



AA Research Foundation

Sustainovation Collective

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Figure 1 Sustainovation Collective participant created image



Sustainovation Collective

AA Research Foundation

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This report ('Report') has been prepared by WSP exclusively for the AA research Foundation in relation to the Sustainovation collective Phase 1 and in accordance with the Sustainovation Collective Short form Agreement with the AA Research Foundation dated 20th December 2024]. The findings in this Report are based on and are subject to the assumptions specified in the Offer of Services dated 20th December 2024. WSP accepts no liability whatsoever for any reliance on or use of this Report, in whole or in part, for any use or purpose other than the Purpose or any use or reliance on the Report by any third party.



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GLOSSARY

Digital Miro board	A digital collaboration tool used for engagement
Mana	The authority we inherit at birth and that we accrue over our lifetime. It determines the right of a young person to have agency in their lives and the decisions that affect them.
Manaakitanga	Nourishing collective wellbeing
Mana Taiohi Principles	Principles guiding positive youth development in Aotearoa
Mātauranga	Knowledge, wisdom, understanding and skill. It includes research, individual experience, customary and cultural knowledge, and the beliefs and ideals held by young people and their whānau
Motu	Country referring to New Zealand
Participatory methods	Methods collaborating with participants
Taiohi	Younger adults living in New Zealand
Whanaungatanga	Relationship, kinship and a sense of family connection
Whai wāhitanga	Young people as valued contributors to society, giving them space to participate, assume agency and take responsibility
Youth at Heart, Meaningful Participation Toolkit	Toolkit for youth engagement

ABBREVIATIONS

AARF	AA Research Foundation
YDSA	Youth Development Strategy Aotearoa
NZ	Aotearoa, New Zealand

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EXECUTIVE SUMMARY

The Sustainovation Collective sought to meaningfully engage with younger adults (taiohi) to explore how they navigate Aotearoa New Zealand (NZ), gaining a deeper understanding of their experiences, perceptions and the challenges they face. Funded by the AA Research Foundation (AARF), the Sustainovation Collective tested the effectiveness of participatory methods and identified key methods to engage with taiohi on the future of transport and issues related to mobility in NZ. It found that taiohi aspire to experience sustainable, affordable and effective travel options in NZ and are eager to contribute towards change.

The Sustainovation Collective has highlighted the unique perspectives and experiences of taiohi. Taiohi experience significant stress, uncertainty and time pressure when navigating the transport system, and the emotional load of travel—particularly relating to reliability, safety and predictability—was a strong theme across all methods. Findings also indicate that novice drivers experience high stress and would benefit from additional support in building confidence, navigating complex journeys and managing wellbeing while travelling. The four participatory methods tested (peer led survey, creative conceptualisation, 'day in the life of' and citizen science) have facilitated the collection of rich data but have also empowered taiohi to actively lead and co-create towards research that pertains to their lives. These methods also demonstrated the value of ongoing, youth-centred approaches for future engagement, suggesting opportunities for continued involvement such as youth advisory mechanisms or future participatory projects.

The use of digital tools such as Miro and Maptionnaire have further supported the engagement process by providing accessible and interactive platforms for collaboration. These tools have enabled taiohi to visualise and articulate their mobility experiences and preferences, fostering a sense of ownership and investment in the outcomes of the research.

Collaborative workshops and group discussions have been instrumental in building relationships and fostering a sense of community among participants. This environment has provided safe spaces for taiohi to share their thoughts, challenge assumptions, and co-create solutions. The emphasis on inclusivity and empowerment has ensured that diverse voices are heard and valued, leading to more comprehensive, representative and impactful findings.

Based on the data collected by the Sustainovation Collective, taiohi expect transport to be safe and efficient yet many feel these expectations are not consistently met. Taiohi need efficient and easy options, that are preferably enjoyable. They often face time constraints, stress, anxiety and competing demands, which limit their flexibility and reduce their options for getting around. As a result, they make strategic trade-offs between time, speed, convenience, and hassle when choosing how to travel.

Taiohi identified and prioritised a list of issues about moving around NZ. These are;

- Unreliable public transportation
- Unavailable public transportation, especially in rural areas
- High cost of car ownership and use
- Traffic congestion and unpredictable travel times resulting in stress and anxiety
- Inadequate safety and biking infrastructure
- Inconsistent public transport facilities, lack of night lighting and pedestrian crossings
- Stressful, risky intersections and crowded spaces
- Limited safe transport options, especially at night
- Conflicts between scooters and pedestrians
- Poor road and path quality, including potholes and poorly maintained footpaths
- Adverse weather conditions
- Expensive parking

The Sustainovation Collective's findings point to several opportunities for change. Short-term actions include strengthening youth-facing communication and legitimacy, enhancing support for novice drivers, embedding wellbeing considerations in transport design, improving the quality and experience of active and public transport, and advocating for improved rural and intercity mobility options. The research reinforces that meaningful engagement with taiohi, grounded in mana-enhancing principles, is essential to designing more equitable transport solutions for young people in NZ.

The Sustainovation Collective's innovative and participatory approaches have not only enriched the research process but have also contributed to a deeper understanding of young people's mobility needs and preferences in NZ by prioritising shared ownership, enduring involvement, and relationship building. The Sustainovation Collective's research underscores the value of participatory, relationship-focused approaches in generating actionable insights and fostering positive change. By centring taiohi voices and co-creating solutions, this report contributes an important foundation for future initiatives aimed at improving mobility and transport equity for taiohi in NZ.

Are you listening?

Taiohi want to be engaged & they know what they need – better transport options

Taiohi expect better transport infrastructure that includes reliability, availability & affordability. For taiohi the experience of the journey is important.

WSP & AA Research Foundation undertook **'The Sustainovation Collective'** a research project to test effective engagement methods and use them to understand younger kiwi's insights in traversing New Zealand.

PROJECT OUTLINE

Data from
141
taiohi

20
active participants

Participants
from all
across
the motu

16-30
years old

Four participatory approaches used:

- Peer-led survey
- Citizen science approach
- Creative conceptualisation
- A day in the life of

PROJECT OUTCOMES

- 1** Reach taiohi in a more engaging way than previous methods and that also enhances their mana
- 2** Identify relevant concerns and challenges facing younger New Zealanders
- 3** Evaluate the effectiveness of engagement approaches used

PROJECT VALUES

Shared ownership, enduring involvement, relationship building Mana Taiohi principles.

ISSUES

57% of taiohi prefer travelling by car



RELIABILITY

Public transport is often unreliable, taiohi are time poor



AVAILABILITY

Limited public transport access, especially in rural areas



WELLBEING

Stressful intersections, crowded areas, and traffic congestion increase anxiety



AFFORDABILITY

Car use and parking are expensive



SAFETY

Inconsistent transport facilities, poor lighting, lack of crossings, and unsafe biking and scooter conditions



WEATHER

Difficult weather conditions affect travel

Travel is so much more than just getting from point A to B. Every journey is shaped by layers of experience, from safety & comfort to time pressure, accessibility & emotional well-being.

We want reliability. We want to know we'll arrive on time, feel safe while travelling, & not be drained by the journey.

Is it worth getting there faster if I feel unsafe? Should I avoid this road even if it saves me time? Do I take the longer way even if it means fewer lights & less tension?

Young people know exactly what they need. They want safer routes, smoother infrastructure, clearer choices & transport systems that work for real life.

WE HEARD

Taiohi are experts in their own lives & experiences, and are capable data collectors with unparalleled access to their networks.

LISTEN TO TAIOHI BY

Build **trusting relationships**



Use **communication methods** used by taiohi



Use **participatory methods**



Enable **decision making**



TAIOHI ASPIRATIONS

Sustainable & ethical transport options



Alternative options to car ownership



Affordable & reliable transport options



Support for **novice drivers**



More available & affordable **intercity connections**



1 INTRODUCTION

The Sustainovation Collective sought to meaningfully engage with younger adults (taiohi) to explore how they navigate Aotearoa New Zealand (NZ), gaining a deeper understanding of their experiences, perceptions and the challenges they face. Funded by the AA Research Foundation (AARF), the Sustainovation Collective also tested the effectiveness of participatory methods. The research found that taiohi aspire to experience sustainable, affordable and effective travel options in NZ and would like to contribute towards future changes.

Across Aotearoa, the wider transport system faces several persistent challenges that shape how people move and influence their mobility choices. Published research consistently highlights reliability issues, with disruptions to bus, train and ferry services—particularly in major centres such as Auckland—undermining trust and making journeys unpredictable¹. National studies note that congestion, inconsistent service performance and delays continue to affect everyday travel². Research led by Mackie and colleagues adds further evidence that NZ's transport environment is constrained by car-centric design, limited alternatives for many trips, and sociotechnical barriers that hinder the development of safe, sustainable neighbourhood street networks³. Issues such as poor cycling and walking infrastructure, safety concerns at intersections, and inconsistent investment across regions continue to impact the quality and accessibility of transport options⁴. Broader analyses also point to high costs of travel, and uneven availability of options in rural areas⁵.

Collectively, these systemic issues form the backdrop to how taiohi navigate their world and reinforce the importance of engaging with taiohi to understand how these challenges affect their daily lives and future aspirations. Across NZ, traditional consultation approaches have often struggled to meaningfully include taiohi, resulting in youth perspectives being under-represented in transport planning and policy discussions. Taiohi frequently experience transport stressors that differ from other age groups, yet these nuances are seldom captured. This research therefore sought methods that better centre taiohi experiences and ensure their voices are heard.

The research aimed to amplify taiohi voices in relation to the transport sector. To achieve this, the Sustainovation Collective sought to collaborate with taiohi, develop enduring relationships, facilitate shared ownership of this research, and gain a better understanding of taiohi perceptions and experiences of living and moving around NZ.

The purpose of this work was twofold.

- To test which participatory methods are effective at engaging with taiohi
- To gain a better understanding of taiohi perceptions and experiences of mobility in NZ

There were three outcomes for the Sustainovation Collective, these were;

1. Reach taiohi (aged 16-30) in more engaging and mana-enhancing ways than previous methods
2. Identify relevant concerns and challenges facing taiohi
3. Evaluate the effectiveness of engagement approaches used

¹Office of the Auditor-General (2025), *Reliability of public transport in Auckland* – documents persistent reliability and disruption issues in Auckland's network. And Waka Kotahi (2024), *Public Transport Deep Dive* – identifies performance variability and reliability concerns.

² Mackie Research (2019), *Healthy Future Mobility: Synthesis Report* – broader system challenges including congestion and modal imbalance.

³ Mackie et al. (2021), *Creating the Circuit Breakers* – sociotechnical constraints and car-centric defaults.

Mackie Research (2019), *Healthy Future Mobility* – car dependence and systemic barriers.

⁴ Hirsch et al. (2020), *Promoting independent walking to school* – challenges of safe pedestrian environments. And Hirsch, Thorne & Mackie (2019), *Understanding the Safe System context behind pedestrian road trauma in Auckland* – unsafe crossings, infrastructure gaps.

⁵ Luther, Wrightson & Mackie (2025), *Opportunities for Everyday Mobility Choices* – affordability barriers and limited rural options.

For the purposes of this research, taiohi will include younger adults aged 16-30. Across NZ the percentage of taiohi within this age range is estimated to be 19% of the overall population⁶, and this number is expected to continue to increase. In NZ, the Youth Development Strategy Aotearoa (YDSA)⁷ has guided engagement, collaboration and policy development in relation to taiohi across NZ since 2002 and Ara Taiohi⁸ is the leading body for youth development in NZ and will be used as a framework for this research.

In discussion with AARF, the following values were identified for this research, influenced by the youth development evidence. These were; shared ownership, enduring involvement, and relationship building. Therefore, our approach and the participatory methods selected prioritised these values.

A note on terminology:

Cohort: The 20 taiohi recruited to co-design and carry out one of the four participatory engagement methods

Participants: The 141 young adults who took part in the research

Taiohi: Younger adults aged 16–30 involved in or represented by the research

⁶ According to Statistics New Zealand (2023). The Census reports ages in 5-year bands, so the 19% figure refers to those aged 15–29 rather than 16–30, but given both include the same number of years (15) shifted by one year, this is considered a reliable estimate.

⁷ [Youth Development Strategy Aotearoa \(2002\) - MYD](#)

⁸ [Mana Taiohi - Ara Taiohi](#)

2 REACHING TAIOHI IN MORE ENGAGING AND MANA-ENHANCING WAYS

Central to this research methodology were participatory methods where we collaborated with taiohi to understand their experiences. Following a select evidence review, and inception workshop the following research questions and participatory methods were selected to be used in this research (see Table 1: Research questions). The selection of participatory methods aimed to capture comprehensive and diverse data sets and to foster engagement with taiohi and collaboration. For a full description of the methodology and recruitment please see APPENDIX I: Methodology.

Outcome	Question	Method
We want to understand the challenges and concerns that taiohi face when travelling around Aotearoa NZ today.	In what way do you currently move to specific locations? What is important to you?	Day in the life of
	How do you make sense of and accommodate the way you move and make journeys? What is important to you?	Creative conceptualisation
	What are the cost implications/barriers to using preferred methods of mobility?	Peer- Led Survey
	What are your perceptions on the existing mobility options available to you? What is important to you?	Citizen science

A total of 20 young people were recruited into cohorts. They were consistently engaged throughout the research. Through the four data collection methods, data from 141 taiohi participants was gathered, giving a broad cross regional view of how taiohi navigate their world. The cohorts reflected reasonable diversity in terms of gender and age, transport usage and AA member status with the majority of cohorts residing in metropolitan areas and some in rural or small-town areas. Cohorts demonstrated a wide range of experiences with various transport modes and needs (See Appendix VII for Appendix VII: Cohort demographics

2.1.1 PEER LED SURVEY

A peer-led survey method was used to gather information about preferences and barriers. Data collection occurred through a survey developed and distributed by a peer-led cohort. The cohort was responsible for formulating the survey questions, setting the survey's scope and length, selecting incentives, and determining distribution methods to optimise response rates. Cohorts received guidance on survey design, survey questions, access to relevant tools for hosting the survey, and information about engagement strategies. Support included providing a question bank for selection and adaptation, a survey template, and recommendations on best practices concerning question quantity, purpose, necessary information, and layout. The cohort determined both the number and content of survey questions and led the recruitment of participants. This cohort concentrated on assessing the cost implications and barriers associated with preferred mobility methods.

To gather relevant data, a concise online survey with three core questions, including optional demographic items, was developed; it typically required less than three minutes to complete. Survey topics included perceived barriers, preferred costs, and modes of travel. Distribution channels encompassed social media platforms, QR codes, and personal networks. As an incentive, participants were offered the opportunity to win one of four \$50 gift vouchers. A total of 72 responses were collected.

From the Peer Led Survey approach we learnt that;

- Taiohi are more likely to engage with a short survey – under three minutes in length
- Recruitment through cohort networks was effective, however some taiohi are reluctant to use their networks and ask their peers to participate
- Sharing a QR code, social media post or link via social media was preferred by cohorts
- Offering a prize incentive is effective in engaging taiohi in recognising their time and knowledge contribution
- Taiohi are digitally aware of protecting their privacy and online data and are aware of legitimacy and credibility, especially if a prize is offered. If a survey does not look legit – e.g. with appropriate branding, wording, link details, and upfront clear asks of what data is required they will not engage
- Including the cohort in the process gave a better appreciation of why demographic data might be useful where they might otherwise prefer not to answer
- Including the cohort to create the survey was advantageous in crafting content, wording and clear concepts to be used with their peers

2.1.2 CREATIVE CONCEPTUALISATION

Cohorts formulated creative concepts to convey their perspectives and experiences related to mobility in NZ. This creative process involved recording mobility concerns using photography, spoken word, memes, or alternative forms of artistic expression. During the data collection workshop, the cohort selected a preferred medium and collectively discussed potential ideas. The resulting concepts were produced by the cohorts to represent their experiences, serving as the basis for group discussions and facilitating the identification of common issues (See Appendix VI: Engagement approach findings for examples).

The creative conceptualisation cohort addressed; how do we understand and adapt to the ways in which we travel and make journeys? What aspects are most significant? The cohort explored potential creative concepts that would effectively demonstrate their perceptions and experiences of travel within NZ. Visuals such as posters, images, and memes were identified as effective tools to initiate conversations and present key issues in a relatable manner. The cohort utilised AI tools to generate imagery, memes, and a poster. From the creative conceptualisation method we learnt that;

- Creative mediums are effective at demonstrating perceptions
- Taiohi have a negative perception of transport options in NZ, but are realistic and optimistic for the future
- Taiohi know what they need
- Taiohi are resilient and will still continue to use transport options that are not ideal and do not meet their needs
- Cohorts highlighted positive aspects of mobility, with connection to nature/environment being important
- Cohorts highlighted that novelty provided excitement and enjoyment

2.1.3 A DAY IN THE LIFE OF

The day in the life of method is a technique used to document individual experiences through different media including stories, videos, graphic representations, and written descriptions. Cohorts established their own procedures for collecting and formatting data to record daily movements and gather additional journeys from members of their networks. The cohort used Miro for uploading images and narratives. During the data collection workshop, cohorts decided on the data formats, the duration of data collection, the number of participants involved, and the quantity of photographs, maps, and narratives required to document routine activities and movements over a typical day. Additionally, the cohort worked together to develop a set of instructions and basic principles to guide participation in the process.

The Day in the Life cohort examined the question: In what way do you currently travel to specific locations, and what factors are important in this process? The cohort documented aspects of a typical day, including how individuals move around, their methods for traveling to destinations, the reasons behind these choices, and the relative ease or difficulty of different modes. Routes, photographs, and written descriptions were used to illustrate significant parts of their journeys and the decisions made. Unique findings from the day in the life cohort included;

- The journey is important to taiohi and a significant factor in the stress and enjoyment of travelling around NZ
- Time, convenience, cost, accessibility, reliability and safety are important factors
- Taiohi are constantly making trade-offs between their time, safety and cost
- Taiohi are time poor, with demands on their time and with less flexibility and options impacting on their travel choice

“Walking is the most cost-effective and convenient option for me. Public transport, such as the bus, takes roughly the same amount of time as walking, so there’s no real advantage in using it. Walking also gives me a bit of daily exercise and a chance to mentally transition into and out of the workday. I often feel more prepared for the work day as I can get some light low impact exercise. I also choose this way to walk as it’s convenient. I can stop by the grocery store on my way home before heading back to my apartment. There is no waiting, no tapping on or off, no traffic and no cost. I also enjoy the fresh air and the consistency of knowing exactly how long the journey will take. The difficult part can be the weather”.

Sustainovation participant

2.1.4 CITIZEN SCIENCE

The citizen science approach centred on gathering information about routes, journeys, and preferences by collecting spatial data along designated geographical locations. The cohort utilised a map-based survey tool (Maptionnaire) to indicate areas where taiohi encountered mobility challenges or noted positive aspects of mobility within their community, as well as to report activities that were difficult or inaccessible. The method was designed to identify behaviour patterns, preferences, and key locations. After gathering the data, the cohort jointly reviewed the results.

The Citizen science cohort focused on gathering data on the enjoyable and challenging aspects of individuals' journeys, both daily and occasional. By investigating travel behaviours and, critically, perceptions of those experiences, we gained valuable insights into current transport infrastructure and its impact on users' wellbeing, safety, accessibility, and mobility. Unique findings from the Citizen Science method include:

- Typical routes used by participants, including tricky spots
- Insight into preferred routes and enjoyable aspects
- Located points of challenging aspects
- For participants decisions are made based on comfort and ease and trade-offs are made between speed and hassle and cost and convenience.

Participants described and located their typical routes and why and identified challenging aspects of their journeys which contributed towards their decision making.

“This is the quickest route, and the driest route with less puddles to bike through. I prefer this route since it’s a quiet route with no cars and a nice intersection. I prefer this route for my safety”

“I use walking as a mode of transportation to my university campus. This is a challenging part of my journey as I dislike walking and prefer driving. Arriving to my destination, i.e., classes and tutorials makes it enjoyable”.

“There is a difficult intersection, with many close crashes I have witnessed, it’s challenging in a small car if a truck pulls next to you, u will not know when to go and could end up being at risk”

Citizen Science participants

We tested four engagement methods, each method provided unique findings relevant to taiohi which are shown in Summary of methods and unique findings

Table 2: Summary of methods and unique findings. The Peer Led Survey method identified that surveys need to be short and associated with a trusted organisation for taiohi to engage. Day in the life of is an effective method to understand journeys and would be beneficial to investigating complex journeys (e.g. older adults). The Citizen science method is especially useful for geospatial data or to identify areas that are perceived as unsafe. The Creative conceptualisation method was especially useful to understand perceptions.

2.1.5 SUMMARY OF METHODS AND UNIQUE FINDINGS

Table 2: Summary of methods and unique findings

Outcome	Question	Method	Key themes identified	Unique findings specific to this method	Types of data collected	Limitations of method
We want to understand the challenges and concerns that taiohi face when travelling around Aotearoa NZ today.	In what way do you currently move to specific locations? What is important to you?	Day in the life of	Time pressure Convenience Reliability Safety Emotional load Availability Reliability Weather	Revealed lived, temporal experience of mobility. Detailed insight into everyday travel decisions and journeys Highlighted trade-offs between time, cost, safety and convenience.	Narratives; journey descriptions; routes and photographs; reflections.	Moment in time
	How do you make sense of and accommodate the way you move and make journeys? What is important to you?	Creative conceptualisation	Perceptions of transport Emotional experience Sustainability Resilience. Weather Availability Safety Novelty	Value-based insights Aspirational dimensions of mobility Novelty and connection to nature Visual output	Creative artefacts Facilitated discussions Shared reflections Memes	Less generalisable and challenging to analyse
	What are the cost implications/barriers to using preferred methods of mobility?	Peer- Led Survey	Affordability Availability Reliability Trust and legitimacy	Scalable insight into cost barriers across a larger group Branding and data privacy Age-related differences in affordability expectations Surveys need to be short	Quantitative survey responses Ranked barriers limited demographics Willingness-to-pay data.	Limited depth and reduced participation where trust is unclear
	What are your perceptions on the existing mobility options available to you? What is important to you?	Citizen science	Safety Comfort Wellbeing Route choice Perceived risk Affordability	Place-based evidence linking infrastructure to experience Identified specific locations and routes that are enjoyable or challenging Linked safety and comfort to route choice.	Spatial data Mapped routes Location-based comments.	Coverage depends on participation.

2.1.6 ENGAGING TAIOHI

The Sustainovation Collective engaged cohorts using participatory methods. These methods not only facilitated the collection of rich data but also empowered the cohorts to actively lead and contribute to research. Participatory approaches contributed to a deeper understanding of mobility needs and preferences of taiohi in NZ. Cohorts noted and enjoyed the use of multiple participatory mixed methods. The incorporation of mixed methodologies contributed to the quality and breadth of collected data, allowing for a broader representation of experiences and viewpoints. Collaborative workshops and cohort discussions were instrumental in building quality relationships and fostering a sense of community among cohorts.

The research values emphasised meaningful engagement through shared ownership, relationship building and enduring relationships. The research's core values were defined from the outset, including specific mana-enhancing practices guided by the Mana Taiohi framework. These values contributed towards effectively engaging with taiohi.

The Sustainovation Collective sought to test methods for effectively engaging with taiohi as a proof of concept. The research enabled multiple opportunities for taiohi to make decisions, leading to increase engagement and co-design in research delivery.

The use of online workshops was effective. The use of digital tools such as Miro and Maptionnaire supported the engagement process by providing digital platforms for collaboration. These tools enabled the cohorts to visualize and articulate their mobility experiences and preferences, fostering a sense of ownership and investment in the outcomes of the research. The mixed methodologies tested provided broader representation of experiences and perceptions. Cohorts expressed their enjoyment of using different methods and being involved in the data collection process.

The research had planned to include an opportunity for a selection of cohorts to present findings and potential solutions to the AARF board of trustees. This was unable to be undertaken during the research timeline. To maintain ongoing relationships, cohorts were offered copies of the final report and the opportunity to be involved in future research initiatives.

2.1.6.1 ENGAGING TAIOHI INSIGHTS

- Providing decision making options contributed to the success of the research
- Taiohi identified that whilst incentives are useful to engage taiohi, trusted relationships and genuine impact were strong motivators
- Taiohi are digitally literate especially in relation to data and online safety, with low tolerance for perceived scams, resulting in low engagement
- The use of participatory and multiple methods enhanced the quality and breadth of data collected
- Taiohi exhibited a clear preference for online interaction and digital forms of communication, written communication, and responding to peers' comments in an online format with likes or emojis

3 APPLYING MANA TAIOHI PRINCIPLES

This section presents and discusses insights from the recruitment, the implementation of the Mana Taiohi principles. Throughout the research, the Mana Taiohi practice principles were applied; mātauranga (individual experience and knowledge), whai wāhitanga (contribution), whanaungatanga (quality relationships), and manaakitanga (collective wellbeing). The research design was intentionally shaped by the Mana Taiohi principles. Whanaungatanga guided decisions around maintaining consistent facilitators and offering regular check-ins to build trusted relationships. Whai wāhitanga informed the choice to allow cohorts to determine their preferred data collection methods and targets, ensuring taiohi contributed actively rather than passively. Manaakitanga shaped the communication style and responsiveness to participant needs, recognising the collective wellbeing of cohorts as a central priority. Mātauranga was reflected by valuing individual experience and knowledge as legitimate expertise, ensuring taiohi voices shaped both data collection and interpretation.

3.1.1 MĀTAURANGA / INDIVIDUAL EXPERIENCE AND KNOWLEDGE

Cohorts shared during and after the research that they enjoyed the process, with several commenting on the introduction of different research methods and consultation on data collection and data analysis as valuable.

The majority of cohorts shared that they enjoyed the opportunity to share their experiences, challenges and preferred aspirations for NZ's transport system. These are the concluding words from one of the cohorts at the final impact workshop, as an example of how cohort's mana and words have influenced this work.

“This research is showing us that travel is so much more than just getting from point A to B. For young people in New Zealand, every journey is shaped by layers of experience, from safety and comfort to time pressure, accessibility and emotional wellbeing. Through this process, we've heard voices from across the country. We've seen what makes the journey enjoyable, what makes it frustrating, and what people wish they had access to. We've seen how comfort zones, congestion, preferred modes, and even puddles or intersections can change the way someone experiences their journey and therefore their day, but most importantly, we've seen that young people know exactly what they need. They want safer routes, smoother infrastructure, clearer choices and transport systems that work for real life, not just on paper. So, as we move forward, whether in design planning or policy, the takeaway is simple. Listen to youth voices. They're not just users of the system; they're experts in their own journeys”.

Sustainovation Collective cohort

3.1.2 WHAI WĀHITANGA / CONTRIBUTION

To achieve the research objectives, shared ownership was prioritised throughout the process. The research aimed to foster engagement by incorporating co-design principles. While the research outcomes were not developed collaboratively with cohorts, all other elements involved their input. As outlined in the below section the research enabled joint decision-making to cultivate a sense of collective ownership. During the workshops, ideas, insights, and conclusions were validated with cohorts to ensure their perspectives remained accurately represented and understood. Inclusive workshop facilitation encouraged active participation and allowed cohorts to lead discussions when appropriate.

Facilitating cohort-led decision-making significantly contributed to the research's success regarding both engagement and data collection. Collaboration enhanced data quality by fostering greater cohort involvement, and it promoted effective collaboration, strengthening both participation and research outcomes. This included choices about the quantity and type of data collection methods preferred frequency and cohort communication formats. Observations indicated that providing individuals with decision-making options was associated with a more balanced distribution of power and increased engagement among cohorts as well as supporting mana through whai wāhitanga.

Several key decisions were made throughout the research, including allowing cohorts to choose from among the four available methods. Although this led to some variation in cohort sizes, it enabled cohorts to engage with the method they found most appealing. Cohorts also determined whether an incentive should be offered to participants as part of data collection and selected its value, such as opting for either four \$50 gift vouchers or a single \$200 voucher. A central area of decision-making involved granting cohorts the authority to define the scope and scale of data collection. Each cohort established what they considered to be appropriate targets based on their assessment of the necessary data volume and what they felt could be practically achieved, resulting in more realistic benchmarks.

3.1.3 WHANAUNGATANGA / RELATIONSHIPS

The research was structured to incorporate multiple touchpoints, both online and via preferred communication channels, offering a range of options to facilitate and sustain cohort engagement. Timely follow-up and continuity, with the same researcher serving as the primary point of contact, contributed to building strong connections with cohorts. Ensuring that incentives were delivered promptly and minimizing alterations to agreed meeting times demonstrated respect for cohorts' time and commitments. Cohort feedback varied regarding preferred touchpoints, underscoring the value of providing choice to accommodate diverse needs.

Collaborative workshops and group discussions have been instrumental in building whanaungatanga fostering a sense of community among cohorts. During the final workshop, all cohorts came together for a final workshop fostering a sense of shared purpose and offered a comprehensive overview of the collective experiences. Cohorts were also consulted directly about the impact and advocacy actions they would like AARF and others to pursue based on the findings, ensuring that feedback led to direct outcomes and tangible benefits for the research.

3.1.4 MANAAKITANGA / COLLECTIVE WELLBEING

Throughout, the research aimed not only to inform but also to actively consult with taiohi ensuring their voices meaningfully shaped the outcomes. The research included peer support by organising research activities within cohorts to foster manaakitanga. The topic of mobility was relevant, involving individuals in the data collection process through whai wāhitanga led to greater engagement with the topic, beyond solely being sources of data. Allowing cohorts to set targets and determine data collection resulted in more detailed information. Through shared ownership and collaboration, especially in relevance to data collection, the research established a foundation of trust and legitimacy. Using several touchpoints throughout the process, and facilitated preferred communication channels, are essential to maintain cohort engagement.

"I thought it would be much easier once I could drive around, rather than getting the bus and walking everywhere. Once I got my licence I could drive more. But it isn't always easier, now I have to maintain my car, and its' expensive. And then I hadn't really considered that I'd have to drive every day. Going to work and back, there's always traffic, I have to find parking and often deal with congestion and changes if there are roadworks and things. It's actually really draining and stressful".

Sustainovation Collective Cohort

For taiohi there is a mental load in using multiple modes of transport to move to different locations. This is impacted by unreliable public transport. For taiohi there are significant life stages, such as moving home, moving jobs, learning a new location, which contribute towards the difficulty of navigating mobility choices. For many taiohi who are novice drivers, there is significant stress and anxiety caused by driving and the need to commute (to work or study).

4 IDENTIFYING RELEVANT CONCERNS AND CHALLENGES FACING TAIOHI

This section presents the findings in relation to the mobility issues found by taiohi. The four participatory methods (Peer Led Survey, Creative conceptualisation, Day in the life of, and Citizen science) have facilitated the collection of rich data but have also empowered taiohi to actively lead and contribute to research that pertains to their lives.

The four research methods were successful at gathering data on the varied mobility experiences of participants. The data collected covered:

- Weekday versus weekend travel
- Urban navigation as well as intra-city travel
- Positive aspects of travelling within NZ
- Participants highlighted the personal importance of travel to them and the impacts of mobility challenges
- It described intricate decision-making processes and a wide range of experiences associated with mobility
- Varied experiences shaped by regional differences
- Perceptions of public transport and travel options

Participants tended to use a diverse mix of transport modes, including driving, walking, public transport, active travel, and carpooling. Factors such as age, geographic location, and income significantly influenced participants' ability to afford and access various travel options. While participants valued the independence and flexibility that different transport options offer, many reported that the quality and availability of these options are often poor, particularly in rural areas.

A common experience among participants was that NZ's transport system is heavily car-centric making it difficult for those without a private vehicle to maintain control over their time and travel choices.

"It feels like our transport system is shouting at you "what do you mean you don't have a car?!?"

Sustainovation Collective participant

Although taiohi expect transport to be safe and efficient, many feel these expectations are not consistently met. Taiohi need efficient and easy options that are preferably enjoyable. They often face time constraints and competing demands, which limit their flexibility and reduce their options for getting around. As a result, participants made strategic trade-offs between time, speed, convenience, and hassle when choosing how to travel. Several participants shared how they bus to university, walked to the shops and bike for fun, showing how the need for flexibility and multi modal networks matter.

Thematic analysis from the day in the life of, citizen science and creative conceptualisations revealed that taiohi travel is not just about getting somewhere, it's also about how the journey feels. Participants appreciated connection to the environment, especially in NZ where public transport routes often pass through scenic landscapes or are connected to nature. This made journeys feel more relaxing and enjoyable. Walking was also a popular choice, especially when it allowed participants to enjoy nature, be active, and experience the outdoors.

Participants described the emotional investment needed for moving around NZ. Public transport, walking, and cycling often required longer routes or detours, making them less appealing. Data analysis and discussion revealed that taiohi want to move quickly and conveniently, but not at the cost of stress, safety or chaos.

"Is it worth getting there faster if I feel unsafe? Should I avoid this road even if it saves me time? Do I take the longer way even if it means fewer lights and less tension?"

Sustainovation Collective participant

Participants highlighted that novel or unique transport options—such as creatively designed buses, interesting routes, or electric vehicles like scooters and go-karts—added a sense of fun and enjoyment to their travel. Electric and sustainable transport options were especially valued. Many noted that NZ's wide and accessible footpaths and smooth routes make active and electric modes of transport more feasible and enjoyable, however they were inconsistent across the motu. For many taiohi, environmentally friendly, fun, and independent travel options can transform transport from a chore into something they look forward to and embrace.

Travel choices often depended on distance to the destination. While many participants preferred having access to a car, they frequently relied on public transport as their primary option. However, public transport was often described as inflexible, limiting their ability to plan efficiently. Despite this, it was also seen as a chance to rest and avoid the stress of driving, which, although convenient, was still considered a source of stress and anxiety by many, especially those with restricted licenses and novice drivers.

“Taiohi want reliability. They want to know they'll arrive on time, feel safe while travelling, and not be drained by the journey”

Sustainovation Collective participant

The Peer Led Survey identified that the greatest barriers to taiohi are reliability, availability, wellbeing and affordability. Weather and safety were lesser barriers.

4.1.1 PRIORITISED LIST OF MOBILITY ISSUES

Cohorts, prioritised the issues identified in the data collection and considered what impact these issues have. They were:

- Unreliable public transportation
- Unavailable public transportation, especially in rural areas
- High cost of car ownership and use
- Traffic congestion and unpredictable travel times resulting in stress and anxiety
- Inadequate safety and biking infrastructure
- Inconsistent public transport facilities, lack of night lighting and pedestrian crossings
- Stressful, risky intersections and crowded spaces
- Limited safe transport options, especially at night
- Conflicts between scooters and pedestrians
- Poor road and path quality, including potholes and poorly maintained footpaths
- Adverse weather conditions
- Expensive parking

4.1.2 RELIABILITY

Reliability was identified as a significant priority. Participants reported that train cancellations, bus disruptions, maintenance issues, and bad weather significantly impact their travel experiences. These disruptions are not only inconvenient but also contribute to feelings of anxiety, panic, uncertainty, and a loss of independence. Through the Peer Led Survey, reliability was identified as a significant barrier to travel, especially for those aged 26-30. 21% of female survey respondents and 17% of male respondents ranked reliability as one of the top three barriers. The Creative conceptualisation cohort also highlighted reliability, noting that often public transport was unreliable, especially outside of business hours. The cohort shared experiences where often due to a lack of reliability, they had little certainty and trust in using public transport, especially when they needed to use it to get to time dependent locations or within a schedule. Participants identified that they often must change their travel plans at the last minute when public transport is unavailable or delayed, causing stress and anxiety and mistrust of the transport system. Participants stated that in many areas they do not and could not use public transport as their main mode of travel because it is unreliable, whereas they perceived travel by private vehicle as the most reliable transport mode.

4.1.3 AVAILABILITY

The time required to travel, and the inflexibility of transport schedules were also key concerns, especially in rural areas, where options are more limited. Limited transport options outside of standard business hours were a significant concern. Peer Led Survey participants noted availability as the top barrier to travel, with a gender discrepancy, 39% of males and 23% of females stated availability was the primary barrier to travel. Participants noted that early morning and evening travel was particularly challenging due to fewer services, reduced reliability, longer travel times, and safety concerns. Participants highlighted the lack of available travel options using public transport between cities within NZ. The lack of intercity trains was highlighted.

4.1.4 WELLBEING

Many participants felt that travel takes up a significant portion of their day. Convenience was a recurring theme. Participants expressed a strong preference for simple, direct, and reliable routes that allow them to plan their day efficiently. For example, one participant noted that their route was convenient and close to shops, but this convenience was frequently disrupted by traffic congestion, crowded roads, and delays near schools. These issues can turn an otherwise easy journey into an unpredictable and frustrating experience, leading some to avoid travel altogether. One participant said they chose the longer but quieter route, showing how comfort sometimes outweighs speed. Participants discussed the impact that driving has on them, even when this is their preferred mode of transport.

While participants often chose quick routes to save time, these were not always ideal. Fast routes sometimes involved risky intersections, confusing layouts, and poor parking, which added stress and uncertainty. Even if a route was technically faster, it could become mentally and physically exhausting due to the number of variables involved. Data collection revealed that people often use routes from repetition rather than preference, because they are familiar or efficient, but not necessarily ideal. Commuting and high traffic volumes were seen as undesirable and a regular challenge. There is a balancing act between time and comfort, demonstrating the complexity of transport decisions, especially when there is a perceived lack of options.

4.1.5 AFFORDABILITY

Additionally, cost was identified as a major barrier to accessing reliable transport. Peer Led Survey participants listed cost as the third most significant barrier, this was especially relevant to those between the ages of 16-25. The cost of public transport was identified as inconsistent across the motu. When asked how much participants were willing to spend weekly on public transport, 11% stated they thought public transport should be free, with 70% willing to pay between \$1-\$40 weekly. 16–25-year-olds were more willing to spend up to \$20 weekly on public transport, and 26–30-year-olds were more willing to pay up to \$40 per week on public transport. The Creative conceptualisation cohort highlighted that there was some frustration that out of business hours the cost of transport was often high, despite poor availability and reliability. Participants identified that some public transport options, such as buses are relatively inexpensive, and walking is free. Schemes that offer discounted public transport were popular, such as 50% fares for university, or similar. The high cost of petrol, parking and car ownership was seen as a major barrier, making private vehicles unaffordable for many.

4.1.6 WEATHER

Those who enjoy being outdoors and physically active tended to use active modes of transport. However, they noted that weather conditions often posed a challenge. The Creative conceptualisation cohort highlighted the changeable NZ weather as a challenge, especially when using active travel modes such as walking and cycling. Participants identified that weather is seasonal, with weather being more of a factor in autumn and winter. The cohort did identify that some areas of NZ were very walkable, with good walking infrastructure, but this is inconsistent. Overall Peer Led Survey participants did not rank weather as a significant barrier to their choice of travel mode; however males were more likely to state weather as a barrier than females, and males had a higher proportion who preferred cycling to travel.

4.1.7 SAFETY

Participants reported challenges in achieving smooth travel experiences when biking, using wheeled transport, or driving. They frequently noted poor road conditions and potholes as factors contributing to discomfort.

Cyclists and individuals interested in cycling, but who often opted not to, specifically pointed out concerns such as the absence of dedicated bike lanes, uneven road surfaces, inadequate lighting, and limited secure bike storage facilities.

Survey results indicated that safety was considered a minor barrier overall, though more so by females (13%) compared to males (4%). Among 16-20 year olds, 25% identified safety as a primary barrier. Additional data highlighted issues like insufficient lighting, dark settings, and isolated environments as contributing to perceptions of feeling unsafe.

“Have you ever tried using the nighttime options, sometimes I just won’t go out because I know it will be too hard to get home outside of business hours. It’s not safe. Then there’s trying to get to different cities, there’s like one bus and it’s awful. I’ve never felt so unsafe in my life. There’s just not enough services and your only real option is to drive, which isn’t always an option unless you have a licence and your own car. Our intercity transport is so reliant on car ownership”.

Sustainovation participant

Participants also reported regularly feeling unsafe on public transport, particularly during intercity travel, outside standard business hours, and when journeys fell outside their daily routine. There was a perception that protective measures were not consistently implemented across public transport services such as security and support.

4.1.8 MOBILITY INSIGHTS

From engaging with taiohi we have heard the following key elements in relation to mobility which aligns with current literature; reliability, availability, and cost as issues with mobility.

- Engagement with taiohi revealed that reliability is an important concern, particularly for taiohi, as delays can result in significant consequences when available options lack flexibility or dependability
- Transportation choices are influenced by and are the cause of stress and anxiety.
- Active and public transport are seen as socially acceptable options, and for many desirable, with a lack of availability preventing frequent use
- Availability of transport options especially outside business hours and in rural locations are poor
- When there is a lack of transport alternatives, the cost of car usage is unaffordable for many taiohi
- Taiohi enjoy positive aspects of public and active transport, especially when it is linked to sustainable travel, novelty and the environment

4.1.9 FUTURE IMPACTS OF MOBILITY ISSUES

Participants were asked to identify potential future actions that would positively impact them, in response to the issues identified. Taiohi expect a future with better quality transport infrastructure that considers affordability, reliability and availability. For participants, more reliable and available public transport would provide a genuine alternative to car ownership. Alternatively, if NZ’s infrastructure remains focused on private vehicles, there is the expectation of support for taiohi to make car usage more affordable. Their expectations are based on the recognition that taiohi are less likely to have discretionary spending budgets but face challenging transport choices, and that taiohi need independence to travel where and when they need to.

Taiohi would like to be consulted before significant changes are made to public transport affecting availability. Participants highlighted taiohi have less time and flexibility, with higher expectations and consequences (e.g. being on time for work/study).

In general, taiohi have poor perceptions and experiences of public transport. Taiohi perceive public transport as a necessity and are willing to use public transport more. Participants talked about the emotional investment needed for planning, moving between places and often having to change plans. For some this is too hard, resulting in them deciding not to go, and for many, the everyday toll of moving around and making transport negotiations impacts on their quality of life and wellbeing.

Participants identified that providing more options out of business hours and in rural locations would provide safer transport options for taiohi to return home, especially in conjunction to reducing behaviours such as drink driving.

Taiohi are concerned with sustainability and ethical transport options, many avoid using some ride share options due to poor pay and working conditions, as well as perceived high cost. Taiohi want affordable but ethical options.

5 EVALUATING THE EFFECTIVENESS OF ENGAGEMENT APPROACHES USED

The Sustainovation Collective's innovative and participatory methods have not only enriched the research process but have also contributed to a deeper understanding of the mobility needs and preferences of taiohi in NZ.

The evaluation framework was agreed during the inception phase with AARF and was used to assess the four engagement methods. The evaluation criteria outlined in Table 3 below highlights the key indicators of effectiveness, including participant experience, the relevance and applicability of the findings. The methods discussed in the report have achieved highly across these criteria, demonstrating their success in engaging taiohi meaningfully.

5.1.1 RELEVANCE

22 cohorts were recruited and participated throughout the research with a 90% retention rate (20). Cohorts collaborated with designing data collection, conducting data collection and data analysis as well as discussions and recommendations. The depth of data was sufficient to consider future recommendations.

5.1.2 EFFECTIVENESS

The research achieved the stated outcomes, including a prioritised list of issues, perception of taiohi experiences and a range of engagement methods that were tested for effectiveness.

The Citizen science method and Creative conceptualisation method provided rich data regarding perceptions. Creative conceptualisation allowed cohorts to express perspectives and issues in a very relatable way. This method provided insights into people's experiences, and a medium to engage with others as discussion starters, or to gain a general shared sentiment. This method could be further used to gauge interest, shared sentiment or perceptions and as a way to build engagement.

The Citizen science method supported participants to identify specific aspects of travel, including sticking points and enjoyable aspects. This method provided spatial data and further contextualised some of the issues identified.

The Peer Led Survey gathered information about taiohi perceptions of surveys and identified principles for building trust and engagement. A peer-led approach may be suited to reaching specific population groups, especially when the survey topic is less familiar. Including taiohi in the survey design and distribution process highlighted preferences regarding question wording, language use, and clarity. Surveys are generally preferred when they contain few questions and can be completed in under five minutes; for longer responses, alternative methods may be more suitable. Standard practices for survey design and distribution remained applicable. Maintaining legitimacy in all survey communications is important for establishing trust and engagement with taiohi.

The Day in the Life method collected a range of information and highlighted aspects such as safety and participant preferences. This approach provided data on regular behaviours. Allowing participants to choose their response method and preferred format generated diverse data. Cohorts decided on the amount of data collection required for adequate depth and data saturation in relation to the research questions. The use of imagery and descriptions in this method added context and contributed to understanding the overall dataset.

5.1.3 RESEARCH VALUES

The research embedded principles of shared ownership, enduring involvement, and relationship building. Participatory methods are effective when values of collaboration and relationship building are prioritised and built into the research design.

TABLE 3: EVALUATION CRITERIA

Criterion	Description	Measures	Indicators	Data collection	Question
Relevance	Did the research do what it said it would?	Commentary on how the engagement methods were applied including if there were research changes to the objectives or methods Monitoring of research including # of participants, # of engagements e.g. discussions, depth of data gathered per method Feedback from participants Prioritised list of mobility issues	30 taiohi are recruited Four cohorts engaged in different methods Taiohi identify issues relevant to them Taiohi take part in process	284 taiohi recruited 84 confirmed participation 40 were selected to participate 22 participated in the research 20 attended all 3 workshops 4 data collection methods were used 141 participant responses Prioritised list of mobility issues identified by taiohi Positive feedback from participants (See Applying Mana Taiohi for more detail)	1,2
Effectiveness	Did the research achieve the stated outcomes?	Prioritised list of mobility issues Commentary on depth of data gathered from each method and applicability Reflection on lessons learnt from engagement methods Monitoring of research including # of participants, # of engagements eg discussions, depth of data gathered per method	Understand context of taiohi Build positive and trusting relationships with taiohi Did taiohi engage with the research and have a positive experience	Prioritised list of mobility issues created Rich picture of participants experiences from data collection Positive participant feedback	1
Research values	Engagement meets values of shared ownership, enduring involvement, and relationship building with taiohi	Reflective practice and learning from engagement methods Commentary on participatory methods applied Selection of taiohi present issues to the board/AARF	Taiohi are involved with decision making (empowering and shared ownership) Collaboration is evident in engagement methods selected (relationship building and shared ownership) Taiohi are engaged throughout and present findings to the board (shared ownership and enduring involvement)	Taiohi contributed and led decision making (see Applying Mana Taiohi for more detail) Taiohi were provided opportunities to contribute to research in the future Taiohi experienced research values as detailed in Applying Mana Taiohi Report findings presented to the board	2,3

6 CONCLUSIONS

This research effectively used participatory methods with taiohi. These methods enabled taiohi to contribute, co-design and lead the research. Innovative use of digital platforms enabled accessible and visual engagement, providing a sense of ownership and enabling collaboration with taiohi. The research was grounded in Mana Taiohi principles. The research provided rich nuanced experiences, perceptions and aspirations regarding mobility. Engagement with taiohi provided clear insights into aspirations of mobility in NZ unique to this age group.

6.1.1 ASPIRATIONS

- Taiohi are very aware of current restraints, they have realistic expectations and consider feasible future changes, and they want to be listened to and contribute towards solutions
- Taiohi want affordable and reliable travel options
- Taiohi want improved transport infrastructure, with less emphasis on car-centric design. Taiohi expect better quality transport infrastructure that considers affordability, reliability, and availability. They desire more reliable and available public transport as a genuine alternative to car ownership
- Taiohi want support with affordability with lower costs for car usage
- Taiohi want improved availability and affordability of intercity connections
- Taiohi are concerned with sustainability and ethical transport options
- Taiohi need more support to navigate transport options
- Novice drivers need more support to alleviate stress and anxiety

The research uniquely prioritises issues identified by taiohi. Issues included unreliable, unavailable public transport and cost. Taiohi value connection to nature and the environment, novelty, sustainability and affordable reliable transport options. Taiohi participatory approaches in future research and policy would better meet mobility needs of taiohi. Several opportunities for action emerge from the findings and insights shared by taiohi. The following recommendations are made.

6.1.2 RECOMMENDATIONS

6.1.2.1 ENHANCING ENGAGEMENT AND TRUST

Taiohi demonstrated strong digital literacy and expressed clear expectations around online safety, legitimacy, and data transparency. To strengthen taiohi engagement in future initiatives, it would be beneficial to develop clear and trusted communication practices, including consistent branding, transparent data-use statements, and accessible information about the purpose and process of participation. Providing flexible and low-barrier online engagement options—such as digital platforms or written channels—could reduce participation fatigue and better match the communication preferences of taiohi.

Short term recommendations: strengthen taiohi-facing communication with clear, trustworthy visual branding and messaging and transparent data use and privacy statements.
Enhance taiohi participation in advisory panels, including with data collection

6.1.2.2 EXTENDING USE OF PARTICIPATORY METHODS

The research demonstrates that participatory methods—such as citizen science, creative conceptualisation, and day-in-the-life approaches—generate rich, relevant, and nuanced insights. Establishing ongoing taiohi advisory mechanisms could also foster enduring involvement and allow taiohi to contribute to future advocacy and action.

Policy reforms should prioritise affordability, increased rural transport options, development of cycling infrastructure, safety enhancements, support mechanisms for novice drivers, and improved intercity connections. Alignment with the Government Policy Statement on Land Transport 2024 underscores an established focus on reliable and efficient public transport. The National Land Transport Programme (NLTP) 2024–2027 allocates funding to public transport services, while the Government Policy Statement 2024 emphasises improving connections in rural and regional areas. Advocacy for affordable rural and intercity transport options remains critical for taiohi.

6.1.2.3 EMBEDDING EMOTIONAL WELLBEING IN TRANSPORT DESIGN

Taiohi should be recognised not solely as end users but also as experts in their own mobility experiences. Across methods, taiohi described the emotional and cognitive load involved in moving around NZ. Travel decisions were shaped not only by time and cost but also by feelings of safety, comfort, predictability, and enjoyment. Future policy and planning efforts would benefit from recognising these wellbeing impacts and prioritising design elements that enhance comfort, predictability and the overall travel experience. It is important for policy and planner practitioners to assess whether current consultation processes effectively engage taiohi and enable them to contribute to decision-making.

Short term recommendation: Conduct a workshop with transport planners and policy practitioners to share the research and identify specific recommendations on areas of future value.

6.1.2.4 IMPROVING QUALITY AND EXPERIENCE OF PUBLIC AND ACTIVE TRANSPORT

Beyond reliability and availability, taiohi valued travel that was enjoyable, connected to nature, and provided a sense of independence. Enhancing the qualitative experience of travel—through improved lighting, ambience, greenery, and reduced stress points—could improve perceptions of public and active transport. Consistency of cycling and pedestrian infrastructure across the motu remains a key need, especially regarding lighting, surface quality, and safe storage for wheeled modes. Investment in cycling infrastructure and safety continues to be a central concern, as reflected in the Government Policy Statement 2024. Building collaborative relationships between local councils and taiohi will further ensure their needs are addressed.

Short term recommendation: advocacy of intercity connections, rural availability and cycling safety and infrastructure

6.1.2.5 SUPPORTING NOVICE DRIVERS

The research highlights that novice drivers experience considerable stress and anxiety associated with driving and navigating NZ's transport system. While affordability remains a barrier, taiohi also indicated a need for broader support as they develop confidence and competence. National or regional programmes focused on driver confidence, safety, and wellbeing could help alleviate these pressures and better support taiohi through key life transitions.

Short term recommendations: Advocate for the adjustment of policy responses to improve the affordability of car use

Consider the provision of low cost/affordable novice driver wellbeing support e.g. information on managing stress, route planning and navigating urban traffic

6.1.2.6 STRENGTHENING RURAL AND INTERCITY CONNECTIVITY

Taiohi in rural locations experience disproportionate challenges relating to availability, choice, and access. The research also highlighted strong concerns about the lack of reliable intercity connections. Improving rural and intercity mobility—including exploring on-demand services, strengthening regional public transport links, or assessing rail feasibility—would address significant inequities raised by participants.

6.1.3 FUTURE RESEARCH OPPORTUNITIES

The following recommendations are for future research in support of this area.

- Future work should investigate how to include and support those who are less represented, such as taiohi, to be involved in advocacy and action steps with wider stakeholders to create a meaningful impact
- Use participatory methods and principles to effectively engage with people e.g. introduce a panel to support survey processes
- Use participatory methods, e.g. the citizen science method gathering crowd sourced data, to understand issues in areas such as perceived safety to advocate for improvements
- Use a Day in the life of method to understand gold card journeys, complex journeys or multimodal journeys
- Research into options to improve the availability, affordability and reliability of intercity travel and travel options in rural locations and the impact of not improving these options for taiohi
- Participants expressed concerns about inadequate biking infrastructure, such as the absence of dedicated bike lanes and poor road conditions. Therefore, researching the impact of improved bike infrastructure on mobility and safety for cyclists would be beneficial
- Investigating driver education programs and continued support for novice drivers could help mitigate issues of stress and anxiety for novice drivers. This might include driver education, support, mental health support and involving taiohi in creating solutions

6.1.4 FINAL REFLECTIONS

The reflections drawn from this research reinforce the value of elevating taiohi as experts in their own mobility journeys. By recognising taiohi as capable data collectors embedded in their communities, the research leveraged authentic voices and meaningful insights, ensuring that the findings reflected real lived experiences. Shared ownership and inclusive decision-making not only built trust but also fostered outcomes that are more relevant and sustainable for taiohi. Effective engagement with taiohi is strengthened by offering a variety of communication channels, acknowledging the diversity within taiohi communities and responding to their unique preferences and needs.

The participatory approaches tested by the Sustainovation Collective has advanced a more nuanced understanding of taiohi mobility in NZ. The research demonstrates that genuine involvement, enduring relationships, and prioritising taiohi-led insights are central to designing transport solutions that are accessible, ethical, and future-focused. Moving forward, continued collaboration and the integration of taiohi perspectives in policy development and implementation will be crucial to achieving equitable outcomes and fostering a generation empowered to navigate their world with independence and confidence.

The next steps for this work includes sharing insights with key transport agencies and planners as well as continuing to strengthen taiohi participation in future advocacy and policy development.

7 LIMITATIONS

This report ('Report') has been prepared by WSP New Zealand Limited ('WSP') exclusively for AA Research Foundation ('Client') in relation to the Sustainovation Collective research project ('Purpose') and in accordance with the Short Form Agreement with the Client dated 20/12/2025 ('Agreement'). The findings in this Report are based on and are subject to the assumptions specified in the Report and Offer of Services dated 20/12/25. WSP accepts no liability whatsoever for any use or reliance on this Report, in whole or in part, for any purpose other than the Purpose or for any use or reliance on this Report by any third party.

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Furthermore, there are the following limitations from the research

- Taiohi are not a homogenised group, whilst the data collected shows a diverse range of rich experiences and perceptions, it cannot represent all experiences and perceptions of taiohi.
- Rural recruitment and retention was limited – whilst our initial recruitment captured several participants from rural areas, we were unable to recruit as many participants from rural areas as we would have wanted.
- The relatively short timeframe meant not we were unable to see evidence of enduring impacts and relationships.

8 APPENDIX

I Methodology

II Select evidence review

III Engagement frameworks

IV Engagement methods

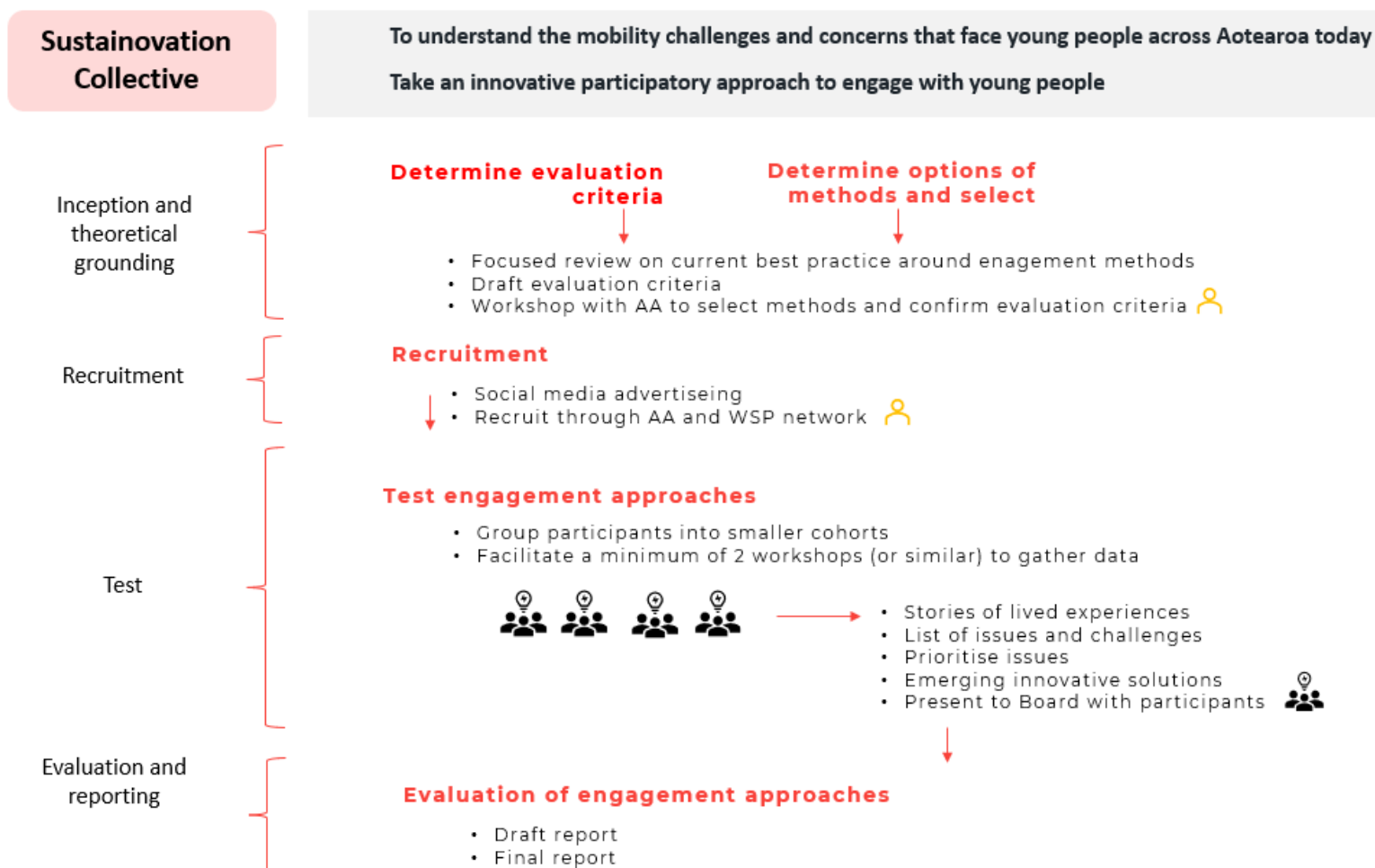
V Advertising

VI Engagement approach findings

8.1 APPENDIX I: METHODOLOGY

Central to this research methodology were participatory methods where we collaborated with taiohi to understand their experiences. See Figure 2: Methodology overview below.

FIGURE 2: METHODOLOGY OVERVIEW



A note on terminology:

Taiohi: Younger adults aged 16–30 involved in or represented by the research.

Cohort: A group of taiohi recruited to co-design and carry out one of the four participatory engagement methods.

8.1.1 EVIDENCE REVIEW

First, an evidence review was conducted. The evidence review focused on current best practice to identify possible participatory methods, frameworks and principles that could be used in alignment with the research outcomes and values. The review findings were discussed with the AARF to identify the methods appropriate to a participatory approach and agree on the methods to be tested.

Grey and academic literature was reviewed to identify current evidence that underpin identified principles in NZ, and then a global scan was conducted to include best practice and evidence internationally relevant to engaging taiohi. It also included the existing evidence base and knowledge in relation to taiohi engagement in NZ. For an overview of the evidence selected and reviewed please see Appendix II: Select evidence review.

There are a range of frameworks in regard to the level of engagement, and specifically for taiohi (e.g. YDSA). Participatory approaches have been associated with improved outcomes⁹, however the review highlighted that there are inconsistencies on how collaborative and participatory methods are implemented. Effective practice principles are needed that are underpinned by research values. The evidence review identified participatory methods that prioritised shared ownership, enduring involvement and relationship building, as well as collaborating with taiohi to achieve the research outcomes.

Three principals were identified in the evidence review:

- Engagement with people whose lives will be impacted by future activities should be involved with decision making
- Meaningful engagement advocates and provides space for taiohi voices to be heard

1 The intended levels of engagement (see Figure 3: Youth at Heart, Meaningful Participation Toolkit

- below) should be considered when seeking to meaningfully engage with taiohi

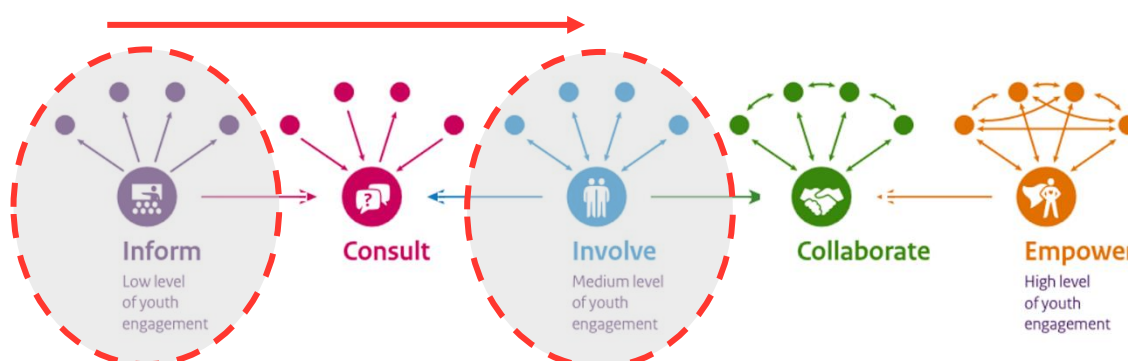
8.1.2 INCEPTION WORKSHOP

An inception workshop with the AARF was conducted to discuss the findings from the evidence review. The workshop considered various engagement methods and, through discussion, identified the core values for the research. Traditional consultation methods typically offer limited opportunities for taiohi to meaningfully shape the direction of research or contribute their lived experience in their own terms. Participatory methods were selected because they align with values identified.

The following values were agreed for this research from the taiohi development evidence with AARF. They are shared ownership, enduring involvement, and relationship building.

2 In discussion with the AARF, the Youth at Heart, Meaningful Participation Toolkit model¹⁰ (Figure 3: Youth at Heart, Meaningful Participation Toolkit

) was selected to determine engagement levels (Ministry of Foreign Affairs, 2022), due to its simplicity and broad scope. The current level of engagement for AARF was identified as 'inform' and an aspirational level of engagement for this research of 'consult/involve' was agreed.



1 Figure 3: Youth at Heart, Meaningful Participation Toolkit

⁹ (Rowland et al., 2024)

¹⁰ [Meaningful Youth Participation - Practical Toolkit \(English\) | Publication | Youthatheart](#)

A range of youth development and engagement frameworks were identified during the evidence review (see Appendix III: Engagement frameworks). During discussions with the AARF, the Mana Taiohi principles were identified as the most relevant framework of practice principles to guide the research outcomes and subsequently informed the development of the Sustainovation Collective. The framework was chosen for its integration of best practice positive taiohi development concepts in a culturally considerate manner. The Sustainovation Collective recognised that knowledge is shaped by individuals' interactions and experiences, emphasising the knowledge contributed by taiohi. Accordingly, throughout this research, the practice principles of whanaungatanga (quality relationships), manaakitanga (collective wellbeing), whai wāhitanga (contribution), and mātauranga (individual experience and knowledge) were applied.

8.1.3 RECRUITMENT

A selection criterion was created to ensure diverse, inclusive recruitment of taiohi for the research, prioritising representation from both rural and urban areas across NZ, as well as diversity in gender, life stage, and driving experience. Cohorts included AA members and non-members within the target age range. The criteria were implemented with a pre-screening tool.

Recruitment methods included social media advertisements, snowball sampling where cohorts recruit others through their social networks, and outreach through existing networks. Taiohi were asked to commit to participation in data collection and three workshops. They received an incentive (gift vouchers) for their time.

8.1.4 DATA COLLECTION METHODS

In an inception workshop with AARF (Appendix IV: Engagement methods) four participatory methods were agreed to support the research's values and objectives. The methods elected to be tested were a) peer led survey, b) creative conceptualisation, c) a day in the life of, and d) citizen science. The methods supported the overall research outcomes; the questions in Table 4: Research questions were identified for each research method.

3 Table 4: Research questions

Outcome	Question	Method
We want to understand the challenges and concerns that taiohi face when travelling around Aotearoa NZ today.	In what way do you currently move to specific locations? What is important to you?	'Day in the life of'
	How do you make sense of and accommodate the way you move and make journeys? What is important to you?	Creative conceptualisation
	What are the cost implications/barriers to using preferred methods of mobility?	Peer- Led Survey
	What are your perceptions on the existing mobility options available to you? What is important to you?	Citizen science

8.1.5 ENGAGEMENT STAGES

To test the four engagement methods, recruited cohorts were invited to participate in an online introductory webinar. The session outlined the research's objectives, required commitments, key milestones, and timelines. Cohorts were asked to indicate their preferred meeting times, with a majority favouring evening sessions. To accommodate these preferences, the webinar was scheduled on two separate evenings and times. During the webinar, attendees received an overview of the four engagement methods under consideration and were given the opportunity to choose their preferred method. Cohorts who attended the webinar and met the relevant

selection criteria were subsequently invited to join the research study and assigned to one of four methods based on their preference.

Each cohort was invited to participate in a one-hour online workshop aimed at collaboratively designing data collection methods. Miro was utilised as a platform to capture information and facilitate discussions. The workshop emphasised introductions and relationship-building within each cohort. Cohorts shared their motivations for involvement, regional locations, and typical travel behaviours. The session also addressed data collection planning: researchers presented overviews of each method, clarified study objectives, and enabled cohorts to determine preferred timelines, communication strategies, and data collection protocols. Guidance was provided on identifying necessary data types, approaches for data collection and storage, and mechanisms for collecting data within community contexts. Cohorts developed data collection plans set to a six-week schedule. Additionally, cohorts indicated their preference regarding the type of voucher incentive with a preference for generic gift cards or grocery vouchers. Miro remained available throughout the research, allowing ongoing progress sharing and peer support for the cohorts.

Following the initial workshop, cohorts were offered weekly online check-in sessions over four subsequent weeks to support data collection activities and address emerging issues. These check-ins were not linked to voucher incentives and attendance varied. Cohorts received workshop details one week in advance, along with a reminder email the day prior to each workshop or catch-up session.

The second online workshop with each cohort concentrated on data analysis. This ninety-minute session provided an overview of the research objectives. Given that each cohort employed distinct data collection methods, the data analysis approach was customised accordingly. Facilitators led cohorts in reflecting on the data collection process, assessing what proceeded as planned, identifying effective practices, and noting areas for improvement. Mana Taiohi principles were integrated throughout the analysis phase.

Data analysis commenced with a discussion on research outcomes and anticipated findings during the online workshops. Employing an inductive approach, cohorts were guided to identify potential themes within the data, this involved the organisation and definition of themes and the consideration of their relevance to the research question. Three cohorts (Day in the life of, Creative conceptualisation, Citizen science) utilised Miro for thematic grouping and coding, while the Peer- Led Survey cohort performed basic descriptive analyses and explored demographic patterns using tables and graphs. Validation steps occurred at each stage to verify accuracy and ensure meaningful interpretation.

The workshop encouraged cohorts to determine the key insights from the data and outline strategies for presenting their research process and findings in a final workshop. We offered a follow-up online check-in with each cohort post data analysis for any reflections, further thoughts and to prepare for the third (final) workshop.

The third workshop involved all four cohorts in an online two-hour session, during which each cohort shared their findings with one another to facilitate triangulation across the different data collection methods. The research objectives and research questions were outlined at the beginning of the workshop. Each cohort presented the research process for their respective method, the key findings, and issues identified from the data. The session concentrated on prioritising issues across the four sets of findings and discussing potential impacts. A representative from the AARF was present, and cohorts were given the opportunity to indicate which issues they considered most significant and to offer suggestions for future advocacy work and general recommendations.

8.1.6 EVALUATION AND REPORTING

Applying the Organisation for Economic Co-operation and Development (OECD) evaluation criteria of relevance and effectiveness¹¹, we developed an evaluation framework to assess engagement. This framework was validated in consultation with the AARF to define what constitutes 'successful and effective' engagement during the inception phase. The established criteria were used to systematically evaluate each method, including considerations such as the depth of evidence and the relevance of issues addressed. Progress for each method was closely monitored against these criteria, allowing for timely adjustments or discontinuation if necessary. The evaluation framework was used to determine the effectiveness of the engagement methods implemented. See Section **Error! Reference source not found.**, Table 3 for the evaluation framework.

¹¹ Evaluation Criteria | OECD

8.2 APPENDIX II: SELECT EVIDENCE REVIEW

Title	Date	Location	Key themes	Engagement methods included	Areas of significance	Relevance (1-3 (most relevant))
Building the future: children and the Sustainable Development Goals in rich countries	2017	Global	Sustainable development goals	-	Global context Child outcomes	3
Evidence Review: The Youth Development Ecosystem	2018	NZ	Historical context Principles Practice frameworks Contextual changes to YDSA Cultural identity	Peer group involvement Survey Longitudinal studies Advisory group Photographs Art/memes Interviews (peer led) Focus groups	Youth development ecosystem Approaches Digital engagement	1
Keepin' It Real: A Resource for Involving Young People in Decision-Making	2009	NZ	Involvement of young people in decision making Barriers to engagement Levels of engagement	Tailored approaches to different groups Workshops Focus groups Surveys Youth advisory groups Social media and digital platforms Creative approaches Peer engagement	Relationship building Levels of participation Ethics	1

Meaningful Youth Participation Practical Toolkit	2022	UK	Framework Principles M&E	Collaboration Consultation Social media Think tank Youth council	Meaningful youth participation Levels of participation	2
Ngā Tikanga Whānaketanga He Arotake Tuhinga: A Review of Aotearoa New Zealand Youth Development Research	2019	NZ	Youth wellbeing Historical influences Youth-adult relationships	Surveys Focus groups Consultations Hui Kaupapa Māori Case studies	Positive cultural identity Kaupapa Māori	1
Six Strategies to Build Empowering Youth Engagement	2021	Global	Empowering engagement Essential conditions Capacity building	Community collaboration Career development Digital tools (jam board, padlet)	Advocacy and support Inclusive spaces	2
The Child and Youth Strategy 2024-2027	2024	NZ	Vision Targets and outcomes 0-24 years old	-	Broader context Policy overview	2
The Factors that Influence Positive Youth Development and Wellbeing	2020	NZ	Frameworks, approaches, health, strengths based approach	Literature review	Relationships and community support Seven tensions Adolescent health	2

Weaving Connections – Tūhonohono Rangatahi: Positive Youth Development in Aotearoa	2024	NZ	Outcomes, approaches Strength based Empowerment framework	Collaboration Peer support	Current and emerging youth development in NZ and Australia Power distribution	1
Youth Development Literature Review: Building Strength	2002	NZ, global literature	12-24 yrs old Life stages Peer relationships Identity	Kaupapa Māori Literature review	Kaupapa Māori Evidence base for positive youth development Good resources will increase good outcomes NZ context	2
Youth Development Strategy Aotearoa: Action for Child and Youth Development	2002	NZ	12-24 yr old focus Vision, principles, aims and goals of youth development Strengths based approach	Strengths based Mentoring Family engagement Youth councils Consultation Training and skills development	Contextual 'big picture' principles NZ youth development approach Partners in NZ youth development	1
Youth Engagement Framework: Te Tuāpapa Whakawhanake Rangatahi — A guide for engaging with young people	2018	Wellington, NZ	Values Involvement of young people	Youth Council Social media engagement Community events Surveys Consultation design	Highlighted transport issues	3
Youth Mental Health Project: Research Review Summary	2015	NZ	12-19 yr olds Mental wellbeing and resilience Rangatahi Ma -ori and New Zealand Pacific youth	Co-ordinated whole approach	Nurturing environments (education, family)	2

			factors associated with positive outcomes			
Youth Participatory Research: A Review of Reviews and Practice Guidance	2024	Global	Consolidation of insights and participatory approaches with young people Participatory levels of youth	Consultation Peer group involvement Survey Health wellbeing surveillance Longitudinal studies Action research Advisory group Photographs Art/memes Interviews (peer led) Focus groups	Literature review of 18 reviews	1

8.3 APPENDIX III: ENGAGEMENT FRAMEWORKS

Positive Youth Development
in Aotearoa Framework



Figure 5: Positive Youth development in Aotearoa Framework

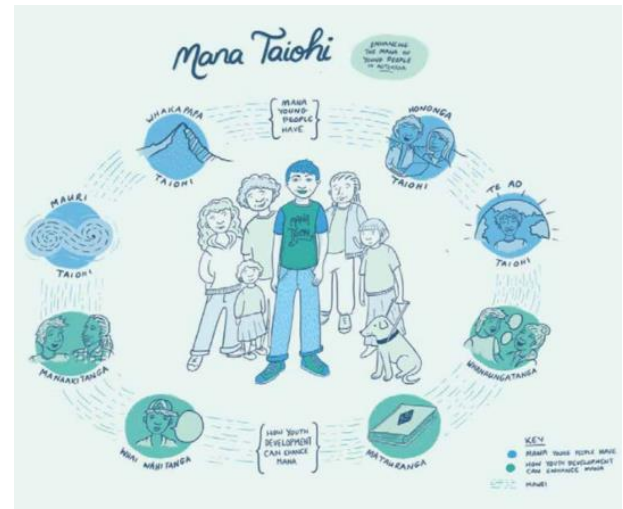


Figure 4: Mana Taiohi Principles

YDSA six key principles:

1. Youth development is shaped by the 'big picture'.
2. Youth development is about young people being connected.
3. Youth development is based on a consistent strengths-based approach.
4. Youth development happens through quality relationships.
5. Youth development is triggered when young people fully participate.
6. Youth development needs good information.

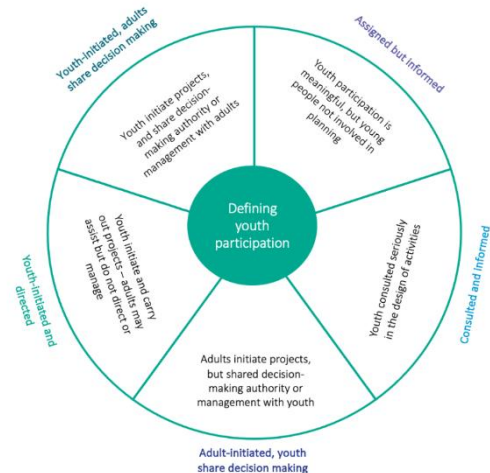
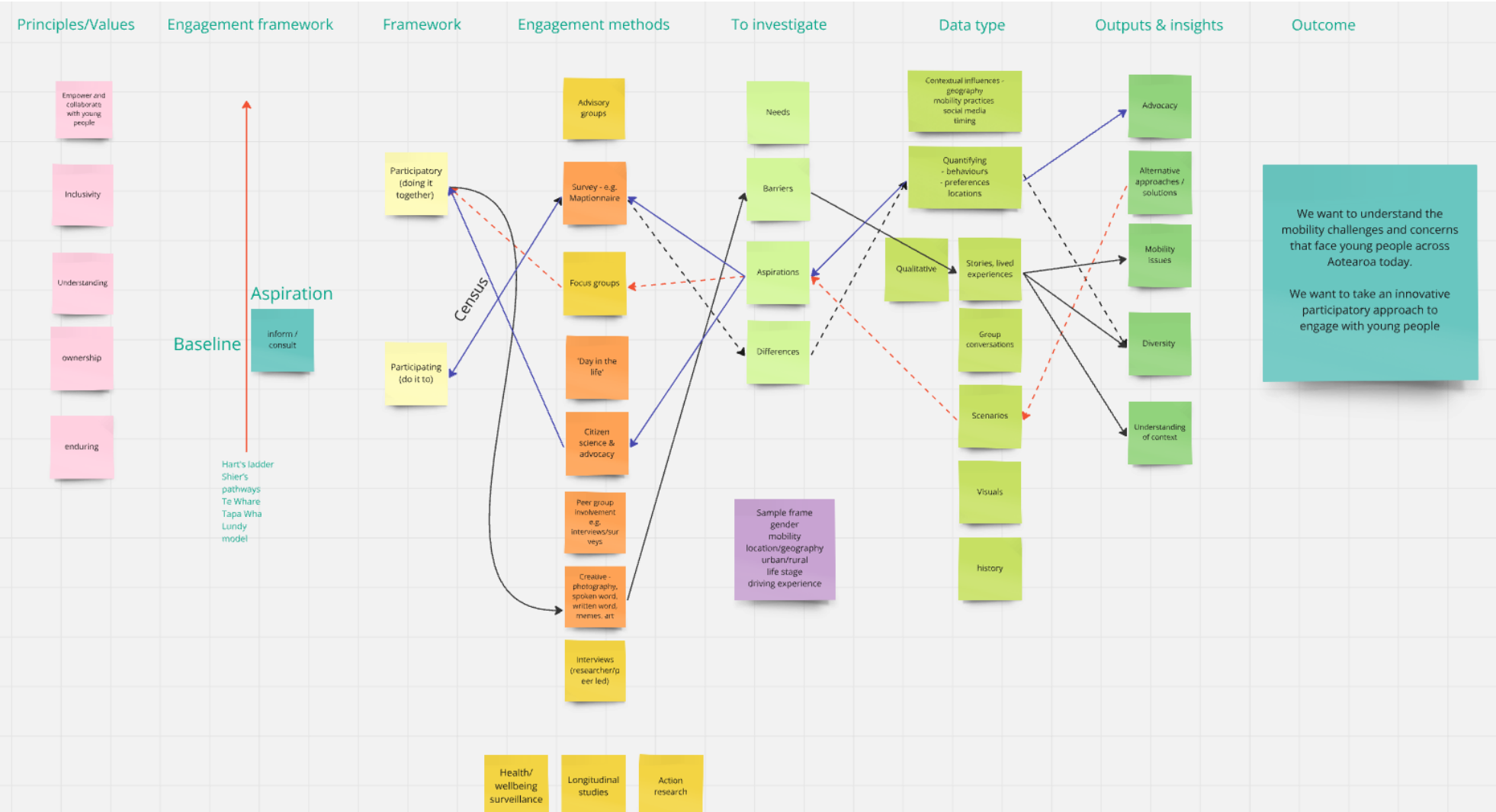


Figure 7: Youth Futures Foundation's revised youth participation wheel



Figure 6: Te Whare Tapa Wha

8.4 APPENDIX IV: ENGAGEMENT METHODS



2 Figure 8: Digital Miro board to identify engagement methods

8.5 APPENDIX V: ADVERTISING

8.5.1 *TAIOHI RECRUITMENT*

WSP networks and social media recruitment strategies were effective for reaching a diverse group of taiohi. Social media, particularly paid advertisements with Meta, proved to be the most effective recruitment tool for taiohi, with cohorts sharing that they would not have normally engaged with a project like this through email or traditional recruitment. Adverts offered taiohi an opportunity to share views and experiences and highlighted that they would be incentivised for their time via vouchers. Cohorts were recruited from various regions in NZ, mainly from urban areas. Targeted advertising led to increased responses from rural locations. Following recruitment efforts, 284 individuals initially expressed interest in the research, 81 responded to invitations to confirm participation, 40 met the selection criteria and were invited to participate, 22 attended the first workshop, and 20 individuals completed the research. Taiohi stated that social media is good for recruitment because it is easy to share with others and they perceived that it is more tailored to them (See Appendix V: Advertising for further insights on advertising, including which images performed best).

An integral component of the research was the offer of incentives to cohorts. While incentives were sometimes viewed as advantageous, some cohorts expressed concerns that the offer was a possible scam, pointing to a need for trusted relationships with established organisations to support engagement within this age group. Cohorts felt the incentives were fair for the time compensation. Some areas to consider for future research are the consistency of incentives and where they are weighted, more fluid online engagement throughout the process (e.g. not set times) fewer online meetings and supporting the legitimacy of the incentives.

8.5.1.1 RECRUITMENT INSIGHTS

- Social media, including paid advertisements with Meta, effectively reached the target audience and enabled targeting of specific demographics
- Advertisements featuring images of people had higher click rates; the most effective advertisement is included in Appendix V: Advertising
- Promoting incentives was effective, with Prezzy or grocery cards being preferred by participants
- The use of a screening tool helped to ensure all participants met the inclusion criteria
- There was a 50% conversion rate from invitation to sign up. Once cohorts had initially engaged, retention was high (86%)

Advertising was conducted via Meta. The adverts reached 58,317 users, with 66,537 views. The ad generated 1,043 clicks (1.6% click-through rate) leading to a 3.2% engagement rate. The advert was successfully targeted to gender, age, and location. The ads were primarily shown on Meta's Audience Network. We were also able to boost posts through WSP's Facebook, Instagram, and LinkedIn accounts. Currently, advertising on TikTok requires a high investment, but may be a useful platform to consider in the future. The first advert shown outperformed the others with nearly twice the amount of engagement and click-through rate.

**ARE YOU 16-30
AND LIVING IN NZ?**



16-30
16-30

ARE YOU 16-30 AND LIVING IN NZ?

Join our mobility research and
earn up to **\$400** in vouchers!



JOIN OUR MOBILITY RESEARCH

Share your experiences and help shape
the future of getting around in Aotearoa.



wsp

ARE YOU 16-30 AND LIVING IN NZ?

Join our mobility research and
earn up to **\$400** in vouchers!



EARN UP TO **\$400** IN VOUCHERS

Share your experiences
and help shape the
future of getting around
in Aotearoa.



8.6 APPENDIX VI: ENGAGEMENT APPROACH FINDINGS

8.6.1 PEER LED SURVEY

While the sample size meant that sub-sample analyses would not normally be done (e.g., preferred transport mode by age group), they are shown here to demonstrate what would be possible with more extensive sampling. Participants attributed the length of the survey as desirable, with distribution within their personal networks as effective. Some participants were reluctant to share the survey link and reported that some participants were concerned of the legitimacy and credibility of the survey link, highlighting the importance of using trusted branding for surveys. Interestingly, a high percentage of participants preferred to not state their ethnicity.



Demographics

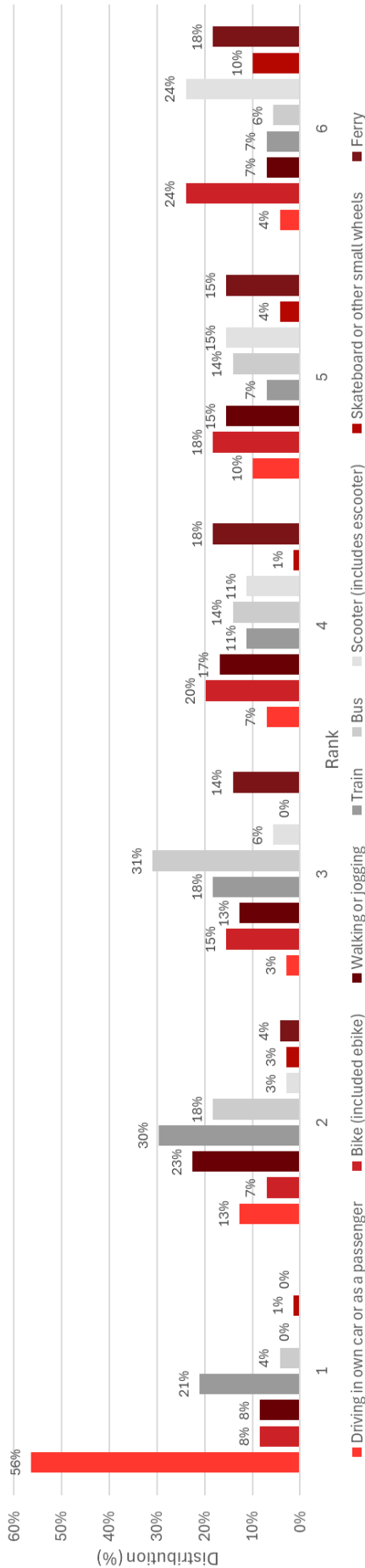
Age group	Percentage
16-20	6%
21-25	29%
26-30	33%
31-35	17%
36-40	6%
41-45	6%
45+	4%
Grand Total	100%

Ethnic group	Percentage
New Zealand European	55%
Prefer not to say	24%
Indian	9%
New Zealand European Māori	4%
Chinese	4%
Samoan	1%
Māori	1%
Grand Total	100%

Gender	Percentage
Female	66%
Male	32%
Another gender	1%
Grand Total	100%

Region	Percentage
Auckland, Tāmaki Makaurau	68%
Canterbury, Waitaha	8%
Bay of Plenty, Te Moana-a-Toi	8%
Taranaki	6%
Waikato	4%
Otago, Ōtākou	3%
Wellington, Te Whanganui-a-Tara	1%
Manawatū-Whanganui	1%
Grand Total	100%

If there were no barriers to travel, which mode of transport would you prefer to use?



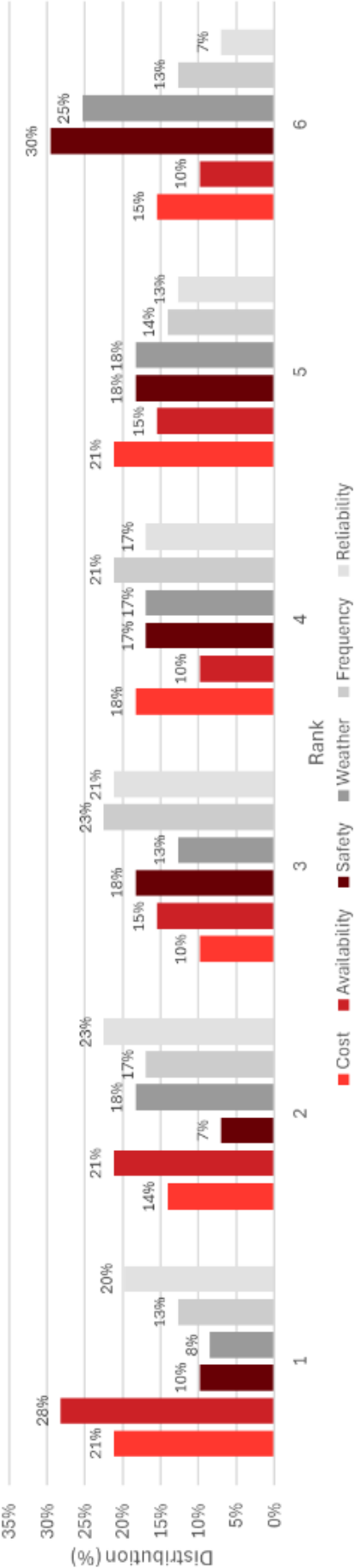
Age and preference of transport mode

Preference	Age group	16-20	21-25	26-30	31-35	36-40	41-45	45+
Mode of transport								
Bike	0%	10%	0%	8%	50%	0%	33%	0%
Bus	0%	0%	4%	17%	0%	0%	0%	0%
Car	75%	55%	61%	42%	25%	75%	67%	0%
Skateboard	0%	0%	4%	0%	0%	0%	0%	0%
Train	25%	30%	17%	33%	0%	0%	0%	0%
Walking	0%	5%	13%	0%	25%	25%	0%	0%
Grand Total		100%	100%	100%	100%	100%	100%	100%

Region and preference of transport mode

Preference	Region	Auckland	Bay of Plenty	Canterbury	Manawatu-Whanganui	Otago	Taranaki	Waikato	Wellington
Mode of transport									
Bike	6%	6%	0%	17%	0%	0%	50%	0%	0%
Bus	6%	6%	0%	0%	0%	0%	0%	0%	0%
Car	58%	58%	67%	50%	100%	50%	0%	67%	100%
Skateboard	2%	2%	0%	0%	0%	0%	0%	0%	0%
Train	17%	17%	33%	33%	0%	50%	25%	33%	0%
Walking	10%	10%	0%	0%	0%	0%	25%	0%	0%
Grand Total		100%	100%	100%	100%	100%	100%	100%	100%

How much do the listed barriers impact your choice of travel mode?



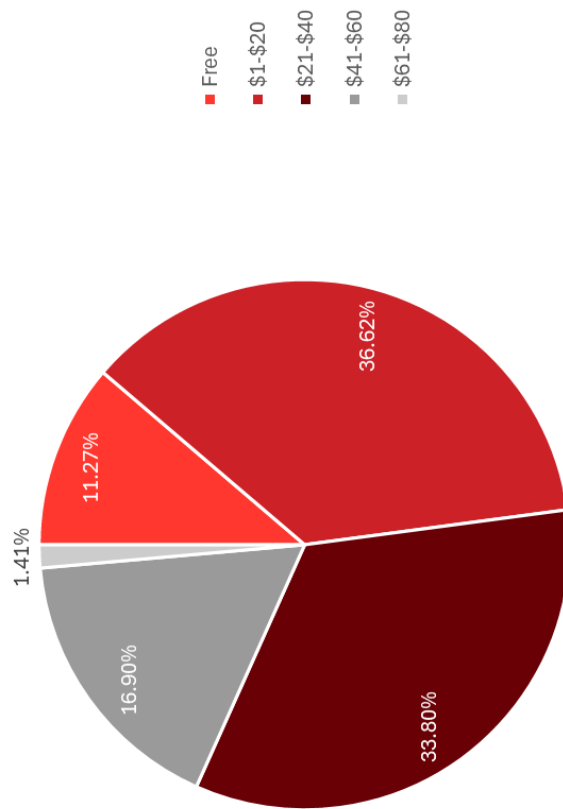
Age and barriers

Barriers	Age group	16-20	21-25	26-30	31-35	36-40	41-45	45+
Cost		50%	25%	17%	25%	0%	25%	0%
Availability		25%	30%	30%	17%	25%	0%	100%
Safety		25%	10%	4%	25%	0%	0%	0%
Weather		0%	5%	4%	8%	25%	25%	0%
Frequency		0%	10%	13%	25%	25%	0%	0%
Reliability		0%	20%	30%	0%	25%	50%	0%
Grand Total		100%	100%	100%	100%	100%	100%	100%

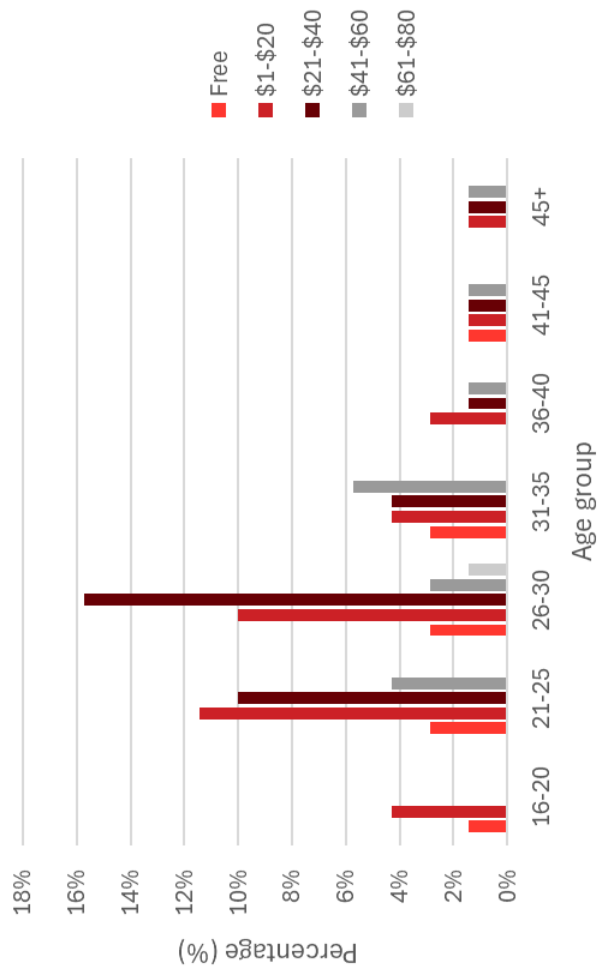
Gender and barriers

Barriers	Gender	Female	Male
Cost		21%	17%
Availability		23%	39%
Safety		13%	4%
Weather		6%	13%
Frequency		15%	9%
Reliability		21%	17%
Grand Total		100%	100%

If public transport were available for you, how much would you be willing to spend weekly on public transport to consistently use it?



Willingness to spend by age group

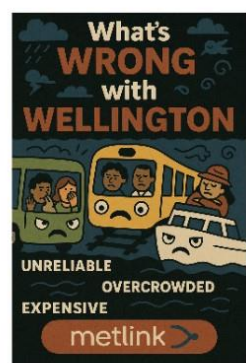
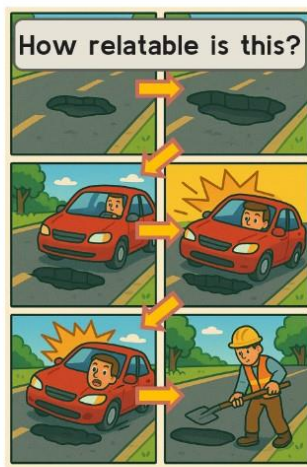
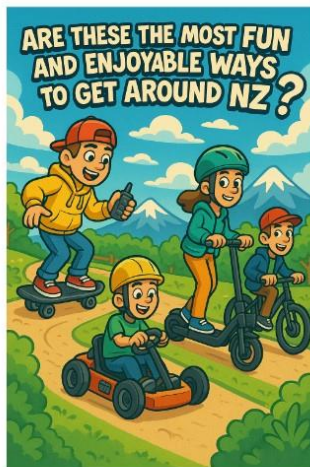


8.6.2 CREATIVE CONCEPTUALISATION

The cohort utilised AI tools to generate imagery, memes, and a poster. A diverse range of concepts was developed, highlighting key issues relevant to the cohort. The cohort shared that knowing the audience, relatability and clarity were important when using creative conceptualisation to highlight real life issues. The cohort in particular highlighted enjoyable aspects of travel, including a connection to nature/environment and excitement for novel and sustainable options. Whilst this cohort planned to test the concept with the general public, i.e. through likes or engagement on social media or with discussion points with peers, this was challenging. Some of the participants discussed with peers and provided feedback to highlight the reliability and views from some peers on the topics highlighted. Many of the cohort used AI to create concepts to be used with social media, suggesting this could be a useful way of generating conversation or checking consensus on simple concepts.



Creative concepts



**Public transport in
NZ be like:**



**The Footpath so wide
even my Corolla
thinks it's a lane**

EXPLORING YOUR

TRANSPORTATION OPTIONS



BUS

- Affordable
- No Parking Hassles
- Eco-Friendly
- Relaxing & Stress-Free
- Social & Community-Oriented



TRAIN TRAVEL

- Eco-Friendly
- Social & Relaxing
- Less Hassle



PLANES

- Speed & Efficiency
- Avoiding Traffic & Road Challenges
- Time for Productivity or Relaxation

UBER

- Ease of Use
- Availability in Major Cities
- Cashless Transactions



CYCLING/BIKING

- Eco-Friendly & Sustainable
- Cost-Effective
- Health & Fitness Benefit
- Avoid Traffic & Parking Hassles



CAR

- Flexibility & Freedom
- No fixed schedules
- No crowded public transport



WALKING

- Eco-Friendly
- No Parking or Traffic Hassles
- Healthy & Free



LOCAL FERRY

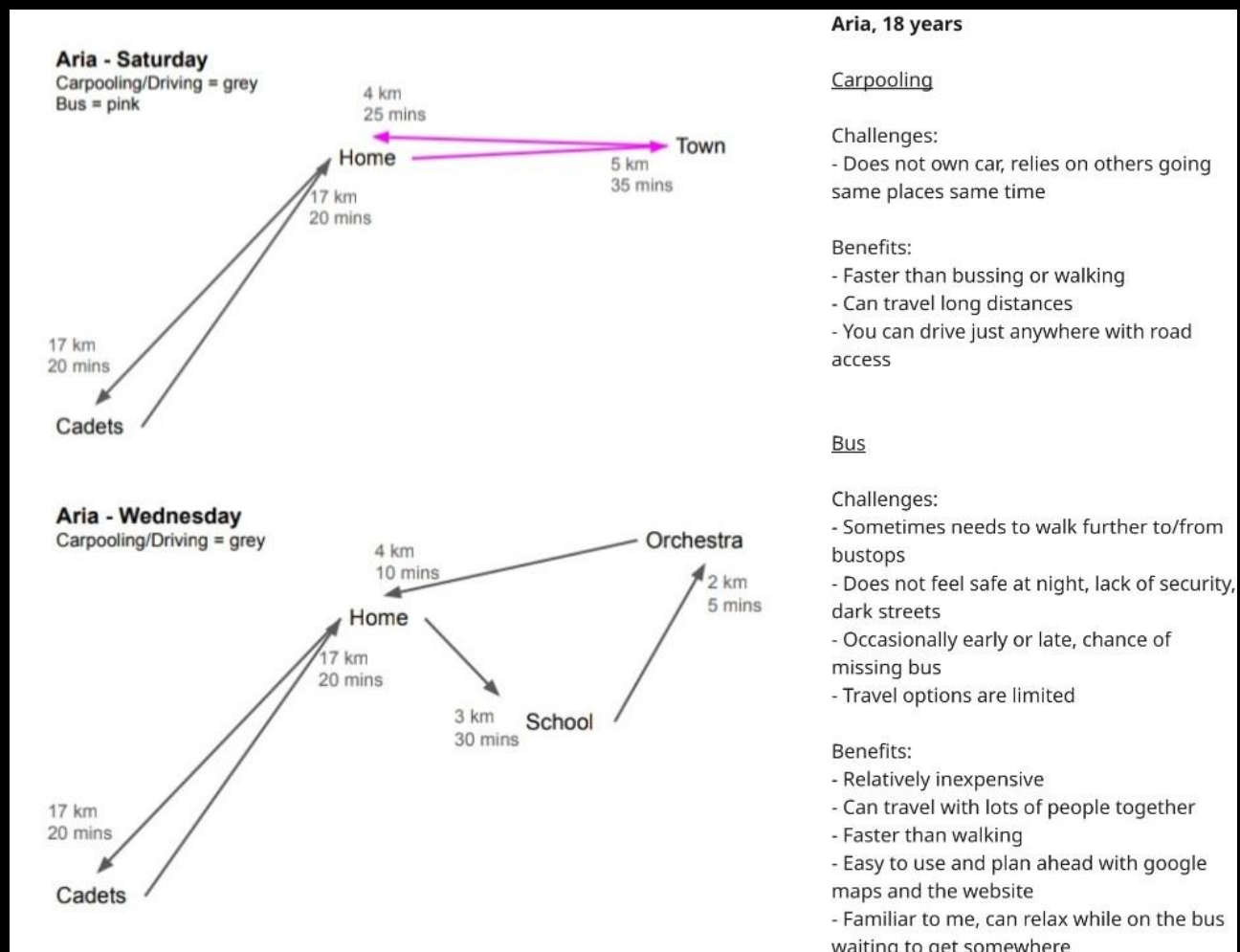
- Avoid Traffic
- Comfortable & Spacious
- Eco-Friendly Option
- Access to Islands & Remote Areas



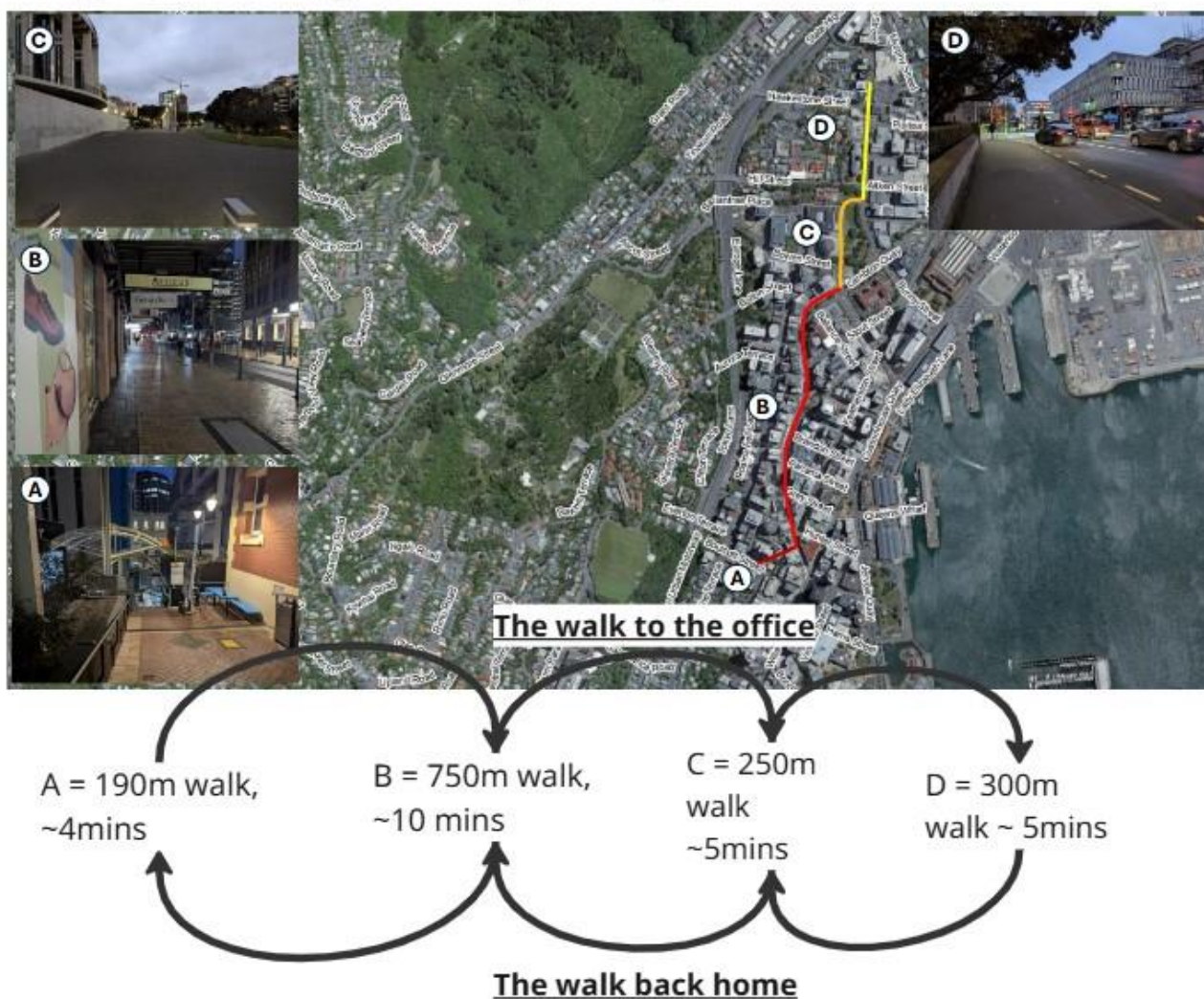
8.6.3 A DAY IN THE LIFE OF

Routes, photographs, and written descriptions were used to illustrate significant parts of their journeys and the decisions made. Participants found that walking when living close was preferred, and time, convenience, cost, accessibility, reliability and safety are all important considerations in transport choices. Participants collected data from urban and rural locations.

Some participants included photos of their daily journeys, participants feedback that their own preference and several of those they collected data from were reluctant to use imagery and precise locations due to safety. Generalising some of the maps or creating them outside of google maps was preferred to highlight key journeys but protect participant identity.



A Day in the Life - A Typical Monday to Friday Commute



1. In what way do you currently move to specific locations?

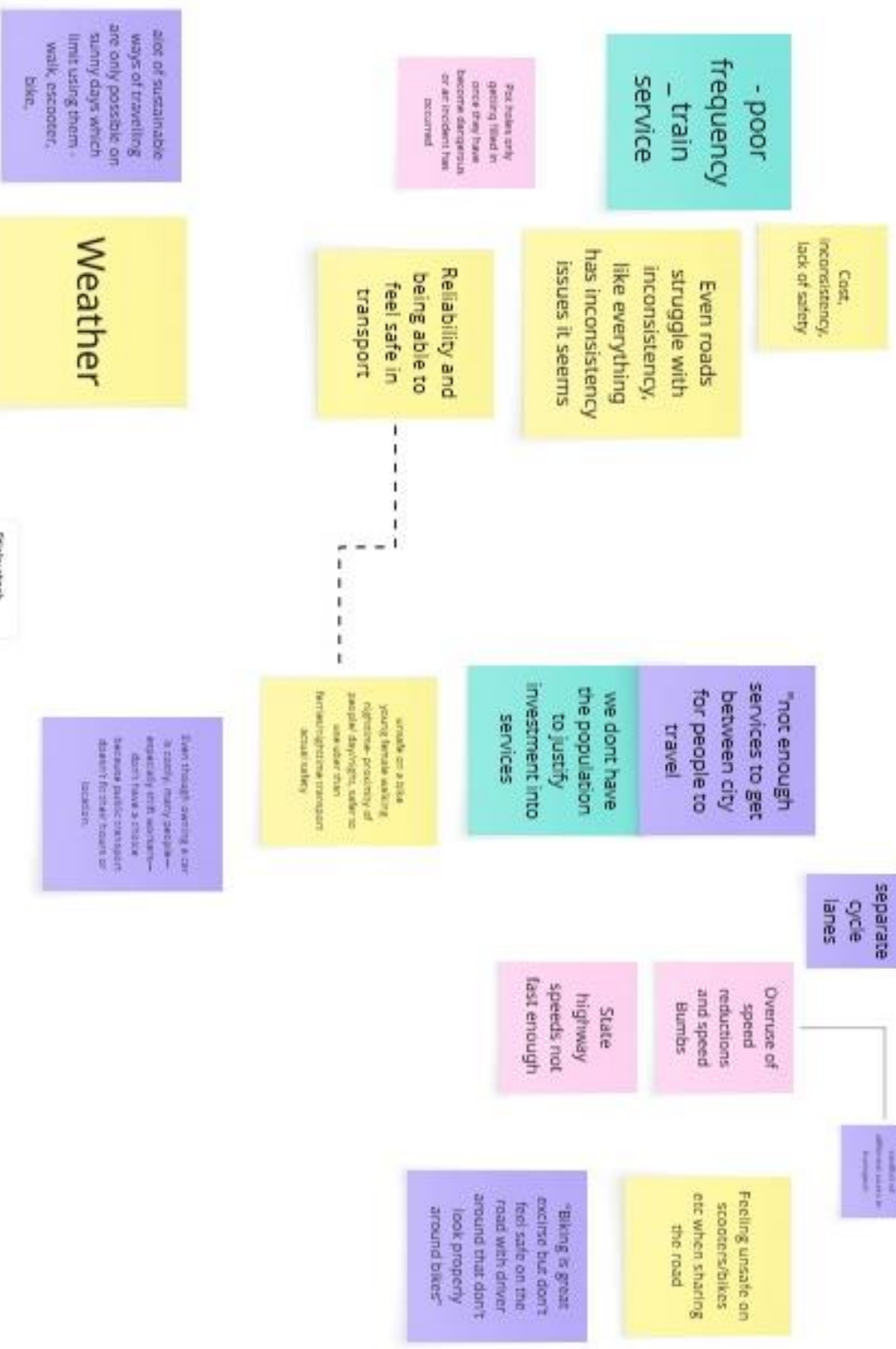
I walk to and from work every day. My office is about a 20-minute walk from where I live, so it's a straightforward and manageable commute on foot. I predominately walk most day, regardless of the weather. When it is too stormy, for me I have the option to work from home.

Hostile to
people
who don't
own cars

[illegible]

"Being in good enough luck to be put in the last left is hellish, and you can't even yell my number. That's just to replace it to be put in great."

What are the challenges?



Sticky stack



What challenges are there?



8.6.4 CITIZEN SCIENCE

The citizen science cohort focused on gathering data on the enjoyable and challenging aspects of individuals' journeys, both daily and occasional. We analysed patterns in how taiohi travel across the country and explored the significance of these findings for future planning. By investigating travel behaviours and, critically, perceptions of those experiences, we gained valuable insights into current transport infrastructure and its impact on users' wellbeing, safety, accessibility, and mobility.

Data was collected via a map-based questionnaire, resulting in 39 respondents who provided 109 pins (spatially referenced data) and mapped routes, and 65 participant comments. Data was collected across the country including cities, towns, rural areas and captured a wide range of trip experiences. Participants dropped a pin on locations to identify where trips were enjoyable or challenging and drew routes of their usual trips and preferred routes. Qualitative data also was collected in comments attached to the locations and routes. This dataset enabled us to assess not only the methods of movement but also the underlying motivations and opinions regarding the travel experience. Our analysis was organised into four key categories: enjoyable aspects of routes, encountered challenges, usual routes taken, and preferred routes. These categories facilitated the identification of common themes, allowing us to transform diverse feedback into actionable insights. Notably, our analysis revealed recurring issues and patterns affecting young travellers.

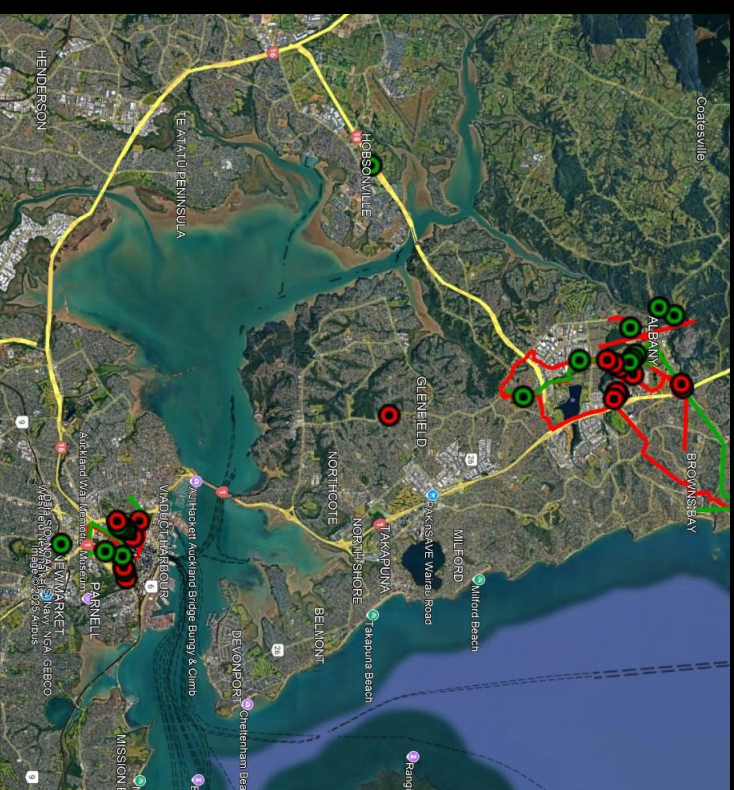
Data collection tested a gamification process to increase participation, whereby the more data that a participant entered, the higher chances of winning the incentive prize draw.



- Data collected on map-based questionnaire
- Pins of enjoyable & challenging locations
 - Routes of usual and preferred routes
 - + Comments

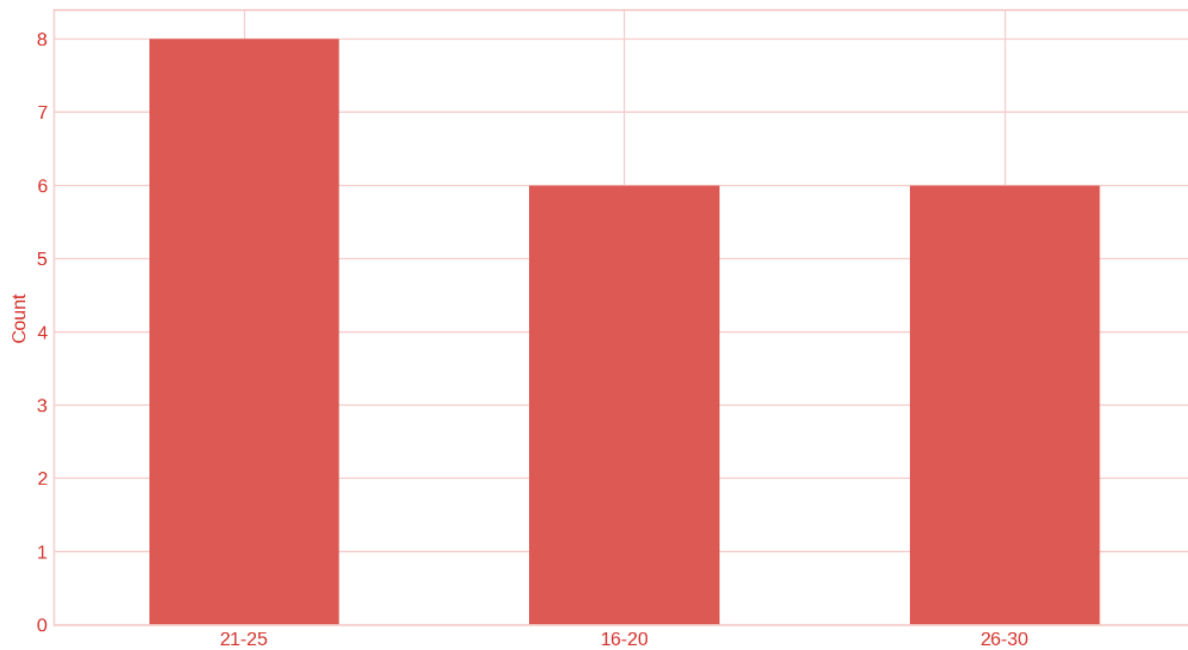


- 32 respondents
- 109 pins and routes
 - 65 comments

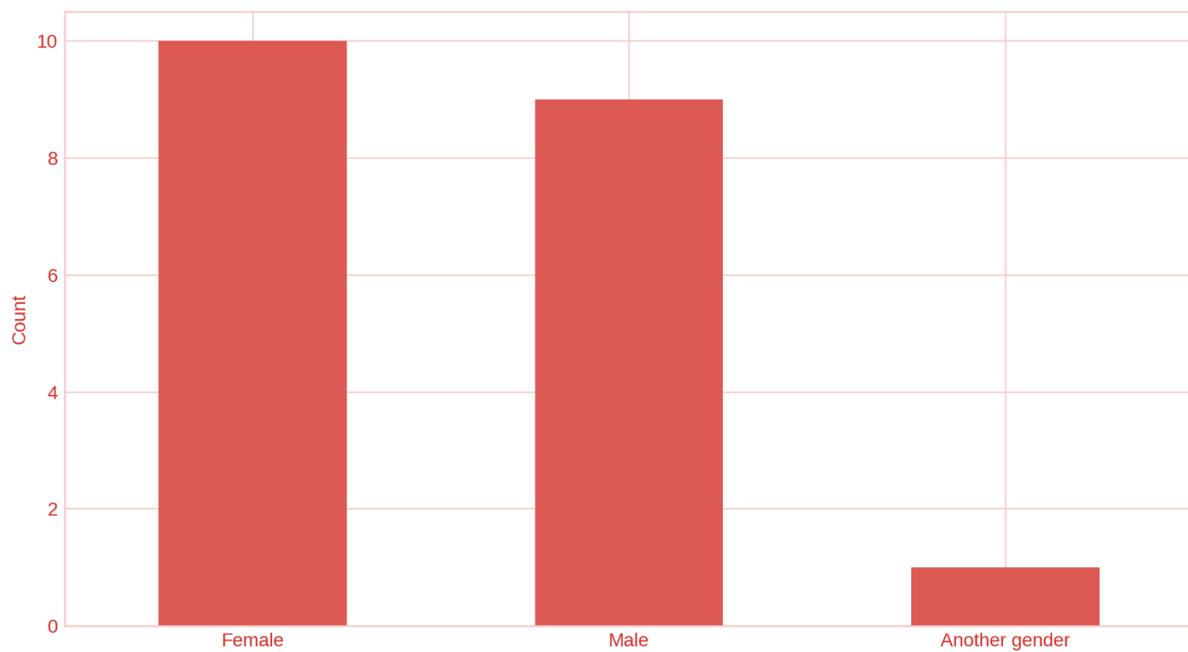


8.7 APPENDIX VII: COHORT DEMOGRAPHICS

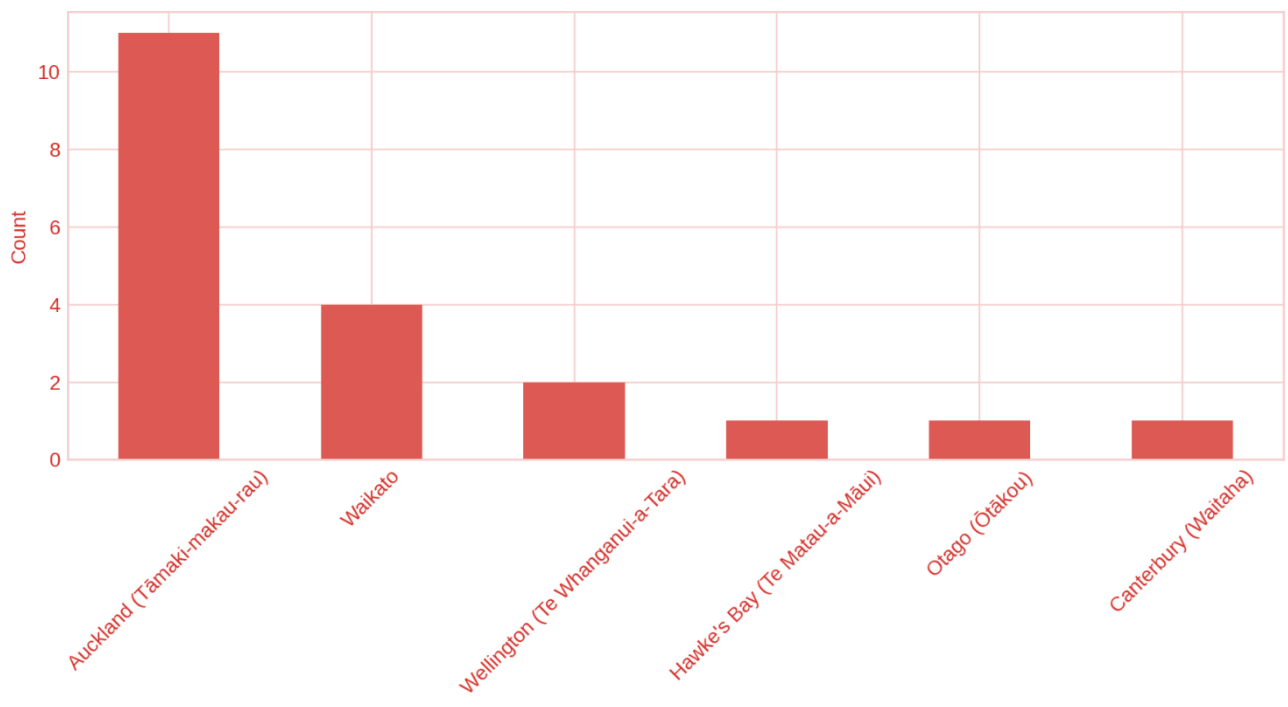
The following demographics are from the cohort participants. Number = 20



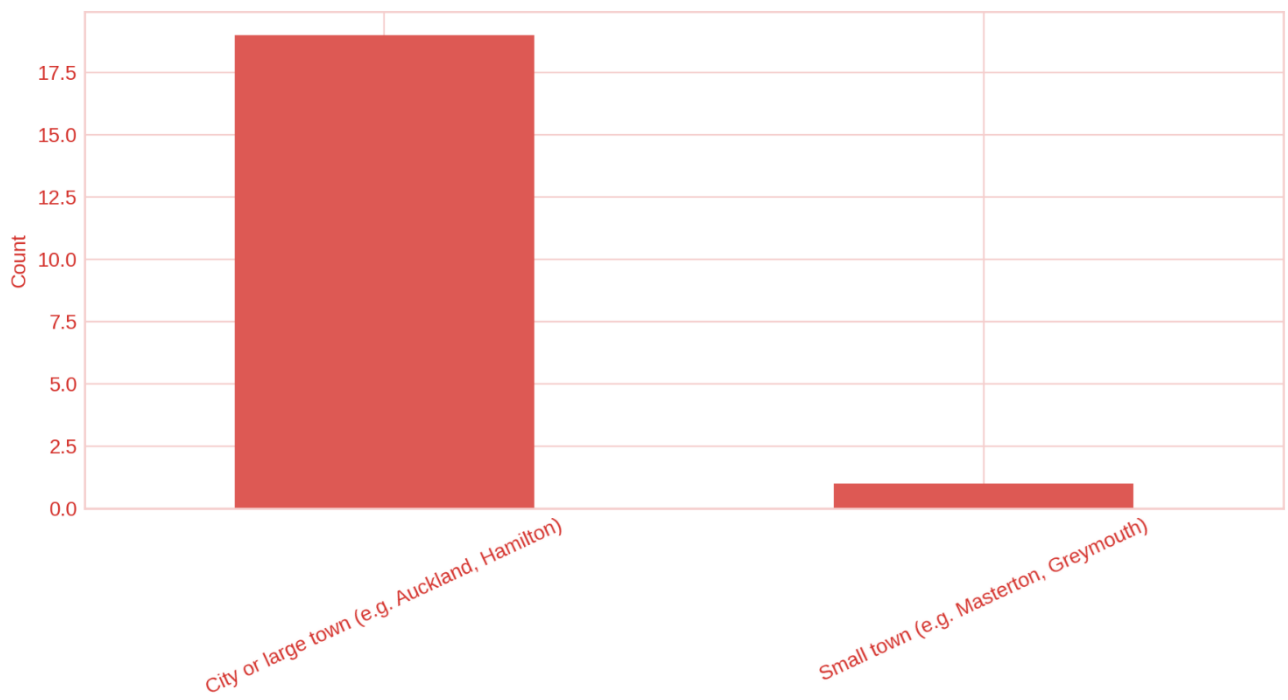
Age distribution (n=20)



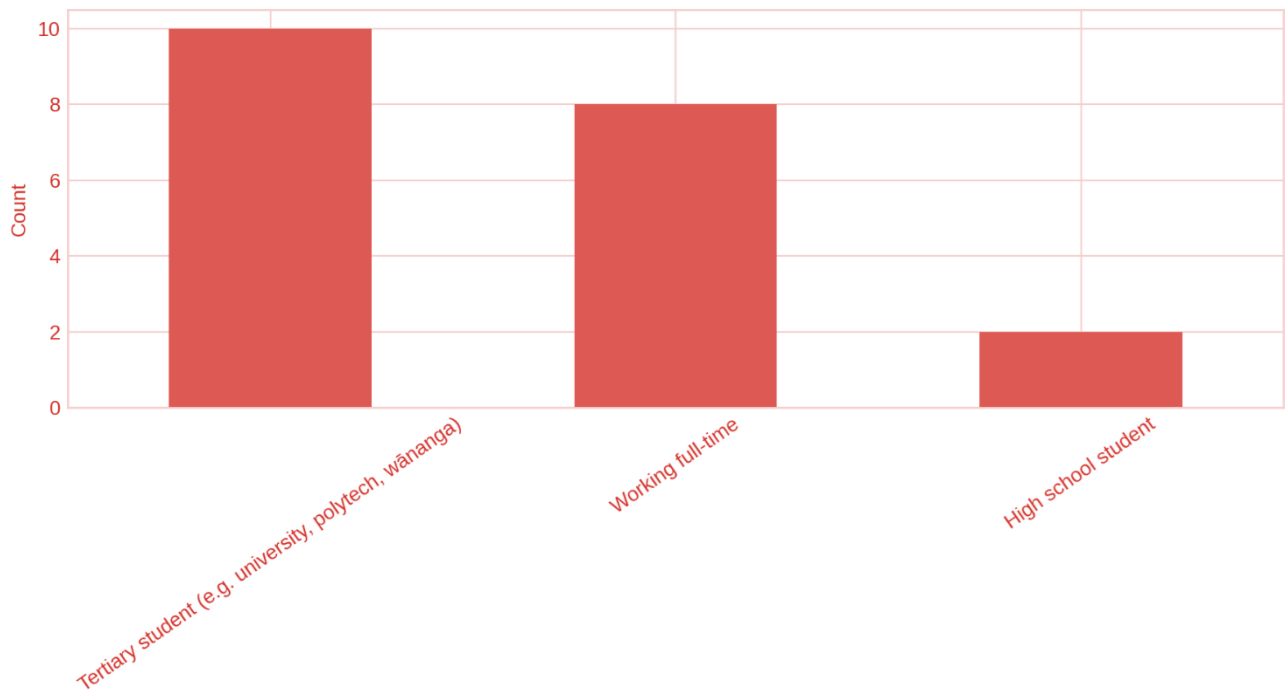
Gender distribution (n=20)



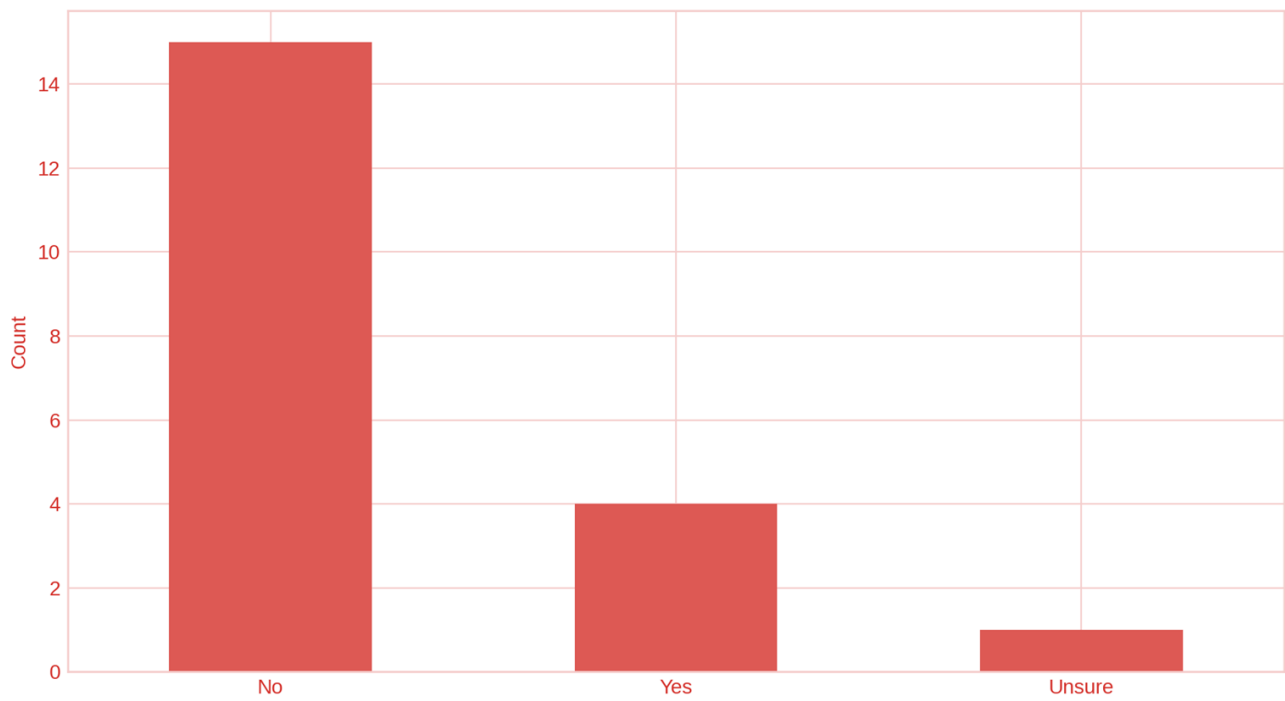
Region of residence (n=20)



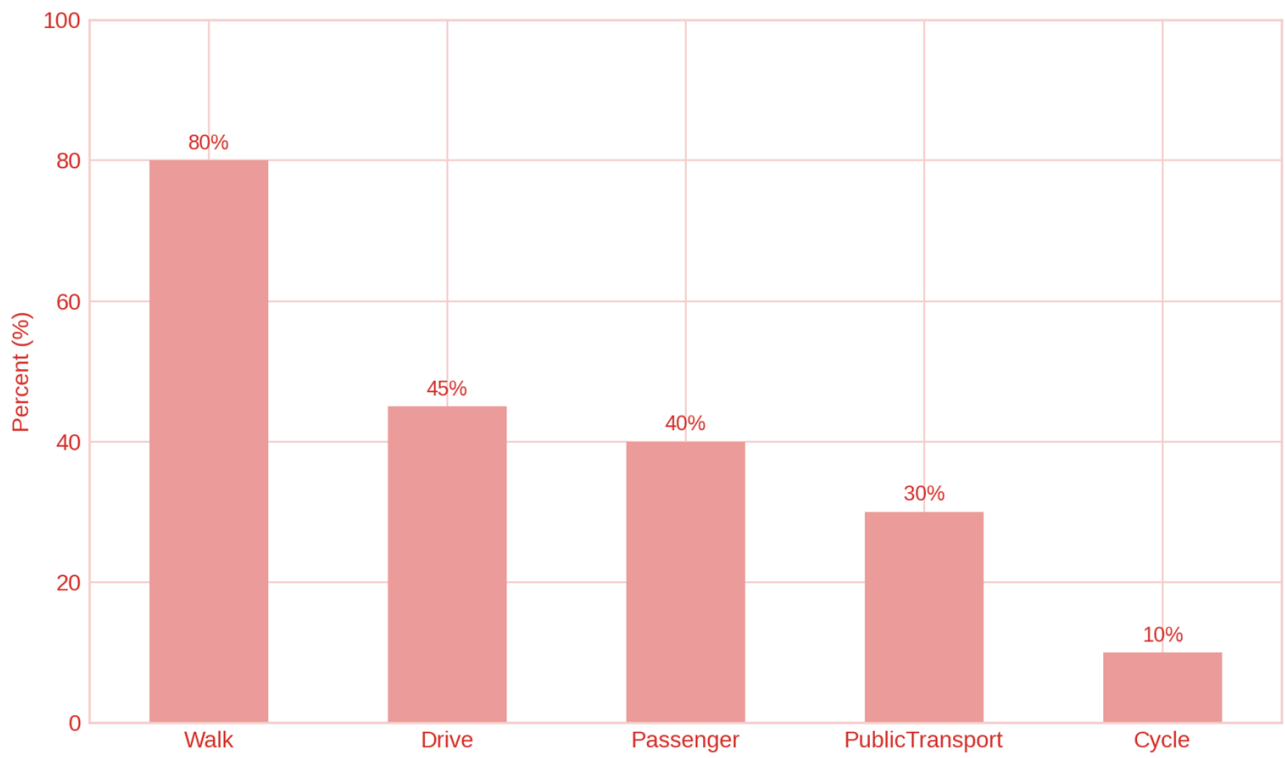
Area type (n=20)



Employment / education status (n=20)



AA membership status (n=20)



Travel modes: % using at least weekly (n=20)

BIBLIOGRAPHY

- Brazier, C., 2017. Building the future: children and the Sustainable Development Goals in rich countries, Innocenti report card. UNICEF Office of Research - Innocenti, Florence, Italy.
- Centre for Social Impact, 2018. Evidence Review: The Youth Development Ecosystem.
- Deane, K., 2020. The Factors that Influence Positive Youth Development and Wellbeing. Ara Taiohi.
- Deane, K., Dutton, H., Kerekere, E., 2019. Ngā Tikanga Whānaketanga He Arotake Tuhinga A Review of Aotearoa New Zealand Youth Development Research. University of Auckland.
- Hirsch, L., Mackie, H., Scott, R., de Pont, J., Douglas, S., & Thomsen, D. (2019). For whom didn't it click? A study of the non-use of seat belts in motor vehicle fatalities. *Journal of the Australasian College of Road Safety*, 30(3), 18.
- Hirsch, L., Thorne, R., & Mackie, H. (2020). Promoting independent walking to school. Report prepared for Auckland Transport.
- Luther, R., Wrightson, S., & Mackie, H. (2025). Opportunities for Everyday Mobility Choices. Report prepared for the AA Research Foundation.
- Mackie, H., Hirsch, L., Thorne, R., Witten, K., & Field, A. (2021). Creating the Circuit Breakers: An examination of the sociotechnical system factors which impede and enable the delivery of safe and healthy neighbourhood street design in Aotearoa New Zealand. In S. Coxon & R. Napper (Eds.), *Advancing a Design Approach to Enriching Public Mobility* (pp. 249–274). Springer.
- Mackie Research & Consulting. (2019). Healthy Future Mobility: Synthesis Report. Auckland, New Zealand.
- McLaren, K., 2002. Youth Development Literature Review: Building Strength. Ministry of Youth Affairs.
- Ministry of Foreign Affairs, 2022. Meaningful Youth Participation Practical Toolkit.
- Ministry of Youth Affairs, 2002. Youth Development Strategy Aotearoa: Action for Child and Youth Development.
- Ministry of Youth Development, 2009. Keepin' It Real: A Resource for Involving Young People in Decision-Making.
- New Zealand Government, 2024. The Child and Youth Strategy 2024-2027.
- Next Generation Coalition, 2021. Six Strategies to Build Empowering Youth Engagement.
- Office of the Auditor-General. (2025). Reliability of Public Transport in Auckland. Office of the Auditor-General, Wellington.
- Roger A. Hart, 1992. Children's Participation: From tokenism to citizenship. Paper Inness Innocenti Essay.
- Rowland, J., Wills, E., Ott, D.E., 2024. Youth Participatory Research: A Review of Reviews and Practice Guidance. Centre for Evidence and Implementation.
- Thomas, J., & Mackie, H. (2016–2019). Transport in Growing Cities: Smarter Thinking and a Wider View to Overcome New Zealand's Urban Transport Problems. Independent Research Association of NZ / Opus Research.
- Statistics New Zealand, 2023. 2023 Census totals by topic for individuals by statistical area 1 – part 1.
- Shier, Harry., 2001. Pathways to participation: Openings, opportunities and obligations. *Children & Society* 107–117.

- Waka Kotahi NZ Transport Agency (2024). Public Transport Deep Dive. Waka Kotahi NZ Transport Agency.
- Wayne Francis Charitable Trust - Youth Advisory Group, 2024. Weaving Connections – Tūhonohono Rangatahi: Positive Youth Development in Aotearoa.
- Wellington City Council, 2018. Youth Engagement Framework: Te Tuāpapa Whakawhanake Rangatahi — A guide for engaging with young people.