

Bulletin: A Life In Transport Planning – Trials and Tribulations

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About the Speaker

Tom Van Vuren MBE easily recognisable by his colourful bow ties and socks, is a distinguished thespian who practices in the scenic backdrops of Worcestershire. More importantly, over a 40-year career, Tom has established himself as a leading authority, innovator and advisor in transport planning. He fell into transport modelling by chance, but has loved it ever since. Calling himself a pracademic, he takes pride in straddling academic rigour and practical pragmatism. By doing so, he has fulfilled a Critical Friend role to many transport planning and modelling projects around the world – in the Middle East advising RTA, ITC and PIF. As well as being Head of Digital Transport at Amey, a Visiting Professor at the Institute for Transport Studies in Leeds, and a Board Member of the Transport Planning Society, Tom provides his consultancy services through his company Van Vuren Analytics Ltd. He is an enthusiastic lecturer who has taught many professionals in the industry. Despite his impressive accolades, he still dedicates time to mentoring students.

Key Takeaways

- **Engagement and Approachability:** Clear communication and approachability are essential in building trust and fostering collaboration. Participants were encouraged not to hesitate in reaching out to senior professionals. Senior members were encouraged to always look back and remember what it was like to be a junior and to always make time for juniors to help develop them.
- **Adaptability and Relevance:** Embracing adaptability in methods but always grounded in a solid understanding of foundational principles ensures effective responses to current and future challenges.
- **Quality Data Collection:** The ongoing collection and analysis of high-quality data remain central to developing accurate predictive models and informed transport planning.



Career Journey

Tom began his journey in civil engineering at the esteemed University of Delft in the Netherlands, initially aspiring to become a quantity surveyor. After facing significant challenges, including repeatedly failing his materials exam, he redirected his path.

An unexpected encounter with a Traffic Engineering professor, during a moment of serendipity, ignited his passion for transport planning, illustrating that setbacks can lead to rewarding opportunities. He has since been involved in numerous projects, including the PRISM model, which remains influential in strategic transport modelling.



Lessons Learned

Tom underscored several valuable lessons from his experiences:

Establishing a personal brand, by being true to yourself and what matters to you, rather than trying to be what you think others expect of transport planners. Allow humour without that reducing your credibility as an expert. He remarks that most people will forget what you talked about, but if you stand out they will often remember what you wore.

Emphasising flexibility in navigating one's career path, where one's journey may take unforeseen turns.

Recognizing the value of failure and challenges as significant learning experiences that contribute to personal and professional growth.



Challenges

Sharing humorous yet enlightening anecdotes, Tom illustrated moments of awkwardness in his career, emphasizing that mistakes often lead to important insights and growth.

He noted the need for continuous professional development to stay abreast of the latest advancements and trends in transport planning and modelling.

Transport Planning & Modelling

While many aspects of transport planning have evolved, Tom noted that certain foundational elements remain unchanged. He stressed that despite technological advancements, the intricacies of human behaviour and decision-making in transport continue to require a robust understanding of traditional principles.

Tom articulated the critical role of transport modelling in decision-making processes, emphasizing the need for models to be user-friendly and transparent. He urged participants to advocate for less complexity to enhance stakeholder engagement. He also highlighted the importance of using diverse models to explore various scenarios, rather than relying solely on a single model to determine policy outcomes.

Looking ahead, Tom discussed the anticipated impact of artificial intelligence and big data on transport modelling. He expressed cautious optimism regarding these developments but underscored the importance of maintaining traditional modelling practices to inform future forecasts. He argued for robust engagement with stakeholders to provide all quantifications of policy outcomes ensure that the insights gained from models are effectively communicated and utilised.

Questions



How do we improve the confidence of large-scale complex models in front of non-modelling transport professionals?

Transparency in modelling processes and open communication with stakeholders were recommended. Tom stressed that models should not be considered "black boxes." Instead, they should be interpretable with clearly defined assumptions and inputs. It is important to use the right models for the task and not try and use a model out of context while providing explanations of the benefits and limitations of the model avoids confusion and helps provide confidence. It should also be noted that the model is only a tool and it should be about the analysis and interpretation.

How can AI help transport modellers?

Tom commented that while AI has the potential to streamline certain aspects of modelling, its effectiveness in forecasting unknown futures remains uncertain. Traditional methods of modelling may still be necessary for long-term predictions. He has a doubt about whether AI can undertake the analytics since it is only based on events known and fed into it during learning. With this in mind there is a need for transport modellers and planners to provide the analysis based on their domain knowledge, however, noting that they may need to adapt their style, for example interpreting AI results rather than producing these themselves.

Should we be looking more to dynamic LUTI modelling as the basis of our longer-term forecasts & appraisals?

Tom acknowledged the importance of dynamic models while cautioning against their complexity. Simplicity in modelling may facilitate a clearer understanding of transport systems and interactions. Developing complex LUTI and activity-based models increases the complexity and may introduce additional room for obfuscation and overreliance. Again, it is about using the correct models for the task in hand and being up-front about the impact of assumptions made when simplifying reality into the model. With this in mind, any model choice should be evaluated based on the application for which it will be used.

One of the key problems with model failures is the methods and quality of the data collection in specific the Household Survey and Choice Model SP surveys. Would you like to give some advice to modellers how best to get quality data?

Models used to be necessary to fill in gaps in data, as we collected small samples that needed extrapolating. Nowadays we probably have too much, rather than too little data. Models in that case have use in giving structure to big data, for example from a range of anonymised sources. Household Travel Surveys remain a valuable source – they can tell who travelled and why, whereas many big data sources can only detect the movement itself. Whatever the future is of modelling, good quality data remains critical; and spending time and effort ensuring that is worth it.

For further inquiries or insights regarding transport planning practices please contact:

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A copy of the recording is available on request.



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