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Analysing th
and Acceptability: Comparative Evidence from Four Cities

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ACCEPTH2 PROJECT:

AcceptH2 is a cross-continental comparative assessment of public knowledge, acceptability and preferences ('willingness to pay') for H2-fuelled buses, in five cities: Berlin (Germany), London (UK), Luxembourg, Oakland (US) and Perth (Western Australia).

AIMS:

- **To investigate public awareness about H2 as a fuel for vehicles**
- **To investigate the initial acceptance of H2-fuelled buses among residents of each city**
- **To estimate the economic value of the environmental benefits of H2-fuelled buses in each city**
- **To assess the impact of the H2 bus demonstration projects on public knowledge, attitudes and willingness to pay with respect to H2 buses**

METHOD:

- **Stated preference surveys carried out with randomly selected residents *before* and *after* the trial of H2-fuelled buses in each city (except Oakland: did not complete an 'after' survey)**

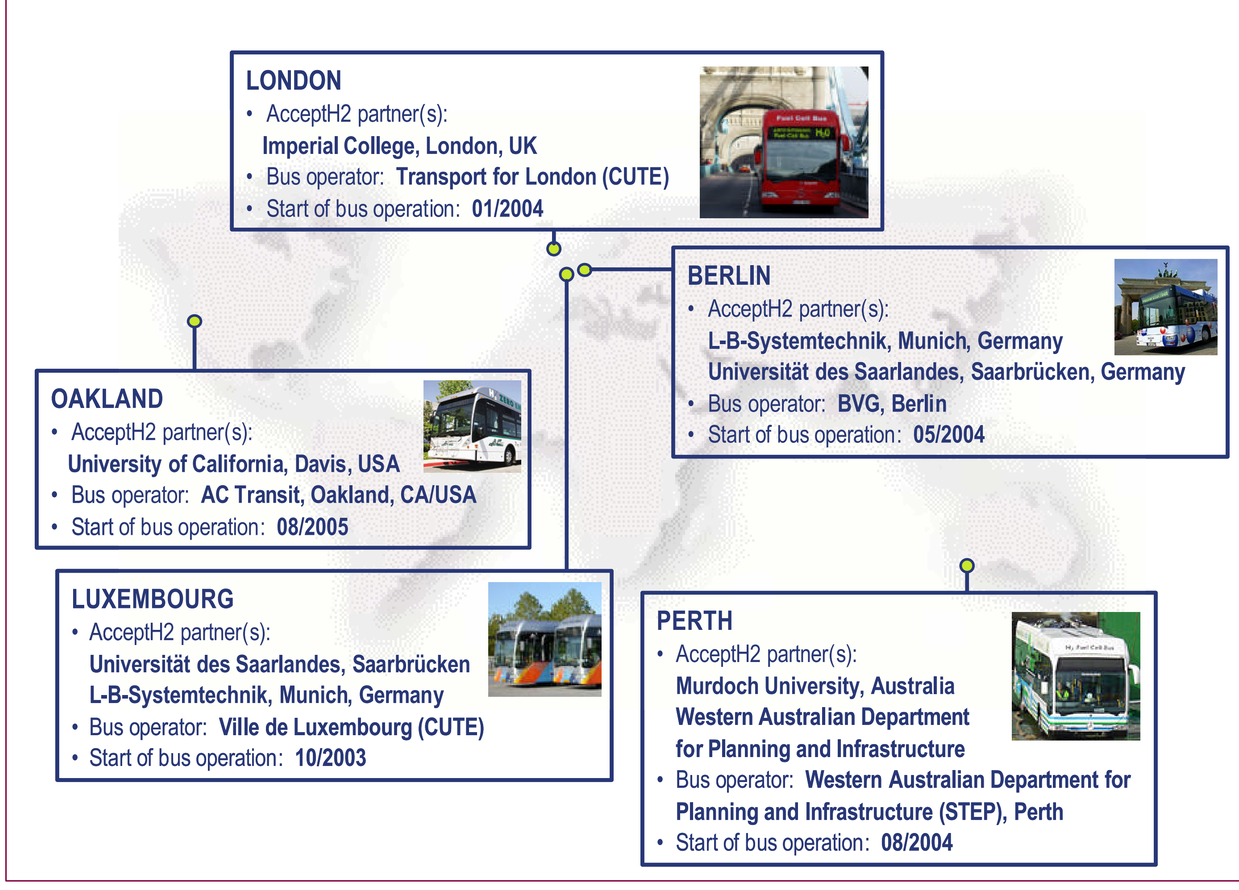
SURVEY DESIGN:

- **Knowledge, attitudes and perceptions of hydrogen**
- **Acceptability of H2 vehicles, and H2 buses**
- **Willingness-to-pay (WTP) for large-scale introduction of H2-fuelled buses in respondents city of residence**
- **Environmental attitudes and behaviour**
- **Socio-economics (e.g. gender, age)**

ACCEPTH2 AT A GLANCE

The demonstration of hydrogen (H2) fuelled vehicles is taking place in selected cities worldwide, with a view to achieving full commercialisation. However, the successful introduction of these vehicles will depend not only on technical maturity, but also on public acceptance of these new fuels and technologies.

Using survey-based methods for data collection, the AcceptH2 project aims to contribute strongly to a better understanding of the public acceptability of H2 technologies, and hence enable the introduction of H2 vehicles to be carried out with a clear strategy towards public acceptance. AcceptH2 accompanied H2 bus demonstration projects in Berlin, London, Luxembourg, Oakland and Perth.



DATA COLLECTION:

- **All 'before' interviews carried out by telephone (except in Oakland: were completed onboard normal buses)**
- **'After' interviews (only in Berlin, London, Luxembourg and Perth) carried out by telephone and on-board H2 buses**
- **Sample sizes: 200-414 per survey**

RESULTS:

***Before* the bus trials:**

- **Awareness about H2 vehicles was highest amongst Berlin respondents (73% had heard about H2 vehicles) and lowest amongst London respondents (47% had heard of H2 vehicles).**
- **Unconditional support for large-scale introduction of H2 buses in each city was moderate: ranging from 30% of respondents supporting this scenario in Perth to 55% in Berlin & Luxembourg.**
- **Respondents were overall willing to pay extra bus fare to support introduction of H2 buses in their cities (€0.30- €0.35 per single bus fare in all cities).**

***After* (6 months into) the bus trials:**

- **Public awareness of H2 vehicles had increased significantly in Luxembourg and Perth only.**
- **Respondents in Luxembourg and Perth are about twice as likely as respondents in Berlin and London to have heard about the H2 bus trials.**
- **Unconditional support for large-scale introduction of H2 buses has increased significantly *in every city***
- **Prior knowledge about hydrogen, and environmental sensibility are key drivers for unconditional support.**
- **Increased unconditional support *is not matched* by increased willingness to pay for the large-scale introduction of H2 buses in most cases.**
- **People who directly experienced a H2 bus rated them more positively than conventional buses. However, *direct experience had no significant influence* on attitudes and WTP for the introduction of H2 buses.**

CONCLUSIONS:

The H2 bus trials have been more effective in raising public awareness in Perth & Luxembourg, compared to Berlin & London. Notably, Luxembourg and Perth are the smallest cities in the study and they were host to extensive information campaigns associated with the bus trials. It is suggested that, in order for hydrogen demonstration projects to have maximum public impact, they must be large enough to secure adequate exposure, and they must be accompanied by adequate communication efforts.

KEY PUBLICATIONS & REFERENCES:

O'Garra, T. (2005) 'Comparative Analysis of the Impact of the Hydrogen Bus Trials on Public Awareness, Attitudes and Preferences: a Comparative Study of Four Cities', Final Analysis Report, AcceptH2 project

O'Garra, T., Schmidt, P., et al. (2005) 'How to run effective hydrogen demonstration projects', Leaflet, AcceptH2 project

Altmann, M., Schmidt, P., O'Garra, T., Mourato (2003) 'Analysis and comparison of existing studies', Final Analysis Report, AcceptH2 project

For further information, please refer to: www.AcceptH2.com

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