

Miami-Dade Metropolitan Planning Organization



2016 Florida Automated Vehicles Summit Tampa, Florida

Aileen Bouclé, AICP
Executive Director



MOBILITY OPTIONS
2040 Miami-Dade
Transportation Plan
EYES ON THE FUTURE

Miami-Dade Metropolitan Planning Organization

Presentation Outline



- I. Framework for Long Range Planning & Integration
- II. Challenges & Opportunities
- III. Miami-Dade Current Planning Efforts
- IV. The Future

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Framework for Long Range Planning & Integration



MPO PERSPECTIVE

- Development of LRTP within rapidly changing technology world, including land use planning and services
- Assuring existing assets & investments are reused/re-purposed
- Understanding how AV technology will influence traveler decisions and behavior

TRANSPORTATION AGENCY RESPONSIBILITY

- How to keep pace with technological changes
- Make sure emerging technologies are integrated into the mobility ecosystem that is in place



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Framework for Long Range Planning & Integration



- Increase in the use of single-occupancy vehicles
- Integration of CAV vehicles and other mobility modes
- Land use planning
- Data management
- Provision of equitable and accessible transportation for disadvantaged groups
- Changes in local, state, and federal regulations
- Changes in Labor/work force



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Challenges & Opportunities



- Heavy Traffic Congestion & Transit Coverage
- Mobility Options & Operational Interconnectivity
- Equitable Mobility & Accessibility Service
- Complex Multi-Jurisdictional Regional transportation grid
- Emerging Transportation Data Challenge
- Federal Regulatory Challenges



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Challenges & Opportunities



- Shared, Connected and Automated (SCA) mobility ecosystem
- Enable proactive planning & management
- Improve transportation safety
- Increase reliable information & mobility options
- Increase vehicular & transit capacity
- Opportunity for reduced car-ownership reliance
- Enhanced transportation mode connectivity



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Miami-Dade MPO Current Planning Efforts

RESOLUTION 10-16 DIRECTING MPO EXECUTIVE DIRECTOR TO CONSIDER THE PROSPECTIVE USE OF AUTONOMOUS VEHICLES IN FUTURE TRANSPORTATION STUDIES AND REPORTS

MPO RESOLUTION #10-16

Agenda Item 5.A.6

RESOLUTION DIRECTING THE METROPOLITAN PLANNING ORGANIZATION EXECUTIVE DIRECTOR OR DESIGNEE TO CONSIDER THE PROSPECTIVE USE OF AUTONOMOUS VEHICLES IN FUTURE TRANSPORTATION STUDIES AND REPORTS

WHEREAS, technological advances continue to change the manner in which people travel; and

WHEREAS, the development of autonomous cars could change the very landscape of the transportation structure; and

WHEREAS, those communities who prepare for this upcoming technological development will be best able to adjust and capitalize on its potential benefits to improve safety and reduce congestion on its roadways; and

WHEREAS, transportation planning should take in to account potential technological impacts; and

WHEREAS, the Miami-Dade Metropolitan Planning Organization (MPO) is best situated to evaluate the potential impacts of autonomous vehicles and to suggest cogent recommendations,

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE METROPOLITAN PLANNING ORGANIZATION FOR THE MIAMI URBANIZED AREA, that the MPO Board directs the MPO Executive Director or designee to consider the prospective use of autonomous vehicles in future transportation studies and reports.

The adoption of the foregoing resolution was sponsored by Board Members Rebeca Sosa and Dennis C. Moss and moved by Board Member Rebeca Sosa. The motion was seconded by Board Member Dennis C. Moss, and upon being put to a vote, the vote was as follows:

Chairman Jean Monestime -Aye
Vice Chairman Francis Suarez -Aye

Board Member Bruno A. Barreiro	-Absent	Board Member Smith Joseph	-Absent
Board Member Esteban Bovo, Jr	-Aye	Board Member Philip Levine	-Absent
Board Member Jose "Pepe" Diaz	-Aye	Board Member Daniella Levine Cava	-Aye
Board Member Audrey M. Edmonson	-Aye	Board Member Dennis C. Moss	-Aye
Board Member Maurice Ferre	-Aye	Board Member Jeff Porter	-Aye
Board Member Oliver Gilbert, III	-Aye	Board Member Rebeca Sosa	-Aye
Board Member Perla Tabares Hantman	-Aye	Board Member Javier D. Souto	-Aye
Board Member Carlos Hernandez	-Absent	Board Member Xavier L. Suarez	-Aye
Board Member Sally A. Heyman	-Absent	Board Member Juan C. Zapata	-Absent
Board Member Barbara J. Jordan	-Aye		



MIAMI-DADE
METROPOLITAN PLANNING ORGANIZATION
SMART Plan Mobility Today & Tomorrow



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Miami-Dade MPO Current Planning Efforts

RESOLUTION 16-16 DIRECTING MPO EXECUTIVE DIRECTOR TO CREATE A TECHNICAL GROUP TO IDENTIFY NECESSARY STEPS FOR IMPLEMENTATION OF AUTONOMOUS VEHICLES TO BE CHAIRED BY THE MPO EXECUTIVE DIRECTOR

MPO RESOLUTION #16-16

Agenda Item 5.A.2

RESOLUTION DIRECTING THE MPO EXECUTIVE DIRECTOR TO CREATE A TECHNICAL GROUP TO IDENTIFY NECESSARY STEPS FOR THE IMPLEMENTATION OF AUTONOMOUS VEHICLES WITH SAID TECHNICAL GROUP TO BE CHAIRED BY THE MPO EXECUTIVE DIRECTOR; AND AUTHORIZING THE MPO EXECUTIVE DIRECTOR TO RETAIN THE SERVICES OF ONE OR MORE OF THE CONSULTANTS FROM THE GENERAL PLANNING CONSULTANT CONTRACT TO PROVIDE TECHNICAL ASSISTANCE TO SAID GROUP

WHEREAS the use of autonomous vehicles is likely to revolutionize the transportation patterns throughout the country; and

WHEREAS, those communities that plan for this pending technological change will be best situated to provide a seamless transition and enhancement to their transportation systems; and

WHEREAS, in the 2016 Session, the Florida Legislature adopted HB 7027 which requires that Metropolitan Planning Organizations include in their Long Range Transportation Plans "consideration of infrastructure and technological improvements necessary to accommodate advances in vehicle technology, such as autonomous technology;" and

WHEREAS, the Miami-Dade MPO, even prior to the actions of the Florida Legislature, adopted MPO Resolution 10-16 which directed the MPO Executive Director or designee "to consider the prospective use of autonomous vehicles in future transportation studies and reports;" and

WHEREAS, establishing a task force chaired by the MPO Executive Director will facilitate this community's preparations for the impending technological changes,

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE METROPOLITAN PLANNING ORGANIZATION FOR THE MIAMI URBANIZED AREA, that the MPO Executive Director is hereby directed to create a technical group to identify the necessary next steps to prepare for the implementation of autonomous vehicles. Members of said technical group shall have expertise in transportation planning and/or transportation technology. The MPO Executive Director is hereby authorized to retain the services of one or more of the consultants from the General Planning Consultant Contract to provide assistance to said technical group.

The adoption of the foregoing resolution was Sponsored by Board Member Dennis C. Moss and Co-Sponsored by Chairman Jean Monestime, Vice Chairman Francis Suarez and Board Members Rebecca Sosa and Danielle Levine Cava. The resolution was moved by Board Member Dennis C. Moss. The motion was seconded by Board Member Rebecca Sosa, and upon being put to a vote, the vote was as follows:

Chairman Jean Monestime-Aye
Vice Chairman Francis Suarez-Aye

Board Member Bruno A. Barreiro	-Aye	Board Member Smith Joseph	-Absent
Board Member Esteban Bovo, Jr.	-Aye	Board Member Philip Levine	-Absent
Board Member Jose "Pepe" Diaz	-Absent	Board Member Daniella Levine Cava	-Aye
Board Member Audrey M. Edmonson	-Aye	Board Member Roberto Martell	-Aye
Board Member Maurice Ferre	-Absent	Board Member Dennis C. Moss	-Aye
Board Member Oliver G. Gilbert, III	-Absent	Board Member Jeff Porter	-Absent
Board Member Perla Tabares Hantman	-Aye	Board Member Rebecca Sosa	-Aye
Board Member Carlos Hernandez	-Aye	Board Member Javier D. Souto	-Aye
Board Member Sally A. Heyman	-Aye	Board Member Xavier L. Suarez	-Aye
Board Member Barbara J. Jordan	-Aye	Board Member Juan C. Zapata	-Aye



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Miami-Dade MPO Current Planning Efforts



MIAMI-DADE MPO CAV TASK FORCE

Private Partners:

Kymeta Corporation
Ford Motor Company
Innovation Lab
Intelsat
Lear Corporation
Local Motors
NuTonomy, Inc.
Assurant

Goal: Enhance interagency dialogue & collaboration, facilitate CAV project development & deployment within Miami-Dade County & the Region



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Autonomous Vehicle Exhibition

March 31, 2016



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The Future



- New Advanced Traffic Management System (ATMS) state-of-the-art with **Smart signals technology** to monitor flow in real time and reprogram signal timing
- **SHIELD + Mobile Eye** (autonomous collision avoidance) technology pilot to be deployed on Metrobuses in Miami Beach.
- **Traffic signal priority (TSP)** integration for Metrobuses

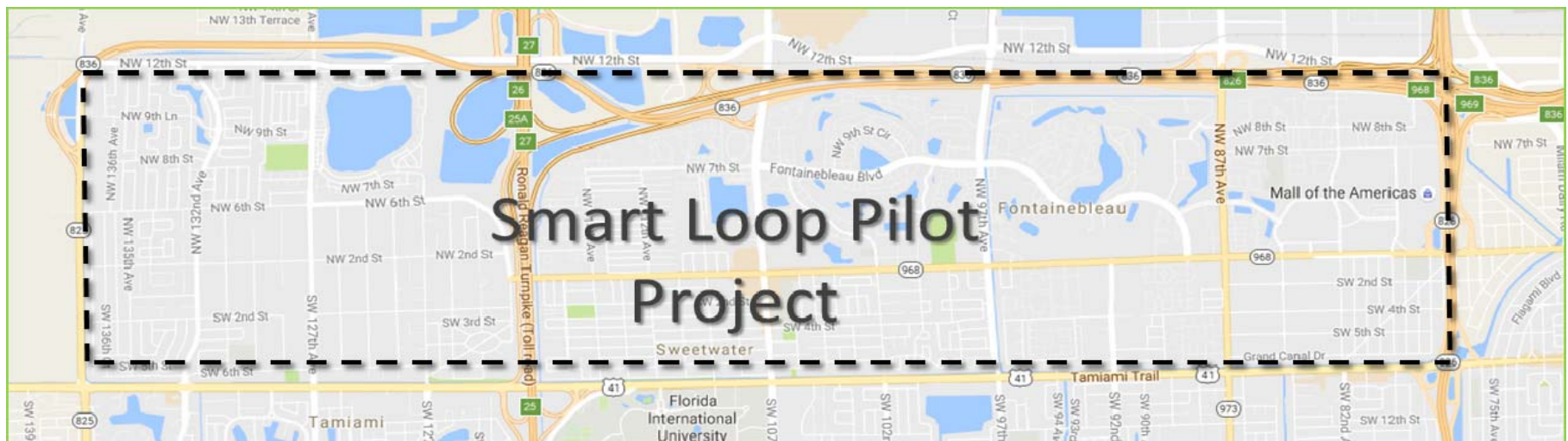


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The Future



- MDX Board **designated a "Smart Corridor"** along SR 836 from the MIC to SW 137th Avenue
- Suggesting to **develop a "Connected Loop"** utilizing this Smart Corridor segment along with: SW 137th Avenue, SW 8th Street & SR 826



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The Future



- Explore best procurement practices on data management and consumer modal choice
- Integration on CAV vehicles and other mobility modes such as bicyclists and pedestrians
- Connected freight pilot project along NW 25th Street Viaduct
- Ensure equitable access and accessible transportation for disadvantaged groups
- Identify high priority corridors
- Continue working with CAV Task Force



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The Future



City Innovate Foundation (CIF)'s Superpublic

Workspace for policymakers, academics, entrepreneurs, industry experts, nonprofit leaders

Focused on **tackling urban mobility problems** and **devise solutions**

Miami-Dade as leading metro area in a series of colliders (deep-dive workshops) for **Open Backend Integration and Mobility On Demand solutions**

Transportation for America (T4America)'s Smart Cities Collaborative

National collaborative to **find technology solutions** to urban transportation and mobility challenges

National Association of City Transportation Officials (NACTO)

1st County to join NACTO's vast network

Miami-Dade 2nd transit agency to join NACTO



Questions & Discussion



AILEEN BOUCLÉ, AICP
MIAMI-DADE MPO EXECUTIVE DIRECTOR
305-375-4507

www.miamidademppo.org



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