Smart ORL
The future of urban sustainability
FSEC Advisory Board meeting
March 3rd, 2017
Green Works Orlando

2013 Community Action Plan

Sustainability

Resilience

Security

- Energy/Green Buildings
- Food Systems
- Green Economy
- Livability
- Solid Waste
- Transportation
- Water
FOCUS AREA: GREEN ECONOMY
US DOT Smart Cities Challenge, Dec 2015

1,400 local officials, companies, academics and non-profits joined our webinars

800 people participated in our Smart City Forum

300 companies have expressed interest in partnering

78 applications received for the Smart City Challenge

7 Smart City Challenge Finalists announced in March at SXSW

1 Smart City Challenge Winner announced in June

#DOTSmartCity

www.transportation.gov-smartcity
How does Orlando define a ‘Smart City’?

• Using *digital technologies* to enhance the livability, workability and sustainability of Orlando.

• Making the critical infrastructure management and services of our city more “*Open*, intelligent, interconnected, efficient and continually renewing”
  
  – Citizen & Visitor Engagement
  – Administration
  – Public Safety (Police & Fire)
  – Built environment
  – Diverse modes of access and mobility
  – Water
  – Energy & Utilities
  – Waste Management
  – Economic Development
  – Inclusion of vulnerable & under-served groups
Smart ORL
Leadership Team

• Orlando Smart Cities Steering Committee
  – Charles Ramdatt, Deputy Convener
  – Chris Castro, Sustainability Director, Co-chair
  – Richard Howard, Director of Public Works
  – Rosa Akhtarkhavari, Chief Information Officer

• Orlando Smart Cities Internal Team
  • Mayor’s Office- Kathy Devault
  • Sustainability - Chris Castro
  • Facilities & Fleet - Ian Lahiff, David Dunn
  • Public Works - Rick Howard, Charles Ramdatt, Jim Hunt, Lisa Henry, Michael Carroll, Scott Zollars
  • Families, Parks & Recreation - Lisa Early & John Perrone
  • Economic Development (EDV) – Mike Rhodes
  • Transportation – Billy Hattaway
  • Information Technology (IT) - Rosa Akhtarkhavari, Matt Broffman
  • OPD - DC Orlando Rolon, DC Robert Anzueto
  • OFD - DC Richard Wales & Keith Maddox
  • Orlando Venues - Kirk Wingerson
External Partners

- NASA Kennedy Space Center
- University of Central Florida (MetroLab Network)
- Florida Solar Energy Center (FSEC)
- Florida Department of Transportation (FDOT)
- Orlando Utilities Commission
- Orange County Government
- Orlando Inc. / Greater Orlando Chamber of Commerce
- Economic Development Commission
- LYNX
- Siemens
- Cisco
- Amazon Web Services
- Lockheed Martin
- Harris Corporation
- General Motors
- 20+ additional partners (US DOT Challenge Partners)
MetroLab Network

• White House initiative launched 2015

• 3-way partnership for Smart Cities R&D
  – Autonomous & Connected Vehicles
  – Solar harnessing for EV’s + V-2-X
  – Real-time Travel information for all mobility
Previous & Current Smart Cities Projects in Orlando

- TravTek In-vehicle Navigation
- ITS (traffic signal priority, AVL, etc.)
- Open Data
- Smart Parking Meters
- Garage Modernization
- Smart Buildings
- Distributed Generation (solar)
- Electric Vehicles
- IRIS and City-wide Surveillance
- Water Monitoring
- Smart Policing Predictive Analysis
- EDIS Route Optimization
- Special Event Management
TravTek: In-vehicle Navigation Systems
Smart Waste Management

• GOAL: Become Zero Waste by 2040

• Expanding recycling and food waste collection in Downtown core.

• Established 10+ recycling bins at Lake Eola

• Establishing 20+ bins, including Big Belly Solar Trash Compactors in Spring 2017
Smart Vehicles

- **GOAL:** 100% alternative fuels by 2030

- EV’s for City Hall motor pool

- Purchasing EV Motorcycles for OPD

- Testing EV buses for LYNX and LYMMO

- Deploying 150+ EV charging stations around City
**Smart Buildings**

- Municipal EE Project
- $17.5 million municipal bond
  - 110 Buildings Total
    - Phase I – 55 Buildings
- **Goal $2.4 Million annual savings**
  - Fund future EE investments
  - Pay down bond debt
Smart Energy: 420KW Solar PV array
Expanding On-site Solar PV

- **GOAL**: 100% Renewable Energy by 2030
- Solar R&D Platform
- 2+ MW of rooftop PV
- 4 MW brownfield community solar farm
SolSmart designation

- U.S. DOE recognition program to help local governments reduce barriers to solar energy growth.

- Focuses on the “soft-costs” of solar

- Developed “Roadmap-to-Gold”
  - Planning / Permitting staff training
  - LDC definition of “Solar equipment”
UCF Digital Smart Grid Lab

- $750,000 grant
- Partnership with SIEMENS, Duke Energy, OUC, and City of Orlando
- Simulation of UCF electric grid
US DOT Autonomous Vehicle Proving Grounds WINNER

• 1 of 10 cities nation-wide
• Developed “Central Florida Automated Vehicle Partnership (CFAVP)”
• R&D for new vehicle technologies, including electric, connected, and autonomous vehicles
• Focus on all modes of travel
  – Freight, Transit, Automobile, Bike/ped
Central Florida Automated Vehicle Partnership
2017 Smart Cities Council Readiness Challenge WINNER!

- 1 of 5 cities nation-wide
  - Orlando, Miami, Austin, Philadelphia, Indianapolis

- Develop comprehensive ‘smart cities’ roadmap

- Deploy cutting-edge smart cities technologies
Smart District:
Creative Village / Downtown UCF