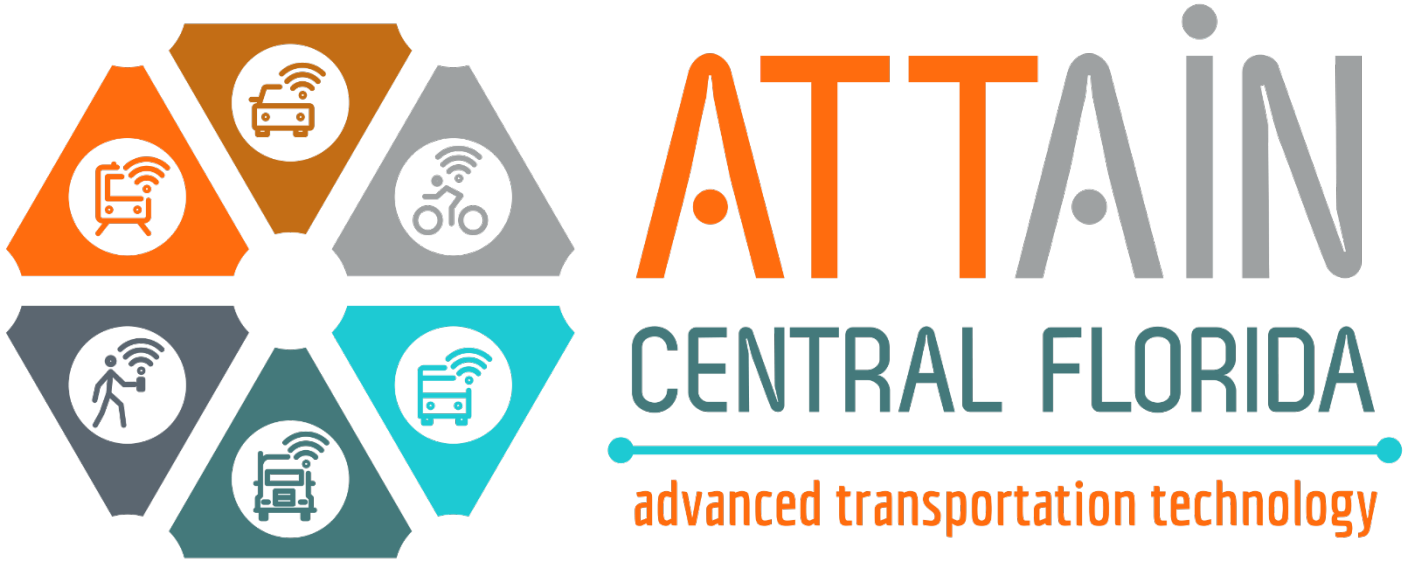

Program Overview

Florida Department of Transportation, District Five

SOURCE: FDOT

ATTAIN Central Florida

Partners

FDOT

- Manages all programs
- Oversees funding
- Responsible for deliverables

metroplan orlando
A REGIONAL TRANSPORTATION PARTNERSHIP

- Facilitates collaboration
- Maintains agency support
- Ensures projects meet intended purposes

UCF
UNIVERSITY OF CENTRAL FLORIDA

- Research capabilities
- Data analysis expertise
- Multiple deployment locations on main campus

28

LOCAL GOVERNMENTS AND REGIONAL AGENCIES

- Total number that have approved resolutions in support of the ATTAIN Central Florida

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Connecting Central Florida

Challenge:

Demand on the transportation system in Central Florida and the need to support underserved communities with safe options are both growing

Solution:

Leverage innovative technologies to connect people, especially those struggling with mobility issues, with places where they need to go and services they need

Connecting Central Florida

FDOT is implementing ATTAIN Central Florida

- Deploys smart transportation technologies that enhance mobility
- Will evaluate deployments to identify best practices and lessons learned
- Proven technologies will be applied to future deployment locations in the region

ATTAIN Central Florida

Funding

$11.9
MILLION
FHWA ATCMTD Grant

$53.1
MILLION
Matching Local Funds and VIK Assets

$65
MILLION
Total Program Funding

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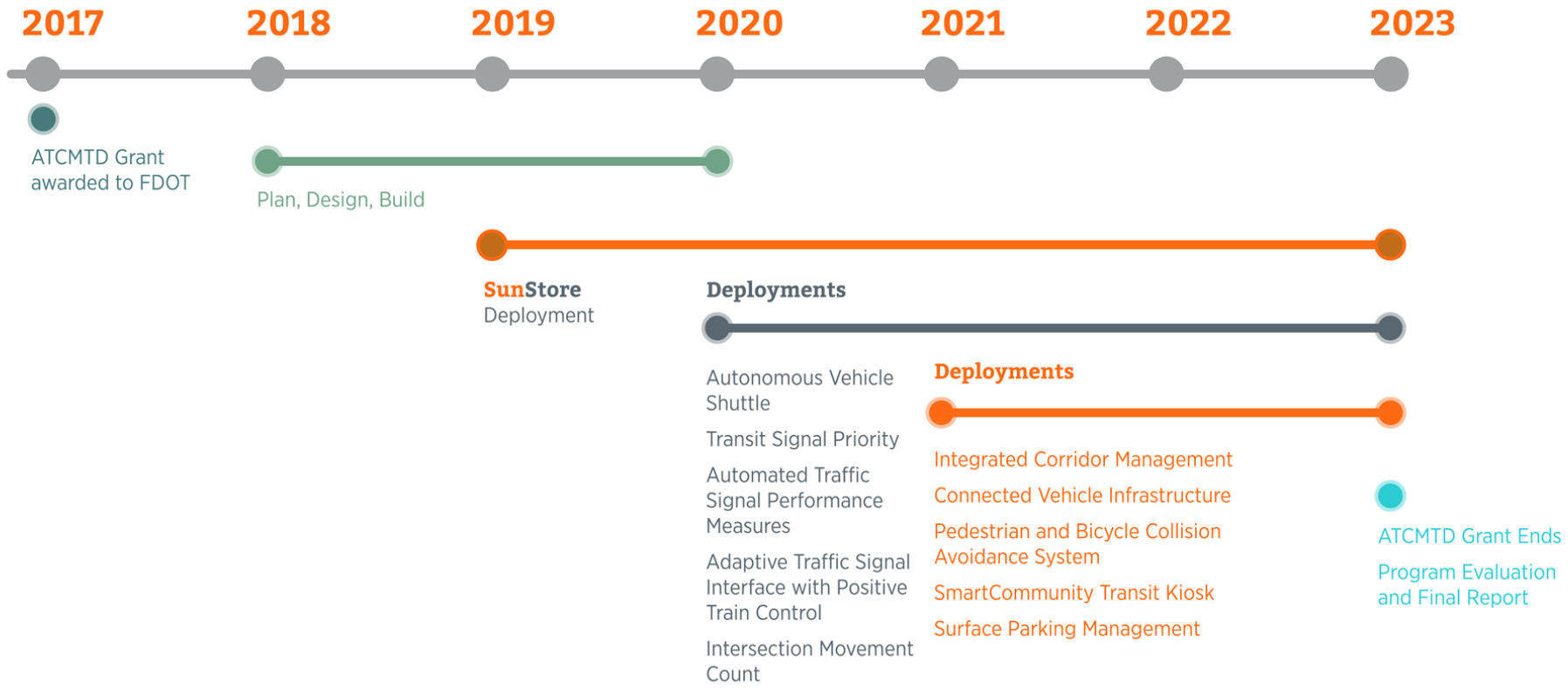
ATTAIN Central Florida

Timeline



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Interrelated Programs

PedSafe

Pedestrian and bicycle collision avoidance system

GreenWay

Six advanced transportation management projects

SmartCommunity

Three projects connecting people with places they want to go

SunStore

Stores data from FDOT and partner agencies for planning and research purposes

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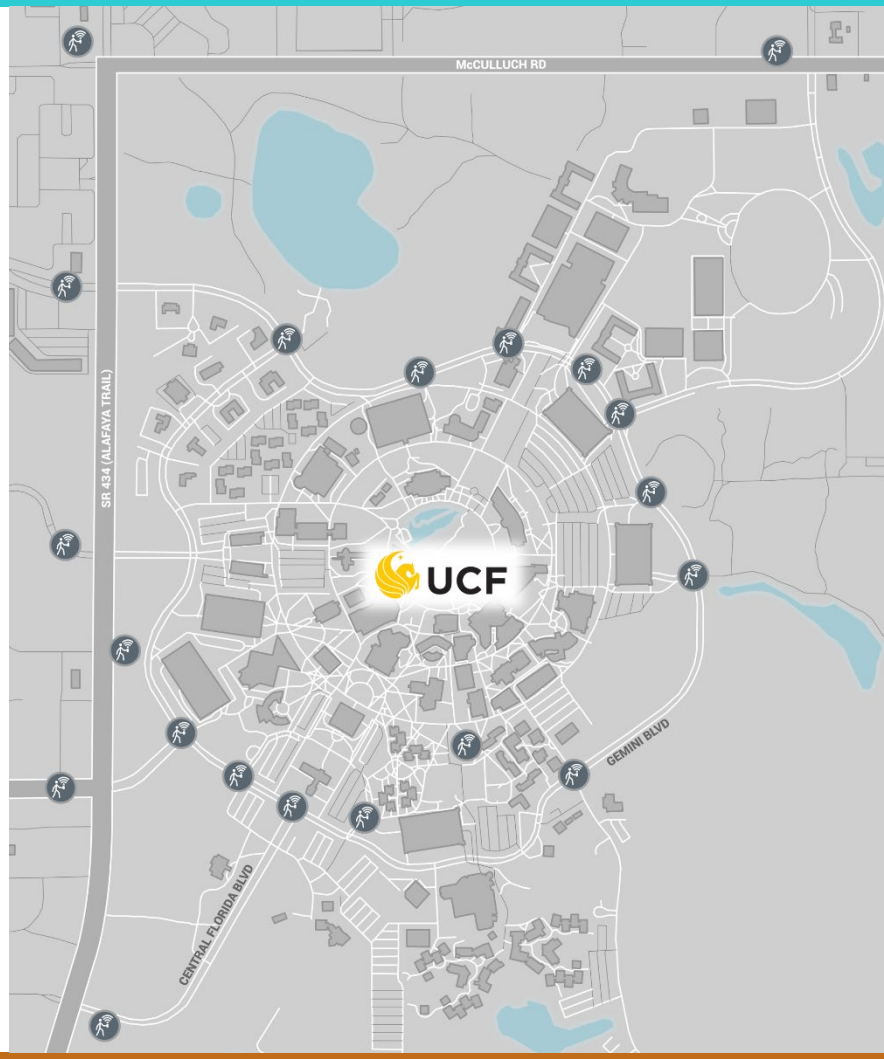
PedSafe

Pedestrians and Bicycle Collision Avoidance System

- Reduces vehicle conflicts with walkers and cyclists
- Utilizes connected vehicle technologies
- On-board unit (OBU) emulator in mobile app
  - Transmits pedestrian location to vehicles
  - Pedestrian receives safety message

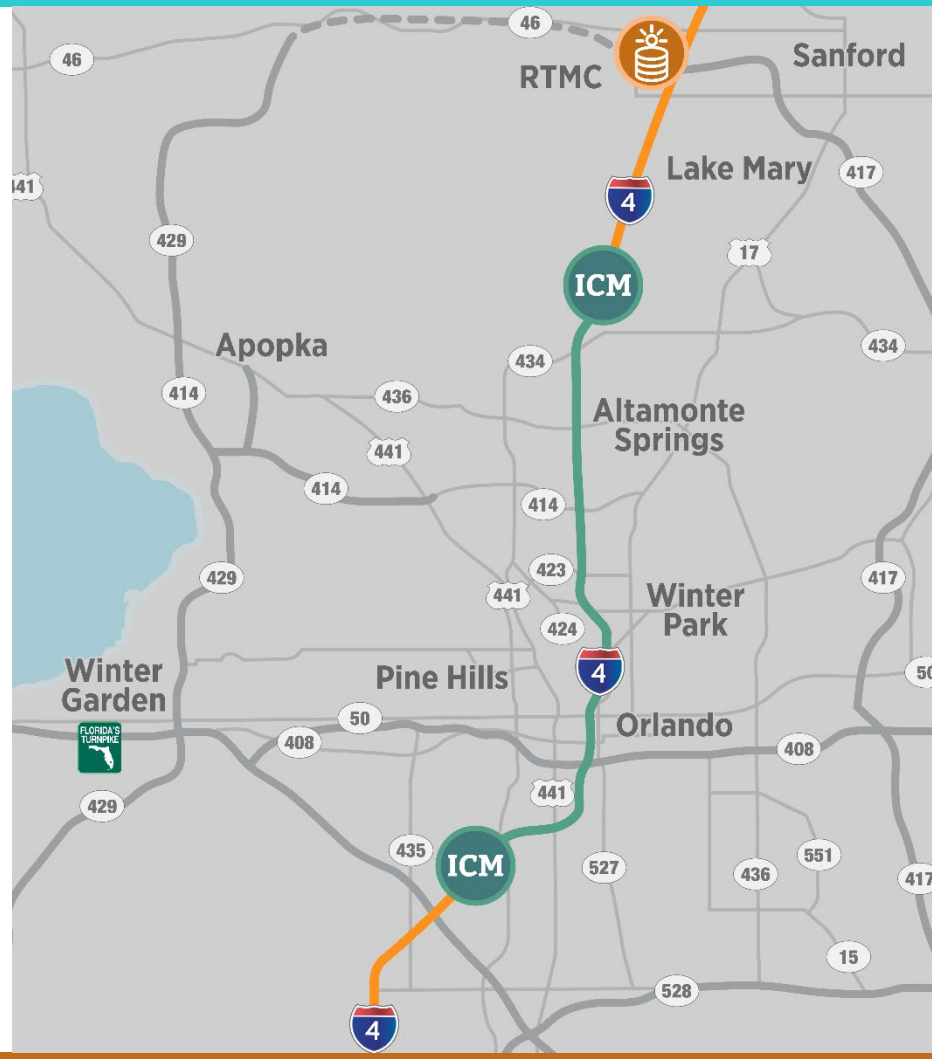


SOURCE: FDOT

Greenway

Regional Integrated Corridor Management System (R -ICMS)

- Keeps traffic moving during incidents
- Real-time analysis predicts traffic behavior, suggests changing timings, Dynamic Message Sign (DMS) updates, and other strategies on alternate route
- RTMC manages incident and shares action with local agencies to act together
- Local agencies manage traffic lights to maintain constant flow



SOURCE: FDOT

Greenway

Smart Signals

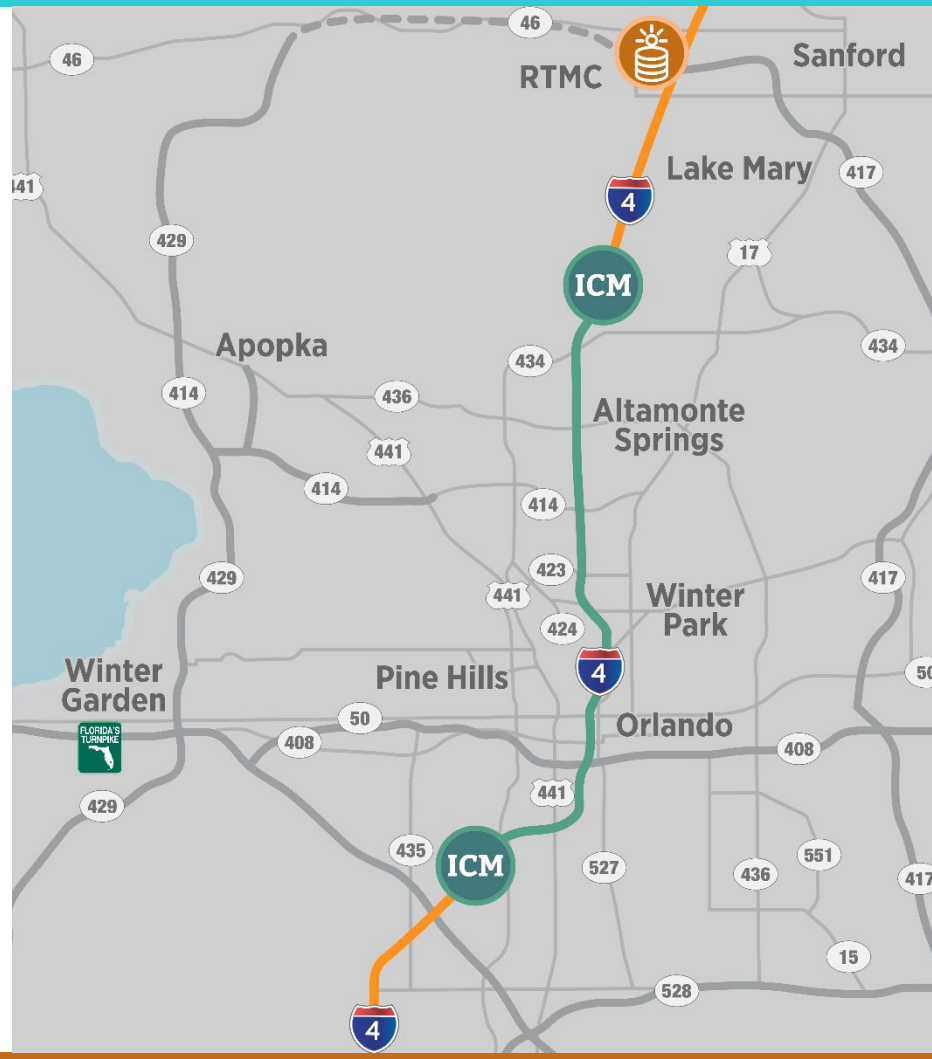
- Collects data to adjust traffic signal timing in real-time
- Reduces manual collection
- Optimizes intersection traffic flow, reduces delays, improves safety and lowers emissions
- Hardware and firmware to be installed in 250 intersections

SOURCE: FDOT

Greenway

Regional Integrated Corridor Management Software (R -ICMS)

- **Predictive Model** predicts traffic up to 30 minutes in the future for best detour route
- **Signal Optimization Tools** determines which signals are farthest from being optimized and allows for their optimization
- **Smart Signals** needs upgraded signals to be fully integrated

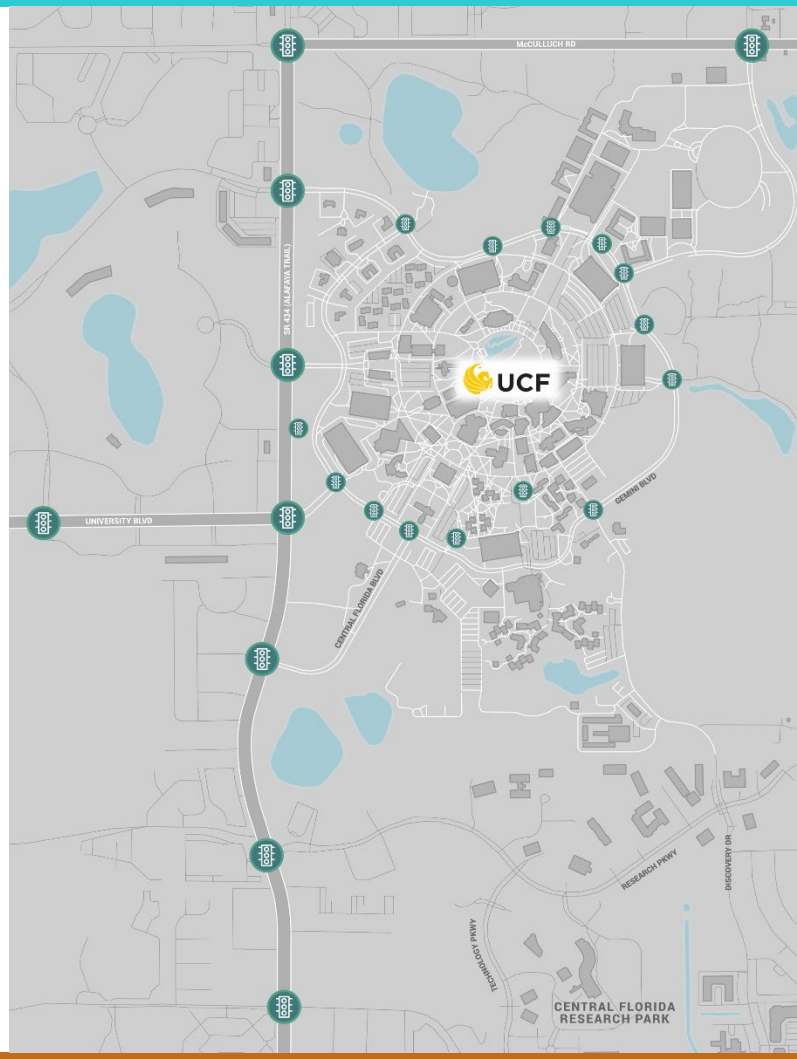


SOURCE: FDOT

Greenway

Connected Vehicle Infrastructure

- Designed to improve safety and mobility
- Transmits alerts to
  - OBU in Connected vehicles
  - OBU emulators in UCF smart phone app
- CV infrastructure technologies will be used by
  - UCF transit
  - First response vehicles



SOURCE: FDOT

Greenway

Transit Signal Priority (TSP)

- Improves on time arrival for public transit vehicles
- LYNX transit vehicles communicate with traffic signal interface at intersections
- Traffic signals adapt in real-time to shorten a red light or hold a green light

SOURCE: LYNX

Greenway

Adaptive Traffic Signal Interface with Positive Train Control

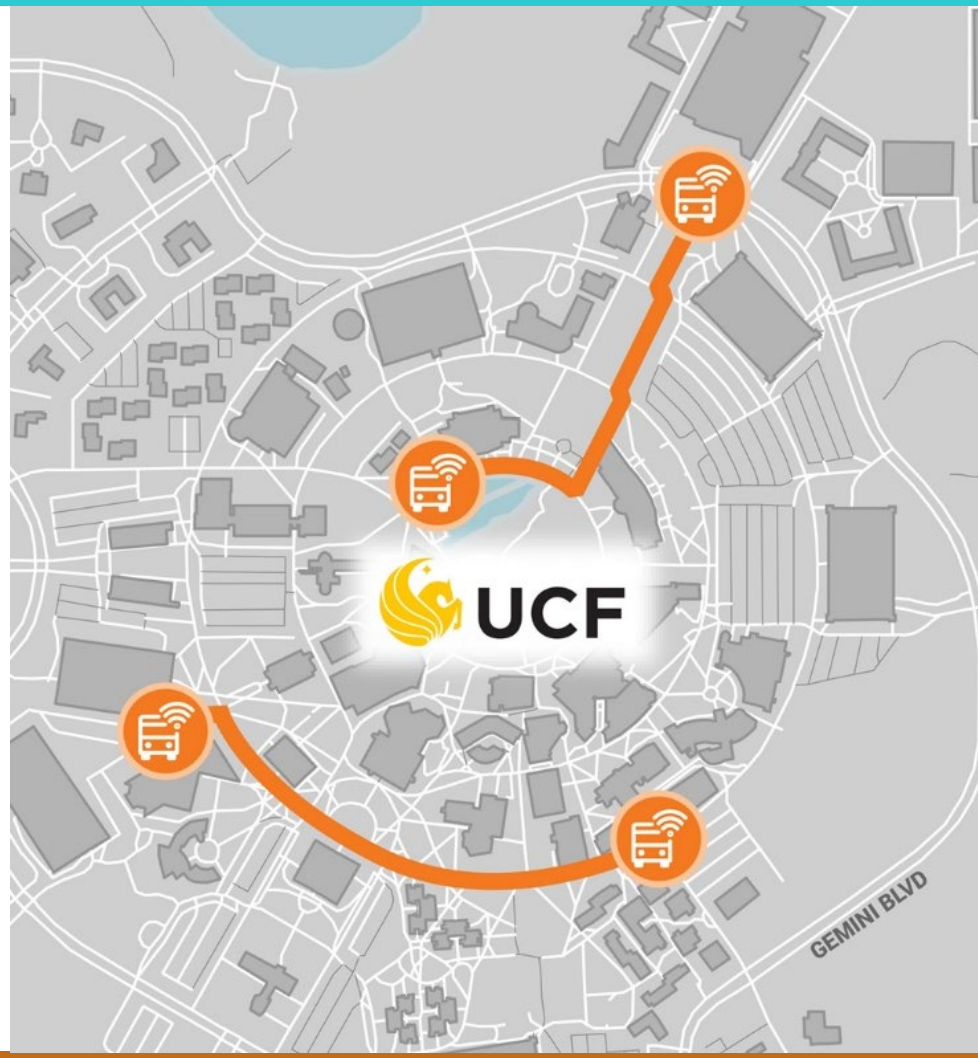
- Deployed at intersections near railroad crossings to relieve congestion
- Identifies incoming trains ahead of arrival
- Shortens red lights or holds green lights to provide clear movements about to be blocked by train crossing

SOURCE: ORLANDO BUSINESS JOURNAL

SmartCommunity

Autonomous Vehicle Shuttles

- Self-driving, electric autonomous vehicle shuttles will operate on UCF main campus
- Shuttles will travel at maximum 15 mph on two routes closed to regular vehicle traffic
- Up to 12 students, faculty, staff and visitors will be transported in each vehicle
- Service begins in 2020 and will be provided for three years by COAST Autonomous

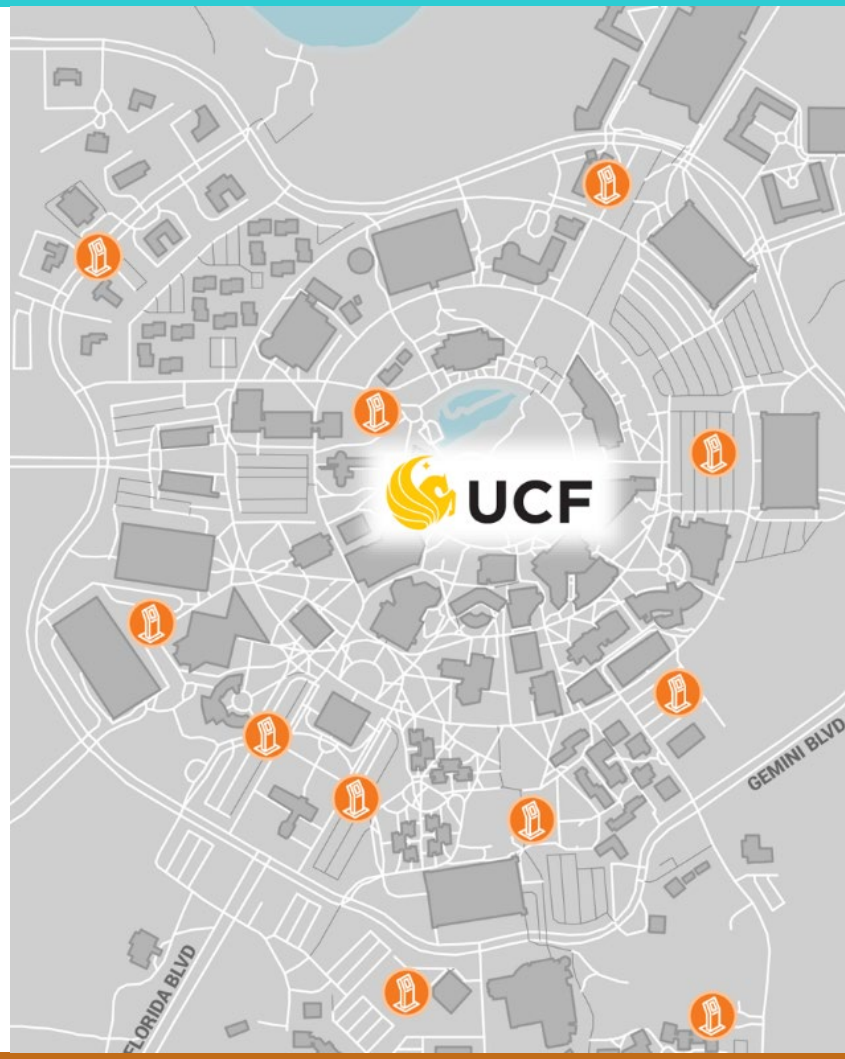


SOURCE: FDOT

SmartCommunity

Transit Kiosks

- Deployed on UCF main campus at existing transit vehicle stops
- Users can combine multiple modes of transit for a single trip
- Will determine optimal route and mode considering time, cost and exercise for best effective combination
- Provides mobility on demand to underserved users who do not own a car or smartphone
- Meant to be scalable solution for Central Florida

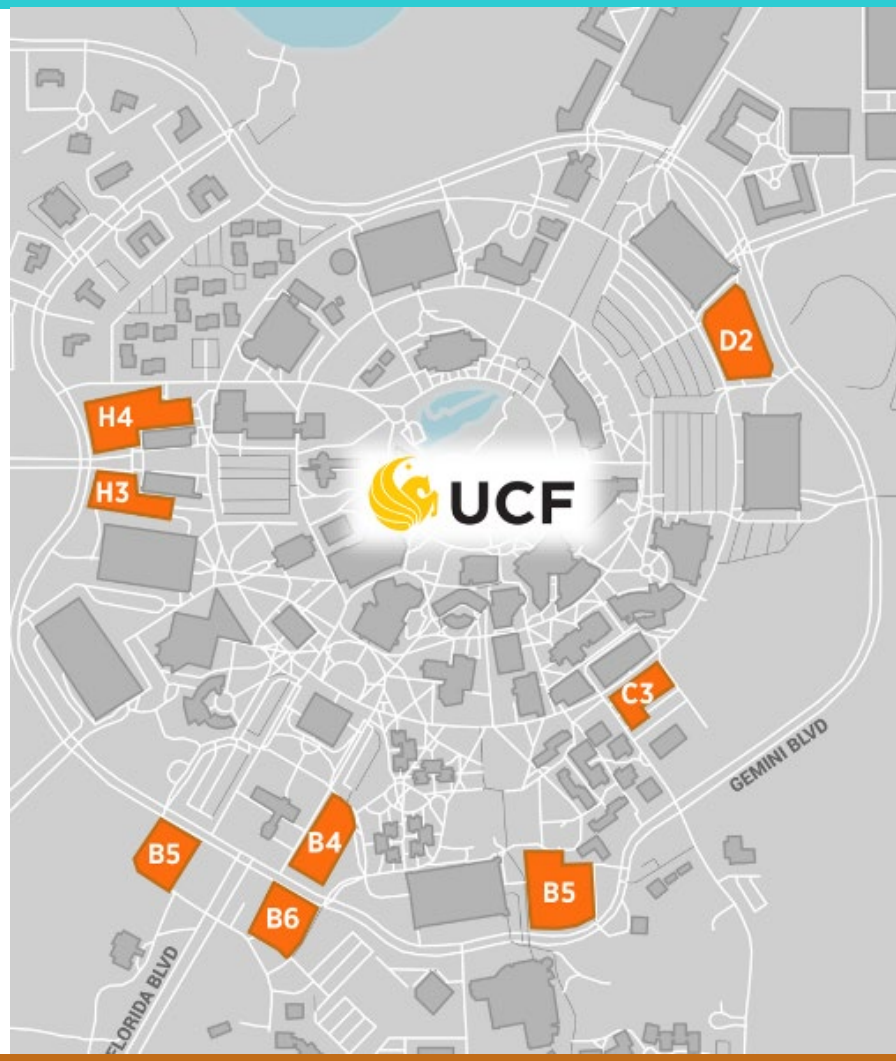


SOURCE: FDOT

SmartCommunity

Surface Parking Management

- Quick and easy method for students and employees to find a parking space
- Deployed in nine lots on UCF main campus
- UCF mobile app will show real-time parking availability
- Identifies space availability by video, microwave and in-pavement wireless magnetometers



SOURCE: FDOT

SunStore

FDOT's Data Storage and Research Sharing Initiative

- Connects and integrates transportation data sources created and utilized by FDOT
- Includes master data management, data fusion and sensor fusion for increased quality
- Data available for research by universities, institutions, planners and businesses
- Stores data from PedSafe, GreenWay and SmartCommunity deployments

SOURCE: FDOT

ATTAIN Central Florida

Current Status

- Testing with Seminole County at their lab is complete
- Hardware is under construction by Chincor and TCD
- Software is under development by IBI and Southwest Research Institute
  - Completion expected end of 2020
- AV Shuttle scheduled for deployment in Spring

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- Value Adds Outside Grant
  - Demo with Orange County working with Cisco
    - Pedestrian safety message generation on SR 50
  - Investments in Controllers from the local agencies/MetroPlan
    - Improves functionality

ATTAIN Central Florida

For more information, please visit:

www.CFLSmartRoads.com