

# Defining a Low Emission Commercial Vehicle

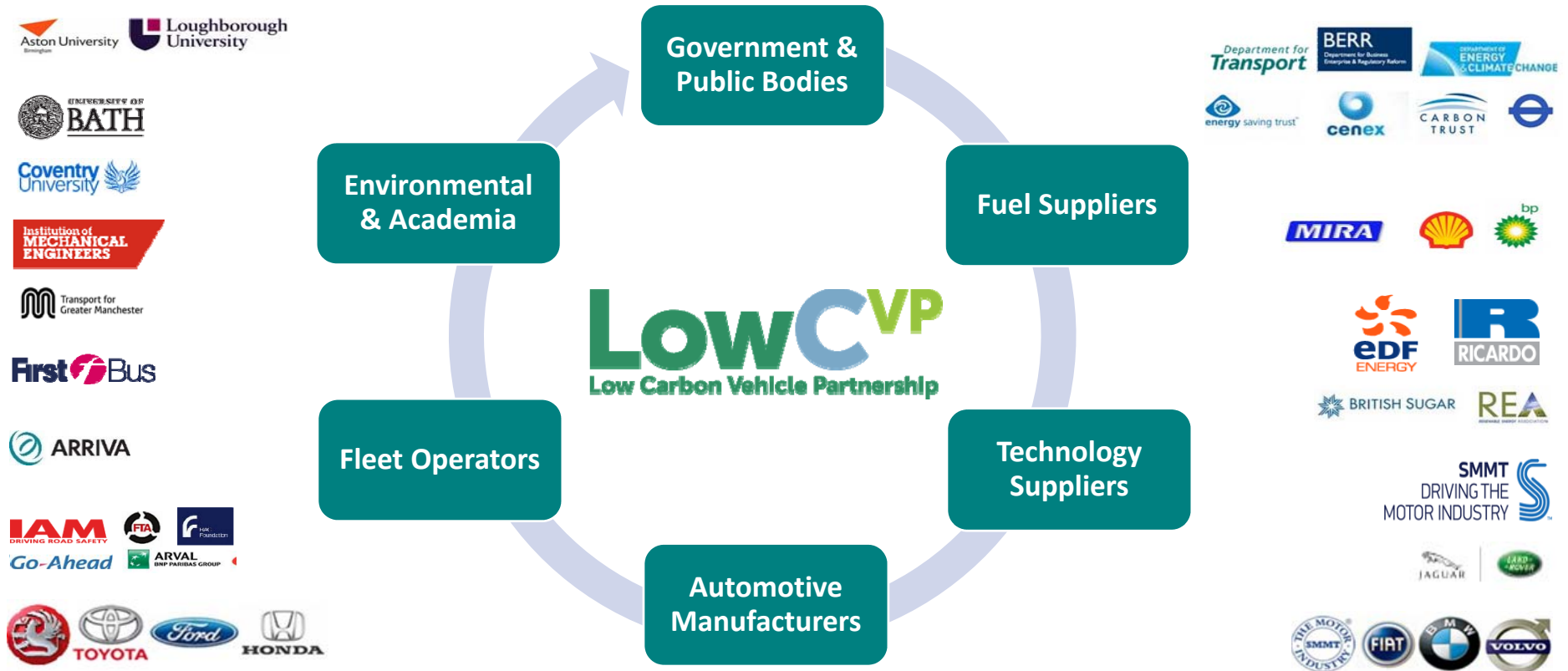
LoCITY – 25/May/2016



*Andy Eastlake*

*Managing Director - LowCVP*

# Collaborating for success



# Innovation is good but ..... Proliferation can create a problem

- CAZ – Clean Air Zones
- Euro 4, 5, 6
- Euro IV, V, VI, EEV
- ULEV – Ultra low emission vehicle
- PiVG – Plug in Van Grant
- LCTT –Low Carbon Truck Trial
- CVTF – Clean vehicle Technology Fund
- RPC – Reduced Pollution Certificate
- LEZ - Low Emission Zone
- CNG, LPG, LNG, CBM, LBM, Electric, Hydrogen, Methanol, HVO, Ethanol,.....



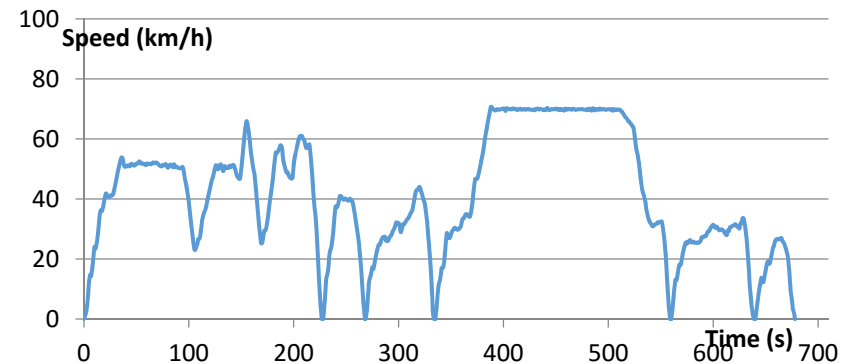
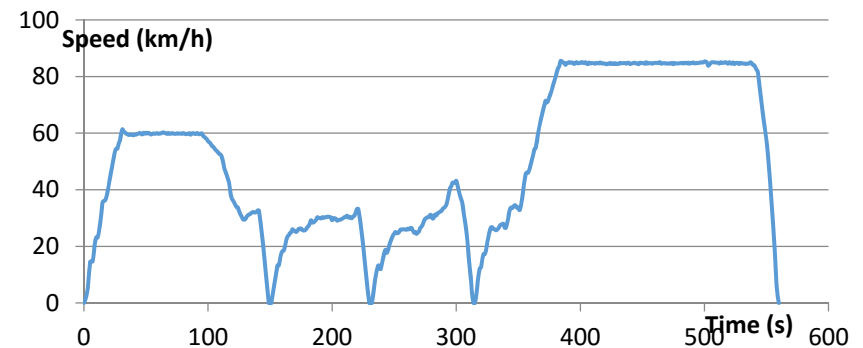
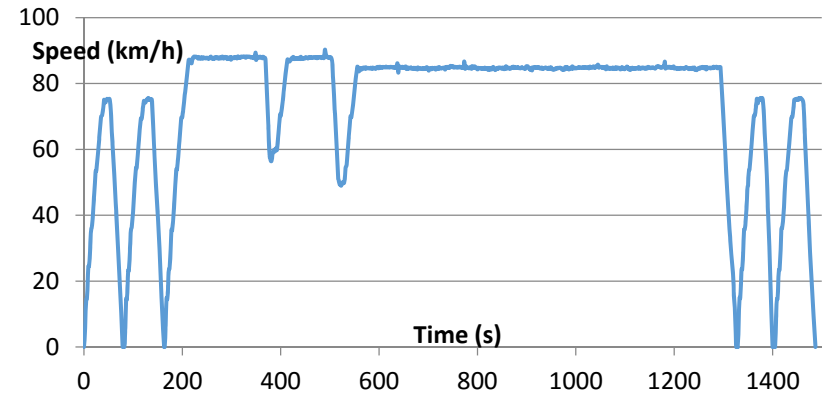
# Steps to success

- Listen to the users – real operational issues and opportunities
- Learn from others – legislation, other sectors, International
- Make the test real
  - Representative - driving cycles
  - Realistic - load
  - Relevant - results
- Think about the costs – Testing, Certification, Application



# LowCVP commercial vehicle test

- 3 Phases, based on European work (VECTO) for HGV CO<sub>2</sub>
- Long Haul – Avg 74 km/h
- Regional Delivery – 50 km/h
- Urban Delivery - 42 km/h



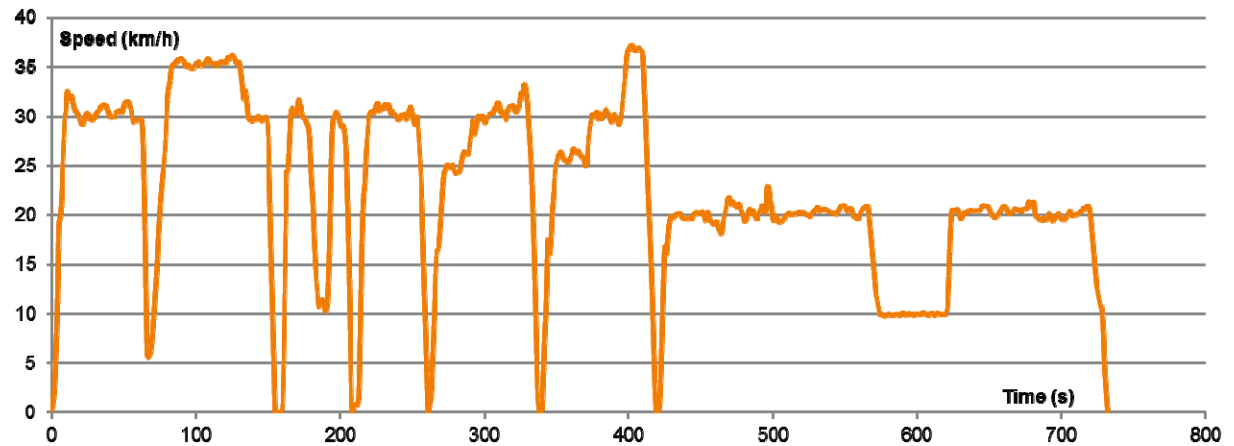


# Real trucks, Real drivers, Real tests



# LoCITY city centre challenge

- City Centre Operation – low speed, start/stop (22km/h)
- Van focussed
- Correlated
- 60% load



# Representative data for real users

- Fuel consumption (l/100km)
  - Energy consumption (kWhr/100km)
  - Emissions – NO<sub>x</sub> (NO, NO<sub>2</sub>), CO, HC
  - Potential for PM (Particulates), N<sub>2</sub>O, CH<sub>4</sub>
- 
- Consistent test cycle
  - Consistent load condition
  - Repeatable across test facilities
  - Evaluation of technologies or changes



# Current work

- Suite of 4 test cycles for all standard commercial vehicles
- Established test process with 2 test providers



- “Pilot” testing of Electric, Gas, Diesel and Hybrid
- Creating accreditation procedures
- Stakeholder reviews
- Joining up the players for common standards across UK
  - OLEV, DfT, TfL, DEFRA, FTA, RHA, EcoStars, SRF, EST
- Setting the thresholds for recognition

# Future work

- Baseline the fleet
- Define “Low Emissions”
- Accreditation lists
- Celebrate and promote LECVs’
- Review bespoke applications
  - Refuse collection Vehicles
  - Construction operations
- Ancillary loads and emissions
  - Refrigeration units
  - PTO applications

# LowCVP supporting LoCITY

- **Creating the platform for robust recognition of low emission commercial vehicles and technologies**

- ❑ **Connect:** With privileged access to information, you'll gain insight into low carbon vehicle policy development and into the policy process.
- ❑ **Collaborate:** You'll benefit from many opportunities to work – and network - with key UK and EU government, industry, NGO and other stakeholders
- ❑ **Influence:** You'll be able to initiate proposals and help to shape future low carbon vehicle policy, programmes and regulations



LowCVP is a partnership organisation with over 180 members with a stake in the low carbon road transport agenda.