ITS Architectures as a Tool for Accelerating ITS Deployment

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Presentation Overview

• Overview of ITS Architectures and the ITS Architecture Development Process

• ITS Architectures as a Tool to Accelerate the Deployment of ITS

• Discussion of What Has Worked Well…and What Hasn’t Worked
ITS Architecture Experiences

36 Regional ITS Architecture Developments
5 Regional ITS Architecture Updates
3 Statewide ITS Architecture Developments
Overview of ITS Architectures and the ITS Architecture Development Process
ITS Architecture Overview

- An ITS architecture is a high-level plan for how ITS can be implemented and operated in a region.
- An ITS architecture defines:
  - Transportation related needs
  - ITS solutions for the needs
  - Operational concepts for the solutions
Key Components of an ITS Architecture

• Description of the region
• Identification of stakeholders
• ITS needs
• ITS services to implement
• Information flows between elements
• ITS standards
• Agreements required for operations
• Sequence of projects
• Maintenance plan
Key Outcomes Desired from an ITS Architecture

- Cooperation and coordination between all stakeholders
- Seamless and integrated transportation system
- Funding
ITS Architecture Deadlines

- Federal Highway Administration Final Rule and Federal Transit Administration Policy from 2001
  - Regions deploying ITS must have a regional ITS architecture in place by April 2005
  - Regions with no ITS deployed must have a regional ITS architecture developed within 4 years after their first ITS project reached final design
  - ITS projects receiving federal transportation funding must conform to a regional ITS architecture
What Has Been Done

From the Federal Highway Administration Website
December 31, 2005

291
Total number of states and regions identified as required to have ITS architectures

242
States and regions considered “Ready for Use”

33
States and regions considered “Under Development”
ITS Architectures as a Tool to Accelerate the Deployment of ITS
Moving Forward

• ITS architectures are only valuable if the plan is implemented
• Don’t just think about how you will develop or update your ITS architecture…think about how it can be used to:
  – Accelerate project deployment
  – Achieve necessary integration
  – Impact operations
• Lesson from the Tour de France…
  “If we are going to ride the Tour, we might as well win.”
What Has Worked Well
Involve Decision Makers From Start to Finish

• Consider a formal MOU prior to starting project
• Conduct a brief executive session or briefing as part of the project kick-off
• Present recommendations to the MPO or other local governing bodies
• Develop non-technical materials for the public and decision makers
• Example: Lawrence, Kansas
Involve Decision Makers
From Start to Finish

Lawrence-Douglas County Planning Commission Briefings

City of Lawrence Utility Bill Mail Outs
Focus on the Big Stuff

- Is there a key problem that **needs** to be solved
- Is there a key project that **needs** to be deployed
- Is there a key operational change that **needs** to be implemented
- Example:
  Corpus Christi, Texas
Focus on the Big Stuff

Some other key needs or projects in other regions:

• Traveler Information Due to Severe Weather: Amarillo, TX
• Snow and Ice Detection: Superior Region (Upper Peninsula), MI
• Emergency Evacuations: Pine Bluff, AR
• Major Special Events: NASCAR in Bristol, TN
• International Border Crossings: Laredo, TX
Identify Clearly Defined Next Steps

• Define next steps beyond ITS architecture maintenance
• Clearly outline how ITS architectures can be used in the planning process
• Define deployment and operational steps in as much detail as possible
• Consider developing an ITS master plan as a follow on to the ITS architecture
• Example:
  Tennessee DOT
  ITS Architecture Program
Identify Clearly Defined Next Steps
Identify Funding

• Funding is needed to continue momentum started during the ITS architecture development

• Funds can act as a great incentive to get involvement, build excitement, and keep interest

• Much easier said than done

• Example: Laredo, Texas
Laredo ITS funding targeted:

- Traffic Signal System
- Bridge Management System
- Operations Center
What Has NOT Worked Well
What Has Not Worked Well

ITS did not move forward beyond the ITS architecture process when:

- There was no pressing problem that could be solved through ITS deployment
- Funding could not be found to support ITS deployment
- There was no agency to champion initial or continued involvement of stakeholders
- The ITS architecture was not integrated into the planning process
Conclusion

• ITS architectures can be a valuable asset in implementing ITS in a region

• Plan ahead before beginning an ITS architecture or an architecture update to determine if the time is right

• Key lessons:
  – Involve decision makers from start to finish
  – Identify the big things and rally stakeholders around them
  – Clearly define the next steps
  – Funding…need to have funding to continue momentum
Thank You!

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