



**CiViTAS**  
Cleaner and better transport in cities

**CATALIST**



THE CIVITAS INITIATIVE  
IS CO-FINANCED BY THE  
EUROPEAN UNION

Urban Goods Workshop  
11. Feb. 2010  
Brussels  
Thomas Kirpal, City of Bremen

## Welcome to Bremen



Thomas Kirpal,  
Project Coordinator  
Free Hanseatic City of Bremen



## Urban Goods in discussion

### Content

- “ Urban Goods traffic in Bremen
- “ Pilots and solutions
- “ Obstacles
- “ Perspectives



## Welcome to Bremen

Free Hanseatic City of Bremen  
540.000 inhabitants (city)





# Bremen

Pedestrianised  
centre



**Congestion Æ infrastructure capacity**

**Accessibility**

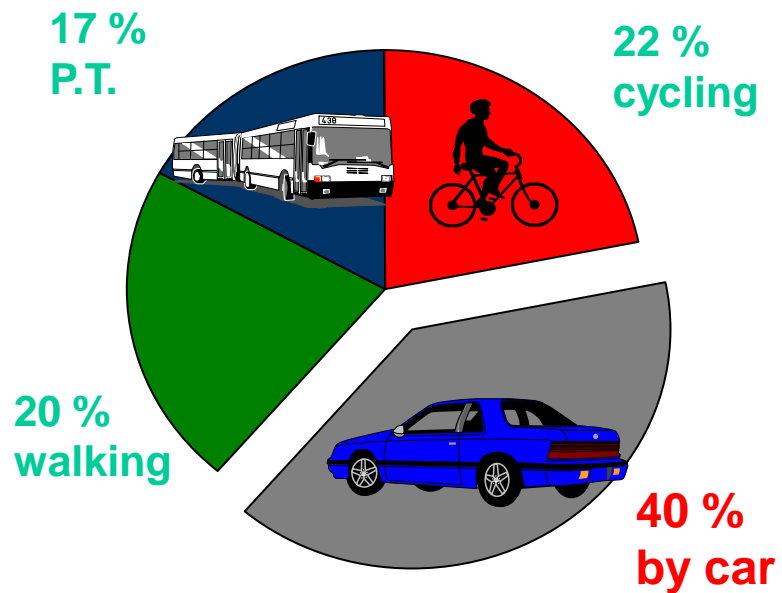
**Air Quality**



## Modal Split

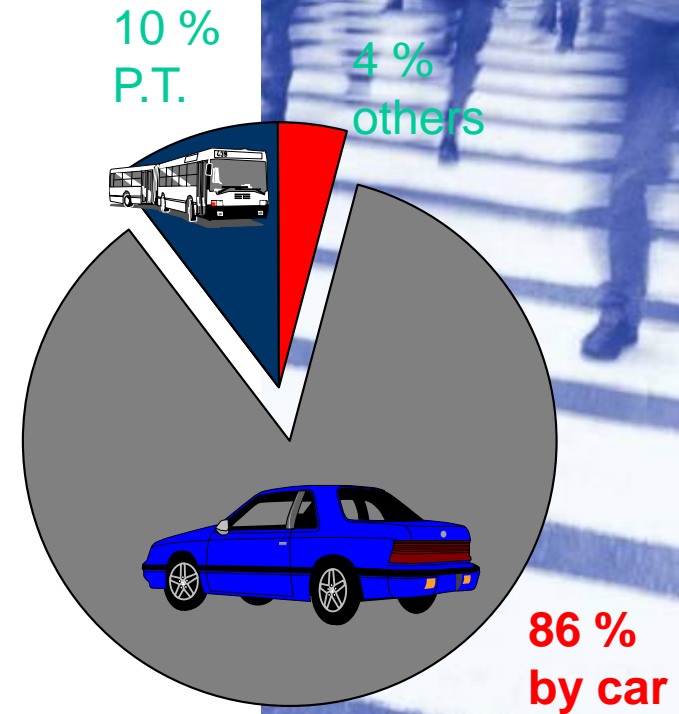
**60 % altern.  
modes**

*City Dwellers*

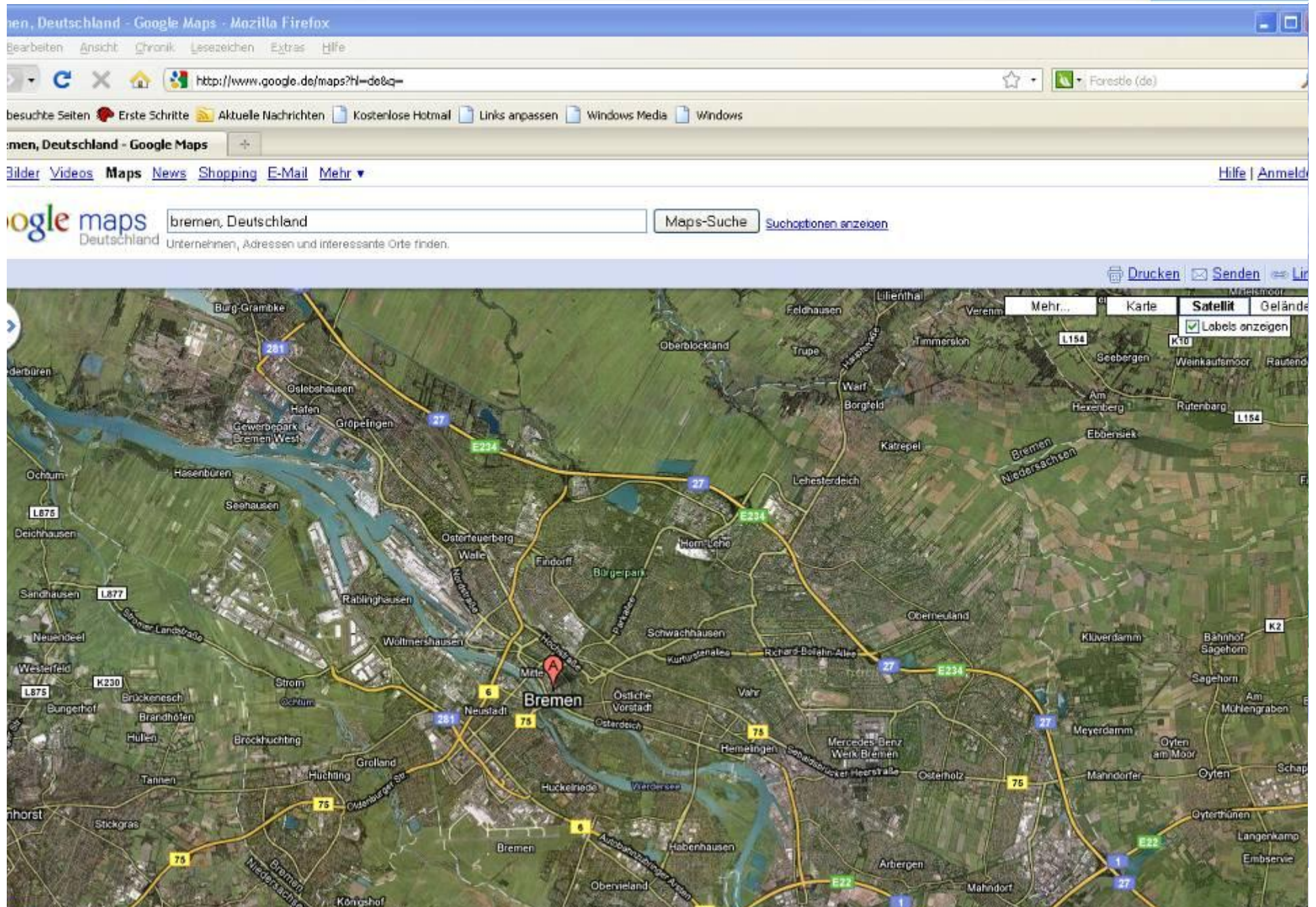


**14 % altern.  
modes**

*commuters*

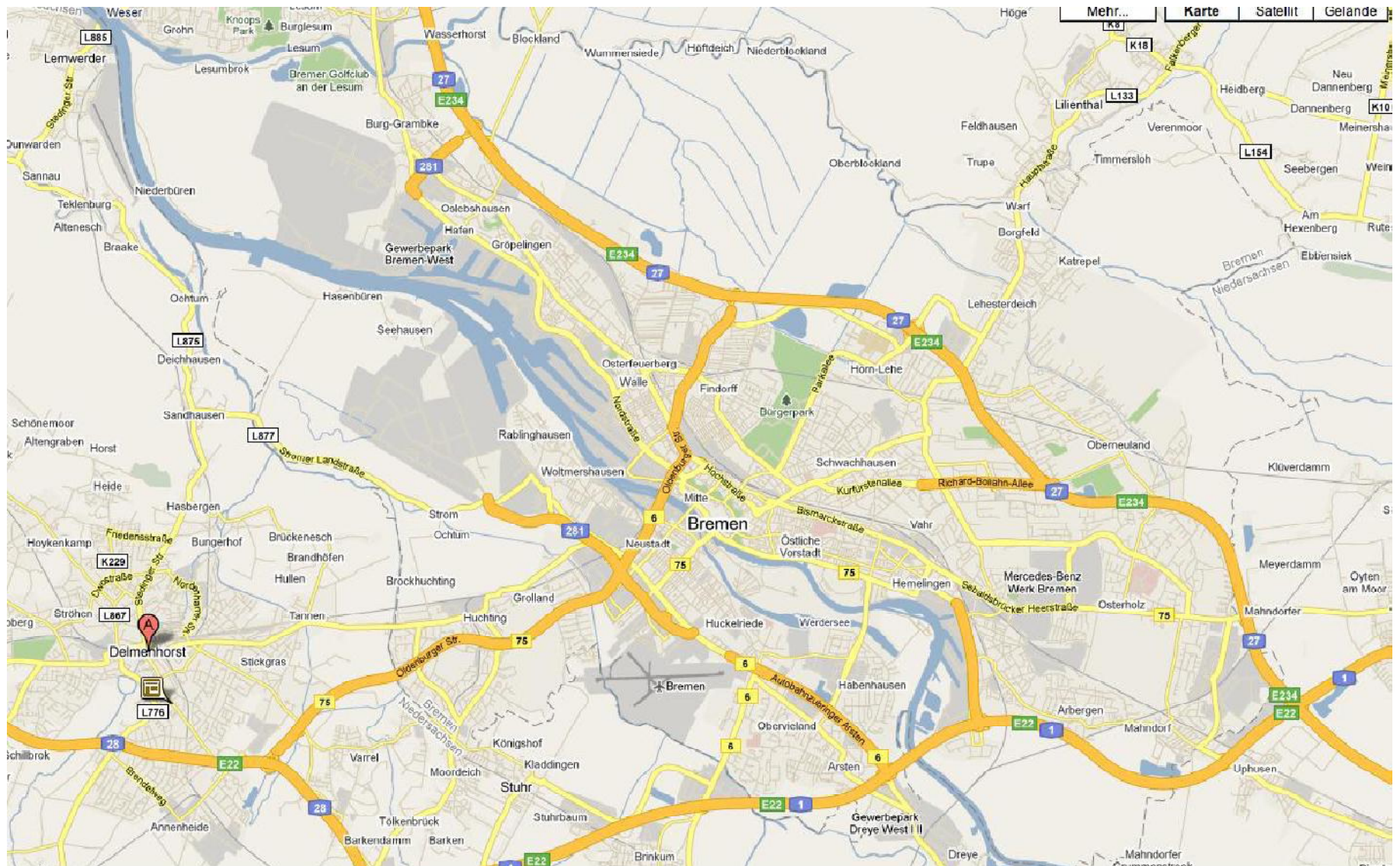








## Main road network of Bremen since 2008





## Freight Logistic Center Bremen



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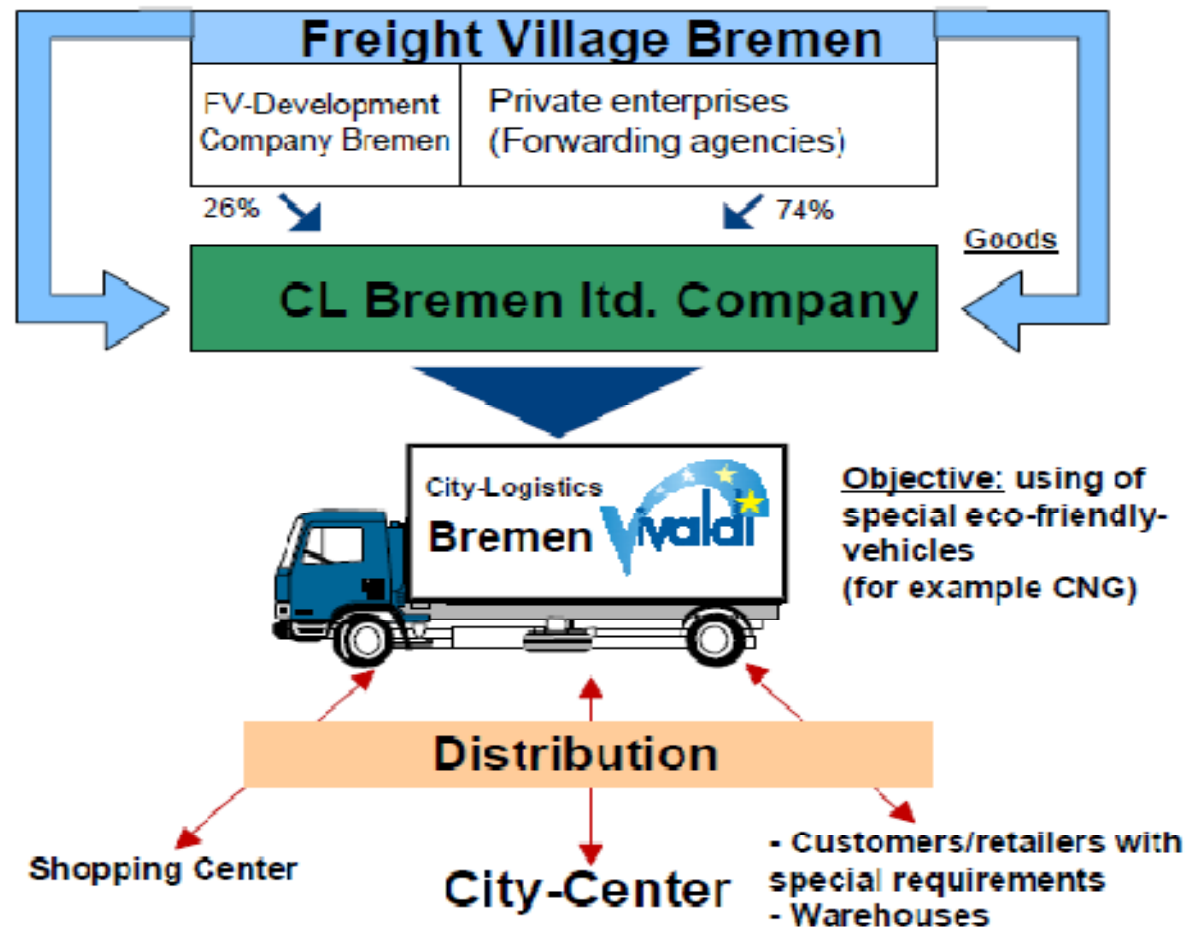


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## Original logistical concept

### CL Bremen: Organisation-structure





## Bremen

Harbour City:

freight +  
logistics



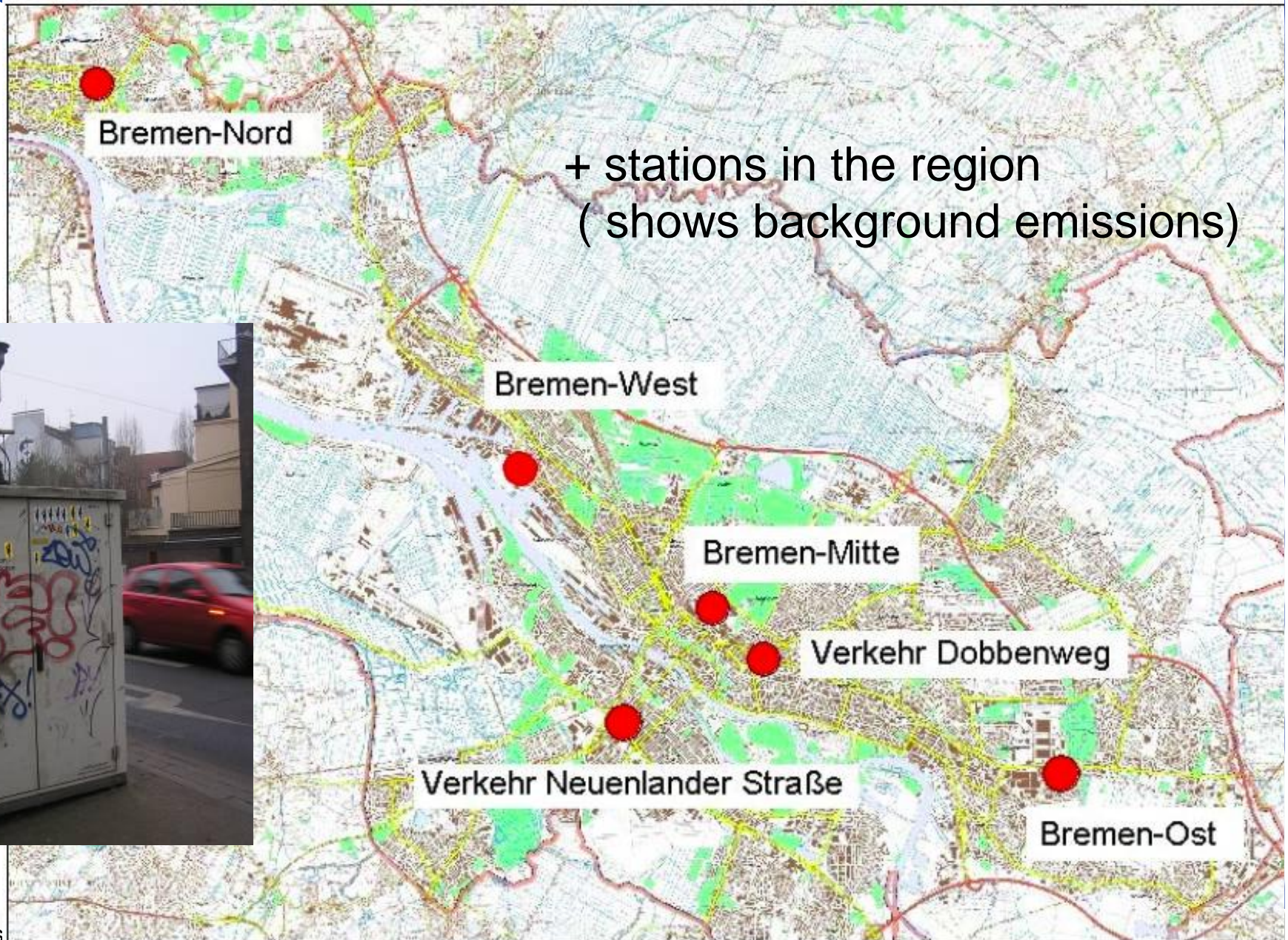


## Reality: Heavy smokers in the city center





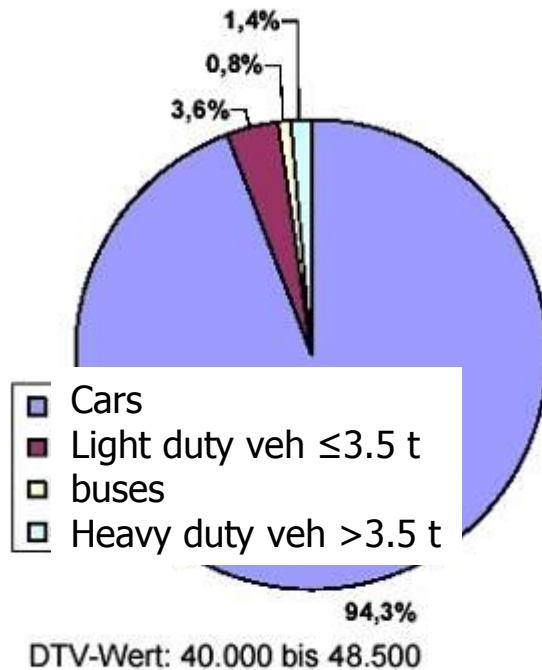
## Monitoring



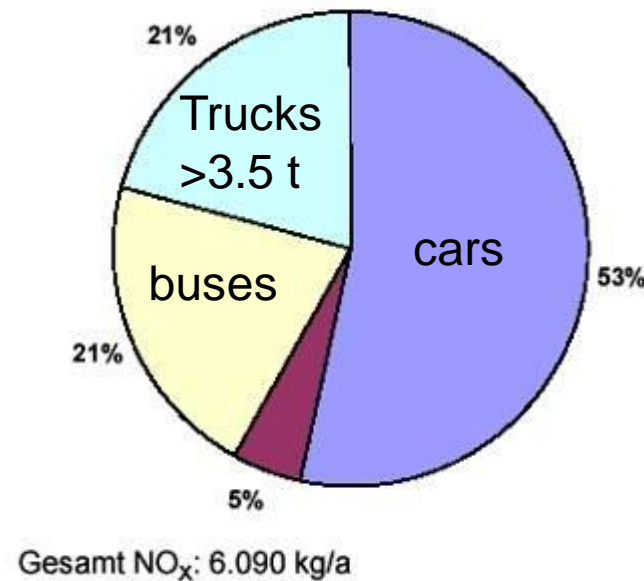


## Diesel and NOx

Anteile der Fahrzeuggruppen am Straßenverkehr



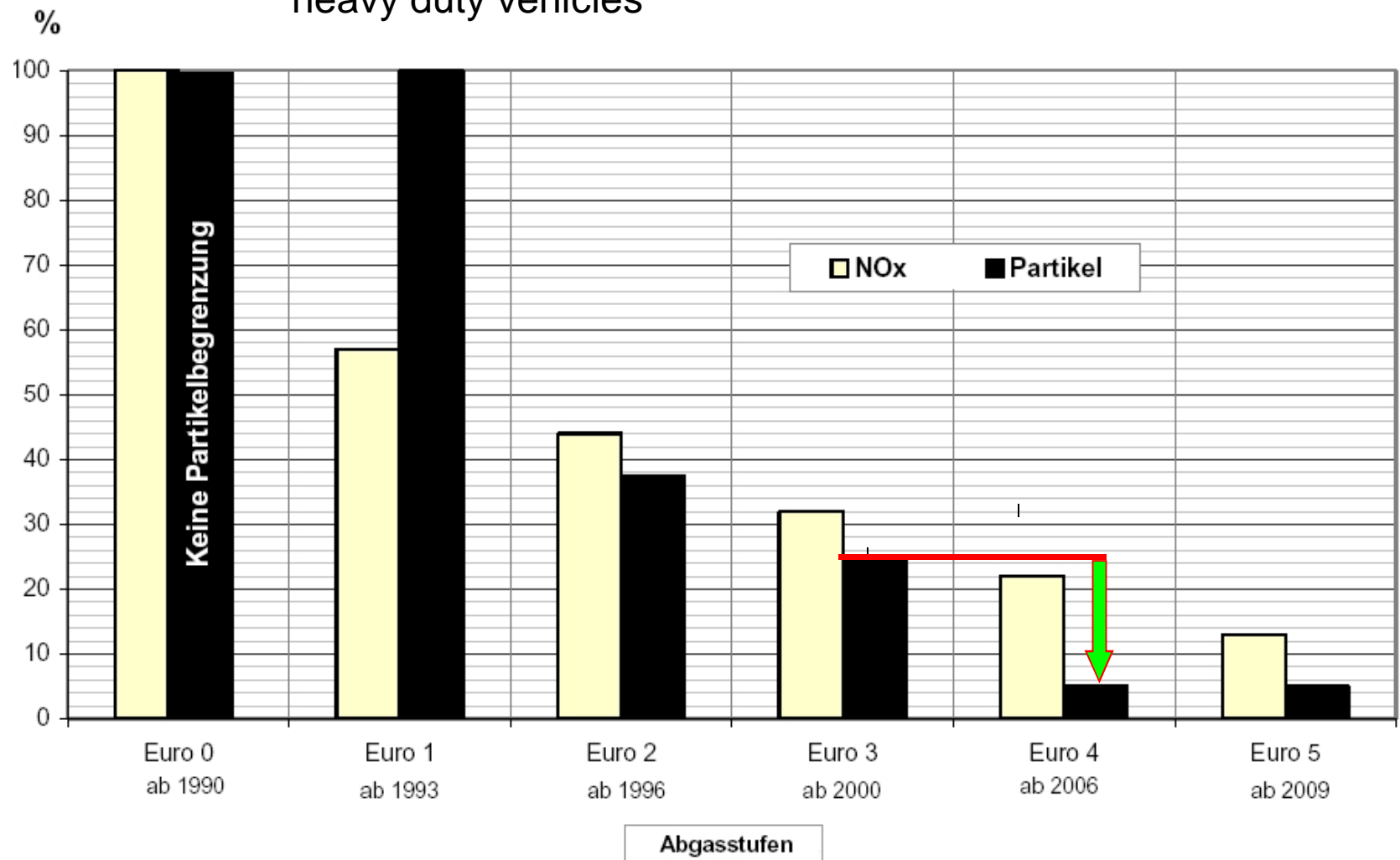
Expected NOx emissions 2010



<10 % of the vehicles cause about 50% of NOx emissions !!!

## Emission standards

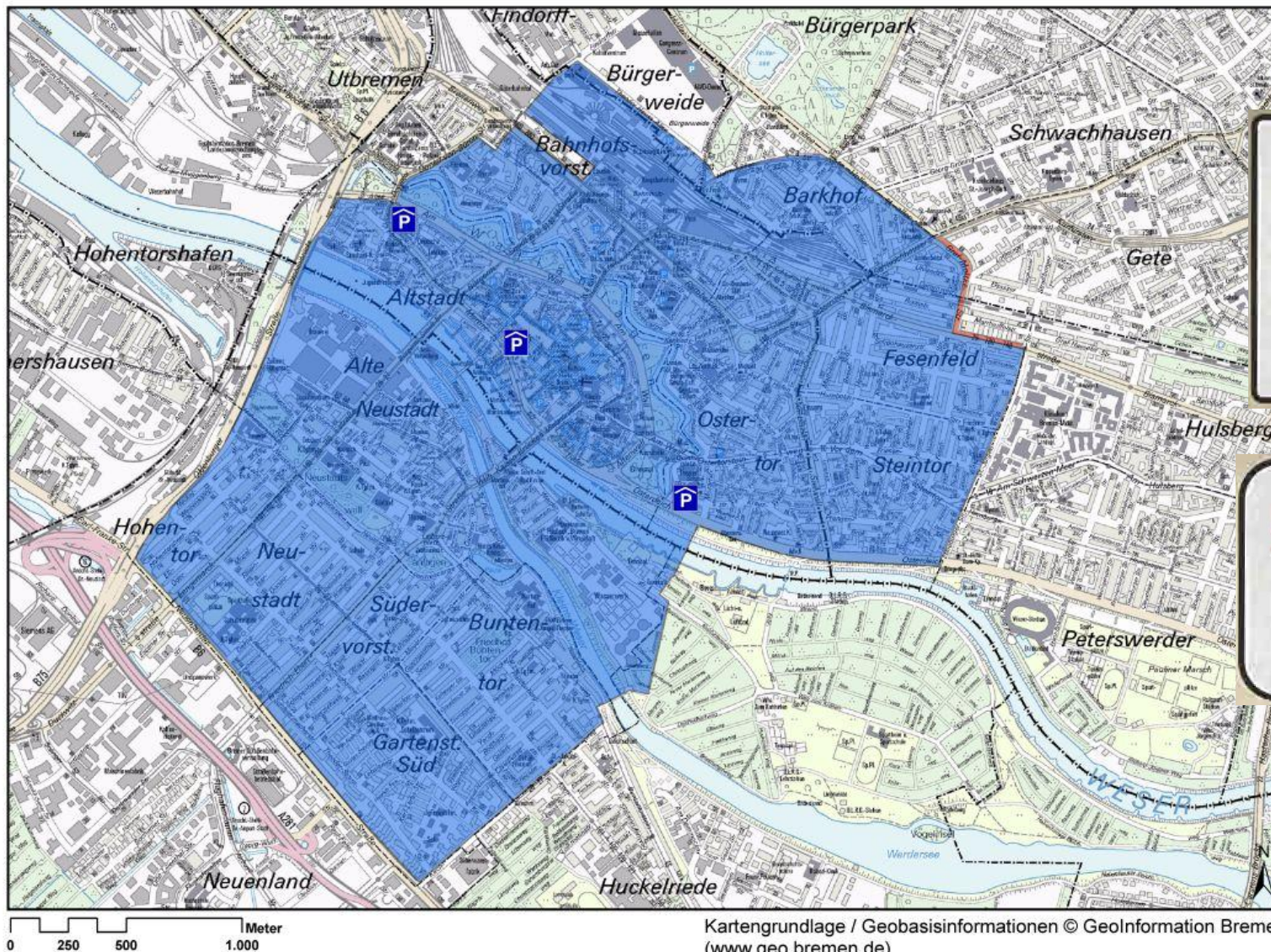
Progress of Euro Emission standards for busses / heavy duty vehicles



## Environmental Zone Bremen since 1.1.2009

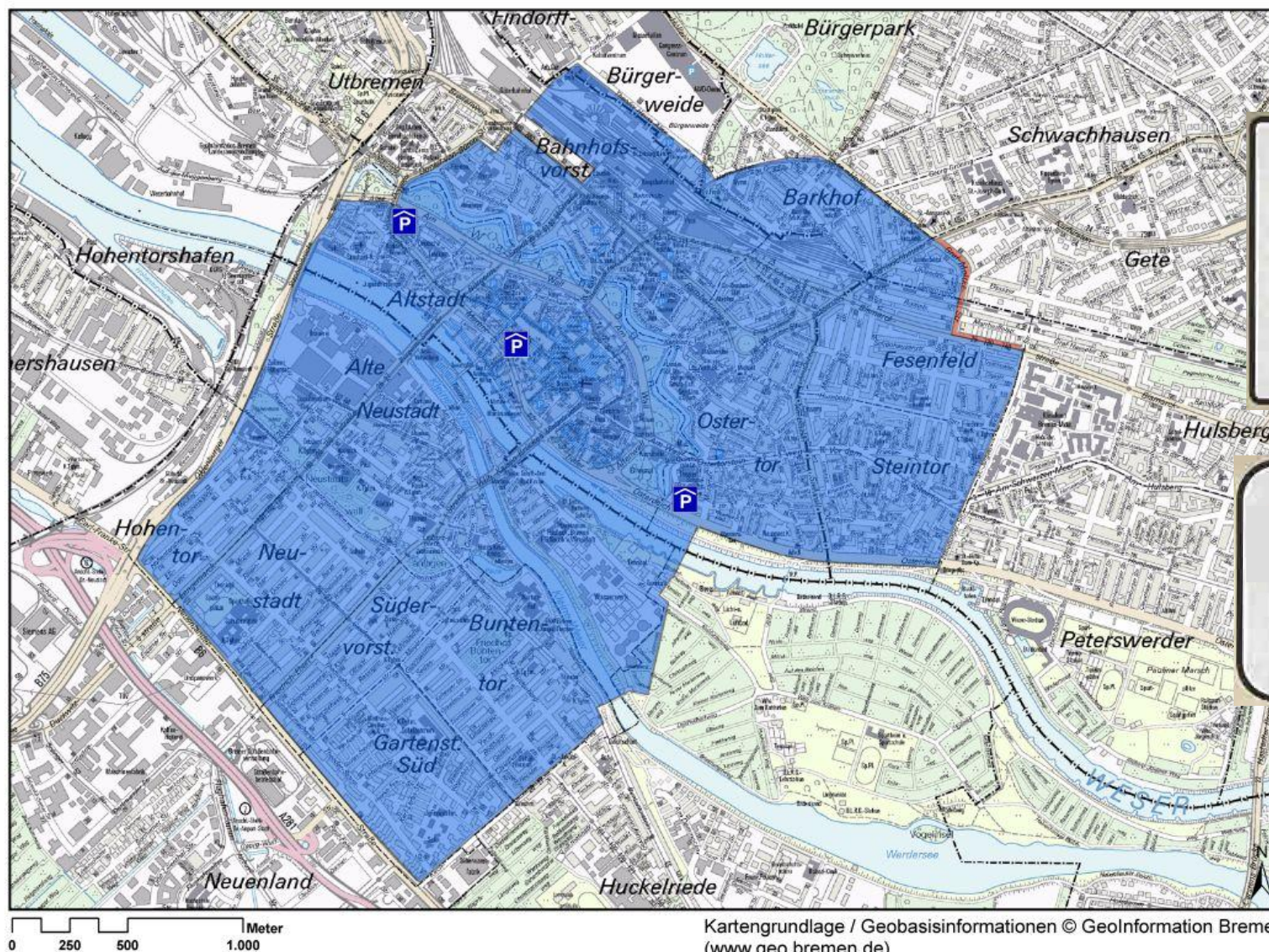






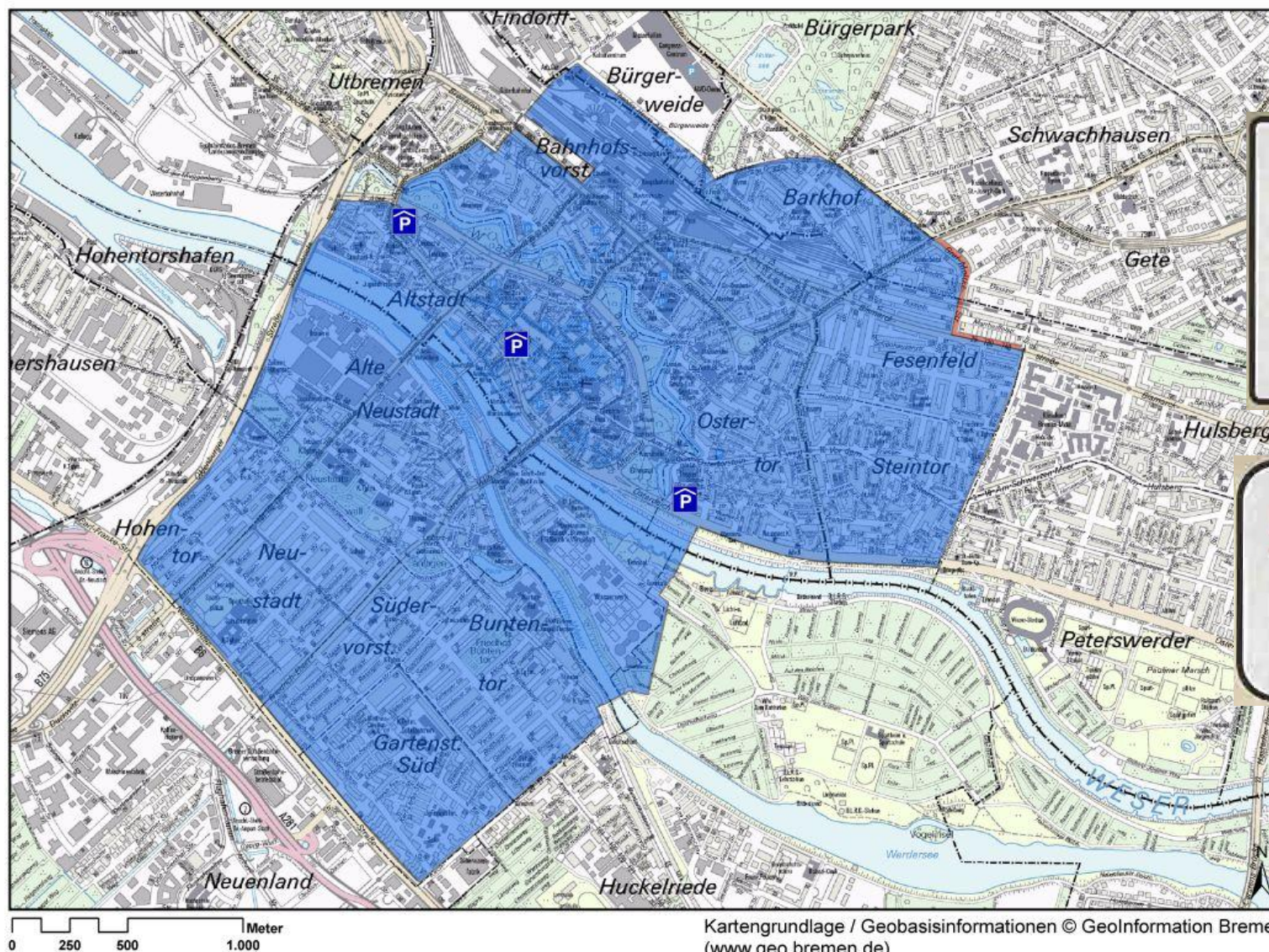
1.1.2009





01.01.2010





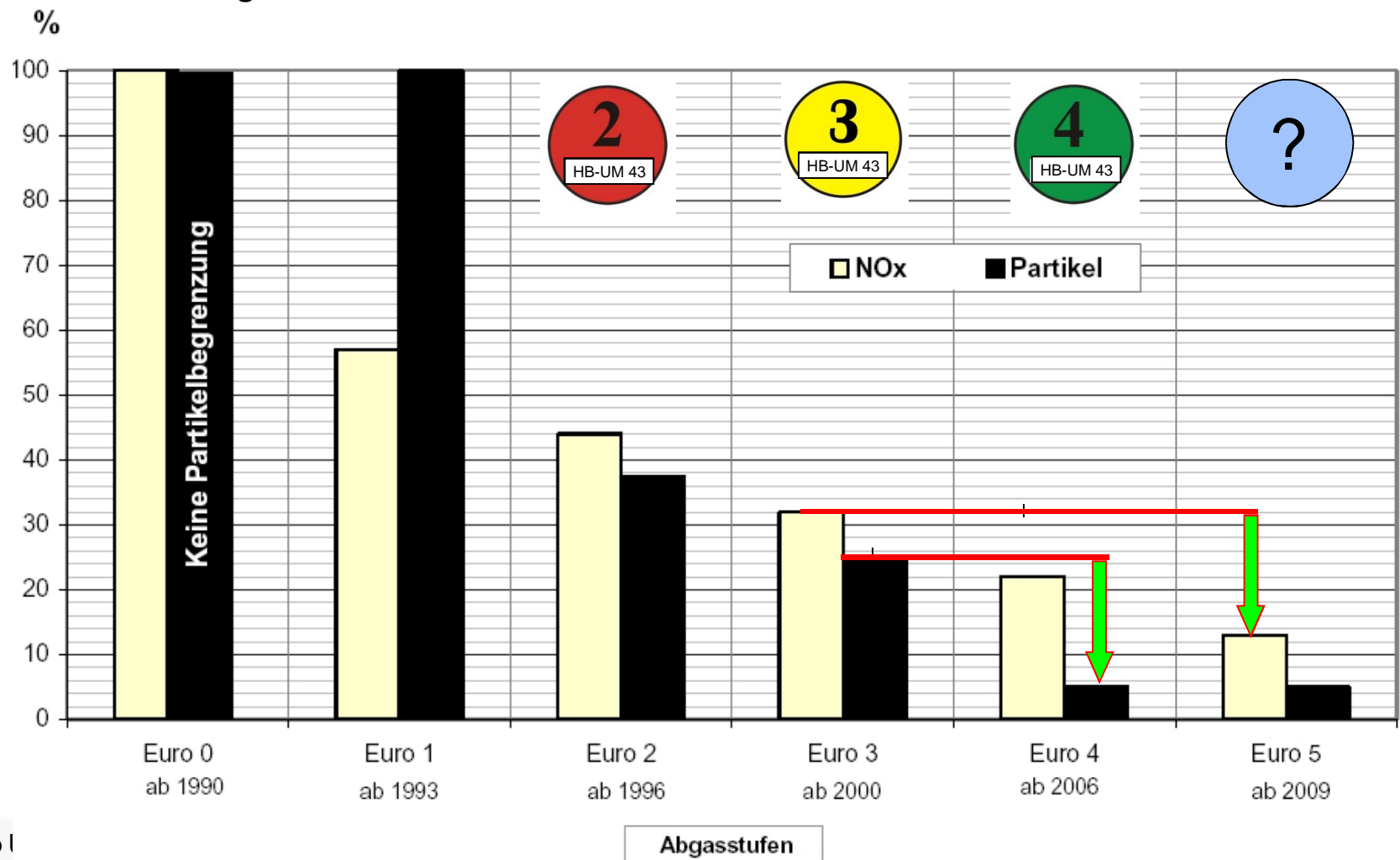
01.07.2011



## City logistics and Environmental standards



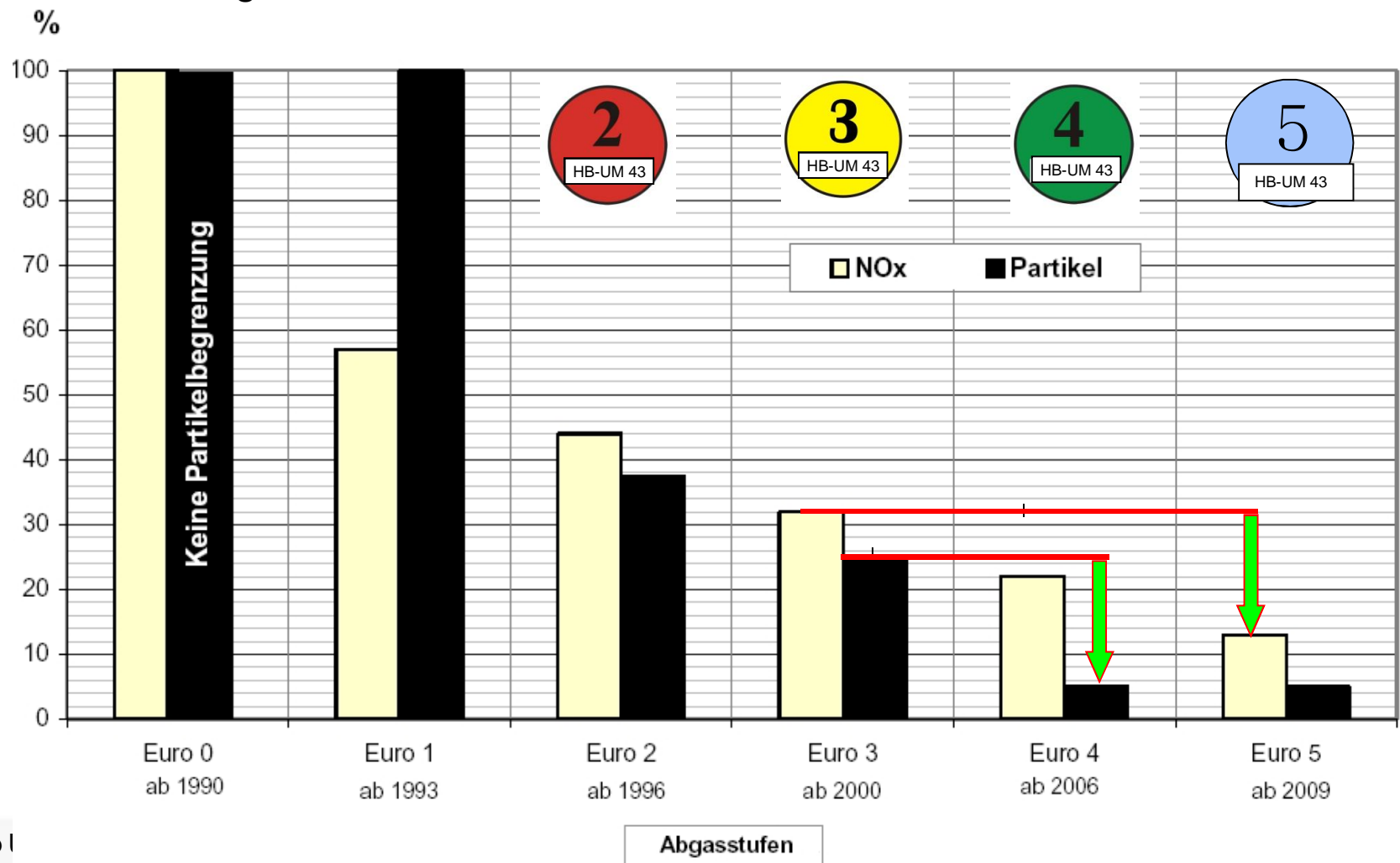
### Euro Emission standards for Heavy Duty Vehicles Badges for Diesel vehicles



## City logistics and Environmental standards



### Euro Emission standards for Heavy Duty Vehicles Badges for Diesel vehicles



# Cleaner Delivery Vehicles

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Emission reduction via (Euro V / EEV)

- PM<sub>10</sub>

- NO<sub>x</sub>

Noise reduction

Diesel > CNG



ED



**CNG-Incentive programme  
and information**

**User advantages  
(Clean Air Zone max Euro IV)**

**Access to pedestrian area  
(time frame)**

**Regularly Mo Æ Fr 5h Æ 11h**



## Environmental Zone; Fleet-wide contract

Incentive for using Euro V - Utility Vehicles



Contract option for  
companies in the  
Clean Air Zone;

Largest: Becks





## Fleet-wide Agreements

**For enterprises located in the Low-Emission-Zone**

**Calculation of the emission of the entire fleet  
(including third parties)**

**Incentive for Euro-5-vehicles**

**If purchasing Euro-5,  
Euro-3-vehicles may be operated a bit longer (until end of 2011)**



## Fleet-wide Agreements

Emissionspunkte-Rechner (bitte in graue Felder eintragen: Anzahl der Fahrzeuge nach Emissionsklassen bzw.- Plakette)

	ohne Euro I	rot Euro II	gelb Euro III	grün Euro IV	grün plus Euro V/EEV	Summe Kfz	Abgaspunkte	Emissionsrechte	
								2010	2011
<b>PKW Anzahl</b>	0	0	7	19	9	35		140	35
<i>Punkte</i>	0	0	35	19	-9		45		
<b>LNF (&gt;2,8 to / &lt; 12 to)</b>	0	0	0	2	0	2		11,5	3
<i>Punkte</i>	0	0	0	3	0		3		
<b>SNF (ab 12 to)</b>	0	0	0	0	2	2		40	10
<i>Punkte</i>	0	0	0	0	-10		-10		
<b>Summe aller Fahrzeuge</b>							<b>38</b>	<b>191,5</b>	<b>48</b>

### Ergebnis

Mit dieser Fahrzeugflotte haben Sie Abgaspunkte	38
Mit dieser Fahrzeugflotte hätten Sie Abgasrechte im Jahr 2010	191,5
Mit dieser Fahrzeugflotte hätten Sie Abgasrechte im Jahr 2011	48

Ihre Flotte ist für das Jahr 2010 gerüstet!  
Ihre Flotte ist für das Jahr 2011 gerüstet!

### Erläuterungen:

Leichte Nutzfahrzeuge LNF: Nutzfahrzeuge 2,8 to / unter 12 to zul. Gesamtgewicht

Schwere Nutzfahrzeuge (SNF): zulässiges Gesamtgewicht 12 to und mehr

alle Fahrzeuge unter 2.8 to zählen wie PKW

Fahrzeuge, die generell von Ausnahmeregelungen erfasst sind (z.B. landwirtschaftl. Fahrzeuge) brauchen in den Listen nicht erfasst zu werden.

Plakettenfarbe Fahrzeugkategorie	Belastungspunkte						Emissionsrechte pro Fahrzeug		
	ohne Euro I	rot Euro II	gelb Euro III	grün Euro IV	grün plus Euro V/EEV		Fahrzeugkategorie	2010	2011
PKW	20	7	5	1	-1	Punkte	PKW	4	1 Punkte
LNF (< 12 to)	30	10	7,5	1,5	-1,5	Punkte	LNF (< 12 to)	6	1,5 Punkte
SNF (> 12 to)	100	35	25	5	-5	Punkte	SNF (> 12 to)	20	5 Punkte



## Incentives for Logistics

### Environmental Loading Point for clean delivery vehicles



Umwelt-Ladepunkt



Nur für **Euro-V-EEV** Fahrzeuge

PARFUM pilot measure Bremen

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## Environmental Loading Point

• for cleaner delivery vehicles



Loading/  
Unloading  
directly  
adjacent to  
pedestrian  
area

PARFUM pilot measure Bremen

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## Environmental Loading Point



Vehicle detection  
with induction  
~~loops + RFID~~ (Radio  
Frequency Identification)



PARFUM pilot measure Bremen

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Vehicle detection  
with induction  
loops + RFID

Euro V- vehicles  
exception,  
sticker and  
transponder



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## Environmental Loading Point



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## Environmental Loading Point



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## Environmental Loading Point



Grand Opening with representatives from DHL Deutsche Post, Senator for Environment, Brepark and Chamber of Commerce

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## Obstacles

..but not very welcome by some motorists

Car-Drivers  
are peeved  
at the  
Eco-Parking



November 2008

## Obstacles towards vehicles

**Renewal rate of vehicles <12 t is low**

**Small businesses claim exeption from environmental zone**

**Clean light truck market evolves slowly**

**Politically rooted pressure is fragile**





## Obstacles towards city logistics

**Logistic chain very sensitive to time loss and further handling activity**

**Question of liability in tracking and handling when additional handlers occur**

**Problem has to be pressing – either there's no space for delivery vehicles or there's strong enforcement of time limitations in delivery**



## Perspectives

### Logistic handling technology improvements

### IT aided routing and practical route finding aid for drivers

### Vehicle technology

#### More clean % conventional

- . Diesel
- . Biofuels
- . CNG
- . Hybrids

#### Electric propulsion

#### ► Unsere Überzeugung

Wir sind uns sicher !

Der emissionsfreie Verkehr in der City gewinnt eine immer größere Bedeutung.  
Die Zukunft des innerstädtischen Transports liegt in der Elektromobilität





## Ihr Vorteil

Steigen Sie mit uns in diese  
„grüne Technik“ ein und  
verbuchen Sie die Vorteile für  
sich



# Promises Å

## ► Emissionen im Vergleich

### Kraftstoffverbrauch und CO<sub>2</sub> Emissionen Informationen gemäß Direktive 1999/94/EC

Niedrige CO<sub>2</sub> Emission

100 g/km oder weniger A

101 bis 120 g/km B

121 bis 140 g/km C

141 bis 180 g/km D

181 bis 200 g/km E

201 bis 250 g/km F

250 bis und mehr G

Hohe CO<sub>2</sub> Emission



0 g/km

Elektrofahrzeug



208 g/km

Kleintransporter



# Thank you!

Thomas Kirpal

Free Hanseatic City of Bremen

Senate for Environment, Construction, Transport and  
European Affairs

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