The future of transport in Tāmaki Makaurau Auckland

Analysis of a deliberative forum with Aucklanders

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Koi Tū: The Centre for Informed Futures is a research centre and an independent, non-partisan think tank at Waipapa Taumata Rau, University of Auckland with associate members across New Zealand and the world.

We address critical long-term national and global challenges arising from rapid and far-reaching social, economic, technological, and environmental change.

Our name, Koi Tū, was gifted by Ngāti Whātua Ōrākei. It means 'the sharp end of the spear'. Like our namesake, Koi Tū aims to get to the heart of long-term issues challenging our future.

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Executive summary

Auckland's transport network faces significant challenges. Planning that has prioritized private car travel over public transport has created car dependency, compounding emissions and congestion problems. Waka Kotahi NZ Transport Agency has asked Auckland Council and Auckland Transport to develop a plan for reducing private vehicle travel, as an important part of the effort to reach its emissions reduction goal. This reduction may require substantial shifts in transport systems and behaviour. Therefore, it is crucial to gain insight into public opinion regarding potential changes to ensure that they will be supported and effective.

Working with Koi Tū: The Centre for Informed Futures at the University of Auckland, the Council has supported the development of a deliberative forum on the future of the transport system, based on the principles of deliberative democracy. The aim was to understand the viewpoints of a diverse cross-section of citizens before and after their exposure to expert knowledge, interactions with fellow participants, and examination of the trade-offs associated with various choices through structured exercises. The group of nearly 100 Aucklanders was selected using two-step randomised civic lottery process known as sortition.

The question that was put to the participants was:

What changes do you think are needed to ensure that everyone can get around Auckland efficiently, affordably, safely and sustainably, well into the future?

The primary measure of the impact of the deliberative process was the change in survey responses obtained before and after the deliberation, regarding participants' perspectives on the existing transport system and its impacts, and their level of support for various possible changes. The survey asked how much they agreed or disagreed with a set of statements, using a Likert rating scale from 0 (strongly disagree) to 10 (strongly agree). The difference in responses between the two surveys revealed shifts in views after learning and deliberation. Qualitative data on participants views during deliberation was also collected and analysed.

What did the deliberative forum tell us?

Results of the pre- and post-deliberation surveys are summarised in the table below.

At the start of the forum there was already support for some (but not all) changes and interventions that would help to reduce the negative impacts of transport. After deliberation, support for all such interventions increased, as indicated by the mean level of support across all participants. From the start, the participants understood that building more road lanes was not a particularly effective way to alleviate congestion and other problems, with low support in the first survey reducing further after learning and deliberation.

The data indicate that the most favoured changes are:

- Upgrade Auckland's rail network so that trains run faster and more frequently
- Make it safer, easier and more comfortable for everybody to walk around their local area
- Provide more bus services so that buses turn up frequently at all times of the day
- Provide a safe and connected bike path network across the Auckland region, including removing car parking spaces where required
- Build more homes closer to the city centre, public transport stations and main bus routes

	Interventions (ranked by mean score after deliberation)	Mean score		% Disagree (score 0-3)		% Neutral (score 4-6)		% Agree (score 7-10)		Net % agree		Change in net % agree
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
1	Upgrade Auckland's rail network so that trains run faster and more frequently	8.3	9.3	0	0	9	4	91	96	91	96	+5
2	Make it safer, easier and more comfortable for everybody to walk around their local area	8.2	9.1	3	1	11	4	86	95	83	94	+11
3	Provide more bus services so that buses turn up frequently at all times of the day	7.7	8.9	3	1	11	5	86	94	83	93	+10
4	Build more homes closer to the city centre, public transport stations and main bus routes	6.1	8.4	14	3	27	11	59	86	45	83	+38
5	Provide a safe and connected bike path network across the Auckland region, including removing car parking spaces where required	6.5	8.3	17	3	17	12	65	85	48	82	+34
6	Provide all-day bus lanes on main roads	6.7	7.7	14	7	22	14	64	79	50	72	+22
7	Prevent further development of new housing and industry in greenfield areas outside of the current developed area	5.2	7.3	23	9	22	23	55	68	32	59	+27
8	Provide subsidies for electric bikes	5.8	7.1	24	13	14	13	62	74	38	47	+9
9	Provide subsidies for car sharing services so people can easily rent by the hour instead of owning a car	5.3	7.0	18	1	25	27	56	72	38	71	+33
10	Charge a fee for on-street car parking which varies in price depending on the area where people live and park	4.0	6.2	42	18	16	19	23	62	-19	44	+63
11	Charge a fee for driving into the city centre	4.3	6.1	43	20	14	27	38	53	-5	33	+38
12	Charge a fee for driving on all main roads when traffic is heavy	3.8	5.9	47	23	21	28	32	49	-15	26	+41
13	Increase the Regional Fuel Tax on petrol and diesel to pay for transport improvements in Auckland	3.8	5.2	44	28	28	28	28	45	-16	17	+33
14	Enable self-driving cars to provide a taxi service	3.2	3.9	48	37	18	35	33	28	-15	-9	+6
15	Build more lanes on motorways and main roads	4.2	3.8	43	47	21	30	36	23	-7	-24	-17

Survey responses ranked according to how much (on average) participants agreed with possible interventions, scored on a scale from 0-10 (0 indicates strong disagreement and 10 indicates strong agreement)

One interesting finding related to the level of support for establishing a network of cycle lanes across the city, including the removal of car parking spaces where necessary. Support for this intervention in the first survey was approximately 65%, which increased to 85% after deliberation. The percentage of individuals who were strongly against the idea dropped from an initial 17% to only 3% between the first and second survey. This support is notable given that nearly three quarters (73%) of participants indicated that they cycled infrequently (if at all), and most surveying suggests that people are reticent to lose access to car parking.

There were several interventions that originally scored negatively, but gained support such that the mean moved from negative (disagreement) into the positive (agreement). These interventions were all associated with pricing and charging, including on-street parking fees, peak-time driving charges, and

fees for driving into the city centre. Interestingly, the intervention with the largest change in the percentage of supporters after deliberation was about charging for on-street parking, which went from net negative (-19%) to net positive (44%) support. While these interventions still do not rank among the most supported, the change in viewpoints is notable and suggests that many understand that some unpopular decisions are required.

How the interventions ranked in terms of levels of support at the end of the forum is illustrated in the graph below. The rankings change slightly after deliberation, with a few interventions shifting positions. However the changes in levels of agreement on some interventions were more substantial, particularly for those relating to pricing. The five options showing the largest change (increase) in support following deliberation were:

1. Charge a fee for on-street car parking which varies in price depending on the area where people live and park
2. Charge a fee for driving on all main roads when traffic is heavy
3. Charge a fee for driving into the city centre
4. Build more homes closer to the city centre, public transport stations and main bus routes
5. Provide a safe and connected bike path network across the Auckland region, including removing car parking spaces where required

Mean scores before and after deliberation

Intervention	Pre-deliberation	Post-deliberation
Upgrade rail network	8.3	9.3
Safer & easier walking	8.2	9.1
More frequent buses	7.7	8.9
More housing near center & hubs	6.1	8.4
Safe & connected bike path	6.5	8.3
All day bus lanes	6.7	7.7
Prevent greenfield development	5.2	7.3
E-Bike subsidy	5.8	7.1
Car sharing subsidy	5.3	7
On street parking fee	4	6.2
City center toll	4.3	6.1
Time of use charge	3.8	5.9
Regional fuel tax	3.8	5.2
Self driving taxis	3.2	3.9
More motorway lanes	4.2	3.8
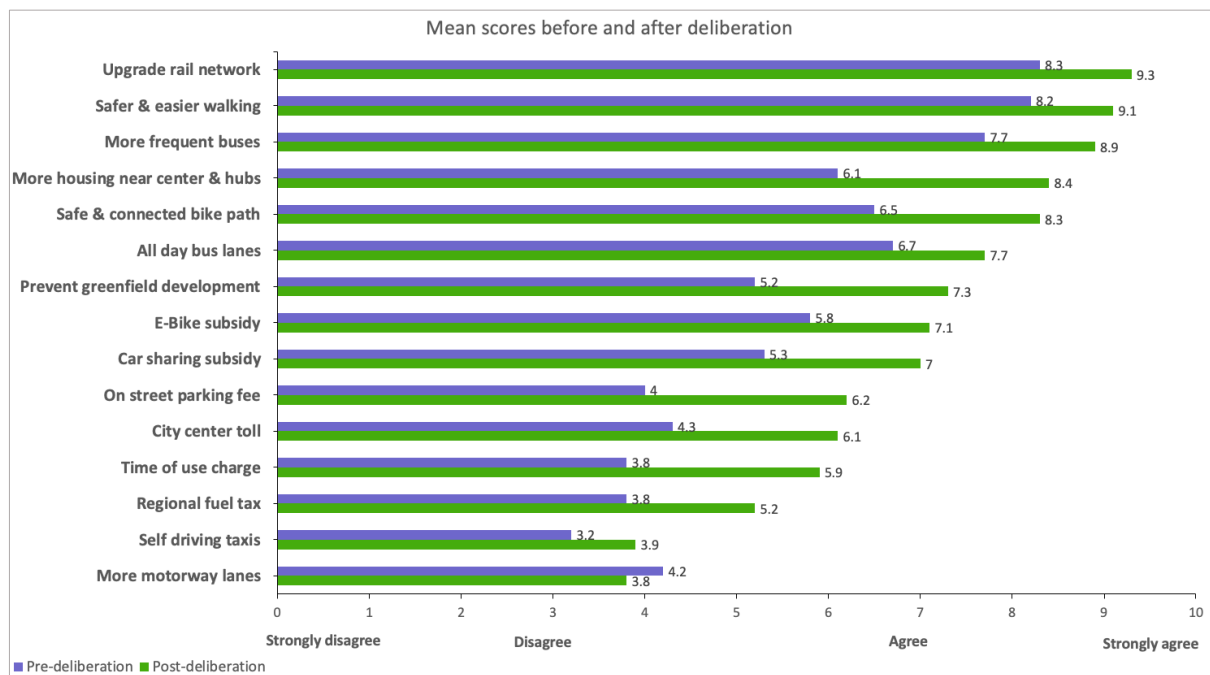
Overall, the deliberative forum showed the capacity of a group of 'average' citizens to reason through problems and moderate their views about some contentious issues when they have the opportunity to consider a range of evidence, perspectives, and trade-offs.

PART 1 – Context and outcomes

1.1   Background and context

As New Zealand's largest and most diverse city, Auckland is both an international gateway and a vital driver of the nation's economy. It is also home to over a third of New Zealand's total population. As in other cities, Auckland's transport system is critical to the functioning and liveability of the city and region, but it faces a number of significant challenges. Rapid population growth, urban sprawl and car-centric urban planning has resulted in lengthy commutes and reduced overall transport efficiency. A focus on motorway development over investment in diversified public transport, walking and bicycling infrastructure has resulted in a very high level of car dependency. As a result, the city struggles with traffic congestion. This type of urban development is also carbon-intensive and lacks resilience to climate change-related temperature and rainfall changes.

Changes must be made to meet the needs of our growing population and economy while responding to the challenges of climate change. In the transport sector, meeting New Zealand's 2050 net-zero carbon emissions target will require a reduction in transport emissions of over 40% by 2035 (from 2019 levels).[1] The situation is more acute in Auckland, where the Council's Transport Emissions Reduction Pathway[2] indicates the need for a 64% reduction of emissions by 2030. Given that close to a third of Auckland's emissions come from cars and light vehicle travel on roads, these targets can only be achieved by reducing travel by these modes.[3] Beyond emissions reduction, reducing travel by private vehicles produces multiple benefits to health, urban biodiversity, climate adaptation, community cohesion and others.

Interventions that may be recommended to meet transport sector emissions goals will affect all Aucklanders in some way, and are likely to require significant system and behavioural change. It is therefore critical to understand what the public think about potential changes if implementation is to be effective and supported.

Typical methods of consultation with the public often fail to engage the full range of people who will be affected. The public may not have the necessary resources, such as access to information or skills or time required to understand complex policy areas such as transport planning and funding. To help ensure sound decision-making in this context, it is important to provide both opportunity and resources to enable people to move from raw opinion to more reasoned judgement. The 'deliberative forum' approach used in this project aimed to do this by providing participants with balanced and relevant information about the issues at hand, and facilitating a respectful exchange of ideas as they worked through the challenges, benefits and trade-offs associated with various options.

The forum was designed to elicit views on possible changes that could have wider benefits to the transport system, beyond emissions reduction.

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[1] Ministry for the Environment (2022) *Te hau mārohi ki anamata Towards a productive, sustainable and inclusive economy: Aotearoa New Zealand's First Emissions Reduction Plan*. Chapter 10: Transport.
https://environment.govt.nz/assets/Emissions-reduction-plan-chapter-10-transport.pdf

[2] Auckland Council (2023) *Sustaining Access for a Thriving Future: Auckland's transport emissions reduction pathway*.
https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/Documents/transport-emissions-reduction-pathway.pdf

[3] Callister, P., & O'Callahan, H. (2021). *How to decarbonise New Zealand's transport sector*. Victoria University Wellington.

1.1.1 Project outline

The deliberative forum aimed to understand the perspectives of a representative group of citizens both before and after having the opportunity to learn from experts, listen to each other, and carefully consider the trade-offs involved with different options. The characteristics of the randomly-selected participant group reflected the Auckland population in microcosm, so it was assumed that their views prior to the forum would be similar to that of the general public, whether or not these views are expressed during 'typical' consultations.

The key measure of the impact of the deliberative process were responses to a survey taken both before and after deliberation, querying participants' views on the current transport system, its impacts, and levels of support for possible changes. Our hypothesis was that the deliberative process would shift the participants' views with regard to the support for (some of) the proposed changes. Additionally, qualitative data (participants' questions, observations, notes) collected during the process provide deeper insight into learning and reasoning that led to the change of view.

The question that was put to the participants was:

What changes do you think are needed to ensure that everyone can get around Auckland efficiently, affordably, safely and sustainably, well into the future?

Koi Tū researchers managed the project, conducted recruitment and sortition (random selection to derive a representative group), and designed and facilitated the process. They also provided the majority of the support facilitators to assist the table groups, helped in expert recruitment, and collected and analyzed data.

Auckland Council and Auckland Transport provided access to databases, co-designed the survey (with Koi Tū), recruited internal and external experts and additional support facilitators, and assisted Koi Tū in answering participants' questions.

Waka Kotahi allocated Climate Emergency Response Fund (CERF) funding for the process, and provided additional support facilitators and observers.

This short-form deliberative process involved:

- Recruitment of a broadly representative group of ~100 Aucklanders selected through a randomised civic lottery process.
- Baseline survey on preferences for strategies to improve transport options and address existing problems, including reducing congestion and car dependency.
- Two days of facilitated learning and deliberation spanning a 2-week period (Saturdays - 2 September and 16 September) with an online session in between.
  - Day 1 "Learning day" – an information and learning session. Understanding the problem and objectives of the forum; providing essential information and learning to deliberate from different perspectives. Working in small groups, bringing questions to plenary to ask of subject-matter experts in the room. Identification of questions to pose to additional experts in the online session.
  - Online session = Information session with experts selected to be able to answer the questions posed by participants on Day 1
  - Day 2 "Deliberation day" – Summary presentation by international transport expert; answering the remaining questions; table and plenary discussions; scenario work; presentation to and feedback from a stakeholder panel, Q&A/fact checking; final 'anonymous' surveying; and forum wrap-up

- Process documentation on film
- Follow-up online conversation using the Consider.it digital platfrom to extend participation to the wider public.
    - Survey statements from the deliberative process will serve as proposals in Consider.it. Participants will be able to add new proposals (subject to moderation) for others to vote on. Consider.it prompts users to include their reasoning for how they rate each proposal, thereby enriching the deliberation and enhancing the ranking mechanism.
    - If the participant pool is large enough, sortition will be used to generate demographically representative subgroups for analysis.

1.2   The deliberative approach

Deliberative processes (also known as minipublics and including citizens' juries, assemblies, and other formats) create fair and representative conditions for everyday people to come together and address political and policy problems. They have been shown to be particularly effective in addressing complex issues that span electoral cycles and that require balancing multiple and sometimes conflicting public values.[4] They have also been shown to successfully bridge the gap between public opinion and public judgment - the difference between someone's views when they haven't had much time to consider the issue compared with when they have.

Core elements of deliberative process are representative participation, learning and deliberation, and a remit that describes the question at hand, and how the output of the deliberation will be used. Representative participation is achieved through sortition or civic lottery, a two-step process in which a large number of randomly selected participants (using databases such as mail, electoral roll, ratepayers or utilities databases, public transport users etc) are invited to express interest in participation. From those who respond to the initial invitation, a descriptively representative sample of the population is then invited to learn and deliberate. The selection is done using a set of demographic variables (age, gender, education, socioeconomic status or whatever deemed appropriate for the particular process and the population they are meant to represent) applied to a sortition algorithm for randomisation (see Part 2, section 2.1).

The remit refers to the purpose of the process: the question or the problem which the convening body is tasking the citizens to help solve. The citizens' response or output can take the form of recommendations that the convening body can commit to implementing or taking into consideration (citizens' assemblies and juries); a statement on a referendum or active ballot measure (citizens' initiative review); ongoing input into public decision making (permanent citizen bodies) or response to surveys applied before and after learning and deliberation (deliberative polls and related processes, such as deliberative forum used here).

Regardless of the purpose and format of the citizens' output, principles of transparency and integrity are crucial to the success of any deliberative process. Transparency refers to the public nature of the process: announcement of the process through public fora, inclusion of observers where possible, public availability of any materials and methodology relevant to the process in a timely manner while respecting the privacy of participants; disclosure of funding and public authority's response to the

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[4] Bryant, P., & Stone, L. (2020). *Climate assemblies and juries: A people-powered response to the climate emergency.* Shared Future/PCAN. https://sharedfuturecic.org.uk/wp-content/uploads/2020/08/Shared-Future-PCAN-Climate-Assemblies-and-Juries-web.pdf

results of the process. Integrity of the process refers to the process being run by a team different from the commissioning authority.

In this deliberative forum on transport, Koi Tū's role as the organizer and designer of the process ensured the distance from the commissioning body (Auckland Council). The process was announced on the Koi Tū website and via social media and was open to external observers. It was documented on film and a journalist attended part of Day 2. The participant website (see Part 2, Section 2.2) is publicly accessible (identifying recordings have been removed to maintain participant privacy where requested).[5]

1.2.1 The remit

The objective of this process was to provide insight into public perceptions of the current state of the transport system, and the support for potential interventions that would help to improve the system, including those that would help to reduce the very high level of car dependency in Auckland. The expected output of the deliberative process was an understanding of the baseline views of a representative sample of Auckland's (adult) population, and then the shift of views following the learning and deliberation phase. This remit was explained to participants of the forum.

1.2.2 Representativeness of the participant group

The civic lottery 'sortition' process produced an original sample of 110 people who accurately reflected the demographics of the Auckland population, based on 2018 Census data. Some invited participants dropped out and were replaced by others selected randomly to match the required demographic categories. There was some inevitable attrition in numbers for the in-person forum sessions, resulting in a total of 81 people completing the full process, including both pre- and post-surveys. The final pool of 81 retained the expected population diversity, with only slight deviations in a few demographic categories (see Part 2, Appendix 1).

Although a proportion of the participants were recruited via Auckland Council's Peoples Panel (a group of people who consented to being invited to Auckland Council's online consultations), the selected forum participants were not typical submitters to Council consultations. In fact, more than 75% of respondents within the group said that they had not ever, or had hardly ever, taken part in community consultations before. Another 21% indicated that they participated 'from time to time' and approximately 3% said that they did so 'often'.

The participants filled out a survey to gather their views before the forum began. These views may or may not be similar to those collected by other types of consultation, but should reflect the spread of actual raw opinions of Aucklanders in general.

1.2.3 Pre- and post-surveys

The survey was co-developed by Auckland Council, Auckland Transport and Koi Tū. The full survey is provided in Appendix 2. It consists of three main parts. The first two parts formulated as statements asking for support expressed as 0-10 on a Likert scale: Part 1 - Transport Effects (12 statements) and

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Part 2 - Possible Changes (15 statements). Part 3 - Ranking Options involved choosing and ranking the respondent's top 5 of the 15 changes introduced in Part 2.

In the pre-deliberation survey, Part 4 collected information on the household context, asking questions about participants' individual transport situation. Part 4 was replaced in the post-deliberation survey with questions regarding the experience of the process and additional comments.

Given the makeup of the participant group, the initial survey should reflect the current views of the diverse Auckland public, including those who don't normally take part in consultations. In the introductory online session the participants were asked (via Mentimeter[6]) whether they usually take part in community consultations, and over 75% responded that they had not ever, or had hardly ever, done so before.

1.2.4 Learning phase

The learning phase is an essential initial part of any deliberative process. Crucially, participants must be provided not only with the information needed but this information must also be in a format and language that they understand. Participants must have enough time and other resources (childcare, any access needs, food & water etc) required to support them in the learning process.

While some deliberative processes provide participants with an initial information pack, because of the short planning timeline for this project and also because this project was testing the baseline knowledge and perceptions, we decided against producing printed background material. Instead, the information was provided through expert presentations on Day 1 and during the online session and through materials uploaded onto the participant website (see Part 2, Section 2.2). This particular process had a shorter deliberation phase and greater emphasis on shifting perspectives through learning and empathy, thus the learning phase occupied a greater portion of the process.

1.2.5 Deliberation phase

In deliberative processes intended to produce recommendations, the deliberation phase may take several days, as participants must come to understand each other views, find the shared ground and then write consensus recommendations. As this forum was not designed to provide consensus recommendations, the deliberation phase was shorter and focused primarily on understanding other people's lived experiences and views and considering evidence from experts. The group was introduced to deliberation on Day 1 when they worked through two different small-group exercises, but the bulk of deliberation took place on Day 2, with the group work on transport scenarios.

The full process is detailed in Part 2 of this report.

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[6] Mentimeter real-time polling software tool https://www.mentimeter.com/

1.3 Outcomes

1.3.1 Initial perspectives

Figure 1. Mentimeter word cloud. Question: Why do we live in urban areas? What do we value? (89 respondents, 231 responses)

The participants were introduced to the deliberation topic by first being asked to consider why the vast majority of New Zealand's population lives near an urban centre, and what they themselves valued about living in their community. Their initial thoughts were captured in a word cloud using the Mentimeter survey tool (see Figure 1). The size of the font indicates the frequency of the mention of individual words/terms.

Discussions centred around places, things and amenities that they accessed, and connections to people and community. This was the beginning of a discussion on what participants value about their city and community, and how these values relate to the issue of transport.

When asked: "What comes to mind when you are asked about transportation in Auckland?", the word cloud conveyed a multitude of problems and concerns. Words such as "expensive", "unreliable", "slow", "dangerous", "congestion", "traffic" and "inefficient" featured prominently (see Figure 2).

Figure 2. Mentimeter word cloud. Question: What comes to mind when you are asked about transportation in Auckland? (91 respondents, 244 responses)

What do we value about transport?

The group was asked to consider what they value most with regard to transport, and to rank those values. Affordability was the highest ranked, followed by independence and freedom of movement (see Figure 3). Other ranked values were: sustainability/protecting the environment (3rd); health and safety (4th), equity and inclusion/accessibility (5th); economic productivity/efficiency (6th); door to door speed (7th) and improving the desirability of a place (8th).

Figure 3. Mentimeter ranking. Question: What do we value with regard to transport? (90 respondents)

What needs to change?

Having discussed the problems with the current transport system, and identified what was most important to them, the group was asked how easy or difficult it was for them to get to the places they needed to go, and whether they would change the way they travelled if they could. While many said that getting around was relatively easy for them, the vast majority responded that they would consider changing transport modes, with only 20% indicating that they would not. Out of 90 responses, 50 said they would, and 22 that they might change the way they travel. The groups were asked to discuss what would need to change, either with the system or themselves, in order to shift modes.

This discussion was facilitated by an activity that asked the participants to write down their thoughts for change and place them on a matrix with one axis indicating the level of effort (how easy or hard the change was to implement) and the other indicating the level of impact the change would have on the system. The bottom right quadrant of the matrix was the key zone for changes that were perceived as "easy to do" and had "high impact". The placement of the ideas on the matrix was discussed among each table group, and recorded by the table host. The matrices were left at the tables, and after the lunch break the table groups were mixed. Each new table group was asked to review the matrices of the groups that had previously worked at that table, and discuss whether, and why, any changes should be made to the placement of ideas on the matrix.
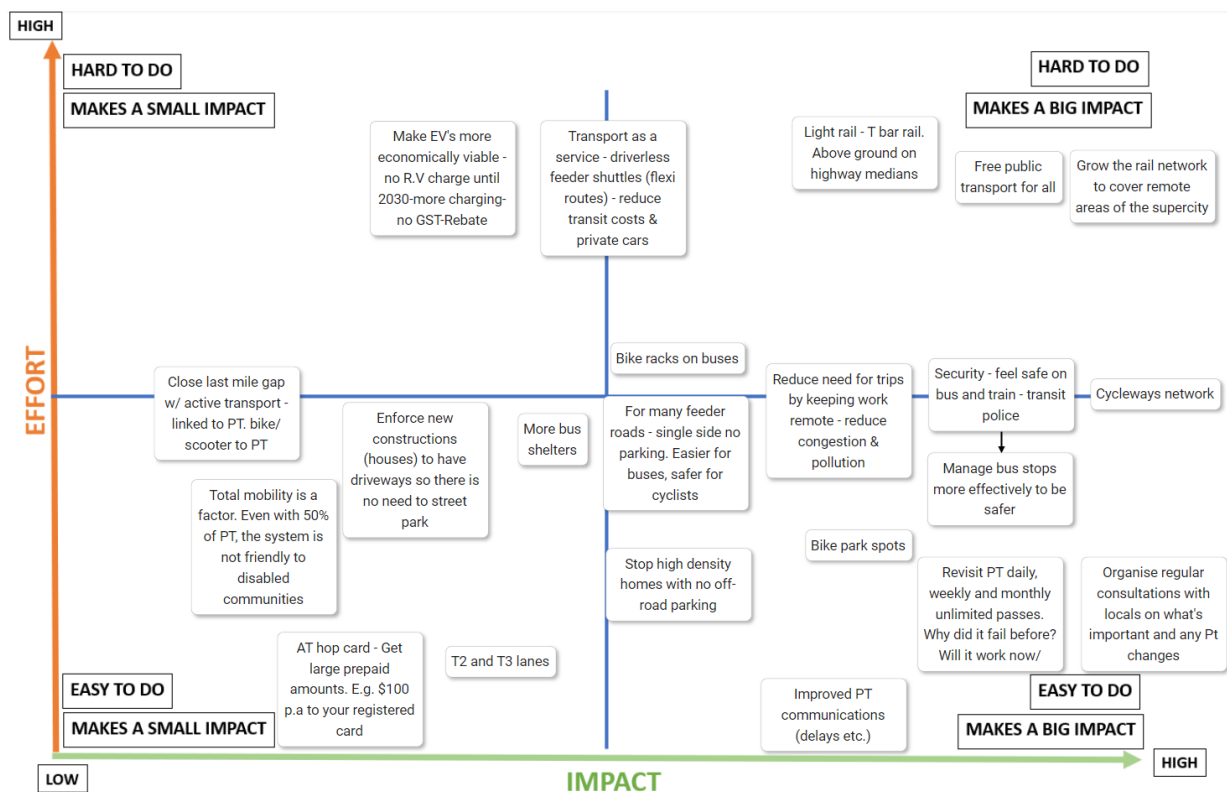
An example matrix is shown in Figure 4.

Figure 4. *Effort vs Impact* matrix example (1 of 16)

The sixteen matrices produced by the table groups were digitised and the results entered into a spreadsheet that indicated the relative positions of ideas on the spectrum of effort vs impact. Overall there were 112 ideas for change that were placed in the "Low effort, High impact" quadrants of the matrices (see Appendix 4).

Many of the ideas that the groups considered to be relatively easy to implement and impactful related to payment and information mechanisms (apps) to make public transport easier and cheaper to use, and other ways to optimise the current system including smaller buses operating more frequently.

A second matrix-based activity was run on the same day, wherein participants worked first in pairs and then as a table group to consider possible changes and their impact against a range of criteria or values. They were given the same list of values they had previously ranked in the morning's exercise, but also had the option of adding new ones to the matrix. They were also given the list of possible changes/interventions that were asked in the pre-forum survey to rank against the criteria, again with the option of adding different ideas to the list or evaluating completely different options of their choosing. The matrices produced by each table group represented the top priority options that each group agreed on, rated against each criteria.

The proposed criteria were:

- Travel choice/freedom
- Health and safety
- Accessibility/equity
- Affordability
- Sustainability/environment
- Productivity/efficiency
- Local amenity/place function

The matrix template is shown in Figure 5.

INSTRUCTIONS: Add your ideas to the 'CHANGE' column or choose from the list provided. Score your top choices against the listed CRITERIA, from 0 (not helpful) to 5 (very helpful). You can add your own criteria in the last 2 columns if you wish.

CHANGE	VALUE / CRITERIA								
	Travel choice/ freedom	Health and safety	Accessibility/ Equity	Affordability	Sustainability / environment	Productivity/ efficiency	Local amenity/ place function		

Figure 5. *Values vs Change* matrix template and instructions

These matrices were digitised and options ranked based on the scores against each criteria. Changes/interventions were scored against values/criteria on a scale of 0 (no impact) to 5 (high impact). Scores were weighted based on the number of table groups that ranked each of the options among their top choices. The results summary is shown in Table 1, which lists all of the interventions queried in the survey (in abbreviated form).

Table 1. Summary of *Values vs Change* matrix results. The grey cells indicate no votes were placed for those interventions or criteria

	CHANGE	Weighted Travel choice/ freedom	Weighted Health and safety	Weighted Access-ibility/ equity	Weighted Afford-ability	Weighted Sustain-ability/ environ-ment	Weighted Productiv-ity/ efficiency	Weighted Local amenity/ place function	Total
1	More lanes on motorways								
2	Safer walking areas	3.000	3.375	3.031	3.250	3.438	2.219	3.188	3.071
3	Bike path network	2.469	2.313	2.188	2.156	2.469	2.438	2.313	2.335
4	All-day bus lanes	1.375	1.375	1.250	1.250	1.375	1.438	1.313	1.339
5	More bus services	3.484	2.781	3.047	2.500	3.000	3.250	3.016	3.011
6	Upgrade rail network	3.375	3.063	3.000	2.563	3.469	3.500	2.844	3.116
7	Self-driving cars for taxi service								
8	Fee for on-street parking	0.250	0.250	0.250	0.125	0.250	0.313	0.250	0.241
9	Fee for driving during heavy traffic times	0.188	0.219	0.125			0.281	0.000	0.163
10	Fee for driving into city centre	0.375	0.625	0.375	0.125	0.625	0.625	0.625	0.482
11	Increase Regional Fuel Tax	0.094	0.188	0.188	0.063	0.219	0.219	0.063	0.147
12	Subsidies for electric bikes	0.250	0.188	0.313	0.250	0.250	0.250	0.250	0.250
13	Subsidies for car sharing	0.563	0.375	0.438	0.438	0.375	0.438	0.563	0.455
14	More homes close to city centre/transport	3.219	2.563	2.688	2.781	3.094	3.094	3.094	2.933
15	Prevent greenfield development	0.750	0.750	0.781	0.688	0.938	0.938	0.813	0.808

From this exercise, five changes were selected most frequently, and ranked highly against most criteria. These were :

1. Upgrade Auckland's rail network so that trains run faster and more frequently.
2. Make it safer, easier and more comfortable for everybody to walk around their local area.
3. Provide more bus services so that buses turn up frequently at all times of the day.
4. Build more homes closer to the city centre, public transport stations and main bus routes.
5. Provide a safe and connected bike path network across the Auckland region including removing car parking spaces where required.

1.3.2 Survey results

Participants completed a short survey prior to attending the forum, which assessed their perspectives on aspects of the current transport system and its impacts (Survey Part 1), and on potential changes to the system (Survey Part 2). They responded to the same survey again at the end of the process.

Understanding the issues

The first part of the survey gauged the participants' perceptions and understanding of impacts of the transport system. This included impacts on the economy, environment and public health, as well as beliefs about the need for action on climate change and whether transport choices significantly impact emissions. Small changes were observed for all of the issues discussed at the forum (see Table 2).

Table 2. Results from Survey Part 1, pre- and post-deliberation

Survey Part 1: Transport effects			
Instructions: Please indicate how much you agree or disagree with each of the following statements on a scale from 0-10, with 0 indicating strong disagreement and 10 strong agreement. If you don't know, please circle "I don't know"			

Questions	Mean score Pre	Post	Change
1 Traffic is a major problem for Auckland's economy	7.8	8.0	+0.2
2 Public transport services (bus, train, ferry) are not frequent	6.6	7.9	+1.3
3 Public transport services (bus, train, ferry) are not reliable	6.9	8.2	+1.3
4 Climate change requires urgent action	7.7	9.5	+1.8
5 Transport has a big impact on Auckland's greenhouse gas emissions	7.1	8.5	+1.4
6 A lack of attractive walking and bike riding facilities has a big impact on health	6.2	8.2	+2.0
7 Air pollution from transport in Auckland is a major cause of asthma and poor health	4.9	7.4	+2.5
8 Lowering the speed limit is important to reduce crashes and injuries on our roads	5.2	7.4	+2.2
9 Everybody should be able to safely walk or ride a bike around their local area	8.7	9.4	+0.7
10 Everybody should be able to park on the street outside their home	5.1	5.2	+0.1
11 Electric vehicles will solve many of our transport problems	4.1	4.1	none
12 Reducing the need to use cars would decrease the cost of living for Aucklanders	5.8	6.9	+1.1

1.3.3 Considering possible changes

The survey asked respondents to indicate how much they agreed with (supported) a range of possible changes to the transport system, on a scale of 0 to 10 (strongly disagree to strongly agree). The changes are listed in Table 3 along with the mean score in both pre- and post-forum surveys. The percentages of people disagreeing (scoring 0-3) and agreeing (scoring 7-10) are shown, along with the percentage of those who were 'neutral' to the idea (i.e. either side of the midpoint 'neither agree nor disagree; scoring 4-6). The overall level of support is indicated by the net percentage of agreement, calculated as the difference between the percentage of supporters and the percentage of non-supporters. The final column shows the change in net percentage of agreement from the pre- to the post-deliberation survey.

Table 3. Results from Survey Part 2, pre- and post-deliberation

Survey Part 2: Possible changes											
Instructions: Please indicate how much you agree or disagree with each of the following statements on a scale from 0-10, with 0 indicating strong disagreement and 10 strong agreement. If you don't know, please circle "I don't know"											
Questions		Mean score		% Disagree (score 0-3)		% Neutral (score 4-6)		% Agree (score 7-10)		Net % agree		Change in net % agree
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
1	Build more lanes on motorways and main roads	4.2	3.8	43	47	21	30	36	23	-7	-24	-17
2	Make it safer, easier and more comfortable for everybody to walk around their local area	8.2	9.1	3	1	11	4	86	95	83	94	+11
3	Provide a safe and connected bike path network across the Auckland region, including removing car parking spaces where required	6.5	8.3	17	3	17	12	65	85	48	82	+34
4	Provide all-day bus lanes on main roads	6.7	7.7	14	7	22	14	64	79	50	72	+22
5	Provide more bus services so that buses turn up frequently at all times of the day	7.7	8.9	3	1	11	5	86	94	83	93	+10
6	Upgrade Auckland's rail network so that trains run faster and more frequently	8.3	9.3	0	0	9	4	91	96	91	96	+5
7	Enable self-driving cars to provide a taxi service	3.2	3.9	48	37	18	35	33	28	-15	-9	+6
8	Charge a fee for on-street car parking which varies in price depending on the area where people live and park	4.0	6.2	42	18	16	19	23	62	-19	44	+63
9	Charge a fee for driving on all main roads when traffic is heavy	3.8	5.9	47	23	21	28	32	49	-15	26	+41
10	Charge a fee for driving into the city centre	4.3	6.1	43	20	14	27	38	53	-5	33	+38
11	Increase the Regional Fuel Tax on petrol and diesel to pay for transport improvements in Auckland	3.8	5.2	44	28	28	28	28	45	-16	17	+33
12	Provide subsidies for electric bikes	5.8	7.1	24	13	14	13	62	74	38	47	+9
13	Provide subsidies for car sharing services so people can easily rent by the hour instead of owning a car	5.3	7.0	18	1	25	27	56	72	38	71	+33
14	Build more homes closer to the city centre, public transport stations and main bus routes	6.1	8.4	14	3	27	11	59	86	45	83	+38
15	Prevent further development of new housing and industry in greenfield areas outside of the current developed area	5.2	7.3	23	9	22	23	55	68	32	59	+27

The mean response scores for level of agreement or disagreement (support/non-support) are shown in Figure 6.
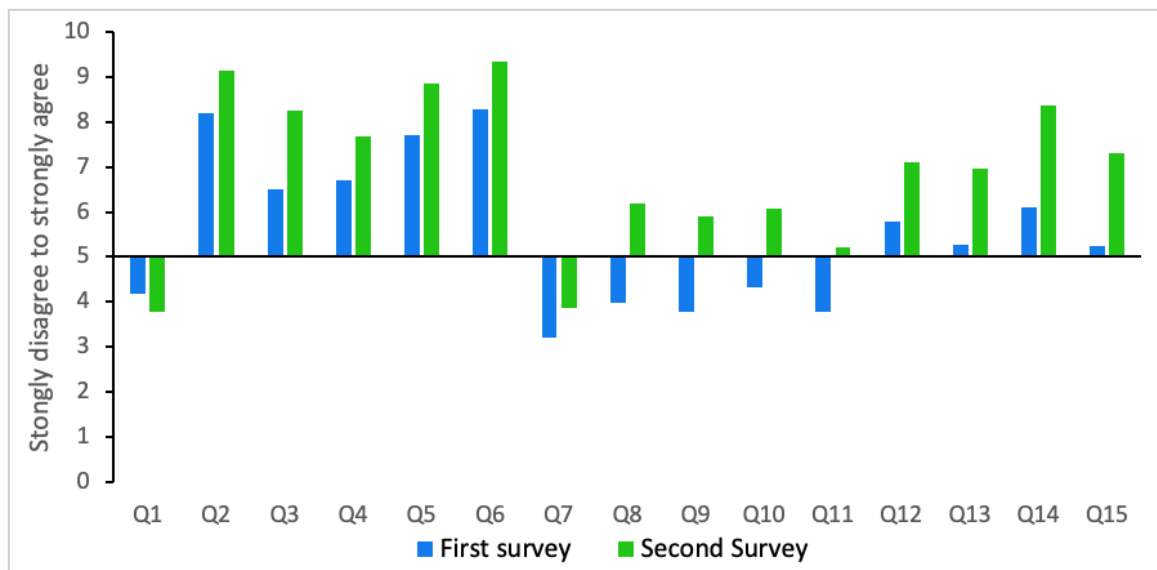

Figure 6. Mean responses to survey questions indicating levels of agreement or disagreement with the changes listed in Table 3, in both pre- and post-surveys

The data indicate that the most favoured options are:

- #6 – Upgrade Auckland's rail network so that trains run faster and more frequently
- #2 – Make it safer, easier and more comfortable for everybody to walk around their local area
- #5 – Provide more bus services so that buses turn up frequently at all times of the day
- #3 – Provide a safe and connected bike path network across the Auckland region, including removing car parking spaces where required
- #14 – Build more homes closer to the city centre, public transport stations and main bus routes

These five options aligned with those from the Values vs Change matrix exercise (see section 1.3.1).

The graph clearly shows the change in levels of agreement between pre- and post-deliberation surveys. All of the changes that would help to reduce private vehicle use gained support after deliberation, whereas those that would not (self-driving cars, adding lanes to motorways and major roads) either remained the same or lost support.

Interestingly, there were several interventions that were not among the highly supported, and originally scored negatively, but gained support such that the mean moved from negative (disagreement) into the positive (agreement). Those interventions with significant shifts in this way were all relating to charging and pricing – for on-street parking (question 8), driving on main roads at peak times (question 9) and for driving into the city centre (question 10).

The mean change in responses to each question is shown in Appendix 5, including those in Part 1 of the survey.

Assessing agreement

Determining the average score for agreement with the intervention statements (Table 3 – Mean score) demonstrates which of the transport system changes are most and least supported overall by the forum participants, both before and after deliberation. It is also informative to look at the range of levels of support for changes – i.e. the proportion of firm supporters vs those in strong opposition to each change. This was done by calculating the percentage of participants who responded towards the higher end of the agreement scale (7-10 = supporters) compared with those who responded towards the lower end of the scale (0-3 = non-supporters). Subtracting the percentage of non-supporters from the percentage of supporters provides a rough assessment of actual support levels in the wider group. This score is shown in Table 3 (net % agree) for both pre- and post-deliberation surveys, along with the change that occurred between them. According to this calculation, the interventions receiving the highest support were the same five, based on the mean scores, listed above (upgrading rail network [net 96% agree], make walking safer [net 94% agree], more frequent bus services [net 93% agree], more homes closer to city centre/transport [net 83% agree] and a connected bicycling network [net 82% agree]).

However, possibly the most interesting results related to how much the participants' opinions changed between the first and second surveys. As for the change in mean support levels, the largest changes in the net percentage of 'firm' support were seen for those interventions that involve charging a fee for things that are currently free – in particular, charging for on-street parking, which garnered a 63% change and moved from a negative position (net -19% support) to a positive one (net +44% support). The second highest shift was for charging a fee for driving on all main roads when traffic is heavy, which went from -15% to +26% firm support.

The data shows that there is still some disagreement about these charging/pricing interventions within the forum group, even though the balance shifted towards support. While these interventions remain somewhat contentious and still do not rank among the most supported, it is clear that people can change their minds about such issues when they have the opportunity to consider a range of evidence, perspectives, and trade-offs.

Figure 7 shows the percentage of supporters vs non-supporters for each intervention in both pre- and post-deliberation surveys, as well as the percentages of 'neutral' responders among those with stronger views. This provides a graphic illustration of which suggested changes are more polarising – i.e. those with relatively high percentages of non-supporters despite an overall high agreement/support rating, according to the mean score. The questions relating to pricing/charging (Q8-10) fall in this category. The only question with more non-supporters than supporters in both surveys and an increase in non-supporters after deliberation is Question 1 (building more lanes on motorways and major roads).

The data indicate that the five options which increased support the most following deliberation are:

- #8 – Charge a fee for on-street car parking which varies in price depending on the area where people live and park
- #9 – Charge a fee for driving on all main roads when traffic is heavy
- #10 – Charge a fee for driving into the city centre
- #14 – Build more homes closer to the city centre, public transport stations and main bus routes
- #3 – Provide a safe and connected bike path network across the Auckland region, including removing car parking spaces where required
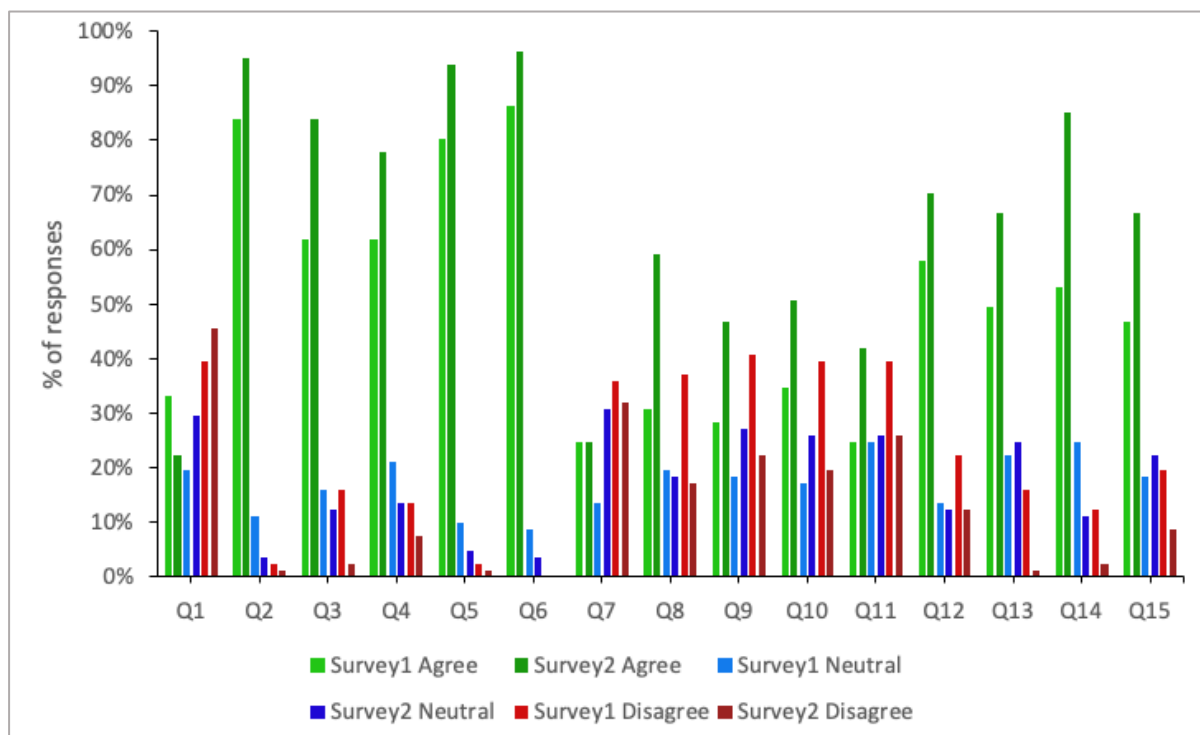
Figure 7. Percentage of people who agreed (scored 7-10), disagreed (scored 0-3) or were neutral (scored 4-6) with changes queried in the survey, both pre- and post-forum (see Table 3 for the question list)

Ranking changes

Following the questions that measured the degree to which respondents agreed or disagreed with each possible change or intervention, the survey asked them to rank their priority interventions from 1 to 5 (leaving off the remaining 10 choices). The percentage of total votes for all interventions, adjusted by their ranking, is shown in Figure 8.

Again, the rankings are consistent with both the Values vs Change matrix exercise (see Section 1.3.1 and Table 1), and the top-scoring interventions based on mean level of support/agreement in questions 1-15 of survey part 2 (see Section 1.3.2 and Figure 6). The largest shift in mean support observed between the pre- and post-deliberation surveys was in support of densification/transit-oriented development (Q14) – building more houses near the city centre, transit hubs and frequent bus lines. Other top interventions received slightly fewer high-ranking votes in survey 2 (Q5 – provision of more frequent bus services; and Q6 – upgrading Auckland's rail network) to account for this shift to more support for densification, but they still ranked very highly overall. There was also a notable increase in support for providing for better/safer walking (Q2) in the post-deliberation survey.
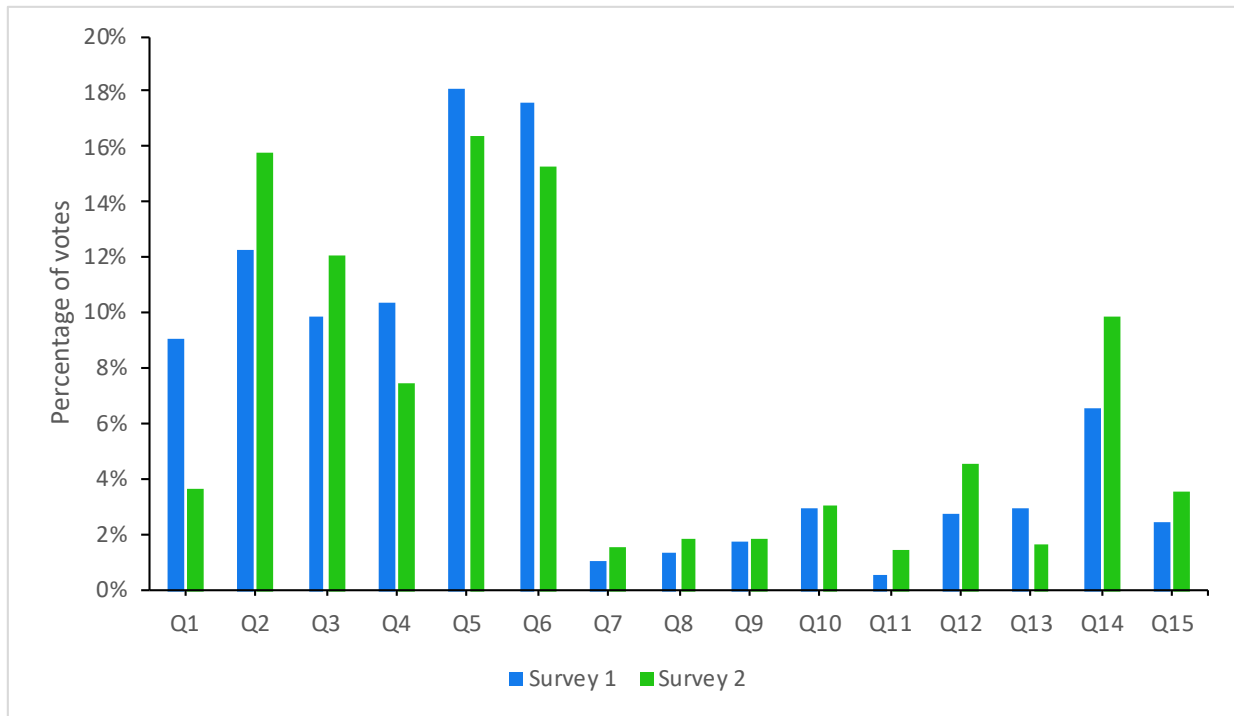
Figure 8. Percentage of total top-5 votes received for each intervention, adjusted by ranking in both pre- and post-deliberation surveys (see Table 3 for the question list). The adjustment was done by multiplying the number of votes ranked #1 by a factor of 5 (x5), those ranked #2 x4, those ranked #3 x3, those ranked #4 x2 and those ranked #5 x1

More detail on the rankings can be found in Appendix 6.

1.4   Summary of findings

1.4.1 Transport effects and values

The first part of the survey taken before the forum queried the participants' perceptions about Auckland's current transport system and its effects (see Table 2). The top concerns were around safety, traffic and its impacts on the economy, and the need to take urgent action on climate change. After learning and deliberation, support for addressing these issues increased further, as it did for most other negative impacts of the system. The largest shifts in perceptions between the pre- and post-deliberation survey among these questions related to the importance of air pollution, the health impacts of active travel, and the need for lowering speed limits to reduce crashes and injuries on our roads. The large changes suggest these may be valuable topics for education and awareness campaigns.

1.4.2 What does the forum support?

There was consistent support for interventions in a few key areas:

- Public transport:
  o Continue investing in public transport to make the system more reliable, efficient, and accessible.
  o Expanding routes and increasing frequency of public transport to help reduce car usage.
- Active modes:
  o Encouraging walking and bike riding by creating more pedestrian-friendly, safe walking spaces and dedicated bike lanes/cycleways, even when they are at the expense of car parking.
- Land Use Planning:
  o Allowing/encouraging higher-density housing near transport hubs and town centres.

The highest ranked interventions from the survey and from both the group deliberation and compiling Values vs Change matrices (assessing changes against criteria/values) were:

1. Upgrade Auckland's rail network so that trains run faster and more frequently.
2. Make it safer, easier and more comfortable for everybody to walk around their local area.
3. Provide more bus services so that buses turn up frequently at all times of the day.
4. Build more homes closer to the city centre, public transport stations and main bus routes.
5. Provide a safe and connected bike path network across the Auckland region including removing car parking spaces where required.

While the survey gives some blunt indicators of support for more specific interventions, the deliberation and activities that the participant group went through during the in-person forum is expected to uncover more nuanced and specific suggestions and will allow a more complete picture of what this informed and representative group of Aucklanders support and desire with regard to the future of transport in Auckland. This will be reported in a subsequent paper.

1.4.3 What does the impact of deliberation tell us?

The pre- and post-deliberation surveys indicated changes in thinking among the participant group, from top-of-mind responses to more informed decisions. Before learning and deliberation there was general support for some (but not all) of the changes/interventions that would help reduce private vehicle travel, but this support increased for all such interventions after deliberation (based on mean of support level by all participants). Some participants would also have changed their minds from not supporting to supporting or vice versa (individual-level changes have not yet been analysed).

Specifically, there were a number of interventions that originally were not supported (i.e. mean level of support below 5 on the scale of 0-10), for which the average level of support switched to the side of 'agree' (greater than 5) after learning and deliberation. These interventions all related to pricing/charging (for on-street parking, driving during peak times, and driving into the city centre). In particular, there was a large shift in net percentage of supporters for the idea of charging for on-street parking (a 63% change from -19% to +44%). Following deliberation, there was also a big shift in support for densification near the city centre, transport hubs and bus routes.

Interventions that would not reduce car usage (i.e. self-driving vehicles; adding more road lanes) showed either no change (self-driving) or reduction in support (road lanes). Even before deliberation, there was little support for building more road lanes as a solution to the transport problems Auckland faces. Participant views became more negative upon discussion of the concept of induced demand and other impacts of transport investment focused mainly on roading.

Specific findings

Bike paths

The question about creating a network of cycle lanes included the caveat that car parking spaces may need to be removed in some cases to allow for this. The support for this intervention in the pre-deliberation was not strong, with the mean response being 6.5 out of 10 ("somewhat agree"). The percentage of people firmly supporting this idea (responding 7 or higher out of 10) was 65%. Another 17% of people fell into the 'do not support' category, scoring it 3 or lower out of 10). However, after deliberation the mean score increased to 8.3, with 85% scoring it 7 or above. The percentage of non-supporters fell to only 3% (scoring it 3 or below). This is an interesting finding, given that nearly three quarters (73%) of participants indicated that they cycled infrequently (if at all).[7]

Parking charges

In the pre-deliberation survey, much of the group disagreed with the idea of charging for on-street parking, with 42% scoring it 3 or below out of 10 (strongly opposed). Only 23% were 'supporters' (scoring 7 or above). After the deliberation, the percentage of non-supporters fell to 18% and the percentage of supporters rose to 62%.

Time of use charging

When participants were initially asked about their agreement with the statement "Charge a fee for driving on all main roads when traffic is heavy", most did not support the idea, with 47% strongly disagreeing (scoring it 3 or below). Only 32% scored this idea highly (7 or above). After deliberation the percentage of non-supporters dropped to 23% and supporters grew to 49%. The results were similar for the question on charging for access to the city centre only.

Subsidies for car sharing

This idea didn't feature among the top ranked interventions, but the results are interesting, particularly the change in percentage of support vs non-support before and after deliberation. Before deliberation the net percentage of support was only 38% (56% supporters minus 18% non-supporters). After deliberation this increased to net 71%, with the level of non-support decreasing to only 1%.

Housing densification

Forum participants were largely in favour of increasing housing density near the city centre, transport hubs and busways, particularly after deliberation. The mean score changed from 6.1 (somewhat agree) to 8.4 (strongly agree) and the net percentage of support jumped from 45% in the first survey, to 83% in the second. This idea was consistently ranked among the top five most popular options across a number of different exercises in the forum. The related option of preventing further development of new housing in greenfield areas also showed substantial increase in support after deliberation, with the mean score moving from neutral (5.2) to supporting (7.3) and the net percentage of support moving from 32% to 59%.

Effects of deliberation

The deliberative forum process produced some interesting results that showed how a representative sample of Aucklanders viewed the problems and potential solutions to improve the city's transport future. The fact that the group was chosen by civic lottery and did not draw from groups that are usually heard from in public consultations, means that even at baseline we would expect to see a

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[7] The first survey contained questions on transport mode use.

difference in views when compared to surveys completed by non-representative samples. This is a hypothesis that could be tested in future.

The change of views and levels of support for interventions speaks to the value of the learning and deliberation that the group experienced. While learning from experts with the opportunity to ask questions and receive answers was an important part of the process, comments received at the end of the process indicate that participants found the deliberation day – the opportunity to work on hypothetical scenarios similar to real life problems, and to understand and inhabit the personality of someone with very different mobility needs – was especially valuable and appreciated.

Having the chance to listen and respond to a wide range of viewpoints and experiences clearly had an impact on the attitudes of many of the participants. Some indicated that they had a greater appreciation of the scope and complexity of the policy problems, and had gained respect for the efforts of Auckland Council and Auckland Transport as they better understood the issues that they faced in trying to improve the transport system. Several participants expressed the desire to use this type of engagement in their local areas, so that they could get into trying to fix real problems in their own communities. Some of their comments are shown below.

Participant voices

"It's interesting to hear from experts about actual facts... there's a lot of kind of urban myths about transport. It's been really interesting hearing the actual data and science of it all. It's been interesting from a personal perspective to probably consider more than just my experience with transport and to consider the impacts on all sorts of different users."

[I would like to see...] "regular public feedback hearings for local communities with AT and Auckland Council present, as well as opportunities for local advocacy groups to be rewarded for their involvement in design and decision-making processes."

"Listen to experts and listen to locals, we each have knowledge to impart on one another."

"Nice to be part of a diverse crowd and not just hear the same tired opinions by loud individuals. Would've been nice to go into more depth on some scenarios we worked on."

"It was good as it gave me a better understanding of the complexities involved."

"Thank you for the opportunity to share information and knowledge. Thanks for listening to the community."

"It's been really enlightening to be honest. There are a lot of problems around the whole city and lots of different solutions. I think it's important discussing and exploring every different sort of point of view and different solutions to go with all the different problems that we've got going on."

"I don't think we could have done the deliberating without the input of the experts. So that, I think, was the most important bit for me. It was really nice to hear other people's views, and share and play around with ideas. You know, people were quite respectful of each other as well, which is nice. It was a comfortable process."

"Having a diverse group of people feed into solutioning is great. I have a lot more sympathy for Auckland Transport. It's definitely a bigger job than what you see just looking from the outside."

1.5 Next steps

Addressing truly complex policy problems requires creating spaces where people can develop a more coherent field of *shared* understanding of the issues at hand. This enables participants to progress from individual, top-of-mind opinions to more informed, collective judgements. Such progression was observed in this forum and in other processes involving face-to-face 'minipublic' deliberations, such as citizens' assemblies.[8]

The richness of the discussions that took place over the 2-day forum are not captured in this report. A more detailed analysis of the outputs of the scenario exercises and other discussion points will be presented in a separate report.

In the upcoming second phase of this project, access to the conversation will be broadened to the wider Auckland public using the online engagement platform Consider.it. This will enable many more people to weigh in on the potential changes to the transport system that were discussed in the forum, with the opportunity to provide 'pro and con' reasonings for others to consider. As in the forum itself, they will be able to suggest additional proposals, or more nuanced changes to those already proposed. The analysis of the online deliberation will also be presented in a separate report.

This deliberative forum utilised a pre-and post-deliberation survey methodology, and was not tasked with delivering consensus recommendations. However, the questions addressed here do lend themselves to a more in-depth citizens' assembly process with a remit to produce such recommendations. We recommend that Council and other local bodies create regular opportunities for more people to engage in such forums, not only to help improve policies and services, but to scale the positive impact that participation has on people's trust in institutions of government, and their perceptions of themselves and others as part of the decision-making process.

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[8] OECD (2020). *Innovative Citizen Participation and New Democratic Institutions: Catching the Deliberative Wave.*

PART 2 – Process details

This part of the report provides details about the process that might be of particular interest to those interested in designing similar processes.

2.1   Recruitment and sortition

The recruitment process was designed to bring together a heterogenous deliberation group that reflected the diverse demographics of the wider Auckland population. Registration for the deliberative forum was open to members of the public. Participants were recruited through invitation letters sent to over 26,000 email addresses randomly selected from the Auckland Council Peoples' Panel database[9] and the Auckland Transport customer database,[10] and letters sent to 5,000 randomised postal addresses across Auckland. The targeted areas for postal invitations were skewed towards areas of low voter turnout. This was supplemented by social media posts (LinkedIn and Twitter) inviting Aucklanders to register. Participants were offered a $420 Prezzy card as a token of appreciation for giving up their time to the process, including compensation for travel costs.

We received a total of 964 expressions of interest from these methods. Potential participants were required to complete a short demographic survey, collecting information on the following variables: Gender, Age, Ethnicity, Income, and Activity Limitations. One hundred and ten participants were selected from the registration pool via a sortition algorithm that assembled a demographically representative group based on Auckland data from the 2018 NZ Census.[11] The final number of participants confirmed before the start of the process was 101, with 87 attending the first day and 81 completing the whole forum process.

The five demographic categories used for stratification were carefully chosen to guarantee a comprehensive spectrum of perspectives within the participant pool, while simultaneously avoiding undue constraints on the composition of the group. The addition of the "Activity Limitation" category was instrumental in ensuring representation for individuals with mobility challenges in their daily lives. The randomly selected group was also checked to ensure a representative geographic spread across the Auckland region.

Appendix 1 shows the demographic stratification data used for sortition. The percentages are based on 2018 census data for the Auckland region.

Figure 9 shows the two-stage civic lottery process for recruitment and sortition.

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[9] 12,000 emails were sent to a randomised, representative sample from the Peoples' Panel, followed by another tranche of 2,837 emails targeting younger, Māori and Pacific audiences, for a total of 14,837 invitations.

[10] 11,472 emails delivered to a random sample of people who use AT services, who opted in to receive emails.

[11] Sortition was performed using newDemocracy Foundation's Stratified Random Selection Tool
https://selection.newdemocracy.com.au/
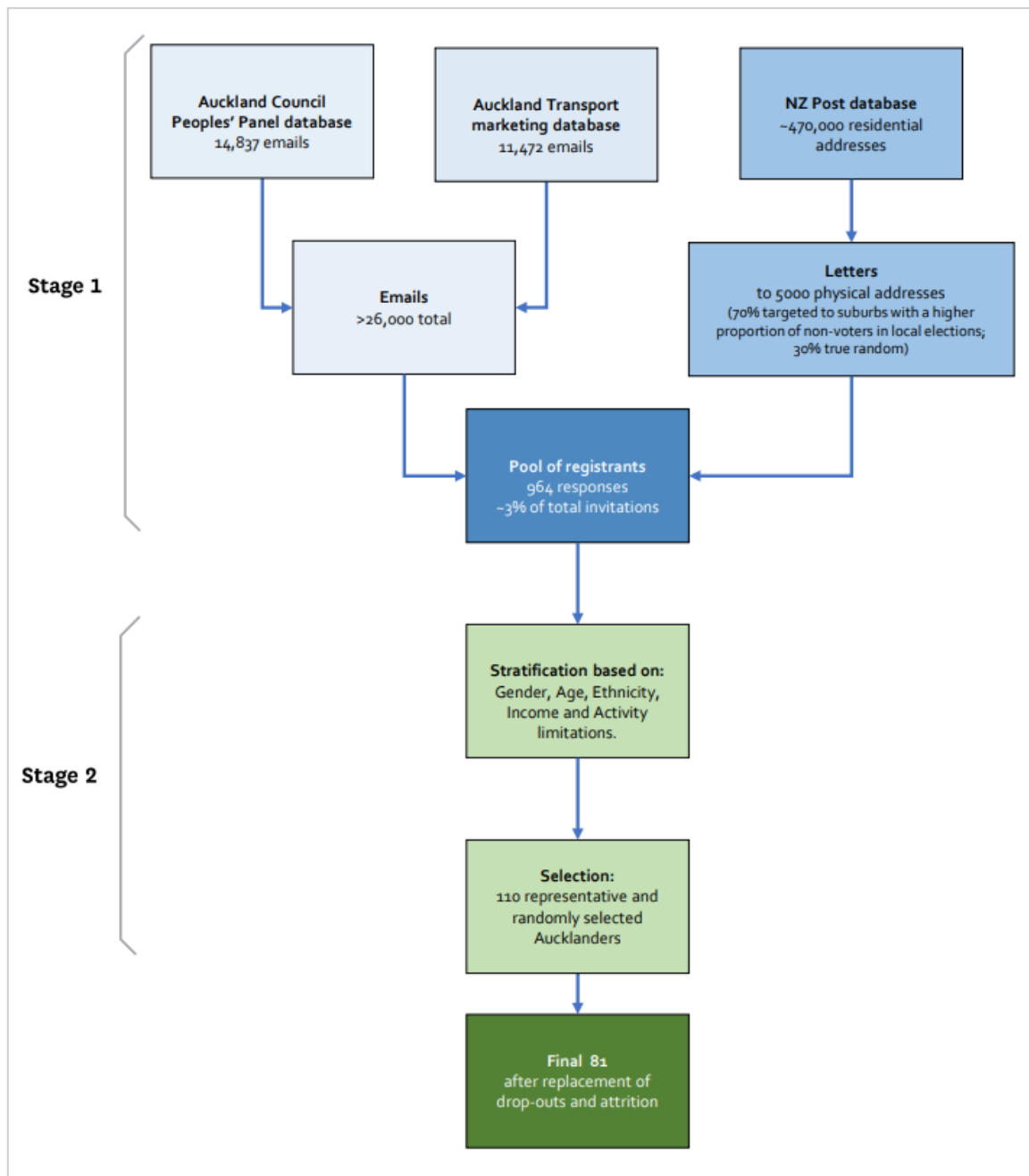
Figure 9. Two-stage civic lottery (sortition) process

2.2   Background materials and expert input

A participant website, built by Koi Tū,[12] provides links to workshop session inputs, expert presentations and information videos, and answers to key questions. It also hosts participants' own groupwork in digitised format. Figure 10 shows a screenshot of the landing page, with quick links to useful materials. The subject matter experts and topics covered in their presentations and Q&A are listed in Appendix 3.

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[12] Participant website: https://www.complexconversations.nz/deliberativeforum/
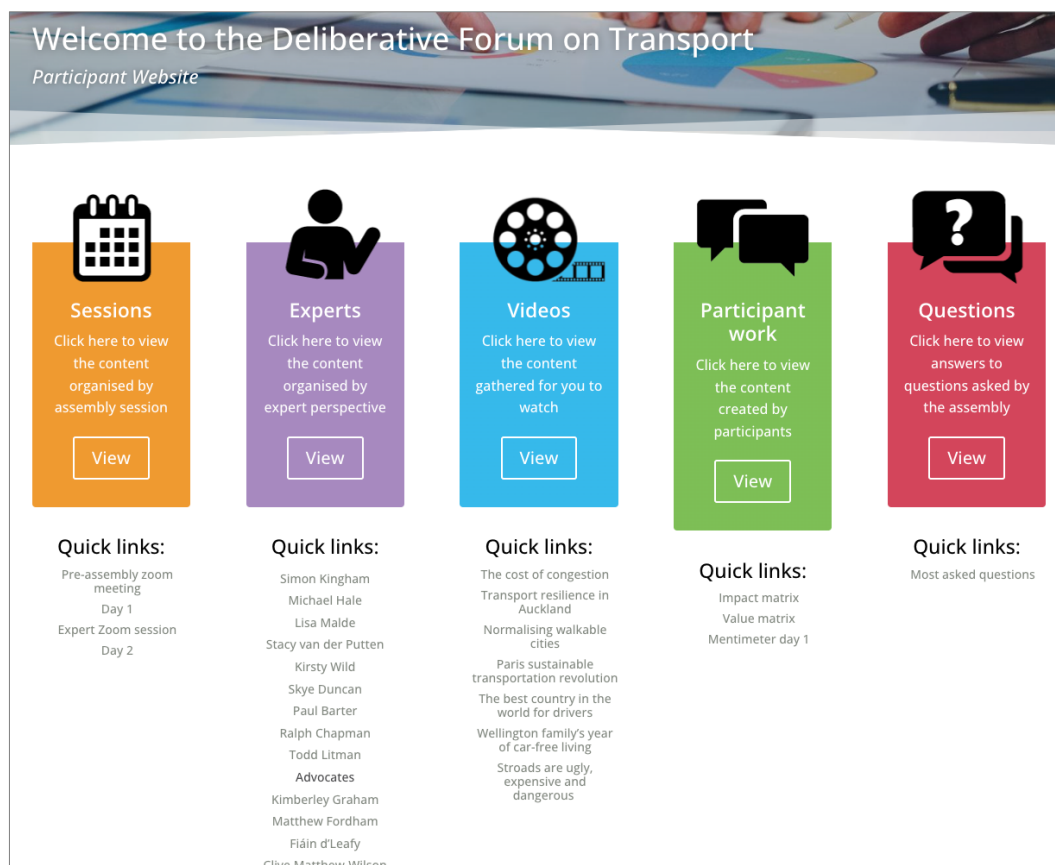
Figure 10. Deliberative forum participant website (screenshot)

2.3 Forum sessions

2.3.1 Day 1 components

Logistics and introductions

The forum was planned for 100 participants and 101 individuals had confirmed attendance prior to day 1. These participants were randomly assigned to tables with 6-7 participants each, and a table host. The group assignments were assessed for diversity and further mixed where necessary to ensure a range of perspectives interacting at each table. The groups were again mixed after the lunch break to different randomly pre-assigned tables which also ensured diversity at each, and different interactions (i.e. no two participants were at the same table for both sessions). There was some inevitable attrition from the original group. A total of 88 people attended on day 1 and completed the pre-deliberation survey.

The forum opened with a karakia and introduction by Robbie Paora of Ngāti Whātua Ōrākei, which provided historical context on Tāmaki Makaurau Auckland from a tangata whenua perspective.

Councillor John Watson, Chair of the Auckland Council Transport and Infrastructure Committee, welcomed the group and expressed the support of the committee and council for the process. He conveyed that the results would be presented back to Council and to Auckland Transport to help inform their future planning, particularly around reducing private vehicle travel.

The Koi Tū facilitator (Anne Bardsley) introduced the topic of deliberation and how the process would work. This emphasised the diversity of the group and the value of listening to all perspectives in the

conversation in order to identify future directions that would be acceptable to the wider population. The main purpose of Day 1 was to introduce the problem, and to allow the participants to start thinking about possible solutions and ask questions of experts, or submit questions to be answered in the online session.

Participant engagement

The forum utilised Mentimeter[13] real-time polling software as a tool to engage the group and to gather information on their initial perceptions of the issues. The groups discussed what they valued about living in/near an urban area, and what was important about the transport system. They used the Mentimeter tool to express their top-of-mind views and to rank problems. They were given time to start to think about what changes they would like to see, or what might need to change in order to consider different modes of transport.

Experts

The participants heard from and interacted with a number of invited experts and panelists for presentations and Q&A (The topics covered by the experts are listed in Appendix 3):

- Presenters:
  - Prof Simon Kingham – Professor of Human Geography, University of Canterbury and Chief Science Advisor to the Ministry of Transport
  - Lisa Malde – VKT Reduction Lead, Waka Kotahi NZ Transport Agency
  - Dr Michael Hale – Public health medicine specialist, Auckland DHB
- Panelists:
  - Stacey van der Putten – Public Transport Services, Auckland Transport
  - Dr Kirsty Wilde – Public health and environmental sociologist
  - Prof Simon Kingham
  - Lisa Malde
  - Michael Roth – Lead Transport Advisor, Auckland Council

Participants were asked to note down their unanswered questions and these were placed on posterboards or deposited in a question box. All questions were digitised and sorted for consideration in the online session.

Small group exercises

Participants worked in their table groups on two different exercises to allow participants to come up with their own ideas to improve aspects of the transport system, and also to evaluate ideas that appeared in the survey.

- **Impact vs Effort matrix** – The groups were asked to write down and discuss their own ideas for change, and to place them on a matrix to indicate (a) how much impact they would have, and (b) how easy/hard they might be to implement. The ideas and their positioning were discussed at the table, then the matrices were left with the table hosts over the lunch break, to be reviewed by the new group occupying the same table after the break. The reviewing group

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could make changes to the positioning of intervention ideas, if justified and agreed by the group. These matrices were later digitised for analysis (see Section 1.3.1 and Figure 4).

- **Values vs Change matrix** – Participants first worked in pairs to fill in a matrix worksheet to assess ideas for change against a range of criteria/values. They could consider their own ideas or assess the list of possible changes that were asked in the pre-deliberation survey, and rate their impact against the criteria on a scale of 0 (not helpful) to 5 (very helpful). The pairs then discussed their answers with the table group, and a group matrix was created. These matrices were also digitised for analysis (see Section 1.3.1 and Table 1).

2.3.2 Online session with experts

To address the range of questions gathered on Day 1, three new speakers were enlisted to provide additional information. An online session was run via Zoom. The session began with a plenary introduction in which the experts provided background to their areas of expertise, followed by simultaneous breakout sessions on three main topics. Each breakout room was attended by a Koi Tū facilitator, the invited expert and a supporting expert. Participants could choose which breakout session to attend.

The topics of the session were:

1. Designing streets for people (expert: Skye Duncan, Global Designing Cities Initiative; supported by Prof Simon Kingham, University of Canterbury and Ministry of Transport)
2. Parking management, pricing and tradeoffs (expert: Paul Barter, Transport strategy consultant, Singapore; supported by Tim Adriaansen, Senior Transport Advisor, Auckland Council)
3. Economics of transport and pricing externalities (expert: Ralph Chapman, Victoria University Wellington; supported by Michael Roth, Lead Transport Advisor, Auckland Council)

All sessions were recorded and uploaded to the website so they could be watched later.

2.3.3 Day 2 components

Logistics and introductions

For Day 2, the participants were again randomly pre-assigned to one of 16 table groups, this time with 5-6 participants per table, plus a table host. The table assignments were checked to ensure a good demographic spread at each, and that participants were mixed with people different from those on their previous two table assignments.

The forum was opened with a karakia and welcome from Maru Delamere, Kaikotui take Matauranga at Auckland Transport. The Koi Tū facilitator reviewed what was discussed on Day 1 and the online session, and some preliminary insights from the Day 1 group work.

Experts

Before beginning deliberative exercises, two presentations were given (see Appendix 3 for details):

1. Traffic network optimisation – Miguel Menezes and Aqil Imam from Auckland Transport presented a brief video and answered audience questions
2. Fair and efficient transport planning – Todd Litman, Victoria Transport Policy Institute, Victoria BC, Canada, gave a live presentation via Zoom and answered audience questions

Exercises and deliberation

Scenario activity

Three hypothetical scenarios were developed, based on real maps of different areas of Auckland. The scenarios represented different situations and transport needs. Each scenario pack included a set of maps, a textual description of the problem and context, a pack of 12 different character cards and a small 'information pack' on urban design. Five to six tables worked separately on each of the three scenarios. Some character cards examples are shown in Figure 11.

Figure 11. Example character cards used in the scenario exercise

Participants were asked to consider the transport needs from both their own perspective and that of a character assigned to them by random selection of a character card. Questions posed to the groups required them to deliberate, listen to the full range of needs and perspectives, and come up with possible solutions that could be accepted by the group.

Participants were also given an individual reflection sheet to express their initial thoughts and changes to their thinking following the deliberation.

Stakeholder panel

A stakeholder panel was assembled to present a range of perspectives on the current transport system, and hear the ideas of the forum participant groups after considering their assigned scenario. The stakeholders were:

- Kimberly Graham – advocating for people with disabilities
- Matt Fordham – advocating for children and youth voices
- Fiáin d'Leafy – advocating for bicycle riders
- Clive Matthew-Wilson – advocating for motorists

One table group from each of the three scenarios was selected to present their ideas to the stakeholder panel, who then provided their perspective to the whole audience. This was followed by a Q&A with all table groups and the panel.

PART 3 – Appendices

3.1.1 Appendix 1 – Participant demographics

The table below shows the civic lottery stratification targets for Auckland based on the 2018 NZ census. Sortition was carried out using the Stratified Random Selection Tool designed by the newDemocracy Foundation (https://selection.newdemocracy.com.au/). The "**Target (%)**" is the expected percentage for each demographic group based on the 2018 census data for the area. The "**Target for group of 110**" column shows the ideal numbers required for a perfect representative sample for a group size of 110 participants, based on percentages from the census data. These numbers were fed into the sortition tool to randomly select the sample. The '**Original 110 selected**' column shows the actual numbers for each demographic group for the 110 participants that the sortition tool selected. The "**Final 81 (with replacements)**" column shows the number of people from each category who completed the forum process. The final column shows the deviation from target percentages based on 81 participants.

Category	Group	Target (%)	Target for group of 110	Original 110 selected	Final 81 (with replace-ments)	Target for group of 81	Target discrep-ancy (for group of 81)
Gender	Male	48	53	52	38	39	-1
	Female	50	55	54	38	40	-2
	Gender diverse	2	2	4	5	2	+3
Age	18 - 24	17.8	20	20	14	14	0
	25 - 34	20.3	22	22	17	16	+1
	35 - 44	16.9	18	18	14	14	0
	45 - 54	16.7	18	18	12	14	-2
	55 - 64	13.3	15	15	11	11	0
	65 - 74	8.7	10	10	9	7	+2
	75 - 84	6.4	7	7	4	5	-1
Ethnicity	European (including NZ European, Pakeha, other European)	47.7	52	49	39	39	0
	Māori	10.3	11	11	6	8	-2
	Pacific Peoples (including Samoan, Tongan, Fijian, Cook Islander, and other Pacific Peoples)	13.8	15	15	9	11	-2
	Asian (including Indian, Chinese, Korean, Japanese, and all other Asian)	25.2	28	27	21	20	+1
	Middle Eastern/Latin American/African	2.1	3	5	3	2	+1
	Other	1.0	1	3	3	1	+2
Personal income	< $30,000	46.1	51	51	33	37	-4
	$30,001 - $50,000	19.3	21	21	19	16	+3
	$50,001 - $100,000	25.1	28	28	20	20	0
	> $100,001	9.5	10	10	9	8	+1
Activity limitations	Yes (Some limitation in getting around)	6.0	8	8	9	5	+4
	No	94.0	102	102	72	76	-4

3.1.2 Appendix 2 – Survey content

PART 1: TRANSPORT EFFECTS

Auckland's transport system is not meeting the access needs of everyone, and our growing population will put more pressure on it. This will affect how the city functions and how we live in it.

Please indicate how much you agree or disagree with each of the following statements on a scale from 0-10, with 0 indicating strong disagreement and 10 strong agreement. If you don't know, please click "I don't know".

Strongly disagree		Somewhat disagree				Somewhat agree			Strongly agree	
0	1	2	3	4	5	6	7	8	9	10

I don't know.

((Each numbered statement in the table below had the following scale where the choice could be clicked on [or circled in the hard-copy form]))

1	Traffic is a major problem for Auckland's economy
2	Public transport services (i.e., bus, train or ferry) are not frequent
3	Public transport services (i.e., bus, train or ferry) are not reliable
4	Climate change requires urgent action
5	Transport has a big impact on Auckland's greenhouse gas emissions
6	A lack of attractive walking and bike riding facilities has a big impact on health
7	Air pollution from transport in Auckland is a major cause of asthma and poor health
8	Lowering the speed limit is important to reduce crashes and injuries on our roads
9	Everybody should be able to safely walk or ride a bike around their local area
10	Everybody should be able to park on the street outside their home
11	Electric vehicles will solve many of our transport problems
12	Reducing the need to use cars would decrease the cost of living for Aucklanders

PART 2: POSSIBLE CHANGES

To improve our transport system, we need to make some changes. Some possible changes are listed below. Please indicate how much you agree or disagree with each of the statements on a scale from 0-10, with 0 indicating strong disagreement and 10 strong agreement. If you don't know, please click "I don't know".

Strongly disagree		Somewhat disagree					Somewhat agree			Strongly agree	
0	1	2	3	4	5	6	7	8	9	10	
I don't know.											

((Each numbered statement in the table below had the following scale where the choice could be clicked on [or circled in the hard-copy form]))

1	Build more lanes on motorways and main roads
2	Make it safer, easier and more comfortable for everybody to walk around their local area
3	Provide a safe and connected bike path network across the Auckland region including removing car parking spaces where required
4	Provide all-day bus lanes on main roads
5	Provide more bus services so that buses turn up frequently at all times of the day
6	Upgrade Auckland's rail network so that trains run faster and more frequently
7	Enable self-driving cars to provide a taxi service
8	Charge a fee for on-street car parking which varies in price depending on the area where people live and park
9	Charge a fee for driving on all main roads when traffic is heavy
10	Charge a fee for driving into the city centre
11	Increase the Regional Fuel Tax on petrol and diesel to pay for transport improvements in Auckland
12	Provide subsidies for electric bikes
13	Provide subsidies for car sharing services so people can easily rent by the hour instead of owning a car
14	Build more homes closer to the city centre, public transport stations and main bus routes
15	Prevent further development of new housing and industry in greenfield areas outside of the current developed area

PART 3: RANKING OPTIONS

Please rank your top 5 of the following possible changes in order of importance. Move the one that is most important to you to the top of the list, followed by four other options in the order you choose. You can drag and drop an option to move it. We will only count the top 5.

((In the online survey, the statements below could be dragged into position to indicate the top 5 choices. In the hard-copy version, the top five choices could be numbered in the lefthand column.))

1	Build more lanes on motorways and main roads
2	Make it safer, easier and more comfortable for everybody to walk around their local area
3	Provide a safe and connected bike path network across the Auckland region including removing car parking spaces where required
4	Provide all-day bus lanes on main roads
5	Provide more bus services so that buses turn up frequently at all times of the day
6	Upgrade Auckland's rail network so that trains run faster and more frequently
7	Enable self-driving cars to provide a taxi service
8	Charge a fee for on-street car parking which varies in price depending on the area where people live and park
9	Charge a fee for driving on all main roads when traffic is heavy
10	Charge a fee for driving into the city centre
11	Increase the Regional Fuel Tax on petrol and diesel to pay for transport improvements in Auckland
12	Provide subsidies for electric bikes
13	Provide subsidies for car sharing services so people can easily rent by the hour instead of owning a car
14	Build more homes closer to the city centre, public transport stations and main bus routes
15	Prevent further development of new housing and industry in greenfield areas outside of the current developed area

PART 4: HOUSEHOLD CONTEXT

((This section was only part of the pre-deliberation survey))

Please tell us about your transport situation.

Do you have a driver's licence?   Y/N
Do you have access to a car when you need it?   Y/N
Do you have an off-street car park available at home? Y/N

How often do you use the following types of transport for getting around (for example, to work, school, shopping, visiting friends and family)?

Car
(2 or more days a week/ Once a week to monthly/ Monthly or less)

Walk
(2 or more days a week/ Once a week to monthly/ Monthly or less)

Bike/eBike/eScooter
(2 or more days a week/ Once a week to monthly/ Monthly or less)

Public transport (Bus, Train, Ferry)
(2 or more days a week/ Once a week to monthly/ Monthly or less)

PART 4: FEEDBACK

((This section was only part of the post-deliberation survey))

Do you want to receive a draft copy of the report?   Y/N
Would you like to be involved in our future research?   Y/N
Any other ideas on how to make the transport system better?   *(Paragraph response)*
Do you have any feedback on how the process went?   *(Paragraph response)*

3.1.3 Appendix 3 – Experts and topics

Expert	Topic
Day 1 – 2nd September 2023	
Simon Kingham Professor of Geography; University of Canterbury; Chief Science Advisor, Ministry of Transport	Travel patterns How we travel now, for work, education, activities
	Public spending on transport – breakdown - Road maintenance - Road improvements - Public transport - Walking and cycling - Investment management - Road safety promotion
	Who pays for travel - National Land Transport Fund (NLTF) - FED, RUC, tolling, eRUC - Auckland-specific data and rates, fees and user charges, operating subsidies, infrastructure growth charges, Regional Fuel Tax, etc. - Transport as proportion of household expenditure, by income group - Benefit : Cost ratios – economic measure of efficiency in investment spending (data for roads of national significance, cycleways)[14]
	External costs: – currently paid monetarily by taxpayers and otherwise by affected residents. User-pays and polluter-pays principles. - Crashes and injuries - Pollution - Physical - Noise - Congestion - Community severance Climate change
	Transport planning - Concepts of 'predict and provide' and 'decide and provide' - Induced and suppressed demand - Transport and land use – impacts of increased population/housing density on ability to provide public and active transport infrastructure - 15-minute communities - Avoid-Shift-Improve framework - Public transport and mass rapid transit - Congestion pricing, road tolls
Michael Hale Public health medicine specialist, Auckland DHB	Impacts of transport on health - Trauma – road injuries are a leading cause of death and serious injury. NZ performs poorly compared with many other OECD nations in deaths by population. Cyclists, pedestrians and scooter riders are disproportionately at risk - Air quality - >3500 preventable deaths per year in NZ - Physical health and wellbeing

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[14] Pickford, M. (2013). State highway investment in New Zealand the decline and fall of economic efficiency. *Policy Quarterly*, *9*(3).

	How has this happened? What needs to change?
	▪ Changing the default environment from health preventing to health promoting
	▪ Road speed, traffic calming, designing streets for people
Kirsty Wilde Public health specialist	Impacts of transport on health Impacts of environment on health
Lisa Malde VKT Reduction Lead Waka Kotahi NZ Transport Agency	Congestion and traffic – facts about Auckland ▪ Auckland has more extreme peak congestion than cities such as Melbourne, Adelaide, Canberra, and Wellington. ▪ Direct costs of traffic congestion to individuals are increased fuel and maintenance costs, loss of time due to longer journeys, and inconvenience. ▪ Benefits of de-congestion in Auckland are estimated to be between $0.9 billion and $1.3 billion (economic and social cost) per annum[15]
	Efficiency – The network is most efficient when it's able to move more people ▪ Number of people moved by a traffic lane vs dedicated bus lane vs cycleway vs footpath ▪ Space taken by different modes ▪ Costs to build and maintain different types of infrastructure
	Emissions - New Zealand's transport emissions rose more than any other source between 1990 and 2019, by approximately 80% ▪ 43.6% Auckland's total emissions; 86% of this is from travel by road ▪ EVs can reduce emissions, but are not a silver bullet and won't achieve wider outcomes
	Accessibility and equity - The benefits and costs of transport are experienced differently by people, depending on whether they belong to a disadvantaged group, and depending on where they live and work ▪ The transport system generally works well for most people most of the time. But it does not serve the needs of all. ▪ People who travel to work in peak hours and whose home and workplace are well served by public transport have the most choices. ▪ Options are significantly reduced for people that can't or choose not to drive. ▪ People in Auckland who have disabilities and would like to walk and use public transport often cannot do so easily, because transport infrastructure and services are inaccessible to them.
Online session – 9th September 2023	
Skye Duncan Global Designing Cities Initiative (additional expert Simon Kingham)	Redesigning streets for people Strategies and best practices
Paul Barter Urban transport researcher, policy advisor and trainer, Singapore (additional expert Tim Adriaansen)	Parking management, pricing and tradeoffs, and impacts on the broader transport system ▪ All parking space potentially has some other use ▪ Parking is costly to provide ▪ Private-use parking vs public-use parking ▪ How should we think about parking fees and about who should pay the costs of car parking? ▪ How much parking is the right amount for each location? ▪ On-street parking: who should have most say?

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[15] NZIER. (2017). *Benefits from Auckland road decongestion*. NZ Institute of Economic Research.

Ralph Chapman Adjunct Professor, Victoria University of Wellington (additional expert Michael Roth)	Economics of transport and pricing external costs - Cost-benefit analysis - Costing climate impacts
Day 2 – 16th September 2023	
Miguel Menezes Technical Lead, Network Optimisation, Auckland Transport **Aqil Imam** Optimization Delivery Manager, Auckland Transport	Traffic management and optimisation - managing traffic light phasing, - dealing with congestion, emergencies, etc.
Todd Litman Victoria Transport Policy Institute, Victoria BC, Canada	Transport demand management - Incentives to use efficient options - Improving transport options (active transport, PT improvements, rideshare programmes, car and bike sharing) - Smart growth policies (transit-oriented development, location-efficient development, streetscaping, traffic calming, reduced parking requirements) - Implementation programmes (e.g. school and campus transport management, freight transport management, commute trip reduction programmes)
	Efficient transportation pricing - Parking costs and pricing - The motorway cost paradox - Congestion/decongestion pricing – higher rates during peak periods

3.1.4 Appendix 4 – Impact vs Effort matrix exercise results

The table below lists all ideas placed in "Low Effort, High Impact" quadrant of the Impact vs Effort matrices in the 16 table groups. Those perceived as being very low effort and very high impact are highlighted in darker green.

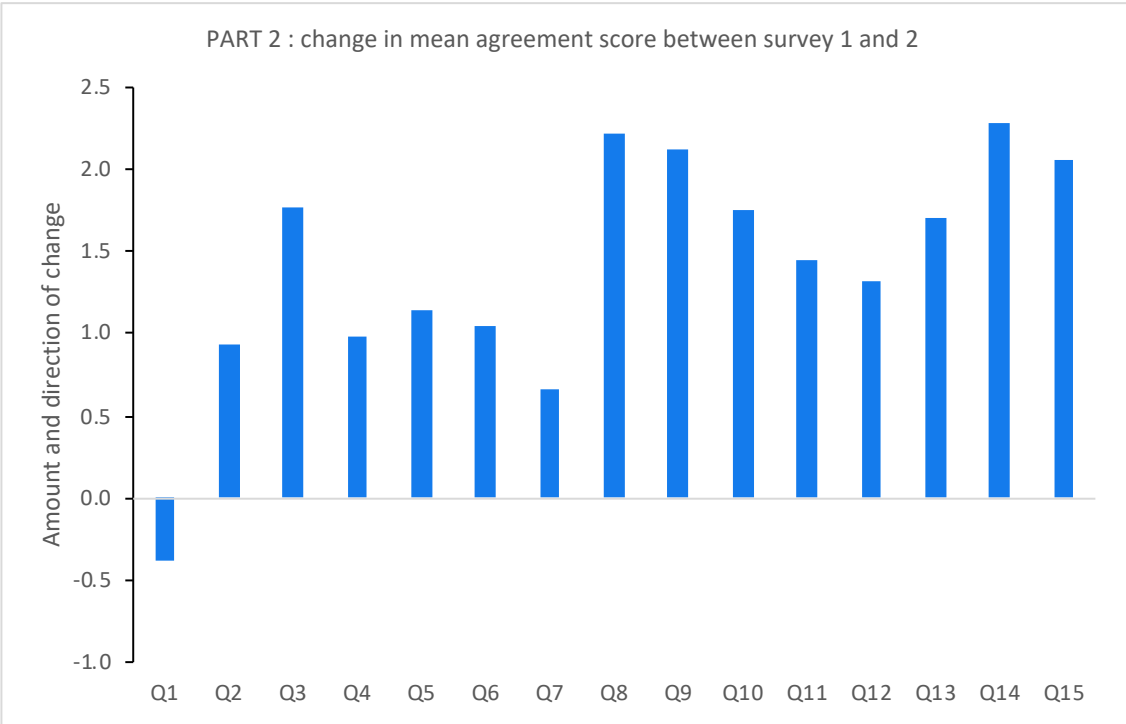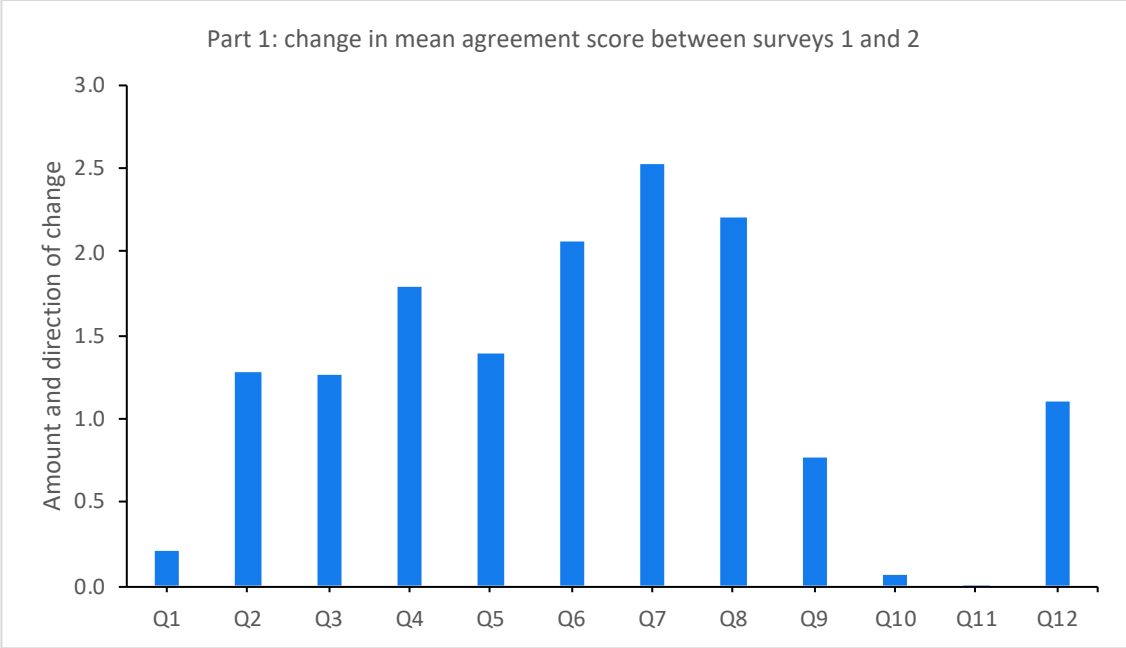| Impact vs Effort matrix entries – Low effort/High impact quadrant		Score by placement within quadrant	
Table group no.	Idea entry	**Effort score** 1 = very low effort 2 = moderately low effort 3 = somewhat low effort	**Impact score** 1 = very high impact 2 = moderately high impact 3 = somewhat high impact
1	Coastal ferry service	3	3
1	Improve traffic management to optimise traffic flow and line up traffic lights	2	3
1	Traffic light sequencing for through main traffic roads	1	3
1	Incentivise active modes of transport e.g. cycling; Subsidise Ebike; subsidise safety gear + child additions for cyclists	3	2
1	Protected cycleways on main arterial routes	3	1
1	Pay using AT app - not limited by card	3	1
1	Trucks driving at night	2	2
1	1. Stops missing numbers 2. Departure of bus times needs to be staggered to stop clog at lights and large delays	2	1
1	Work from home support	2	2
1	Maximum daily charge for AT wide transport. Attractive price to encourage more people to use - $3.00 or $5.00 esp. weekend	1	1
1	Make it safer with more vulnerable people by having reliable, even late night. Encourage weekend PT	1	1
2	For many feeder roads - single side no parking. Easier for buses, safer for cyclists	3	3
2	Stop high density homes with no off-road parking	2	3
2	Bike park spots	2	2
2	Improved PT communications (delays etc.)	1	2
2	Revisit PT daily, weekly and monthly unlimited passes. Why did it fail before? Will it work now?	1	1
2	Organise regular consultations with locals on what's important and any Pt changes	1	1
3	Allow push bikes + scooters on footpaths	2	3
4	(electric) Minibus, short connecting routes	3	3
4	More bus routes (more frequent buses, easier access)	3	2
4	Account for all modes of transport e.g. calculate specific wait time for pedestrians, cyclists	3	1

4	More connections between footpaths	2	3
4	Not needing tech (phone, app) to know when the bus is coming	2	1
4	Wider and safer footpaths	1	3
4	Slower speed limits	1	1
4	Reutilise road space - narrow lanes and wider active recreation+transport	1	3
4	Easier, intuitive ticketing e.g. goldcard	1	2
5	Bus stops that are closer and easy to get to	2	3
5	Charge a high emissions car, like in London	2	2
5	Design 2way train space as a standard part of all 4+ lane motorways	2	1
5	Put bike racks on all buses, see South Bend Indiana	1	3
5	Have safety call system on bus for when aggressive passenger (red button)	2	2
5	Reduce cost (Reduce ticket prices to carry more passengers)	2	1
6	Tactical urbanism - Implementing fast temp street furniture/barricades to improve walkability and safety of roads	3	3
6	Toughen penalties for traffic accidents	3	2
6	Dual use pathways	3	1
6	Raise Auckland fuel tax	2	3
6	Reduce on street parking to increase transit lanes	2	2
6	Reduce Pt fees/or free	2	1
6	Consider greater good of all ppl when making decisions	1	1
6	Fast bus ways similar to light rail with multiple 'follow me' wifi connected buses with dedicated bus lanes	1	1
7	Ebike subsidy	3	3
7	Change law so motorists are default at fault for bike(/pedestrian?) collisions	3	2
7	Increase tax on cars/parking owners	3	2
7	Add a gold card type option for low income. Maybe add to CSC to get free or discounted PT	2	2
7	Free PT for low income community card	1	3
8	Charge trucks for using community roads	3	2
8	Multiple service providers to deliver ferry service for harbour communities	2	1
8	Align timetables of connecting services PT	1	3
9	Have more free parking areas for commuters (+1 vote)	3	3
9	Make more pedestrian crossings	3	2
9	More lighting/wider footpaths	3	1
9	Build more bus stations which will allow people to walk in 5 minutes	2	3
9	Use one side footpath for bike lane (and generally remove hazards)	2	2

9	Bring back the public transport discounts for all	2	1
9	Improve cross town transport, not just CBD	2	3
9	Add bike parks to existing infrastructure - fence, benches, poles (give permission to park)	2	1
9	Increase the bus/train frequency to 5min in peak time	1	3
9	Make trolleybuses in Auckland	1	2
9	Use mass venue with parking for park & ride. I.e. exchange for hub at stadium/shopping centre - public/private partnership	1	2
9	Off peak (or on) run busses to nearby train stations to free them for other runs	1	1
10	Increase P.T. frequency and reliability	1	3
10	Add bigger buses in peak hours (mostly uni)	2	2
10	Online hopcard (Apple wallet)	2	1
11	Being able to use HOP card on scooters & to add options esp. for shorter distance	3	1
11	Transport mobile app (Paywave-like)	2	1
11	Study bus peak times - Optimisation	1	2
11	Smaller shuttles for shorter journeys	1	3
11	Replacement services	1	2
12	Get buses to wait and never leave early	2	3
12	Convince younger ppl to use PT and get used to it starting early	2	2
12	use existing At app data to customise timetable for Bus\Train	2	1
12	Easier and more frequent PT feeder services	1	2
12	Smaller buses more frequently (shuttles)	1	1
12	Policy makers and economists need to listen to the people - more opportunities to engage	1	2
13	More flexibility of work hours to reduce congestion	3	3
13	Cost of PT, Safety of PT	3	2
13	Map the city - where employees live and work need to have transport options	2	2
13	Lower urban road speed	2	2
13	More enforcement of road rules - speeding, driver license, aggressive driving incl. speed cameras	2	3
13	Publicly owned freight transport companies	2	1
13	Online service, Car sharing app, expression of interest public services	1	3
13	Create car/bike parks at transport hubs/highway exits	1	2
13	Paying PT workers more	1	1
13	Agree to union/worker demands before strike action	1	1
14	Increase peak time train carriage numbers	3	2

14	Separate carriage for babies/prams and disabled people	3	3
14	Security on certain bus/train late night services	3	2
14	Free PT, Full subsidies for vulnerable	3	1
14	Compulsory defensive driving education	2	1
14	For non-gated train stations, can we get vending machine for tickets	2	3
14	Pre-emptively schedule or book services to influence timing/capacity and get cancellation notifications	2	2
14	At Hop timetable cancellation without 24hr previous notice. Notification if won't come and other options	1	2
14	Ability to use debit/credit to tag on/off (like london)	1	3
14	Modernise At hop app (takes ages to load $)	1	1
15	Give up personal transport and use public transport	3	3
15	Uber shuttle	3	2
15	Govt to buy land around Pt and build homes to speed up the process	3	1
15	Automation of transport system - make suggestions, advise travel times	3	2
15	Online hopcards (apple wallet etc.)	2	2
15	Make AT app more reliable and up to date	2	1
15	Change/stagger school starting times	2	3
15	Increase PT services + routes	2	2
15	Auckland unitary plan adhered to. I.e. Public transport hub and dense	1	3
16	Dedicated shelters with time table at stops	3	2
16	Help senior citizens/accessibility - wheelchairs	3	3
16	Mapping local area travel needs more. Need area specific travel plans. Focused on local problems	2	1
16	Changing phasing of lights + pedestrian lights	2	3
16	Connections with travel and different routes should be kept in view while making time schedule of Departure/Arrival	1	2
16	Linking of all our PT, cycling and walking routes	1	2
16	Focus on first mile last mile - changing modes	1	2
16	Have public vote for what they want - cycleways etc.	1	1

3.1.5 Appendix 5 – Change in responses from survey 1 to survey 2

The graphs below show the mean change in response to each survey question in Part 1 (Transport effects) and Part 2 (Possible changes). The questions were answered for level of agreement on a scale of 0-10 with 0 being 'strongly disagree' and 10 being 'strongly agree.' For most questions the mean agreement score increased after deliberation (by up to 2.5 points). The questions are listed below the graphs.


Part 1: change in mean agreement score between surveys 1 and 2

PART 2 : change in mean agreement score between survey 1 and 2

Questions		Mean change
Part 1: Transport effects		
Q1	Traffic is a major problem for Auckland's economy	+0.2
Q2	Public transport services (bus, train, ferry) are not frequent	+1.3
Q3	Public transport services (bus, train, ferry) are not reliable	+1.3
Q4	Climate change requires urgent action	+1.8
Q5	Transport has a big impact on Auckland's greenhouse gas emissions	+1.4
Q6	A lack of attractive walking and bike riding facilities has a big impact on health	+2.0
Q7	Air pollution from transport in Auckland is a major cause of asthma and poor health	+2.5
Q8	Lowering the speed limit is important to reduce crashes and injuries on our roads	+2.2
Q9	Everybody should be able to safely walk or ride a bike around their local area	+0.7
Q10	Everybody should be able to park on the street outside their home	+0.1
Q11	Electric vehicles will solve many of our transport problems	none
Q12	Reducing the need to use cars would decrease the cost of living for Aucklanders	+1.1

Questions		Mean change
Part 2: Possible changes		
Q1	Build more lanes on motorways and main roads	-0.4
Q2	Make it safer, easier and more comfortable for everybody to walk around their local area	+0.9
Q3	Provide a safe and connected bike path network across the Auckland region, including removing car parking spaces where required	+1.8
Q4	Provide all-day bus lanes on main roads	+1.0
Q5	Provide more bus services so that buses turn up frequently at all times of the day	+1.2
Q6	Upgrade Auckland's rail network so that trains run faster and more frequently	+1.0
Q7	Enable self-driving cars to provide a taxi service	+0.7
Q8	Charge a fee for on-street car parking which varies in price depending on the area where people live and park	+2.2
Q9	Charge a fee for driving on all main roads when traffic is heavy	+2.1
Q10	Charge a fee for driving into the city centre	+1.8
Q11	Increase the Regional Fuel Tax on petrol and diesel to pay for transport improvements in Auckland	+1.4
Q12	Provide subsidies for electric bikes	+1.3
Q13	Provide subsidies for car sharing services so people can easily rent by the hour instead of owning a car	+1.7
Q14	Build more homes closer to the city centre, public transport stations and main bus routes	+2.3
Q15	Prevent further development of new housing and industry in greenfield areas outside of the current developed area	+2.1

3.1.6 Appendix 6 – Rankings

The graphs show the total number of votes for each intervention in Part 2 of the survey, by rank 1-5, for survey 1 (pre-deliberation) and survey 2 (post-deliberation).

Survey 1 rankings

Survey 2 rankings
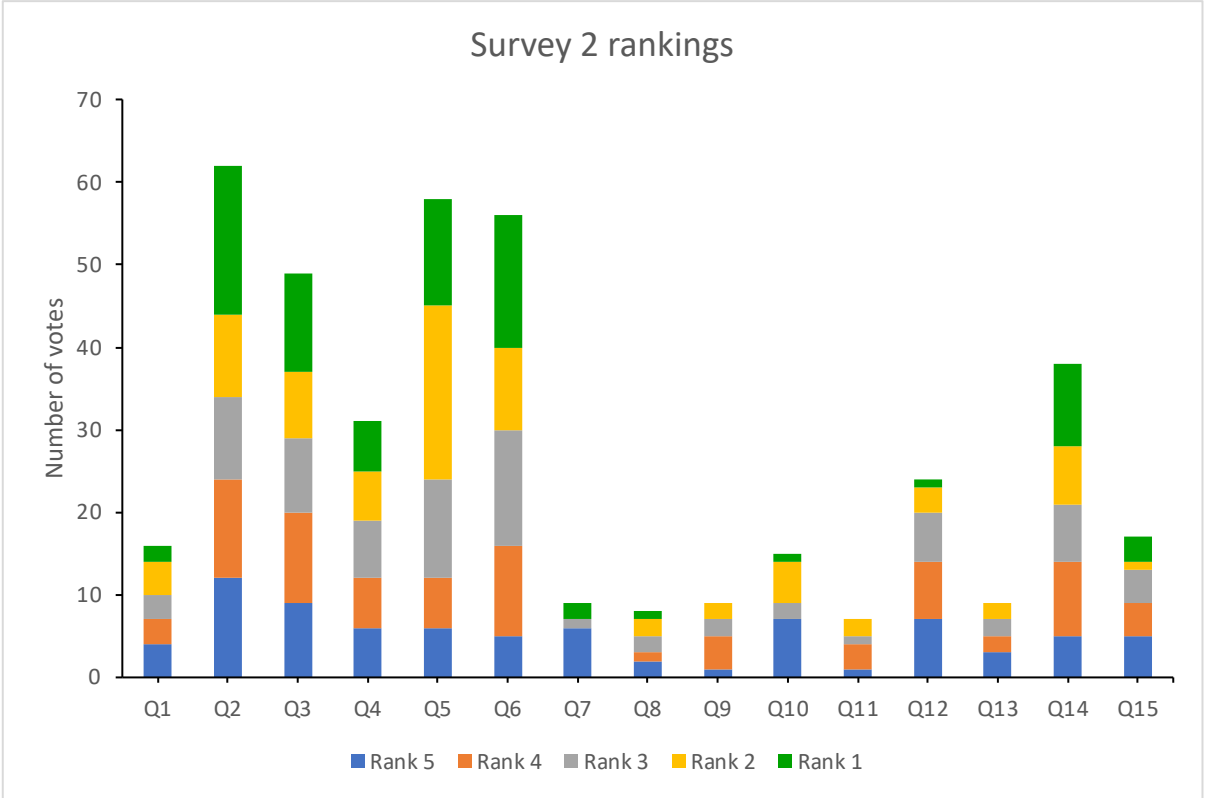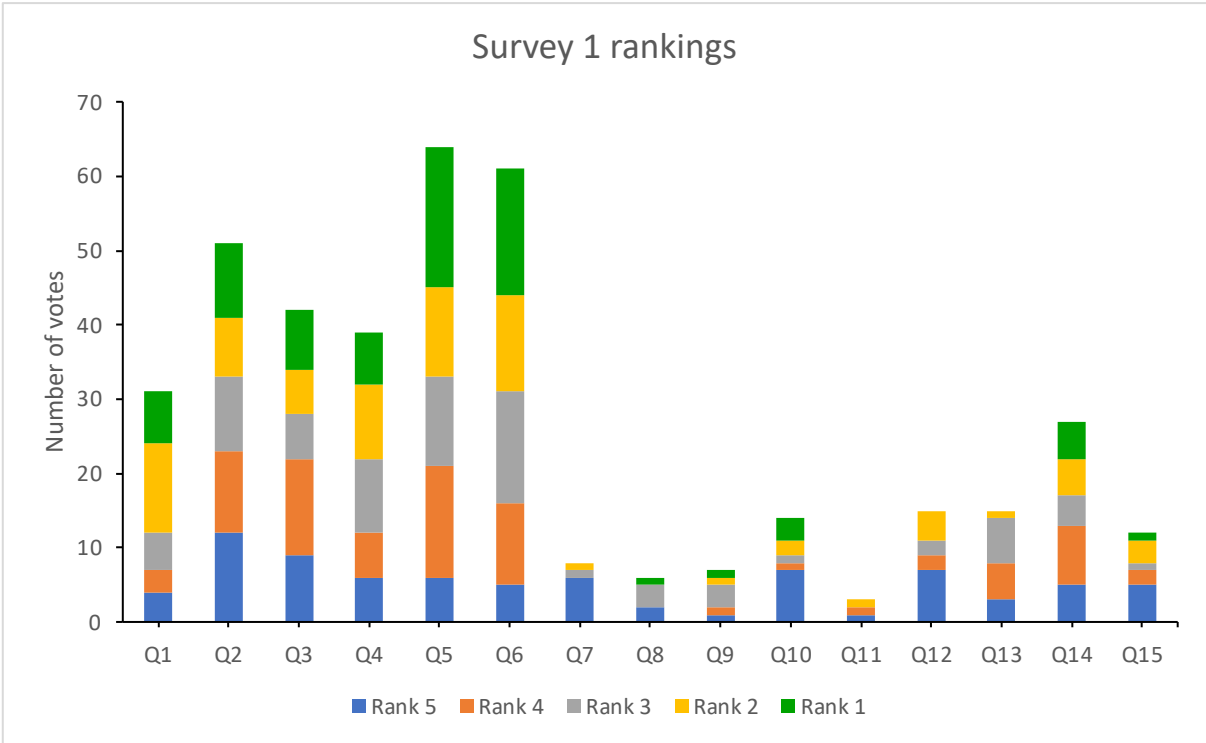
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