



Universität für Bodenkultur Wien  
Department für Raum, Landschaft  
und Infrastruktur  
Institut für Verkehrswesen IVe

# Urban environments promoting active travel modes

Michael **Meschik**

[michael.meschik@boku.ac.at](mailto:michael.meschik@boku.ac.at)



EUROPEAN CITIES AND REGIONS NETWORKING  
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# Good conditions for active modes

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**Infrastructure** for walking & cycling **important**, but –  
**additional measures** (e.g. **soft policies**) **indispensable**.

## Issues to be solved:

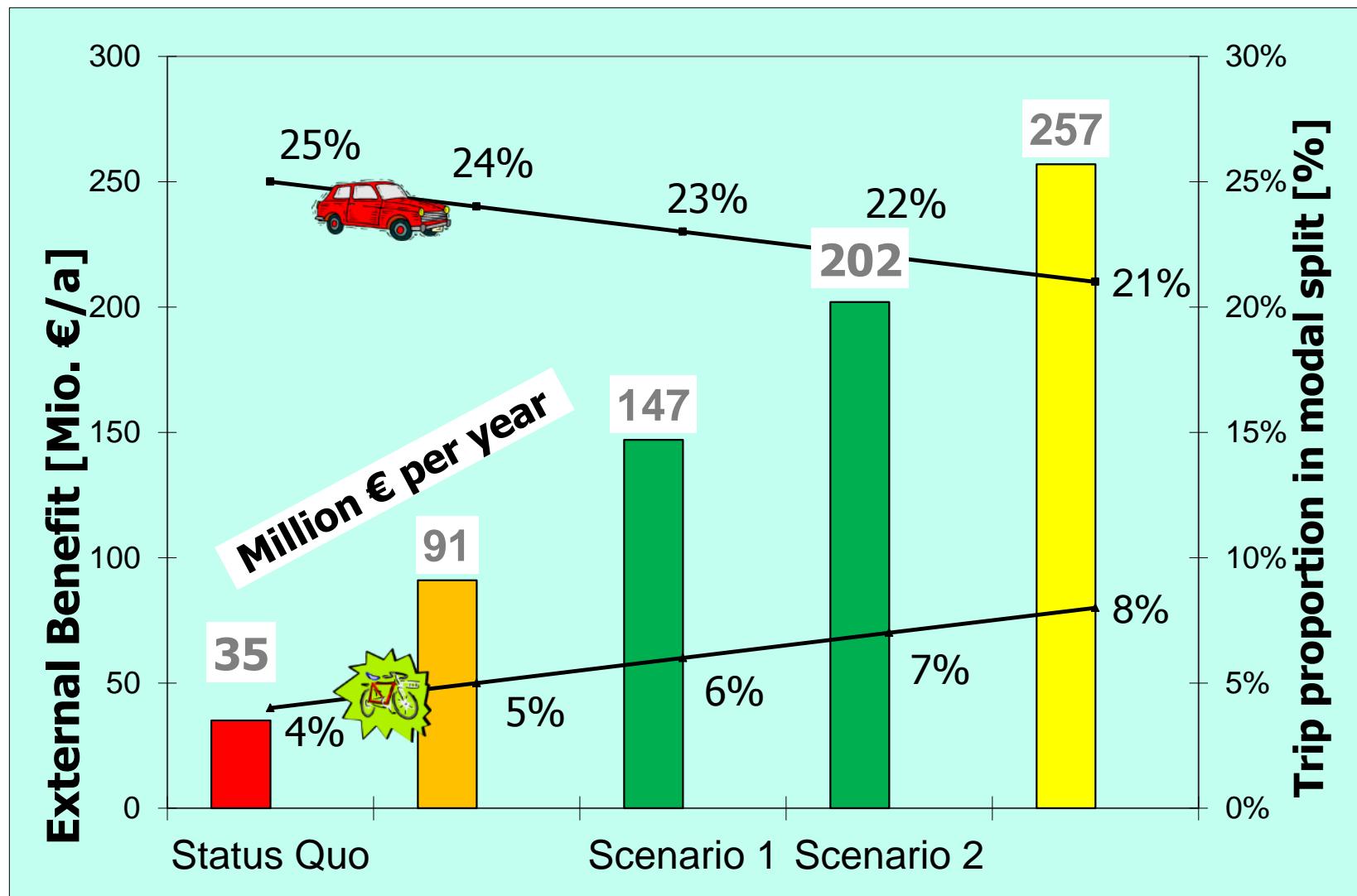
- **traffic safety** (active modes fear reckless/speedy drivers)
- **enjoyable, secure surroundings**
- **bicycle parking** and **theft/vandalism protection**
- **allow independent mobility**  
→ crucial for children's development.
- 50% of inner city-car trips < 5km  
**shift short trips: car → walking/bicycle**
- longer trips: **car → active modes & public transport**

# Bicycle (benefit) vs car (loss) for the overall economy

Indicator [€-ct/km]	Internal		External		Total	
	Bicycle	Car	Bicycle	Car	Bicycle	Car
Health	-	-	89.89	-	89.89	-
Noise	-	-	-	-1.02	-	-1.02
Accidents	-6.29	-1.44	-8.42	-1.85	-14.71	-3.29
Running costs	-10.20	-38.30	-	-	-10.20	-38.30
Travel time	-66.53	-54.29	-	-	-66.53	-54.29
Pollutants	-	-	-	-0.63	-	-0.63
CO <sub>2</sub>	-	-	-	-0.85	-	-0.85
<b>TOTAL</b>	<b>-83.02</b>	<b>-94.03</b>	<b>81.47</b>	<b>-4.35</b>	<b>-1.55</b>	<b>-98.38</b>
<b>DIFFERENCE bicycle-car</b>	11.01		<b>85.82</b>		96.83	

[Vienna 2009, €-ct per km], Source: Trunk G. (2011)

# Changing modal split – resulting external benefit



[Vienna, Million € per year], Source: Trunk G. (2011)

# Built environment <-> active modes

**5% increase in walkability** (land use mix, street connectivity, net residential density, and retail floor area ratios)  
**associated with** (Frank et al. 2006):

- **+ 32.1% time spent per capita in physically active travel,**
- **0.23-point reduction in body mass index,**
- **– 6.5% vehicle miles traveled,**
- **– 5.6% NOx and 5.5% VOC emitted**

## Germany vs U.S. (30 minutes of daily active travel)

(Buehler et al. 2011):

- **five times higher** for **seniors** (34.3% vs 6.3%) and
- **more than three times as high** for **children** (30.3% vs 8.6%) and **women** (29.3% vs 8.2%)
- **active travel results from promotion programs:** increase costs of driving, restrict car use/parking in cities, while simultaneously improve the safety/convenience of walking & cycling.

# We need proper conditions for walking ...



Brussels 2009, Havenlaan

# We need to take cyclists seriously ...

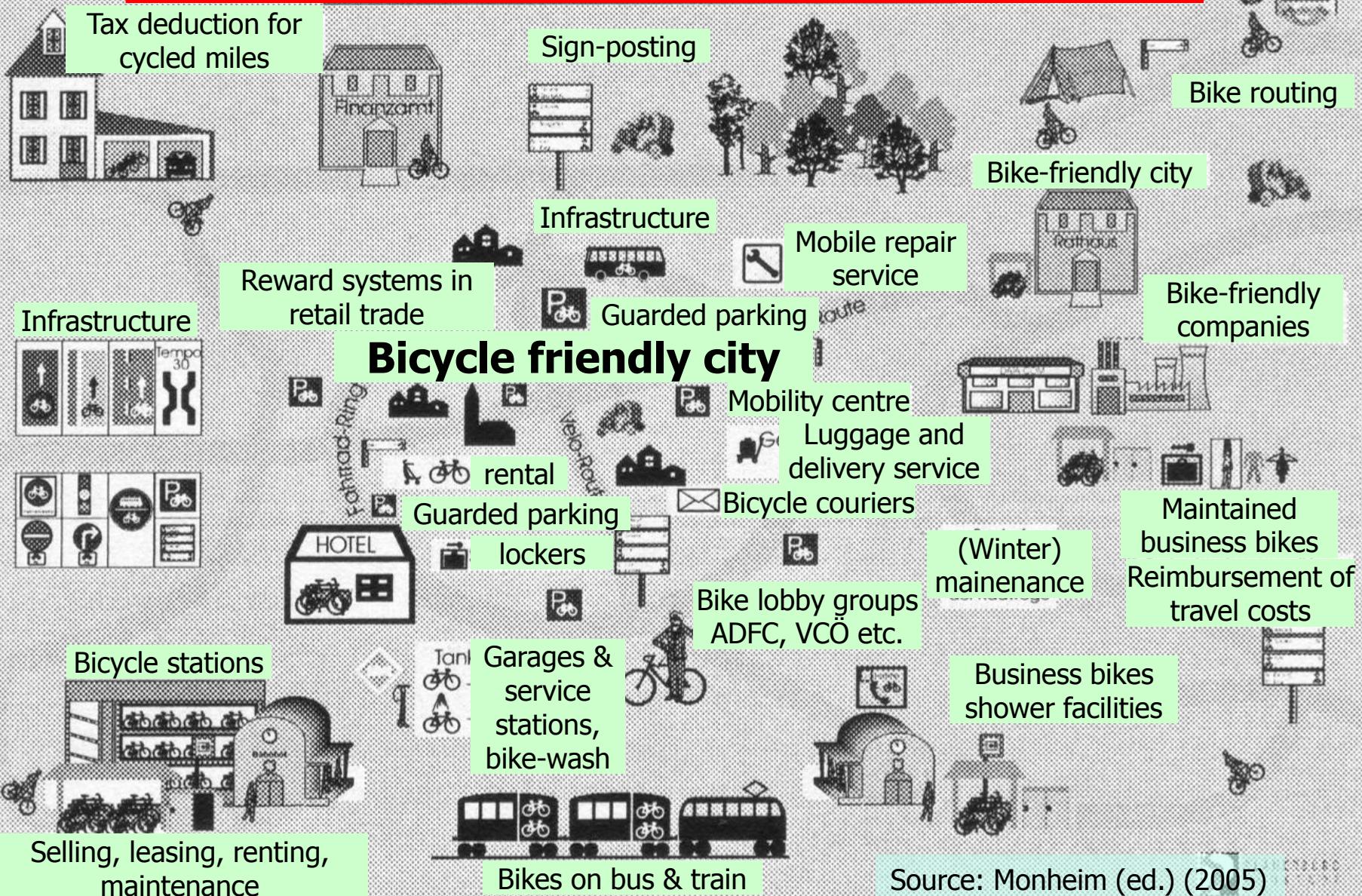


Source: Vienna 2005



Source: (?) New York

# Bicycle traffic as a life style (R. Monheim)



# References

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