

# The Parking Conundrum



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September 30, 2010  
Guangzhou, China

# Breda, The Netherlands



“The walking distance to a parking place has to be *at least as long as* the walking distance to the public transport stop”  
– Hermann Knoflacher, Inventor of Walkmobile





# Parking Podiums



Chicago

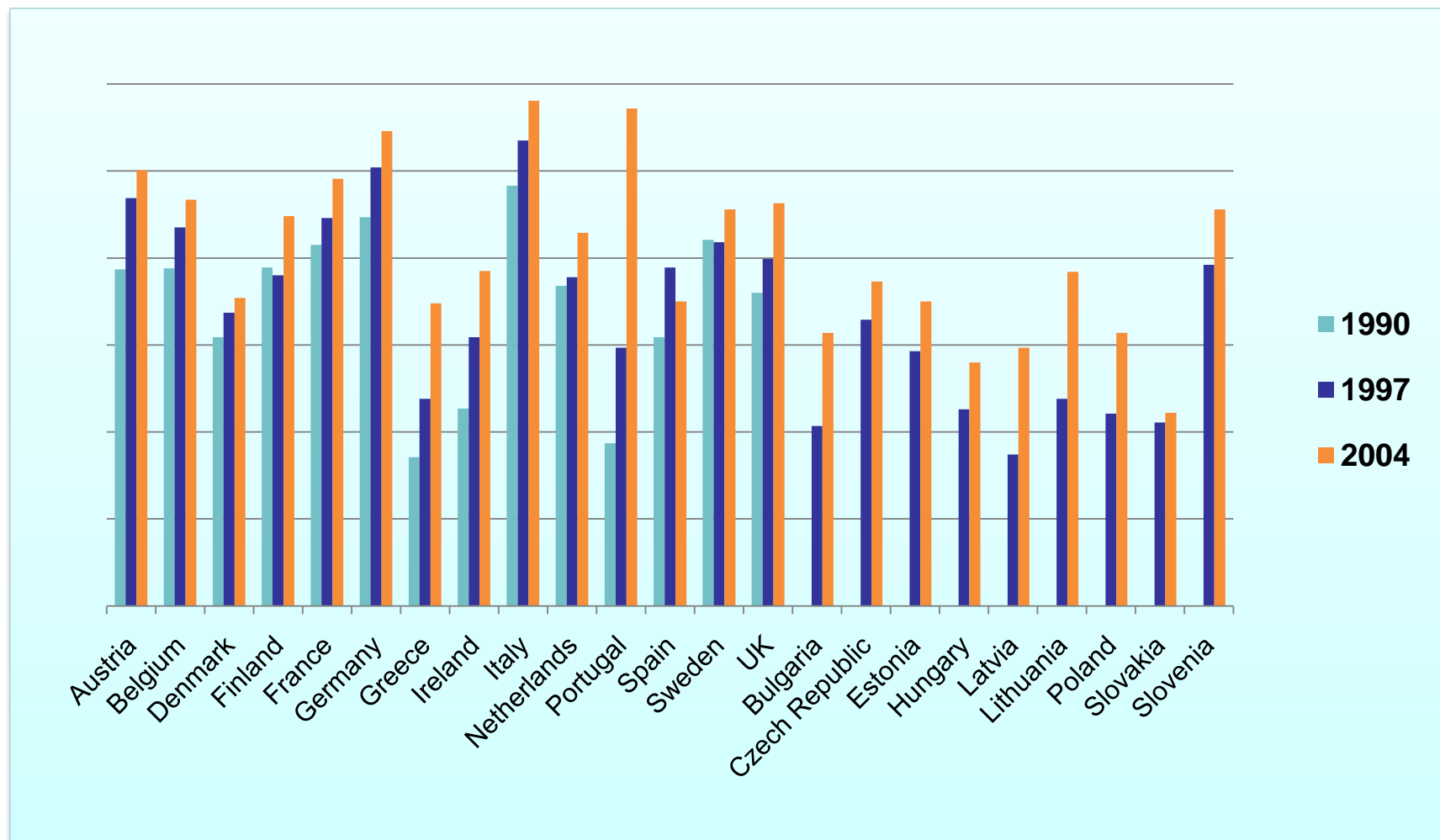


Bangkok

# Parking Standards

- **Minimums:** Least amount of parking developers are required to include based on land use.
- **Maximums:** Limit how much parking a developer can include in a construction project.

# Change in number of passenger cars per 1,000 residents, 1990-2004



**Source:** Figure 1: EEA (2000): 'Are we moving in the right direction', European Environment Agency, Copenhagen. Eurostat (2003): Statistical yearbook on candidate countries, Office for Official Publications

# National Parking Policies

- **United Kingdom:** National Guidance on Parking Maximums
- **The Netherlands:** Dutch A,B,C Policy
- **France:** Parking is viewed as a tool that can influence 14% of the greenhouse gas emissions emitted every year.

# Dutch **ABC** Location Policy: Transit Access & Parking Discounts for Commercial Developments

Location	Description	Regulation
A	Excellent public transport facilities, surrounding main train stations	1 parking place per 250 m <sup>2</sup>
B	Good public transport and also good accessibility by car	1 parking space per 125 m <sup>2</sup>
C	Mainly well accessible by car	Tailor made, no norms

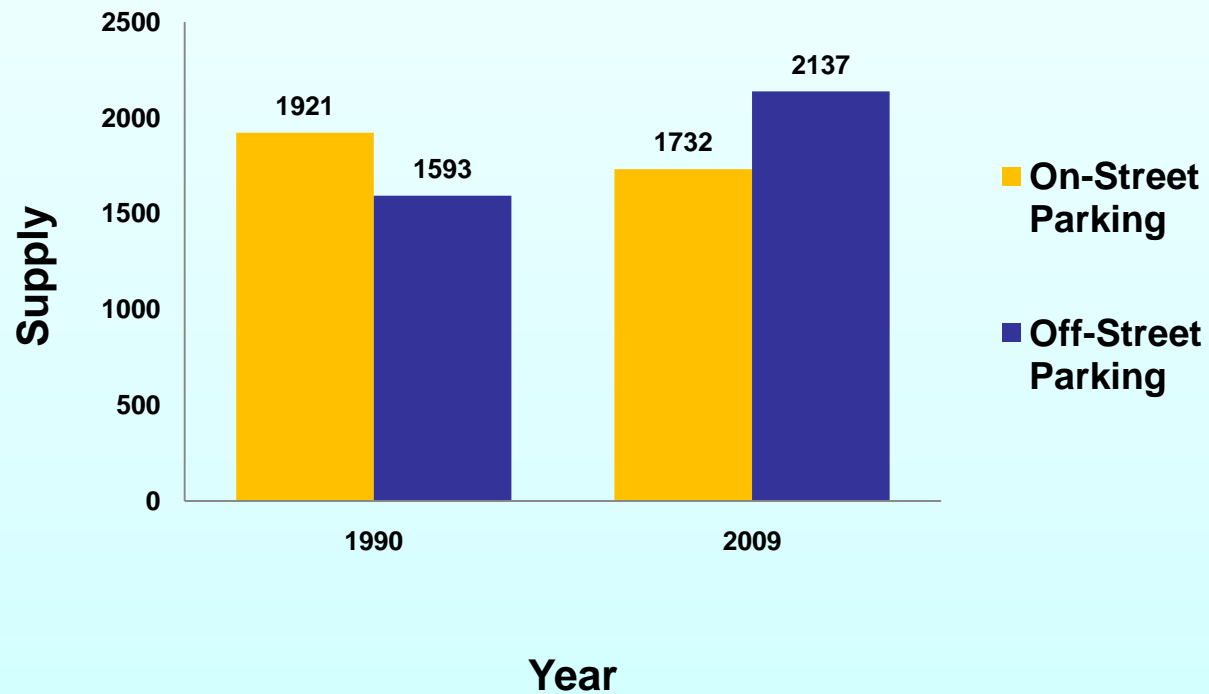


# Supply Caps




- **Hamburg:** Sealed inventory in Central Business District at roughly 30,000 spaces in 1976
- **Zurich:** “Historic Compromise” instituted in 1996
- **Amsterdam:** Every spot created off-street should remove a spot from on-street.

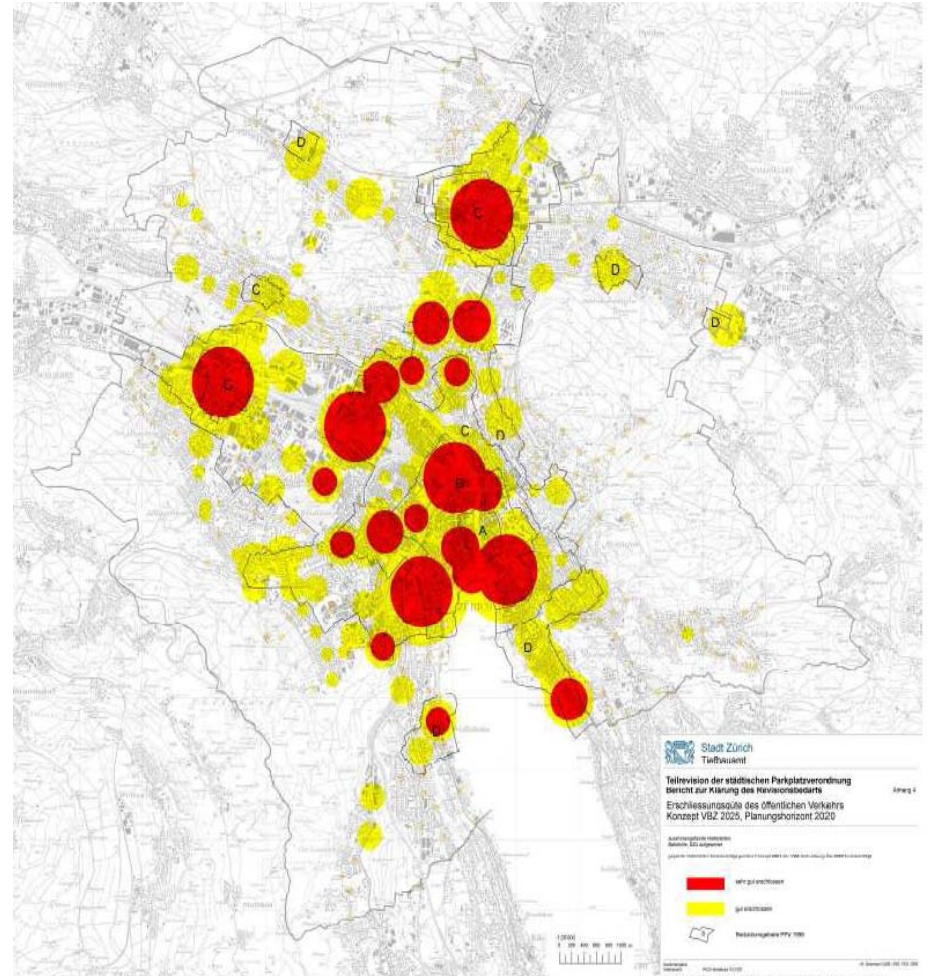


# Zurich Parking Supply in Kreis 1 (1990 & 2009)







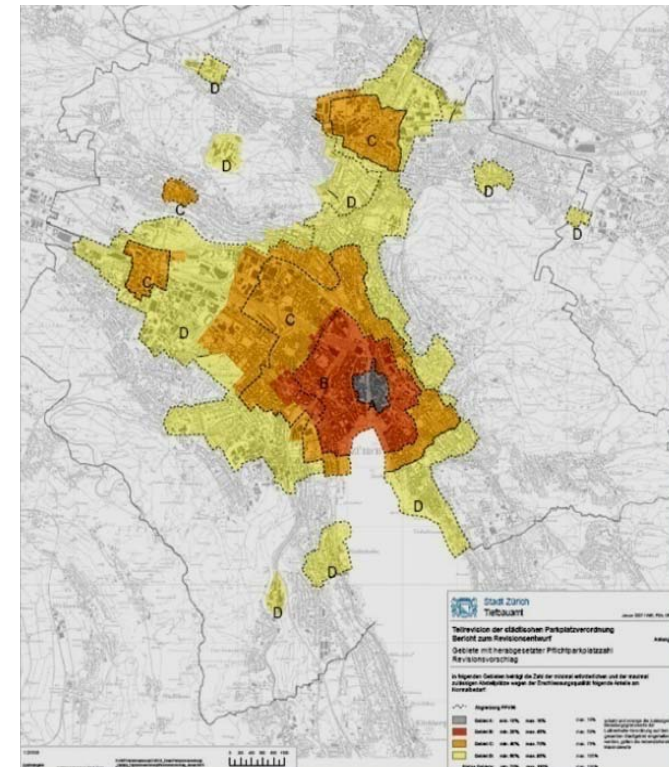
# Zurich Transit Access Plot

-  **RED:** Very good access to public transport
-  **YELLOW:** Good access to public transport
-  **BORDER LINE:** Emphasizes the capacity gaps—with yellow and red points areas far away from some points.



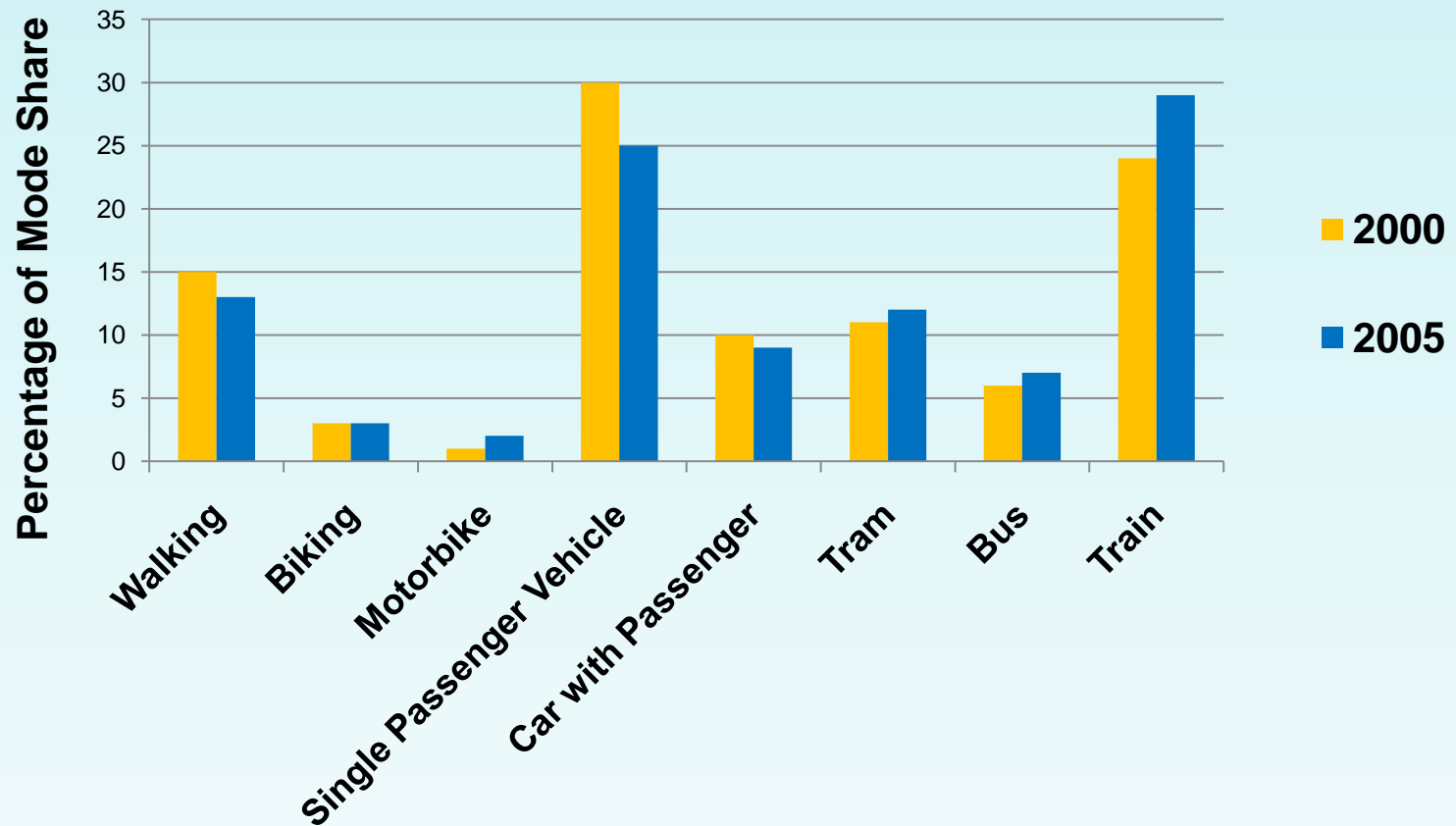
# Accessory Parking Requirements Based on Access to Transit as Percentage of Building Floor Ratio

	<u>Area</u>	<u>Minimum (%)</u>	<u>Maximum (%)</u>	<u>*Maximum 2 (%)</u>
	A	10	10	10
	B	25	45	50
	C	40	70	75
	D	60	95	105
Remaining Areas		70	115	130



\*Related to clean air regulations

# Zurich Mode Split Trend (2000 & 2005)





# Comparison of Minimum Accessory Parking Standards

City	Minimum Residential Standards
Amsterdam	1 spot/housing unit + 0.2 added for guests
Antwerp	1.1 spots/dwelling unit
Barcelona	1 spot/2-6 apartments (depending on area)
Copenhagen	1 spot/100 sq. meters
Hamburg	0.2/living unit in CBD, 0.8/living unit outside CBD
Madrid	1 spot/unit
Munich	1 spot/unit
Stockholm	0.14 spots/room
Strasbourg	0.5 spots/apartment if within 500 meters of PT, 1 spot/apartment otherwise
Vienna	1 spot/dwelling

# Cities with Maximums

- Zurich
- Paris
- Strasbourg
- London



# Transit Access and Parking Discounts

- **Paris:** 100% discount if a development is 500 meters from a metro stop. Every 500-600 meters, there is a metro in Paris and every 1.5-2 km a regional rail station.
- **Strasbourg:** 50% discount for centrally located neighborhoods or neighborhoods less than 500 meters from a public transportation stop.



# Existing Supply Scan

- **Stockholm:** Developers contact Stockholm Parkering to help find available parking spaces off-site to satisfy parking regs.
- **Strasbourg:** When building permits are granted, construction projects clustered in an area are analyzed and unused spaces nearby are shared or consolidated (as of 2010).





# Multi-modal Station with P&R



Hamburg, Germany (Altona District)



# Play Street



Antwerp, Belgium

# Parking Protected Cycle Path



Muenster, Germany

# Thank you!