

## Automated Transportation Systems Defined

#### **Automated Transportation Systems (ATS):**

Automated vehicles operating on fixed routes

Could operate in mixed traffic or on elevated guideways

#### The Basis of ATS:

- Flexible vehicle technology to adjust for changing needs/demand
- Future-proof systems design for future technology advances
- Vehicle automation and advancing battery technology to minimize operational costs while maximizing service

## Automated Transportation Systems (ATS)

#### **NCTCOG ATS Goals:**

- NCTCOG is looking to address first/last mile connectivity to supplement the broader transit network
- Other technologies/systems have previously filled this roll
  - Automated People Movers
  - As these systems age, they become more difficult and more expensive to maintain
- More real-world deployments of Automated Vehicle technology in recent years

#### **Recent NCTCOG Efforts:**

NCTCOG study on the issue culminates in Automated Transportation Systems

- Dallas Midtown Autonomous Transportation System and Shared Parking Feasibility Study (2019)
- NCTCOG Automated Transportation System Development Study (2023)

## Automated People Movers

#### **Rail-Based Systems:**

- Higher speeds
- Proprietary parts

#### **Elevated Guideways:**

- Unrestricted by traffic
- Expensive maintenance

#### **Examples:**

- DFW Skylink
- Irving Las Colinas APT



Courtesy of NCTCOG

### **Automated Vehicles**

#### **Rubber-Tired Systems:**

Easier maintenance

#### **Mixed Traffic or Dedicated Paths:**

Reduced capital investment in infrastructure

#### **Examples:**

- Waymo
- May Mobility (Arlington RAPID)
   Fixed-route service



Courtesy of NCTCOG

## Current ATS Examples

Circulation within a district, campus, airport, etc.

#### **District:**

- Jacksonville Skyway & The Ultimate Urban Circulator (U2C)
- Las Vegas Zoox

#### Campus:

West Virginia University - Morgantown PRT

#### Airport:

DFW Airport – Skylink



Courtesy of JTA



## Potential Applications

First and last mile travel for specific transportation corridors

#### **District:**

- In conjunction with remote parking garages
- Reduce SOV use, parking needs

#### Freight:

- Freight movement within work campus
- Connection to broader freight network



Courtesy of NCTCOG



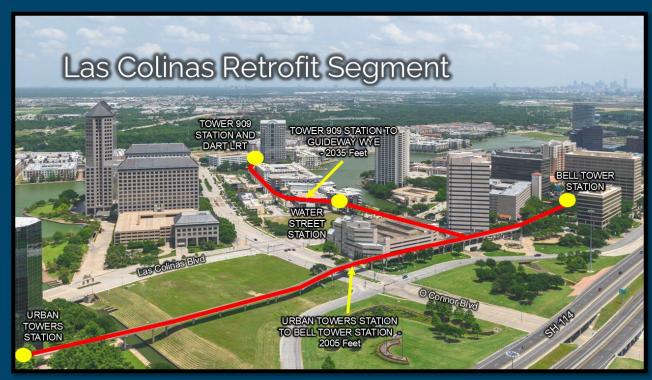
## NCTCOG Current ATS Efforts

# Las Colinas Automated Transportation System Retrofit:

Develop the engineering for a retrofit of the existing guideway to meet the needs of modern Automated Transportation Systems

# Legacy West Automated Transportation System:

Develop the planning, design concepts, and feasibility of the Plano Legacy Area Automated Transportation System



Courtesy of NCTCOG



# Certification of Emerging and Reliable Transportation Technology

#### <u>Certification of Emerging and</u> <u>Reliable Transportation Technology</u>

Bring technology providers and municipalities together to meet long-range transportation needs

- J-Pods: Automated pods on elevated guideway for first/last mile and local transportation
- Swyft Cities: Elevated pod/modern gondola for Personal Rapid Transit



Courtesy of Swyft Cities

# Questions?



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