



**XXIVth World
Road Congress
Mexico 2011**
Mexico City 2011.

Ten years of the Zurich mobility strategy – Lessons learned and outlook

Martin Buck

- SNZ Engineering & Consulting, Zurich, Switzerland
- CEO
- m.buck@snz.ch



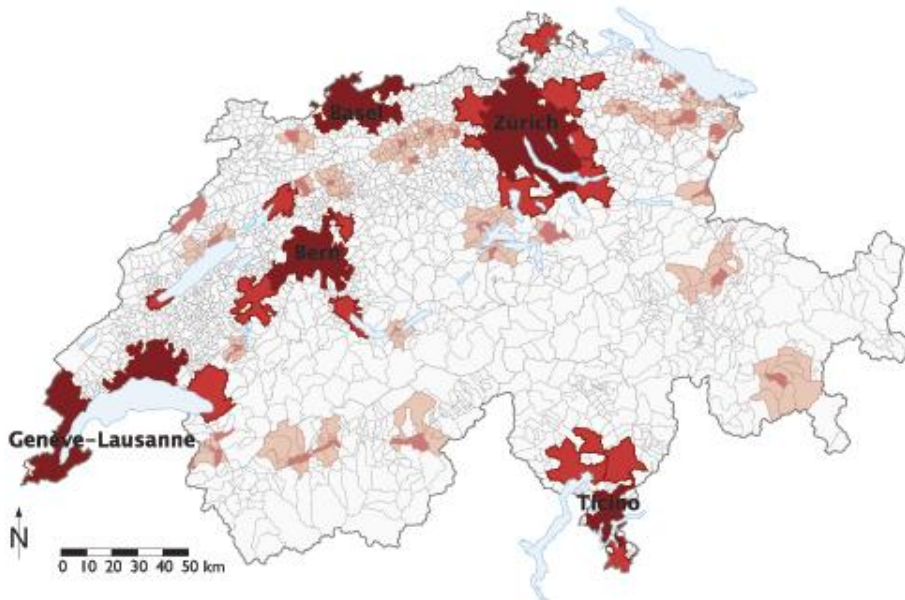
SNZ Ingenieure und Planer AG

Index

- Facts and Figures
- Zurich mobility strategy – a brief portrait
- Achievements in the last ten years
- Lessons learned and outlook



General



Inhabitants

- City: 378'000
- Agglomeration: 1.25 million
- Metropolitan area: 1.68 million
- Greater Zurich Area: 3.2 million

• Transportation

- Motorisation: 376 Cars / 1000 Inh.
- Network public transport: 288 km
- Network streets: 740 km
- Network bike routes: 340 km
- Parking places:

public ground	51'000
private	220'000

Economy

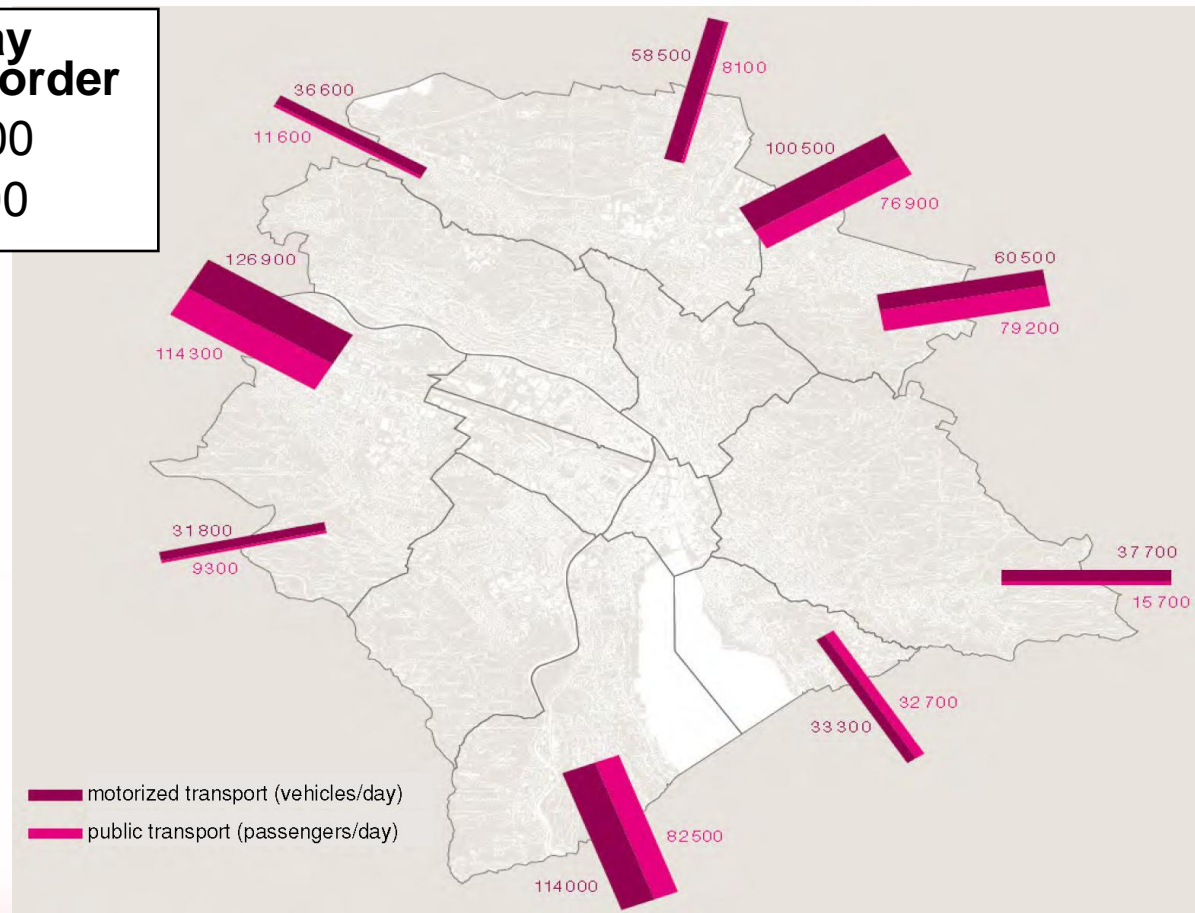
- Economic Capital of Switzerland: 20% of Switzerland's gross domestic Product
- 330'000 employees, unemployment: 4.1% (Aug 2007)



Mobility (1)

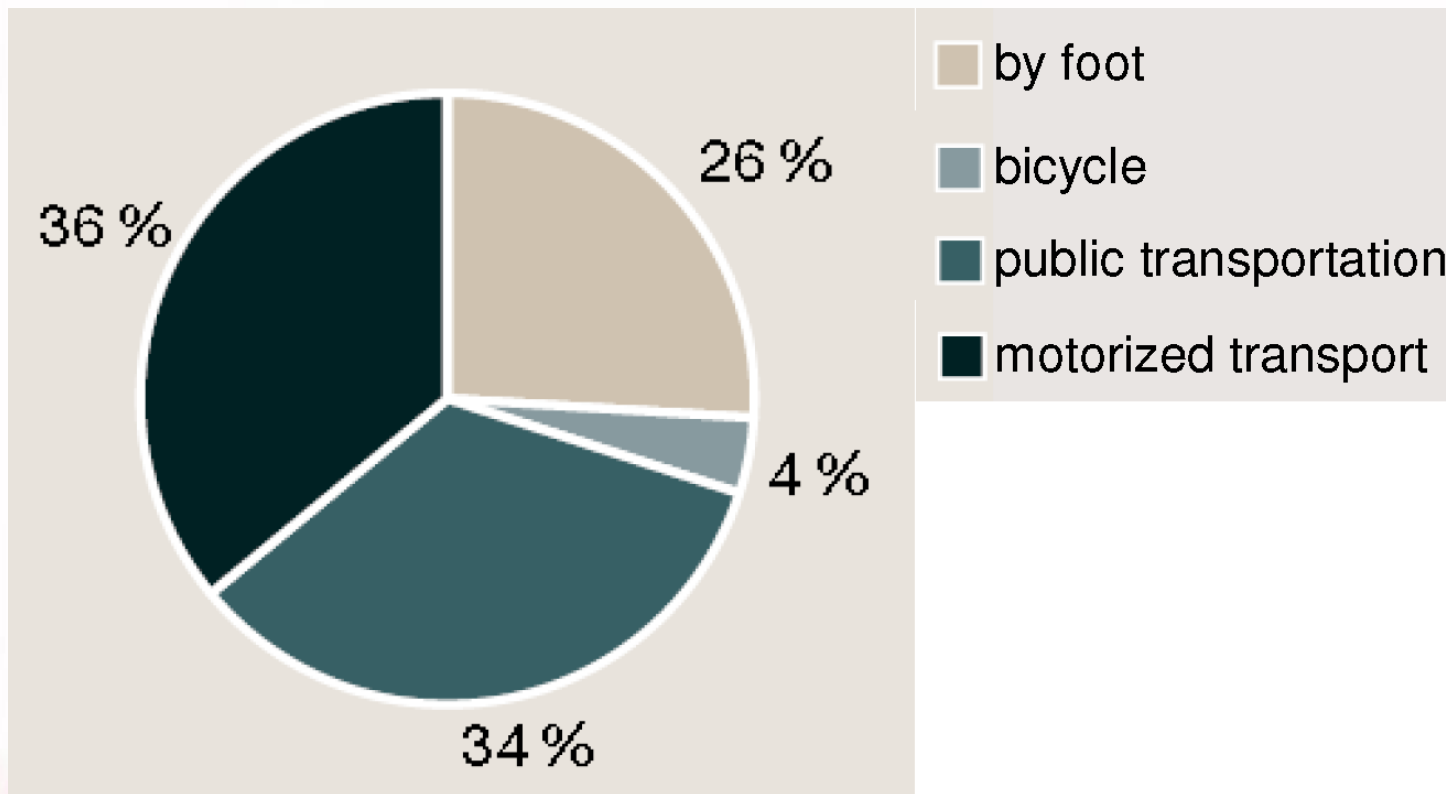
Persons per day crossing city border

- P.T.: 400'000
- M.I.T.: 700'000



Mobility (2)

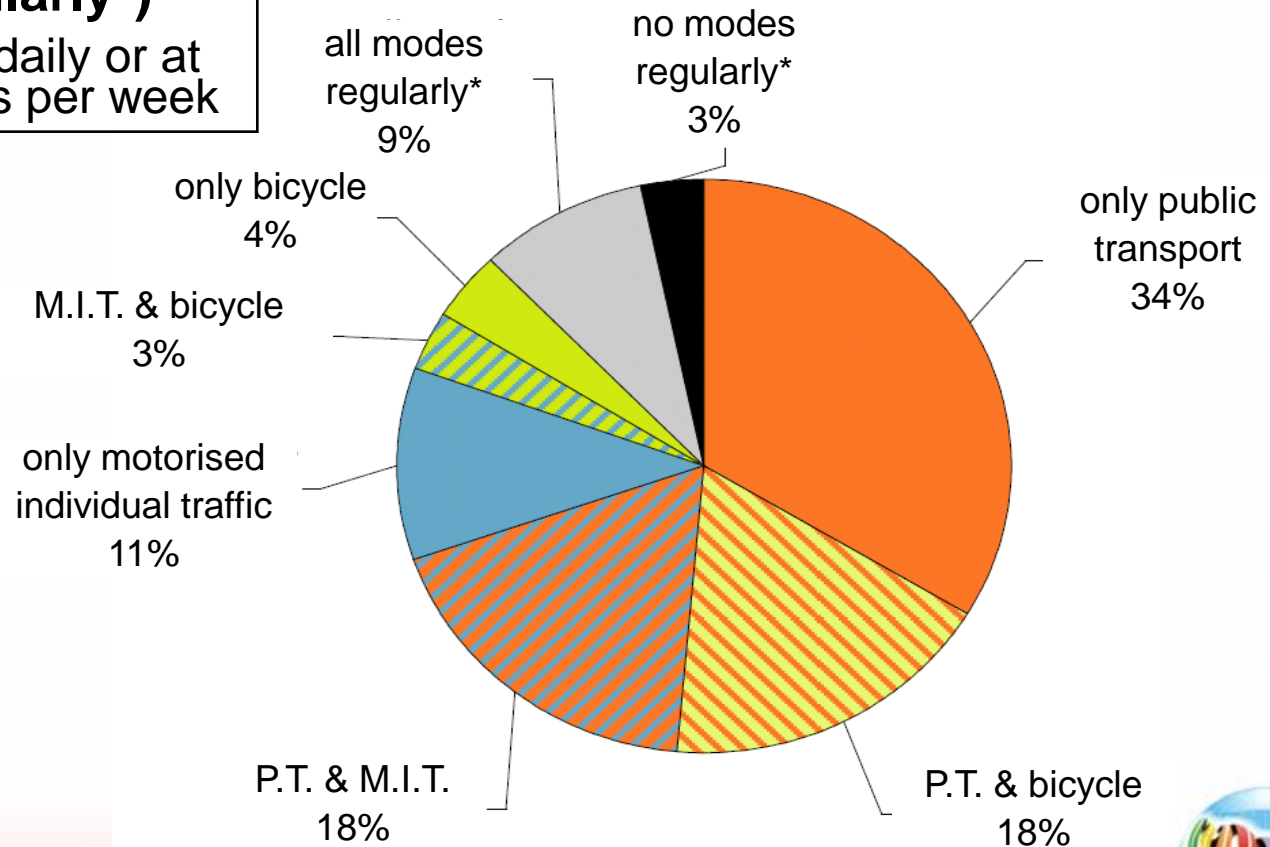
Share of means of transportation within city limits (# trips)



Mobility (3)

Inter-/Multimodal behavior (regularly*)

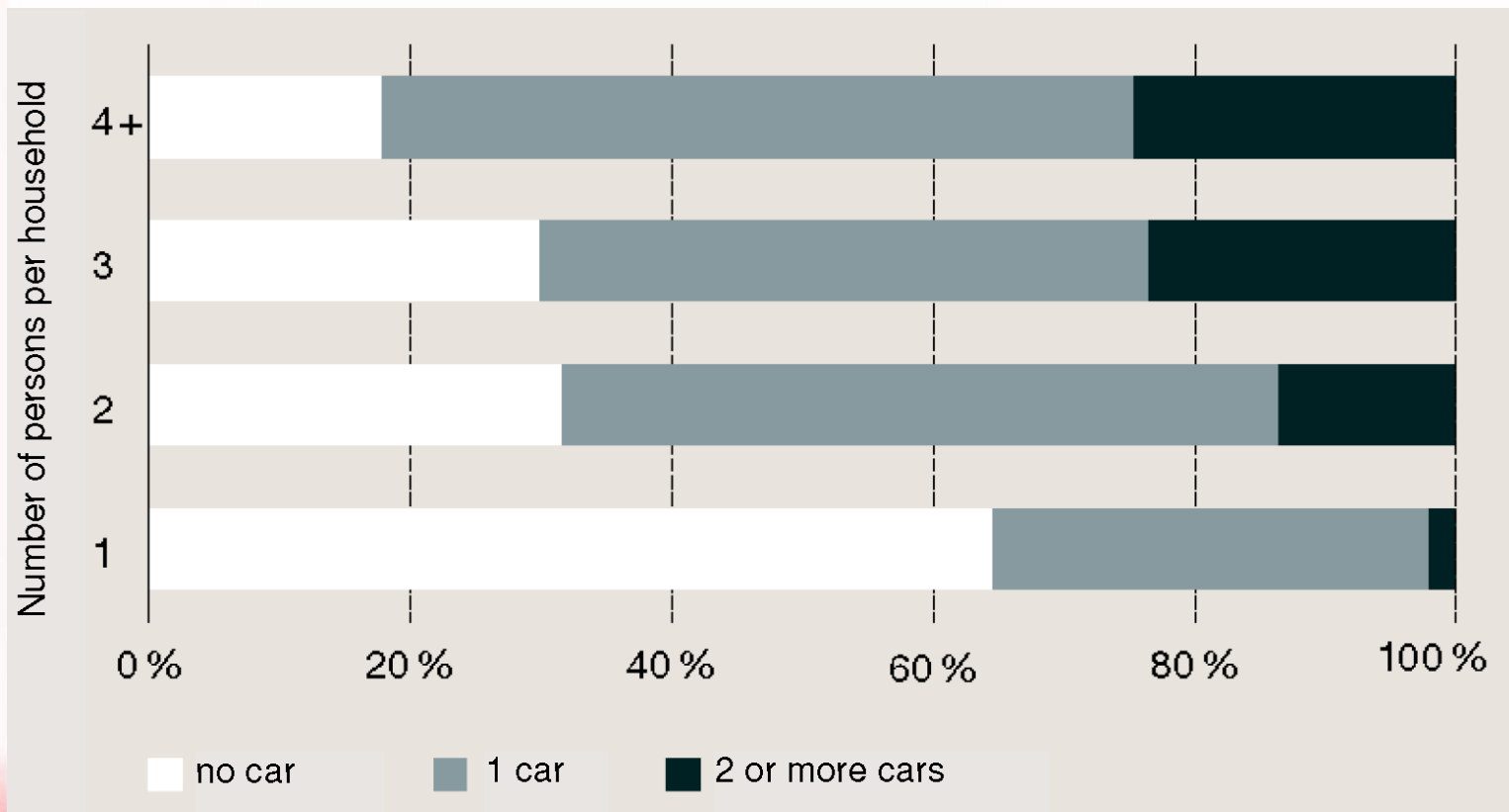
- *regularly, i.e. daily or at least 2-5 times per week



Mobility (4)

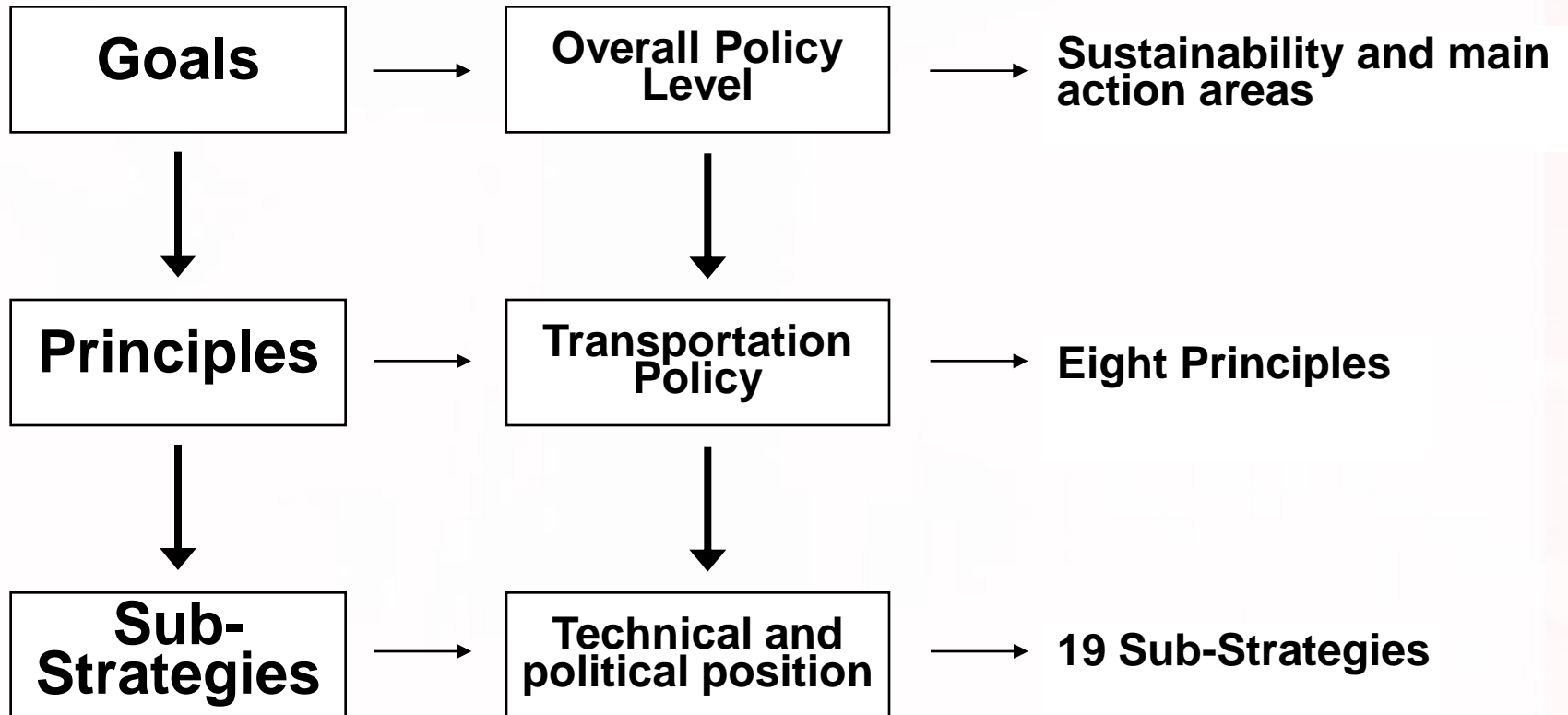
Car-ownership

- 45% of all households do not own a car



Zurich Mobility Strategy – a brief portrait

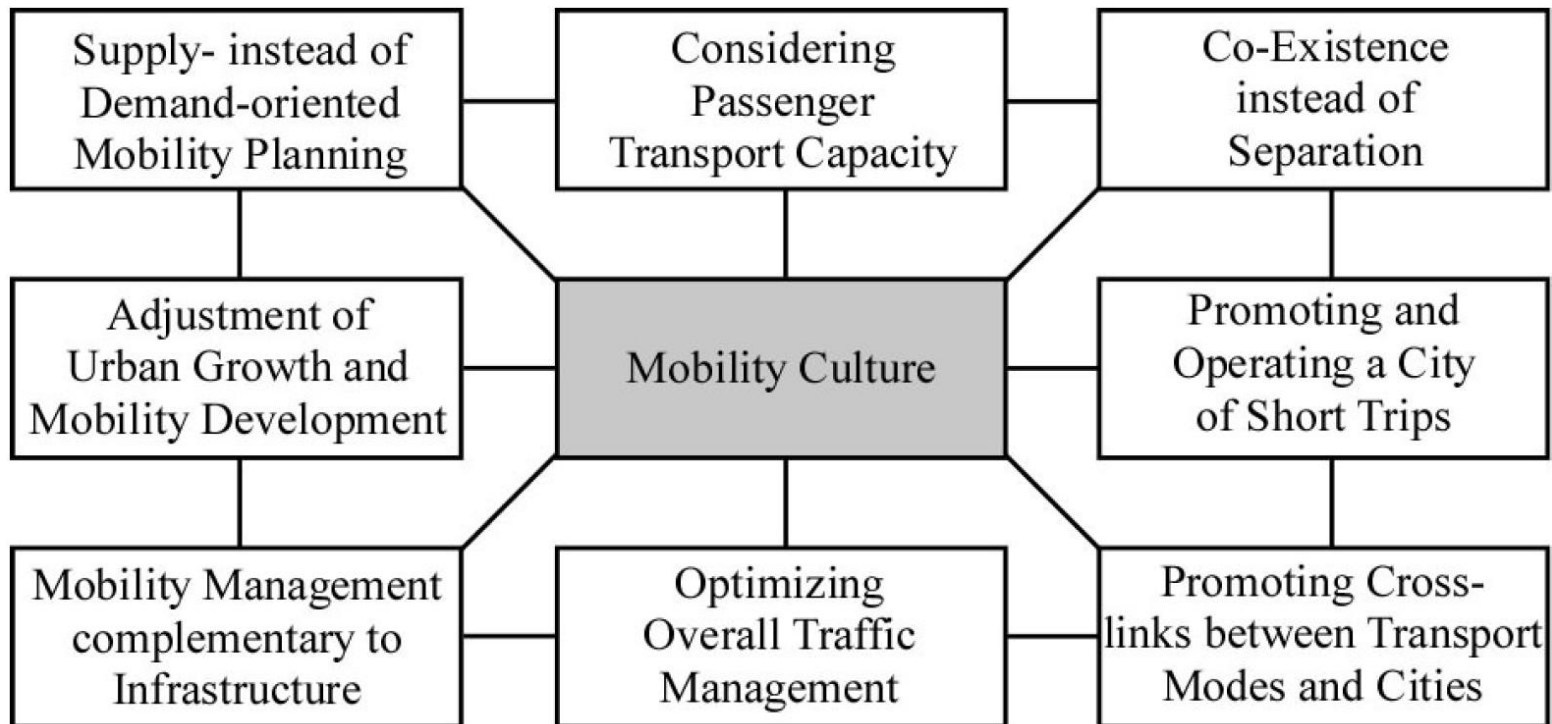
Zurich Mobility Strategy (1)



Zurich Mobility Strategy – a brief portrait

Zurich Mobility Strategy (2)

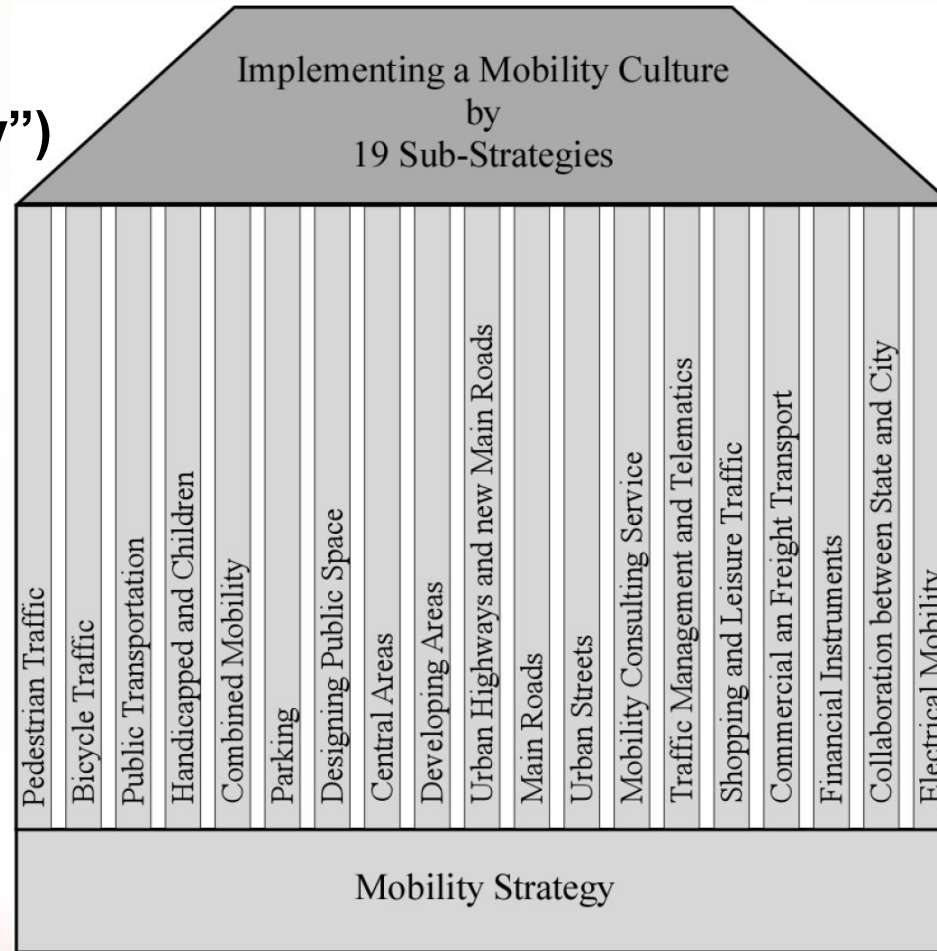
Eight Principles for a Mobility Culture



Zurich Mobility Strategy – a brief portrait

Zurich Mobility Strategy (3)

19 Sub-Strategies (The “house of mobility”)



Zurich Mobility Strategy – a brief portrait

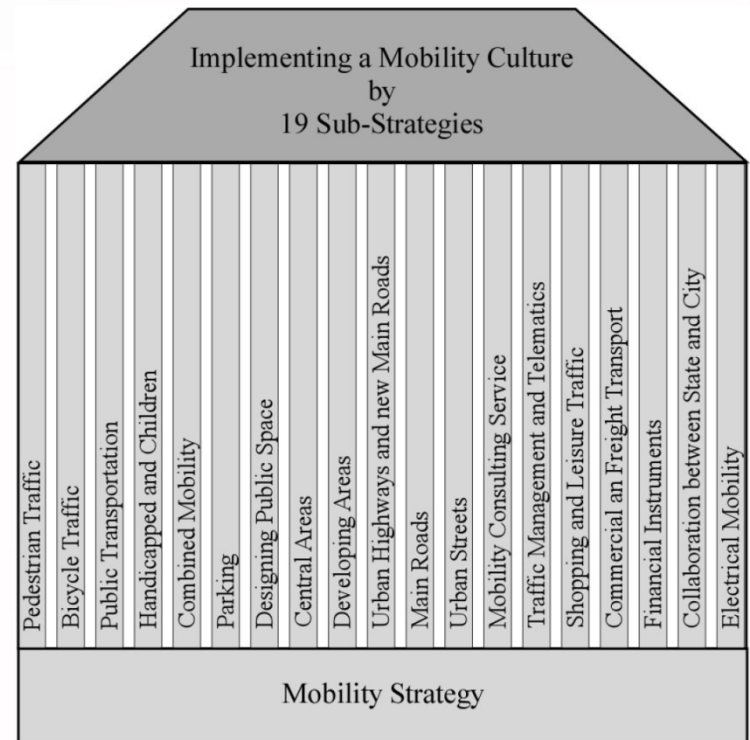
Zurich Mobility Strategy (4)

19 Sub-Strategies (The “house of mobility”)

- Specifically formulated
- Body of arguments
- Flexible toolkit
- Easy adjustment

But:

- No priorities between sub-strategies



Achievements in the last ten years

Achievements (1) - Mercer

Mercer's World-wide Quality of Living Survey



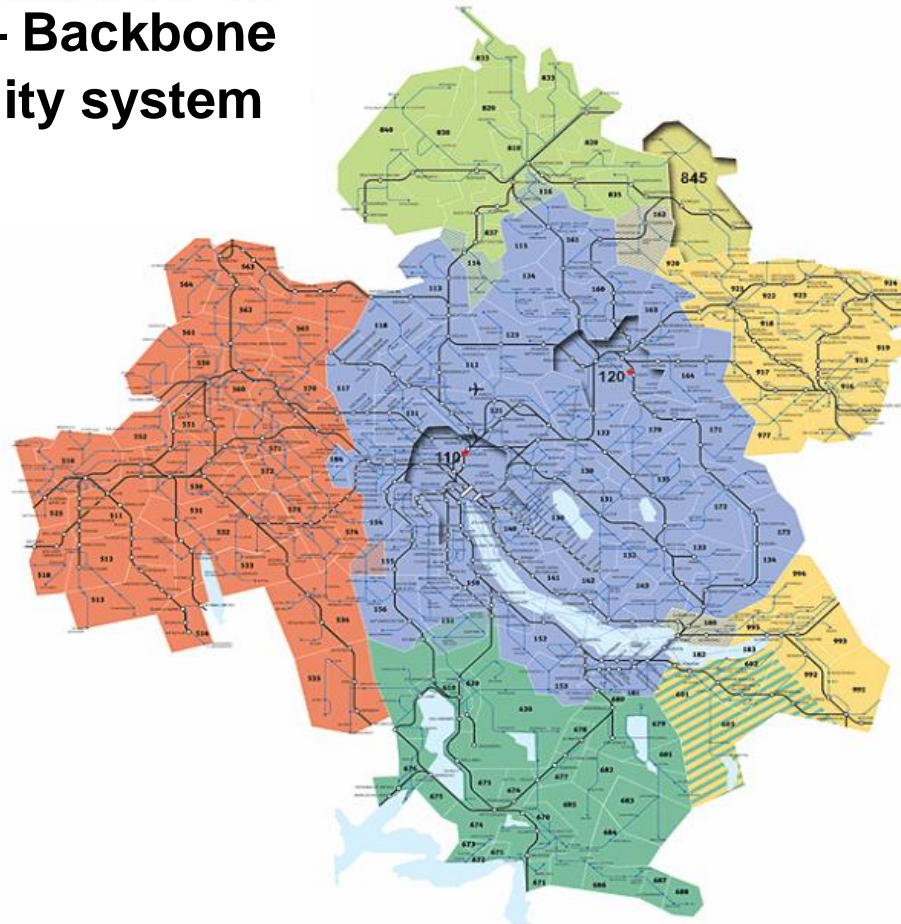
Achievements in the last ten years

Achievements (2) - Public Transportation

Public transportation – Backbone of Zurich's urban mobility system

Success Criteria

- One ticket for all public transport means in the entire metropolitan area
- Strong suburban railway system
- Attractive tram & bus service within town



Achievements in the last ten years

Achievements (2) – Public Transportation



EIN TICKET FÜR ALLES.  **ZVV**
Richtig verkehrt.



EIN TICKET
FÜR ALLES.

 **ZVV**
Richtig verkehrt.

ZVV-Tickets gelten für alle öffentlichen Verkehrsmittel im öffentlichen Straßen-, Bus-, Bahn- und Seeverkehr.



EIN TICKET FÜR ALLES.  **ZVV**
Richtig verkehrt.



EIN TICKET
FÜR ALLES.

 **ZVV**
Richtig verkehrt.

Schiff, Tram, Bus, Bahn: mit einem ZVV-Ticket.



Achievements in the last ten years

Achievements (3) – Mobility Behavior

Promoting sustainable mobility behavior

- Building and cultivating public awareness
- Innovative products and advertising
- Event management
- Mobility consulting for companies and schools



Achievements in the last ten years

Achievements (4) – Parking management

Parking management

- Historic compromise (**public** parking places frozen and shifted from street to underground public parking garages)
- **Private** parking: trip-counting models
- Routing system for public parking garages
- Variable parking fees (time, congestion)



Achievements in the last ten years

Achievements (4) – Parking management



Many gentlemen happen to meet the wrong ladies when going out.

Die Bekanntschaft mit diesen Teuersten bleibt Ihnen erspart, wenn Sie das Auto in Zürich zuhause lassen. Und auf Tram und Bus umsteigen. In der Stadt ist die nächste Haltestelle im Durchschnitt nur gerade 300 Meter entfernt. Dort finden Sie alle paar Minuten Anschluss. Und können sich ohne Parkplatz-

probleme ins Kino, ins Restaurant oder an die Party chauffieren lassen. So kommen Sie in jeder Hinsicht besser an. Fürs erste Kennenlernen empfehlen wir Ihnen die ZVV-Tageskarte für CHF 7.20. Weitere Informationen unter www.vbz.ch

VBZ ZürichLinie

Umsteigen lohnt sich.



Achievements in the last ten years

Achievements (5) – Low-speed zones

Low-speed zones in residential areas



Until 2014:

- Expand area of 30 km/h for noise protection



Lessons (1) – Maintaining the efforts

Implementing a Mobility Strategy

- ... is not a piece of cake, but hard work
 - ... is not a one time action, but a continuous task
 - Rather a lot of little and modest steps than few large steps
 - Keep up political and public awareness
- Early and persistent education among age groups
- Teaching ways for sustainable mobility behavior



Lessons (2) – The project level

Sub-strategies are not prioritized

- Trade-offs between sub-strategies have to be solved on a project level (« the battle for centimeters »)
- Rules of conduct are necessary for efficient implementation

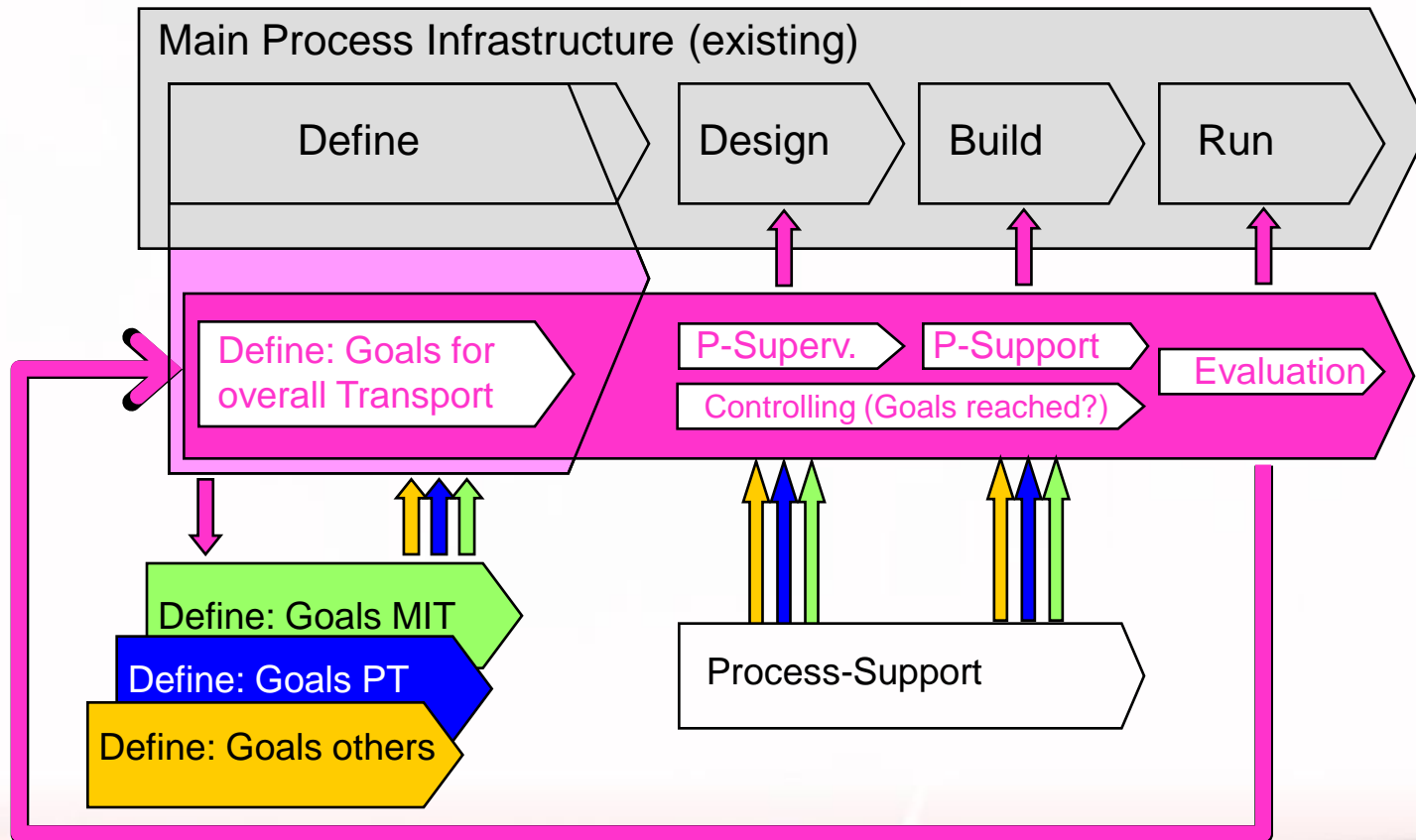
→ Development of a Transport process



Lessons learned and outlook

Lessons (2) – The project level

Transport Process



Lessons (3) – Public spaces

Functionality vs. appearance in public spaces

- Public spaces in cities are generally very limited
- Mobility Strategy aims to rearrange public spaces in a rather functional manner
- Urban planning strives for a high quality of p. s. (perception, aesthetics...)

→ Broad analysis of public spaces



Lessons (3) – Public spaces

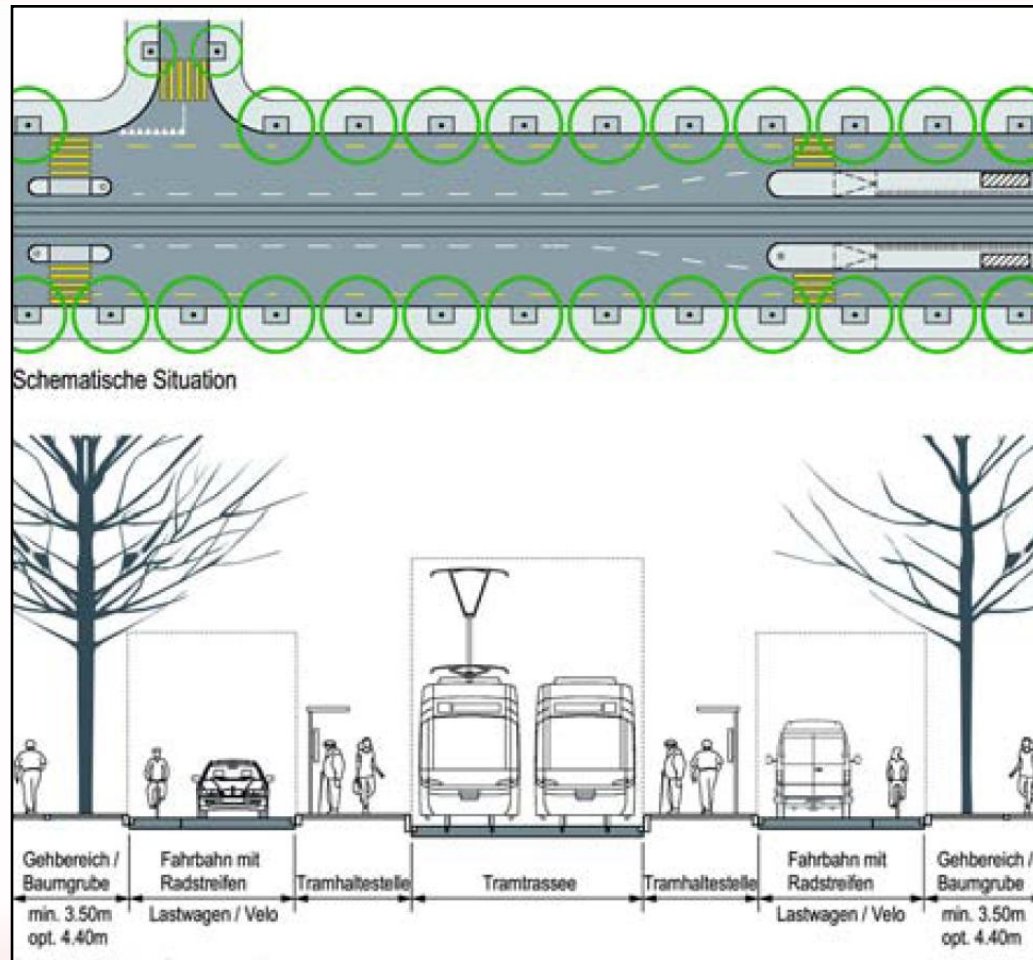
Strategy « Public Spaces », vision and aims

- Vision: «Functionality, Sensuality, Aesthetics, Quality of stay»
 - Clear hierarchy
 - Coherent design
 - High quality of time spent in public spaces



Lessons (3) – Public spaces

Standards



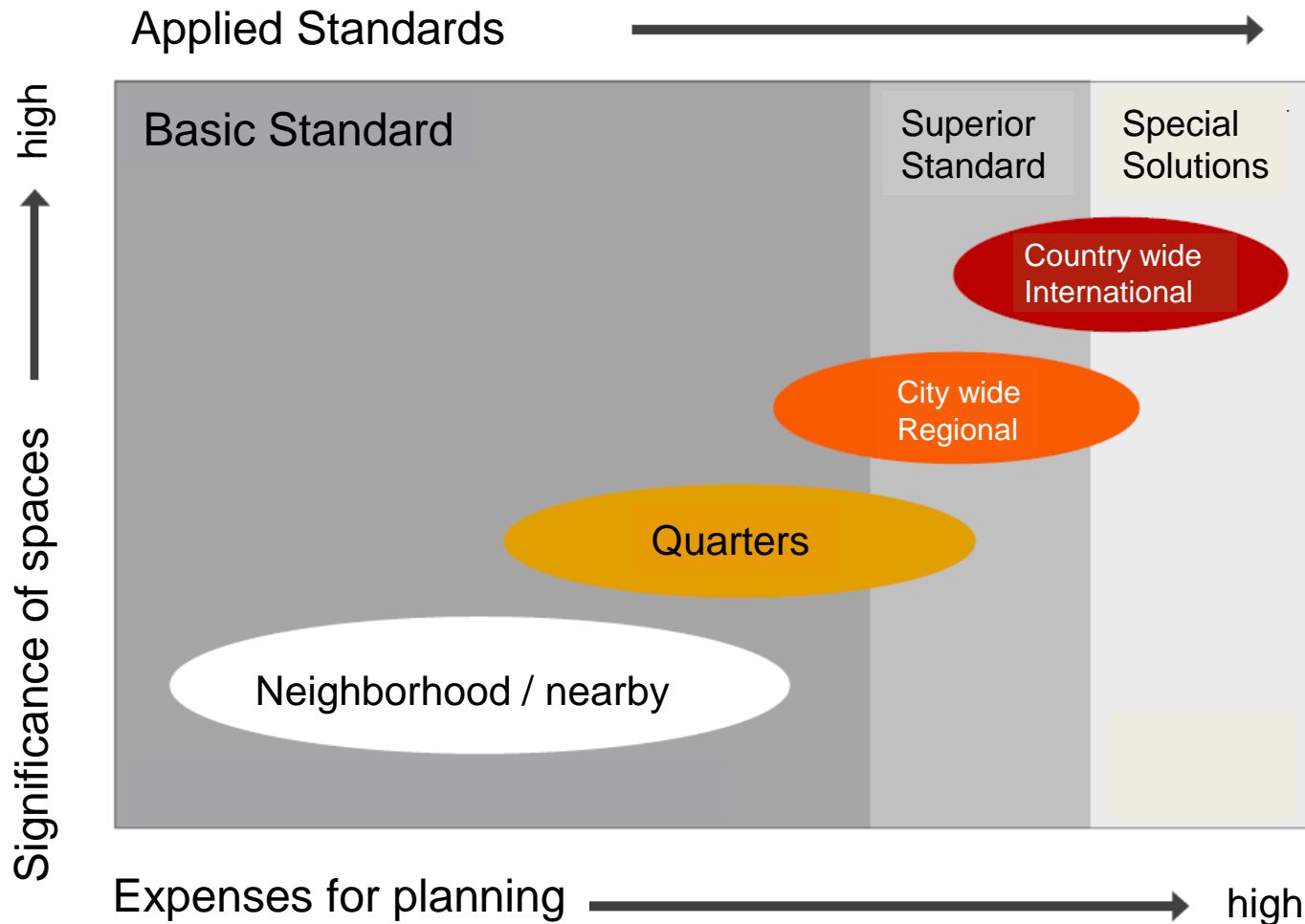
Lessons (3) – Public spaces

Elements



Lessons learned and outlook

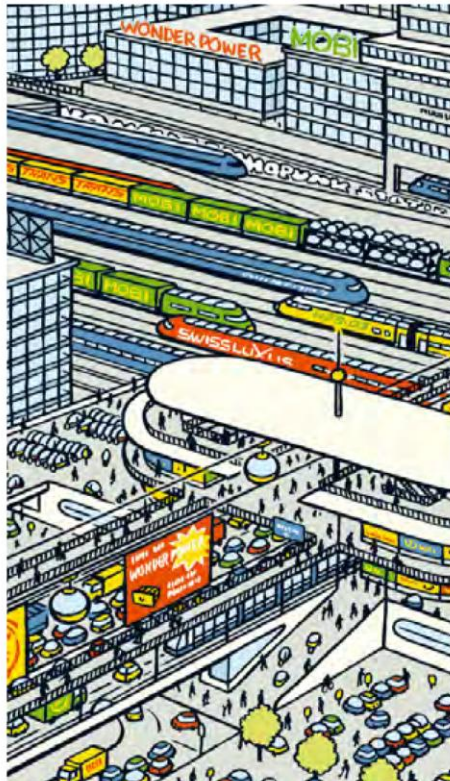
Lessons (3) – Public spaces



Lessons learned and outlook

Visions for the future (1) – Images 2050

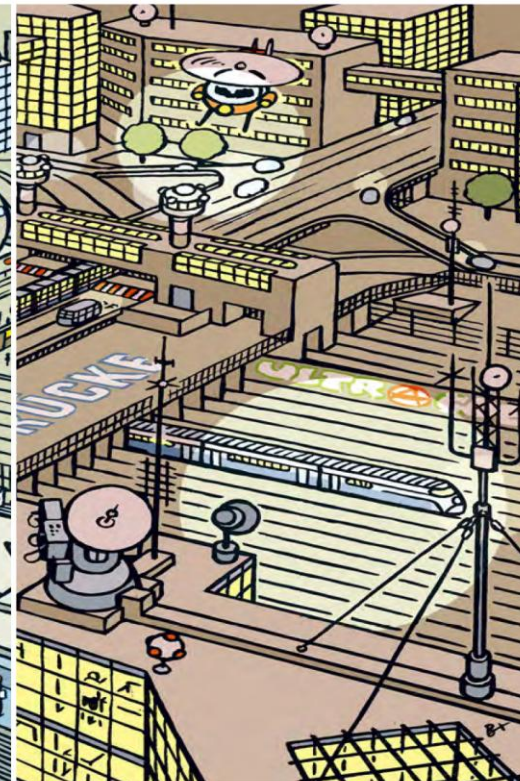
Zurich's Transportation 2050



Individuality



Resource shortage



Online and disintegration



Lessons learned and outlook

Visions for the future (2) – Energy and Transport

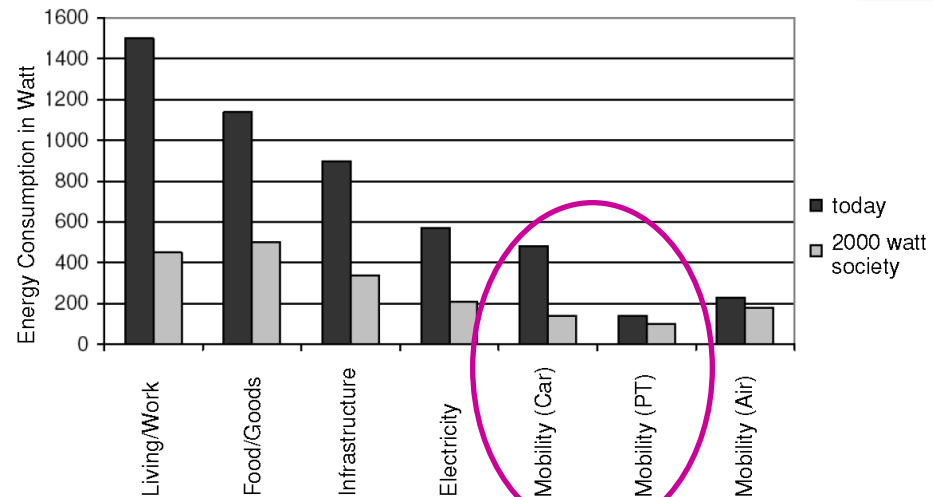
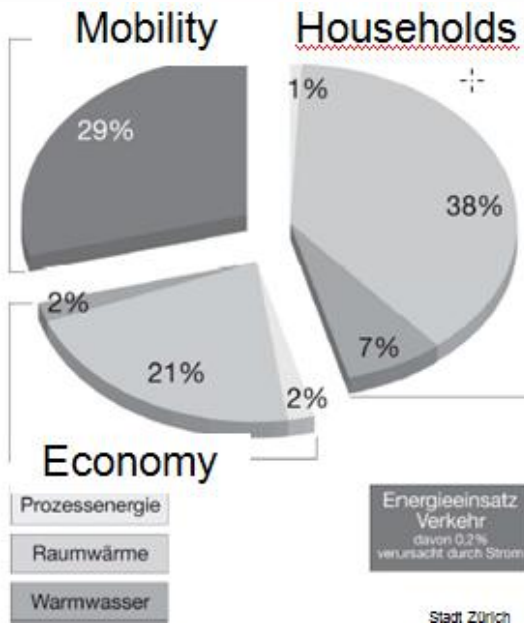
Toward a 2000 watt society and a 1 ton p.c. CO2 emissions

Generally Reduction Goal:

- From 6000 W to 2000 W
- From 6 ton CO2 to 1ton CO2

Equivalent to Traffic:

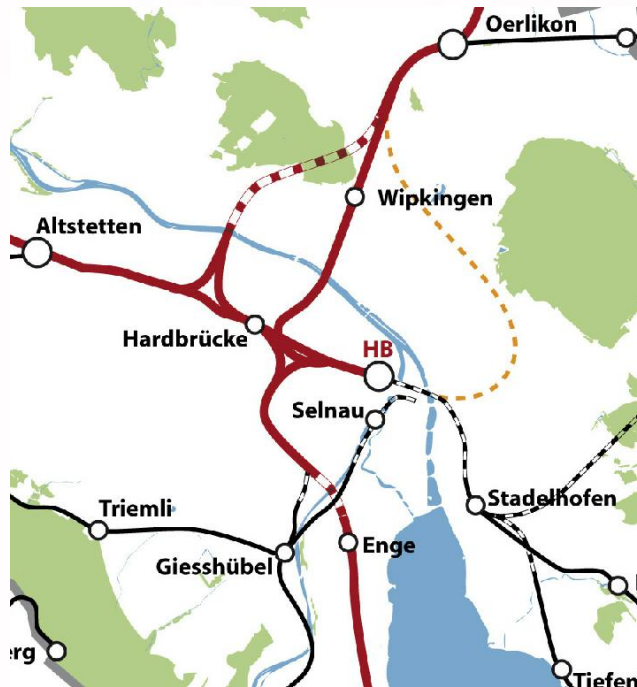
- -60% of Emission
- -30% of Energy



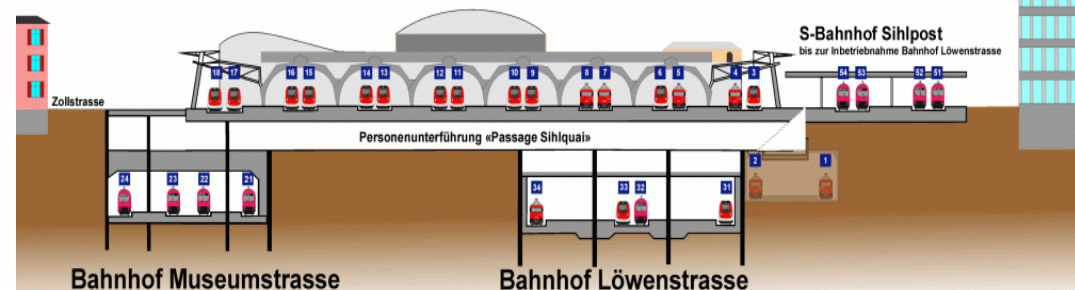
Lessons learned and outlook

Visions for the future (3) – Capacity of P.T.

Expansion of Zurich's Main Station



- Intersection longdistance-, national-, regional traffic (S-Bahn)
- Expansion till 2013: new underground trough-station with new tunnel to the north (1,5 Mia. CHF)
- **350'000 travellers per day – to-be 550'000?**



Visions for the future (3) – Capacity of P.T.

Capacity of feeder network

- Tramway and Bus system with limited capacity potential
- Capacity analysis and strategic network development tbd.
- Possible completion of P.T. network by an additional system

→ Under/above ground? Conflicts with quality of public space?...



Visions for the future (4) – The speed-issue

Speed vs. co-existence

- Speed is a highly ambivalent issue in city mobility (efficiency, emissions, safety, competitiveness)
 - Public space is limited and claimed by all means of transportation
 - Which mean of transportation sets the pace?
- Different requirements must be negotiated and compromised in transportation planning processes to come



Visions for the future (5) – Electric mobility

Impacts of electrification of car transport

- 19th and latest sub-strategy
- Hybrid cars, e-bikes, e-scooters, plug-in-vehicles
- High expectations (substitute, 1 t/p.c. CO₂, noise...)
- **Where does the electricity come from?**
- **What are the tasks and the possibilities of a City?**

→ Infrastructure (battery-charging),
Information/Knowledge, Pilot projects



Thank you

Thank you for your attention

