



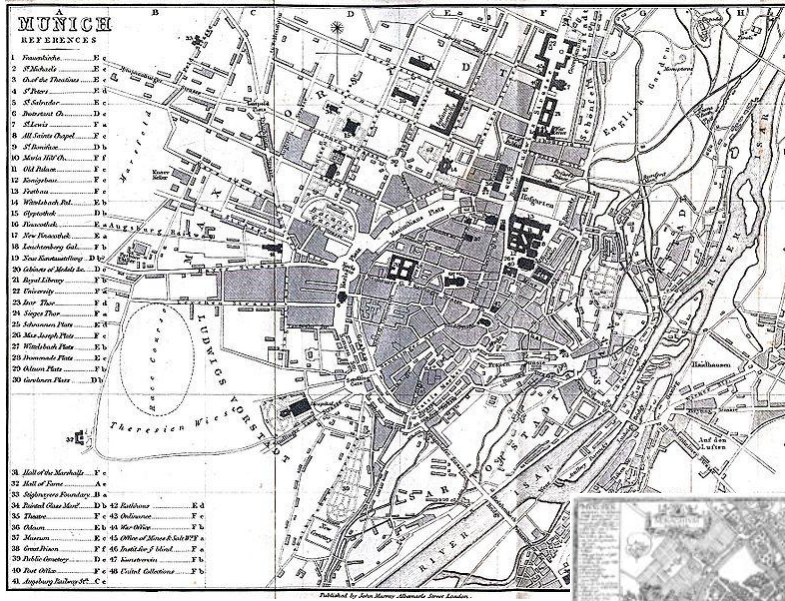
# Munich's Public Transport Reasons for its success

A review of hard and soft measures over the last 50 years



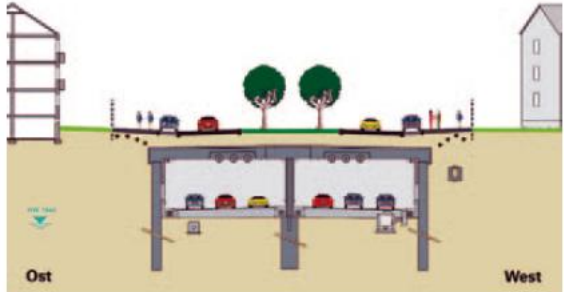
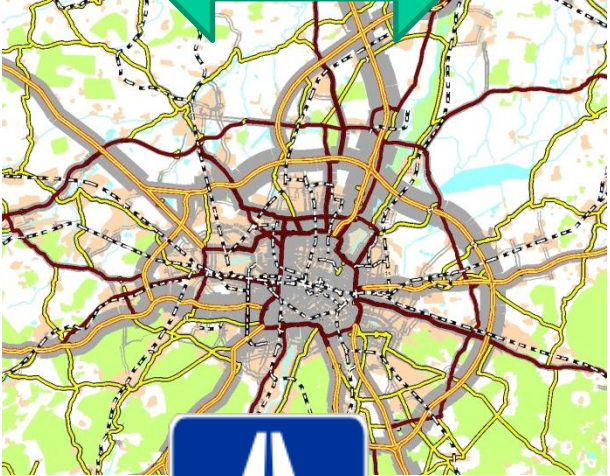
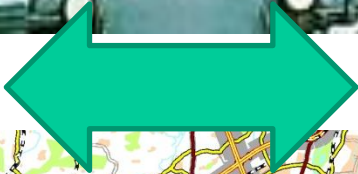
Referent: Bernhard Fink

# 1946: Rebuilding Munich



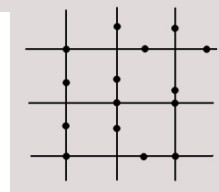
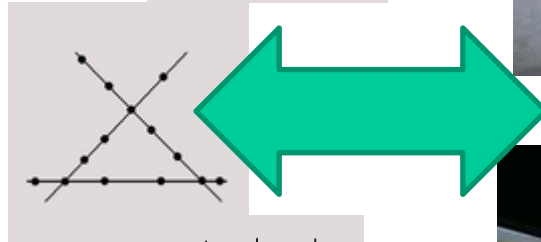
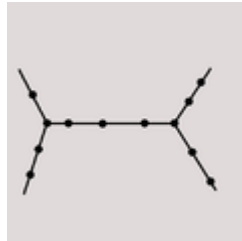


# 1950-1966: Planning and building new roads





# 1950-1965: Planning the best public transport system



# 26.04.1966: Munich to host Olympic Games



Munich1972





# 28.05.1972: MVV founded

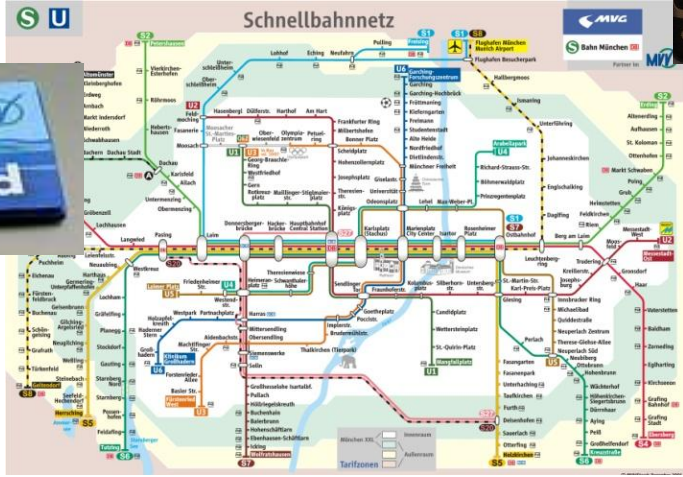


Munich1972

## One network, one timetable, one tariff



1 Netz. 1 Fahrplan. 1 Ticket.





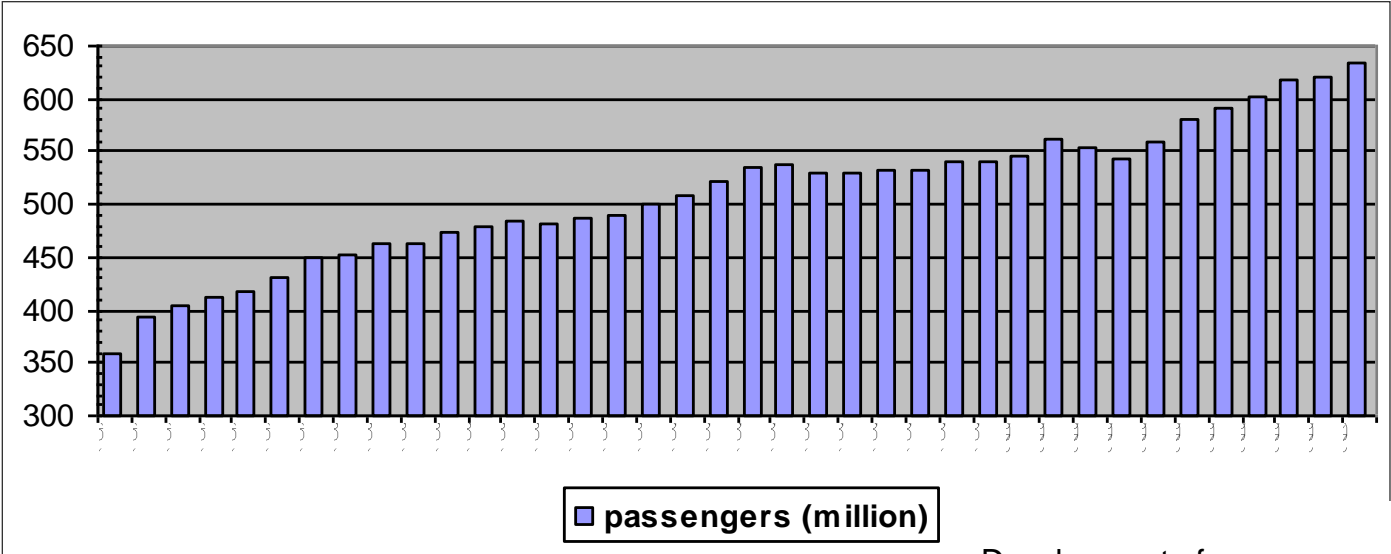
# 28.05.1972: Munich's pedestrian zone opened



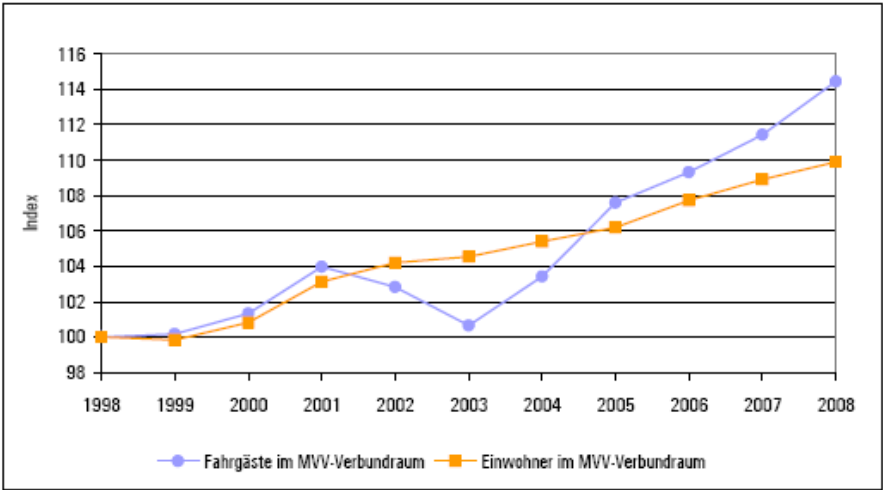
Munich1972



# 1973-2010: Passenger numbers



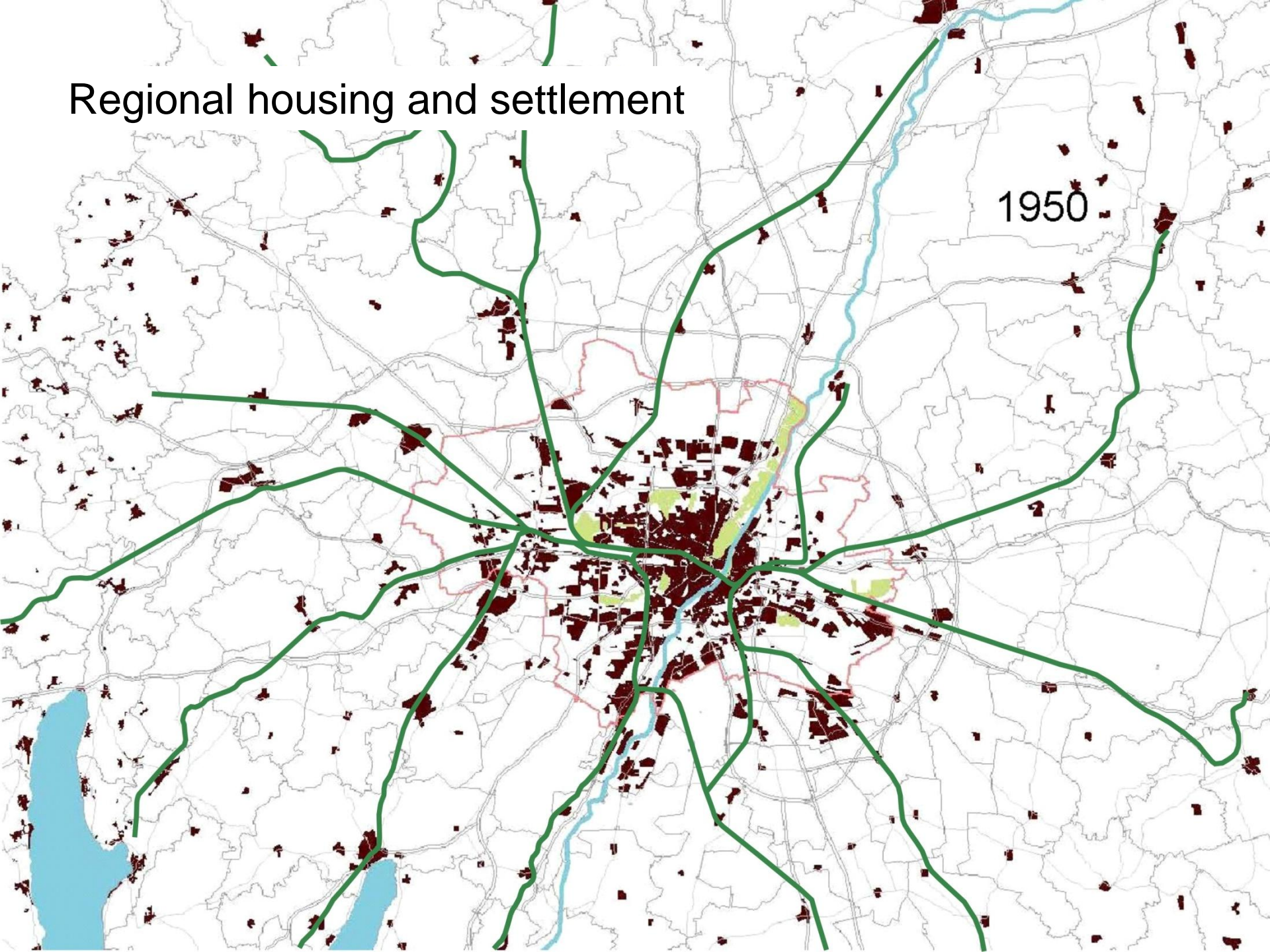
Development of passengers and inhabitants at the MVV





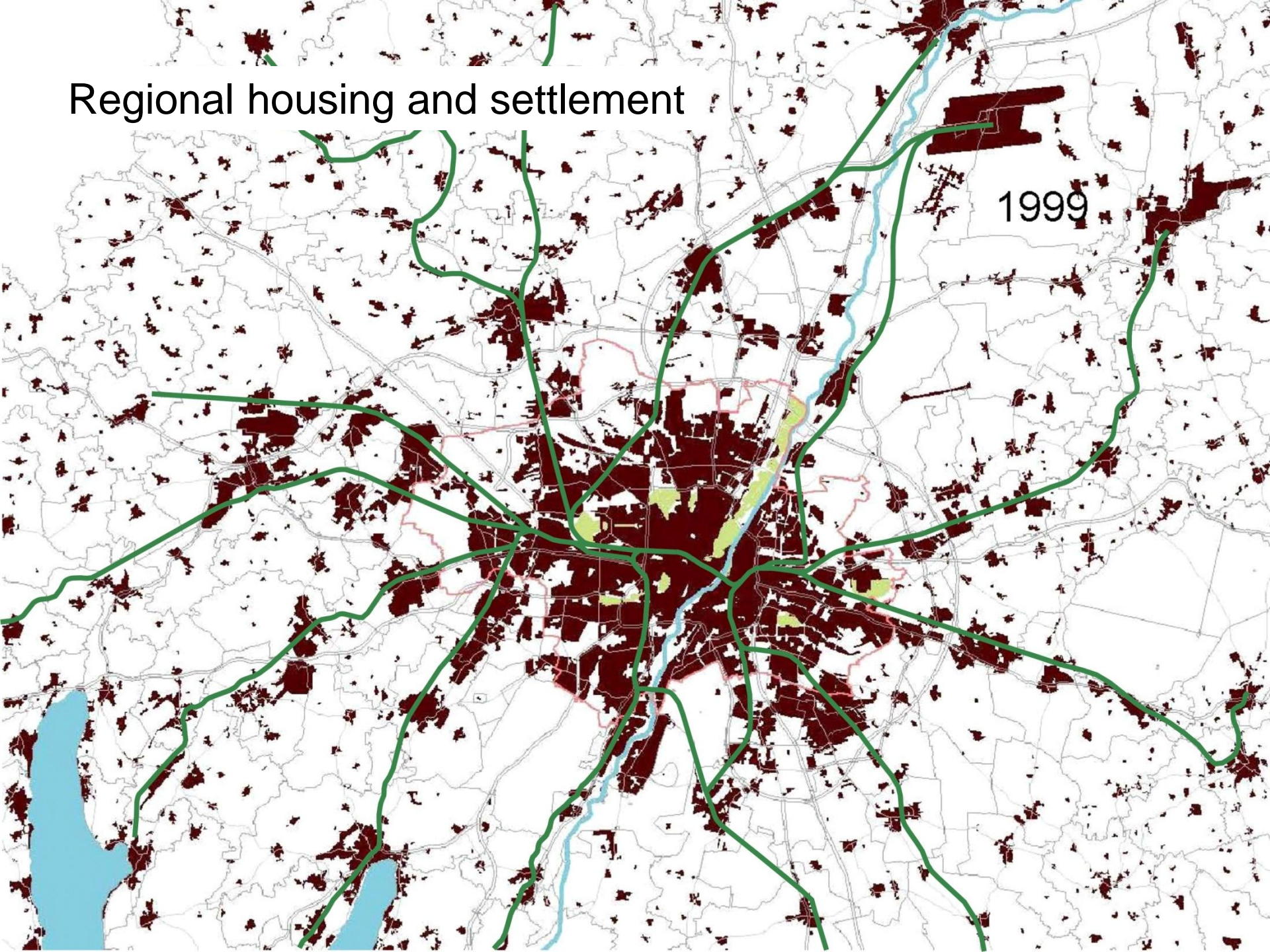
# Regional housing and settlement

1950





# Regional housing and settlement



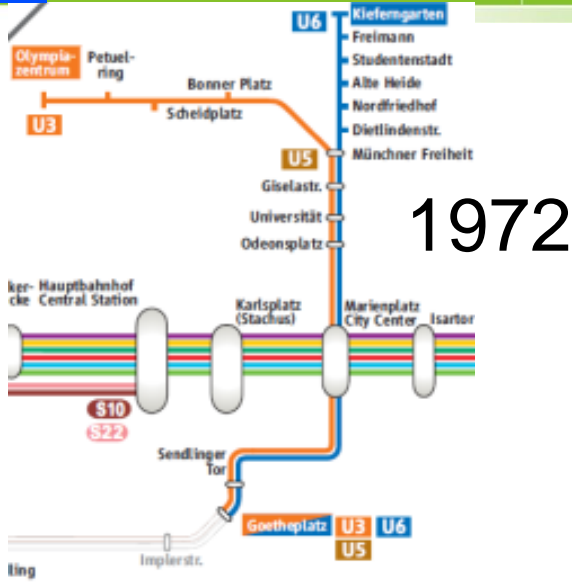




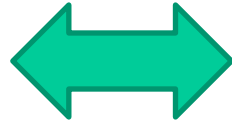
# 1972-2011: Extension of the subway in Munich



Investment for the subway 1964 - 2011 (netto):  
**4.280.895.050 €**

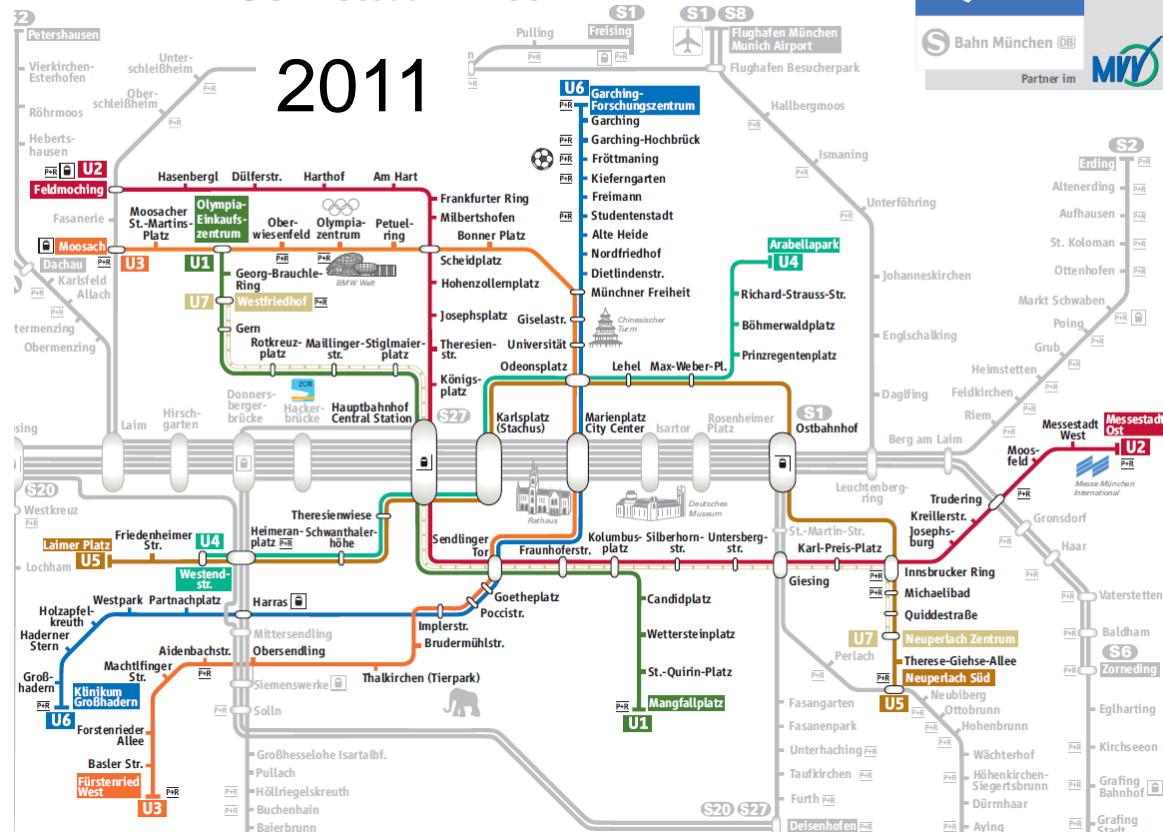


1972



Schnellbahnnetz

2011



Weitere Daten

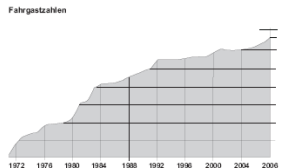
- Streckennetz in Betrieb: 100,6 km
- Gesamtlänge bezogen auf die Bauart (also einschließlich der Wendeloop- und Abstellanlagen, Verbindungsarme usw.): 189,8 km
- davon oberirdisch: 11,9 km
- Tiefste Stelle (Tunneltiefe bis Gelländeebenante - zwischen Karlsplatz und Odeonsplatz): 34 m
- Zahl der Verknüpfungspunkte mit der S-Bahn (in Betrieb): 11
- Bahnhöfe: 98
- Anzahl der Bahnhöfe in Betrieb (Verknüpfungspunkte Sendlinger Tor, Hauptbahnhof, Odeonsplatz und Olympia-Einkaufszentrum zählen doppelt)
- Anzahl Aufzüge: 167
- PAR-Belplätze insgesamt: ca. 7.000
- \* Die Privatstellen an den Bahnhöfen Feldmoching und Odeonsplatz sind nicht mitgezählt
- Baukosten: 4,181 Mrd. Euro
- Seit Beginn wurden insgesamt bezahlt (bis Ende 2005, ohne MwSt.)

Behindertengerechte Ausstattung der Bahnhöfe

Mittlerweile sind - mit Ausnahme des Bahnhofes Freimann - alle U-Bahnhöfe mit Aufzügen oder Rampen nach von Rollstühlen erreichbar. Ein zweifuriges Ausbausprogramm regelt seit 1986 die behindertengerechte Nachrüstung der älteren Bahnhöfe.



Hersteller:  
 Landeshauptstadt München  
 Bauhof  
 Friedenstr. 40  
 80671 München  
 Oktober 2007  
 www.muenchen.de/bahn

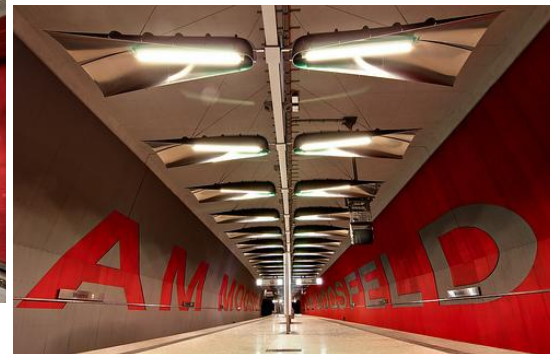
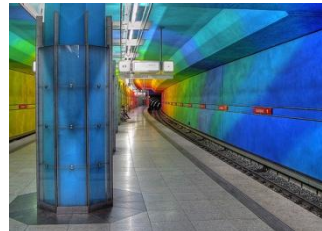




# 1972-2011: Extension of the subway in Munich



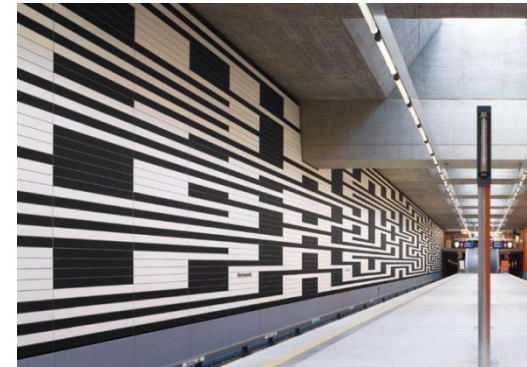
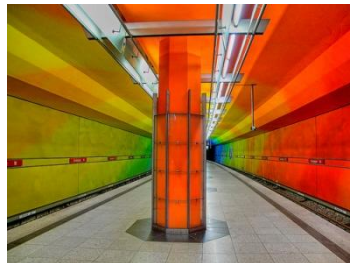
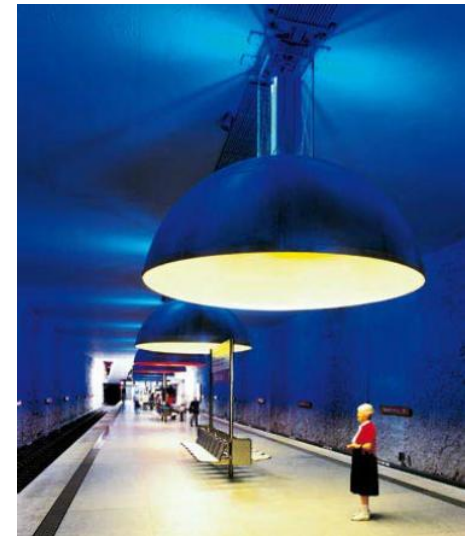






# U

## 1972-2011: Extension of the subway in Munich



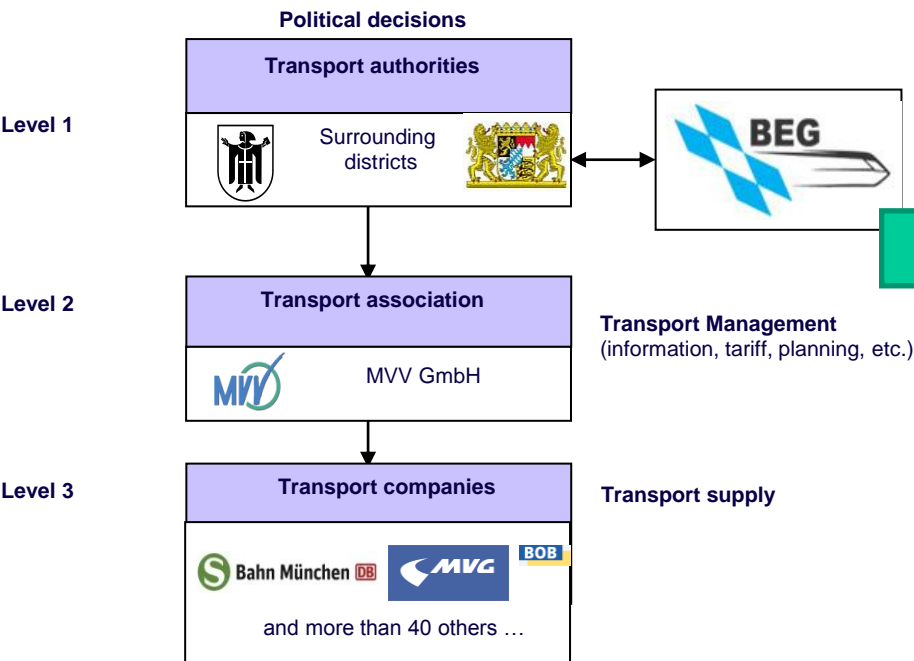


# 1996: Liberalization of the German Railway system



## New shareholders at the MVV:

Three-level-model



## Tendering of regional trains by:

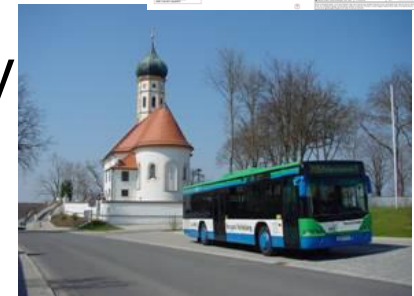


## BUS city buslines / regional buslines

## Tendering of regional bus services by:



## Surrounding districts/MVV

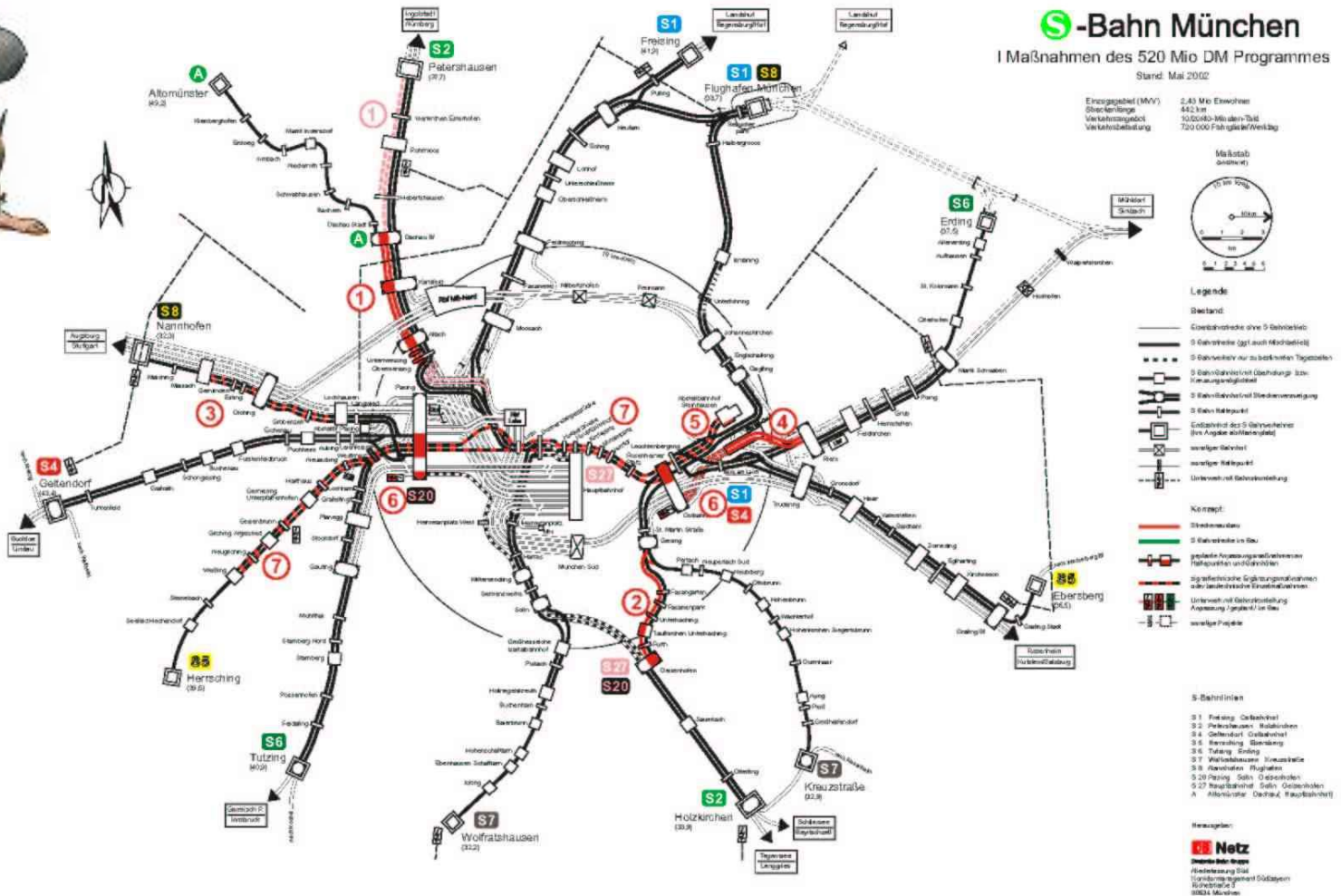




# 1998-2004: Extension of the rapid transit system



## Extension-program 1998-2004



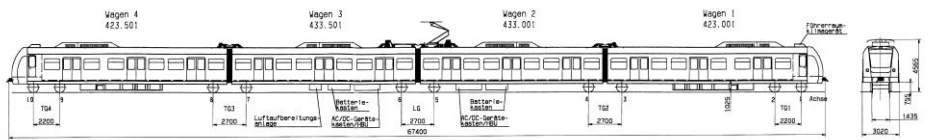




# 1998-2004: Modernization of the rapid transit vehicles



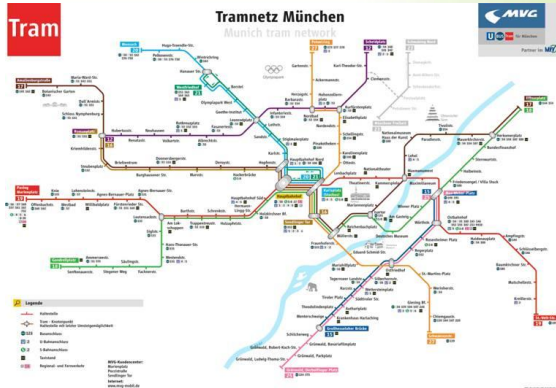
## New rolling stock material



### Comparison ET 420 / ET 423

	ET 420	ET 423
High speed	120 km/h	140 km/h
Acceleration	1 m / s <sup>2</sup>	1 m / s <sup>2</sup>
Length	67,4 m	67,4 m
Number of seats	194	192
Other places	254	352
Total	448	544
Weight (empty)	138 t	109 t
Use of energy per km	9,97 kWh	6,05 kWh

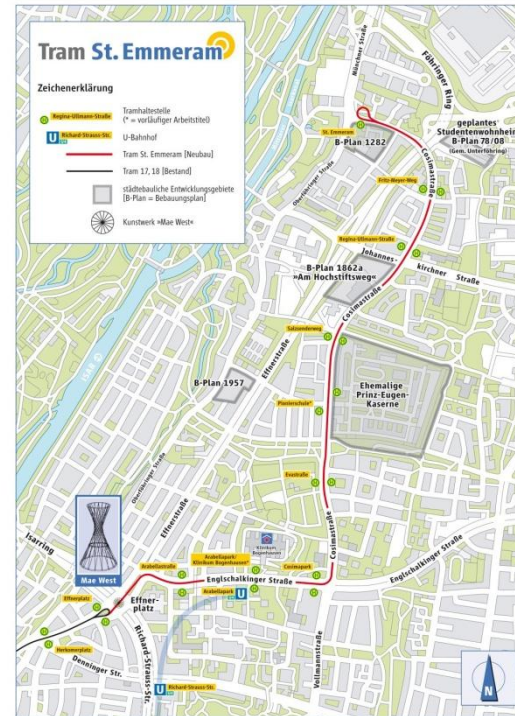




- Service for 125 years
- New rolling stock material
- Acceleration of all lines



## Tram 23



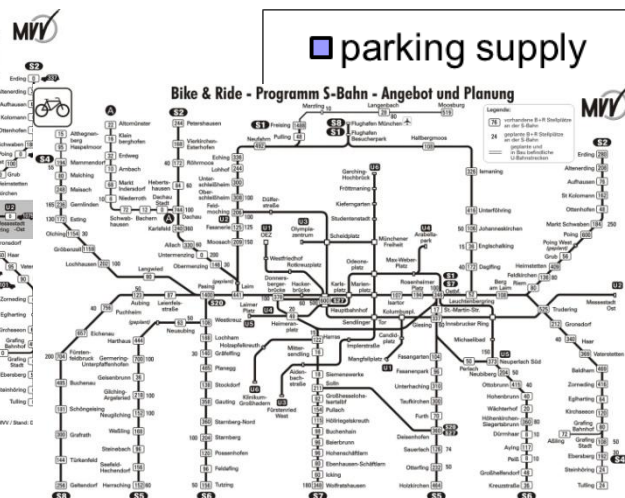
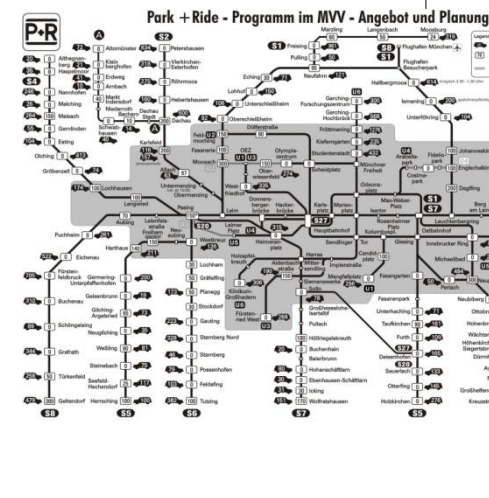
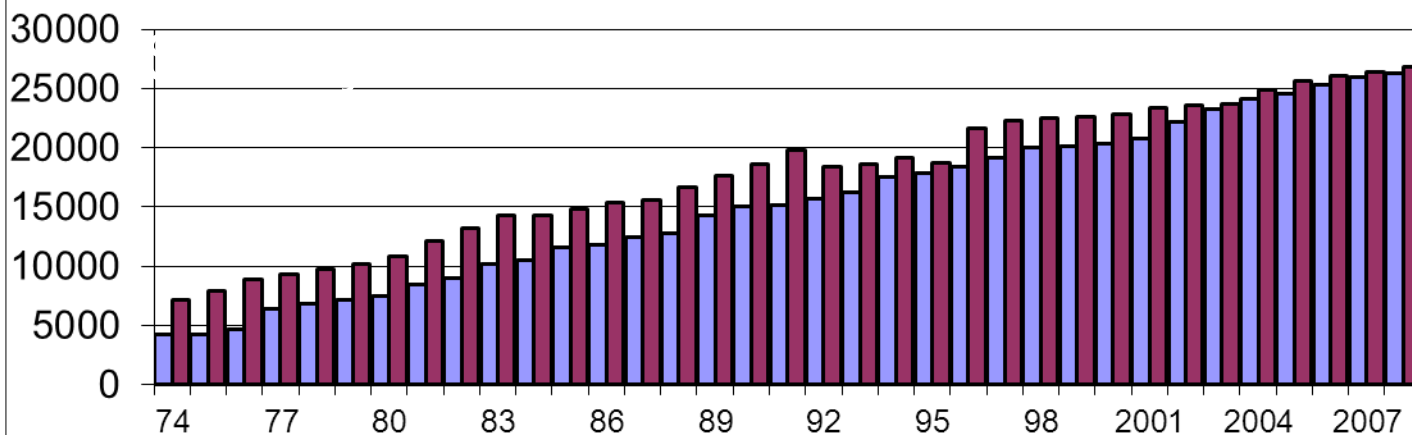




# 1972-2012: Extension of park and ride / bike and ride



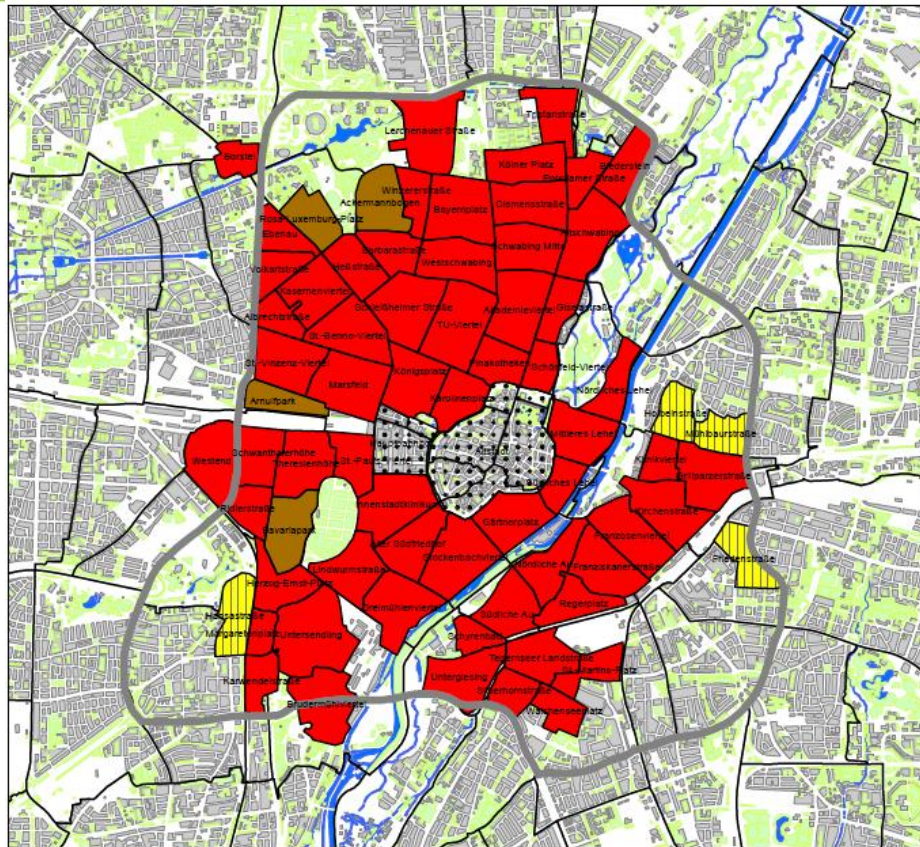
## Park and Ride facilities: supply and demand



■ parking supply    ■ parking demand



# 1998-2012: Implementation of "soft" measures



## PARKRAUMMANAGEMENT IN DER LANDESHAUPTSTADT MÜNCHEN

### Maßnahmegebiete

- Altstadt
- in Betrieb
- in Planung, Umsetzung ausgesetzt
- ggf. gesonderter Handlungsbedarf

- bebaut Fläche
- Grünflächen
- Wasserflächen
- Mittlerer Ring

Kartengrundlage:  
Dig. Sitzkarte (VAmT)  
Stand: September 2011  
Maßstab 1:35.000

0 0,5 1 1,5 2 km



### Umweltzone

Der blau angefarbte Bereich ist die Umweltzone.  
Sie umfasst das Elterngebiet innerhalb des Mittleren Rings  
(siehe den Ring selbst).

LANDESHAUPTSTADT MÜNCHEN  
PLANUNGSREFERAT

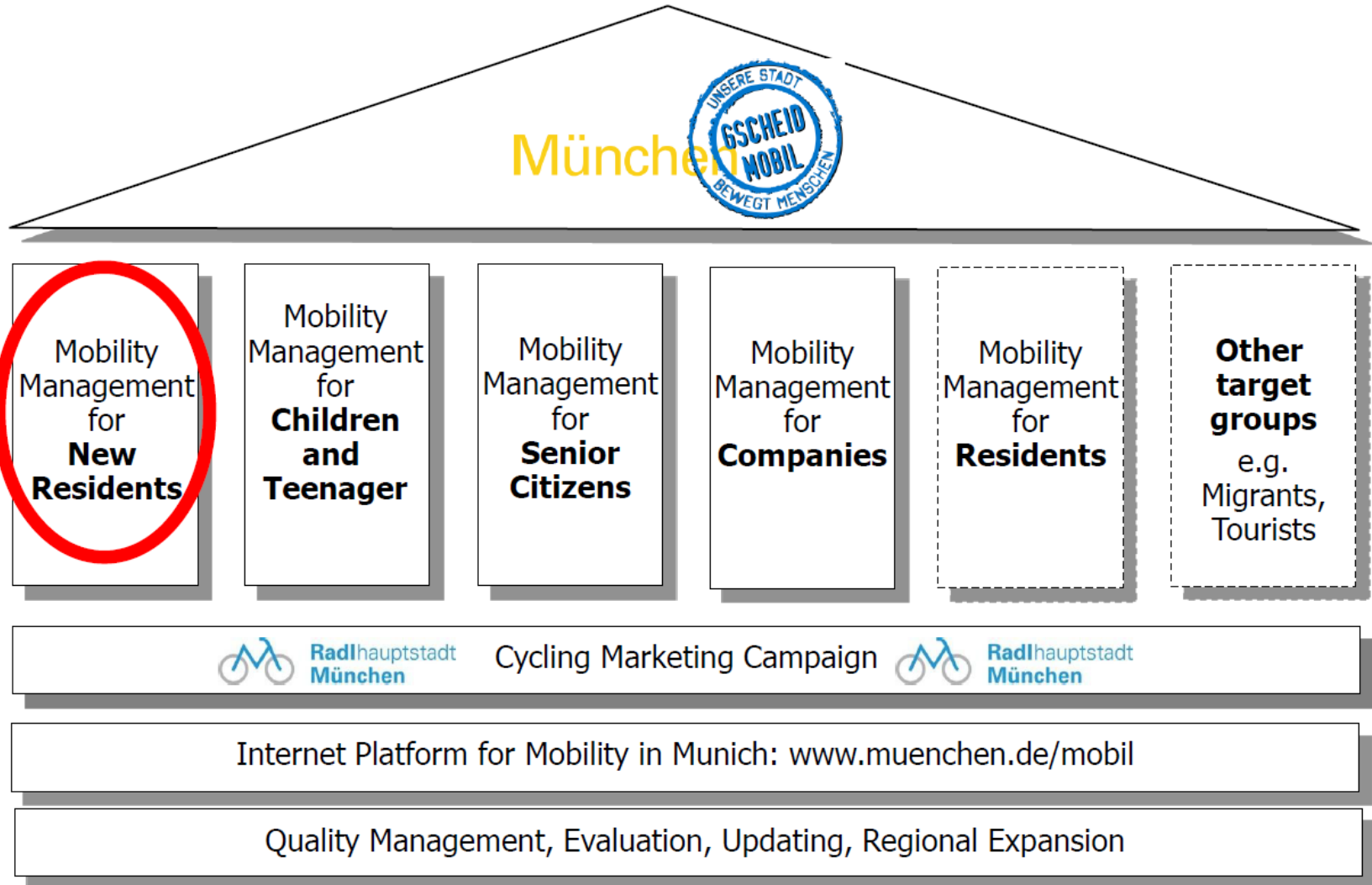


## Extension of the residential parking areas

## Extension of an environmental zone



# 1998-2012: Implementation of “soft” measures



# 2004-2012: Implementation of "soft" measures



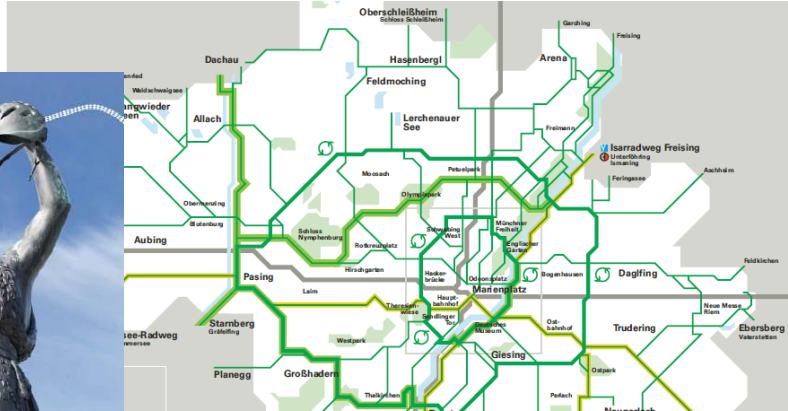
## Radlhauptstadt München



Munich's „Cycling-Star“



Website: [www.radlstar.de](http://www.radlstar.de)



Landeshauptstadt München



Wähle deinen Radl STAR und gewinne!





# 2009-2011: Marketing campaigns



## System marketing for public transport by the MVV

Damit Atmen keinen Kater macht.  
Einfach MVV fahren.



Klimaschutz ist unser Antrieb.

S-Bahn | U-Bahn | Bus | Tram  
www.mvv-muenchen.de

Damit Atmen nicht auf die Nüsse geht.  
Einfach MVV fahren.



Klimaschutz ist unser Antrieb.

S-Bahn | U-Bahn | Bus | Tram  
www.mvv-muenchen.de

Damit Atmen wieder Bock macht.  
Einfach MVV fahren.



Klimaschutz ist unser Antrieb.

S-Bahn | U-Bahn | Bus | Tram  
www.mvv-muenchen.de

Damit Atmen nicht in der Lunge piekst.  
Einfach MVV fahren.



Klimaschutz ist unser Antrieb.

S-Bahn | U-Bahn | Bus | Tram  
www.mvv-muenchen.de



# 2004-2012: Implementation of "soft" measures



Abfahrt Departure

Linie	Zeit	Nach	Gleis	Aktuelles
S7	08:19	Aying	1	pünktlich
S6	08:21	Erding	1	pünktlich
S1	08:24	München Ost	1	pünktlich
S1	08:24	München Ost	1	pünktlich
S5	08:27	Ebersberg (OBB)	1	pünktlich
S4	08:29	München Ost	1	pünktlich
S8	08:31	München Ost	1	pünktlich
S2	08:34	Holzkirchen	1	pünktlich

Abfahrt Departure

**S6 Erding** 3 Min

Ostbf. - Markt Schwaben

40 Min-Takt zwischen Aying und Kreuzstraß

MVG

Linie	Ziel	Abfahrt in Min.
U3	Olympia-Einkaufszentrum	1
U6	Harras	2
U6	Klinikum Großhadern	5
U6	Garching-Forschungszentrum	7
U3	Fürstenried West	8
U3	Olympia-Einkaufszentrum	10
U6	Harras	12
U6	Klinikum Großhadern	15

MVG

Garching-Hochbrück  
Garching, Gewerbegebiet  
Garching, Gewerbegebiet U  
Garching, Voithstraße S U  
Carl-von-Linde-Str.

Linie: **294 Wagen hält** 09:53

Nachrichten +++ Wetter +++ Sport



Text version

Home | Timetable information | Stop | Contact

Timetable Tickets MVG network Service The MVG

Home » Timetable »

Journey planner

Stop timetable  
Departure board  
Timetable book  
Mobile services

Fahrplanauskunft (EFA)

Fahrt  
Abfahrtszeit: 13:09 Uhr Datum (TTMM): 17.10.11  
Anfahrtszeit: [ ]

Start  
Haltestelle: [ ] wichtiger Punkt: [ ] Alternative Suche: [ ] [ ]  
Straßenhausnr.: [ ] beliebige Eingabe: [ ]

Ziel  
Haltestelle: [ ] wichtiger Punkt: [ ] Alternative Suche: [ ] [ ]  
Straßenhausnr.: [ ] beliebige Eingabe: [ ]

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- About 40 dynamic timetable information systems for the rapid transit system
- About 110 dynamic timetable information systems for the tramway and bus system
- EFA produces up to 400,000 different electronic timetable information units per day





# Situation 2012-??: Has the MVV reached the capacity limit?



Bild: Münchner Merkur

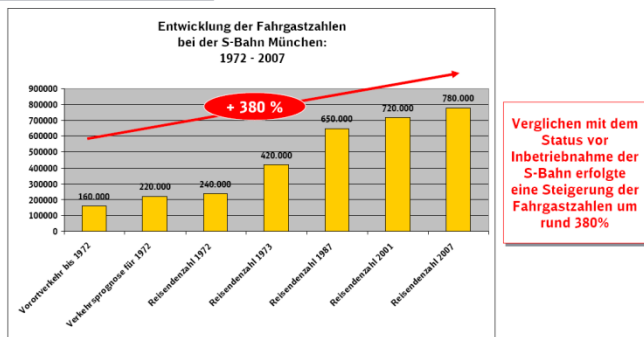


# Situation 2012-??: Has the MVV reached the capacity limit?



## passenger numbers of the Rapid transit system

1972 - 2007



Quellen: Pospischil, MVV  
S Bahn München

### Passenger demand

- Today 2.6 million inhabitants live in the area covered by the MVV. By 2029 this number will increase to 2.8 m.

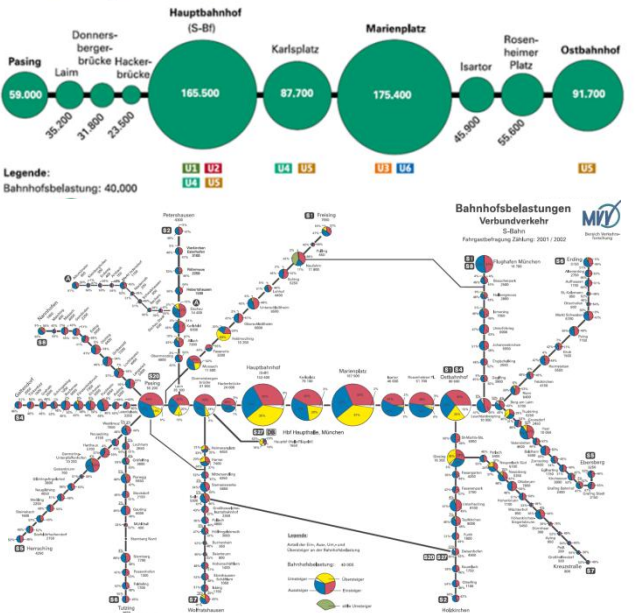
### capacity

- The supply should be increased, especially in the outer districts
- but: The capacity limit of the main track with 30 trips every hour and in each direction has been reached.

### Operating quality

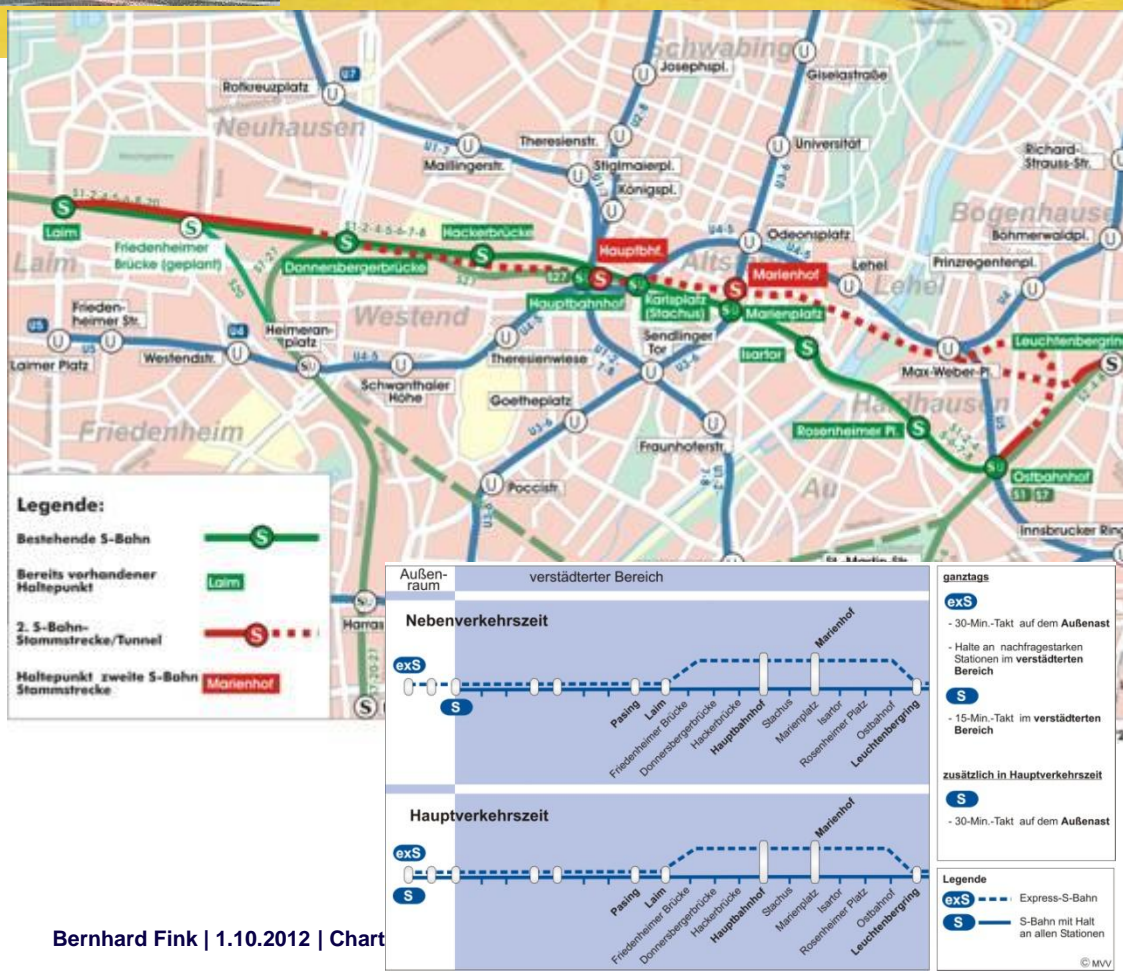
- Because of hold ups, delays can easily include all S-Bahn lines

→ The S-Bahn system must be extended immediatly!





# Situation 2012-??: Planning and building of a second tunnel



## Limit of capacity of existing tunnel has been reached

- 700,000 passengers a day
- 30 trains per hour and direction
- in rush hour - no opportunity to increase the capacity

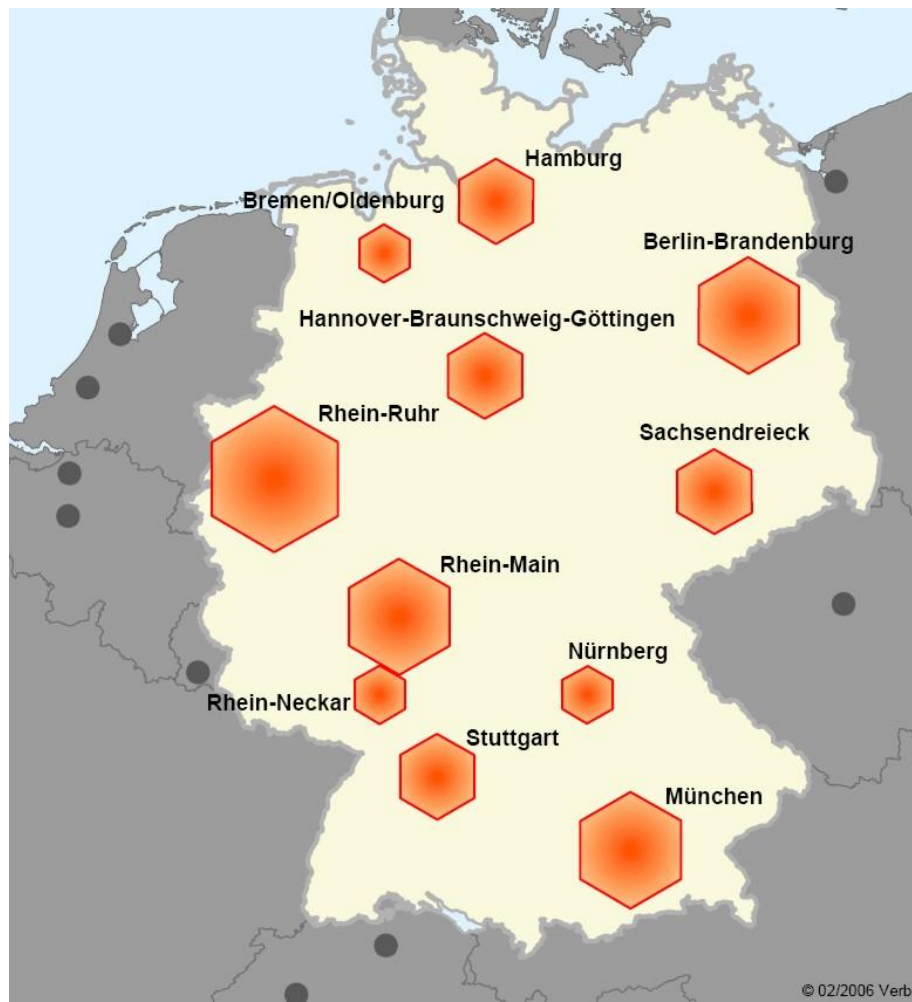
## Transfer of delays

- Trains in 2 minute-intervals → incidents cause network-wide transfer of delays

## Construction of second tunnel

- Present situation: negotiations about financing
- start in 2013 ?? – opening in 2019
- new operating system – planning of express-trains





## EUROPAISCHE METROPOLREGION MÜNCHEN

**Federal Minister** for room-planning has determined eleven centers of “European Metropolitan regions”





264



Thank you for your attention!  
Mere information på:  
[www.mvv-muenchen.de](http://www.mvv-muenchen.de)

CITARO



Mercedes-Benz



1 Netz. 1 Fahrplan. 1 Tarif.

Vielen Dank für Ihre  
Aufmerksamkeit

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