Crash analysis assists agencies in determining appropriate roadway or intersection improvements or countermeasures that can make travel on roadways safer. Crash analysis examines many aspects of travel and can involve specialists from enforcement, education, and engineering, including transportation designers, planners, and maintenance engineers. Improvements and countermeasures can lead to enhanced enforcement efforts, roadway enhancements, pavement marking, signing, or other actions.

In this project, Florida International University researchers examined the current pattern of crash analysis practice in Florida with a view toward standardization. Their first objective was to identify how and by whom crash analysis is currently performed. To reach the wide spectrum of transportation agencies in Florida, the researchers developed three online surveys targeted at Florida Department of Transportation (FDOT) districts, local transportation agencies, and law enforcement agencies.

Survey questions were developed through interviews at South Florida agencies and tailored to agency type. Surveys targeting FDOT districts and local transportation agencies included questions covering seven areas of interest: use of crash data; high crash locations; project selection, implementation, and evaluation; crash analysis software systems; crash analysis standardization; crash analysis documentation; and meetings and training. Survey questions targeting law enforcement agencies included questions covering four areas of interest: selection of enforcement locations, traffic violations and safety campaigns, crash reports, and working with transportation agencies.

In addition to the surveys, three GIS-based crash systems currently in use in Florida for crash data retrieval and analysis, the Web Crash Data Management System (Web CDMS), the Traffic Safety Analysis Tool (TSAT), and the Signal Four
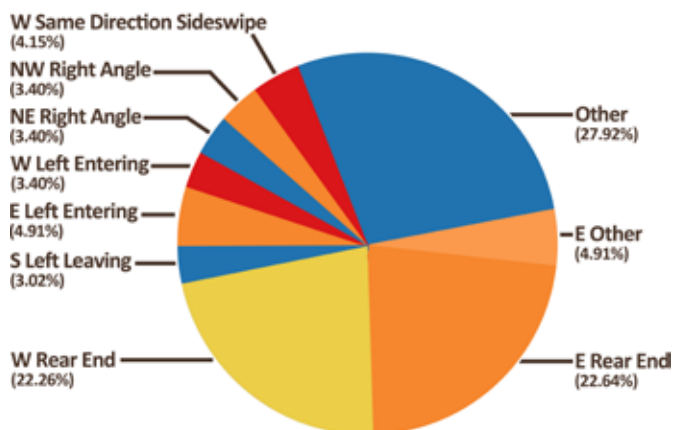
Sample output from crash analysis application used by the Miami-Dade County Public Works Department.

Analytics (S4), were reviewed to learn about their features and capabilities.

Recommendations for how to proceed toward standardization and what the characteristics of a standardized system should be were based on a detailed analysis of the surveys. The relatively recent release of the Highway Safety Manual and the corresponding SafetyAnalyst software has created a window of opportunity for implementation of a state-wide standardized crash reporting and analysis system. The efforts and suggestions from this report have the potential to provide an advanced crash analysis system that can save money and lives on Florida's roadway system.