



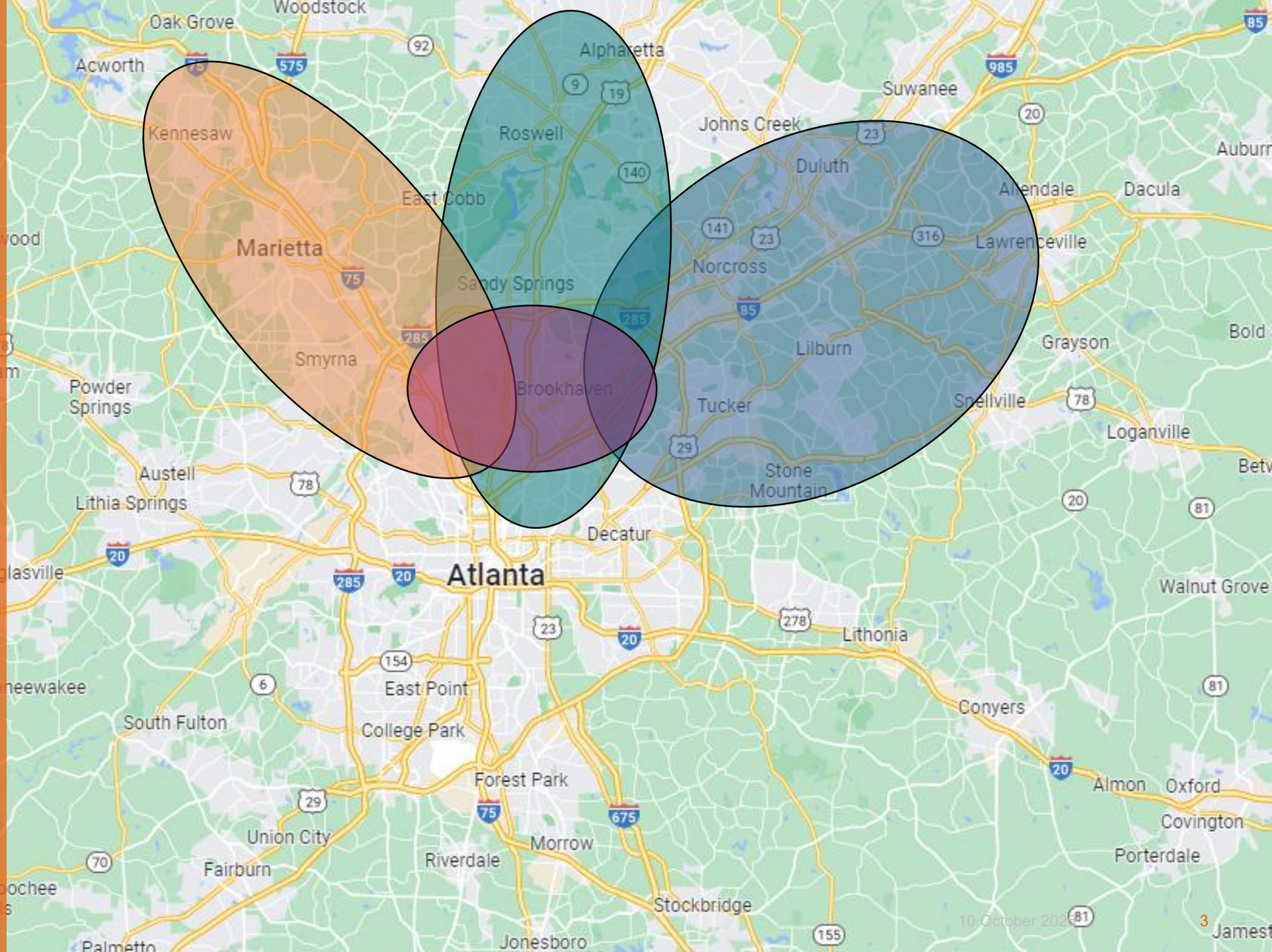
Georgia Joint Agency Data Acquisition & Management Program

MLK Jr Dr Gate
1,837 crossings
21.3% of trips

October 2025

Background

Understanding the Problem



Data Offering	GDOT Planning	GDOT OTD	GDOT Ops	GDOT Safety	GDOT Design Policy	ARC	SRTA
Detailed Intersection Data							
Lane Attributes							
Road curvature, elevation, roughness							
Truck specific routing and restrictions							
Pedestrian specific routing and restrictions							
Detailed Road Attributes							
Signs, Signals and Warnings							
On-Street Parking							
Bicycle specific routing and restrictions							
Basic Road Attributes							
Roadway Speed Limit							
Dangerous Slow Down API							
Historic Parking							
Traffic Volume Estimates							
Places, Fuel stations, EV Charging Points							
DTM							
LiDar and Panormaix							
Environmental Zones							
Vehicle Regulations							
Historic Trip (OD) data							
Real time Parking							

	Current (enhancement desired)	Need	Want
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Program Development

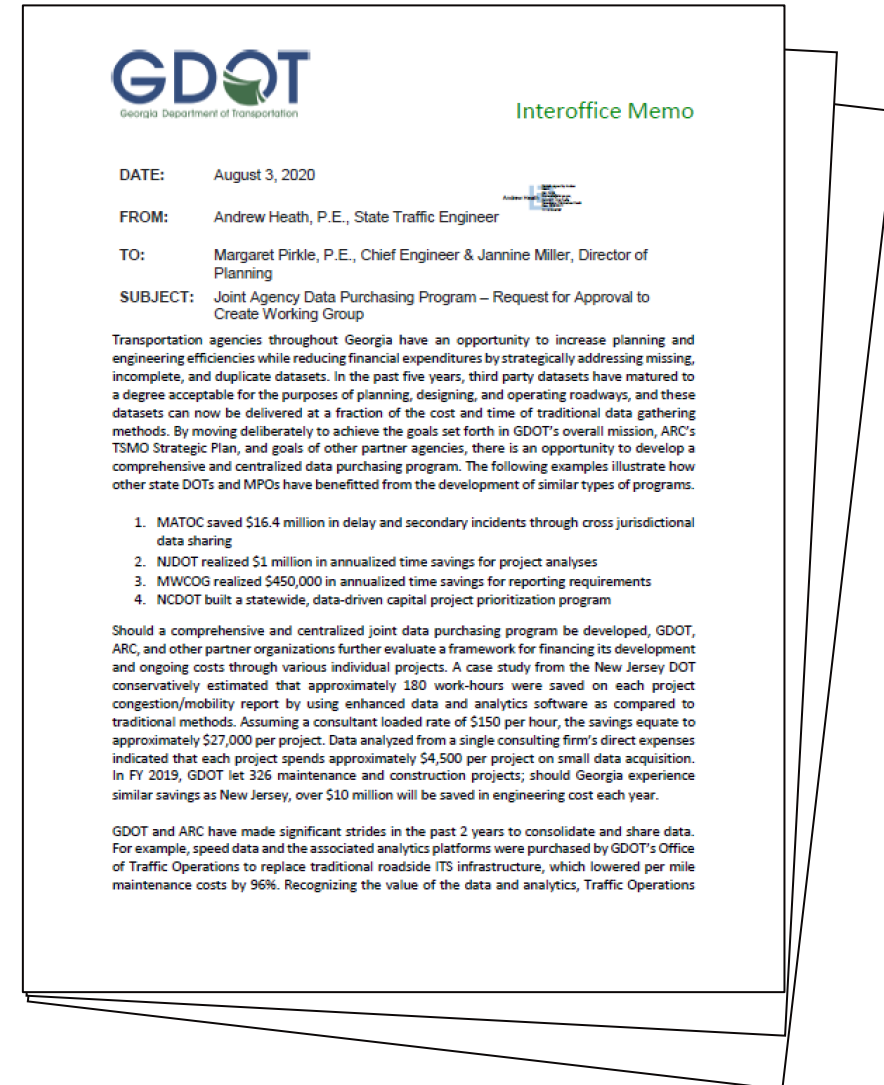
GA Joint Agency Data Management

Develop a comprehensive and centralized data acquisition program in order to:

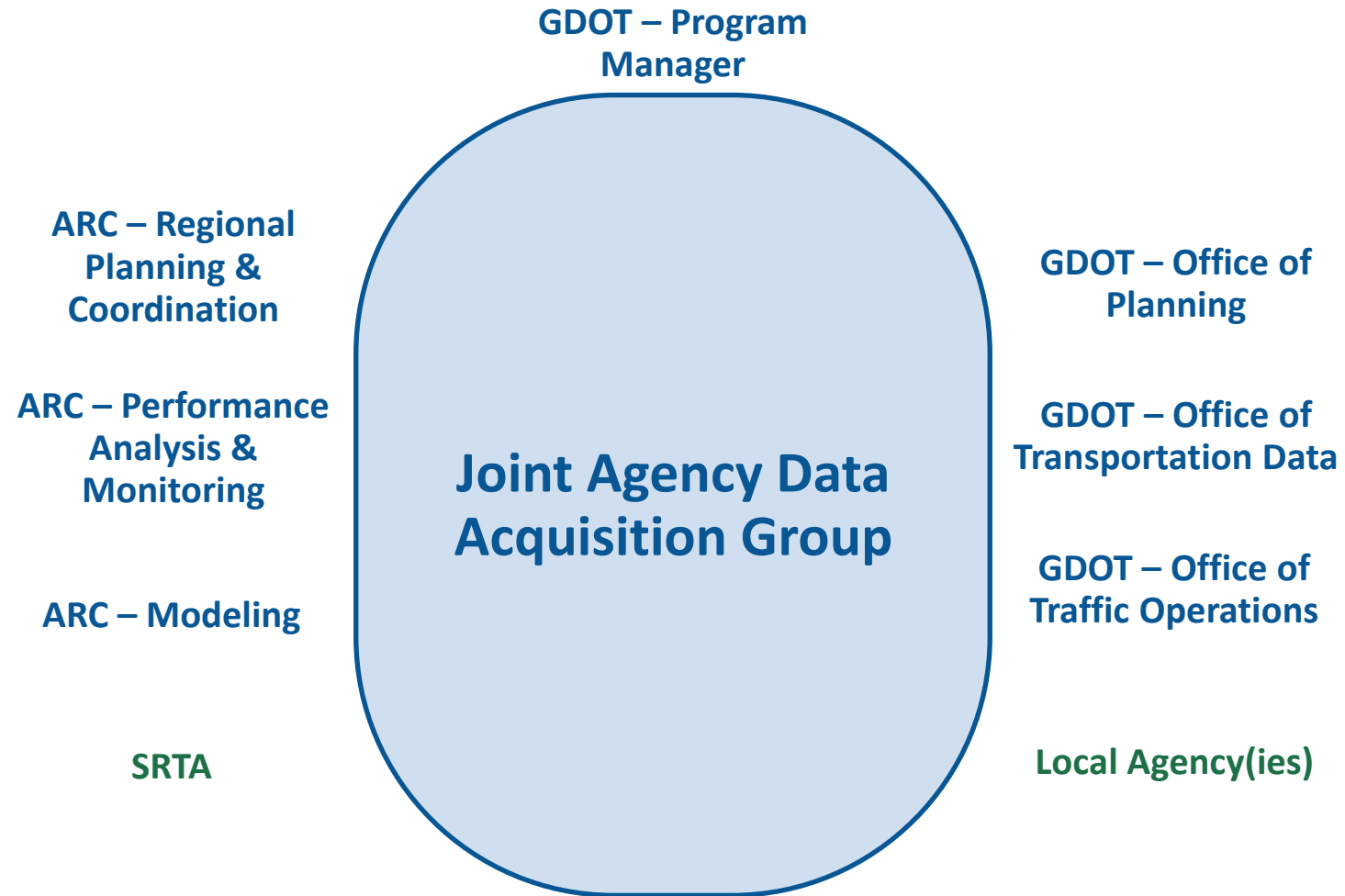
1. Enhance and standardize data analytics capabilities for ALL projects
2. Eliminate unnecessary duplication of data and associated analyses
3. Lower overall agency costs

This Program is responsible for:

1. Developing an interagency program charter
2. Identifying a funding plan
3. Developing guidelines and/or policy recommendations for data acquisitions



Organization



Funding Plan

FY 21 Spend	Proposed	Description
\$0	\$2,000,000	Statewide trip, commercial vehicle, volume estimation, multimodal, and demographics analytics
\$1,100,000	\$1,100,000	Statewide speed, travel time, congestion, user delay cost, and bottleneck analytics. Data Validation
\$300,000	\$700,000	Statewide connected vehicle applications (ex. commercial vehicle safety, dangerous slowdown, hazard warning, and mass messaging alerts)
\$0	\$700,000	Geodata and enhanced roadway attribute (ex. street centerline database and network coding)
\$125,000	\$500,000	Software and data storage enhancements
\$7,400,000	\$0	Excessive Agency Project Cost for Data Analysis and Acquisition
\$8,925,000	\$5,000,000	TOTAL
\$3,925,000		Estimated Annual Agency Savings

Building GA-Specific Specs

GDOT and ARC built upon existing TETC requirements with the following approach:

- Black text denotes TETC TDM mandatory requirements
- Blue text (i.e., **blue text**) denotes Georgia-specific text added or modified.
- In some cases, text from the TETC TDM is shown as blue strikeout text (i.e., ~~strikeout~~). When text is shown in strikeout format, it is no longer in force, and is shown for reference in cases where it is important for the reader to understand that a TETC TDM statement has been removed

4. Third-Party Transportation Data Requirements

4.1 Introduction

This chapter of the Georgia Transportation Data Guidelines documents Georgia-specific data quality and delivery requirements for third-party Transportation Data acquisition. Since Georgia is a member of TETC and utilizes the TDM as its primary mechanism for acquiring third-party Transportation Data, it utilizes the requirements outlined in the TETC TDM as its standard for data reporting, quality, and standards.

Within TETC TDM, requirements were identified as mandatory, highly desirable, and desirable. Within this section black text denotes TETC TDM mandatory requirements and blue text (i.e., **blue text**) denotes Georgia-specific text added or modified. In some cases, text from the TETC TDM is shown as blue strikeout text (i.e., ~~strikeout~~). When text is shown in strikeout format, it is no longer in force, and is shown for reference in cases where it is important for the reader to understand that a TETC TDM statement has been removed.

4.2 Real-time Traffic Speed and Travel Time Data Requirements

1. Base Real-Time Data Elements of Travel Time and Speed for all Roadways
 - a. Shall report travel time to the nearest whole second (or equivalent such as decimal minutes).
 - b. Shall report speed to a precision of the nearest 1 mph.
 - c. ~~Shall report historical Travel Time and Speed (expected speed for the current time of the day and day of the week).~~
 - d. Shall report comparative Travel Time and Speed (current speed as compared to historical speed for time of day and day of week).
2. Status Flag and Error Estimates
 - a. Shall provide a status flag(s) per segment for each reported Travel Time / Speed record to indicate the following:
 - i. Normal system operations with sufficient probe density to estimate travel times accurately.
 - ii. Periods of low-traffic flow, travel time may need to be imputed from a combination of real-time data combined, historical data, and adjacent roadway segments.
 - iii. Real-time probe data is not available, travel time is imputed based on historical data and / or adjacent roadway segments.

Example: Status flag are given scores of '30', '20' and '10.'

 1. 30: Indicates data feed is based on real-time data.
 2. 20: Indicates combination of real-time and historical data.
 3. 10: Indicates assumed free flow.
 - b. ~~Shall provide a numerical score and explanation that reflects the confidence or anticipated error in the estimate of the mean Travel Time & Speed.~~
3. Data ~~Quality Accuracy~~ and Latency
 - a. Freeways
 - i. Shall have a maximum AASE of ~~5~~ 3 MPH or less in each of the following speed ranges: (all in MPH)

Building Additional Guidance

GDOT and ARC also created general guidance for

- Dataset Implementation / Transition
- Data Ownership, Sharing, and Licensing

Purpose:

- Ensure principles espoused by TETC are captured on a state and regional level.
- Provide consistency for data acquisitions needed outside of TETC TDM



Results

Program Benefits

11.9

Benefit-Cost
Ratio

57

Calendar days
saved / project

	Category	Benefit
Direct	Time Saved Procuring Data	\$1,042,000.00
	Data Cost Savings	\$19,525,000.00
	Time Saved Analyzing Data	\$6,844,000.00
Indirect	Value Added to Projects	\$3,325,000.00
	Previously Exempt Projects	\$546,000.00
Total		31,282,000.00

Additional Benefits

1. Data-driven ability to deviate from standards to create more practical, location-specific, and cost-effective designs.
2. Uniform data analysis capabilities, regardless of project size or budget.
3. Immediate access to data for project development and delivery.
4. Enhanced capabilities for project justification and visualization during public forums.
5. Consult data transparency.
6. **Direct cost savings for all statewide local agency partners.**

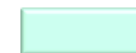
Data Type	GDOT					ARC		Local Agency
	District	Planning	Interstate Ops	Arterial Ops	Safety	Planning	Modeling	
Speed/ Travel Time	Detour Routing	MAP-21 Reporting	<u>NaviGator</u>	<u>SigOps</u>	Screenings & TE Studies	Corridor Performance Monitoring	Activity Based Model	Speed Permits
Origin-Destination/ Trip		I-85 Corridor Study	Detour Analysis	Major Event Planning	TE Studies	Corridor Performance Monitoring	Regional Travel Demand Model	East West Connector Study
Volume Estimation	Bottleneck Impact Analysis		AAR User Delay Analysis	Cause & Cost of Congestion	Cross Street Impact Studies	Corridor Performance Monitoring	Regional Travel Demand Model	
Connected Vehicle/ Event	Content Classification Plan				Active Transportation Plan		Regional Travel Demand Model	
Freight		Statewide Freight Plan				Regional Freight Plan	Regional Travel Demand Model	Freight Cluster Plan



Programmatic Performance Management



Programmatic Tasks



Individual Projects

Locally, Nationally, & Internationally Recognized Expertise



CASE STUDY

BEST USE OF MANAGEMENT OF DATA TO IMPROVE TSMO IN GEORGIA

By Georgia Department of Transportation (GDOT)

IN THIS CASE STUDY YOU WILL LEARN:

- How GDOT's Measurement, Accuracy, and Reliability Kit (MARK 1) automated a manual reporting system for a Regional Traffic Operations Program.
- How GDOT saved hundreds of hours in development each month and approximately \$250,000 in annual savings.
- Continuing partnerships with other state agencies, like the Utah Department of Transportation (UDOT), have led to additional insights and metrics being developed.



Purdue University, INDOT, Minnesota DOT (MNDOT), and the Federal Highway Administration (FHWA). Beginning in 2015 the Georgia Department of Transportation (GDOT) launched its own instance of ATSPM, with the assistance of UDOT, providing free access to advanced corridor and signal metrics to engineers across the state. As of August 2019, over 6,500 traffic signals in Georgia provide this real-time data.

TSMO PLANNING, STRATEGY, AND DEPLOYMENT

In 2017, GDOT retained Kinley-Hiers to further develop ATSPM as well as consolidate the controller event data and vehicle probe data into corridor-wide performance measures for monthly and quarterly trends for each Regional Traffic Operations Program (RTOP) corridor. Launched in January 2018, GDOT's Measurement, Accuracy, and Reliability Kit (MARK 1) automated a manual reporting system for

BACKGROUND

Automated Traffic Signal Performance Measures (ATSPMs) started in 2005 when the Indiana Department of Transportation (INDOT) initiated research with Purdue University to develop performance measures that characterized flow rates, quality of coordination, and split failures using logged time-stamped detectors, phase changes, and controller events. During the development of these performance measures, the research team reached out to agency partners and vendors (Econolite, Siemens, and Peak) to develop a library of definitions for controller events as placement

above. This research resulted in a performance measures that could once all the vendors were talking a language, called the Indiana Traffic Resolution Data Logger Enumerate the development of ATSPMs went. The Utah Department of Transportation developed a web-based application this data to produce performance in 2014, UDOT led an American Association of State Highway and Transportation Innovation Initiative (AASHTO AI) that helps to identify and change implementation and deployment processes that are likely to yield benefits to the users. UDOT led

NCoE CASE STUDY

Georgia Joint Agency Data Management Program

By Georgia Department of Transportation
8/15/2024



Benefits Statement

The GDOT (Georgia Department of Transportation) and ARC's (Atlanta Regional Commission) centralized data program improves safety by enabling rapid deployment of autonomous vehicle technologies and informed decision-making. It saves time by providing immediate data access and streamlining processes, reducing project delays. Financially, it saves an estimated \$3.14 million annually through cost-efficient data management, eliminating duplication, and improving resource allocation. The program ensures efficient, data-driven planning, enhancing safety, and reducing both time and costs in transportation projects.

In this case study you will learn:

- How GDOT streamlined data acquisition, reducing duplication and costs.
- How GDOT developed tailored guidelines, enhancing data quality and selection transparency.
- How GDOT achieved \$3.14 million in savings, expanded data access, and earned recognition for innovation and collaboration.



Case Study #187
Version Number: 1





WHY AIRSAGE? PRODUCTS SOLUTIONS RESOURCES COMPANY CONTACT US

MAY 22, 2024

A Behind the Scenes Look at GDOT's Adoption of Big Data

May 22, 2024

ITS Georgia Awards ARC and GDOT's Joint Data Management Program with 2023 Innovation Award

Whom it May Concern,

It is with great pride that I

both ITSGA and the Georgia members with invaluable training

ce, ranging from newcomers to specific use cases in various sectors to highlight their and our membership, such as the Georgia Chapter of the ITS and collaborative nature

Traditional capital build activities. Planning efforts prior analyses - are gaining recognition programs have retooled to greater transparency. The program has gained recognition America, in peer exchanges. Significant Innovation Award for leadership and unwavering efforts have not only excellence and partnership.

July 18, 2024

Sam Harris
Assistant State Traffic Engineer
Georgia Department of Transportation

Kofi Wakhisi
Planning Administrator
Atlanta Regional Commission

Dear Mr. Harris and Mr. Wakhisi

ERTICO, ITS America, and ITS Asia-Pacific have the great pleasure of informing you that Georgia DOT/Atlanta Regional Commission has been elected to the ITS World Congress Hall of Fame as the winner of the 2024 Local Government award for The Americas.

The ITS World Congress Hall of Fame was created in 2010 to recognize luminaries and true thought leaders in the ITS field. The Hall of Fame Awards provide an invaluable opportunity to highlight the successes of the most outstanding, ambitious, and innovative ITS deployments and to reward those people and organizations most worthy of recognition and praise.

The Local Government Award will be given to a local government agency that:

- Developed and/or deployed significant innovative ITS products or services that fostered advanced deployment of ITS services over the course of the previous year
- Implemented policies or projects advancing the development and deployment of ITS over the course of the previous year
- Plays a leading role in the ITS Community

We would be delighted if you could accept this award, which will be celebrated and presented at the ITS World Congress Hall of Fame Ceremony during Plenary 1: Safe, Trustworthy and Resilient Mobility Ecosystems in Changing Times on Tuesday 17 September, 9:00 -10:30.

Please note that you will be asked to record a short message of thanks/acknowledgement that will be shown during the Plenary 1. We will share guidelines for the recording in due time. If you can travel to Dubai or be represented during the Plenary, the award will be presented by the regional CEO and pictures of the presentation on stage will be taken.

Many thanks in advance for your cooperation. We look forward to welcoming you at the 2024 ITS World Congress in Dubai.

Yours sincerely,

Joost Vantomme
CEO

Laura Chace
President & CEO

Akio Yamamoto
Secretary General
ITS Asia-Pacific

ERTICO ITS AMERICA ITS

“Even after we had developed the Congestion Management Process (CMP) and Travel Demand Model (TDM) we knew the data was limited. We needed enhanced data to infill the TDM. We needed enhanced data to infill the CMP. We were able to do that with a third-party trip dataset.

“Once we had the data in hand, we got to ask ourselves a new question, ‘What else can we do now that we couldn’t do before?’”

Mason Perrone, Rhode Island DOA

Thank You



Matt Glasser, PE

National TSMO Account Lead

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TSMO Awards & Recognitions



Home
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Obtain
Access



Helpful
Resources



NOCoe Case
Study



CONTACT US: DataSupport@dot.ga.gov