The Beacon Council

THE FUTURE OF TRANSPORTATION

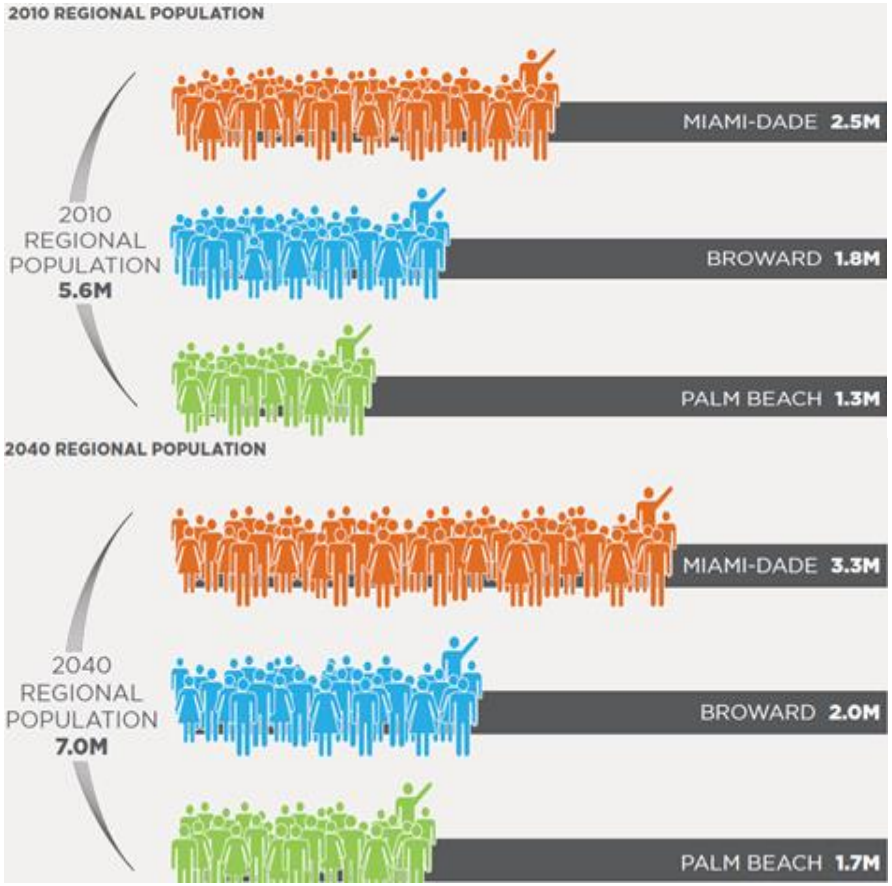
Alice N. Bravo, P.E. Director

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

MIAMI-DADE COUNTY

over **300** square miles
2.7million residents
34 municipalities
One County

Miami-Dade County



- **8th** most **populous** county in US
- **1st** most **populous** county in FL
  - largest seniors & millennials population
- Top **tourist destination**
  - 15.4 million visitors in 2015
- **Primary** Central Business District in Southeast Florida

source: Southeast Florida Regional Transportation Plan

A Mobility Management Agency

Department of **Transportation** & **Public Works**

Traffic Engineering

Signals and Signs

Transit Systems

Bike/Ped

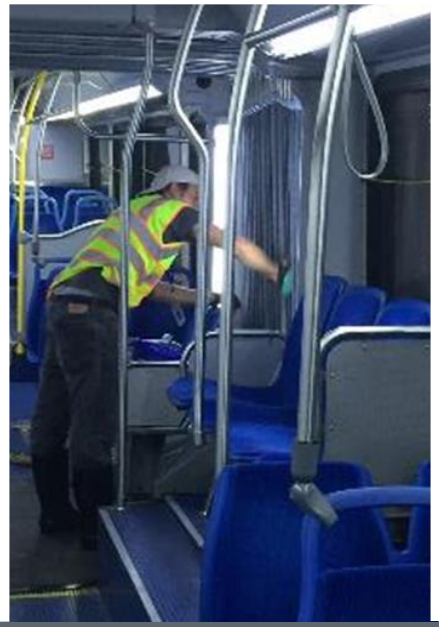
8th most congested metro area
7,680 paved lane miles roadway
18 million linear feet sidewalk
171 million drainage canals
one million traffic signs
26,400 street lights
3,000 traffic signals
209 bridges

15th largest
transit system in US
360 sq.mi.
transit service area
350,000
boardings (75,000 on rail)
over 850 buses
in 98 routes
22-mile
exclusive bus Transit Way
25-mile
elevated heavy rail
4.4-mile
automated people mover

Our focus has been on moving people and **minimizing the time a commuter spends** driving their car. We have partnered with our peer agencies to **improve mobility** in Miami-Dade County and have already seen some early wins.

What we've accomplished

10105
10105



GARA

Clean, Safe, Reliable
and Convenient Service

ENHANCED SECURITY

- Upgrade of the Closed-Circuit Television (CCTV) system
  - State-of-the-art and high definition cameras
  - Provide coverage throughout the system
- When completed, DTPW will have the ability to view the system through nearly 1,400 cameras

Rate Your Ride

Let us know how we're doing

- **Mobile App: "Rate Your Ride"**
  - Launched in October 2015
  - Transit riders provide feedback on how we're doing using their smartphone
  - Transit riders can rate us from 1 to 5 across these categories:
    - ✓ Cleanliness
    - ✓ Convenience
    - ✓ Reliability
    - ✓ Courteous service
    - ✓ Amenities
  - The decals with QR code inside buses, Metrorail and Metromover trains
  - Available via MDT Tracker app

FAST TRACK YOUR COMMUTE

METRORAIL EXPRESS

DRIVE LESS. LIVE MORE.™

DOWNLOAD MDT TRACKER APP

App Store | Google Play

MIAMI-DADE COUNTY

New Express Routes

METRORAIL DOWNTOWN EXPRESS

Air Conditioned Bus Shelter
& Fans at Metromover Stations

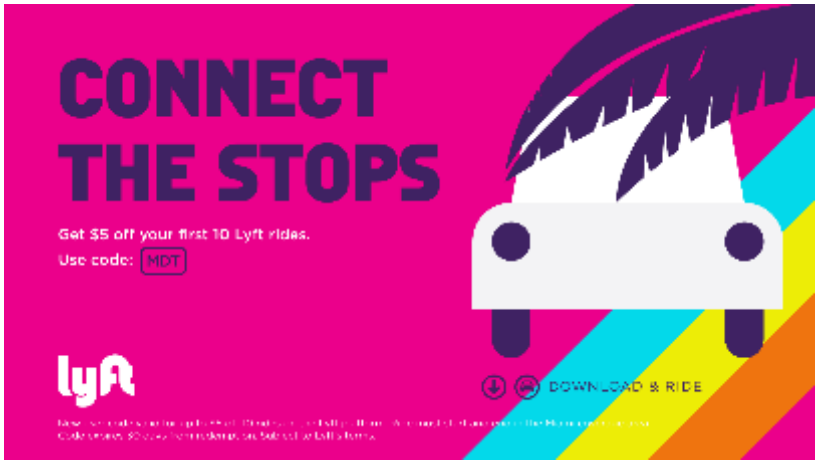
Metrorail Car Assembly Facility

New Metrorail Vehicles & Updating Bus Fleet

Improving Mobility

Transportation Network Entities

- Ordinance for TNEs
- Strategies with TNEs for first-mile/last-mile solutions:
  - Discounted Uberpool rides from/to Metrorail stations, from during Sep.
  - Discounted Lyft rides for new users, from Sep. thru Nov.



the **Underline**

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

MIAMI-DADE COUNTY

Mobility Innovation

- **MPO's Connected and Autonomous Vehicle (CAV) Task Force**
  - Joined efforts to enhance collaboration and facilitate CAV project development and deployment within Miami-Dade
- **Miami Parking Coalition Initiative** – partnered to reduce congestion through shared information
  - Municipal/private parking providers coalition
  - Integration of parking assets and real-time information
- **Sidewalk Labs' Smart Parking App**
  - Partnership with Sidewalk Labs for Flow Program in Miami
  - Smart parking app to help drivers find available parking real time through Google Maps
- **PayByPhone Partnership**
  - Efforts to implement parking payment applications for Metrorail parking garages and Park & Ride locations
- **Bike Share Program**
  - Issued RFP for Bike Share and Automated Bicycle Rental program at Metrorail Stations and other County Facilities

MIAMI-DADE METROPOLITAN PLANNING ORGANIZATION

MIAMI PARKING AUTHORITY

SIDEWALK LABS

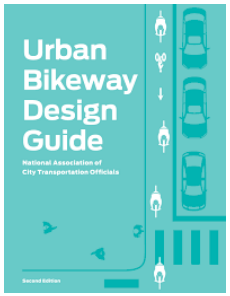
paybyphone

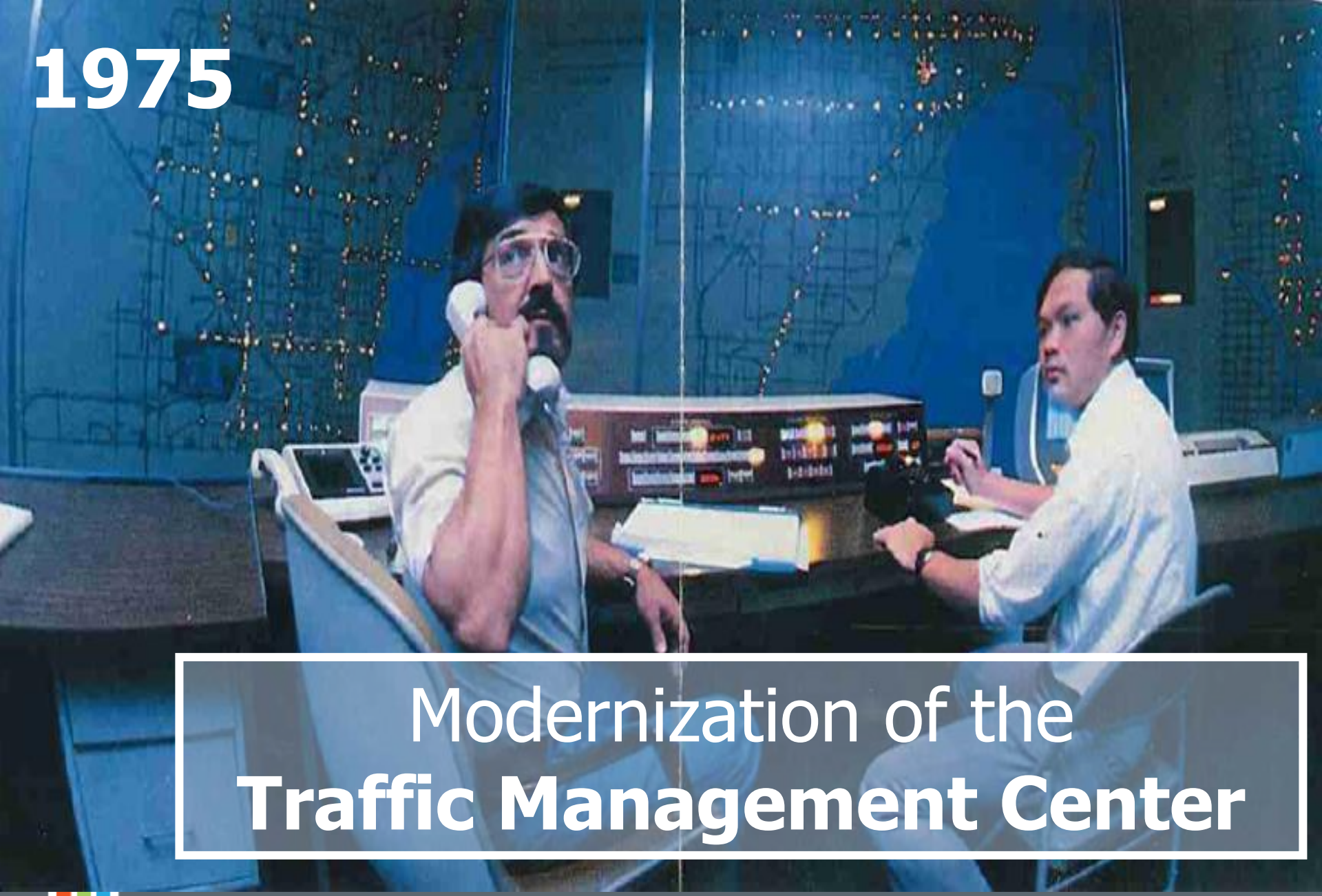
National Collaborative

- **City Innovate Foundation (CIF)'s Superpublic**
  - focused on tackling urban mobility problems and devise solutions
  - Workspace for policymakers, academics, entrepreneurs, industry experts, nonprofit leaders
  - 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, from national collaborative to find technology solutions to U.S. cities transportation and mobility challenges
- **National Association of City Transportation Officials** (NACTO)
  - 1st County to join NACTO's vast network
  - 2nd transit agency after NYC to join NACTO

SUPER PUBLIC

Transportation for America





Modernization of the **Traffic Management Center**

2016

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

MIAMI-DADE COUNTY

TRAFFIC MANAGEMENT CENTER

TOOLS & RESOURCES

VIDEO WALL
2 rows of 7 monitors (14 total) connected to the workstations

ITSDCAP
ITS Data Capture and Performance Management developed by FIU and FDOT

E-MAIL
Constant communication

RITIS/ BLUETOOTH
Regional Integrated Transportation Information System / Bluetooth System

ATMS
Advanced Traffic Management System

SUNGUIDE/ MDC SYSTEMS
Video Cameras

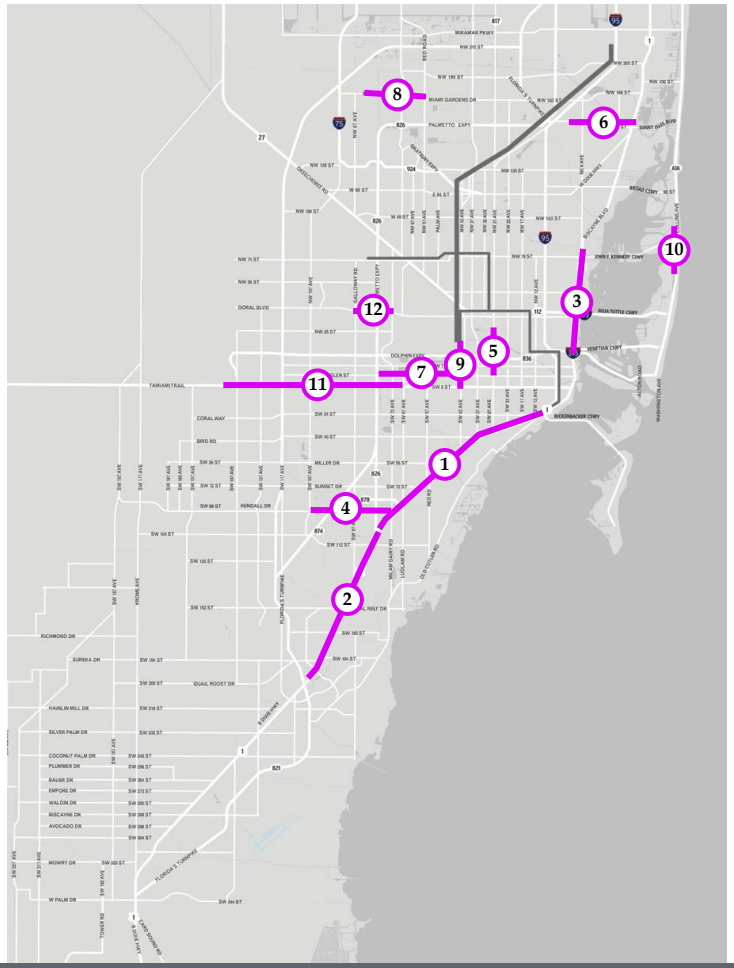
WAZE/ GOOGLE MAPS
Internet Tools

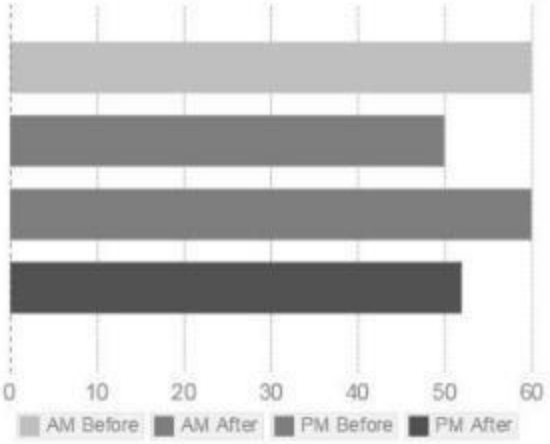
Work Station
6 monitors, 3 computers and 1 keyboard

Synchronized Signalized Intersections
Top 12 Most Congested Corridors

Partnered with FDOT to **optimize signal timing** on these corridors

1. US 1, from SW 16 Avenue to SW 98 Street
2. US 1, from SW 104 Street to SW 195 Block
3. Biscayne Boulevard – NE 11 Terrace to NE 82 Street
4. Kendall Drive, from Dadeland Boulevard to SW 107 Avenue
5. NW 27 Avenue, from W Flagler Street to NW 20 Street
6. NW 163 Street, from US 1 to NE 10 Avenue
7. W Flagler Street, from LeJeune Road to NW 79 Avenue
8. Miami Gardens Drive, from Red Road to NW 79 Avenue
9. LeJeune Road, from SW 8 Street to NW 14 Street
10. Harding Avenue/Abbott Avenue/Indian Creek Drive, from 81 Street to 63 Street
11. SW 8 Street, from SW 67 Avenue to SW 142 Avenue
12. NW 36 Street, from Galloway Road to NW 7100 Block





Peak Hour Travel Time along
US1 between SW 152nd Street & SW 16th Avenue

the average AM peak hour travel time has been reduced from 60 minutes to 50 minutes and PM peak hour from 60 minutes to 52 minutes.

1,260 hrs
during peak hour

25 % Peak Period has been reduced from 9 hours to 6.75 hours per day

AM Peak Period

- Before at 4.5 hrs
- After at 3.5 hrs

PM Peak Period

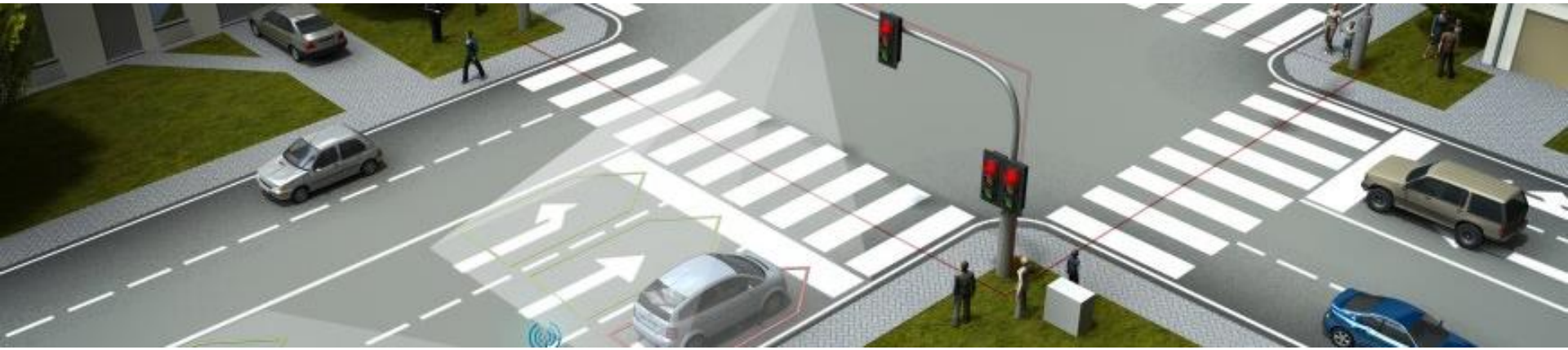
- Before at 4.5 hrs
- After at 3.25 hrs

$6M in peak hour savings &

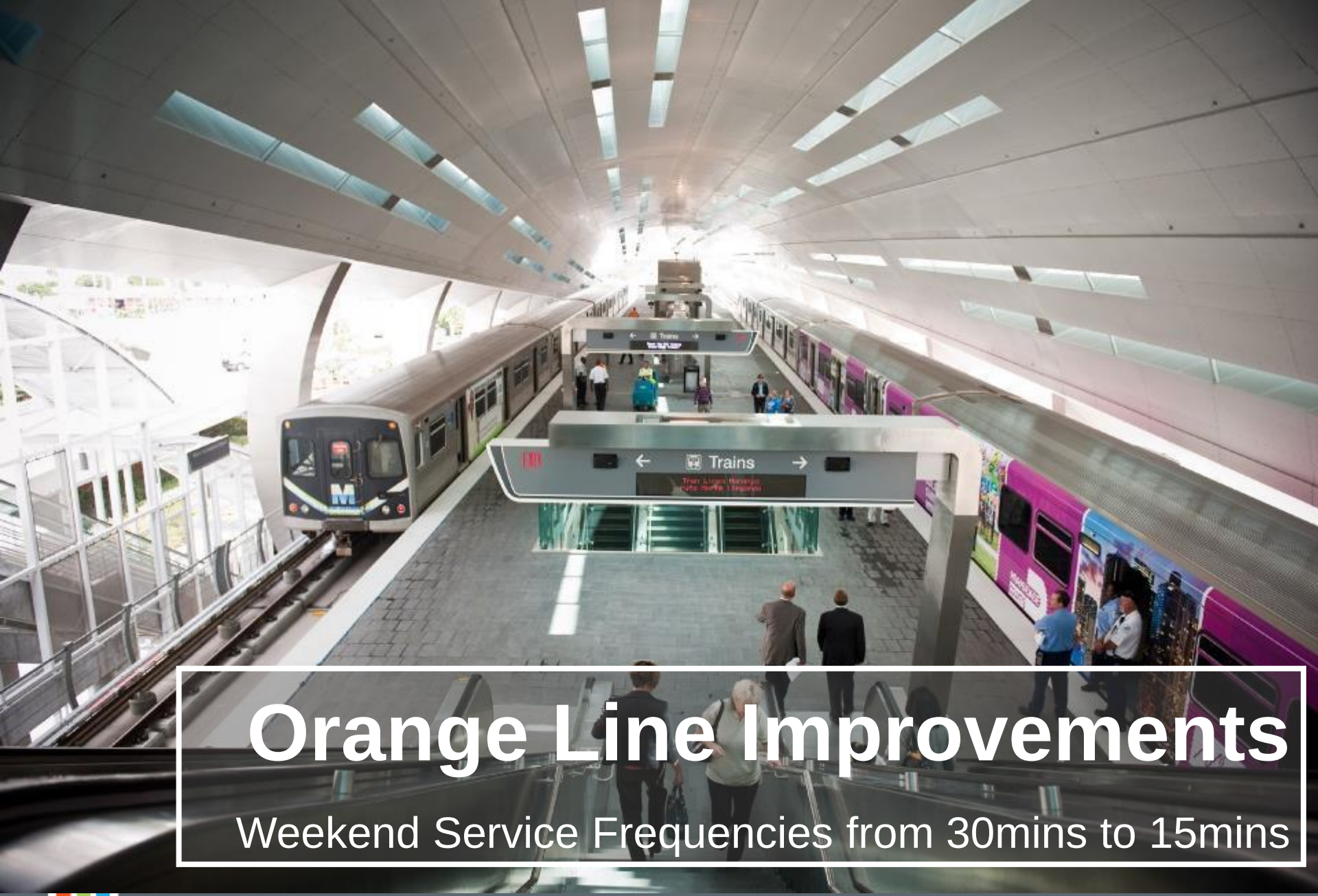
$20M in total peak period savings per year

The Texas Transportation Institute of Texas A&M identifies a value of time for commuters at $17.67 per hour

New Controllers for **Improved Traffic Flow**



- **Smart signals technology,** from to monitor traffic flow and reprogram signal timing to respond quicker to changing traffic conditions
  - Upgrading traffic signals with intelligent traffic controller technology
  - Implementing smart flow detection systems
- **Initial deployment along Congestion Management Corridors**
  - Intelligent traffic controller technology along with adaptive traffic signal systems and cameras are being deployed along 12 congestion management corridors
  - **1st new signal controllers and adaptive traffic signal system** already implemented on NW 36 Street between Galloway Road and NW 7100 Block
- **Transit Signal Priority (TSP) integration for buses**
- **Reversible lanes**



Orange Line Improvements

Weekend Service Frequencies from 30mins to 15mins

Extended Metrorail hours
on Fridays and Saturdays until 2 a.m.

MDT Tracker
MDT Transit Watch

Improving Transit Reliability

IMPROVING METROBUS RELIABILITY

- **On-time performance improvements**
  - adjustments to 38 Metrobus routes
- **Real-Time Tracking for Buses**
  - CAD/AVL system to monitor buses, see buses stuck in traffic and relocate resources to improve reliability
  - Provide real-time tracking and ETA information for users

MUNICIPAL DATA INTEGRATION PROJECT FOR TRIP PLANNING

- **Integration of Municipal Circulators** with MDT Tracker web-based and mobile applications

GO MIAMI-DADE
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

Upcoming All-Inclusive
Trip Planner & Payment App

- An infrastructure project for Open Back End Integration
- An **account-based system** that works across different fare structures & transportation providers
  - Purchase **transit tickets/passes**
  - **Book & pay** for services
  - Reload **account(s)** cards instantly
- Eliminate need to carry **EASY**card for Pay as You Go
  - Use Near Field Communication (NFC) enabled **smartphones**, **wearables** and **contactless bank** cards

EASY Pay

Transit Oriented Developments (TODs)

Santa Clara

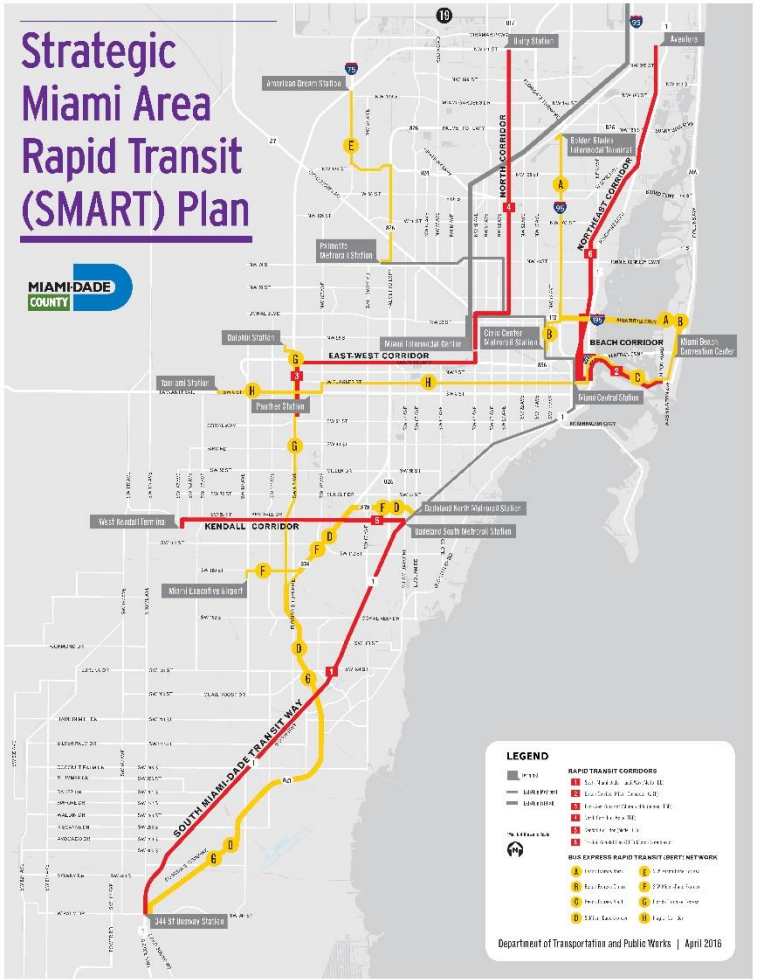
Northside

Brownsville

NW 7th Avenue Transit Village

- Promote and encourage development of dense **mixed-use developments** on County owned properties
- **Affordable housing** developments at Metrorail stations
  - **Completed TODs:** Santa Clara, Northside, Brownsville and NW 7 Ave. Transit Village
  - **Planned TODs**: Busway, SW 200 St., Busway & SW 296 St. and NW 27 Ave. & NW 215 St.
- Pursue opportunities for **large market rate joint developments**:
  - Brickell Citi Centre, Downtown Miami
  - Miami Worldcenter, Overtown

SMART Plan



Six **rapid transit** corridors

North corridor (HRT)

East-west corridor (HRT)

Beach corridor (LRT)

South corridor (HRT)

Kendall corridor (BRT/LRT)

Northeast corridor (CRT)

PUBLIC TRANSIT DAY

Public Transit Day on Friday, **December 9th**