OPUS

Collecting road users' experiences of safety using geospatial survey methods

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Title slide for use with Transportation work stream

Important to quantify safety
Validate expert ratings with road users
Difficult to gather road user perceptions of safety
        Difficult to link to particular road features
Makes it difficult to incorporate real world experiences in the design process
Design for improved safety means firstly understanding what is unsafe

Information tools for decision-makers

- Creating local evidence, local knowledge + wider expertise
  - How people use transport infrastructure and what they value
  - 'Fuller picture' of the environment and information that is not in public domain
  - Identify problems areas and improvement options not previously known / thought about
  - To validate / expand experts-identified issues with the road

- Enabling wide engagement,
  - Balancing 'squeaky wheel' effects,
  - Informs users and stakeholders along the way
  - Developing survey tools with consultants, clients and stakeholders increases understanding of the project itself – 'this is what it could look like'…

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Tools: Public participatory geographic information system (PPGIS)

- Collect robust geospatial data
- Interactive online mapping tool combined with a survey tool
- Allows participants to show, rather than simply describe
- Geospatial referenced data
- Quick to display and analyse visually
- Allows road users (current and potential) to be local experts in using (or not using) infrastructure
- Captures information about *their* everyday environment
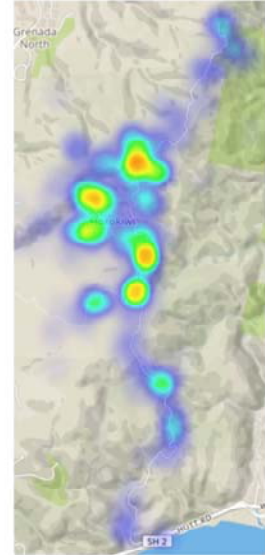
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Two PPGIS examples

- PPGIS MARK I: Whanganui Shared Pathways
  - Balancing safety trade-offs between parking and cycling infrastructure
- PPGIS Mark II: Cambridge to Piarere - Plans to improve safety and efficiency on SH1, Stakeholder & Community Engagement
  - Creating what matters for future generations
  - Survey 1: what currently matters to road users on the corridor?

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Mark I: Whanganui Shared Pathways

- Whanganui District Council Engagement Plan:
- Explore potential impacts of shared pathways with the community
- Provide detailed information about the proposed shared pathways
  - **City to North Mole Shared Pathway**: this 3m wide sealed path/boardwalk will go from Whanganui City Bridge to the North Mole, largely upgrading the existing pathway
  - **Te Tuaiwi Shared Pathway:** this 3m wide sealed path will provide a safe route across the Whanganui City Bridge, through town and past some of Whanganui's central schools.
- Seek feedback related to intersection conflicts, loss of parking and existing trees.
- 76 submissions

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Method: Interactive Online Mapping

- Present the spatial information and artist impressions for each shared pathway in an embedded viewer on the WDC website. Supported with flyer and online video.

- Browse points of interest to better understand the effect of the shared pathways on factors along the route such as road layouts, intersection design, car parking and vegetation.

TAKE A VIRTUAL WALK ALONG THE PATHWAYS

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Method: Online Feedback Survey

- An online survey was developed and hosted on the WDC website beside the interactive online map.

- This provided an opportunity for members of the community to give constructive feedback through a series of closed- and open- ended questions on the proposed shared pathways.
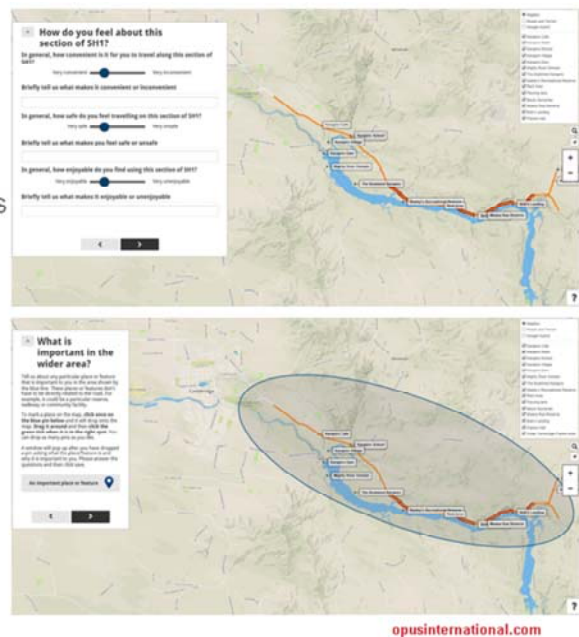

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Intersections Feedback

Figure 3: Level of agreement that the intersections along the proposed route of Te Tuaiwi shared pathway should be improved to prioritise **safety** for users of the pathway
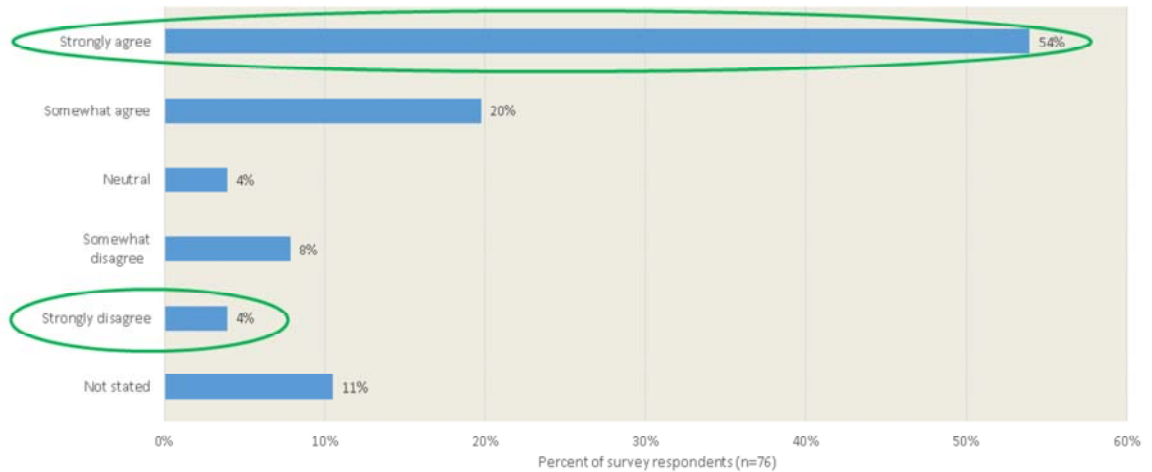
Response	Percent
Strongly agree	54%
Somewhat agree	20%
Neutral	4%
Somewhat disagree	8%
Strongly disagree	4%
Not stated	11%

Percent of survey respondents (n=76)

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Very important to adequately scope and understand the purpose of the engagement to ensure Maptionnaire is the best tool and the survey is created to collect meaningful data
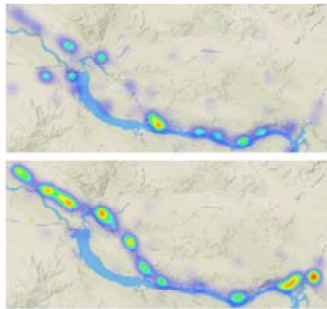Not a full-functioning GIS programme
Survey functionality limitations
Analysis capacity

Cambridge to Piarere, Survey 1: what are users' perception of problems?

- 490 responses
- 1400 geospatial data points
- Just over 7 minutes to complete
- Key themes validated expert-identified issues
  - Safety at intersections, congestion and flow, and safety along the road
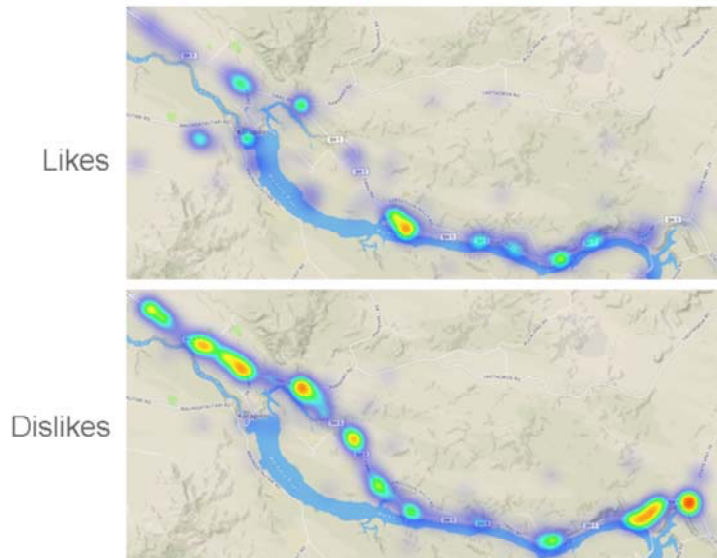- Recruitment was crucial
- Engaged community
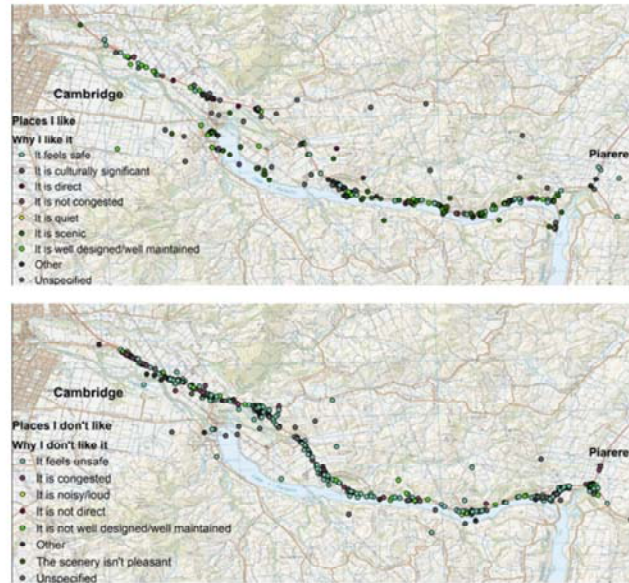
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Clearly shows differences between features/places participants like versus dislike. Shows dislike features are focused on intersections and passing lanes

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Understanding alternative routes

'I often use it long weekends, Friday afternoons, as the congestion and risks on SH1 [are] too bad.'

'When heading to lake with boat [I] would prefer to avoid turning across traffic.'

'It's a nice, quiet drive.'

'I feel safer [going] on an alternative route to avoid the SH1/Karapiro Road intersection.'

'Turning right at the intersection is difficult in peak hours and I would rather not, so [I] just take Karapiro road. Also there [are] a larger number of distracted drivers during peak hours.'

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· Conclusion

- · Tools to 'listen' early in the project life cycle
- · Decisions based on local knowledge and vernacular
- · Robust, local evidence > increased confidence in design and mitigation
- · Richer understanding of safety for road users and designers / investors / operators

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