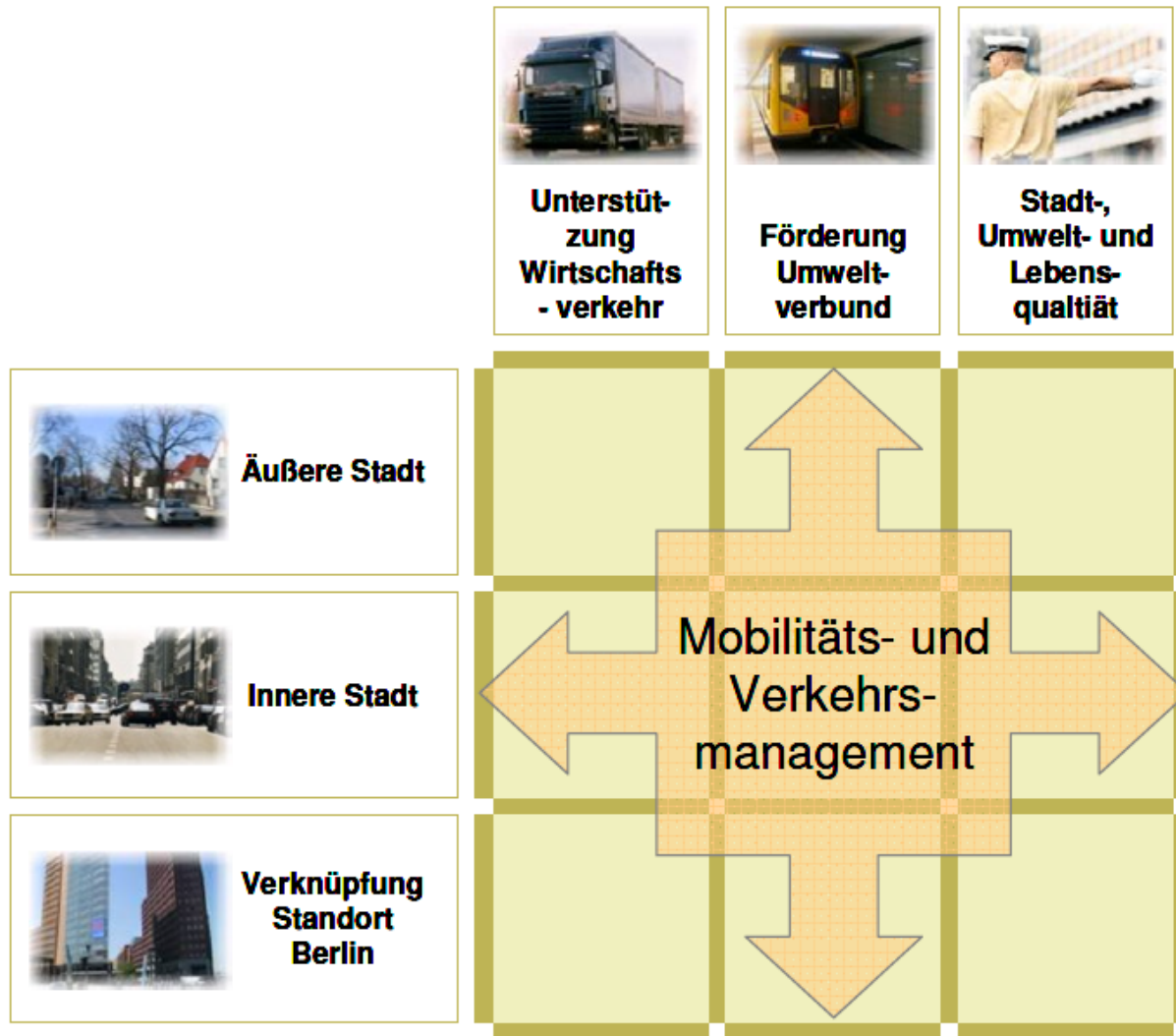


Source: Mohaupt, M.: City of Dresden 2025 plus, sustainable urban mobility plan (SUMP), Annual POLIS conference 2011, 29. November 2011, Brussels

Two levels of mobility master planning



Strategy-levels of the Mobility Plan Berlin



Source: Senatsverwaltung für Stadtentwicklung Berlin, Stadtentwicklungsplan Verkehr Berlin, June 2011

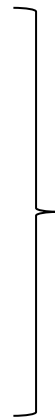
Comparison and evaluation of measures, scenarios and situation

0-Situation

0-forecast

Scenarios

...



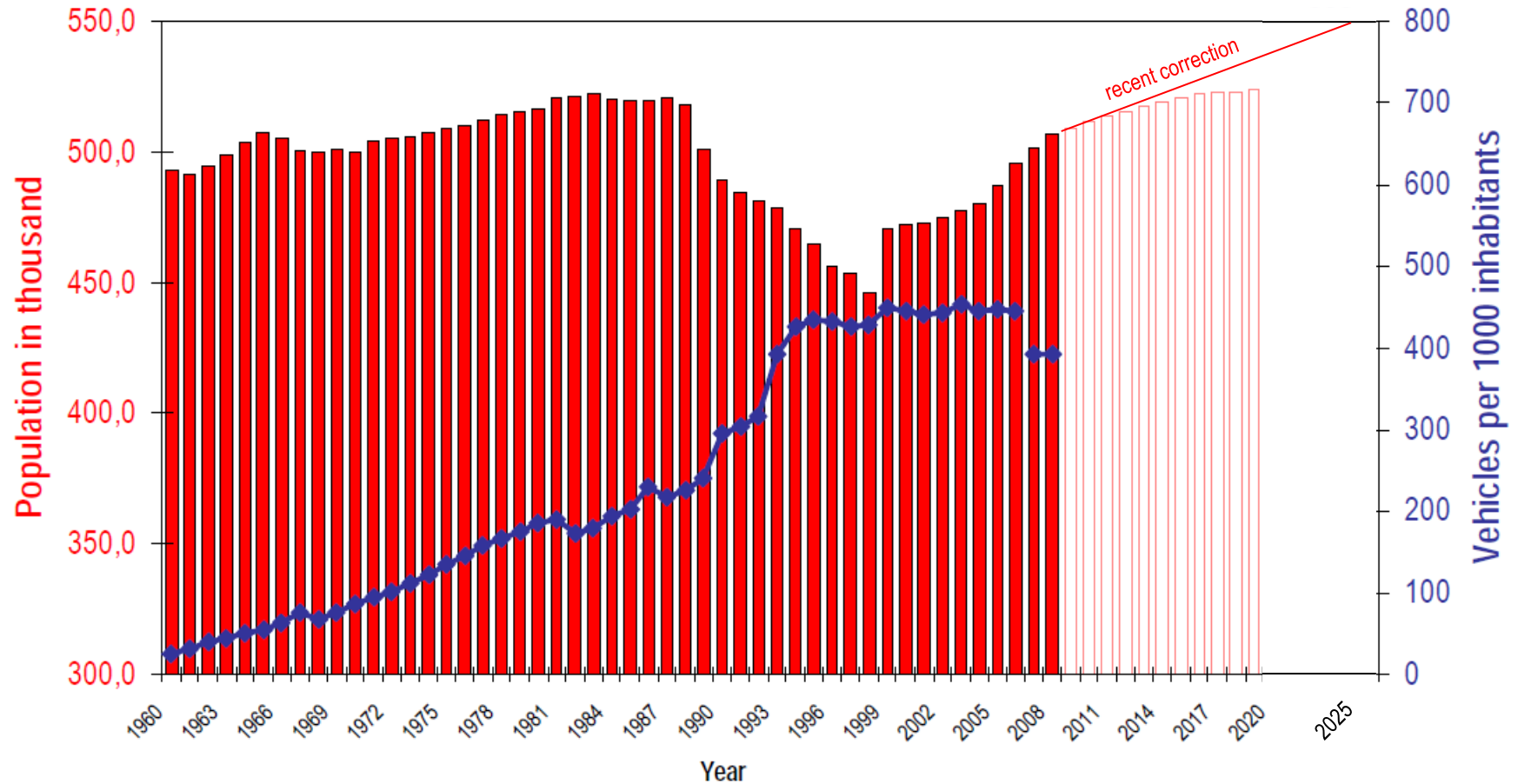
lead to

Profiles of effects

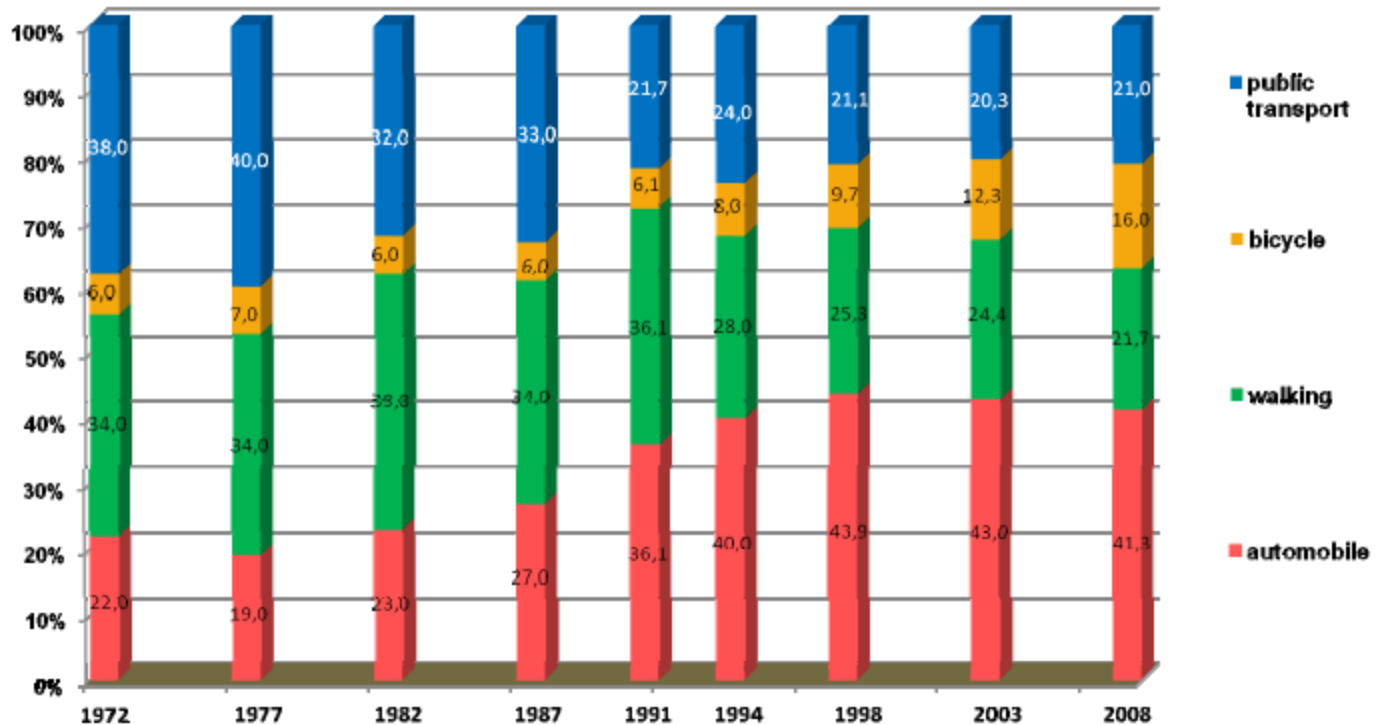
To be compared with compatible profiles of objectives (requirements)

Result are profiles of qualities with satisfactory conditions and deficiencies

Example Dresden – population and motorization



Example Dresden – modal split

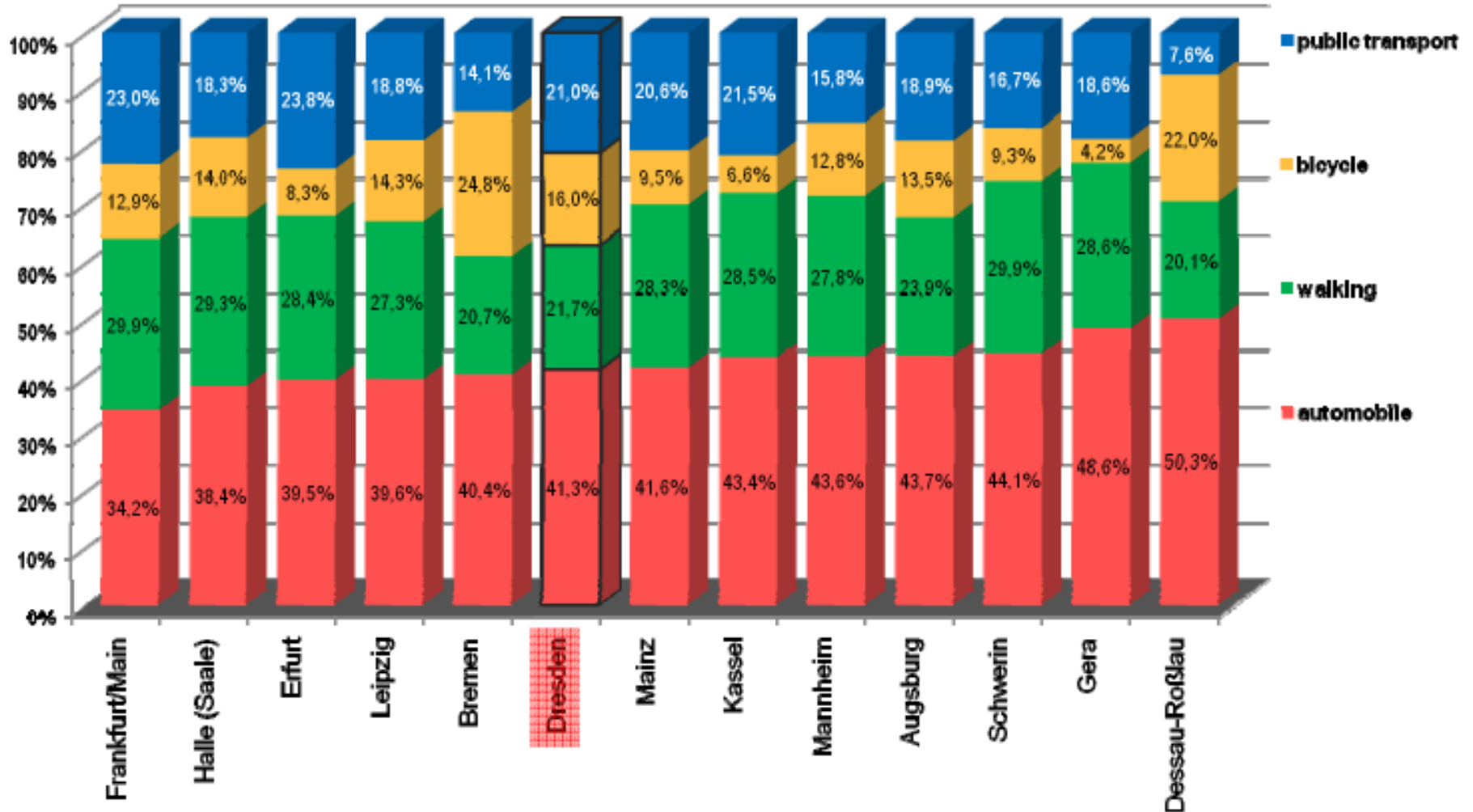


In 2008 37 % of Dresdens houtholds had no private car!

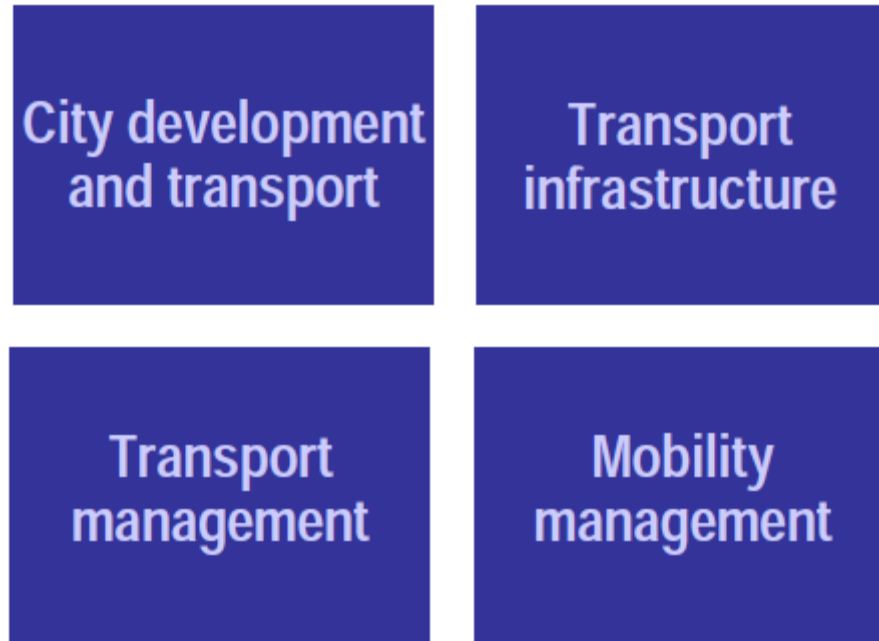
Mobility in cities - SrV

Example Dresden – comparison with other cities

SrV 2008, all trips of residents



Example Dresden – Dresden's mobility strategy in the past



Example Dresden – SUMP 2025+ – the new strategy bridge



SUSTAINABLE URBAN TRANSPORT PLAN

Clean
Air
Plan

Noise
Action
Plan

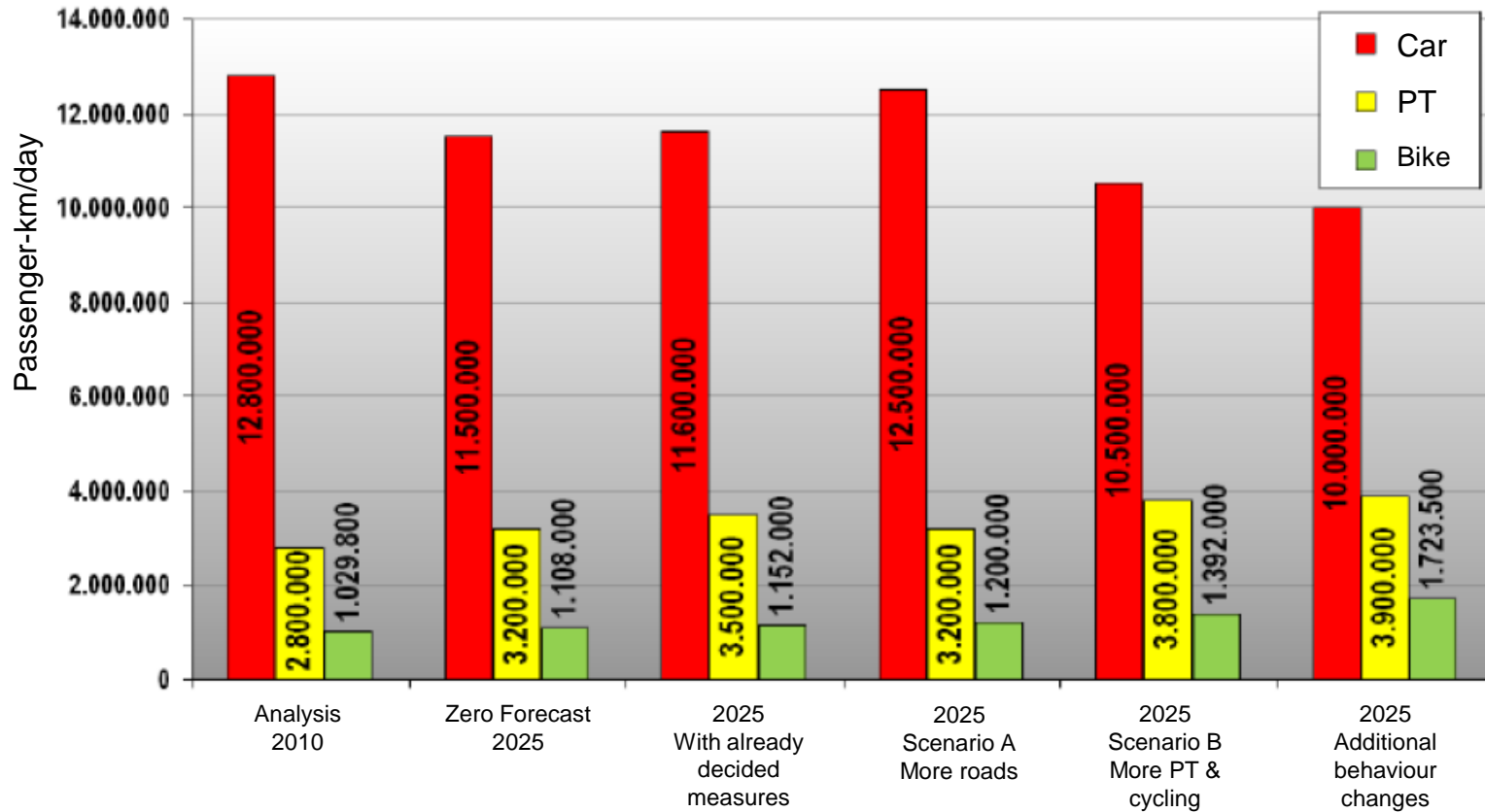
Transport
measures
and
concepts

Public
Transport
Plan

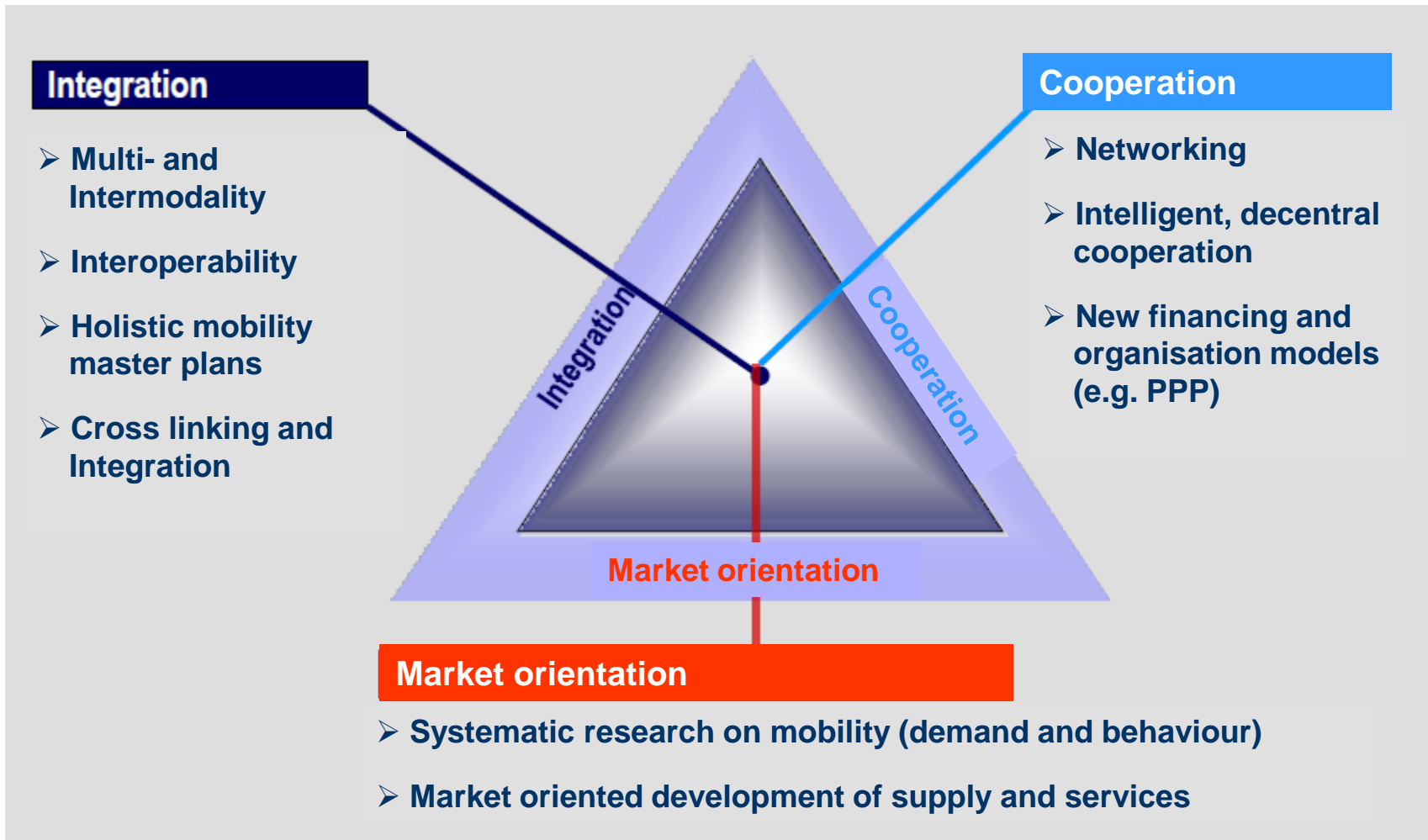
Further
sector
plans
related
to traffic
and
transport

Example Dresden – results of scenarios

Passenger kilometers within the city
for automobil traffic, public transport and bicycles

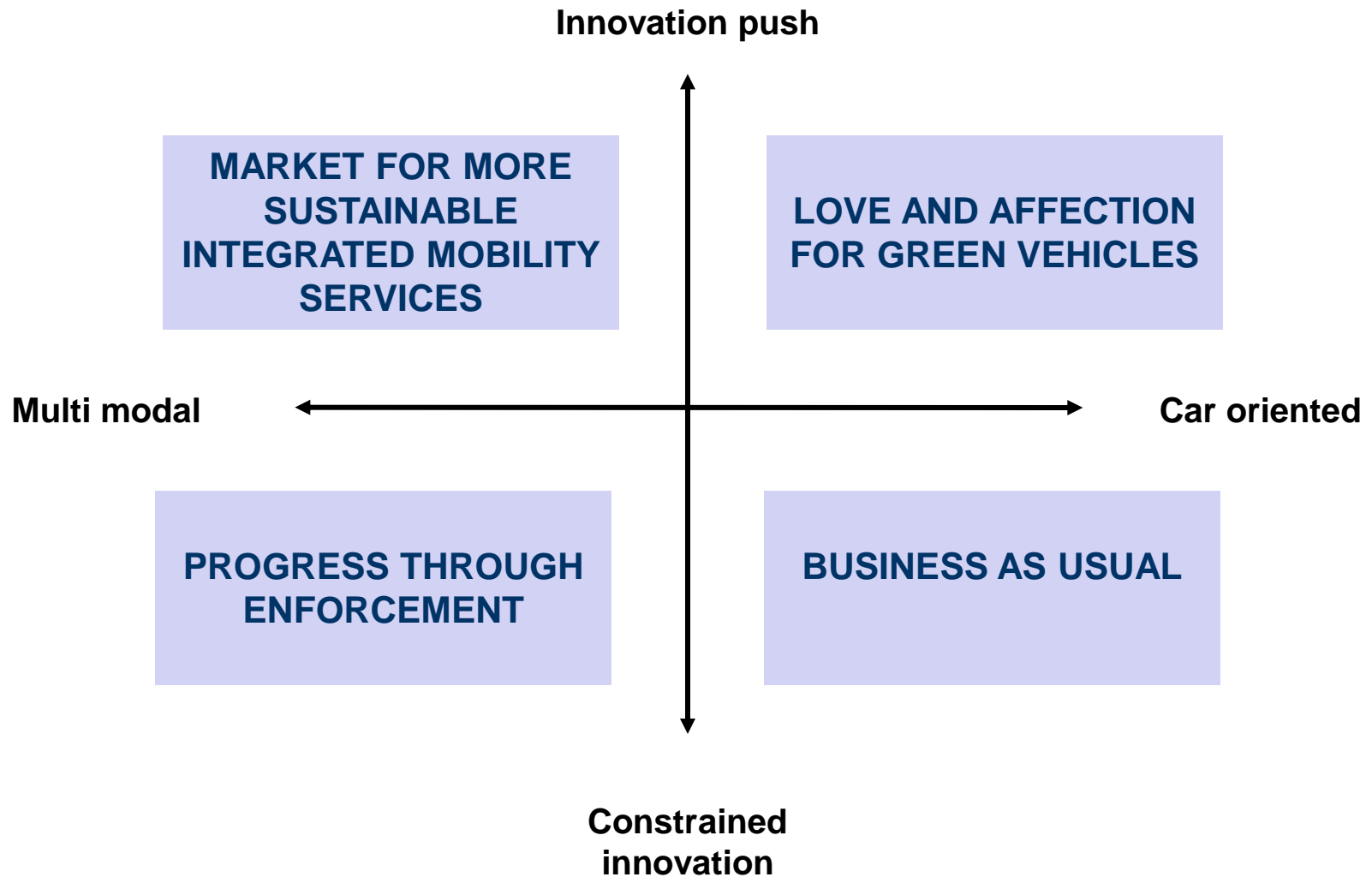


Mobility market: Factors of success



Source: Ringat, K.: Zukunftslinien des ÖPNV (future of public transport). Technische Universität Dresden, Institute for Transport Planning and Road Traffic, Verkehrsplanerisches und Verkehrsökologisches Kolloquium, 20 October 2010

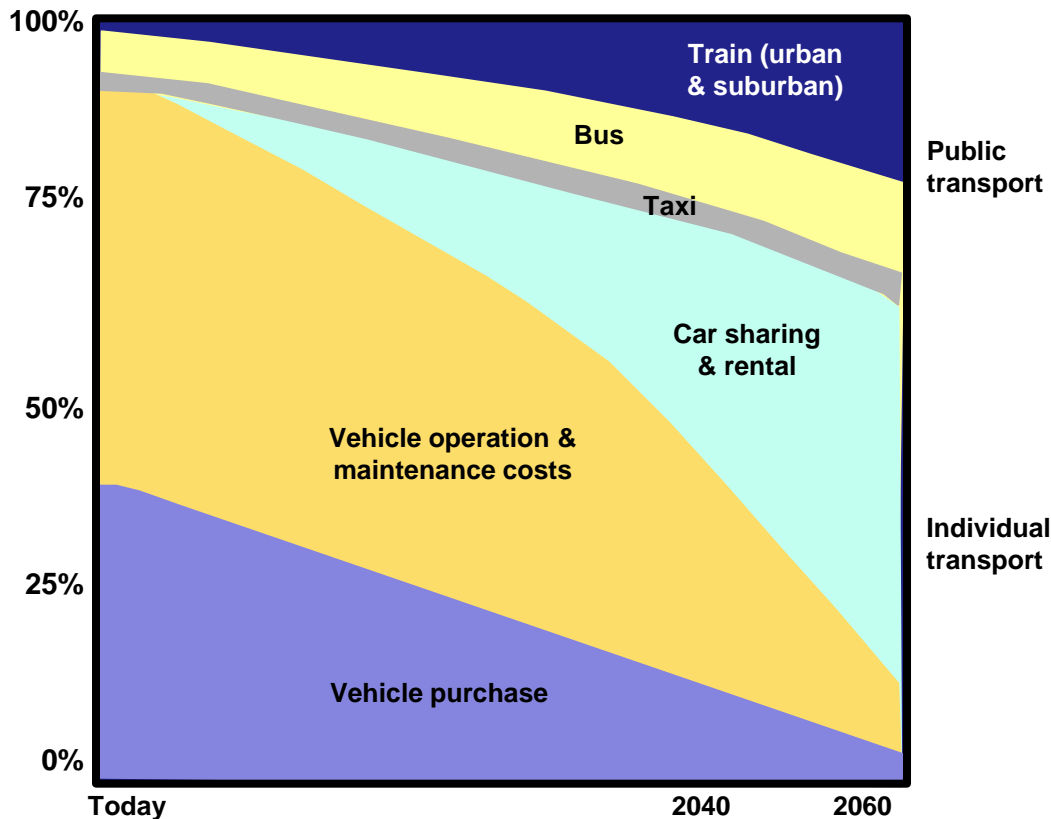
Urban mobility – In which direction will we travel?



Compare: Glockner, H., Rodenhauser, B.: Zukunft der Mobilität. z-punkt-The Foresight Company perspektiven02. February 2009 (www.z-punkt.de)

Thank you for your attention!

Household transportation expenditures today and in future



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Source: World Business Council for Sustainable Development, Oliver Wyman (quoted at: Prof. Johann H. Tomforde: Mobility Innovations on the way to post-oil cities. Our Common Future, Conference of the Volkswagenstiftung and Stiftung Mercator, Hannover and Essen, 2-6 November 2010)