



TransPosition is the trading name of Peter Davidson Consulting, which has operated since 1993, with a special focus on the analytical side of transport, software development and land use planning. With a client list that includes a range of local governments, state agencies, national organisations and private developers; TransPosition has a depth and breadth of experience that makes it particularly well suited to integrated, multi-faceted or innovative projects.

Core Competencies

- ◆ Integrated transport planning and project evaluation
- ◆ Transport modelling
- ◆ Strategic planning for public transport
- ◆ Toll road analysis
- ◆ Accessibility analysis
- ◆ Statistical and economic analysis
- ◆ Land use projections
- ◆ GIS and technical software development

Past Performance

- ◆ Queens Wharf Development Bid Review (Traffic), Department of State Development, Infrastructure and Planning Queensland, 2014-2015
- ◆ Surat Basin Transport Strategy, Queensland Transport and Main Roads, 2015
- ◆ Queensland Motorways Bid, Abertis Infraestructuras et al, 2014
- ◆ Toowoomba Second Range Crossing Business Case, Projects Queensland, 2013
- ◆ Clem 7 Bid Assessment, UBS, 2013
- ◆ Toowoomba Sub Regional Transport Study, Stage 1 and 2, Queensland Transport and Main Roads (TMR), 2012-2013
- ◆ Toowoomba Bypass Business Case Review, TMR, 2011
- ◆ Review of New England Highway Upgrade, TMR, 2011
- ◆ TransApex Strategic Advice, Queensland Transport, 2006-2008
- ◆ Brisbane Urban Growth Model, Brisbane City Council (BCC), 2007-2011
- ◆ Toowoomba Regional Transport Study, TRC, 2009
- ◆ Caboolture Shire Planning/Modelling Advice, 2004-2008
- ◆ Caboolture Priority Infrastructure Plan and Local Growth Management Strategy, CSC then MBRC, 2005-2008
- ◆ LUPTAI Development, Queensland Transport, 2007-2008
- ◆ Caboolture Shire Traffic Forecasting Model, CSC, 1999-2000

Key Personnel



Peter Davidson

Peter Davidson has worked in the transportation planning field for over twenty years, starting at Main Roads in Queensland, then joining a private consultancy before forming his own company in 1993. He has had broad experience with transport planning, and has worked on all stages of transport model development; from data collection and software design through to option testing and evaluation. He has been the primary developer of a number of major models and has broad skills in two key fields - transportation planning and information technology.

Peter has an extensive background in urban model design, calibration, application and software and has demonstrated an ability to develop world-class practical models within the constraints of time and data availability. Recently Peter has developed a new approach to multi-modal transport modelling based on the application of Monte-Carlo simulation to detailed transport/land use systems. The approach, which he called the 4S model (Segmented Stochastic Slice Simulation), gives unprecedented detail and behavioural breadth. The model is particularly useful for considering pricing issues, including toll roads, and has been used in a range of studies across Queensland.

Peter has had a focus on issues of tolls and pricing; he worked for the Queensland Government on reviewing the Business Case for a number of the TransApex projects (Clem 7, Airport Link, Go-Between Bridge) as well as helping to draft the conditions imposed by the state in granting tolling powers to the Brisbane City Council.

He recently prepared the Business Case for the proposed Toowoomba Bypass, including a detailed analysis of tolling issues and financial and economic assessments. He also advised UBS Global Asset Management, one of the bidders for the recent sale of Clem 7, performing the demand analysis that formed the foundation of their bid, assisting with the revenue side of the financial model and presenting the results to lenders. He did the same for the Abertis Consortium in their \$7b bid for Queensland Motorways.

Peter's range of engineering, planning and information technology skills allow him to combine innovation, judgment and efficient implementation to deliver affordable high quality solutions. He is very experienced working as part of a multi-disciplinary team, often with severe time constraints, and ensures the model outputs are provided on time and in a useful format for other team members.

Anabelle Spinoulas graduated in 2013 with a Masters in Physics from the Perimeter Institute for Theoretical Physics, Waterloo, Canada. Prior to that, she studied Applied Mathematics and Physics at Griffith University, winning the Science Medal for the highest achieving graduate in the Bachelor's degree.

Anabelle has skills in complex analysis, geographical information system (GIS) and transport modelling. She undertook transport modelling for one of the consortia bidding for Queensland Motorways Limited (QML), using TransPosition's 4S model. This involved everything from freight movement research and geocoding through to option testing and report writing.

Anabelle has also worked closely with the Saturn traffic model for the Queens Wharf Brisbane Project (working for the Department of State Development, Infrastructure and Planning) including option testing and output analysis.

She has worked on the Surat Basin Transport Study (Stage 2) for the Department of Transport and Main Roads where she undertook extensive research and data collection to better understand freight movements to and from the Surat Basin region. Anabelle has also used SIDRA for intersection analysis whilst completing a Traffic Impact Assessment for the proposed InterLinkSQ Toowoomba intermodal and inland port.



Anabelle Spinoulas



Ken Davidson

Dr Ken Davidson has had fifty years' experience in transport network strategy, from the original 1962 Road Plan of Queensland, through the Transport Studies of the 1960s, the developing science of transport network analysis and evaluation that followed, and more recent major network issues in many different locations. He has been an analyst, modeller, researcher, lecturer, network manager, policy manager, operating system manager, and specialist consultant in transport network development and strategy. He has worked for all three levels of government and, as a consultant, has worked with many transport authorities.

As a researcher he made significant contributions to all aspects of transport network modelling and developed a completely new accessibility-based evaluation technique which allowed impacts on land use to be explicitly included in the evaluation.

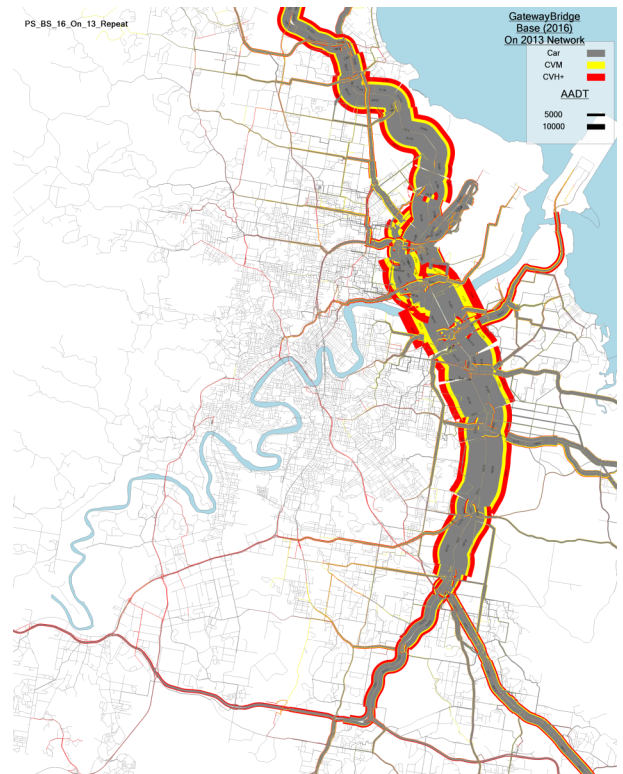
Ken had a significant creative role in the development of the Toowoomba Bypass and Second Range Crossing, and the associated rail issues. He has done foundational work on both the Queensland and national road and rail networks including initiating the now-accepted Melbourne-Brisbane Inland Railway.

He has a very detailed knowledge of the SEQ region, having been involved there for all but ten of the past 50 years as Main Roads Engineer, founder of the transport engineering courses at UQ, Manager of Brisbane Transport, and specialist consultant over significant periods of the past 25 years to Main Roads, Queensland Transport and QR. His consultancies and earlier work in other jurisdictions have also given him wide comparative experience.

In short, Ken Davidson has made significant contributions to the science of transport planning, practiced it widely and in many different contexts, and has un-paralleled knowledge and experience of transport planning issues.

Key Achievements

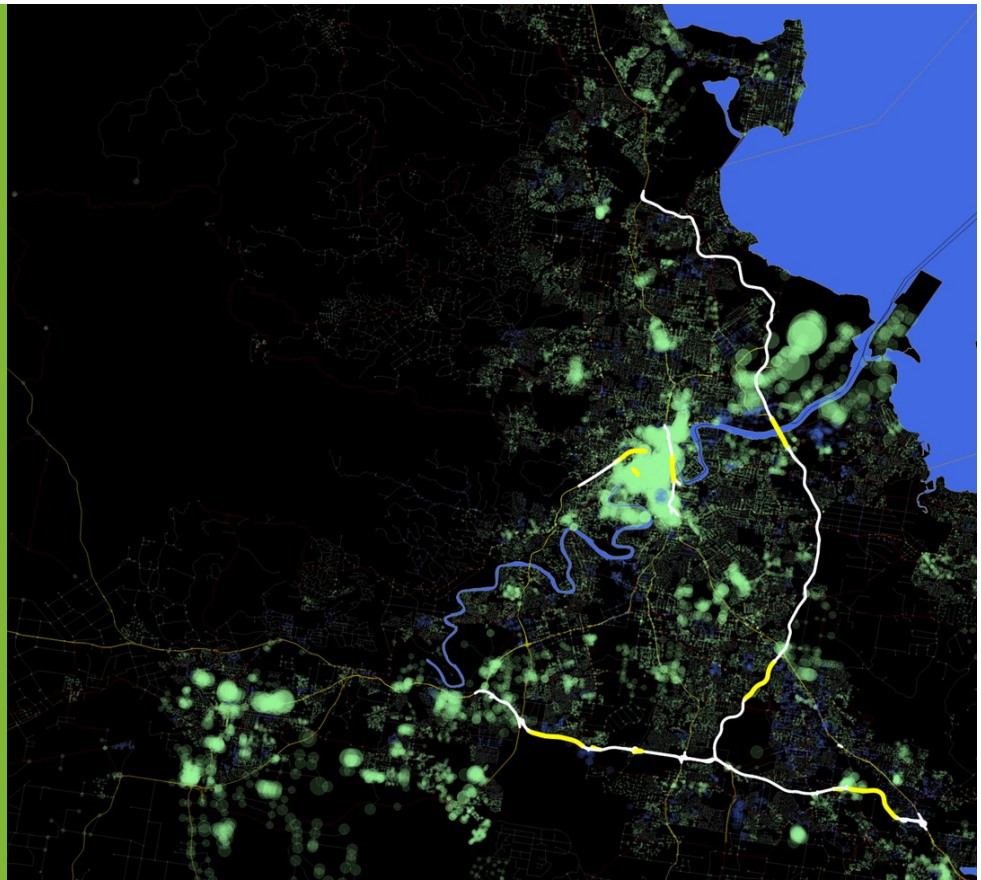
- ◆ Contributed to the planning of over \$9 billion worth of transport infrastructure
- ◆ Worked on due diligence for one of the world's largest toll road transactions (sale of Queensland Motorways Limited)
- ◆ Responsible for all traffic and transport issues in the successful business case for the Toowoomba Second Range Crossing
- ◆ Developed a new modelling approach that overcomes many of the deficiencies of the traditional four-step model
- ◆ Developed a detailed transport model for the whole of Queensland
- ◆ Awarded best paper in the Transport and Land Use Modelling section at the AITPM National Conference 2015: "Modelling Autonomous Vehicles - What could this mean for the future of transport?"
- ◆ Interviewed on ABC National radio on toll road issues



Network catchment of Brisbane's Gateway Bridge

Contact Us

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Projected employment growth in Brisbane to 2031

Recent Published Papers

- ◆ “Autonomous Vehicles - What Could This Mean For The Future Of Transport?”, AITPM 2015
- ◆ “Integrated Approach to Urban/Non Urban Freight and Land-side Port Demand”, AITPM 2015
- ◆ “A new approach to transport modelling – the Stochastic Slice Simulation (4S) model and its recent applications”, ATRF 2011
- ◆ “Modelling toll roads – Where have we gone wrong?”, ATRF 2011

Referees

- ◆ Jaron Yuen, Executive Director, Investment Finance, UBS Global Asset Management, (02) 9324 3164, jaron.yuen@ubs.com
- ◆ Wilfred Mak, Projects Queensland, Queensland Treasury and Trade (07) 3035 1847, wilfred.mak@projectsqueensland.qld.gov.au
- ◆ Don Seiler, Program Manager, Partnerships & Planning Program, Department of Transport and Main Roads, (07) 45297021, donald.g.seiler@tmr.qld.gov.au