

## Interim Project Summary

### **Introduction:**


Our team is researching the City of Ann Arbor's Transportation Commission and its response to Bird e-scooters within the city. Initially, our research question sought to analyze how the Ann Arbor Transportation Commission has responded to evolutionary changes in informal modes of transportation such as Bird, and how have their actions aligned or misaligned with the needs and desires of the student population. After attending the AATC meeting in October, our research question shifted to: what are the attitudes surrounding Bird e-scooters from the Ann Arbor Transportation Commission (AATC) perspective and students' perspective? Do these align? Now, after conducting various observations and engaging with our two populations of concern, U of M students and city officials, our final research question is: **What are the attitudes surrounding Bird e-scooters from the Ann Arbor Transportation Commission (AATC) perspective and students' perspective? And, what social influences and demographic factors impact these attitudes?**




### **Literature Review:**

Previous literature that informs our research project is an article written by Lord and Choong (2001) related to social normative theory and decision making. Their article, “Differences in normative and social influence”, attempts to explain and demonstrate that distinctive characteristics of normative and social influence, influence decision making processes. This literature review finds that distinctive characteristics from an individual's



 cultural framework have a large effect on their decision-making process. In regard to our research, we hope to explain how age, SES, and cultural backgrounds influence attitudes surrounding Bird and Bird usage.

With the development of our new research question, our team is utilizing social norm theory due to its ability to uncover how the demographic differences between AATC and  students in regard to age, SES, and cultural/geographic background lead to differences in attitudes. Normative social influence refers to individuals' behavior based on the social norms derived from their distinctive cultural contexts and backgrounds.

As previously mentioned, we utilize the concept of normative influence to explore how demographic differences affect the varying attitudes found in regards to Bird e-scooters. For example, in the focus group interviews, we learned that many of those who had come from cities that had Bird e-scooters prior were relatively more excited and open to their presence in Ann Arbor. The hypothesis we are testing is: **cultural frameworks and demographics have an effect on attitudes and usage of Bird e-scooters in Ann Arbor.**




a. Previous exposure to heavily utilized modes of public transportation and attitudes and usage of Bird have a positive correlation.




b. Higher socioeconomic status and the attitudes and usage of Bird have a positive correlation.

c. Older age and the attitudes and usage of Bird have a negative correlation.

### **Methods:**

 We use both quantitative and qualitative research methods to ensure that we have a variety of data to answer our research questions holistically. For quantitative data, we designed and distributed an online survey that examines the attitudes towards Bird e-scooters and received  100 usable responses. For qualitative data, we conducted three semi-structured interviews with Ann Arbor city officials and five focus groups with U of M students to have more in-depth dialogues with our target populations. The participants of the interviews and focus groups were  randomly chosen. Additionally, we also observed people's usage of Bird at various locations around U of M campus to complement our data.

The two main focal populations are the U of M student population and the Ann Arbor city officials. We included in our survey a specific question to eliminate data from any survey respondents who are neither city official members nor students.

To operationalize the construct of attitude, we break it down into three parts, constituting the attitude towards: a) the use value of e-scooters broadly; b) the safety of e-scooters broadly; c)  the relationship with Bird specifically. In our online survey, we included questions such as “How do Bird e-scooters meet your needs in regard to safety?” to understand our population's attitude towards e-scooters in terms of their use value. In our interview and focus groups, we specifically probed for participants' understanding of safety regulations regarding e-scooter usage. Finally, we attended a City of Ann Arbor council meeting to examine their relationship with the Bird company as opposed to e-scooters as a general transportation mode. Therefore, a variety of methods are embedded in our data collection process to ensure that the all operationalizations of the construct of attitude are accurately captured.

### **Preliminary Results:**



The data collected and analyzed from our observations and survey indicate that the attitudes of AATC and students regarding Bird e-scooters do not vary as much as expected. However, there are clear demographic influences regarding Bird scooters specifically in regard to age, previous exposure, and gender. Specifically, our three hypotheses on positive correlation between previous exposure and Bird attitude/usage, positive correlation between SES and Bird attitude/usage, and negative correlation between age and Bird attitude/usage are all supported to a certain extent.

Through preliminary analysis, it became evident that there is a lack of transparency in regard to safety and how to use e-scooters properly and effectively. Evidently, safety is a main concern from not only the AATC perspective but also the student perspective which became very surprising to us. From both the AATC perspective and students perspectives, safety is a main concern regardless of age. AATC members and students all feel as though e-scooters may not fully meet their safety needs.

### **Limitations and Challenges:**

Many limitations exist in regard to our research. First, there is a limit in our numbers due to how small the AATC is. We have collected one hundred survey responses, however, the number of student responses and the number of AATC responses is disproportionate simply due to the nature of the Commission. ~~Additionally, through our observations and interviews it is very possible that we were biased in our findings. Due to the fact that we have such a~~



~~concentrated hypothesis, we could have simply been looking for answers to our questions instead of paying attention to other key findings. Lastly, attitudes between the students and the AATC aligned much more than expected, creating a slight shift in our hypothesis while new themes emerged in regard to safety.~~

Moving forward, our biggest challenge will be choosing exactly which results we would like to draw conclusions on. Our hypothesis are very broad, and we have collected very large sums of data so it is important that we choose to analyze ideas that we can accurately form conclusions on. Demographics and cultural backgrounds include such large sums of information, so we must decide which factors we specifically want to focus on when it comes to age, SES, gender, cultural frameworks, previous exposure, etc.

### **Next Steps:**

The next step for our project is to analyze the data we received from the survey in order to assess our hypotheses. We plan to code our qualitative interview and focus group data by using structural coding and priori codes. We also plan to create tables in order to show clear connections and conclusions that we came to in regards to student and official e-scooter usage and attitudes, and compare both by utilizing comparative tables.

The only additional literature that may help inform our project is more information regarding safety concerns within Ann Arbor and safety concerns in regard to e-scooters. Through our survey, focus groups, observations, and interviews, safety became a much more prominent issue and theme than we initially expected. Moving forward, we will consider gathering more literature concerning this relevant theme.



## **Appendix:**

As safety has become more of a focus for our research project, we have collected additional literature reviews which inform our understanding of general perceptions of safety in regards to e-scooters.

### **Potential New Literature Reviews:**

Bradshaw, T. (2018). Global rise of scooter use sparks safety fears. *FT.Com*, Retrieved from

<http://proxy.lib.umich.edu/login?url=https://search.proquest.com/docview/2117031087?accountid=14667>

Promoting Scooter Safety and Security. (2018, Oct 17). US Fed News Service, Including US

State News Retrieved from

<http://proxy.lib.umich.edu/login?url=https://search.proquest.com/docview/2120605585?accountid=14667>

Prichep, D. (2018). *As E-scooters roll into american cities, so do safety concerns*. Washington:

NPR. Retrieved from

<http://proxy.lib.umich.edu/login?url=https://search.proquest.com/docview/2120003866?accountid=14667>

Age Association	How well do e-scooters meet your needs in regard to safety?					
	E-Scooters meet my needs completely	Very Well	Moderately Well	Slightly Well	E-Scooters do not meet my needs at all	Total
Traditional Undergraduate	18	14	24	21	13	90
Young AATC Member	0	0	0	0	2	2
Old AATC Member	0	1	1	0	6	8
Total	18	15	25	21	21	100

Safety became a main concern through our observations and interviews. This table combines three main questions from our Qualtrics survey to identify key patterns in regard to safety.



Above is the question on age, government affiliation, and e-scooters fulfilling safety needs into one table to summarize these results. Moving forward, we would like to dive deeper into the topic of safety and potentially find literature to support these results.

		11. How much do you agree with the following statement: I am aware of the safety rules and regu...							Total
		Strongly Disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	
1. What is your age?	under 18	0	0	0	0	0	0	0	0
	18-22	10	21	8	3	12	20	12	86
	23-26	1	0	0	0	0	2	0	3
	27-30	1	0	0	0	0	0	0	1
	31-45	0	0	0	1	1	2	2	6
	45 and above	0	1	1	1	0	1	0	4
	Total	12	22	9	5	13	25	14	100

Aforementioned, safety became a key priority of our observations and interviews. This survey question cross-analyzes how aware college-aged students, middle-age, and older individuals are of the safety rules and regulations of Bird e-scooters.

## Schedule:

TODAY < > November 2018							Month						
Mon 29 6:30pm Monday Meet	Tue 30	Wed 31	Thu Nov 1	Fri 2	Sat 3	Sun 4							
5 6pm Group 8: Meeting	6	7	8	9	10	11 7pm meeting							
12 6:30pm Monday	13	14	15	16	17	18 6pm Sunday Meeting							
19	20	21 Submit Group Interim Pro	22 Thanksgiving	23	24	25							

<div> <div>TODAY</div> <div>&lt; &gt;</div> <div>December 2018</div> <div> <div>Q</div> <div>Month</div> <div>⚙</div> <div>⌵</div> <div>🔔</div> <div>   </div> </div> </div>						
Mon 26	Tue 27	Wed 28	Thu 29	Fri 30	Sat Dec 1	Sun 2
<div>Group Meeting: Outline K</div> <div>● 6:30pm Monday Meet</div>		<div>Working Session: Build P</div>	<div>Working Session: Buildin</div>			<div>Group Meeting: Build &amp; P</div> <div>● 6:30pm Group Meeting</div>
<div>3</div> <div>Working Session: Compl</div> <div>● 6:30pm Monday Meet</div>	<div>4</div> <div>TEAM PRESENTATION DI</div>	<div>5</div> <div>In-Class Presentations</div>	<div>6</div>	<div>7</div>	<div>8</div>	<div>9</div> <div>Group Meeting: Final Rep</div> <div>● 6:30pm Group Meeting</div>
<div>10</div> <div>Working Session: Final R</div> <div>● 6:30pm Group Meeting</div>	<div>11</div>	<div>12</div> <div>● 6:30pm Group Meeting</div>	<div>13</div>	<div>14</div> <div>FINAL REPORT DUE</div> <div>INDIVIDUAL REPORT DU</div>	<div>15</div>	<div>16</div>

## References:

Lord, K. Lee, M. Choong, P. (2001). *Differences in normative and informational social*

*influence*. Advances in Consumer Research. Volume 28 page 280-285.

<http://acrwebsite.org/volumes/8490/volumes/v28/NA-28>.