

Tools for improving road safety

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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developing software tools to help you improve the safety of your road network

ARRB has developed a suite of software tools to assist road safety professionals to; identify hazards and deficiencies in the road environment, proactively assess hazards and treatments, set appropriate speed limits.

ARRB has experience and capability in the development of software and manual applications to assist road safety practitioners to:

- identify and assess road hazards and to evaluate treatments
- streamline engineering evaluations and decision making
- set appropriate speed limits.

There are numerous examples of existing applications developed for clients in Australia, New Zealand and many other countries. Some are professional-level PC applications for use by a larger number of licensed practitioners. Others are low-cost yet highly specialised decision support tools for experts and program managers. Some of the current examples are listed below.

Speed Limits (X-Limits suite)

The consistent and appropriate setting of speed limits is critical to ensure the covered limits are set, and provide the travelling public with speed limits and speed environments that are expected and understood.

ARRB has worked with Austroads and different road authorities to develop a suite of speed limit setting software tailored to an individual jurisdiction's needs. These web-based programs guide road authority engineers to select appropriate speed limits for the road environment, road user and traffic flow conditions in a consistent and defensible way.

ARRB's speed limit setting software has been tailored for all Australian states, including Victoria (VLIMITS 2.0), South Australia (SALIMITS), Queensland (QLIMITS/SLR-QLD), New South Wales (NLIMITS), Western Australia (WALIMITS 3.0) and Tasmania (TLIMITS). Overseas applications have been developed for New Zealand (NZLIMITS) and the United States (USLIMITS). New generations of the software are being developed to apply speed limits that achieve the aims of the Safe System vision.



Road Safety Audit Toolkit

The Road Safety Audit (RSA) Toolkit is an online tool that assists practitioners to carry out road safety audits, helping them to:

- undertake road safety audits at any stage of a project – feasibility, preliminary design, detail design and pre-opening, roadwork traffic scheme and existing roads
- generate a road safety audit report with recommendations
- link to Australasian and jurisdiction-specific references and standards
- manage and keep track of members in a road safety audit team.

Contact: rsatoolkit@arrb.com.au

Austroads Road Safety Engineering Toolkit

ARRB, in association with Austroads, developed a Road Safety Engineering Toolkit for road safety practitioners and engineers. It outlines best-practice, low-cost, high-return road environment measures to achieve a reduction in road casualties. Access to the toolkit is free to Australasian practitioners and requires no registration.

The Toolkit seeks to reduce the severity and frequency of crashes involving road environment factors. Provision of safer roads and roadsides is a major area for action under the National Road Safety Strategy and is a strategic priority area for Austroads research.

The Toolkit draws together existing road safety engineering knowledge for easy access. The knowledge has been updated with recent experience from local and state government agencies, and with the results of comprehensive road safety research reviews.

The Toolkit has regular updates and revisions, so that the most recent safety 'wins' are captured and disseminated.

Visit: www.engtoolkit.com.au



Road Safety Risk Manager

The Road Safety Risk Manager (RSRM) has been developed to provide road safety professionals with a user-friendly tool to proactively assess road safety hazards and treatments for the purpose of prioritising actions. The tool adopts a risk management approach, with the aim of achieving the greatest risk reduction on the road network for a given budget.

The RSRM will assist you to:

- assess the road safety value of over 60 different engineering treatments for different sites
- prioritise a series of potential projects to maximise the road safety value of a program of works given a limited budget
- document and track assessments of each issue
- achieve the maximum road safety benefit from the investment in road engineering treatments.

The RSRM can be used for assessing and ranking:

- road safety audit recommendations
- mass action programs (e.g. guardrail, line marking, sign replacement)
- safety-related routine maintenance issues
- responses to road safety issues raised by the community or through regular inspection programs
- design audit recommendations.

Following the collection of site information, the tool allows the assessment in 5-10 minutes. RSRM includes reporting and budget analysis tools to assist with risk identification, risk management and the development of remedial treatment programs.

Contact: rsm@arrb.com.au



NetRisk -Road Network Safety Assessment

Road authorities are obliged under law to maintain minimum levels of information regarding the safety condition and quality of their road network. Recognising the need for a standardised yet flexible approach, ARRB Group in collaboration with the Queensland Roads Alliance has developed a network assessment process that can be applied across any road environment.

Utilising the latest Austroads research findings, NetRisk is designed to enable road authorities to rapidly assess the safety condition of any road network. Only the most hazardous locations are highlighted for detailed investigation according to the road authority's resource levels and local considerations.

NetRisk changes the traditional approach by using a research proven method to prompt practitioners to investigate only the most hazardous sites.

Application of the NetRisk method involves a two-stage process:

- Stage 1 involves a network level assessment, to focus attention on high-risk sections of the network.
- Stage 2 involves the detailed investigation at the project level of the high-risk sites, to locate and analyse specific hazards and preferred treatment options.

All standard road types can be compared and assessed:

- urban mid-block
- urban intersection (major/minor)
- sealed rural mid-block
- unsealed rural mid-block
- rural intersection (major/minor).

For further information please visit our website www.arrb.com.au


