



**Countdown timers:  
time to counter?**

*Megan Gregory*  
SNUG workshop,  
August 2023



# First, a confession...

- I used to think a countdown timer supersedes a flashing red man



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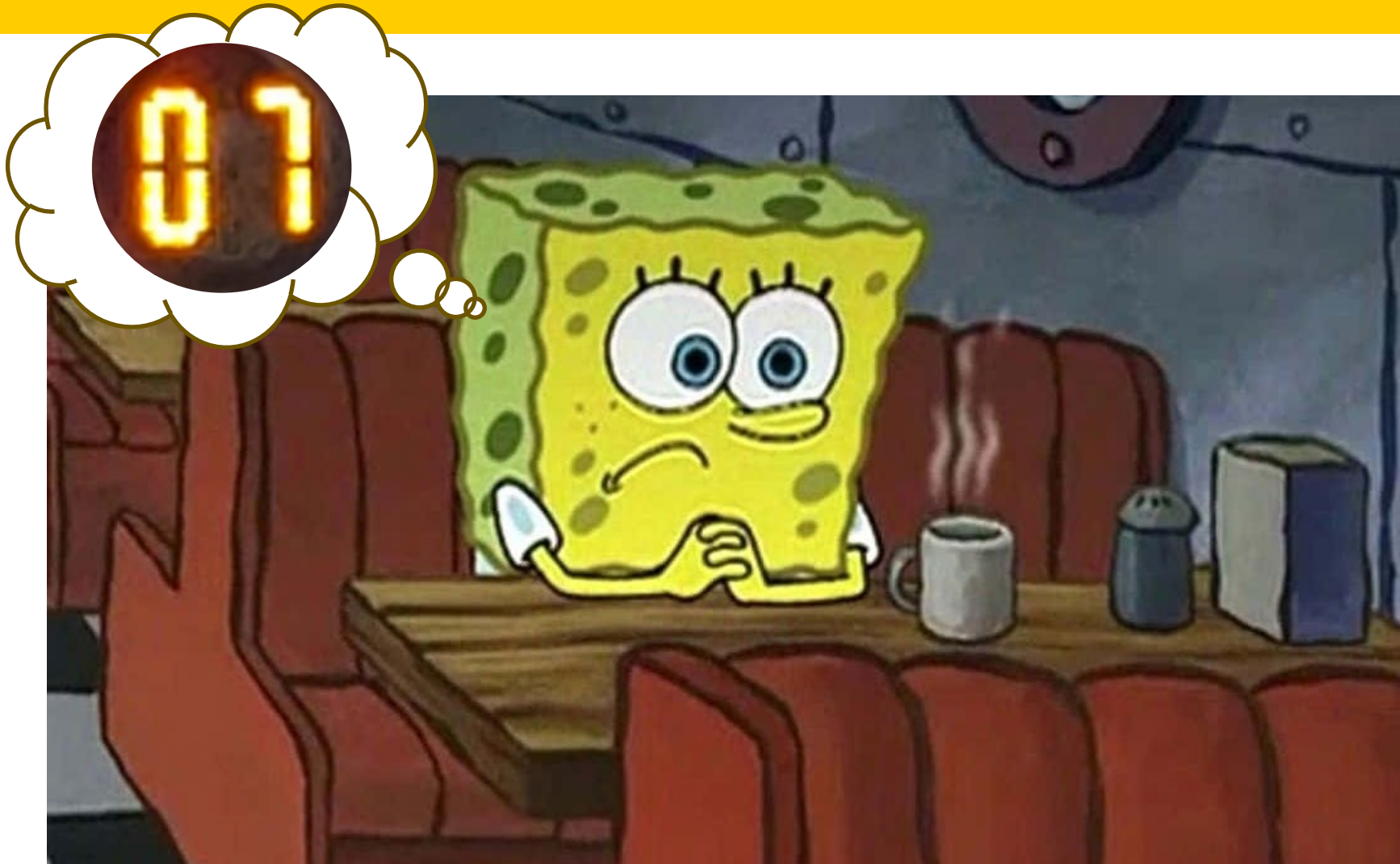
- I used to think a countdown timer supersedes a flashing red man
- But I was wrong



## **Road User Rule 6.6(3A):**

A countdown pedestrian signal, comprising a white or yellow display (conforming to the description in Schedule 3) showing the number of seconds remaining in the pedestrian clearance period [...]

# Was I alone?



# Was I alone?

- Research Report 428 (2010) suggests I was among a small minority
  - “Almost all pedestrians (95%) understood their function”

Table 6.2 On- site questionnaire responses

Question	Number of respondents	Response
1	79	70% of the respondents noticed the countdown timer
2	62	Of those who noticed the countdown timer, 39% did not change behaviour, 31% walked more quickly, 3% more slowly, and 19% stopped and waited, 8% crossed when they should have waited
3	79	<u>86%</u> of respondents thought the numbers indicated the time left to complete crossing
4	78	90% of respondents thought the countdown timers added to pedestrian safety



# Was I alone?

- Research report 428 would suggest I was among a small minority
  - “Almost all pedestrians (95%) understood their function” – or is it 86%?
- But, how was the survey worded?

“What do you think the numbers on the timer mean?”

Options  
given in  
RR 428  
survey

1. Time left to ***complete*** crossing
2. Time left to ***start*** crossing
3. Time until ***start of next crossing***
4. Don't know / care



# So, I made my own survey

- Separated participants into three groups
- Each group had two scenarios, for each scenario:
  - Asked what they are ALLOWED to do (understanding)
  - Asked what they WOULD do (response)

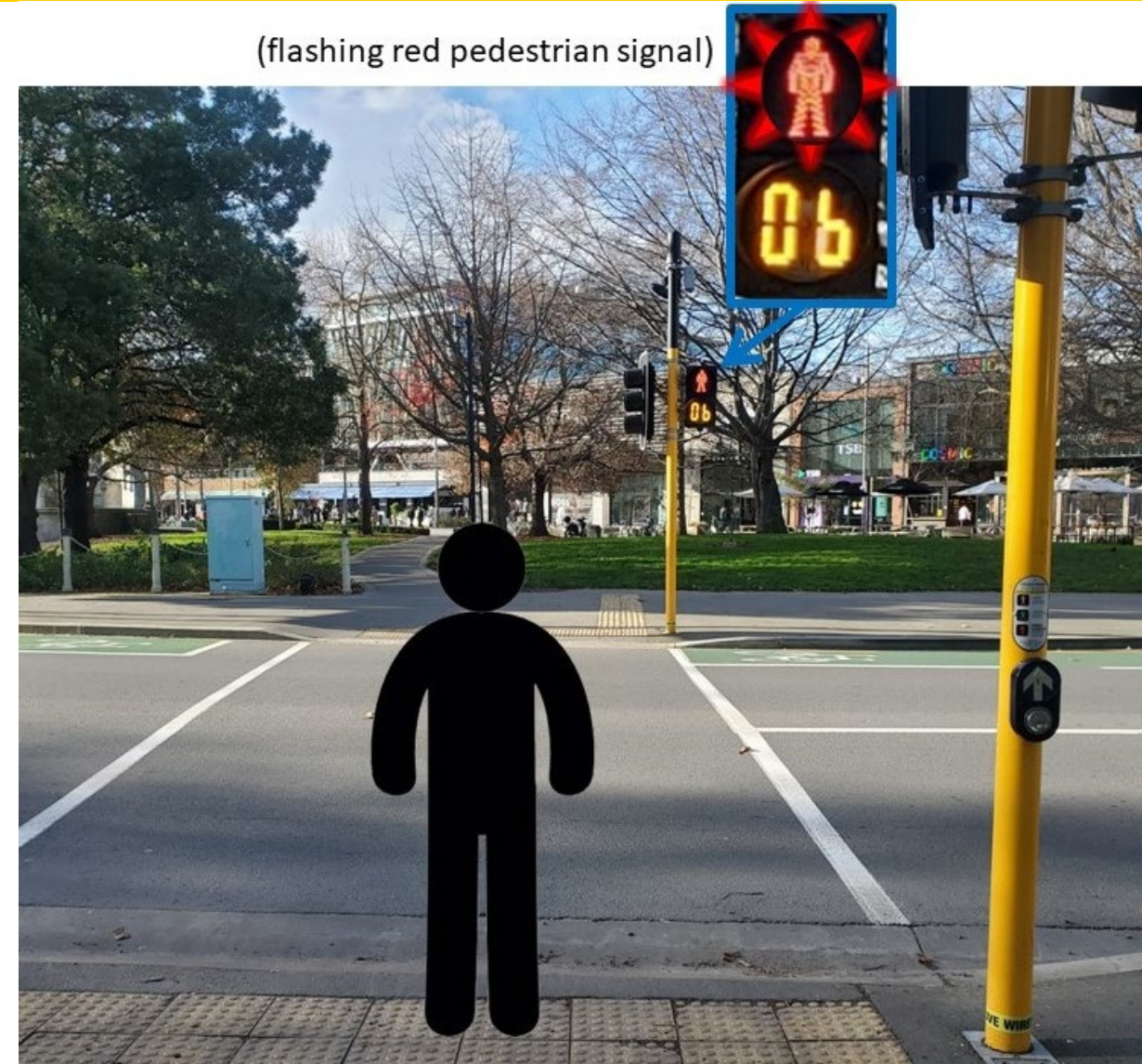


# Example scenario: Group 1, question 1

Imagine you are the person in the picture. You are standing at the kerb and want to cross to the other side. The crossing signals show a flashing red figure and the number “06”. You are confident you can cross in less than 6 seconds.

**What are you ALLOWED to do?**

- a) Wait until the signals show a green man
- b) Walk across safely in 6 seconds or less
- c) Walk across, but only if other people are already crossing
- d) I don't know





# Example scenario: Group 1, question 2

Continue with the previous scenario.  
You are standing at the kerb and want to cross to the other side.  
The crossing signals show a flashing red figure and the number “06”.  
You are confident you can cross in less than 6 seconds.


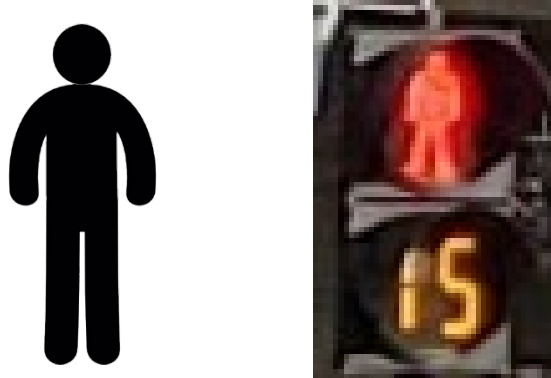
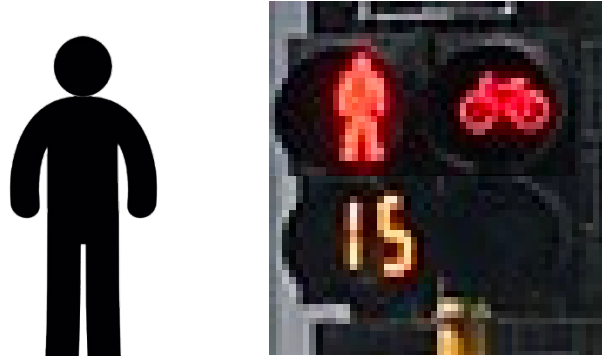
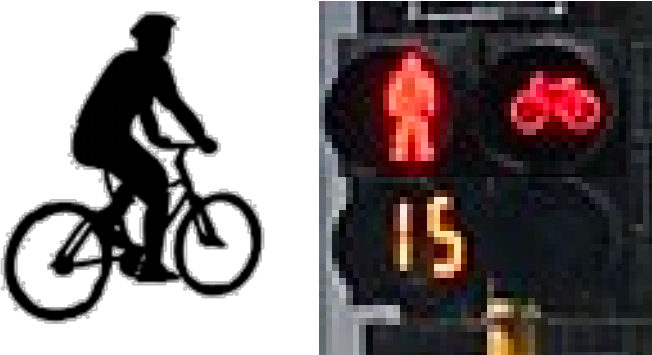


## What **WOULD** you do?

- a) Wait until the signals show a green man
- b) Walk across safely in 6 seconds or less
- c) Walk across, but only if other people are already crossing
- d) Run across
- e) Other (please specify)

(flashing red pedestrian signal)



# Scenarios covered

	Group 1 (Jan-Apr)	Group 2 (May-Aug)	Group 3 (Sep-Dec)
Scenario 1			
Scenario 2			

# Survey dissemination

- Advertised to normal people (not just traffic geeks)
- 154 complete responses

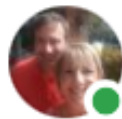


Nick Reid

17 July · 👤



Kia ora, my wonderful colleague Megan is doing some research and would appreciate some help to understand how people interpret certain traffic signals in Aotearoa. Please have a go at her survey - <https://www.surveymonkey.com/r/26MCPYJ> - it should only take a few minutes



~~Megan W.~~

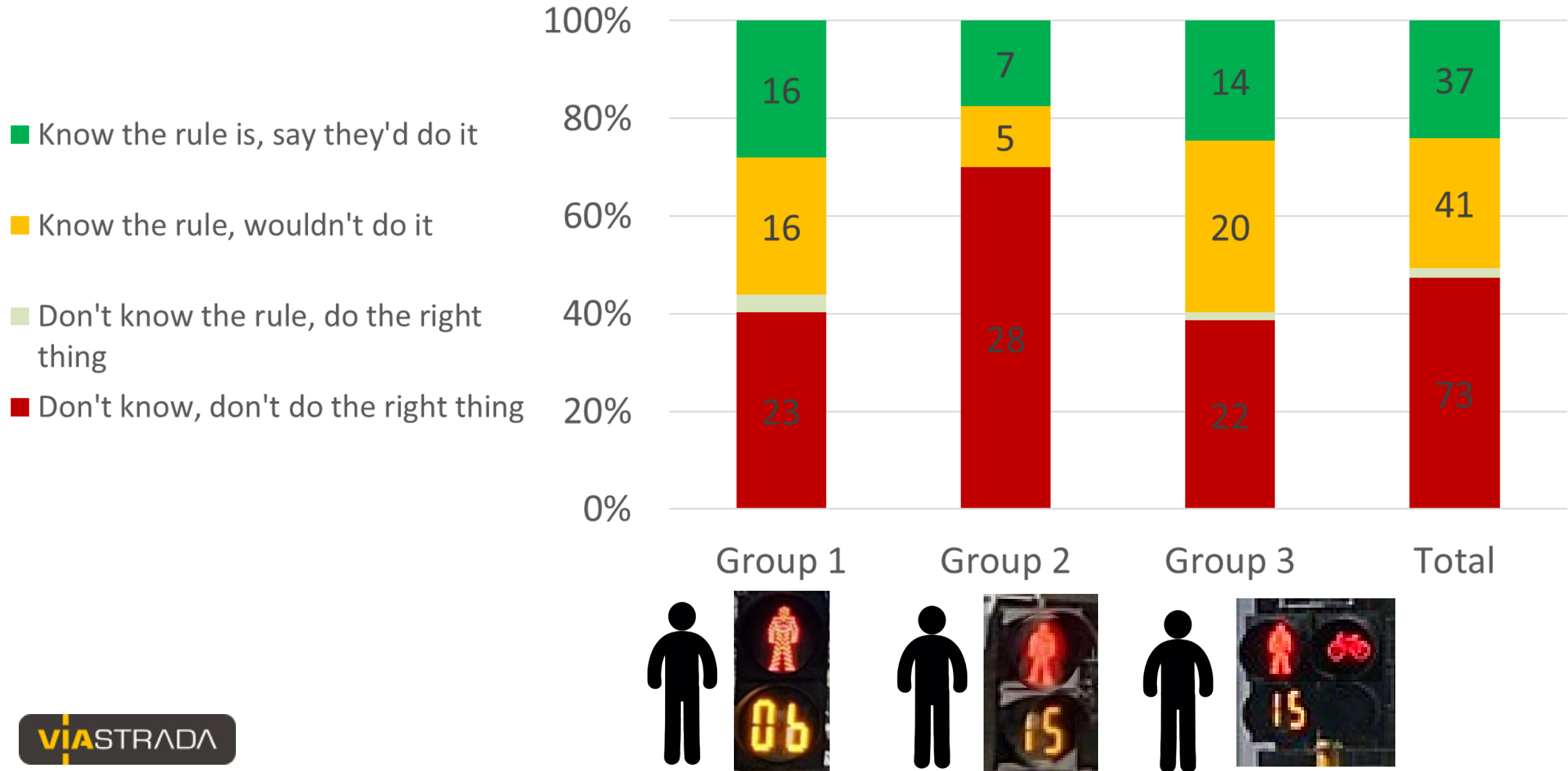
That was fun - can you create some more quizzes for us please?! Haha

Haha Reply 5 w

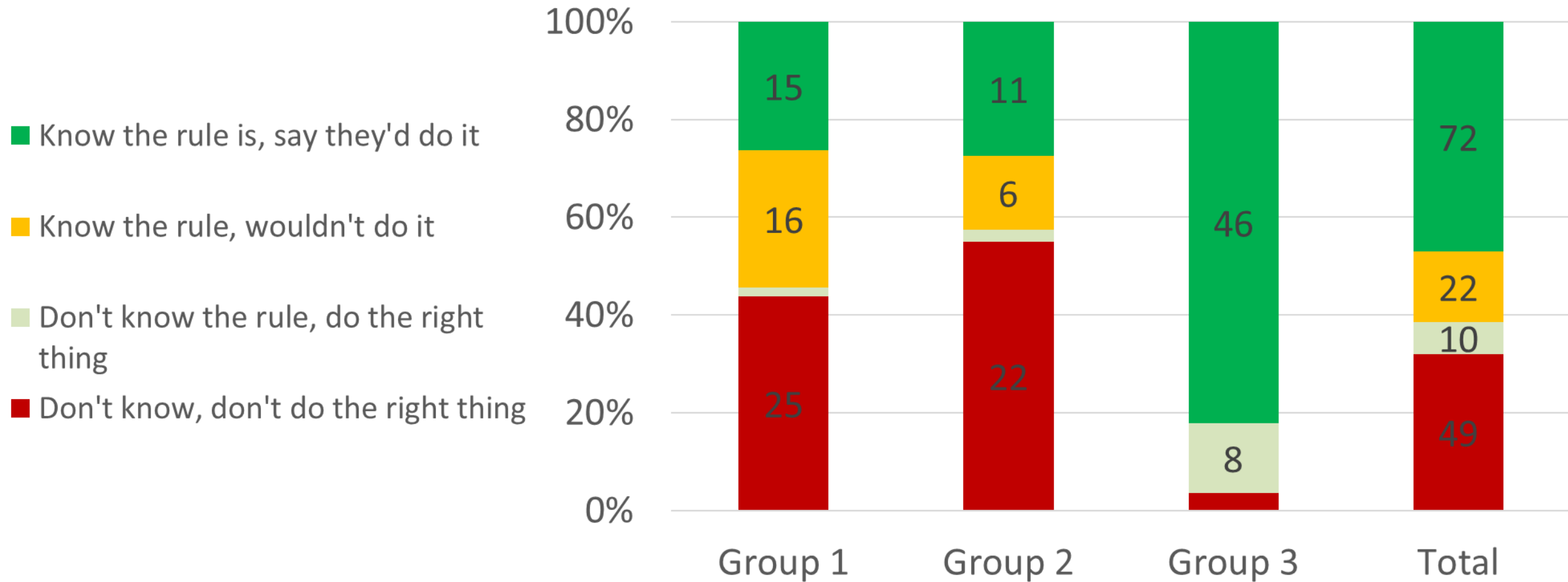




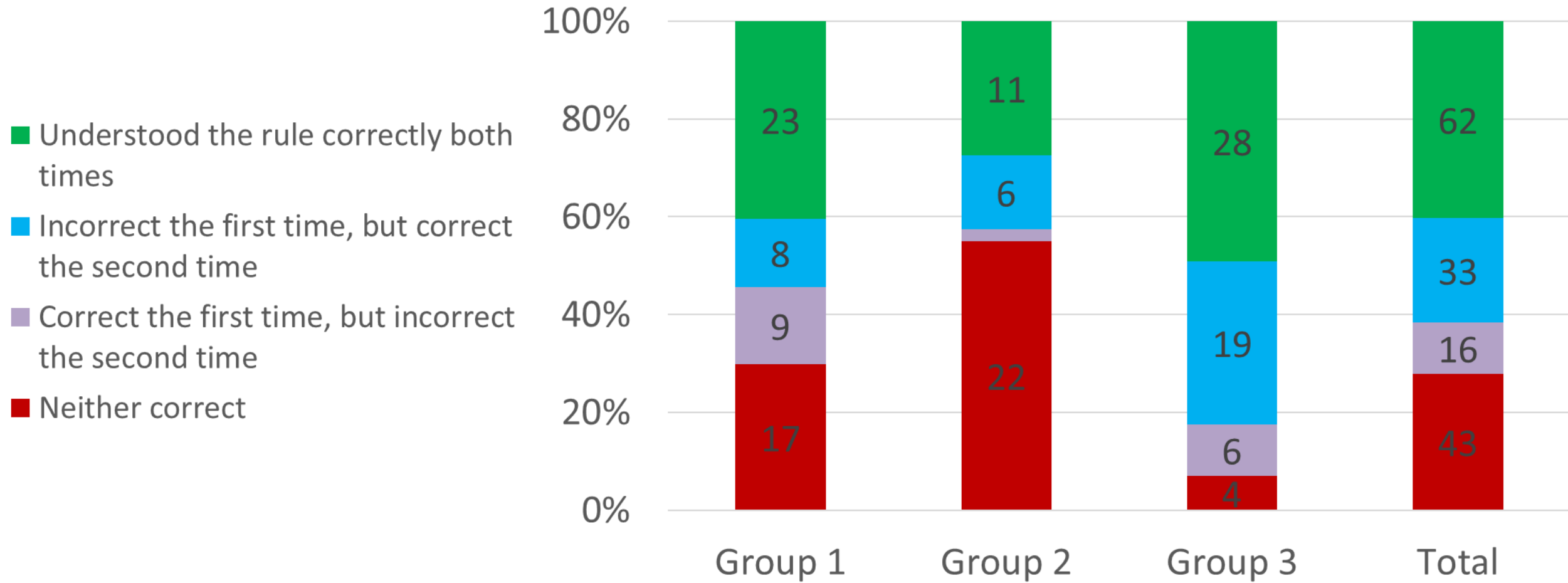
# First question pair



# Second question pair



# Both understanding questions by group





# Pearls of wisdom from respondents (1)

- Countdown timers are great – they help to make a more informed decision on whether I feel I can get across safely or not.”
  - Group 3 respondent, who got the first understanding question wrong
- “Having done this survey, I think now that a lot of the time we follow each other... unsure whether we're actually following the signals correctly!”
  - Group 1 respondent, both understanding questions wrong
- “I like countdown timers better than random flashing red icons”
  - Group 3 respondent, both understanding questions correct

## Pearls of wisdom from respondents (2)

- If the countdown is showing ten seconds or less I know logically pedestrians should wait but I do tend to run across... some of our intersections it would be at least 4 minutes waiting until the next crossing otherwise, and it is often raining...
  - Group 3 respondent, first question wrong
- “It’s more obvious what you’re supposed to do when you can actually see it counting down.”
  - Group 1 respondent, both understanding questions correct

# What do they do overseas?

Country / State	Walk period	Clearance period		
		Time to finish crossing only	Grey area	Inform users deciding whether to start crossing
Australia – Victoria		✓		
Australia – SA				✓
Australia – NSW			✓	(✓)
UK		(✓)	✓	
USA		✓		
Canada – Toronto		✓		
Canada – Montreal				✓
France	✓			
Spain	✓			



# Example – walk period: France

- Road Code:
  - Countdown timer shows time left in walk period
  - Also used to countdown to the next crossing green



# Example – time to finish crossing: Toronto

- City of Toronto promotional video:
  - “Start your crossing only when the walking person is on...”
  - “Midway through your crossing, you may notice the helping hand [flashing red hand] is on, along with the countdown display...”
  - “Whether it’s flashing or solid, do not start your crossing if the helping hand is on...”



# Example – grey area: UK



- Traffic Signs Manual, Ch6

- “Countdown signals indicate the amount of time remaining in which people can finish crossing the road.”
- Can start crossing during a green man, cannot start crossing during blackout period.

- But...

 **Bristol Temple Quarter**  
@TempleQuarter · Follow



Our new crossing at [#TempleGate](#) is now open and the countdown timer switched on. This is the first of its kind in Bristol & helps pedestrians & cyclists judge if there's time to start crossing    
[#TempleQuarter](#) [@travelwestEng](#) [@WofEnglandLEP](#)  
[@networkrailwest](#)



**TRAFFIC CHOICES BS1**  
CITY OF BRISTOL

Pedestrian countdown timers show the amount of time left to cross the road before the red man appears. This allows pedestrians to decide if they have enough time to cross the road.

# Example – inform decision: Montreal

- Regles de circulation
  - Regardez le temps qu'il reste.
  - Traversez seulement si vous avez le temps d'atteindre l'autre trottoir.
  - Si le décompte numérique est à zero, ne traversez pas.



## FEUX POUR PIÉTONS

Lorsque des feux pour piétons sont installés à une intersection, vous devez vous conformer à cette signalisation, en priorité sur toute autre signalisation.



### TRAVERSEZ

Regardez de chaque côté. Faites attention aux véhicules qui effectuent des virages. Traversez.



### AVERTISSEMENT - Main orange clignotante

Si vous êtes déjà engagé, continuez à traverser. Si la main clignote et qu'elle n'est pas accompagnée d'un décompte numérique, vous ne pouvez pas amorcer la traversée de la rue.



### ARRÊT

À la main fixe, ne traversez pas.

**Amende > 15 \$**



### DÉCOMPTE

Regardez le temps qu'il reste. Traversez seulement si vous avez le temps d'atteindre l'autre trottoir. Si le décompte numérique est à zéro, ne traversez pas.

**Amende > 15 \$**



# Example – inform decision: Montreal

- Road Rules

- Look at how much time is left.
- Only cross if you have enough time to get to the other footpath.
- If the timer is at zero, don't cross.



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# Example – inform decision: South Australia

- Department for Infrastructure & Transport South Australia video:  
<https://www.youtube.com/watch?v=n9wFRmLmQfQ>
  - Green man → countdown timer → steady red man



# A few interesting findings from overseas studies

- UK (Earl, 2011)
  - Pedestrians don't understand the blackout period well
  - More pedestrians started to cross at start of countdown than blackout
  - Fewer pedestrians started to cross at end of countdown than blackout
- Sydney & Melbourne (McTiernan et al, 2012)
  - No net change in safety
  - Reduced compliance
- Toronto (2013)
  - Pedestrian collisions reduced but vehicle-vehicle collisions increased.

# Research Report 428 (2010) findings

- Decrease in safety at Wellington sites
  - Increase in late starters
  - Increase in late finishers
  - “Rather than using the additional information of the countdown timers to postpone their crossing... pedestrians used this information to risk crossing during the flashing red man.”
- Increase in safety at Auckland site (not quantified)



# Conclusions

1. Poor level of user understanding of countdown timers in NZ
  - 51% doesn't suggest they're "intuitive"
2. Existing confusion with flashing red man
  - underlying issue to be fixed
3. Range of different applications overseas
  - NZ among the most common – indication for people already crossing
  - Some localities need to tidy up their legislation and promotion / applications, to reflect their true intention
4. I think we can do better – give users information and choice
  - Especially if we want to use the same signals for cyclists and pedestrians

# Thank you, any questions?



We share more knowledge on  
[www.viastrada.nz](http://www.viastrada.nz)



TRANSPORT PLANNING AND DESIGN