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SUSTAINABLE TRANSPORT: CHALLENGES AND OPPORTUNITIES

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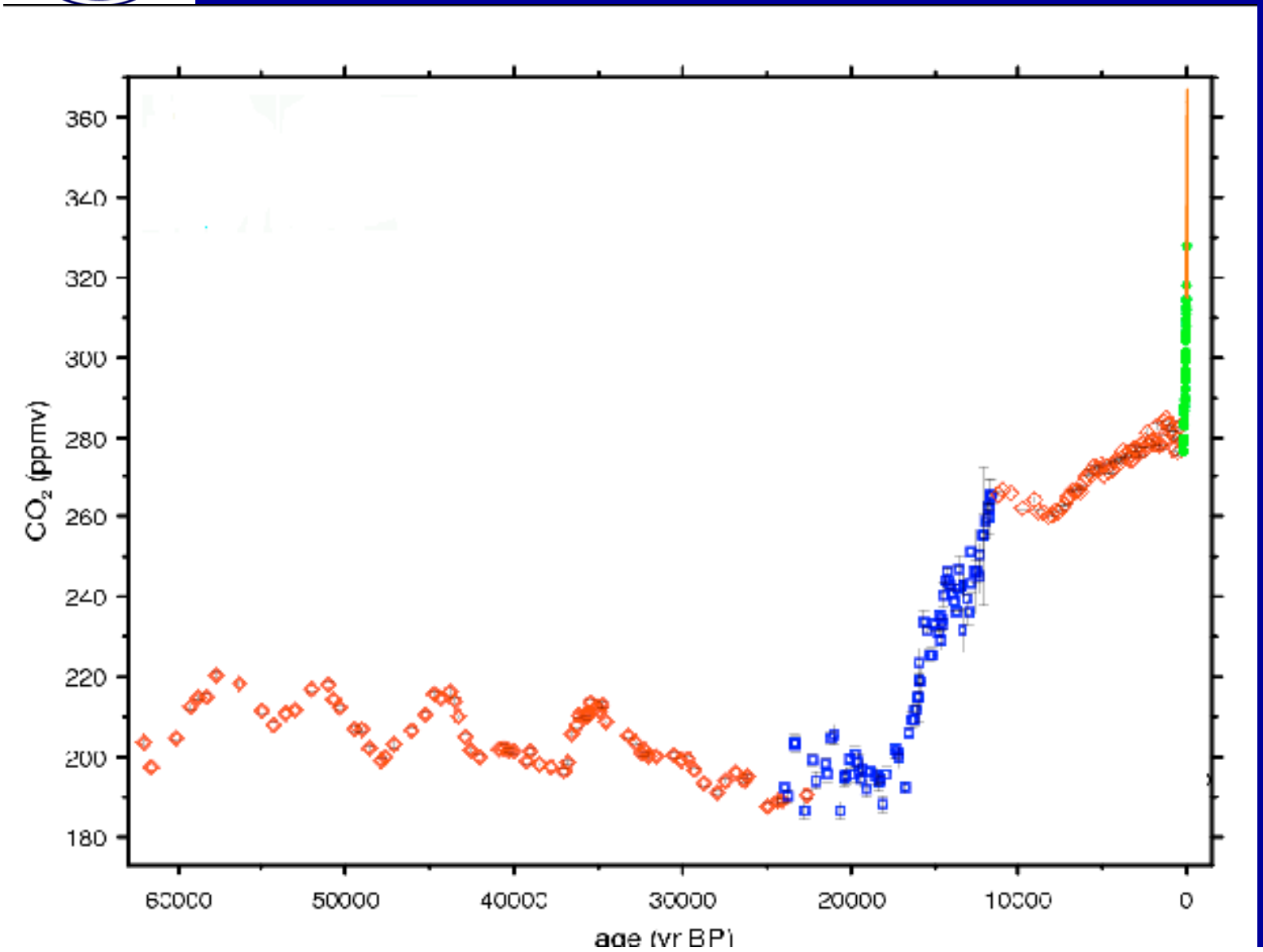
The New Imperative



381 ppm
2005

EU Kyoto Commitment -8% 1990-2010

EU White Paper on Transport - 2001

1. **Integration of transport in sustainable development**
2. **Break link between economic growth and transport**
3. **Shifting the balance between modes**

Energy consumption in transport = 28% of CO_2

Could increase by 50% from 1990 to 2010

Road accounts for 84% of this figure

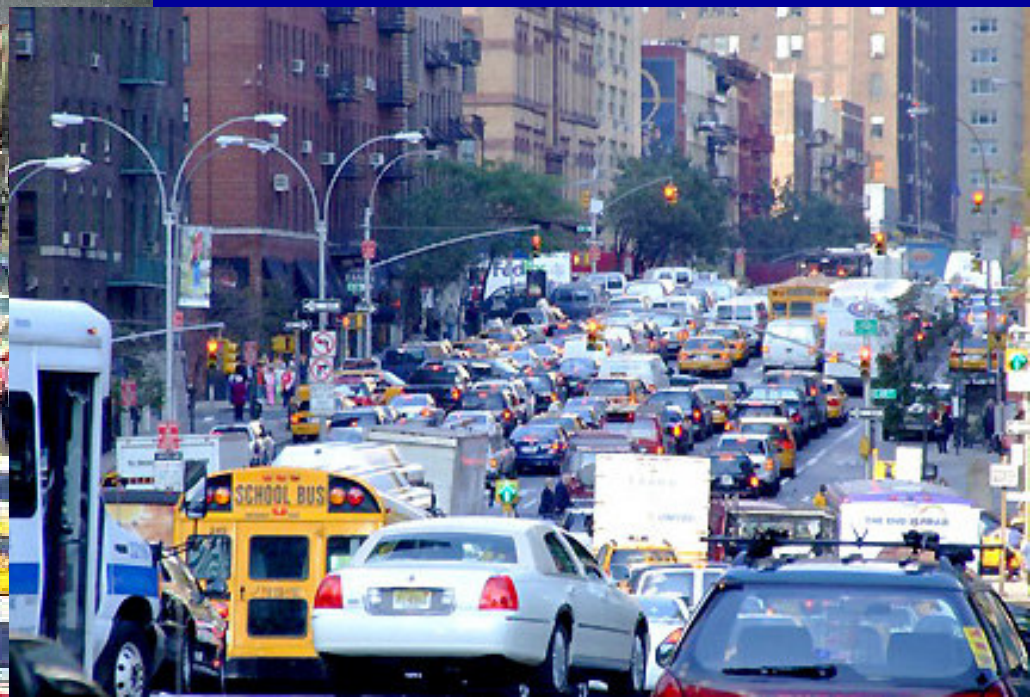
Quality of life in cities – pollution, noise, accidents and congestion

Changes in Travel

EU25 Pass km (billion)	1995	2003	Change %
Car	3819	4444	16.4%
Buses and Coaches	466	483	3.6%
Tram and Metro	64	72	12.5%
Rail	322	345	7.1%
Air	307	449	46.3%

Great Britain	Total	1975/76	1992/94	2003
Journeys		935	1053	990
Distance		7536 km	10302 km	10933km
Journey Length		8.06 km	9.78 km	11.04km
Air travel distance per person per year			65.6km	124.8km

The Universal Problem



1. Technology and Pricing

Internalising the social costs of transport through the pricing mechanism

1. Fuel duty increases – fuel duty escalator
2. Emissions trading schemes – cap and trade
3. Road pricing – congestion based or environmental based

Fuel Duty Escalator in the UK

1993 3% then 5%

1997 7%

Increased price of fuel by about 20% (1994-2000) in real terms

Reflected in lower demand and switching to smaller cars

Carbon emissions reduced by 1.9MtC (1994-2000)

Abandoned in 2000

Technology has always solved the problems in the past and will solve them now

- Catalytic converters
- Voluntary agreements with industry
- Electric and hybrid vehicles
- Renewable transport fuels obligation - RTFO

Electric Cars

Free electric recharging in Copenhagen and Free unrestricted parking for electric vehicles in London

Voluntary Agreements

EU average for all new vehicles to be 140 g/km of CO_2 by 2008

Reducing to 120 g/km of CO_2 by 2012

Current levels for new cars in the UK(2006) = 167.2 g/km CO_2

Hybrid Cars and Lean Burn Technology

Alternative Fuels

Focus FFV can use 85% Bioethanol and produces 30% the CO_2 of the same conventional fuelled car.

Hydrogen Fuel buses – 3 operating in London from January 2004

2. Regulation, Taxation and Pricing

1. Taxation according to pollution profile
2. Congestion charging

£0 Annual Charge

Electric Car

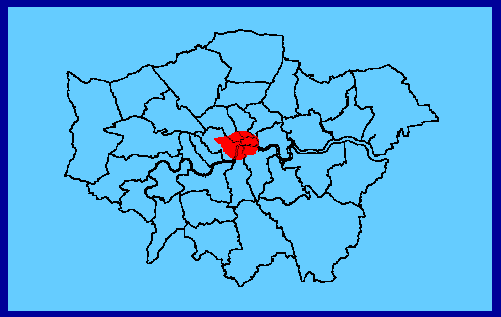
£125 Annual Charge

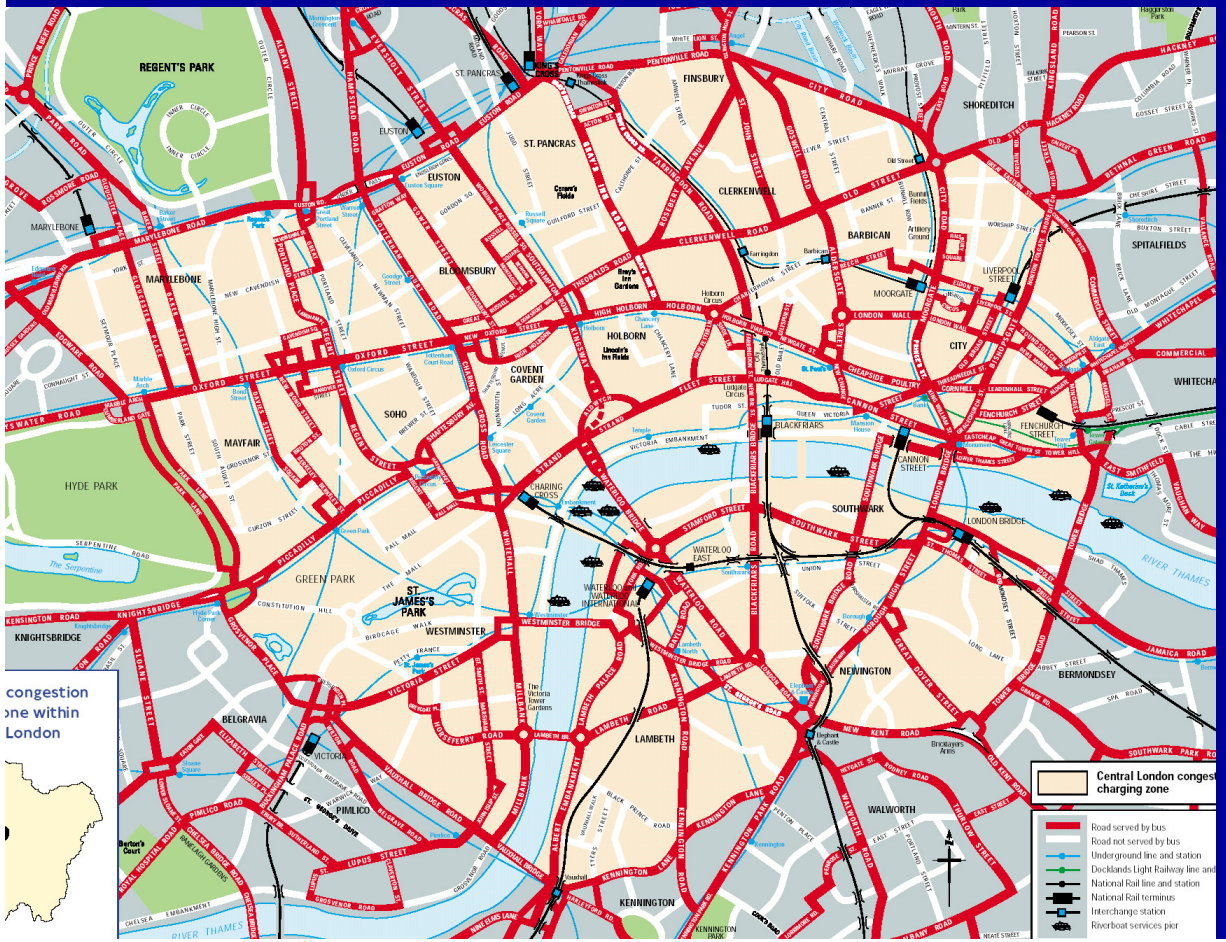
Ford Focus

£210 Annual Charge

Range Rover

The London congestion charging area





- £5 daily charge (€7) – now £8 (€11)
- 174 entry points
- £80 penalty for non compliance (€110)
- Requires registration of all vehicles
- About 50% vehicles have discounts or exemptions

Outcomes 2003-2006

- Traffic down 15% entering
- Delays down by 30% - congestion down by 26%
- 15% speed increase in zone
- Increase in traffic of 5% on IRR but journey times remain the same
- Bus services improved – 4% shift from car to bus
- Bus patronage inside area +16%
- 100,000 payers/day
- Environment – emissions -12%
- Net Revenues £123m (2006/07)

3. Land Use, Development and Planning

- Location of new development in larger settlements to reduce journey lengths – higher use of public transport and green modes of transport
- As density increases the number of trips by car decreases – car use in high density locations half that in low density areas

High density development in London

- Mixed use developments allows trip chaining – location of services and facilities in close proximity
- Promoting high quality locations, including public transport interchanges – where people want to spend time at with facilities – transport development areas

Transport Development Areas

1. At public transport accessible locations
2. Encouragement of multi modal trips
3. Office location and retail centres at TDAs
4. Affordable housing units and car free developments
5. New interchange points where people want to meet and spend time and money

4. Information, Acceptability and Marketing

Empowerment of all key stakeholders through an interactive and participatory process

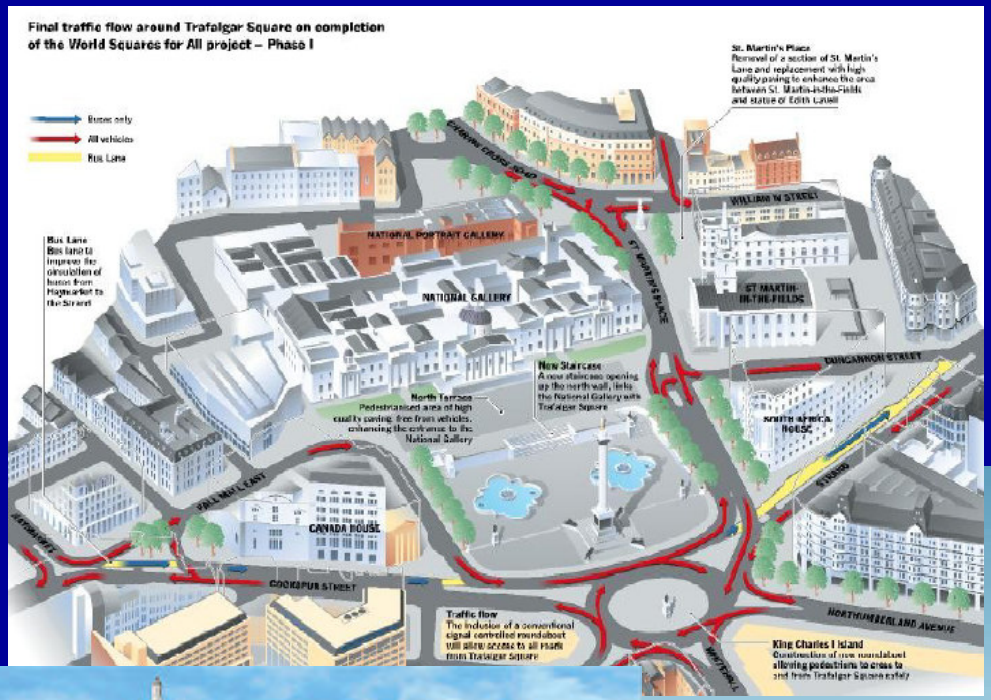
Policy packages must be seen to be effective and fair

- Demonstration projects – car free days
- Healthy transport – exclusive routes for people and cyclists

City Bikes in Copenhagen – 33% of commuting is by bike, with 300 kms of cycle tracks and networks of cycle routes

- School travel plans – company travel plans
- Individualised marketing – proactive involvement
- Quality neighbourhoods – vitality of local areas

Spaces for People



Conclusions - 4 Strategies

1. Reduce the need to travel – substitution - technology
2. Switch to more efficient modes of transport – public transport
3. Reduce travel distance – land use and development strategies
4. Use the best available technology – increased efficiency

Conclusions – 5 messages

1. Many positive actions being taken in cities to improve quality of life and promoting sustainable transport
2. Role of the car in the city is limited, at least in its current form



3. Cities for people - Involvement and commitment of people to live without the car and to use public transport, cycle and walk – the healthy city

4. Quality is key – environmental questions at the top of the agenda - urban design and creation of high quality spaces

5. Leadership – prepared to commit cities to sustainable transport and to persuade business and electors to support radical action.