

STATE DOT CASE STUDIES ON SAFETY ADVANCEMENTS

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GEORGIA

AASHTOWARE SAFETY POWERED BY NUMETRIC – UNLEASHING THE POWER OF CRASH ANALYTICS

Cost: AASHTOWare Safety User License **Project Dates:** Launched 2019, ongoing revisions

The Issue: The absence of a crash data analytics platform presented challenges in efficiently analyzing and comparing historic crash trends across the state. Locations were compared to average crash rates were calculated statewide on an annual basis to determine if the location’s crash history was significant. This did not allow for manipulation of attributes such as an emphasis area like pedestrians, roadway departure, and distracted driving, or a geographic boundary including a cities, counties, MPOs, etc. As a result, prioritizing projects aimed at improving road safety becomes significantly inefficient and time consuming. Establishing baselines is crucial for identifying problem areas, understanding their significance, and allocating resources effectively.

The Solution: The Safety Program unveiled AASHOTWare Safety powered by Numetric in 2019 and continues to update the tool and the crash data analytics platform allows for a focused, data-driven approach. GDOT has invested in an unlimited number of users and provides free access for a wide variety of stakeholders including local planning agencies and police departments. Users can see trends in crash data more easily and streamline analysis for project development. Quick statistics such as the ranking of a roadway, school, intersection, etc. can be identified in just a few minutes.

AASHTOWare Safety powered by Numetric continues to be refined to enhance the processes within the safety program, including collision diagrams and network screenings for selecting road safety audits. The multitude of filters on the Numetric platform allow an engineer to establish focus when either assessing crash trends or conducting a network screening. Crashes can be filtered by any label used in police reports, such as manner of collision, lighting condition, vehicle movement, driver age, pedestrians, and bicyclists. Furthermore, crashes and segments are filterable based on roadway information such as traffic volume, roadway division, lane number, functional class, and more. This allows for a user to target specific improvements—such as a roadway reconfiguration—that may only be applicable in certain roadway environments. Recently added filters include curve geometry, transit routes, school locations, state bike routes, signed bike routes, and the CDC’s social vulnerability index (SVI).

The investment in AASHTOWare Safety powered by Numetric has increased the efficiency of crash analytics and promoted the propagation of traffic safety culture within traffic engineering industry in Georgia. Internal and external staff have observed a 60 percent reduction time in crash analysis. Understanding the lack of resources for local agencies, GDOT invested in the development of a Local Road Safety Plan dashboard, with the goal of making the data easy to understand and creating a report which a local agency may use to apply for federal, state, or other funding resources.

In partnership with FHWA, the GDOT Safety Program launched a final Local Road Safety Plan workshop. Two separate events were held to ensure equitable travel requirements across the state. The full day was utilized not only to educate local agencies on resources, but to work on plans and ask agency specific data questions. Across the two days, a total of 26 agencies attended. As a result, four participants have completed plans, and eight agencies have draft plans.