



CiViTAS
Cleaner and better transport in cities

CATALIST
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Collective Passenger Transport Experience City of Graz

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THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION

Overview



- **General Data and Statistics**
- **Planning Principles**
- **Public Transport in Graz**
 - Extending Tram-Network
 - New Vehicles
(Bio-Diesel -> Bio-CNG)



City of Graz

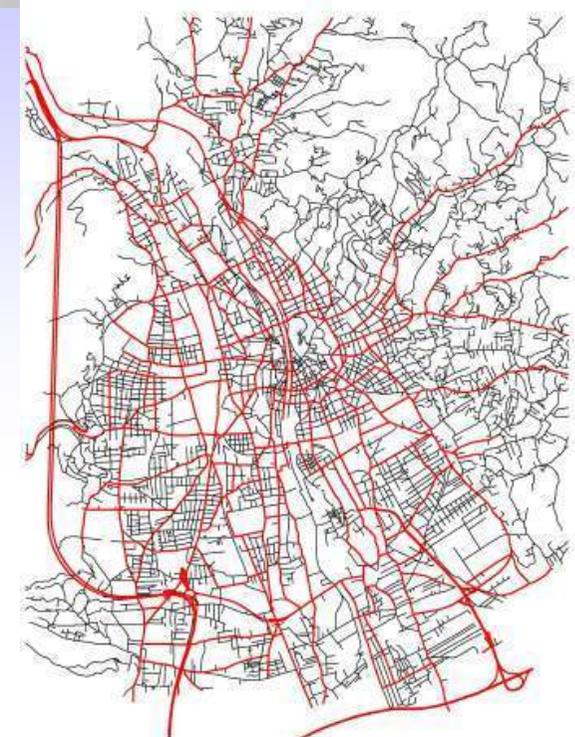


- **European Cultural Capital City 2003**
- **Area 127 km²**
- **~ 255.000 inhabitants** (1991: 238.000)
- **~ 121.000 jobs** (1991: 134.000)
- **District Graz–Umgebung (surroundings)**
 - 131.000 inhabitants (1991: 118.000)
 - 36.000 jobs (1991: 26.000)

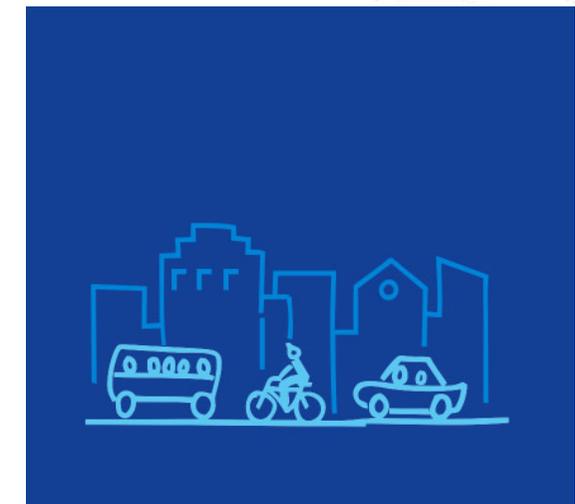


Infrastructure

- **Bicycle route network** ~ 116 km
- **Public transport network** ~ 392 km
 - Tram (6 lines) ~ 49 km
 - Bus (37 lines) ~ 343 km
- **Road network** ~ 996 km
 - Priority roads ~ 194 km
 - Roads without priority ~ 802 km



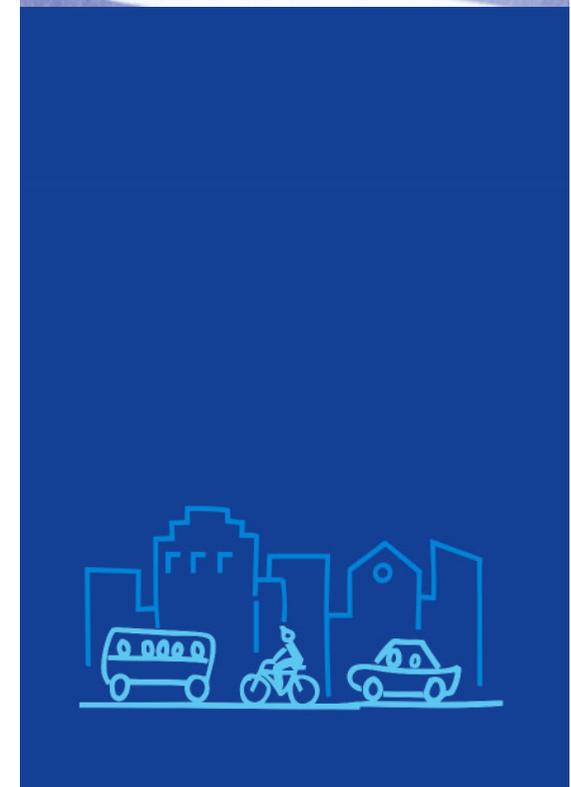
Stadt **GRAZ** Stadthausdröhrum



Mobility of the population

- **On average every inhabitant makes 3.7 trips per day** (2004: 3,7)
- **He/she covers 23,5 km on average** (2004: 23 km)
- **And spends 83 minutes in traffic** (2004: 78 min.)
- **0.9 million trips are made every day in Graz** (2004: 1.1 mio.)

mobility survey 2008

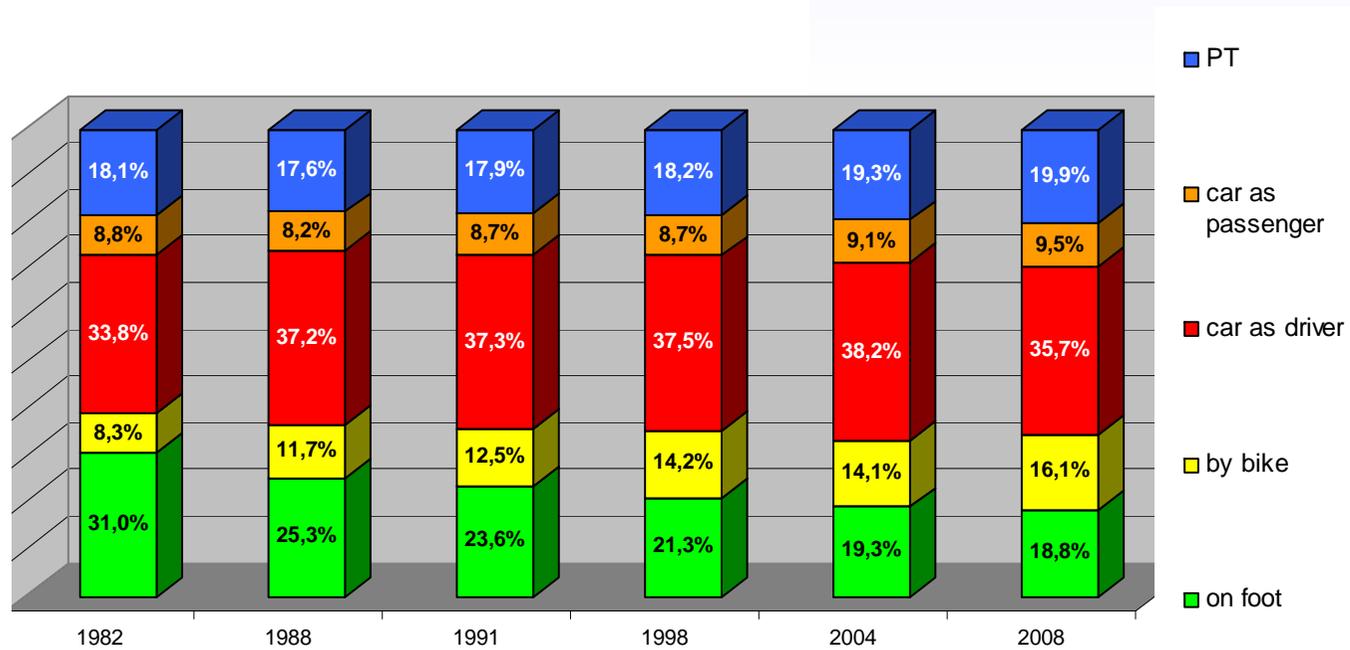
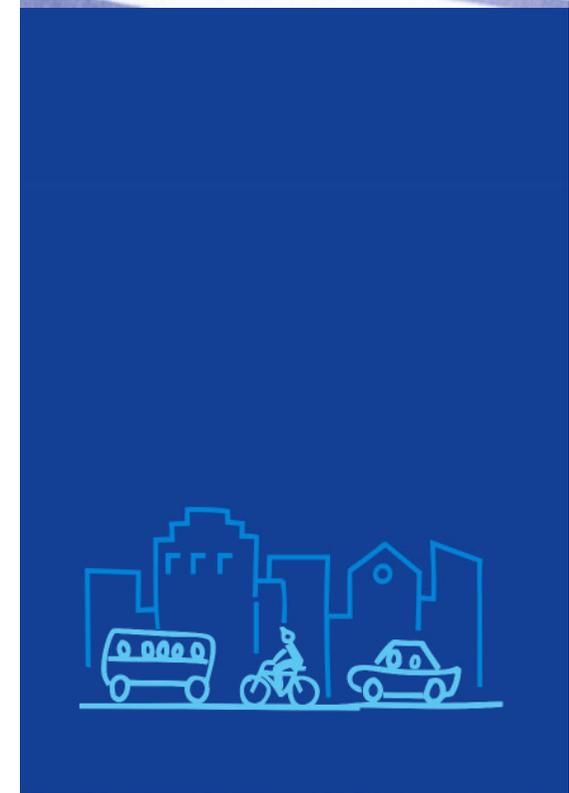


*Planning principles
Policy Guidelines*

- **Graz – a city of good accessibility**
- **Graz – a city of short distances**
- **Graz – a city with a balanced distribution of the means of transport**
- **Graz – a city with socially and environmentally compatible traffic**
- **Graz – a city with public participation**

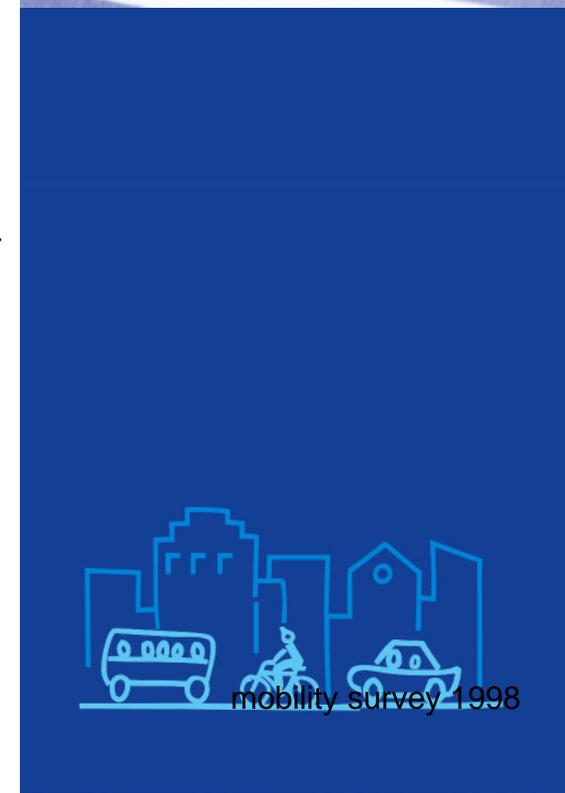
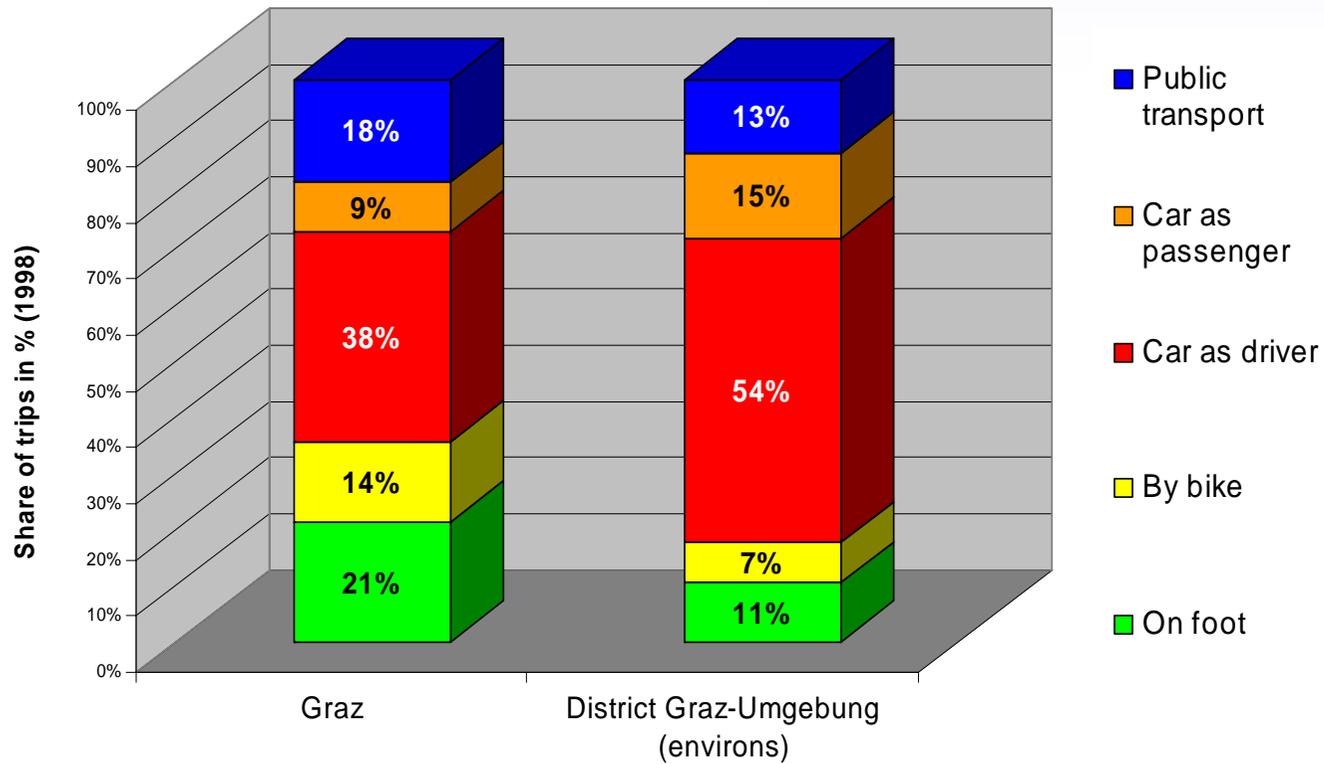


Modal Split - mode choice



mobility survey 2008

Mobility - City and District



The idea of Gentle Mobility

- **developed since 1980**
- **Gentle Mobility**
 - forcing of the environmental friendly group (pedestrians, bike, PT)
 - reduction of car use on a necessary level
 - speed reduction (Tempo 30/50)
 - on-road parking management



*Planning principles:
Gentle Mobility since 1980*

- **Priority for environmental friendly modes**
 - **Creation of a „green network“**
 - foot and bike network
 - Direct connection to city centre and city quarter centres
 - **Making public transport more attractive**
 - User friendly stops
 - Modern vehicles
 - securing connections, correct timetables
 - Extension and priority measures



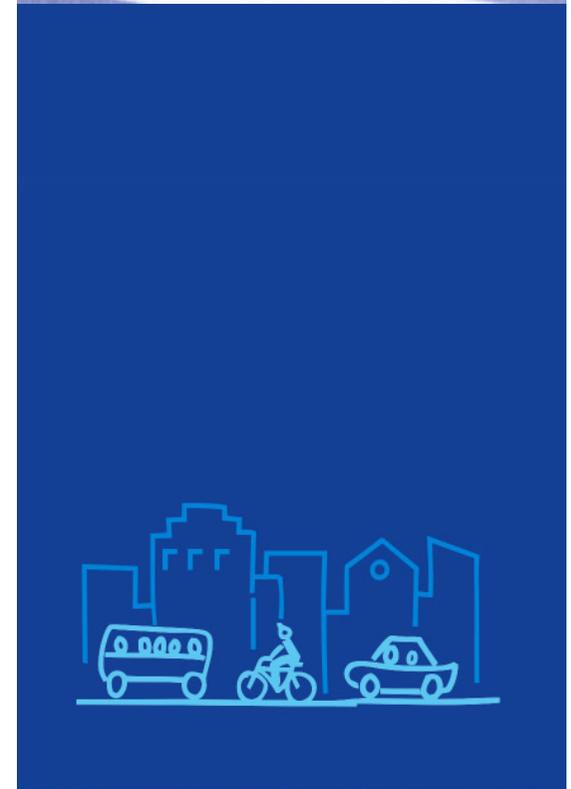
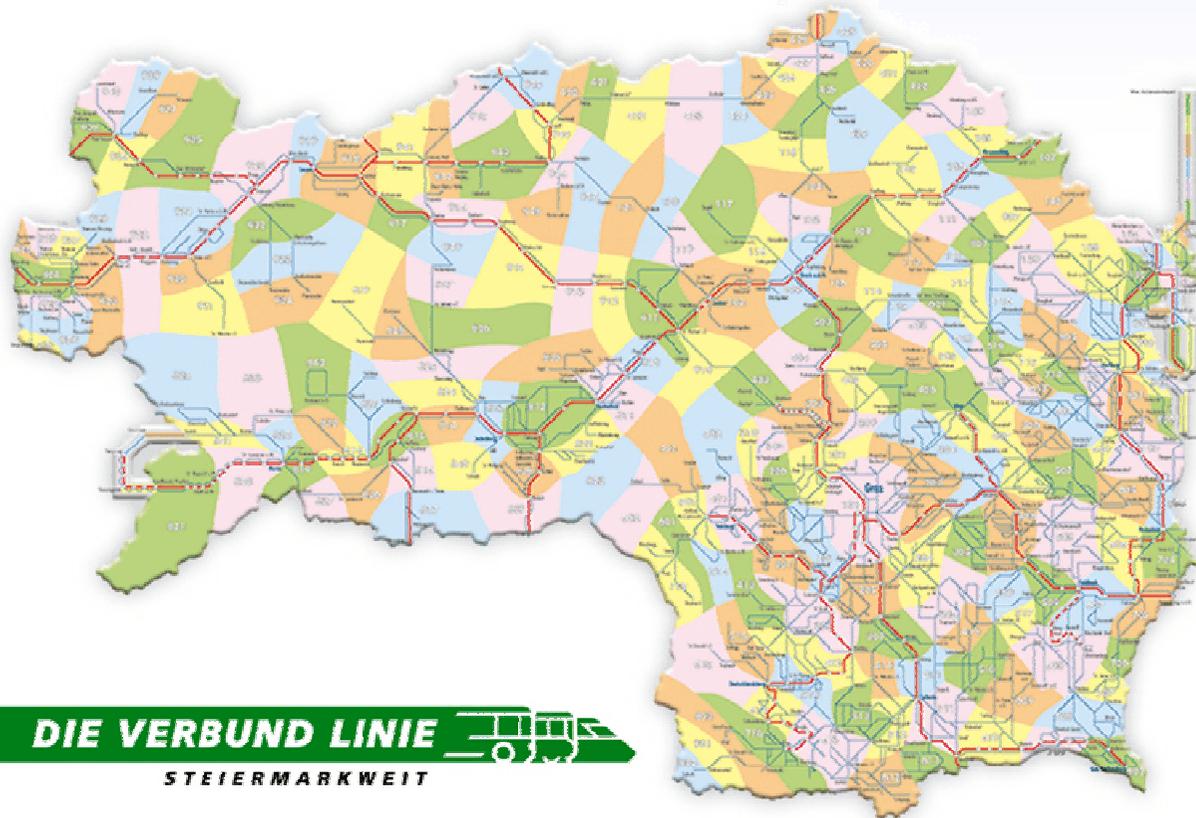
Planning principles: Gentle Mobility since 1980



- **Keeping through traffic out of residential areas**
 - Closing gaps in the priority road network
 - Direct link-up of industrial and commercial areas with the priority road network
- **Parking management**
 - Park & Ride at the city edges and in the region
 - Different tariff zones
 - Extension of short term parking zones
- **Speed reduction**
 - Tempo 30/50



*Attractive Public Transport –
one ticket for the whole Region*



Attractive Public Transport – Tram Extensions

• **3 Tram Extensions Realised 2006 / 07**

- Extension Linie 4
 - Length: 1,5 km
 - Costs: € 15,1 Mio.
 - Passengers: ~ 7.600
- Extension Linie 5 (to the interchange Puntigam)
 - Length: 0,4 km
 - Costs: € 15,2 Mio.
 - Passengers: ~ 6.700



Attractive Public Transport – Tram Extensions



- **3 Tram Extensions Realised 2006 / 07**

- Extension Linie 6

- Length: 1,8 km
- Costs: € 19,4 Mio.
- Passengers: ~ 8.300

- **2 New Interchanges**

- Connection between light railway, tram, regional and urban bus-lines with P+R facilities

- **Mobil Central – Info Centre**

- **Bike and Ride facilities**

Attractive Public Transport – Next Steps (in planning)



- **New Southwest Tram-Line**

- Length: 7,7 km
- Costs: ~ € 80,0 Mio.
- Passengers: ~ 22.000

- **New Northwest Tram-Line to the new Interchange Gösting**

- Length: 4,4 km
- Costs: ~ € 48,0 Mio.
- Passengers: ~ 15.000

Attractive Public Transport – Next Steps (in planning)

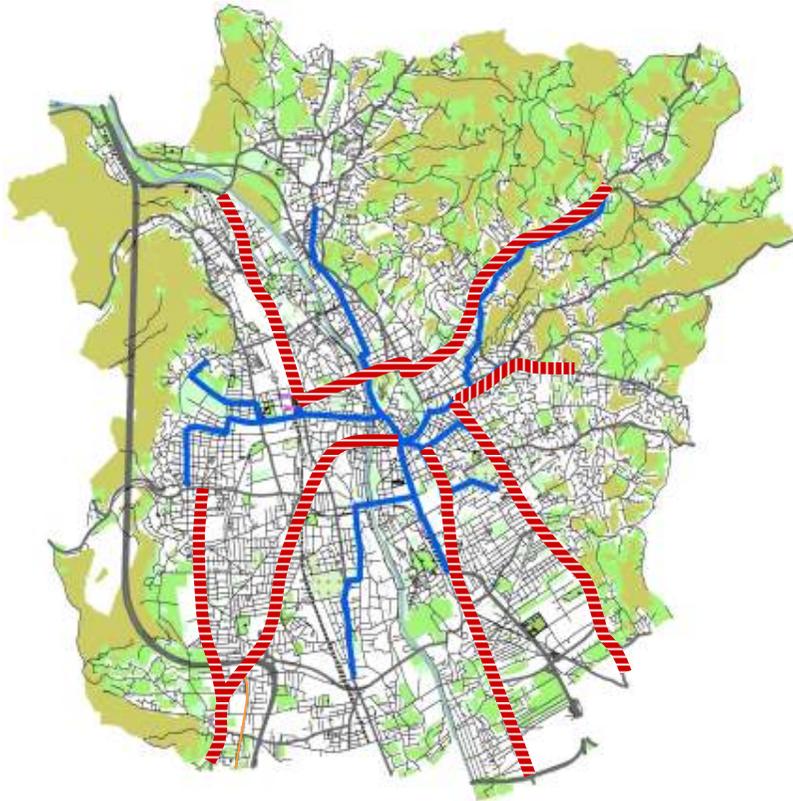


- **Circle Line – University**

- Length: 1,4 km
- Costs: ~ € 15,0 Mio.
- Passengers: ~ 2.000

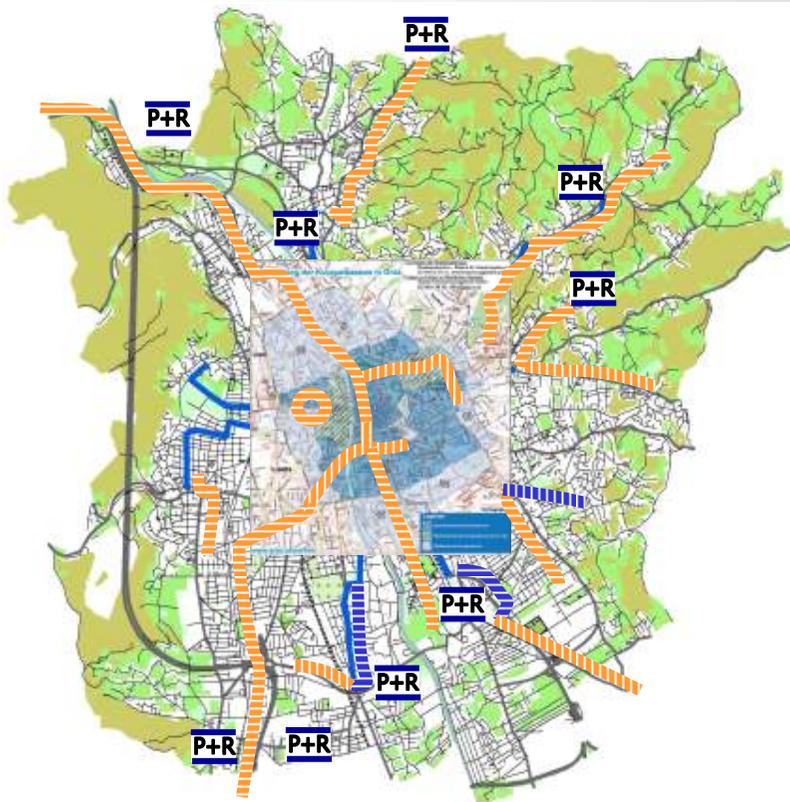


Attractive Public Transport – Next Steps (in planning)



- **bus - corridors / extension**





Projects – parked cars

- **advancement of on-road parking-management**
 - zones of short-term parking
 - chargeable on-road parking („Parking-zone“)
- **P+R areas at rail- and/or Tram-lines**
 - 2.100 existing parking places
 - 2.000 parking places in planning stage

Attractive Public Transport – for the next decades



- **Completion Tram – Network**
- **Light-Railway operation on railway lines to reach suburban areas**
-



Attractive Public Transport – New Vehicles - Tram



- **City-Runner**
 - 100% low-floor technology
 - Since 2002 in use
- **Variobahn – Stadler**
 - 45 new vehicles appointed
 - Delivery from 2009 to 2015
 - 100% low-floor
 - €2,16 Mio. per vehicle
 - Option to enlarge to a length of 40 m

Attractive Public Transport – New Vehicles - Bus



- **134 Bio-diesel Busses**
 - 1st trials with 2 busses in 1994
 - Start to change in 1997
 - 2006 all busses run with bio-diesel
 - Since 2005 diesel particulate filter will be built in
 - Bio-diesel a proven technology
- **Lower Emissions**
 - -92% Hydrocarbon
 - -97% Carbon Monoxide
 - -90% Micro Dust

Attractive Public Transport – New Vehicles - Bus



- **In face of the effective bio-diesel technology it's a question of resources**
- **Consideration to change to Bio-CNG**
- **Gathering of organic waste, liquid manure under implication of sewage plant**
- **To run a bio-gas factory**
- **1st step with 4 busses 2009**

Attractive Public Transport – Next Steps (in planning)



- **Underground connection on main railwaystation**
 - About 40.000 passengers per day
 - Connections between railway, 4 tram-lines, 25 regional and urban bus-lines
 - Realisation from 2010
 - Estimated Costs: ~ €90,0 Mio.



Financing Public Transport

- **96 mio. pass. per year in the city**
- **Revenue to Cost ratio at ~69%**
- **Financing Contract between City of Graz – PT-Operator GVB since 2009**
 - Term of Contract 10 years
 - Volume € 500 Mio.
 - Include acquirement of vehicles
track maintenance
development of passenger information system



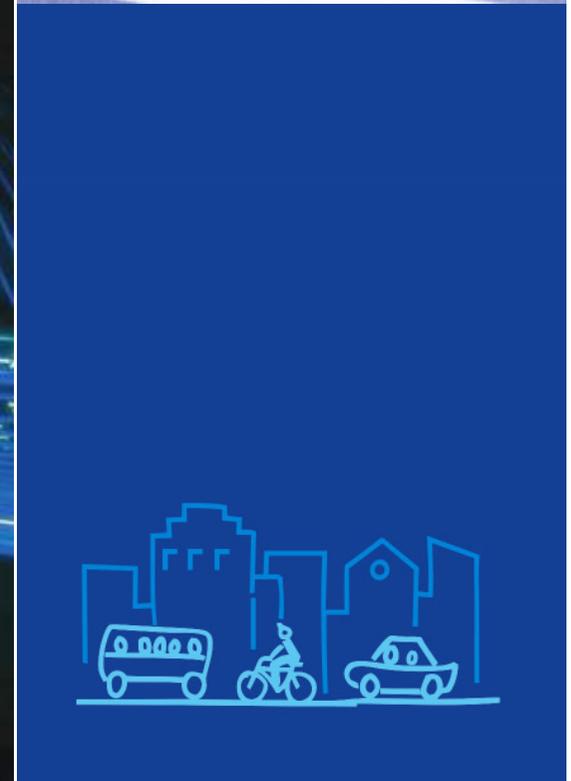
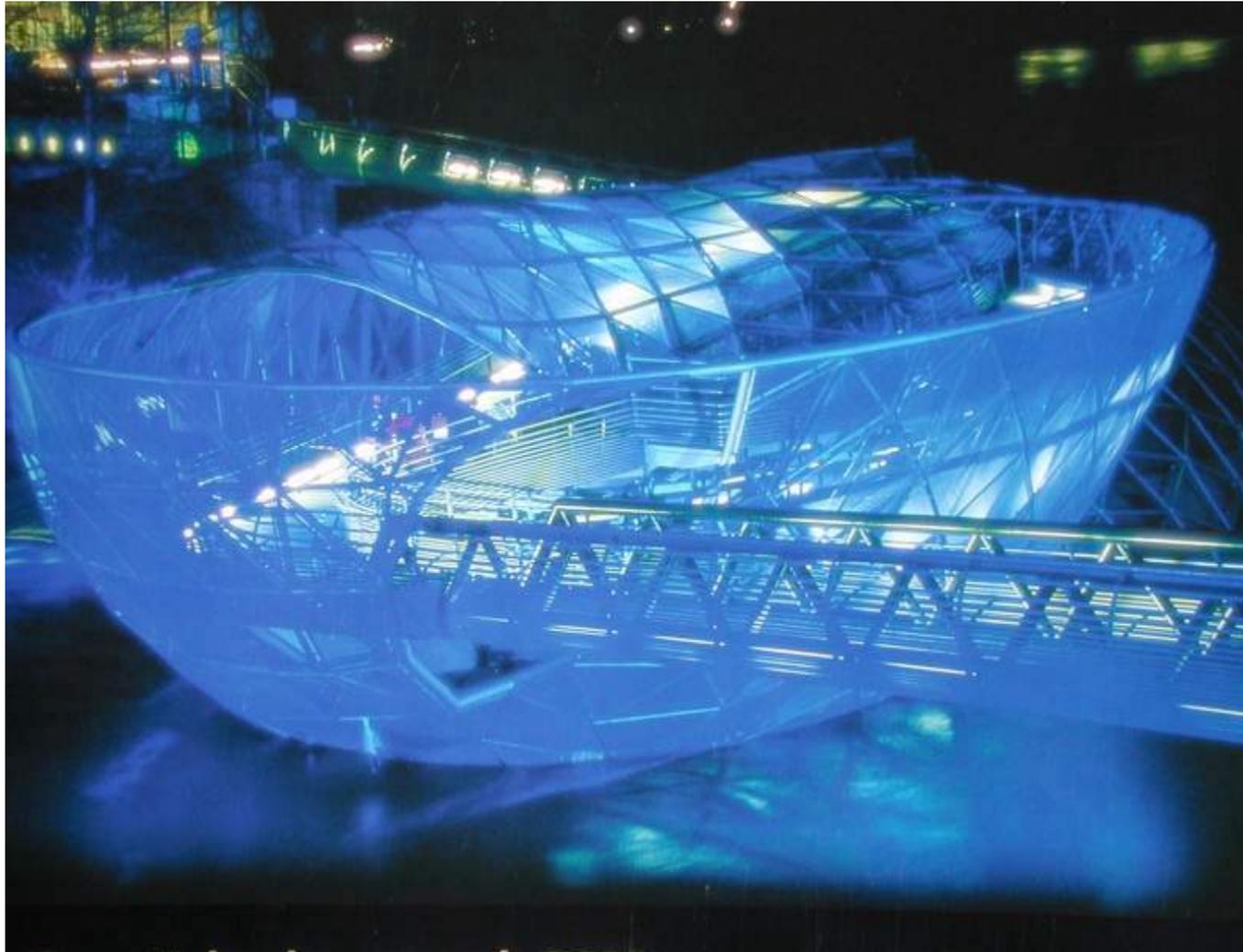
Financing Public Transport

- **Integrated Tariff System since 1994**
- **Financing Partners**
 - Federal government (€ 9,27 Mio.)
 - Regional government (€ 13,46 Mio.)
 - City of Graz (€ 4,93 Mio.)
 - Order of PT-Services (€ 15,34 Mio.)

Total (€43,0 Mio.)
- **Tariff subsidy of ~ €23,69 Mio.**



Thank you for your attention



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City of Graz

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