

Transport network operations





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How can you get the most out of your transport network?

The ARRB transport operations team provides services relating to the operation of transport networks including roads, freeways, car parks and related technologies. We investigate the strategies and technologies for efficient and safe movement of people and freight. For example ARRB provides services and advice that address issues such as:

- the performance and measurement of a road traffic system so that congestion can be managed equitably and in real time
- determining needs for vehicle detection, classification and identification, and the best technologies to meet those needs
- evaluating available technologies and schemes for telematics applications
- determining the sort of road advisory information that should be conveyed to travellers and how it can be provided
- improving the productivity and reliability of arterial and freeway networks
- improving the level of service for trucks, on-road public transport vehicles and emergency vehicles
- improving safety and efficiency of off-road car parks.

Members of the team have also prepared Intelligent Transport Systems (ITS) strategies for road authorities and developed innovative schemes for the measurement of road network congestion and its management.

ARRB can provide specialist advice, complete solutions and independent evaluations. It has strong connections with road transport and planning authorities. We are members of national and international bodies and forums that set the future directions of transport network operations.



safe, sustainable and effective movement of people and freight

Our services include:

- evaluation of the costs and benefits of ITS solutions and parking technologies and schemes
- provision of strategies
- development of algorithms and software engines
- provision of in-depth, state-of-the-art reviews
- macro- and micro-simulation modelling studies
- preparation of guidelines and procedures
- provision of training workshops, based on best practices.

Examples of recent projects:

- Evaluation of mobile phone tracking for network performance measurement
- Development of accessibility metrics and models to understand the intersections between travel efficiency and land-use opportunities
- Developing the functional specifications of a new generation of traffic signal controllers
- Real-time estimation of travel times on arterial and roads with an elemental approach based on signal timings and flow data in SCATS and STREAMS
- Real-time estimation of bus travel times on Punt Road-Victoria Parade, Melbourne
- Evaluation of a wireless vehicle sensor based on changes in earth's magnetic field as a vehicle passes over the sensor
- Modelling of the impact of high-productivity freight vehicles on travel demand, congestion, fuel consumption and externalities
- Development of a range of guidelines: e.g. Guide to Traffic Management Part 3 (Traffic Studies and Analysis), best practice on road use data collection, analysis and reporting, and microsimulation traffic modelling



- Knowledge transfer workshop series in most capital cities, including on traffic studies microsimulation traffic modelling, transport modelling, parking, sustainable urban transport planning and local area traffic management
- Parking efficiency review of Roy Talbot Rehabilitation Centre in Kew, Victoria.

The transport operations team works closely with ARRB's transport safety and traffic, transport economics, transport planning and management and heavy vehicles teams to develop tailored solutions that meet client needs. The team draws upon ARRB's expertise and resources from across Australia.

About ARRB:

ARRB Group Ltd (ARRB) provides research, consulting and information services to the road and transport industry. ARRB applies research outcomes to develop equipment that collects road and traffic information and software that assists with decision making across road networks. ARRB is the leading provider of road research and best practice workshops in Australia.

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