



Working with what we have

Resilience for the Future

Whakamahinga ki ngā mea kei a tātou:
He manawaroa mō ngā rā anamata
Transportation Conference 2026



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Te Whanganui-a-Tara Wellington

Transport Modelling - have you gone down a tunnel?

My early work in 2001 with Transportation Engineering Lecturer Dr. Andre Dantas at Canterbury University asked a radical question - how will people cope if a natural disaster or international incident caused a fuel shortage in New Zealand? We didn't have a Magic 8 Ball so we worked to adapt transport models and freight models to the question of oil downshift. It wasn't possible. Free flow of oil into the transport system is a locked-in assumption for Transportation Engineering Modelling. We had to build new models, using strange new ideas, like needs-meeting for households, and the risk assessment of urban form, and even market mechanisms on household needs-meeting, and the economy. Now, 25 years, many papers and PhD projects later, I will be happy to set out the upside-down transport modelling (typical of New Zealand) and how it could revolutionise the field very quickly by injecting new multiple layers of sustainable value into the development landscape.