Ultimate Urban Circulator

Program Overview
Industry Forum
May 23rd, 2017
Ultimate Urban Circulator

» Forum objectives
• Share our vision for the U²C program
• Obtain feedback from industry partners
• What we learn will be used to define:
  o Project scope
  o Project phasing
  o Implementation strategy
Presentation Overview

» History

» Skyway Modernization Recommendations
  • System Plan
  • Preferred Technology

» Examples of Autonomous Transit

» Key Considerations

» Next Steps
History

» Skyway planning originated in the early 1970s to address:
  • Downtown traffic congestion
  • Air quality
  • Parking

» 1977, the project was transferred from the city to JTA for continued development and implementation

» JTA completed a series of technical studies and applied for demonstration project funding

» 1980’s, skyway is one of the automated people movers systems that were built in the U.S.
Skyway Historical Timeline

Skyway System Development Timeline
Where are we in the process?

- Technology Assessment
- Policy Development/Skyway Advisory Group
- Skyway Modernization Program
- U^2C Project Development
- Design and Construction

- Keep
- Modernize
- Expand
System Plan

Supporting Downtown Mobility
Existing Skyway
Existing Skyway – Neighborhoods
Existing Skyway – Development
Existing Skyway – Development
Skyway System Expansion
Ultimate Urban Circulator
River Crossing

* Conceptual Rendering
Population and Employment

2017 Population Density Within 1/4 Mile of the U2C

2017 Employment Density Within 1/4 Mile of the U2C

Traffic Analysis Zones (TAZ)

2017 Population Density:
- 0 to 5 Per Acre
- 5 to 10 Per Acre
- 10 to 15 Per Acre
- 16 to 20 Per Acre
- Over 20 Per Acre

Source: Rockville METRO Plan

Traffic Analysis Zones (TAZ)

2017 Employment Density:
- 0 to 5 Per Acre
- 5 to 10 Per Acre
- 10 to 15 Per Acre
- 16 to 20 Per Acre
- 21 to 26 Per Acre
- 27 to 32 Per Acre
- Over 32 Per Acre

Source: Rockville METRO Plan

Scale: 0, 125, 250 Feet

2017 Total Population Within 1/4 Mile of U2C = 12,141

2017 Total Employment Within 1/4 Mile of U2C = 61,647
Population and Employment
Desired System Attributes

Ultimate Urban Circulator (U²C)

» Utilizes investment in Skyway
» High frequency and reliable service
» Flexible and context sensitive
  • Capacity to handle peak event loads
  • Operate elevated or at street level
  • On demand and point to point capacity
Preferred Technology Option
Preferred Vehicle Technology

Next Generation Autonomous Vehicle (AV)

» Flexible
  • Operates at street level or elevated
  • Operational flexibility

» Cost effective

» Best approach for extensions

» Technology rapidly developing

» Unique opportunity for deployment of AV
U²C Cost Effectiveness

» Vehicles and operating system
  • Expected savings in excess of 50%

» Stations and extensions
  • Expected savings in excess of 75%

» Operations and maintenance
  • AV annual operating cost savings up to 25%

» One-time conversion costs
  • Guideway
  • Operations and maintenance center
Examples of Autonomous Transit
Autonomous Vehicle Examples

» Easymile
» Local Motors
» Navya
» Ultra Global
» 2getthere
Key Considerations
Key Considerations

» Infrastructure conversion
» Vehicles
» Operating system
» Operating characteristics
» Project delivery
Path Forward - Next Steps
Next Steps

- Technology Assessment
- Policy Development/Skyway Advisory Group
- Skyway Modernization Program
- U²C Project Development
- Design and Construction
Next Steps

» Request for Information (RFI)
  • RFI Responses June 16

» State of the Authority
  • Speaker: Dr. Dean Bushey

» AV Pilot/Test Track
U²C Program Master Timeline

AV Pilot/Test Track
- Design/Constr.
- 5 years

System Conversion
- Project Development
  - 1 year
- Procurement & Funding Plan
  - 1 year
- Design & Construction
  - 2-3 years
- Winter 2017

System Expansion
- Project Development
- Brooklyn Extension
  - 5-7 years
- Five Points to Sports Complex
  - 7-10 years
- Remaining expansion segments
  - 10+ years
- River Crossing