Ultimate Urban Circulator

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Automated Skyway Express

» 2.5 mile, bi-directional system
» 8 Stations
» Elevated guidebeam
» 6-8 minute headways
» 5000 trips on average weekday
» 6 am to 9 pm weekdays and special events
» Vehicles past midlife
» Structure and vehicles have remaining useful life
Automated Skyway Express

» **Benefits:**
  ▪ Speed  
  ▪ Reliability  
  ▪ Capacity  
  ▪ Connectivity with fixed route bus

» **Challenges:**
  ▪ Vehicle obsolescence  
  ▪ Doesn’t reach major existing and planned development  
    ○ *Cost and intrusiveness/feasibility of extensions*  
  ▪ Frequency  
  ▪ Cost effectiveness (high cost per revenue mile)
Existing Skyway
The Solution: The Ultimate Urban Circulator (U²C)

» Retrofit existing Skyway system
  ▪ Remove guidebeam and create new running surface

» Replace with new vehicles
  ▪ Next generation autonomous vehicle technology
  ▪ Larger fleet of smaller vehicles to enhance frequency

» Expand system at ground level in dedicated lane and/or mixed traffic

» New river crossing to create riverfront transit and pedestrian loop

» Explore on-demand or point-to-point service as technology develops
Skyway System Expansion – U²C Program
Benefits of U\textsuperscript{2}C with AV Technology

» Uses existing elevated structure
  ▪ Maintains high level of reliability in urban core
  ▪ Ideal platform to deploy AV technology

» Flexibility
  ▪ High frequency or high capacity
  ▪ Elevated or at-grade

» Feasibility of extensions
  ▪ Context Sensitive

» Cost effectiveness
  ▪ Stations, guideway, vehicles and O&M less costly than current system

» Opportunity for future expansion and innovation
Autonomous Vehicle Examples

» Easymile (at JTA Forum)
» Local Motors
» Navya
» Ultra Global
» 2getthere (at JTA Forum)
Key Considerations

» Conduct structural analysis
  ▪ Evaluate guidebeam removal
  ▪ Create new running surface
  ▪ Assess wall requirements on elevated structure

» Determine station modifications required
  ▪ Accommodate different vehicle height

» Options for elevated-to-ground transition

» Identify dedicated lane opportunities

» Vehicle and operating system selection

» Maintenance and vehicles storage

» Project delivery and funding strategy

Remove Guidebeam
Next Steps

- Developing infrastructure conversion project
- Transit Concepts and Alternatives Review (TCAR) Study
- AV pilot and test track
- Funding and project delivery plan
Funding and Project Delivery

» **Traditional**
  - Securing grants (FTA, FDOT)
  - Lengthy process

» **Project delivery**
  - Design-build
  - Design-build-operate-maintain
  - Design-build-finance-operate-maintain

» **Public-Private Partnership (P3)**
  - Savings – reduced O&M costs
  - Fare revenue
  - Tax increment financing
  - Joint Use Development/TOD
  - State and Federal
U²C Program Master Timeline

AV Pilot/Test Track
- Winter 2017
- Design/Constr.

System Conversion
- Project Development: 1 year
- Procurement & Funding Plan: 1 year
- Design & Construction: 2-3 years
- System Expansion
- Project Development
  - Brooklyn Extension: 5 years
  - Five Points to Sports Complex: 5-7 years
  - Remaining expansion segments: 7-10 years
  - River Crossing: 10+ years