

# Impacts of Car-Sharing on the Environment and Mobility Patterns

TOSCA Training Seminar Bremen 7-8 June 2001

# Environment

## Environmental Impacts of Transport:

- Local Emissions
- Global Emissions
- Threat of Accidents
- Space Consumption
- Waste, Energy (Life-Cycle Analysis)

# Environment

## Strategies:

- Vehicle Technology
- Better Fuels

Local Emissions	+++
Global Emissions	+/o/-
Threat of Accidents	o
Space Consumption	o
Waste, Energy	+/o/-

# Environment

## Strategies:

- CNG

Local Emissions	+++
Global Emissions	o/-
Threat of Accidents	o
Space Consumption	o
Waste, Energy	o

# Environment

## Strategies:

- Electric Vehicles

Local Emissions	+++
Global Emissions	+/o
Threat of Accidents	o
Space Consumption	o/-
Waste, Energy	+/o/-

# Environment

## Strategies:

- Electric Vehicles

Local Emissions	+++
Global Emissions	+/o
Threat of Accidents	o
Space Consumption	o/-
Waste, Energy	+/o/-

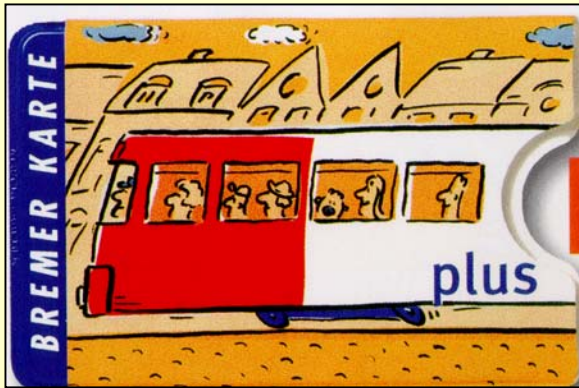
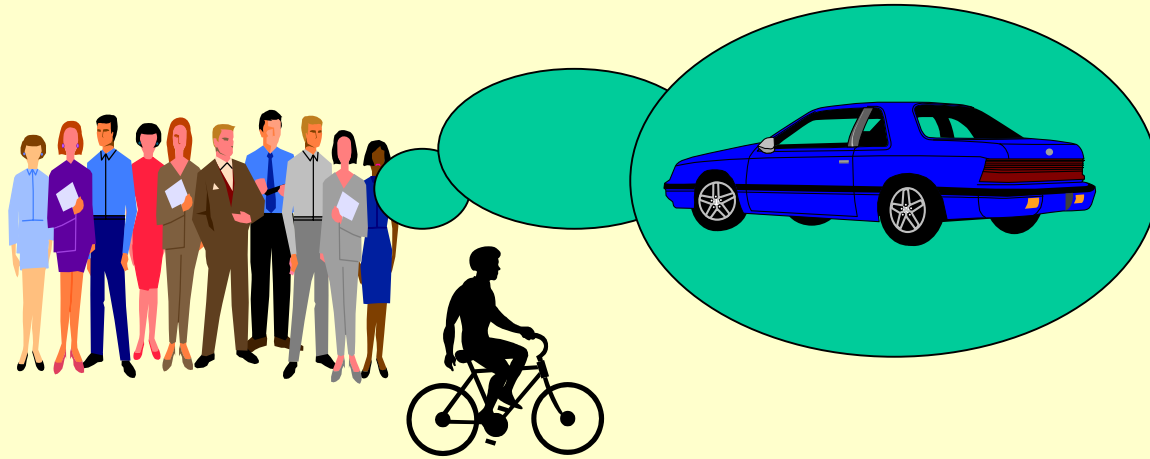
# Urban Environment



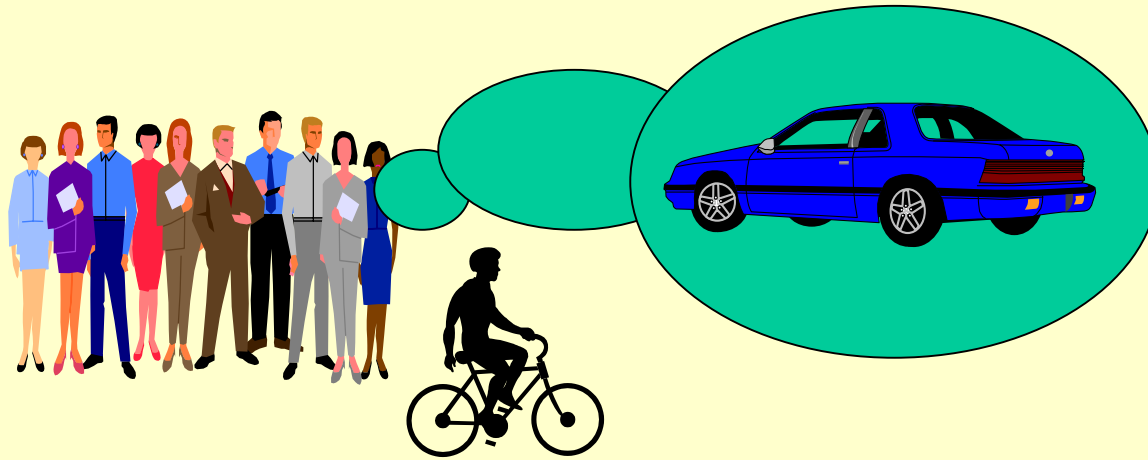
# Urban Environment

- contributes to attractiveness of urban areas
- air quality
- noise
- transport space or social space?
- Safety...

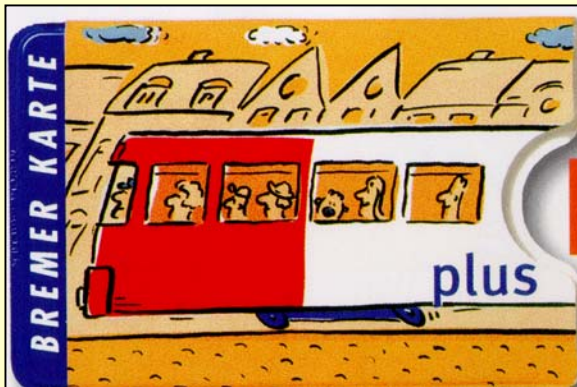
# Role of Car-Ownership



Public Transport Season Ticket



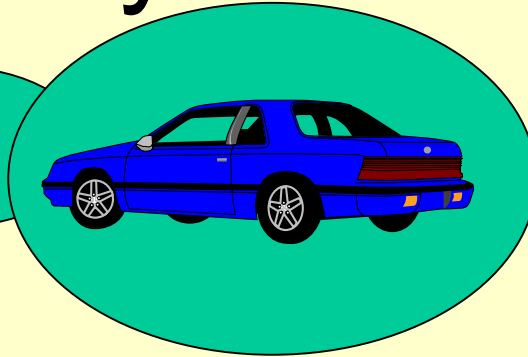
**TAXI**



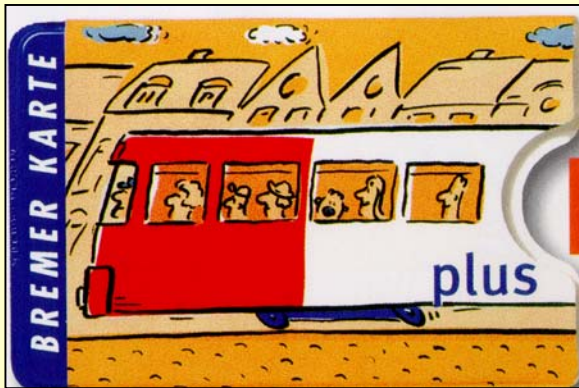
Public Transport Season Ticket

... Sometimes the shared car is the best Alternatives to the private car...

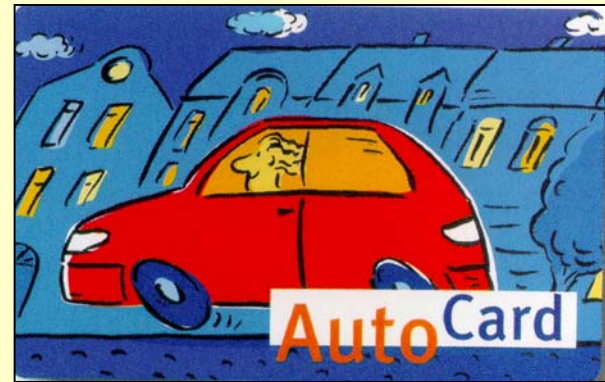
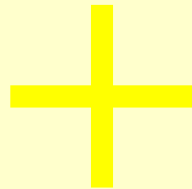
# Car at your Disposal



**TAXI**



Public Transport Season Ticket

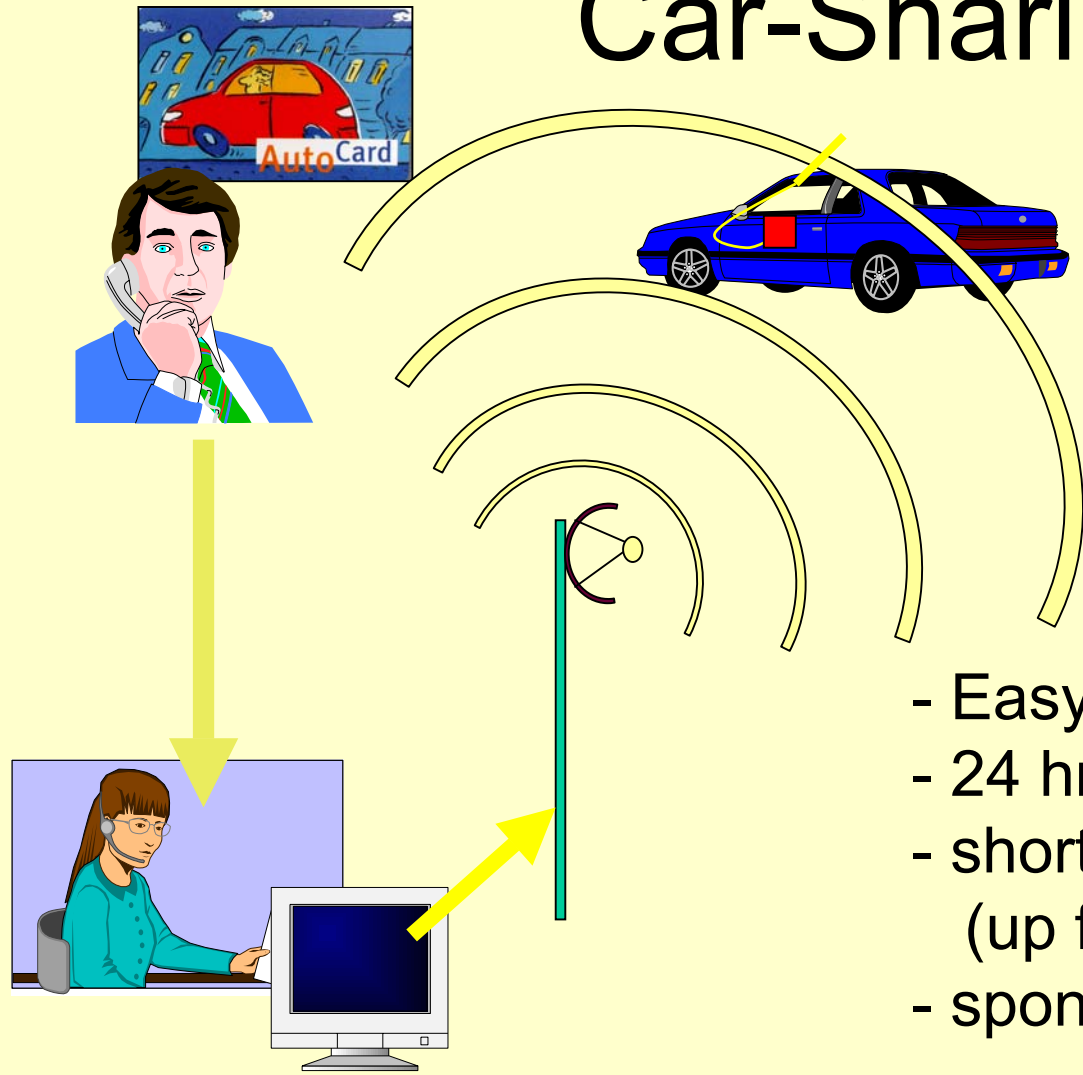


Car-Sharing Membership

# Environment

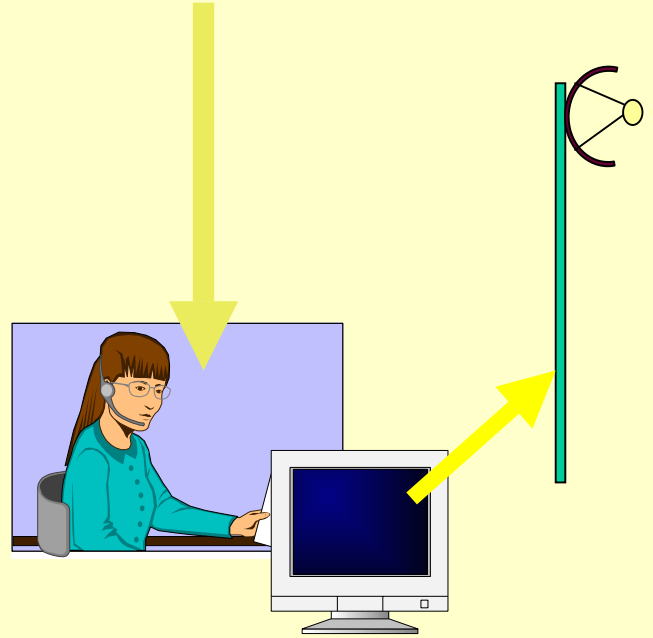
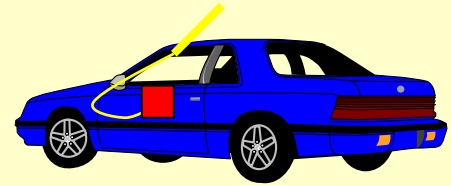
- What kind of Car-Sharing are we practicing in Bremen?

# Car-Sharing



- Easy unbuerocratic booking
- 24 hrs a day / 7 days a week
- short time use possible  
(up from 1hour)
- spontaneous rides possible

# Car-Sharing



- Pay-as-you-drive
- no free milage
- incentive to drive less
- various vehicles available
- smaller cars are cheaper

# Car-Sharing

More than 40 locations in Bremen



# Car-Sharing



# Car-Sharing



# Car-Sharing



# Car-Sharing



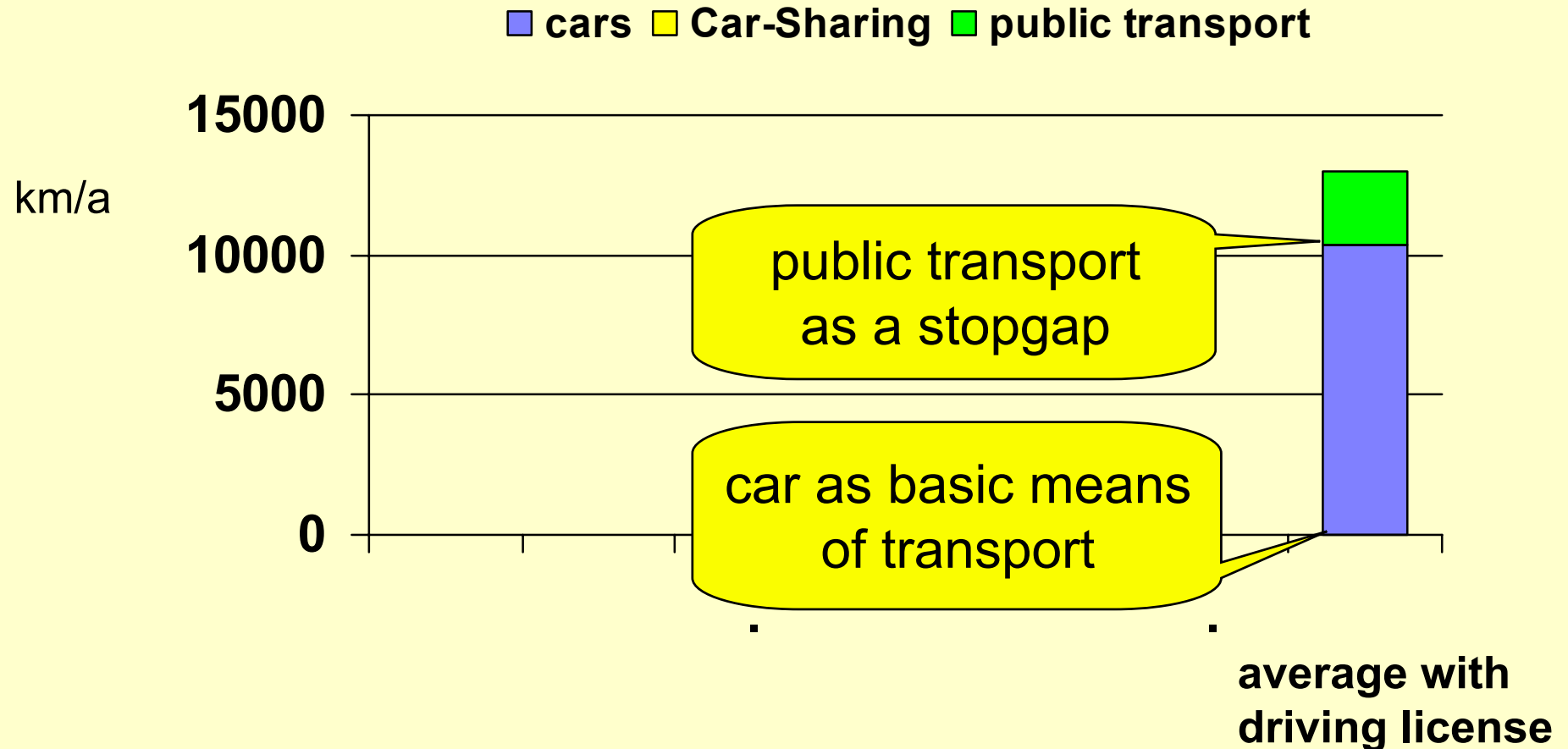
# Car-Sharing



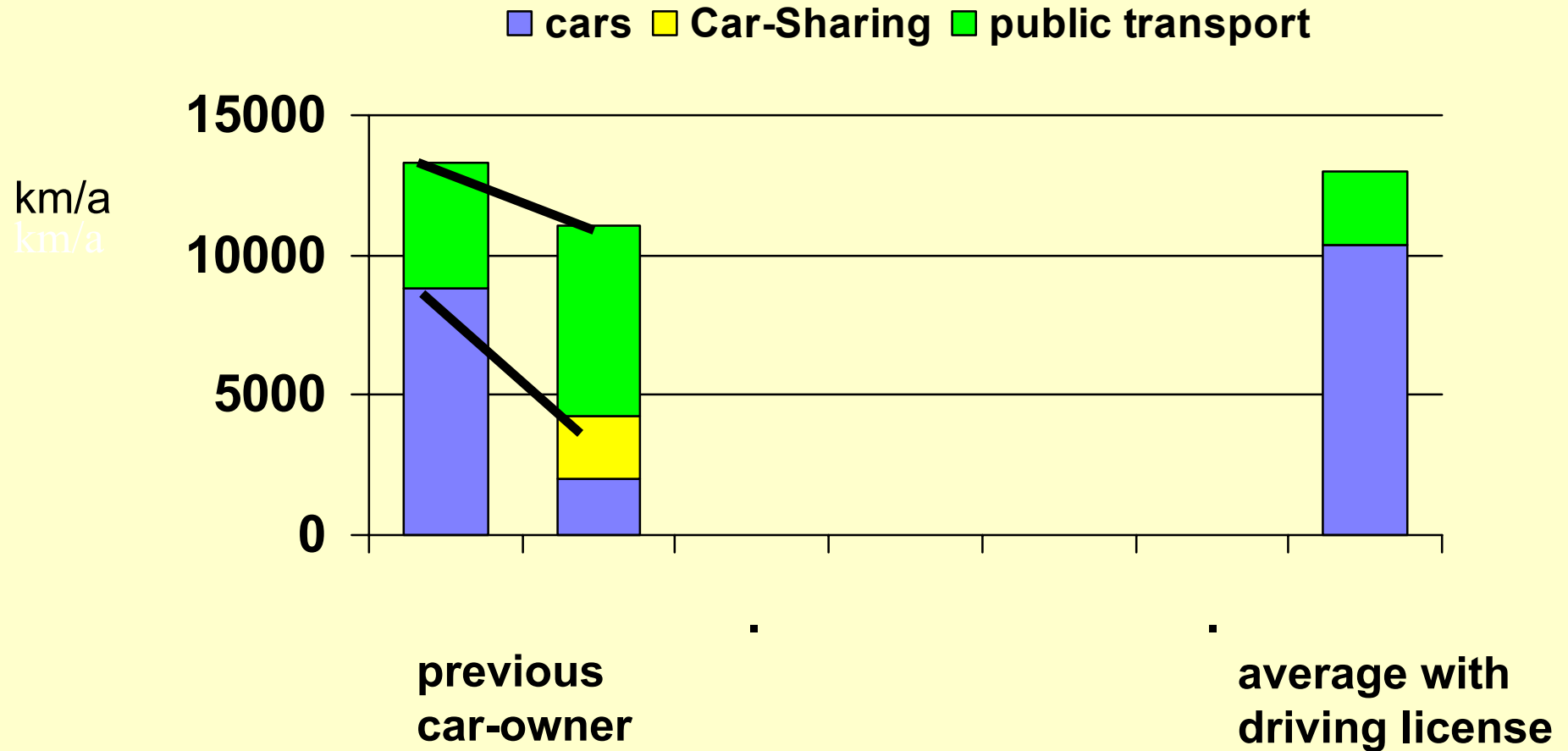
# Vehicle Standards



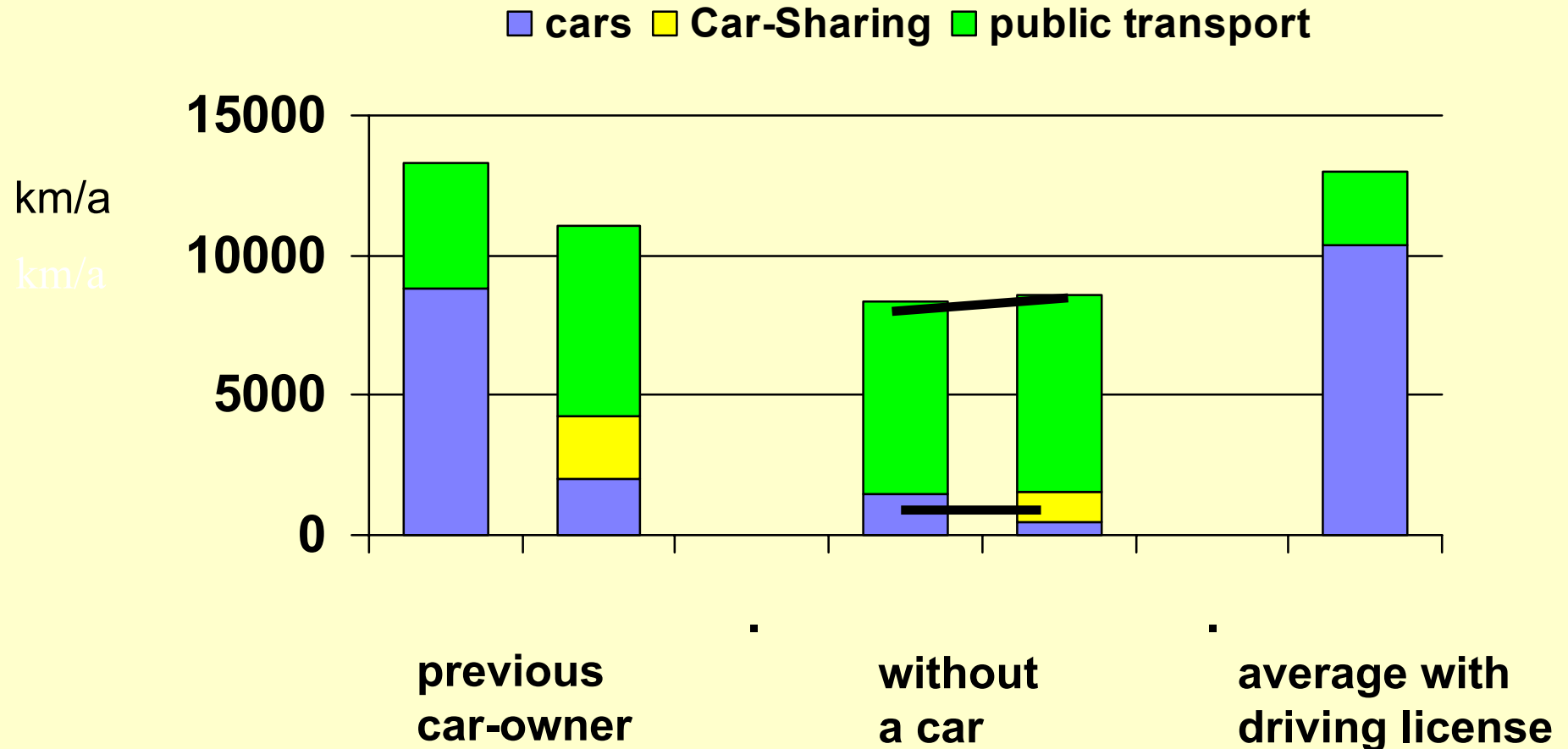
# Mobility Patterns



# Mobility Patterns



# Mobility Patterns



# Environment

## Mileage Reduction

	Bremen (103)	Switzerland (511)
Before subscribing CS	5060	5540
After subscribing CS	3433	3540
Difference (%)	- 32%	-36%

# Mileage Reduction

Experience of Car-Sharing in Bremen

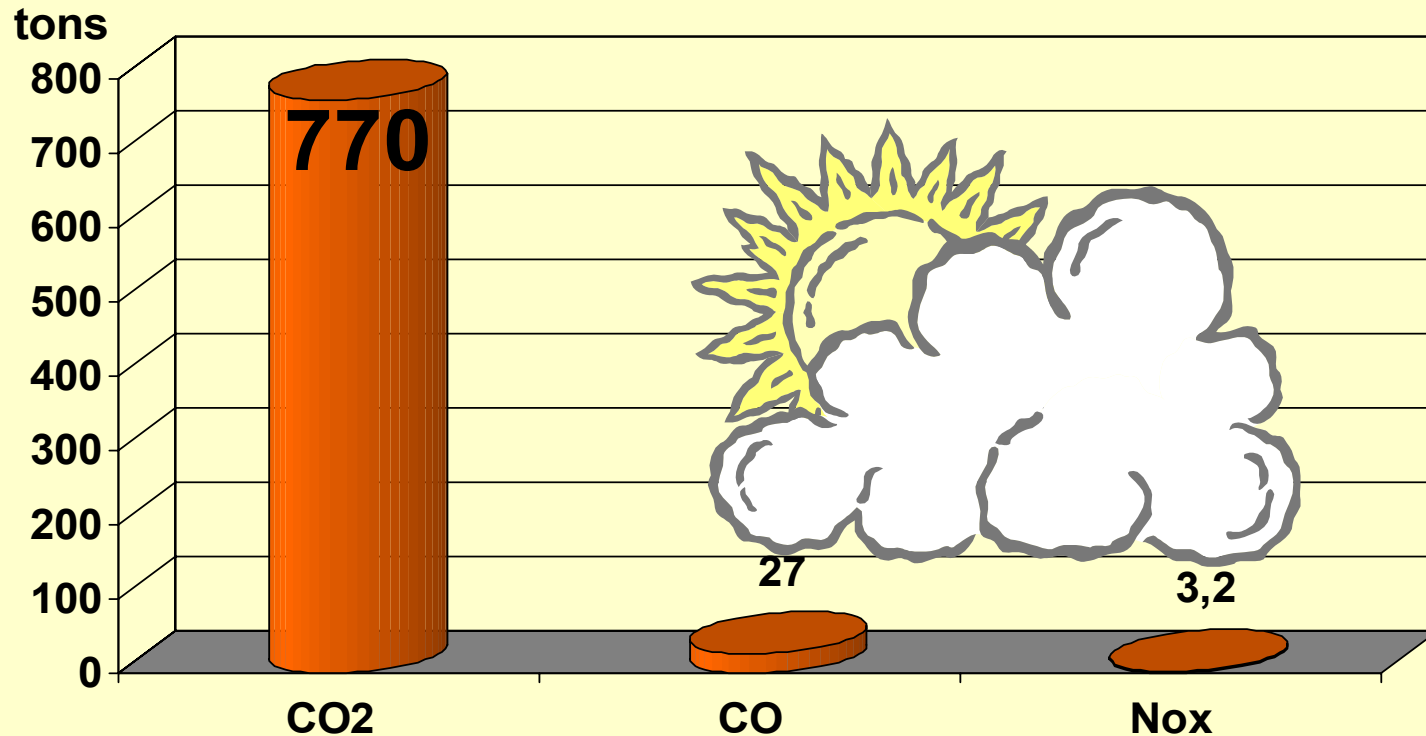
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Less Kilometres  
driven annually

by the actual 2200 Participants of the  
entire StadtAuto Bremen Car-Sharing System (05/00)

# Emission Reduction

## Experience of Car-Sharing in Bremen



Results for Bremen (p.a.) - estimated for 2200 Car-Sharer (10/00)

# Environment

- Less Mileage

Local Emissions	+++
Global Emissions	+++
Threat of Accidents	++
Space Consumption	0
Waste, Energy	+

# Environment

- Less Mileage
- Smaller / more efficient cars

Local Emissions	+++
Global Emissions	+++
Threat of Accidents	++
Space Consumption	o/+
Waste, Energy	++

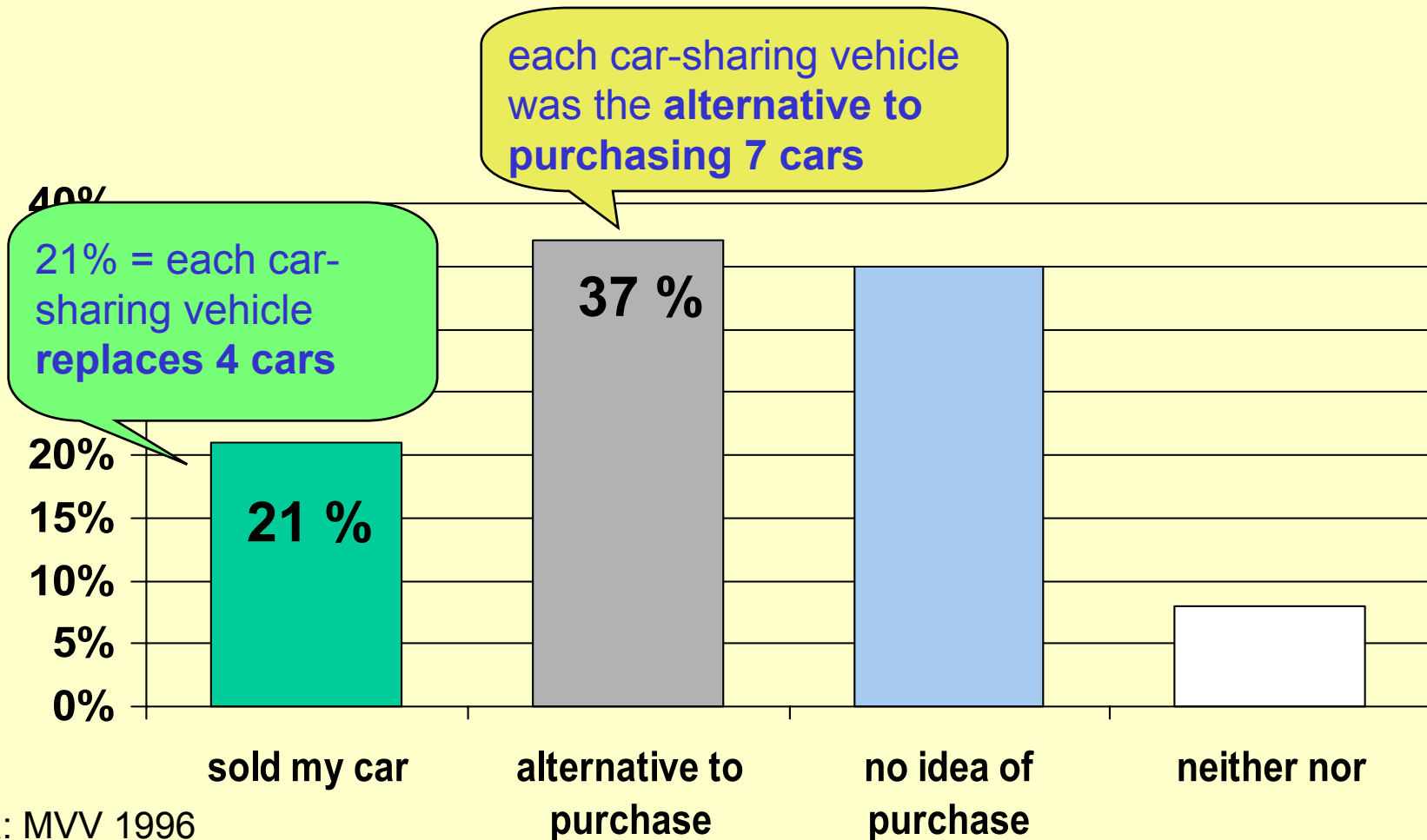
# Change of Mobility Patterns

## Results of Study about Bremer Karte + AutoCard

- 79 % have no car
- 33% the alternative to purchasing a car
- 16 % new clients for Public Transport (annual and monthly season ticket)
- Annual season tickets increased from 52 % to 78 %

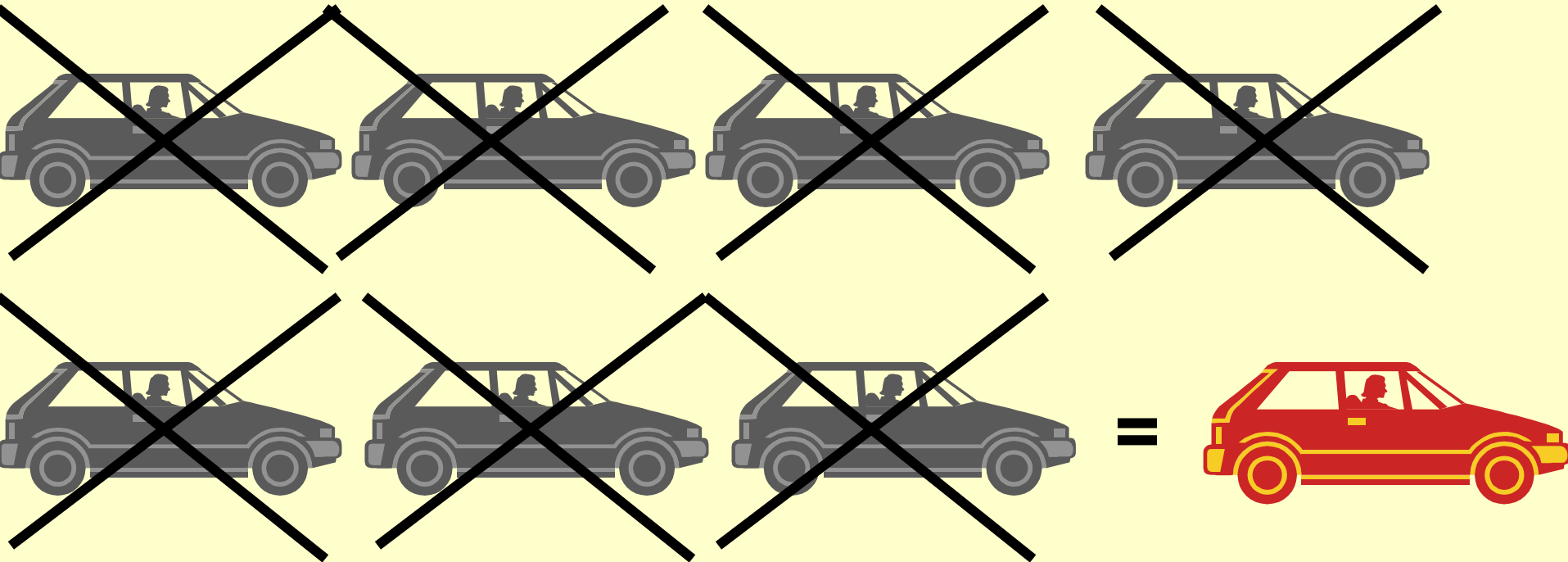
# High Mobility with less Cars

## Impacts of getting membership



# Mobility Patterns

Each Car-Share vehicle  
replaces 4 - 10 private cars !



# Environment

- Less Mileage
- Smaller / more efficient cars
- Less Cars

Local Emissions	+++
Global Emissions	+++
Threat of Accidents	++
Space Consumption	+++
Waste, Energy	+++

# Environment



# Certification of Car-Sharing

- Positive Environmental Impacts
- Official German Eco-Label „Blue Angel“
  - Basic Service
  - Tariff structure (without free mileage)
  - Vehicle standard

