Chattanooga
Regional ITS Architecture Update
Project Overview

January 7, 2014

Chattanooga-Hamilton County

RPA
Regional Planning Agency
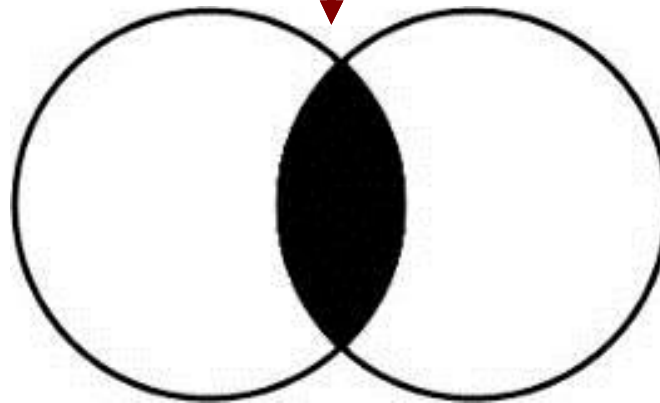
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Project Overview

- Update of the 2010 Chattanooga Regional ITS Architecture and Deployment Plan

- Provides a long range plan for the deployment and integration of ITS

- Key Components
  - Stakeholder Workshops and Interviews
  - Regional ITS Architecture and Deployment Plan
  - Turbo Architecture Database
  - Project Website

Project Overview

**Regional ITS Architecture
and
Deployment Plan**

**Transportation
Issues**

**ITS
Solutions**

Project Benefits

- Provides vision for ITS deployment in the Region

- Supports the deployment of an integrated and interoperable system in the Region

- Encourages use of standards and shared resources to maximize return on investments

- Assists agencies in seeking federal funding on projects

- Meets USDOT requirement that ITS projects funded with federal transportation funding conform to their Regional ITS Architecture and appropriate standards

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Stakeholder Involvement

2 Stakeholder workshops conducted at the Resource Center

9 Stakeholder interviews conducted with key stakeholders in the Region

41 Participants
- Federal, state, regional, county, and municipal agencies
- Traffic, transit, public safety, emergency management, and private sector industry

Key Steps

Step One — **Identify ITS Inventory and Needs**

Step Two — **Develop ITS Service Packages**

Step Three — **Identify Projects for Deployment in the Region**

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Regional ITS Architecture

- Identified and defined 42 ITS service packages (based on 97 in National ITS Architecture)

- Focus of ITS service packages included:
  - Traffic and Incident Management
  - Traveler Information
  - Emergency Management
  - Transit Management
  - Archived Data

ITS Service Package Prioritization

High Priority ITS Service Packages		Medium Priority ITS Service Packages		Low Priority ITS Service Packages	
Traffic Management					
ATMS01	Network Surveillance	ATMS04	Freeway Control	ATMS10	Electronic Toll Collection
ATMS03	Surface Street Control	ATMS13	Standard Railroad Grade Crossing	ATMS11	Emissions Monitoring and Management
ATMS06	Traffic Information Dissemination	ATMS19	Speed Monitoring	ATMS21	Roadway Closure Management
ATMS07	Regional Traffic Management	ATMS24	Dynamic Roadway Warning		
ATMS08	Traffic Incident Management System				
ATMS22	Variable Speed Limits				
Emergency Management					
EM01	Emergency Call-Taking and Dispatch	EM06	Wide-Area Alert		
EM02	Emergency Routing	EM08	Disaster Response and Recovery		
EM04	Roadway Service Patrols	EM09	Evacuation and Reentry Management		
		EM10	Disaster Traveler Information		
Maintenance and Construction Management					
MC08	Work Zone Management	MC01	Maintenance and Construction Vehicle and Equipment Tracking	MC12	Infrastructure Monitoring
MC10	Maintenance and Construction Activity Coordination	MC03	Road Weather Data Collection		
		MC04	Weather Information Processing and Distribution		

ITS Service Package Prioritization

High Priority ITS Service Packages		Medium Priority ITS Service Packages		Low Priority ITS Service Packages
Public Transportation Management				
APTS01	Transit Vehicle Tracking	APTS06	Transit Fleet Management	
APTS02	Transit Fixed-Route Operations	APTS07	Multi-Modal Coordination	
APTS03	Demand Response Transit Operations	APTS09	Transit Signal Priority	
APTS04	Transit Fare Collection Management	APTS11	Multimodal Connection Protection	
APTS05	Transit Security			
APTS08	Transit Traveler Information			
APTS10	Transit Passenger Counting			
Traveler Information				
ATIS01	Broadcast Traveler Information			
ATIS02	Interactive Traveler Information			
Commercial Vehicle Operations				
		CVO06	Weigh-in-Motion	
Archived Data Management				
AD1	ITS Data Mart	AD3	ITS Virtual Data Warehouse	

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ITS Deployment Plan

- Identifies projects for deployment in the Region

- Developed to support the Regional ITS Architecture

- Projects identified for short-term (0-5 years), mid-term (5-10 years), and long-term (beyond 10 years)

- Responsible agency, opinion of probable cost, and funding status also included

ITS Deployment Plan

Stakeholder	Example Projects
TDOT	- SmartWay deployments at targeted locations - Variable speed limits - Improved coordination with Georgia
GDOT	- CCTV cameras and detection at all interchanges - Dynamic message signs on I-24 and I-59
Municipal	- Traffic signal system upgrades - CCTV camera and dynamic message signs for incident management - Flood detection and warning system - Railroad grade crossing advance notification systems - Fire Department traffic signal preemption
Transit	- Smart Card implementation - Next-Bus arrival sign expansion - Trip planner - Transit traffic signal priority
TPO	Transportation data warehouse

Use and Maintenance

Use of the Regional ITS Architecture

Project Manager Evaluates Conformance to Regional ITS Architecture

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Project Manager Completes ITS Architecture Maintenance Form and Submits to TPO

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TPO Reviews and Files Form for Use During Next Update

Maintenance of the Regional ITS Architecture

Update every four years in coordination with the LRTP update

Chattanooga-Hamilton County
Chattanooga Regional ITS Architecture Maintenance Form
Regional Planning Agency

Please complete the following form to document changes to the 2014 Chattanooga Regional ITS Architecture. Forms should be submitted to the Chattanooga/Hamilton County/North Georgia Transportation Planning Organization (CHCNGA-TPO) for review and acceptance. All accepted changes will be kept on file by the CHCNGA-TPO and shared with the TDOT Long Range Planning Division. Changes will be incorporated into the 2014 Chattanooga Regional ITS Architecture during the next scheduled update.

Contact Information

Agency	
Agency Contact Person	
Street Address	
City	
State, Zip Code	
Telephone	
Fax	
E-Mail	

Change Information

Please indicate the type of change to the Regional ITS Architecture or Deployment Plan:

☐ Administrative Change: Basic changes that do not affect the structure of the ITS service packages in the Regional ITS Architecture.
Examples include: Changes to stakeholder or element name, element status, or data flow status.

☐ Functional Change – Single Agency: Structural changes to the ITS service packages that impact only one agency in the Regional ITS Architecture.
Examples include: Addition of a new ITS service package or changes to data flow connections of an existing ITS service package. The addition or changes would only impact a single agency.

☐ Functional Change – Multiple Agencies: Structural changes to the ITS service packages that have the potential to impact multiple agencies in the Regional ITS Architecture.
Examples include: Addition of a new ITS service package or changes to data flow connections of an existing ITS service package. The addition or changes would impact multiple agencies and require coordination between the agencies.

☐ Project Change: Addition, modification, or removal of a project in the Regional ITS Deployment Plan.

☐ Other: _____

Submittal

Please submit ITS Architecture Maintenance Documentation form to:
Chattanooga/Hamilton County/North Georgia Transportation Planning Organization
1250 Market Street
Suite 2000, Development Resource Center
Chattanooga, Tennessee 37402
Phone: 423-757-5216
Fax: 423-757-5532   Form Submittal Date: _____

Regional ITS Architecture Maintenance Form
Version 2.0 – January 2014

Regional ITS Architecture Maintenance Form
Version 2.0 – January 2014

Project Website

www.kimley-horn.com/projects/tennesseeITSarchitecture

Next Steps

- Draft Regional ITS Architecture has been updated

- Revised Draft Regional ITS Architecture being reviewed

- FHWA and TDOT to provide "Ready for Use" letter

- Documents to be finalized upon TPO approval

Thank You!

Yuen Lee, AICP
Chattanooga-Hamilton County Regional Planning Agency

Thomas Fowler, P.E., PTOE
Kimley-Horn and Associates, Inc.