

ABSTRACT SUBMISSION FORM

Presenter:

First name	Shannon	Surname	Page
Organisation	Lincoln University, PO Box 85084		
E-mail Address	shannon.page@lincoln.ac.nz		
Phone number	03 423 0402	Cell Number	027 272 3739

Key Author:

First name	Susan	Surname	Krumdieck
Organisation	University of Canterbury, Department of Mechanical Engineering		
Postal address	Private Bag 4800		
E-mail Address	susan.krumdieck@canterbury.ac.nz		
Phone number	03 364 2987x7249	Cell Number	027 272 3739

2nd Co-Author:

First name	Montira	Surname	Watcharasukarn
Organisation	University of Canterbury		

3rd Co-Author:

First name	Shannon	Surname	Page
Organisation	Lincoln University		

Paper Details:

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Overview of Presentation

The impending decline of oil supply can be seen as a risk to transport activity systems. A virtual reality survey method has been developed to audit the participant's normal weekly travel activity, and to explore participant's travel adaptive capacity. Travel adaptive capacity is proposed as a measure of long-range resilience of activity systems to fuel supply decline. Mode adaptive potential is proposed as an indicator of the future demand growth for less energy intensive travel. The travel adaptive capacity assessment (TACA) Sim survey uses avatars, Google Map™, 2D scenes, interactive screens and feedback scores. A case study was conducted involving 90 participants in Christchurch New Zealand. All of the participants were students, general staff or academics at the University of Canterbury. The adaptive capacity was assessed by both simulated extreme fuel price shock and by asking, "do you have an alternative mode?" without price pressure. The travel adaptive capacity in number of kilometres was 75% under a 5-fold fuel price increase. The mode adaptive potential was 33% cycling, 21% walking and 22% bus. Academics had adaptive capacity of only 1-5% of trips by cancelling or carrying out their activity from home compared to 10-18% for students.