



GDOT Regional Traffic Operations Program



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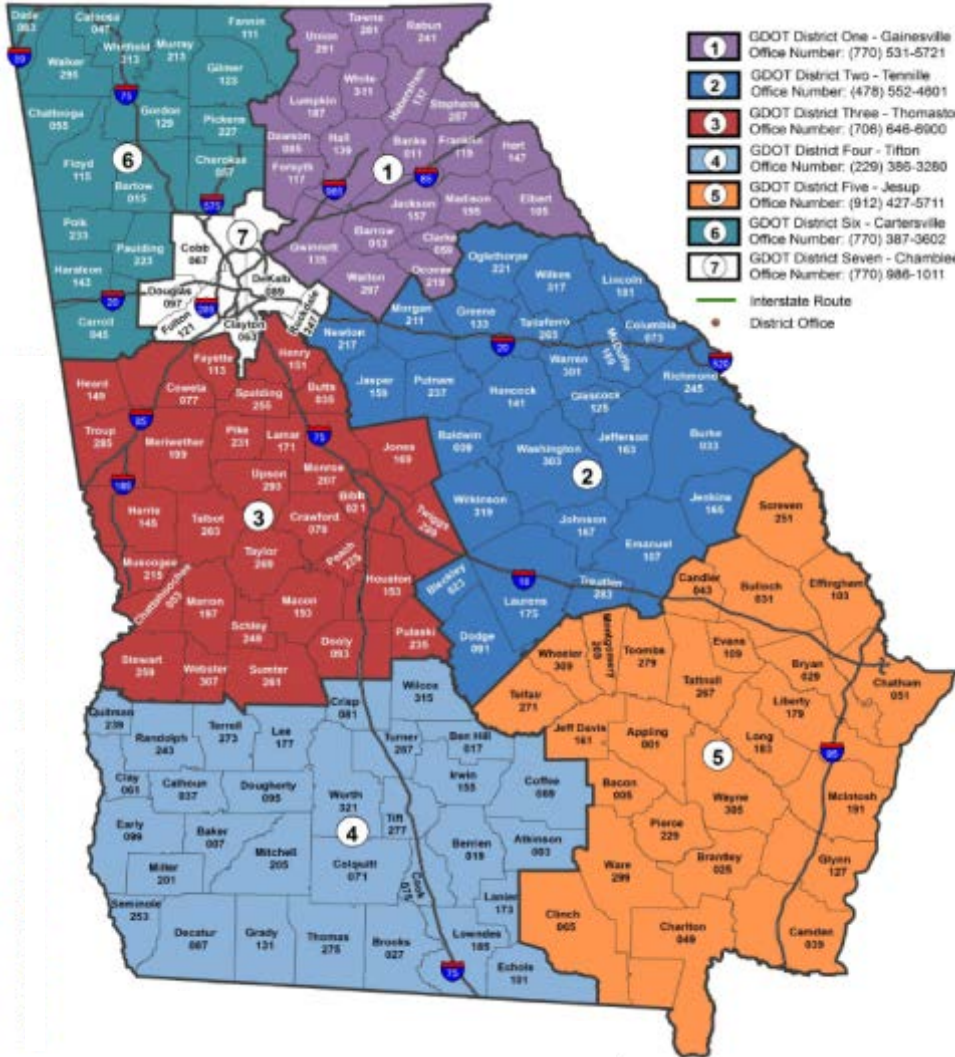


GDOT Signal Operations

1. State of Georgia
2. What is RTOP
3. Current and future initiatives



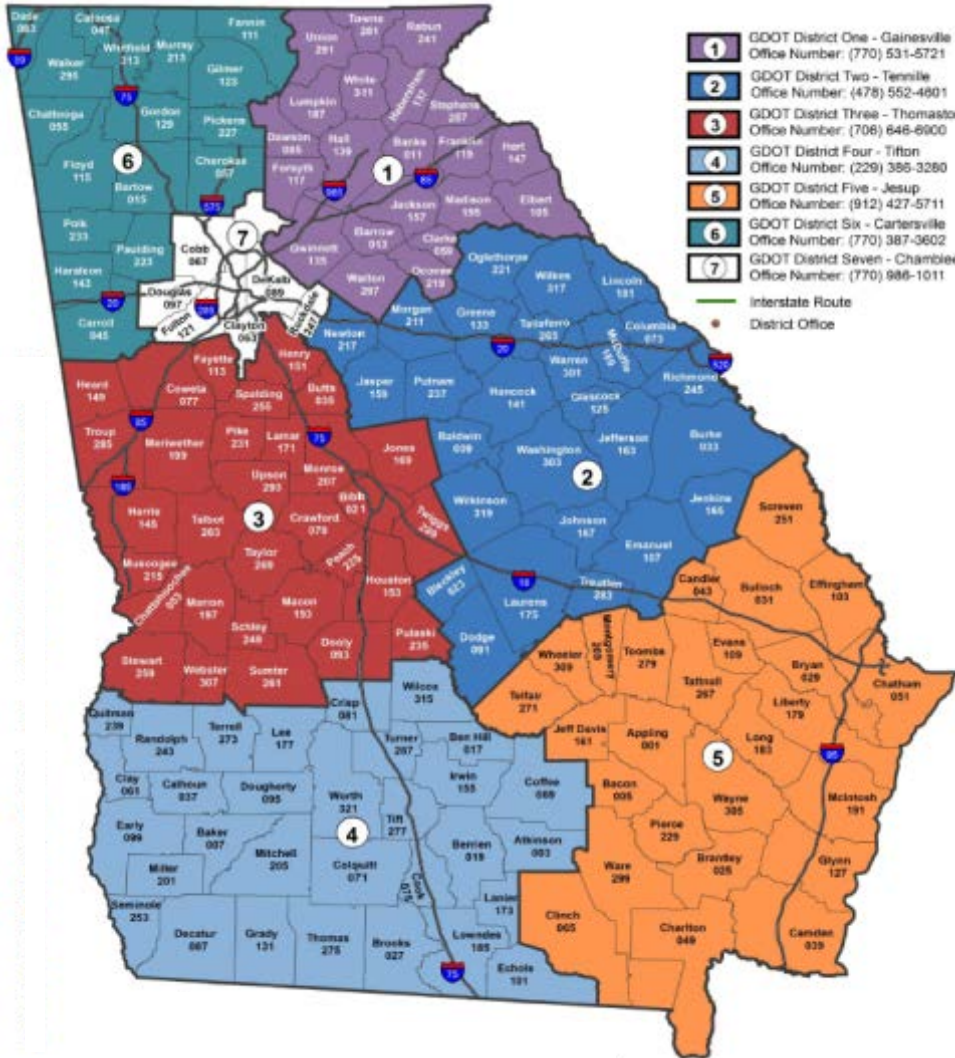
State of Georgia



- Seven Districts
- One Central Office
- Two Transportation Management Centers (TMC)



State of Georgia



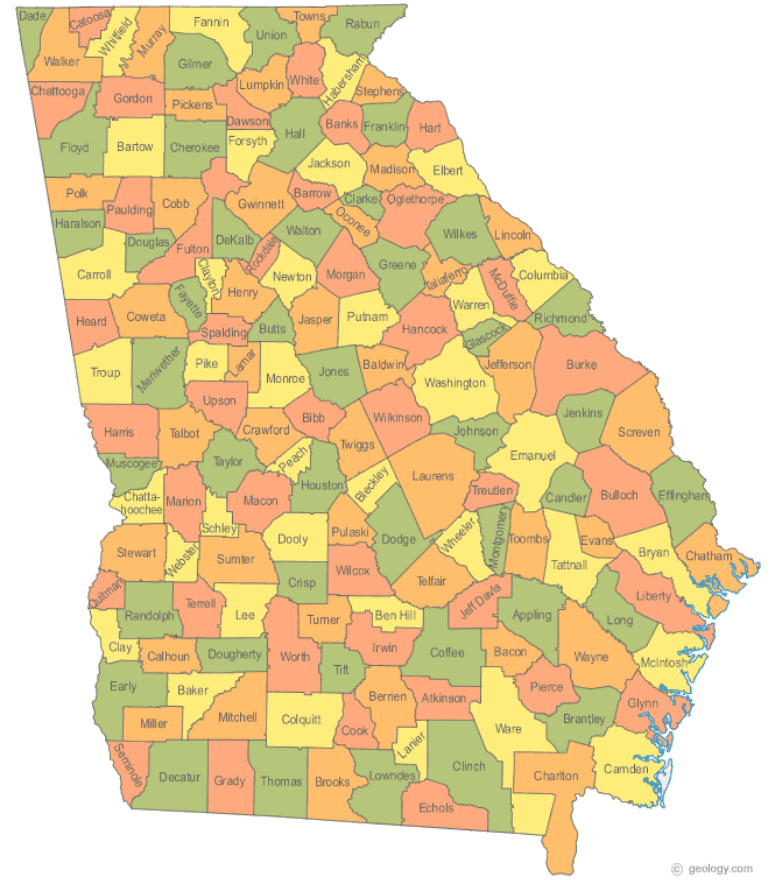
- 9,500 signals statewide
- 5,414 on-system
- 3,000 GDOT maintained



GDOT Arterials and Signals

- Maintaining Agencies:
 - 7 GDOT Districts
 - 54 Counties
 - 36 Cities

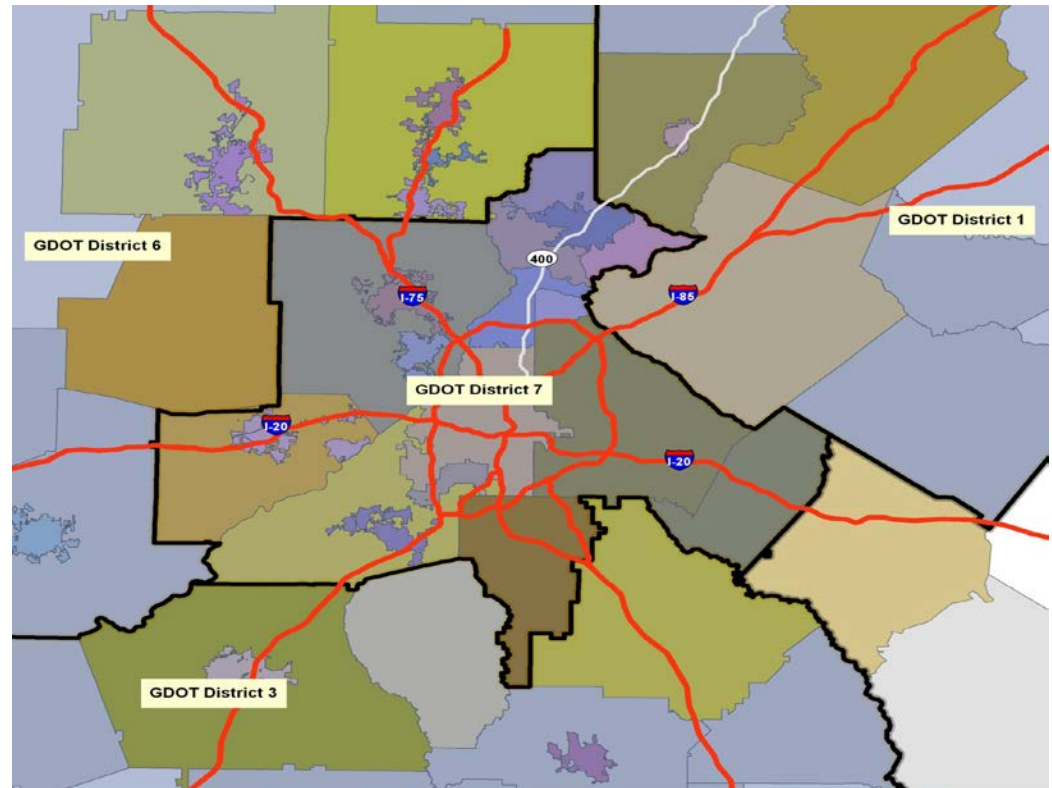
- Top 5 maintaining agencies:
 - GDOT: 3000 signals
 - City of Atlanta: 975 signals
 - Gwinnett County: 705 signals
 - DeKalb County: 661 signals
 - Cobb County: 543 signals





GDOT Arterials and Signals

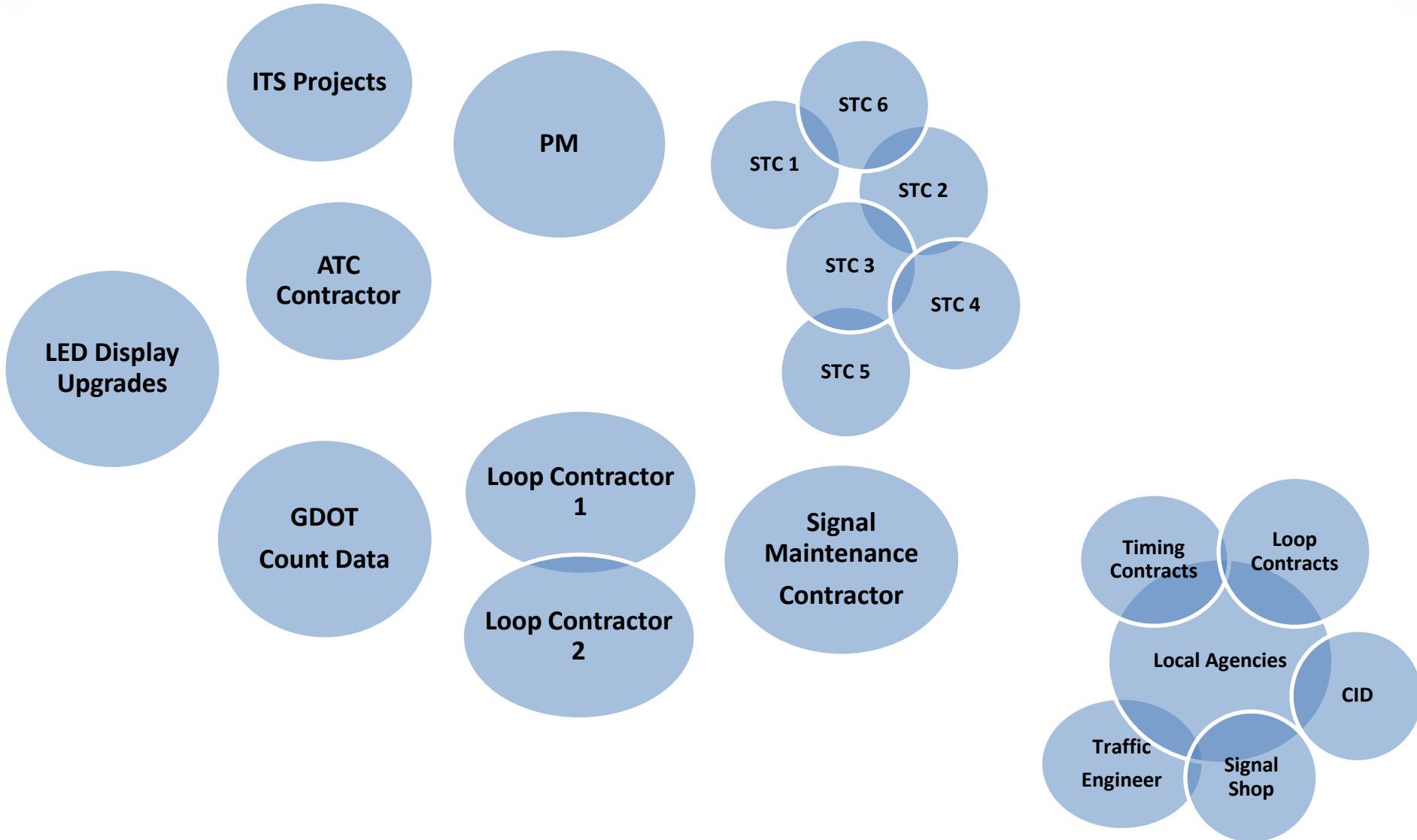
- In most major metropolitan areas:
 - State DOT manages the freeway network
 - Local agencies manage arterials
- In Atlanta:
 - 4 GDOT Districts
 - 15 Counties
 - 22 Cities

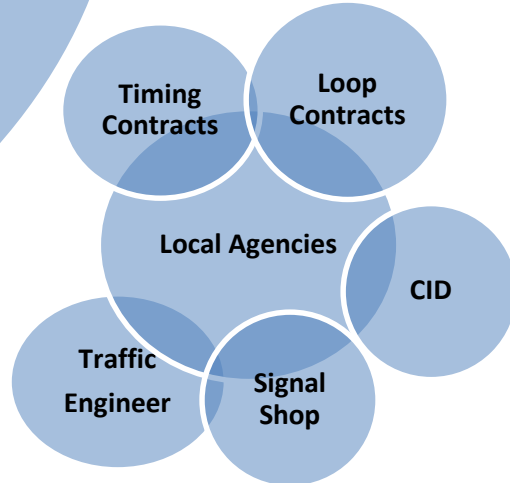
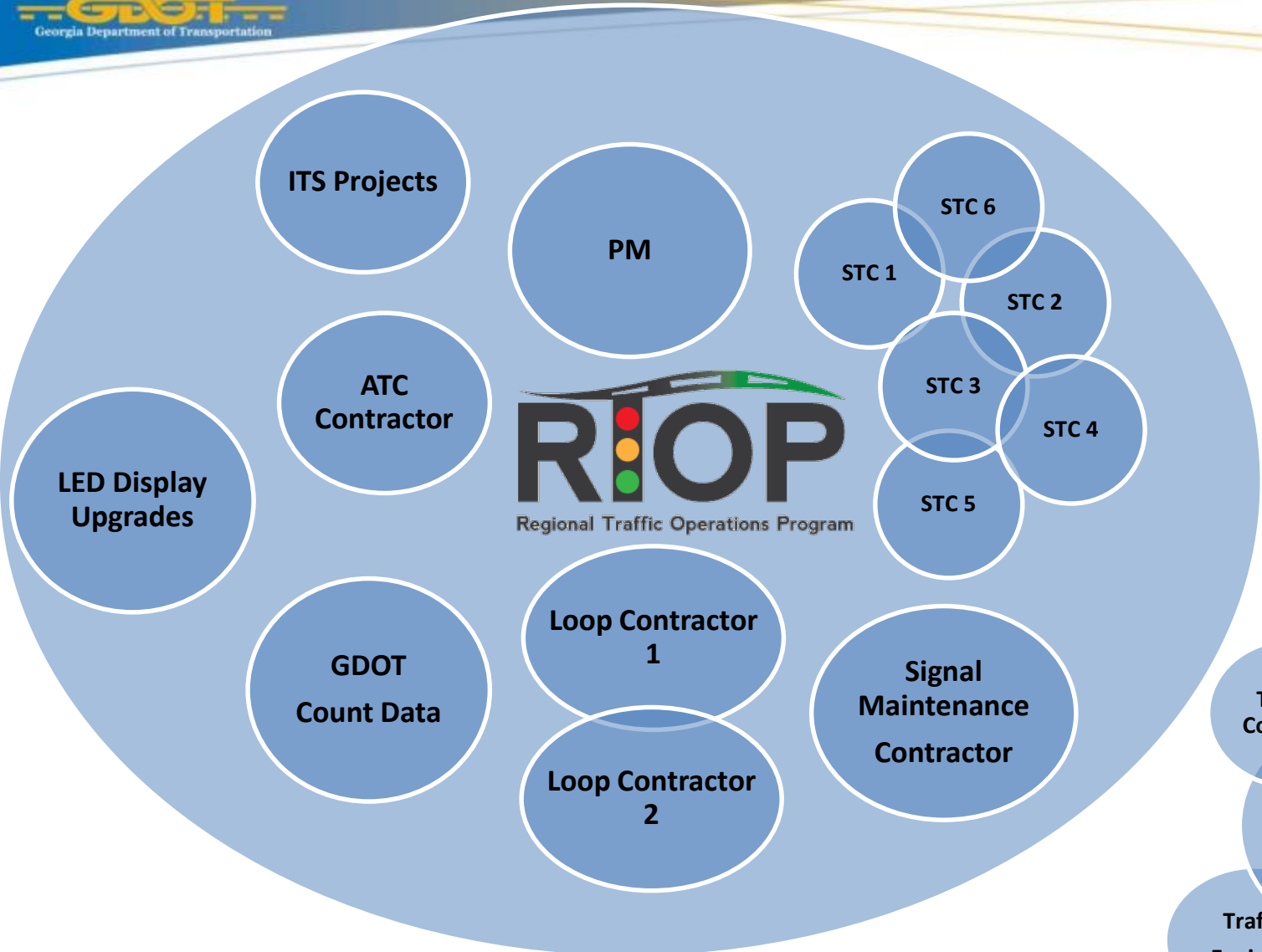


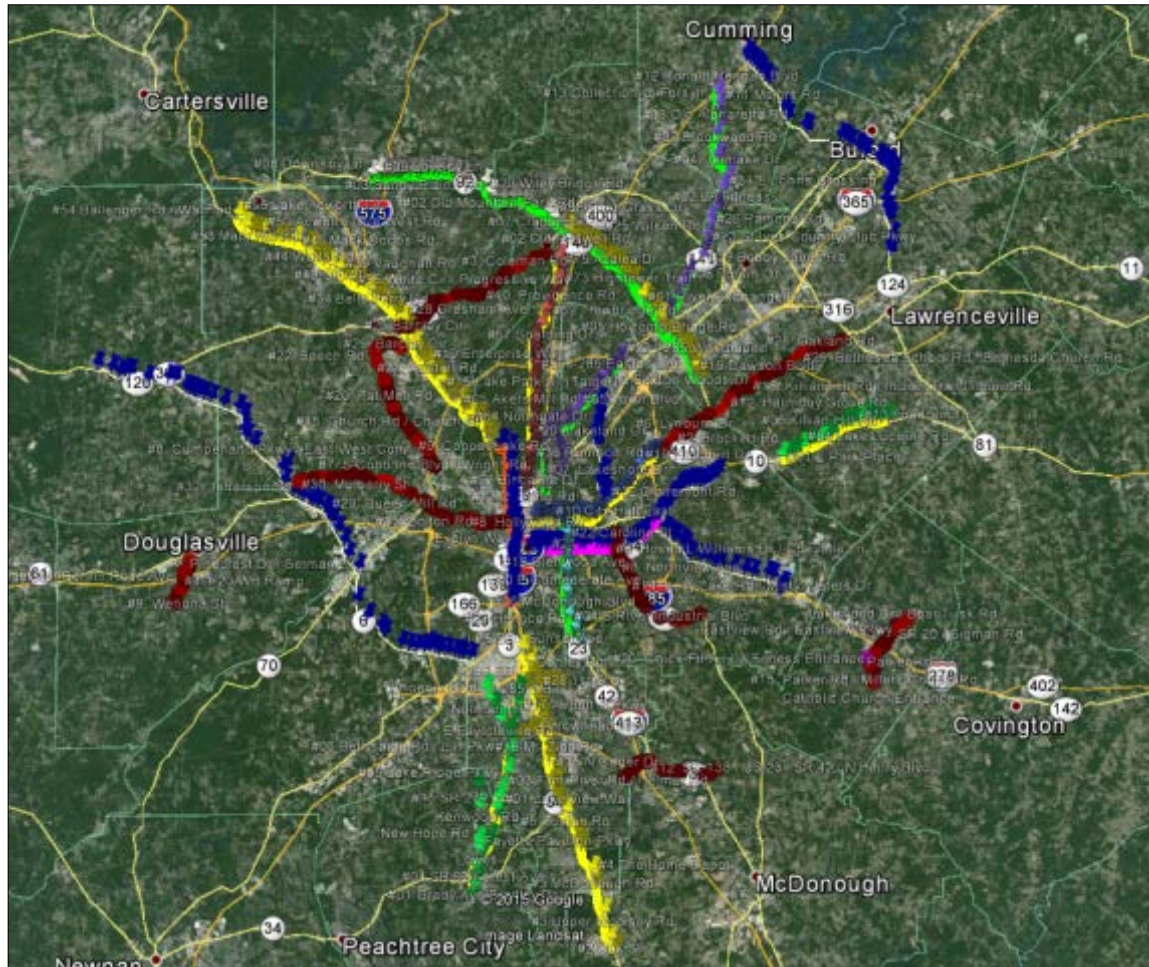


What is RTOP









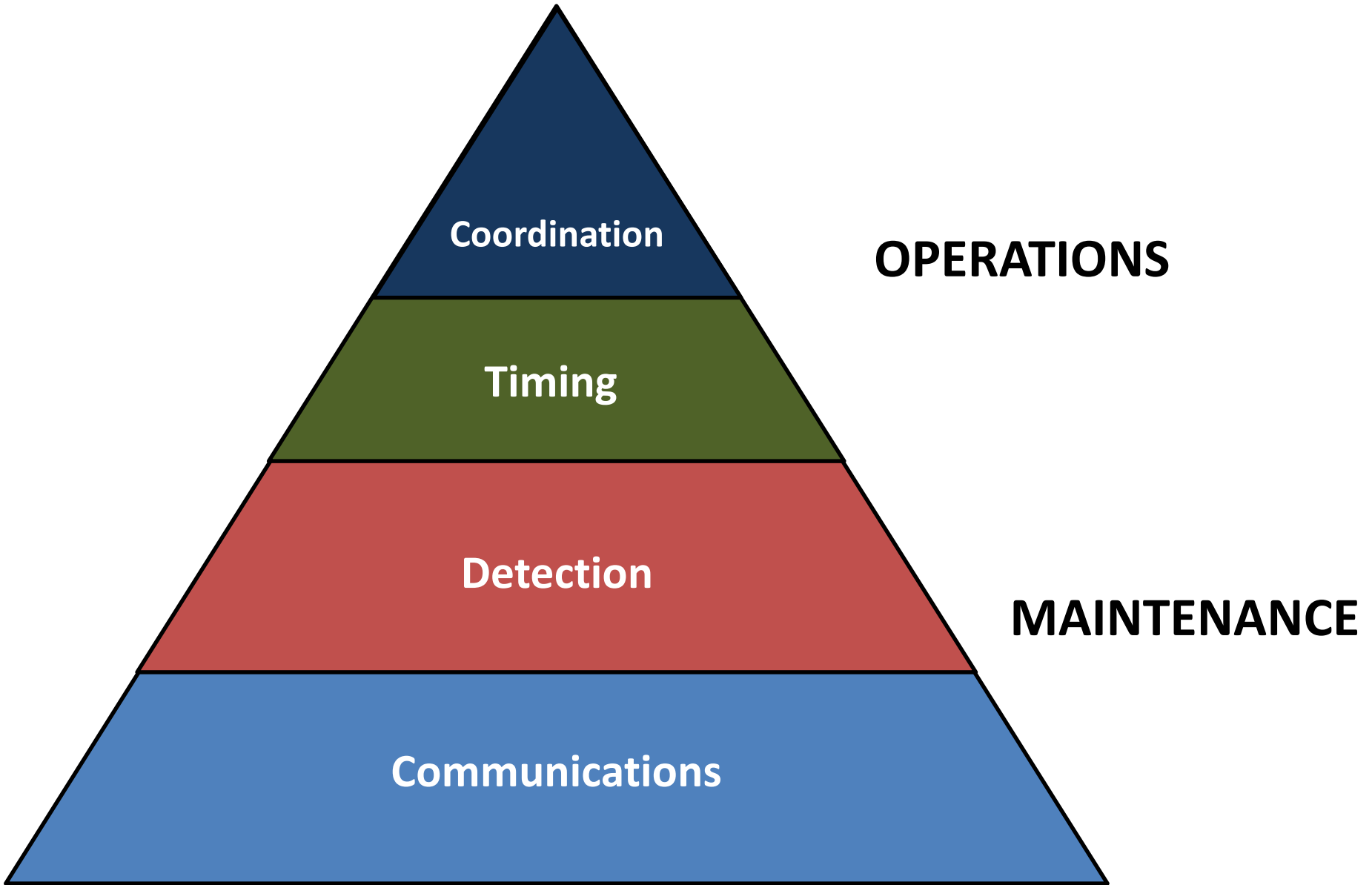
25 Corridors, 1100+ signals, Span 12 Counties, and 13 Cities in the Metro Region
Based on corridors of Regional Significance
3 CID's, 350+ signals



Goals and Objectives

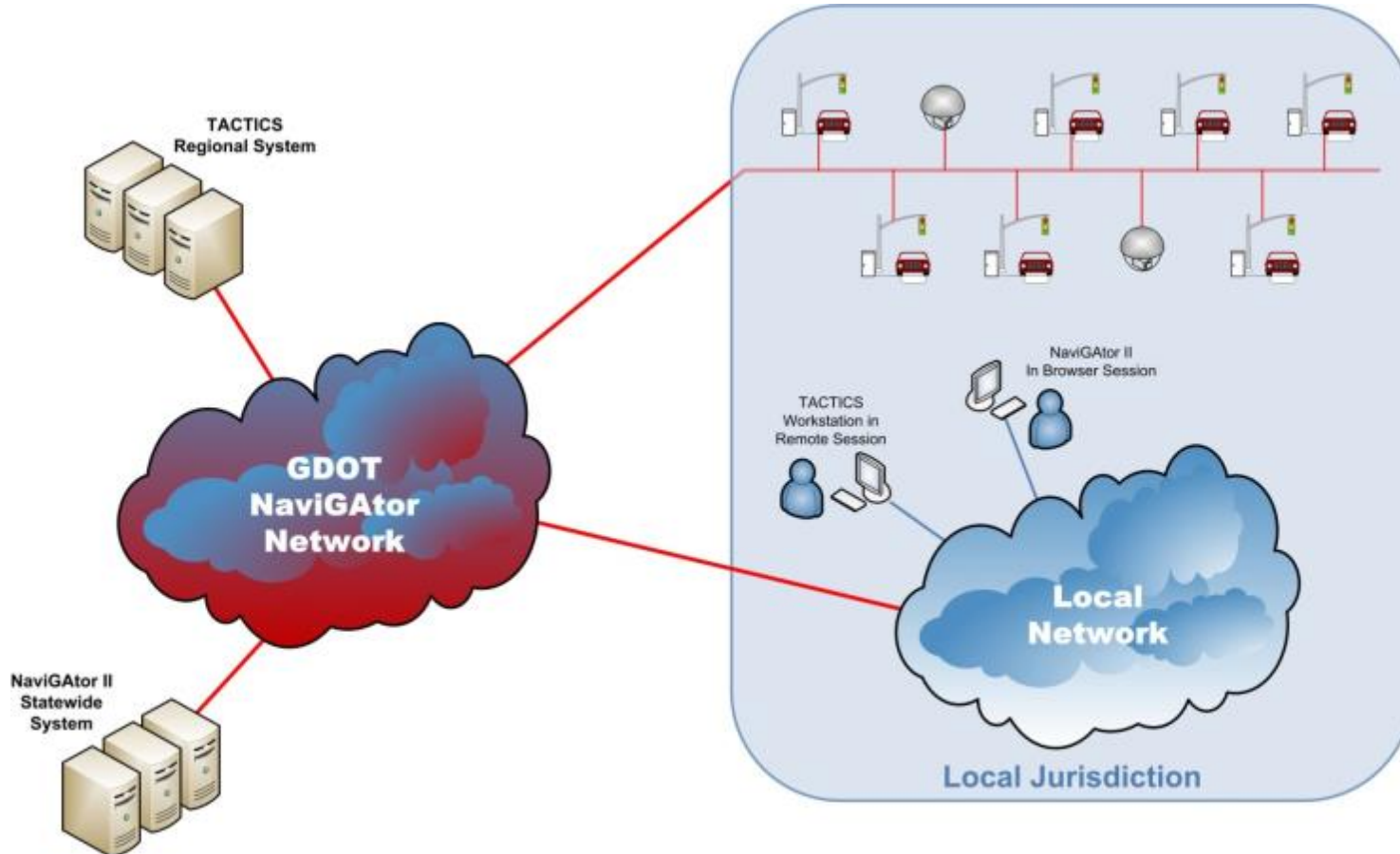
Primary objectives of signal operations

- i. Monitoring of traffic signals frequently enough to identify when maintenance or operational intervention is warranted;
- ii. Good allocation of green times; and
- iii. Good progression on selected arterials at selected times of day.





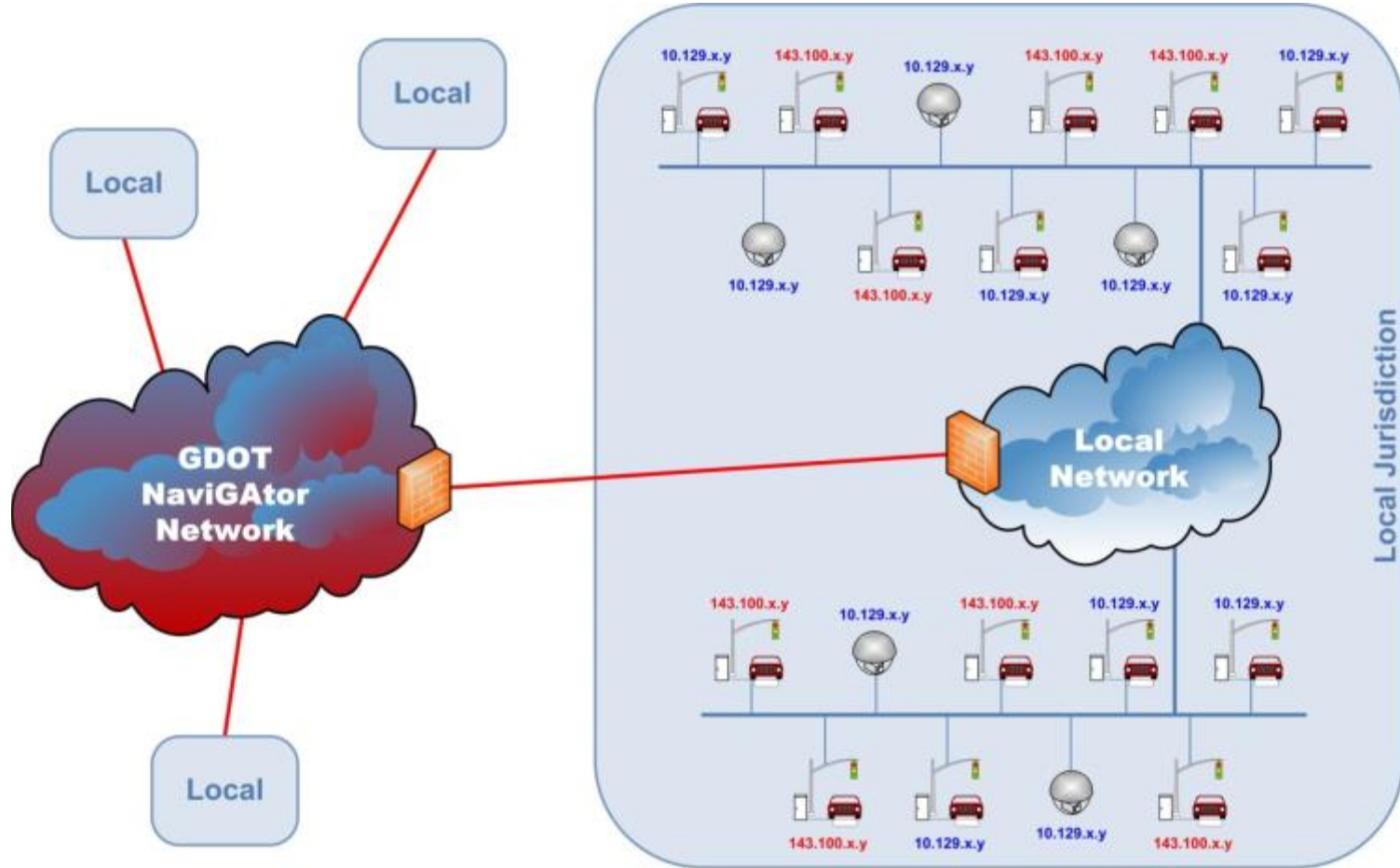
Communications



Method A – Field Devices Direct Connect to GDOT – with Systems



Communications



Method B – Field Devices Direct Connect to Local Network



Current and Future Initiatives





86°

WE

EQUIPMENT WORLD'S BETTER ROAD

Find your EX FACTO

DOTS

Georgia DOT part install 1,000 sma

Chris Hill | August 30, 2016

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The Georgia Department of Transportation (GDOT) has partnered with Intelight to install 1,000 smart traffic signals across the state by the end of July. The project is part of an effort to upgrade traffic signals throughout Georgia to an "up-to-the-second" control technology.

GDOT says the updates will keep engineers from relying on citizen complaints or on-site checking of signals. Instead the system will allow the signals to automatically provide real-time feedback to a central system in the

For the planners and the adventurers. mapquest Download the app

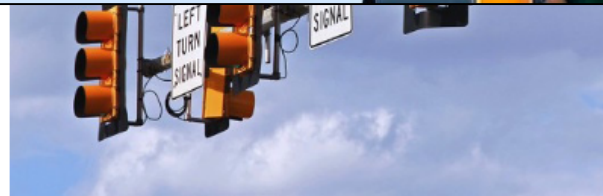
PATCH DEAL HOUND» Dremel, Running Shoes, String Lights and More: Tuesday's Best Deals

Politics & Government

'Smart' Signals Come To Bartow County

The Georgia Department of Transportation has rolled out the new technology at about 1,000 intersections across the state.

By Kristal Dixon (Patch Staff) - August 30, 2016 2:44 pm ET



Trending Now Across Patch

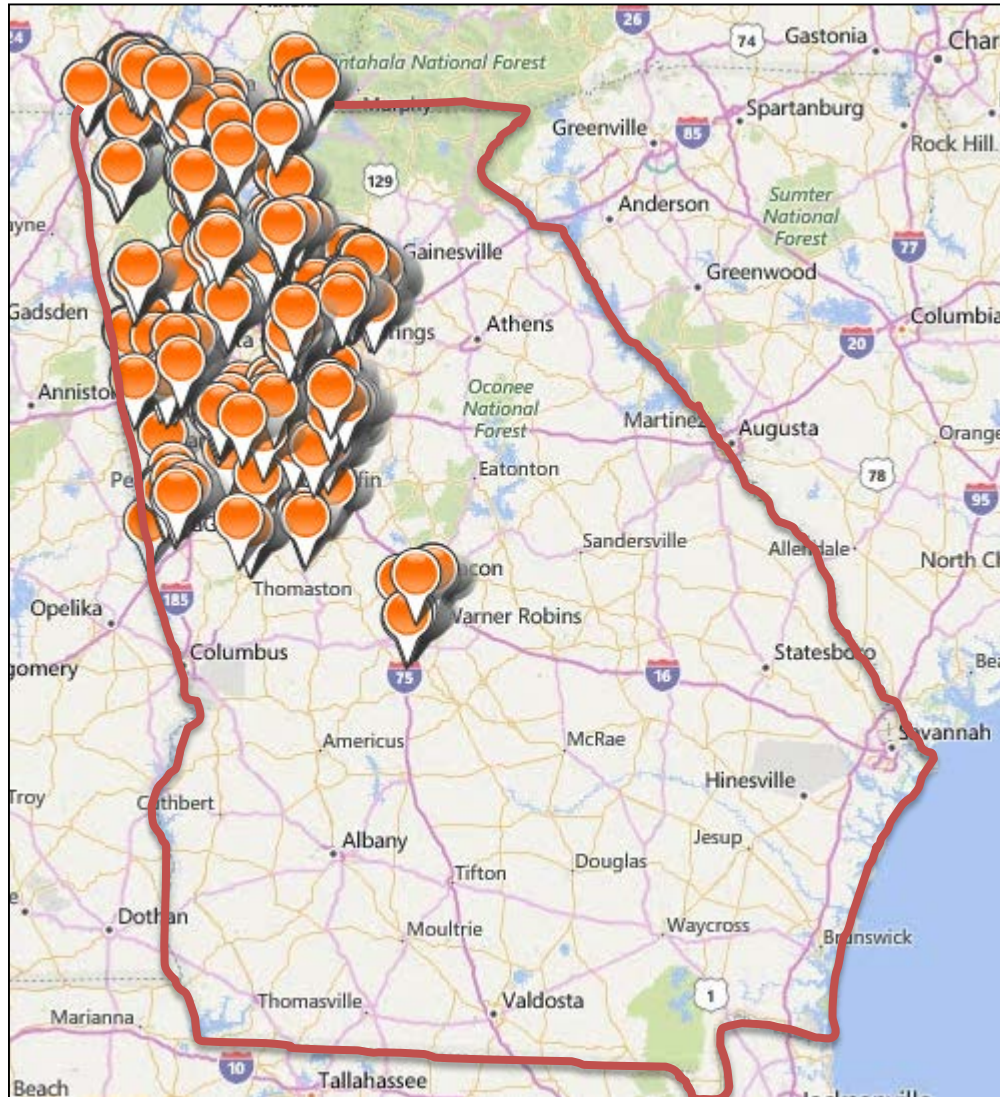
Latest News

because

- Peachtree Ridge siblings expand CARE closet concept



Current Progress



1,487 intersections converted (8/19/2016)

- 426 – District 6
- 191 – RTOP/City of Atlanta
- 204 – District 3
- 490 – Gwinnett County
- 176 - Athens Clarke County
- 50 - District 5

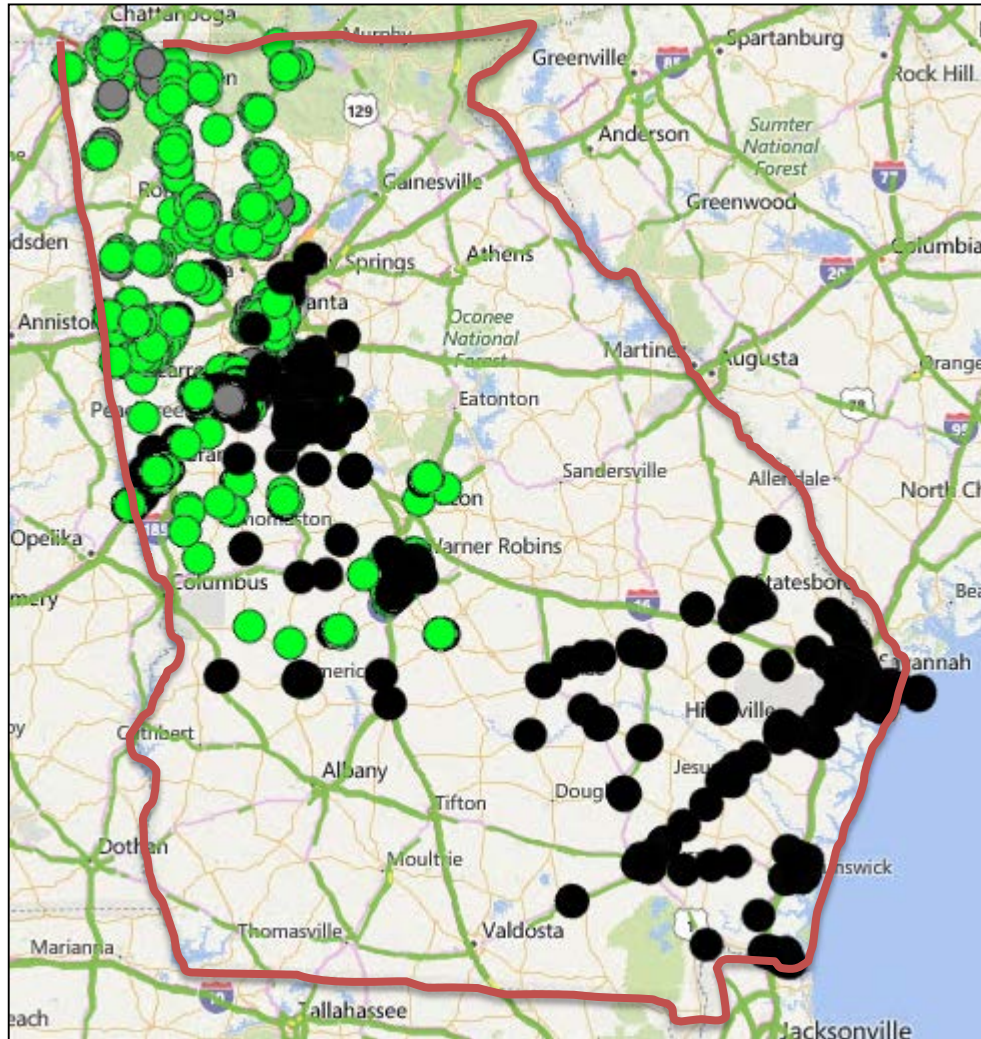
Current Authorized Deployments:

- RTOP – 790
- Gwinnett County – 517
- District 3 – 444
- Athens Clarke County – 176
- District 5 - 355

3,219 intersections by
February 2017



Communications



- **758** district intersections online
 - 426 – District 6
 - 332 – District 3
- **100% of GDOT maintained signals online by May 2017**

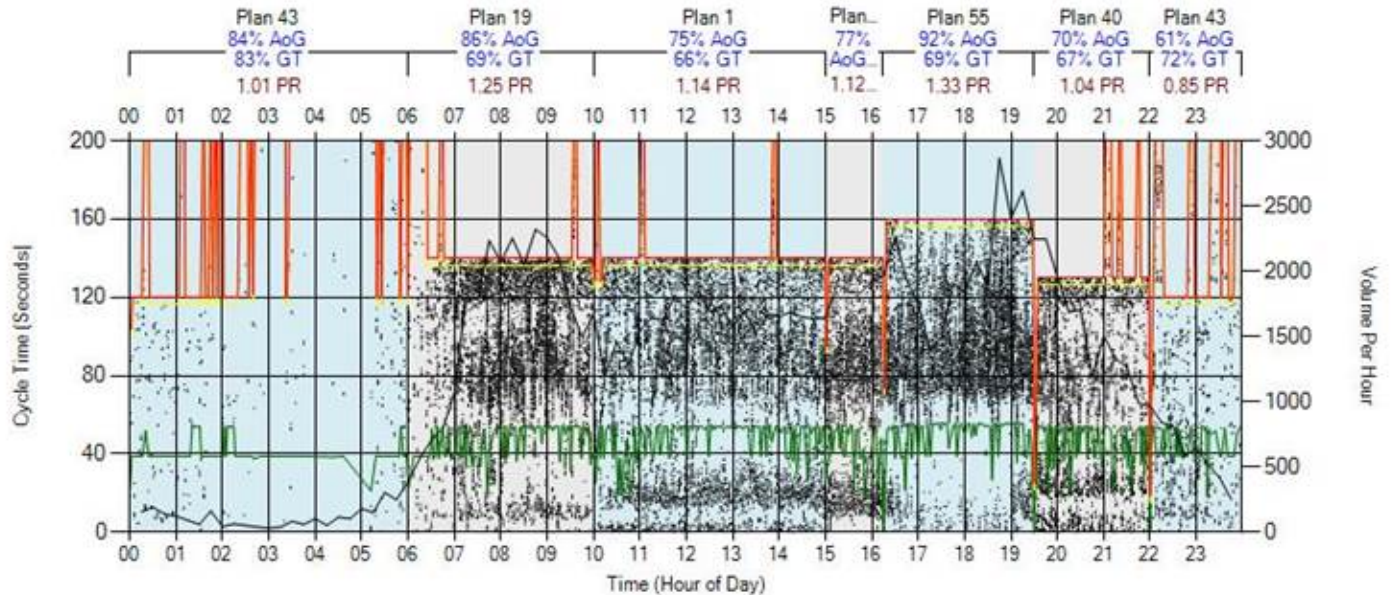


Automated Performance Metrics

SR 141 Peachtree Stratford Rd Signal 7056 Phase: 2 Westbound
Tuesday, December 15, 2015 12:00 AM - Tuesday, December 15, 2015 11:59 PM

81% AoG

- Detector Activation
- Change to Green
- Change to Yellow
- Change to Red
- Volume Per Hour
- AoG - Arrival On Green
- GT - Green Time
- PR - Platoon Ratio



GDOT Signal Performance Metrics

->Signal Metrics

Selected Signal

Signals

District

Metric Type

Filter

Signal List

Map

Metric Settings

Metric Type

- Approach Delay
- Approach Volume
- Arrivals On Red
- Purdue Coordination Diagram
- Purdue Phase Termination
- Speed
- Split Monitor
- Turning Movement Counts

Time Y Axis Maximum

Volume Y Axis Maximum

Volume Bin Size

Dot Size

Show Plan Statistics

Show Volumes

[Export Data](#)

Upload Current Data

Dates

Start Date

End Date

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6



Coming Soon



TravelSmart

Drive Smart

Partner Smart

Build Smart

Invest Smart

Home -> Drive Smart -> Safety & Operation -> Traffic Signals

- Bridge Maintenance
- Diverging Diamond Interchange
- Drive Alert. Arrive Alive.
- Medians
- Railroad Safety Program
- Roundabouts
- Safe Routes to School
- Traffic Signals**

Traffic Signals

REPORT
TRAFFIC SIGNAL OUTAGE

511

VISIT 511

Engineering, Technology & Innovation

Traffic Signal Performance Metrics



Coming Soon

QPL 48



Traffic Signal & ITS Equipment

QPL Requirements



Traffic Signal Design Guidelines





Signal Performance Metrics



Center for Accelerating Innovation

Search Accelerating Innovation



FHWA Home / Accelerating Innovation / Every Day Counts / EDC-4 Innovations

Accelerating Innovation

Every Day Counts

STIC Network

AID Demonstration

Resources

every day counts
An Innovation Partnership with States



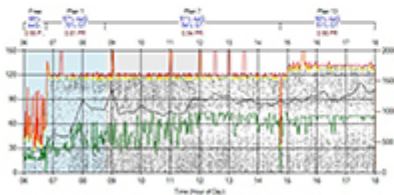
Mobility • Safety • Quality • Environment • Shortening Project Delivery

EDC-4 Innovations (2017-2018)

Signal Performance Metrics

Automated Traffic Signal Performance Measures (ATSPMs)

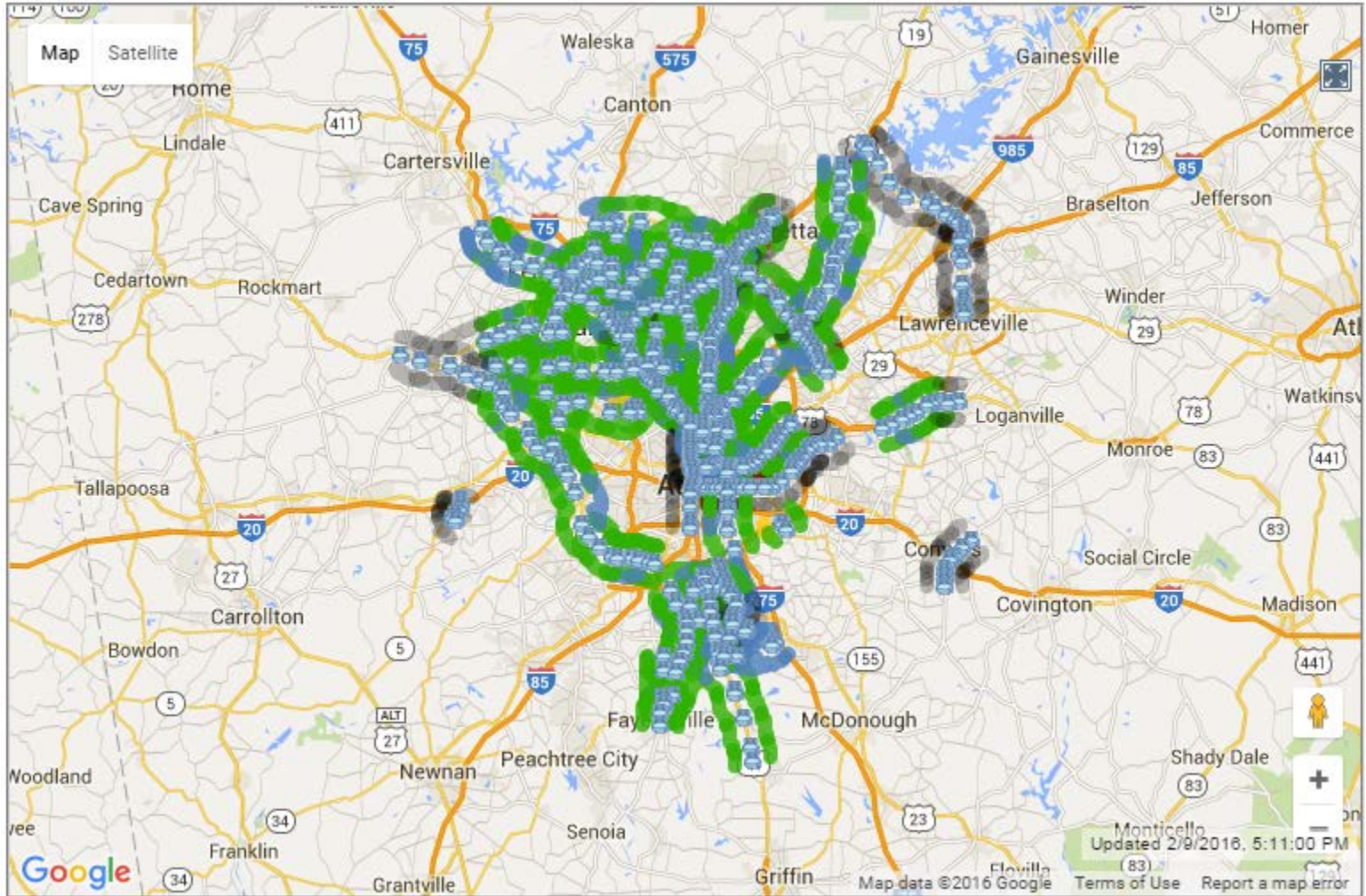
Highway agencies typically rely on complaints or manual data collection processes to identify the need for and outcomes of signal retiming projects. These projects are typically scheduled on a three- to five-year cycle, at a cost of approximately \$4,500 per intersection. The costs and level of effort associated with collection of performance data translates into congestion, reduced safety and increased delays for vehicles, pedestrians and bicycles.



ATSPMs will revolutionize the management of traffic signals by providing the high resolution data necessary to actively manage performance. High quality service can be delivered to customers with significant cost savings to agency maintenance and operations activities. A number of technology implementation options are available including a low-cost open source code framework supported by peers, to fully integrated traffic signal system alternatives provided by vendors or consultants.

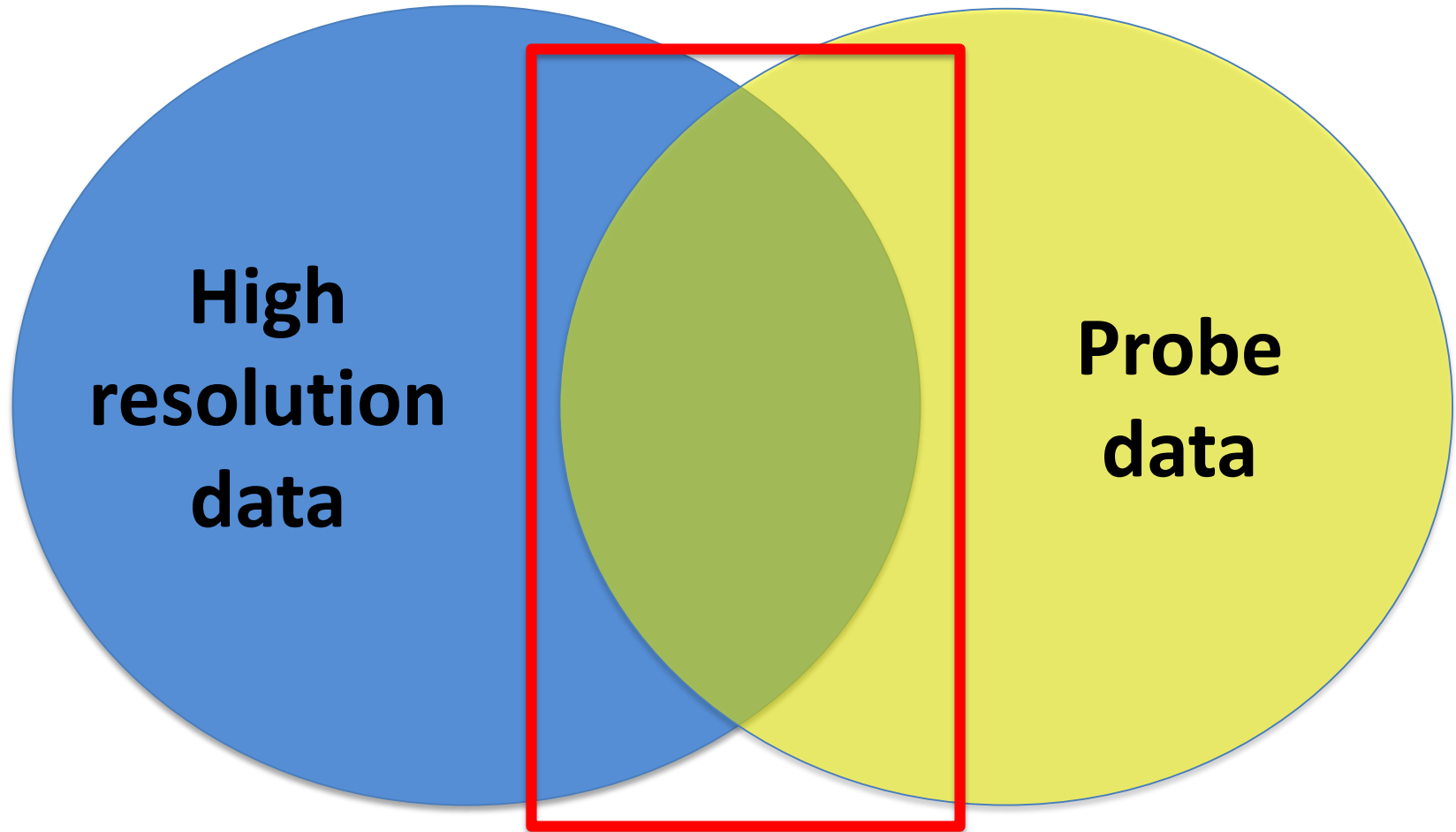


Probe Data





Opportunity



Opportunities to better leverage existing infrastructure

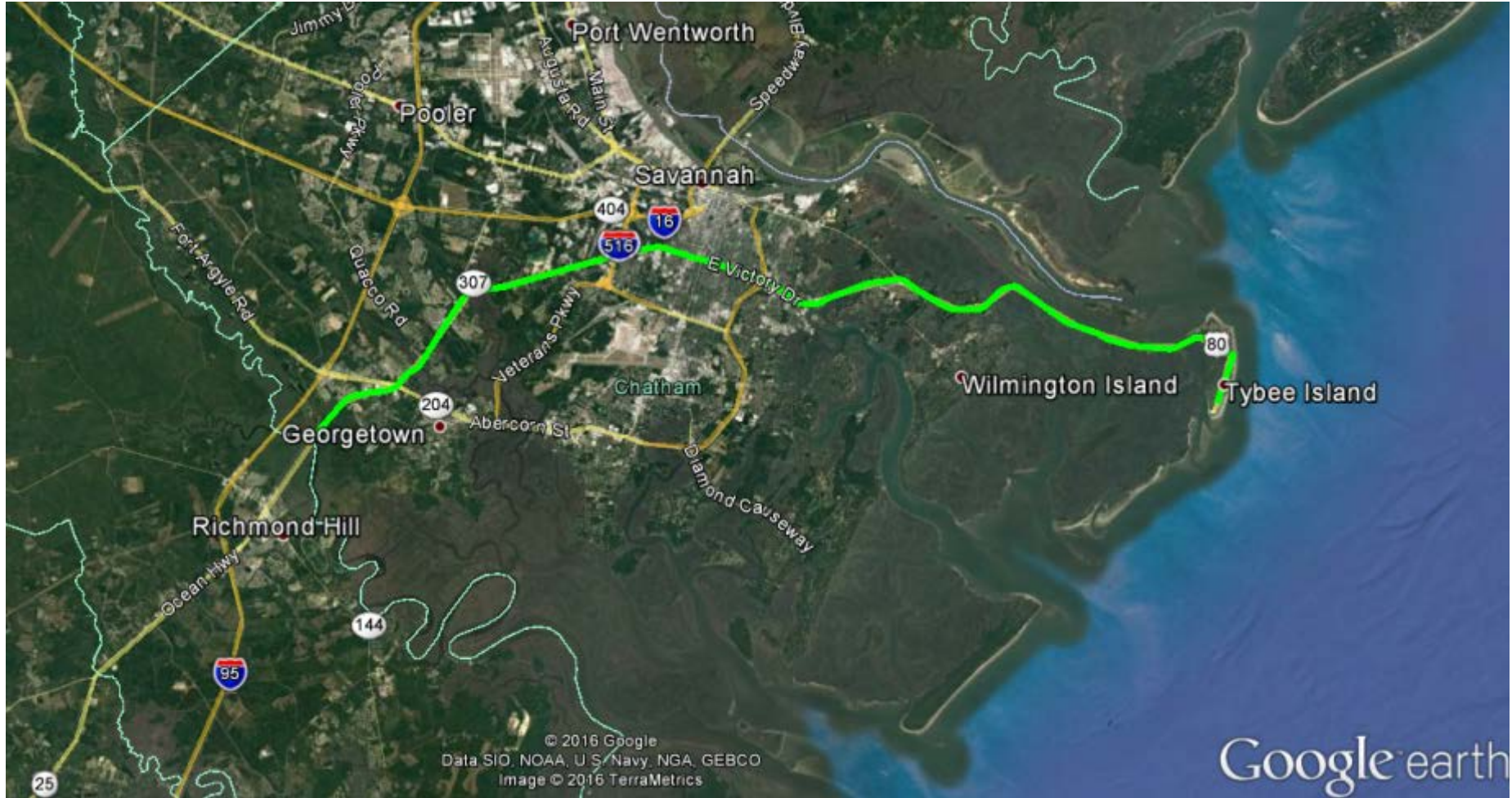


Up Next





Victory! (Drive)





Connected Vehicles





Questions?

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404-635-2832