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

![Graph: Transportation to/from Campus by Northeastern University Students]

- **Walking**: 45% (Primary), 20% (Secondary)
- **Public Transportation**: 40% (Primary), 35% (Secondary)
- **Driving Personal Vehicle**: 15% (Primary), 10% (Secondary)
- **Uber/Lyft/Carpool**: 5% (Primary), 3% (Secondary)
- **Bike Share Program**: Negligible
- **Personal Bicycle**: Negligible
- **Other**: Negligible

*Percentage of Students*
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.2049
  - S.2034
  - 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


