



# Revisiting our FHWA Data Business Plan

July 2020





# Mapping the data landscape

- Who are the responsible parties?
- What datasets are being collected?
- What datasets are not being collected?
- How can each dataset support planning/management/operations?
- How can we collaborate?
- What are we working toward?

Who are the  
responsible parties?

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# Organizations invited to participate

- Approximately 20 agencies/organizations participated in stakeholder interview process
- Identifying data stewards within each agency
- Identifying the regard for data & organization within each agency



What datasets are being  
collected?

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# Data & gap assessment

- Revealed 50-ish sets of mobility data collected
- Questions about validity of these responses
  - Responses ranged from “all types of data” to “none”
  - Were we asking the right people? Did they do homework to answer the question correctly?
- Uneven landscape of data
- Novel datasets – CV pilot, Waze, LBS



What datasets are not  
being collected?

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# Data & gap assessment

- Few turn counts
- Bike/ped is extremely limited
- Origin-destination is desired
- Few ROI analyses





How can each dataset support  
planning/management/operations?



# Opportunities for intersection(al) analyses

- Identifying ways to study relationships
  - Crash & speed
  - Infrastructure condition & demography
  - Health & bike/ped counts



How can we  
collaborate?

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# Forums to discuss topics regarding data & analyses

- Intelligent Transportation Systems committee
- Regional Big Data Working Group
- Smart Cities Alliance
- Intra-agency working groups



Data &  
Analytics  
Portal –  
Why?

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Working smarter, not harder

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Centralize datasets across entire D7

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Consistent analyses – error free

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Eliminate data duplicates

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Regional performance measures



# Regional Data Platform - Overview

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The fusion and analysis of data from across the region brought together in one platform to enable the **maximum amount of insight** to be gleaned and in doing so creates the opportunity to manage our transport networks more efficiently and enhance mobility for all.

## **Vision:**

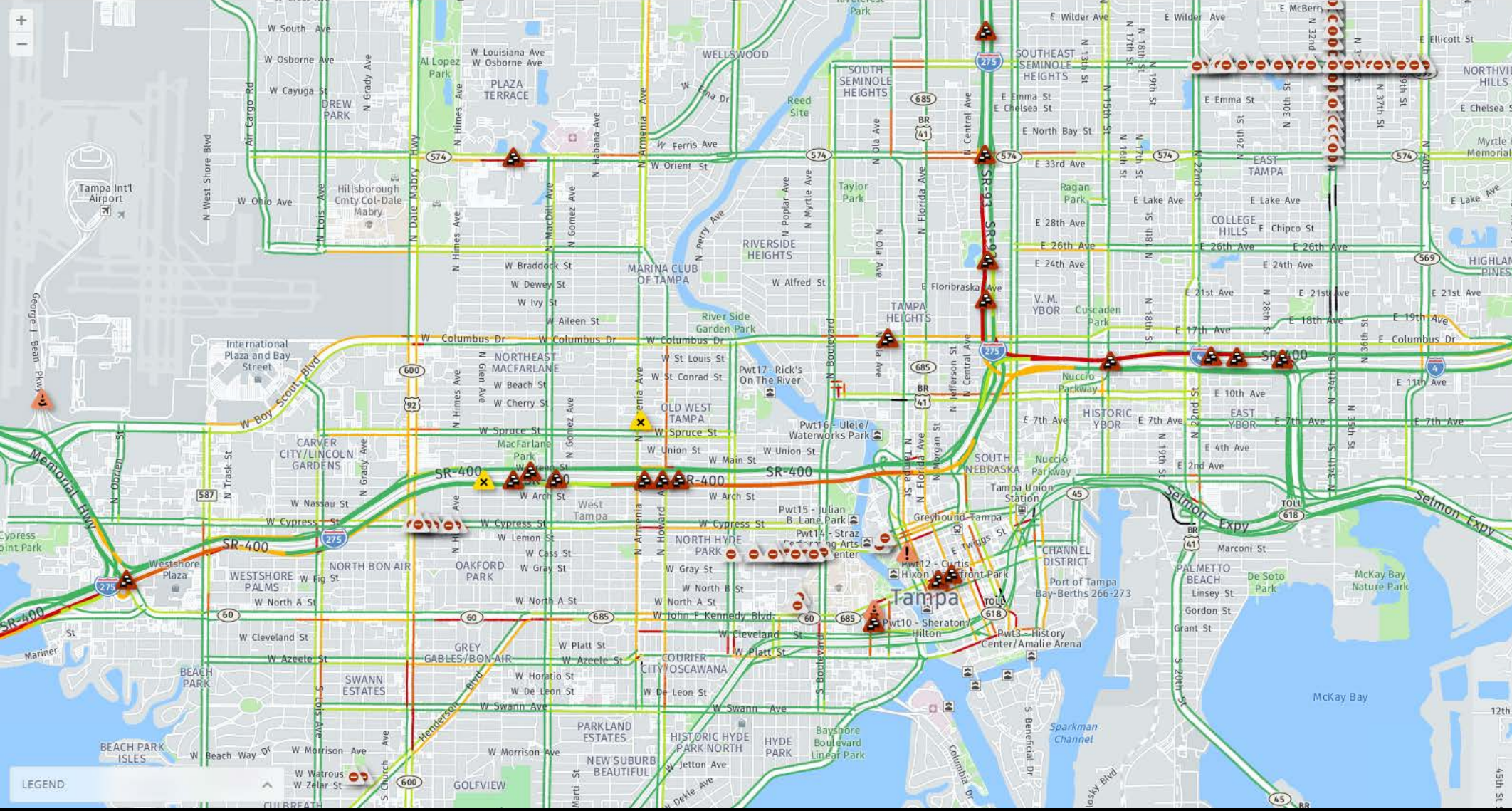
To use 'big data' to **optimize mobility movement** across the region, inform our future planning strategies and **drive efficiency savings**, this vision will be enabled by a proof of concept pilot project and then a series of projects as defined on the overall roadmap.



# ClearGuide

Real-time contextual  
mobility intelligence





### Incidents

Sources:

- Agency Crash
- Waze Incidents

RELIABILITY SCORE

All

- Crash
- Breakdown
- Congestion
- Police
- Other
- Advisory
- Construction
- Closure
- Hazard/Debris
- Weather



# Route Planning

Key Economic Spaces Across Hillsborough County

# Focus on commuter routes rather than corridors

The screenshot displays the iteris ClearGuide application interface. At the top, the logo "iteris ClearGuide" is on the left, and navigation options "MAP" and "ROUTES" are in the center. A location dropdown shows "Hillsborough". Below the header, a timeline shows "NOW" at "7:14:01 AM".

The main map area shows a blue highlighted route through Hillsborough, starting from the downtown area and heading towards the west. The route is labeled "Greater Downtown to TIA North/Anderson Rd".

On the left side, there is a sidebar with the following sections:

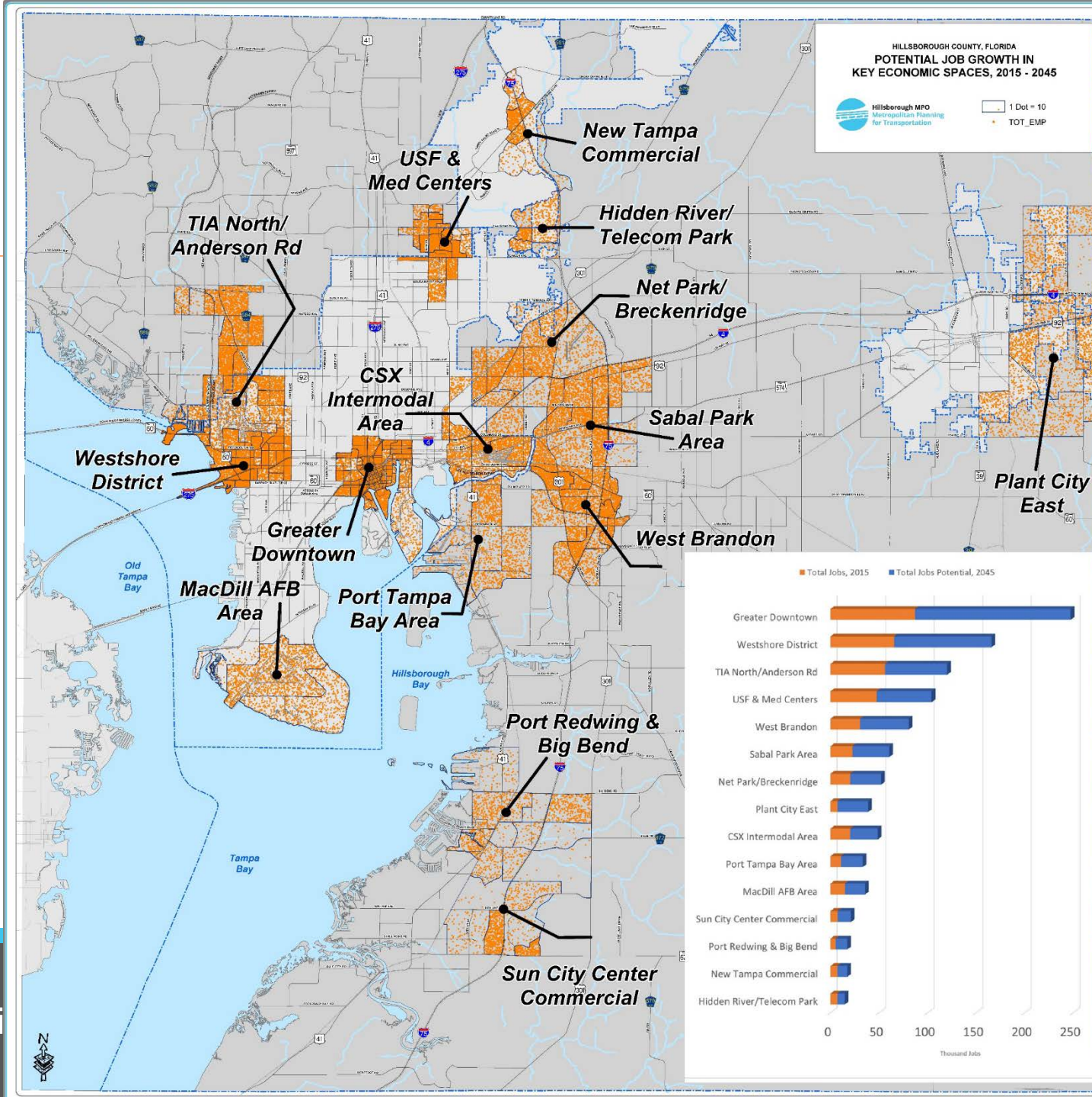
- Greater Downtown to TIA North/Anderson Rd**
- ROUTE PROPERTIES**
  - Route ID: 26
  - Description: I-275 (S) to HILLSBOROUGH AVE (E)
  - Tags: commuter route, kes
  - Created On: Nov 25, 2019
- ROUTE REPORTS + INFO**
  - Route Info / Exits
  - Timeseries
  - Time of Day
  - Day of Week
  - Time of Day + Day of week
  - Contours
  - Monthly Contours

On the right side, there is a search results panel:

- Buttons: SEARCH, CREATE
- Section: Search Results
- Actions: MODIFY, NEW
- Navigation: PREVIOUS, Showing 1-20 of 27, NEXT
- Table Headers: ID, NAME, CREATED ON
- Results:
  - Greater Downtown to Westshore District**
    - TAGS: commuter route, kes
    - ID: 24
    - CREATED: Nov 25, 2019
  - Greater Downtown to TIA North/Anderson Rd**
    - TAGS: commuter route, kes
    - ID: 26
    - CREATED: Nov 25, 2019

# Top 20 Most Miserable Commutes

- Based on KES
- 15x15 OD pairs
- Combining 6 measures of congestion for AM&PM peaks
- Future RL RTP integration?



# Focus on commuter routes rather than corridors

iteris ClearGuide

MAP ROUTES Hillsborough

TODAY NOW 7:14:01 AM

Greater Downtown to TIA North/Anderson Rd

ROUTE PROPERTIES

Route ID	26
Description	I-275 (S) to HILLSBOROUGH AVE (E)
Tags	commuter route, kes
Created On	Nov 25, 2019

ROUTE REPORTS + INFO

- Route Info / Exits
- Timeseries
- Time of Day
- Day of Week
- Time of Day + Day of week
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SEARCH CREATE

Search Results MODIFY NEW

PREVIOUS Showing 1-20 of 27 NEXT

ID	NAME	CREATED ON
24	Greater Downtown to Westshore District	Nov 25, 2019
26	Greater Downtown to TIA North/Anderson Rd	Nov 25, 2019

# Focus on commuter routes rather than corridors

The screenshot displays the iteris ClearGuide application interface. At the top, the logo "iteris ClearGuide" is on the left, and navigation options "MAP" and "ROUTES" are in the center. A location dropdown shows "Hillsborough". Below the navigation bar, a timeline shows "NOW" at "7:14:01 AM".

The main map area shows a highlighted commuter route in orange and blue, starting from the downtown area and heading north towards TIA. The map includes labels for various neighborhoods like Northwest Park, Pinecrest West Park, and Westshore.

On the left side, a sidebar displays route details for "Greater Downtown to TIA North/Anderson Rd":

- ROUTE PROPERTIES**
  - Route ID: 26
  - Description: I-275 (S) to HILLSBOROUGH AVE (E)
  - Tags: commuter route, kes
  - Created On: Nov 25, 2019
- ROUTE REPORTS + INFO**
  - Route Info / Exits
  - Timeseries
  - Time of Day
  - Day of Week
  - Time of Day + Day of week
  - Contours
  - Monthly Contours

On the right side, a search results panel is visible, showing a list of routes:

- SEARCH RESULTS** (Showing 1-20 of 27)
- Greater Downtown to Westshore District
  - TAGS: commuter route, kes
  - ID: 24
  - CREATED: Nov 25, 2019
- Greater Downtown to TIA North/Anderson Rd
  - TAGS: commuter route, kes
  - ID: 26
  - CREATED: Nov 25, 2019

# Supplement to traditional corridor-level LOS

## Improving Travel Time Reliability 30% Countywide is Achievable with "Smart Cities" Treatments Applied to these County Road Segments\*

County Road?	Route Created?	Road Name	From	To	MEAN TRAVEL TIME INDEX SCORE	LENGTH	RELIABILITY FORECAST (scores above 1 indicate less reliability)
Yes	Yes	12TH ST NE	19TH AVE NE	US 41	1.360	3.004	1.209
Yes	Yes	30TH ST / BRUCE B DOWNS BLVD	FLETCHER AVE	138TH AVE	2.364	2.938	1.280
Yes	Yes	30TH ST / BRUCE B DOWNS BLVD	FOWLER AVE	PINE DR	2.295	0.628	1.126
Yes	Yes	30TH ST / BRUCE B DOWNS BLVD	138TH AVE	BEARSS AVE	2.271	1.620	1.075
Yes	Yes	30TH ST / BRUCE B DOWNS BLVD	131ST AVE	FLETCHER AVE	1.623	1.133	1.068
Yes	Yes	30TH ST / BRUCE B DOWNS BLVD	PINE DR	131ST AVE	1.276	5.066	1.057
Yes	Yes	40TH ST	HANNA AVE	RIVERHILLS AVE	1.275	4.000	1.052
Yes	Yes	40TH ST	HILLSBOROUGH AVE	HANNA AVE	1.272	1.875	1.052
Yes	Yes	40TH ST/ MCKINLEY DR	BUSCH BLVD	BUSCH GARDENS	1.353	0.144	1.467
Yes	Yes	46TH ST	FLETCHER AVE	SKIPPER RD	1.423	0.500	1.641

# Supplement to traditional corridor-level LOS

County Road?	Road Name	From	To	Length	TTI (2020)	Mean TTI (2045)	Reliability Forecast (2045)
Yes	12 <sup>th</sup> St NE	19 <sup>th</sup> Ave NE	US41	3.004	1.001	1.360	1.209
Yes	40 <sup>th</sup> St	Busch	Busch Gardens	0.144	1.410	1.353	1.467
Yes	46 <sup>th</sup> St	Fletcher Ave	Skipper Rd	0.500	1.034	1.423	1.641
Yes	Big Bend Rd	I75 N Ramp	US HWY 301	0.612	1.590	1.299	1.278
Yes	Gibsonton Dr	I75 N Ramp	US HWY 301	0.597	1.640	1.187	1.062

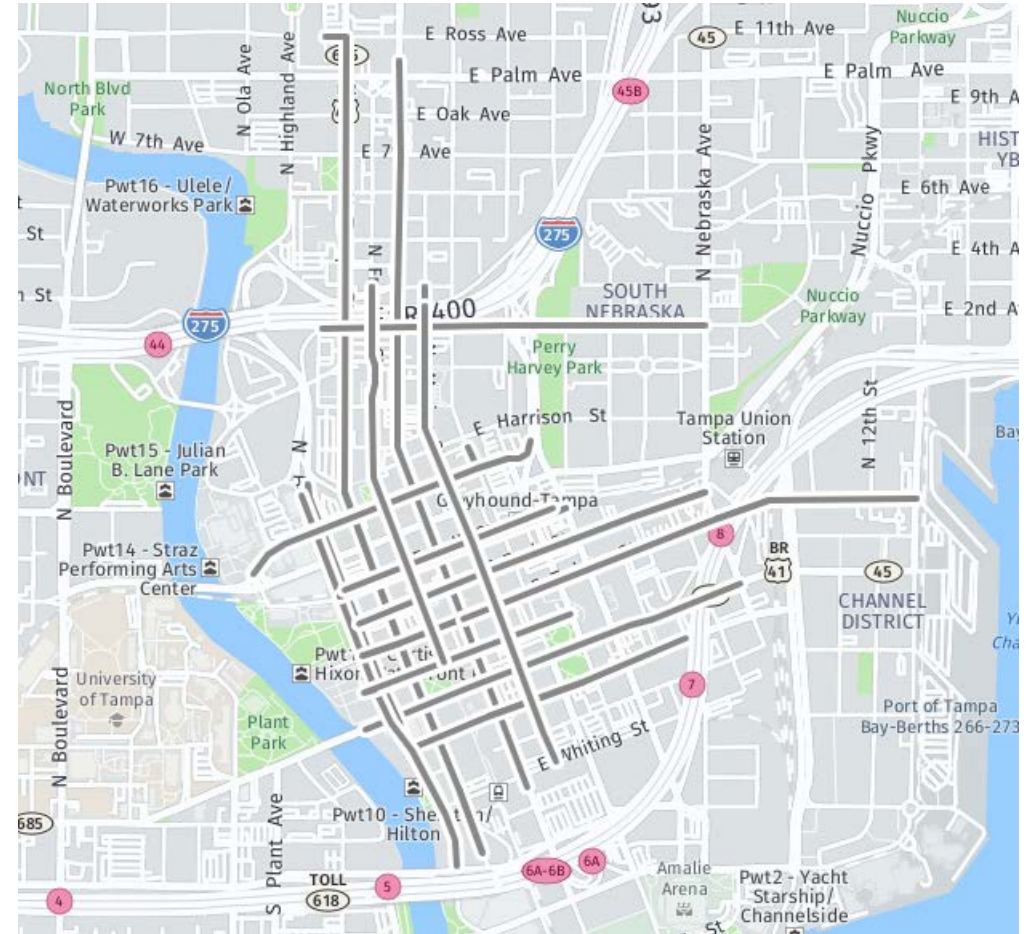
# Traffic Management

Signal Retimings in Tampa



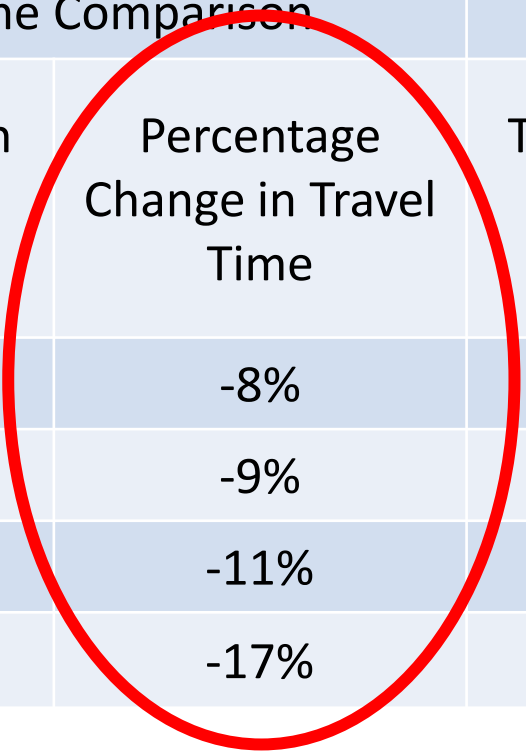
# Retiming signals in downtown Tampa

- Step 1 – Define area for evaluation
- Step 2 – Create routes
- Step 3 – Use multi-route reports in CG = obtain before and after values for travel time and delay
- Step 4 – Use AADTs and average hourly distributions for downtown to assign volumes to each route = vehicle hours of delay and travel time



# Evaluation

Travel Time and Delay Summary for All Corridors				
Time of Day	Travel Time Comparison		Delay Comparison	
	Total Change in Travel Time (veh-hr)	Percentage Change in Travel Time	Total Change in Delay (veh-hr)	Percentage Change in Delay
AM Peak - 0700 - 1000	-93.7	-8%	-55.1	-15%
Mid Day Peak - 1100 - 1300	-87.6	-9%	-52.0	-15%
PM Peak -1600 - 1800	-176.8	-11%	-118.1	-22%
Late Night - 2200 - 0000	-41.8	-17%	-31.5	-48%



## Next steps for data & analytics platform

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- Building dashboards on website
- Continue data exploration
  - Transit
  - O-D
  - Micro-mobility options
- Predictive analytics



# Lessons learned



# Learn by doing

- Be willing to be flexible or break the rules
- Lesson in organizing/coordination
- Value must be intersectional
- Governance must add value for the agencies & the public



# Best practices



# Suggestions for others

- Draw connections to projects & programs and talk about what could be possible
  - Vision Zero, Smart Cities
- Never stop talking about governance & related topics
  - Create a forum to discuss issues
- Regularly update the Data Business Plan
  - Scale of issues becomes more granular over time



Thank you

