The Future of Mobility at Northeastern University

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Overview

- Determine demand
- Gain an understanding of student awareness and interest
- Provide recommendations based on market
Introduction

- Shared micromobility - any small, human or electric-powered transportation solution such as skateboards, bikes, e-bikes, scooters, e-scooters, or any lightweight vehicle that is being used as a shared resource between multiple users (Transportation for America, 2020)
  - Docked and dockless formats
Vision

• Provide tools to effectively engage in micromobility
  • Which options to support
  • Recommendations for implementation
  • Prepare for the future
Goals

• Assess demand for micromobility at Northeastern University’s Boston Campus
• Maximize positive effects
• Minimize negative effects
Objectives

- Conduct Student Survey
- Meet SMEs
- Online Research
- Bluebikes Data Analysis
Key Findings – Survey Data: Current Transportation Trends

![Chart showing transportation to/from campus by Northeastern University students. The chart compares primary and secondary methods of transportation. The methods include walking, public transportation, driving personal vehicles, Uber/Lyft/Carpool, bike share program, personal bicycle, and other. The percentages are displayed for each method.](chart.png)
Key Findings – Survey Data: E-scooters

• 74% of students are aware of e-scooters programs
• 35% have used them in the past
• 66% would be willing to try e-scooters
• Most notable concerns amongst students
  • Cost
  • Safety
Key Findings – Survey Data: Bluebikes

- 77% of students are aware of Bluebikes
- 21% of students have actually utilized Bluebikes in the past
- 67% are unaware of their locations
- 43% would use it more often
- Most notable concerns amongst students
  - Cost
  - Safety
Key Findings – Bluebikes Data

- Increase in use every year from 2015-2019
  - 1.1 million bike rentals in 2015
  - 2.5 million bike rentals in 2019
- Average ride 30 mins or less
- Hubs of interest
  - Ruggles
  - North Parking Lot
Destinations of Bluebikes Rentals from NU 2019
Origins of Bluebikes Returns to NU in 2019
Key Findings – Positive Effects

- Demand
  - Grew faster than rideshare (Ajao, 2019)
  - Technology continuing to develop (Hours, 2019)
- Solution for first mile/last mile problem
- Traffic congestion
- Parking issues
Key Findings – Negative Effects

• Dockless can become tripping hazard
• Cities still learning how to integrate into urban plan (Zarif, Kelman, & Pankratz, 2019)
  • Is it really more sustainable?
  • Life span
Key Findings – Regulatory Environment

• E-scooters are currently not permitted
  • Legacy policies targeting mopeds effect e-scooter legality

• Bills underway
  • H.3073      • S.2034
  • S.2049      • HD.520

• Under proposed legislation e-scooters:
  • Will not need operational stop and turn signals
  • Will not need to keep to the right side of the road at all times
Recommendations - Communication

- Get the word out!
- Add traditional and digital signage around campus
- Pass information via paper and digital flyers
- Relay information at student orientation
Recommendations - Safety

- Require helmets
- Limit use to suitable roads
- Consider adding additional bike lanes
- Limit speeds in dangerous areas
- Roaming enforcement officers
Recommendations - Aesthetics

- Utilize geofencing
- Create dedicated storage corrals
- Roaming enforcement officers

Storage corral in Washington, D.C. (Clabaugh, 2019)
Other Considerations Around Campus

- Scope
- Sustainability
- Congestion
- Public Transportation
- Financial Impact
Other Considerations (continued)

- Wayfinding
- Accessibility
- Equitability
- Add covered bike racks
- Add showers
Next Steps

• Continue to monitor:
  • Technology improvements
  • Legislation
• Conduct data based research after implementation to improve effectiveness
  • Ensure implementation effects socio-demographic groups equally
  • Add additional routes and storage corrals
• Monitor for novel safety concerns
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References


