

















To really bring about change, we'll have to change our attitude toward cars.









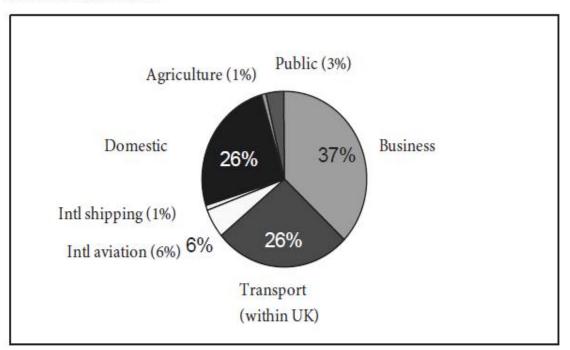








Figure 2 Total transport (including international aviation and shipping) makes up 33% of total UK carbon emissions



Sources: Table 5, UK Climate Change Programme 2006; Figure 20int, "UK Greenhouse Gas Emissions – Latest Figures", 30 March 2006, http://www.defra.gov.uk/environment/statistics/globatmos/gagginvent.htm









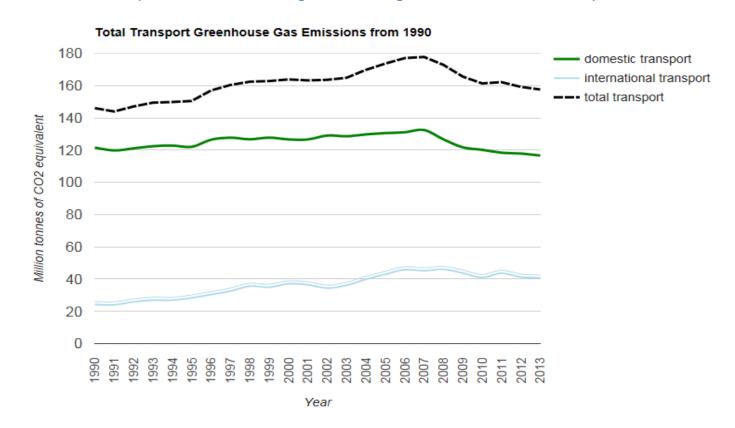




Total greenhouse gas emissions from transport

Total Transport Greenhouse Gas Emissions from 1990

View business plan indicator: Total greenhouse gas emissions from transport



GREENHOUSE GAS EMISSIONS BY TRANSPORT MODE

			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
(a) By source ²																Percent of all domestic in 2012
Domestic	Dood transport	Constructed baseds	76.4	76.0	77.2	75.0	76.1	75.6	74.6	74.6	72.2	60.4	66.2	CF 1	64.2	11
transport	Road transport	Cars and taxis	76.4 22.5	76.0 22.3	77.2 22.9	75.8	76.1	75.6 23.8	74.6 24.2	74.6 26.2	72.2 22.6	69.4	66.3	65.1	64.2	11
		Heavy goods vehicles				22.9	23.1					21.8	23.5	23.4	24.3	4
		Light vans	12.8	13.1	13.4	13.9	14.5	14.8	15.3	15.8	15.4	14.9	15.0	15.2	15.3	3
		Buses and coaches	4.0	4.0	4.2	4.5	4.5	4.6	4.7	4.9	4.6	4.6	4.6	4.3	3.9	1
		Motorcycles & mopeds	0.6	0.6	0.6	0.7	0.6	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.5	-
		Other road transport emissions ³	0.3	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	- -
		Total	116.5	116.4	118.7	118.3	119.4	120.0	120.0	122.7	115.9	111.7	110.4	108.9	108.7	19
	Other transport	Rail ^{1,4}	1.7	1.8	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	-
		Domestic aviation	2.1	2.2	2.2	2.3	2.4	2.6	2.5	2.3	2.2	2.0	1.8	1.7	1.7	-
		Domestic shipping ¹	2.6	2.5	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.6	2.6	2.5	2.4	-
		Other ⁵	3.8	3.8	3.9	3.7	3.6	3.4	4.0	4.3	3.8	3.5	3.4	3.3	3.1	1
		Total	10.2	10.3	10.4	10.3	10.4	10.5	11.1	11.3	10.8	10.0	9.8	9.6	9.3	2
	Total domestic transport		126.7	126.7	129.1	128.6	129.8	130.6	131.0	134.1	126.6	121.8	120.2	118.5	118.0	21
Net domestic emissions all sources			689.8	694.2	674.7	680.9	676.9	670.5	667.2	657.3	637.8	584.4	599.8	556.7	575.4	100
International emissions (Memo items) ⁶		International aviation	30.4	29.6	29.1	29.8	32.7	35.4	35.9	35.7	34.9	33.0	31.6	33.2	32.3	
		International shipping ¹	6.7	7.0	5.4	6.4	7.3	7.8	10.1	9.6	11.3	10.7	9.1	10.2	8.6	







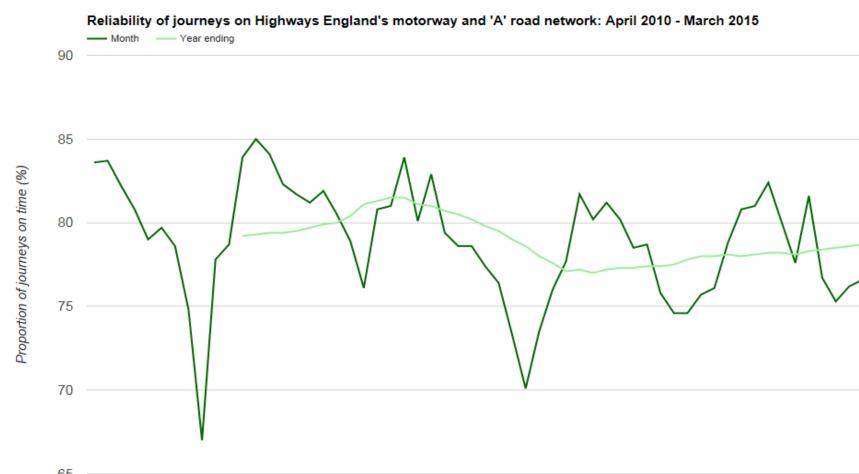






Reliability of journeys on Highways England's motorway and 'A' road network: April 2010-March 2015

View business plan: Reliability of journeys on the Highways England's motorway and A road network



Apr10 Aug10 Dec10 Apr11 Aug11 Dec11 Apr12 Aug12 Dec12 Apr13 Aug13 Dec13 Apr14 Aug14 Dec1 Jun10 Oct10 Feb11 Jun11 Oct11 Feb12 Jun12 Oct12 Feb13 Jun13 Oct13 Feb14 Jun14 Oct14 F Month

TACTICAL APPROACHES TO REDUCING EMISSIONS FROM TRANSPORT

- Targeting fuel consumers: pricing fuels.
- Targeting motor vehicle users: pricing other variable costs of motor vehicle use.
- Targeting motor vehicle operators: changing driving conditions and managing traffic.
- Targeting travellers and shippers: influencing travel choices.
- Targeting vehicle purchasers: influencing vehicle fleet demand and turnover.
- Targeting motor vehicle manufacturers and importers: influencing vehicle fleet supply.
- Targeting fuel refiners and importers: influencing fuel supply.
- Targeting developers and planners: influencing the built environment.
- Targeting households and firms: influencing location choices.
- Targeting the general public: influencing public attitudes towards transportation.













Millions of Vehicle Miles travelled

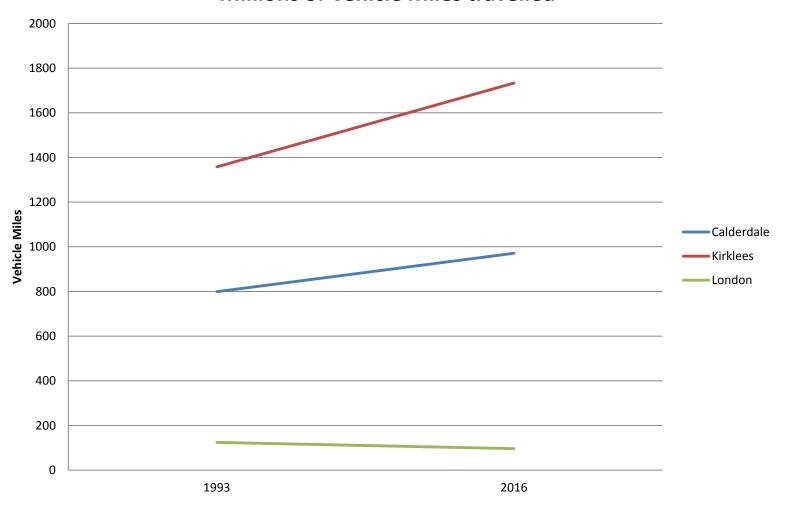
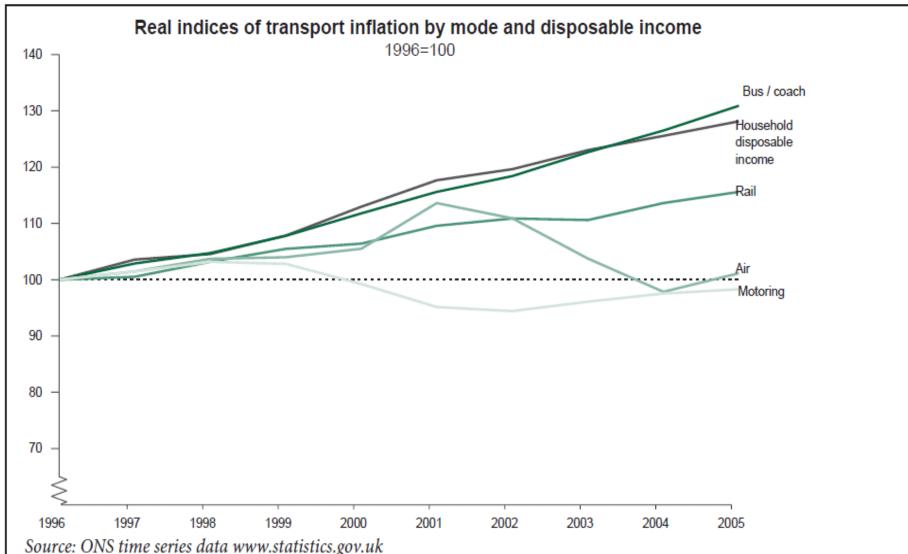








Figure 5 Higher carbon modes of transport have become cheaper than lower carbon modes



Source: ONS time series data www.statistics.gov.uk

Note: "Motoring" is our name for what the ONS categorises as "Personal travel". In addition to the generalised costs of car use, it includes the costs of motorbike and bicycle purchase and repair, and all motor fuel.



From House OF Commons Environmental Audit Committee 2005/6

"In view of the imperative to take bold actions in order to help avert dangerous climate change, the Department should actively encourage modal shift towards lower carbon modes of transport, and discourage marginal car and plane journeys. As part of this, the Government should take much more decisive action to shift the balance of affordability more in favour of trains, buses, and lower carbon cars and lorries.

While we recognise the difficulties in decoupling economic growth from increases in carbon emissions in the transport sector, we are concerned that the Department seems to have a fatalistic attitude which sees carbonintensive activities and economic growth as going hand in hand.

At the very least, local and regional authorities need to be given very strong leadership and guidance on reducing carbon emissions by central Government."















SYSTEMIC STRATEGIES













Transportation engineers and urban planners are #POWERCDALE looking at how to reduce traffic congestion so vehicles spend less time on the road.

People are more active...lower maintenance costs....better environments for people

As a crude approximation, what if all petrol taxes, tolls, and registration fees were doubled. All other things being equal, drivers would then be paying the cost of the roads.

Except all other things wouldn't be equal: there would be a stronger incentive to shift to more efficient cars and to drive less, which would reduce the petrol tax revenue. So the first-order effect suggests you would have to more than double the taxes and fees in order to have the drivers pay for the roads



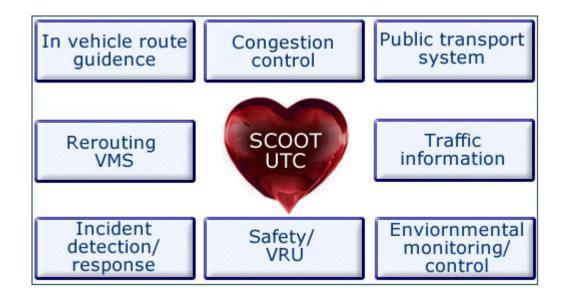












REAL TIME INFORMATION AND SMART SYSTEMS





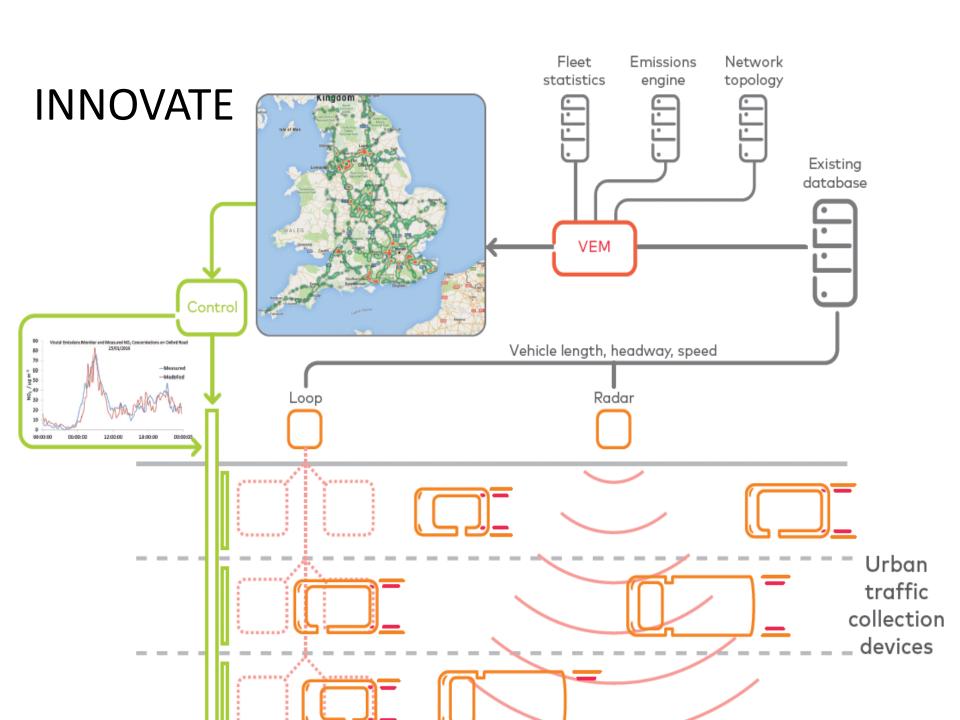




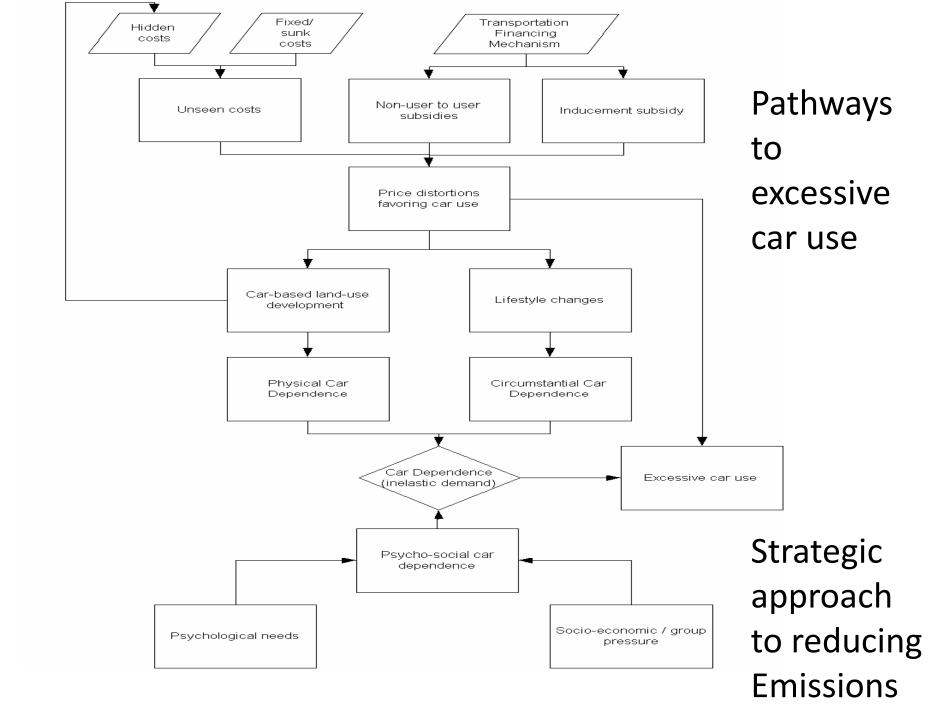












FEEL SAFE AND MOVE FASTER



www.alamy.com - H89Y1Y















CAR NO LONGER KING



















Maintaining routes for active modes must become integral to drive demand

EASIER AND CHEAPER









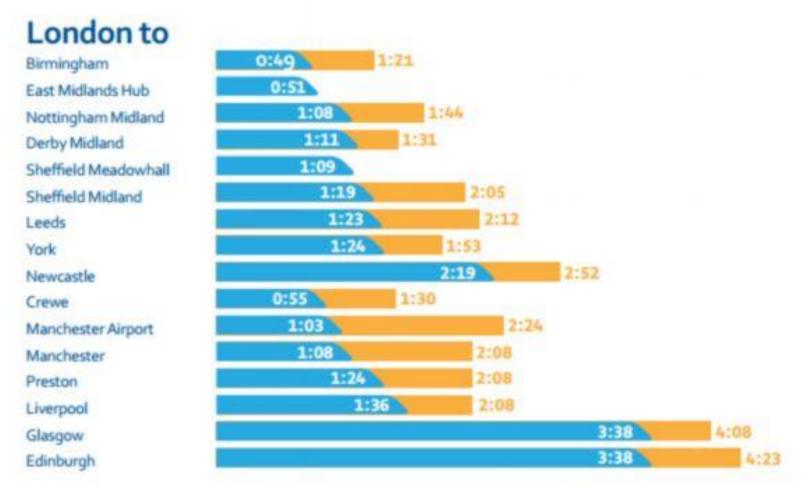












RAIL SHOULD BE AT LEAST 25% FASTER THAN DRIVING



Public policy is the basis for real change

But we have to have the nerve to carry it through to delivery?



Can you love your car a little less?













The back of the BMW Hydrogen 7 is displayed during the 2008 North American International Auto Show in Detroit, Mich.





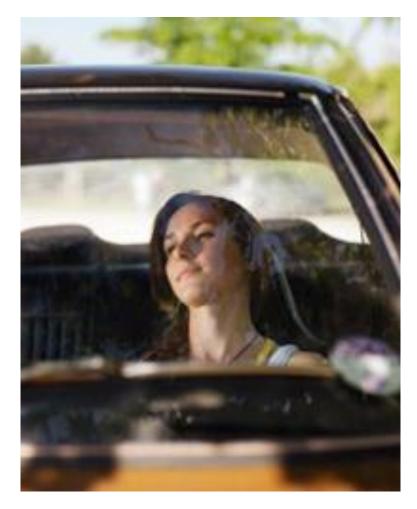












One of the most effective ways to help reduce tail pipe emissions is to reduce idle time for vehicles.













