

# Waka Kotahi COVID-19 transport impact

Fieldwork waves 3-5 deep dive analysis – commuter traffic, active modes and volume of mode usage

5 May 2020

# Disclaimer

This presentation is based on research currently being undertaken by Ipsos on behalf of Waka Kotahi NZ Transport Agency. In order to support an agile response to the unfolding COVID-19 pandemic, we are releasing regular key insights from the preliminary findings prior to this work being finalised. Please note that these deliverables have not yet been through a formal peer review process and the findings should be considered as draft

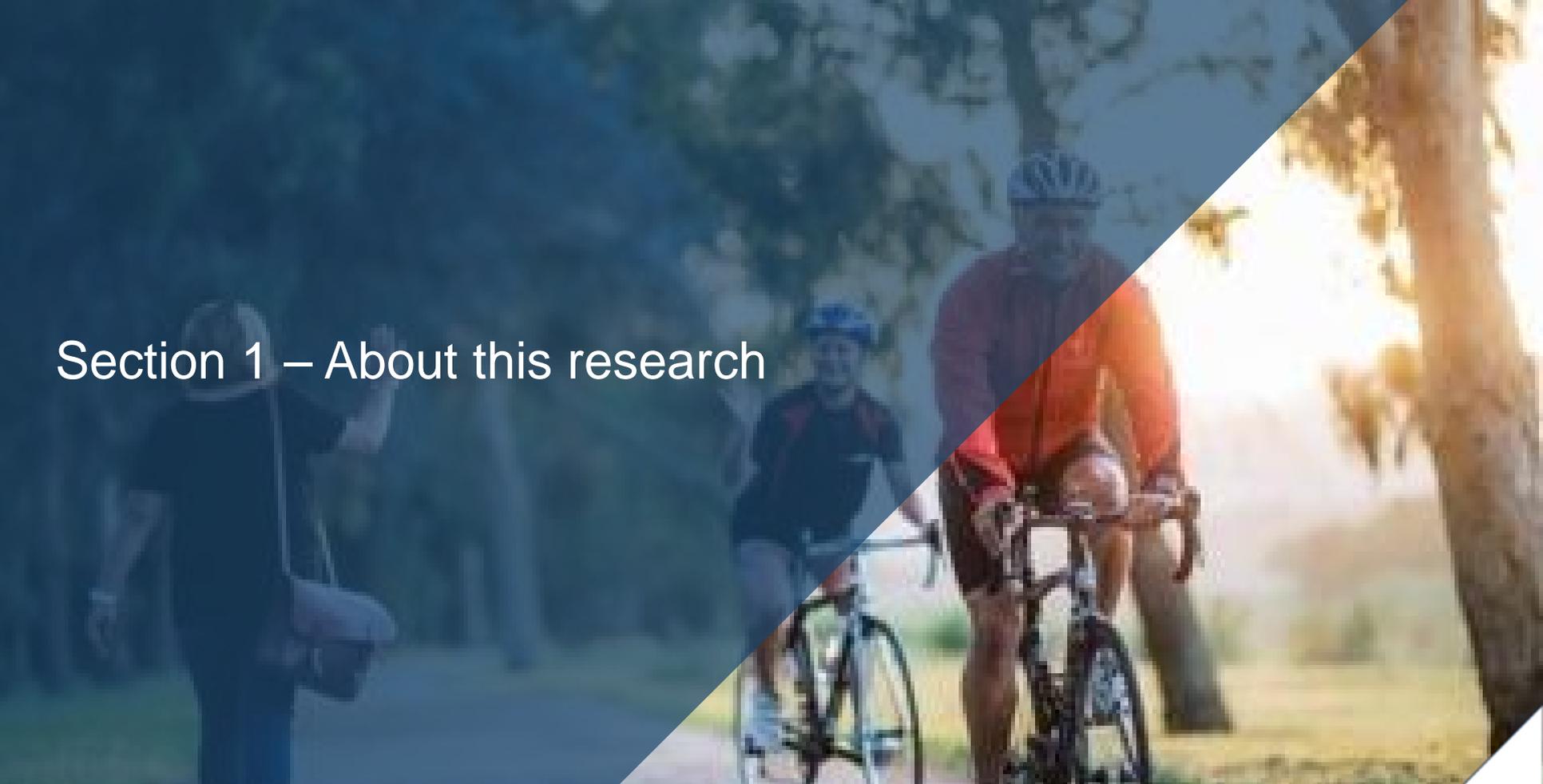
While Waka Kotahi provided investment, the research was undertaken independently, and the resulting findings should not be regarded as being the opinion, responsibility or policy of Waka Kotahi or indeed of any NZ Government agency.

For more information on the Covid-19 weekly tracker contact:  
[NZTAresearch@nzta.govt.nz](mailto:NZTAresearch@nzta.govt.nz).

# Deep dive report content

## COVID-19 transport impact deep dives waves 3-5

- Section 1 – About this research
- Section 2 - Impact of commuter traffic changes on journey modes (wave 3)
- Section 3 - Active modes (wave 4)
- Section 4 – Volume of mode usage (wave 5)



## Section 1 – About this research

# Study purpose and importance

## Introducing the Waka Kotahi NZ Transport Agency COVID-19 transport impact tracker

The **purpose of the COVID-19 Tracker** research is:

To understand **how travel is changing** and evolving in response to COVID-19 on a weekly basis

- such as trip frequency and journey type changes.

To understand **why travel is changing** and evolving in response to COVID-19 on a weekly basis

- such as perceptions/attitudes towards COVID-19 and travel options.

To include sufficient respondent numbers to understand how this varies across region and cohorts of interest

- such as different employment types (work from home, essential workers, etc.), vulnerable groups (elderly, immune compromised, etc), DHB, etc.

To provide weekly updates in a timely fashion so actions and planning can respond to the evolving situation.

The **importance of this research** cannot be understated:

There has been a major disruption to travel habits that will have long-lasting impacts on society:

- Where and how people choose to work, and how they choose to travel will change.
- Where people choose to travel domestically will change.
- How these changes will play out in the medium to long-term is unknown.

Without regularly updated knowledge on **what people are thinking and feeling**, and **why they are choosing** to travel the way they do, we won't be able to quantify how people are responding to COVID-19, and without this we won't know how best to respond and how we are able to influence travel habits.

- With regularly updated knowledge on COVID-19's impact, we can quantify how road usage and modal choice is changing, and we will know how to respond and influence future travel habits.

# Overview of research (i)

## Research design and outputs

The **design of the tracker** ensures we can undertake analysis at various levels for different purposes, and for different stakeholders.

The study is an online quantitative survey that is a nationally representative sample of New Zealanders 15+ years old, with a weekly sample of n=1259 per week, using quotas and data weighting.

- With sample boosts to ensure sufficient numbers to analyse key cities of interest, such as Tauranga, Dunedin and Hamilton.
- Sample numbers allow longitudinal view on cohorts and regions of interest.
- Sample is sourced from a blend of online panels, including Pure Profile, Ipsos iSay, Dynata and Consumer Link.

Average survey duration of between 12-15 mins

- Outside core measures, flexibility to change questions every week

Fast turnaround of results to allow a weekly view on how behaviours and attitudes are changing.

- Design will pivot according to alert level changes that may occur at nationwide and regional levels.

There will be **three types of outputs** available on a weekly basis:

- 1) Online dashboard results delivered through Harmoni
  - with the ability to manipulate, interrogate and export the data according to your areas of interest.
- 2) This weekly overview power point report
  - benchmark and longitudinal summary of key data points
  - including extra analysis based on topical questions.
- 3) An infographic of key data points
  - visual representative of results for ease of access.



Example: Harmoni Dashboard Page

# Overview of research (ii)

## Question topics in the survey

### Question areas covered in the research:

#### Level of personal concern of the impact of COVID-19

- to themselves, their families, their work, the country, etc.

#### Current essential journeys undertaken and changes

- change is measured since February 2020.

#### Modal shift patterns and perceptual shifts

- including perceptions of Public Transport among users
- perceptions of various transports modes with regards to safety, hygiene, convenience, etc
- perceptions of potential shifts in work flexibility.

#### Measuring attitudinal shifts towards COVID-19

- using a Behavioural Science framework to understand current people's current state to facilitate potential interventions.

#### Questions to classify into a variety of segments of interest

- including journey profile, vulnerability, COVID-19 attitudes, economic, etc.

#### Ad hoc questions of interest

- including perceptions of future workplace flexibility, enjoyment of 'quiet streets', intention to return children to school, etc.

# Report notes (i)

## Key information to note for this report

- This report is based on six waves of fieldwork:
  - wave 1 data collected Friday 3 April to Wednesday 8 April
  - wave 2 data collected Thursday 9 April to Tuesday 14 April
  - wave 3 data collected Thursday 16 April to Monday 20 April
  - wave 4 data collected Thursday 23 April to Sunday 26 April
  - wave 5 data collected Thursday 30 April to Sunday 3 May.
- Total sample for this report is presented in a number of ways, including as a combined sum of the first four fieldwork waves (all conducted under level 4 alert), combined sum of waves 5 and 6 (under level 3 alert), as well as individual waves where appropriate.
- Waves 1–4 of fieldwork were completed under a level 4 alert in New Zealand, while waves 5 and 6 were completed under a level 3 alert.
- The focus of this report is tracking the trends and changes over time and how New Zealanders have adjusted their use of transport and travel behaviour. As this study was not conducted prior to level 4 restrictions, respondents were asked to recall their transport and travel behaviour prior to level 4 restrictions based on a '*normal week*' i.e. in February this year.
- At a total population level, significance testing indicated in this wave 6 report is based on a statistically significant shift of results between waves 1-6, as well as statistically significant shifts from combined level 4 alert results vs combined level 3 alert results.
- At a sub-population level, significance testing indicates a statistically significant difference between the sub-population and the base or total population. The total population benchmark is based on the total sample base collected across all four waves.

# Report notes (ii)

## Key transport terms and demographic groupings

There are a number of transport terms used in this report. Below are key terms with definitions:

**Public transport (PT):** refers to bus, train and ferry and does not include taxi/uber services and private hirer vehicles (these will be treated separately in the analysis).

**Private vehicle (PVT):** refers to car, van, motorcycle or scooter, and does not include e-bikes.

**Active modes:** refers to walking (of at least 10 mins) and cycling, including e-bikes.

There are a number of demographic subgroup terms used in this report. Below are key groups with definitions:

**Any disability:** All respondents indicating that they have a great deal of difficulty or cannot do the following: seeing, even when wearing glasses; hearing, even with a hearing aid; walking or climbing steps; remembering or concentrating; washing or dressing; communicating in their usual language.

**COVID-19 vulnerable:** All respondents indicating that they personally have a medical condition that makes them acutely vulnerable to COVID-19, such as heart disease, hypertension, chronic respiratory disease or cancer.

**Essential worker:** All respondents indicating that they are classified as an Essential Worker at the current alert level.

**Travelling essential worker:** All respondents indicating that they are classified as an essential worker at the current alert level and that they are required to leave their home for their job.

# Sample structure and further definitions

	Definition	Waves 1 - 4		Wave 5	
		Sample	MoE*	Sample	MoE*
Total		n=5,060	1.38	n=1,267	2.75
Auckland	All in Auckland Region, including city and surrounding rural areas	n=1,324	2.69	n=331	5.39
Tauranga	All living in the city of Tauranga	n=400	4.9	n=100	9.8
Hamilton	All living in the city of Hamilton	n=400	4.9	n=100	9.8
Wellington	All in Wellington Region, including city and surrounding rural areas	n=684	3.75	n=223	6.56
Christchurch	All living in the city of Christchurch	n=400	4.9	n=100	9.8
Dunedin	All living in the city of Dunedin	n=398	4.91	n=100	9.8
Rest of NZ	All living in areas outside of those noted above	n=1,454	2.57	n=313	5.54
Any Disability **	See previous page	n=550	4.18	n=157	7.82
COVID-19 Vulnerable**	See previous page	n=1,230	2.79	n=297	5.69
Aged 70 + years**	All indicating that they are considered higher risk for COVID-19 as they are aged 70 or over	n=618	3.94	n=168	7.61

\*Margin of error is calculated at 95% confidence level based upon an estimated population of 4,978,388 as at Thursday 16 April 12:44pm.

\*\*Sub-groups are *not mutually exclusive* as individuals may fit into more than one category (for example, some may be aged over 70 and also have a chronic respiratory condition that makes them more vulnerable to COVID-19) any such respondents within the sample would be counted in *both* applicable groups.

# Deep dive analysis

## Emergent stories and trends

- It is expected that with the constantly evolving nature of the COVID-19 pandemic, the changing alert levels governing public behaviour and emergent narratives impacting civil society discourse, the environment in which this research takes place will also be ever evolving.
- Deep dive analysis delivered as part of this research will enable questions to be answered outside of the core remit, and to periodically check in on societal variables and trends that may not be of interest every single week, but will speak to contextual changes and important landmarks in New Zealand's response to the COVID-19 overtime.
- Content included in the deep dive is generated from steering group requests.
- The emerging narratives in this deck are in places more complex than would warrant inclusion in the core report, included also are other narratives that may take on greater prominence later on when more responses are accumulated or when alert levels are changed.

# Summary

## Waves 3-5 deep dives

The third and fourth waves of fieldwork took place on the weekends of Thursday 16 to Monday 20 April and Thursday 23 to Sunday 26 April respectively, both under alert level 4 conditions, but with public discussions underway about the step down into level 3. The fifth wave of fieldwork took place on the weekend of Thursday 30 April to Sunday 3 May; the first weekend under alert level 3 conditions since fieldwork began.

### **Impact of commuter traffic changes on journey modes (wave 3)**

By the third wave of fieldwork, it was possible to make meaningful comparisons within the usually working population about how commuter habits had changed.

- It is clear that by this point public transport was more tangibly impacted by the reduction in daily travel to work, with two thirds who normally travelled by bus, train or ferry either out of work or now working from home.
- The working from home aspect is the biggest driver of this, with no statistically significant difference between private vehicle or active mode commuters who are out of work and public transport commuters who are out of work.

### **Active mode travel (wave 4)**

In the last weekend under level 4 conditions, the proportion reporting active mode travel began to recover towards pre-alert levels, with reported running, walking and cycling for leisure also resurgent at this time.

- However, walking for transport and travel increased to a greater extent than walking or running for leisure and exercise.
- Comparatively, the proportion reporting essential journeys made by bike and the proportion reporting cycling for leisure and exercise proved to be roughly equal through most of level 4, until the two activities diverged in the final weekend.

### **Volume of mode usage (wave 5)**

For much of this research, modal changes have been viewed through the prism of the changing number of weekly users. However, due to the way that transport usage is collected, we are also able to project mode usage as the number of travel days that the average New Zealander is taking for each mode.

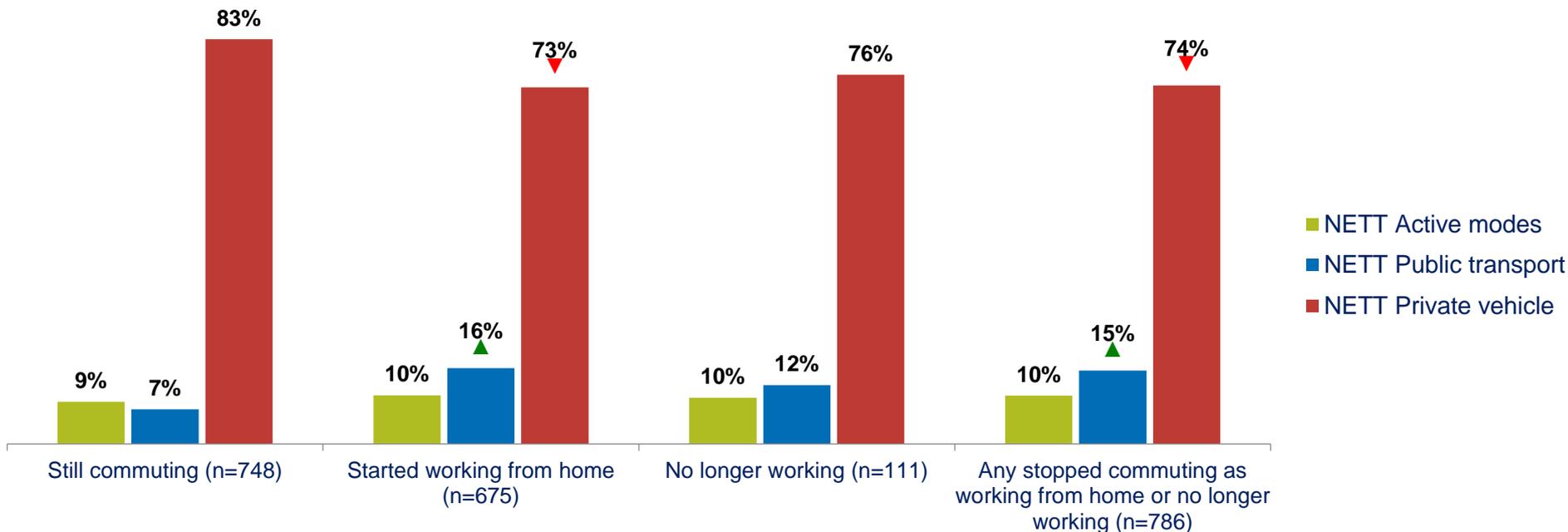
- In the case of driving, while the number of drivers declined, the volume of driving days per New Zealander dropped to a much greater extent, without any sign of recovery at this stage, despite the new level 3 conditions.
- For active modes, the number of travel days increased in the final weeks of level 4, in line with the increased proportion travelling in this way.
- For New Zealand's most used public transport mode, the bus, the number of people travelling each week remained stable, but there was some directional increase in the number of bus travel days on average across the population.



## Section 2 – Impact of commuter traffic changes on journey modes (wave 3)

# Public transport users are far more likely to be outside the commuter population at this time, chiefly driven by the higher proportion working from home

## Current commuter and working status



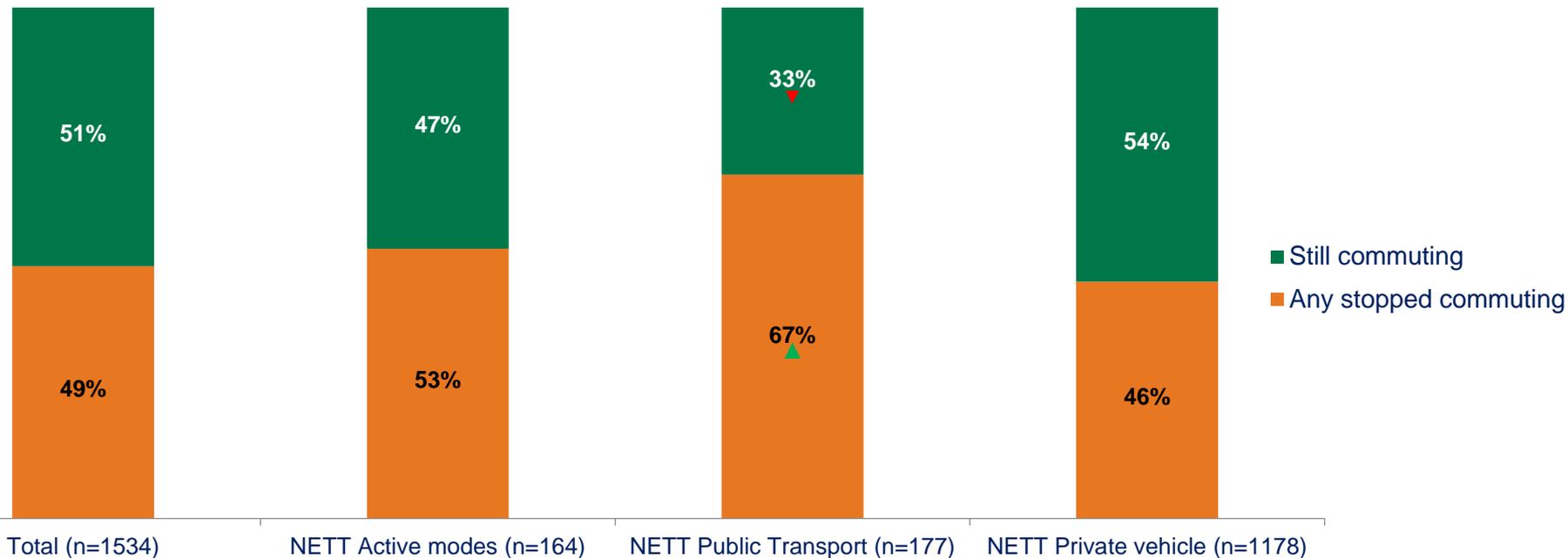
QMODE1\_1 Travelling to work: How would you normally make each of the following types of journeys listed below? For each journey, please select the method of transport that makes up the majority of the journey

Base: all adults 15+ in New Zealand who were travelling to work before lockdown



# Only a third of those who would normally use public transport remain in the commuter population, compared to more than half of drivers

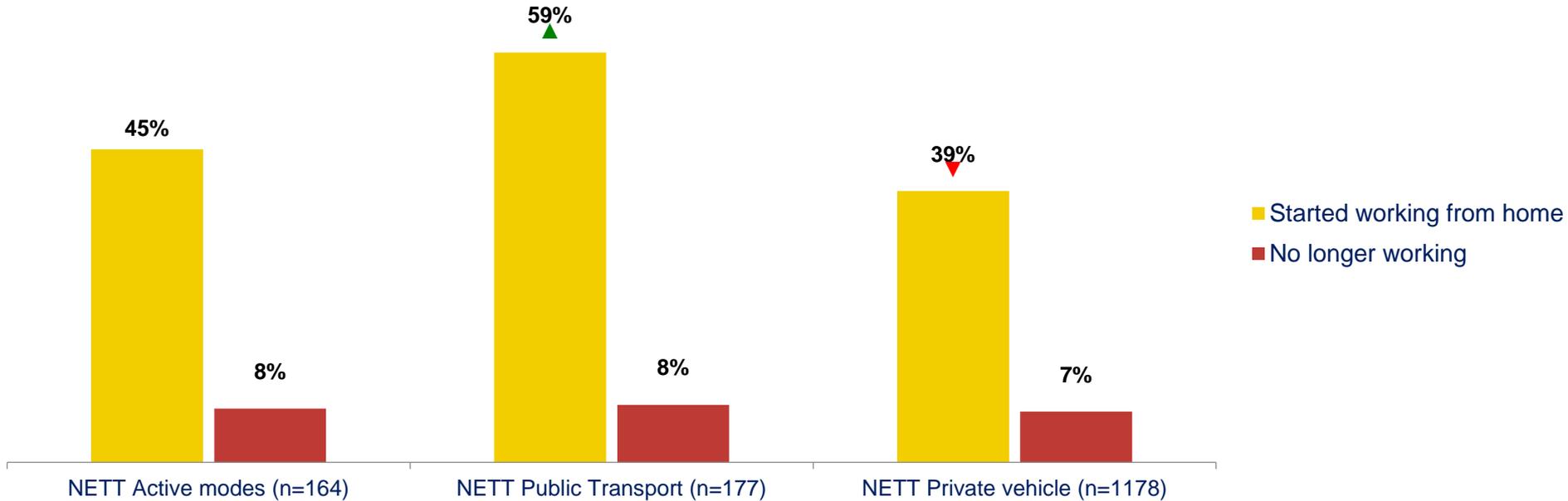
*Proportion in commuter population during lockdown*



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Base: all adults 15+ in New Zealand who were travelling to work before lockdown

The proportion of public transport commuters no longer working is no different from other modes; it is those working from home that are lost from commuter traffic

*Proportion of populations in each non-commuter group*



QMODE1\_1 Travelling to work: How would you normally make each of the following types of journeys listed below? For each journey, please select the method of transport that makes up the majority of the journey

Base: all adults 15+ in New Zealand who were travelling to work before lockdown

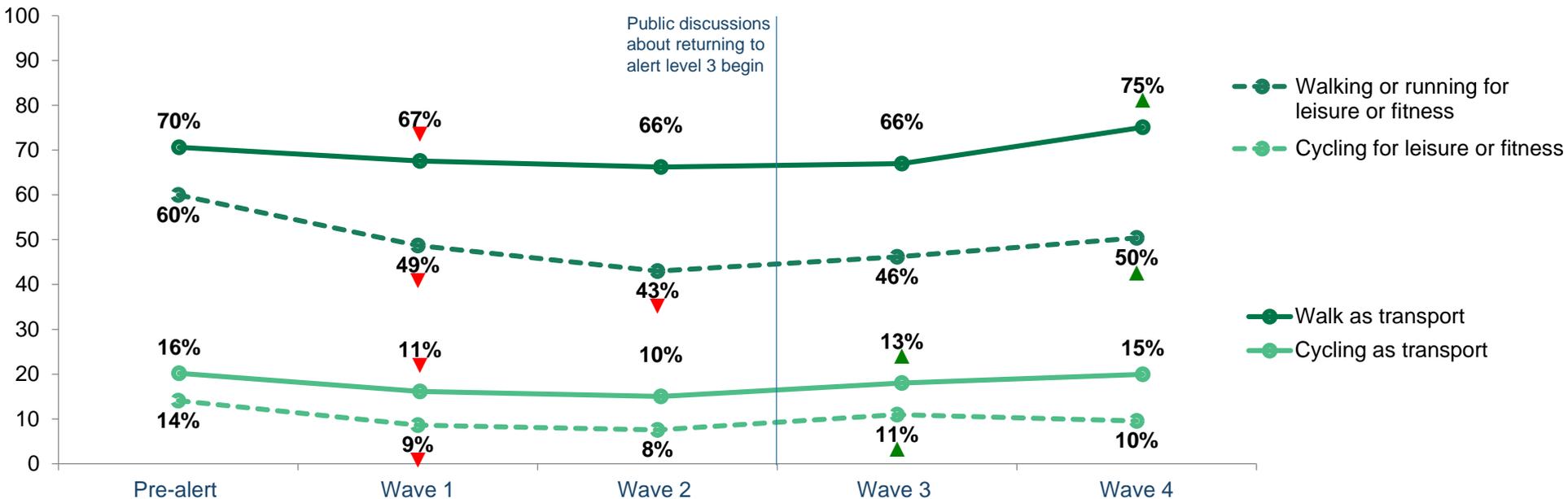




## Section 3 – Active modes (wave 4)

# The gap between walking to 'get around' and walking for leisure has grown, whereas leisure and practical bicycle use have stayed at similar incidence levels

## Active mode transport compared with leisure by wave

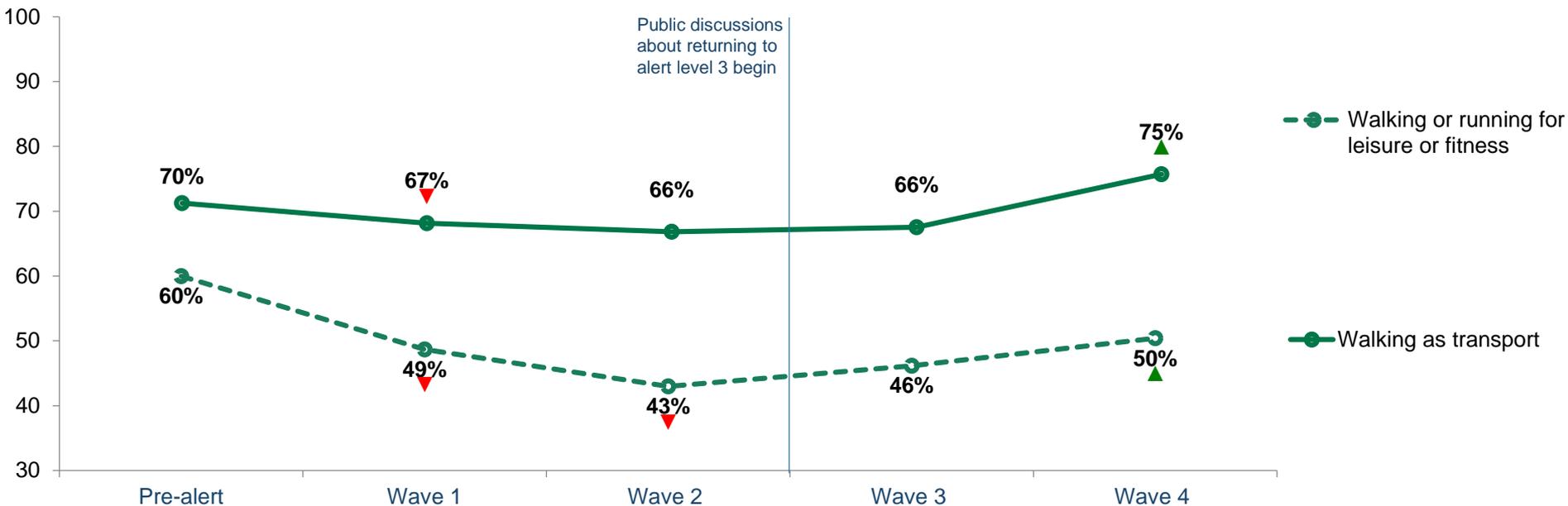


QFREQ1/QFREQ2 –And in the course of a normal week, **on how many days** would you normally travel via each of the methods listed below? And during the past seven days, **on how many days** have you travelled via each of the modes listed below? QJOURNEY1-2. Which, if any of the following types of journeys would you have made in a normal week (e.g. in February this year)? And which, if any of the following types of journeys did you make *during the last seven days*?

Base: all adults 15+ in New Zealand in Benchmark: (n=3,759); Wave 1 (n=1,264); Wave 2 (n=1,263); wave 3 (n=1,232); wave 4 (n=1,301)

# The use of walking as a transportation mode has grown more quickly during the recent weeks of lockdown, while walking for leisure dropped more steeply at the start

## Walking as transport compared with leisure by wave

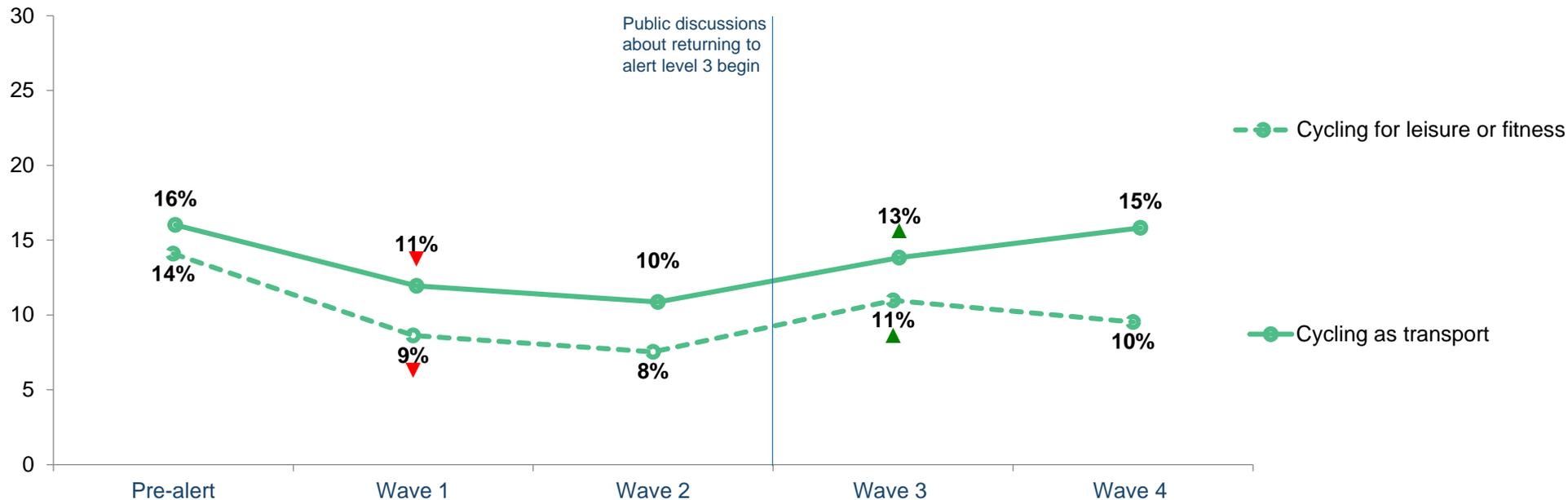


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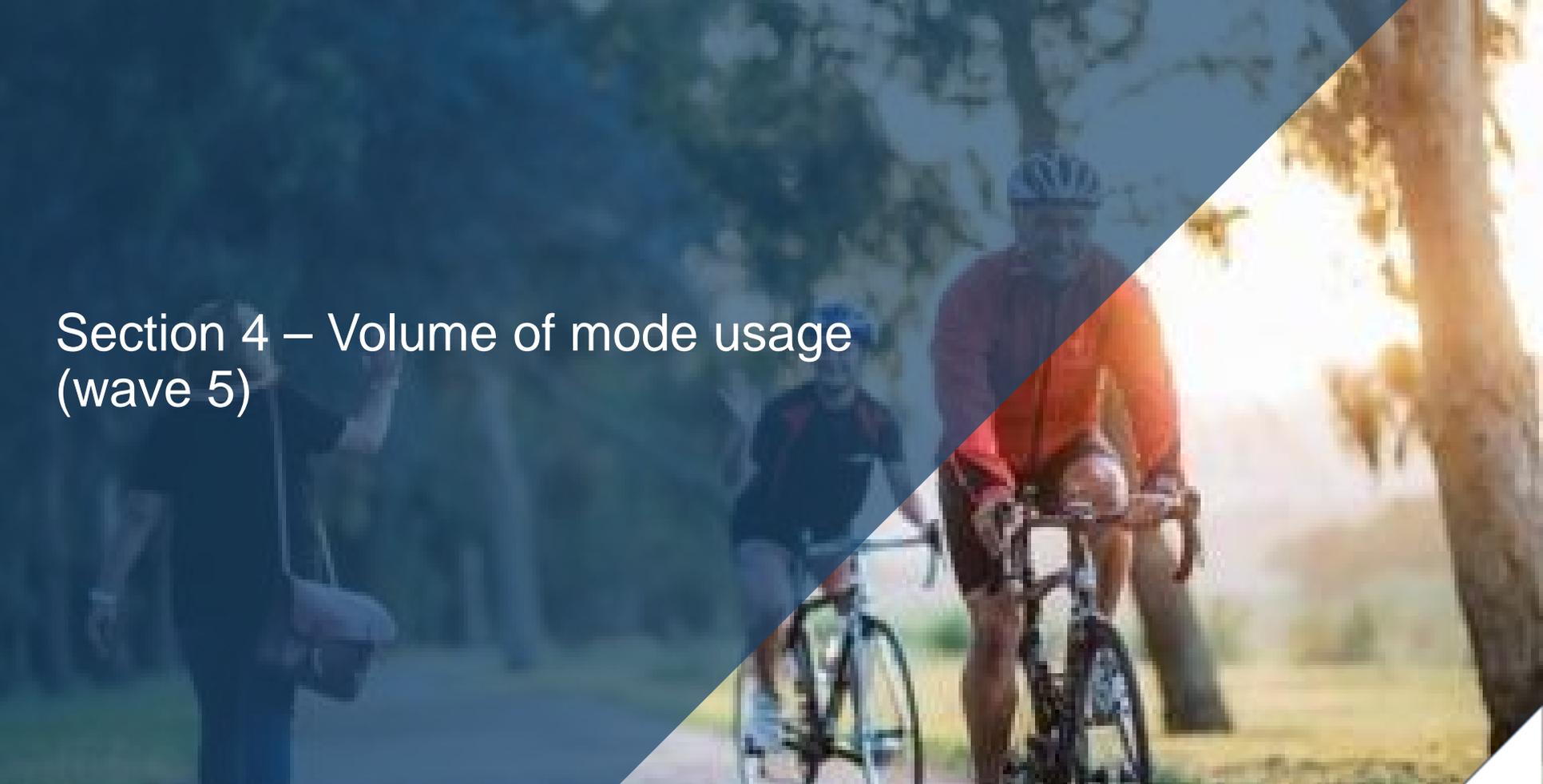
Until wave 4, there was a two point gap in the proportions cycling for transport and for leisure; while this has widened, more tracking will allow us to infer real change

### Cycling as transport compared with leisure by wave



QFREQ1/QFREQ2 –And in the course of a normal week, **on how many days** would you normally travel via each of the methods listed below? And during the past seven days, **on how many days** have you travelled via each of the modes listed below? QJOURNEY1-2. Which, if any of the following types of journeys would you have made in a normal week (e.g. in February this year)? And which, if any of the following types of journeys did you make *during the last seven days*?

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## Section 4 – Volume of mode usage (wave 5)

While we have primarily viewed mode usage according to volume of users, this is collected as an expression of *number of days* each mode is used on within a week

### Asking about volume of mode usage

ASK ALL WHO NORMALLY TRAVEL (QJOURNEY1 = 1-8),  
PROGRESSIVE GRID, NUMERIC FIELD PER ROW

#### QFREQ1

And in the course of a normal week, **on how many days** would you normally travel via each of the methods listed below?

If you are not sure please give your best estimate

Please enter "0" if you don't normally do this

#### ROWS

1. Walk of more than 10 minutes (includes wheelchair, mobility scooter)
2. Bicycle including E bike
3. Bus
4. Train
5. Ferry
6. Taxi/ Uber
7. Car, van etc,
8. Motorcycle, motor scooter etc.

#### COLUMNS

1. NUMERIC FIELD, RANGE 0-7

ASK ALL WHO NORMALLY TRAVEL (QJOURNEY1 = 1-8),  
PROGRESSIVE GRID, NUMERIC FIELD PER ROW

#### QFREQ2

And during the past seven days, **on how many days** have you travelled via each of the modes listed below?

If you are not sure please give your best estimate

Please enter "0" if you don't normally do this

#### ROWS (AS IN QFREQ1)

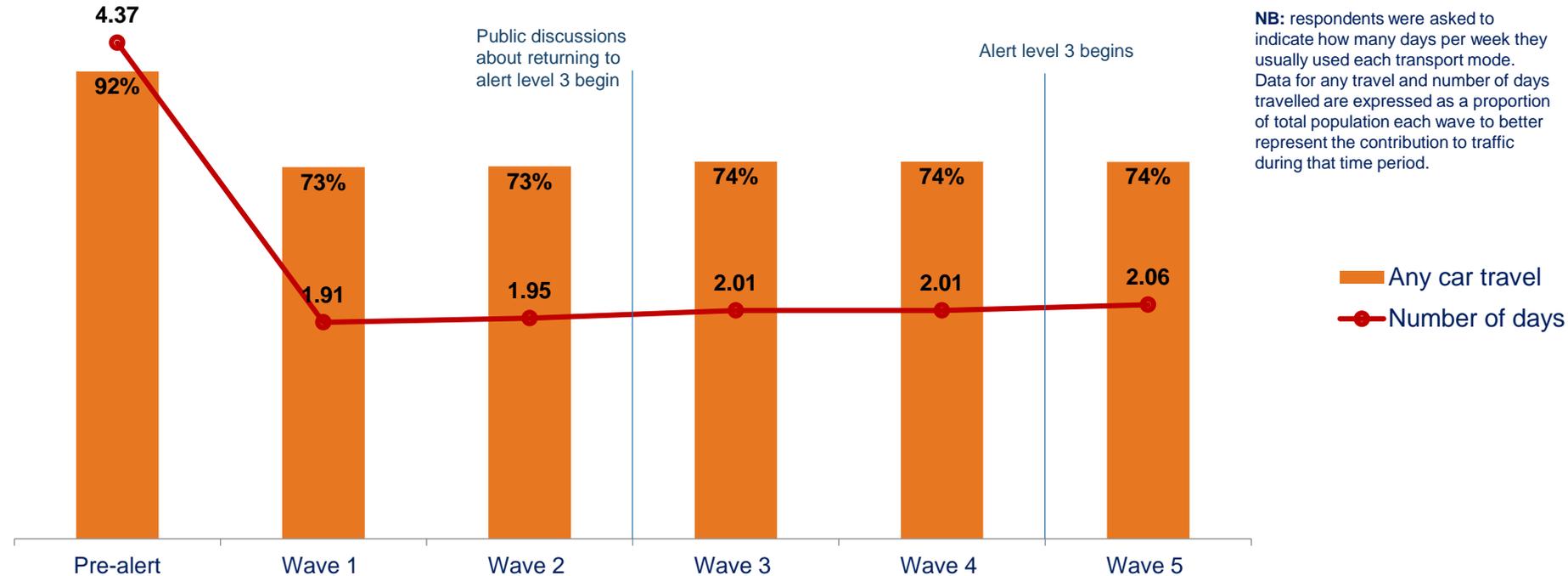
#### COLUMNS

1. NUMERIC FIELD, RANGE 0-7

This means that as well as expressing the number of drivers, walkers and public transport users, we can derive the average number of days walked across the sample and the general population

# The average New Zealander halved their driving, going from four days of driving per week to just two; the proportion driving *at all* did not decline to the same extent

## Percent driving and number of days car used per week

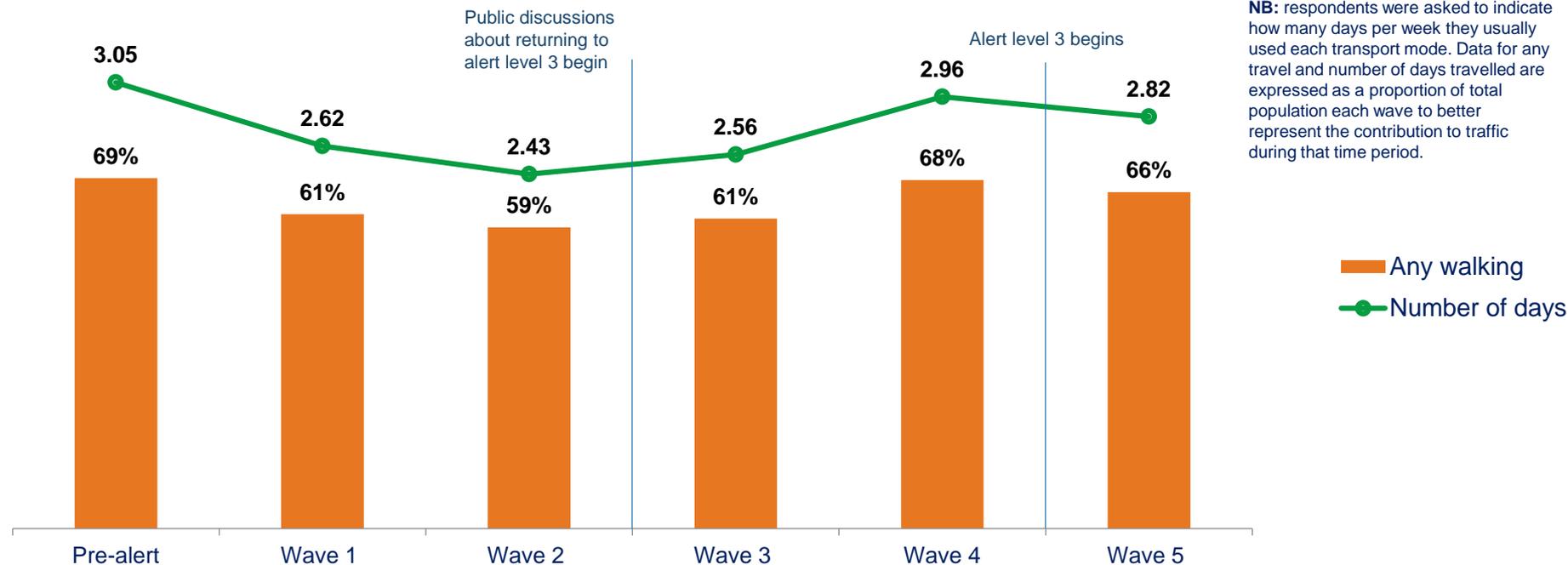


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# Walking has a robust level of participation across the population, with both the proportion walking and the number of days walked remaining consistent

## Percent walking and number of days walked per week



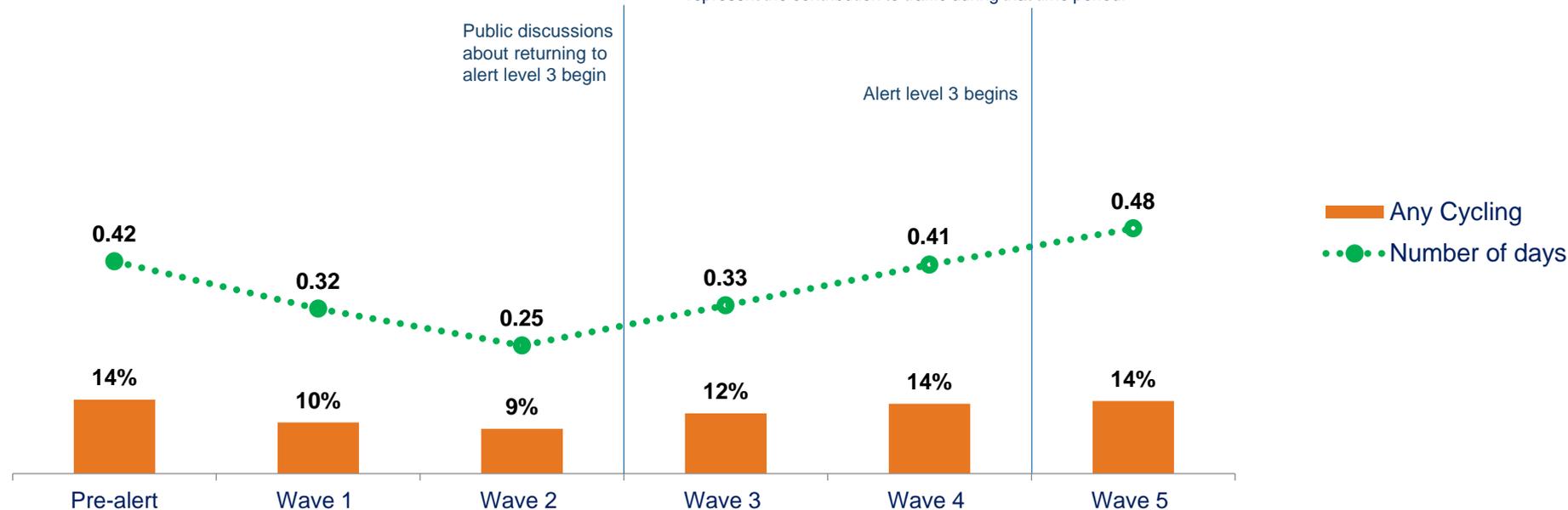
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# While the proportion cycling has not increased by a great amount, the amount of cycling undertaken has increased, indicating higher activity among cyclists

## Percent cycling and number of days cycled per week

**NB:** respondents were asked to indicate how many days per week they usually used each transport mode. Data for any travel and number of days travelled are expressed as a proportion of total population each wave to better represent the contribution to traffic during that time period.



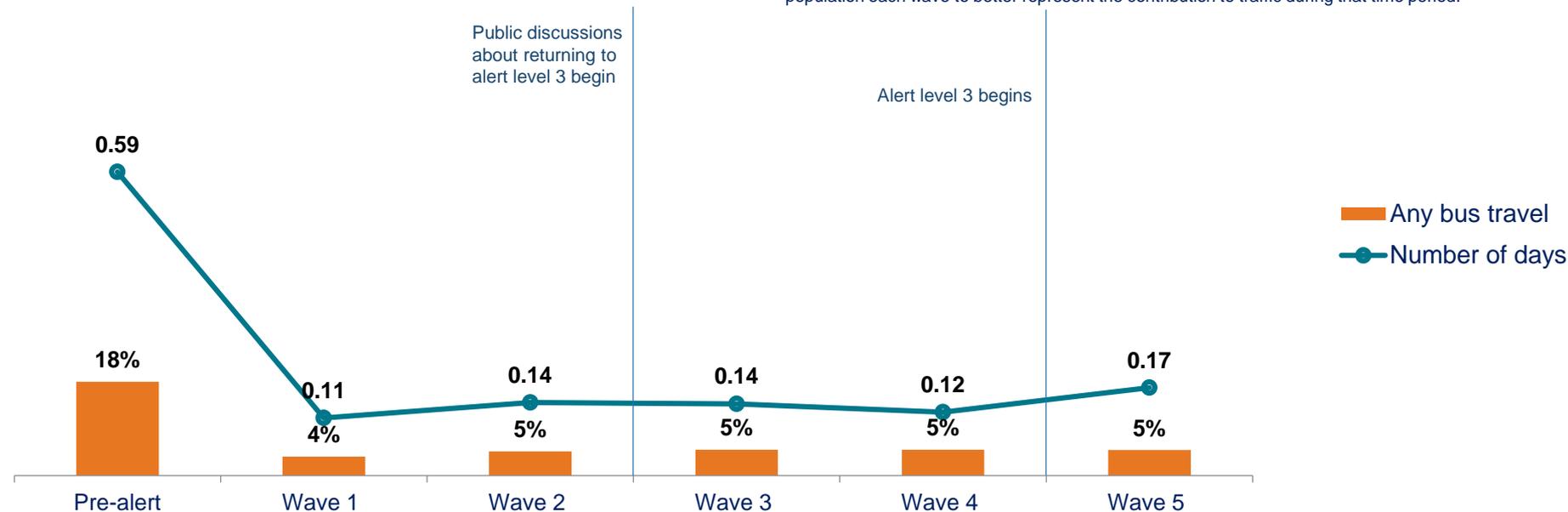
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# The drop in bus users is reflected in the volume across the population, with the average person using a bus every six days, compared to every other day previously

## Percent taking bus and number of days used per week

**NB:** respondents were asked to indicate how many days per week they usually used each transport mode. Data for any travel and number of days travelled are expressed as a proportion of total population each wave to better represent the contribution to traffic during that time period.



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