



TRANSPORT INTELLIGENCE DIGEST

Issue 7

<p>Date of issue: March 2018</p> <p>Contact:</p> <p>Stephen Evans E s.evans@transport.govt.nz,</p>	<p><u>Contents</u></p> <p>Transport impacts</p> <p>System planning and management</p> <p>User behaviours and needs</p> <p>Future funding and charging</p> <p>Around the world: research and statistical releases</p> <p>Hub Knowledge</p>
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Introduction

Welcome to the 7th issue of the Transport Intelligence Digest.

There is a wide assortment of contributions in this edition that is sure to interest readers. Some of them link to recently raised issues in the media – cycle helmet wearing, road speed limit setting, and transport & health issues.

We welcome contributions from anyone who reads this Digest. We ask you to indicate which of the four knowledge themes 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

Disclaimer:

This Digest references a wide range of third party articles. Reference to these articles does not constitute endorsement by the Ministry.

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Autonomous-vehicle technology is advancing ever faster

International Transport Forum (ITF) (February 2018)

Contributed by: Ralph Samuelson, Ministry of Transport

Keywords: Vehicle technologies & standards

Automated vehicles (AVs) are on the cusp of working on public roads, at least in orderly environments with good weather. This article talks about the technological advancements being made in these vehicles and the issues for the future.

The public seems concerned mainly about two potential risks associated with AVs. The first is how they should respond to ethical dilemmas: say, choosing between hitting a group of children in the road or swerving and hitting another vehicle. Many people working in the field think that such questions do not reflect the real world, and point out that the best course of action is usually to slam on the brakes. AVs have superhuman, 360-degree perception and much faster reaction times. The second worry is about cyber-attacks. AVs, which are essentially computers on wheels, could be remotely hijacked or sabotaged. Engineers working on AVs insist that they take cyber-security very seriously, and say that the multiple redundant sensor and control systems they build in to make a vehicle mechanically safe will also provide some protection. If any part of the vehicle starts to behave strangely, for whatever reason, it will stop.

<https://www.economist.com/news/special-report/21737420-making-vehicles-drive-themselves-hard-getting-easier-autonomous-vehicle-technology>

The Bristol Twenty Miles Per Hour Limit Evaluation (BRITE) Study

University of West England & Bristol City Council, England (March 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Safety; Active modes; Surveys

This study aimed to evaluate the impact of the roll-out of 20mph speed limits across the city of Bristol. The research took a holistic, public health approach to evaluation, using a variety of data sources to examine changes in vehicle speeds, road traffic casualties, levels of walking and cycling, public perceptions and attitudes, and reported levels of health and wellbeing across the city.

<http://eprints.uwe.ac.uk/34851/>

Current issues in the impacts of transport on health

British Medical Bulletin (March 2018)

Contributed by: Simon Kingham, Ministry of Transport

Keywords: Active modes; Environment; Health; Safety;

This paper is a review of recent research on transport and health. It found that areas:

- where the research agrees include: the benefits of travel for access and physical activity, and the harm associated with air and noise pollution, injuries and fatalities from falls or collisions, sedentary behaviour with motorized transport, community severance (barrier effect of busy roads and transport infrastructure), global climate change, impacts on inequalities and transport's role in facilitating spread of communicable diseases.
- of less certainty include: biofuels; cycle safety; driving by older people.
- of future research will include: effects of slower speed limits and the impacts of autonomous vehicles on health and inequalities.

If you just want a quick read to see what the research is saying on health impacts of transport in one article, it's worth a quick read.

<https://doi.org/10.1093/bmb/ldx048>

Cycling and Walking Investment Strategy (CWIS) safety review

Department for Transport, United Kingdom (February 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Active modes; Evaluation; International; Safety, Strategy

Consultation on a safety review of the Cycling and Walking Investment Strategy (CWIS) has commenced until June 2018. Britain has some of the safest roads in the world. Casualties have fallen substantially over the last 10 years, with a 44% reduction in fatalities on Britain's roads since 2006. The Government wants walking and cycling to be a normal part of everyday life, and the natural choices for shorter journeys - such as going to school, college or work, travelling to the station, and for simple enjoyment. As part of our aim to build a society that works for all, we want more people to have access to safe, attractive routes for cycling and walking by 2040. The aim of this Call for Evidence is to support an open and comprehensive review of how we can address the issues that cyclists and pedestrians face, or perceive, when using our road infrastructure, to support the Government's aim of increasing cycling and walking.

<https://www.gov.uk/government/consultations/cycling-and-walking-investment-strategy-cwis-safety-review>

Cycle Safety Review

Department for Transport, United Kingdom (February 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Active modes; Evaluation; International; Safety

A review of pedal cycle safety was undertaken earlier this year by Birketts LLP, a consultancy firm in London. The review was undertaken in 2 phases: analyse the case for a new offence equivalent to causing death or serious injury when cycling and; consult on road safety issues relating to cycling considering the rules of the road, public awareness, key safety risks and the guidance and signage for all road users. It also considered whether the current applicable laws are adequate and whether there is need for legislative change. Part of the processes included a comparison with 11 countries, including New Zealand, an examination of recent legal cases brought before the courts, the effectiveness of current cycle-related legislation and sentencing. Among some conclusions provide in the report, it found that there is a persuasive case for legislative change to tackle the issue of dangerous and careless cycling that causes serious injury or death; in order to bring cycling into line with driving offences.

<https://www.gov.uk/government/publications/cycle-safety-review>

Do speed cameras save lives?

London School of Economics (February 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Evaluation; Safety

This study by researchers from the London School of Economics analysed collision outcomes before and after speed cameras were installed at 2,500 sites in England, Scotland and Wales. The analysis found that from 1992 to 2016, the number of collisions fell by between 17% and 39% – and fatalities by between 58% and 68% – within 500 metres of speed cameras. The lead researcher says that adding another 1,000 cameras would produce annual savings of up to 190 deaths, 1,130 collisions and 330 serious injuries. However, the report points out that the benefits of speed cameras are highly localised and dissipate over distance – with a slight increase in collisions observed at distances beyond 1.5kms from the camera sites. The report says this could be due to a 'kangaroo effect' as drivers brake suddenly before the camera to avoid fines and speed up beyond camera surveillance.

<http://eprints.lse.ac.uk/86567/1/sercdp0221.pdf>

Environmental quality, climate change and transport innovation

Campaign for Better Transport (October 2017)

Contributed by: Sina Mashinchi, Ministry of Transport

Keywords: Safety; Data & statistics

What this report does is to explore the nature of the change which will occur, the possible futures that may create, and how to influence the impact on travel behaviour. Of course travel is derived from social and economic activity but it also has a strong influence on that activity, most obviously in terms of land use planning, but also much more widely, for example in terms of industrial production and international commerce. It is an area where change can happen, and be made to happen, relatively quickly. This makes it an attractive option for addressing issues such as pollution and carbon emissions.

<http://www.bettertransport.org.uk/sites/default/files/pdfs/Tracks-Carbon-Reduction-Report-2017.pdf>

Evaluating Environmental Impact of Traffic Congestion in Real Time Based on Sparse Mobile Crowd-sourced Data

International Transport Forum (ITF) (February 2018)

Contributed by: Sandy Fong, Ministry of Transport

Keywords: Data & statistics; Environment; Modelling and forecasting

This research establishes a framework for traffic-related air pollution evaluation using sparse mobile data and traffic volume data. The proposed framework integrates traffic state model, emission model and dispersion model. The proposed methods have good performance in estimating monthly peak hour fine particulate matter (PM 2.5) concentration. The proposed system will help transportation operators and public health officials alleviate the risk of air pollution, and can serve as a platform for the development of other potential applications.

https://ncst.ucdavis.edu/wp-content/uploads/2016/10/NCST-TO-032.1-Hao_Real-Time-Env-Impacts-of-Congestion_Final-Report_FEB2018.pdf

Ex-post Economic Evaluation of National Road Investment Projects

Bureau of Infrastructure, Transport and Regional Economics (BITRE) (January 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Data & statistics; Evaluation; Infrastructure; Safety

BITRE undertook two rounds of ex-post evaluations of national road investment projects: one in 2005–2007 and the other in 2014–2016. Available evidence suggests that there is much room for improvement in the quality of Australian road CBAs if they are to be used as an effective tool for ranking options and prioritising projects. The net present value (NPV) was over-estimated by significant margins in some of the selected case study projects. Over-estimation in NPV was largely caused by over-estimation of road user benefits (up to 500 per cent), with the errors mostly coming from travel time cost saving estimates. Inaccurate traffic forecasts and methodology errors were mostly responsible for the over-estimated road user benefits. There was no evidence of systematic cost overruns for the projects selected for ex-post review. Lessons learned include recommendations for improvements in CBA documentation and review, traffic forecasts, and estimation of road user benefits and residual values.

https://bitre.gov.au/publications/2018/rr_145.aspx

Guidebook for Measuring Multimodal Network Connectivity

US Federal Highway Administration (February 2018)

Contributed by: Sandy Fong, Ministry of Transport

Keywords: Active Modes; Data & statistics; Evaluation

A guide for transportation planners and analysts on analysis methods and measures to support transportation planning and programming. It describes a five-step analysis process and numerous methods and measures to support planning decisions. It includes references and illustrations of current practices, including walking and cycling levels of service and measures.

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_connectivity/fhwah_ep18032.pdf

Health consequences of transport patterns in New Zealand's largest cities

New Zealand Medical Journal, Vol 131 No 1472: 23 March 2018 (open access after September 2018)
Contributed by: Bonita Gestro, Ministry of Transport

Keywords: Safety; Vehicle technologies & standards;

This study aimed to look at sustainable transport systems in New Zealand's six largest cities and quantify the health consequences of the current transport situation. The authors estimated the health impacts and carbon emission changes if Auckland, Tauranga, Hamilton, Christchurch and Dunedin had the same walking, cycling and public transport levels as Wellington currently does. All cities would have health benefits, for example in Auckland's case there would be 57 fewer premature deaths each year, in Tauranga 50 fewer. The health gain would be as a result of increased physical activity, reduced air pollution and reduced overall injury (despite slightly increased cyclist and pedestrian injury) due to fewer cars on the roads. Carbon emissions from light vehicles would be between 7 to 32% lower (depending on the city) if the other big cities in New Zealand had the same transport patterns as Wellington currently does. Local (and central) Government needs better transport policies that take into account health and carbon impacts.

<https://www.nzma.org.nz/journal/read-the-journal/all-issues/2010-2019/2018/vol-131-no-1472-23-march-2018/7529>

The Ongoing Transformation of the Global Transportation System

US Department of Transportation, Volpe Center (February 2018)
Contributed by: Sandy Fong, Ministry of Transport

Keywords: Safety; Vehicle technologies & standards;

This report summarizes ideas and insights from seven leading transportation thinkers who joined the Volpe Center's 2017 speaker series.

Automation, artificial intelligence, robotics, sensing technology, and computing will transform the future of travel and commerce. Technological advances continue to change the national and global transportation landscape at an unprecedented pace.

As the private sector drives innovation across all modes, there is potential for dramatic impacts on the safety and efficiency of the future transportation system and the composition of the nation's transportation workforce.

<https://www.volpe.dot.gov/events/transforming-transportation>

Progress in reducing drink driving in Europe (report)

European Transport Safety Council (February 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Safety

This report looks at how to reduce the 5,000 deaths caused annually by drink-driving in the European Union and concludes that alcohol interlocks should be fitted in all new vehicles used by professional drivers – and retrofitted to cars used by repeat drink-driving offenders. An alcohol interlock is an in-car breath testing device that prevents a vehicle from being started if the driver is over the drink drive limit. Alongside the call for mandatory alcohol interlocks in vans, lorries and buses, the report asks EU member states to increase enforcement and introduce rehabilitation programmes for drink-drive offenders. The report points to programmes across Europe, including in France where as of January 2018 all repeat offenders are required to install an alcohol interlock. In Austria, a national rehabilitation programme for drink-drivers was introduced in September 2017 which offers offenders the option to install an interlock in order to have their licence back before the full term of a ban has expired. The ETSC says programmes such as these have ‘proven to be one of the most effective measures for tackling drink-driving’ and should be extended across the EU.

http://etsc.eu/wp-content/uploads/report_reducing_drink_driving_final.pdf

Recent Stats NZ releases relevant to the impacts of transport

Statistics NZ (March 2018)

Contributed by: Tracey Wilkinson, Statistics NZ

Keywords: Economics; Environment; Tourism

Doing research on transport issues in NZ, particularly in the fields of economics and the environment? Stats NZ has a number of data sources that could help you.

Did you know that transport taxes increased from \$637 million to \$2.3 billion from 1996-2016? Or that transport taxes accounted for 47% of environmental taxes in 2016? The just-released (February 2018) Environmental Economics Accounts show the amount of greenhouse gas emissions, greenhouse gas intensity, and environmental taxes paid by the transport industry, as well as environmental transport taxes paid across the economy. The Tourism Satellite Account (latest release December 2017) has information on various transport mode expenditure by domestic (household, business, government) and international tourists from an industry and product dimension.

For more background material, the Input-Output tables (latest release April 2016 with data for year ended March 2013) show how the transport industries are connected into the wider NZ economy.

[Environmental Economics Accounts](#)

[Tourism Satellite Account](#)

[Input-Output tables](#)

Re-working Appleyard in a low density environment: An exploration of the impacts of motorised traffic volume on street livability in Christchurch, New Zealand

World Transport Policy and Practice (February 2018)

Contributed by: Simon Kingham, Ministry of Transport

Keywords: Human behaviour; Surveys

This paper re-produced some work done in the UK in the late 1970s that looked at community connections and interactions in relation to traffic volume on streets where people live. Results indicate that residents on streets with less traffic have more neighbourhood connections and community interactions in addition to perceiving their street to be more liveable. This affirms relationships found in previous research, indicating that increasing motorised traffic volumes can have significant impacts on street liveability and community wellbeing.

<http://www.eco-logica.co.uk/pdf/wtpp24.1.pdf>

Speed and Crash Risk

International Transport Forum (March 2018)

Contributed by: Tim Herbert, Ministry of Transport

Keywords: Safety; Data & statistics

Inappropriate speed is responsible for 20 to 30% of all fatal road crashes. After reviewing the current knowledge on the relationship between speed and crash risk, this report analyses eleven cases from ten countries that have recently changed speed limits or introduced a large-scale automatic speed control. The analysis confirms the very strong relationship between speed and crash risk and that higher speed is associated with increased occurrence and severity of road crashes.

Keywords:: Safety; Evaluation

<https://www.itf-oecd.org/speed-crash-risk>

Vehicles as Workplace

Austrroads, Australia (March 2018)

Contributed by: Sandy Fong, Ministry of Transport

Keywords: Health; Safety

Work health and safety legislation in Australia and New Zealand defines vehicles as a workplace. Vehicle use in road traffic is by far the most significant contributor to work-related traumatic injury.

This report discusses the context within which work health and safety and road traffic safety currently intersect, and the process followed during the preparation of a work health and safety guide. The report includes an engagement strategy to support ongoing work in the area and is itself supported by a communications plan and evaluation plan.

The draft work health and safety guide provided in this report closes a gap in the provision of work health and safety guidance on managing vehicle use in road traffic. It provides pointers on how to address road traffic as a hazard, and on the hazards that are likely to be encountered in the use of vehicles in road traffic.

<https://www.onlinepublications.austrroads.com.au/items/AP-R561-18>

Access available after free registration

Walkability, transit, and body mass index: A panel approach.

Journal of Transport and Health (February 2018)

Contributed by: Simon Kingham, Ministry of Transport

Keywords: Health

This research used an approach called a panel study where the researchers track a group of people over time, in this case 4870 people from across the US from 1999-2013. One of the strengths of this approach is that you can track changes in individual behaviour and/or wellbeing over time. In this study changes various health outcomes including body mass index (a ratio of weight to height) were compared to changes in public transport availability and use, and residential walkability and density at various times in the study; this often as people move house. There are some slightly strange results (for example public transport accessibility leads to lower BMI for those who do not use it, but no effect on those who do!). Overall the study finds that changes in transport environment and travel behavior may be associated with reductions in BMI, specifically moving to places with better public transport or more walkable communities leads to weight loss. The most significant finding was that people who give up using a car see a significant reduction in weight.

Overall the main message seems to be that more investing in public transport and walking is likely to be good for health – probably no surprise there.

<https://doi.org/10.1016/j.jth.2017.12.012>



Assessment Methods from Around the World Potentially Useful for Public Transport Projects

University of Cape Town, South Africa and Tuup Ltd, South Africa (March 2018)

Contributed by: Sandy Fong, Ministry of Transport

Keywords: Economics; Evaluation; Funding & expenditure

This paper provides an overview of assessment methods used to evaluate public transport investments. Positive and negative aspects of various assessment tools are identified and discussed. Some developing world examples appear to be more elaborate and appropriate, than developed world examples. Although the authors conclude that all methods/tools have challenges, they are of the opinion that a broad and inclusive assessment of public transport investment projects is a must and that the narrowly analysed and ad-hoc investments witnessed around the world should be avoided.

<http://scholarcommons.usf.edu/jpt/vol20/iss2/6/>

Electric Vehicle Integration green paper

Vector Ltd (March 2018)

Contributed by: Sandy Fong, Ministry of Transport

Keywords: Engineering; Evaluation; Safety, Strategy

Vector Ltd has published a green paper to:

- examine the potential long-term network impact of widespread EV charging;
- identify options that both Government and industry could consider to minimise the significant infrastructure investment implications; and
- ensure all stakeholder can make informed decisions to enable customer choice in the uptake of EVs in New Zealand in the short and longer term.

<https://www.vector.co.nz/articles/ev-network-integration>

Integrating Shared Mobility into Multimodal Transportation Planning: Improving Regional Performance to Meet Public Goals

US Department of Transportation (February 2018)
Contributed by: Sandy Fong, Ministry of Transport

Keywords: Active modes; Data & statistics; Travel & mobility

This white paper provides a framework and examples to assist transportation agencies in anticipating and planning for shared mobility as part of a multimodal transportation system. It synthesizes noteworthy practices in 13 US metropolitan areas collected from online research and conversations with planning practitioners, identifies challenges and opportunities, and provides recommendations for future research needed to improve planning practices related to shared mobility.

https://www.planning.dot.gov/documents/SharedMobility_Whitepaper_02-2018.pdf

New research into health effects of road dust

Journal of the Air & Waste Management Association (May 2017)
Contributed by: Suz Halligan, Ministry of Health

Keywords: Freight; Revenue & finance

Researchers in Canada found a significant association between mortality and the coarse fraction of particulate matter (PM) attributed to road dust (Hong et al., 2017). The epidemiological study statistically analysed daily levels of PM in seven communities against daily mortality over the period 2003-2015. It found that an 8.6 µg/m³ increase in coarse fraction particulate matter (PM_{10-2.5}) was associated with a 3.1% [95% confidence interval 0.8, 5.4] increase in non-accidental mortality during the road dust season – when adjusted for PM_{2.5} (i.e. possible confounding effects of PM_{2.5} removed). The results suggest different impacts of different PM fractions by season, which in turn suggests different sources of particulate matter have different impacts. Few other studies have considered only the coarse fraction of PM attributed to a specific source. MoH drafted a technical memo on this research and provided it to the National Road Dust Working Group.

http://rcaforum.org.nz/sites/public_files/images/171031-Road_Dust_and_Mortality-memo.pdf

Potential pollution exposure reductions from small-distance bicycle lane separations

World Transport Policy and Practice (February 2018)

Contributed by: Simon Kingham, Ministry of Transport

Keywords: Active modes; Environment

This work, funded by NZTA, simultaneously measured pollution exposure (for ultrafine particles and carbon monoxide) of three people travelling by bicycle on parallel routes at varying distances from the traffic (on the road, 7 metres from the road and 19 metres from the road) in Christchurch. Pollution exposure levels were approximately 20–30% lower 7 metres from the road and 40–50% lower 17 metres away, than those on the road. Earlier research as part of the same study had already found that people travelling by bicycle are exposed to lower pollution levels than people travelling by car on the same road at the same time. These results suggest potentially significant exposure benefits of segregating cycle-ways, which can help inform city planning. Overall the main message is that separating cycle lanes on key routes can help reduce cyclists' cumulative intake of pollutants, especially on heavily trafficked roads.

<https://doi.org/10.1016/j.jth.2016.10.002>

Reducing child deaths on European roads

European Transport Safety Council (March 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Active modes; Evaluation; International; Safety

Every day in the European Union, more than 30 children are seriously injured and two are killed in road traffic collisions. More than 8,100 have died over the last decade. This report argues that improving road safety for children can be achieved through a combined set of measures to address the behaviour of all road users: upgrading the road environment, designing vehicles that better protect both their occupants and those outside the vehicle, enforcing traffic laws, promoting correct use of appropriate child restraint systems, improving road traffic education and awareness raising. It also suggests that a policy focus on child safety resulting in actual safety measures might also lead to a general improvement in road safety for all road users.

Recommendations for national and EU policymakers are made throughout, and a shorter list of priority measures is given at the end of the executive summary.

<https://etsc.eu/reducing-child-deaths-on-european-roads-pin-flash-34/>

System dynamics investigation of freight flows, economic development and network performance

Infometrics Consulting Ltd, Future Impact Ltd and Transport Futures Consulting Ltd (September 2017)

Contributed by: Tony Brennand, NZ Transport Agency

Keywords: Freight & trade; Infrastructure; Modelling and forecasting

The purpose of this research was to investigate if and how systems dynamic (SD) modelling could be used for understanding traffic flows at an inter-regional (state highway) level, in the context of improving understanding of the relationship between economic activity, the demand for freight, and the performance of the rail and road network. We used the Auckland – Hamilton – Tauranga (AHT) triangle as a pilot case study. The SD model can be used to ask 'what if' questions around future freight growth and infrastructure planning. Examples include road improvements along the Waikato Expressway and the Kaimai Range, greater use of larger (HPMV) trucks, changes in driver working hours and road–rail substitution.

<https://www.nzta.govt.nz/resources/research/reports/629/>

Towards Safe System Infrastructure: A Compendium of Current Knowledge

Austroads (March 2018)

Contributed by: Sandy Fong, Ministry of Transport

Keywords: Engineering; Evaluation; Safety, Strategy

This Austroads report provides a compendium of knowledge on Safe System treatments and identifies real world experience in the practical application of solutions that can mitigate crash severity.

The Safe System is internationally regarded as the best practice approach to road safety. Although Australia and New Zealand have been early adopters of the approach since 2004, there has generally been a lack of clarity amongst practitioners on how best to integrate the approach into their daily activities.

Assessment frameworks and tools are also now emerging that allow the alignment with Safe System be better quantified. A hierarchy of treatments is described that provide practitioners with a basic understanding of the types of practices that should now be applied on a trajectory towards a Safe System. Primary treatments are capable of virtually eliminating death and injury and certain supporting treatments can transform the network a step closer to reducing the overall harm being caused.

<https://www.onlinepublications.austroads.com.au/items/AP-R560-18>

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Alcohol-Related Road Casualties in Official Crash Statistics

International Transport Forum (ITF) (February 2018)

Contributed by: Sina Mashinchi, Ministry of Transport

Keywords: Safety; Data & statistics

This study examines how improving insights regarding the real number of alcohol-related road casualties worldwide can help to save lives. It is widely recognised that drink driving is an important risk increasing factor and contributes to many road deaths. With great certainty, the real number of alcohol-related road casualties is higher than reported in the official statistics. Better insights into reporting procedures is of the utmost relevance to arrive at comparable and reliable data. For this study, a total of 45 countries were surveyed with the help of an online questionnaire. The survey was facilitated through the members of the International Transport Forum's permanent working group on road safety, known as the International Traffic Safety Data and Analysis Group (IRTAD), the Ibero-American Road Safety Observatory (OISEVI) and the International Center for Alcohol Policies (International Alliance for Responsible Drinking (IARD), formerly ICAP), Washington. The questionnaire looked at drinking and driving legislation and at definitions of alcohol-related road fatalities and serious injuries. Based on the information provided, the methods of recording alcohol-related road casualties and the quality of the data were reviewed, with specific attention to the issue of underreporting.

<https://www.itf-oecd.org/sites/default/files/docs/alcohol-related-road-casualties-official-crash-statistics.pdf>

Bike Use Propensity Index

Institute for Sensible Transport, Australia (March 2018)

Contributed by: Tim Herbert, Ministry of Transport

Keywords: Active modes; Modelling and forecasting; Strategy

Using 2016 Census data, we built an Index comprising 7 variables to help Brisbane City Council predict future hotspots for cycling. The Bike Use Propensity Index has been designed to show the variation in the relative propensity to ride, at the highest possible level of spatial detail. The 2,708 individual geographic areas (SA1's) covering Brisbane City Council were mapped and the interactive map below can be used to see how different areas of Brisbane scored on the propensity for cycling. In general, a Bike Use Propensity Index can be used to assist governments prioritise their bicycle infrastructure network, by highlighting the areas that are more likely to attract usage. This can help maximise the benefit from new investment. This Bike Use Propensity Index was used to help inform Brisbane City Council's future planning of their bike network.

https://mailchi.mp/sensibletransport/sensible-transport-newsletter_march2018?e=30059590a6

Characteristics of the Close to Home Crash

University of Waikato, published in: Safety Science (June 2018)

Contributed by: Bridget Burdett, Traffic Design Group

Keywords: Travel & mobility; Safety; Human behaviour

Knowing that in New Zealand, injury crashes are over-represented compared with travel on roads close to home, this study was an analysis of crash causes to determine what kinds of errors contribute towards these crashes, and where they happen on the road network. We found that crashes close to home typically happen on urban roads are more likely to involve unintentional lapses of attention than intentional violations. Compared with urban road crashes further away, those close to home are more likely to happen at midblocks and priority intersections than at roundabouts or traffic signals. The results suggest that behavioural effects associated with driving in familiar, undemanding streets may have an impact on the close to home effect in road crashes.

<https://www.sciencedirect.com/science/article/pii/S0925753517317642>

Golden Foot Walking Awards 2018

Living Streets Aotearoa (March 2018)

Contributed by: Ellen Blake, Living Streets Aotearoa

Keywords: Active modes; Safety;

Nominations for the Golden Foot Walking Awards 2018 are now open. There are a wide range of initiatives that promote walking and support pedestrians so we will accept a wide range of nominations. Golden Foot Walking Award initiatives could be:

- Walking and Public Transport initiatives
- Facilities or place-making
- Events
- Research
- School projects
- Walking Advocate Champions
- Extraordinary walkers (eg walk fundraisers for a particular cause, long distance commuter walkers or walkers who overcome barriers)
- Projects or programmes
- Buildings and public spaces that show strong accessibility and safety (CPTED) principles

Associate Minister of Transport Julie Anne Genter will host the Award ceremony at Parliament in late June when we will hear about the finalists' great projects. Opus Consultancy are a valued 'Strider' sponsor. This is your opportunity to nominate great initiatives that have made a difference and deserve to be recognised. Use the attached form to make your nomination by 25 May 2018. See our website for examples from previous years.

<http://www.livingstreets.org.nz/node/4875>

How dangerous is cycling in New Zealand

Journal of Transport and Health (February 2018)

Contributed by: Tim Herbert, Ministry of Transport

Keywords: Active modes; Safety

This Auckland University research compared the risk of injury from cycling with other common activities including DIY, horse riding, quad bike riding, rugby and skiing. It found the risk of injury for people cycling was similar to doing DIY and much lower than horse riding, skiing and playing rugby. The authors argue that the way cycling is presented in the media implies it is far riskier than it actually is, and this should be rectified. Overall the main message is that cycling is a lot safer than people think, and maybe efforts should be made to change this misconception.

<https://doi.org/10.1016/j.jth.2017.02.008>

Inside the Commuting Driver's Wandering Mind

University of Waikato, published in: Transportation Research Part F: Traffic Psychology and Behaviour (November 2017)

Contributed by: Bridget Burdett, Traffic Design Group

Keywords: Travel & mobility; Human behaviour

This article summarises research into what drivers think about during the daily commute. Specifically we investigated drivers' tendency to experience mind wandering (thinking about something other than the driving task). We found that drivers frequently report mind wandering on the journey between home and work. The triggers for drivers' thoughts varied between what they could see or hear (sensory triggers) and internal concerns (such as what happened at work, or plans for their evening). Although over 60% of thought samples were categorised as mind wandering, drivers were generally engaged in the drive and conspicuous hazards caught their attention.

<https://www.sciencedirect.com/science/article/pii/S1369847817301146>

Motility as a policy objective

Tel Aviv University, Tel Aviv, Israel (March 2018)
Contributed by: Tim Herbert, Ministry of Transport

Keywords: Travel & mobility

Western literature abounds with powerful imagery of mobility and travel, extolling the richness of experience and learning that can only happen along the way. The more common policy and research contexts consider travel and mobility as an important means to an end, valued relative to the destination activity. This review builds on the research that considers on-the-way benefits in order to expand this perspective as a part of transport studies.

The question posed is if there is a place to evaluate mobility as a life-enhancing activity in its own right, directly contributing to the capacity for autonomy and freedom of choice that are central elements of personal well-being. Motility or mobility capital, defined as the capacity for mobility, offers a theoretical context for this purpose. The literature has adopted motility for its ability to broaden the understanding of mobility choices, by structuring a role for material, human, social and cultural capital as contributing to an individual's capacity for mobility. The context of individual capital implies that motility holds value not only as an input to mobility choices, but also through its exchange value with other forms of capital, thereby promoting broader contexts for human flourishing. Therefore, motility has value as a policy objective for its contribution to individual well-being and this article further argues that it is through mobility experiences that this type of capital can be advanced.

<https://doi.org/10.1080/01441647.2017.1355855>

Understanding Urban Travel Behaviour by Gender for Efficient and Equitable Transport Policies

International Transport Forum (ITF) (February 2018)
Contributed by: Sandy Fong, Ministry of Transport

Keywords: Active modes; International; Travel & mobility

Gender influences travel behaviour, but it is often the least understood. Understanding travel behaviour by gender will help better design transport policies that are efficient and equitable. Due to the gendered division of work in households, women often have multiple tasks and activities. As a result, women are more likely to have shorter commute distances, to chain trips, to have more non-work related trips, to travel at off-peak hours, and to choose more flexible modes. This study examines travel behaviour by gender in eight different cities, across three different continents, focusing on transport mode, trip purpose, travel distance and departure time including Auckland. The most common trends found in the cities are that women tend to travel shorter distances and prefer public transport and taxi services to cars more than men.

<https://www.itf-oecd.org/sites/default/files/docs/urban-travel-behaviour-gender.pdf>



Tasmanian Freight Equalisation Scheme - Review of the expanded component: Final Report

Bureau of Infrastructure, Transport and Regional Economics (BITRE) (March 2018)
Contributed by: Stephen Evans, Ministry of Transport

Keywords: Freight; Revenue & finance

In March 2015 the Australian Government responded to the Productivity Commission's (2014) Tasmanian Shipping and Freight Report by announcing the Tasmanian Freight Equalisation Scheme (TFES) would be expanded from 1 January 2016 to provide assistance to goods going to markets not previously covered by the Scheme.

The announcement included a new monitoring process, with the Bureau of Infrastructure, Transport and Regional Economics (BITRE) to conduct an initial review of the expanded component in 2017 (this review). Thereafter, monitoring of the expanded component will become part of the BITRE's general TFES monitoring reviews commencing in 2019.

In terms of the level and appropriateness of the flat rate for the expanded component, BITRE's finding in this 2017 review are that:

- There is little relevant information on overall rate trends for freight shipped due to a limited claims history and many destinations.
- The appropriate benchmark for freight costs is the shipping cost across Bass Strait as, to be eligible, freight must be transhipped via an Australian mainland port.

BITRE sought public comment on a draft of this review in December 2017. Two submissions were received (including one after the finalisation of the report).

<https://bitre.gov.au/publications/2018/tfes-monitoring-report-1.aspx>

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2017 Traffic Data for U.S Airlines and Foreign Airlines U.S. Flights

US Department of Transportation (March 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Aviation; Data & statistics; International; Tourism; Travel & mobility

The U.S. Department of Transportation's Bureau of Transportation Statistics (BTS) report that U.S. airlines and foreign airlines serving the United States carried an all-time high of 965.0 million system wide (domestic and international) scheduled service passengers in 2017, 3.4 percent more than the previous record high of 933.1 million reached in 2016. The system wide increase was the result of a 3.0 percent rise from 2016 in the number of passengers on domestic flights (741.6 million passengers in 2017) and 4.8 percent growth from 2016 in passengers on U.S. and foreign airlines' flights to and from the U.S. (223.4 million passengers in 2017) (Tables 1, 1A, 5)

<https://www.bts.gov/newsroom/2017-traffic-data-us-airlines-and-foreign-airlines-us-flights>

Bureau of Transportation Statistics (BTS) Transportation Economic Trends 2017

US Department of Transportation (March 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Data & statistics; Economics; Freight & trade; Funding & expenditure; Revenue & finance

The U.S. Department of Transportation's Bureau of Transportation Statistics (BTS) has released Transportation Economic Trends 2017, BTS's annual report on transportation and the economy. The 124-page report highlights important trends in transportation and the economy, and explains related economic concepts and data sources for a general audience. The 2017 edition features updated data and new content, including national data measuring the value of and investment in transportation assets, as well as new material on transportation productivity measures and how the transportation sector has contributed to economic growth in the United States. The report's eight chapters cover the Transportation Services Index, a monthly summary of freight and passenger movement; what transportation contributes to the American economy; the costs that households and businesses pay for transportation; transportation-related employment; transportation productivity; household spending on transportation goods and services; government transportation spending and revenue; and transportation assets and infrastructure.

<https://www.bts.gov/browse-statistical-products-and-data/transportation-economic-trends/transportation-economic-trend-12>

Europe

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Reported road casualties in Great Britain: quarterly provisional estimates year ending September 2017

Department for Transport, England (March 2018)
Contributed by: Stephen Evans, Ministry of Transport

Keywords: Data & statistics; Safety

There were 1,720 road deaths in the 12 months ending September 2017 - 4% fewer than in the corresponding period ending September 2016. A total of 27,010 people were killed or seriously injured, but the DfT says this should not be compared to previous years due to changes in the casualty reporting systems used by police forces. There were 174,510 casualties of all severities – a year-on-year fall of 5%. Motor traffic levels rose by 1% compared to the period ending September 2016 - meaning that the overall casualty rate per vehicle mile decreased by 5% over the same period. Between July and September 2017, 450 people were killed in reported road accidents - a decrease of 1% compared to the same period in 2016.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/681593/quarterly-estimates-july-to-september-2017.pdf

Australia

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Australian Infrastructure Statistics—Yearbook 2017

Bureau of Infrastructure, Transport and Regional Economics (BITRE) (March 2018)
Contributed by: Stephen Evans, Ministry of Transport

Keywords: Data & statistics; Infrastructure

The Australian infrastructure statistics yearbook provides a comprehensive evidence base to examine long-term and emerging trends as well as inform policy development and regulatory reform in the transport, energy, water and communications sectors. It is the only comprehensive source of time series statistics for Australia's major areas of economic infrastructure. The yearbook is accompanied by the Key Australian Infrastructure Statistics Booklet which is a summary of statistics from the yearbook.

https://bitre.gov.au/publications/2017/yearbook_2017.aspx

Fatal Heavy Vehicle Crashes Australia—Quarterly Bulletins

Bureau of Infrastructure, Transport and Regional Economics (BITRE) (March 2018)

Contributed by: Stephen Evans, Ministry of Transport

Keywords: Data & statistics; Safety

The Bureau of Infrastructure, Transport and Regional Economics (BITRE) releases a publication tracking counts of fatal crashes that involve heavy vehicles.

Over the three years to December 2017 for fatal crashes involving the 3 types of trucks:

- heavy trucks - decreased by an average of 1.9 per cent per year
- articulated trucks- decreased by an average of 2.7 per cent per year
- heavy rigid trucks— increased by an average of 1.6 per cent per year.

https://bitre.gov.au/publications/ongoing/fhvc/files/Bulletin_Dec_2017.pdf

Road Deaths Australia—December 2017

Bureau of Infrastructure, Transport and Regional Economics (BITRE) (December 2017)

Contributed by: Stephen Evans, Ministry of Transport

This bulletin covers road deaths data for the end of 2017 calendar year. During the 12 months ended December 2017, there were 1,225 road deaths. This is a 5.3 per cent decrease compared to the total for the 12-month period ended December 2016. Presently, the rate of annual deaths per 100,000 population stands at 5.0. Compared to the figure for the 12-month period ending December 2016, this is a 6.8 per cent decrease.

https://bitre.gov.au/publications/ongoing/rda/files/RDA_Jan_2018_Final.pdf

HubKnowledge

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Sharing transport data, information, research, evidence, knowledge and ideas

The start of the year has been a very busy one for the Transport Knowledge Hub.

- The year started in January with a presentation given by two holidaying academics Dr Ruth Jepson and Dr John McAteer (University of Edinburgh) that can be found [here](#).
- A new hub – Transport and Health – was launched in February with two presentations by Ralph Samuelson (Ministry of Transport) ([presentation](#)) and Kylie Mason (Massey University) ([presentation](#)) on this subject area.
- A presentation given by Stuart Donovan (Veitch Lister Consulting) in March that can be found [here](#).
- Another Topic Hub was also launched in March – Transport Data Hub – with an excellent turnout and where several presentations were made and included a panel discussion (presentations not yet available on the website).

A milestone in Hub membership was reached with 500 people now subscribed to the Hub.

Progress has also been made about this year's [Transport Knowledge Conference](#). It will be held on Thursday 15 November in Wellington. Please ensure you note this date in your calendar now! More information will be announced in due course.

General websites

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

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

Stocktake of Information and Data Sources:

<http://www.transport.govt.nz/assets/Uploads/Research/Documents/Domain-Plan-Stocktake-March-2017.pdf>

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>

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Webpage: <http://www.transport.govt.nz/research/transport-knowledge-hub/>

Email: knowledgehub@transport.govt.nz

Upcoming events

Hub events

Event, venue and dates	Topic & Speakers	Contact details
Transport & health in our cities Ground floor, Boulcott Suites North Tower, 1 O'Reilly Avenue, Wellington 2pm to 3.30pm, Thursday 19 April 2018	Caroline Shaw, University of Otago. Health and carbon consequences of transport patterns in New Zealand's largest cities Dr Simon Kingham, Chief Scientist, Ministry of Transport Transport, wellbeing and community: learning from recovering Christchurch	https://www.eventbrite.co.nz/e/transport-health-in-our-cities-tickets-44964190103

Conferences

Event	Registration costs & contact details	Key Dates	
Federation of Rail Organisations of New Zealand conference 2018 <i>West Plaza Hotel, Wellington</i> Monday 27 Friday 1 June to Monday 4 June 2018	Registration (to be advised) Email https://www.fronz.org.nz/contact-us Webpage: https://www.fronz.org.nz/conferences	Registrations open	April 2018
NZAE Conference 2018 <i>Sir Paul Reeves Building at AUT, Mayoral Drive, Auckland</i> Wednesday 27 June to Friday 29 June	Registration (ranges from \$155 to \$460 incl GST) Email: shelley@on-cue.co.nz Webpage: http://nzaeconference.co.nz/	Conference registration opens	Monday 26 March
		Abstracts Due	Monday 02 April
		Early-bird registration due	Monday 14 May
2WALKandCYCLE conference 2018 <i>Conference & Function Centre, Palmerston North</i> Monday 30 July to Wednesday 01 August	Registration (ranges from \$335 to \$1,145 incl GST) Email: lizzie@hardingconsultants.co.nz Webpage: http://www.2walkandcycle.org.nz/	Early bird registration due	Friday 15 June
		Standard registrations due	Friday 13 July

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