



# GLOBAL TRAFFIC TECHNOLOGIES

*INNOVATIONS IN ITS SOLUTIONS*

ITS GEORGIA – SAVANNAH, GA  
OCTOBER 8 – 10, 2017



GLOBAL TRAFFIC TECHNOLOGIES

# AGENDA

---

- Overview
  - Emergency Vehicle Preemption (EVP)
  - Transit Signal Priority (TSP)
  - Traffic Sensing Systems
- Distributed vs. Centralized Architectures
- Software Applications
- Case Studies



# OVERVIEW

## BENEFITS FOR MULTIPLE AGENCIES, STAKEHOLDERS AND CITIZENS



Transit

### Benefits ...

- Improve schedule reliability
- Lower fuel consumption
- Reduce carbon emissions



Emergency

### Benefits ...

- Increase safety
- Improve response times
- Reduce liability
- Provide cost savings



Transportation

### Benefits ...

- Manage remotely
- Improve service levels
- Identify system abuse
- Improve overall system performance

One system, multiple users, multiple technologies

# OVERVIEW

## TRAFFIC MANAGEMENT SYSTEMS APPLICATIONS

### EVP

- **Improve Travel Times** by up to 25%
- **Reduce Intersection** crash rates by up to 70%

### TSP

- **Reduce Transit Delays** by up to 40%
- **Cut Fuel Costs** by up to 19%
- **Increase Ridership** by up to 10%

### Traffic Sensing

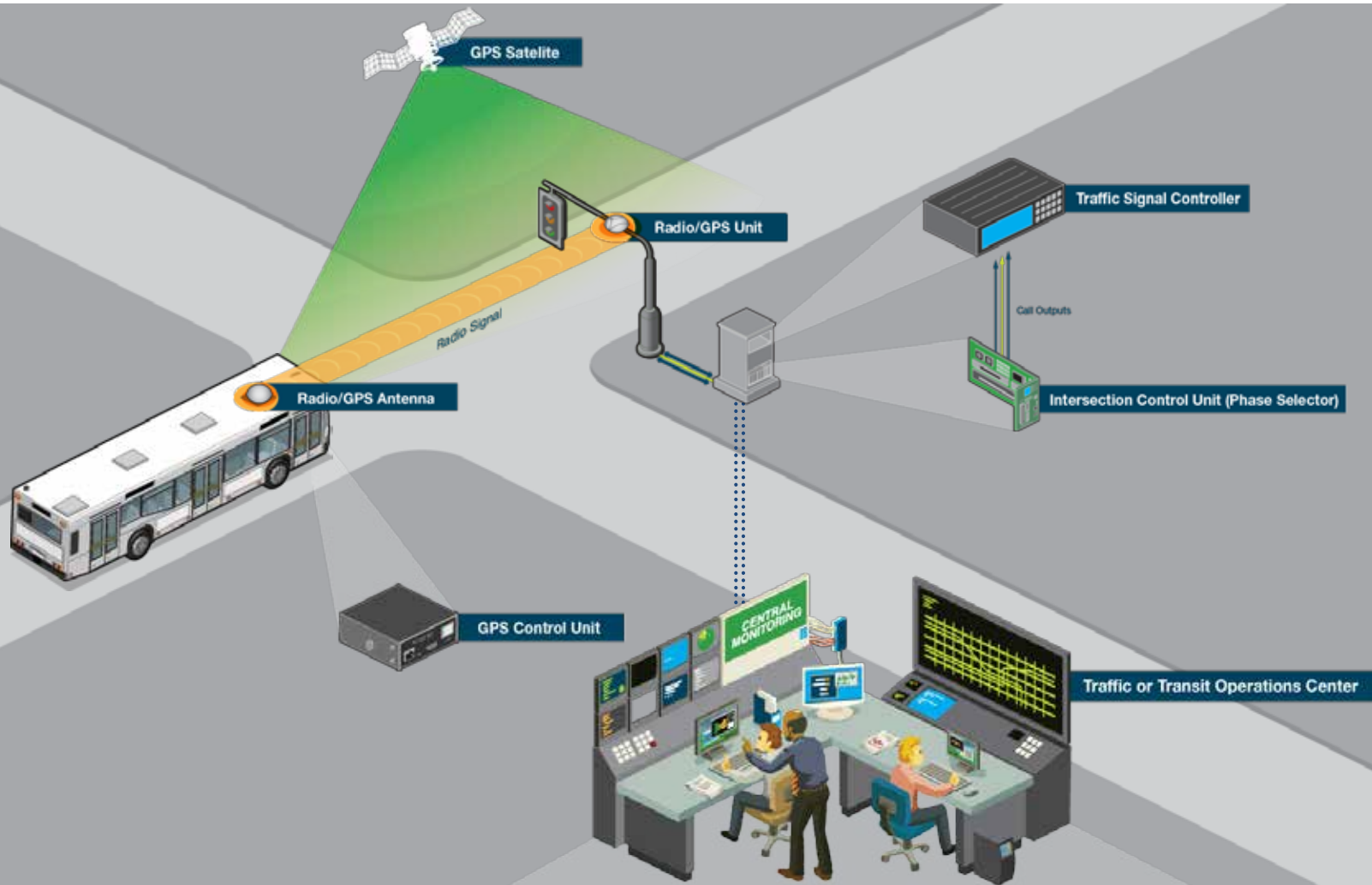
- **Improve vehicle and bike** traffic flow
- **Increase safety** at rural or unmarked intersection crossings



Array of solutions to be  
customized to ITS needs

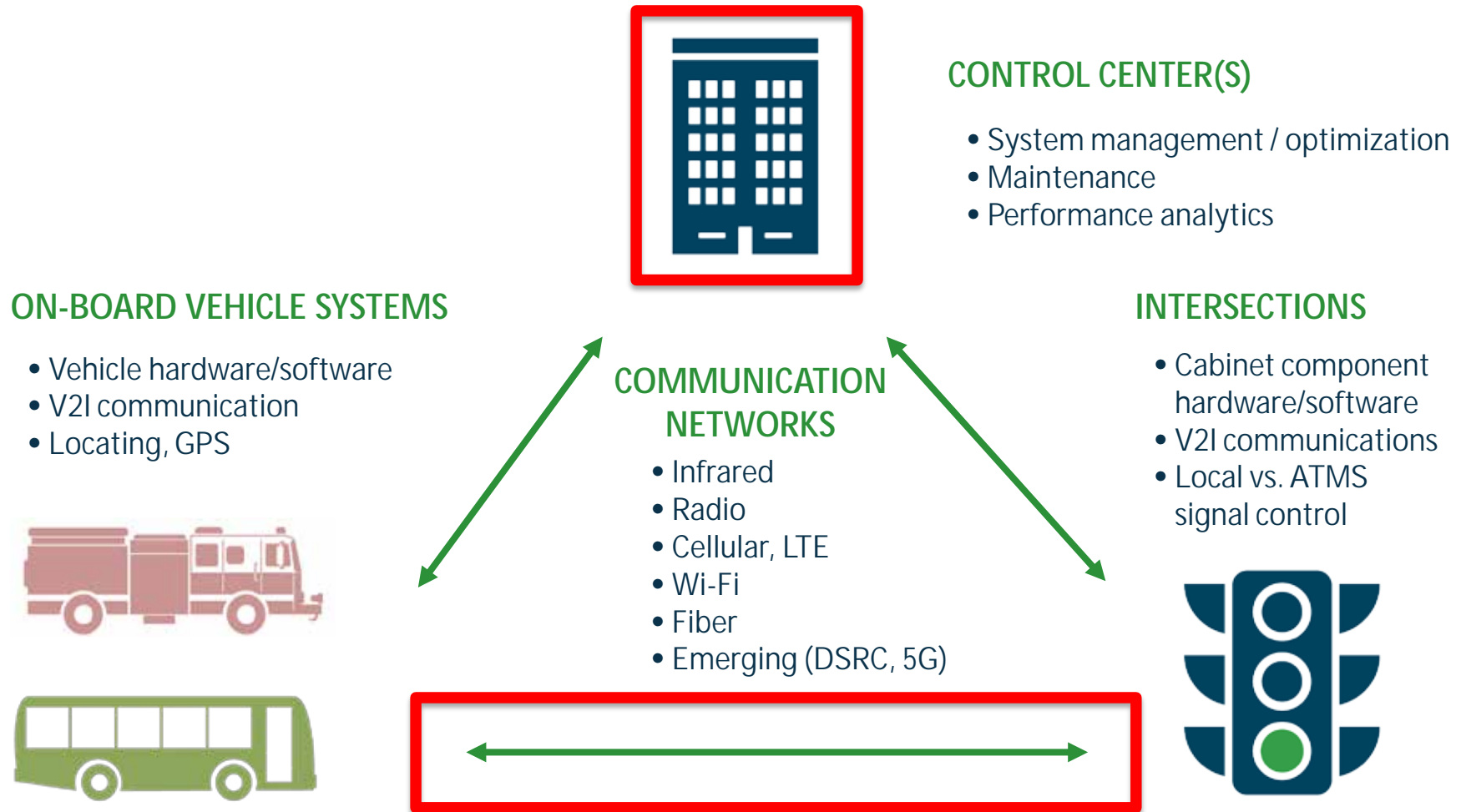
# OVERVIEW

## BASIC EVP AND TSP OPERATIONS



# DISTRIBUTED VS. CENTRALIZED ARCHITECTURES

## INTEGRATION OF TRAFFIC, VEHICLE AND DATA CENTER TECHNOLOGIES



# EVP AND TSP SOFTWARE

## CUSTOMER-HOSTED AND CLOUD-BASED APPLICATIONS



- Intersection-centric Monitoring, Management and Maintenance
- Vehicle-centric Monitoring, Management and Maintenance
- EVP and TSP Performance Analytics and Graphs
- EVP and TSP Effectiveness Measures
- Report Distribution to Multiple Agencies



# CASE STUDY

## MEMPHIS, TENN.

### CHALLENGE

- Poor on-time performance amid heavy traffic congestion
- Longer travel times drove fuel and operating costs higher

### SOLUTION

- Opticom GPS Transit Signal Priority (TSP) at more than 50 intersections along the city's two most congested transit routes
- Integrate Opticom Central Management Software (CMS) for comprehensive monitoring and reporting

### PERFORMANCE

- Reduced bus travel times by up to 20 percent
- Desktop reporting tools expedite maintenance and reduce technician trips to the field





# CASE STUDY

## ORLANDO, FLA.

### CHALLENGE

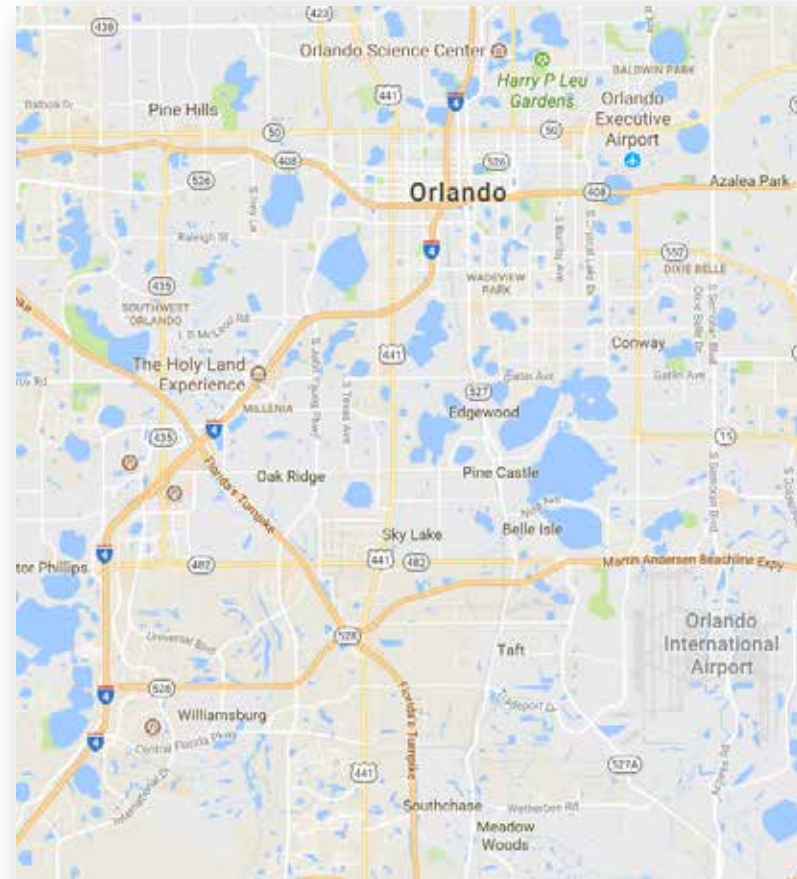
- Integrate a modern priority control solution that could span both TSP and EVP applications
- Preserve the long-term EVP investment in OpticomIR

### SOLUTION

- Opticom Multimode TSP and EVP at more than 300 intersections throughout FDOT District 5
- Integration with Clever CAD/AVL system for conditional priority
- Integrate Opticom Central Management Software (CMS)

### PERFORMANCE

- More reliable bus travel times
- Faster emergency response times and reduced likelihood of crashes at intersections







# THANK YOU

Paul Fellows, Principal Client Service Engineer  
Global Traffic Technologies  
Ph 781-696-7039  
[Paul.Fellows@gtt.com](mailto:Paul.Fellows@gtt.com)



GLOBAL TRAFFIC TECHNOLOGIES