

SSAC 2018-19 Transportation Team

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April 23, 2019

Expanding UCF Shuttle Service – Final Proposal

Background

The University of Central Florida is a leader in creating a more resilient and sustainable college campus. We continue to make progress towards strengthening our campus-wide commitment to sustainability. We seek to recognize the complex challenges of today that impact all of us, not only on the University of Central Florida campus. Since we are the connection from the student perspective to the policies and practices of the University, we can identify specific issues that can be addressed to strengthen the University's commitment to sustainability.

Our recommendation is focusing on promoting shuttle ridership and limiting the carbon emissions from students and faculty. By increasing shuttle ridership, we can limit the amount of cars driving to and from campus as well as reduce queue times for parking.

The implementation of another shuttle or reorganizing current routes will allow for more students to take advantage of public transportation and cultivate a more sustainable lifestyle for individuals living in and near University of Central Florida's neighborhood.

Objectives

The main objectives of this project will englobe all the corresponding aspects for a successful understanding and future expansion of the UCF shuttle services. During the initial research stages, prior to any specific use of data gathering techniques or official meetings, it has become evident the existence of informational silos and the low levels of integration between all involved parts. Each individual department, or organization, has conducted efforts of improving their services but the lack of cooperation and knowledge transfer has caused underused transportation services and benefits.

- **Promote shuttle services communication, collaborations, and partnerships.**

Back in 2007, The University of Central Florida pledged to reach climate neutrality by the year 2050. This is a gradual and evolving process that will drastically change the campus attendants' behavior, drifting away from singular forms of transportation into more sustainable ways like electric vehicles and mass transportation services. Combining the necessity of more effective transportation and a comfortable service that fulfills the student's needs, it is possible to increase the quality of the shuttle services and promote their utilization. The utilization of personal vehicles by commuters into campus is responsible for a great portion of the greenhouse gases (GHG) emissions associated with the University activities, this must be mitigated.

- **Reduce carbon emissions by improving ridership**

There is a necessity for more effective routes and shuttle services. Not every location around the University's campus is being served at the moment, this could be due to a combination of factors of low density areas and shortage of transportation units. Some other places with high population density are also missing the services and it seems to be because a dialogue has not been established.

- **Strengthen community relationships with neighboring student's housing, renters, and homeowners associations.**

Research Questions

This project requires research regarding ridership in order to determine the most economically sensible routes and stops for additional shuttles. Thus, research questions will address the following uncertainties:

- Which neighborhoods contain the highest student populations?
- Will students show interest in using this commodity?
- How can a route be structured to minimize drive time, yet maximize impact?
- How can student body presidents incorporate this on their platform?

Apart from obtaining student survey information, it is important to determine the percentages of certain neighborhoods which consist of students. This may be accomplished by contacting HOA's (less efficient, more accurate), or by determining rental unit percentages via the

Orange County Property Appraiser website, and assuming a percentage of renters which are students (more efficient, less accurate). This will allow us to determine target neighborhoods for shuttle routes.

Furthermore, a notion of UCF's relationship with local HOA's is to be determined in order to see if they'll allow shuttles to enter the neighborhood. Unless the community is gated, these are county roads and they cannot legally deny access. Coordination with A.J Range of UCF Community Relations will ensue for this information.

Significance

This project attempts to touch on the SSAC Mission & Committee Charge to reduce carbon neutrality for the UCF campus by 2050. Increasing bus ridership and therefore reducing automobile traffic to campus represents a major step in achieving this goal. Furthermore, the project seeks to integrate sustainability across several disciplines, a goal landmarked for 2025, by incorporating participation from public administration and marketing. Although confined to UCF campus and the surrounding neighborhoods, expansion of the shuttle service reflects well onto the city of Orlando's Sustainability Goals as well, outlined to increase trips regarding carpools, transit, biking, and walking. This project coincides with an increased level of service for public transit in the Greater Orlando area.

Methodology

- Research for the "student data" will begin with a survey to be routed via Facebook student pages, or with the assistance of the UCF marketing department. The latter will depend on the turnout sample size from the initial delivery.
- In order to obtain renter data, a member of the team will utilize the Orange or Seminole County Property Appraiser map. This methodology is based upon the confident assumption that the majority of rental housing northeast of campus consists of students. This assumption does not apply to non-student housing apartment complexes (i.e, the Glenn,

the Rexford, Waterford Lakes, etc.) where all housing is rented. Additionally, GIS can be used to produce maps of which neighborhoods contain the most students/renters.

- While this research is being developed, additional coordination will take place between the SSAC Transportation Team and LYNX to discuss the free ridership for UCF students program currently in place. This program is underutilized and we are currently conversing with LYNX officials to determine if this program could become more mainstream with students.
- Once research is concluded and data is compiled, it will be presented in deliverable form to both the 2019-2020 SSAC cohort, as well as potential SGA presidential candidates. Presidential candidates will have the option to include this tangible information as support to part of their campaign to “increase shuttle services.” Coordination between Alex and SGA Senate member, Robert Sells, has commenced to identify potential presidential candidates for the upcoming election.

Literature

Many college campuses across the country provide shuttle service to off-campus students. Nationwide, college students cite convenience, time, accessibility, and parking availability as the primary reason to utilize a shuttle service to reach campus, according to a study conducted at the University of North Dakota. A study by Massachusetts Institute of Technology (MIT) cites safety as a major factor for ridership. However, this particular case study is comparing shuttle ridership to walking (especially at night) whereas pedestrian travel is not a major commuting style at UCF. Based on the culture at UCF, the relation of parking availability and convenience are likely to be major factors. Texas A&M University has a similar ratio of on-campus to off-campus housing to that of UCF, and operates a fleet of 79 shuttles both on and off campus (Hanover). TAMU owns and operates this fleet itself, and uses heat-map overly (a GIS method of determining density) to locate the complexes or neighborhoods most appropriate for shuttle routes and stops.

Hanover Research. (2014). Best Practices in University Transportation Services. *Academy Administration Practice*. Retrieved February 12, 2019.

Tieskoetter, R. (2018, August 24). The Challenges, Opportunities of Operating University Campus Shuttle Services. Retrieved February 12, 2019, from <http://www.metro-magazine.com>

Work Plan

1. Release “student opinion” surveys
2. Compile and interpret data
3. Use this data to back the need for expanded shuttle service
4. Obtain renter data for neighborhoods near UCF to determine student “hot spots” via GIS
5. Discuss feasibility of bringing shuttle routes to local HOA’s (commenced)
6. Meanwhile, work with LYNX to determine feasibility of coupling the existing service with new routes (depending on responsiveness of LYNX representatives) (commenced)
7. Network with potential SGA candidates to produce awareness of the push (commenced)