TRANSPORT INTELLIGENCE DIGEST

Issue 13

Date of issue: September 2019	**Contents** Inclusive Access Economic Prosperity Resilience and security Environmental sustainability Healthy and safe people Around the world – statistical releases Hub Knowledge Vacancies
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Introduction

Welcome to the 13th issue of the Transport Intelligence Digest.

This publication will now be tied to the 5 transport outcomes of the Transport Outcome Framework. This reflects our vision for a transport system that is inclusive, healthy and safe, and contributes to a sustainable, resilient and prosperous society; and explains how Government should work toward these outcomes through a guiding principle of mode neutrality.

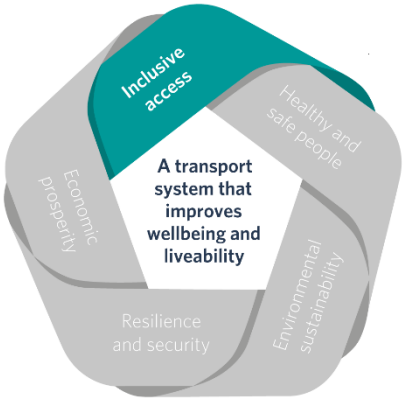
We welcome contributions from anyone who reads this Digest. We ask you to indicate which of the 5 transport outcomes your contribution would fall under. The contribution should be a recent release. Contributions don't have to be about research: we have a section devoted to statistical releases and we're happy to receive contributions for that area as well.

Happy reading

Stephen

Transport Knowledge Hub

Inclusive Access



The transport system provides ways for people and products to move from one place to another. This enables people to access economic opportunities (e.g. work) and social opportunities (e.g. friends, family/whanau, and community services). Transport therefore plays an important role in social development. Access is also vital for economic activity, as recognised in the economic prosperity outcome.

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Factors affecting cycling levels of service

WSP OPUS (September 2019)
Author(s): C Bowie, J Thomas, P Kortegast, K O'Donnell, A Davison

Keywords: Accessibility;

This is an NZTA Research Programme funded project.

This report examines cyclists' perceptions of cycle infrastructure levels of service and proposes an assessment methodology for evaluating the level of service provided by cycling facilities.

First, a range of methodologies for evaluating cycling levels of service (CLOS) are described. These are diverse in both their approach and foundations, ranging from tools that are based exclusively upon expert opinion and judgement, to those that rely on user perceptions of infrastructure quality. The latter is an ongoing field of research that seeks to understand what is most important to the cyclists who ride on the infrastructure we build, and to those contemplating doing so.

Second, this study describes a mixed methods approach, using data collected from cyclists (self-assessed as having at least an intermediate level of cycling experience) riding on the road network and participants (the majority self-assessed as having advanced cycling ability) in a video survey to understand perceptions of cycling infrastructure. This information is supplemented by expert opinion from New Zealand transport professionals.

Out of this research, we propose a CLOS evaluation methodology as a starting point for a nationally consistent approach to evaluation of cycle infrastructure in New Zealand. With further work to complete it, the proposed tool will support better decisions, planning and investment for our cycleways by capturing the needs of existing cyclists.

https://www.nzta.govt.nz/resources/research/reports/660

Impacts of gradual automated vehicle penetration on motorway operation: a comprehensive evaluation

European Transport Research Review (July 2019)

Keywords: Congestion; Vehicle technologies & standards

This paper modelled impacts on congestion, safety, and emissions from automated vehicles (level 4, autonomous) and variable speed limits (complied with) in motorway traffic.

- Introducing automated vehicles has little impact when there is no congestion
- Variable speed limits are efficient in making positive impact on congestion, safety and emissions when there are less than 70% automated vehicles
- Variable speed limits have no impact when more than 90% automated vehicles are in the traffic
- Automated vehicles produce gains for throughput and travel time (compared to zero AVs) under hyper-congested situations but safety and emissions are degraded due to extra vehicles

The outcomes of the research can provide motorway designers and operators a reasonable range of influences contributed by AV penetration so as to better prepare for AVs' arrival.

https://etrr.springeropen.com/articles/10.1186/s12544-019-0375-3

Inclusive cycling in towns and cities

Sustrans & Arup, United Kingdom (June 2019)

Keywords: Accessibility; Active modes

This report says that a third of disabled people in UK cities would like to start cycling but are being held back by 'systematic barriers'. The report, authored by active travel charity Sustrans and transport consultants Arup, estimates 84% of disabled people living in urban areas never cycle for local journeys – yet 33% say they would like to do so. The report recommends that local authorities should ensure the voices of underrepresented groups are integrated in policy and planning, and create a dense network of cycling routes within and around where people live.

https://www.sustrans.org.uk/media/1029/inclusive_cycling_in_cities_and_towns_2019_06_arup_sustrans.pdf

Next generation New Zealand transport models

Stantec NZ (September 2019)
Author(s): MG Smith

Keywords: Accessibility; Modelling and forecasting; Surveys

This is an NZTA Research Programme funded project.

Household Travel Survey data is an essential component of building a transportation model. The New Zealand Ministry of Transport (MOT) has recently embarked on a rolling programme of annual surveys. This research project confirmed that, with some changes, the data collected in the surveys was adequate to build existing model forms currently being used and would be suitable if tour-based or activity-based transportation models were to be built in the future, noting that sample sizes in the MOT survey would need augmenting for this purpose. As part of the project a stocktake of current models was undertaken, as was a short survey of the public sector transport modelling resource in New Zealand. The study concludes with suggestions for topics of future research.

https://www.nzta.govt.nz/resources/research/reports/659

Opportunities for road agencies in Mobility as a Service

Austroads (August 2019)

Keywords: Accessibility

Mobility as a Service, referred to as 'MaaS', represents the opportunity for all available public and private transport services to be integrated and bundled into a platform directly accessible by the individual travellers through their mobile devices, enabling door-to-door journey, with clear options on travel time, transport modes, and price, and centralising journey information, journey planning, service reservation, and payment.

This concept is challenging the traditional transport landscape with potential new players set to take a key customer-facing role going forward as MaaS operators, and existing roles and business models required to adapt.

The development of MaaS in Australia and New Zealand will likely be shaped by market opportunities. However, it will require strong public-sector leadership to develop integrated mobility strategy, understand and support the new business models MaaS implies, and assess and manage the impacts on existing services and legislation, including existing and planned public transport infrastructure and services.

https://austroads.com.au/publications/network/ap-r601-19

Physical activity of electric bicycle users compared to conventional bicycle users and non-cyclists: Insights based on health and transport data from an online survey in seven European cities

Physical Activity through Sustainable Transport Approaches (PASTA) (July 2019)

Keywords: Accessibility; Active modes

Physical activity has been widely associated with beneficial health effects. The use of electric-assist bicycles (e-bikes) can lead to increased or decreased physical activity, depending on the transport mode substituted.

This study aimed to compare physical activity levels of e-bikers and conventional bicycle users (cyclists) as well as across e-bike user groups based on the transport mode substituted by e-bike. Physical activity, transport and user related parameters were analysed. Data from the longitudinal on-line survey of the PASTA project were used. The survey recruited over 10,000 participants in seven European cities.

The highlights of this papers included:

- E-bikers take longer trips by e-bike and bicycle, compared to cyclists.
- Physical activity gains from active travel are similar in e-bikers and cyclists.
- Substituting all car trips with e-bike use leads to a gain of 550 MET min/week.
- Transport mode substituted by the e-bike is still used frequently afterwards.

https://www.sciencedirect.com/science/article/pii/S259019821930017X?via%3Dihub

Regulating App-Based Mobility Services

International Transport Forum (August 2019)

Keywords: Accessibility

This report examines how new app-based mobility services can be effectively regulated. High-quality regulations are essential to ensure that ridesourcing, dockless bikeshare, e-scooters and other innovative forms of urban mobility deliver their full benefits for society. They are also crucial to guarantee safety, address environmental concerns and ensure consumer protection. But inappropriate regulation will deny citizens welfare benefits and stifle development of services that may contribute to a more sustainable transport system

https://www.itf-oecd.org/regulating-app-based-mobility-services

Strategies to manage congestion in Australia and New Zealand

Austroads (August 2019)

Keywords: Congestion

This Austroads report presents key initiatives Australian and New Zealand road and transport agencies are implementing to deal with the growing issue of congestion in major cities and regional centres. Agencies use a very diverse range of treatments and operational improvements to tackle their traffic congestion. Key trends include 'sweating' existing assets and infrastructure by using technology for real-time network operations such as smart motorways schemes, and investing in data acquisition, analytics and visualisation to evaluate events and conditions and ultimately design more informed congestion management strategies. There are also operational improvements to how roadworks are planned, authorised and managed to minimise and inform on traffic disruptions, and increased collaboration between public transport agencies and business units to influence transport mode shift and reduce the demand on the road networks. This report will enable agencies to learn from each other's practical experience, and continue to support knowledge sharing through the proposed framework for congestion management relief opportunities.

https://austroads.com.au/publications/network/ap-r600-19

Using telematics devices in heavy vehicles to inform road policy and planning

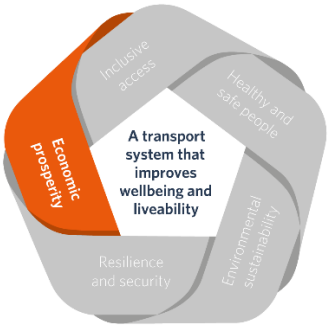
Austroads (August 2019)

Keywords: Accessibility

Telematics devices in vehicles provide data about vehicle location, driving speed and distances travelled, for example. To explore how well such telematics systems could inform road agencies about ways heavy vehicles use key freight routes and where congestion occurs, Austroads commissioned Transport Certification Australia (TCA) to analyse telematics data collected from a range of heavy vehicles, including rigid trucks, articulated combinations and special purpose vehicles. The Key Freight Routes – Heavy Vehicle Usage Data Project provides the results of this research.

https://austroads.com.au/publications/freight/ap-r602-19

Economic Prosperity



Transport supports economic activity by connecting businesses with their workers, customers, suppliers, and other businesses. This enables each community and region of New Zealand to take advantage of their unique strengths and resources.

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Australian Infrastructure Audit 2019

Infrastructure Australia (August 2018)

Keywords: Economics; Funding & expenditure

What Infrastructure Australia sees as their transport challenges, we face similar issues. Passenger transport section looks at:

- Changing urban travel patterns
- Technology and the future of passenger cars
- International, interstate and inter-regional connectivity
- Funding and maintaining our transport assets
- Passenger transport sustainability and resilience
- Safety in the transport sector
- Transport accessibility and equity

Freight transport section looks at:

- Freight gateways supporting international trade
- The urban freight challenge
- Ensuring the national freight network is effective and efficient
- Unlocking regional economic development through freight

https://www.infrastructureaustralia.gov.au/australian-infrastructure-audit-2019-transport

Maritime Subsidies: Do They Provide Value for Money?

International Transport Forum (ITF) (September 2019)

Keywords: Economics; Evaluation

The shipping sector receives subsidies, tax breaks and other forms of financial support from governments. This report gives an overview of direct and indirect subsidies available to maritime transport in OECD countries and assesses whether they provide value for taxpayers' money. Based on this, the report offers recommendations on how policy-makers can increase the effectiveness of maritime subsidies.

https://www.itf-oecd.org/maritime-subsidies-do-they-provide-value-money

Transport, participation and wellbeing: Evidence and recommendations

Waikato Regional Council (May 2019)

Keywords: Economics; Funding & expenditure

The Waikato Regional Council has an interest in transport and wellbeing because it governs regional land transport planning, and public transport planning and operations. This piece of work was commissioned to demonstrate links between policy, investment, participation and wellbeing, for investment in transport and other sectors; and define the people and communities of greatest need for improvements to their access and mobility, for whom investment would have the largest impact on improving wellbeing.

The main findings of this work were that there are some very clear links between investment, participation, health and wellbeing. The report concludes that there is good potential to demonstrate the contribution of policy and investment in transport to wellbeing. For example, relatively small changes to funding and resourcing, to target support to people of greatest need, are likely to accrue benefits for individual and community wellbeing.

https://www.itf-oecd.org/sites/default/files/docs/value-saving-travel-time.pdf

What is the Value of Saving Travel Time?

International Transport Forum (ITF) (October 2019)

Keywords: Economics; Evaluations

This report revisits the rationale and methods for estimating the value of reductions in travel time. In doing so, it considers changes in the way people use time and specifically explores whether the value of time will fall towards zero as connected technologies allow a wide range of activities while travelling. The report also reviews evidence and methodologies to account for the utility derived from such activities, as well as implications for modelling, appraisal and policy planning.

https://www.waikatoregion.govt.nz/assets/WRC/Services/publications/technical-reports/2018/TR201818.pdf

The transport system can benefit or harm people's health, depending on how it is designed, developed, and used. Minimising and managing the risks from natural and human-made hazards, anticipating and adapting to emerging threats, and recovering effectively from disruptive events.

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Air passenger experience of security screening: 2018

Department for Transport (DfT), Great Britain, (August 2019)

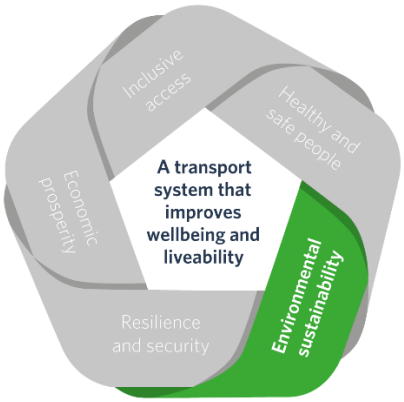
Keywords: Security

This short paper provides results from a short set of questions about experiences of security screening from the CAA Passenger Survey at selected UK airports in 2018.

Air passenger satisfaction at surveyed airports with security screening in 2018 can be broadly summarised with:

- 85% of air passengers saying they were very satisfied or satisfied
- 51% of air passengers saying they were very satisfied
- 3% of air passengers saying they were very dissatisfied or dissatisfied

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/827013/air-passenger-experience-of-security-screening-2018.pdf



People and places will only be able to prosper long-term if the living systems that our society, economy, and wellbeing depend on are sustained in a healthy condition. Transitioning to net zero carbon emissions, and maintaining or improving biodiversity, water quality, and air quality.

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A Community of Practice for Economic Modelling of Climate Change Mitigation in New Zealand

Motu (August 2019)

Keywords: Environment

In community modelling our future can take us to new heights. The public and private sectors face important strategic decisions about low-emissions transitional pathways. Such decisions require sound evidence, with input from experts and stakeholders across the board. Models can be used for evidence-based decision-making, but New Zealand has shortcomings in its capacity for climate policy analysis, particularly in comparison with other jurisdictions. These deficiencies pose a serious risk to New Zealand's future economic development.

Climate policy analysis requires assessing a wide range of factors. A multi-model approach supported by multiple providers improves consistency, coordination, and collaboration across members of the modelling community, users of modelling results, and funders of modelling.

This document summarises the compelling case for developing a New Zealand 'Climate Policy Modelling Initiative' (CPMI). This initiative would coordinate and enhance delivery of modelling across multiple providers. This work is informed by several workshops that brought together economic modellers from a range of organisations.

If supported by government leadership and commitment, the CPMI would have a transformational effect on New Zealand's capacity to plan for a successful low-emissions future.

https://motu.nz/our-work/environment-and-resources/lurnz/a-community-of-practice-for-economic-modelling-of-climate-change-mitigation-in-new-zealand

Are e-scooters polluters? The environmental impacts of shared dockless electric scooters

Environmental Research Letters (August 2019)

Keywords: Environment; Vehicle technologies & standards

Using life cycle assessment, we quantify the total environmental impacts of this mobility option associated with global warming, acidification, eutrophication, and respiratory impacts. We find that environmental burdens associated with charging the e-scooter are small relative to materials and manufacturing burdens of the e-scooters and the impacts associated with transporting the scooters to overnight charging stations.

Results show that dockless e-scooters consistently result in higher life cycle global warming impacts relative to the use of a bus with high ridership, an electric bicycle, or a bicycle per passenger-mile traveled. However, choosing an e-scooter over driving a personal automobile with a fuel efficiency of 26 miles per gallon results in a near universal decrease in global warming impacts. The use of dockless e-scooters are often preferable to dockless bicycles, yielding lower life cycle emissions 67% to 100% of the time.

https://iopscience.iop.org/article/10.1088/1748-9326/ab2da8

Electric Vehicle Uptake: Modelling a Global Phenomenon

Bureau of Infrastructure, Transport and Regional Economics (BITRE), Australia (August 2019)

Keywords: Vehicle technologies & standards

This report describes an approach to estimating likely electric vehicle uptake for each of 22 countries around the world. Models of electric vehicle uptake were derived for Australia, Austria, Belgium, Britain, Canada, China, Denmark, Finland, France, Germany, India, Ireland, Italy, Japan, Korea, the Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, and the United States (as well as for the 'Rest of Europe'). Section B17 at the rear of this report provides the New Zealand results, whilst also showing international comparison tables within the report.

The uptake estimates presented here, as a result of electric vehicle uptake modelling for the 22 countries, will be of interest to policy makers charged with maintaining and funding the transport and energy systems, and those charged with ensuring sustainable transport systems and reduced emissions.

https://www.bitre.gov.au/publications/2019/files/bitre-report-151.pdf

Modelling net effects of transit operations on vehicle miles travelled, fuel consumption, carbon dioxide, and criteria air pollutant emissions in a mid-size US metro area: findings from Salt Lake City, UT

Environmental Research Letters (August 2019)

Keywords: Environment; Vehicle technologies & standards

This paper analysed data for 2016, along with service schedules and routes from General Transit Feed Specification (GTFS) data in Utah (population: 1.8 million), to estimate the impact of UTA on the air quality in its service region by accounting for vehicle miles travelled, gasoline gallons equivalent of fuel consumed, and multiple pollutant species emitted.

Buses, light rail, and commuter rail were found to collectively offset approximately 1.5% of the on road emissions due to transit use replacing single passenger vehicle use. These offsets are not homogeneous; ridership drops significantly (~20%–50% depending on the mode) during the summer months as some of the largest users are educational institutions with noticeable seasonal cycles. Low transit use during the weekend negates some of the air quality benefits as buses and trains travel at lower capacity.

https://iopscience.iop.org/article/10.1088/2515-7620/ab3ca7

Testing New Zealand vehicles to measure real-world fuel use and exhaust emissions

Emission Impossible Ltd & Mote Ltd (July 2019)
Author(s): Dr G Kuschel and J Metcalfe - Emission Impossible Ltd; P Baynham and Dr B Wells - Mote Ltd

Keywords: Environment

This is an NZTA Research Programme funded project.

The purpose of the research was to better understand real-world fuel consumption and vehicle exhaust emissions from the New Zealand fleet and use this knowledge to improve the ability of the Transport Agency's Vehicle Emissions Prediction Model (VEPM) to predict actual emissions.

A portable emissions monitoring system (PEMS) was developed to measure real-world emissions from a range of typical New Zealand vehicles on a route typical of New Zealand conditions. Testing was undertaken in Auckland between January and May 2018 on six light duty petrol vehicles, 20 light duty diesel vehicles and six heavy duty diesel vehicles, including New Zealand-new and Japanese-used imported vehicles manufactured between 1996 and 2014.

As expected, our testing found that real-world emissions of most pollutants were higher than regulated standards (up to eight times). The real-world NOx results were comparable to real-world emissions from Europe and Australia for similar vehicles. Although based on real-world factors, VEPM emissions factors were found to be different from those derived from the PEMS results in this study for all vehicles tested and all speed bins analysed.

Recommendations have been made to improve and update VEPM utilising the results of this study and other international and New Zealand evidence. Additional testing of heavy duty diesel vehicles is recommended to better predict emissions and fuel consumption from this class of vehicles.

www.nzta.govt.nz/resources/research/reports/658

Understanding the value of meeting the requirements of environmental legislation for roading improvement projects

Tonkin + Taylor Ltd (September 2019)
Author(s): C Reed, T Fisher and A Burgess - Tonkin + Taylor Ltd; T Denne - Covec

Keywords: Environment; Evaluation

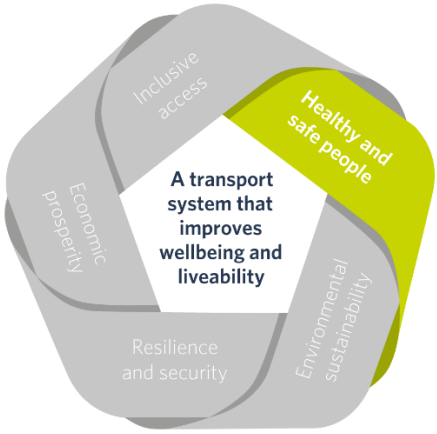
This is an NZTA Research Programme funded project.

This research developed a framework to enable roading authorities to understand the value of meeting the requirements of environmental legislation for roading improvement projects. The Resource Management Act 1991 (RMA) is New Zealand's main piece of legislation that determines how the environment is managed and was the focus of this research. Government and roading authorities are seeking an understanding of the costs and benefits of environmental mitigation in particular, which meant this research sought to understand the outcomes of the 'avoid, remedy, mitigate' process set out in section 5 of the RMA.

The study found that, to better inform decision making around the value of meeting the requirements of environmental legislation, a consistent approach to cost and benefit capture is required across roading authorities, which links costs with activities and outcomes arising from the implementation of environmental legislation.

https://www.nzta.govt.nz/resources/research/reports/640

Healthy and safe people



New Zealand is a geologically active country, and we often experience wild or extreme weather. We therefore face ongoing natural hazard events (e.g. earthquakes and cyclones) that can cause serious damage to infrastructure and communities. Our transport system needs to anticipate both natural and human-made risks, and be prepared to recover from disruptive events

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Effects of roadside memorials on drivers' risk perception and eye movements

Cognitive Research: Principles and Implications, volume 4, Article number: 32 (2019)

Keywords: Human behaviour; Safety

Road crashes are a leading cause of death worldwide. In many countries, it is common to see spontaneous roadside memorials constructed in response to road fatalities. These memorials are controversial and are explicitly banned in many jurisdictions. Advocates argue that the presence of memorials improves safety by making other drivers aware of an especially dangerous road where others have died, whereas opponents argue that they are distracting and decrease safety by diverting drivers' attention away from the road. However, there has been almost no research examining the effects of roadside memorials on road user behaviour and safety. In this study, 40 drivers viewed videos of road scenes with and without memorials, to examine how the presence of roadside memorials influences drivers' attentional allocation (indicated by eye movements to the roadside area) and safety-related behaviours (indicated by perceived risk ratings and preferred travel speeds for the road). The findings indicate memorials do capture visual attention, as participants were more likely to fixate on memorials compared with a comparison object placed on the roadside. However, fixations on the memorials, and to the roadside area in general, were relatively brief. The presence of memorials did not affect perceived risk and did not produce a clear systematic effect on preferred travel speed. Nearly all drivers in our study supported permitting roadside memorials, but a small number strongly opposed memorials on the belief they are distracting and/or distressing.

https://cognitiveresearchjournal.springeropen.com/articles/10.1186/s41235-019-0184-1

Potential of active transport to improve health, reduce healthcare costs, and reduce greenhouse gas emissions: A modelling study

PLOS (July 2019)
Author(s): Anja Mizdrak, Tony Blakely, Christine L. Cleghorn, Linda J. Cobiac

Keywords: Active modes; Health

Physical inactivity contributes substantively to disease burden, especially in highly car dependent countries such as New Zealand (NZ). The report aimed to quantify the future health gain, health-sector cost-savings, and change in greenhouse gas emissions that could be achieved by switching short vehicle trips to walking and cycling in New Zealand.

The report concluded that switching short trips to walking and cycling would have positive health impacts, reduce healthcare costs, and may also reduce greenhouse gas emissions. Further research is needed to identify viable strategies to increase uptake of walking and cycling for short trips in highly car dependent societies such as New Zealand.

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0219316

How Safe Are You on Britain's Main Road Networks?

Road Safety Foundation, Great Britain (July 2019)

Keywords: Infrastructure; Safety

This annual report tracks the safety of the main 'A' roads where most of Britain's roads deaths are concentrated, and which can be targeted. This year's survey shows, overall, the number of deaths on Britain's roads has changed little since 2011. For the first time, the surveys compare the major route networks which are the responsibilities of different authorities. The report identifies Britain's most improved roads and persistently higher risk roads. It calls for a new tranche of high return investment from the successful Safer Roads Fund to address 75 persistently higher risk road sections identified. Released alongside the report is a data portal containing tools which allow practitioners to interact with the data used in the report.

https://roadsafetyfoundation.org/how-safe-are-you-on-britains-main-road-networks/

Human factor considerations for a licensing point system

University of New South Wales (September 2019)
Author(s): J Hatfield, T Senserrick, S Boufous, L Mooren, A Williamson, C Sakashita and S Job - Transport and Road Safety (TARS) Research, School of Aviation, University of New South Wales

Keywords: Evaluation; Human behaviour; Safety;

This is an NZTA Research Programme funded project.

The New Zealand Transport Agency (Transport Agency) sought to better understand how licensing point systems (LPSs) operate, including how different population groups respond to LPSs. A literature review provided a theoretical background for understanding the functions of LPSs and factors that may influence LPS effectiveness. The LPSs that exist worldwide were studied to identify the features of a 'best-practice' system.

The Transport Agency offence data for all New Zealand-licensed drivers from 2005 to 2014 was analysed to explore how individuals and cohort drivers respond to licensing points, and to identify factors that impact on the likelihood of multiple offending.

An on-line survey of a representative sample of 999 New Zealand adult car-licence holders and focus groups with four key road-user groups (young novice drivers, Māori drivers, professional drivers and motor cyclists) were conducted to investigate knowledge of, and attitude toward, the LPS, as well as acceptability of possible refinements. Results suggested approaches for refining the LPS to strengthen deterrence for a substantial group of repeat offenders (including focus on key offences), and to enhance the ability of the LPS to identify, suspend and remediate the smaller group of incalcitrant recidivist offenders.

Consistent enforcement, and initiatives to enhance public knowledge and awareness of the LPS and enforcement activities, are critical to supporting the system. Careful consideration of the broader policy implications of approaches to align with international best practice LPSs would be required before the adoption of approaches which effectively balance deterrence, road safety and fairness.

https://www.nzta.govt.nz/resources/research/reports/657

Reducing the incidence and severity of road crashes in regional and remote areas

Austroads (September 2019)

Keywords: Evaluation; Safety;

Vehicle users in regional and remote areas of Australia and New Zealand have a higher risk of dying or being seriously injured in road crashes than those in major cities. In 2016, 65% of all road fatalities in Australia and 78% in New Zealand were in regional and remote areas.

The new edition of the Guide analyses crash data from Australia and New Zealand to understand issues and trends, reviews national and international literature, identifies people who are most at risk of being involved in crashes, and identifies measures and initiatives to reduce harm.

The paper found many single vehicle and head-on crashes in remote and regional areas. Crashes mainly involved drivers who were drunk, had taken drugs, were unlicensed or were fatigued, and vehicle occupants not wearing seat belts. It also found an increased risk of crashes when higher speed limits were not supported by the quality of the road or existing infrastructure

https://austroads.com.au/publications/road-safety/ap-r603-19

The Road Safety Statement 2019: A Lifetime of Road Safety

Department for Transport (DfT), Great Britain, (July 2019)

Keywords: Safety; Strategy

In the UK, a new road safety strategy highlighting seventy-four actions to improve road safety have been published. These are aimed at reducing the number of people killed and injured on roads. The report says they can no longer keep doing the same things in the same way if we want to improve. The second graph on the next page highlights that since 2010 the fatality statistics have flat lined. There has been little change in the number of reported fatalities on British roads since 2010. Over the same period, the volume of traffic on roads in Great Britain has increased by 8%.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817695/road-safety-statement-2019.pdf?_ga=2.242804610.108592483.1566512524-157794844.1512607627

Vision Zero for Tāmaki Makaurau: A transport safety strategy and action plan to 2030

Auckland Transport (August 2019)

Keywords: Safety; Strategy

Auckland Transport has released its road safety strategy with the aim of eliminating transport deaths and serious injuries (DSI) in Tāmaki Makaurau by 2050. To achieve this vision, they are embracing the principles of Vision Zero. The strategy, being released before the Government's Road to Zero" strategy, describes where Auckland are now with it's road safety record, a set of actions covering 2019 to 2021 how to improve, with a high level target (no more than 575 deaths and serious injuries by 2021). This target is approximately a 20% reduction from the 2016-2018 annual average baseline. This is complimented by a range of performance indicators to measure progress.

https://at.govt.nz/media/1980787/vision-zero-for-t%C4%81maki-makaurau.pdf

Will driverless cars be good for us? Now is the time for public health to act together with urban and transport planning

Journal of Global Health (September 2019)
Author(s): Angela Curl (University of Otago, Christchurch), Helen Fitt (University of Canterbury)

Keywords: Environment; Health; Vehicle technologies & standards

The article is a viewpoint considering the potential health impacts of driverless cars. Although there are plausible benefits in terms of road safety and reduced impacts of driving cessation among older adults, the broader impacts of continued reliance on motorised transport for urban environments, physical activity, pollution and social exclusion need to be considered.

http://www.jogh.org/documents/issue201902/jogh-09-020303.pdf

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Australian Aircraft Activity

Bureau of Infrastructure, Transport and Regional Economics (BITRE), Australia (August 2019)

Keywords: Aviation

This annual survey covers all Australian registered aircraft used in the Commercial Air Transport and General Aviation sectors of the Australian aviation industry. Number of aircraft is provided, hours flown and landings by type of activity and state of operation. Also included are details by power type and type of fuel. Details are also provided by age of aircraft and distribution by hours flown. Sport aviation activity as reported by the relevant association is also included.

Total hours flown by Australian aircraft was 3.41 million in 2018, an increase of 1.2 per cent compared with the previous year. Total airline RPT flying hours fell 0.2 per cent in 2018 to 1.42 million hours. Other VH-Registered aircraft flying hours rose 2.6 per cent in 2018 to 1.64 million hours. The Sports and Recreation Associations registered sector recorded 348 thousand flying hours in 2018, an increase of 0.6 per cent compared to 2017.

The report: https://www.bitre.gov.au/publications/ongoing/files/Australian%20Aircraft%20Activity%202018.pdf
Excel spreadsheet: https://www.bitre.gov.au/publications/ongoing/files/Australian_Aircraft_Activity_2014-2018a.xlsx

Bi-annual road trauma data tables for the Australia New Zealand Trauma Registry

Bureau of Infrastructure, Transport and Regional Economics (BITRE), Australia (September 2019)

This Excel sheet provides national summary tables of severe injury cases (admitted patients with an Injury Severity Score > 12) added to the Australia New Zealand Trauma Registry. Separate tables are provided for on-road transport, off-road transport, unknown transport and non-transport cases. Data are preliminary and exclude data for two small sites.

https://www.bitre.gov.au/publications/ongoing/severe-injury.aspx

Clinically seriously injured (MAIS 3+) road casualties in Northern Ireland, 1999-2017

Department for Transport (DfT), Great Britain, (June 2019)

Keywords: Safety

This research series presents the number of people seriously injured in road traffic collisions in Northern Ireland from 1999 to 2017 using a clinical definition.

The data show that the series peaked in 2002 with 235 serious injury (SI) casualties, after which numbers began to fall. The most recent five years have shown evidence that the historic downward trend may now be levelling off. In the latest available year, 2017, there were 89 MAIS 3+ casualties – this is a decrease of 62% since the peak in 2002, and an increase of 31% since 2016 when 68 were recorded. While the numbers of MAIS 3+ serious injuries is much lower than reported by the PSNI, the overall trends are similar: both series have shown an historic decrease followed by signs of levelling off over the latest few years.

https://www.infrastructure-ni.gov.uk/system/files/publications/infrastructure/mais-3-plus-road-casualties-in-northern-ireland-1999-2017.pdf

Evolution of transport infrastructure investments since before the financial crisis

International Transport Forum (ITF) (July 2019

Keywords: Economics; Evaluation

This is a statistical note that covers the evolution of infrastructure investments before the financial crisis (2007/08). The ITF statistics on investment, maintenance expenditure and capital value of transport infrastructure for 1995-2017 are based on a survey sent to current ITF member countries. The survey covers total gross investment (defined as new construction, extensions, reconstruction, renewal and major repair) in road, rail, inland waterways, maritime ports and airports, including all sources of financing. It also covers maintenance expenditures financed by public administrations and capital value of transport infrastructure.

A couple of the findings from these statistics include:

- China has the highest inland transport infrastructure investment share of GDP among ITF countries with available data in 2017 (5.8%).
- In Europe, the inland transport infrastructure investment share of GDP has remained stable at 0.8% since 2012 (1), which is only a slight decrease from its pre-crisis level of 0.9% in 2007.

https://www.itf-oecd.org/evolution-transport-infrastructure-investments-financial-crisis?ct=t(2018_Sept_Newsletter_COPY_01)&mc_cid=8840eeea0a&mc_eid=56f140b0e4

National Travel Survey: 2018

Department for Transport (DfT), Great Britain, (July 2019)

Keywords: Surveys; Travel & mobility

The National Travel Survey is a household survey of personal travel by residents of England travelling within Great Britain, from data collected via interviews and a seven-day travel diary. The NTS is part of a continuous survey that began in 1988, following ad-hoc surveys from the 1960s, which enables analysis of patterns and trends.

The average number of yearly trips made by people living in England have increased each year from 2015 to 2018. The 986 trips people made on average in 2018 was the highest since 2009. Most of the increase in the average number of trips recorded in the NTS since 2015 was due to an increase in walking trips. However, the most recent trends in the average distance travelled and the average time spent travelling were more mixed.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/823068/national-travel-survey-2018.pdf

Rail passenger numbers and crowding on weekdays in major cities in England and Wales: 2018

Department for Transport (DfT), Great Britain, (July 2019)

Keywords: Surveys; Travel & mobility

This publication provides information on the number of passengers travelling by rail into and out of a number of selected major city centres in England and Wales. The statistics are based on a count of passengers carried out in autumn 2018. They represent passengers on National Rail services on a 'typical' weekday.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/820770/Rail_Passenger_Numbers_and_Crowding_2018.pdf?_ga=2.41125026.108592483.1566512524-157794844.1512607627

Reported road casualties in Great Britain, main results: 2018

Department for Transport (DfT), Great Britain, (June 2019)

Keywords: Safety

This release gives an overview and commentary of reported road casualties in 2018. It provides the number of personal injury road traffic accidents in Great Britain that were reported by the police in 2018. It also includes the number of people killed or injured in these accidents and which road user group they were in.

There were 1,782 reported road deaths in 2018, similar to the level seen since 2012, which followed a period of substantial reduction in fatalities from 2006 to 2010.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/820562/Reported_road_casualties_-_Main_Results_2018.pdf?_ga=2.12101940.108592483.1566512524-157794844.1512607627

Road Trauma Australia—Annual Summaries

Bureau of Infrastructure, Transport and Regional Economics (BITRE), Australia (August 2019)

Keywords: Safety

This report is the latest in a series of annual road crash statistical reports. It presents annual counts of deaths, fatal crashes, injuries and standardised rates. The focus is on the last ten years. There were 1,145 road deaths in 2018, down from 1,223 in 2017—a 19.7 per cent reduction against the National Road Safety Strategy 2011-2020 baseline and reduction of 2.0 per cent per annum. While deaths decreased significantly over the decade, injuries have increased. There were 38,945 hospitalised injuries in 2016, a nominal increase of 3.6 per cent per year since 2013.

https://www.bitre.gov.au/publications/ongoing/files/Road%20trauma%20Australia%202018%20statistical%20summary.pdf

Vehicle speed compliance statistics for Great Britain: 2018

Department for Transport (DfT), Great Britain, (June 2019)

Keywords: Surveys; Travel & mobility

This statistical release presents estimates of compliance with speed limits in free-flowing conditions on roads in Great Britain. These are based on speed data from a sample of DfT's Automatic Traffic Counters (ATCs), chosen to exclude locations where external factors might restrict driver behaviour (e.g. junctions, hills, sharp bends and speed cameras). The statistics provide insights into speeds at which drivers choose to travel when free to do so, but are not estimates of average speeds across the whole network, which are available separately. The release also presents information from a range of other sources relevant to vehicle speeds and compliance.

https://www.gov.uk/government/statistics/vehicle-speed-compliance-statistics-for-great-britain-2018?utm_source=d6aa941c-eb80-4dfe-ae96-753a5d355652&utm_medium=email&utm_campaign=govuk-notifications&utm_content=immediate

Walking and cycling statistics, England: 2018

Department for Transport (DfT), Great Britain, (July 2019)

Keywords: Active modes; Surveys; Travel & mobility

Statistics on walking and cycling statistics in England for 2018. This statistical release is based on 2 main sources: the National Travel Survey and the Active Lives Survey.

Results from the National Travel Survey show that in 2018:

- people made an average of 347 walking stages and walked an average of 210 miles
- people on average have walked more often and further distances in the last 3 years, following a period of decline.
- people made an average of 17 cycling trips and cycled an average of 58 miles
- people cycled 50% further in 2018 compared to 2002, but the number of cycling trips remained at a similar level to previous years

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/821842/walking-and-cycling-statistics-2018-accessible.pdf

HubKnowledge

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Update of events

July to September was another very busy quarter for Hub events. We also have the Transport Knowledge Conference (TKC2019) arrangements under way and a second Transport Research Colloquium is being arranged.

Upcoming events:

- The draft conference programme is now available here for the 6th **Transport Knowledge Conference 2019** (TKC2019) on 5th December in Wellington – registrations are open until 22 November 2019. To register for the conference please go here
- The **2nd Transport Research Colloquium** will be held in Wellington on 6th December. The purpose of the Transport Research Colloquium is to connect research and policy communities by providing an opportunity to meet and share insights on transport topics of contemporary importance to New Zealand. The event is attendance by invitation only. To find out more, please email knowledgehub@transport.govt.nz

Previous events:

  - In July, Dr Subeh Chowdhury from University of Auckland presented on **Investigating the barriers faced by people with disabilities using public transport**.
  - The presentation is available here.
- Also in July, Dr Abhisek Ukil from University of Auckland come along to present on his paper on **"Grid Integration of Electric Vehicle and Renewable Energy: Challenges & Opportunities"**
  - The presentation is available here.
- A Joint CASANZ TSIG and NZ Transport and Environment Knowledge Hub-Emissions Group (TEKH-EG) Workshop was held in August:
  - Three presentations from this workshop were given:
    - Health Impacts of PM10 from Unsealed Roads in Northland - Jayne Metcalfe, Emission Impossible
    - Update on research to determine the impact of gross emitting vehicles - Jeff Bluett, PDP
    - Environment and health dashboard - Stephen Evans, Ministry of Transport
- In August, Professor Alistair Woodward (University of Auckland) and Dr Michael Hale (Auckland Regional Public Health Service) presented on **'What if transport was an urgent public health matter?'.** Their presentation can be viewed here.
- Also in August, the Drones benefit study on our website was presented by Lawrence McIlrath, M.E. Consulting (August 28). Slides can be found here.
- On August 28th, a series of data-related presentations were given:
  - Data Sharing to Enable Business at the Speed of Customer– Myles Lind, Senior Project Manager – Complex, New Zealand Transport Agency and David Darwin, Outcome Delivery Manager, State Highways, NZ Transport Agency,
  - Structure Asset Data – The Value it Generates - Tim Cross, Business Systems Analyst, Transport Advisory Services, WSP Opus
- On September 10th an event; **'Urban transport and health – maximising opportunities, minimising risk'** was held with two presentations given:

- Quantifying the potential of active transport for health - Dr Anja Mizdrak, University of Otago (Wellington)
- Transport Infrastructure and Air Pollution Exposure for Urban Commuters - Associate Professor Kim Dirks, University of Auckland

General websites

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Transport Knowledge Hub webpage: http://www.transport.govt.nz/research/transport-knowledge-hub/

Presentations from previous Hub events: http://www.transport.govt.nz/research/transport-knowledge-hub/transport-knowledge-presentations/

The Transport Domain Plan: http://www.transport.govt.nz/research/transport-domain-plan/

The Transport Research Strategy 2016-2020: http://www.transport.govt.nz/research/transport-research-strategy/

The Transport Research Register:
http://www.transport.govt.nz/assets/Uploads/Research/Documents/Transport-Research-Register.xls

Stocktake of Information and Data Sources:
http://www.transport.govt.nz/assets/Uploads/Research/Documents/Domain-Plan-Stocktake-March-2017.pdf

Vacancies

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Ministry of Transport: Please watch the Ministry's careers page for information about current vacancies: https://mot.careercentre.net.nz/Job

NZ Transport Agency: Please watch the NZTA's careers page for information about current vacancies: https://www.nzta.govt.nz/careers/

Events calendar

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To view a full calendar of upcoming events please go here

Webpage: http://www.transport.govt.nz/research/transport-knowledge-hub/
Email: knowledgehub@transport.govt.nz

Recent and upcoming events

Conferences

Event	Registration & details	Key Dates
IEEE Intelligent Transportation Systems Conference - ITSC 2019 *Cordis Hotel, Auckland* Monday 27 to Wednesday 30 October 2019	Registration: Open Webpage: https://www.itsc2019.org/	
Trafinz Conference 2019 *Claudelands, Hamilton* 10 to 13 November 2019	Registration: Open Webpage: https://www.trafinzconference.co.nz/	Abstracts closed on Monday 10 June
Green Light Hackathon *NZ Transport Agency Innovation Lab, 105 Cook Street, Auckland* Friday 15 to Sunday 17 November 2019	Registration: Open Webpage: https://nzta.govt.nz/hackathon/green-light/	
Transport Knowledge Conference 2019 *James Cook Hotel, Wellington* 5 December 2019	Registration: Open (until 22 November 2019) Webpage: http://www.transportknowledgeconference.nz/	
Transport Research Colloquium **Ministry of Transport, 3 Queens Wharf, Wellington** **6 December 2019**	Registration: Open (until 22 November 2019)	Invitation only event, please email knowledgehub@transport.govt.nz for more details
Government Economics Network (GEN) Conference 2019 *Te Papa, Wellington* 6 December 2019	Registration: From September Webpage: https://gen.org.nz/gen-2019-annual-conference/	Early bird registrations close 1 November

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Transport Knowledge Hub