



TRANSPORTATION

Customer

County of Santa Clara, California
Roads and Airports Department

Partner

MetroTech

Challenge

Provide real-time traffic data for
signal optimization

Solution

MetroTech IntelliSection VAS
MetroTech IntelliSection ITS Dashboard
ArcGIS® for Server
GeoEvent™ Extension for Server
ArcGIS™ Online
ArcGIS for Desktop
OSIsoft PI System
PI Integrator for ArcGIS

Results

Reduced congestion and
commuter times

Real-Time Transportation Solution Keeps Traffic Moving

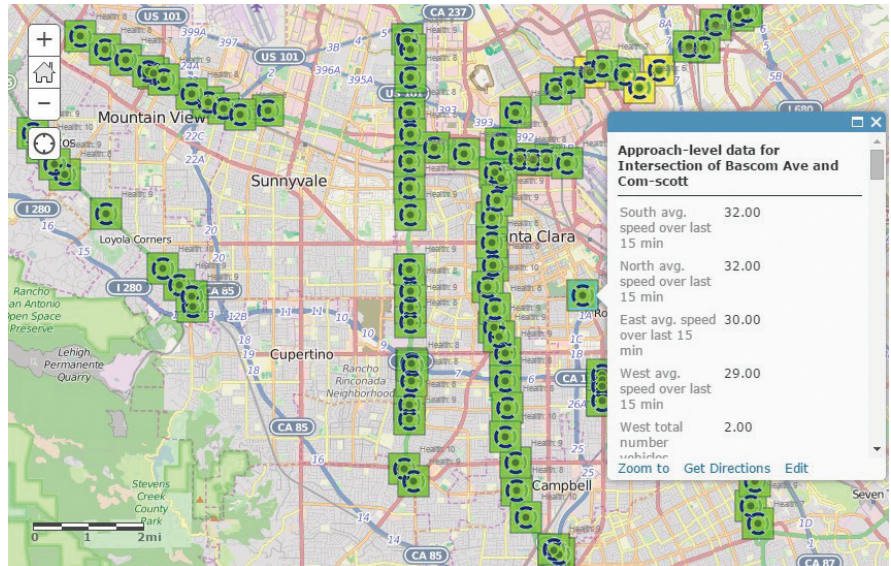
Close to 1.8 million people live in Santa Clara County, California. It is the home of Silicon Valley and its innovative high-tech companies, three universities including Stanford, and San Jose Airport, and it's next to one of the largest cities in the United States—San Francisco. The county works to keep millions of people traveling smoothly through its 62 miles of expressways and 635 miles of roadways.

The Challenge

The county wanted to enrich its Esri® technology-based geographic information system (GIS) with accurate, real-time traffic information for its extensive roadway system, which includes 168 bridges, 39 miles of car pool lanes, 164 signalized intersections, 4,500 streetlights, 25,000 regulatory signs, and 2,185 culverts. With this data, the county would have a complete picture of current traffic counts, which would help the county's Roads and Airports Department to optimize signals to keep traffic moving smoothly.

The Partner

MetroTech provides an accurate, real-time, cost-effective solution that helps organizations capture a complete picture of traffic. MetroTech's video analytics software, IntelliSection, works with video feeds to produce metrics, including vehicle counts and speeds, that are used for short and long-term analysis. This solution, paired with Esri's ArcGIS technology, delivers greater than 90 percent accuracy day and night, with less than one-minute latency.



“MetroTech converted our traffic cameras into 24 x 7 count stations, providing us with enhanced traffic data. From this data, we were able to improve our signal timing, mitigating overall congestion.”

Ananth Prasad
Senior Civil Engineer
County of Santa Clara

The Solution

Working with Esri’s ArcGIS software and OSIssoft technology, MetroTech’s IntelliSection turns existing video feeds into sensors that allow the county to collect, analyze, and distribute real-time traffic information. This data is essential for rapid and intuitive interpretation and management of real-time response to events.

Sensor data is streamed via PI Integrator for ArcGIS to the Esri platform, specifically to Esri GeoEvent Extension for Server. GeoEvent Extension sends that data as real-time updates to a standard Esri feature service hosted in ArcGIS Online. The live updating feature service can be analyzed and manipulated using Esri’s powerful tools. It can be visualized as a web map that updates live traffic data. This traffic solution is an opportunity to bring savings to governments; businesses; and, ultimately, commuters.

The Results

Consumers value their time. They want the most accurate data so that they can shorten their commute and add to their quality of life. MetroTech’s traffic management solution has been deployed in Santa Clara County since 2012 to provide more granular, real-time traffic data for signal optimization. The solution empowers traffic engineers to reduce congestion and overall commuter times.

In addition, by gathering and analyzing traffic data, the county is able to improve its ability to predict events and plan alternative routes. Enabled with better data and traffic management, the county improves safety, increases speed and efficiencies, and helps the environment—all while reducing costs.



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