St. Louis Regional ITS Architecture Update
Why Build an ITS Architecture?

- To develop a regional plan for our ITS System.
- To integrate transportation system management and operations regionally.
- To guide the further development of the regional ITS system.
- To satisfy federal requirements for ITS expenditures.
What is ITS?

The use of information and communications technologies to meet transportation needs
ITS Service Areas

Traffic Management

Traveler Information

Public Transit

Commercial Vehicle Operations

Emergency Management

Maintenance & Construction Management

Electronic Payment

 Archived Data Management
Traffic Management

- Signal Control and Coordination
- Traffic Monitoring
- Signal Preemption for Emergency Vehicles
- Parking guidance

- Active Traffic Management
- Ramp Metering
Traveler Information

- Dynamic Message Signs
- Mobile, Web and Phone-based Traveler Information
Public Transit

- Transit Vehicle Tracking
- Transit Signal Priority
- Real-Time Info
- Demand Response Transit Operations
- Internet Trip Planning
- Security Cameras
Emergency Management

- Communications
- Response Planning
- Signal Preemption
- Vehicle Tracking
- Coordinated Response
- Freeway Service Patrols
Electronic Payment

- Electronic tolling technologies
- Electronic transit payment
- Integrated cashless payment
  - Transit, parking, etc. (e.g., SmartCard)
  - Smartphone-based payment
Emerging Area

• Connected Vehicles
  – Vehicle-to-Vehicle communications (safety messages)
  – Vehicle-to-Roadside communications
  – Safety, Mobility, Environmental applications
What Is an ITS Architecture?

- **Framework for Integrating Transportation Systems**
- **Identifies:**
  - Organizations
  - Systems Operated
  - Functions Performed
  - Communications
  - Information Exchanged
ITS Architectures Provides a Framework for Integration

Traffic

traffic information

request for traffic information

Travelers

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Transit

Emergency

Innovation for better mobility
Stakeholders’ Role

• Groups who own, operate, maintain and use ITS systems to manage the transportation network.
• Identify existing and planned ITS systems.
• Identify the Region’s needs.
• Identify strategies to address those needs.
How do we Implement the Vision?

Origin:
Existing Systems, Current and Future Needs

How to get there:
Strategic Deployment Plan

Destination:
Ultimate Regional ITS Architecture
Stakeholder Outreach

- **Stakeholder Workshop #1**
  - Inform stakeholders about the project
  - Learn from stakeholders
    - Stakeholder’s current operational activities
    - Future activities and needs

- **Major Stakeholder Meetings**

- **User Surveys**
Stakeholder Outreach

• **Stakeholder Workshop #2**
  – Present and discuss an operational concept
    • Identifies roles and responsibilities of stakeholders in the operation of the ITS system
  – Receive input on candidate regional ITS initiatives
  – Begin process to prioritize the ITS services
Results So Far:

- Workshop
- Meetings
- Survey

“Common Threads”
- Improve coordination between agencies
- Improve information to travelers
- Expand system coverage

Other Key Needs
- Delay / congestion / safety focus
- Freight / CVO enforcement and services
- Training
Three Levels of Initiatives

- “TIER 1” projects support regional coordination, cooperation and multi-modal traveler information, as well as efforts to standardize and share traffic incident, event and emergency information.

- “TIER 2” projects represent corridor operational strategies that may also be multi-modal in nature. May impact one or more Interstate corridors as well as multiple travel modes within a particular corridor or sub-area.

- “TIER 3” projects improve internal traffic or transit operations activities for a particular stakeholder.
Next Steps

• Complete Operational Concept
• Define Specific Projects
• Define Regional and Project Architectures
• Develop Deployment Plan / Time Frames
• Project Completion June 30
Project Web Site

https://secure.iteris.com/share/STL/

- Project Announcements
- Project Deliverables
- Link to Needs and ITS Service Prioritization Surveys
- Turbo Architecture Output
- Questions and Comment Links