



# Waka Kotahi COVID-19 transport impact

Fieldwork wave 11 deep dive analysis – commuter traffic

16 June 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

- Section 1 – About this research
- Section 2 – How much commuter travel has been lost to job losses/hour losses?
- Section 3 – What sort of commuter travel has been lost to people working from home?
- Section 4 – What is the combined NETT impact of days lost to lost work hours, working from home and partially working from home?



## 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:

- 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: Harmony 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 and domestic travel 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, domestic tourism intentions, intention to return children to school, e tc.

# Report notes (i)

## Key information to note for this report

- This report is based on eleven waves of fieldwork, see table ►
- Total sample for this report is presented in a number of ways, including as a combined sum of the first four fieldwork waves, combined sum of waves 5 and 6, combined sum of waves 7, 8, 9, 10 and 11, as well as individual waves where appropriate.
- The focus of this report is tracking 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 11 report is based on a statistically significant shift of results between waves 1 to 11, as well as statistically significant shifts from combined level 4 alert results vs combined level 3 alert results vs. combined level 2 alerts.
- 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 the first four waves of data.

Wave	Dates of fieldwork	Alert level
1	Friday 3 April to Wednesday 8 April	Alert level 4
2	Thursday 9 April to Tuesday 14 April	
3	Thursday 16 April to Monday 20 April	
4	Thursday 23 April to Sunday 26 April	
5	Thursday 30 April to Sunday 3 May	Alert level 3
6	Thursday 7 May to Sunday 10 May	
7	Thursday 14 May to Sunday 17 May	Alert level 2
8	Thursday 21 May to Sunday 24 May	
9	Thursday 28 May to Monday 1 June	
10	Thursday 4 June to Sunday 7 June	
11	Thursday 11 June to Sunday 14 June	Alert level 1



# 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.

# 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.

# Sample structure and further definitions

	Definition	Waves 1 - 4		Waves 5 - 6		Waves 7 - 10		Wave 11	
		Sample	MoE*	Sample	MoE*	Sample	MoE*	Sample	MoE*
Total		n=5,060	1.38	n=2,532	1.95	n=5,043	1.38	n=1,268	2.76
Auckland	All in Auckland Region, including city and surrounding rural areas	n=1,324	2.69	n=662	3.81	n=1,324	2.69	n=331	5.39
Tauranga	All living in the city of Tauranga	n=400	4.9	n=200	6.93	n=400	4.9	n=100	9.8
Hamilton	All living in the city of Hamilton	n=400	4.9	n=200	6.93	n=400	4.9	n=100	9.8
Wellington	All in Wellington Region, including city and surrounding rural areas	n=684	3.75	n=418	4.79	n=799	3.47	n=213	7.13
Christchurch	All living in the city of Christchurch	n=400	4.9	n=200	6.93	n=400	4.9	n=100	9.8
Dunedin	All living in the city of Dunedin	n=398	4.91	n=200	6.93	n=392	4.95	n=106	9.85
Rest of NZ	All living in areas outside of those noted above	n=1,454	2.57	n=652	3.84	n=1,328	2.69	n=318	5.3
<b>Disability, Vulnerability and COVID-19**</b>									
Any Disability	See previous page	n=550	4.18	n=297	5.69	n=611	3.96	n=140	7.92
COVID-19 Vulnerable	See previous page	n=1,230	2.79	n=597	4.01	n=1,139	2.9	n=286	5.63
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=315	5.52	n=627	3.91	n=140	8.11

\*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.

# Summary

## Wave 11 deep dives

The eleventh wave of fieldwork took place between Thursday 11 and Sunday 14 June, the first weekend under level 1 conditions. This deep dive addresses the total impact of lost work, reduced hours, and working from home on commuter traffic during lockdown.

It should be noted that data on usual and current volume of commuting days has been collected in waves 9, 10 and 11 only. These waves were conducted under level 2 and level 1 conditions and as such, we would expect that the impact on this metric may have been higher in earlier weeks. The data on volume of travel refers to the number of *days* that respondents travelled for work, and not the total number of trips across the week.

### **What sort of commuter travel has been lost to job losses/hour losses?**

At the height of lockdown, much commuter traffic was lost to people losing work completely, being stood down from work or having hours severely reduced. However, much of this group comprised people who normally travelled fewer days for work on average.

The impact of lost work and lost hours was much more keenly felt in the population of private vehicle commuters than active mode or public transport users.

### **What sort of commuter travel has been lost to people working from home?**

Although it is now returning to normal, as many as half of workers were working from home at some point in lockdown.

As with those who lost hours, the people working from home tended to have fewer commuting days on average than the general working population.

Unlike those who lost work, the working from home population skewed much more towards public transport users than any other commuting group.

### **What is the combined NETT impact of days lost to lost work hours, working from home and partially working from home?**

The NETT impact of these dynamics combined was the loss of more than a day of commuting for the average worker.

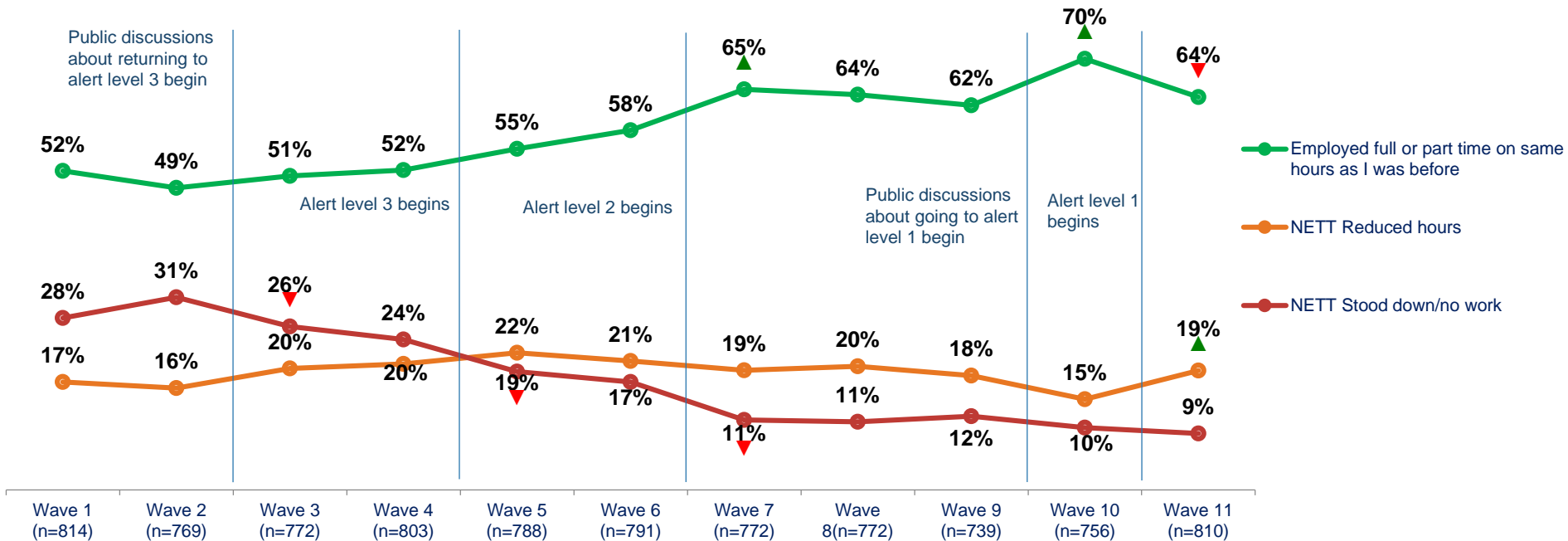
The overall impact affected commuters of all modes, but it is clear that this impacted those who normally commute by public transport, in particular by train, more than any other mode of commuter. Public transport commuting was reduced by nearly two days on average.



## Section 2 – What sort of commuter travel has been lost to job losses/hour losses?

# For level 3 and level 4, close to half of the workforce were working less due to reduced hours and job losses, materially decreasing the commuting population

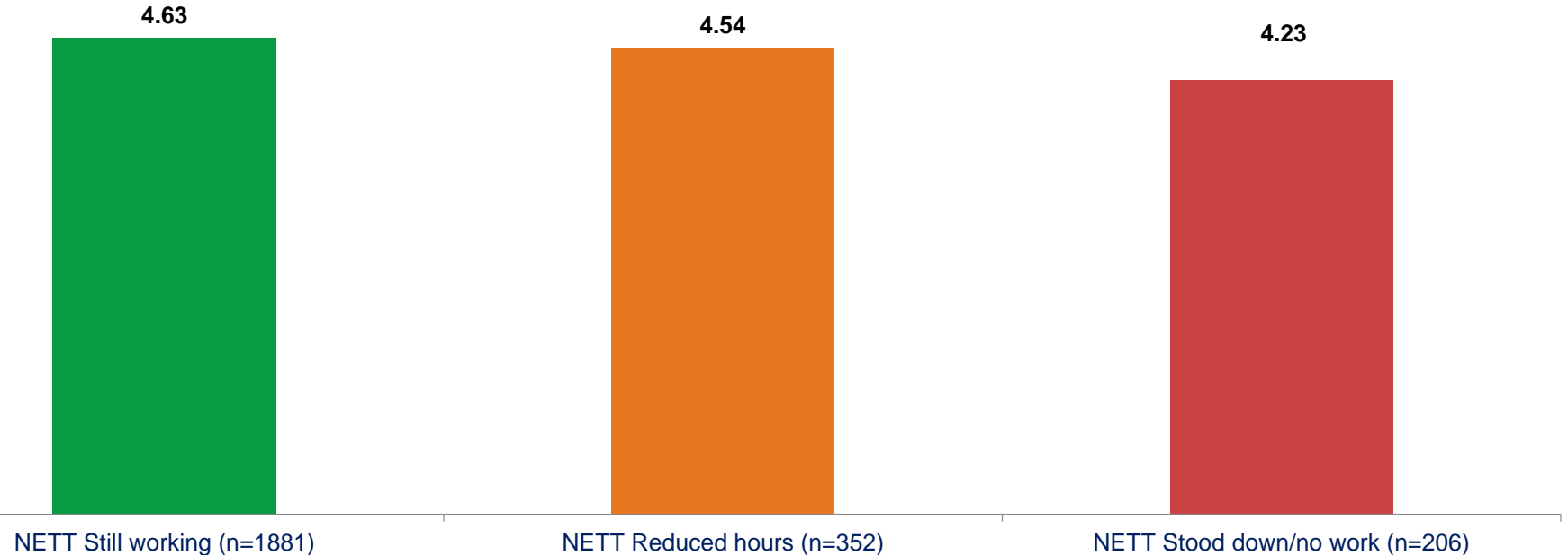
## Post lockdown work status by wave



QWORK2: And where do you *currently* work?  
 Base: all adults 15+ in New Zealand usually working

In general, those who were stood down or had hours reduced already had below average number of commuter days

Usual (pre-lockdown) number of commuter days by current working status



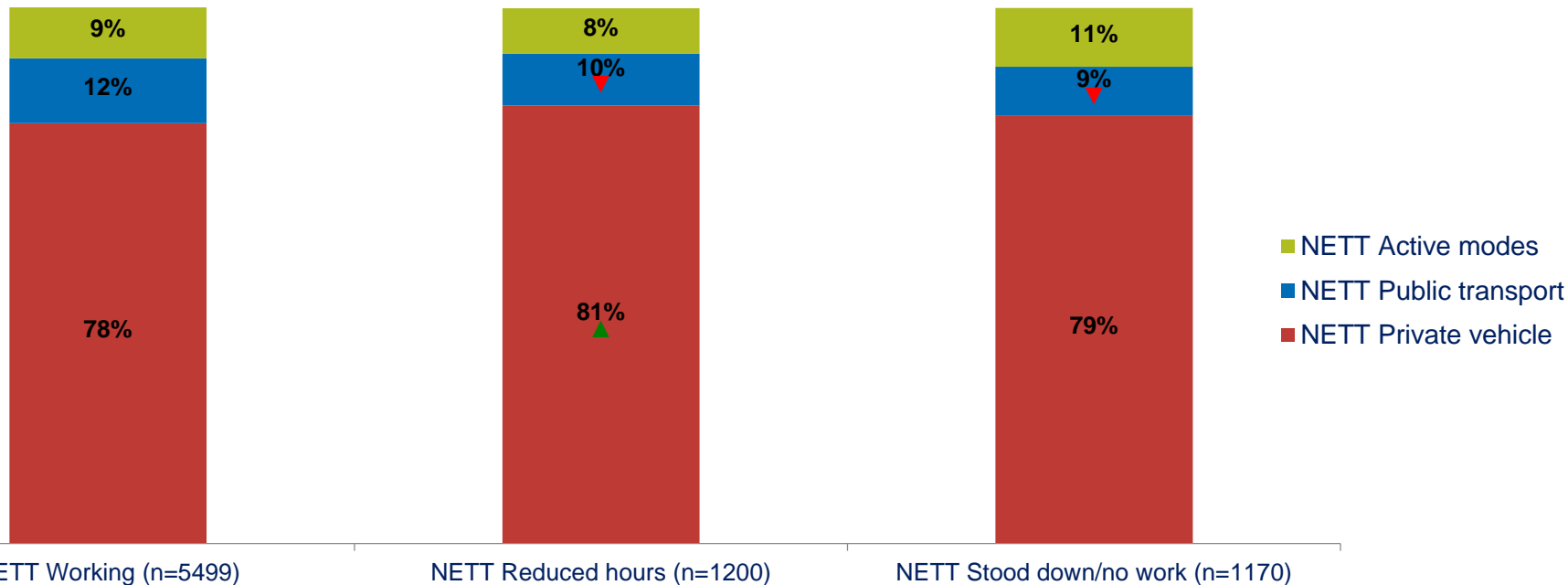
QWORK1B In a typical week prior to any public health alert or lockdown, on how many days per week did you tend to travel to a place of work (e.g. office, store, client site)?

Base: all adults 15+ in New Zealand working away from home in waves 9, 10 and 11



# The reduction in working hours had slightly more impact on driving commuters than on public transport or active mode commuting

## Normal commuting travel by current working status



QMODE1\_1 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: Travelling to work

Base: all adults 15+ normally travelling for work



Indicates a statistically significant increase from total working population



Indicates a statistically significant decrease from total working population

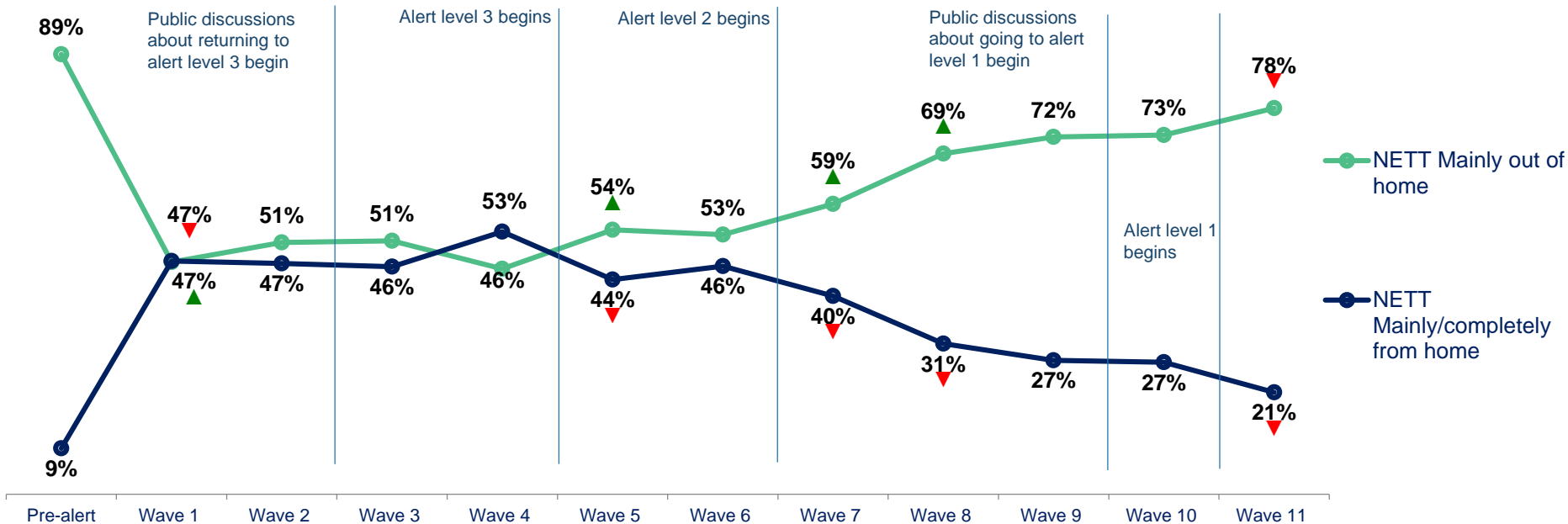




## Section 3 – What sort of commuter travel has been lost to people working from home?

# Commuting was also impacted by people working from home, particularly under level 4 conditions

## Proportion working in and out of home by survey wave



QWORK1A/QWORK2A: And prior to any public health alert or lockdown, where did you mainly work?/ And where do you currently work?

Base: all adults 15+ in New Zealand usually working in waves 9, 10 and 11



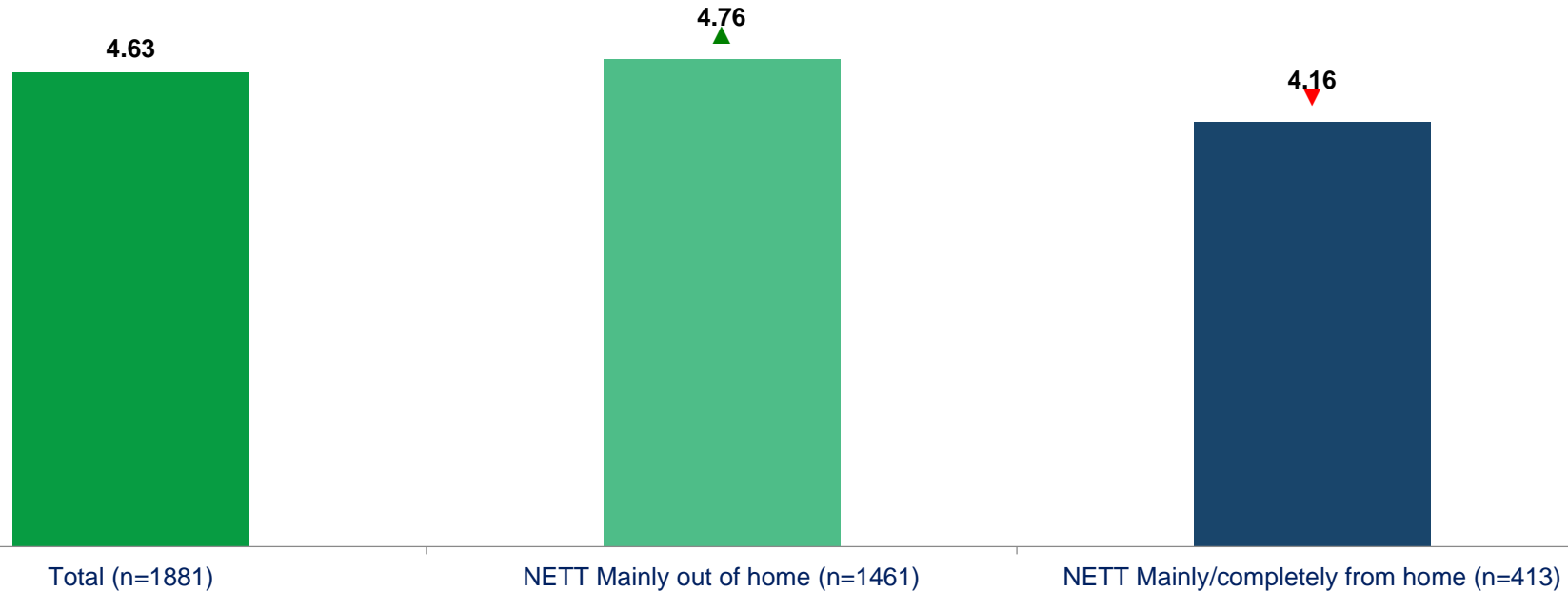
Indicates a statistically significant increase from previous time period



Indicates a statistically significant decrease from previous time period

# Those who worked from home during lockdown tended to have lower than average commuter days before lockdown, mitigating the impact on traffic

*Usual (pre-lockdown) number of commuter days by current work location*



QWORK1B In a typical week prior to any public health alert or lockdown, on how many days per week did you tend to travel to a place of work (e.g. office, store, client site)?

Base: all working adults 15+ in New Zealand in waves 9, 10 and 11



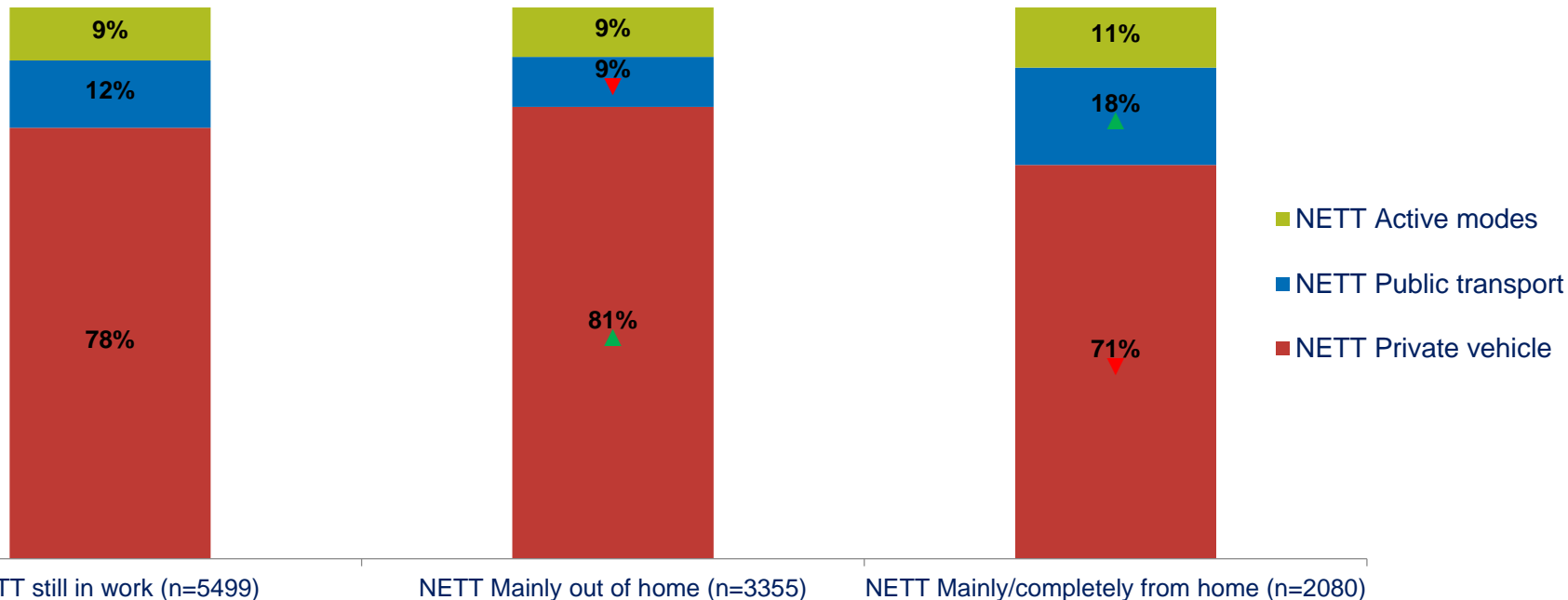
Indicates a statistically significant increase from total working population



Indicates a statistically significant decrease from total working population

# Working from home had a much larger impact on public transport usage than loss of employment or working hours


## Normal commuting travel by current working location



QMODE1\_1 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: Travelling to work

Base: all adults 15+ normally travelling for work

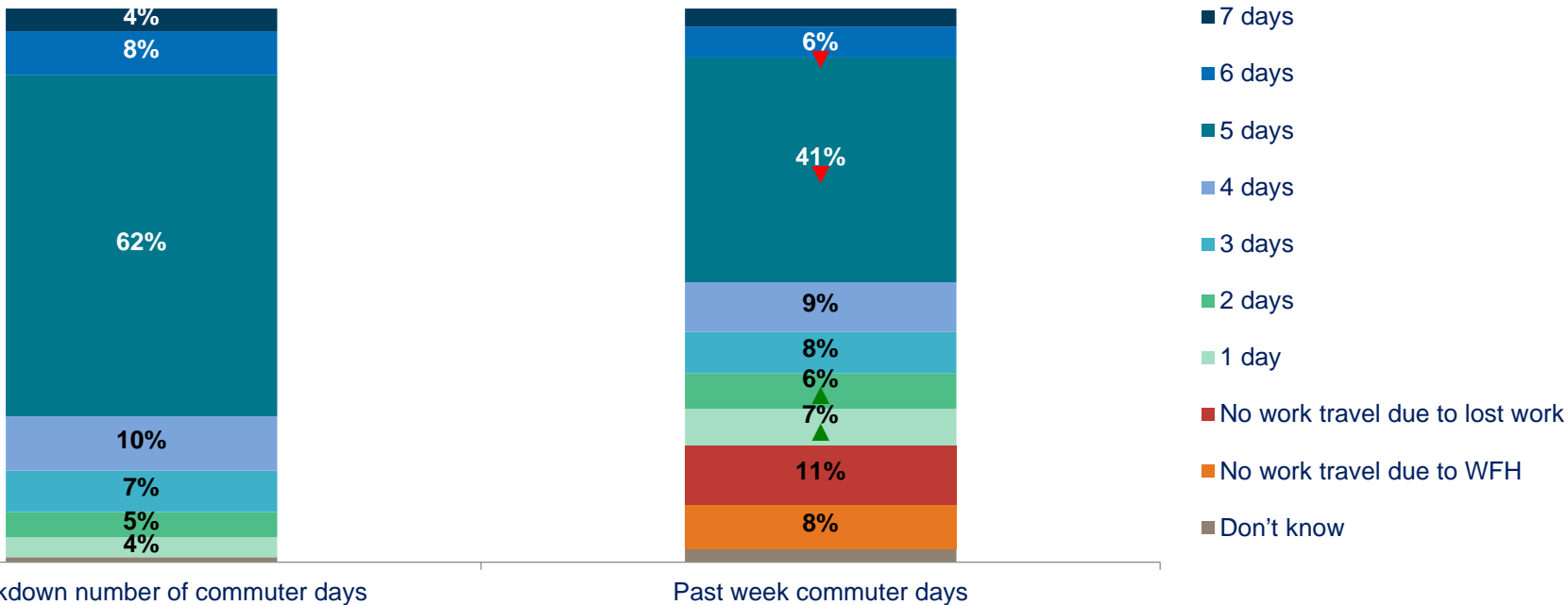




Section 4 – What is the combined NETT impact of days lost to reduced work hours, working from home and partially working from home?

# By re-basing estimates of travel days to incorporate all lost commuters, we get a clearer picture of the volume of commuting days lost

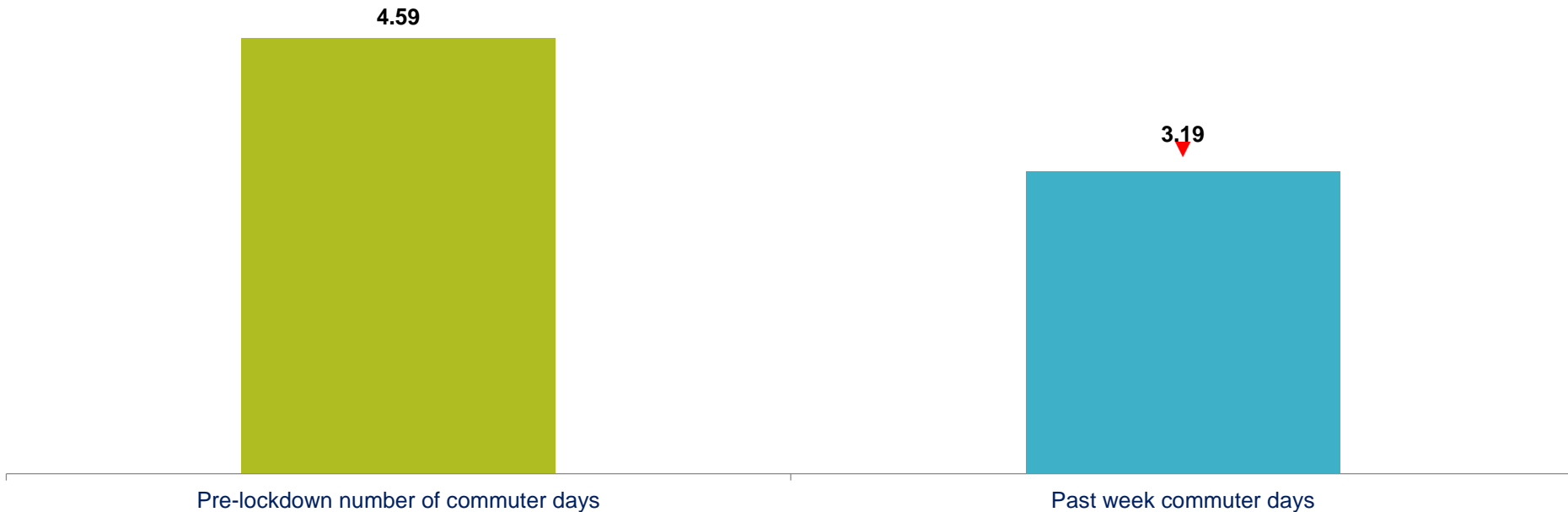
## Distribution of commuting days pre and post lockdown



QWORK1B/QWORK2B: In a typical week prior to any public health alert or lockdown, on how many days per week did you tend to travel to a place of work (e.g. office, store, client site)? / Thinking about the past week, on how many days out of the past seven did you travel to a place of work (e.g. office, store, client site)?  
 Base: all adults 15+ in New Zealand normally working away from home in waves 9, 10 & 11 (n=2,096)

# As a result, the average number of commuter days within the normally commuting population drops to just over three days

*Average number of commuter days within pre-lockdown and post-lockdown*



QWORK1B/QWORK2B: In a typical week prior to any public health alert or lockdown, on how many days per week did you tend to travel to a place of work (e.g. office, store, client site)? / Thinking about the past week, on how many days out of the past seven did you travel to a place of work (e.g. office, store, client site)?

Base: all adults 15+ in New Zealand in waves 9, 10, 11 who normally work (n=2,096)



Indicates a statistically significant increase from previous time period

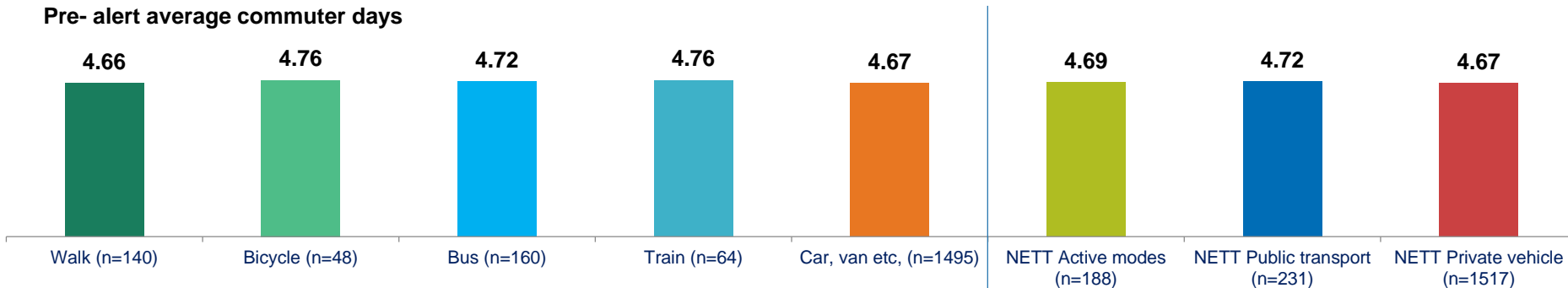


Indicates a statistically significant decrease from previous time period

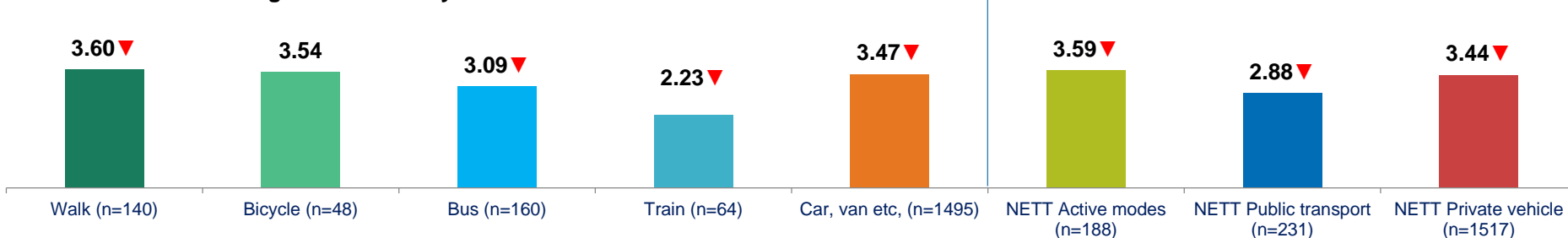
# All transport modes are impacted by a loss of commuting days, but the total impact is largest on public transport, particularly trains

## Average number of commuter days by normal commute mode

### Pre-alert average commuter days



### Post-lockdown average commuter days



QWORK1B/QWORK2B/QWORK2: In a typical week prior to any public health alert or lockdown, on how many days per week did you tend to travel to a place of work (e.g. office, store, client site)? / Thinking about the past week, on how many days out of the past seven did you travel to a place of work (e.g. office, store, client site)? / Which of the following currently applies to you?

Base: all adults 15+ in New Zealand in waves 9, 10, 11 who normally work, \*mode with base of <30 not shown





