



Reducing CO2 from Road Transport

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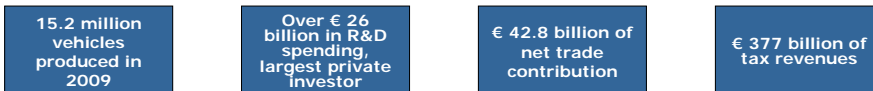


1. Introducing ACEA

“The Engine of Europe”



An industry crucial for economy...



... and employment

- 35% of EU manufacturing employment
- 2.2 million direct jobs
- Indirect employment for another 9.8 million families





2. Major Trends for the Auto Industry

- **Global competition**, economic balance shifting away from Europe
 - China, India, Brazil
 - Need to keep a manufacturing/supplier base
- Global **economic woes**
 - Revival of the **value of manufacturing?**
- Growing **demand** for (individual) **mobility**
 - Further urbanisation
- The challenge to ensure that mobility is **sustainable**



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3. Reducing CO2 -- Getting the Framework Right

Zero-emission mobility requires partners

- Need to adopt an **integrated approach** involving
 - **Vehicle technology**
 - **Fuels & energies**
 - **Eco-driving**
 - **Infrastructure & logistics**
 - **CO2-based taxation**



Tapping the full CO2 reduction potential

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3.1 A Cost-effective Policy

Authoritative voices recommend an Integrated Approach:

- **McKinsey:** “the capital intensity of abatement is nine times higher than in the power sector, and three times more than in the building sector” – “high upfront costs”
- **Nicholas Stern:** “three important elements in mitigation policy: carbon price, technology policy, behavioural change” – “Leaving one out will significantly increase costs”
- **TNO:** eco-driving has a negative cost – and the results can be measured



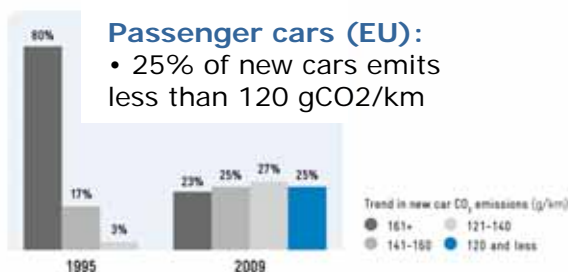
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3.2 The Role of Technologies

Vehicle manufacturers are technology leaders

- **Advanced internal combustion engines**
- **Alternative fuels** ▪ **Breakthrough technologies**



Commercial vehicles:

- A modern truck consumes just 1 litre per 100 tonnekilometres
- Fuel efficiency has increased by one third since the 1970s

But: effect of technology and fleet renewal offset by increase in transport demand -- **Need for an integrated approach**

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4. Commercial road transport – a closer look

Market forces are already driving down emissions -- and continue to provide strong incentives

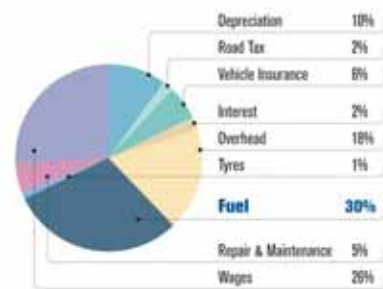
▪ **Fuel efficiency** is the **key purchasing factor** for trucks and vans

- Largest part of truck operating costs is fuel (30%)
- Businesses calculate rationally

Note: Trade-off between Euro emission norms and fuel economy

Total Operating Costs (TOC)

40-tonne Tractor - Semitrailer Combination



SOURCE: IHS

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4.1 The "Vision 20-20"

2008 (IAA Hanover):

Commitment to further improve CO2 performance of commercial vehicles

- A further reduction of fuel consumption by on average 20% per tonnekilometre by 2020
 - compared to 2005
- Seeking an active partnership with political leaders, fuel industry, hauliers, vehicle operators, and drivers



"The world cannot do without trucks, but we can go without emissions"

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4.2 Trucks need a dedicated policy approach

Incorporate the 'work done' principle

- Large differences in complete vehicle shape, purpose and use ("mission")
- Computer simulation to close in on reality

Longer truck combinations reduce CO2 emissions per tonnekilometre

GCW/GVM tonne	Lead Capacity tonne	Distance km	V/1000tonnekm at 100% utilisation	V/1000tonnekm normal utilisation	V/1000tonnekm considering normal utilisation
LONG DISTANCE					
26	17	100	1700	14.7	21.0
40	25	100	2500	12.8	18.3
60	40	100	4000	10.8	15.4

Missions

City delivery		1
Delivery / communal		2
Heavy delivery		3
Long haul		4
One Overnight		5
On-road construction		6
Heavy construction		7

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4.3 Global harmonisation

Truck and bus manufacturers serve a global market

- Harmonisation of standards and measurement methods is essential

"Global Meeting" of the world's commercial vehicle makers has called upon UNECE to:

- Develop certification procedure for heavy-duty hybrid electric vehicles based on HILS procedure (Japan)
- Agree on CO2 per tonnekm / cubickm / passengerkm as metric for fuel efficiency
- initiate activities to develop computer simulation tool to calculate CO2 emissions from complete heavy-duty vehicles, engines and components



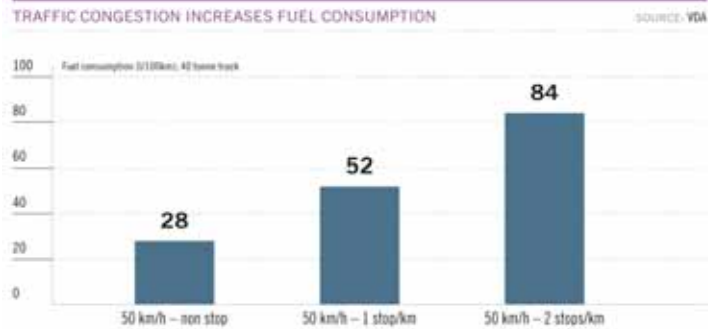
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4.4 The key word is: efficiency

Less congestion, skilled drivers, intelligent traffic management, available alternative fuels

Making the best use of product and technologies!



The reality is co-modality

- Different transport modes do not compete; they are complementary
- All modes need to reduce emissions and work together more efficiently

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5. The Regulatory Framework

Ingredients for a supportive industrial policy

- Encouraging **innovation**, skills, R&D
- Ensuring **predictability**, lead-time
- Feasible, sensible, **fact-based** policy making
 - Impact assessment; industry consultation
- Policy **coordination** & harmonisation
- Striving for **balanced trade relations**
 - Level playing field
 - Non-tariff barriers
 - Market access
 - Raw materials



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5.1 Electrification -- Part of the Solution

No 'silver bullet'

- Diverse transport & mobility needs

Managing expectations

- **Range of technologies** in development
- **Challenges:**
 - Battery capacity and durability
 - Recharging infrastructure
 - Costs, mainly of batteries
- **Low-carbon energy** key to realise CO2 savings potential



Supporting the transformation of the industry

- **High investment levels**
- Hen & egg dilemma

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6. In summary

The auto industry is in transition...

- Increasing **environmental needs** and demands
- Growing **global competition**/ shifting balance
- Pressure to build **alliances**
 - inside & outside the industry



...and determined to play the part

- Automobile industry is **largest private investor in R&D** in EU
 - The sector files about **5,900 patents** every year

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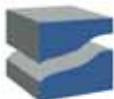
6.1 Final remarks

What is needed from policy makers?

- **Leadership and vision:**
 - Achieving the **mobility solutions** for the future
 - A clear **commitment to manufacturing**
 - as the basis for a solid economy
- **A supportive policy framework**
 - Adopting an integrated approach



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Thank you for your attention

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