

Supporting Safer Roads Partnerships to deliver Net Zero Harm on local roads



The fundamental need: to reduce the number of casualties on local roads

Police forces face a continual challenge to reduce the number and severity of road casualties in their area. Road network managers in Local Authorities also have ambitious goals to achieve Vision Zero, and competing compliance and policy obligations that constrain progress. Budgets are tight and while there are several avenues for getting additional funding (such as from Active Travel England), it's hard to know which objectives to focus on, and which strategies to deploy in priority.

The good news is that Road Safety teams all over the UK are working with the same challenges on their local roads, and everyone can learn from the best performing teams.

It is frequently the police that take the lead on initiatives to achieve Net Zero Harm, often as part of a Safer Roads Partnership. TRL have a package of affordable services that will deliver positive outcomes, fast, every time.

Our approach is evidence based; we only present options that have proven to work elsewhere.



Quick wins

- Preventing suicides on local roads
- Identifying collision hot-spots
- Co-ordinating road safety policy across local partner agencies
- Aligning road safety policy to win investment funds



Anticipating change:

aligning with national policy and strategy to deliver safer local roads

The transformation of the transport sector is causing road safety professionals sleepless nights. Both the speed of change and the increasingly inter-connectedness of things is making it difficult for anyone to make firm decisions about the future. This affects road safety and casualty reduction because it becomes hard to set and achieve measurable goals.

Undertaking a technical review of all the documentation in support of a Vision Zero strategy for a Local Authority is not as daunting as it may sound. For a modest fee, TRL brings to the task all its decades of familiarity with the legal and regulatory requirements and a deep understanding of the national policy landscape. So as a desk-based review, this is a relatively simple task for TRL.

The real benefit from regular policy and strategy reviews is to take advantage of TRL's domain knowledge about ALL of the things happening in the world of transport, and what things are likely to have the greatest impact on the long term planning done at Local Authority level when seen through the lens of public safety.

New driver assistance technology in vehicles, electric vehicles, charging infrastructure, mobility-as-a-service payment methods, automated vehicles, travel demand, traffic flow patterns, ITS, pedestrianisation, changes to the Highway Code, mobility hubs, electric scooters.... all these things and more can and do change at pace. At the same time society is always adapting and attitudes change fast (e.g. reaction to the introduction of 20mph speed restrictions in Wales).

TRL will do the heavy lifting of anticipating what is coming next and what that means for the safety of the ratepayers on your local roads.

Outcomes

- **Hassle-free review of existing road safety policies and strategies for compliance**
- **Balanced review of co-dependent policies and strategies**
- **Impact assessments of specific disruptors**
- **Matching local plans to regional and national plans**
- **Interpreting national requirements at local level**



Suicide prevention

Safer Roads Partnerships can make a real difference, by adopting a pro-active strategy to suicide prevention on their local roads. This means applying the knowledge gained from practical interventions that have worked elsewhere. These include:

- Improving data collection about suicide incidents, following the example of the rail industry
- Identifying risk factors from high-frequency locations and extrapolating to identify other assets at risk on your network
- Introducing a proactive risk-based approach to the design and delivery of new assets or retrofit of existing assets
- Developing data tools and standardised processes to support design teams working on transport or road schemes
- Issuing practical design guidance including hard and soft measures, based on industry best practice
- Developing relevant guidance products for anyone whose job involves identifying and managing suicide risk – e.g. information sheets, helplines, self-managed learning

For advice on suicide prevention please ask for Ros Walker
Telephone: 07786 154009 or email: rcwalker@trl.co.uk

Suicide is not inevitable; suicide is preventable



TRL *in action*

TRL are actively supporting National Highways' Suicide Prevention Team in their ambition to reduce the occurrence of suicide incidents on the SRN.

Using iMAAP for monitoring safer road interventions

iMAAP is TRL's software application for the timely and low-cost collection of data relating to collisions and incidents on local road networks. Although its function is a monitoring tool (for inputting essential information into a database), its purpose is a management tool to support and evidence high level road safety strategy, highway network operation and network investment decisions.

iMAAP is a web-based app which allows an untrained observer to quickly and easily capture environmental data immediately after an incident, such as designated speed at the incident location, traffic flow, temporary interventions, pavement condition, and other factors easily seen if prompted. This information is then supplemented by data from the formal police report, and any medical data if serious or fatal injuries are sustained in the collision.

With basic training, an iMAAP user can interrogate the database to better understand local road safety problems, select appropriate countermeasures, and evaluate the effectiveness of related policy, programmes and interventions without recourse to expensive consultants.

iMAAP delivers valuable insights regardless of the size of the road network.

iMAAP Fataals

An additional module for police collision investigators to use at the scene of fatal collisions. It prompts the capture of more than 300 data points about an incident in order to determine the root cause.

Outcomes

- **High volume of quality data collected at minimal cost (e.g. by any first responders)**
- **Data covers whole safe-system approach to provide whole safe-system insights**
- **Non-specialist users easily trained**
- **Wide array of automatic trend reports built-in**
- **Instant benchmarking of local road safety statistics against national figures**
- **Test proposed countermeasures against proven safety performance models**
- **Track road safety KPIs against goals**

TRL *in action*

iMAAP has saved over 25,000 lives across the globe and Jamaica is among the growing list of countries switching from the old paper-based product to using the new version, a cloud based app, to make their roads safer.



Forensic collision investigation – technical services

When a road collision requires investigation, or police are required to give evidence in an insurance claim, there is a lot of work to do. TRL's team of highly experienced forensic collision investigators can assist the police with investigative activities that may be more cost effective when outsourced. These tasks include:

Outcomes

- FCIU officers' time dedicated to priority activities in preparing cases for court
- Reduced training burden to acquire and maintain specialist skills
- Clarity for nuanced liability claims from simulated reconstructions



TRL expert witnesses gave evidence in the criminal cases relating to the death of a bus driver in Orpington in 2019, and the Glasgow bin lorry crash in 2014.

TRL provide collision investigation support for the UNHCR and its staff who work in high risk countries around the world.

CCTV & dashcam footage analysis

Our fixed price service will report back with confirmed speed, orientation and actions of objects, with data packs to run in reconstruction models.



Analysis of event data

A fixed price service looking at information available from in-vehicle data such as infotainment systems, telematics products, insurance 'black box' trackers, airbag and restraint system modules. Sometimes the absence of event data is as revealing as the presence of data when it comes to determining a precise sequence of events

Event reconstruction using 3D simulation software

Particularly for complex or multi-vehicle incidents, a high-fidelity visualisation of a collision can be extremely helpful in court. TRL are experts in combining 3D laser scan data of the scene with CCTV video, 3D vehicle models and other physical data collected by the collision response team, to recreate the chain of events based on the laws of physics.



Scene from animation showing on-coming motorcycle with subject vehicle turning right across its path



Forensic collision investigation of incidents involving ADAS technology

ADAS technology assessment

Free advice on whether a fault or failure of an automated system caused or appears to have contributed to an incident.

This service is funded by DfT in exchange for inviting officers to record pertinent information about ADAS systems known to be present on a vehicle involved in collision. Capturing this data is essential as the UK prepares for an increasingly automated vehicle parc, so that FCIU officers in turn are equipped to deal with the technologies. This information is stored in RAIDS.

For case support telephone: 01344 770150 or email: CAVcollisions@trl.co.uk

Outcomes

- **Familiarisation with issues relating to new systems before they become mainstream**
- **Faster preparation of court documentation**
- **Participate in building a national view of ADAS technologies as contributors to collisions**

Examples of Advanced Driver Assistance Systems (ADAS)

- Automated driver support (Tesla Autopilot, Volvo Pilot Assist, BMW Drivepilot etc.)
- Automated Lane Keep Assist (ALKS)
- Adaptive cruise control with stop/start
- Traffic jam/queue assist
- Lane keeping/ lane centring feature
- Lane change assist
- Automated lane change
- Navigation on Autopilot
- Summon
- Infotainment systems & connectivity



Image courtesy of Mercedes Benz

TRL *in action*

TRL has been delivering the RAIDS programme for the Dept for Transport for 11 years. RAIDS (Road Accident In-depth Study) collects high quality information on all aspects of road traffic collisions. Analysis of the data informs road and vehicle safety research policy and supports development of standards to prevent future collisions and reduce injuries.

Why engage TRL

Objective alignment

TRL is a social purpose enterprise whose mission is to create clean and efficient transport that is safe, reliable and convenient for everyone.

Independent and impartial advice

Without shareholders, TRL is agnostic to the commercial supply chain, investment funders and any other external influence. We adopt an evidence based approach to advise land transport providers and road network managers at corporate, local, regional, national and international levels

Domain knowledge and technical capability

With 90 years of transport research and technical advice embedded in our corporate "know-how", TRL's specialists have a depth and breadth of expertise unavailable to regular management consultants.

Certainty of perspective

TRL invests in our own research to give us a view beyond the current horizon and understand the interplay of forces driving changes in the transportation sector.

Collision research

Our collision investigation experts have unrivalled experience in high profile cases, complex reconstructions, and access to a wide pool of specialists covering every factor that influences a road collision.

TRL *in action*

TRL delivers the National Highways Fatality Research programme that looks in detail at 150+ collisions each year on the Strategic Road Network. This permits a deep dive into locations or topics of concern, and triggers further analysis of key findings in support of National Highways' operational planning and research activities.



Transport for London, in pursuit of Vision Zero, worked with TRL specialists to carry out in-depth analysis of bus collisions and identify a package of countermeasures which resulted in new safety standards for bus operators and bus manufacturers which won a Prince Michael Road Safety Award in 2023.





Our services can be purchased via direct award or through various frameworks. For a no obligation conversation to explore how TRL can help make your Safer Roads Partnership achieve its aims, contact Paul May

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For Forensic Collision Investigation services, please contact us via

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