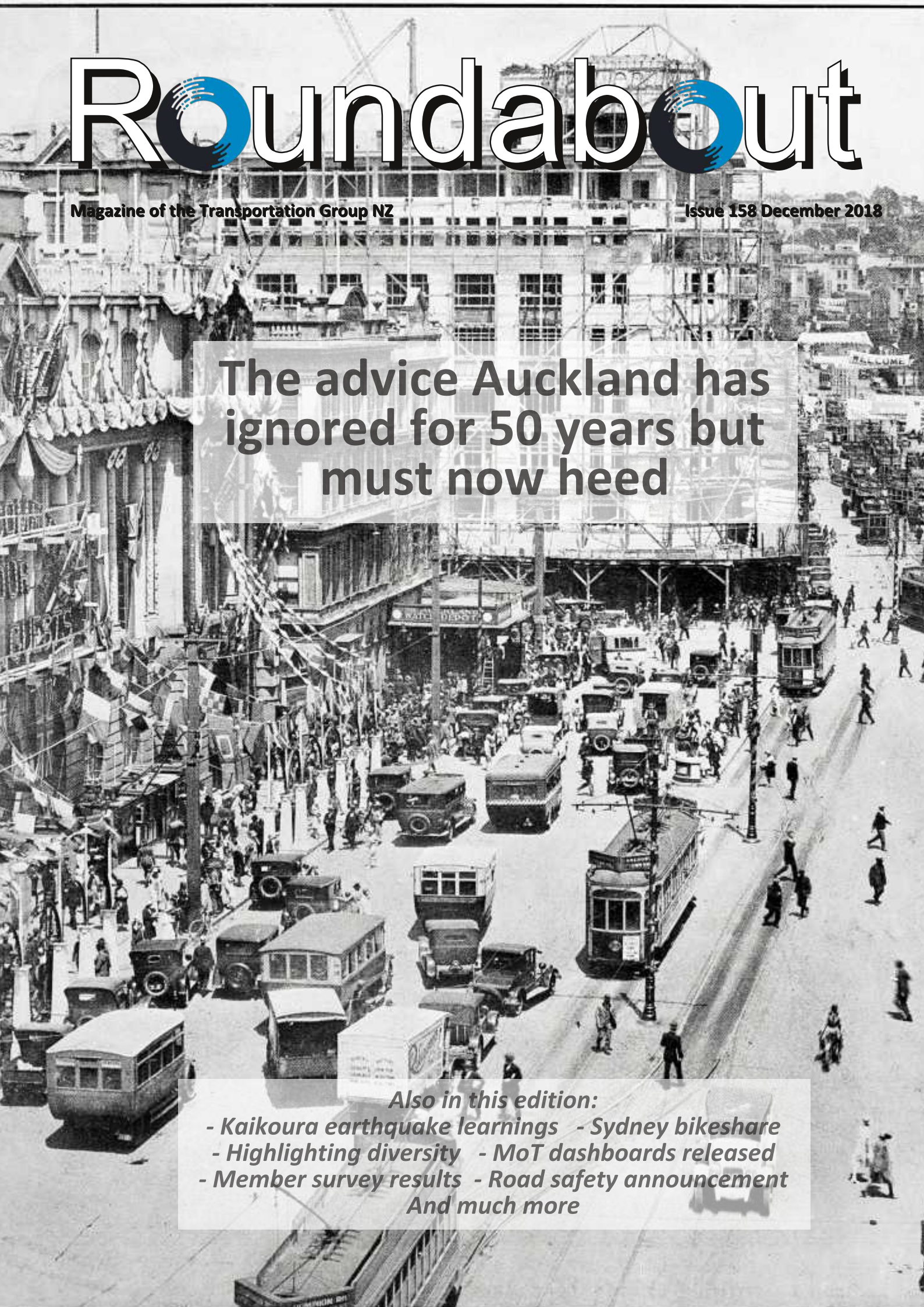
Roundabout

Magazine of the Transportation Group NZ

Issue 158 December 2018



The advice Auckland has ignored for 50 years but must now heed

Also in this edition:

- Kaikoura earthquake learnings - Sydney bikeshare
- Highlighting diversity - MoT dashboards released
- Member survey results - Road safety announcement
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Roundabout is the magazine of the Transportation Group NZ, published quarterly. It features topical articles and other relevant tidbits from the traffic engineering and transport planning world, as well as details on the latest happenings in the NZ transportation scene.

All contributions, including articles, letters to the editor, amusing traffic related images and anecdotes are welcome. Opinions expressed in Roundabout are not necessarily the opinion of the Transportation Group NZ or the editor, except the editorial of course. There is no charge for publishing vacancies for transportation professionals, as this is considered an industry-supporting initiative.

Correspondence welcome, to Daniel Newcombe:
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Roundabout is published around the 15th of March, June, September and December each year, and contributions are due by the 10th of each publication month.

A monthly Mini-Roundabout email update is circulated on the 15th of in-between months and contributions are due by the 12th of each month.

If somehow you have come to be reading Roundabout but aren't yet a member of the Transportation Group NZ, you are most welcome to join. Just fill in an application form, available from the Group website:
www.transportationgroup.nz

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Editorial

I don't know about you, but for me this year has been really full on.

There is so much work on, and there has been such change in the industry that I am amazed we are still standing.

The change in government late last year created a seismic shift in the approach, projects and attitude to transport planning in our industry. Out went oversized motorways, in came light rail and cycling projects. And yet, not much progress is to be seen – it takes a long time to turn a ship the size of our industry.

As someone working on light rail, I find it interesting how quickly people think we can get a multi-billion-dollar project underway despite it being only announced a year ago. The allocation of money in the coming decade and the establishment of a formation project team is great, but it takes a huge amount of effort to get something like light rail underway.

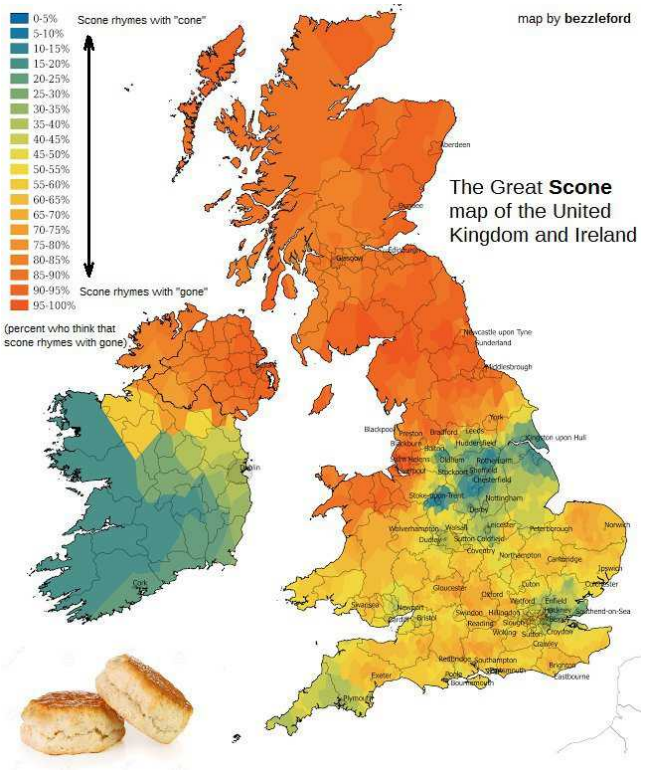
Despite the difficulties of the year, I am still fairly positive towards the industry and where it is headed.

Increasingly I think we will see confusion and disappointment in the public arena that more tangible progress isn't apparent. This is due in part because many of the transport professionals working on light rail have spent decades developing motorways, and it is a monumental change to focus on public transport – its much more about land use change and people movements rather than vehicle movements.

This isn't a criticism of them – that's been their job in the past and giving NZTA the mandate to do light rail doesn't instantly undo that history or change the skillset available. I really hope the coming year sees a settling in of the 'new way forward' and we can start to make actual progress as opposed to the churn involved with 'turning the ship'.

One thing I have more hope for is the increased focus on road safety. It is in a better position due to previous work already being underway in this area but – in hindsight – this effort was held back by institutional restrictions that valued travel time or 'efficiency' over people's lives. That may sound emotional but it's the truth.

Even today, when I discuss with colleagues lower speed limits to reduce the risk of death to pedestrians, I often hear 'but that will slow traffic down'. I am incredulous that we are still having to weigh up a decision between someone's life and someone else' commuting time.



There are many people in our industry who have fought for years for greater consideration of safety in our plans, and now they are getting a greater hearing. Long may that last. But ultimately the truth will be seen in whether the ill-named 'road toll' drops or not.

I have noticed (in relation to the general new approach for the transport profession) that it is taking a while for the internal assessment processes to catch up. There is a newfound focus on safety and public transport, but many of the internal assessment processes still focus on efficiency, value-for-money and vehicle-based outputs. It might take a while for everyone to 'get with the programme'.

Despite the difficulties of the year, I am still fairly positive towards the industry and where it is headed. I hope you have had a fruitful year and are heading into a productive 2019.

Enjoy a break over Christmas and New Year, and come back refreshed. There is still a lot to do.

Daniel Newcombe
Roundabout Editor
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TRANSPORTATION GROUP NEW ZEALAND

Chairman's Message

As 2019 draws to a close we are looking at a dawn of accessible transport in our major citie. Mobility as a service is here, and ACC are worried…

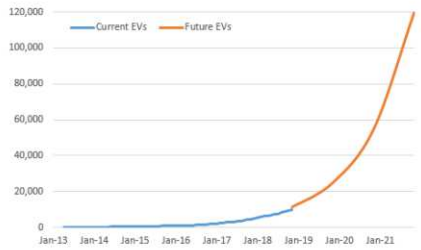
Of course I'm talking about the phenomena of Lime scooters. Bankrolled by Uber, they have been headline news since they appeared in October with 400 in Christchurch and 500 in Auckland, almost 300 claims have been lodged with ACC.

Whatever you think about them, I can't help feeling that it is fundamentally a good idea, user error aside. This is providing a real personal transport option in urban centres. It is also a soft introduction to a new transport ownership model, one which people are adopting with enthusiasm. Maybe we will be ready for AVs when they start appearing.

Whilst I am talking about Auckland, and alternative modes, I feel the need to set a stance with Mike Hoskings. As a broadcaster, journalist and public figure, he has a responsibility to provide a less prejudiced opinion than he is currently serving up in his "click bait" opinion pieces.

Some people will look up to him and value his opinion, and sometimes he may even be right. Last month's rant about the worthlessness of cycleways and cycling in general seems too far. Cyclists already receive plenty of bad press and are seen as targets for victimisation by a few misguided individuals. If this was the USA Mr Hoskings' words could be used as an indictment for hate crimes against active modes. Just saying.

Current MoT reporting suggests we have just over 11,000 EVs on our roads, still way below 1% of the fleet, although we are still on the exponential rise from the 1,100 vehicles registered back at the start of 2016. So how are we tracking on the 2016 target to have 64,000 registered EVs by 2021?



My extrapolation using the average annual growth of the past 5 years looks like we should be pretty close, depends on when in 2021 we are measuring the figure. I would say that is a success in the making.

I also read in the news about a pressure group on Waiheke Island wanting to be 100% electric, replacing the 7,000 vehicle fleet with EVs by 2030. The first thing that sprung to mind was "Wow! There are 7,000 vehicles registered on Waiheke - where do they all drive to?"

Another key consideration is the daily ferry traffic and how would emissions be controlled? Seems like there is probably some more thinking to do, but fundamentally it looks like a good aspiration. (Link)

Starting in April next year, London starts its Ultra-low emission zone - effectively charging $23 a day if you don't have a "Euro Standard" compliant vehicle (roughly newer than 2007) $184 for non-compliant diesel buses or trucks. (Link)

This is aimed at meeting stricter pollution targets by 2020 and should encourage regular users to choose a cleaner vehicle when theirs needs replacement. On top of the congestion charge of $21 (unless you have an exemption – one of which is emissions based and basically means EVs and PHEVs) this is likely to add more reason to make the switch to public transport or alternative fuels.

Anyone feel like suggesting this in Auckland or Wellington, it's going to happen if we want to get anywhere close to our emissions target.

Moving on to a brief and wholly biased assessment of traffic in Hawaii (OK this is just an excuse to skite about my bucket list holiday, but there were some interesting things worth sharing):

Firstly, whilst it is a State in the US, it feels like its own country, and it is so familiar. The landscape, road design, signage, architecture, place names, I could go on but you get the picture. It feels like home, if you weren't driving on the right you would believe you were in NZ. Apart from the side of the road and ridiculously oversized utes, some of the stand out points were:

• Pedestrian crossing behaviour: it's a legal requirement to stop for people on crossings, and everyone abides by this rule, even if they ignore other things. There are random crossing points marked across the roads, even in relatively remote areas. And drivers stop for you to cross. It would be interesting to compare this with the (lack of) courtesy crossings we see around NZ, where pedestrians remain on the bottom rung of the transport hierarchy…

• Attitude to speed: This is an interesting one. The majority of drivers appeared to stick to the posted speed limits. On freeways, virtually everyone drove at about 10% above the 60mph posted limit, seems familiar doesn't it?

However, on two lane roads the imperative was not there. People drove at or below the limit and when someone was driving slightly slower, they simply adapted and gave them space. No tailgating, flashing lights or anxiety, probably because the alignment wasn't appropriate for overtaking and you would only end up behind the next slow vehicle.

Possibly because the distances were modest so it didn't really matter - something we could learn from perhaps. In peri-urban areas and around intersections the speed limit appeared to randomly change to 45mph and 35mph, which seemed to be closely adhered to. One thing that caused me some difficulty was

trying to figure out what the open road speed limit was on a State Highway when you join from a side road. It was often a couple of kilometres until a repeater sign, so guessing the speed based on other traffic was the norm.

• Where are the cops? We literally didn't see any evidence of enforcement outside of urban areas and yet the vast majority of drivers appeared to behave themselves. In towns there was a strict obedience of speed, signal compliance, drink driving and cell phone use.

• Seatbelt use. This was reinforced with road signs everywhere. From what I could tell there was almost 100% compliance.

• Maintenance was also very familiar with identical practices and traffic management. Oddly the roads, even some of the remote rural ones, seemed to be in very good condition despite the recent hurricane and slips.

Public transport is alive and well in Honolulu, with a huge investment in mass transit underway. Bus services are cheap and regular and go all over Oahu. But it's desperately slow, with circuitous routes and

'pay as you enter' ticketing, and dwell times range into the minutes. The phone app is really good and provides a whole of journey planner as well as tracking buses in real time.

Waikiki is a tourist trap which appears to exist for the sole purpose of extracting the Yen from the Japanese tourist. They even have their own Japanese language bus service. It's very crowded on narrow footways either side of massive four-lane roads. Mid-block crossing is virtually impossible and signal times frustratingly slow (sound familiar aye Auckland?)

So I'm thinking, Hawaii is surprisingly similar to home - almost identical population distribution (not density), similar cultural diversity, a large number of two lane, two way rural highways, almost identical crash rate, but about 4 times the annual tourist numbers. We have a lot in common apart from population size and the side of the road they drive on.

I'm wondering, why we follow Nordic countries in our road safety strategy, they are culturally the polar opposite of us, with a significantly different social ideal and climate. Yes, Sweden has the same population density, but is that just maths?

I fully support our efforts to reduce harm on our roads, but is our strategy right for us? Evidence suggests it may not be, considering how much we spend and the increase in DSIs.

I fully recognise that people make mistakes and we should allow for that in our interventions but are people helping themselves? I'm going to court (more) controversy and suggest that distraction (i.e. mobile device use) is the one of the biggest risks we face.

Last but not least, on a recent trip to New Plymouth to pick up a new bike, I came across these fold-down cycle stands outside the Len Lye centre (if it's still called that), genius. Unobstructed footway when not in use and robust cycle stand when erected.

Ok, that's me for this year. Have a great (and safe) Christmas and we will see you all in the New Year. As always please also support your local branch. If you want to know more, complain, or volunteer.

Alan Gregory
National Committee Chair

Keep up to date with IPENZ Transportation Group happenings:
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www.twitter.com/ipenztg
www.facebook.com/ipenztg

TRANSPORTATION GROUP NEW ZEALAND

New trial rideshare service in Devonport

A New Zealand-first rideshare scheme called 'AT Local' has launched in Devonport, Auckland.

Three electric vans and three electric cars are travelling around the Devonport peninsula, picking up passengers and taking them to and from the Devonport, Bayswater or Stanley Bay ferry terminals.

Run by Auckland Transport, AT Local aims to make the first and last leg of a public transport journey easier, giving the people of Devonport even more incentive to use the ferry services.

This is the first on-demand rideshare service in New Zealand using only electric vehicles, and among the first in the world.

Passengers can order the vehicles on the specially developed AT Local app to pick them up from a nearby corner. Passengers can either schedule a pick up or choose to be picked up immediately.

The vehicles operate within a 3km radius of the Devonport ferry terminal on the lower Devonport peninsula and it costs $2.50 per ride.

AT Local will run for a year as a trial to test whether it's a viable way to get people to and from the ferry and other local destinations, free up parking and reduce the number of cars on the road.

AT Local - electric rideshare vehicles

During the trial, AT will evaluate the successes, make changes where necessary and then look at whether it can be implemented in other parts of Auckland.

The trial is being run in partnership with Via, whose co-founder and CEO Daniel Ramot says this trial is an exciting development that will increase public transport use and decrease congestion through the use of smartphone technology and shared electric vehicles.

Paving the way to sustainability

Recently Auckland Transport (AT) supported the work of Fuji Xerox NZ, Downer NZ and Close the Loop to repave a section of Carrington Road using TonerPave, a low carbon asphalt made from waste printer toner.

AT are supporting Project Alchemy which looks to carry out a feasibility study on using waste toner in New Zealand roads to help New Zealand meet its carbon reduction targets and drive circular economy thinking.

With funding from the Ministry for Environment's Waste Minimisation Fund, the project team were able to lay the first road in New Zealand using TonerPave.

"AT's involvement with this project has been a great opportunity to demonstrate our commitment to environmental sustainability," says AT Asset Manager Neil McLoughlin. "I hope that we can partner more with the private sector to explore further opportunities to lower the environmental footprint of road construction."

Putting your waste toner to good use

New Zealand has an ongoing challenge with waste generation and losing valuable raw materials to landfill. Toner cartridges and residual toner are a key waste stream for Fuji Xerox New Zealand and their competitors.

Even though many businesses, including Fuji Xerox NZ, are shifting to digital solutions, they still currently recycle 300 tonnes of toner cartridges annually. It is important that waste toner is handled correctly because it poses a fire, explosion, and inhalation risk.

Previously, waste toner has been incinerated as fuel to heat water used for washing trucks. However, it is much better for the environment to recycle toner into a new product, such as road surfacing, which also provides additional benefit to reducing the carbon footprint of the road surfacing.

"I was there on the night they were laying the TonerPave which was fantastic to witness!" says Viv Heslop, Head of Transport Sustainability. "Make sure you check it out if you're in the area!"

Kaikoura Earthquake Recovery is global civil engineering project of the year

The North Canterbury Transport Infrastructure Recovery (NCTIR) Alliance project Moving Mountains to Reconnect Communities was recently announced as the winner of the 2018 Institution of Civil Engineers (ICE) People's Choice Award.

This prestigious industry award recognises the best global engineering project of the year.

Based in the UK, this is the first time the award has been open to international entries. NCTIR had stiff competition up against a number of outstanding engineering projects from across the globe, including The Tate Museum in St Ives, England; the Hyderabad Metro Rail Project, India; and The Forth Bridge Replacement Crossing, Scotland.

Aurecon's Managing Director, Infrastructure Ben Stapleton said the leading engineering, infrastructure and advisory company led the design delivery on behalf of NCTIR on the $1.3 Billion (NZD) Kaikoura Earthquake Recovery Program following the devastating 7.8 magnitude earthquake that struck New Zealand's South Island, roughly 60km south-west of the coastal town of Kaikoura, just after midnight on 14 November 2016.

"We could not be more proud of this achievement and our team, particularly as the NCTIR Alliance was the only Southern Hemisphere project to make the top 10, Mr Stapleton said.

"This was more than just a rail and road opening. Families and friends were reconnected, businesses welcomed tourists back, and freight could move easily to and across the South Island."

The earthquake twisted train tracks and ruptured road pavements. More than 100 structures and 20 tunnels were damaged, with more than one million cubic metres of rock and other debris coming down onto the road and rail links.

In December 2016, NCTIR was formed comprising key stakeholders, the New Zealand Transport Agency (NZTA) and KiwiRail, and four of New Zealand's largest contractors. This was an industry first partnership.

World's longest sea bridge opens

China recently opened the world's longest sea-crossing bridge and tunnel, linking the financial centre of Hong Kong, the gambling hub of Macau and western reaches of the Pearl River Delta at the heart of southern China's economic boom.

The Hong Kong-Zhuhai-Macau bridge is made up of nearly 35-km of bridge and road sections, and a 6.7 km tunnel between artificial islands to allow shipping to pass unhindered.

China's vice premier Han Zheng said the bridge would help drive China's strategic blueprint for a "Greater Bay Area" around the Pearl River Delta modeled on other global economic dynamos like San Francisco Bay and Tokyo Bay.

"Standing at this new historical starting point, we firmly believe that the opening of the bridge will further develop the special advantage of Hong Kong and Macau," Han said in a speech at the ceremony.

The 35km bridge includes a 6km tunnel section

Transportation Engineering Postgraduate Courses 2019

The University of Auckland
NEW ZEALAND

NZ TRANSPORT AGENCY
WAKA KOTAHI

Department of Civil & Environmental Engineering University of Auckland
For Master of Engineering Studies [MEngSt] and Post Graduate Certificate [PGCert], with / without Transportation specialisation, or for a one-off Certificate of Proficiency, COP

Semester 1 (Mar-Jun 2019)

CIVIL758 – Traffic Systems Design (Monday & Tuesday, three hours / week, 12 weeks)	Traffic signal timing analysis, gap acceptance parameters, intersection analysis of performance (priority, roundabouts, signals), introduction to transportation planning and modelling techniques, RMA and other requirements, computer modelling and simulation.
CIVIL765 – Infrastructure Asset Management (20-22 March & 15-17 May)	Advanced theories and techniques fundamental to the management of infrastructure assets, with a focus on Asset Management Plans. Covers the entire spectrum of infrastructure, including roads, water networks and buildings. A major project incorporates a literature review, selection and critical review of an industry AMP.
CIVIL769 - Highway Geometric Design (28-29 March, 9-10 May & 6-7 June)	An advanced course in highway geometric design techniques. Through the use of an independent applied project, students will apply advanced theory, methods, processes and design tools to the safe design of highway geometric alignments that includes an understanding of human / driver behaviour characteristics.
CIVIL770 - Transport Systems Economics (14-15 March, 2-3 May & 30-31 May)	Advanced specialist topics in transportation economics including economic analysis, theory of demand and supply of transport, govt. intervention policies, and externalities and agglomeration. A research project analyses 2 major transportation infrastructure projects to determine likely future social benefits and dis-benefits.

Semester 2 (Jul-Oct 2019)

CIVIL759 – Highway & Transportation Design (Monday & Tuesday, three hours / week, 12 weeks)	Economic and environmental assessments of transport projects. Road safety engineering. Crash reduction and prevention methods. Pavement asset management. Pavement rehabilitation techniques. Heavy-duty pavements, highway drainage and chip seal design.
CIVIL762 – Transportation Planning (7-9 August, 2-4 October)	Provides an in-depth exploration of various components of the urban transportation planning process, with emphasis on theories on modelling. Conventional four-stage transport planning model principles, trip generation, distribution, modal split and assignment, are covered.
CIVIL766 – Road Asset Management (14-16 August & 25-27 September)	Advanced topics in road asset management - develops a critical awareness of the key issues encountered, including the evaluation of functional and structural performance; risk management; deterioration modelling and calibration; prioritisation and optimisation. Core skills are extended by a complex road asset management problem.
CIVIL 771 – Planning & Managing Transport (1-2 August, 29-30 August & 17-18 October)	An advanced course on integrating land use planning and transport provisions, including planning for different land use trip types and parking, travel demand management techniques, and intelligent transport systems. An independent project applies this specialised knowledge in planning, designing and managing transport infrastructure.

NOTE: Other relevant courses at the University of Canterbury (e.g. Civil / Transportation) or at Auckland (e.g. in Civil / Construction Management) or elsewhere can be suitable for credit – prior approval is required.

For Admission / Enrolment inquiries contact: **Assoc. Prof. Roger Dunn**, Director of Transportation Engineering
Phone: (09) 923 7714 DDI, Mob 021 309 600 Email: rcm.dunn@auckland.ac.nz

Further details, including the course outlines, can be found at:
http://www.cee.auckland.ac.nz/uoa/home/about/ourprogrammesandcourses

Our Masters degree Brochure *https://cdn.auckland.ac.nz/assets/engineering/for/future-postgraduates/documents/Transportation_final_print.pdf*
Our Transportation Research Centre *www.trc.net.nz*

Special dates of interest

- Registration is open now!
- Early bird registrations close 1 Feb.
- Applications for young professional & student registrations

Early bird registration fees 2019 (including GST)

Full	$1075
Single day	$650
Life member	Free
Student full	$450
Student day	$250
Young professional full	$750
Young professional day	$300
Exhibitor	$575
Non-member fee	$158.70

Networking events at conference

Informal get together, Sunday 3 March

For those interested, there will be an informal get together at a CBD bar on the evening before conference.

Welcome function, Monday 4 March

Walk to the Cable Car and ride up to the Carter Observatory. Take a seat in the stunning planetarium.

Conference dinner, Tuesday 5 March

Here is a chance for you to celebrate and unwind with your colleagues and other delegates after an intense couple of days of learning. Join us for dinner at Parliament.

Read more about our keynotes

MARK AMES, STRAGEGIC CITIES

Mark believes understanding the media production process is a vital and underestimated skill for anyone delivering change in cities today. Join Mark as he discusses **"Talking change: manage the conversation about change "**.

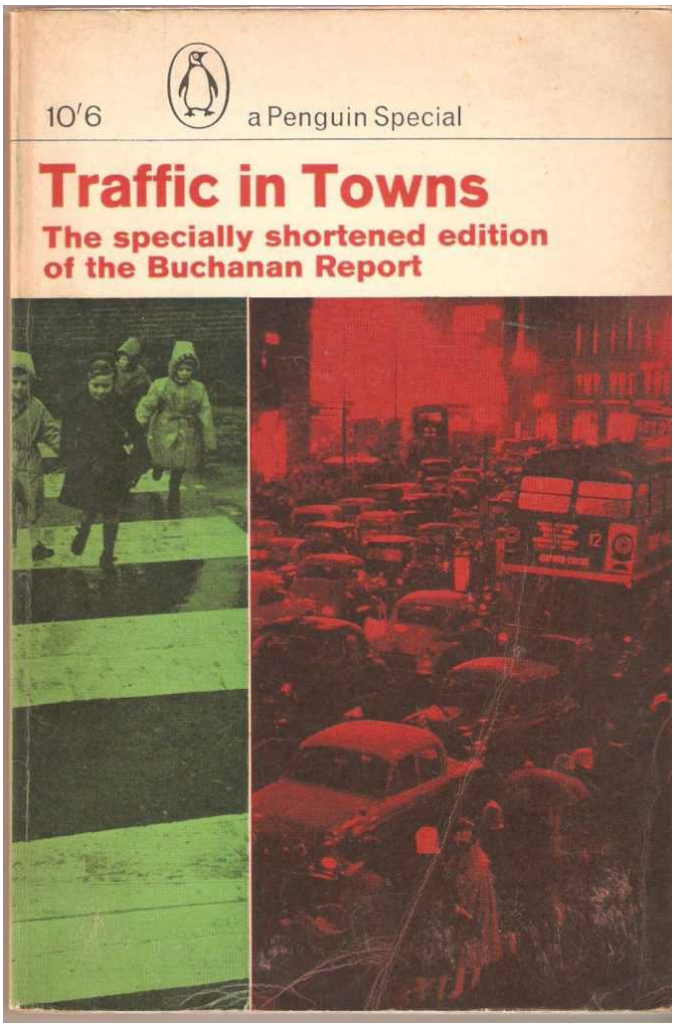
ISABEL DEDRING, ARUP, UK

Isabel is Global Transport Leader, ARUP. Previously, she served as Mayor of London's Deputy Mayor for Transport, and the former Environment Advisor. As Dep. Mayor for Transport, she set policy and supervised transport.

www.tgconference.co.nz

The advice Auckland has ignored for 50 years but must now heed

Engineer planner Lt Col Sir Colin Buchanan is rightly famous for his 1963 report Traffic in Towns and 1964 book of the same name.



The report looks ahead to wall of traffic heading to British streets in the post war period and sets out principles and plans to ameliorate the negative effects as much as possible. It was hugely influential in the UK at least, wiki:

The report signified some fundamental shifts in attitudes to roads, by recognising that there were environmental disbenefits from traffic, and that large increases in capacity can exacerbate congestion problems, not solve them. This awareness of environmental impact was ahead of its time, and not translated into policy for some years in other countries, such as Germany or the USA, where the promotion of traffic flow remained paramount

There is so much wisdom in this report, much of it borne out by the passage of time, just a couple of examples:

The American policy of providing motorways for commuters can succeed, even in American conditions, only if there is a disregard for all considerations other than the free flow of traffic which seems sometimes to be almost ruthless.

And this, still so true:

We have found it desirable to avoid the term 'solution' altogether for the traffic problem is not such much a problem waiting for a solution as a social situation requiring to be dealt with by policies patiently applied over a period and revised from time to time in light of events.

In other words, if traffic flow is the dominant priority, this requires the sacrifice of the very places it is meant to serve. And the problems of traffic cannot be solved, only restricted.

I have known about this book since seeing it in my parent's bookcase as a kid. But what I didn't know, and only has come to my attention because his grandson Paul (a transport economist) sent me a copy, is that Sir Colin was commissioned in 1966 by the Mayor of Auckland to "advise upon the the re-arrangement of the inner city streets systems consequent upon motorways".

The resultant report: City of Auckland Planning in the Central Area – An Assessment has eluded my hauntings of the city archives so must have been even more deeply suppressed than most. And I guess I can see why. It's very very good. So good its principles should be followed now.

Like any good consultant he answered the question that the situation demanded as well as the lesser one he was actually asked: The best of the report is about the principles of how to plan and control city streets in the age of the car, and it is this I want to focus on now.

Because we still need to do this.

And I guess the great news is that we have never been better placed to do so than now, because we are now fixing the huge mistake of last century in Auckland: the car-only transport policy.

The key point is Buchanan starts from the inarguable position that city building is an aesthetic issue, a qualitative one, as well as a quantitative one, and that vehicle traffic in volume is an unacceptable assault on the very possibility of a successful city, and must be consciously managed. Unfortunately the context of his

19. **The Auckland City Council, meeting on 6 April 1966, considered a report by the Mayor on the De Leuw Cather proposals. The Council resolved to approve the system of motorways outlined in the De Leuw Cather Reports, but were not satisfied that the proposals for the co-ordinated bus and railway system would achieve commensurate benefits to justify the costs incurred. The Council also, in response to doubts expressed by the City Engineer regarding the proposals for street improvements and circulation within the central business district, resolved to ask us (Colin Buchanan and Partners) for further advice in determining "the best possible street connections to the inner city motorways".**

employment was:
So the starting point of the report is the rejection of the Rapid Transit half of the De Leuw Cather plan.

The Proposed Mass Transit System

78. It was recommended by Messrs De Leuw Cather that existing railway lines extending to the eastern suburbs be upgraded and extended for a short distance in tunnel into the central business area. Prima facie this is an attractive proposition. But we share the doubts of the City Engineer whether, in the circumstances of Auckland with its very low residential densities, this could possibly be a viable economic concept. Yet, on the other hand, the result of the central area study which we have recommended would undoubtedly be to reveal a limit to the amount of traffic that the centre could accommodate, and from this it would follow that there was a residual commuter load which would have to be carried by some form of public transport.

On this the report is rather wistful:
The City Engineer, who earlier had presided over the ripping up of the tramways, was looking for support for what parts of the city centre he should bulldoze to receive all the traffic from the planned motorways, which streets to flood with traffic.

This is the thinking that gave us the Hobson/Nelson one-way system, Mayoral Drive (Quadrant St) smashed through buildings, the total destruction of Grafton Gully etc.

The report discusses all these, nodding along in a very lukewarm way, suggesting trials only. Constantly pointing to place costs this will all impose, especially on the quality of the City Centre and University, but aware of the inevitability.

The report describes the current situation, complains politely about the fractured nature of the governance of the city, then gets to the central problem.

Basically that the motorway plan, unrelieved by any alternative, will just dump far too much traffic into the city centre, "more than is civilised".

23. We think this is really the nub of the matter. The City centre is in process of being rebuilt, Queen Street in particular is being redeveloped from end to end, and we suggest with great respect that it is for the City Council to ask themselves whether they have set their sights high enough as regards the standards of environment that should be sought.

This paragraph could have been written today:
There follows an interesting discussion about Queen St,

25. **In our opinion, these increases in the traffic volumes in the central streets are quite unacceptable. They are, in a sense, the more unacceptable because they arise in spite of massive expenditure for the solution of traffic problems. The central area, for example, is** planned to be ringed round by a motorway of formidable dimensions. We do not question the need for it, but there is no doubt that to insert a motorway on this scale into standing development is an expensive and painful operation. One would expect the benefits from this expenditure of public funds to be very substantial indeed and to include at the least a high degree of withdrawal of traffic from the central streets and the University area. Instead, as already mentioned, there is to be an increase of traffic in the shopping streets, and the University, instead of being endowed with a precinctual character, remains divided into four by traffic routes.

and how the Barnes Dance crossings are likely only popular because of a rare respite from traffic they offer. Then:

"One would expect the benefits from this expenditure of public funds to be very substantial indeed and to include at the least a high degree of withdrawal of from the central streets."

Then he asks why the motorway was routed to sever the city so tightly. We do know the answer to this but it is a bit off topic, perhaps for a later post.

The report then uses the term environmental standards, by which is meant the whole aesthetic

Environmental Standards

53. This is the point at which the question of environmental standards would be of great importance. If we ourselves were undertaking a study of the centre of Auckland we would most certainly start from the working assumption that Queen Street and other important shopping streets should be for pedestrian use only, with all motor traffic cleared out. It does not follow that this environmental standard could be maintained, it might prove necessary to relax the standard somewhat, perhaps for example by admitting buses, but we would certainly start the study with the highest possible standard and only relax it for the best of reasons.

condition, the quality of place, so somewhat broader than how we tend to use the term now.

So his *starting point* would be the pedestrianisation of the heart of the city centre. Begin with place quality then fit the movement to suit.

Network for "Maximum Motorisation"

55. In exactly the same way that we would start the exercise with the highest possible standards of environment in view, so we would also seek in the first instance to devise a highway system catering for the maximum possible use of motor vehicles, especially of private cars for the journey to work. We feel quite certain that this exercise would produce a highway network of such enormous dimensions and complexity as to be quite unassimilable into the structure of the City, especially towards the centre. This would be the value of the exercise - it would (on the assumption that at some stage the study is made public) demonstrate to councillors and public alike the impossibility of catering for a future condition of "maximum motorisation". It also provides a very firm point from which to commence a process of simplification - that is to say the gradual "paring down" of the network to proportions which are reasonably assimilable with the structure of the City and which involves in the process a reduction of the traffic loads which have to be catered for.

And as a contra to that he would start at the other end and try to ram as much traffic in as possible, but, and here's the twist, this part of the exercise is simply undertaken to prove its futility:
"This would be the value of this exercise – it would demonstrate to councillors and the public alike the impossibility of catering for a future condition of "maximum motorisation".'

Poor Sir Colin, must be spinning in his grave, as an ideology of "maximum motorisation" is a very good description of exactly what was pursued in Auckland, from pretty much the moment his report hit the table, if not before.

Total hegemony of the diktat of traffic flow over all other values on our roads and streets, the conversion, as much as was possible, of all streets into roads.

Including in the city centre. The condition of the highway considered as an ideal, not as an exception.

Still today Hobson and Nelson streets in the city, for example, are controlled by highway engineers and

Reduction of Full Potential Traffic Loads

56. This last point - the reduction of the traffic loads - is extremely important. We have not the slightest doubt that a study on the lines we have indicated would show that if environmental standards appropriate to a civilised city are to be sought in the centre of Auckland then there is a fairly strict limit to the amount of traffic that can be accommodated. Even if environmental standards were jettisoned completely there would still be a limit. We suggest that this fact has got to be faced, and that it is futile to proceed in the blind faith that every possible movement can be provided for by motor vehicle.

vehicle traffic modellers, with less (though slowly

Summary

68. To summarise, the impression we are endeavouring to convey is of a quantitative and qualitative study of the central area which is developed on the basis of a number of alternatives from which in all probability one will eventually emerge as the "best" or "preferred" design. Whether or not such a design would be capable of being implemented within present legal and financial systems seems to us to be largely irrelevant. It is the long term future of the City that is at stake and there surely can and must be some anticipation of both a strengthening of powers in the future and of a more favourable financial climate. With regard to the latter, however, the position somewhat puzzles us. We have not attempted to study the matter in detail but we do observe a considerable building programme in course of execution in the central area, and we also observe a massive urban motorway system in course of execution. This last is something which most cities in Britain are finding it very difficult to initiate for financial reasons. To this extent Auckland seems a good deal better off than many cities we know. But in a sense this increases the dangers. If the buildings in the centre are to be renewed and if the encircling motorway is to be driven ahead, both without benefit of or relationship to a central area plan, then there are very serious risks that the centre of the City will degenerate into confusion as regards traffic circulation and architectural form.

increasing) input from designers into their condition.

That futility was, and by some, is still pursued here.
This is interesting, in contrast to post-war Britain he saw us as having plenty of cash, just not spending it wisely (this situation is even more evident now in Australian cities; all are building terribly wasteful massive motorways that will simply generate ever more driving and congestion and pollution…).

And his prediction was surely correct; Auckland city centre has degenerated into a confusion both in terms

70. The emphasis would need to be on a team. We think the normal town planning, architectural and engineering skills would be needed, but it is essential that there should also be continuous access to sound urban-economics advice. Team working on these urban problems demands, of course, a new kind of inter-professional co-operation. Possibly the most important aspect of this is that traffic engineers with their supremely important contribution, should be in full partnership with the other professions.

of transport and built environment, both movement and place.

80. It only remains to emphasise the urgency of the position. Plans for improving the accessibility for motor traffic to the central area have been driven ahead, but the complementary planning task to reorganise the centre to deal with the traffic has lagged seriously behind. The urgency arises from the fact that the centre of the City is actually in process of being redeveloped, and if major improvements for the public good are to be achieved, it is essential to take advantage of this process of redevelopment. Opportunities lost now may never be recovered.

And it's not hard to read what this paragraph is referring to:

Furthermore he could clearly see what was happening:

Now, obviously the pressures are greater, but also we at last building that 'co-ordinated bus-train rapid transit system', we do have a whole department focussed on design of the city at Council, and they have been busy designing access to city with the quality of the outcome in mind, rather than just how to empty ever wider motorways onto our streets.

Sydney's share bikes take 22,000 city trips a week

Sydney's share bikes are being taken on more than 22,000 trips in the inner city each week, figures from the city's two dockless bike scheme operators have shown.

Lime and Mobike have spruiked the popularity of share bikes as a way to get around the city as the NSW government flagged Manly as the location for the first shareable electric scooter trial.

The companies are the only share bike operators on Sydney's streets after two of their predecessors, Ofo and Reddy Go, quit the city amid a council crackdown on dumped bikes this year.

Lime, which is backed by Uber and Google's parent company Alphabet, launched in Sydney in November and has so far dropped 2000 electric bikes on the city's streets.

The company's community affairs manager William Peters said the public's response had been "phenomenal", with nearly 9000 users signing up via the app in the first two weeks.

This map shows the most common trip start locations for Mobike users in Sydney.

"We've just clicked over 50,000 trips on the e-bikes," he said. The average trip was about 10 minutes, or 2 kilometres, he said.

Mobike's head of international operations, Mark Lin, said in a statement that the company had clocked more than half a million rides since its launch 12 months ago. "Sydney is one of our most active markets in the world."

Bikes were turned over more than six times a day in some parts of the city, he said.

The council will trial six to eight bike share parking spots in locations around Central station, Hyde Park, Redfern and Green Square in a bid to prevent abandoned bikes clogging the city's streets.

Waverley mayor John Wakefield, who in February described the bikes in his area as "just dumped rubbish", said Lime appeared to have "learnt a lesson" from the previous operators and numerous councils' criticism of them.

"It has not eliminated that problem in the eastern suburbs. There are still less of them going up the hill than coming down, but the company is redistributing them. We've seen a fair number of bikes hit the streets, they appear to be fairly well-maintained. They're very heavy bikes so we're not seeing as much vandalism."

Mr Peters said Lime was trialling shareable electric scooters in Queensland and had spoken with Sydney councils about running similar pilot programs in the city.

A spokeswoman for Transport Minister Andrew Constance said that Manly had been chosen as the first location to trial electric scooters from several operators – believed to include Lime and Bird – this summer.

Those providers would be exempted from road safety regulations that banned electric scooters on shared bike paths for the duration of the pilot program in that area, the spokeswoman said.

She said the government would review the data at the end of the trial and consider amending the legislation.
Source: SMH

Celebrating Engineering Cadets

These articles come from Auckland Transport's Culture and Transformation team.

We'd like to shine a light on one of our up-and-coming Engineering Cadets. Ryan Clarke is part of AT's Early Careers Programme (ECP) and is currently working part time while completing his studies towards a degree in Civil Engineering at Manukau Institute of Technology.

He is assigned in the South East delivery team, reporting to Remi Cruz, PT Development Manager and Acting Investigation & Design Manager.

Apart from delivering major roading infrastructure and public transport projects, the team is also renowned for people development, taking on a number of summer interns over the years and participants of the Project New Grad programme.

Currently, they host two graduates and an engineering cadet in the ECP and will be providing work experience to support an AT scholarship offered through AT's partnership with the charity First Foundations.

In the ten months Ryan has been with AT, he's been involved in many projects and is already learning so much.

A highlight for Ryan has been working on the Half Moon Bay Bus Interchange project, a local project that has opened up many learning opportunities. Working alongside engineers and contractors, Ryan has seen first-hand all the inner workings and important steps that lead to project completion.

Not only that, but he was also given the opportunity to present at the Southern Hui to give Mana Whenua an update of the project.

"Previously, I did not have a lot of knowledge about Mana Whenua's involvement in AT's projects.

Being of Māori descent myself, it was very interesting understanding how important the partnership between Mana Whenua and AT is to achieve better outcomes for the projects."

Responsible for facilitating the installation of artwork for the project, Ryan had the unique opportunity to work alongside the artist. Although, dealing with contractors and other parties, Ryan quickly learnt that not every task goes smoothly and there were some minor speed bumps along the way.

Realising that not everything goes to plan was a big learning curve for Ryan. He came away from the experience with an understanding that unforeseen delays can appear at any stage of a project and has gained valuable problem-solving skills to overcome such challenges.

After finishing up with the Half Moon Bay project, Ryan can't wait to move on to his next challenge and is looking forward to learning and developing his skills even further.

Highlighting Diversity in our Major Projects teams

Diversity is not just an aspiration for Auckland Transport's Major Projects team – it's the way we do things! The people in our Major Projects – South East Delivery team hail from a variety of backgrounds. Our team members are charting many different paths in their careers, and they work on projects that are never the same twice.

The South–East Delivery team employs people at many different ages and levels of experience. There are roles in our team for cadets through to principal engineers and managers with decades of experience, and you can find staff aged from 18 to 68 working on the same project.

We have taken in not one but two graduate engineers through the Early Careers Programme, and have employed an undergraduate cadet who is still studying at university while working part–time.

For those at the other end of their careers, our team is committed to Auckland Transport's Staying On

programme, which provides assistance and flexible working options to staff over 50.

Our team has a proven track record for stretching the abilities of junior staff. Whatever their background, we aim to provide opportunities that will improve the skills of our team members and widen their experience.

Where possible, we aim to promote talent from within our own team. One of our team members started as an engineering cadet and is now a principal engineer, while another started as a summer intern and two years later is now a full–time engineer.

Unique within Auckland Transport, our team is a scholarship partner with the First Foundation programme. Through this programme we are employing a Pasifika scholar while they study at university – the first person in their family to do so. Our full–time staff also get opportunities to study, with many training courses available to help widen their skill sets.

As well as growing new talent, we also import it from around the world. Just under half of our team were born overseas, in Hong Kong, Malaysia, India, Sri Lanka, Fiji, the Philippines, the UK, and Russia.

There is also ethnic diversity among our team members from New Zealand, including staff with European, Chinese, and Māori backgrounds. Many of our team members speak multiple languages, which can be a big help when assisting customers whose first language is not English.

When it comes to building a team, we don't just look for a single skill set. Our projects have complex requirements across many areas of expertise, and we make good use of the varied work experience and educational backgrounds of our team members.

Our team members have had experience working across New Zealand, Europe, Asia, the Middle East, and Australia in areas ranging from drainage to housing, irrigation, rail and even accounting and law. Many of our staff have backgrounds working in private design consultancies, while others have had extensive careers in managing transport projects for local and national government agencies.

We know as well as anyone that there isn't just one type of engineer or project manager. A quarter of our team are women, and we are always looking for more. In 2019 two young women engineers will be joining us through Project New Grad.

Our team members have qualifications ranging across civil engineering, transportation engineering, environmental engineering, structural design, traffic engineering, mathematical optimisation and project management.

Our team is committed to Auckland Transport's vision of a diverse and inclusive workplace. We take pride in the diversity of our team, because the wide range of experiences, backgrounds, and skills of our team members are key for managing projects that are delivering improved transport choices for Auckland.

Whether taking the kids to schools, getting to and from work, doing business across the city, cycling in the park, going shopping, or heading to sporting events and concerts, we're part of your everyday life.

We're working to shape our city and provide transport choices for a growing, vibrant Auckland. Our people bring the best of local and international expertise and we take pride in a diverse team of forward thinking, passionate people providing innovative and realistic answers to the city's transport challenges. As catalysts for change, each and every one of our team has a pivotal role in moving Auckland forward. We have a plan, join us and help make it a reality!

View the latest vacancies at Auckland Transport here

Auckland Transport
An Auckland Council Organisation

$1.4 billion road safety boost announced

The Government recently announced $1.4 billion to be allocated over the coming three years to make dangerous roads safer.

The Safe Network Programme will make 870km of high volume, high-risk State Highways safer, with known safety improvements like median and side barriers, rumble strips, and shoulder widening.

Transport Minister Phil Twyford and Associate Transport Minister Julie Anne Genter announced the spending recently at Dome Valley, a treacherous section of SH1 between Warkworth and Wellsford, where 36 people have died and 102 suffered serious injuries between 2000 and October 2018.

Over three years, the programme will target an estimated $600m to $700m of state highway safety improvements and $700m to $800m of local road safety improvements.

Once complete, the improvements are expected to prevent 160 deaths and serious injuries every year.

Among the projects already underway are new safety barriers and upgrades line marking between Taupiri and Gordonton in the Waikato, similar work between Cambridge and Piarere, improvements between SH1 and Shannon in the lower North Island and a dangerous section of road on the outskirts of Christchurch between Marshlands and Burwood.

Work is due to start this summer on 39km of SH1 through Dome Valley. Other projects that will shortly get underway include a stretch of SH16 between Brigham Creek and Waimauku in Auckland, between Hamilton and Whatawhata, the Hawkes Bay expressway and between Waitara and Bell Block in Taranaki.

Twyford said:
"Drivers will inevitably make mistakes and it's the Government's job is to stop those mistakes turning into tragedies. This year, far too many New Zealanders have lost their lives or been seriously injured in crashes that could have been prevented by road safety upgrades."

The treacherous stretch of road through Dome Valley north of Warkworth has claimed multiple lives.

Genter said: "Our Government believes it is unacceptable for anyone to be killed or seriously injured on our roads. Annual road deaths in New Zealand increased from 253 just a few years ago in 2013, to 378 last year. The number of serious injuries increased from 2020 to 2836 per year over the same period."

She said no other industry accepts hundreds of people dying each year as normal.

"No person I know thinks losing a loved one in a crash is an acceptable price to pay for living in a modern society – that's why we're making safety a priority. Local councils will be offered a higher level of central government funding to fix high-risk, local and regional roads.

Over half of all fatal crashes happen on local roads and we recognise central government funding will help make these roads safer sooner,"

A programme of local road safety projects is already under development with the first projects expected to begin next year.

The NZ Transport Agency says it will speed up the time it takes to deliver safety projects by fast-tracking the approval process for standard, proven safety improvements.

Had it been in place, the new fast-track process on projects like the SH1 Dome Valley upgrade would have shaved nine months off the project timeframe.

"Regions with the highest rates of deaths and serious injuries - Waikato, Auckland and Canterbury - will be prioritised in the first year of the programme. It will then be rolled out to other regions including the Bay of Plenty," Genter said.

The programme will also include a nationwide advertising campaign to help raise awareness and conversation about why we must change some of our riskiest roads to prevent more road trauma, the minister said.

Safety project under way

Central North Island
SH3: SH37 to Te Kuiti Safety improvement project delivering 14km barriers, 10.6km line marking, signage improvement, shoulder widening. February 2019

SH27: SH26 to SH24 Safety improvement project delivering 19.5km barriers, 138km line marking, signage improvement, shoulder widening. November 2018

SH1B Taupiri to Gordonton Section 3 Safety improvement project delivering 1.8km barriers, 36.5km line marking, signage improvement, shoulder widening. November 2018

SH1: Cambridge to Piarere Safety improvement project delivering 2.8km barriers, 11km line marking, signage improvement, shoulder widening. May 2019

SH23: Waitetuna to Raglan – Stage 1 & 2 Safety improvement project delivering 2.2km barriers, 43km line marking, signage improvement, shoulder widening. August 2019

Lower North

SH57: SH1 to Shannon Safety improvement project delivering 14km barriers, 42km line marking, signage improvement, shoulder widening. December 2018

SH2: Wairoa to Bay View Safety improvement project delivering 8.5km barriers, 30km line marking, signage improvement, shoulder widening. August 2019

South Island

Waipara to Waikari Safety improvement project delivering 6.3km barriers, 40km line marking, signage improvement, shoulder widening. June 2019

SH74: Marshlands to Burwood Safety improvement project delivering 6.5km barriers, 10.6km line marking, signage improvement, shoulder widening. May 2019

SH2: Pakipaki to Waipukurau Safety improvement project delivering 13km barriers, 37km line marking, signage improvement, shoulder widening. December 2019

Safety projects starting 2018-19

Upper North Island SH16 Brigham Creek to Waimauku Safety improvement project to improve safety and efficiency for road users on the stretch of State Highway 16 between Brigham Creek and Waimauku in Auckland. Currently in design. Quarter 2 December 2018

SH1 Dome Valley Safety Improvements – Stage 1&2 Safety improvement project delivering 6km barriers, 39 km line marking, signage improvement, shoulder widening. Estimated

Construction startoing early 2019

Central North

SH23 (Hamilton to Whatawhata), NSRRP Safety improvement project. Quarter 2 December 2018

SH2B/SH50/SH50A Hawkes' Bay Expressway Safety Treatments Safety improvement project, will deliver median barrier. Currently out to tender. Quarter 2 December 2018

Safety improvements in Safe Network Programme include:
· fixing dangerous corners
· installing roadside and median safety barriers
· shoulder widening
· further safety improvements for high risk intersections
· rumble strips
· improving skid resistance
· improving rail level crossing safety
· setting safe and appropriate speed limits.

Professional development opportunities

Planning and design for Cycling	NZ TRANSPORT AGENCY WAKA KOTAHI / VIASTRADA

Wellington, 12 February 2019	Venue to be confirmed

New Zealand is continuing its journey to ensure cycling is a safe and attractive transport choice. The new Government Policy Statement has signalled a strong desire for more liveable cities that are safe, accessible and are designed to improve people's wellbeing. This means we need to continue to develop our cycling networks to a level of service where people will use them, and make sure they are well integrated into the wider transport system.

The NZ Transport Agency and ViaStrada are offering a full day industry training course based on the recently ratified Cycle Network Guidance and cycling levels of service research which will focus on planning and design for cycling. The courses are hosted by the Transport Agency and will likely be held at their offices at Chews Lane (TBC).

The course will summarise recent advancements in cycling planning and design understanding, using case studies from a wide range of New Zealand projects implemented in the last five years. Topics covered will include:
• Understanding our users – customer thinking / target audience approach, cyclists' 5 main requirements
• Planning for cycling – assessing demand, route options, prioritisation, monitoring, engagement, funding
• Designing between intersections – various types of provision (focus on separated cycleways and paths), making space
• Intersection design – achieving continuity through intersections, cycle bypasses, minor junctions, cycle crossings, cycle detection, signalised intersections, roundabouts

While the cost is still to be finalised; the early-bird fee is likely to be around $350 to $400+GST.

This course will benefit anyone involved in planning or designing for cycling facilities such as: project managers, road safety auditors, transport planners, transport engineers and elected members.

Information and registration
To find out more or register for the course contact Helen Woodhouse at ViaStrada:
03 366 7605
helen@viastrada.nz

Visit the ViaStrada website for more information on course content, and a link to the registration form. Any updates will also be posted at www.viastrada.nz/training

Data and decision making in the transport system following the Kaikōura earthquake

Large amounts of information and data relating to the transport system were produced, managed, analysed, and communicated following the 14 November 2016 Kaikōura earthquake.

A report has been developed which summarises the key findings of a stakeholder workshop and series of interviews, outlining what information was available and useful, where it came from, how it was transferred between organisations, and how data might be managed and used in transport system monitoring to improve resilience in the future.

This report captures common themes of participants' experiences rather than prescribed formal response and recovery structures. The results capture insights into how the system did function, rather than the system as it was intended to function.

The workshop and interviews were designed to include as many participants from across the transport system as possible, from those responsible for transport policy to organisations and industries affected by transport disruptions caused by the Kaikōura earthquake.

The report is not intended as a comprehensive review of New Zealand's crisis management system or incident command procedures, and there are extensive efforts elsewhere to ensure that New Zealand lifeline utilities manage information to facilitate post-disaster outcomes.

The report can be downloaded here.

Reports regarding the impact of and response to the Kaikōura Earthquake can be found here.

TRANSPORTATION GROUP NEW ZEALAND

Nominations open for Life Memberships of the Transportation Group

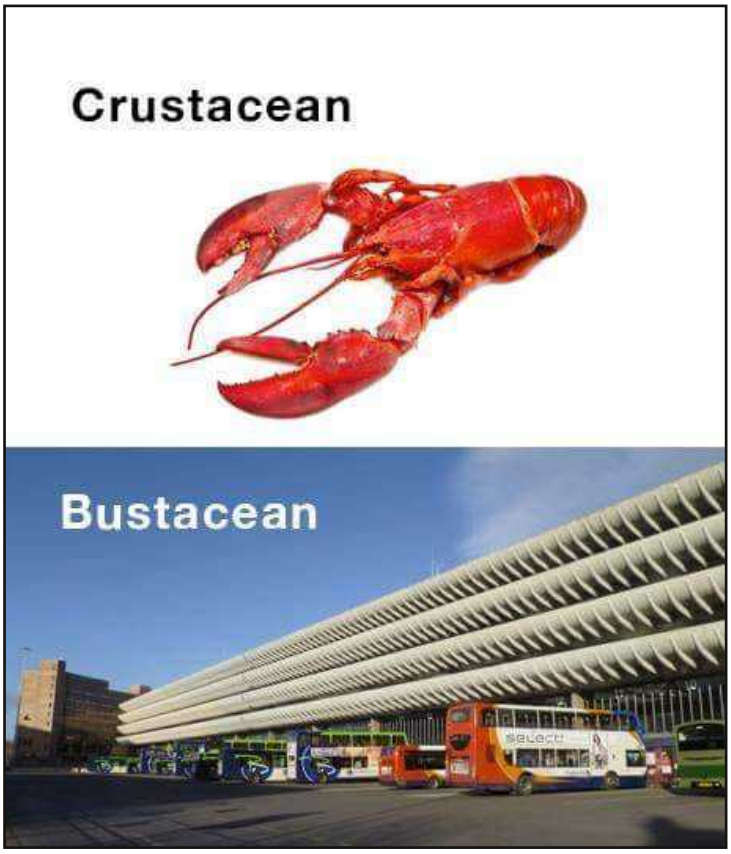
Do you know someone that has made a significant to the Transportation Group and the transport industry?

We are looking for nominations for promotion to Life Membership of the Transportation Group. Being a Life Member is a significant honour and acknowledgement of the outstanding contribution which an individual has made to transportation in New Zealand.

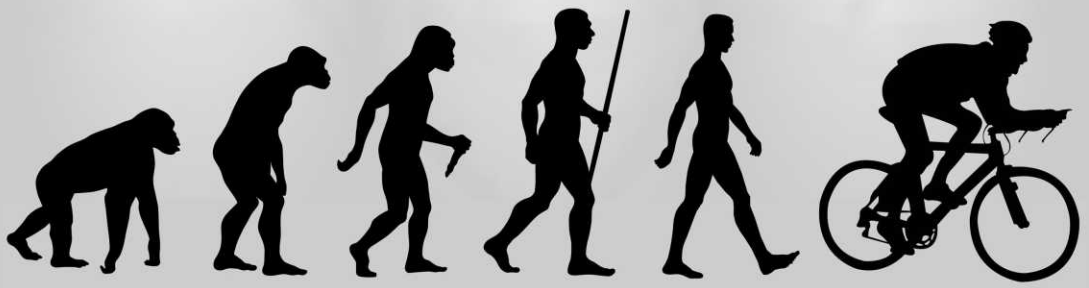
If you want to make a recommendation for promotion to Life Member, please submit a one page letter outlining the contributions made to the Transportation Group. Please also include who will provide a citation at the award ceremony. Nominations must be endorsed by four current Transportation Group members – one which is a Fellow of Engineering New Zealand - and representation from at least two branches.

Life Memberships will be presented at the 2019 Transportation Group conference in Wellington.

Please make your submissions to thomas.small@jacobs.com by Friday 8th February 2019



FYAs and RRFBs – tools we might be able to benefit from



John Lieswyn, Megan Gregory, and Axel Wilke (ViaStrada, Ltd.)

In this article, we present two traffic engineering treatments aimed at improving motor vehicle driver's propensity to give way to people walking and cycling who are crossing a roadway.

Both tools involve a flashing yellow light but have substantially different applications. This is a short version of a fully referenced journal article currently in development. If there are any New Zealand jurisdictions interested in conducting a trial of the devices described here, please contact the authors.

Flashing Yellow Arrows (FYAs)

FYAs are in use with two different objectives – to either warn motorists that they need to give way to opposing drivers, or to encourage drivers to give way to people walking or cycling along the road.

Flashing yellow arrows are used in countries including Australia (Sydney), France, Germany, Ireland and the USA. In the USA, where the bulk of the available literature on FYAs comes from, interim approval was granted in 2006 to use FYAs for filtered long turns (against opposing traffic)[1].

FYAs were initially seen as a way of making the obligations of filter turning clearer and eliminating the yellow trap (which NZ practice already seeks to avoid). FYAs were introduced to the Manual of Uniform Traffic Control Devices (MUTCD) for filter short turns (through pedestrian crosswalks) in 2009.

In 2016, New York City commenced a trial of using FYAs for traffic filtering through separated cycleways, where the FYAs are applied after a period where the cycleway and adjacent through traffic had green signals and turning traffic had a red arrow [2].

Sites operated with the FYA treatment had half the number of conflicts per turning vehicle compared with the fully protected signalisation, and also substantially less than sites with mixing zones or "protected intersection" layouts. It has been recommended to continue the use of FYAs, while also investigating ways of further improving the supporting layout (ibid). The city has also developed a short educational video: https://www.youtube.com/watch?v=nCvfPUnpaww

In addition to the results from New York, numerous studies of driver comprehension and compliance when FYAs are applied for long-turns filtering through opposing traffic suggests that this would be transferrable to the other application [3-5].

New Zealand has a poor safety record of filter turning across pedestrian crosswalks; [6] found filter turning to be 25-30% less safe for pedestrians than an alternative split phasing with full protection.

Based on the American experience and similarities between the two countries, it is anticipated that applying FYAs for filter turning through pedestrian movements would yield safety benefits. The same is anticipated for separated cycleways, but the matter is slightly more complex as other variables must be considered.

The NZ Road User Rule currently contains certain ambiguities regarding the relationship of a separated cycleway to the general "roadway", and this complicates the possibility of operating filter turning across a separated cycleway.

When separated cycleways are fully protected from opposing turning vehicles, people cycling receive a much-reduced amount of green time compared to adjacent through drivers – this reduction in LOS and perceived inequality can lead to cycleway users choosing to run a red light, which has obvious safety implications. Depending on the relative volumes of people on bikes and left turning vehicles, it may be

advantageous to allow filter turning through a protected cycleway at certain locations.

In addition to clarifying the Rule, one way of introducing filter turning on a site-specific basis would be to trial FYAs and ensure the legislation (and associated public education) states that drivers turning on a FYA must give way to cyclists on an adjacent cycleway, and pedestrians on an adjacent pedestrian crosswalk (the use of FYAs for right filter turning through opposing traffic could also be considered and incorporated).

The beauty of this approach is that FYAs can be introduced by the NZ Transport Agency, via an official traffic control device trial, as opposed to changes in the Road User Rule which require sign-off from the Ministry of Transport (a process that the Transport Agency can encourage but not direct).

Besides potentially overcoming a loophole in NZ legislation, FYAs would bring safety benefits to the filter turning operation. There is currently a common misunderstanding regarding the flashing red man during the crosswalk clearance phase; many drivers think that pedestrians should have already cleared the crosswalk and that turning vehicles have right of way, especially if this coincides with the extinction of a red arrow used as partial protection.

Introducing a FYA to the system would enhance the message that drivers may only proceed with caution, once they've given way to other users. This would be particularly useful where separated cycleways are involved, as people approach faster when cycling than walking.

Flashing Yellow (or Amber) Arrows were identified as a possible initiative to consider in a Review of Road User Rules for People Walking and Cycling (2016) prepared for the NZ Transport Agency [7]. ViaStrada presented on the possibility of using FYAs with filter turning at the 2018 SNUG conference [8].

Rectangular Rapid Flashing Beacons (RRFBs)

Many suburban multilane arterial roads have few pedestrian crossing opportunities, except for at signalised intersections, which creates a severance between land uses on either side of these roads.

Formal pedestrian ('zebra') crossings have not been favoured at these locations due to concern that drivers will fail to give way to pedestrians. This is especially the case on roads with raised medians and consequent low 'friction'; today's drivers are more likely than ever to be distracted by mobile phones and in-car infotainment options.

To help address these safety and severance issues in the United States, a solar-powered, pedestrian push-button activated yellow LED rectangular rapid-flashing beacon (RRFB) has been widely adopted in the last decade.

Like the flashing yellow arrow, the intent of a RRFB is to arrest the driver's attention and improve give way rates, but only at mid-block locations.

The RRFB luminaire is typically 6 cm x 15 cm, mounted under the permanent warning sign, and is only used at zebra crossings. What makes the RRFB effective is a 'wig-wag' rapid-volley flash pattern [9].

A proximity sensor and audible voice prompt can provide vision impaired pedestrian accessibility. Based on strong efficacy results, the RRFB is approved for use in the USA under specific conditions, including that the device must automatically dim at night; it must have a pilot light visible from the side such that a pedestrian can see that it is operating; and it must not have a flash pattern known to cause seizures [10].

An example from Texas, USA is shown in Figure 4 and a video showing operation is available at: https://www.youtube.com/watch?v=cQlaFJy-nY0

Figure 4: An RRFB in Texas, USA

In the United States, the cost of an RRFB is about NZ$45K (less than a quarter the cost of a full pedestrian signal), based on 2018 exchange rates and a 2012 average cost estimate published by USDOT [11]. New Zealand costs may differ.

Shurbutt and Van Houten [9] found that give way compliance increased from 18 to 81 percent for a two beacon system (and 88 percent for four-beacon systems). The distance between the driver who has given way and the crossing increased over the baseline in all distance bins measured, improving the sightline between a driver in an adjacent lane and the pedestrian.

Research by Texas A&M Institute of 25 RRFB installations found a motorist compliance rate of between 19% and 98%, with pedestrian-friendly designs (such as median refuges and shorter crossing distances) having the highest rates of motorists giving way to pedestrians [12].

Across New Zealand, many zebra crossings have been removed from multi-lane roads due to poor motorist compliance and a concern that pedestrians will assume right-of-way without looking to confirm that motorists are in fact going to give way.

Existing pedestrian treatments for crossing roads are listed in Table 1, with limitations compared to the RRFB. Other than the pedestrian refuge, these existing tools are not commonly used on multi-lane arterial roads.

Existing tool	Discussion and limitations compared to RRFB
Pedestrian refuge	People with cognitive or physical limitations (e.g. children and elderly) may still find crossing multiple lanes of single direction traffic challenging, especially with uninterrupted flow and higher volumes of traffic
Raised platform	Vehicle acceleration noise impacts on people occupying nearby land uses Bus occupant discomfort Vehicle suspension maintenance costs
Speed cushion	Vehicle acceleration noise impacts on property occupants due to vehicles that cannot straddle the cushion
Reduced speed environment	Not appropriate for arterial roads with a motor traffic priority function
On-roadway flashing yellow light system *as per TCD Rule 8.2(12)* [13]	Less durable than an-above ground solution, due to pavement maintenance and clouding of the luminaire lens from friction with vehicle tyres, sweepers, and debris Flash rate not defined in legislation; existing range is 0.46-0.60 sec on, 0.2-0.4 off Efficacy: increase of 5% to 21%, with up to 90% give way rate after installation on Tuam Street, Christchurch [14]. However, the installation also included kerb extensions, raised platforms, and marking changes which may have influenced the 'after' results. Lower efficacy due to lower intensity and slower flash rate compared to RRFB, and position not in the primary field of driver's view [9]; especially if not mounted on the face of a platform ramp
Symbolic warning – active steady or active flashing light on permanent warning sign *Active steady/full LED symbol: as per TCD W19-2.1* *Active flashing in corners: as per TCD W19-2.2*	Lights in the top corners (for flashing signs) or all four corners (for steady signs where the entire sign including symbol is illuminated) of the W16-1 pedestrian SLOW DOWN permanent warning sign Not specifically designed with an arrow pointing at the crossing as in the USA Flash rate not defined in legislation; existing signs flash at a rate of 1 hertz (cycle per second) Lower efficacy due to lower intensity, slower flash rate and lack of 'wig-wag' pattern / 'stutter flash effect' compared to RRFB
Lighted belisha beacon and zebra crossing	Lower efficacy due to lower intensity, slower flash rate and lack of 'wig-wag' pattern / 'stutter flash effect' compared to RRFB. Unusual for crossing more than one approach lane of traffic in either direction.
Signalised mid-block crossing	While effective, a mid-block pedestrian signal is substantially costlier

The lack of pedestrian crossing facilities on major suburban arterials is proof that none of the tools in Table 1 address the safety, capacity, accessibility, and cost constraints facing local authorities.

New Zealand's engineers and authorities should consider that the research has been done and the US federal authorities are convinced of the value of the RRFB. At least in transportation terms, Kiwis are not that different from Americans.

It is high time to provide something better for Kiwis trying to cross the road than a kerb ramp and a median refuge.

Table 1: Means of improving safety and LOS of pedestrian crossings

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THE WORLD'S NEW MEGACITIES

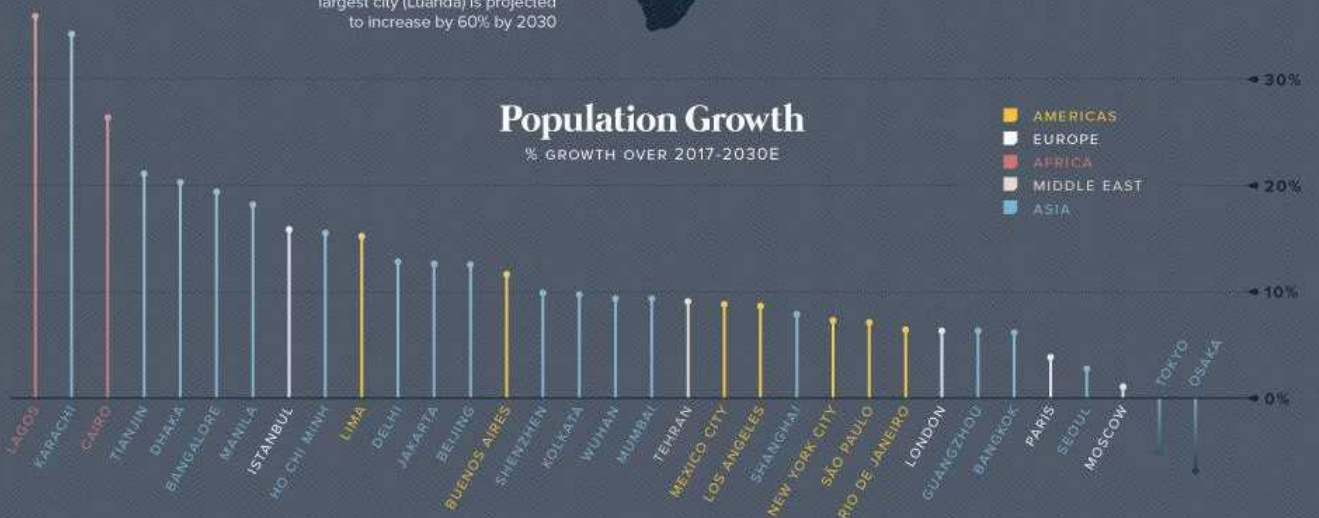
Developing countries will dominate megacity growth over the next two decades

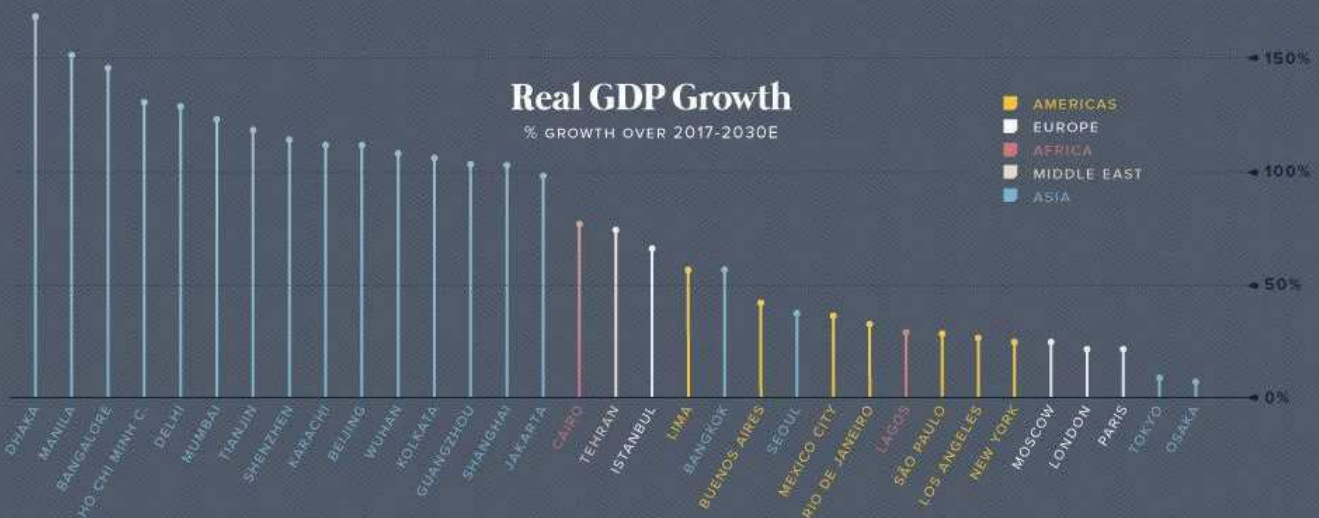
Currently, there are 33 megacities on Earth...

WHAT IS A MEGACITY?

An urbanized center, housing ten or more million inhabitants. They are often the primary nodes for investment in a country and feature the most affluent households.

...with another six on the way by 2030





Aotearoa Bike Challenge returns in February

We are pleased to announce the Aotearoa Bike Challenge will return this February. The Aotearoa Bike Challenge is a month-long workplace challenge which encourages Kiwis to make everyday trips by bike, offering tailored guidance and tips and the chance to win some great prizes along the way.

The 2019 challenge follows an encouraging 2018 competition which saw more than 14,000 people from over 1,600 organisations taking part, including over 2,600 new riders. Participants collectively made more than 159,000 trips by bike and cycled nearly 2.1 million kilometres.

This year's challenge is slightly different and will be points-based. This means organisations climb the leader board by encouraging their staff to ride, ride often, and encourage others to ride. This incentivises more riding and participation throughout the challenge.

Registrations for both workplaces and individuals are now open, and if you sign up before 18 December you'll be in to win one of two Christmas hampers! (If you've taken part in previous challenges all you need to do is sign into your account to be in to win).

Find out more and register at www.aotearoa.bike

BikeReady, set to go - Minister launches new system

The best of the best in cycle skills training is up and pedalling with the implementation of the new national cycling education system, BikeReady.

The Transport Agency, ACC and local government have worked together with the education community and cycling stakeholders to develop BikeReady – built on the finest of the regionally-based cycle skills training and initiatives available.

Greater Wellington Regional Council is New Zealand's first accredited BikeReady provider and the Transport Agency is working to get more providers accredited across the country.

Associate Transport Minister Julie Anne Genter (photo above right) was at Titahi Bay School near Wellington recently to announce that $23 million of funding has been committed by the Transport Agency and ACC to the BikeReady implementation programme over three years until 2021 – including funding for Bikes in Schools.

Bikes in Schools involves installing a riding track within school grounds which allows students to learn and practise riding their bike in a safe area before progressing out of the grounds.

This programme will be supported with $6.7 million of the BikeReady funding.

This funding means an additional 43,000 Kiwi kids will have access to Bikes in Schools facilities. Read more about the initiative or find out how you can get involved at www.bikeready.govt.nz

Waikato cycling and pedestrian bridge wins award

A cycling/pedestrian bridge over the Waikato River has won an award from the Institute of Structural Engineers.

This project was supported by the Transport Agency as one of the Waikato's Urban Cycleway Projects.

The Perry Bridge is the final link in the chain of the 70 kilometre Te Awa River Ride Walk and Cycleway. A visually stunning, innovative network arch, the bridge is very long and slender, spanning 130 metres at just three metres in width. It was installed using a unique cable launch method.

The efficiency of this form of structure kept costs within a practical budget, while also presenting the local district council and Te Awa the opportunity to create a visually compelling focal point to help attract people to the cycleway.

Ministry of Transport releases Road Transport and Public Transport Dashboards

The Ministry of Transport continues to release a new series of dashboards on its website, to assist the industry.

The dashboards replace the existing Transport Indicator Framework and also provide an update to the Transport Outlook: Current State publication which was released in July 2017.

When finalised the dashboards will detail a series statistics covering eight topics: household travel, road transport, public transport, cycling and walking, domestic freight (road and rail), air passenger and freight, maritime and ports, and environment and health.

Most recently, the Ministry has released the Road Transport and Public Transport Dashboards.

Topics in the road transport dashboard include amongst other things: the volume of vehicle travel (vehicle kilometres travelled), the vehicle fleet and its characteristics, road infrastructure quantity and quality, road financing and expenditure, and road safety.

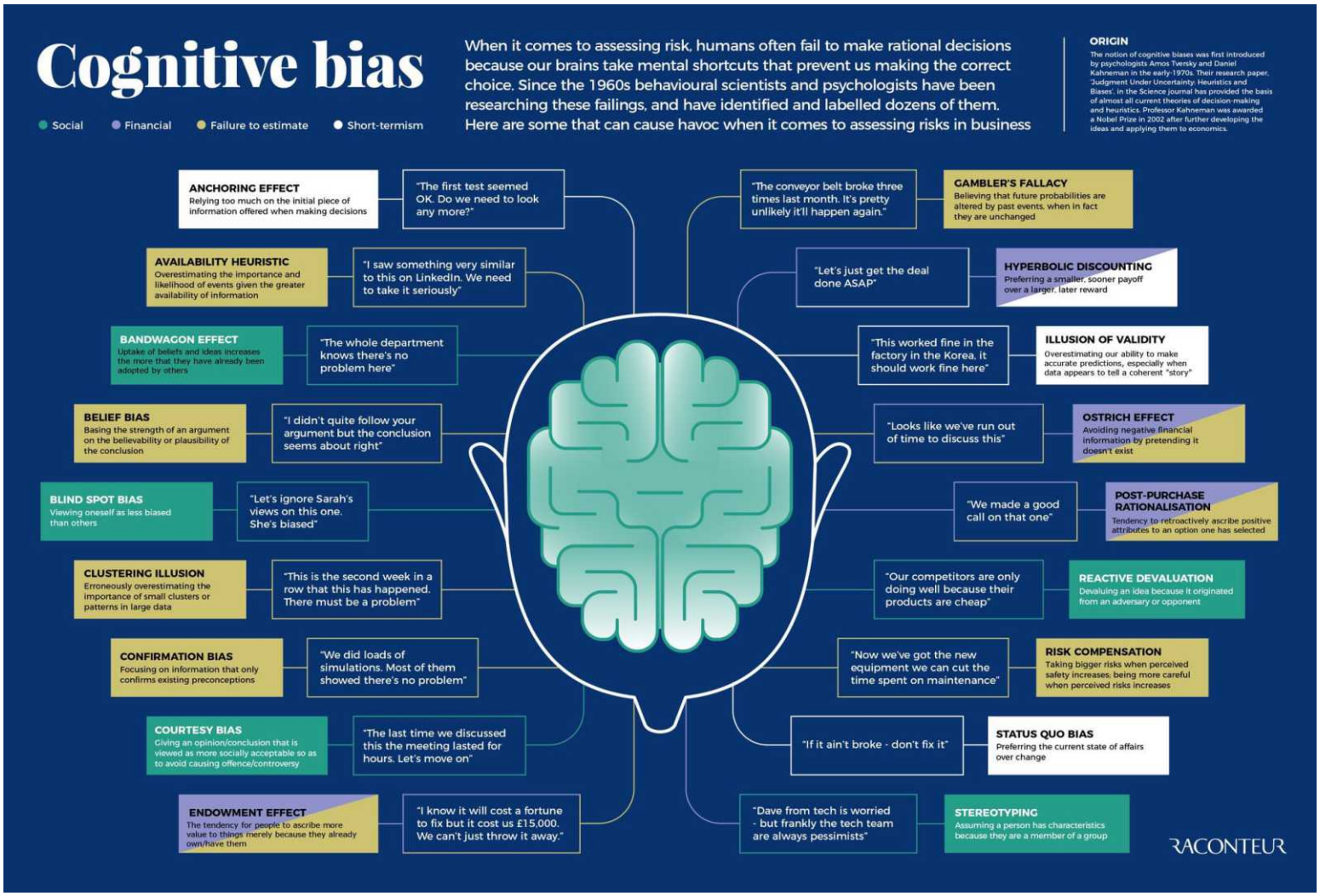
Access the report here.

The statistics covered by the public transport dashboard include for example: public transport boardings, public transport funding, and consumers price indices for public transport. Access the report here.

The Ministry will advise you as each new set of Dashboards are released. As noted, the Transport Dashboard is still under development. Beyond adding more topics, improvements to the user navigation and user-analytical functionality are also in the works. However, The Ministry always welcomes your feedback on the Transport Dashboard.

If you have any questions, please email MoTAnalytics@transport.govt.nz

Transport Knowledge Hub

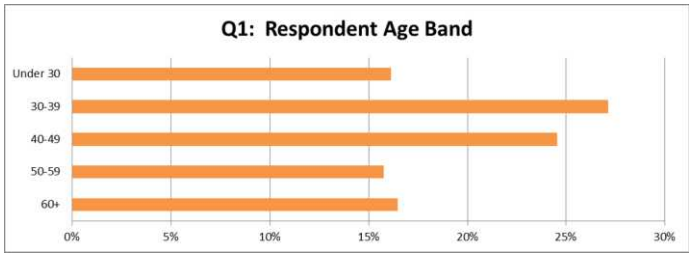


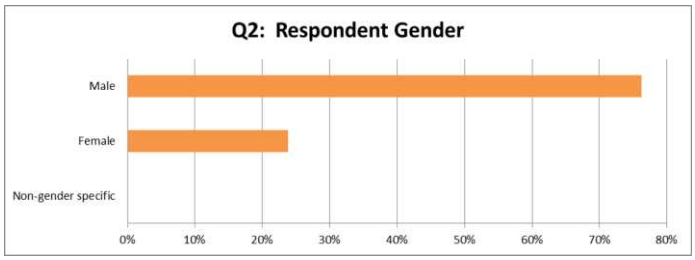
Results of Transportation Group Member Survey

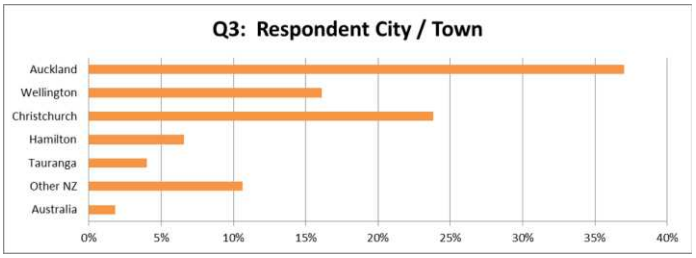
The Transportation Group's National Committee is continually reviewing what activities we do, to see if this meets the needs and expectations of our members.

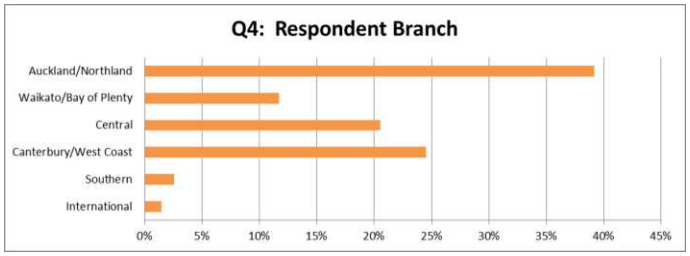
As part of this, we undertook a recent survey to understand what members require of the Group, how members value what we currently do, and whether we can make any improvements to our activities.

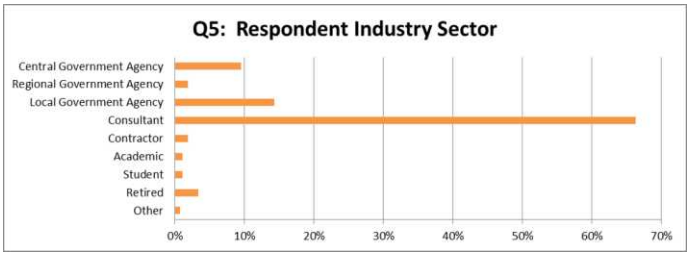
273 responses were received out of around 1,100 members, representing approximately a 25% response rate. Most respondents (52%) were in the 30-49 age bracket. 76% of respondents were male. The bulk of respondents were from the three major cities, Auckland 37%, Christchurch 24% and Wellington 16%. 66% were consultants and 14% from Local Government. A summary of the respondent demographics is below:



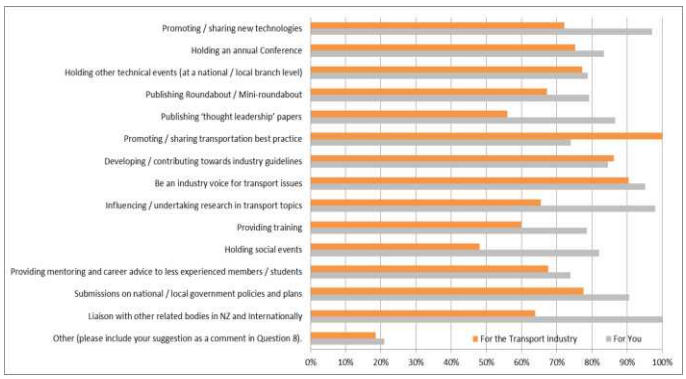








We asked respondents to rank the Group's activities that provide the most value for the NZ transportation industry and to members personally. The results are below:



For the industry, the top three Group activities were found to be 'Promoting / sharing best practice', 'Developing / contributing towards industry guidelines' and 'Being an industry voice for transport issues'.

Holding an annual conference was found to be the sixth most popular activity and publishing Roundabout / Mini-roundabout ranked ninth of the fifteen activities.

Results for members personally had a different profile than for the industry, indicating that individuals had different needs. The top four activities were 'Liaison with other related bodies in NZ and Internationally', 'Influencing / undertaking research in transport topics', 'Promoting / sharing new technologies' and 'Being an industry voice for transport issues'.

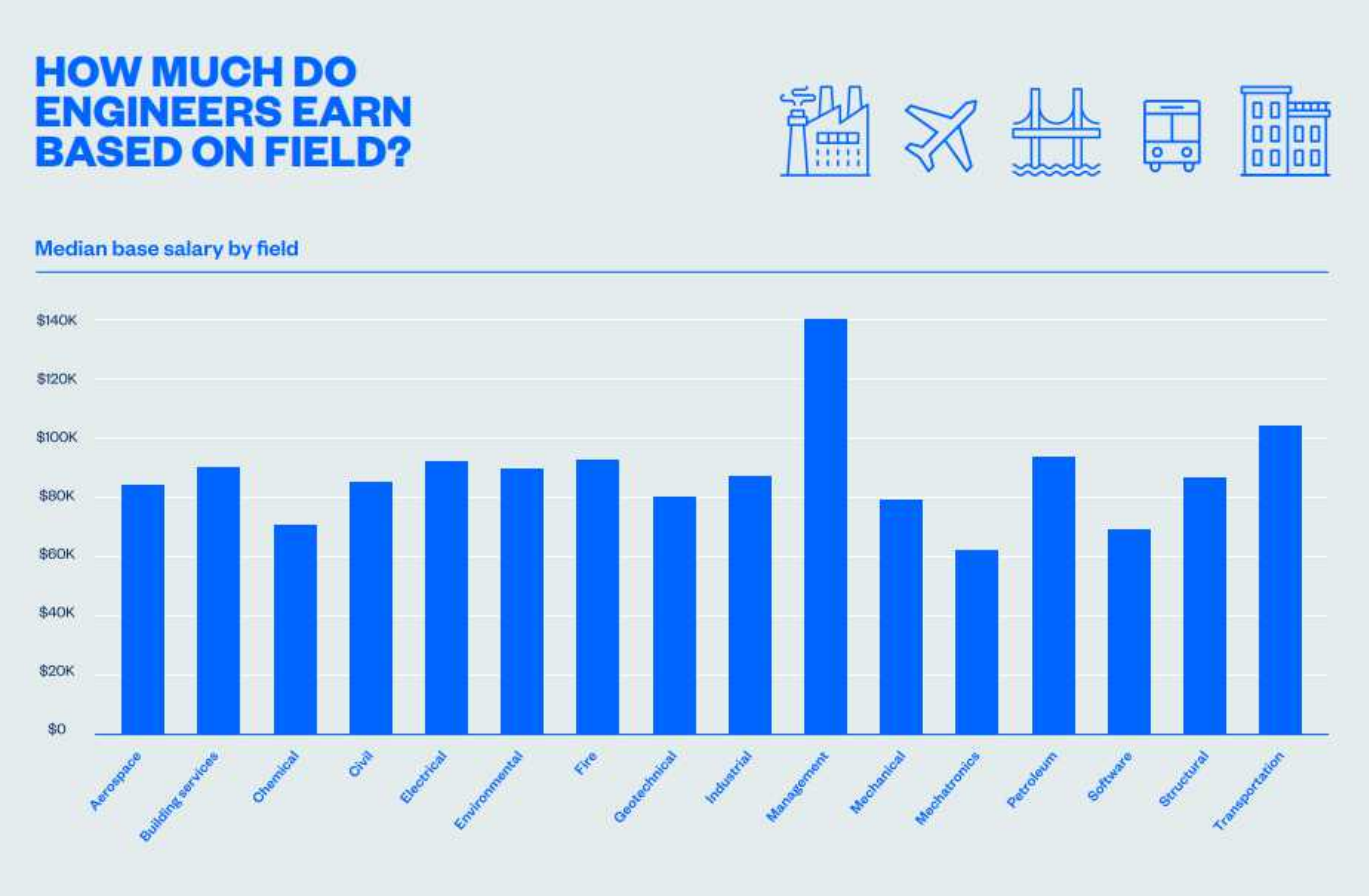
Holding an annual conference was found to be the eighth most popular activity and publishing Roundabout / Mini-roundabout ranked eleventh out of the fifteenth activities.

As a reward for taking part in the survey, we randomly selected one respondent to win a small prize. Congratulations to the winner Nabiha Haque!

Thanks to everyone who took part in the survey. The National Committee will be using the results to help shape upcoming events and activities. If you have any further suggestions on how the Group can better support members or the industry, please get in touch with your local branch chair or any member of the National Committee (see back pages of Roundabout or the Group website).

TRANSPORTATION GROUP
NEW ZEALAND

Work in Transportation, Get Paid More



This is a snapshot from the just published 2018 Engineering NZ Remuneration Survey. The median base salary for Transportation Professionals is over $100K, and appears to be at least 10% higher than other disciplines (ignoring management). Stick with us and you'll get paid better, maybe...

Branch updates

Auckland/Northland Branch

The branch is all done for the year, which has been very busy. We will probably hold the AGM in February, so look out in January's Mini-Roundabout for details.

Waikato/Bay of Plenty Branch

The Waikato/Bay of Plenty branch have struggled with committee membership over the past year due to changes in staff and work commitments.

We welcome members who would like to have a more active role in both regions to be part of our committee. Please contact Alan (agregory@tonkintaylor.co.nz) or Craig (craig.richards@beca.com) for details of next meeting and for further information.

Next year we are planning a few social and technical events, hopefully in association with the University of Waikato. We are always open to suggestions from our members so please get in touch

Central Branch

Very busy organising the conference.

Canterbury-West Coast Branch

We've had an on again off again last quarter and are now settling into the December Christmas rhythm.

September was a month of collaboration with us joining in the latest Pecha Kucha Christchurch fix in the Festival or Architecture week. We also enjoyed a networking evening with several other industry bodies and got a taste of Christchurch's newest hospitality development – The Terrace.

October was more laid back for the team as we prepped for a busy November and December.

Notably, November started with the AGM. This saw the stepping down of two committee members (thanks and bye Glen Koorey and Jared White) and stepping up of two more (welcome Ben Wong and John Lieswyn). Jeanette then led a discussion about shared streets and the existing guidance around them, which will be documented in a think-piece in a future edition of Roundabout.

A few weeks later the Bruntletts of Modacity came to town (see photo below from when they also visited Auckland). Chris and Melissa gave a public seminar on building a cycling city on their first night for 120 odd people from a variety of backgrounds, with their two kids Etienne (9) and Coralie (11) also standing up and speaking about their experiences.

The Bruntletts also held a workshop for 28 stakeholders of Christchurch about community opinions about cycling, opened the Women in Urbanism photo exhibition around Cycling in Christchurch, and had some good face time with keen city councillers.

Earlier this week we had our end of year function where we wandered down the new Oxford Terrace promenade with guides from Ōtākaro and spent the evening at the Pegasus Arms, and today both this year and next years' committees came together to create our blueprint from next year. We've got a new chairperson for next year with Nick Lovett taking the reins, and we will be trialling casual and regular Lunch & Learns for those who can't make evening events. We're excited for the new year and so should you be!

Southern Branch

Definitely exists.

NZ Modelling User Group

Remember if you are a Transportation Group member, it is free to join NZMUGs. All you need to do is email tech.groups@engineeringnz.org and ask to sign up.

Signal Network User Group

Remember if you are a Transportation Group member, it is also free to join SNUG. All you need to do is email tech.groups@engineeringnz.org and ask to sign up.

Canadian bike advocates Chris and Melissa Bruntlett visited Auckland and Christchurch recently.

Active Modes Infrastructure Group Update

NZTA recently commissioned research "Providing for walking – Research into guidance and policy" and this is now live on the NZTA website at the following link.

The cycle give way signs and a few other cycling related traffic signs have now been Gazetted and are available on our Traffic Sign Specifications web pages. So, all those signs out there are now legal. The Gazette notice can be found here

AMIG concluded its meetings for the year with a two-day catch-up in Auckland on November 29th-30th. The longer time-slot allowed attendees a chance to have a look firsthand riding the recent Northcote cycle route (see photo), as well as getting through some additional agenda items. Here's some key points of interest from the latest meeting:

One of the reasons for the extended meeting was to allow for review of some of the draft updates to the Cycling Network Guidance (www.nzta.govt.nz/cng). The CNG is now an ongoing 'living document', with additions and amendments being made as new information comes to hand from trials, case studies, overseas examples, and changes in relevant legislation. At present, there are over 50 different items being developed or reviewed for the CNG, some minor changes and some quite significant updates. At this meeting, feedback was received on proposed updates to hook turn guidance, cycleway separators, neighbourhood greenways, and merges between cycleways and roads at intersections.

Coloured surfacing was a topic of some discussion at this meeting. Increasingly we are seeing the likes of green, red, and other colours being used as part of treatments for cycleway conflict areas, pedestrian crossings, shared spaces, etc. While it may provide a useful indicator or guidance, there is a need to ensure that there is some consistency about how and where it is used; it is another 'traffic control device' after all. Some investigative work will scope out the range of current or potential uses of coloured surfacing to identify where some specific national guidance might be needed.

The previous draft guidance on bollards on pathways has been expanded into a restrictive devices policy, now covering all manner of 'furniture' on or close to cycling paths. The default position is that no potentially hazardous objects (poles, barriers, railings, etc) will be placed in these areas unless there is a clear documented need for them (after exploring alternatives), or rider speed is managed first.

Now that public e-scooters have touched down in our main centres, there has not surprisingly been some consideration of user behaviour and how fit-for-purpose our e-scooter regulations currently are. NZTA are liaising with the main city councils to ensure that a coordinated approach is taken to amending existing Rules or bylaws based on the initial local trials. The current anomaly that technically prohibits e-scooters from using on-road cycle lanes is one of the issues being looked at, as well as the potential for more explicit speed requirements for wheeled devices on footpaths.

Other items discussed at AMIG this time include pedestrian/cycle signal trials, updates on multimodal planning/design industry training, forthcoming redevelopment of NZ pedestrian guidance, findings from cycling Level of Service research, and the development of a national cycle count database. If you want to know more about this and previous AMIG meetings, check out the group's webpage: http://rcaforum.org.nz/working-groups/active-modes-infrastructure

The next AMIG meeting will be at the end of February 2019 back in Wellington and will probably also feature a look at some of the recent walking/cycling developments around town too. If you would like to attend, or at least be part of the ongoing email discussion group, contact co-convenors Wayne Newman (RCA Forum; wayne@cresmere.co.nz) or Gerry Dance (NZTA; Gerry.Dance@nzta.govt.nz).

I don't receive much feedback from Group members, but your practical input is important. If you have any ideas or issues regarding the planning, design or regulation of active modes, have a chat with me about raising these on your behalf.

AMIG is also always on the lookout for RCAs wishing to trial new treatments, e.g. we're currently interested in trialling cycleway merge treatments approaching roundabouts.

Glen Koorey (Trptn Group AMIG rep), ViaStrada (glen@viastrada.nz, ph.027-739-6905)

2020 Road Safety Strategy – Reference Group Meetings

Everyone in the NZ transport industry is well aware of the worsening road safety statistics from the past five years.

The current "Safer Journeys" national road safety strategy (2010-20) is coming to an end, and so work has begun by the new Government on developing the next strategy from 2020 onwards. The revised GPS, National Land Transport Programme, and public statements by the Transport Ministers have already signalled a stronger focus on road safety by this administration, including the adoption of a "Vision Zero" framework.

As part of the development of the next road safety strategy, the Ministry of Transport has recently convened a series of workshops for five sector reference groups; these have been focused around the four traditional safety planks of roads/infrastructure, vehicles, road user behaviour and speed, as well as a new group on vehicles as a workplace (a separate exercise is also looking into the impacts of post-trauma care/response). Various representatives from local government, transport advocacy/sector groups, and other relevant agencies were asked to contribute to these meetings between September – November.

The Transportation Group NZ was invited to take part and had representatives in the roads/infrastructure (Pravin Dayaram) and speed (Glen Koorey) reference groups.

Initial meeting content focused on bringing everyone up to date with current road safety data and key issues showing up. For example, road deaths have increased by 52% since 2013 (serious injuries by 44%); these changes are far in excess of the corresponding growth in population, traffic volumes or GDP.

We're also performing much worse (up to 3 times higher) than other countries such as Norway, Sweden and Switzerland (many that are similar in size/density as us), so it is useful to understand what it is that is working so well for them.

With regards to road infrastructure planning and design, the relationship between road networks and land use/liveability was explored, as there may be 'structural' planning issues affecting our ability to produce safer networks.

The impacts of existing infrastructure on existing road users (including people walking and cycling) were also discussed; this also led to consideration of how our existing standards and guidelines help or hinder the ability to produce infrastructure that is safe for all, e.g. do mandatory standards ensure good quality or stifle innovation?

The infrastructure reference group also looked at what different problems are apparent on our rural and urban road networks. It should be noted that, while 75% of motor vehicle fatalities occur on rural roads, more than half of active mode deaths are in urban areas; so different solutions are likely to be needed in each case. For example, there might be a focus on median barriers and skid resistance in rural areas vs intersection and crossing improvements in urban areas.

In the safer speeds discussions, it was highlighted that over 80% of existing roads in NZ currently have a posted speed limit that doesn't match the calculated "safe and appropriate speed". While in some cases, there are valid reasons for this (and planned road improvements will address some inconsistencies), clearly there are a considerable number of roads that should be considered for speed review (generally downwards).

A sticking point is how to do this in an efficient manner (i.e. minimise the required red tape for RCAs) while also taking the public along in understanding the need for these changes. Various options were considered for expediting the setting speed limits process, such as a national speed limit register, different default speed limits, and regional speed management plans.

The speed reference group also explored options for greater use of technology, such as in-car intelligent speed adaptation and point-to-point speed cameras. The respective roles of infrastructure design, enforcement penalties and marketing campaigns/incentives for influencing travel speeds were also discussed, particularly looking at what has been tried overseas.

The impact of speed on more vulnerable road users was also looked at, including different ways of dealing with speeds around schools, commercial centres and other high-risk locations. It is notable that, while the main focus is on safety, the impacts of speed on broader transport outcomes such as health and liveability should not be underestimated either.

Although not directly involved, we also received some updates of what the other reference groups were discussing. For example, the vehicles group discussed how to undertake safety retrofits for the existing vehicle fleet (incentivising vs mandating?) while the road user group considered different mechanisms to influence behaviour, including enforcement approaches and penalties.

The vehicles as a workplace group looked at opportunities for businesses to take leadership on changes to road safety for their vehicle fleets, particularly given their health and safety obligations.

The next step for the Ministry and the Transport Agency is to take the discussion points/feedback and develop a draft road safety strategy. After internal review, this should be out for public consultation in March/April next year.

All going well, following review of the feedback and further revision, the aim is to launch the new strategy in September 2019. It should be noted that, rather than waiting for 2020, some road safety initiatives are likely to be rolled out sooner (e.g. easier implementation of speed limit changes).

For further information about the work so far, contact Pravin or Glen.

Glen Koorey (glen@viastrada.nz) &
Pravin Dayaram (P.Dayaram@harrisongrierson.com)

Special dates of interest

- Registration is open now!
- Early bird registrations close 1 Feb.
- Applications for young professional & student registrations

Early bird registration fees 2019 (including GST)

Full	$1075
Single day	$650
Life member	Free
Student full	$450
Student day	$250
Young professional full	$750
Young professional day	$300
Exhibitor	$575
Non-member fee	$158.70

Networking events at conference

Informal get together, Sunday 3 March

For those interested, there will be an informal get together at a CBD bar on the evening before conference.

Welcome function, Monday 4 March

Walk to the Cable Car and ride up to the Carter Observatory. Take a seat in the stunning planetarium.

Conference dinner, Tuesday 5 March

Here is a chance for you to celebrate and unwind with your colleagues and other delegates after an intense couple of days of learning. Join us for dinner at Parliament.

Read more about our keynotes

MARK AMES, STRAGEGIC CITIES

Mark believes understanding the media production process is a vital and underestimated skill for anyone delivering change in cities today. Join Mark as he discusses **"Talking change: manage the conversation about change "**.

ISABEL DEDRING, ARUP, UK

Isabel is Global Transport Leader, ARUP. Previously, she served as Mayor of London's Deputy Mayor for Transport, and the former Environment Advisor. As Dep. Mayor for Transport, she set policy and supervised transport.

www.tgconference.co.nz

Transportation Engineering Postgraduate Courses 2019

Dept of Civil & Natural Resources Engineering University of Canterbury

Supported by:

The courses below are available for full-time or part-time students studying for the following postgraduate transportation qualifications at Canterbury:

- Certificate of Proficiency (COP) ~ for individual one-off courses (great for CPD!)
- Postgraduate Certificate in Engineering (PGCertEng) ~ typically four courses
- Master of Engineering Studies (MEngSt) ~ typically eight courses
- Master of Engineering in Transportation (MET) ~ up to six courses plus research project or thesis

Please see the website of the University of Canterbury for fees per course in 2019:
http://www.canterbury.ac.nz/courseinfo/MyGetCourses.aspx?course=&year=2019

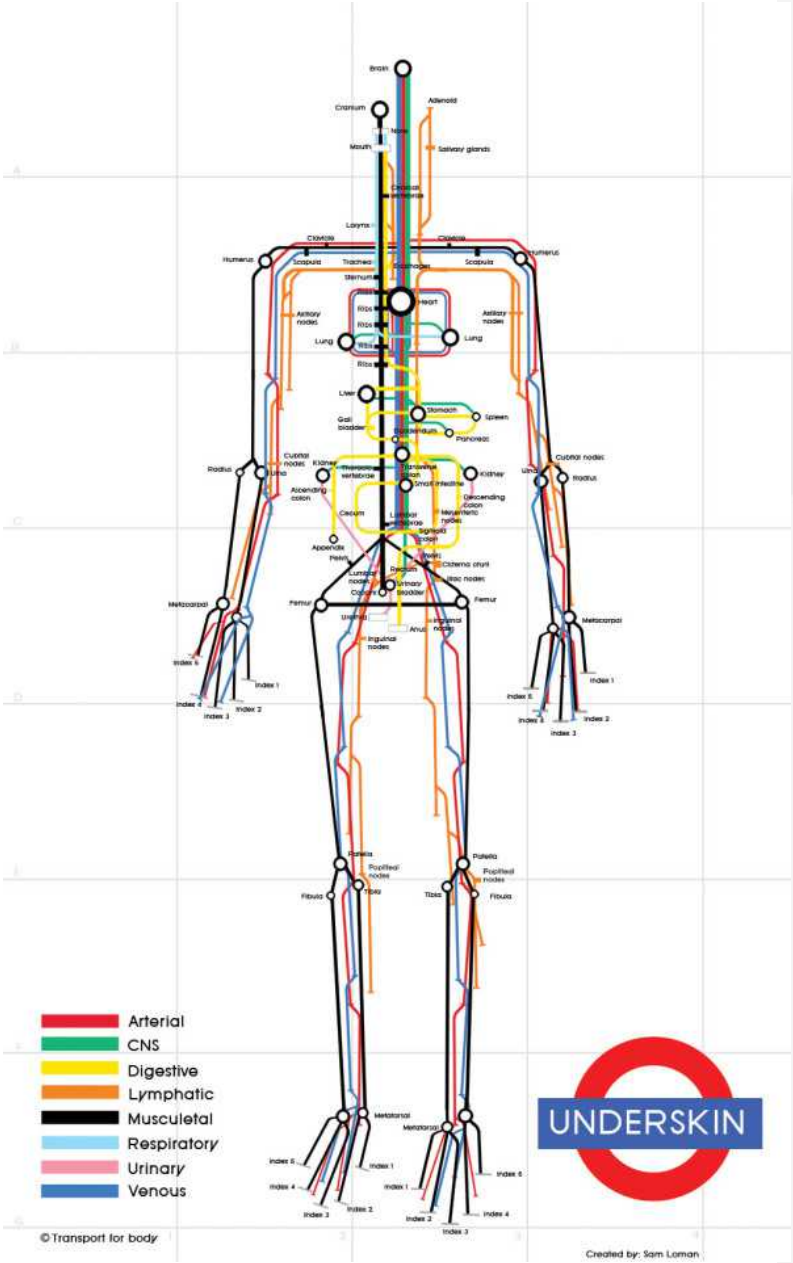
All courses run in "block mode" to enable part-time and distance students to easily take part. In 2018, the contact time will be four days (i.e. a 2-day block of 2 blocks), and students taking the courses will be expected to do more reading and learning in their own time.
All prospective students must apply to enrol in courses no later than one week prior to the course starting (preferably earlier), otherwise late fees may apply.
Candidates with a Bachelor of Engineering OR other relevant degrees (e.g. planning, geography, psychology, maths), OR non-degree qualification and suitable work experience, will be considered for entry.

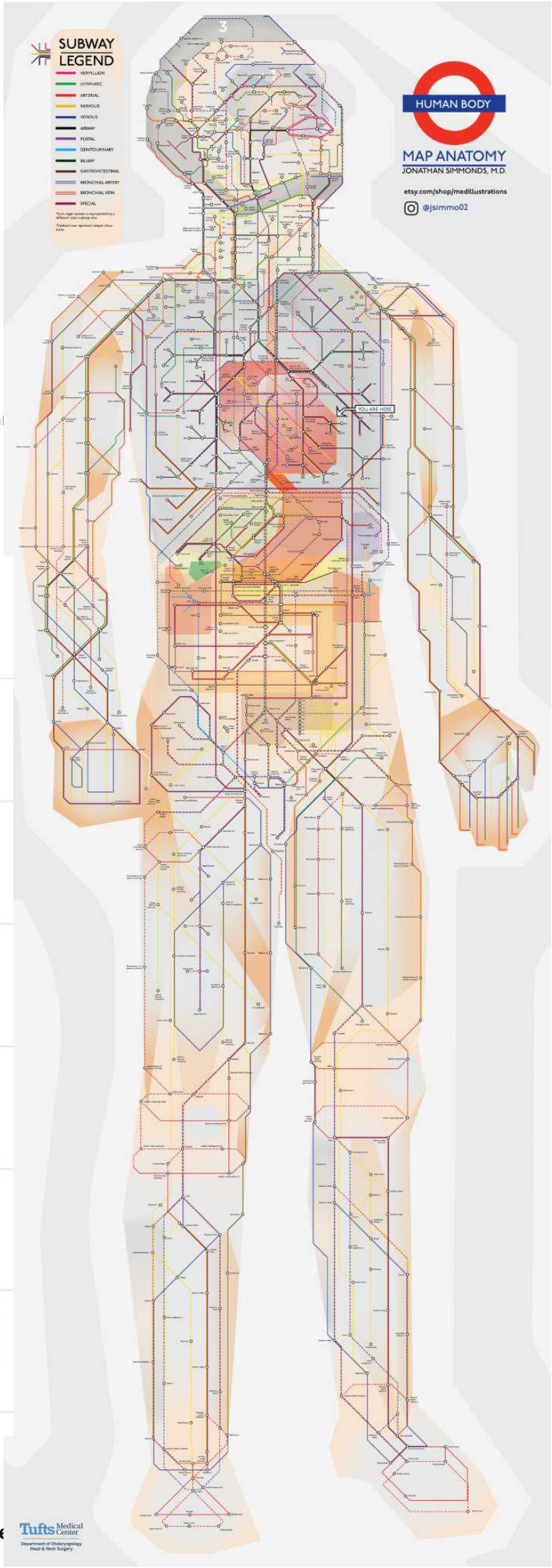
COURSE	DESCRIPTION (see flyers on website for more details)
Semester 1	
ENTR 401: Fundamentals of Transport Engineering	Self-study course with tutorials on 27 Feb (Semester 1) and 24 July (Semester 2) Course coordinator: Dr. Kun Xie Traffic engineering; Road geometric design; Highway capacity and level of service; Intersection analysis & design; Traffic flow theory; Traffic signal control; Transportation planning; Accident reduction; Statistical analysis. [bridging course for non-transportation students]
ENTR603: Advanced Pavement Design	Block dates: 18-19 Mar, 13-14 May Course coordinator: Assoc. Prof. Mofreh Saleh Covers the principles and fundamentals of Superpave characterization system; Multilayer analysis using Circly; Traffic volume and loading calculations; Austroads mechanistic empirical pavement design; Deflection analysis and backcalculations; Overlay design.
Semester 2	
ENTR608: Traffic Management and Monitoring *(Block dates: 26-27 Aug, 30 Sep-1 Oct)*	Course coordinator: Dr. Mehdi Keyvan-Ekbatani This course will provide students with a fundamental understanding of traffic network estimation techniques, including control theory, traffic estimation and traffic control techniques using a variety of simulation and software packages. This course is expected to develop student skills to the level where the student understands the theory behind traffic control and can identify, diagnose and manage traffic flow problems.
ENTR612: Transport Policy and System Management *(Block dates: 19-20 Aug, 23-24 Sep)*	Course coordinator: Dr. Diana Kusumastuti Transport economics; Travel demand management; Transport policy objectives and instruments
ENTR615: Advanced Traffic Flow Theory and Simulation *(Block dates: 2-3 Sep, 16-17 Sep)*	Course coordinator: Assoc. Prof. Dong Ngoduy This course introduces advanced concepts and principles of traffic flow modelling. Participants will also obtain skills in the practical application of traffic simulation software.

Note: Other relevant courses at the University of Canterbury, University of Auckland or elsewhere may also be suitable for credit to a PGCertEng, MEngSt or MET (contact Assoc. Prof. Saleh for approval).
For more details contact:
Associate Professor Mofreh Saleh (Ph. 03 369 5118; Email: mofreh.saleh@canterbury.ac.nz)
Or visit the website: **www.met.canterbury.ac.nz**

Photo Competition

No photos this edition, just a couple of versions of Tube designs being applied to human bodies to explain va internal systems. Seen any others? Send photos to: daniel.newcombe@at.govt.nz





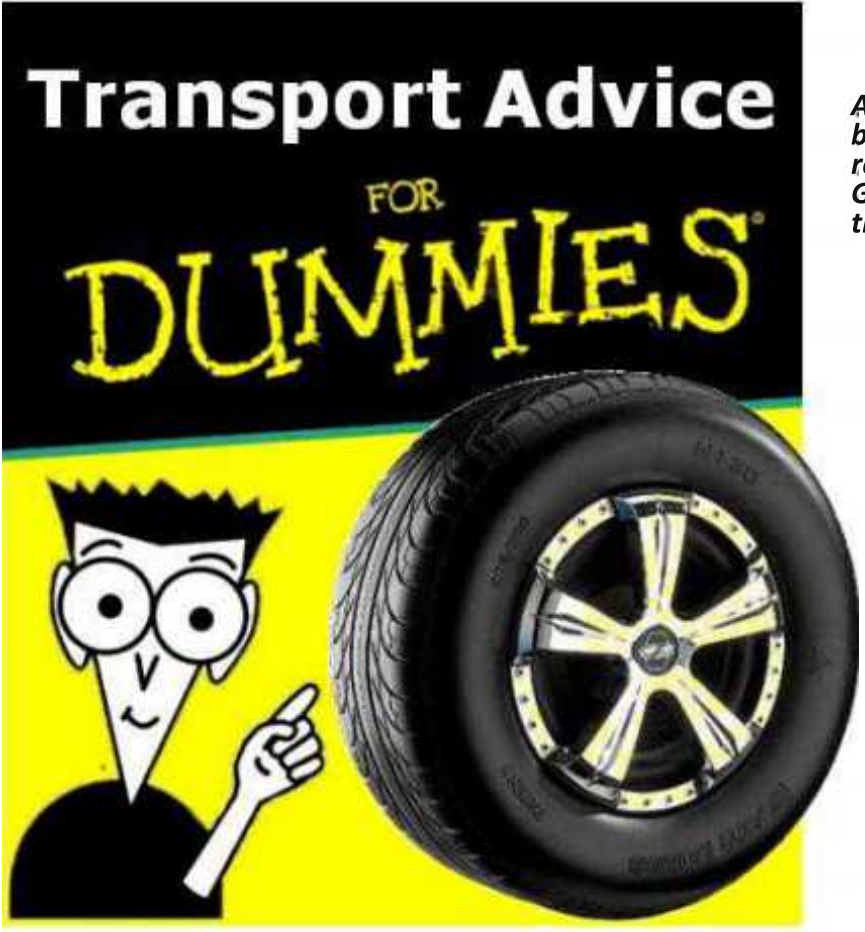
Roundabout of the month

Road users were left stuck in a hellish traffic jam on a roundabout in Xi'an, the capital of Shaanxi province, China, with nowhere to go. At least the greenery on the roundabout gave them something to look at.

Seen a better pic? Email: daniel.newcombe@at.govt.nz

Caption competition

This edition's caption competition is has the Associate Transport Minister speaking to some schoolchildren. Who knows what she is saying? A caption has been suggested. If you have a better suggestion, send it to daniel.newcombe@at.govt.nz



A tongue-in-cheek column on transport matters by The Transport Guy. The contents do not represent the views of the Transportation Group NZ, Engineering NZ, or anyone else for that matter. Follow the advice at your own risk.

Dear Transport Guy

People are going crazy over these new Lime scooter things. Its madness! Zooming all over the place and endangering pedestrians. This should be banned.

Mike, Auckland

Dear Misery

You are correct. People have found a fun, cheap and sustainable way to travel around without being in a car. This threatens your world view and possibly your manhood. The sooner people come to their senses and realise that trips - no matter how short - should always be undertaken in a car, the better. If someone travels to work on a scooter, did that trip really happen? Not according to our traffic models.

~Transport Guy

Dear Transport Guy

As the year draws to a close, what are the main transport themes you think we'll see in the New Year?

Phil, Wellington

Dear Full

I think we've discovered a new fuel supply - Mike Hosking's tears over people using cycleways. This fuel source will just grow and grow in the coming years, as despite him telling people they will never be used, more and more people will cycle. This fuel source is both sustainable and fun to watch.

Another theme will be continuing growth in the purchasing of electric cars - there will be more of them. Until people realise that sitting in traffic in an electric car is the same as sitting in a petrol-powered car - it's still annoying watching cyclists and E-scooter riders zoom past, and it is still hard to find a parking space.

So people will ditch their cars for other modes. And those other modes will include light rail. Not in the coming year. Or the one after. Well, not for quite a few more years. But eventually you'll be able to catch a tram to the airport. Whether its Auckland Airport or Wellington Airport remains to be seen.

And lastly, road safety will finally be taken seriously. By which I mean NZTA will set up a research group to report to a subcommitee to report to a management group to consider the possibility that travel time benefits maybe shouldn't be able to be traded off with people's lives when designing and funding road projects. These are heady days indeed.

Enjoy the coming year. It will be a fun ride.

~Transport Guy

Do you have a dumb question for Transport Guy? Email it to: transportfordummies@gmail.com and he'll do his best to answer...

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Kids explain traffic engineering

"People should wear helmets when they ride Lime E-scooters. But to be really safe, car drivers just shouldn't go fast. Then everyone is safe no matter what."