

Safety in Numbers: An Analysis of Three Vancouver Bike Routes

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Summary of Our Project Focus

- Our project focus is to help the City of Vancouver achieve its goal: to have 50% of all trips made by Vancouverites involve some kind of active transportation, by the year 2020 (Zipf, 2018).
- To achieve this goal, ensuring that everyone city-wide feels they have the space to be able to use active transportation is necessary. To this end, we assessed three of the Design Guidelines of All Ages and Abilities Cycling Routes (Vancouver, 2017) in three seawall locations: Olympic Village, Granville Island, and David Lam Park.
- With the data gathered, we examined trends and made subsequent recommendations for the city to implement, in order to increase use of active transportation. Read on to explore more details!



Location of Quantitative Data Collection



Data Collection Process: Our Method Behind the Madness

- Collecting quantitative and qualitative data from people riding their bikes posed a unique challenge that we had to overcome.
- We created large, waterproof posters to grab the attention of oncoming cyclists. The first poster outlined that we were UBC students collecting cyclist feedback, and that responding to our prompts would be giving consent to have responses used in this report.

The remaining posters contained our prompts:

- 1) Do you feel pedestrian and cyclist traffic seamlessly co-exist on this bike route? Thumbs up for yes, thumbs down for no, thumbs in the middle for somewhat.
- 2) Do you feel the bike route is an adequate width for all cyclists? Thumbs up for yes, thumbs down for no, thumbs in the middle for somewhat.
- 3) Do you feel the bike route surface is safe when it's raining? Thumbs up for yes, thumbs down for no, thumbs in the middle for somewhat.

• In order to put some meaning behind the quantitative responses, we also had some generous participants fill out an online survey, in which we asked what their main reason for cycling was, and out of the criteria we were assessing, what they thought the most impactful change to increase the quality and the safety of the bike route.

Qualitative Results

Why do you feel like that change would be the most impactful?

Many problems happen with cyclists weaving in and out. Almost like there is a middle lane for passing and it is unsafe. Cyclists don't know when to yield for pedestrians, and I have seen cyclists ignore people waiting and keep on riding. Some even become angry and frustrated with me when I ride slower.

Most of the route is ok, could be wider though. Some parts have restaurants and people on patios drinking. It becomes unsafe and hard to bike in those areas.

There is not enough space for families with kids to ride along with more intense cyclists who go fast and weave in and out of the lane. It would be nice to feel more comfortable riding with a family.

Many people at parks walking around not paying attention. There should be more places for people to cross the bike side safely, and more signs so there is less interference.

The path is narrow in some places and is a problem around tight corners especially because it can create blind spots and crashes.

Pedestrians sometimes walk into the bike lanes, and it's dangerous when you're sharing the path. Not all cyclists know when to stop for pedestrians, that can be dangerous too.

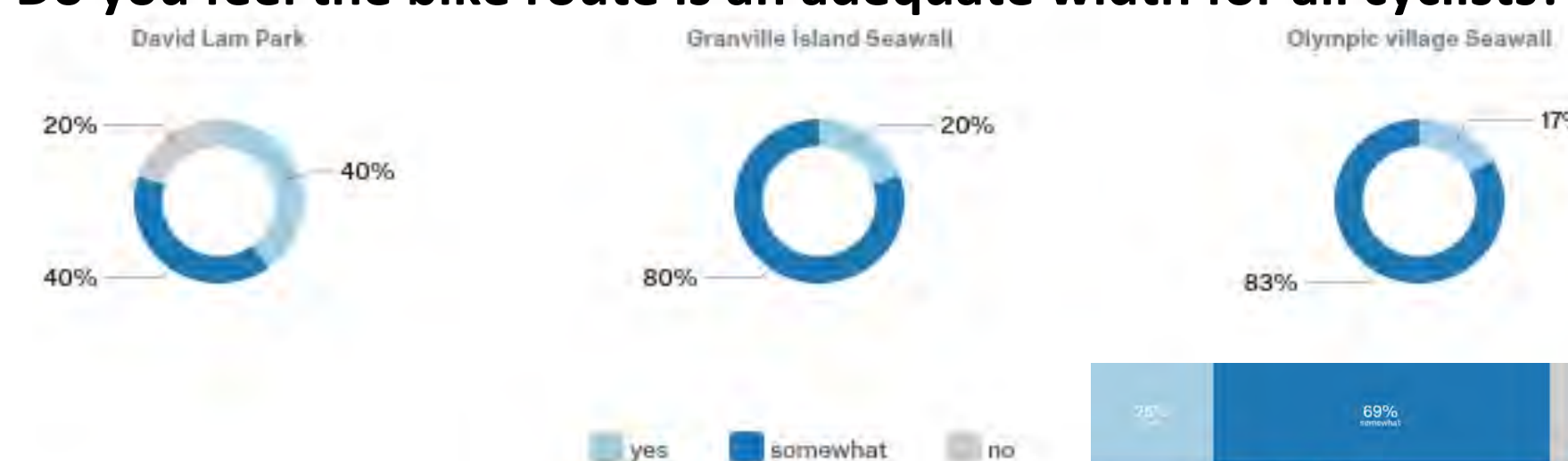
Pedestrians would feel safer and cyclists wouldn't be worried about pedestrians.

What We Learned

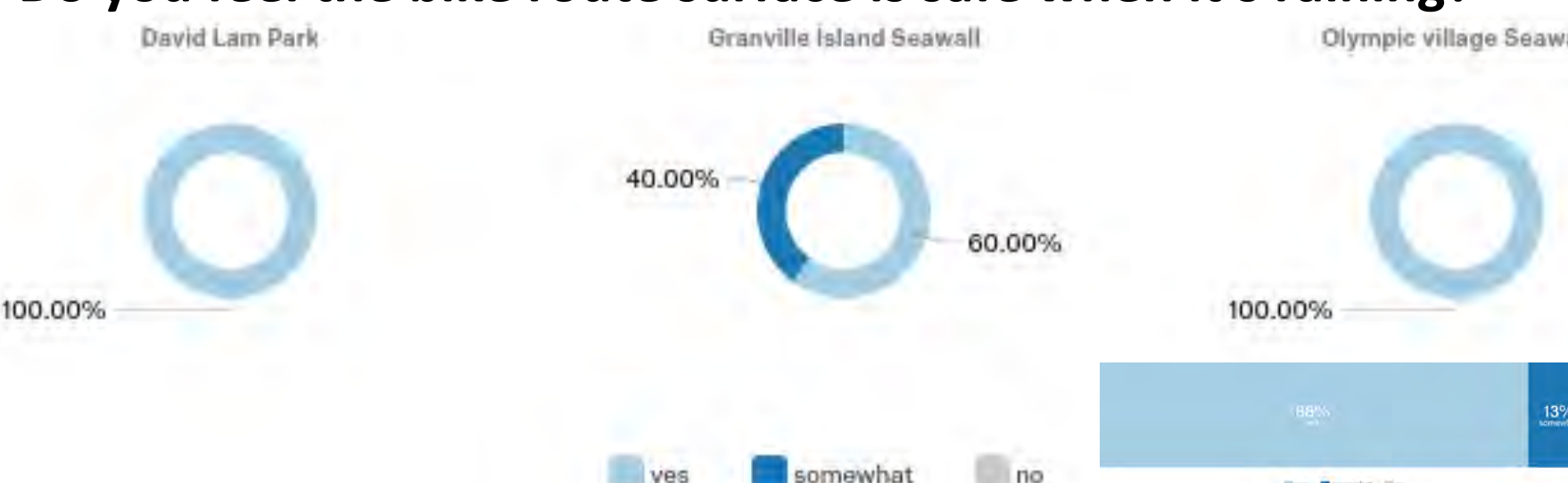
- Our quantitative data indicates that most cyclists agree that the surfaces of all three bike routes are safe, even in the rain.
- Cyclists feel that bike route width, and pedestrian and cyclist traffic flow, require the most improvement on all three routes surveyed.
- The qualitative data supports and provides insight to these findings.
 - First, issues arise with route width during high traffic times when a variety of experience levels and types of cyclists are on the route, and when there are attractions and establishments that draw a lot of foot traffic.
 - Second, it is not widely understood that cyclists need to yield to pedestrians, even with painted crosswalks on the routes. Moreover, some cyclists deliberately disobey this rule, despite knowing it.

Quantitative Results

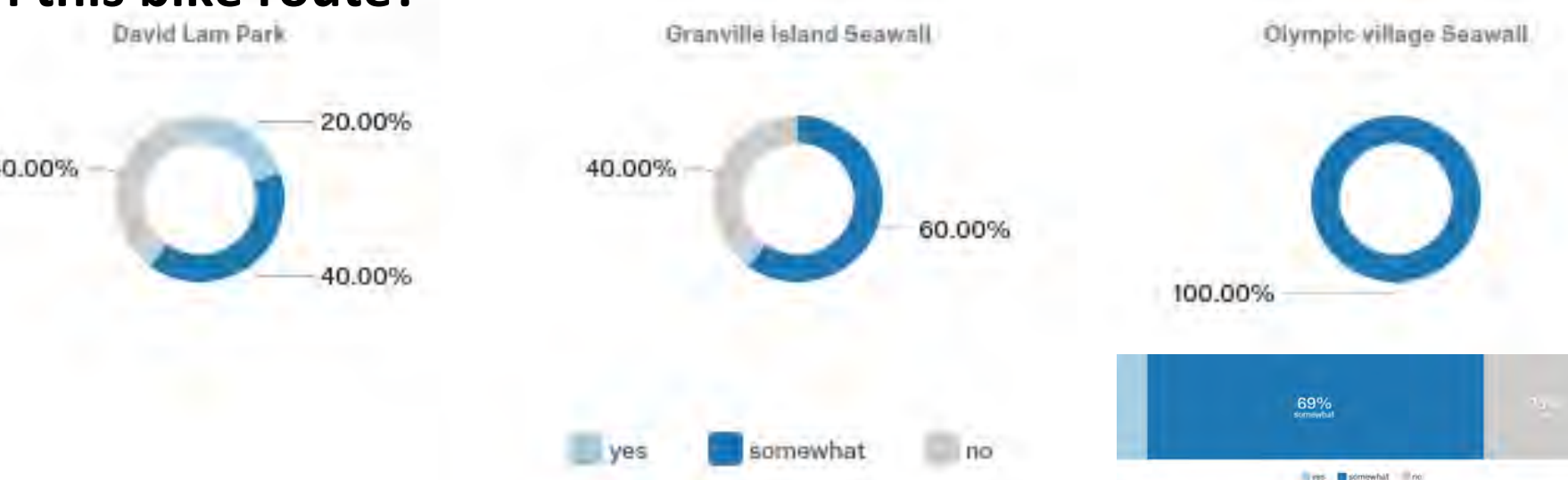
a) Do you feel the bike route is an adequate width for all cyclists?



b) Do you feel the bike route surface is safe when it's raining?



c) Do you feel pedestrian and cyclist traffic seamlessly co-exist on this bike route?



Recommendations For a Future of Active Transportation

- It would be valuable to repeat this research at different times of day, in different types of weather, and on a weekend. Different traffic volumes and a riding population of various skill levels would give more impactful, and rich data to explore.

There are two main recommendations for our CityStudio partners:

- 1) Create wider width pathways in high congestion areas where possible on current routes, and in future bike routes.
- 2) Place signage that will help alleviate conflicts between cyclists, and between cyclists and pedestrians. Signs such as "yell or bell" to indicate passing, and "yield to pedestrian" signs.

Olympic Village Bike Route



Acknowledgements

CityStudio: CityStudio Vancouver is an innovation and experimentation hub for the City of Vancouver in collaboration with seven of Vancouver's post-secondary institutions (BCIT, ECUAD, Langara, SFU, UBC, VCC and NEC). Since 2011 CityStudio has contributed more than 100,000 hours of experiments, projects and skills training to support City goals and strategies like the Greenest City Action Plan and Healthy City for All strategy. Learn more @CityStudioVan.

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