Mohawk Valley Regional ITS Architecture Stakeholder Workshop



New York State Office Building Utica, NY June 3, 2010

AGENDA

ConSysTec



•	08:00 AM	Welcome/Introductions
•	08:15 AM	Presentation: Mohawk Valley ITS Architecture Work Plan Overview
•	08:20 AM	Presentation: Overview of ITS and ITS Architecture
•	09:00 AM	Discussion of Stakeholders in the Region
•	09:15 AM	Discussion of ITS Inventory in the Region
•	10:00 AM	Break
•	10:15 AM	Discussion of Transportation Needs for the Region
•	10:30 AM	Discussion of ITS Projects in the Region
•	11:50 AM	Next Steps and Next Meeting
•	12:00 Noon	Adjourn

Work Plan Overview



- Stakeholder Workshop
- June 14 Draft ITS Architecture on Web Site
 - June 17 Work in Progress Telecon
 - June 28 Regional ITS Architecture Review Workshop
- July 30 Final Web Site, ITS Architecture Report, CD-ROM



June 3



ITS Architecture Overview







Intelligent Transportation System

Could be:

- Integrated Transportation System
- One Definition:
 - "The application of *data processing* and *data communications* to surface transportation, to increase *safety* and *efficiency*."





- Is:
 - Identifies the ITS stakeholders in a region and their elements
 - Identifies the information or control to be exchanged between stakeholder elements
 - Making policy decisions by including or not including specific information flows between stakeholder elements
 - Selects standards for information exchange
- Isn't:
 - Doesn't select specific technologies or design
 - How projects are selected or funded



National ITS Architecture-Framework and Template









• A plan for deployment of ITS in the Region

Focus on integration of ITS in the Region





- National ITS Architecture (the cookie cutter)
 - a Framework or Template
 - a menu of possibilities
- Regional ITS Architecture (the cookies)
 - Specific instances, associated with local stakeholders and projects
 - Current inventory + future projects
 - Only the pieces you need
 - Put together based on local needs
 - Extensions, where necessary







- How will your systems evolve?
 - What new or enhanced services will you provide?
 - What systems will you connect to and what information will you share?
 - What agreements need to be in place to make it happen?
- The Mohawk Valley Regional ITS Architecture will provide the framework and plan for the evolution of your systems over the next 15 to 20 years.





- Transportation planning tool
 - Get a handle on where we are going with our Intelligent Transportation System
- Regional information sharing opportunities
 - Get early insight into what ITS information others have that can help you do your job better (or you can provide to others)
- Opportunities to leverage funding across multiple jurisdictions and agencies





- AND -- Addresses FHWA Rule/FTA Policy on ITS Architecture and Standards
 - Requires Development of a Regional ITS Architecture if using Highway Trust Fund money to fund deployment of projects containing ITS elements.
 - Intended to foster integration of ITS Systems
 - Defines requirements for ITS projects
 - Defines requirements for ITS agreements
- This workshop continues the process of updating the Mohawk Valley Regional ITS Architecture





- 1. Description of the region (Scope)
- 2. Identification of participating agencies and their systems (Inventory)
- 3. Operational concept
- 4. Agreements required for implementation
- 5. System functional requirements
- 6. Interface requirements
- 7. Identification of ITS standards
- 8. Sequence of projects required for implementation
- 9. Process for maintaining your ITS Architecture





- Executive management support and stakeholder involvement are key to project success.
- Consensus and operational concepts documented in the ITS architecture provides projects with a head start in dealing with institutional barriers.
- The Mohawk Valley Regional ITS Architecture will help project managers apply a systems engineering process.





Architecture Scope







- Geographic
 - Covers systems and roads in the 6 county Mohawk Valley Region.
- Time Frame
 - Existing Today \rightarrow 15 to 20 years in the future?
- Scope of Services
 - Traffic, Maintenance, Transit, Emergency, Planning
 - Electronic Toll and Commercial Vehicles Operations are handled in the New York Statewide Services ITS Architecture





Discussion of Mohawk Valley Regional ITS Elements







- A list of ITS elements and the elements that interface with them
- And an ITS element is:

"The name used by stakeholders to describe high level parts of an ITS system."



Regional ITS Inventory



- Review current and planned elements
- Types of elements:
 - Centers Traffic, Emergency, Transit
 - Field Devices Traffic, Maintenance
 - Traveler Interfaces Web sites
 - Data Systems Planning, Archives
 - Vehicles Transit, Emergency, Maintenance





Lets go to the inventory...





Transportation Needs







- What are Needs?
 - Regional necessities that address particular transportation issues
 - Some are ITS related, meaning the need can be satisfied with the incorporation of ITS in the transportation system
 - Some are not ITS related
- Needs are both qualitative and quantitative
 - Qualitative Needs Identifies a general requirement
 - E.g. Improve incident response and remediation
 - Quantitative Needs Identifies a specific requirement by which one can measure numerically if it has been met.
 - E.g. Install 12 CCTV Cameras on state highways



Why identify Needs for the Mohawk Valley Region?

- Identification of ITS related needs will help make a connection between transportation planning and the ITS projects that are developed.
- Aids member agencies in developing financial strategies to deal with unmet needs
 - Identify possible future funding sources
 - Multi-year financing plan to leverage funding now





- Identify and extract ITS Needs identified by:
 - Review of common ITS elements in New York Statewide Services ITS Architecture
 - Stakeholder representatives interviews
 - Past experience in architecture development



Transportation Needs



- Move people to/from work
- Move goods to/from markets
- Monitor transportation system status
- Plan for new transportation projects
- Provide safe transit of travelers, public safety, and emergency personnel during incident response





Deployments/Projects





Representative Sample of ITS Deployments/Projects



- Traffic Management
 - Traffic Monitoring and Surveillance
 - Traffic Signal Upgrades / Arterial Management (Coordination of timing across operators)
 - Freeway Management
 - Dynamic Message Signs / Highway Advisory Radio / CCTV
 - Probe Surveillance / TRANSMIT
 - At-grade Crossings
 - CVO Parking on the Thruway
 - Canal Coordination (e.g., TransAlerts)
 - Sharing of Information amongst TMCs
 - Region 1 Capital District
 - Region 3 / 7 Syracuse / Watertown
 - Region 9 Binghamton
 - TSOC through the IEN



CVO



- Electronic logs (communications of fleet operators with drivers)
- Truckers could be "on the look out", e.g., Amber Alerts.



Representative Sample of ITS Deployments/Projects



- Maintenance and Construction
 - Dispatch and Automated Vehicle Location for Maintenance and Construction Vehicles
 - Snow Removal Operations
 - Put in something like MDSS for Counties and Municipalities
 - Currently exists for State routes
 - Weather Stations and Pavement Sensors
 - Work Zone Safety
 - Asset Management for Counties
 - Sharing of information about lane closures for construction and maintenance
 - Counties and Municipalities to law enforcement, school districts, 9-1-1 center, transit operators





- Transit
 - Dispatch and Automated Vehicle Location for Transit Vehicles
 - Paratransit
 - CENTRO has this.
 - Birnie bus.
 - Transit Priority
 - Sharing of schedule and vehicle location data amongst agencies
 - Reciprocity with Birnie Bus / CENTRO





- Emergency Management
 - Dispatch and Automated Vehicle Location for Emergency Vehicles
 - Traffic Incident Management
 - Multiple PSAPs in the region
 - Regional Traffic Incident Management Committees in the future. Currently, being kicked-off as a Statewide
 - Major Events Planning (County Fairs, State Fairs)
 - HAZMAT
 - Amber Alerts
 - Emergency Management Coordination
 - SEMO (NY Alert), County / Municipal EMOs
 - Disaster Management / Evacuation / Dam breaks





- Traveler Information
 - 5-1-1 New York (511ny.org)
 - Region 2 has CARS terminal
 - Transit also
 - TransAlert
 - Local Traveler Information
 - Local PIO





- Archived Data / Planning
 - Traffic, Transit, Incident, Environmental Data Collection for Planning





Discussion of ITS Services-Market Packages Overview





ITS Services Cover



- Traffic Management
- Traveler Information
- Transit Management
- Emergency Management
- Commercial Vehicle Operations
- Maintenance and Construction
- Archived Data Management
- Advanced Vehicle Safety



Traffic Information Dissemination





Television Station

Web Site



ConSysTec

Automated Transit Fare Payment





Market Packages







APTS04 – Transit Passenger and Fare Management Market Package





Customized Market Package



APTS04 - Transit Passenger and Fare Management CNYRTA







Next Steps







Next Steps- Architecture Website

- Draft updated Mohawk Valley Regional ITS Architecture will be available on the project website:
 - Link to project website at <u>www.consystec.com</u>
- Email to all stakeholders when ready for review
- Please take the time to review your portion of the architecture and provide comments







- Your input from this workshop will be turned into an initial updated draft Mohawk Valley Regional ITS Architecture
- Your input on the Mohawk Valley Regional ITS Architecture website will be captured and reviewed at the remaining stakeholder meeting
- Thank you for your input today

