Low-energy innovation in urban transport

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Meeting with Brighton & Hove City Council
28th May 2014, University of Sussex
Energy use reduction in transport

Why focus on cities in UK?

a) Majority of trips within urban areas

b) Top-down processes in government:
   i. Climate Change Act 2008
   ii. Decentralisation of responsibilities and localism agenda (2011 White Paper)

c) Bottom up processes: more pro-active approach to create sustainable transport at urban level by local government, private sector and civic society since ±2000

d) **Variations between & within cities** regarding initiatives that (may) reduce energy consumption and GHG emissions
Aims of project

a) Identify factors and processes that explain differences between & within urban areas in emergence and development of low-energy innovations

b) Understand to what extent those factors and processes are transferable across urban areas

c) Offer suggestions to (local) governments and other stakeholders about how low energy innovations in urban transport can be stimulated
Approach

a) In-depth study of four case studies using document analysis, interviews & focus groups rather than quantitative study of many UK urban regions

b) Focus on ‘innovation activity’ = diversity of initiatives to create a low energy/carbon mobility system in a given locality

c) Focus on developments since 2000, plus city as a whole and locations (‘neighbourhoods’) within the city

d) Focus on many different stakeholders: national/local government, public transport providers, entrepreneurs, civic society, media, consultants, transport system users
Battery electric vehicles
Parking restrictions
E-bikes
Bike sharing
Transit-oriented design
Car clubs/sharing
Autonomous cars
Urban light rail
Bike events
Road space reallocation away from private vehicles
Bike infrastructure
ITS
Hydrogen vehicles
Mobile phone apps
Bike repair/maintenance initiatives
Walk-to-school initiatives
Road pricing
Bikeability initiatives
e-commerce/services
Case studies

a) **London** – ‘extreme case’: global city, international reputation for innovation in transport, unusual levels of institutional capacity and resources, strong differences between central and outer London

b) **Merseyside** – post-industrial legacy, strong links between transport and welfare policy, car-oriented physical structure, limits on institutional capacity and resources

c) **Oxford** and **Brighton & Hove** – knowledge economies, high receptivity to ‘green’ arguments and lifestyles, well-developed alternatives to car use ⇒ favourable settings for flourishing of low-energy innovations in urban transport
Some early findings

a) High level of diversity of innovations in each urban area
   - Marked differences between location in each urban area
   - Greater involvement of ‘private sector’ in London

b) Significant role of ‘incumbents’ ≈ car industry, bus sector, local government ⇒ enough space for radical innovations by new players?

c) Contingency of city level action upon national (and EU) level funding ⇒ does shift towards short-term, project oriented external funding offer sufficient possibilities to offer persistent support for low-energy mobility?
Innovation activity

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- London

- Merseyside

- B&H

- Oxford

⇒ London is class of its own
⇒ Some local specialisation in Brighton & Hove and Oxford – driven in part by success in bidding for external funding