

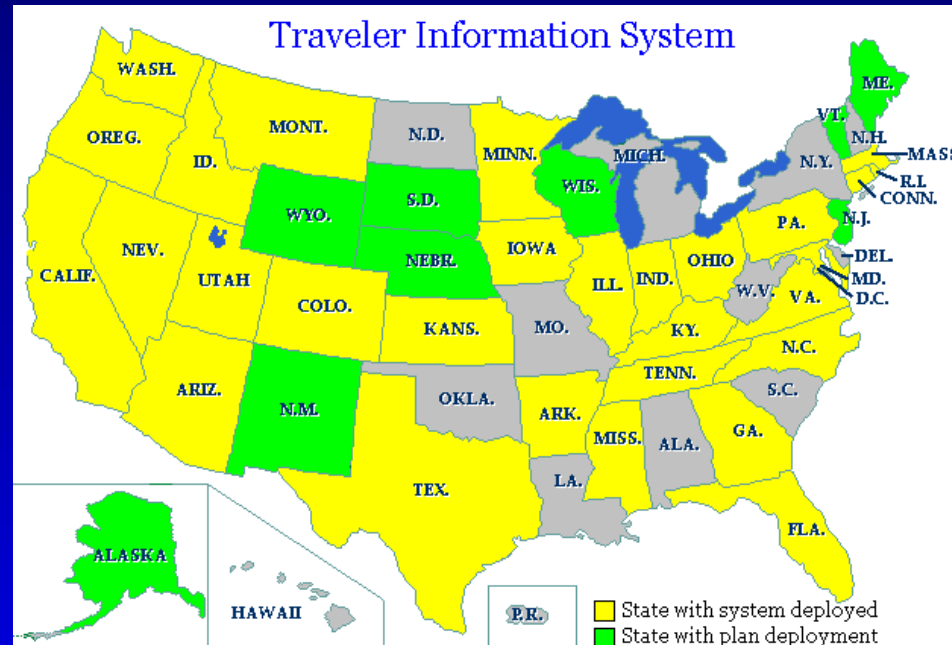
Background: The U.S. Perspective

Joe Peters

Background:

Transportation in the United States

- Numerous partners involved in transportation
 - Federal government
 - 50 States
 - County and city governments
 - Transportation
 - Public safety
 - Private firms
- Nearly all are facing transportation challenges
- Nearly all are turning to some investment in ITS



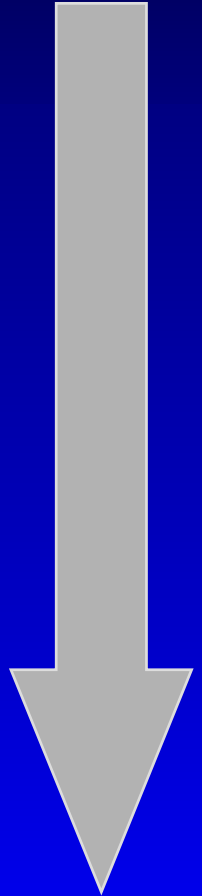
Major Areas of ITS Investment in the US

- Metropolitan
- Rural
- Commercial Vehicles
- Intermodal Freight
- Intelligent Vehicles



ITS Timeline in the US

- 1970's – 90's: Pre-ITS research
 - Dynamic route guidance
 - Traffic signal control systems
- 1990's – 2000: Birth of ITS
 - Field Operational Tests
 - Deployments
 - Intelligent Vehicle Initiative
- Today
 - Deployment of an Information Infrastructure (iFlorida)



Current Status of ITS in the US

- Over 20 years of ITS research and development
- New research continues apace
- Many applications are now 'mature'
 - ITS has become mainstreamed
- Investment decisions are primarily made at the State, local and industry level
- The Federal Government is coordinating these efforts and encouraging standardization

Coordinating and Ensuring Standardization of ITS in the US

- US DOT's ITS Joint Program Office
 - Promotes ITS research and development
 - Promotes standards and a common architecture
 - Performs a critical program assessment role

Program Assessment Role of the USDOT's ITS Joint Program Office

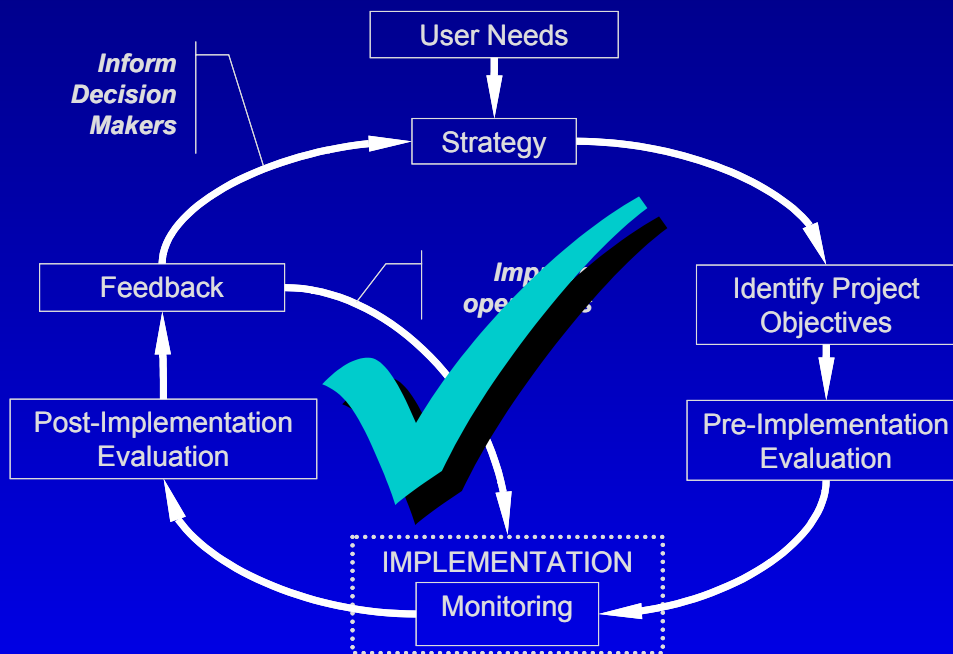
- Tracks the extent of ITS deployment and integration
- Determines the benefits and costs of ITS
- Shares these results with others

Definition of ITS Evaluation in the US

- The reasoned consideration of how well project goals and objectives are being achieved
- A feedback mechanism to ensure that project goals and objectives are met or exceeded

Central Theme of US Evaluation

- “Evaluation is a process, not a report card”



Determining ITS Benefits and Costs

- The Joint Program Office sponsors targeted evaluations of efforts including:
 - Field Operational Tests
 - Model Deployments
 - Local Deployments
 - Integration Program “Earmark” projects
- The office also leverages partner’s efforts by:
 - Providing evaluation guidelines and standards
 - Supporting a common reporting database
 - ITS Benefits and Cost Database

Why Do We Evaluate ITS?

- **Understand the impacts**
- **Quantify the benefits**
- **Help make future investment decisions**
- **Optimize existing system operation or design**
- **To improve the U.S. surface transportation system**

How can ITS Evaluation be Useful: Process Improvement

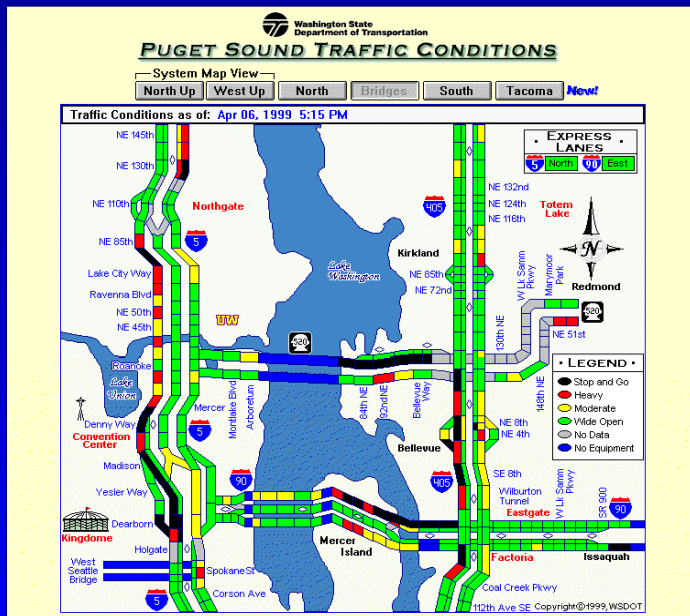
- In-Vehicle Navigation Deployment to Public Sector in Texas



- Initial reaction was lukewarm
- Evaluation revealed ineffective training and maintenance
- When these improved, satisfaction increased substantially
- Para-transit drivers now demand vehicle with units

How can ITS Evaluation be Useful: Programming Assistance

- Metropolitan Model Deployment Evaluation
 - Aided ATIS resource allocation and programming decisions



Versus



How can ITS Evaluation be Useful: Policy Analysis

- Minnesota Ramp Metering
 - Public / Legislative questions of effectiveness
 - Shut system down for evaluation
 - Freeway travel times *increased* 22% while meters were off
 - This led to increased public support
 - Led to operational improvements



Who Benefits from ITS Evaluation and How?

- Customers/Beneficiaries
 - Travelers - Improved safety, reduced delay and stress
 - Shippers/Carriers - More efficient operations
 - Taxpayers - Better use of transportation dollars
- Decision Makers
 - Elected and appointed officials

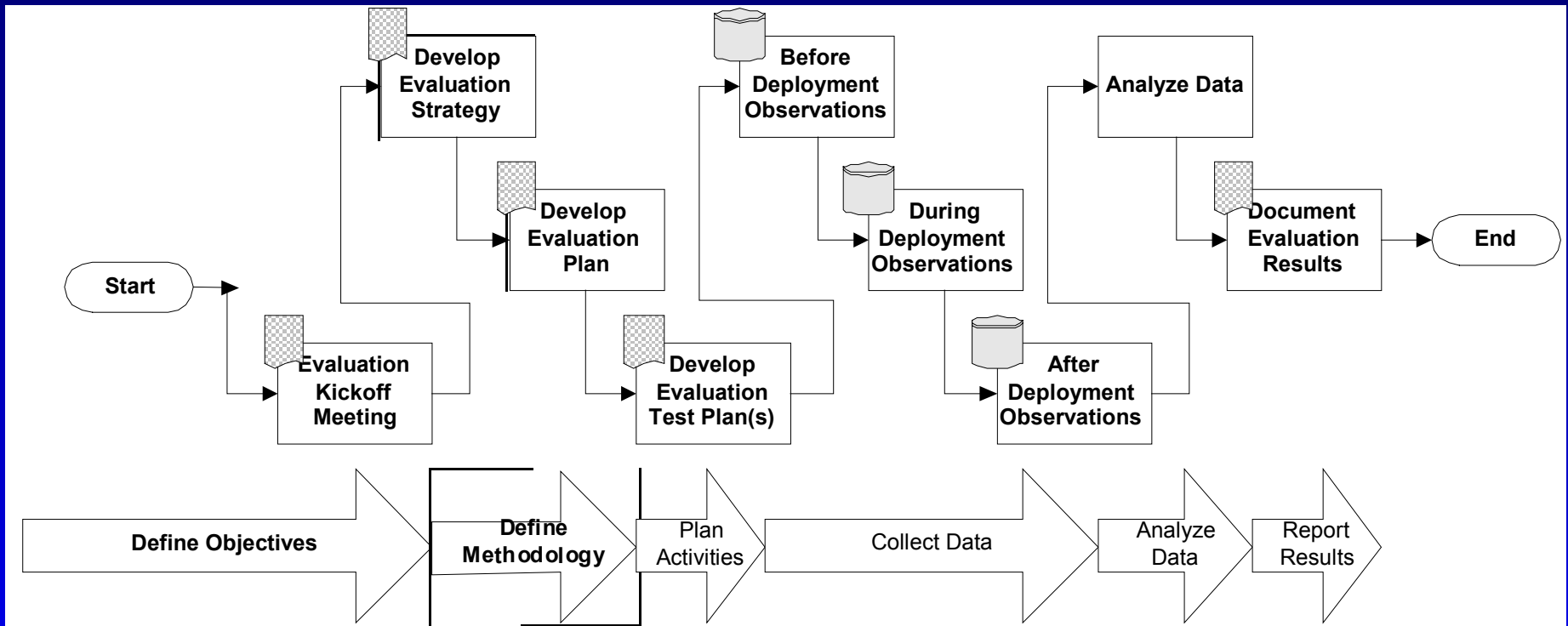
Who Else Benefits From ITS Evaluation and How?

- System Operators
 - Facility operator
 - Boards of Directors/Commissioners
 - Operators of adjacent facilities
- Funding Partner(s)
 - Federal, State, Local, Private sector

How Do We Conduct ITS Evaluation in the US?

1. Form an evaluation team
2. Develop an evaluation strategy
3. Develop an evaluation plan or plans
4. Develop test plans
5. Perform Data Collection and Analysis
6. Reporting

Evaluation Approach - Graphical



Guiding Principles to ITS Evaluation in the US

- Focus limited evaluation resources on data gaps
 - Develop and follow a standardized approach
 - Use sound scientific methods
 - Allow visibility into the process
 - Ensure consistency and transferability
 - Carefully set the context
 - Report on impacts – Positive and Negative
-

Evaluation is a process!!!

Agenda

- Introductions and Overview
- Background – US perspective
- **Background – European perspective**
- The Evaluation Process
- Evaluation Techniques & Performance Measures
- Real Evaluations
- Wrap-up and Conclusions