

Accelerating a sustainable shift to low carbon vehicles and fuels

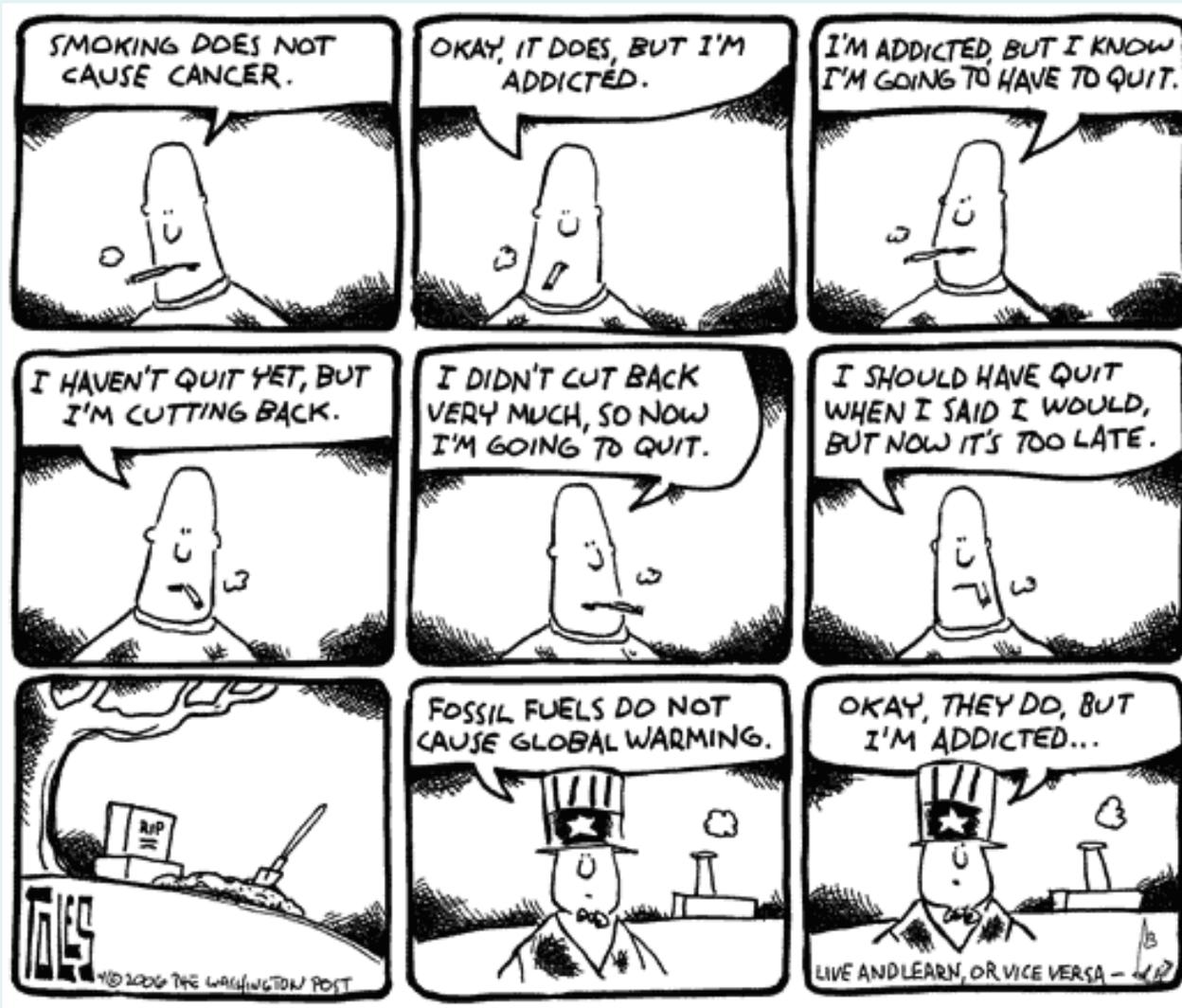
Fuels for Low Carbon Transportation

Institute of Mechanical Engineers

29th November 2010

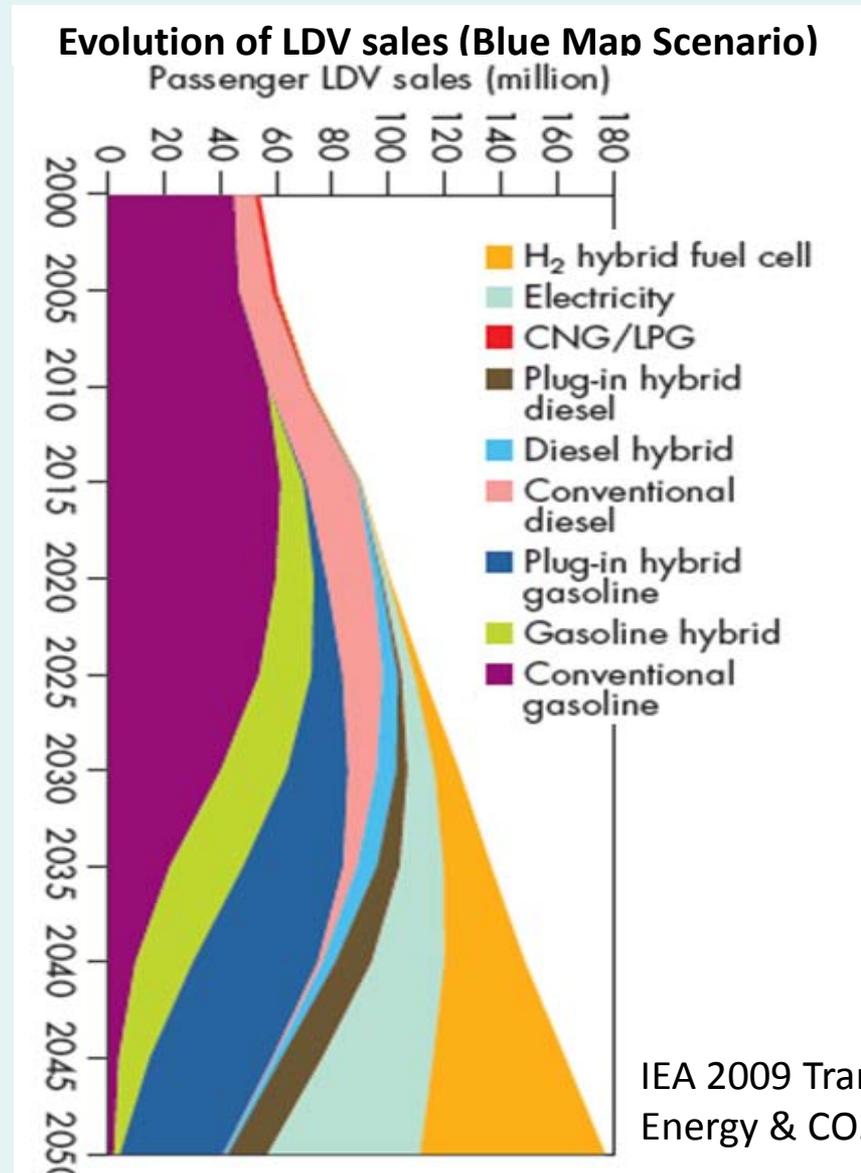
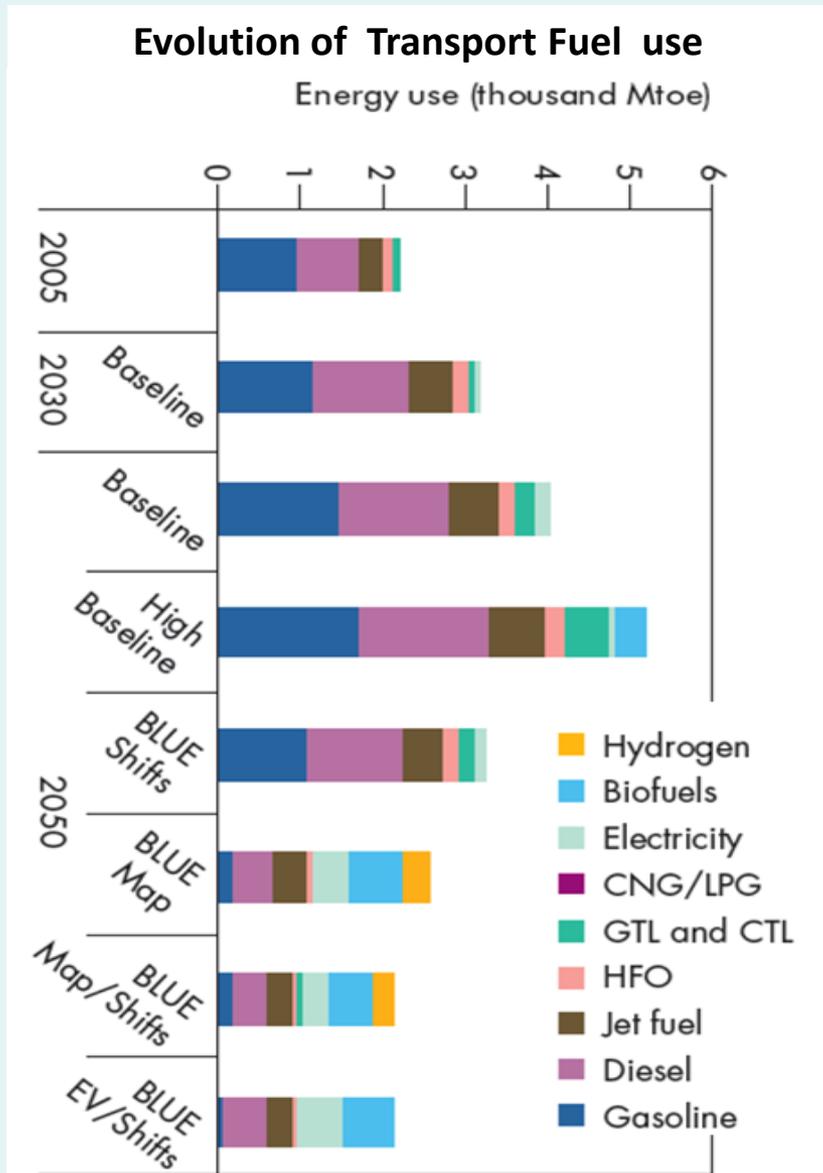
Greg Archer, Managing Director, Low Carbon Vehicle Partnership

Outline



- ❑ 21st century transport challenges & solutions
- ❑ Market barriers
- ❑ LowCVP mission and focus
- ❑ Strengthening consumer demand
- ❑ Supporting effective regulation
- ❑ Stimulating innovation and action
- ❑ Assisting UK industry
- ❑ Future priorities
- ❑ Final thoughts

Transport fuels and vehicles will become increasingly diverse – there are no silver bullets

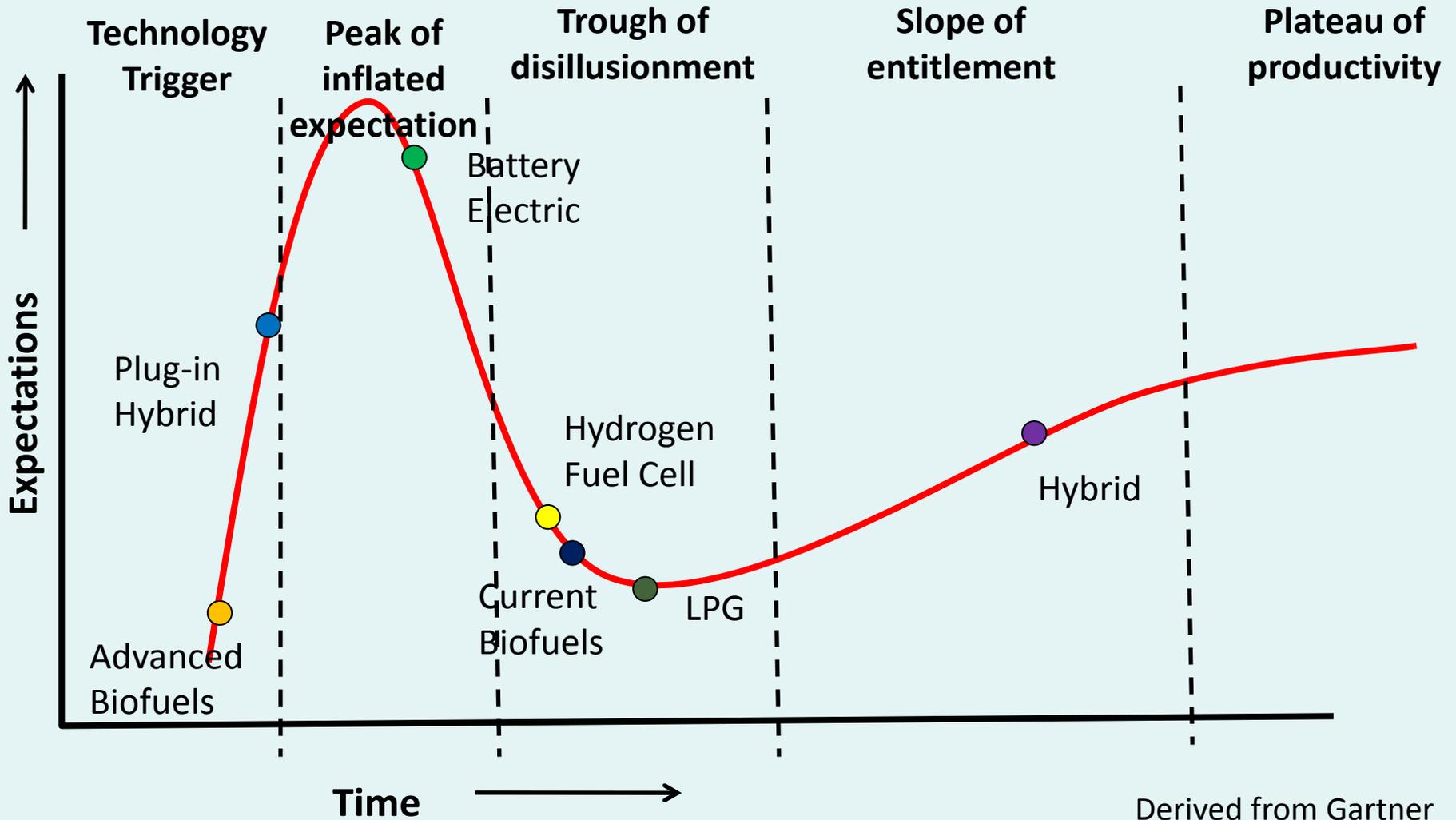


IEA 2009 Transport, Energy & CO₂

To 2020 the challenge is to ready the market for renewable fuels – but which option?

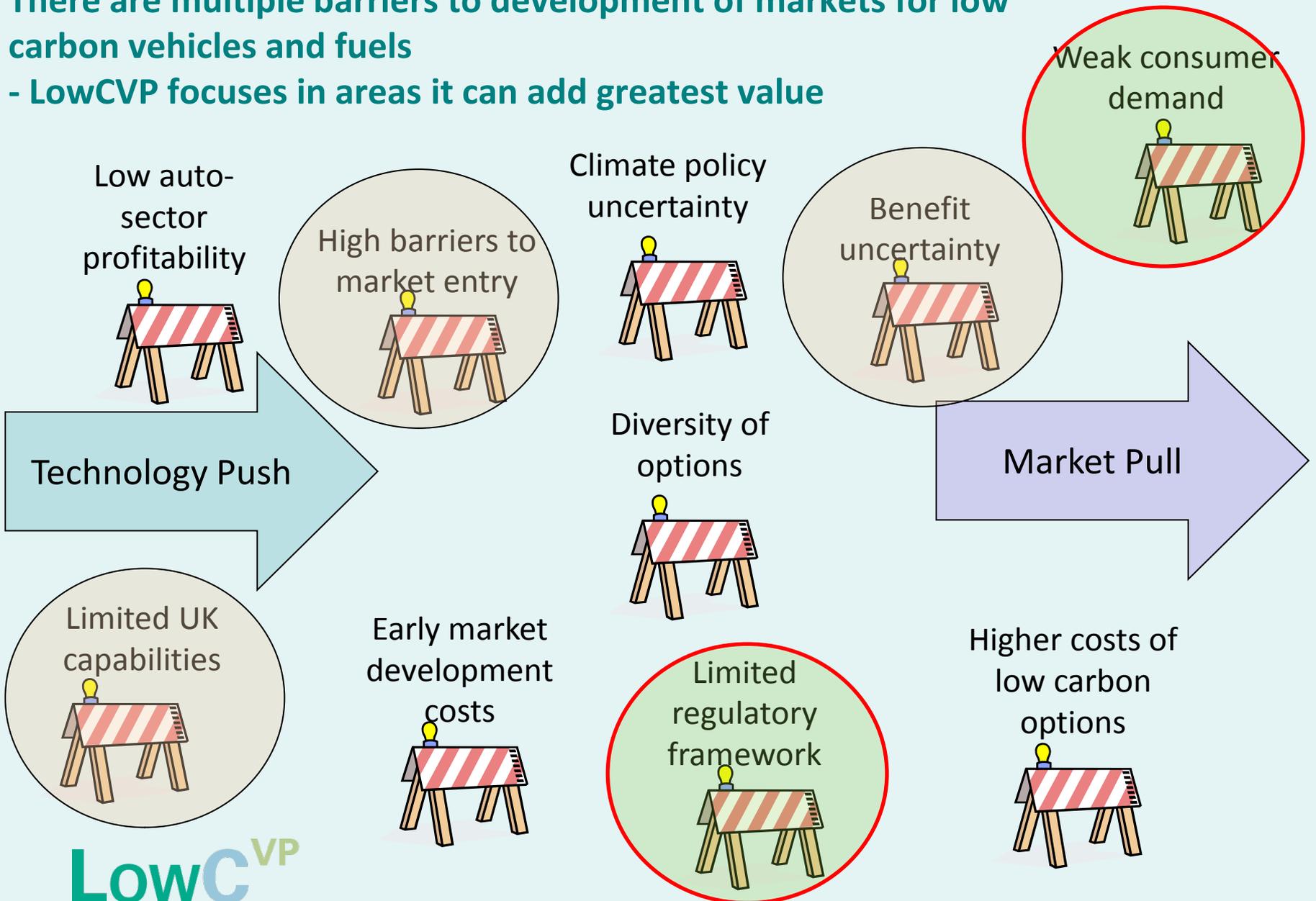
	1 st G Bio	2 nd G Bio	H2-IC	H2-FCV	Bio-CH4	EV
Technology readiness						
Cost competitiveness						
Vehicle availability						
Infrastructure deployment						
Driver acceptability						
Sustainability						

The adoption of new technologies is likely to be incremental and does not follow the hype cycle



There are multiple barriers to development of markets for low carbon vehicles and fuels

- LowCVP focuses in areas it can add greatest value



LowCVP 's mission is to accelerate a sustainable shift to low carbon vehicles and fuels & stimulate opportunities for UK businesses

LowCVP delivers its mission by:

- ❑ Working with Government (and other policy makers) to enable the development and deployment of more effective market transformation policies and programmes
- ❑ Engaging industry, stimulating and leading voluntary industry-wide initiatives
- ❑ Ensures consumers are informed about the opportunities and benefits of lower carbon options promoting their uptake
- ❑ Helping UK business, especially SMEs, to benefit from the new market opportunities
- ❑ Encouraging action and building a consensus for sustainable change through enhancing stakeholder knowledge and understanding.



LowCVP working structures are built around our work programme priorities

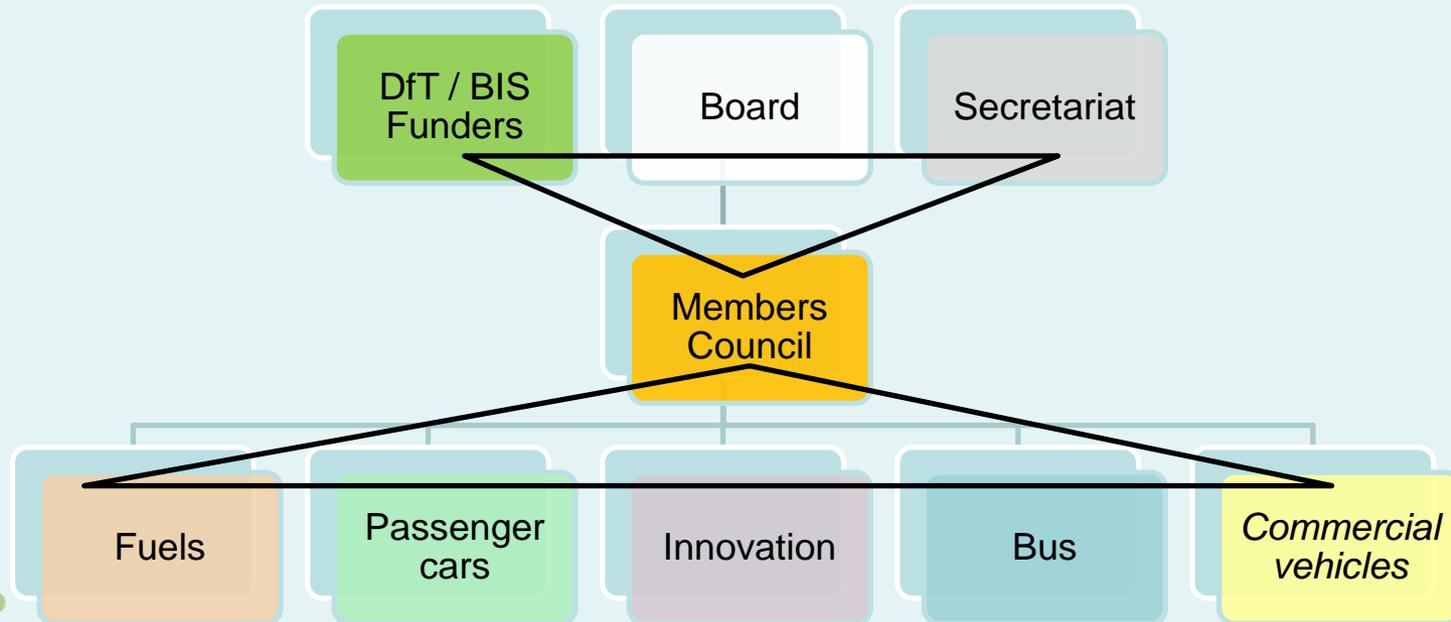
LowCVP work programme areas -

- Incentivising and informing lower carbon choices for cars
- Building the market for lower carbon commercial and public service vehicles
- Tackling market barriers to use of lower carbon fuels
- Facilitating the creation of a successful UK supply chain
- Monitoring progress and tracking pathways to lower carbon transport
- Enhancing stakeholder knowledge and understanding

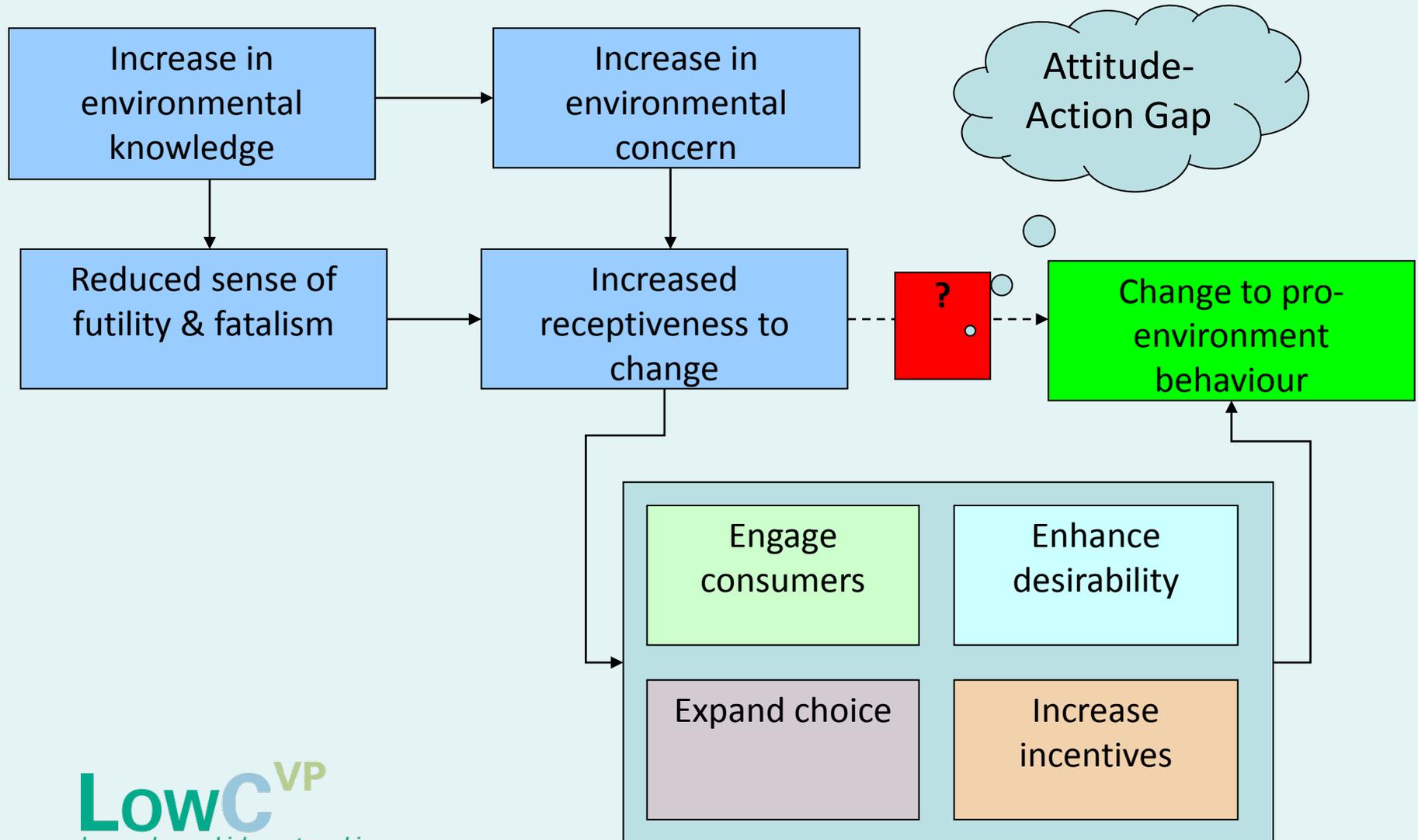
Funders and Board approve the work programme

Council prioritises the programme, oversees progress & reviews outcomes

Working Groups originate the work programme



LowCVP activities to *incentivise and inform lower carbon choices for cars* focus on activities to bridge the “attitude-action gap”



LowCVP initiated voluntary vehicle efficiency labelling for new cars in 2005 and extended the scheme to the used car market in 2009

Thirteen VED bands

The figures on the coloured arrows (A-M) indicate the 13 ranges of emissions by g/km that correspond to levels of annual Vehicle Excise Duty (VED or Road Tax). Low carbon-emitting cars pay less tax. The lowest – Band A – pay no tax.

Make, model and engine details

The vehicle make, model, fuel type, engine capacity and transmission type are all listed. Together they determine the CO₂ emissions and running costs.

Fuel Economy		Low Carbon Car
CO₂ emission figure (g/km) 		B 117 g/km
Fuel cost (estimated) for 12,000 miles <small>A fuel cost figure indicates the consumer a guide fuel price for comparison purposes. This figure is calculated by using the combined drive cycle (urban/combined/highway) and average fuel price. Re-calculated annually, the current cost per litre is at 140p per litre (115p, diesel 127p and LPG 16p).</small>		£1,104 £35
VED for 12 months <small>Vehicle excise duty (VED) or road tax varies according to the CO₂ emissions and fuel type of the vehicle.</small>		
Environmental Information <small>A guide on fuel economy and CO₂ emissions which contains data for all new passenger car models is available at any point of sale free of charge. In addition to the fuel efficiency of a car, driving behaviour as well as other non-technical factors play a role in determining a car's fuel consumption and CO₂ emissions. CO₂ is the main greenhouse gas responsible for global warming.</small>		
Make/Model: Low Carbon Car		Engine Capacity (cc): 1399
Fuel Type: Diesel		Transmission: 5 speed manual
Fuel Consumption:		
Drive cycle	Litres/100km	Mpg
Urban	5.4	52.3
Extra-urban	3.8	74.2
Combined	4.4	64.2
Carbon dioxide emissions (g/km): 117 g/km <small>Important note: Some specifications of this make/model may have lower CO₂ emissions than this. Check with your dealer.</small>		

CO₂ emissions figure

The black arrow points to the vehicle's relevant band of CO₂ emissions on which Vehicle Excise Duty (VED or Road Tax) is based.

Running costs

Average yearly fuel costs are calculated and displayed together with the relevant level of Road Tax. Figures updated with recent prices.

Fuel consumption

Shows how efficient the car is in miles per gallon and litres per 100km in town, country and combined driving situations.

Building consumer trust in fuel efficiency information is essential – voluntary best practice marketing principles for automotive environmental claims have helped

Best Practice Principles for environmental claims in automotive marketing to consumers

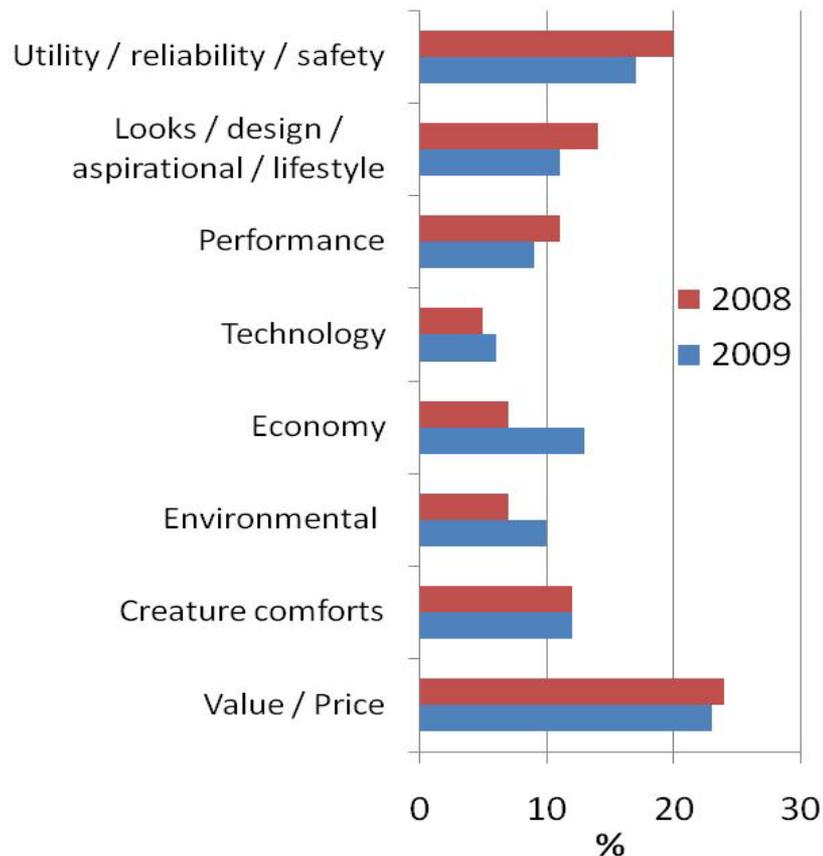
LowC^{VP}
low carbon vehicle partnership



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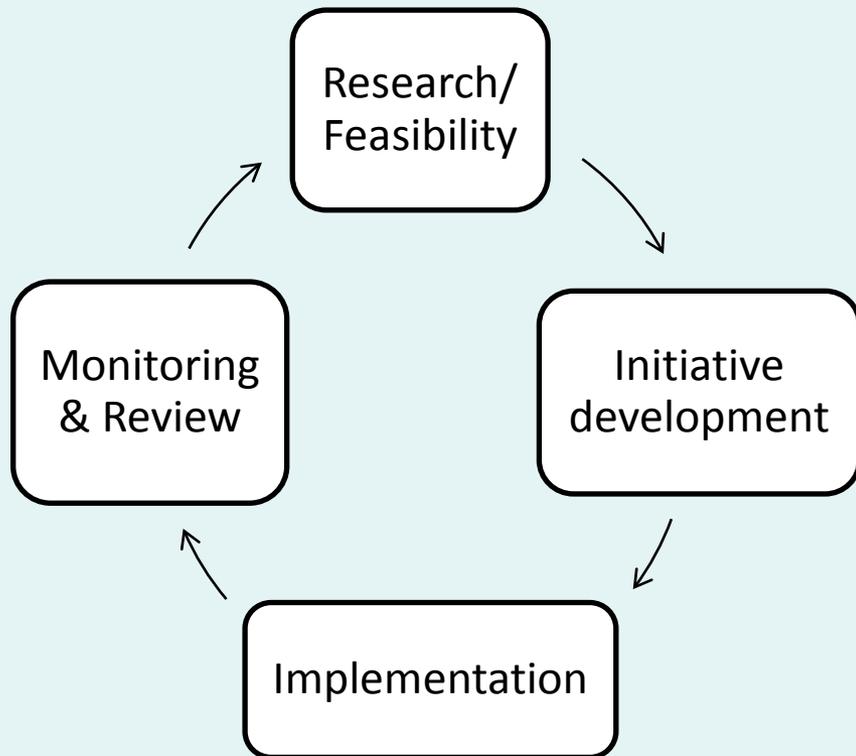
Share of National Press Messages



- ❑ Marketing communications should be legal, decent, honest and truthful.
- ❑ Consumers should be able to access the information to inform their purchase decision.
- ❑ The Principles should apply throughout the marketing chain to all promotional material and practices
- ❑ Principles concern
 - The form of environmental claims
 - Accessibility of information
 - Appropriate comparisons
 - The use of green imagery, symbols and endorsements

Regulation and other policy has a key role in tackling market barriers. LowCVP significantly influenced and designed key interventions to support the market for sustainable biofuels

LowCVP programmes follow a development cycle



- ❑ Determined a wide range of biofuel WTW emissions in production
- ❑ Demonstrated the feasibility of incentivising biofuel sustainability
- ❑ Encouraged Government to adopt sustainability requirements in regulations
- ❑ Developed carbon and sustainability reporting requirements for RTFO
- ❑ Rolled out guidance to operators
- ❑ Demonstrated practicality of scheme to the European Commission
- ❑ Supported adoption of sustainability criteria in RED and FQD
- ❑ Input to iLUC debate



LowCVP work has supported the development of Europe's largest market for low carbon buses. Ongoing projects are designed to support markets for low carbon trucks and vans & design new evaluation frameworks



- ❑ Encouraged Government to incentivise “low carbon” buses
- ❑ Defined system for defining LC buses on a WTW basis
- ❑ Developed testing protocol
- ❑ Advised DfT on appropriate incentives
- ❑ Supported roll-out of the Green Bus Fund
- ❑ Engaging local authorities to promote uptake
- ❑ Working to establish EU buying consortium

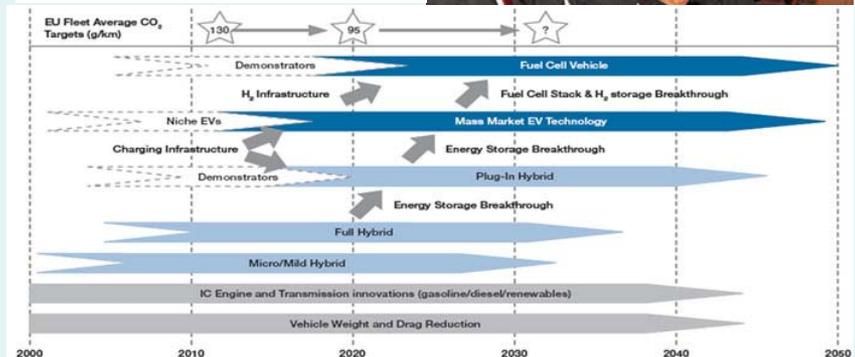
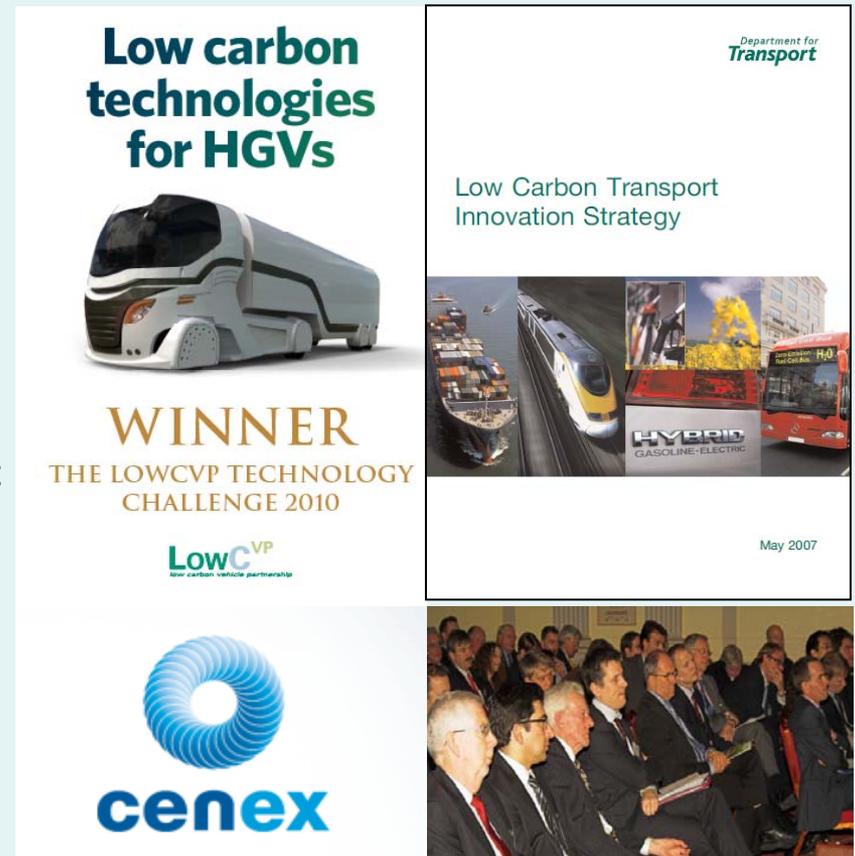
New projects

- ❑ Market development for low carbon passenger car technologies 2020-30
- ❑ Improved metrics for comparing passenger car performance
- ❑ Encouraging the market for fuel efficient vans
- ❑ Testing and certification of fuel economy and CO2 of HGVs and technologies for HGV applications
- ❑ Development of a risk based framework for managing indirect land use change by biofuels



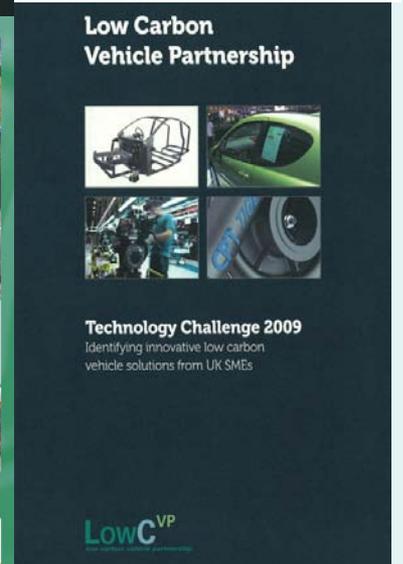
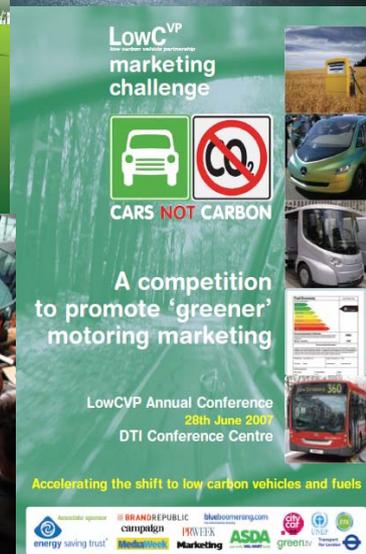
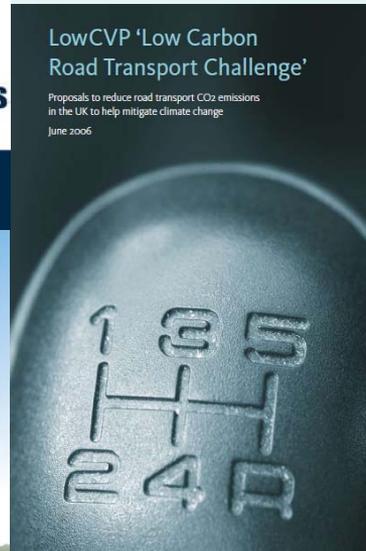
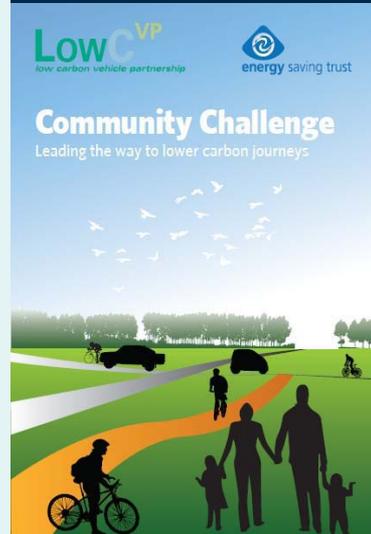
LowCVP supports UK business, especially SMEs, to prosper from new market opportunities for low carbon vehicles and fuels

- ❑ Technology Challenges to network suppliers of new technology with prospective supply chain and fleet clients
- ❑ Investors events inform and engage prospective funders of the opportunities in clean-tech transport applications
- ❑ Support for innovation policy and road mapping - review and effectiveness of public support
- ❑ Development of industry tools – a common language for UK manufacturing and technology readiness
- ❑ Partnering events to promote collaboration between businesses
- ❑ 2005 creation of Cenex



LowCVP initiatives stimulate innovation, recognise excellence & engage stakeholders

- ❑ Champions Awards
- ❑ “Challenge” competitions
- ❑ Conferences
- ❑ On-line seminars
- ❑ Monthly newsletter
- ❑ Information portal



Final thoughts

- ❑ There are no silver bullets!
Vehicle and fuel technologies will become increasingly diverse
- ❑ Current policies are inadequate for the scale of the challenge
- ❑ New metrics will be needed
- ❑ Consumer awareness and acceptability must be increased
- ❑ Supporting UK innovators can provide significant green business opportunities for the UK
- ❑ Transport tax revenues will decline with increasing lower carbon vehicle adoption
- ❑ Partnership working is effective in tackling market failings



Join the LowCVP

LowCVP members are: influential; networked; informed; engaged; committed; leaders; knowledgeable. **ARE YOU?**

www.lowcvp.org.uk