



SAFE AND SUSTAINABLE MOBILITY FUTURES

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Introduction

1. Futures without the car – difficult to imagine
2. Increasing constraints on the use of the car
3. Radical changes in the car itself – next 20 years

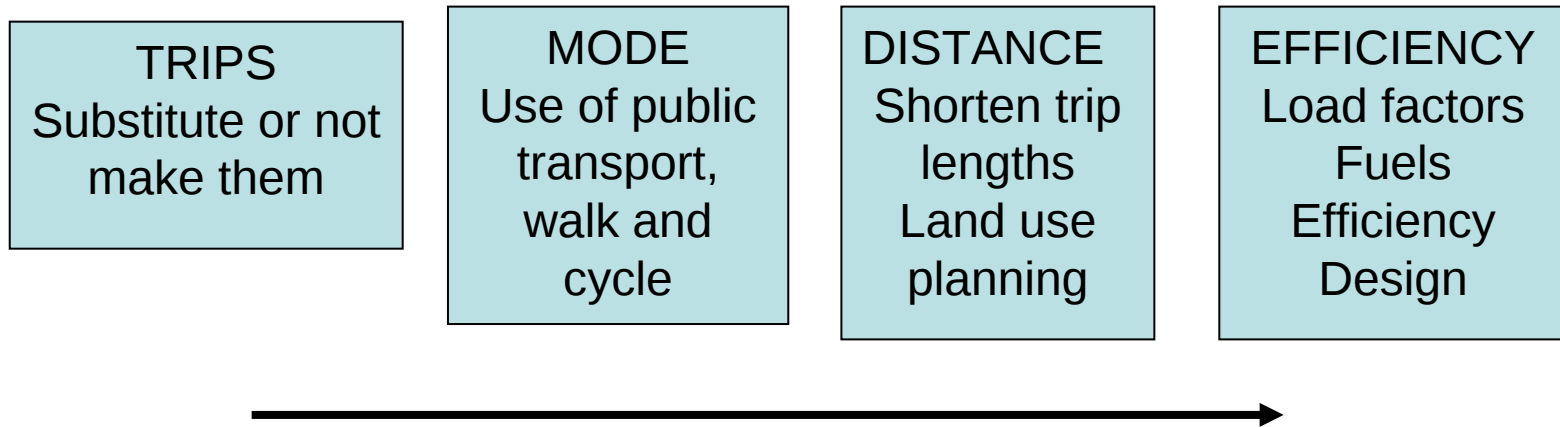
Sustainable mobility paradigm – contribution to a slower, safer and more healthy transport system – focus on opportunities in the city



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Sustainable Mobility Paradigm



Sustainable mobility explores ways of travelling less rather than travelling more, to overcome the problems of capacity, and also to address the environmental imperative.

1. Reducing the need to travel – substitution

- Trip no longer made – replaced by non travel activity or substituted through technology



2. Transport Policy Measures – Modal Shift

- Promotion of walk and cycle
- Slowing down of urban traffic
- Demand management
- Investment in public transport
- Flexible use of streets
- No rebound effects





3. Land Use Policy Measures – Distance Reduction

- Build sustainable mobility into patterns of urban form and layout
- Increase densities and concentration – mixed use developments, housing location



Greenwich and Camden - London

4. Technological Innovation – Efficiency Increase

- Best available technology – lean burn and plug in hybrids
- Alternative fuels – renewable electricity and Biofuels (?)
- Restrictions – clean parts of the city
- Ecological driving and slower speeds
- Increase load factors

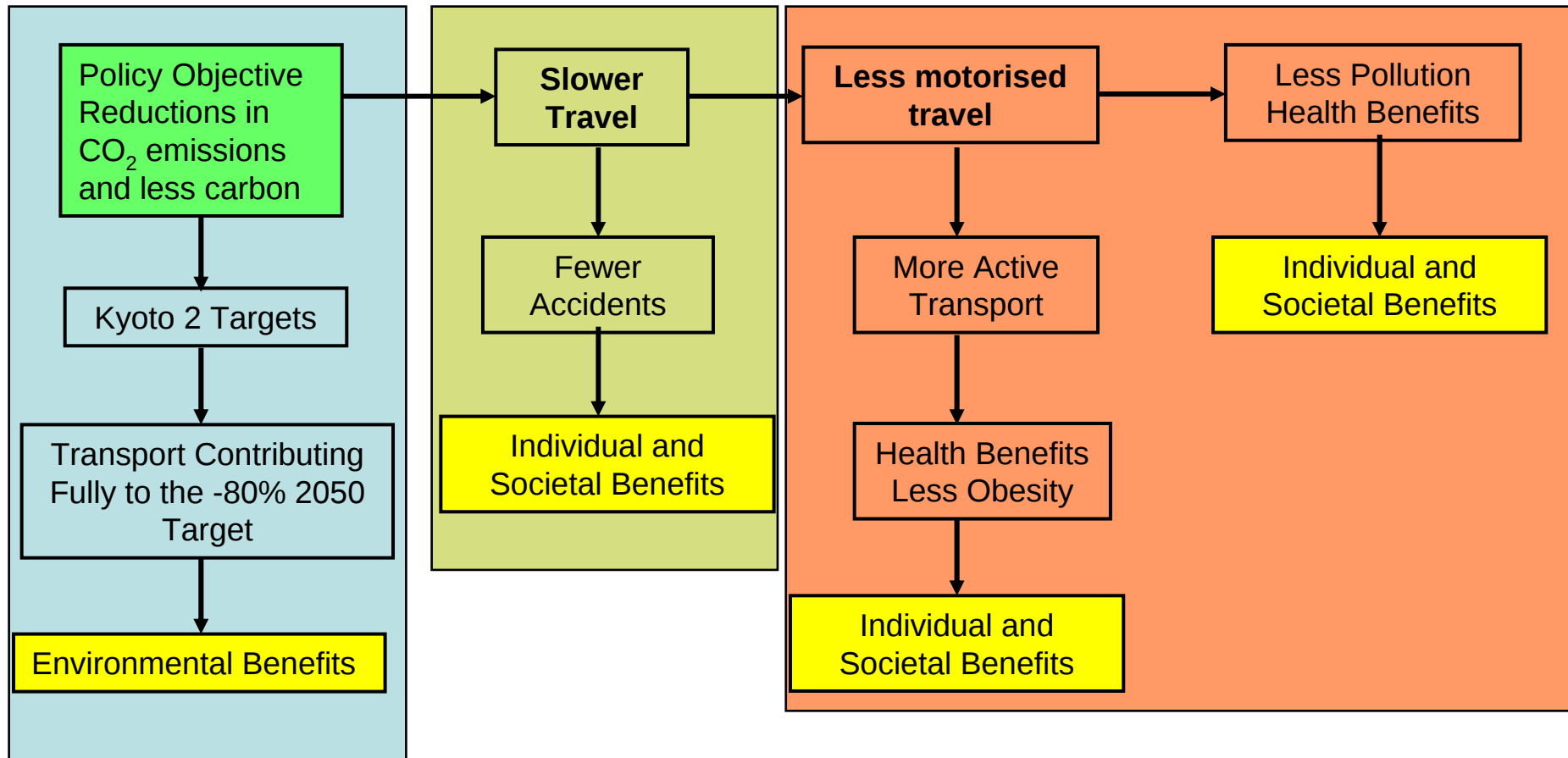




Potential for Transport

Transport = 25% CO₂ 2009 – over 30% if maritime and air included

Virtuous Pathways





Costs of Transport



Urban Road Accidents – Cost £12bn a year, and affects the young, those living in deprived areas and pedestrians disproportionately – 62% of deaths and serious injuries from road accidents occur in urban areas.

Air Pollutants from Transport – Lead to short and long term ill-health. Estimated cost of particulate pollution alone exceeds £9bn annually. Oxides of nitrogen and particulate air pollution cause 12,000 - 24,000 premature deaths and a reduction in life expectancy of 8 months (Defra, 2007).

Noise causes sleep disturbance and stress, and this may be linked to heart disease.

Physical Inactivity is a risk factor for several diseases, and the estimated cost of physical inactivity and obesity is in excess of £10bn in England alone (NHS, 2007).



VIBAT – London Study

Target of 60% CO₂ reduction 1990-2025

Examined 11 Policy Packages – able to get us about half way (27.6% reduction) with a “Balanced Strategy”

Low emissions vehicles (13.0%) key input

Slower speeds and ecological driving important (3.1%) – savings from drivers and from modal shift

Enhanced when combined with smart choice ‘soft’ measures and public transport investment – alternatives more attractive

Limited contribution to CO₂ targets

www.vibat.org

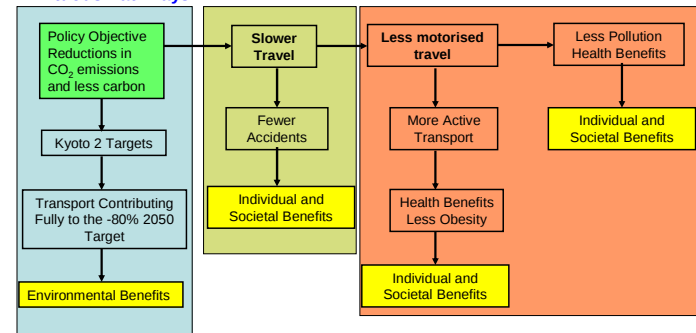


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TC-SIM London



Web Version 03

http://www.vibat.org/vibat_ldn/tcsim3/tcsim.html

Web Version 02

http://www.vibat.org/vibat_ldn/tcsim2/tcsim.html



Sustainable Mobility Futures



1. Speed reductions may not contribute to CO₂ targets in urban areas – but there are still safety and health benefits
2. Slower travel may improve city quality of life, with a switch to active modes and public transport
3. Travel time savings need be related to travel time reliability and reasonable travel times

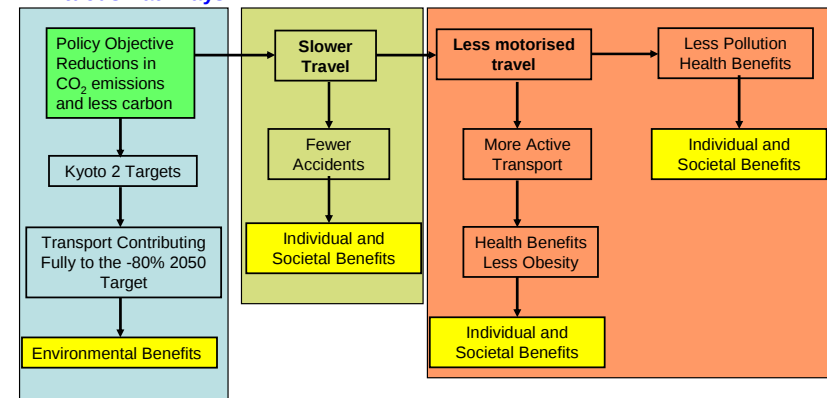


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4. Promotion of active transport important – local pollutants have a direct effect on health and quality of life in cities – low emissions zones
5. Need for active travel – cycling and walking. 66% of adults do not get enough exercise
6. Reallocation of space in cities to cyclists and walkers – 50% of trips

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