

The Road Less Traveled

A Navigation App for the Urban Cyclist

RESEARCH REPORT

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Road Less Traveled Research Report | **Introduction**

Bicycles occupy a special niche in the urban transportation ecosystem.

Despite dramatic improvements in the infrastructure to support the growing number of cyclists (of all types), serious challenges remain.

Chief among these is finding safe and appropriate routes from point A to B, especially as gentrification spreads from the Bronx to Bushwick and beyond.

[Ride with GPS](#) allows users to plot their own routes and then tag them for walking, cycling, etc.

It also allows users to add points of interest and note other features on the route.

However RideWithGPS seems intended for the recreational, touring or competitive cyclist. Users cannot plot routes on the mobile app -- only display them.

[Strava](#) is well-known in the competitive cycling community.

It offers a number of features, including the ability to pick from other users' published routes, measure themselves against their peers.

Users can also employ tools to track performance metrics: e.g., speed and energy output.

In other words, it is designed for athletes/competitive cyclists.

Like RideWthGPS it is designed to create, upload and publish *existing* routes not *plot* them on the fly.

[Ouvos](#) (now in beta) has a slightly different mission.

Their proposition is to crowdsource reports of unsafe road conditions -- and perhaps offer directions to circumvent them.

Ouvos' target market is probably closer to ours, the urban commuter/recreational cyclist.

We conducted an online survey of city cyclists, in Brooklyn and Manhattan to discover their concerns.

We followed up with in-person interviews to validate our hypothesis: specifically that 'bike lanes do not a bike route make.'

Moreover, that motor vehicle traffic remains the chief concern of city cyclists.

What is the most satisfying part of riding in the city?

In a word: Freedom

‘The feeling of freedom’ 26%

“Feeling of freedom from MTA”

It just makes me feel free.”

“Seeing [the city] from a different perspective”

“Finding out about places you might not explore if you are underground all the time.”

“The ability to hop off and do something or visit a store or neighborhood with more spontaneity.”

“Everything”

What is the most challenging part of riding in the city?

Traffic 83%

An overwhelming majority responded that dealing with motor vehicle, pedestrians and other cyclists was their chief concern.

“Cars hate you and don’t care if you die”

“I don’t like traffic and find riding on busy streets stressful”

“Motorists do not respect cyclists. [They’re] our streets too.”

“Traffic, pedestrians in bike lane”

“Dedicated bike lanes being filled with car traffic, even though they are marked for bike use.”

“Other cyclists doing whatever they want and pedestrians.”

So Why Do It? Business & Pleasure

60% of cyclists surveyed ride for some combination of commuting and recreation

- Recreation 27%
- Everything 20%
- Commuting 20%
- Commute and recreation 20%
- Commute, recreation, competition 13%
- Errands 7%

How do they plan a route to a new destination?



- Google 73%
- Ask a friend 270%
- DOT bike map 20%

What's important when planning a route?

- Bike lanes 60%
- Traffic 60%
- Road conditions 47%
- Shortest distance 47%
- Most direct 40%

Nicole, 32 – Web Designer

Nicole is a 32 year-old web designer. She rides recreationally in the park or along the greenways.

She wants to start riding to and from work and school but is intimidated by traffic.

I ...

- I am extremely scared of dying. I want to avoid traffic as much as i can
- I need routes that are as direct as possible — that are easy to remember.
 - I don't want to ride on pot-holed roads with parked cars and big trucks.
 - I don't mind riding a longer distance to avoid traffic

Road Less Traveled Research Report | **Persona**

Nicole's Goals

- Cycling routes that take advantage of bike lanes
- Avoiding motor vehicles
- Riding on quiet, pleasant well-paved streets
- Routes that offer amenities (e.g., coffee shops)
- Routes that are easy to follow/remember

Pain Points

- Left turns
- The crazy quilt street grid
- Traffic, traffic, traffic
- Mortal peril
- Potholes, construction and bumpy roads
- Crazy cyclists

Road Less Traveled Research Report | **Problem Statement**

Nicole needs a way to plot bike routes to and from work that she can use on her mobile device (phone).

Google maps suggestions for cyclists are *terrible*. While they favor routes along bike lanes these have several shortcomings:

- They often take cyclists way out of their way (they're indirect)
- Even though they use bike lanes, they expose cyclists to motor vehicle traffic or are otherwise unsuitable for cycling

How might we provide a better means to plot routes for urban bicyclists?