Pragmatic Incremental or Courageous Leapfrog [Re]Development of a Land-use and Transport Modelling System for Perth, Australia

Sharon Biermann, Doina Olaru, John Taplin and Michael Taylor

Abstract

Responding to land-use and transport modelling requirements, identified through a rigorous stakeholder engagement process, current land-use and transport modelling practices in Perth, Western Australia were examined and benchmarked against world-wide best practice. Three alternative model systems were proposed and evaluated. The preferred option, PLATINUM (Perth LAnd and Transport INtegrated Urban Model), is the more radical option, avoiding duplication and other resource inefficiencies, yet not discarding specialised and advanced work already undertaken. The unique, contextual design challenges relate to the current modelling situation in Perth. It is concluded that designing model systems should explicitly acknowledge the current system in use and solutions should specify the pathway from the existing situation to the new model system. In addition, the two-edged sword of experience should be recognised as both a positive influence in terms of innovation awareness but carefully handled in relation to potential negative influences of path-dependent, 'incrementality' at the expense of embracing more radical innovations.

_____

S. Biermann (Corresponding author) •
The University of Western Australia, School of Earth and Environment, Planning and Transport Research Centre, Perth, 6009, Western Australia, Australia
Email: sharon.biermann@uwa.edu.au

D. Olaru
The University of Western Australia, Business School, Planning and Transport Research Centre, Perth, 6009, Western Australia, Australia
Email: doina.olaru@uwa.edu.au

J.H.E. Taplin
The University of Western Australia, Business School, Perth, 6009, Western Australia, Australia
Email: john.taplin@uwa.edu.au

M.A.P. Taylor
University of South Australia, School of Natural and Built Environments, Adelaide, 5001, South Australia, Australia
Email: map.taylor@unisa.edu.au