Organisation of a Sustainable Transport System in Swiss Urban Areas

Presented June 29, 2004 in Ottawa at the Forum of Federations / Transport Canada by
Peter Scheidegger, CEng, ETH <rail.bus@bluewin.ch>
former CEO of a suburban rail+bus company in Bern (Switzerland) and former member of the UITP - commission "Transport and Urban Life"

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Outline:

1 – Switzerland - a short overview
2 – Sustainable transport = high usage of public transport
3 – Who pays and who decides in local transport matters?
4 – Conclusions

Switzerland: A Short Overview

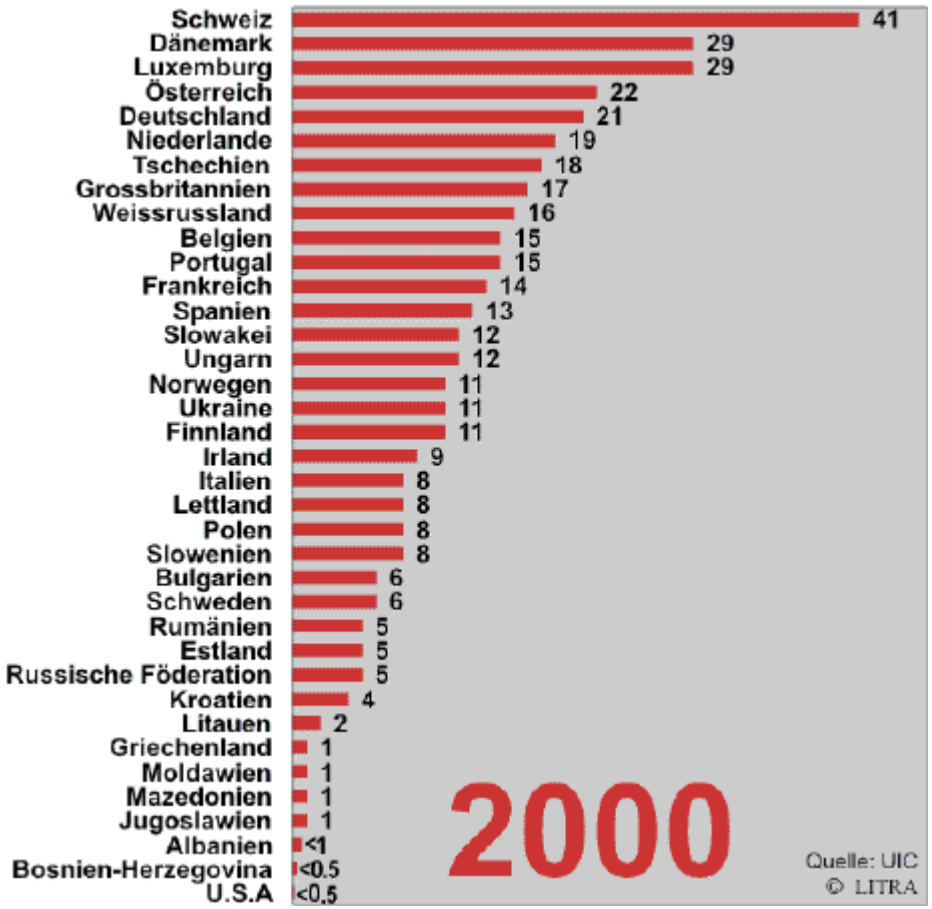
- **Geography: Small & unfavourable topography**
  - In the heart of Europe / Connecting important European Regions
  - 7 mio. residents; N-S: 300 km; W-E: 350 km
  - No natural resources / no access to sea / export oriented economy
  - 2/3 of surface are mountains ; 1/3 populated with high density
  - „No“ flat land, cities in valleys and on shores of lakes and rivers
  - Only medium sized urban areas (< 1 mio. inhabitants)
- **Political system: Federalism & direct democracy**
  - Popular initiatives and referendums
  - 3 political hierarchies: central state, cantons, municipalities
  - Non EU member
- **Transport: dense network of transport infrastructure**
  - 70’000 km roads; 5000 km railways
  - 3 international airports

Problem No. 1: Space

60 Persons in 50 Cars ..or.....in 1 Bus

Pictures: STI,Thun,Switzerland

Fact 1: Swiss Railways Heavily Used



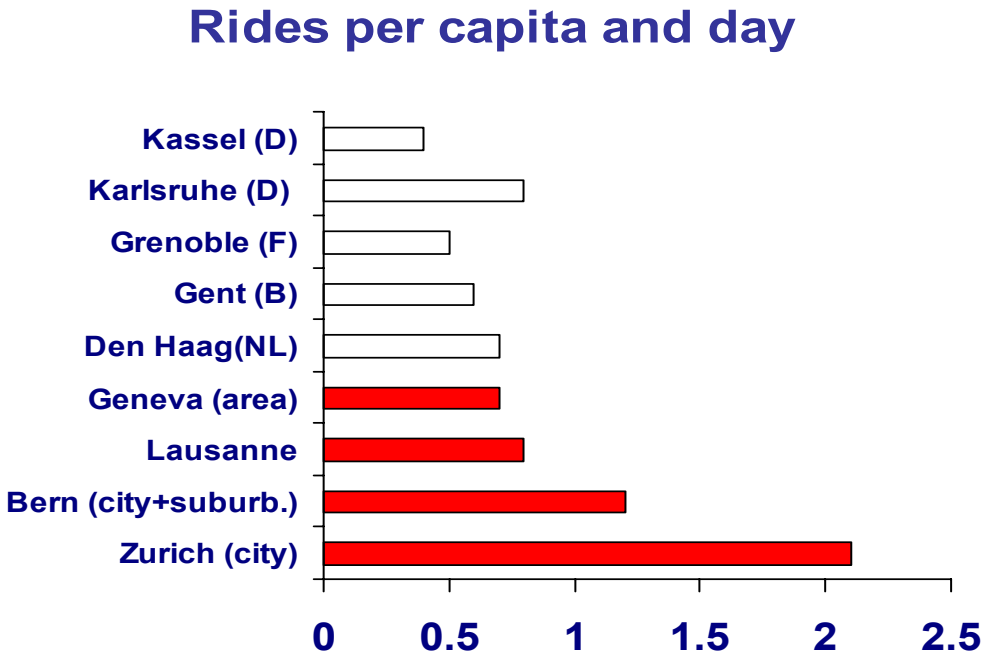
The average Swiss uses the national train 41 times per year (excluding trams and cableways), more than any other European citizen. Only in Japan, railways are used more (69 times per year).

<u>Share of PT nationwide:</u>

13% on rail

10% on bus; total =23%

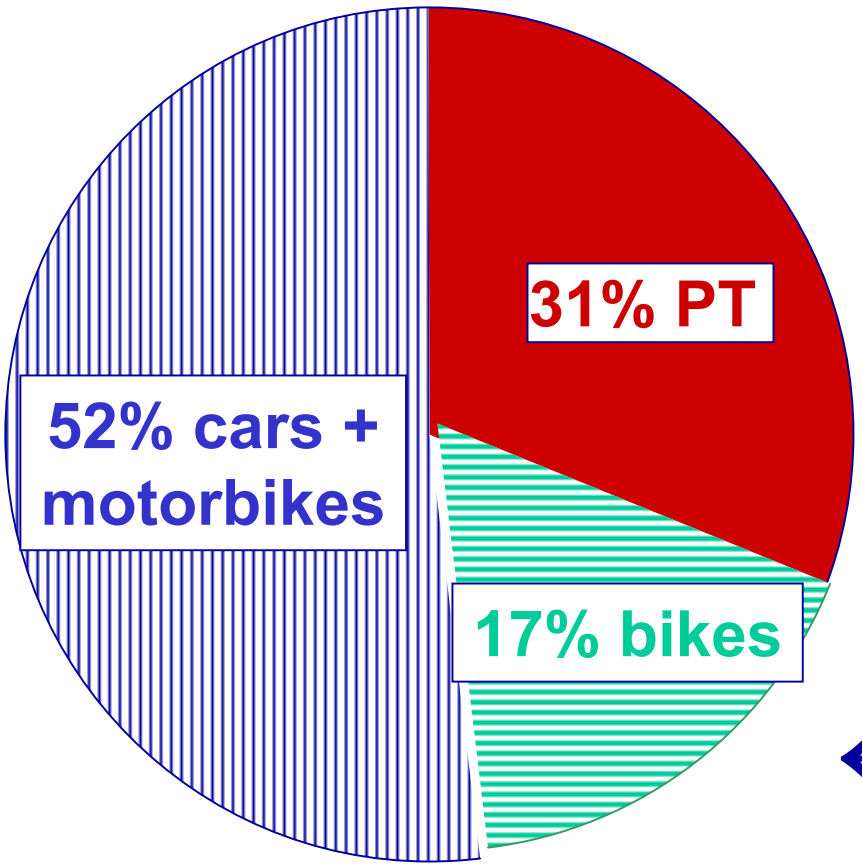
Fact 2 - Buses and Streetcars in Swiss Cities are Heavily Used



Source: Jane's, DVB, Websites

With 0.7 to 2.1 rides per inhabitant + day, urban public transport is used twice to three times as much as in other Western European cities of the same size.

Fact 3 - High Modal-Split in Cities



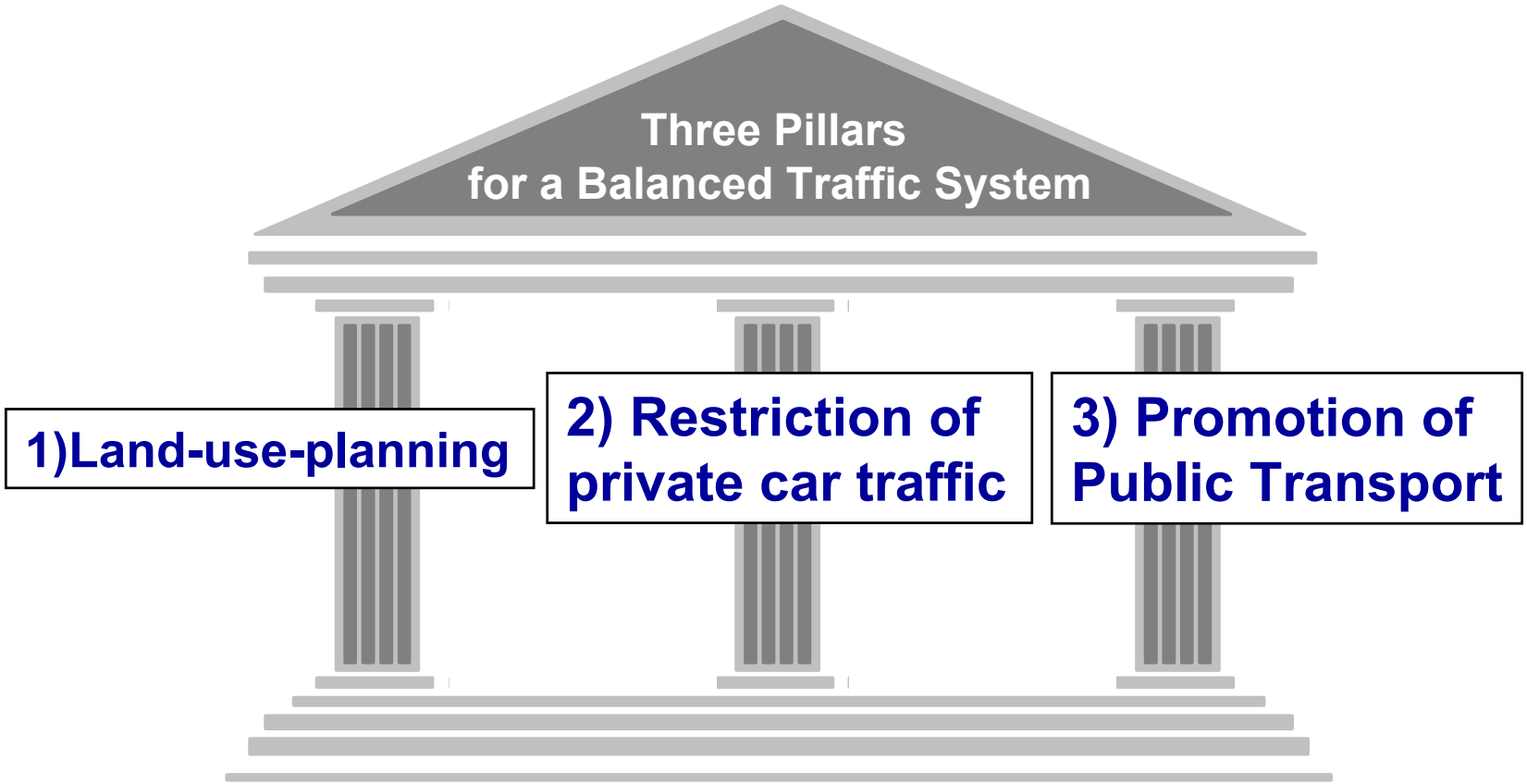
Although Swiss Cities are small, in urban areas the market share of PT is high:

- **in conurbation ≈ 30%**
- **towards the city in the morning peak ≈ 50-60%**
- **in the CBD ≈ 70%**

←

Whole conurbation of Bern (source: telephone survey "Bäre-Abi")

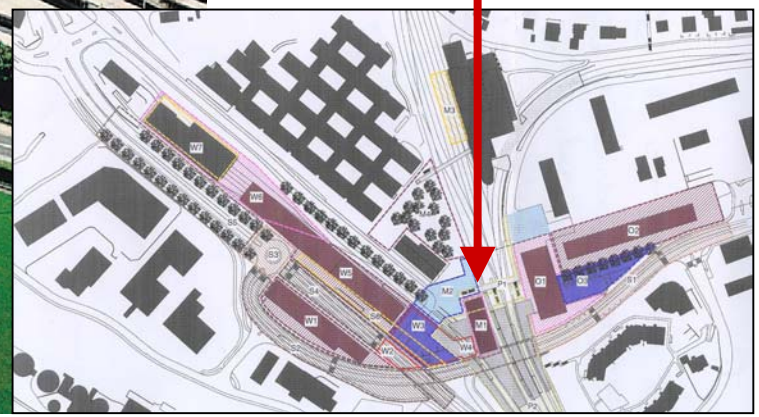
Three Pillars for a High Modal-Split



Pillar 1: Land-Use Planning

New office blocks must be situated near attractive stations

RER / S-Bahn-Station



Pillar 2: Restriction of Car-Use

Restricted parking in city centres:

e.g. Bern CBD (near central station):

- **60'000 jobs**
- **6'000 parking spaces**

Parking restrictions for new office blocks:

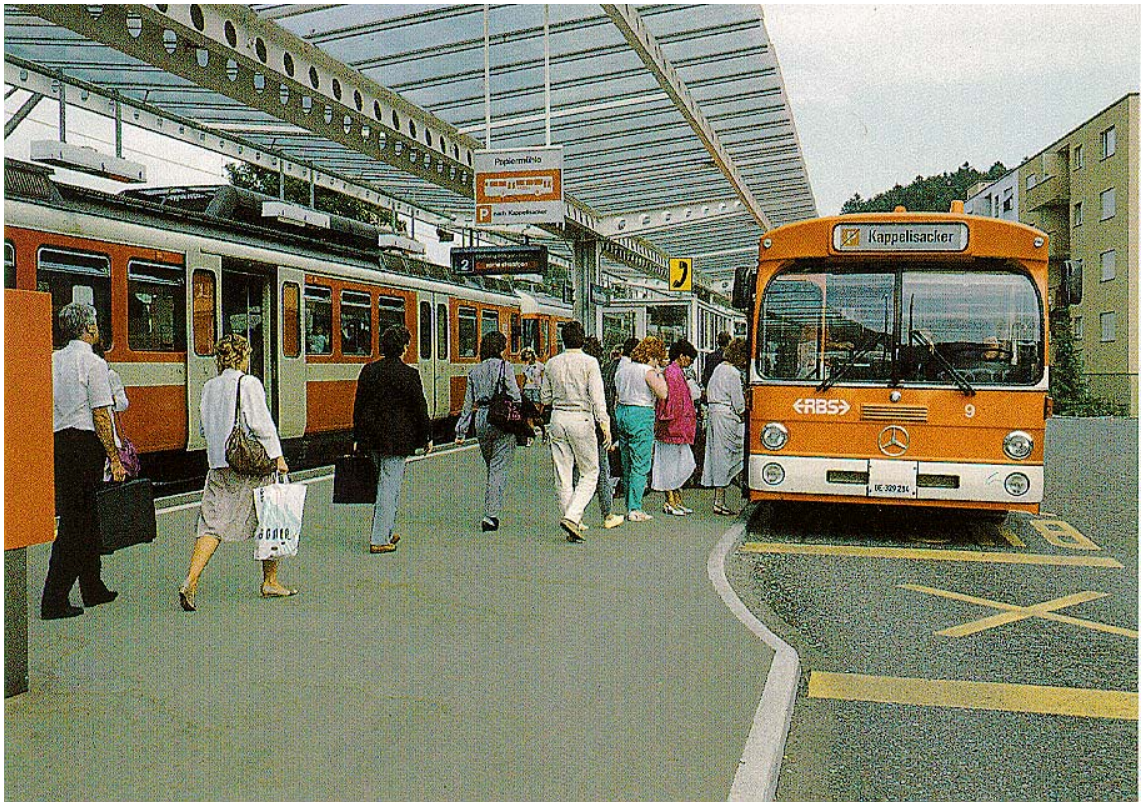
In some Swiss urban areas, law permits only 0.2 - 0.4 spaces per employee

Pillar 3 : A Successful Promotion of Public Transport

Aspect 1: Virtual Competition

35 “private”companies are managing 40% of rail lines

Aspect 2: Multimodality



- No real competition between train+bus, but good co-ordination

- "General" season ticket for all PT modes (except mountain railways); no special access charge (TGV,ICE)

Aspect 3: Voters Decide for Sustainable Transport Systems!

Future Metro Lausanne

1987
57%"yes"on national level for:
"Rail 2000", a scheme for a better regular interval timetable

1998
64%"yes" on national level for:
$20 billions for rail infrastructure (incl. for transalpine freight)

2002
62% "yes" in Lausanne (canton) for:
$ 0,4 billions for a short metro

2003
66% "yes" in Zurich-Nord (canton) for: $ ½ billions for suburban light rail

2004 49,5% „yes" for Tram Bern-West

Public Transport Infrastructure Subsidies

At present (by company):	Future plans (by function):
National railway company: By central state only (local investments in stations & S-Bahn: also cantons)	National network incl. important regional lines: Only central state
„Private“ railway company: Co-financed by central state and cantons	Secondary lines: By cantons only
Local rail company (trams): By municipalities (and some cantons)	Important local lines: Co-financed by municipalities, cantons and a contribution (<50%) from central state.

Reasons for Central State Contribution towards Local Transport Investments

- **Biggest traffic problems are in urban areas!**
- **Traffic jams affect also (national) through traffic**
- **Historic boundaries of cantons and municipalities do not respect traffic patterns (need of coordination by central state)**
- **Earmarked fuel excise duties (gas tax) goes towards central state, whilst local authorities have a big transport deficit**

Planned Conditions for Central State Subsidies:

- **Comprehensive transportation + urban planning (e.g. reducing urban sprawl, sustainability, efficiency)**
- **Comprehensive planning for all modes**
- **One single local authority in charge**
- **Local (canton and municipalities) share > 50%**

How Will the Central State Finance his Planned Contribution towards Local Transport?

Planned:

- **fund**
- **for road and rail infrastructure investments only**
- **financed by earmarked fuel excise duties**
- **to solve traffic problems in urban areas in a efficient way.**

Philosophy ~ USA (TEA)

Financing ~ Germany (but <50% and not 85%!)

The Swiss Experience - Conclusions

1) Although a wealthy country, high use of PT due to density, restrictions in car-use and PT-promotion
2) Direct democracy decides for sustainable transport systems
3) Central state will in future co-finance local transport investments under certain conditions (<50%, comprehensive planning)

Our Goal:

To keep our cities as dense centers of economy, culture and living place

Bern,
Capital of
Switzerland