

BEYOND TRAFFIC: The Smart City Challenge



THE CITY OF
COLUMBUS
ANDREW J. GINTHER, MAYOR

#SMARTCOLUMBUS

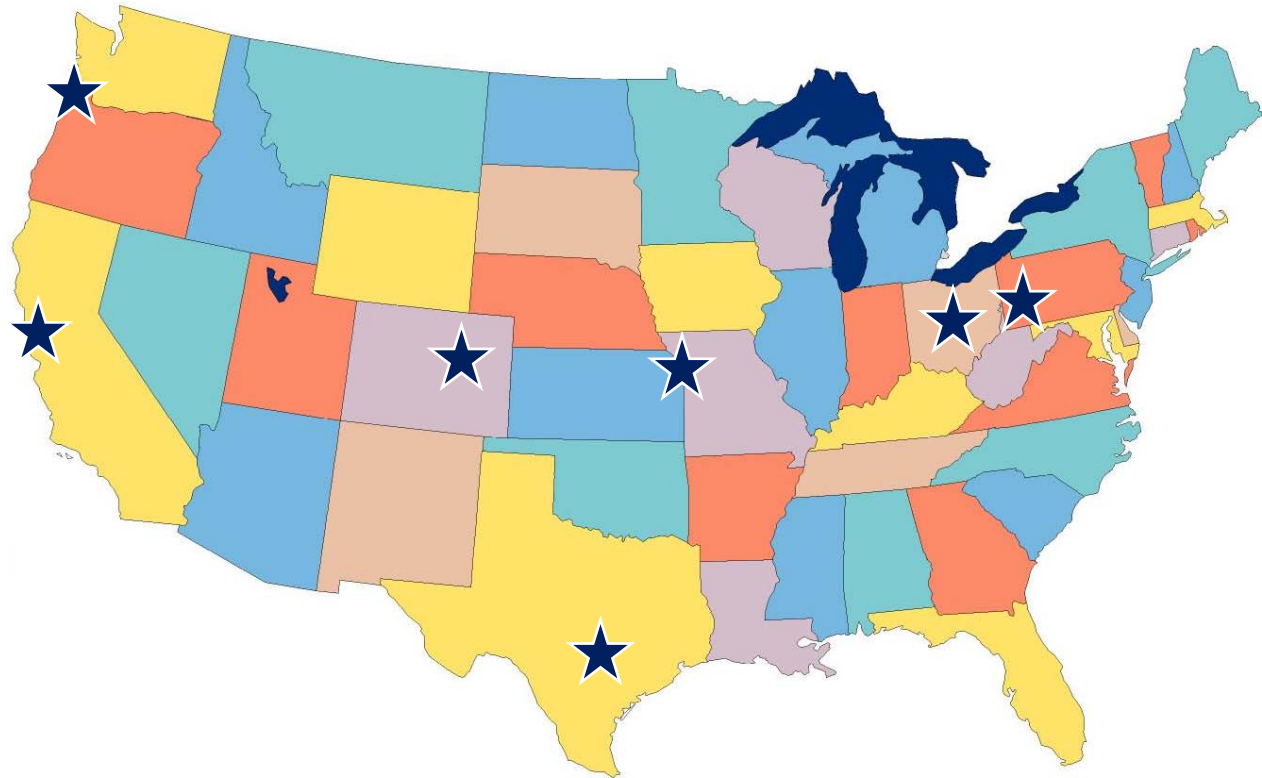
THE SMART CITY CHALLENGE

- US Department of Transportation (USDOT) competition
- Demonstrate transportation technologies to benefit cities
- Open to Midsize American cities (250,000-850,000)
- 78 cities competed (5 in Ohio in February)
- 7 finalists named in March
- 1 winner to be named in June
 - \$40 million+ for over 4 fiscal years



THE SMART CITY CHALLENGE

- Austin
- Denver
- Portland
- Pittsburgh
- Kansas City
- San Francisco
- And...Columbus!



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Our Vision

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“To be a community that provides beauty, prosperity and health for all its citizens by:

Implementing intelligent transportation systems that will connect citizens with jobs and recreation opportunities through sustainable transportation options and logistics.”



PARTNERS AND COLLABORATORS

- **Implementation Partners:** OSU, Columbus Partnership, Battelle, MORPC, COTA, Columbus 2020, ODOT, IBM
- **Collaborators:** Community leaders, social and employment services, Experience Columbus, banking and insurance sectors, Clean Fuels Ohio, car2go, CoGo, Uber, Lyft, IPS, Easton Towne Center, others
- **Technology Partners:** Ann Arbor/UoM, Pittsburgh/ CMU
- **International Technology Partners:** Barcelona, IDANA Lab, Montreal, others
- Technology Transfer strategy with Midwest Cities



ACCESS TO JOBS

Deployment

- Enhance COTA CMAX Project
 - Additional traveler information via Smart- phone
 - Mobileye
 - Smart intersections
 - Smart corridors
 - Self-driving vehicles servicing Easton (first/last mile from Transit Center)



SMART LOGISTICS

Deployment

- **Leverage Federal Funds:**
 - CTSS Fiber Program
 - OHGO (Ohio Department of Transportation)
 - Traffic Management Centers (city and state)
- **Deployments via Smartphone:**
 - Real-time regional traffic condition data
 - Delivery site location/availability data
 - Regional truck routing data



CONNECTED VISITORS

Deployment

- **Smartphone app**
 - Transit and driving route information
 - Hours of service
 - Parking and transit service options
 - Event information



CONNECTED CITIZENS

- **Focus:** Linden Neighborhood
- Determine citizen mobility needs and connect them with transportation for:
 - Employment services
 - Healthcare
 - Social Services
 - Healthy food choices
- Develop smart payment system to transition from cash based transaction



SUSTAINABLE TRANSPORTATION

■ Challenges

- Limited fueling availability
- Locations not publicized
- Legislative and policy barriers

■ Deployment

- Expand SMART Grid
- Encourage car sharing service providers to convert to electric vehicles (EVs)
- Convert city fleets
- Expand EV charging stations
- Alternative fuel recharging facility location app



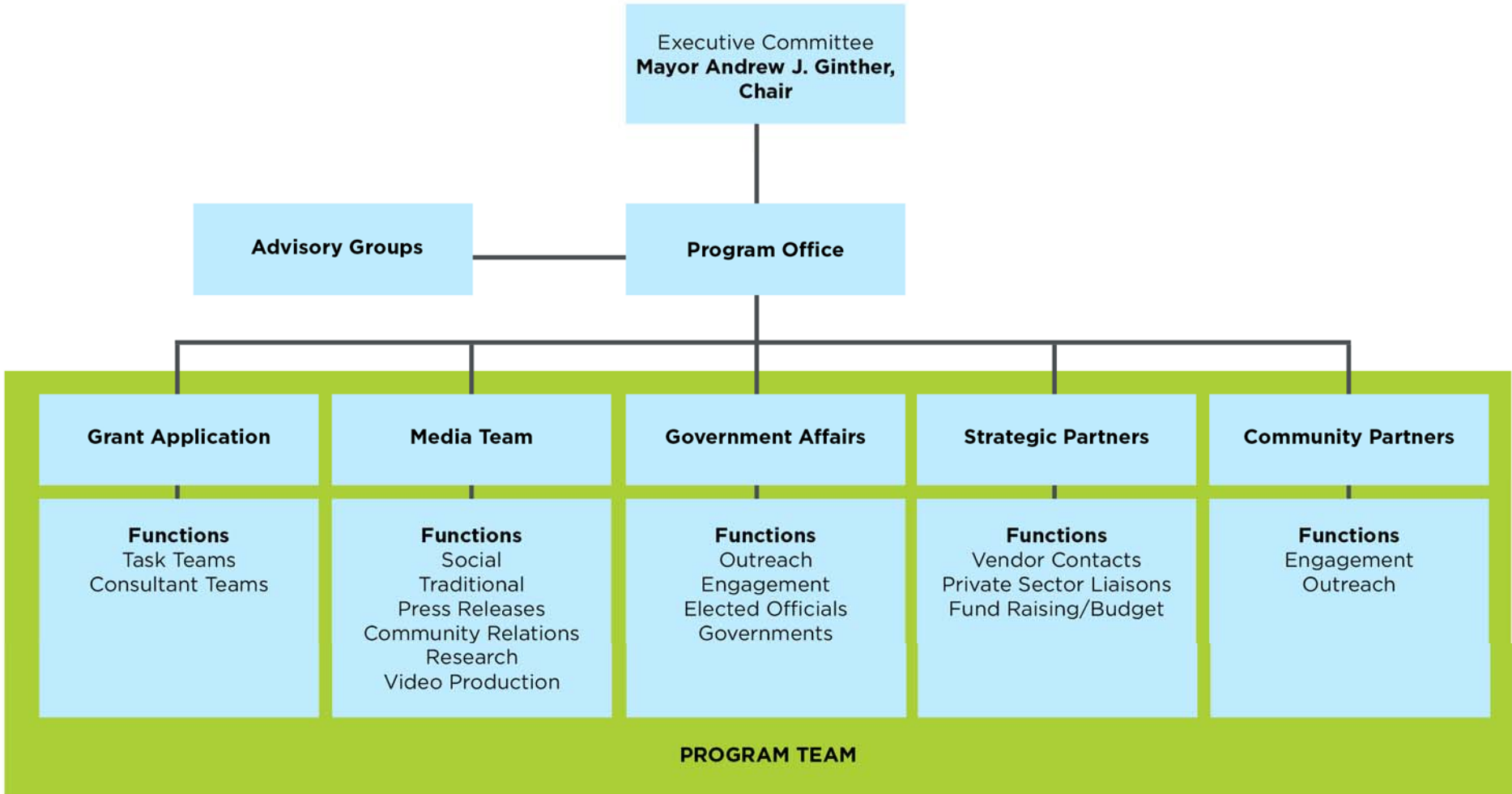
#SMARTCOLUMBUS Deployment

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SMART COLUMBUS ORGANIZATIONAL CHART



#SMART COLUMBUS COMPONENTS

City Implementation ★		COLUMBUS VISION AND OUTCOMES				
INITIATIVES	Access to Jobs	Connected Citizens	Smart Logistics	Sustainable Transportation	Connected Visitors	
★ 1. Smart Corridor CMAX, Street Lights, Hubs, DRSC, Mobilleye, Service Info	✓	✓	✓			
★ 2. Linden Neighborhood Kiosks, Street Lights, Service Info, Personal Transit	✓	✓		✓		
3. AV Deployment Service Info, Service Order, AV, Infrastructure, Smart Corridor-Morse	✓			✓		
★ 4. EV Development EV, Refueling, Smart Grid	✓			✓		
5. Smart Logistics & Parking Event, Truck Parking, Truck Routing, Truck Delivery	✓		✓		✓	
6. Common Payment Deployment Enhanced Human Services. Payment Integration, ADA	✓	✓	✓	✓	✓	

1. SMART CORRIDORS

- **Challenges:** Last mile services, access to jobs, maximize connected vehicle network, smart payment system (apps or cards), transit service info via smartphone
- **USDOT Partners:** NXP, Amazon, Alphabet Sidewalk
- **Owner:** COTA
- **Connections**
 - Smart street lights
 - Linden Neighborhood
 - Smart payment system
 - Transit service info



2. LINDEN NEIGHBORHOOD INITIATIVE

- **USDOT Partner:** Alphabet Sidewalk Lab
- **Potential Services:** Personal transit (Uber, GM/Lyft), public transit (COTA), financial/smartphone access, smart payment system
- **Connections**
 - CMAX (Cleveland Ave)
 - Kiosks and smart street lights
 - Smart payment system
 - Common transit service info
 - Integrated social and employment services and transportation app



4. ELECTRIFICATION DEPLOYMENT

- **USDOT Partners: Vulcan, USDOE**
 - Increase the adoption of electric vehicles citywide
 - Expand AEP Smart Grid
 - Expand EV charging infrastructure
 - Incentivize EV adoption
- **Owner:** City, developers, fleet owners, personal transit providers, AEP for Smart Grid
- **Connections**
 - Easton demonstration
 - Smart Grid expansion
 - Clean Cities Coalition
 - Columbus Green Community plan



DATA MANAGEMENT & ANALYTICS

- **USDOT Partners: Amazon Web Services**
 - City-wide activity to organize data management and analytics, performance measurement activities
 - Provides common data format/ collection standards for all program components



QUESTIONS?

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