

People and places: at the frontier of transport appraisal

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In June, the Department for Transport (DfT) published a consultation on priorities for a new ‘Appraisal and Modelling Strategy’, setting out its vision for developing modelling and appraisal tools over the next five years. A workshop was held in London on 27 September to discuss one of the key themes of the consultation: the impacts of transport on people and places. The objective was to gather views on three topics: healthy people and places, journey improvements, and location attractiveness. Do we already have the required evidence base or is there a need for further research on these topics? What are the major barriers to integrating new or improved methods within DfT’s appraisal guidance (WebTAG)?

There were two main conclusions arising from the workshop:

- Current methods to assess people and places often look only at “one side of the coin”: either the positive or the negative impacts of transport policies.
- Capturing some of the impacts on people and places requires going beyond current appraisal paradigms and developing new concepts and methods.

Health: more than noise costs and active travel benefits

The “two sides of the coin” theme initially emerged in relation to the appraisal of transport noise. The standard approach is the measurement of the **negative** impacts of noise on health. But participants noted there is almost no evidence on how transport prevents people from enjoying the **positive** elements of “soundscapes” (e.g. the sounds of nature, children playing, or neighbours chatting). In addition, assessments usually deal with impacts on residents in areas surrounding noisy transport infrastructure, neglecting the impacts on pedestrians and other people using the area (e.g. workers, tourists).

The assessment of physical activity also suffers from a similarly partial point of view. It was noted that current appraisal methods are designed to capture the active travel **benefits** of policies that improve conditions for active modes (e.g. walking, cycling), and not the **costs** of reduced physical activity caused by policies that improve the circulation of motor vehicles to the detriment of non-motorised modes.

However, participants also identified issues that call for more than a simple change in perspective, and require whole new concepts and appraisal methods. One of them is the value of “place” and how it is affected by what one participant called “traffic dominance”. WebTAG and other transport appraisal frameworks rely on a concept of transport as

movement and are not well suited to assess the uses of transport infrastructure (e.g. streets, stations) as places where people spend time.

Further discussions identified three major implications of extending or reformulating WebTAG to address the aspects above:

- Assessing these aspects requires a more complex modelling than what is routinely done now, for example to capture the mobility patterns of the population in order to assess how people are exposed to noise in different modes of transport at different times of day, and their levels of physical activity during a period (rather than on a trip basis).
- Assessment of the more subjective aspects of health and wellbeing requires methods that go beyond stated or revealed preferences.
- At a conceptual level, there is a need to isolate the value of the activities that people do in places or while travelling from the value of being exposed to the surrounding physical environment when doing those activities.

Journey improvements: more than travel time savings

The need to consider both positive and negative effects was also debated in the discussions about journey improvements. There was a general recognition that travel time is not always perceived **negatively** by travellers. In fact, there is growing evidence that under certain conditions, travel time is perceived **positively**. This has usually been the case for many walking and cycling trips, but it increasingly applies to public transport trips as well, given the developments in technologies (e.g. tablets, smart phones) that facilitate productive or enjoyable uses of travel time.

But participants also agreed that that journey quality is more than simply shorter or longer travel times. It was argued that travel time reliability is as important as travel time itself. However, we still have a limited understanding of its causes and effects and how policy interventions can improve it. Other aspects, such as comfort and convenience, also have a relatively small evidence base.

There are also many gaps regarding the wider impacts of improvements (or deteriorations) in some aspects of journey quality. One example is safety, which it is currently appraised in terms of the personal and property costs of accidents. The long-term effects of trauma caused by accidents are not well captured. In addition, accidents may have an indirect impact on travel demand. For example, one participant pointed out that witnessing or learning about accidents involving cyclists may lead some people to make fewer trips by bicycle.

Another example is freight transport. Some participants stressed that given rapid changes in patterns of production and consumption, transport planners need to understand how freight transport uses road infrastructure and how improvements in the management of that infrastructure benefit the freight industry, shops, customers, and ultimately wider society.

In practical terms, attending to these issues would require:

- Again, an increase in complexity in modelling and appraisal methods, to capture the wider impacts of journey improvements.
- More robust and more regularly updated multipliers of travel time to account for comfort and convenience.
- At a conceptual level, isolating the opportunity cost of travel time from the value of productive/enjoyable travel time uses.

Location attractiveness: more than benefits at trip destinations

The discussions on location attractiveness also stressed the need to look at both positive and negative effects. When it considers land use changes at all, transport appraisal is usually limited to the assessment of how projects generate **benefits** at trip destinations (by increasing their attractiveness) . However, some participants noted that the same projects may lead to **costs** at trip origins. This is for example the case when improved transport leads people to stop doing an activity (e.g. shopping) in their local area and to start doing it in another area.

Again, attending to the wider impacts of transport on land use requires going beyond the existing methods, which in this case rely on the calculation of user benefits using the “rule of a half” under the assumption of fixed land use. More generally, it requires judging the extent to which the anticipated impacts of projects are aligned both to their economic and strategic cases.

In practice, this implies, again, an increase in complexity, in order to capture the multiple links between transport and land use at different time scales. There was consensus among participants that this complexity calls for joined-up efforts. For some participants this meant simply the harmonisation of methods used by different transport policy-makers. Other participants suggested that this is not enough, and more bridges should be built within and between the public and private sectors, which could be achieved for example, by opening-up data and software.

The way ahead

There was a final discussion to identify overarching themes emerging from the separate discussions on the three topics. Participants agreed that moving forward requires more complex methods, both to start estimating the wider indirect impacts of transport policies and to assess the direct impacts in more detail than it is currently done. This would improve not only the assessment of the overall size of transport’s benefits and costs but also of how these are distributed among social groups – as all three discussions identified gaps in the way that distributive issues are currently framed in WebTAG.

The major disagreement point was about the pragmatics of using complex methods. Is it realistically possible to identify all the multiple cause-effect relationships between transport, health, and land use? And if yes, are the additional benefits and costs captured with the new

methods big enough to justify the extra modelling effort? DfT needs to consider these issues as it decides on the priorities for the new Appraisal and Modelling Strategy.

Some participants were optimistic that the increased availability of “big data” allows for more robust revealed preference analyses to value the direct and indirect impacts of transport policies. However, this optimism should be tempered with (at least) two concerns. The first is that to address impacts on people and places, methods based on preferences need to be balanced with methods focusing on subjective wellbeing and life satisfaction. The second is that the success of modelling and appraisal methods depends on improvements in methods for option generation - the stage that one participant identified as the most neglected in transport decision-making.

Finally, there was widespread support for the idea that improving WebTAG requires learning. This could be learning from experience, i.e. putting more effort on the evaluation of transport projects and drawing implications for appraisal. Or it could be learning (and using) work done in other sectors, for example the environment and health sectors.

The full report of the workshop will be published by DfT in due course. The workshop was chaired by Prof. Peter Jones (UCL). Participants represented a wide range of stakeholder organisations with particular interest and/or expertise in the theme of people and places in the context of transport appraisal: Iven Stead (DfT), John Nellthorp (ITS Leeds), Gerard de Jong (ITS Leeds), James Laird (Peak Economics), Tom Worsley (ITS Leeds), John Swanson (SDG), Terry O'Neill (in place of Chris Ferrary) (Temple Group), Colin Smith (DEFRA), Ryan Taylor (TfL), Tom Millard (PJA), Like Jiang (ITS Leeds), Andrea Barry (TfN), Cynthia Kalyan (MHCLG), Bruce McVean (City of London), Lucy Saunders (TfL), Paulo Anciaes (UCL), Andy Cope (Sustrans), Bianca Letti (NIC), Matthew Dillon (ARUP), Manuel Ojeda Cabral (ITS Leeds), Bridget Fox (CBT), David Metz (UCL), Paul Cobain (TfWM), Pedro Abrantes (HE), Rhys Wheeler (HE), Musa Imran (DfT), Benjamin Clayton (Homes England), David Simmonds (DSC), Henry Kelly (DfT), Jack Snape (TfN), Ian Raymond (Merseytravel).

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