



Sustainable Improvements to Embry-Riddle's Shuttle Services



EMBRY-RIDDLE
Aeronautical University
CIVIL ENGINEERING

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Introduction

- The shuttle service is a free of charge transportation service operated by the Student Government Association (SGA) for Embry-Riddle Aeronautical University (ERAU) students.
- The current operations are limited to the following locations:
 1. Eagle Landing
 2. Chanute-Eagle Landing
 3. Bellamy
 4. Onshore
 5. Micaplex-Eagle Landing facilities
- Current Operating hours:
 - Monday through Friday
 - 7 am to 8 pm

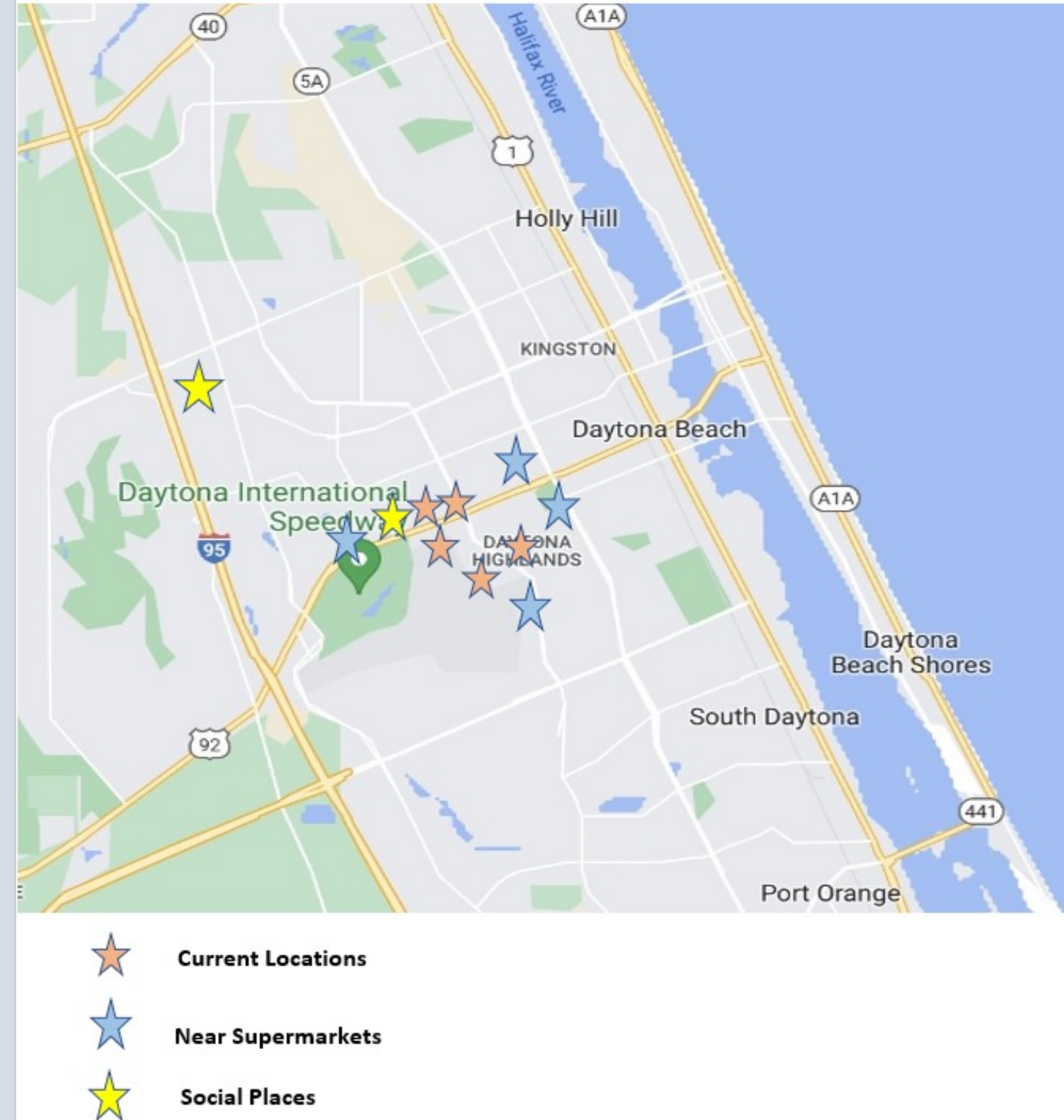


Figure 1. Locations of the shuttle current and future destinations.

A Sustainable Shuttle System

- Why would Embry-Riddle need a sustainable shuttle system?
 1. To encourage the use of the shuttle system and help with the reduction of carbon footprint of individuals by carpooling.
 2. To minimize school and student expenses related to transportation cost.
 3. To improve students' well-being by allowing them access to recreational activities and necessities.
 4. To improve the environmental, economic and social sustainability for the entire university.
- What would a more sustainable shuttle system look like?

Sustainability within the shuttle system will keep providing the same services now with the ability to provide greater services in the future to the student population.

How to create of create a sustainable shuttle system?

1. Increase the number of apartment complexes the vans are eligible to go.
2. Add stops to local supermarkets and large plazas where students can do weekly grocery shopping.
3. Add stops to social places on the weekends.
4. Increasing the number of vans for more student use.

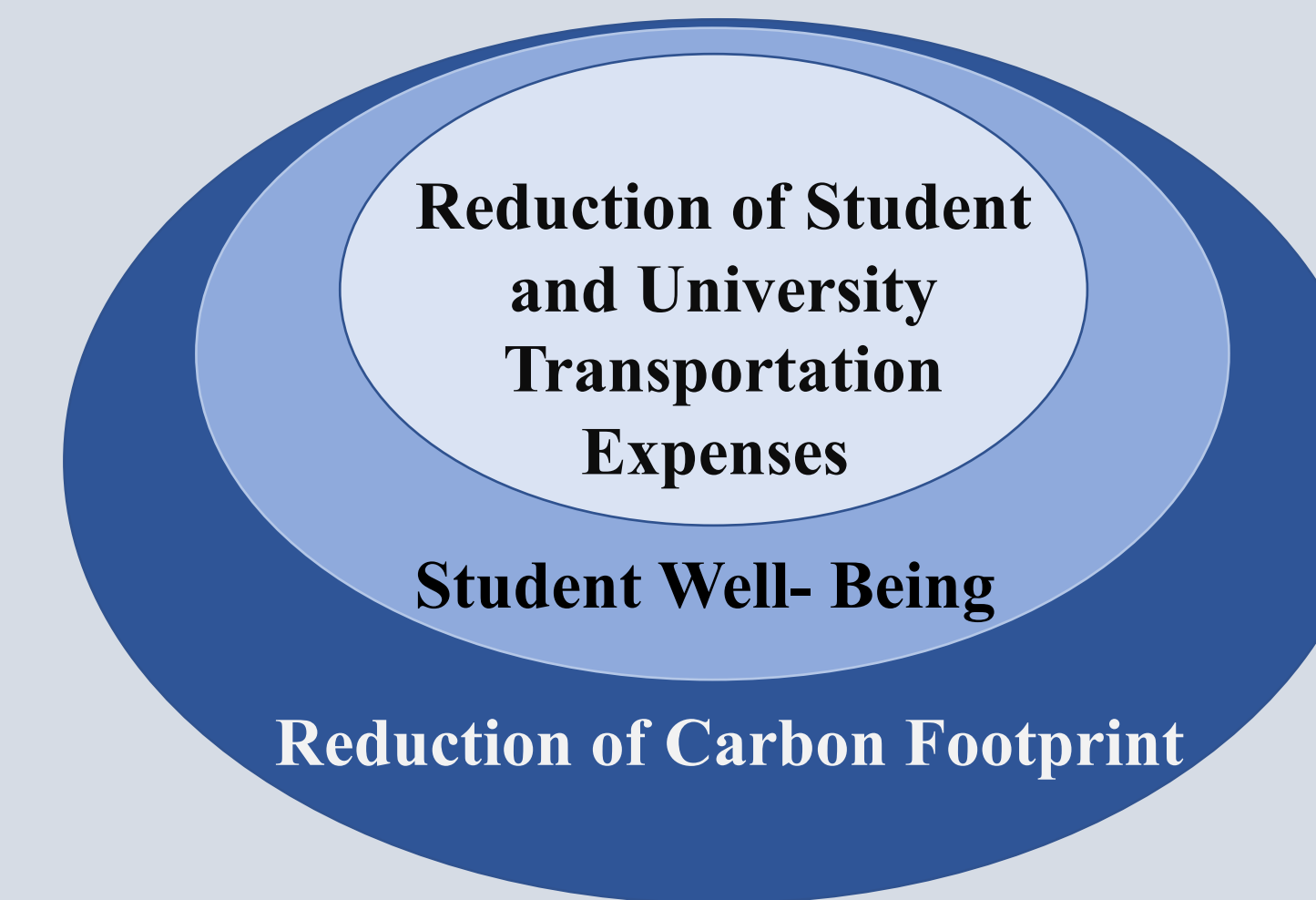


Figure 2. Nested sustainability model for the shuttle van sustainability plan.

Goals

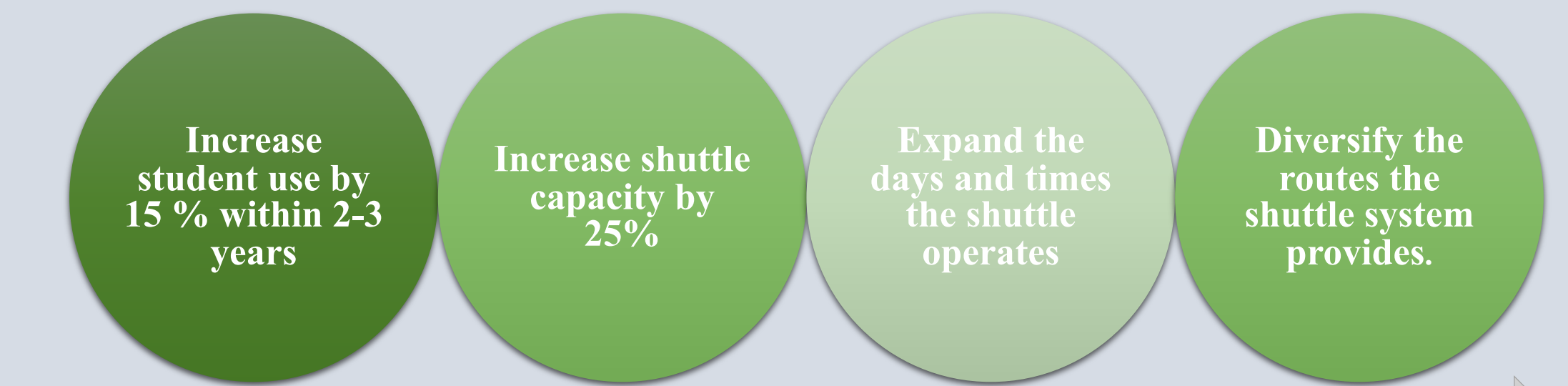


Figure 3. Short Term Goals.

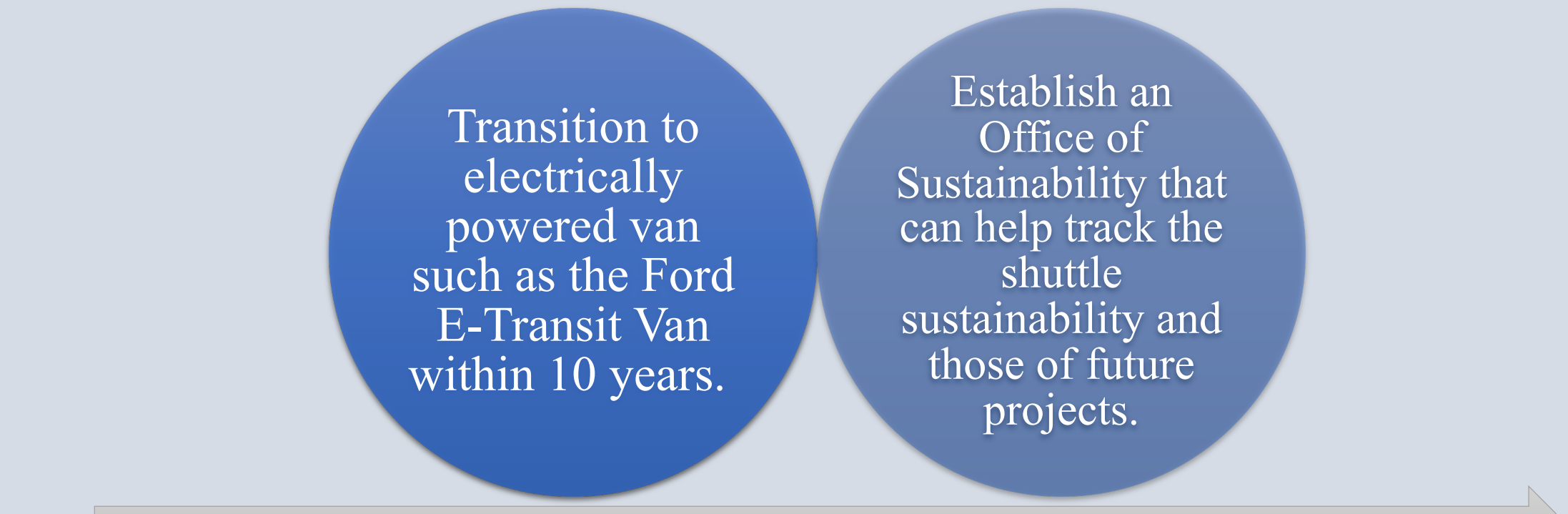


Figure 4. Long Term Goals.

Results

Current Status

To accommodate the growing student population Embry-Riddle has spent \$11M to create more parking spaces.

2022 Transportation Census

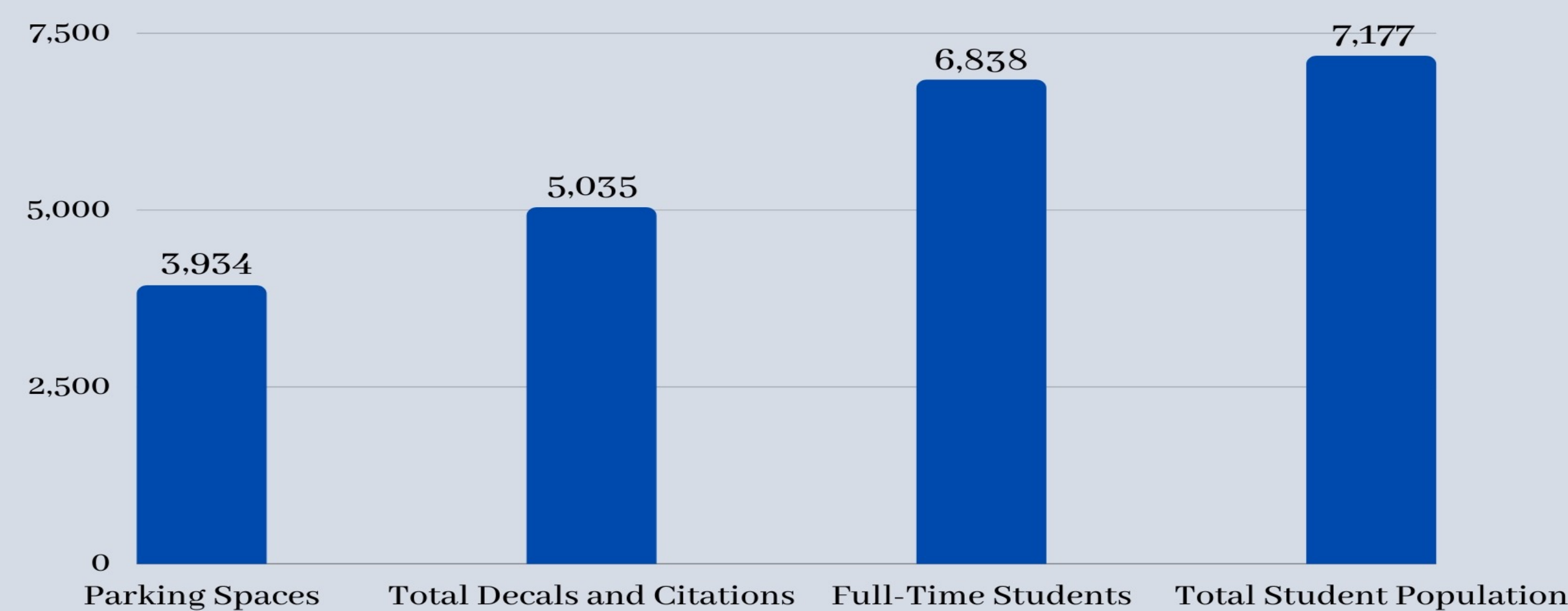


Figure 4: ERAU 2022 student population against the available number of parking spaces.

- Every year around 1,800 students enroll in the university and 63% stay for a 6-year career.

Survey

- A survey was conducted to gather information on students in the Lehman Building, COAS, and the Student Union on their opinions of the shuttle system by asking questions on the use of the shuttle and if new routes and times will be beneficial.
- 70 students participated in the survey

Shuttle Use After Improvements are Made

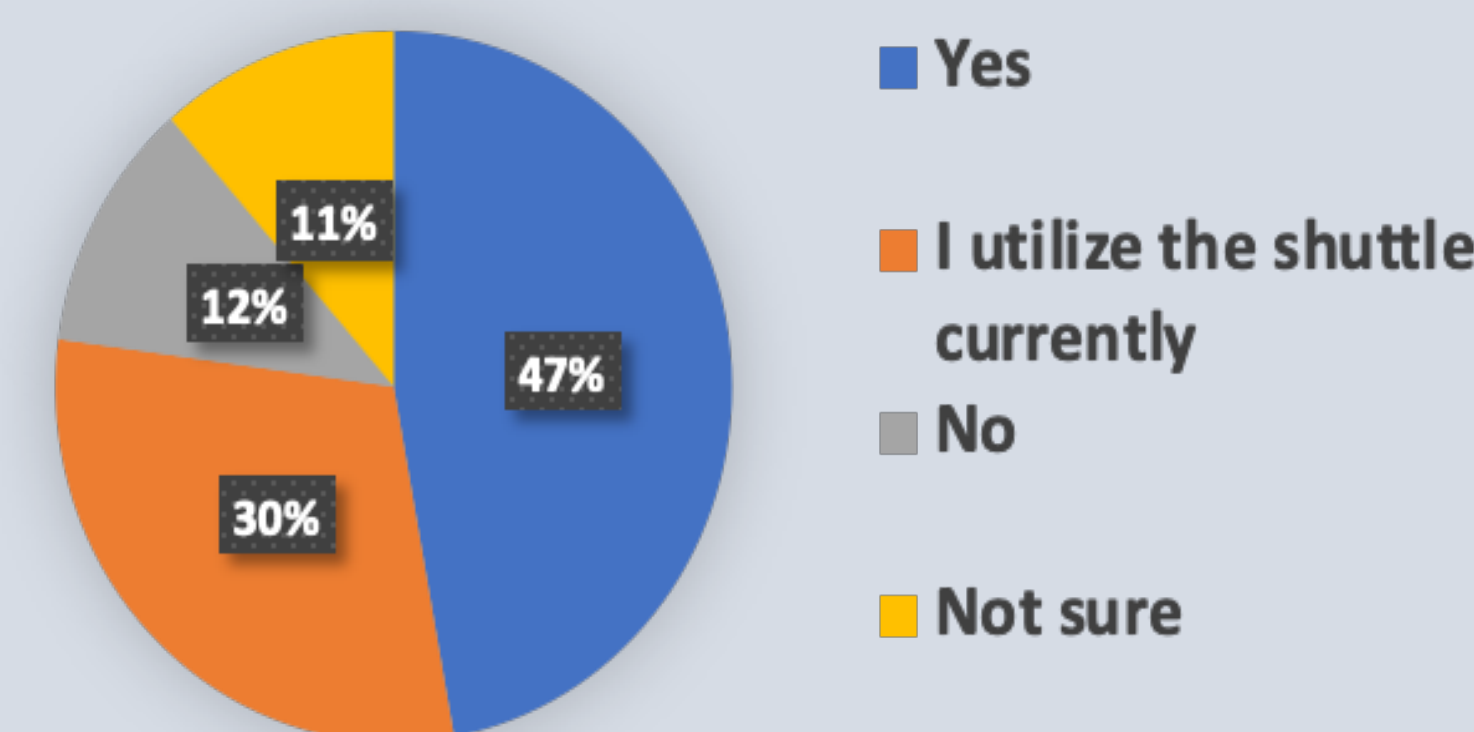


Figure 5. Results of students using the shuttle after improvements.

Short Term Improvements to the Shuttle Service

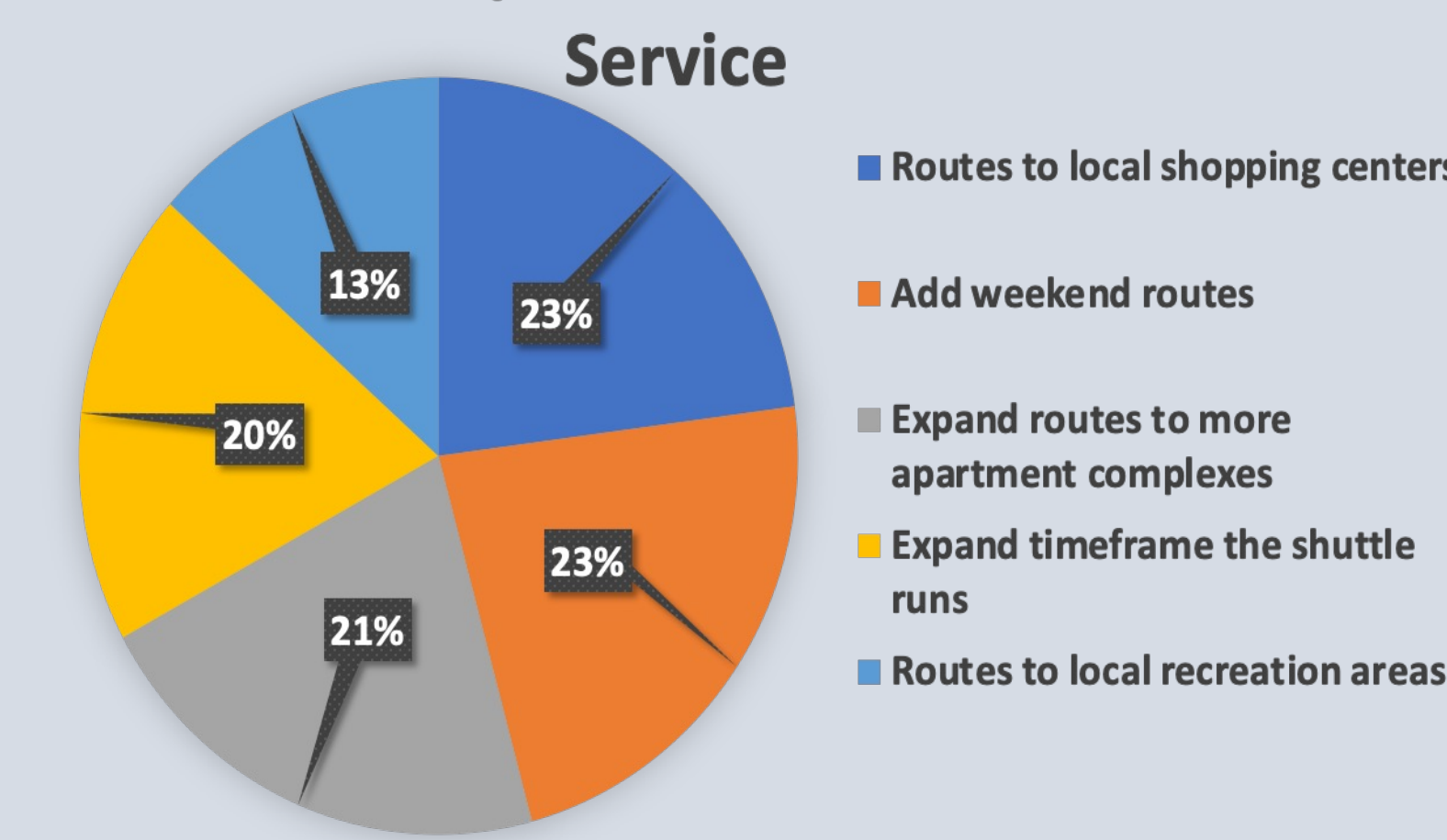


Figure 6. Results of short-term improvements.

Stakeholder Analysis

A stakeholder analysis is implemented to understand how to communicate our plan across diverse stakeholders with the financial and social ability to bring this plan to life.

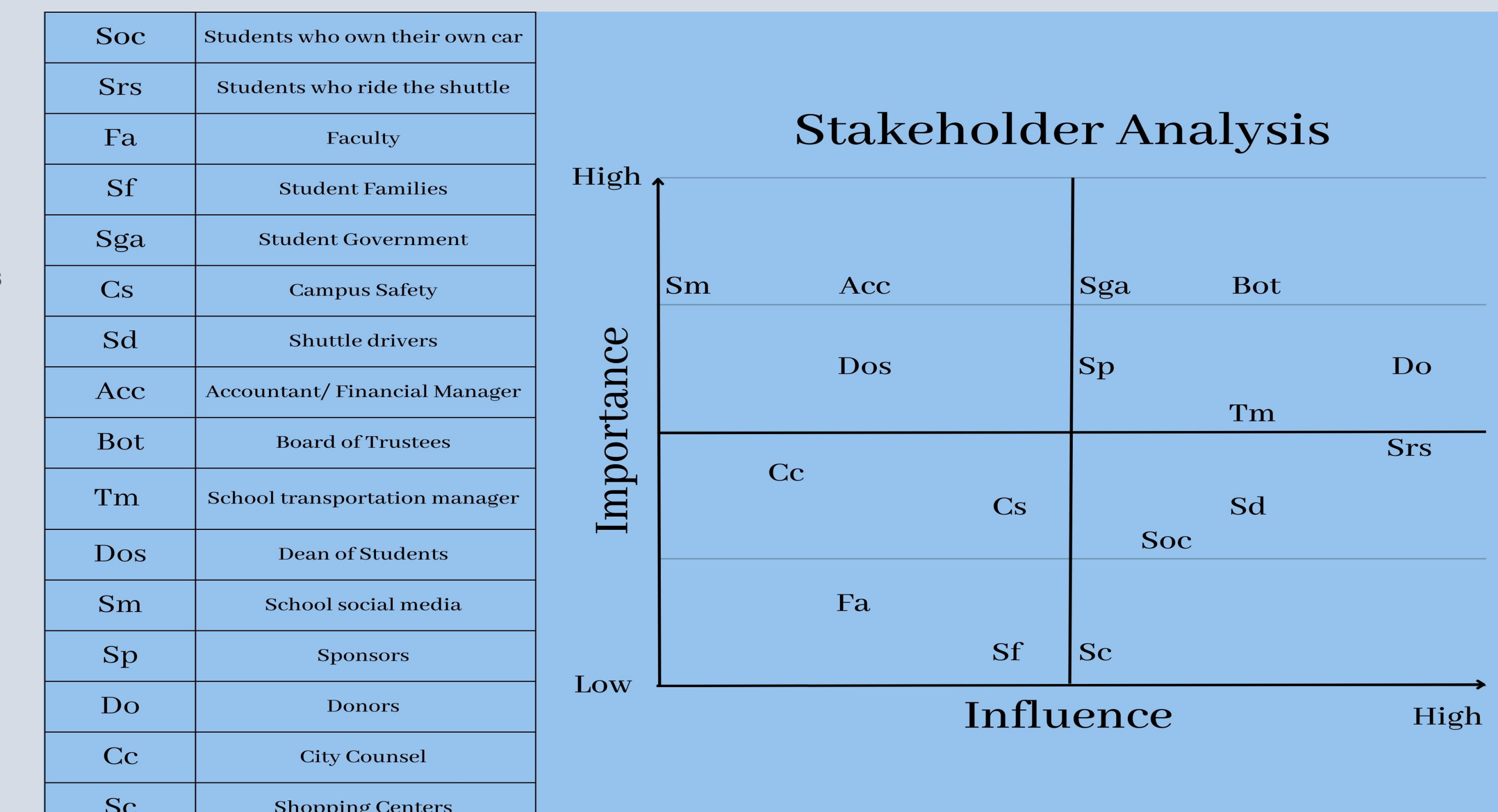


Figure 7: Stakeholder Analysis for ERAU shuttle system.

Conclusions

- The establishment of a sustainable improvements to the van shuttle systems will improve the well-being of students by allowing them to save on their expenses and help reduce their personal carbon footprint.
- This plan will help the university by reducing the amount of funds used to keep adding parking spaces and direct them towards other projects.

Acknowledgements

- SGA for providing information on their current shuttle van attendance.
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- Campus IT for providing information on student drivers.
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References

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