

Linking Research and Practice: Business Perspective on Progress towards Low Carbon Freight Transport

4th International Workshop on Sustainable Road Freight
Cambridge University Engineering Department, Cambridge, UK



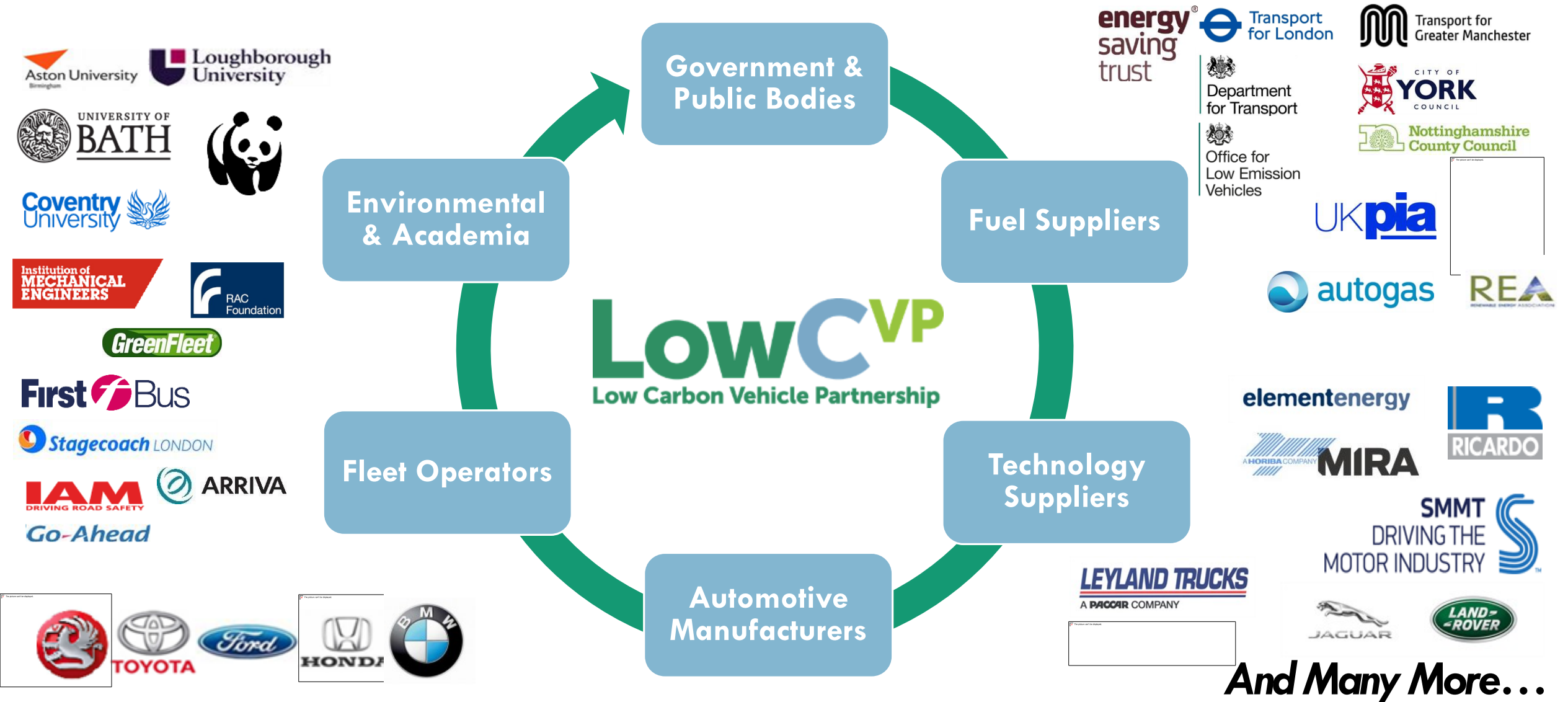
LowCVP
Low Carbon Vehicle Partnership
Connect | Collaborate | Influence



Andy Eastlake

Managing Director, LowCVP

LowCVP: A unique public-private membership organisation, building evidence and creating robust policies and innovation in the UK

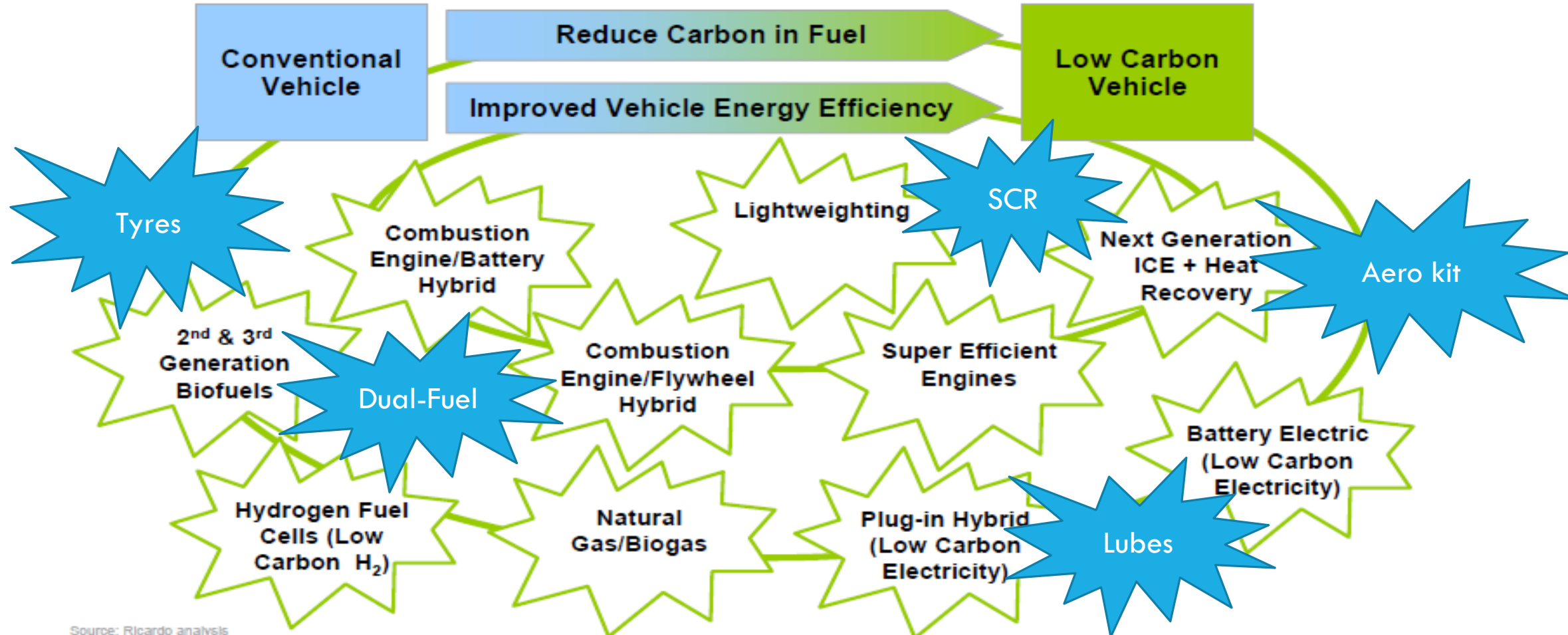


And Many More...

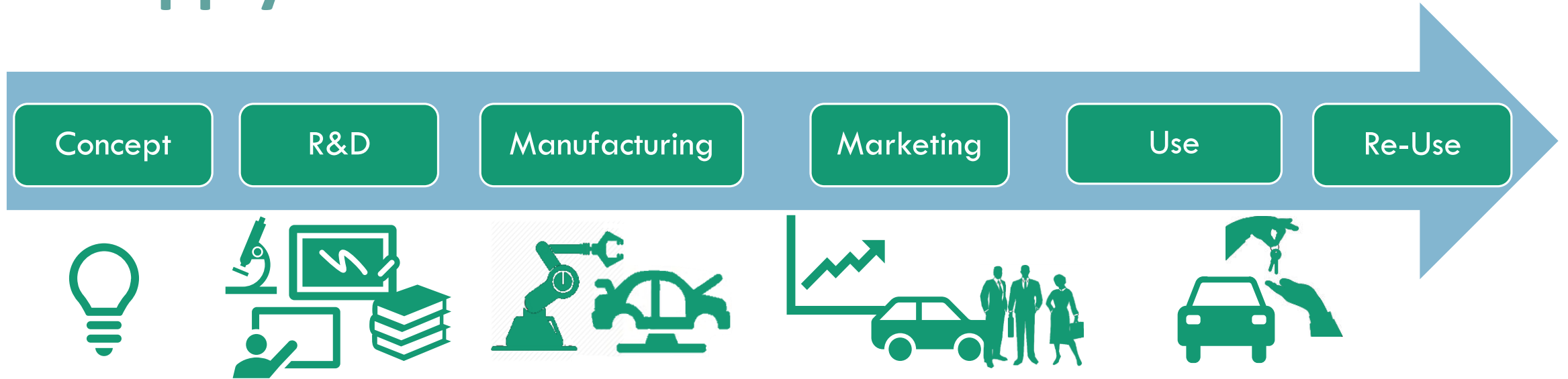
There are many technical options to reducing new and existing vehicle CO₂ and improving air quality. All have challenges and are suitable to different applications.

We are likely to need most or even all of them.

- Low carbon vehicles achieved through improved efficiency and/or low carbon fuels:



Supply chain and Demand chain



Robust evidence, information, support and policy is needed at every stage of the process

But..... At each stage the requirements and audience are different

Providing a platform for strategy, growth and sustainability in the automotive sector and UK transport market

Research

Innovation

Industrialisation

Sustainable
Manufacturing/
Market Development

Policy Environment

Research relevant
to Automotive
manufacturing
sector

Low Carbon
Vehicles Innovation
Platform

R&D support for the
industrialisation of
Low Carbon Vehicles

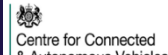
Promoting and
encouraging wider
market uptake

Providing feedback
and guidance for
shaping future policy

 EPSRC

 Innovate UK

 ADVANCED
PROPULSION
CENTRE UK

 Centre for Connected
& Autonomous Vehicles

 Office for
Low Emission
Vehicles

 **LowCVP**
Low Carbon Vehicle Partnership

Early TRLs

Early/Mid TRLs

Mid/Late TRLs

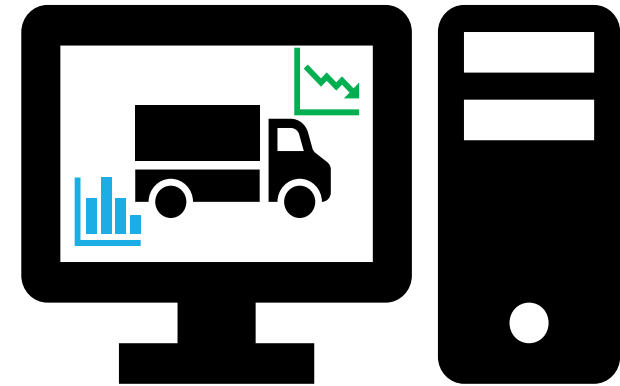
Promoting British trade across the world facilitating inward investment and export.

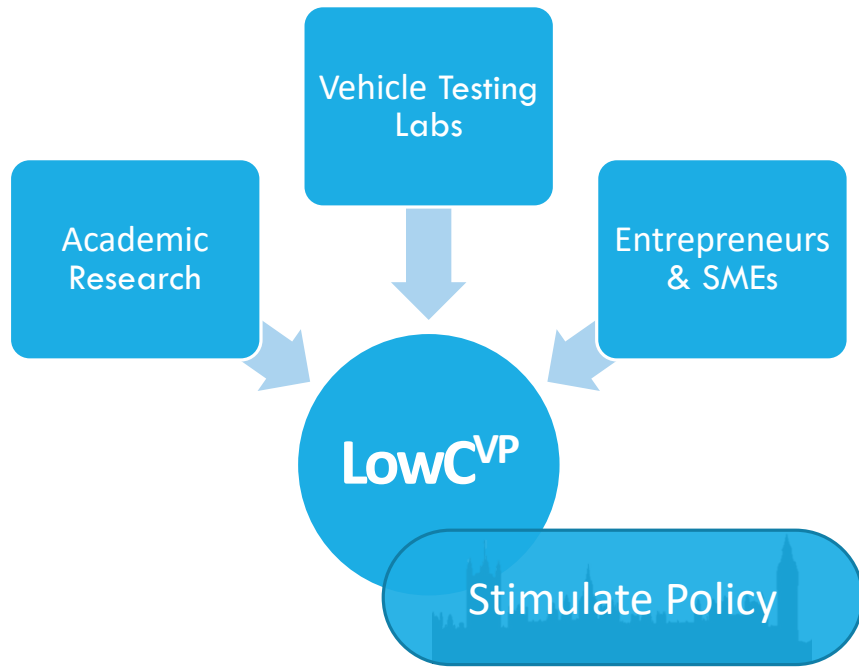
Championing Innovation, Low & Zero Carbon Vehicles across industry and Government and users

Road

Lab

Model





Getting the right metrics to drive policy.



CO₂ Emissions g/km
 • Tax Banding

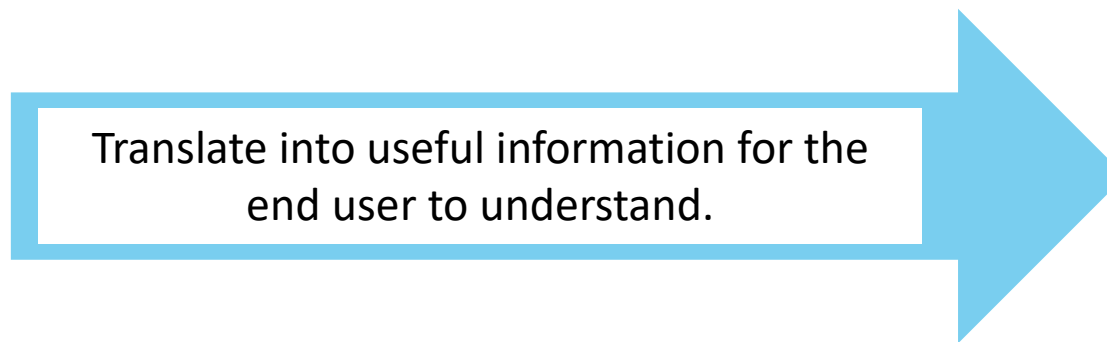


Energy Efficiency kW/h
 • Funding schemes?



NO_x emissions g/km
 • Air Quality Plan

Policies used to incentivise good practice and achieve desired outcome, backed up by robust, detailed data



Operational Costs

- MPG
- Maintenance

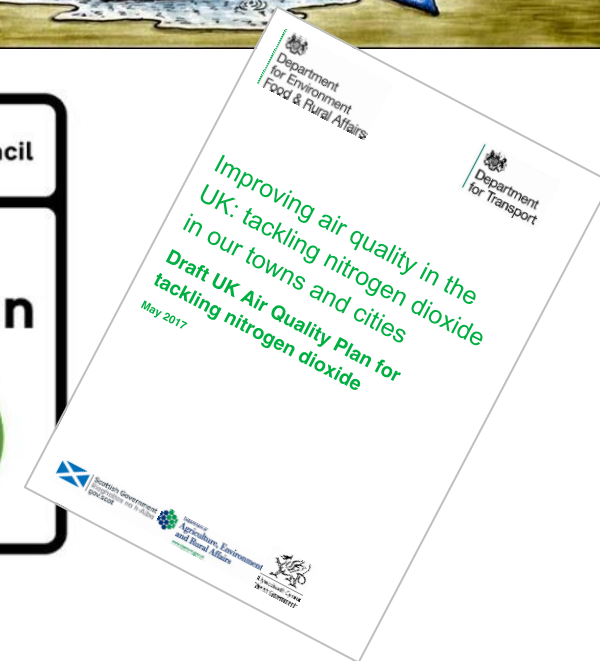
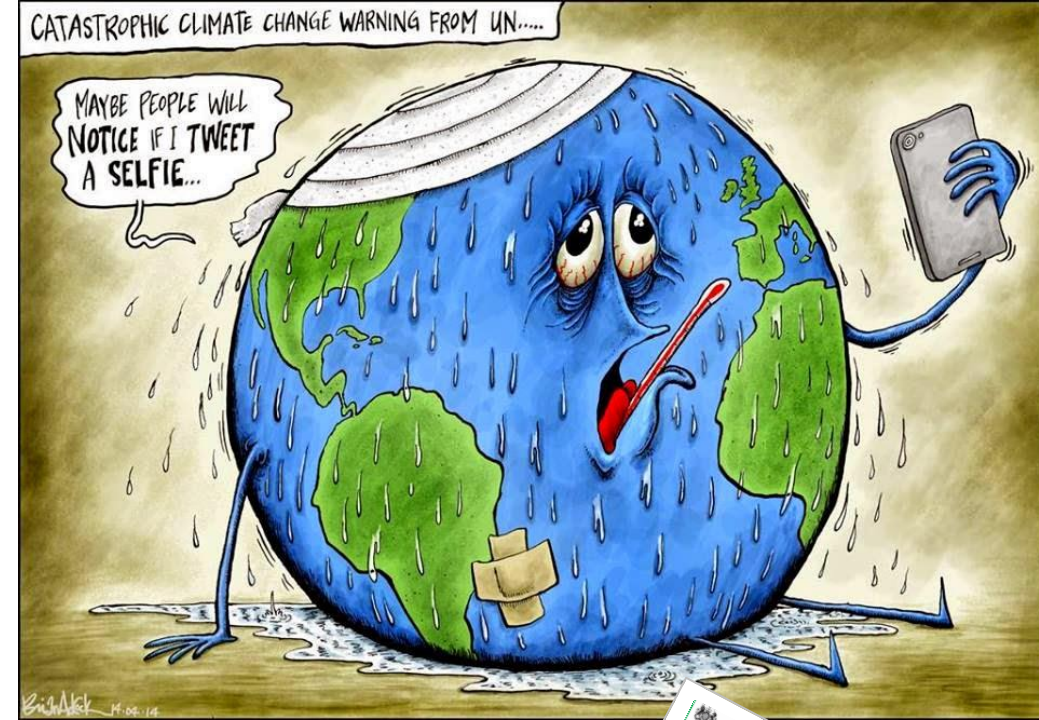
Vehicle Tech Costs

Grant Funding

Outcomes:
 More Efficient
 Transport

Now available...

- **For improving the fuel efficiency and/or reducing the GHG emissions of existing trucks:**
 - **Certification Scheme for Aftermarket Technologies**
 - Measures % savings over baseline vehicle, over range of test cycles.
 - Can also measure AQ pollutants, but only to verify no significant increase.
 - **Track-based**, with PEMS option where appropriate.
- **For cleaning up old Euro III, IV or V trucks (or vans) to achieve in-service emissions similar to an equivalent Euro VI/6 vehicle**
 - **Clean Vehicle Retrofit Accreditation Scheme**
 - Checks compliance to g/km limits for various pollutants, esp. NO_x, including NO₂.
 - Also measures GHG emissions, to ensure no significant increase.
 - Not full Euro VI (engine) tests.
 - Whole vehicle tests using cycles representative of typical operations.
 - Will link via accredited installation to vehicles being compliant with CAZ/ULEZ .
 - **Dynamometer-based**, with full AQ measurements, including PM, NH₃ (and N₂O).
 - Track tests as per above to provide PEMS data for vehicles > 26t.



The schemes will help to build the market for low carbon and low emission trucks and freight

Evidence

- Operators get reliable, trustworthy and relevant information on likely effectiveness for their duty cycles
- Suppliers can demonstrate realistic savings, independently evaluated

Recognition

- Suppliers gain marketing opportunities, able to distinguish themselves from the snake oil salesmen
- Innovative and genuinely effective products encouraged
- Certificate issued for products that meet the mark

Incentives

- Win-win for suppliers and operators via increased sales and fuel savings
- Government can properly target support mechanisms towards genuinely effective products

CAZ
compliance

Grants

ULET
standards

Thank you. Any questions?



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Interested in joining the Partnership?

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