

## TECHNOLOGIES and TRAVEL

### Background

**Technologies and Travel (TnT)** is a 4-year project funded by the UK Transport Research Centre. It brings together expertise in social science and transport studies to examine how 'non-transport technologies' indirectly impact upon travel demand through their influence on social practices (and patterning of land use).



The principal collaboration is between the Centre for Mobilities Research (CeMoRe) at Lancaster University and the Centre for Transport & Society (CTS) at the University of the West of England, Bristol (UWE). Colleagues at Newcastle University are also involved.

The project's starting contention is that non-transport technologies have significantly been shaping—and will continue to shape—patterns of, and the extent of, travel demand and yet such shaping remains far from fully understood in the context of rapid and changing uses of existing and new technologies and practices in society.

By 'non-transport technologies' we mean technologies that were not specifically designed with transport in mind and which do not directly substitute for or complement travel. These technologies may indirectly

affect travel but their impact is not normally taken into account in travel demand analysis. The consequences for transport of such technologies are mostly unintended and/or unanticipated. The domestic refrigerator, for example, has made it possible to store food for days (in homes as well as in food stores) and thus facilitated weekly shopping, increased motorised travel to out of town supermarkets and the development of centralised distribution centres revolving around automobiles.

### Objectives

The project aims to extend our understanding of the complexity of travel demand by showing the interconnectivity of travel with other everyday social practices. It will do so by examining how past and future developments have and will transform travel and transport through changing non-transport technologies, economies and socialities. In specific terms, the objectives of the project will be as follows:

1. to 'deconstruct' examples of present-day social practice and activity engagement that involve travel, to understand how and to what extent these have been influenced by enduring and emerging non-transport technologies;
2. to classify/cluster the different forms of non-transport technologies according to their impacts on travel demand;
3. to examine socio-political conditions that have influenced the uptake and impact of non-transport technologies on social practice—and thus travel;
4. to construct and examine different future scenarios in order to assess the scope for non-transport technologies to have a major impact upon travel demand in a 'climate change' future; and
5. to use the project's findings to encourage debate regarding implications for policy development and policy support tools relating to travel demand.

## Methodology

The project will embrace a mixed-method approach. In its first phase the following elements are being pursued:

1. Preparation of inception papers based on extensive cross-disciplinary reviews to establish what is understood about how non-transport technologies emerge and evolve and come to embed themselves within and influence social practice.
2. Examination of UK national trend data reporting (Transport Trends and Social Trends) to summarise how social practices and travel patterns have changed over time.
3. Further desk study work to highlight and examine the non-transport technologies that emerged and existed over the timescales for the national trend data.
4. An examination of past predictions of 'past futures' to expose apparent pitfalls in expectations of how technologies and allied social practices would evolve.
5. Interviews with (science and technology) experts to determine which existing and emerging non-transport technologies are deemed most likely to be associated with changing future social practices and travel.

One of the challenges this project faces is to determine *which* existing, emerging, and future non-transport technologies are deemed to have an important impact on changing social practices and the associated travel demand. To deal with this issue forecasts will be gathered from 'the frontlines' by interviewing experts from various industries on their expectations regarding relevant non-transport technologies. These contributions will then be critically (re-)assessed by relating them to the general findings we have drawn out from past evaluation studies of future forecasts.

Beyond this first phase of the project the intention is to continue to work with a wider pool of experts and policymakers to develop scenarios that are able to highlight how non-transport technologies may significantly shape social practices and travel. Through the development of such scenarios the aim is to be better able to consider how policy formulation might account for non-transport technologies in ways that are beneficial.

## Potential outcomes and benefits

Transport underpins society. The transport infrastructure is the bedrock of our globalised world and is inexorably linked to our routines, goals, and anticipated future trajectories. People engage with transport infrastructure through travel, which is derived from the need or desire to participate in many different kinds of activities. People's schedules of activities in turn are derived from, and have interdependencies with, social and business practices; and these practices are shaped and facilitated through various kinds of technology. Yet there are incredible inconsistencies between our experiences of travel and the planning and infrastructure that transport policy enacts. These inconsistencies stem in part from the complex and non-linear path dependencies that have arisen around technology. The project will produce new and extended understandings of the inter-relations between technologies, practices, and travel. From a transport planning and policy perspective the project may serve to expose greater uncertainty about the future for travel demand rather than to render matters more predictable. There might never be a 'magic bullet' for transport planning; however, our potential to harvest, conceptualise, and map new data, both quantitative and qualitative, is also growing. The key benefit of the project will be to raise important questions about how transport co-evolves with society; how we might engage with the issues of climate change, resource depletion, and population growth; and to open up new ways of thinking about how policies might effectively be developed that can accommodate complexity in a way that is ultimately more beneficial for social, economic and environmental goals.

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