Georgia Joint Agency Data Management Program

By Georgia Department of Transportation

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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:

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

Case Study #187

Version Number: 1

BACKGROUND

Atlanta Regional Commission

In 2017, ARC engaged GDOT and other regional transportation agencies to obtain their input for several initiatives, including initiating data governance.

As ARC's effort finished, GDOT compiled and shared Georgia's input to The Eastern Transportation Coalition's (TETC) Transportation Data Marketplace (TDM). GDOT felt it was essential to provide TETC and the community with a better understanding of Georgia's values, needs, and desires. Upon completion of that effort, the group realized the overwhelming and overlapping needs among the group members.

The team requested approval from ARC and GDOT's executive leadership to create an interagency group to develop a comprehensive and centralized data acquisition program 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.

Upon approval, the working group identified three immediate actions:

1. Develop an interagency program charter.
2. Identify a funding plan.
3. Develop guidelines and policy recommendations for data acquisitions.

The program charter identified the scope and created the mechanisms for membership.

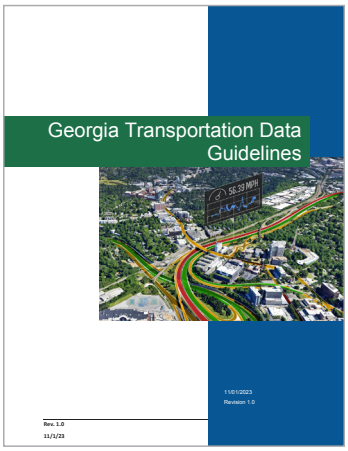
The voting representation was set at three members for ARC and GDOT each and also required that business units be limited to one voting member, thus ensuring expansive representation and institutionalized collaboration.

The group evaluated each agency's data purchasing history. It was determined that the agencies expended considerable resources to acquire data, but they were overlooked.

Moreover, the practice of project-by-project purchasing resulted in data duplication. It became evident that by reducing unnecessary data duplication, providing more robust and standardized analytics tools, and purchasing in bulk, the Program could reduce overall agency costs.

In August 2021 both agencies agreed to jointly fund the Program.

TSMO PLANNING, STRATEGIES AND DEPLOYMENT



In 2023 the attention of the Program focused on developing policy recommendations and guidelines for data acquisitions. This also included the following items:

- Licensing requirements for personnel, interagency (including local agencies), and consultant usage.
- Data use and publishing permissions.
- Interagency gap/overlap analysis and best value assessments.

The team reviewed the TETC TDM RFP, vendor information, and other states' resources to create a foundation for the current market. Using these assets, the team built dynamic querying resources that allowed them to understand the market capacity to deliver specific desires for Program member individually and collectively. The goal was to expand capabilities beyond the TETC standards to meet Georgia's specific needs while also ensuring the ability for competition from multiple vendors.

After completing collaborative workshops to identify mandatory and value-add attributes, team members documented their selection and reasoning to further establish a firm understanding of "why" for future use.

As they created Georgia-specific guidance, the group determined that utilizing the principles developed by TETC would make the most sustainable foundation. Similar to how agencies use national standards for signing and marking or road design, the group felt that this created a mechanism for consistency and the ability to leverage national expertise while providing flexibility for the state to strengthen specific requirements.

COMMUNICATIONS PLANNING AND EXECUTION

Once the Georgia-specific guidelines were complete, they were shared with all TETC vendors for open comment and conversation. GDOT and ARC have a strong history of engaging private sector partners, and they encouraged regular iterations and adjustments based on the feedback they received. Further, the team members engaged national experts from the National Renewable Energy Laboratory and TETC to understand the marketplace shifts. Over the course of the conversations, GDOT and ARC were invited to share their process as a best practice to TETC and vendors like Airsage.

Using the guidelines, the team built worksheets to engage TETC vendors to understand their current capabilities. The worksheets identified the minimum viable data attributes and allowed for concise responses for vendor-proposed deviations.

Additionally, the team members recognized that additional inputs beyond minimum viable requirements would be advantageous for evaluating the available datasets. They utilized the outputs from the workshop and interviews to identify data attributes that did not rise to the level of a minimum standard but met one or more of the following criteria:

- Identified use-case.
- Cost-reducing potential.
- Data quality improvement.
- Expanded geographic reach.
- Well-distributed data among rural and low-volume roadways.

This approach significantly reduced the level of effort for vendors to provide their feedback while also providing critical information for the Program. Moreover, it allowed for rapid and consistent evaluations by the Program members for minimum viable requirements as well as value-adds. Using this approach created selection transparency and allowed the team members to find the highest quality product that met the most needs and aspirations. This information, combined with cost, allowed the Program members to find the best value data to meet the collective needs of the state and region.

While this effort was underway, the Program partnered with professional organizations across the state to provide extensive training and information sessions. Over the course of 2023 and into 2024, the Program facilitated 10 separate trainings, reaching over 250 transportation professionals.

OUTCOME, BENEFITS AND LEARNINGS

At the completion of the evaluations, the Program members selected statewide datasets for speed, trip, freight, and connected vehicle/ telematics data with open-agency analytics capabilities.

The Program team members identified direct financial and intangible benefits. Moreover, using this model, GDOT and ARC have grown to over 1,000 total Big Data users from over 40 agencies and consultants throughout the state and won accolades from professional organizations.

Team members completed a financial comparison to understand if the anticipated benefits had been realized. GDOT and ARC conservatively estimated a direct annual savings of $3.14 million.

Additionally, the comprehensive interagency data acquisition and management program has helped position both agencies to address their agency-wide goals better. These include, but are not limited to:

1. Address the implementation of 7 of the 8 initiatives and 21 of the 38 of the associated primary actions outlined in ARC's TSMO Strategic Plan.
2. Position Georgia for rapid, statewide, low-risk deployments of connected and autonomous vehicle technologies and applications.
3. Direct cost savings for all statewide local agencies and consultant partners.
4. Data-driven ability to deviate from standards to create more practical, location-specific, and cost-effective designs.
5. Uniform and equitable data analysis capabilities, regardless of project geography, size, or budget.
6. Immediate access to data for project development and delivery.
7. Enhanced capabilities for project justification and visualization.
8. Consultant data transparency.

The Intelligent Transportation Society of Georgia (ITSGA) has praised the Program for its extensive training sessions and information dissemination efforts. ITSGA's awarded the program with its Innovation Award, highlighting its impact to improved strategies in capital projects, statewide studies, and operational programs.

Similarly, TETC has lauded the Program for its proactive engagement in the TDM program. In a letter of support Patricia Hendren (Executive Director of TETC) stated that, "By enhancing transparency, fostering collaboration, and realizing cost savings for state governments, initiatives such as the Joint Agency Data Management Program set a benchmark for excellence in our industry."