

## Final Group Project

**Investigation Summary:**

We have discovered that Chattanooga does have a good infrastructure for active and alternative transportation. The city is currently initiating plans to rework some of the bus routes in the city, thus bettering some of the problems that citizens have complained about (Putman, 2015). The bike share and bus systems are established and very comparable to those in places like Washington, DC. Our main focus is that Chattanooga has not been able to eradicate the stigma associated with alternative transportation. This is evidenced by most Chattanooga residents reporting that they have not used the bus routes and is not educated about the busing system (2015 Community Survey Results). However, of the Chattanooga residents who reported that they used the bus system, only 6% reported that the bus was "bad," or "very bad." By combining this knowledge, it is our understanding that there are preconceived negative perceptions about the busing system, which are dispelled by those who actually use the busing system regularly. Also, the reports of negativity with the busing system should decrease as the city continues its expansion of busing routes, which was one of the biggest issues facing the Chattanooga busing system (Putman, 2015). We hypothesize that through increasing awareness, those who were hesitant to use active and alternative transportation before will be more informed, and thus will be more likely to make use of these systems.

It appears that our primary research has confirmed some of our original beliefs and hypotheses. We discovered an astounding finding related to alternative transportation. Not a single respondent routinely uses the busing system, and only one had used the busing system recently. Qualitative data seems to suggest that this is because of the bus not reaching where they are wanting to go (which is being worked on) or having negative stereotypical opinions about the

bus (stinky, don't know how to use it, etc.). Interestingly, they have these negative opinions but have not used the bus system recently. The combination of secondary literature and our primary literature advance our group's problem in many ways. We are now able to get a clearer picture of usage of active and alternative transportation in Chattanooga, and we believe that our effort to change the culture of the busing system is supported by the data. Our groups' focus now is to work on implementation of an Adopt-a-Stop program and increasing awareness about the benefits of the bus system.

**Problem Definition:**

The issue facing Chattanooga today in terms of active and alternative transportation is that it is not being used at a high rate. A study that was provided by the PROVA Group showed that the large majority of Chattanooga residents do not use alternative transportation in their daily commutes, and tend to drive alone in their cars. Our group set out to determine why this is so high. The first subject of study was the alternative transportation system itself. However, we found that many forms of alternative transportation are available, and that they are constantly being improved. The question now becomes: "Why do only a small minority of individuals utilize the available alternative transportation resources?" Our group has determined that there is a negative connotation and culture that has been an issue in getting people to use active and alternative transportation.

Our focus has shifted to discover ways to change the culture of active and alternative transportation in Chattanooga, and to make these forms of transportation fun and more appealing. The two major ideas that progress this idea forward are: Expanding the Message of the alternative transportation and to implement an Adopt-a-Stop program. These two ideas have been successful in other areas, and if implemented correctly, they will begin the process of

getting Chattanoogaans more invested and interested in alternative forms of transportation. Thus, connections to CARTA and usage should increase.

**Problem Solution Statement:**

Our problem solution is aimed to change the culture and enhance the convenience of the transportation system in Chattanooga. Each team members of our group have investigated solutions these issues that we believe will enhance the public transportation system in Chattanooga. We have determined that expanding alternative transportation's message via the 'This Way' campaign and implementing an Adopt-a-Stop program are our best and most practical solutions going forward. While these two projects may be seen as separate entities, when culminated together, they will begin changing the culture of the public transportation system in Chattanooga. We are hopeful that these changes will lead to an increase in usage in the public transportation systems in place in Chattanooga, create conversation, benefit the overall community, and thus will allocate more funds into the system spawning future improvements.

**Implementation Plan:**

This Way:

1. Before any type of implementation can begin, it would be vital to get a baseline for how much usage CARTA and other forms of alternative transportation are getting. While some of this data is available, it would be important to gather data from specific demographics (i.e. tourists, college students, working adults, etc.)
2. Since the artwork and ideas are already developed an in-place, the first step of implementation would be to develop this artwork into real signage, posters, and brochures.
  - a. These projects would be made specifically to the demographic area. For example,

a brochure made for UTC would highlight the benefits of public transportation specifically for UTC students, while a Tourist brochure would specifically highlight how public transportation in Chattanooga could enhance tourist experience.

- b. The cost of this should be relatively low ( $10,000 >$ ), and could be bid out throughout the city to get the cheapest price available. Based upon our research and estimations, the cost of the initial project implementation would be around \$3500 dollars.
  - i. 20,000 Brochures  $\rightarrow$  20,000 x \$0.193 each = **\$400.00** (PsPrint - <https://www.pspint.com/resources/brochure-flyer-marketing-budget/> )
  - ii. 550 Posters  $\rightarrow$  550 x \$3.75 each = **\$2100.00** (VistaPrint - <http://www.vistaprint.com/posters.aspx?GP=4%2f27%2f2016+4%3a32%3a35+PM&GPS=3925394903&GNF=1> )
  - iii. 100 Neighborhood Banners  $\rightarrow$  100 x \$10.00 each = **\$1000.00** (VistaPrint - <http://www.vistaprint.com/custom-banners.aspx?GP=4%2f27%2f2016+4%3a38%3a13+PM&GPS=3925394903&GNF=1> )
3. After ordering and receiving the signage, these would need to be distributed accordingly. For example, the Neighborhood banners would need to be hung in the neighborhoods in which they were created for, the posters would need to be hung in areas representative to their areas (i.e. UTC signs hung around campus), and brochures would need to be distributed in areas in which they would be well received (i.e. UTC brochures located on campus, tourist brochures distributed in travel agencies and popular tourist sites like

Rock City, etc.).

- a. This process could be done by volunteers or by CARTA employees. By using volunteers, the cost would be nearly nothing, and if CARTA employees were used the only cost would be their salary for the day(s) spent distributing.
4. Next, surveys should be developed to measure the success of this project. This process could be going on while the above steps are being worked on, but actual measurement would not go on until afterwards. The surveys developed should include questions specifically pertaining to the This Way Campaign (i.e. Have you seen these posters/signs/brochures around the city? ; Have these posters/signs/brochures encouraged you to use the bus system more?). CARTA and PROVA entities already have research projects and materials in place, so this planning and measurement could be added onto that preexisting entity, and thus should not increase cost by a significant amount.
  5. Once This Way has been implemented and post-implementation research has been measured, the plan could be adjusted appropriately to benefit groups where it was lacking. For instance, if the campaign were doing well with UTC students but not tourists, then the UTC programs could maintain and the focus could turn to improving gauging the tourist market.
- Adopt-a-Stop:
    1. Before any changing or updating of the bus stops can occur, it is vital that we understand and know how much bus stops cost. For the purposes of our idea, we have modeled our cost analysis to Nashville since they are a relatively close distance to us. In the 2014-2015-budget year, Nashville set aside 1 million dollars to renovate 100 bus stops. This

averages out to \$10,000 dollars per bus stop renovation

(<http://www.nashvillemta.org/Nashville-MTA-New-Bus-Shelters.asp> ).

- a. Our Adopt-a-Stop program differs from the Nashville project slightly. The Nashville renovations were a city project, while we are suggesting a project that mostly outsources responsibility for the renovations. We want community partners to invest in the bus stops, and thus renovate them on their own, and by doing this they can add their own personal touch to the bus stop. For instance, a local business could invest in a bus stop that corresponds with a route that leads to their store. The investment then becomes a marketing tool for the business, increases the cleanliness and uniqueness of the stop, and thus is a win-win for both parties.
2. The second step in this project is to gather interest from investors in the city. These investors would agree to renovate a stop, and then would begin the process of creating innovative stops around the city. Interest could be gathered by talking to local business, individual investors, non-profit organizations, and various other Chattanooga entities.
  - a. Some interest has already been seen from members of the Innovation District, and they would be a great area to start in.
3. Once interest has been gathered, the dynamics and logistics of the specific stops identified would need to be worked out. There would be guidelines set out by the city and CARTA would implement requirements for the update. These could include adding a city map to the design, having some sort of identifier for the stop, or having a cover for passengers. The investor would work out with the city if there are certain issues with their idea and the stop with the city (i.e. if the idea meets specific city ordinance guidelines)

and CARTA (i.e. making sure the idea isn't offensive and meets the upgrade requirements).

4. The individual investor would handle the cost of building and maintaining the stop.
5. Finally, evaluation of the stop would be determined by the increase of ridership, increased Internet and foot traffic of investors, and an improvement of aesthetic appeal of the bus system. Targeted surveys developed (or the Chattanooga Community Survey) by CARTA would measure the usage and aesthetic appeal, while companies and investors would be able to manage their personal product by analytics of manual measurement of foot traffic. If these stops show improvement in these areas, the process could expand and more stops could begin to be invested in and renovated.

**Evaluation Plan:**

- Adopt-A-Stop
  - a. Companies getting involved will want to know that their investment is paying off.  
To show this we will want to evaluate:
    - i. General measure of interest in company investment. We will evaluate this by creating a survey, or some other means, to investigate if companies/civic groups would want to do this. A moderate interest level (8-12 stops) would be seen as an initial success to the program, while long-term a high volume of stops (25+) would be seen as a success.
    - ii. Internet traffic, people in and out of local stores, publicity (Marketing Metrics): Companies would use a metric service (i.e., Google Analytics) to measure Internet traffic before and after the stop has been implemented. Local companies could also take a general measurement of foot traffic in

their respective stores. A general increase in either of these categories would be seen as a success.

b. Measurements of Improvement:

i. General Increase in Ridership: One of the main ways to assess if this was working would be to measure the general ridership increases of CARTA and the Bikeshare programs.

1. Statistically measured by CARTA and Bikeshare. They would measure this the same way they do now, but with a before and after measure after implementation.

ii. Calculations from Volunteers to count riders at specific stops before and after would be used to see if there was an actual increase in usage of the specific bus stop changed.

1. Simple measurement increase would be considered a success, as volunteers would measure usage at various times before and after implementation.

iii. Surveys of bus stops and bus aesthetics before and after improved stops would be a key measure in if this program was working.

1. The Chattanooga Community Survey and specific targeted demographic surveys would be developed to see if there was an overall improvement in the appeal of CARTA and the Bikeshare. Specifically, we would want more people saying that they had tried the bus initially, and rated it as good/very good on the Community Survey.



2. Lead Conversions (Share bus-stop story!): An alternative way of measuring this that could be used is a Lead Conversation Marketing Approach. A website or program could be developed where citizens and riders could share stories and tell more about the two entities.

## 2. This Way

- a. A Targeted student, tourist, & citizen response. We would want to measure each demographic differently, and rate them accordingly. Generally, an increase in ridership and increased Internet traffic would be key after implementation.
  - i. Focus groups, social media traffic, possible apparel sales, and brand measurement (Google Analytics): These tools would be used to measure if the plan was working. To rate this as a success, there should be a significant increase in Internet traffic for the This Way Campaign and the programs involved (CARTA, Bikeshare, CDOT, etc.).
- b. Increased membership/usage in BikeShare and general increase in CARTA usage
  - i. Measure student, tourists, and citizen membership specifically. Both of these entities would want to see an increase in ridership, usage, and membership after this campaign has been implemented. A success would be seen as there being significantly more members and riders for each of these programs.
- c. Survey of before and after about aesthetics and convenience of BikeShare/Bus system
  - i. Community Survey: Increased response of usage, how well they report its

used, decreased response of non-usage

- ii. Individual Targeted surveys measuring specific entities: Important to the This Way campaign specifically. Independent surveys would need to measure the This Way brand specifically to see if it was making a difference and if people were taking notice. This should NOT be done at the very end of the campaign or at a set end date, and should be measured periodically. A success would be seen as an increase in the This Way brand and increased publicity because of it.

d. Increased Financial Gain for BikeShare & CARTA

- i. A final and smaller goal of these programs is a financial benefit due to these programs. While these two entities are public and may not turn a profit, an increased usage should eventually lead to some financial gain. Cost per customer measurements (analytics) could be used to measure this specifically, with a success being defined as a significant increase from using these ideas.

**References and Investigation Resources:**

Transportation Resources

<http://www.chattanoogachamber.com/media/downtown.pdf> - Chattanooga Demographics

<http://www.timesfreepress.com/news/local/story/2015/sep/28/cartexpects-transportatireport-november/327491/> - News article describing transportation advances in Chattanooga

[http://www.chcrpa.org/TPO\\_reorganized/Plans\\_and\\_Programs/Transportation\\_Improvement\\_Program\\_\(TIP\)/2014-2017\\_TIP/FY\\_2014-2017\\_Final\\_Approved\\_TIP\\_Document\\_10152013.pdf](http://www.chcrpa.org/TPO_reorganized/Plans_and_Programs/Transportation_Improvement_Program_(TIP)/2014-2017_TIP/FY_2014-2017_Final_Approved_TIP_Document_10152013.pdf) -

Chattanooga Transportation Improvement Program

<http://www.chattanooga.gov/internal-audit-files/2015CommunitySurveyReport.pdf> - Community Survey

## Reports

<https://www.psprint.com/resources/brochure-flyer-marketing-budget/>

[http://www.vistaprint.com/posters.aspx?GP=4%2f27%2f2016+4%3a32%3a35+PM&GPS=3925394903  
&GNF=1](http://www.vistaprint.com/posters.aspx?GP=4%2f27%2f2016+4%3a32%3a35+PM&GPS=3925394903&GNF=1)

<http://www.vistaprint.com/custom->

[banners.aspx?GP=4%2f27%2f2016+4%3a38%3a13+PM&GPS=3925394903&GNF=1](http://www.vistaprint.com/custom-banners.aspx?GP=4%2f27%2f2016+4%3a38%3a13+PM&GPS=3925394903&GNF=1) - Cost

## Estimations

<http://www.nashvillemta.org/Nashville-MTA-New-Bus-Shelters.asp> - Nashville Plans

Also have been using two preexisting (non-academic) surveys on active/alternative transportation provided by Phil Pugliese as references for our work throughout.