Information Assets to Support Transportation Decision Making:
A Peer Exchange of State Transportation Organizations

# Transportation Information Assets: Review of Data Applications from States

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# TRB Initiative's Objectives

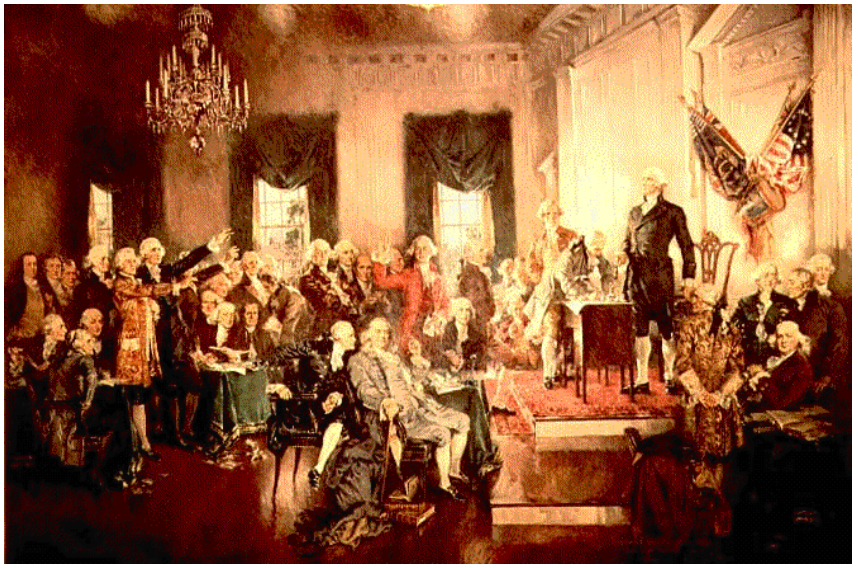
- To support SAFETEA-LU-mandated policy study:
  - Understand role of data / information for decision making (Planning, operations management, priority setting and resource allocation…)
  - Assess information needs
  - Provided basis for ensuring information for transportation decision making
- Transportation Information Needs Policy Study not  begun

Not a pleasure cruise

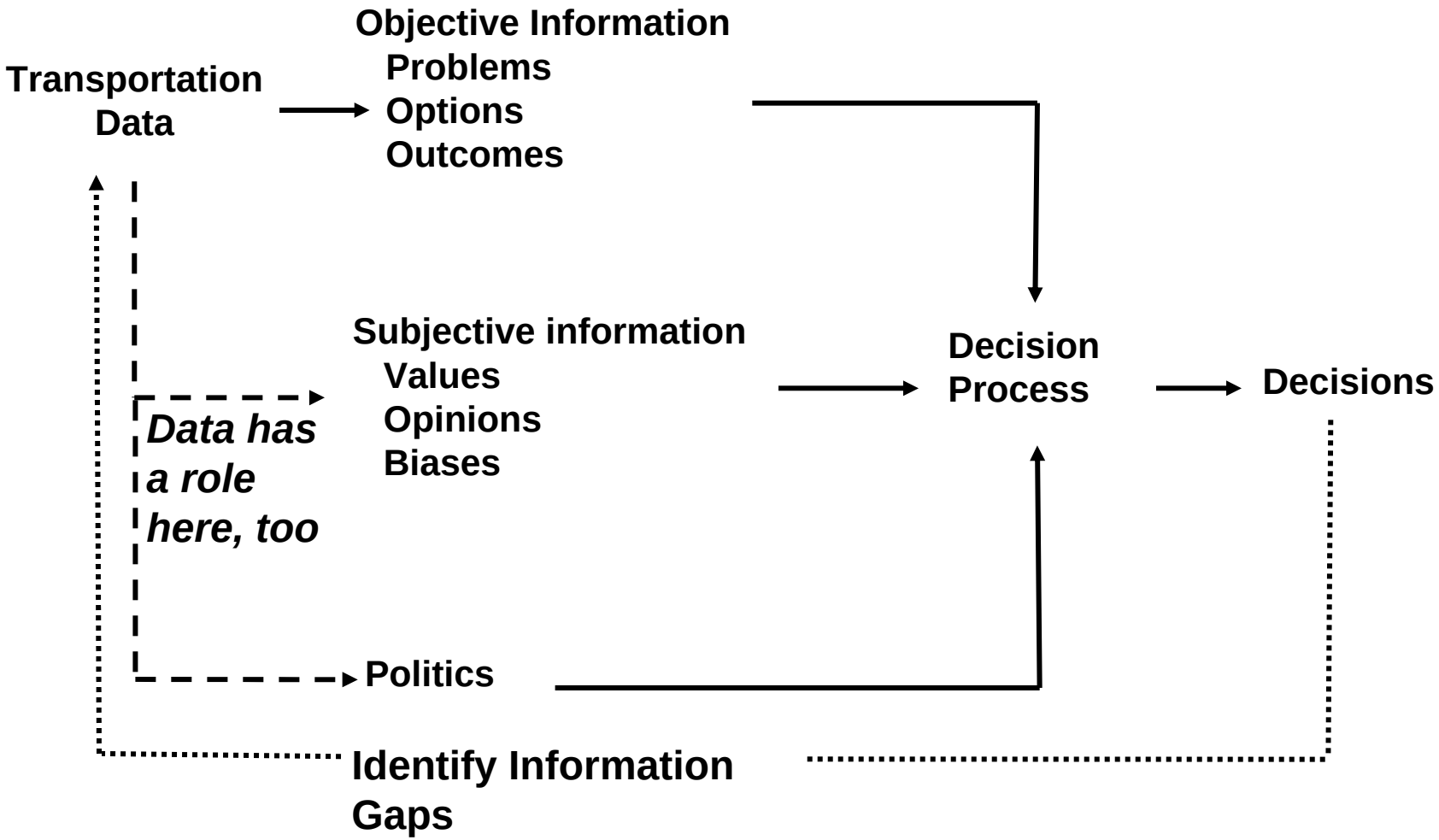
Serious volunteer effort!

# Approach

- Survey TRB 144 Technical Committees
  - Data needs (650+)
  - Examples – where data made a difference
  - Organize and interpret
  - TRB Electronic Circular 109 December 2006
- Interview decision makers
  - Interpret results
- TRB meetings:  July, January
- Congressional testimony
- Organize peer exchange
- Engage American Assoc. State Highway and Transportation Officials



# Data and Decision-Making



# Information Needs - TRB Committees

- Data Needs
  - National, regional, and local needs identified, including both physical condition and operational performance issues:
    - Real-time performance, traveler perceptions, spatially defined network inventory, land-use, population, employment, evaluations (infrastructure investments and policy changes)
- Other Information Needs
  - Analytical procedures and tools, data access, best practices
- Attributes of Good Data
  - Quality (trustworthy), recent, routine, available, broad coverage
- Data & information are assets of transportation systems

# Decision Makers Views of Information

- Data and information are important to decision makers
  - Decisions will be made (with ***or without*** data)
  - Identifies/confirms problems
  - Mitigates political influence on transportation decisions
- Information Needs for Today's Decisions
  - Demographic trends
  - Infrastructure condition
  - Traffic volumes
  - System performance

  } **Current System State**

  - Outcomes of past actions (basis for learning for the future)
  - Forecasts? Some are uncertain about these
- Key Information Attributes
  - Timely, responsive, meaningful, simple, concise

# Main Findings

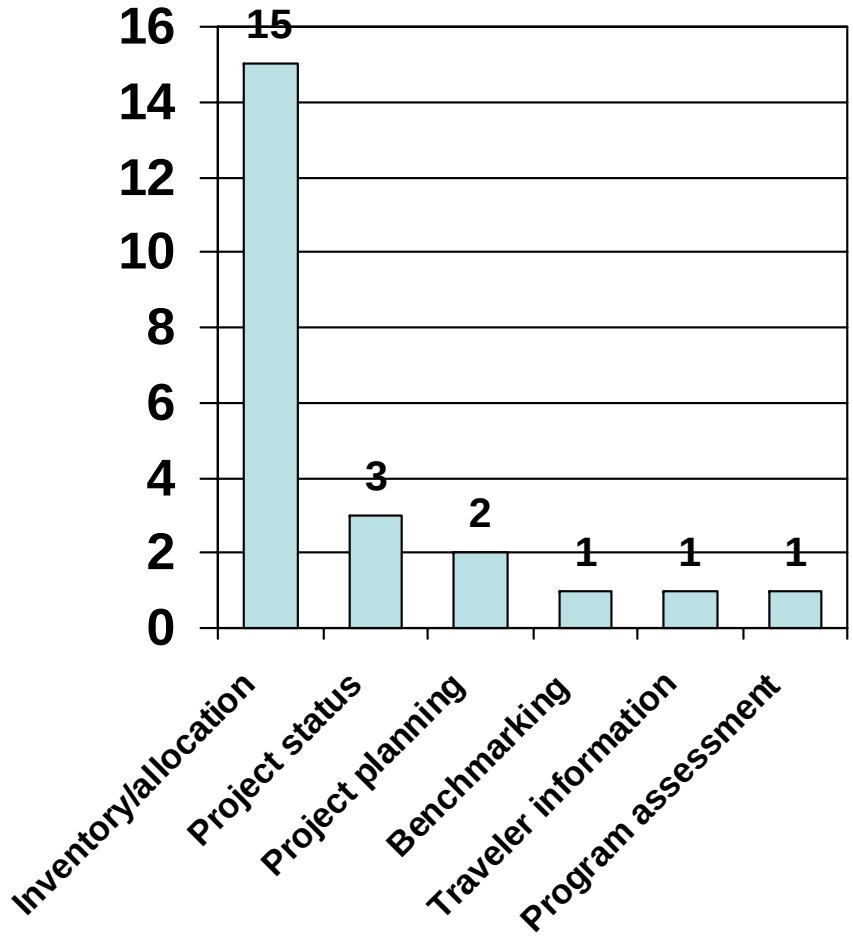
- Data is an asset of transportation system – contributes value, requires money, time and commitment
- Good decisions (informed decisions) – the hallmark of an effective information program
- Decisions will be made… data that is "in the bank" is used
- Critical need for essential national, sustained databases
  - Support both national and local uses
- Analysis and communication "stretches" and improves data and procedures
- Still need improved tools, procedures, presentation approaches

# Still More Main Findings

- Partnerships – Public/public & public/private – are growing
  - Broad agreements, not just single efforts or projects
- Data sharing, data borrowing are common
  - Sharing data extends its value
  - Argues for commonality, documentation, availability
- Technology – changing procedures & institutions
- Technology and Partnerships are improving data acquisition efficiency

# Peer Exchange Examples
# Information Support for Decision Making

- Participant inputs – starting point for discussions
- Convenience sample
  - Kansas, Maryland, Michigan, Minnesota, New Mexico, Nevada, Virginia, Vermont
  - 23 examples
- Six types **NEXT→**
  - Inventory, condition & regular resource allocation
  - Project status monitoring & management
  - General project planning
  - Bench marking
  - Traveler information
  - Program impact assessment



# Examples – Information for Decision Making

- Inventory & allocation
  - Asset inventory, condition, performance & outcome data
  - Identify problems, find solutions, set priorities, allocate resources
    - SSD, guard rails, pavement condition, bike routes, real time performance, ADA compliance, crash data integration
  - Data driven resource allocation: **DDRA**
- Project status monitoring & management
  - Project data dashboard, environmental data
- General project planning
  - Data for project scoping
- Bench marking
  - Staff salaries
- Traveler information (real time)
- Program Impact Assessment
  - Connect program investments to economic development

# Attributes of Useful Data…

- **Objective**
  - Condition measures vs what we did last year, or “fair share” allocations
  - What’s really happening – project status (& accountability)
  - Reality over myths, beliefs (program impacts, project effectiveness)
- **Detailed**
  - Location, conditions, performance, problems
- **Accessible**
  - Readily and by multiple users:  computer based, consistent interpretation and decision, all on same page
- **Timely** (*i.e.*, current)
- **Integrated**
  - One stop shopping, multiple related measures on one place
- **Efficient**
  - Use data at hand, multiple uses of same data

# Surprises in Participant Examples?

- No use of national data bases?
- Are most problems local?
- Or are these just convenient examples?
- Is making wise use of local data the most cost-effective way to deploy data for good purposes?
- Where do national databases come into play
- These are under stress right now – we do  need to protect

# Meeting Your Data & Information Needs

Hunting for the Right Data

Bridging Data Gaps

- Decisions & Data
  - Relationships & trends
- Data producers views of Customers
  - Who are they? What do they need?
- Data users on data resources
  - How well are you served
  - Where  do you turn?
- Data gaps and ways to bridge them
  - Responsibilities
  - Resources
- Making the case for needed data
- Roles for states, national organizations
- Bringing it together – what do we do next?