

## Enhancing Campus Mobility with Autonomous Transit Solutions

Carlo Asam, Emily Cai, Adrian Ong, Viki Shi, Alex Trinh, and Christine Uy

**POTENTIAL ROUTES** 

#### BACKGROUND

In collaboration with UC San Diego, Beep, and TESIAC, our team aims to explore solutions for improving first/ last mile connections in the UCSD campus transportation network.

Through comprehensive market analysis and user research, we aim to develop a final proposal document containing potential shuttle routes in the La Jolla area and key user insights and analytics.

This project is designed to **enhance** mobility access for students by introducing Beep's autonomous zeroemission shuttles on campus.

#### **OBJECTIVES**

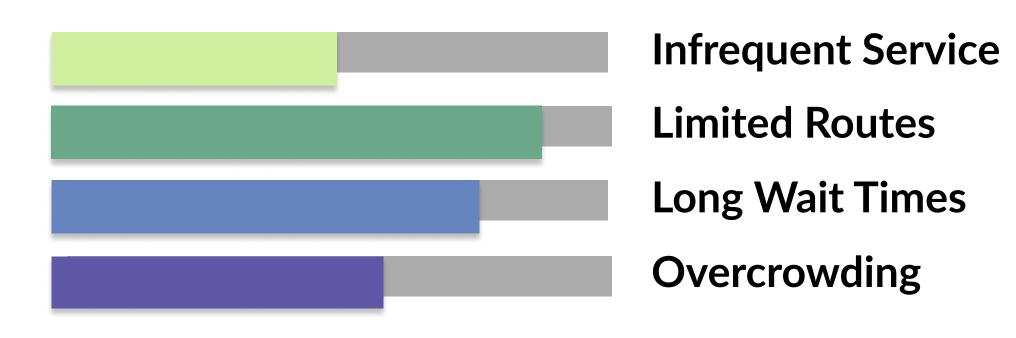
Our final deliverable will be a **mobility** planning document that includes potential service areas, technology recommendations, and identifies potential local partnerships to support the effort moving forward, which highlights:

- Recommended routes/service types
  - Informed by a student survey of potential riders
  - Identifies specific pickup and dropoff Points
- Vehicles to support the program
- Service times & trip frequency
- Economic factors
- Key stakeholders to support the program
  - UCSD Transportation Department
  - Existing transportation network & locating any gaps

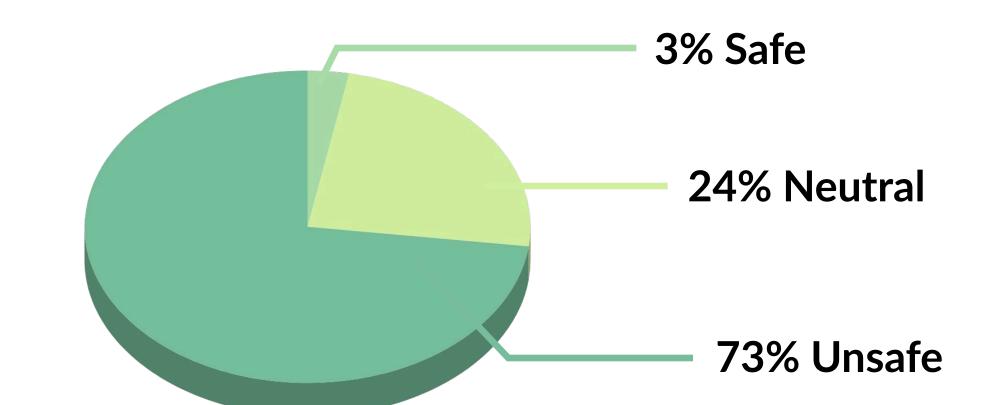
### OUTCOMES & DELIVERABLES

#### **USER RESEARCH ANALYTICS**

Main Concerns with MTS



#### Do students feel safe using the MTS after dark?



We recommend that UCSD partner with Beep to launch an on-demand autonomous shuttle with operational hours focused after 9 PM.

#### FINAL PROPOSAL DOCUMENT



Our **final proposal** document going over our full research progress! Check it out for a better look and explanation of data, routes and hotspots!

#### POTENTIAL HOT SPOTS



Convoy Sixth College La Jolla Village Square UTC and more...!

### LEARNING OUTCOMES

- Customer discovery & market research
- Data analysis and evaluation,
- Working alongside Stakeholders
- Evaluating individual components of a problem together (logistics, financial, desirability etc.)
- Adapting to challenges and problem solving

#### **NEXT STEPS**

With a plan in place, our next steps will be to discuss the actual implementation of Beep's autonomous vehicles as **night** shuttles catered towards students. This will involve:

- Meeting with UCSD Administration
- Developing accompanying mobile app
- Coordinating with UCSD **Transportation Services**

#### PROJECT JOURNEY & MILESTONES



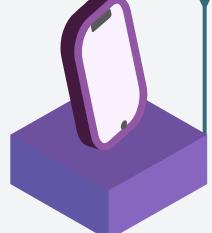
### Meeting the Team

Discussing the strengths /



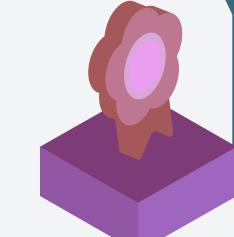
#### Refocusing the Scope

Shifted project focus to La Jolla and the UC San Diego campus based on project alignment. Revising our user research methods to better fit the new target audience.



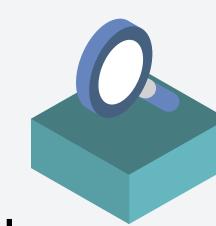
#### **Reaching Out**

Initiated outreach to UCSD Transportation Services to discuss feasibility and logistics. Began researching funding opportunities, including university grants and clean energy



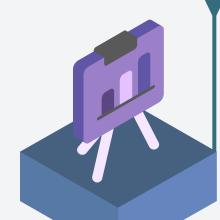
Finalize our proposal and recommendation report, that summarizes our research and findings. Also creating this research poster!

weaknesses of our team and establishing roles is an integral part of any project



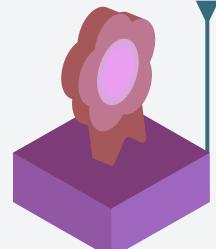
#### **CIVITA Outreach**

Researched the city of CIVITA and its existing transportation system. Distributing surveys at various locations to gather public input on the needs and preferences for an autonomous shuttle.



### **Analysis and Interviews**

Analyzed survey results to understand the transportation needs of students, staff, and faculty. Met with Beep to discuss potential solutions based on community feedback.



# Final Deliverables



Learn more about this

