



Experiences in alternative (public) transport solutions for the city of Bremen

Michael Glotz-Richter

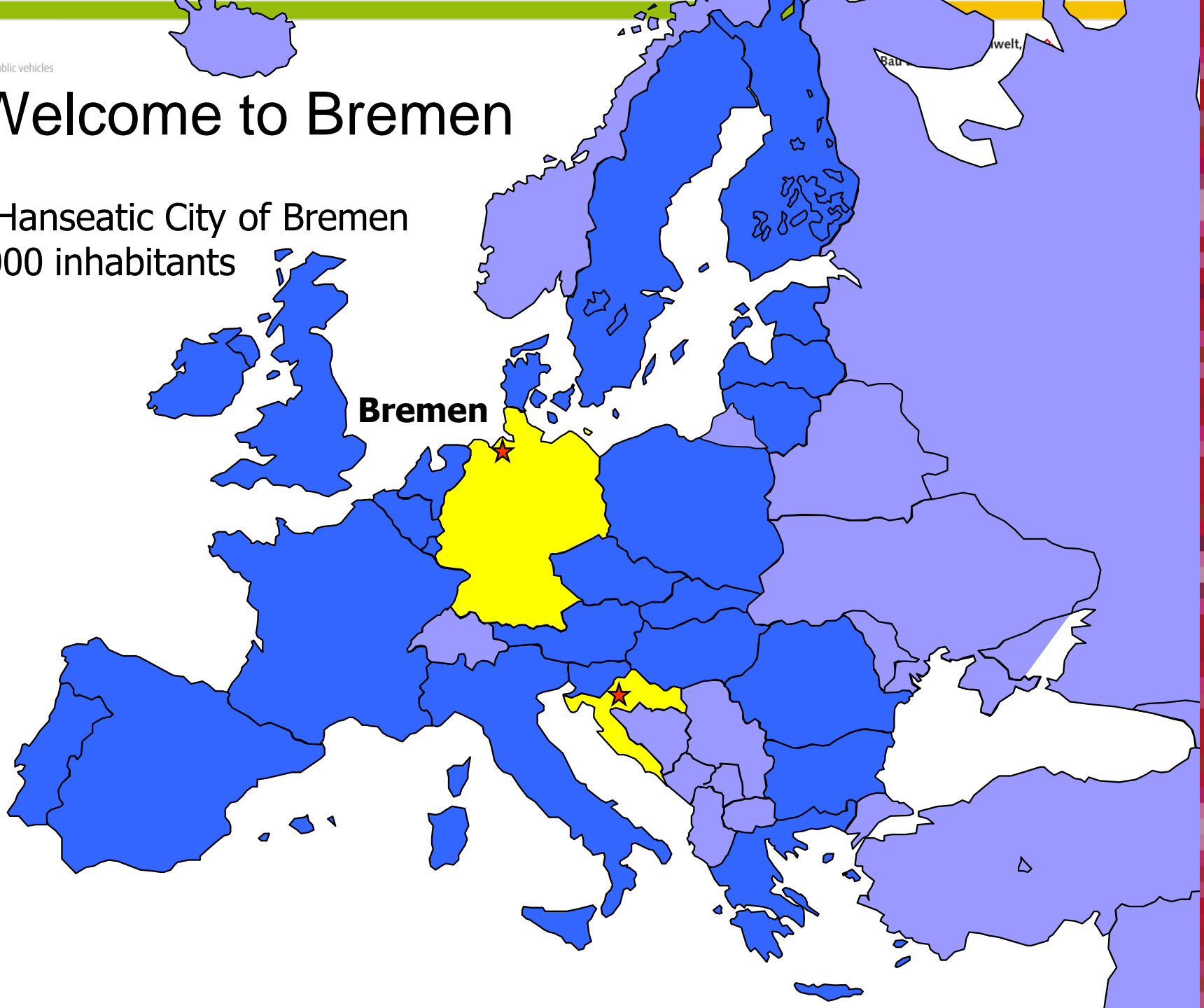
Free Hanseatic City of Bremen
Senate Department for Environment,
Construction and Transport

Der Senator für Umwelt,
Bau und Verkehr



Welcome to Bremen

Free Hanseatic City of Bremen
548.000 inhabitants



Welcome to Bremen



548,000 inhabitants

Welcome to Bremen

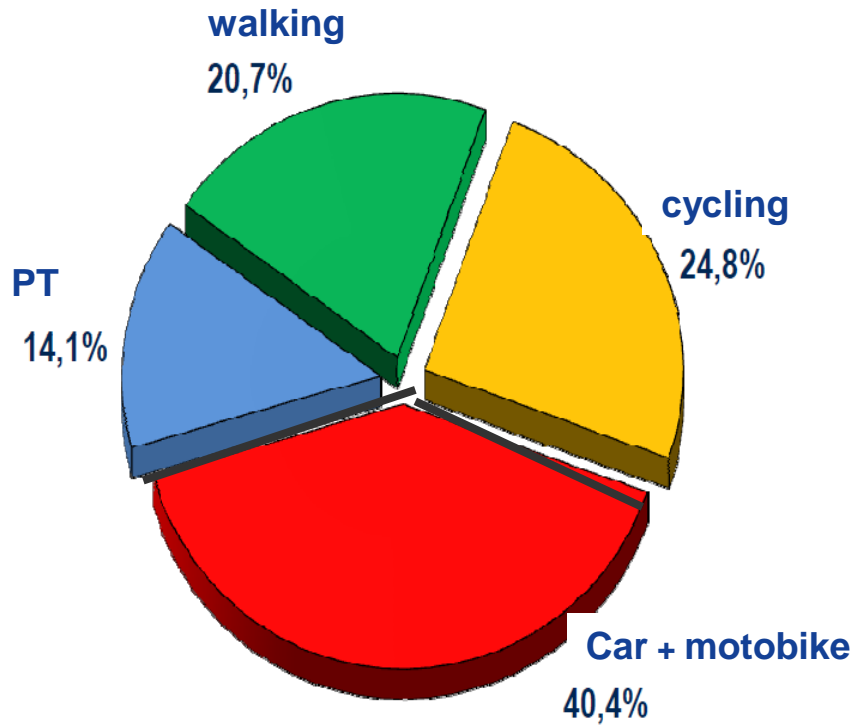


Welcome to Bremen



Modal Split Bremen

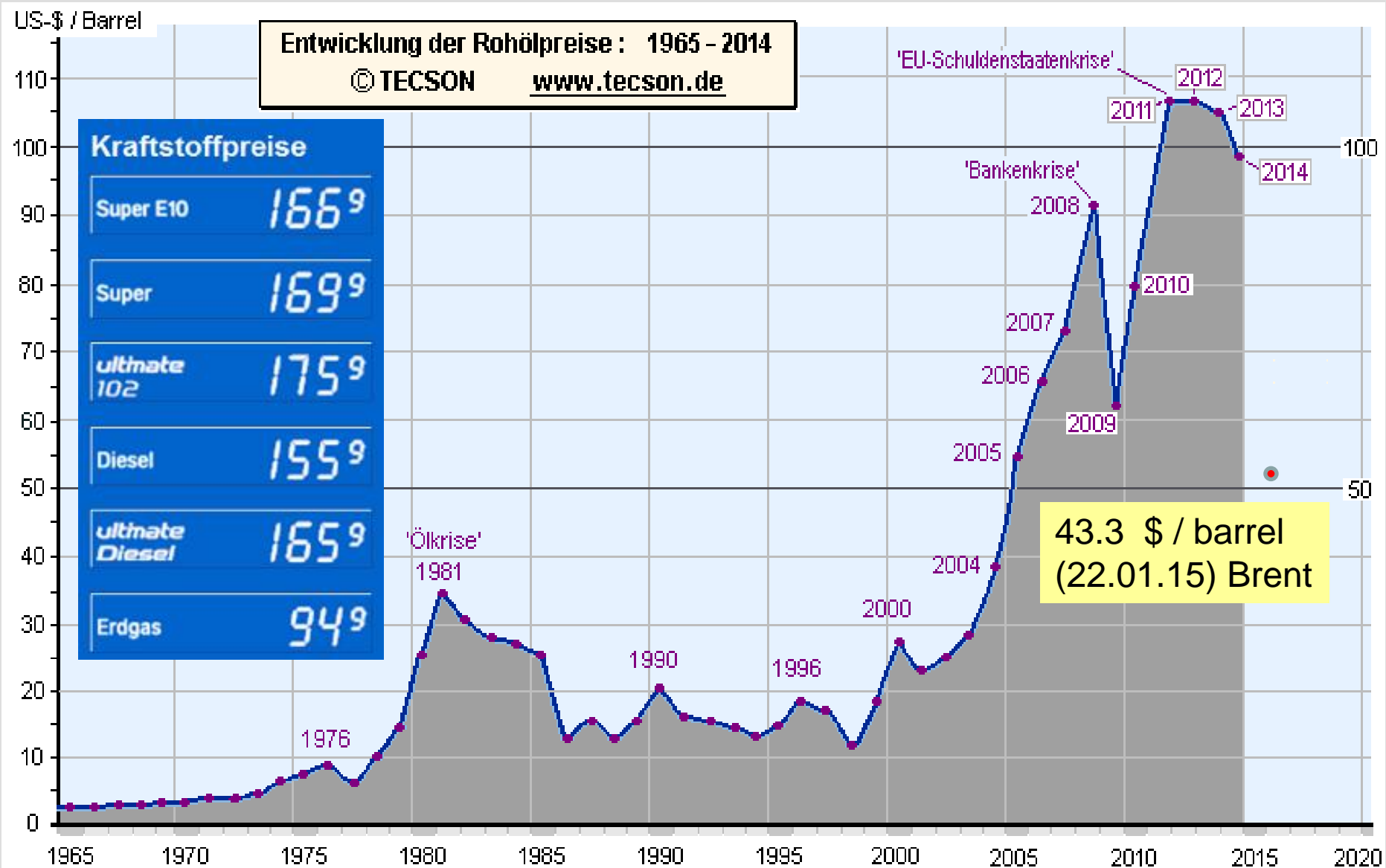
All trips
of all Bremen citizens



Source: SrV 2008



transport – the oil problem

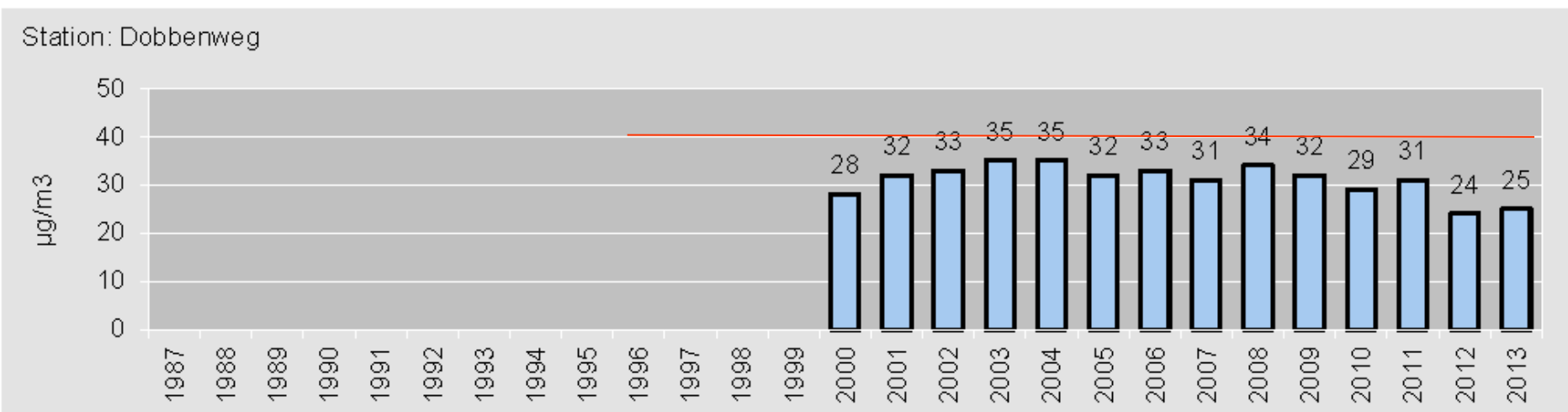
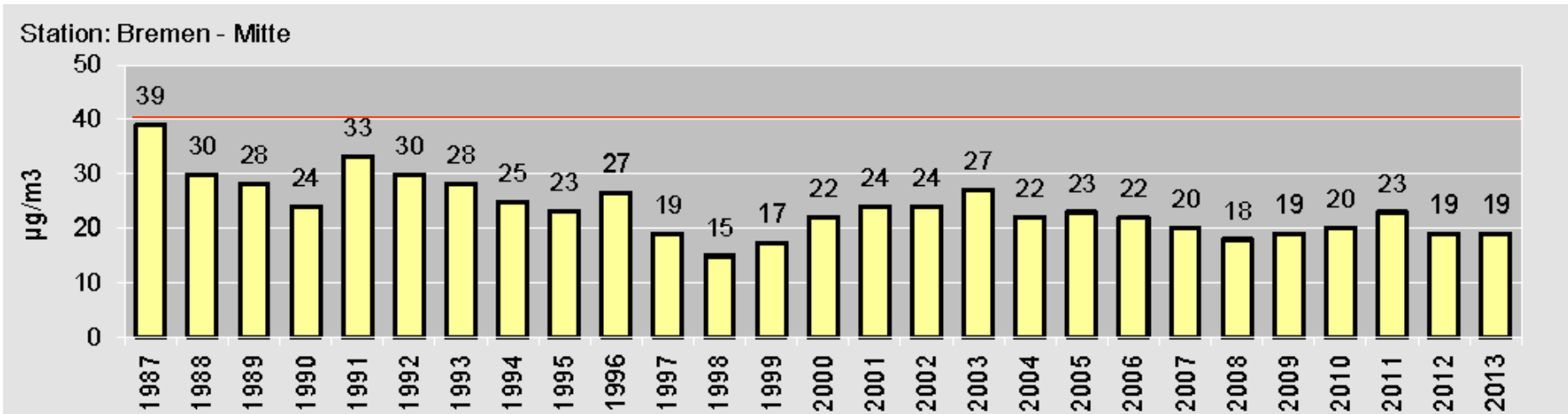


Air Quality Problems



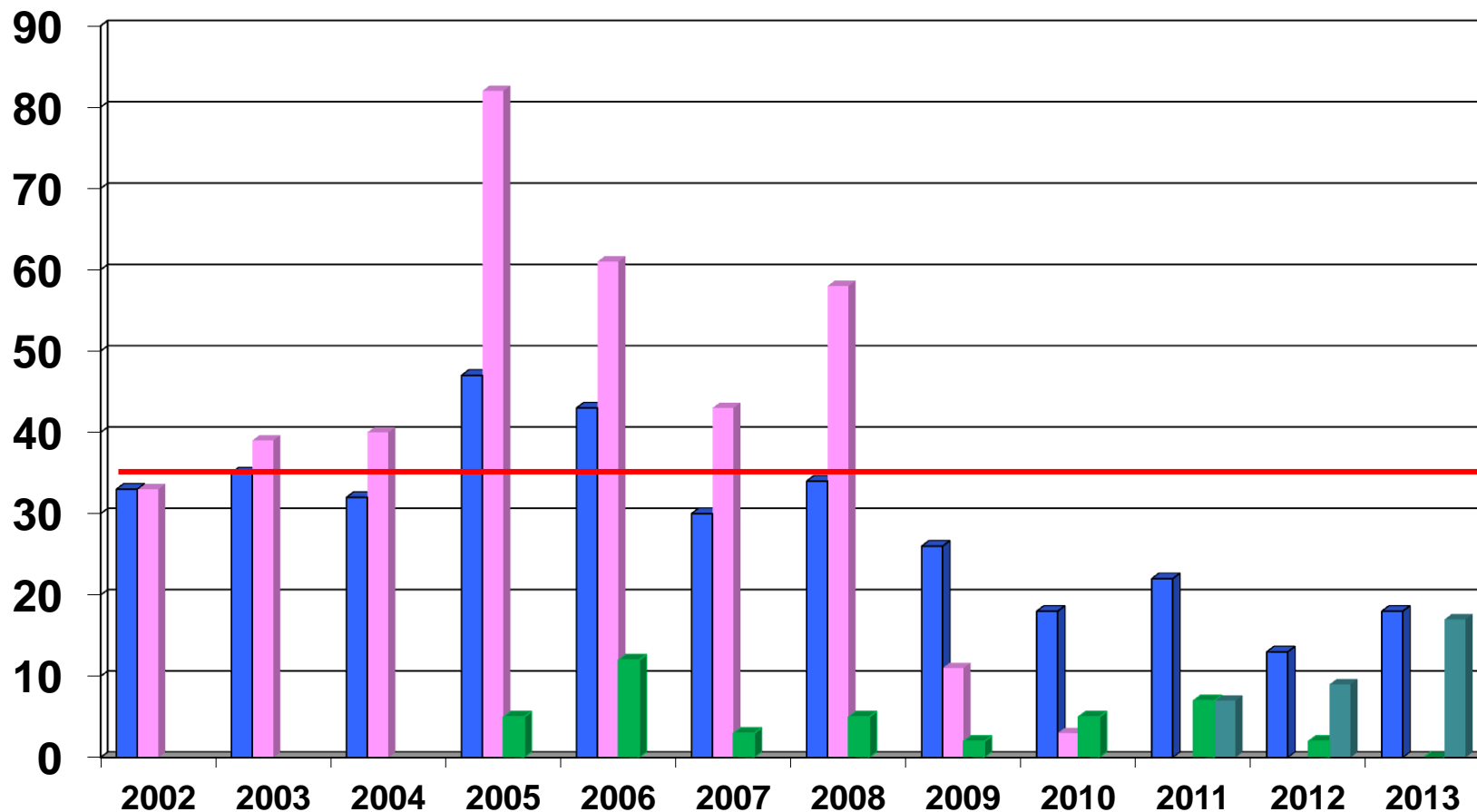
Air Quality Monitoring

concentration level: PM₁₀



concentration level: PM₁₀

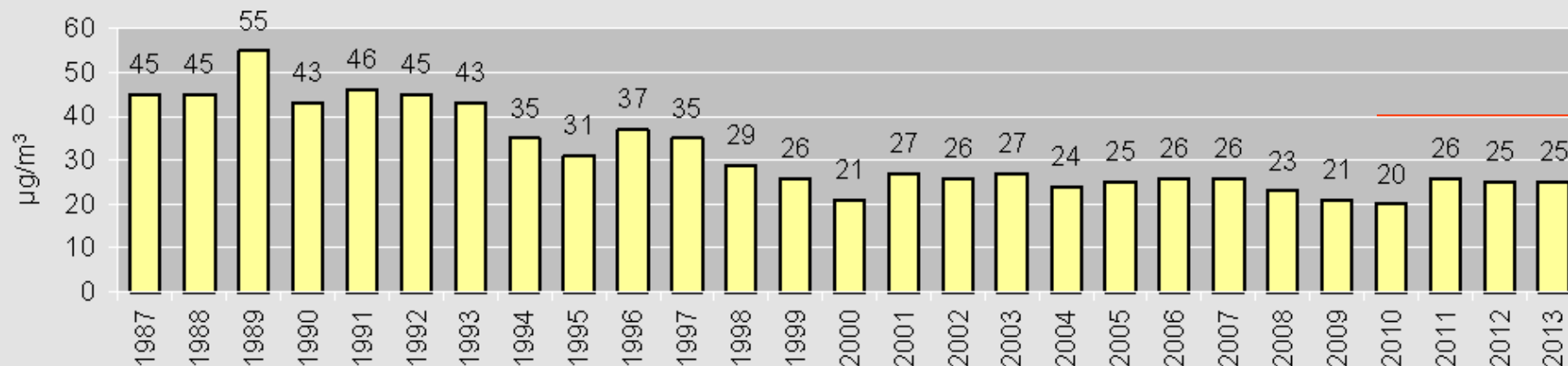
Number of days exceeding 50 µg/m³



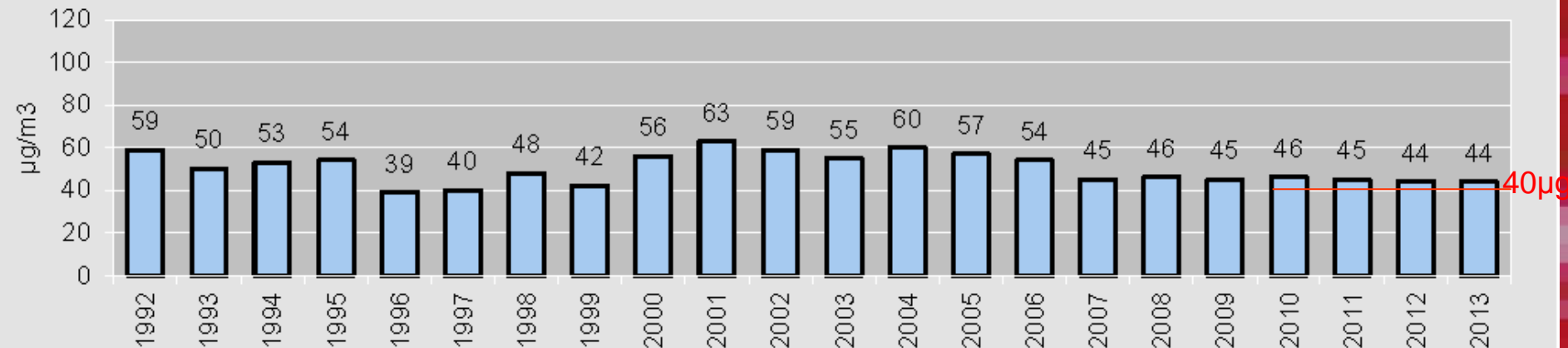
■ Am Dobben ■ Neuenlander Str. ■ Mitte ■ Nordstr.

concentration level: NO₂

Station: Bremen - Mitte



Station: Dobbenweg



„heavy smokers“



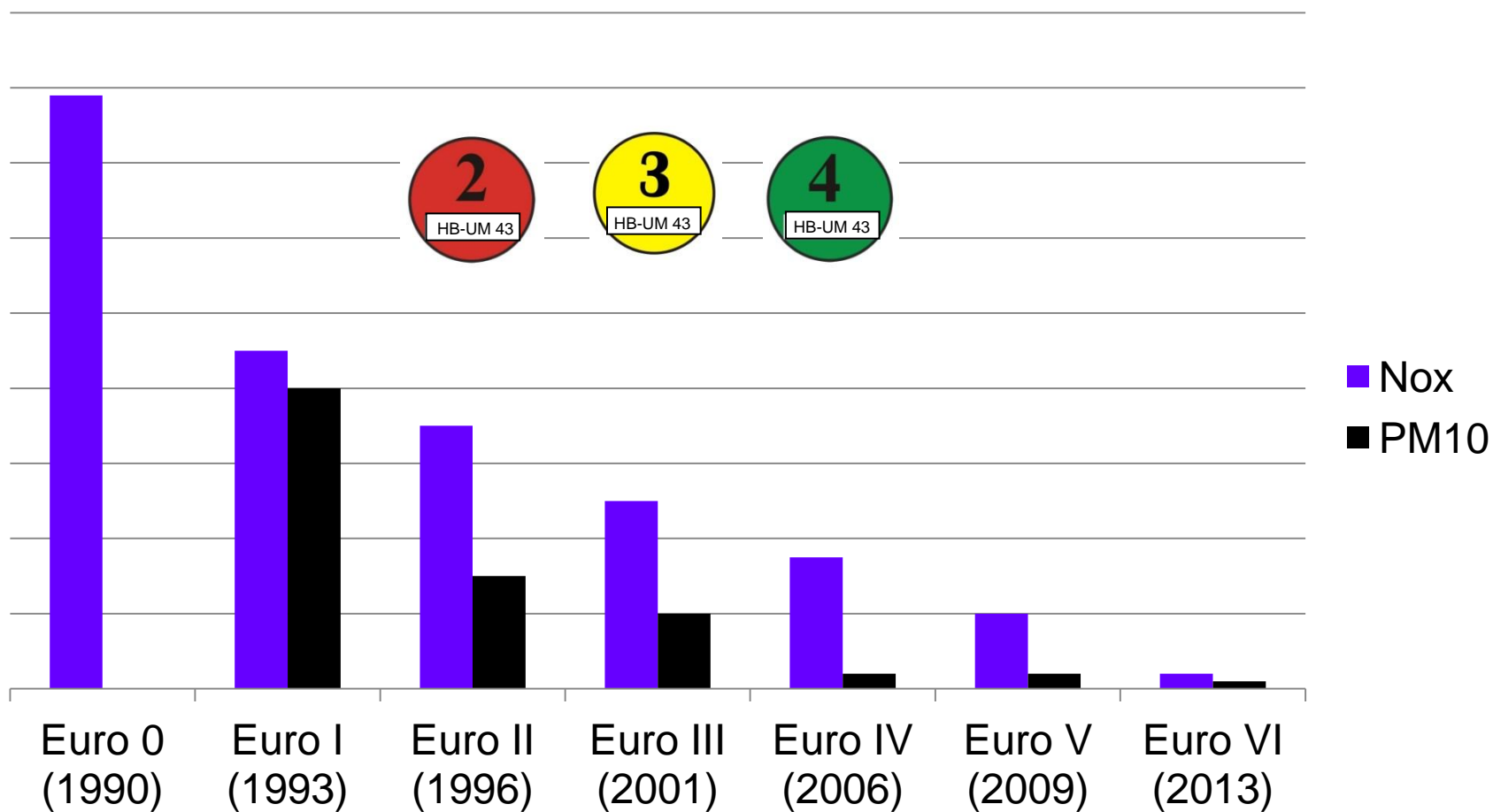
Labelling cars



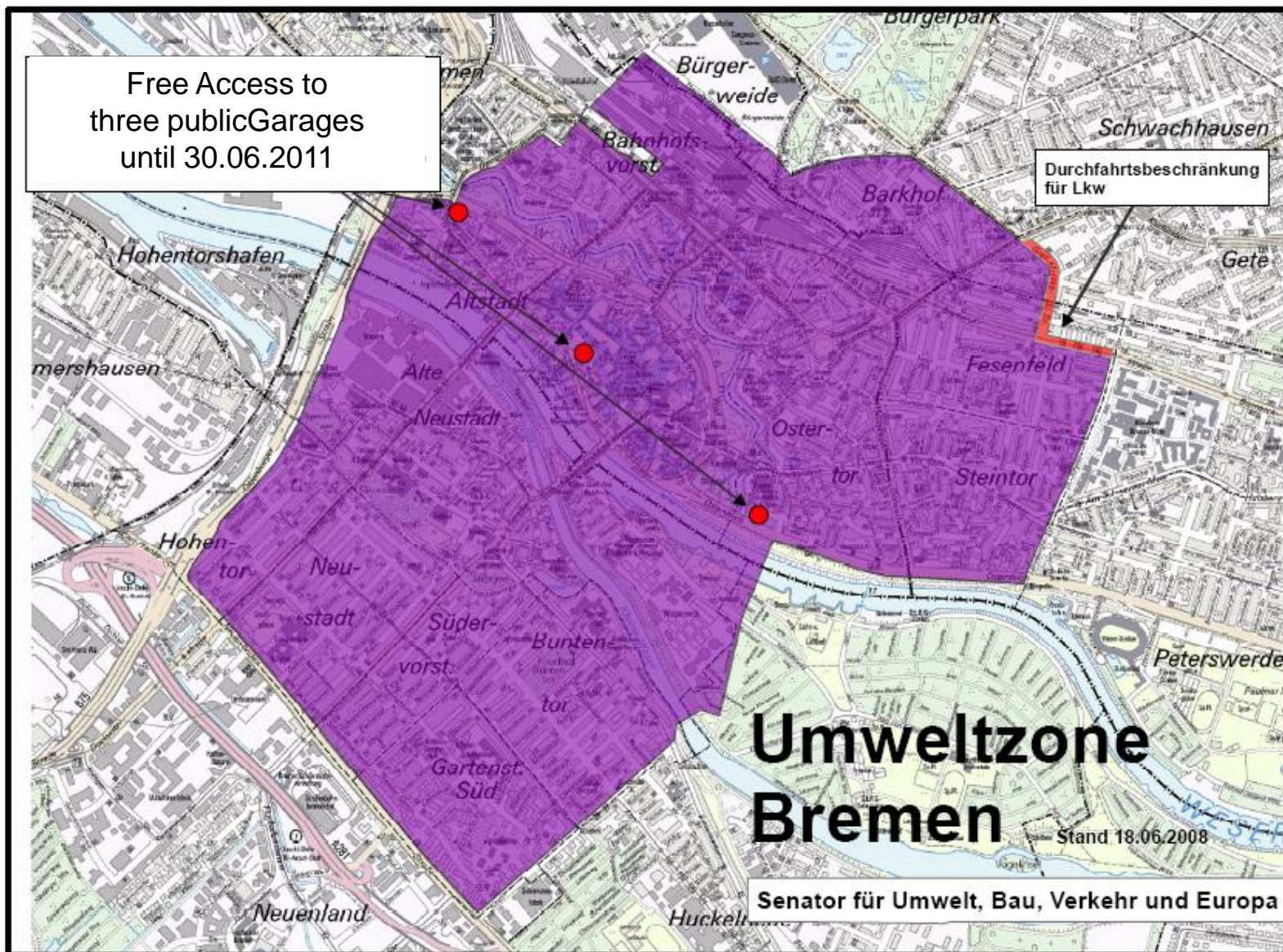
German regulation:
Labelling according
emission standard
(vehicle licence)



Emission standards HDV



Clean Zone



area:
7 km²

Clean Zone – 1st phase (start 01/2009)



Banned:
Diesel < Euro 2
Petrol < Euro 1

Clean Zone – 2nd phase (start 01/2010)



Banned:
Diesel < Euro 3
(or Euro 2 + filter)
Petrol < Euro 1

Clean Zone – 3rd phase (start 07/2011)



Banned:
Diesel < Euro 4
(or Euro 3 + filter)
Petrol < Euro 1

Private (motorised) vehicles

	2-strokers	private cars	company cars	municipal cars
number	low	high	high	low
env impact per vehicle	Very high	medium	medium	medium
total impact	low	high	high	low
technical options		in development	in development	in development
influence of municipality	low	low	low	high

Clean Cars: e.g. electric



electric cars



electric vehicles (municipal fleet)



Others talk about it...
...we try it out!

Commercial vehicles

	delivery vehicles	trucks
number	medium	low
env impact per vehicle	high	high
total impact	high	high
technical options	in development	not really
influence of municipality	low	low

Promoting clean vehicles



Clean delivery vehicles (CNG program)



Public transport / services

	PT buses	waste collectors
number	low/medium	low / medium
env impact per vehicle	high	high
total impact	high	high
technical options		in development
influence of municipality	high	high

Tram city



Tram city (?)

Supplementary bus network



Annual consumption: 8,000,000 litres Diesel

CO₂ emission: 22,000 tons CO₂ p.a.

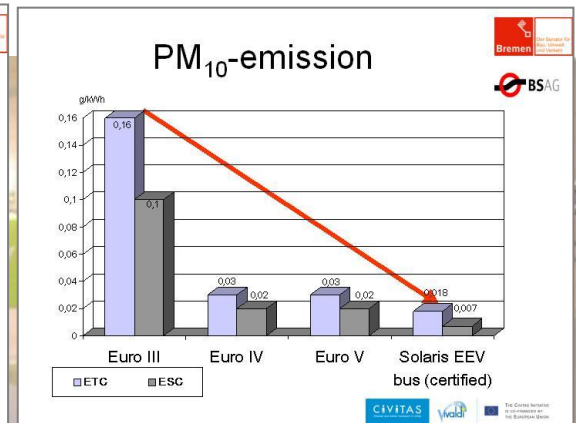
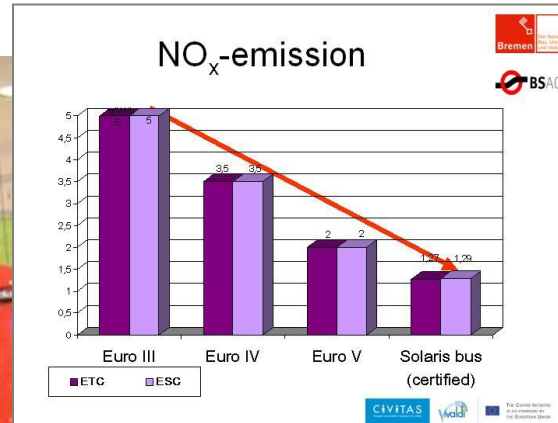
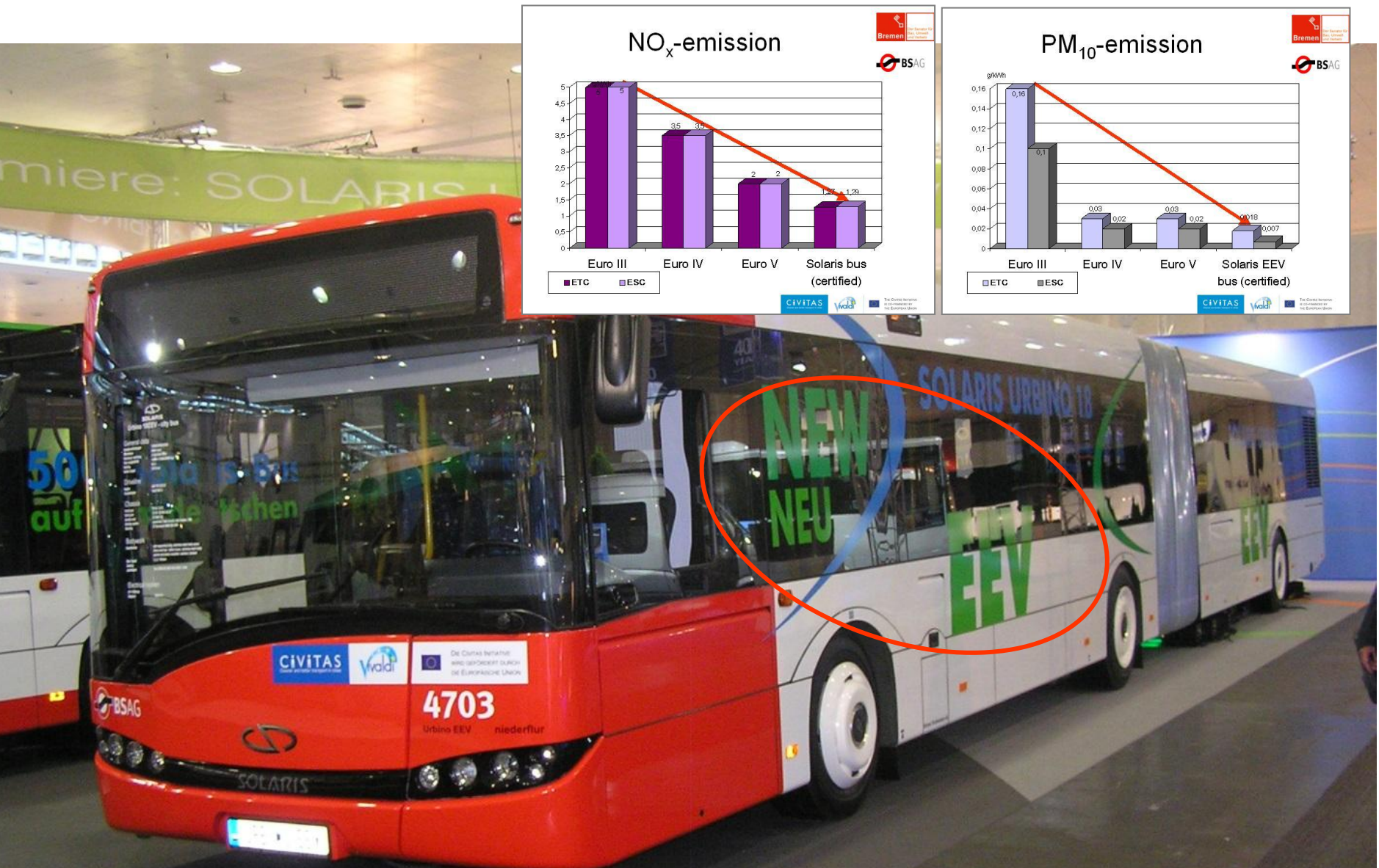
8 million litres

22,000 tons CO₂

Clean buses

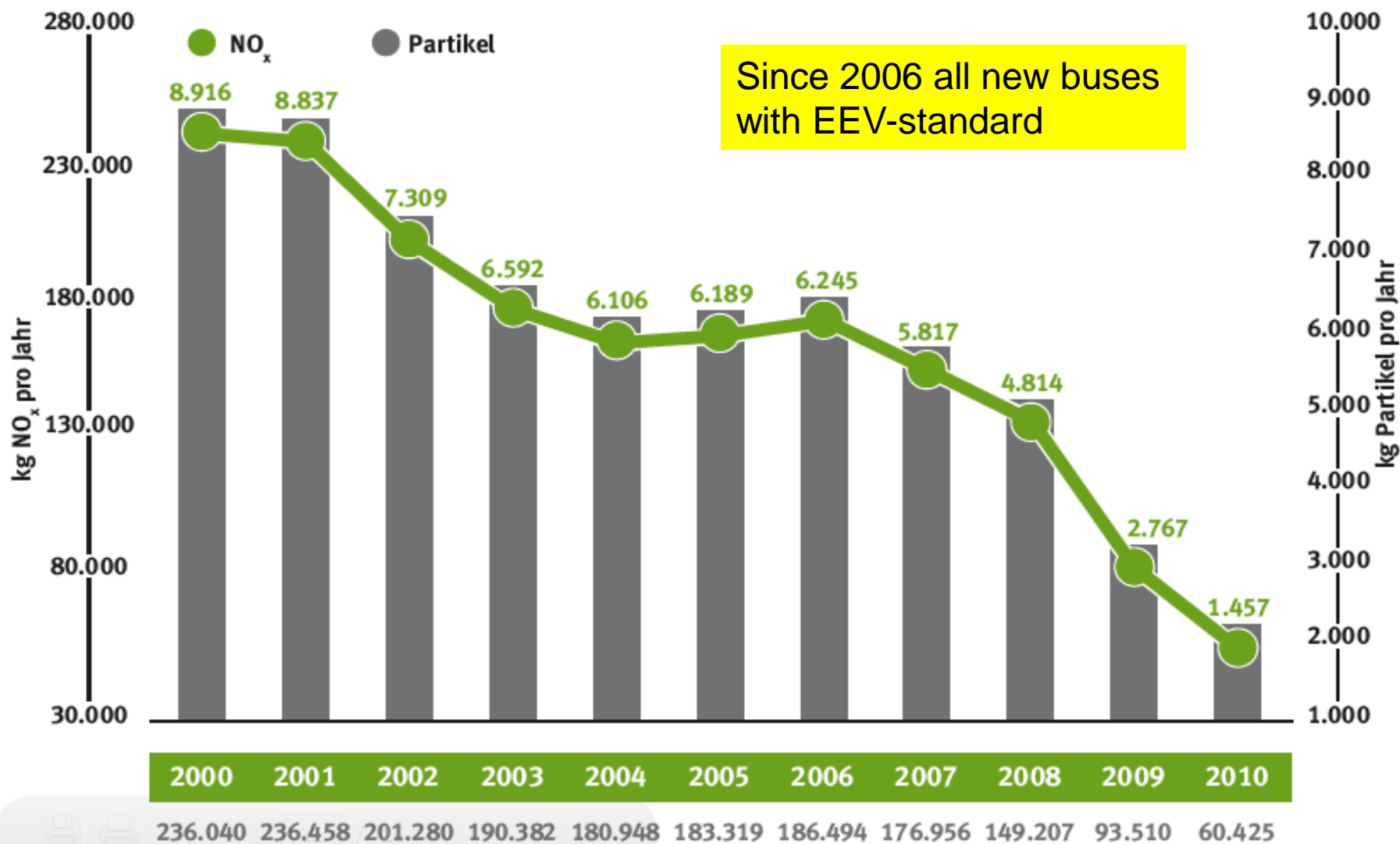


Clean buses (EEV standard / SCRT)



Emission bus fleet Bremen

PARTIKEL- UND NO_x-EMISSIONEN DER BSAG-BUSSE



Electric buses under test



Test of Rampini full electric bus (2013)

Electric buses under test



Electric buses under test



Hybrid waste collecting truck



hybrid waste truck Bremen

Hybrid waste collecting truck



Hybrid waste collecting truck



Clean vehicles and the city



... before introducing e-cars...



...after introducing e-cars...

Priority:

Clean modes of transport

Improving cycling

Bicycle as ultimate zero-emission vehicle





PT priority and extension tram



conclusions

- Highly sensitive political issue
- Environmental Zone helpful (upgrade of fleet)
- Show your own contribution (e.g. bus fleet)
- More than clean cars required (public transport, cycling, walking, car-sharing,...)
- Framework by National policy (esp. fiscal)



**Thank you for your attention
Hvala na ljubaznoj pozornosti**

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