

ZENITH PERTH TRANSPORT MODEL

Zenith is a comprehensive strategic transport model, now available for the Perth metropolitan region. Reflecting the activity patterns and travel choices of households, Zenith provides reliable forecasts for transport infrastructure planning, public transport service planning, toll road forecasting, economic evaluation and policies affecting travel.

zenith.veitchlister.com.au

PERTH

Zenith Travel Model

The Zenith model architecture was first established in 1988, and has benefited from continual research and development to ensure that it provides the most contemporary practical model available in Australian cities. Representing all major metropolitan regions in Australia, the Zenith models are the most widely used in the country, and have been relied upon by state and local governments for over 25 years in the planning of major infrastructure projects and land use changes.



Coverage

The Zenith model of Perth covers 43 local government areas extending from Mandurah in the south, east to Brookton, and north to Northam and Yanchep on the coast. In 2011, this area had a resident population of 1,870,000 and employment of 950,000.

Zone System

Zenith describes the Perth region in over 4,000 travel zones. Base and future year demographic data are maintained for small areas, allowing extreme flexibility in conforming the Zenith model to other zone systems, including the Strategic Transport Evaluation Model (STEM) and the Regional Operations Model (ROM).

Integrated multimodal transport network

The Perth model network includes over 44,000 road links with a total length of 15,700 km. It incorporates over 1,200 public transport routes for rail, bus and ferry services with over 7,800 stops. The network also includes links for active travel such as walking and cycling to reflect the role these play in supporting a sustainable transport system.

Meeting the challenges of transport planning in Perth

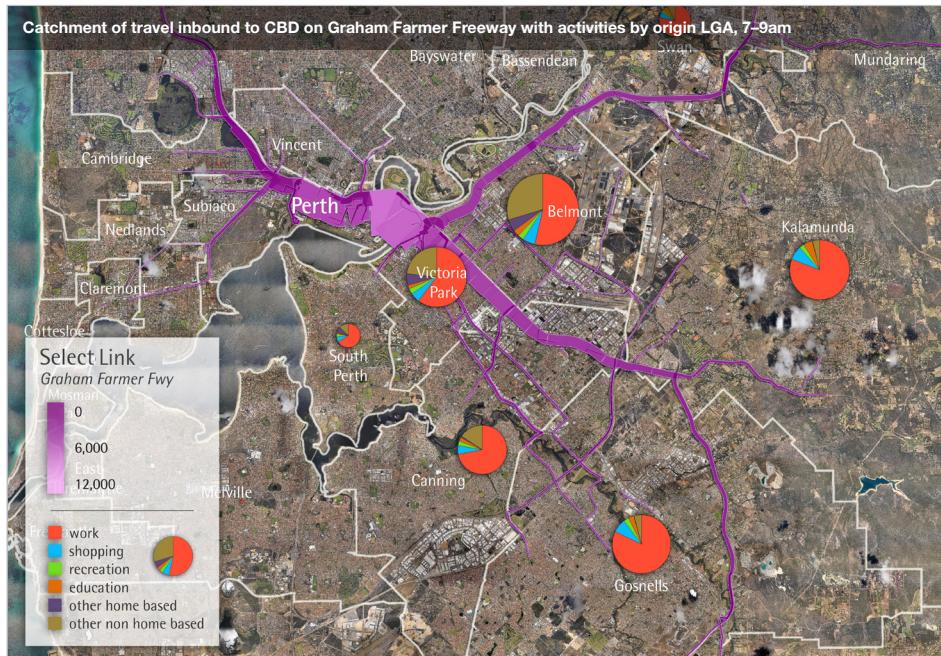
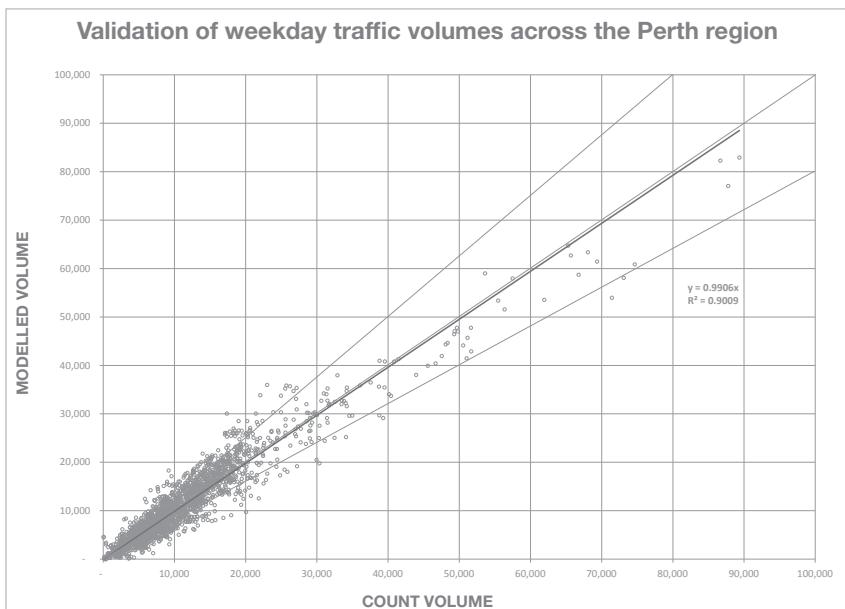
Zenith simulates the travel undertaken by all individuals across the Perth metropolitan area. Developed to respond to the challenges of land use and transport planning in Australian cities, it provides accurate forecasts of multimodal trips, including where car, walk or bicycle is used to access public transport. This is crucial in planning for growth areas where high frequency services may only be provided along certain corridors, and in reflecting competition between modes and stops in areas where several choices are available.



State-of-the-art travel demand modelling

The Perth demand model has been estimated from the ABS Census and household travel surveys. The assignment of private car, light and heavy goods vehicles are validated against traffic counts at 1,800 sites, and public transport passengers from survey information provided by the Public Transport Authority of Western Australia.

The demand models are revalidated each year against updated count information and recalibrated when necessary to reflect changes in travel behaviour or demographics.



Clear presentation for a wide range of audiences

Zenith offers a wide range of tools for analysis of travel demands, accessibility and infrastructure performance. Operating in the OmniTRANS software platform, users can produce high quality graphical analysis for presentation to technical and non-technical audiences alike. The intuitive interface is also suitable for live and interactive model presentations, which is a valuable way to encourage stakeholder ownership in model outcomes.

Model Summary

Area Covered

27,060 sq km

Travel Zones

4,000+

Modelled population

1,870,000

Modelled employment

950,000

Modes

Car, Commercial Vehicle, Rail, Ferry, Bus, Walk, Cycle

Road Network

44,000 links covering 15,700 km

Public Transport Network

1,200 routes and 7,800 stops

Always up-to-date

Our Zenith team are always working to ensure that the Perth model reflects the most recent demographic and land use forecasts, and forward planning for infrastructure and services. We also ensure that a reference case and alternative scenarios are available for future years, consistent with current transport policies and discussion papers, such as the Department of Transport's recent consultation paper Public Transport for Perth in 2031.

Available under licence

In addition to custom analysis through a consultancy service, Zenith is available under licence for in-house use by government, educational institutions and commercial organisations. Current clients for this arrangement include the Victorian State Government, the University of Sydney and the University of Seoul. Updates to demographics, land use, travel behaviour, road networks and public transport systems for models under license are provided annually.

The team at VLC are always on hand to support you in the use of Zenith. We offer support online and by phone, as well as in-person training.

MOVE

The Zenith model also underpins MOVE – the official audience measurement system for outdoor advertising in Australia.



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