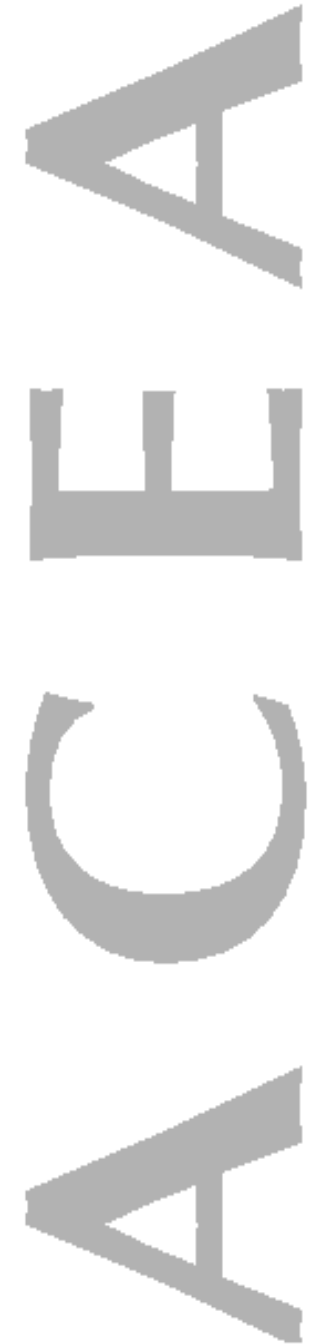


European  
Automobile  
Manufacturers  
Association

# CO2 emissions from cars: Time for an Integrated Approach

**Towards a Global Approach to  
Automotive Fuel Economy**  
Paris, 16 May 2008

**Rolf Stromberger**





# The “Engine of Europe”

## Important employer

12 million families depend on the automotive industry

## The world's largest vehicle producer

1/3 of all new cars is manufactured in the EU

## Yearly investment of 20 billion euros in R&D

4% of turnover; largest private investor in R&D in the EU

## One of the most regulated sectors in the EU

more than 80 EU directives; 115 UN-ECE pieces of legislation

## Tax revenues of € 360 billion or 3.5% of GDP



# EU Auto Industry Track Record

**CO2 emissions** ⇒ minus 14% since 1995

**NOx and PM** ⇒ reduced by over 95%

**Noise** ⇒ reduced by 90%

**Recycling** ⇒ up to 95%

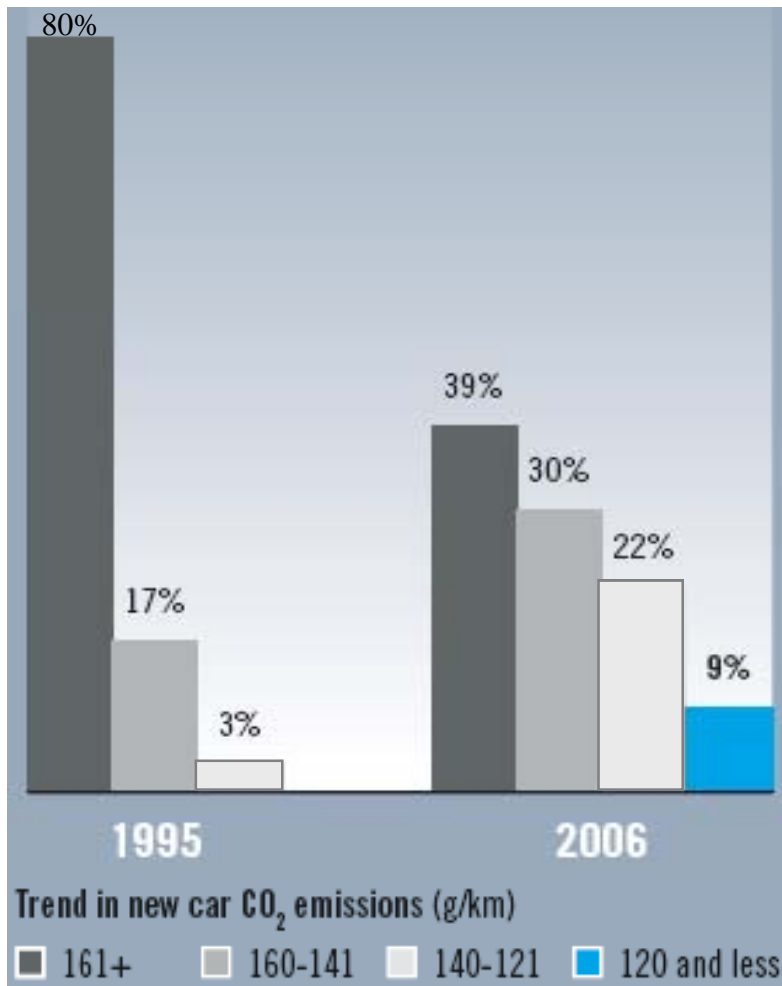
**Active & passive safety** ⇒ ABS, seatbelts, ESP, airbags...

**Mobility** ⇒ navigation systems, traffic management...

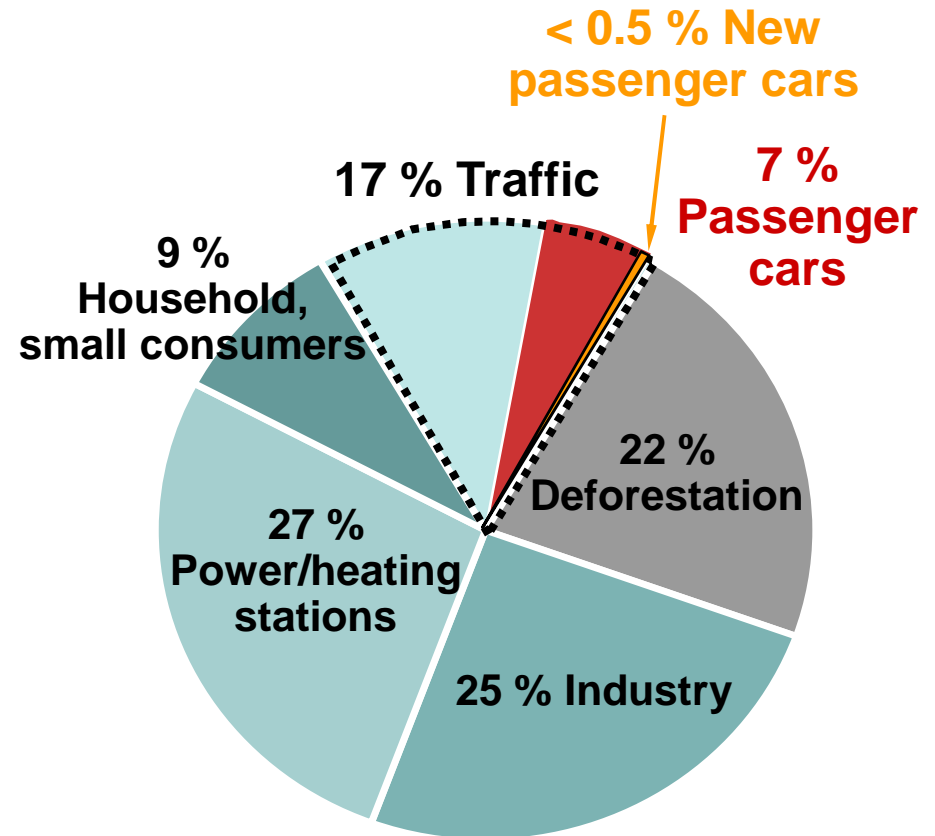


# Car industry is ready to contribute

## Unbroken CO2 reductions from new cars



## Car share of global CO2 emissions



Source: IPCC Fourth Assessment Report, WG III, 2007.  
World Business Council for Sustainable Development, 2004.



# Global Fuel Economy Standard: Challenges

- Different countries with....
  - different types of markets
  - different income levels
  - different driving behaviour
  - different traffic infrastructure
  - different fuel infrastructure
  - different consumer preferences → car segments
  - different fiscal policies and incentive schemes
  - etc.
- Aligned fuel economy test procedure....
  - fuel economy in test cycle versus real fuel consumption → consumer confusion?



**Policies should send consistent signals to consumers and manufacturers**



## EU Commission: focus on car technology

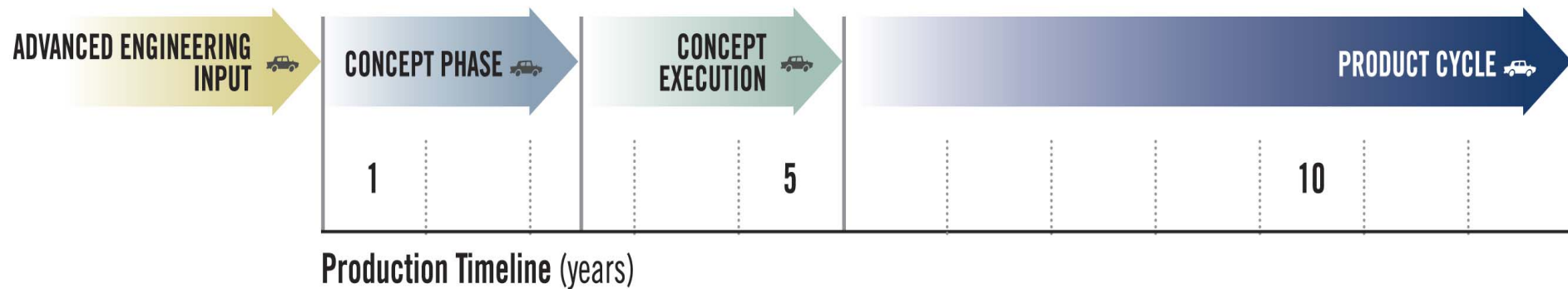
### **European Commission's legislative proposal on CO2 reduction from cars adopted on 19 December 2007:**

- **120g/km in 2012:**
  - 130g/km through cycle technologies (weight as parameter)
  - 10g/km through low-blend biofuels and other complementary vehicle technology measures (Gear shift indicator, Energy-efficient air-conditioning, Low rolling resistance tyres, Tyre pressure monitoring systems)
- **Narrow focus on new car technology**
  - instead of Integrated Approach involving all relevant stakeholders
  - Contrary to holistic approach adopted in Commission's Energy



# Lead-time (1)

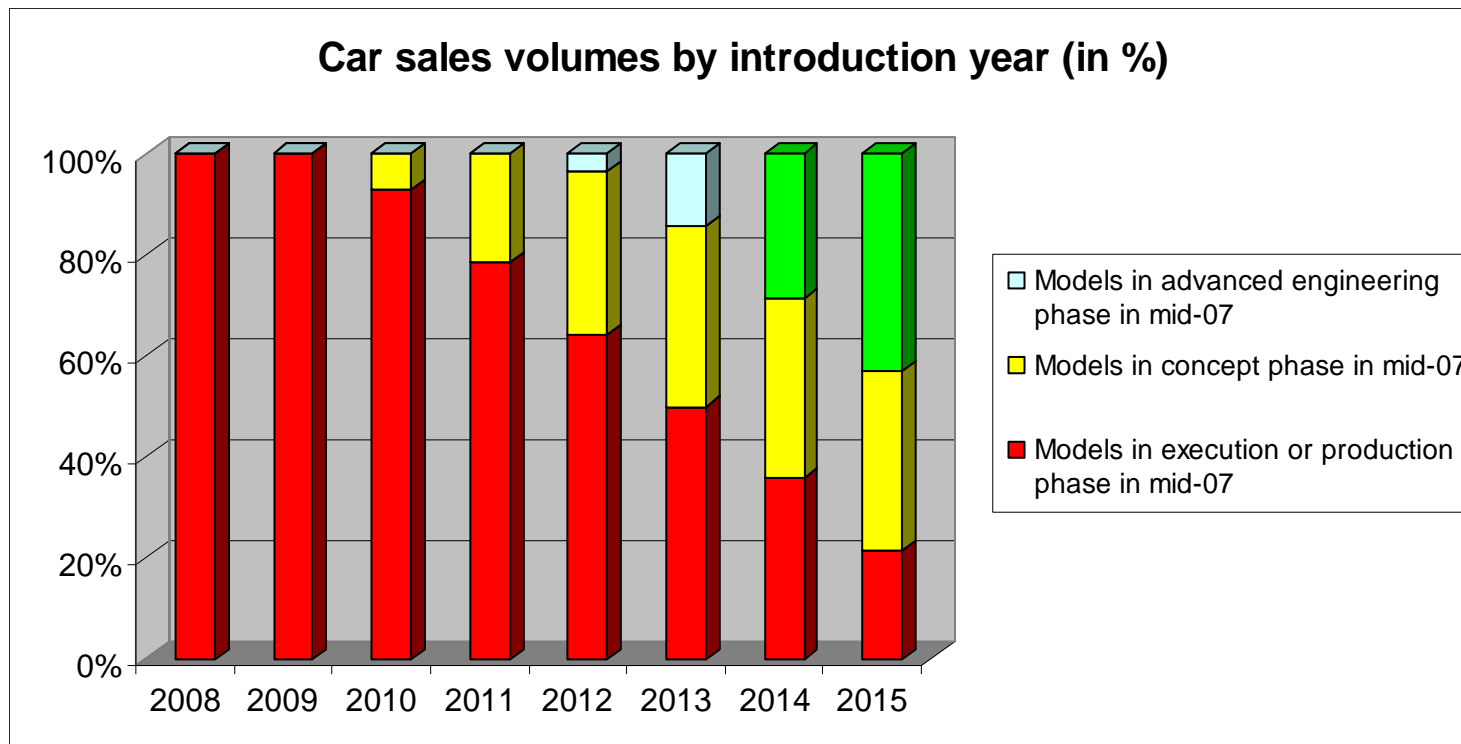
- Development phase of typical car
  - ~5 years from concept definition until start of production
- Product cycle of typical car
  - ~6-7 years
- Engineering and production capacities already allocated at manufacturer and supplier level





## Lead-time (2)

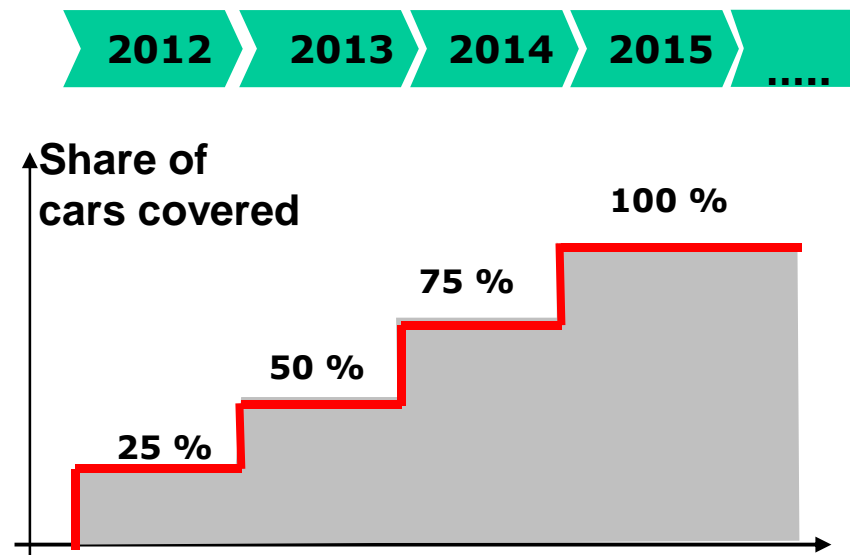
- Of new cars sold in 2012...
  - Nearly 2/3 are already in execution or production phase
  - About 1/3 are already in concept phase
- Need for a phase-in 2012 - 2015





# Phase-in

- ACEA position: Increasing share of cars covered



- Consideration of lead-time and product cycle needs



# Compensation payments

- **The objective is to comply** with the regulation and not to pay compensation payments
- The proposed levels (€20/g in 2012, €35/g in 2013, €60/g in 2014, €95/g in 2015) are **vastly out of line** with CO2 abatement costs and payments in other EU sectors/policies and internationally
- 1 tonne of CO2 from cars has the **same environmental effect** as 1 tonne emitted by any other sector (industry, household, etc.)
- Compensation payment reduces a **car company's R&D budget**
- Any **revenues** should go to car-related CO2 reduction schemes

**Assuming that a car drives 200,000km over lifetime:**

⇒ **1 g of CO2 per km corresponds to 200kg (0.2 tonne) of CO2**

⇒ **€95 for 0.2 tonne equals €475 per tonne of CO2**



# Rewarding eco-innovations

Additional  
eco-innovations  
(with proven results)

[10g/km]

Gear-shift indicators  
Energy-efficient air conditioning  
Low rolling resistance tyres  
Tyre pressure monitoring systems  
Biofuels  
(\*)

- **Innovation** of industry should not be limited by defining a closed list of eco-innovations
- Eco-innovations will provide the **flexibility** to comply with the target → cost-effectiveness
- Eco-innovations, not covered in the test-cycle, should be **rewarded** via credits at individual car level
- The CO2 reduction value of eco-innovations should be **measured and monitored** by an independent body
- **Examples:** high-energy efficient LED, eco-mode, solar roof panels, advanced navigation aid...

(\*) according to Communication from 7.02.2007



## Long-term target

- Car industry is open to discuss further targets, but long-term target must be based on an **impact assessment**
- Inclusion of any **political target for 2020** in current CO2 legislation proposal and without impact assessment **is not goal-oriented**
- **Integrated approach** to environment and safety must be applied if societal objectives are to be achieved cost-effectively
- **External factors** must be considered
  - Economic environment
  - Oil price development
  - Market changes
  - Infrastructure for alternative fuels

**Car industry already delivers CO2 emissions reductions of over 30% (1990 – 2015)**

**⇒ more than any other sector**

**⇒ more than EU general target of 20% between 1990 and 2020**



## Way forward: Integrated Approach / Global Approach

- Automotive industry will continue making major efforts
- Integrated Approach
  - **Car technology** will remain the major contributor
  - Huge potential for **alternative fuels and biofuels**
    - sustainable 1<sup>st</sup> generation; future lies with 2<sup>nd</sup> generation!
    - More R&D support necessary, fuel industry has to be involved!
  - Changing **consumer** awareness & driver behaviour
  - Make way for **infrastructure** measures
  - Harmonised CO2-related **taxation**
- **Cost-effectiveness** means reaching environmental targets at lowest cost to society



⇒ **Energy Efficiency Action Plan & CARS 21  
endorsed Integrated Approach**

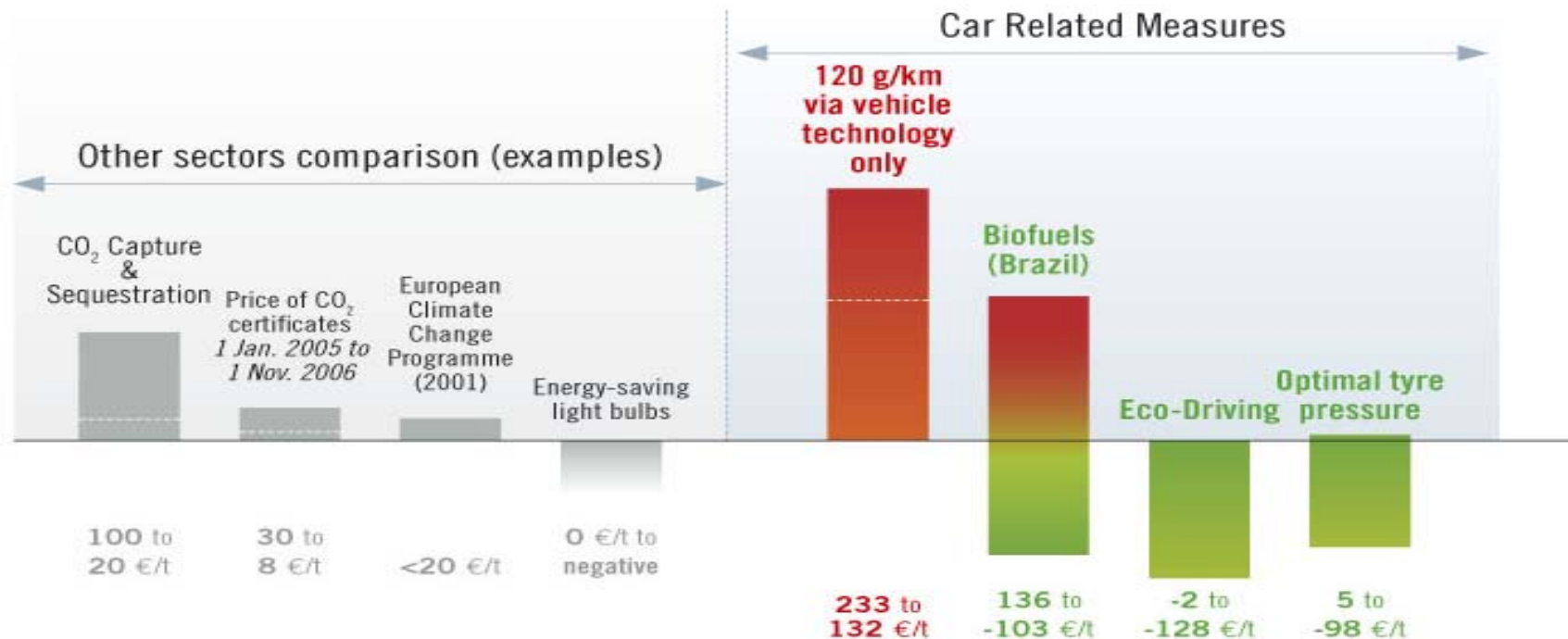


# Reducing CO2 emissions – – finding effective measures

**Combining efforts of all involved  
+ Including all cars on the road**

**= Achieving environmental  
goals at lowest cost to  
society**

## Societal costs compared



SOURCE : ECCP



## Consumer information

- Rationale: support demand
- Criteria:
  - **EU-wide harmonized labeling scheme**
  - Focused on CO<sub>2</sub> / fuel consumption only (tank-to-wheel)
  - Stability over time
  - Simplicity and transparency



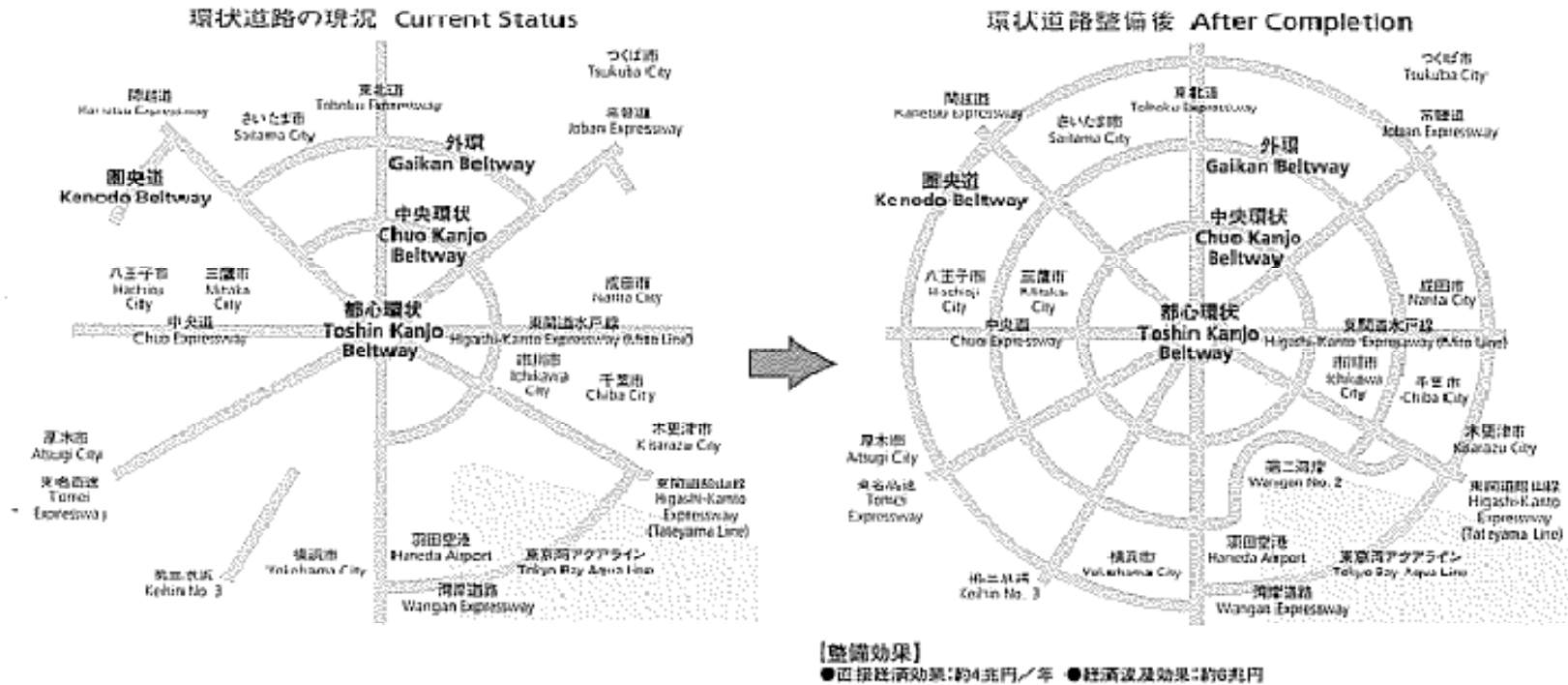
## Driver behaviour

- **Eco-driving**
  - Reduces fuel consumption → lowers CO<sub>2</sub> emissions
  - Reduction potential: 50 Mt in Europe by 2010 (ECCP)
  - Long term potential: up to 10%
- **Benefits**
  - Cost-effective: ECCP calculates cost-savings!
  - Easy to learn & can be applied across park
  - All stakeholders can contribute to EU-wide campaign



# Infrastructure

## ● 首都圏の環状道路整備計画と整備効果 ROAD NETWORK IMPROVEMENTS IN THE GREATER TOKYO REGION



- Japanese government counts 28Mt reductions through infrastructure in Kyoto plan
- Dynamic traffic lights, road rolling resistance, etc.
- Works across park!



## CO2-based taxation on cars

- **To incentivise car buyers and manufacturers**
  - Clear market signal → pull effect
  - Promote customer demand
  - Current tax policies too fragmented & unfocused
- **How**
  - All taxes/fees to be substituted by circulation tax
  - Proportional to CO2 emissions
  - Linear (no arbitrary steps) and technology-neutral
  - No discrimination (certain types, segments)
  - Revenue neutral
  - Harmonised model across the EU (or coordinated...)



# Conclusions

- **ACEA members support 120g/km target**, and will continue being **major contributor**
- **Integrated Approach** required for **cost-effectiveness**
  - Combining efforts of all involved
  - Including all cars on the road
  - Enabling more cost-effective & flexible approach for new cars
- Encouraging and rewarding **eco-innovations**
- Industry needs **stability and predictability**
- The industry is strongly involved and committed to CO2 reduction but needs **sufficient time to comply** with new requirements (lead-time)
- **ACEA supports** revision of **labelling directive**
- **ACEA supports CO2 based taxation** for cars & alternative fuels



**Thank you!**



**European Automobile Manufacturers Association**  
**[www.acea.be](http://www.acea.be)**