

Curb'n: Solution-Fit Hypothesis Testing

NOTE: The answers to the "If so, how?" question under Hypothesis 1 have only been summarized in the result. They should have been reported without paraphrasing in the responses section.

Results

We interviewed 5 people to test our hypotheses across the following demographics:

- Gender: 3 female, 2 male
- Profession: 3 undergraduate students, 2 early career professionals

Hypothesis 1: Commuters are more likely to take a less carbon-intensive route when presented with information in Curb'n about how much they can reduce their carbon emissions by doing so.	
Questions	Responses
Would seeing the carbon footprint of a transportation option affect your likelihood of using it? (Yes/No) If so, how?	<ul style="list-style-type: none">• 80% said yes• 20% no
Result: Hypothesis validated. Seeing their carbon footprint in Curb'n would increase their likelihood of choosing a less carbon-intensive route. Interviewees cited seeing their carbon footprint as their main motivation to use the app, while those who said no explained that the particular metric presented to them to represent this (grams of CO ₂) was hard to conceptualize, which is addressed in Hypothesis 2.	

Hypothesis 2: Presenting carbon emissions in the form of weight (ie: grams of CO2) conveys different severities of environmental impact to users by transportation option on a given route	
Questions	Responses
Does 3000g of CO2 for a typical driving commute seem like a lot? (Yes/No)	<ul style="list-style-type: none"> • 80% said yes • 20% said no
Compared to 350g of CO2 for taking public transit? (Yes/No)	<ul style="list-style-type: none"> • 100% said yes
If not, what would be more meaningful to you? (ie: an abstract absolute measure or a percentage reduction?)	<ul style="list-style-type: none"> • 40% said some comparative metric (ie: taking the bus instead of driving reduces your carbon footprint by 90%) • 60% said some type of relative metric (ie: 2L of gas, or a sack of food)
<p>Result: Hypothesis was disproved to some extent. Although the majority of interviewees understood the difference in magnitude, they also would prefer an alternate metric instead of grams of CO2 that was easier to grasp and understand the impact of their choice.</p> <p>Response to Result: Presenting carbon emissions in the form of a relative metric (ie: sacks of food) to Curb'n users conveys different severities of environmental impact in a method that is meaningful to users.</p>	

Hypothesis 3: Visualizing a user's long-term behaviour over time in Curb'n will help them develop the habit of choosing less carbon-intensive transportation routes.	
Questions	Responses
Would you be more motivated to make environmentally-friendly choices if you saw a visual of the carbon impact of your transportation regularly (ie: daily, weekly, monthly breakdowns)? (Yes/No)	<ul style="list-style-type: none"> • 100% said yes • 80% cited the ability to visually compare their behaviour over time
Why or why not?	
How frequently would you check this data? (ie: daily, weekly, monthly)	<ul style="list-style-type: none"> • 60% said weekly • 40% said daily
<p>Result: Hypothesis validated. Interviewees said that visualization of their habits over time would motivate them to begin or continue to choose less carbon-intensive transportation routes going forward. In addition to this, all users said they would check their impact on a weekly or more frequent basis</p>	

Hypothesis 4: Presenting aggregated carbon emissions to a Curb'n user relative to other users in their community will help them measure their success and motivate them to continue to improve their transportation habits

Questions	Responses
Would knowing how your community is doing make you feel more successful? Either by comparing yourself (top 50%, 75%, etc), or seeing collective impact (more has been accomplished together)?	<ul style="list-style-type: none"> ● 100% said yes ● 60% said they would feel motivated by comparing themselves to the community ● 60% also said they would feel motivated by seeing collective impact

Result: Hypothesis validated. All said they would be motivated by the solution of comparing themselves to the community, seeing the collective impact, or both. The solution proposed in Curb'n would help them continue to improve their transportation habits.

Hypothesis 5: Curb'n educational modules will compel our users to apply their learnings to make more environmentally sustainable decisions

Questions	Responses
How educated do you feel about environmental sustainability? (1-5)	<ul style="list-style-type: none"> ● 80% said 3 ● 20% said 4
How compelled do you feel to make decisions based on the sustainability of them? (1-5)	<ul style="list-style-type: none"> ● 20% said 3 ● 80% said 4
Would you feel more compelled if you learned more about environmental sustainability through Curb'n? (Yes/No)	<ul style="list-style-type: none"> ● 100% said yes

Result: Hypothesis validated. No interviewee said they felt they felt maximally educated about environmental sustainability, and most were compelled to make decisions based on how sustainable they know them to be. All would be more compelled if they learned more about environmental sustainability through Curb'n.