

Intelligent Parking Policies: Global Lessons



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São Paulo, Brazil
20 September, 2011

13195. West Main St. looking West, Durham, N. C.

Photo Supply
Laurie



Oversupply of Surface Parking



Durham, North Carolina, USA



What is the parking problem in São Paulo?

Parking is unregulated

Air quality, traffic, noise problems.

Parking treated as a right rather than a commodity.

500 new cars on the road every single day.





Jakarta, Indonesia





SCARPA

City Kunstner/Artikler

PELLA
Pella Go

Yoga





Why do Danes cycle?

1%

Environment

6%

Cheap

19%

Exercise

61%

Convenient, Fast
and Easy

Copenhagen Bicycle
Account 2006





Copa Cava

mparier

es

SUSIN

STREET SIGN



Breda, The Netherlands



Pricing Matters



No meters



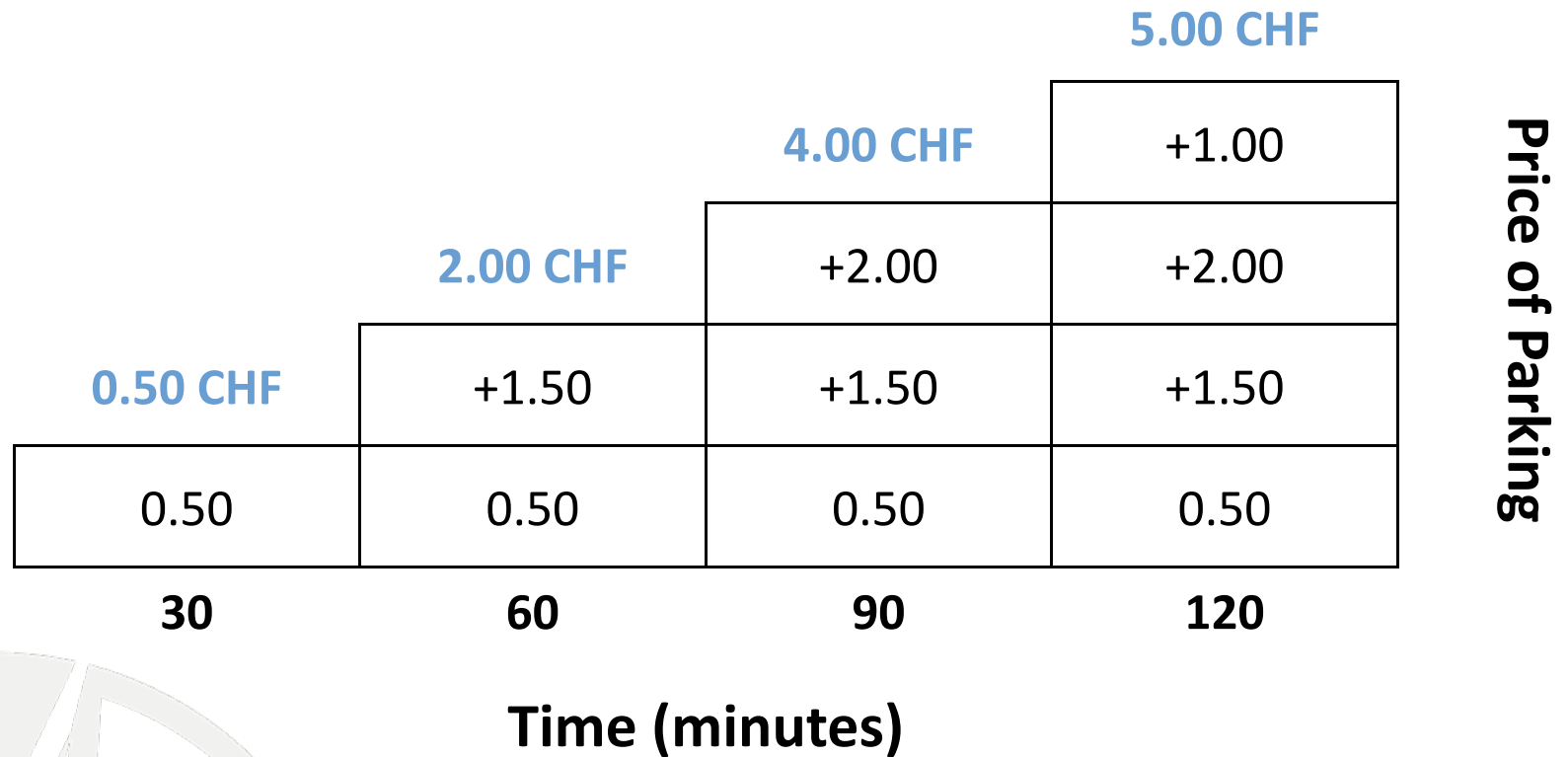
Meters



Prices quadrupled

Grosvenor Square in London

Zurich Progressive Parking Charges





On-Street Cost Comparison

First Hour Fees

City	Euros	Reais
Amsterdam	5	12.00
London	4	9.60
Stockholm	3.87	9.27
Paris	3.6	8.63
Copenhagen	3	7.17
Barcelona	2.85	6.81
Munich	2.5	6.00
Budapest	2	4.80
São Paulo	--	2.70
Belo Horizonte	--	2.70
Rio	--	2
Buenos Aires	--	1.41
Mexico City	--	1.18

*Currencies converted as of July 26, 2011

Earmarking/Ring fencing Parking Funds

London: Freedom Passes

- Elderly and disabled ride for free

Barcelona: Bicing Bicycle Share Program

- First city to use 100% of surplus from on-street parking fees to finance a public bicycle sharing scheme—Bicing. Antwerp to follow.

Antwerp:

- Parking fines are invested into public transport



Parking Benefits Districts



Boulder, Colorado, USA

“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

Minimum Residential Parking Standards

City	Provision per dwelling unit
Amsterdam	1 + 0.2 added for guests
Antwerp	1.1
Barcelona	1 per 2-6 units (depending on area)
Copenhagen	1 per 100 m ²
Hamburg	0.2 in CBD, 0.8 outside CBD
Madrid	1
Munich	1
Stockholm	0.14 per room
Strasbourg	0.5 if within 500 meters of PT, 1 otherwise
Vienna	1
Mexico City	1 (<120 m ²) 2 (120 to 250 m ²) 3 (>250 m ²)
São Paulo	1 (< 200 m ²) 2 (200 to 500 m ²) 3 (>500 m ²)

Supply Caps

Hamburg: Sealed inventory in Central Business District at roughly 30,000 spaces in 1976

Zurich: “Historic Compromise” instituted in 1996

New York/Boston: Compliance with Clean Air Regulations in 1970s



Amsterdam Residential Parking Permits



London Borough of Camden CO₂ Based Residential Parking Permit Costs

	Vehicle Cylinder Capacity (cc)	CO ₂ Emissions (g/km)	3 month	6 month	12 months
Motor Vehicle	0-1299	up to 150	£30.50	£48.00	£82.00
	1300-1849	151-185	£35.50	£56.50	£97.50
	1850-2449	186-224	£41.00	£67.50	£118.00
	2450+	225+	£53.00	£89.00	£159.00
Motorcycle	n/a	n/a	n/a	£25.00	£47.00
Electric Vehicle	n/a	n/a	£6.50	£12.00	£22.50

A Tale of Two Developments

	SihlCity (Zurich)	Centro Metropolitano de Barra (Rio de Janeiro)
Land Area	100,000 m2	4,329,401 m2
Car Parking	850	108,912
Bike Parking	600	0
% of Floor Space Dedicated to Car Parking	18%	68%
Mode Breakdown	Actual: 70% public transit, walking, biking	Forecasted: 52% cars 43% pub transit

Ghastly Multi-Story Becomes TOD



Queens, New York (Long Island City)

Transit Access and Parking Standards

Paris:

100% discount if a development is 500 meters from a metro stop.

Strasbourg:

50% discount if development 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 regulations.

Strasbourg:

When building permits are granted, construction projects clustered in an area are analyzed and unused spaces nearby are shared or consolidated.



Illegal Parking & Enforcement

Amsterdam Scan Car

- 6 cameras (3 on each side)
- Moves at 40 km/hr
- Takes 160 photos/sec
- 3 wardens on scooters follow
- 98% accuracy





Paris: On-Street Parking Case Study

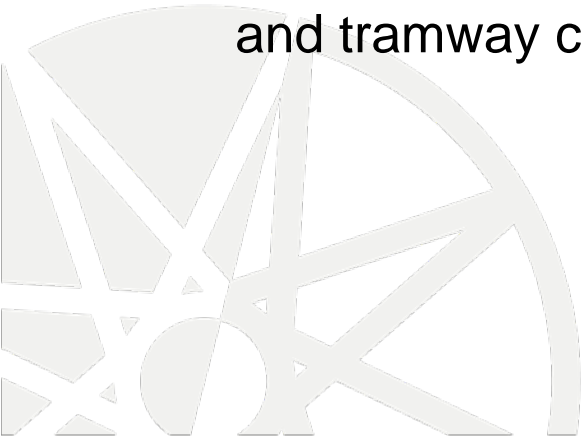


Paris On-Street Space Reclamations

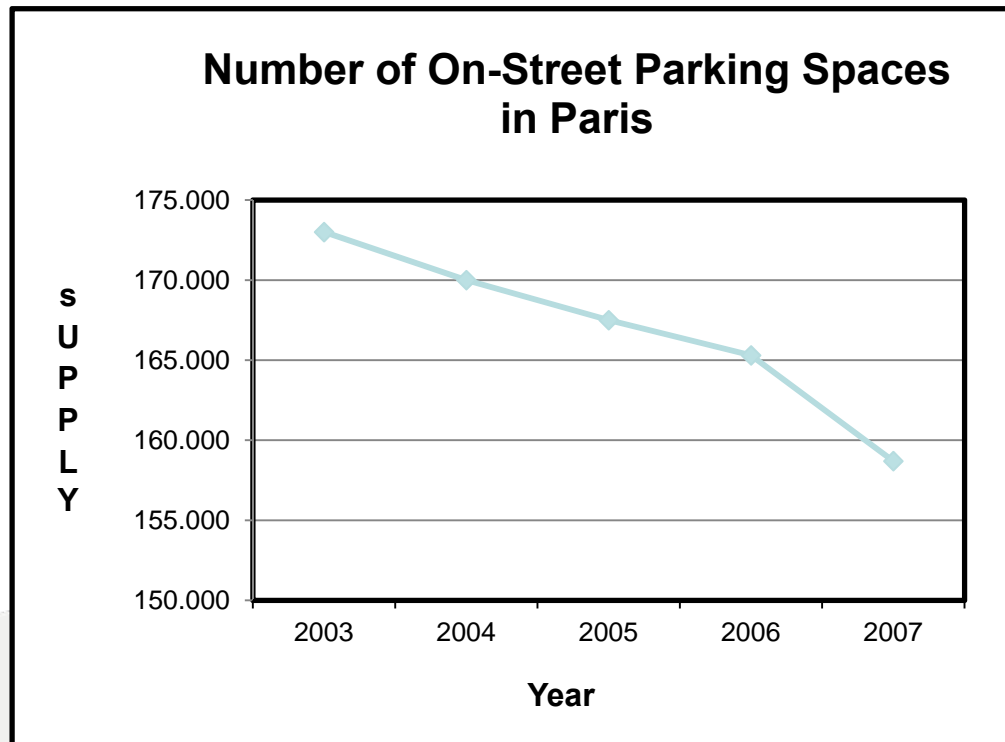
4,000 removed to accommodate 1,451 new Velib stations that hold about 20,000 public rental bikes.

>100 km of new bicycle lanes installed.

Space was also reallocated for motorcycle parking, bicycle parking, disabled parking and tramway corridor access.



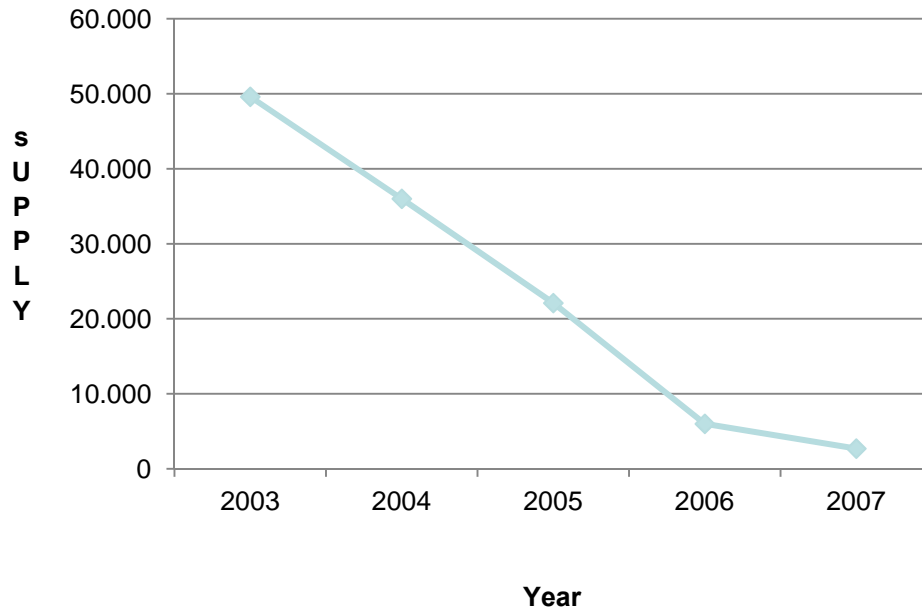
Paris On-Street Parking Supply Trend



Data Source: Paris Transport and Travel Report (2007)

Overall on-street parking supply was reduced by **9%** (14,300 spaces)

Free Parking Spaces in Paris

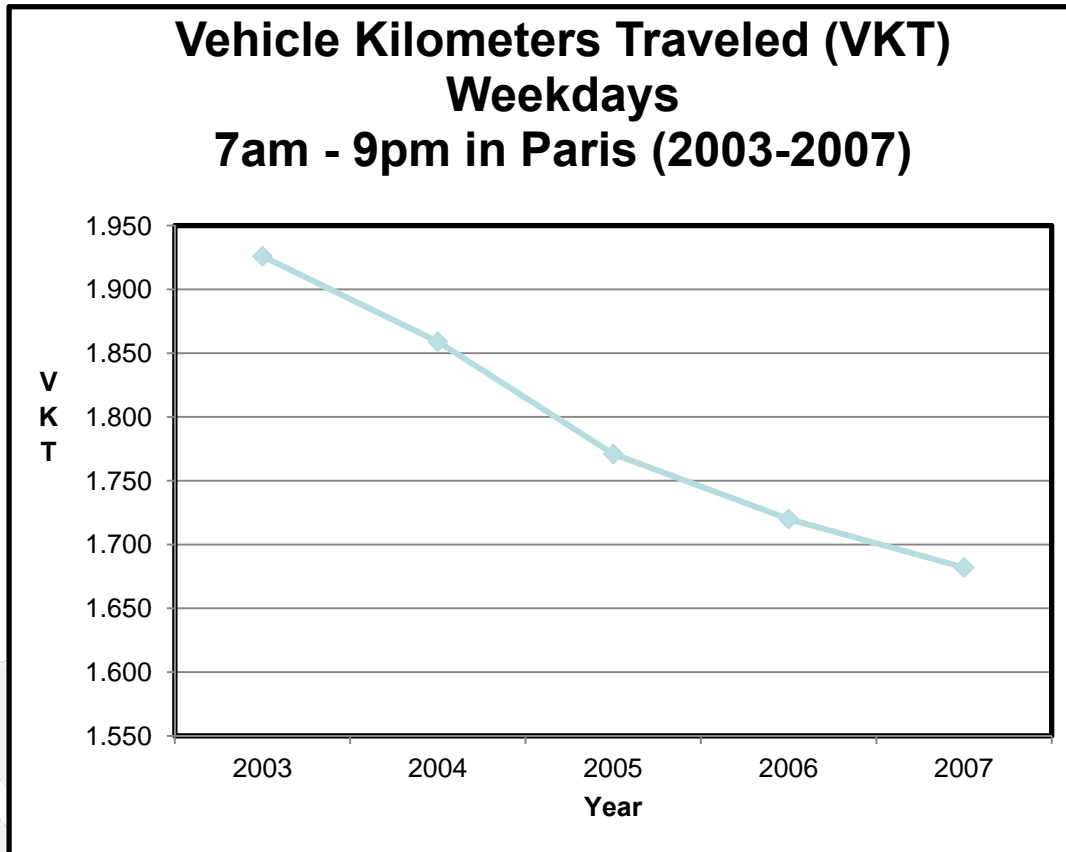


Data Source: Paris Transport and Travel Report (2007)



95% of free spots were turned into paid parking spaces

Impact of Paris Parking Reforms



- VKT: ↓ by **13%**

- Share of private vehicles in traffic: ↓ **68% to 60%**

- Cyclists shifting from car commuting: **5%**





Data Source: Paris Transport and Travel Report (2007)

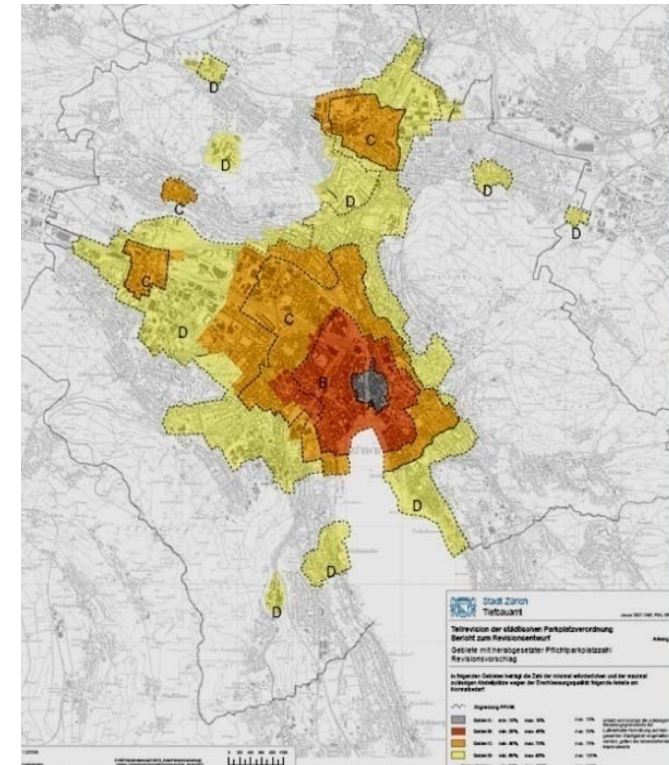


Zurich: Off-Street Parking Case Study



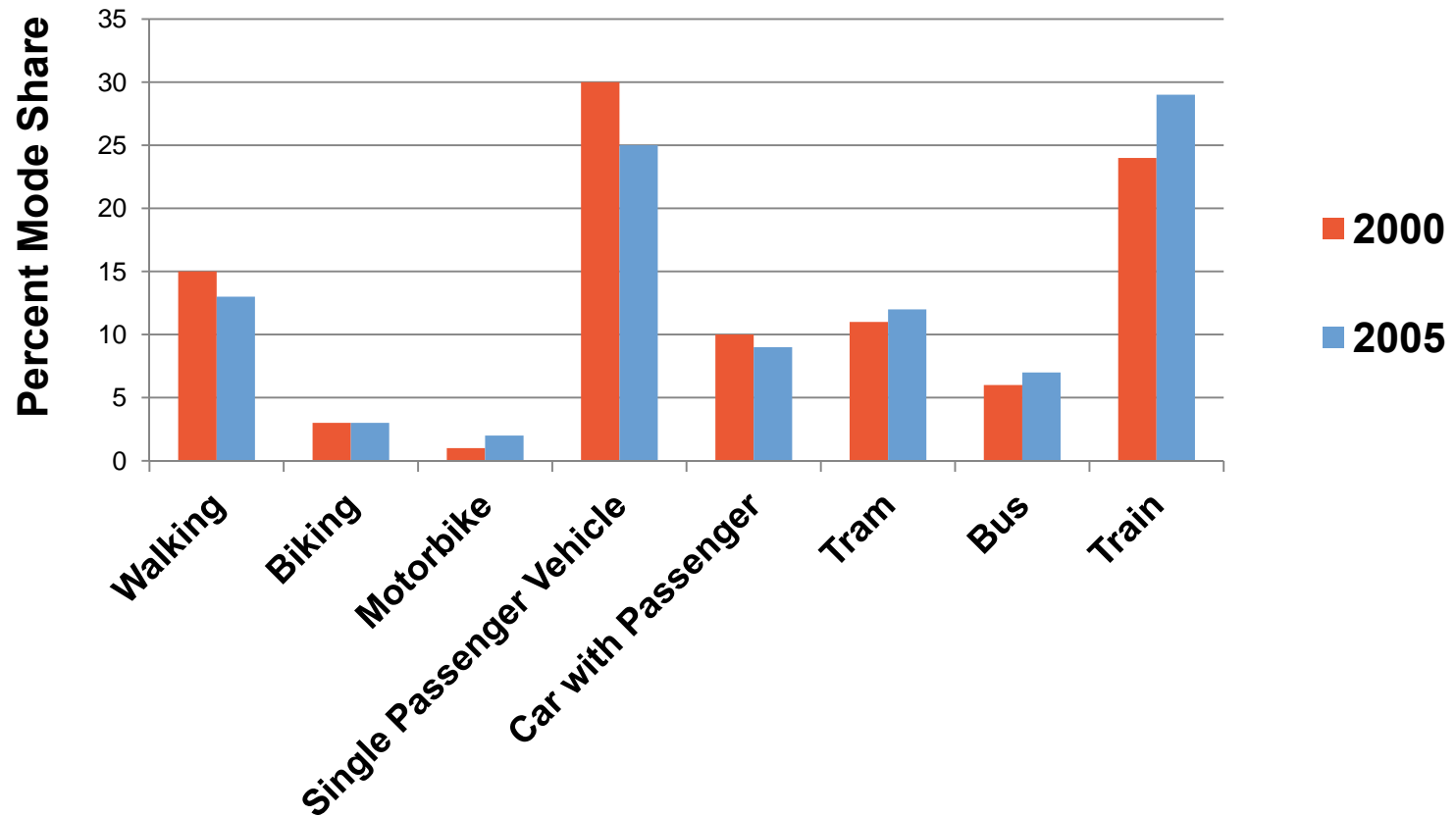
Parking Requirements Based on Access to Transit

	Area	Minimum (%)	Maximum (%)	*Maximum 2 (%)
	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 and road capacity

Zurich Mode Split Trend (2000 & 2005)





Street Design



Play Street



Antwerp, Belgium



Copenhagen, Denmark



Parking Protected Cycle Path



Munster, Germany

“Park Once” Facility at Multi-Modal Station



Hamburg, Germany (Altona District)

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