Monitoring and Sharing the Impacts of ITS for Decision Support: US Perspective

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TOPICS

- Background
- Resources
- Lesson Learned

ITS Knowledge Resources: Integrated Website and Databases

- Part of the USDOT's ITS Evaluation Program

- One-of-a-kind collection of Web-based resources to assist decision makers, state and local government agencies, and researchers in understanding the benefits, costs, lessons learned, and extent of deployment of ITS.

http://www.itskrs.its.dot.gov/

- Websites supplemented by:
  - Outreach activities (webinars, presentations, etc.)
  - Publications such as a periodic Benefits, Costs, and Lessons Learned (BCLL) Update Report and articles
  - Periodic deployer surveys

ITS Knowledge Resources Evolution

Year	Major New Feature
1995	1st (USDOT) ITS Benefits Report was published
1999	The ITS Knowledge Resources website first launched, with ITS benefits and unit costs databases
2003	ITS Deployment statistics survey data put online System Costs introduced
2005	The Lessons Learned Knowledge Resource database developed
2011	Interactive Asset Mapping Feature implemented
2013	Sample unit costs spreadsheets made available
2014	Interactive Benefits, Costs, and Lessons Learned Fact Sheets Launched

Who is the Target Audience?

- State, regional, and local transportation professionals seeking to consider ITS in the development of transportation plans and projects to address local transportation needs and problems.

- Non-transportation decisonmakers at all levels of government seeking to understand tradeoffs between ITS investment and other types of investment – are ITS investments worth it, as they compete with other funding/political priorities

- Researchers or policymakers seeking to better understand the state of knowledge and extent of deployment of ITS, and learn about patterns of how technology in general, but ITS in particular, gets deployed over time.

- Private sector companies seeking to get a better understanding of market development and future direction

- Academia: the databases are a vast repository of data that is useful for research purposes

- Others

International Data in the Knowledge Resources: Who's Looking?

Source of Data

United States, 86%

Other, 14%

- United States
- United Kingdom
- Canada
- Sweden
- Germany
- Italy
- Netherlands
- Finland
- Japan
- Singapore
- France
- Australia
- Norway
- Denmark
- Taiwan
- Brazil
- Ireland
- China
- South Korea
- Israel
- Belgium
- Spain
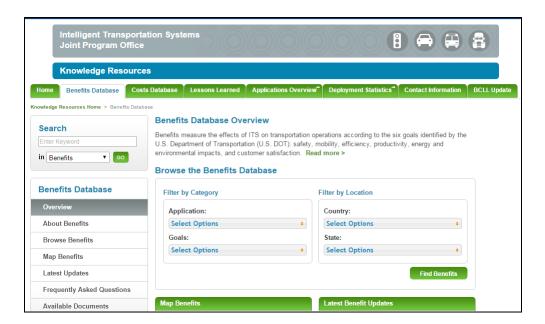- Luxembourg

Resources

Knowledge Resources Portal

Knowledge Resources Portal –
ITS Benefits Database

Objective

- Analyze and document ITS benefits
- Disseminate information about ITS benefits

Benefit Entries

- Provide summary of source document
- Provide methodology
- Provide results, findings, performance impacts, conclusions, etc.
  - Quantitative
  - Qualitative
- Direct link to source document
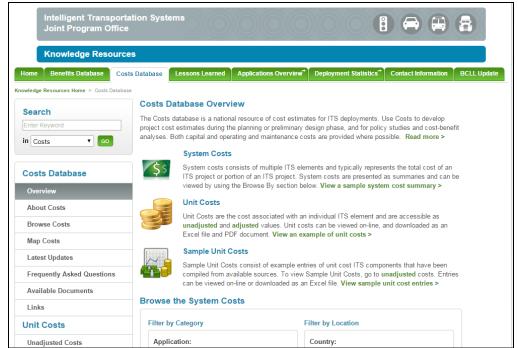

www.itsbenefits.its.dot.gov

Knowledge Resources Portal - ITS Costs Database

Objective

- Analyze and document the costs of deploying ITS
- Disseminate information about ITS costs

Costs Summary

- Unit Costs
  - Cost associated with an individual ITS element
  - Sample Unit Costs
- System Costs
  - Multiple ITS elements and typically represents the total project cost
- Costs summaries provide same level of detail as Benefit and Lessons Learned summaries

www.itscosts.its.dot.gov

Knowledge Resources Portal – ITS Lessons Learned

Objective

- Gather and disseminate lessons learned from the experience of past ITS deployments

Lessons Learned Entry

- Provide summary of source document
- Provide Lessons for practitioners to consider when deploying projects
- Direct link to source document
- Provide contact information

www.itslessons.its.dot.gov

Knowledge Resources Portal – ITS Deployment Statistics

- The ITS Deployment Tracking Project regularly surveys transportation agencies in the largest U.S. cities on a regular basis

- Most recent survey is 2013; data from previous survey years is also available.

- Next survey currently being conducted in 2016

- Deployment results organized by agency function
  - Freeway management
  - Arterial management
  - Transit management
  - TMC
  - Toll Collection
  - Fire and Rescue
  - Law Enforcement

www.itsdeployment.its.dot.gov

Using the Knowledge Resources to Support Deployment

1

Use the benefits database to find ITS solutions that will address your needs and will provide meaningful results.

2

Use the costs database to develop project cost estimates and conduct benefit/cost analysis.
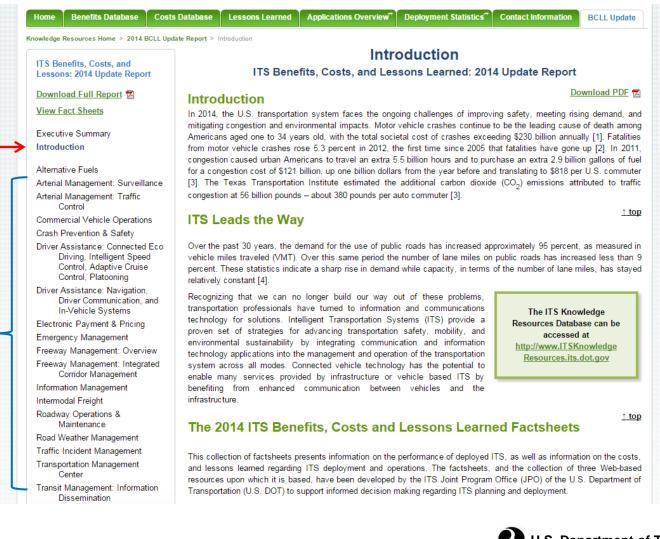
3

Use the lessons learned database to find deployment guidance relevant to your desired system for easy and efficient implementation.
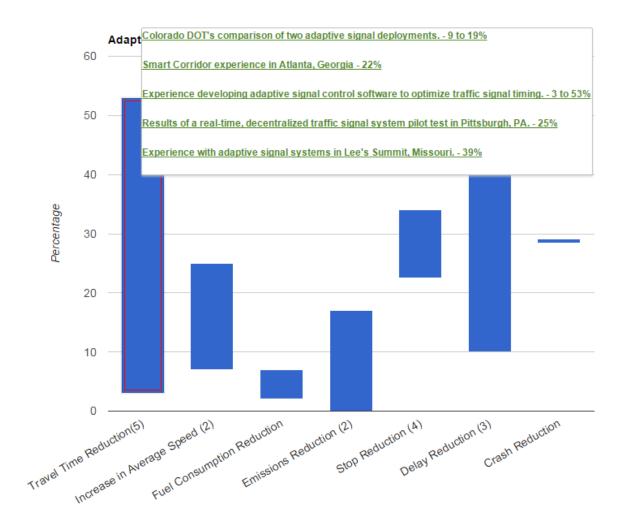
Bi-Annual Reporting
Benefits Cost Lessons Learned (BCLL)

http://www.itsknowledgeresources.its.dot.gov/its/bcllupdate/

BCLL Interactive Graphs

BCLL - PDF Versions of Fact Sheets

http://www.itsassets.its.dot.gov/

Visually displays the location of certain types of ITS deployments across the U.S, providing a geographic picture of the status of ITS deployment.

- Includes GIS data regarding key ITS technologies such as cameras, messages signs, ramp meters, speed sensors, and roadway weather information systems.
- Zoomable down to intersection-level detail
- Over 75,000 assets in the database and growing...

Lessons Learned

U.S. Lessons Learned in Developing/ Maintaining Knowledge Resources

- Be willing to commit time and resources to the knowledge initiative
  - Keeping the contents updated is key – but it's not easy and takes commitment
  - Don't "build it and forget it"
- Use a common classification system across resources and make it transparent to users
- Engage target users and stakeholders during development and maintenance/operations phases
  - Crucial to know what users want
  - Show them mock-ups and get their feedback
- Actively seek feedback from Users and non-Users, and do it often
- Market the resources regularly and provide training

U.S. Lessons Learned in Developing/ Maintaining Knowledge Resources

- Design user interfaces for quick comprehension and communication of results
  - Your audience needs to find data quickly and doesn't have much time to assimilate information
- Provide "canned" presentation materials for users
- Be willing to provide interim results
  - Timely information is important
  - Shortcuts long cycles that occur before evaluation reports are published
- Seek to include a wide variety of sources, including briefings, interviews, conference presentations, etc.

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