

# U.S. EPA's State and Local Energy and Environment Webinar Series

## New Mobility Mindsets: On-Demand Transit

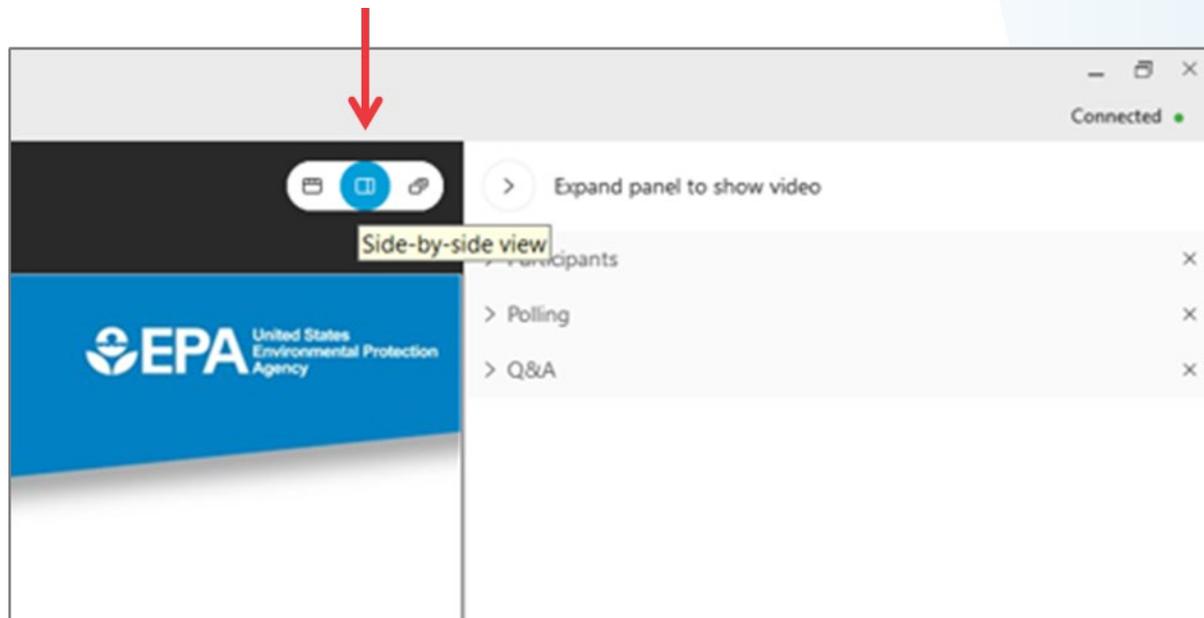
November 16, 2020  
3 pm Eastern

Three audio options:

1. Listen via computer
  2. Use WebEx's Call-Me feature
  3. Dial 1-415-655-0002 or 1-855-797-9485
- Event number: 171 624 1064



- There are several layout options
- We recommend the side-by-side view

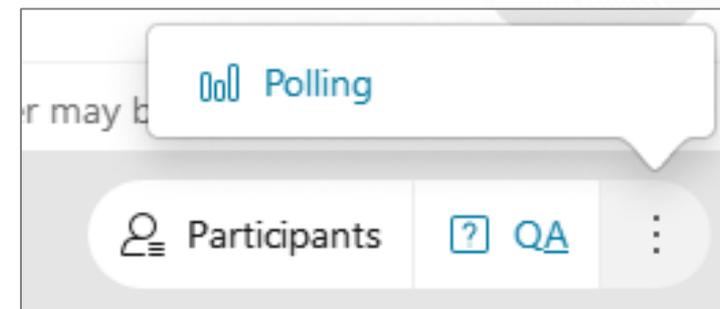


## We'll use three panels

- Participants, Polling, and Question & Answer (Q&A)
- Use the arrow to expand or collapse the panels

## Adding Panels

- If some panels don't appear, hover over the bottom of the screen and select the desired panels
- Select More Options (...) for additional panels
- Blue icons indicate active panels



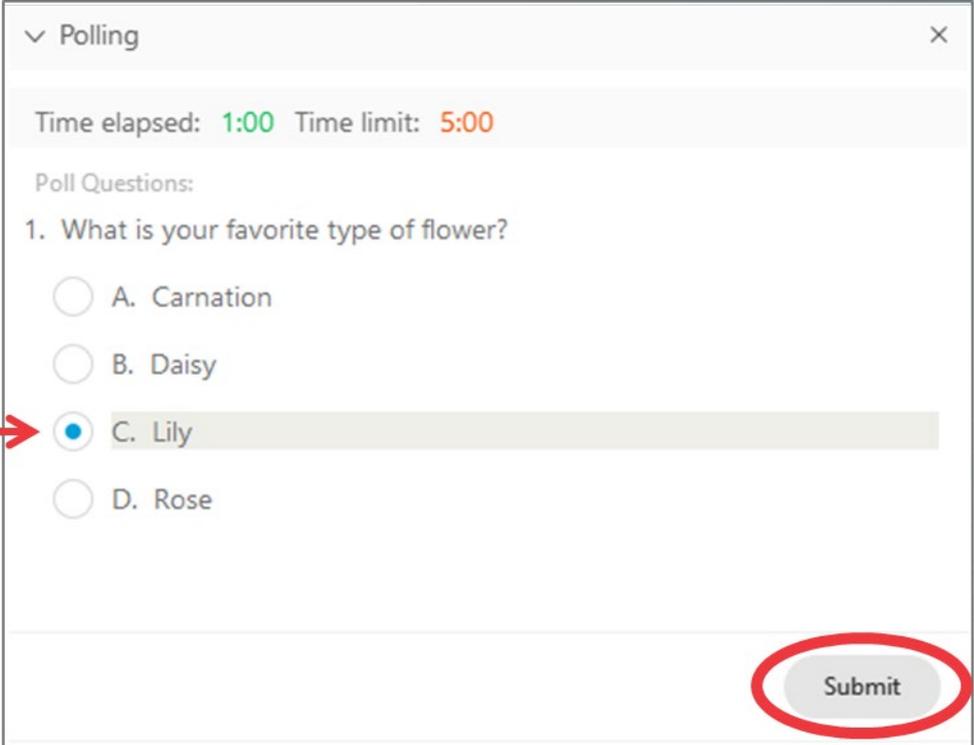
↑ Participants      ↑ Q&A      ↑ More Options  
Polling

## Polling

- We'll ask several poll questions during the webinar
- The polling panel will appear when we open the first poll
- Select your desired response and hit "Submit"

## Webinar Feedback

- A feedback form will pop-up when you exit today's webinar



▼ Polling ×

Time elapsed: 1:00 Time limit: 5:00

Poll Questions:

1. What is your favorite type of flower?

A. Carnation

B. Daisy

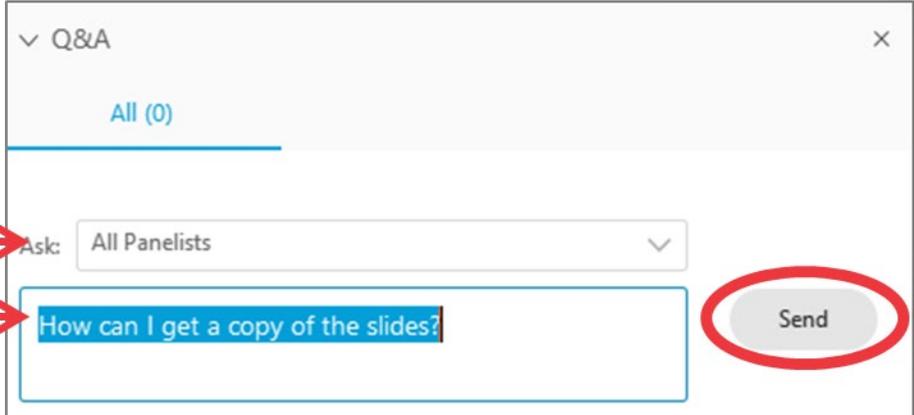
C. Lily

D. Rose

**Submit**

- Participants are muted
- Questions will be moderated at the end
- To ask a question:

1. Select “All Panelists” from the drop-down menu
2. Enter your question in the Q&A box
3. Hit “Send”



The screenshot shows a Q&A interface with a title bar "Q&A" and a close button "X". Below the title bar, it says "All (0)". There is a drop-down menu labeled "Ask:" with "All Panelists" selected. Below the menu is a text input box containing the question "How can I get a copy of the slides?". To the right of the input box is a "Send" button, which is circled in red. Two red arrows point to the "Ask:" menu and the text input box.

- EPA will post responses on the Webinar Series page:  
[www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series](http://www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series)

# Today's Agenda

- **Andrea Denny**, Office of Atmospheric Programs, U.S. Environmental Protection Agency (EPA)  
**Michelle Graff**, Office of Transportation and Air Quality (OTAQ), EPA
- **Arthur L. Guzzetti**, American Public Transportation Association (APTA)
- **Gary Thomas**, Dallas Area Rapid Transit (DART)
- **Elliott Doza**, Central Ohio Transit Authority (COTA)
- Question and Answer Session

*The views expressed by speakers on this webinar are solely those of the participants and EPA does not endorse any products or commercial services mentioned in this webinar.*

**Andrea Denny**

Local Energy and Environment  
Program Lead

**Michelle Graff**

Physical Scientist

U.S. Environmental Protection Agency



# U.S. EPA's State and Local Energy and Environment Program



- We offer free tools, data and technical expertise about energy strategies, including energy efficiency, renewable energy and other emerging technologies, to help state, local and tribal governments achieve their environmental, energy and economic objectives
- Access these resources at: [www.epa.gov/statelocalenergy](http://www.epa.gov/statelocalenergy)
- Electrification Webinar Series
  - ▶ Additional topics in 2021: codes, planning, public engagement
  - ▶ Get notifications by subscribing to our newsletter: [www.epa.gov/statelocalenergy/state-and-local-energy-newsletters](http://www.epa.gov/statelocalenergy/state-and-local-energy-newsletters)
  - ▶ Past Webinars: [www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series](http://www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series)
- ENERGY STAR Certified Electric Vehicle (EV) Supply Equipment: [www.energystar.gov/products/other/evse](http://www.energystar.gov/products/other/evse)

# U.S. EPA's Office of Transportation and Air Quality

- State, local, and tribal transportation resources: [www.epa.gov/state-and-local-transportation](http://www.epa.gov/state-and-local-transportation)
  - ▶ State Implementation Plans
  - ▶ Transportation Conformity
  - ▶ Vehicle Emissions Inspection & Maintenance and state fuel programs
  - ▶ Travel Efficiency and Greenhouse Gas (GHG) Planning
  - ▶ MOtor Vehicle Emission Simulator (MOVES), Calculators, and Tools
  
- Other resources
  - ▶ EPA Automotive Trends Report: [www.epa.gov/automotive-trends](http://www.epa.gov/automotive-trends)
  - ▶ Green Vehicle Guide: [www.epa.gov/greenvehicles](http://www.epa.gov/greenvehicles)
  
- Voluntary programs and initiatives
  - ▶ Clean Diesel program (Diesel Emissions Reduction Act | DERA): [www.epa.gov/cleandiesel](http://www.epa.gov/cleandiesel)
  - ▶ Ports Initiative: [www.epa.gov/ports-initiative](http://www.epa.gov/ports-initiative)
  - ▶ SmartWay: [www.epa.gov/smartway](http://www.epa.gov/smartway)

Andrea Denny  
[denny.andrea@epa.gov](mailto:denny.andrea@epa.gov)

Michelle Graff  
[graff.michelle@epa.gov](mailto:graff.michelle@epa.gov)



**State and Local  
Energy and Environment Program**

Visit Our Website | [www.epa.gov/statelocalenergy](http://www.epa.gov/statelocalenergy)

Sign Up for Our Newsletter | [www.epa.gov/statelocalenergy/state-and-local-energy-newsletters](http://www.epa.gov/statelocalenergy/state-and-local-energy-newsletters)

Join Our LinkedIn Group | [www.linkedin.com/groups/12129811/](http://www.linkedin.com/groups/12129811/)

## Arthur L. Guzzetti American Public Transportation Association



# *EPA New Mobility Mindsets Webinar Series*

## **On-Demand Transit**

**Art Guzzetti**

**Vice President – Policy and Mobility**

**American Public Transportation Association**

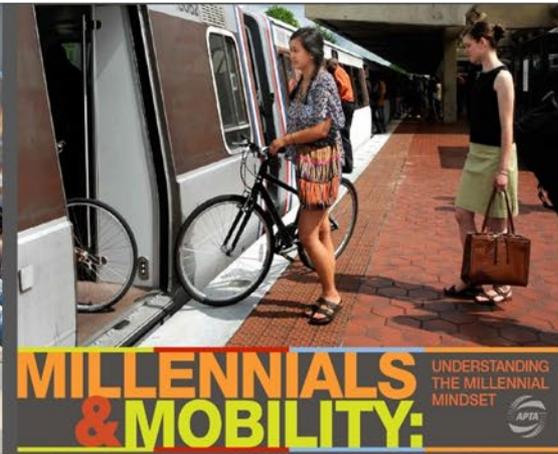


**AMERICAN  
PUBLIC  
TRANSPORTATION  
ASSOCIATION**

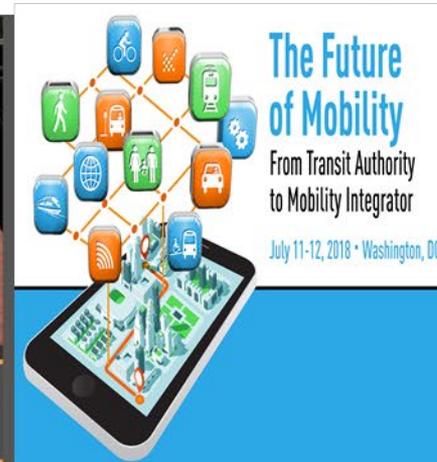
November 18, 2020

# New Mobility Mindsets

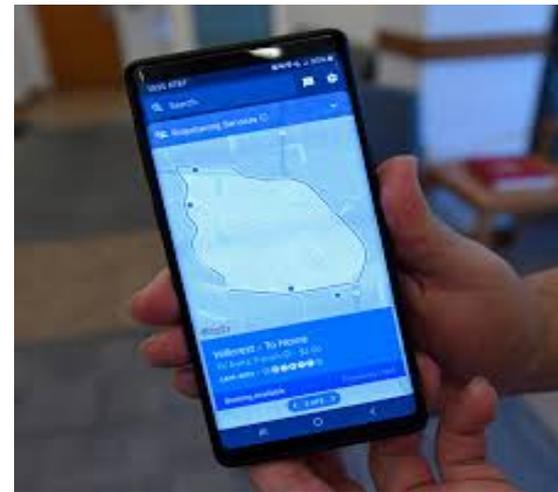
Cashless / Wireless / Paperless / Driverless / On-Demand / Integrated / Clean Powered



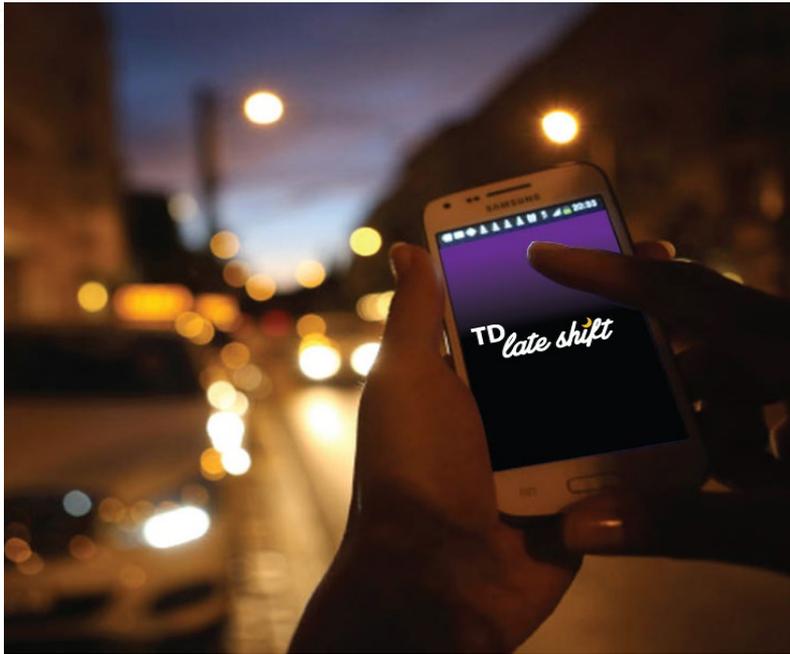
**MILLENNIALS & MOBILITY:** UNDERSTANDING THE MILLENNIAL MINDSET  
APTA



# App-based, on-demand service at Tri-Delta

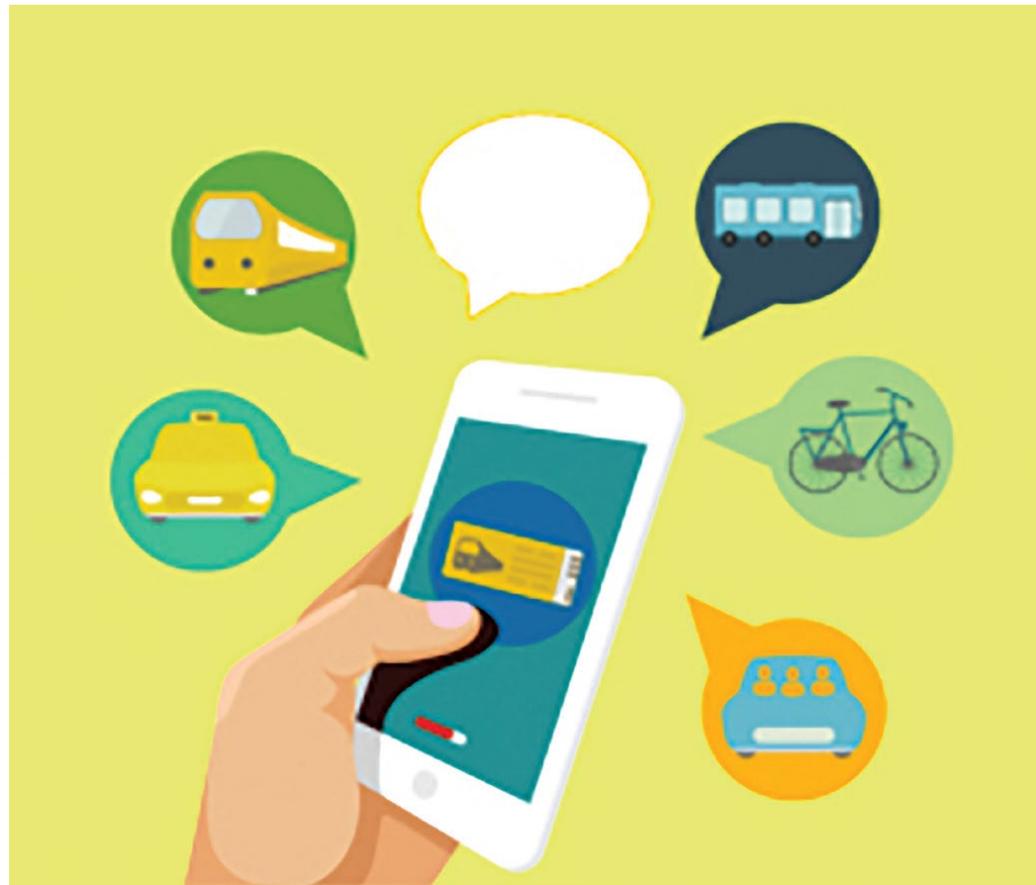


# Filling Service Gaps in Pinellas County, FL



# Mobility-as-a-Service (MaaS)

“The integration of a full range of mobility services into a single digital platform”



# Automated Transit Shuttles

- 80+ Low Speed Transit Shuttle Demos
- Operating under several different service models.
- Often public-private partnerships
- Procurement for 40-foot automated bus is underway
- Several projects are planning to operate on exclusive right of way (ROW)



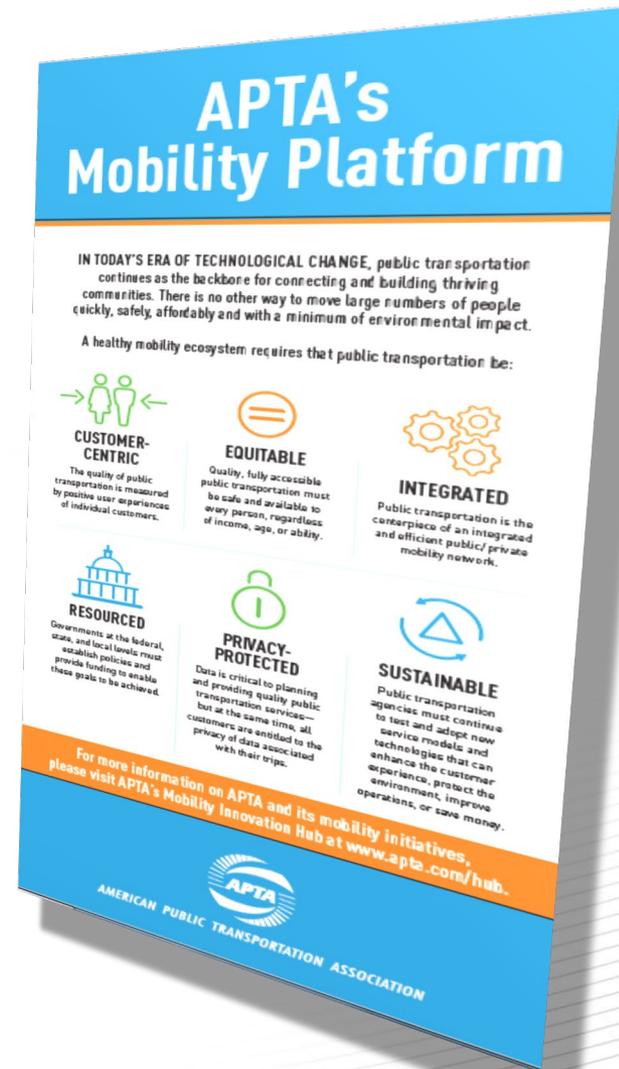
# Jacksonville Vision: Ultimate Urban Circulator



RS&H Vcz 2016

# APTA's Mobility Platform

- Customer-Centric
- Equitable
- Integrated
- Resourced
- Privacy-Protected
- Sustainable



**APTA's Mobility Platform**

IN TODAY'S ERA OF TECHNOLOGICAL CHANGE, public transportation continues as the backbone for connecting and building thriving communities. There is no other way to move large numbers of people quickly, safely, affordably and with a minimum of environmental impact.

A healthy mobility ecosystem requires that public transportation be:

- CUSTOMER-CENTRIC**  
The quality of public transportation is measured by positive user experiences of individual customers.
- EQUITABLE**  
Quality, fully accessible public transportation must be safe and available to every person, regardless of income, age, or ability.
- INTEGRATED**  
Public transportation is the centerpiece of an integrated and efficient public/private mobility network.
- RESOURCED**  
Governments at the federal, state, and local levels must establish policies and provide funding to enable these goals to be achieved.
- PRIVACY-PROTECTED**  
Data is critical to planning and providing quality public transit at the same time, all customers are entitled to the privacy of data associated with their trips.
- SUSTAINABLE**  
Public transportation agencies must continue to test and adopt new service models and technologies that can enhance the customer experience, protect the environment, improve operations, or save money.

For more information on APTA and its mobility initiatives, please visit APTA's Mobility Innovation Hub at [www.apta.com/hub](http://www.apta.com/hub).

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION



# APTA's Health & Safety Commitments Program

Agencies that pledge to fulfill the commitments below become partners in APTA's Health & Safety Commitments Program

## OUR COMMITMENTS TO RIDERS

## RIDERS COMMITMENTS TO ALL

### Agencies follow official guidance

Our policies and practices follow the latest science-based guidance from public health experts and agencies.

- Examples:
- CDC and/or federal, state and local health agencies
  - Transit agency health advisor
  - APTA's industry best practices



### Riders follow official guidance

Riders of diverse ages, needs, and abilities can feel safe and confident by following official guidance from public health experts and agencies.

- Examples:
- Stay informed of latest news and warnings.
  - Read and follow transit agency rules and policies.

### Cleaning & Disinfecting

Vehicles and stations will be cleaned, disinfected, and maintained daily using EPA-approved disinfectants and accepted industry practices.

- Examples:
- Cleaning and disinfecting all vehicles and facilities daily, with added attention to high-contact surfaces
  - HVAC/ventilation maintenance to ensure adequate fresh or recirculated air
  - Hand-sanitizer installed in stations and at stops where practical; sanitizing wipes installed on vehicles where possible
  - Contactless fare systems and fewer contact points



### Face Coverings & Clean Hands

When entering a public transit station or vehicle, riders will wear face coverings and, where possible, use hand sanitizer / sanitizing wipes.

- Examples:
- Face coverings must be worn (unless exempted for health condition or for children under age 2).
  - Hand sanitizer / sanitizing wipes are to be used as available.
  - Avoid contact with common surfaces; i.e. railings, handles, etc.
  - Practice good hygiene by covering coughs and sneezes.

### Information & Resources

Timely information about high-density routes and vehicles, and changes in service will be shared with riders on a frequent and regular basis so they can make informed travel choices.

- Examples:
- Frequent announcements and audio reminders on vehicles and at stations about safe practices, crowdedness, and service changes
  - Apps to provide latest info on crowdedness
  - Adjustments in service to reduce crowded vehicles, as feasible



### Physical Distancing

Riders will practice physical distancing to the degree practical. Riders and operators will avoid physical contact.

- Examples:
- Choose a transit vehicle with fewer riders or at less busy times when possible.
  - Use fare apps to minimize use of cash where available.
  - Minimize talking aboard vehicles.
  - Practice physical distancing from operators and other riders.

### Healthy Transit Employees

All public transit personnel will use face coverings and/or other personal protective equipment, and take leave at the sign of illness or possible exposure to the coronavirus.

- Examples:
- COVID testing for essential employees
  - Daily wellness / symptoms checks where possible
  - Training to keep employees and riders healthy
  - Mandatory face coverings and personal protection equipment
  - Use of physical barriers, boarding rules, and fare payments that help separate riders and operators



### Healthy Riders

Before using public transit, riders will assess their own health, including any risk of illness they may pose to others.

- Examples:
- Avoid using transit if you are ill or may have been exposed to the coronavirus.
  - Use face coverings and hand sanitizer / sanitizing wipes.
  - Follow physical distancing guidance where possible.
  - Assist health officials with contact tracing when possible.

# Health & Safety Commitments Program Seal



**Thank you for your time and attention!**

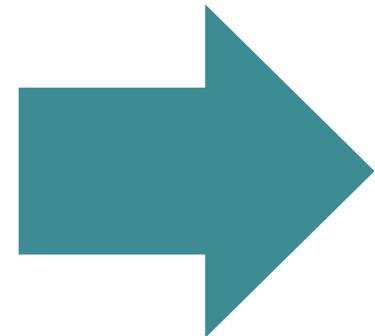
[aguzzetti@apta.com](mailto:aguzzetti@apta.com)



# What does the future of transit look like in your city? (select as many as apply)

- More electrification (including hydrogen) and/or hybrids
- An increase in the number of traditional bus or rail lines
- New bus rapid transit routes
- Move away from fixed transit (e.g., on-demand transit)
- Multimodal hubs
- It will look similar to the way it is now
- Other (answer in Q&A box)

**Poll 1**



# New Mobility Mindsets: On-Demand Transit

## Gary Thomas Dallas Area Rapid Transit





# **New Mobility Mindsets: On-Demand Transit**

---

Gary C. Thomas  
President/Executive Director

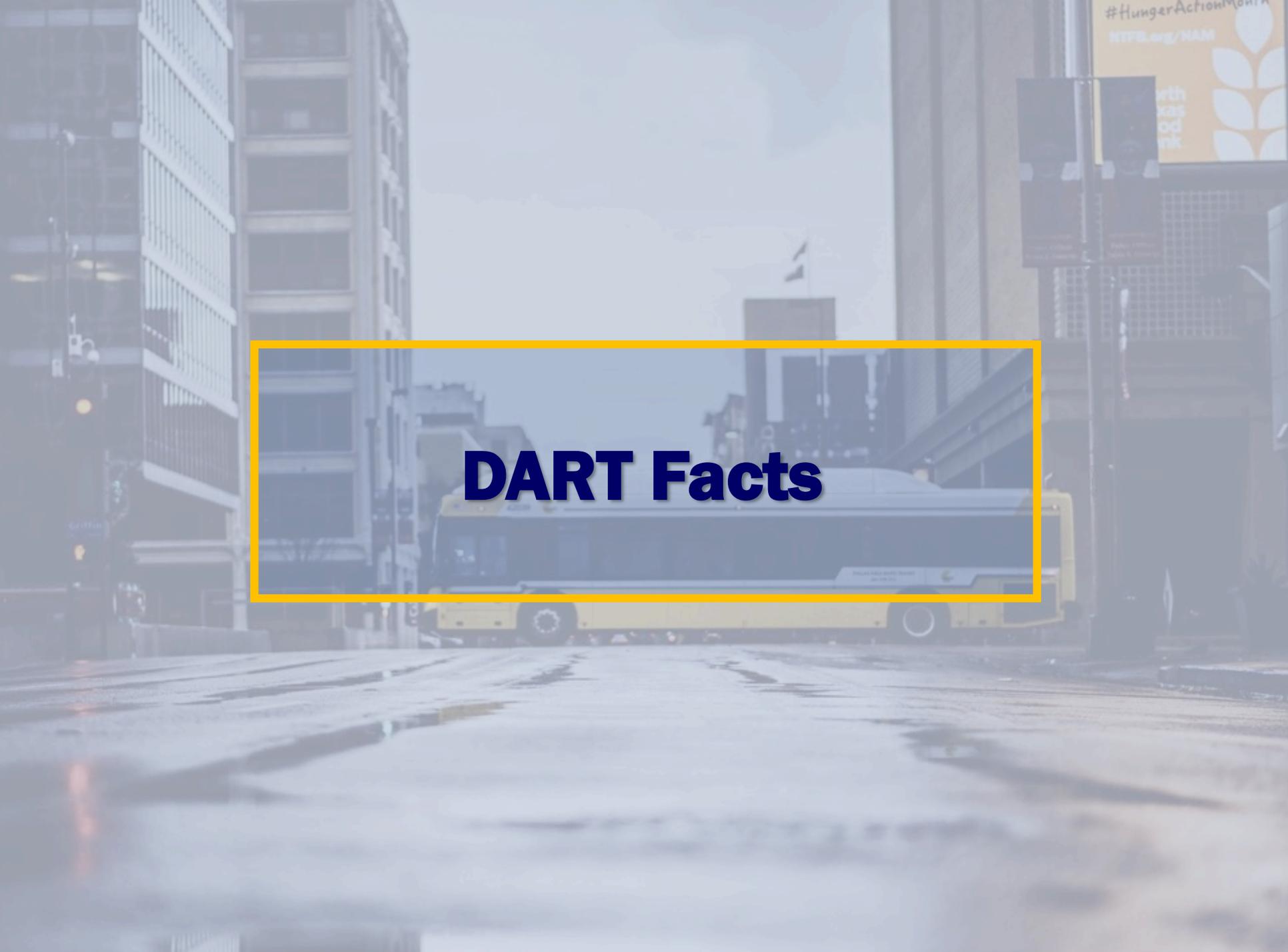
November 16, 2020



# Agenda

- DART Facts
- GoPass Mobile App
- Mobility as a Service (MaaS) Framework
- DART GoLink Microtransit
- Other Payment Options
- Final Thoughts



A photograph of a city street with a yellow and grey DART bus in the center. The bus is viewed from the side, facing left. The street is wet and reflective. Tall buildings line both sides of the street. In the background, a flag is visible on a building. On the right, there are traffic lights and a sign with the text "#HungerActionMonth" and "with kas food bank". A yellow rectangular box is superimposed over the bus, containing the text "DART Facts" in a bold, dark blue font.

# **DART Facts**

# DART Facts

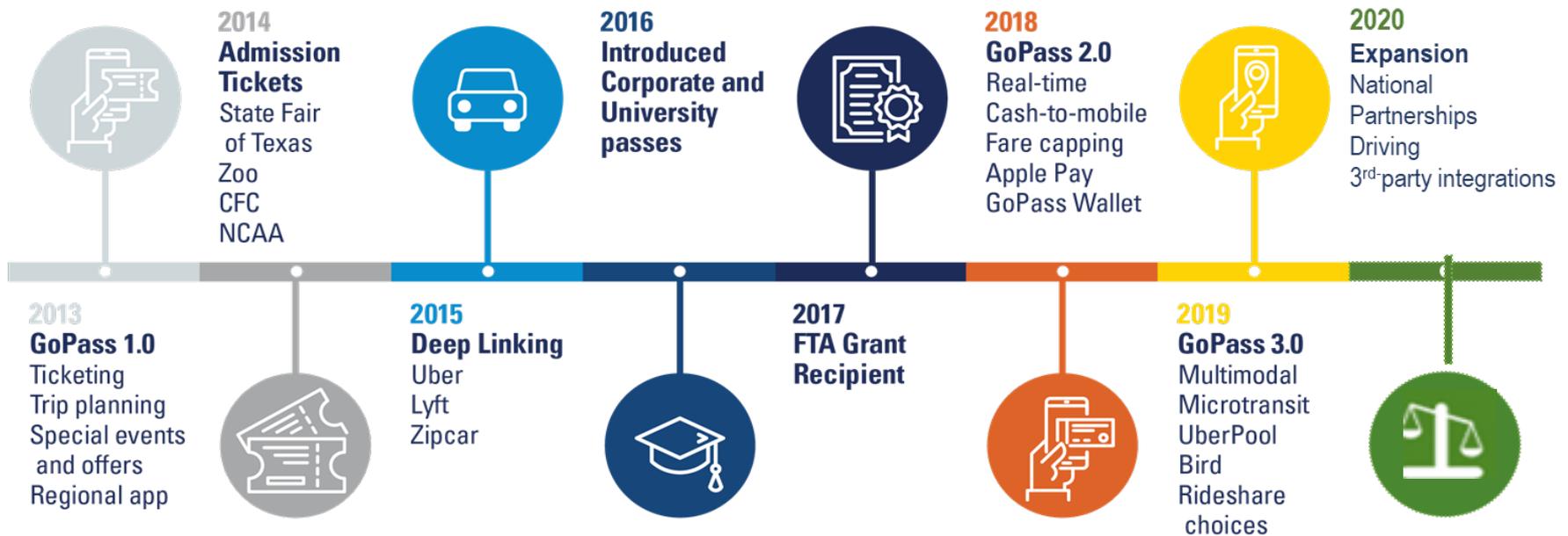
- Serves the City of Dallas as well as 12 surrounding cities in the North Texas region
- Modes of transport include buses, light rail, commuter rail, microtransit, streetcar, vanpool and paratransit services
- Moves more than 220,000 passengers per day across a 700-square-mile service area (Pre-COVID)
- 93-mile light rail system (longest in U.S.)
- 34-mile commuter rail system in the Dallas-Fort Worth (DFW) region
- And DART is continuing to expand....





# **GoPass Mobile App**

# GoPass Mobile App Journey



# Robust Trip Planning, Ticketing and Payment Platform

## Mature Multi-Agency Platform

- ✓ GoPass supports multiple Agencies across DFW region
- ✓ In operation since 2013, frequent feature additions
- ✓ Currently scaling to national partners
- ✓ White-label platform version also available
- ✓ Flexible open architecture

## Multi-Modal Trip Planning

- ✓ Seamless end-to-end directions for Point A – B – C
- ✓ Real-time vehicle status updates
- ✓ Map interface displaying DART vehicles in motion
- ✓ Additional options for TNCs & Micro-Mobility (Uber, Bird)

## Digital Payments & Cash to Mobile

- ✓ Cash-to-Mobile supporting unbanked riders (7-Eleven, Tom Thumb, Ace Cash Express & More)
- ✓ Google Pay, Apple Pay, All Major Credit Cards
- ✓ Digital Wallet solution for loading and storing value

## Rider and Operator Safety & Security

- ✓ DART See Something-Say Something integration alerts authorities to incidents and protect rider safety
- ✓ Rider Alerts from Agency presented to flag issues to riders



## Additional Rider Support

- ✓ Support to service riders in transit deserts through on-demand services
- ✓ Integrated Concessions for eligible riders (Low income programs, minors, seniors)
- ✓ Support for riders with additional needs (wheelchair, service animal)



## Regional Events & Wayfinding

- ✓ Presents and sell tickets to key regional events such as State Fair and NCAA events
- ✓ Local events promotion and listings through App



## Fully Integrated Microtransit

- ✓ GoPass includes full integration of GoLink™ Microtransit booking and payments, powered by Spare
- ✓ VIA Microtransit integration is planned for Q3 2020
- ✓ App intelligently offers Microtransit options for trips with origin or destination within defined zones, linking to transit hubs



# GoPass<sup>®</sup> Mobility as a Service (MaaS) App Platform

## GoPass by the Numbers

**11,300,000+** Tickets Sold

**1,300,000+** App Downloads

**80,000+** Special Events Tickets Sold

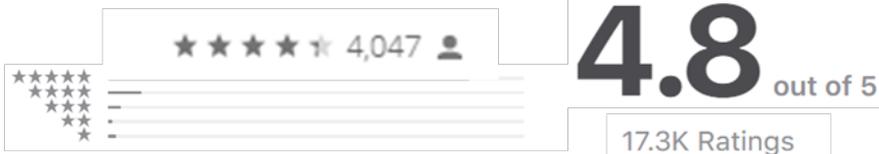
**35,000+** Uber Pool Bookings Initiated

## American Public Transportation Association (APTA) Award for 2019

GoPass<sup>®</sup> received 2019 APTA Innovation Award. Industry recognition for excellence, DART honored as award recipient



## Best App Store Ratings Across US Transit Market



★★★★★  
Erin Dragonrider, 10/30/2019

**Great discovery!**  
I am just discovering this pass with all of the features. I do not drive so this looks like a very promising release from isolation. My congratulations and thanks to all the peo [more](#)

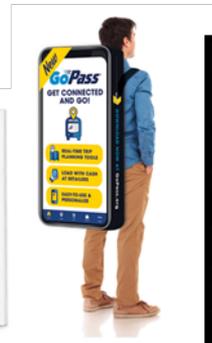
★★★★★  
soukb, 06/18/2019

**No cash**  
Driver told me no card was allowed only cash but he told me about the app so I downloaded it bought my ticket. I thought I was going to have to walk until he said something abo [more](#)

★★★★★  
Cratylus1998, 01/14/2019

**Best app ever**  
This app helps me navigate public transportation so easily. I just tell it where I want to go, and it shows me exactly which stops the train stops to take. I buy a pass [more](#)

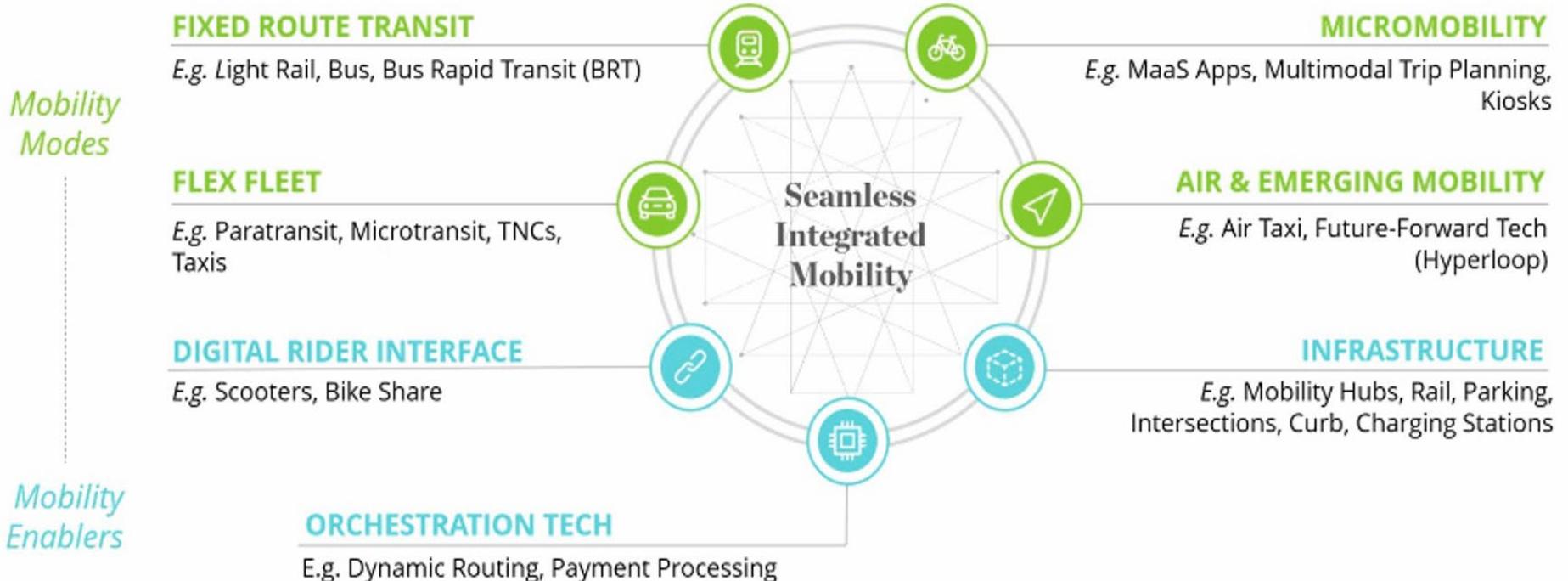
## Agency Voice Marketing Assets & Branding Support



A photograph of a city street featuring a blue and yellow tram. The tram is positioned in the center of the frame, moving along tracks. The background consists of modern glass-fronted buildings. A prominent sign on one of the buildings displays the number '1505' and a phone number '214-571-1905'. Another sign on the tram reads 'LEDGETTER'. A yellow rectangular box is superimposed over the tram and the text 'MaaS Framework'.

# MaaS Framework

# Public and Private Coordination across Transportation Modes & Enablers

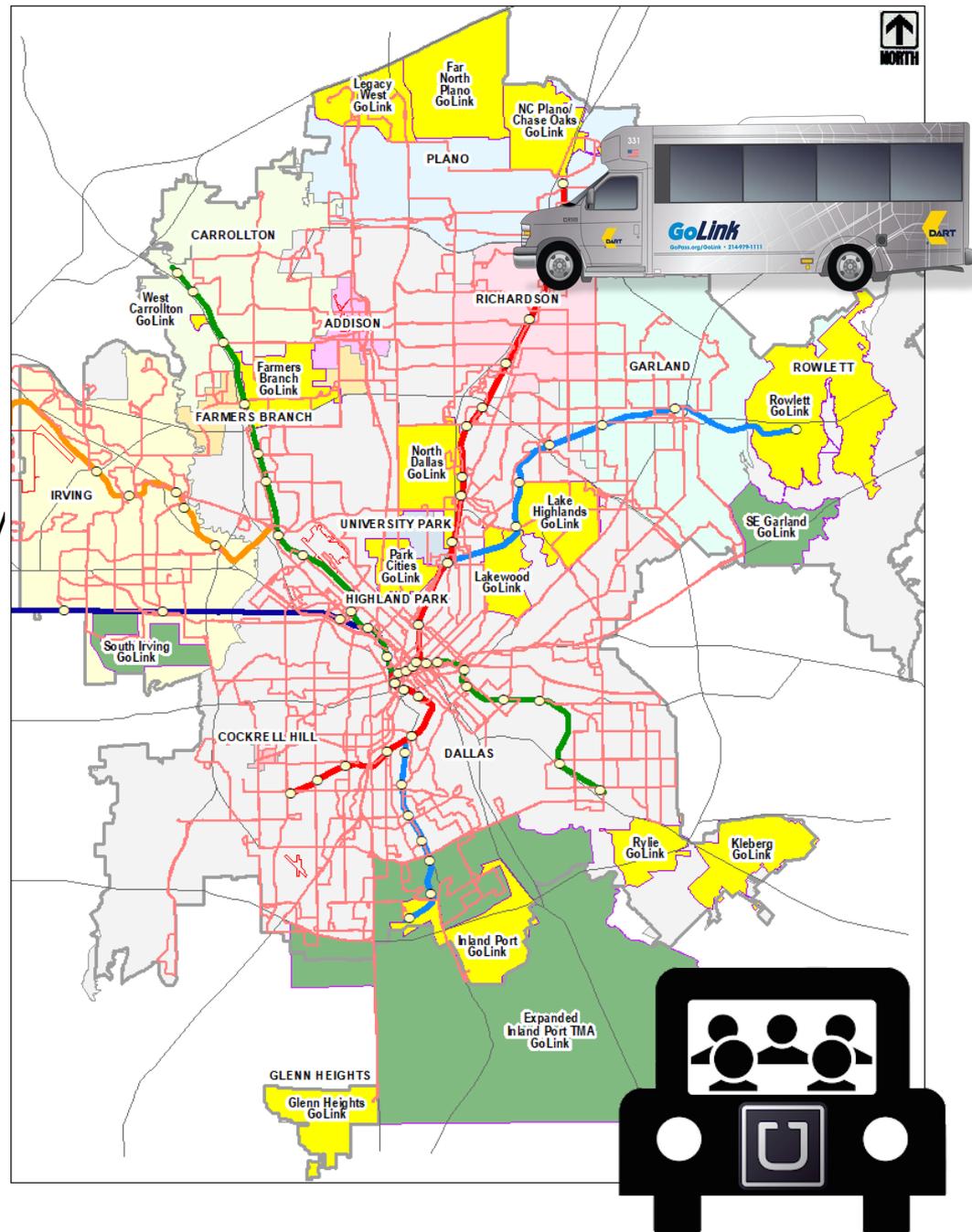
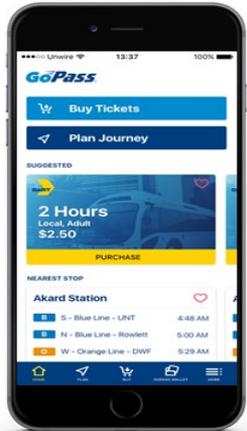


A yellow and white DART GoLink Microtransit vehicle is driving on a city street. The vehicle is a small, boxy, autonomous-style car. The street is wet, and there are buildings on either side. A yellow box highlights the text "DART GoLink Microtransit" in the center of the image. In the background, there are signs for "Hunger Action Month" and "Texas Food Bank".

# **DART GoLink Microtransit**

# DART GoLink Microtransit

- 1st Last Mile Service
- 17 zones in service area
- Anchored to high frequency rail or bus
- Request with GoPass or DART Call Center
- Wait time – 10 minutes
- Contactless fare payment
- Option of UberPool



A light rail train, numbered 171 and named 'LEDGETTER', is traveling on a city street. The train is white with a yellow stripe. The street is paved with cobblestones and has tram tracks. In the background, there are modern buildings, including one with a '1505' sign. A street sign for 'Akard St. 309 W' is visible on the left. The text 'Other Payment Options' is overlaid in a large, bold, dark blue font, centered on the image.

# Other Payment Options

# DART's Road to Contactless



# Unbanked & Underbanked Solutions

*22% of U.S. adults are either unbanked or underbanked\**

## POTENTIAL SOLUTIONS

- Retail networks transforming cash into digital currency
- Reloadable general-purpose prepaid cards
- Digital-only banking options

- Redefined banking
  - Rebalancing risk portfolios
  - Restructuring banking fees
- Federal government issuing prepaid cards
- Google and Bill & Melinda Gates Foundation



# Final Thoughts

It takes a village.....



# Contact Information

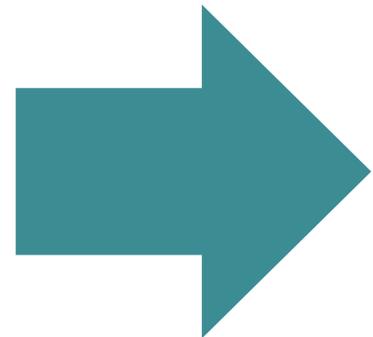
**Gary Thomas**  
[GThomas@dart.org](mailto:GThomas@dart.org)



# What are the largest barriers to adopting on-demand transit in your city?

- Technology adoption
- Pre-existing vehicle fleet
- Uncertainty of demand for service
- Uncertainty of implementation costs
- Popularity of fixed route services
- Other (answer in Q&A box)

**Poll 2**



## Elliott Doza Central Ohio Transit Authority





# COTA//Plus Update

*November 16, 2020*



## ABOUT COTA

# Fixed-Route, Mainstream and COTA//Plus

- First passenger trips in 1974
- \$150 million operating budget for 2019
  - \$72.5 million capital budget
- Operational Funding – Total of 0.5% sales tax:
  - Permanent 0.25% sales tax
  - 10-year renewable 0.25% sales tax
- Pursue major federal funding for capital projects
- 1,150+ employees, more than 700 operators
- 327 buses, among the youngest in the industry
- Nearly 19 million trips annually (60,000 daily trips)
- COTA Mainstream serves seniors and people with disabilities with 250,000+ trips each year

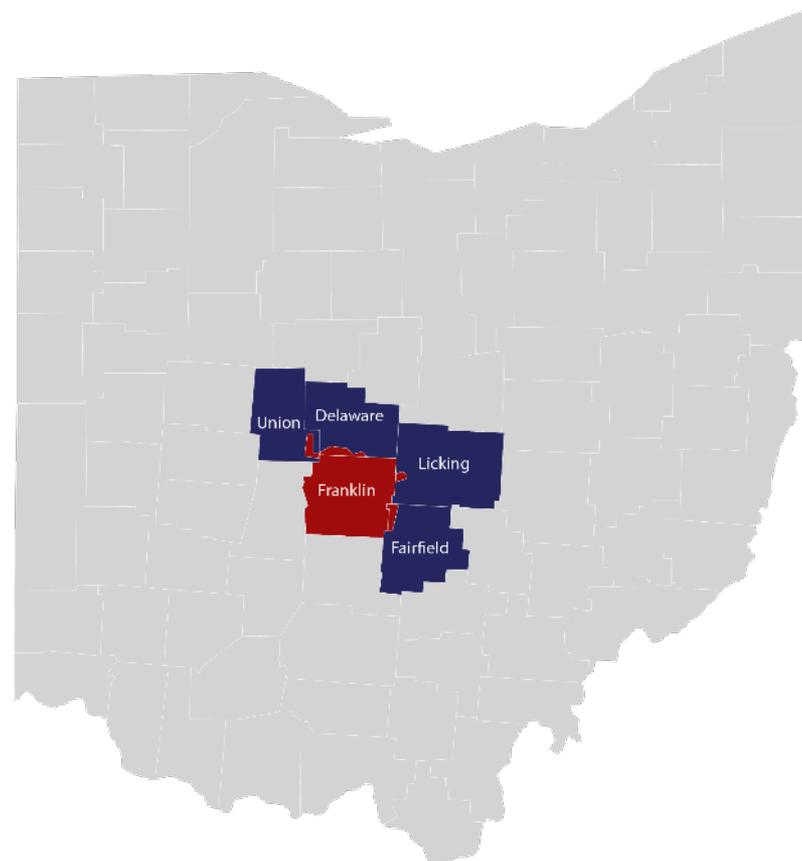
# Operations & Governance

## Service Area

- 562 square miles
- 1.2 million residents
- All of Franklin County
- Portions of Delaware, Fairfield, Licking and Union Counties (within charter cities)

## Governed by 13-member Board of Trustees

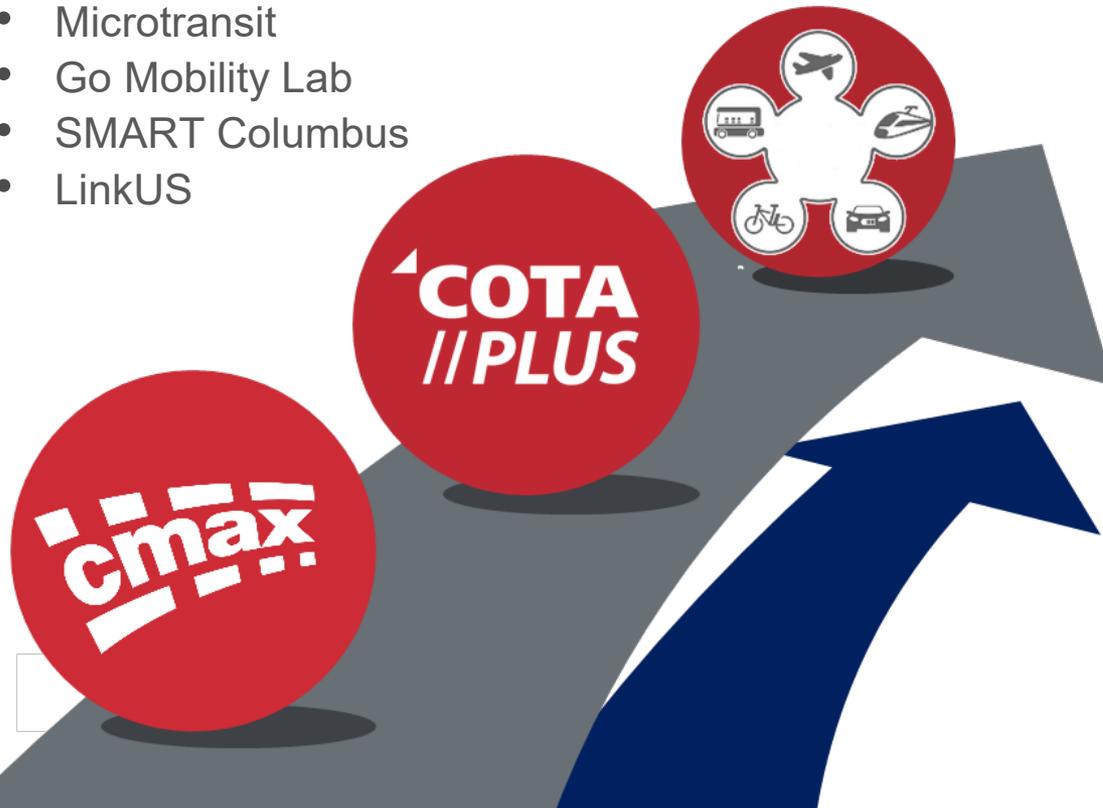
- Seven members appointed by City of Columbus
- Two members appointed by Franklin County
- Four members appointed by other municipalities (rotating)
- Two Community Advisory Panels



# Our Bold Initiatives

## Mobility Innovation

- Increase ridership
- Public-private partnerships
- Multimodal trip planning
- Strategic Plan
- Microtransit
- Go Mobility Lab
- SMART Columbus
- LinkUS



## CMAX

Provides rapid transit to major destinations along Cleveland Avenue between downtown Columbus and Polaris Parkway/Africa Road.



## COTA//PLUS

Provides a first/last mile solution for riders with starting points and destinations over 1 mile from a COTA transit stop.

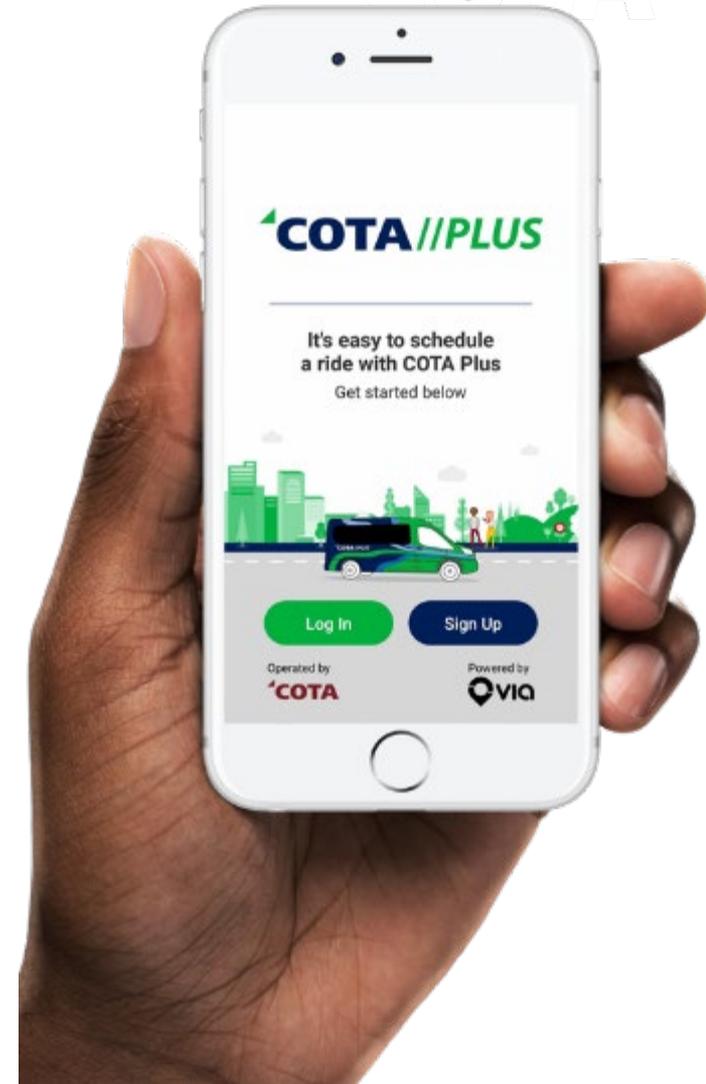


## MOBILITY HUBS

Will serve as centralized locations for residents to conveniently access the region's various public and private mobility options.

# COTA//Plus

- COTA-operated, real-time, on-demand transportation
- Customers must register through the COTA//Plus app or by calling COTA Customer Care. Trips are requested the same way
- Service is available within a defined geographic zone
- Customers may be directed to nearby pick up locations
- Technology allows zones to be easily scalable



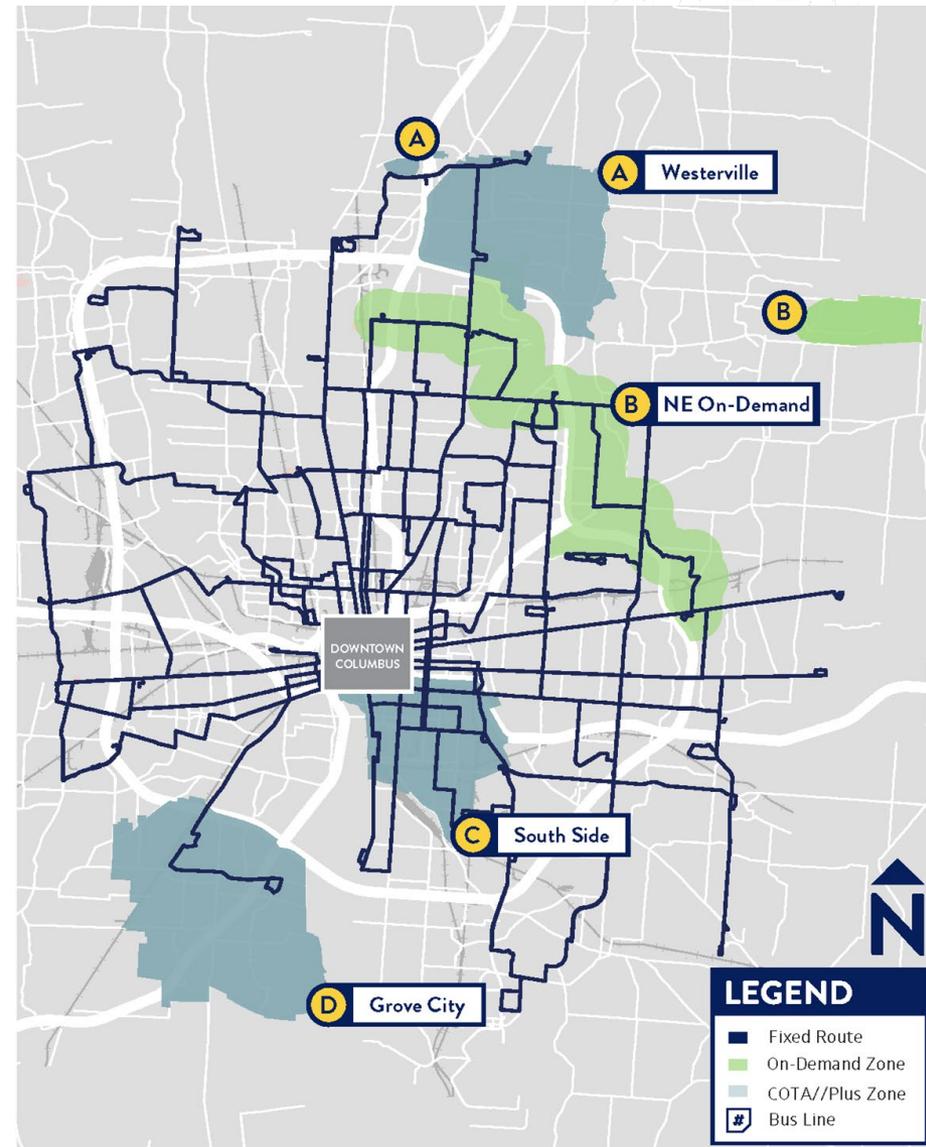
# Scaled to Need

## Microtransit

- Vans and cutaways with WiFi
- 15 minute or less wait time
- Pick up/drop off anywhere in zone
- Mix of accessible and passenger vehicles with universal serial bus (USB) charging ports

## On-demand Bus

- Full size bus with WiFi
- 20–45 minute wait
- Pick up/drop off at bus stops only
- Accessible vehicles with bicycle racks





## Goals

### Microtransit

- First/last mile connections in areas where buses do not make sense
- Provide transit in communities that do not currently have access through funding partnerships with a focus on equity
- Fill in gaps in the fixed-route network

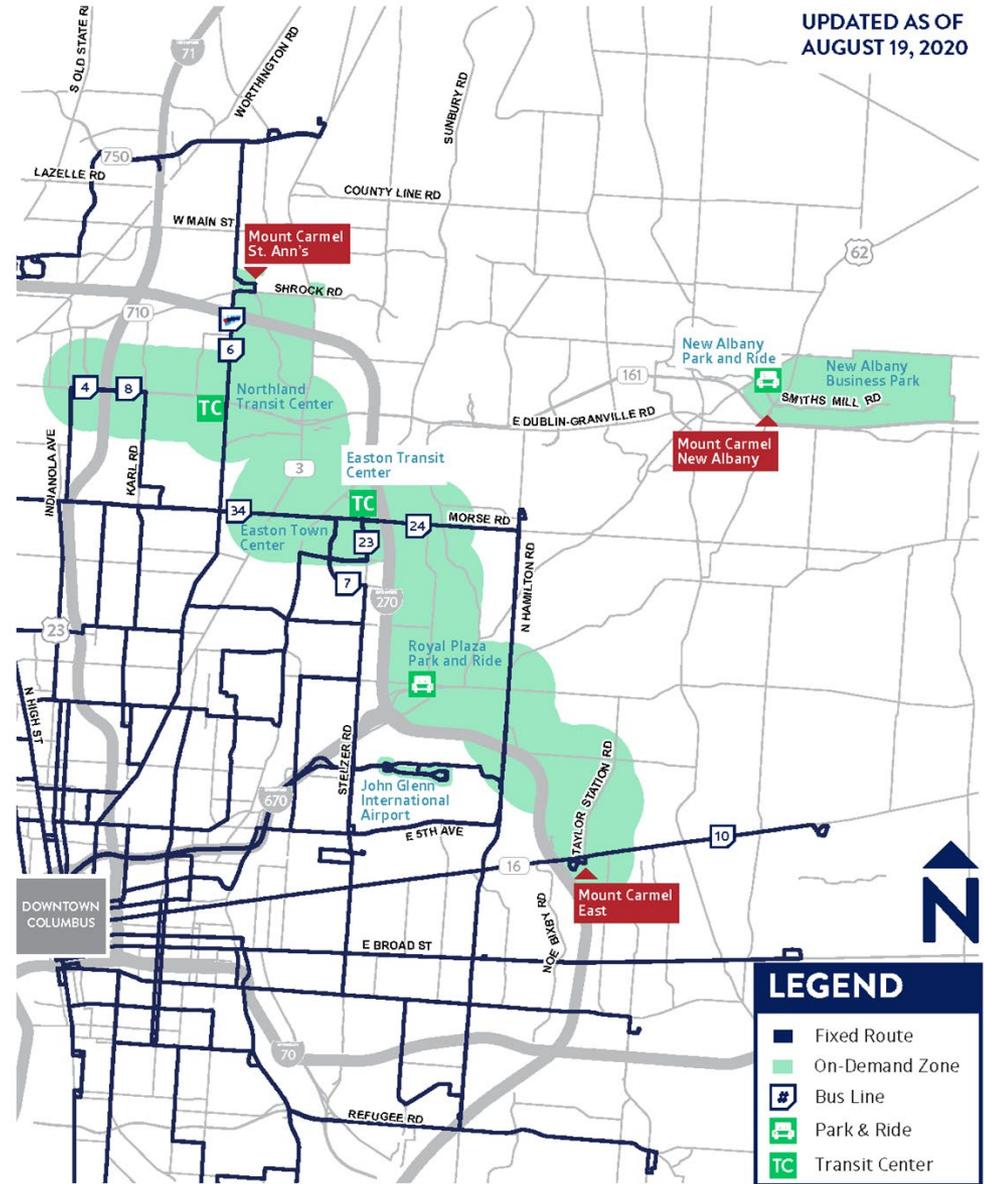
### On-demand Bus

- More efficient use of resources through conversion of low-performing fixed-route lines
- Expand COTA's service area by adding service where a fixed-route could not operate

# Responding to COVID-19

- Northeast Zone
- Reduced capacity
- Sanitization practices
- Operator and customer health
- No fares

## NORTHEAST ON DEMAND ZONE



# Best Practices/Lessons Learned

- **Set realistic expectations – talk to other agencies**
  - Microtransit can be costly and ridership difficult to grow
  - Focus on benefits to the community and businesses
  - Senior transportation can provide built-in ridership
- **Familiar mobile application interface is easy to use**
  - Call Center is crucial to ensure access for all
- **Fare payment can be a barrier to access – include a non-credit card option**
- **Understand policies surrounding smaller vehicles**
  - Car seats – ensure riders have options to bring car seats
  - Accessibility

# Future of COTA//Plus

- Two to three additional microtransit zones in 2021
- Incorporation of bus on-demand model in network planning
- Identification of electric vehicle models



**MOVING EVERY LIFE FORWARD**

# Follow Us

---



@cotabus



@COTAbus



@cotabus



@COTA

# Question and Answer Session



# Connect with the State and Local Energy and Environment Program

Andrea Denny  
U.S. Environmental Protection Agency  
[Denny.Andrea@epa.gov](mailto:Denny.Andrea@epa.gov)



**State and Local  
Energy and Environment Program**

Visit Our Website | [www.epa.gov/statelocalenergy](http://www.epa.gov/statelocalenergy)

Sign Up for Our Newsletter | [www.epa.gov/statelocalenergy/state-and-local-energy-newsletters](http://www.epa.gov/statelocalenergy/state-and-local-energy-newsletters)

Join Our LinkedIn Group | [www.linkedin.com/groups/12129811/](http://www.linkedin.com/groups/12129811/)