



Guidance for transport planning and policymaking in the face of an uncertain future



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ARTICLE INFO

Article history:

Received 21 July 2015

Received in revised form 25 March 2016

Accepted 29 March 2016

Keywords:

Uncertainty

Future mobility

Peak car

Real options analysis

Accessibility

Policymaking pathways

ABSTRACT

Uncertainty of outcome is widely recognised as a concern facing decision-makers and their advisors. In a number of spheres of policy, it appears uncertainty has intensified in the face of globalisation, economic instability, climate change, technological innovation and changing consumer preferences. How can planners and policymakers plan for an uncertain future? There is growing interest in, and use of, techniques that can help decision-making processes where deep uncertainty is involved. This paper is based upon one of the most recent international examples of a foresight exercise employed to examine uncertainty – specifically that which concerns uncertainty over the nature and extent of future demand for car travel. The principal focus of the paper is on the insights and guidance this examination of uncertainty brings forth for transport planning and policymaking. To accommodate deep uncertainty requires a flexible and open approach in terms of how policy and investment possibilities are formulated and judged. The paper argues for a focus upon the *Triple Access System* of spatial proximity, physical mobility and digital connectivity as a framework for policy and investment decisions that can harness flexibility and resilience. Uncertainty becomes an opportunity for decision-makers with the realisation that they are shaping the future rather than (only) responding to a predicted future. The paper outlines two forms of policymaking pathway: *regime-compliant* (in which adherence to trends and the nature of the world we have known pushes policy) and *regime-testing* (in which the nature of the world as we have known it is brought into question and vision pulls policy decisions). Stronger orientation towards regime-testing to assist in managing an uncertain future is advocated.

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1. Introduction

Proclamations about the future (even where provenance or authenticity may be questioned) can subsequently gain historical prominence for their fallibility: “This ‘telephone’ has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.” (Western Union internal memo, 1876); “Heavier than air flying machines are impossible.” (Lord Kelvin, President of the Royal Society, 1895); and “The actual building of roads devoted to motor cars is not for the near future, in spite of many rumours to that effect.” (Harper’s Weekly, 1902). The future is uncertain. This is a truism. However, in the face of a globalising society and the tempo of socio-technical change, its poignancy is as great today as it has ever been.

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Herein lies the difficulty for planners and policymakers. The essence of planning, as a profession, is to plan for the future – going beyond only prediction with a goal of creating a better future (Myers and Kitsuse, 2000). Yet conventional tools employed to try and understand uncertainty and the future state are rooted in prediction based on the current understanding of cause and effect relationships. Forecasting, for example, has been a tool often employed to assist strategic decision-making. While forecasting itself can seek to accommodate uncertainty through providing a range of forward projections, it has a reputation for being based upon historical trends and relationships leading to extrapolation. Forecasts tend to conceal uncertainty, with their quantifications giving an air of authority and precision. Yet we are seeing some contemporary demonstrations of their fallibility. Six forecasts (from different sources) of future oil prices running from 2011/12 to 2017/18 were collated in relation to the Scottish Independence Referendum in 2014 (Lyons et al., 2014: 16). Six-year change in price ranged across the forecasts from +30% to –10%. The range itself signals significant uncertainty but this was underlined when the price of crude oil plummeted in the second half of 2014 (and has since fallen further). This has been in the face of increased production in the United States, declining demand from developing economies and continued production from other oil producing nations.

Drawing upon an analysis of 210 projects across 14 countries, Flyvbjerg et al. found that “forecasters generally do a poor job of estimating the demand for transportation infrastructure projects” (Flyvbjerg et al., 2006: 1). Further demonstration of traditional tools’ limitations or fallibility comes from national forecasts for road traffic volumes, which are noted for an unwavering projection of growth (albeit of varying magnitude). Collations of official forecasts reveal repeated upward projection in spite of recent actual trend data to the contrary.¹ The phenomenon of ‘peak car’ has emerged, which refers to a decade long period in several developed economies of long-run growth in car travel having halted or even reversed (Goodwin and Van Dender, 2013). Professional opinion is divided over whether car travel (per capita annual distance travelled or total distance travelled) in the future will remain largely unchanged, will resume its trend of growth or will go into decline (Lyons and Goodwin, 2014). Uncertainty regarding the future for car travel can be cause for significant concern. However, uncertainty can be seen as an opportunity rather than a threat if greater recognition and acceptance is given to the obligation on transport policymakers to play a part in shaping future society, rather than only having a more reactive approach that responds to trends.

In the face of uncertainty, there is a growing body of literature concerning the value of scenario planning (Davidson, 2014). Scenario planning produces a number of divergent plausible future scenarios from which to then consider the implications for present-day policymaking. This paper offers an examination of the challenges, imperatives and opportunities for transport planning and policymaking in the face of an uncertain future. It considers approaches to looking to the future with a focus upon a recent strategic project by the New Zealand Ministry of Transport, involving scenario planning. The paper does not set out in detail the scenario planning exercise and the accompanying work within the project (though this is summarised). It instead focuses its attention upon the insights resulting from the project. The paper highlights different approaches to policymaking and investment decisions and makes the case for moving away from a ‘regime-compliant’ approach towards a ‘regime-testing’ approach. The paper is structured to address the following insights in sequence:

- We are confronting *change* which, because of our limited understanding of cause and effect, is *uncertain*. There is uncertainty concerning what *people* in future will want to do and what *technology* in future will enable us to do.
- Examining the future for car travel indicates a range of future demand scenarios from significant increase to significant decrease in vehicle kilometres travelled.
- To accommodate uncertain change we need *flexibility* both in our thinking but also in the design of systems and infrastructure.
- Change comes about and flexibility is enabled by the fact that it is *accessibility* not mobility that is at the heart of economic and social welfare. Being able to reach people, goods, services and opportunities is affected by our transport, land-use and telecommunications systems, referred to in this paper as the *Triple Access System*.
- There are different *policymaking pathways*. A policymaking pathway is a series of elements of approach that contributes to determination of a policy or investment decision. This is distinct from a policy path (policy actions to be taken, and when to take them). Policymakers have a responsibility to consider the type of pathway best suited to evolving the transport system. They may find it useful to consider the wider *Triple Access System* in support of a better future in the face of uncertainty.

2. Change and uncertainty

Predictions of future change are often based on our *experiences* of past change: looking back over time to observe what has changed (and how quickly) informs our attempts at foresight. Seidl and van Aaken (2009) label this reliance on past experiences as our ‘cultural-cognitive limitations of perception’ (see also Chia, 2004; Narayanan and Fahey, 2004; Banister and Hickman, 2013). Experience of past change reminds us that the rate and nature of change across multiple drivers can vary. It can be sudden and unexpected (e.g. natural disaster) or so slow that from day to day or year to year one is oblivious to its accumulation over time (e.g. ageing or change in land use). The accumulation of change can establish or reinforce the way of the world as we know it, or reflect a gradual and ultimately profound transition towards a new ‘regime’.

¹ <http://transportationist.org/2014/12/03/extrapolations-in-traffic-vs-reality/>.

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