

Connecting the East Orlando Communities UPDATE

Update of ATCMTD Progress

December 2018

MetroPlan Orlando

ATCMTD Award

\$11.9M Award

\$52M Match

(Previous, Future, and O&M Expenditures)

Reminder

Reminder

- 4 Key Focus Areas
 - PedSafe – Improving Pedestrian Safety
 - Greenway – Improving Mobility
 - Smart Community – Enabling Smart City of Tomorrow
 - SunStore – Data Management

- Lots of Technology Threaded together
 - Autonomous Vehicles
 - Connected Vehicle
 - Smart Signals
 - Transit Kiosks
 - LiDAR
 - Computer Vision
 - Machine Learning

Collaborative Effort



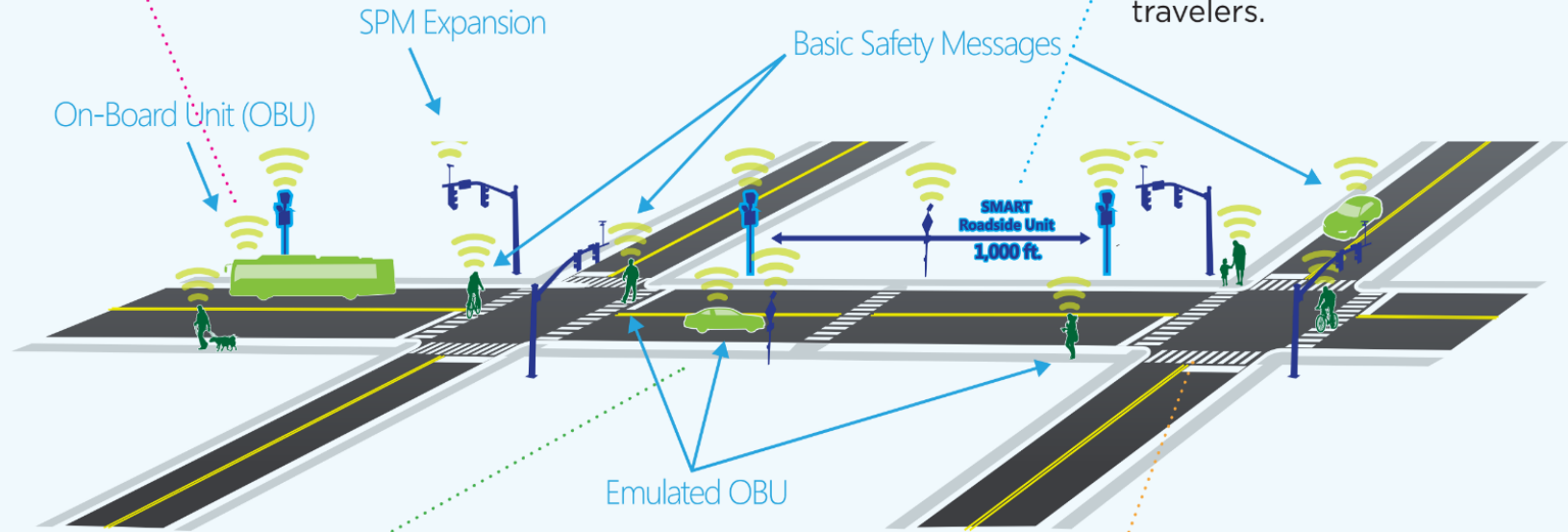


ON-BOARD UNITS (OBU)

Physical on-board units will be installed on buses and fleets.

SMART ROADSIDE UNITS

These physical units will facilitate communication between the infrastructure and travelers.



EMULATED OBUs

Pedestrians, bicyclists, and motorists do not need a physical OBU, they can emulate one on their smartphones.

SIGNAL PERFORMANCE METRICS

Automated performance metrics will enable real-time incident and congestion management.

LAKE

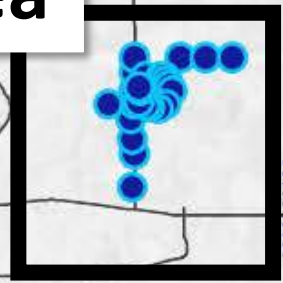
BREVARD

Pine Hills

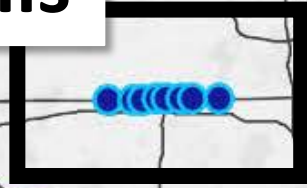
UCF Area



UCF East Orlando Deployment Area



CENTRAL FLORIDA RESEARCH PARK



CITY OF ORLANDO

ORANGE

UNIVERSAL ORLANDO RESORT

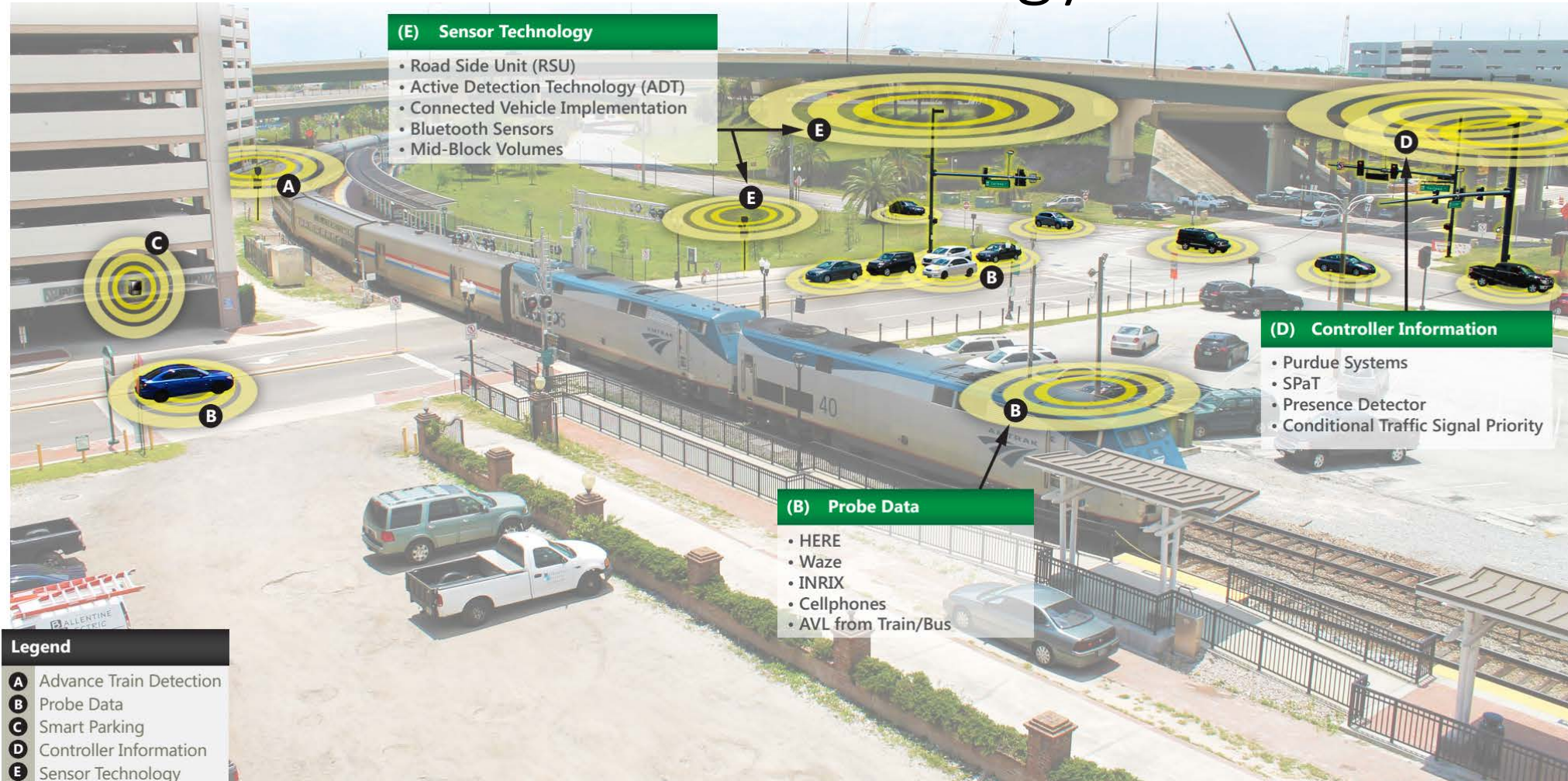


Disney



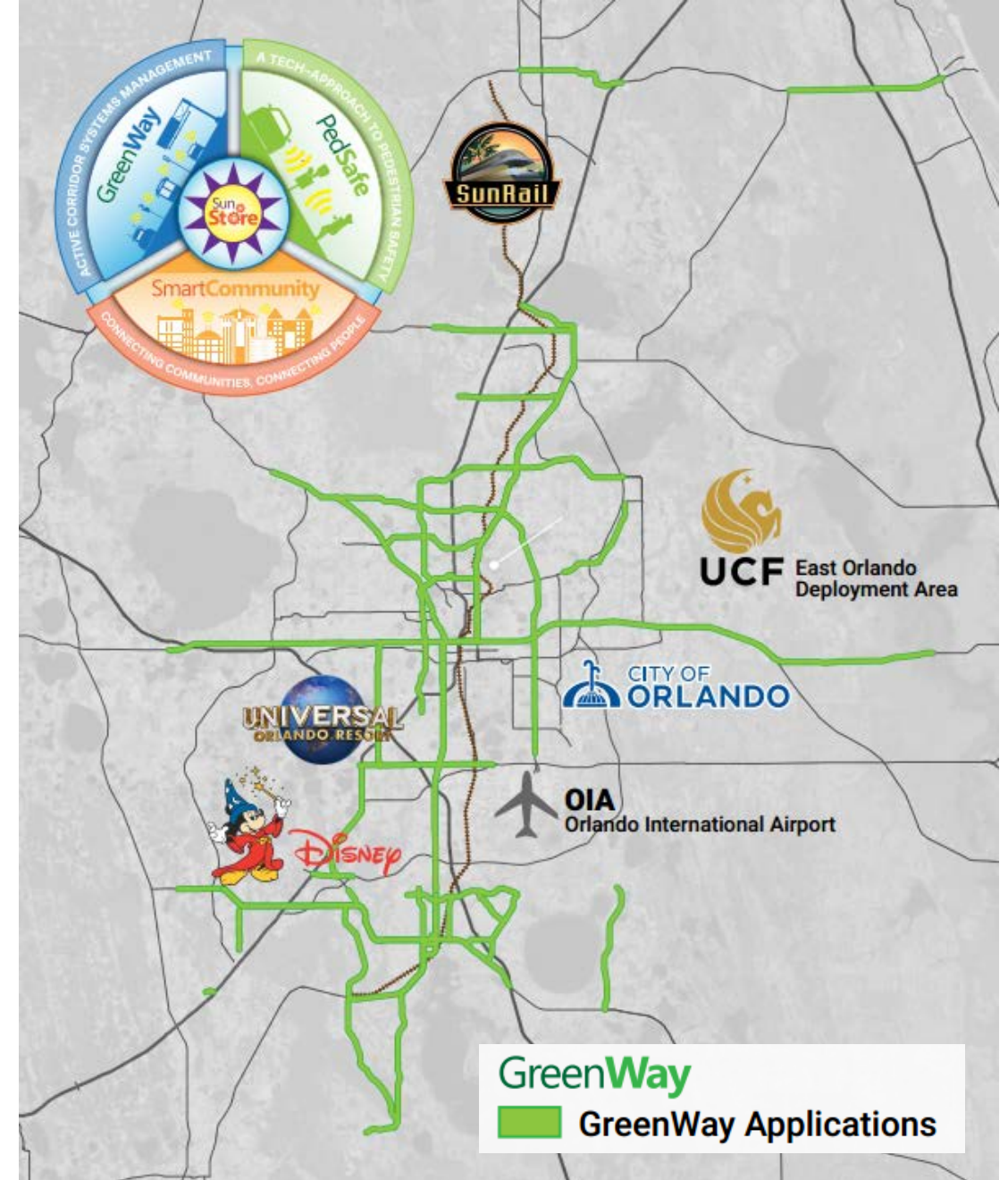
OIA
Orlando International Airport

Latest and Greatest Roadside Technology



Scalability and Portability

- Manage major corridors throughout the District
- Inside and outside of MetroPlan Orlando





SmartCommunity



SmartCommunity

Advanced Parking Management

Autonomous Shuttles

EV Charging Stations

Zipcar Carsharing

Existing Shuttle Routes



GRANT

BACKGROUND

APPROACH

BENEFITS

Q&A

Transferable Components

- Modular Software
 - Route and Mode Choice Engine
 - Can be used connect LYNX, Votran, Sunrail, Uber, LYFT, ZipCar, and Juice
 - OBU software
 - Can be integrated into existing Apps to get CV benefits or made standalone



SunStore

- Engine that makes everything work
- Performance Management
- Keeping everyone on same page
- Latest and Greatest Technology for Data Management



Update

Last Quarter

- Continued plans development
 - SR 434 Connected Vehicle (CV) Pilot Project, PedSafe, Greenway at 90%
 - Dedicated Short-Range Communication (DSRC) device spectrum testing completed
 - Continued Seminole County interoperability testing for CV technologies.
- Regional Integrated Corridor Management System (R-ICMS)
 - Completion of Preliminary Design documentation
 - Critical Design documentation review has begun and is a continuing effort.
- Procurement of traffic signalization hardware

Last Quarter

- Developed app for signal data collection
- Improved ATSPM performance with indexing
- Completed Route and Mode Choice feasibility study,
 - Minimal technical requirements, and design concept started
- Request for Information (RFI) for transit kiosk closed
- Request for Information (RFI) for the Autonomous Vehicle (AV) shuttle received and reviewed vendor responses

Last Quarter

- Renewal licenses for SunStore. Progressed to testing bulk data download. Complete Token and Role Manager
- Continued university research efforts include:
 - Automated Machine Learning for Signal Timing Research
 - Automated Incident detection
- Transit Signal Priority Phase 3 shortlisted
- Completed preliminary ATCMTD Pre Deployment literature review, identified performance measures, and started data collection

Next Quarter

- Construction Plans coming in February.
- ICMS
 - Iteration One to be completed in December
 - Iteration Two to be complete in March
- Expect bring 300+ signals fully into ATSPM, with 700 more remaining
- Route and Mode Choice and OBU emulator ITB to be advertised in January
- Autonomous Shuttle to advertise this calendar year
- Transit Signal Priority (TSP) design-build project to begin in Quarter 4.
- Key performance measures to be collected by January

Thank You.

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