City of Madison Smart City Initiatives

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ITS Wisconsin Forum
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“We will see more change in the industry in the next 5 to 10 years than we have in the last 50.”

MARY T. BARRA,
CHAIRMAN AND CEO, GENERAL MOTORS
“The challenge is that we don’t know what’s coming but we know it’s coming. We all have to learn to change on a dime.”

PAM O’CONNOR, COUNCILWOMAN, CITY OF SANTA MONICA, CA
The BIG change

By 2030, Driverless technology will be deployed in fleets of taxis and buses.
Beginning today, a select group of Pittsburgh Uber users will get a surprise the next time they request a pickup: the option to ride in a self driving car.
The Smart City Challenge

- December 7, 2015: USDOT announcement
- $40 million to one mid-sized city (population: 200,000 to 850,000)
- Vulan Inc. to contribute an additional $10 million
- Other private partners to provide additional incentives
DOT Smart City Challenge

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

U.S. Department of Transportation
Madison Smart City Partners

[Diagram showing various partners and stakeholders related to smart city initiatives in Madison, Wisconsin]
Madison’s Proposal

- Intelligent data collection, analysis, and sharing
- Autonomous, connected, and electric vehicles
- Smart infrastructure
Intelligent Data Collection, Analysis, and Sharing

- Shared Madison data platform
- Performance analytics
- Ridesharing and microtransit algorithm
- Algorithms for real-time processing and sharing data from all sources
- Application developments
- Smart Parking algorithms
- A single fare payment system
- Smart freight delivery
- Real-time transportation system simulations for decision making
Autonomous, Connected and Electric Vehicles

- Autonomous microtransit pilots
- Innova Dash electric vehicles
- Mobility on Demand jitney services
- DSRC radio installations at all signalized intersections and RR crossings, and on all transit buses and select taxis
- EV parking spaces with smart chargers
Smart Infrastructure

- Network of thermal and environmental sensors, and air quality sensors
- Four adaptive corridors
- City-owned 4G network and connect all public safety, public works and transit vehicles
- Smart grid improvements
- Advanced collision avoidance systems
- Accelerated deployment of ITS Strategic Plan
Madison’s Smart City Vision Map
ALAS, NO FLYING CARS: It’s another whole month before the Department of Transportation announces the five finalists of its $40 million Smart City Challenge innovation grant at SXSW, but MT persuaded some of the 78 cities in the running to give an advance peek at their pie-in-the-sky transportation proposals. We’ll be previewing some of these projects over the next few days. First up: Madison, Wis. The city’s proposal to DOT centers on the creation of a “Shared Madison Data Platform” that “will provide the open source information, infrastructure, and accessibility to develop tools to foster a more efficient and equitable transportation system.”

Rideshare and live maps and microtransit fleets, oh my! The platform, Madison official say, will pool data from infrastructure throughout the city, as well as public and private vehicles. “Some of the initial applications developed on the Platform will include a ridesharing algorithm that allows members of the public to connect and share rides for mutual benefit, a live map showing current road conditions, and a single-payer system for all transportation modes. Most importantly, the Platform … will have the capability to evolve to handle driverless microtransit fleets in the future.” Not quite flying cars, but big promises nonetheless!
Columbus was the Winner

- Announced June 23, 2016
- Leveraged $50 million in USDOT and Vulcan funding into an additional $90 million match
- $22 million public, $53 million private, $17 million Institutional/Non-Profit
- Demonstrated more value than any other applicants
What’s Next for Madison?

• The second adaptive corridor on University Avenue
• CV pilot: connected Park Street Corridor
• AV pilots: UW, Epic campus and State Street shuttles
• Smart City Collaborative
The Second Adaptive Corridor

- The first adaptive corridor done on McKee Road – Fish Hatchery Road
- The second adaptive corridor programmed on University Avenue
- Federal funding and local match secured
- Design in 2017
- Construction in 2018
Connected Park St Corridor

- Park St from University Ave to Beltline
- Major transit corridor
- Test corridor for private sector such as Cadillac
- Wisconsin’s first CV infrastructure
- One of the first cities in the nation to meet the V2I DC deployment goal
Autonomous Vehicle Pilots

East Campus Mall Route

State Street Route
Smart City Collaborative

- Transportation for America
- Sidewalk Labs
- Estimated 50 cities nationwide
- Various work groups
- Tentative meeting schedules
Contacts

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