Today’s Presenters

• **Moderator**  
  Johanna Zmud, Texas A&M Transportation Institute

• **Implementing a Transportation Agency Data Program Self-Assessment**  
  Frances Harrison, Spy Pond Partners

• **Test Application at Utah DOT**  
  Stan Burns, Integrated Inventory

• **Tool Customization for Freight Data Application**  
  Birat Pandey, FHWA and Jeff Trombly, Leidos

• **AASHTO Efforts to Further Pilot Tools**  
  Penelope Weinberger, AASHTO
NCHRP is...

A state-driven national program

- The state DOTs, through AASHTO’s Standing Committee on Research...
  - Are core sponsors of NCHRP
  - Suggest research topics and select final projects
  - Help select investigators and guide their work through oversight panels
NCHRP delivers...

Practical, ready-to-use results

• Applied research aimed at state DOT practitioners
• Often become AASHTO standards, specifications, guides, manuals
• Can be directly applied across the spectrum of highway concerns: planning, design, construction, operation, maintenance, safety
A range of approaches and products

- Traditional NCHRP reports
- Syntheses of highway practice
- IDEA Program
- Domestic Scan Program
- Quick-Response Research for AASHTO
- Other products to foster implementation:
  - Research Results Digests
  - Legal Research Digests
  - Web-Only Documents and CD-ROMs
NCHRP Webinar Series

• Part of TRB’s larger webinar program
• Opportunity to interact with investigators and apply research findings.
Today’s First Presenter

- Implementing a Transportation Agency Data Program Self-Assessment
  Frances Harrison, Spy Pond Partners
NCHRP 8-92: Implementing A Transportation Agency Data Program Self-Assessment
A methodology, guide and tools to help agencies answer four key questions:

• Do we have the right data to make good decisions and meet reporting requirements?
  – What data do we need and why?

• Is our current data good enough?
  – What level of accuracy, timeliness, completeness, etc. is needed?

• Are we making best use of our data collection and management resources?
  – Are we being efficient about how we collect and manage the data?

• Are we getting full value from the data that we have?
  – Are users able to access, integrate and analyze it?
Why Conduct the Self-Assessment?

• **Data is an essential transportation agency asset**
  – Transportation agencies are increasingly data driven
  – Data needs are growing in number and complexity
    • Performance management
    • Asset management
    • System operations and traveler information

• **Data is expensive to collect and maintain**
  – Important to derive full value from data investments
  – Systematically identify opportunities to improve efficiencies and adjust the data portfolio to better meet agency needs
## Operationalizing AASHTO’s Data Principles

<table>
<thead>
<tr>
<th>Data Principle</th>
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<tbody>
<tr>
<td><strong>1. VALUABLE</strong>: Data is an asset</td>
</tr>
<tr>
<td><strong>2. AVAILABLE</strong>: Data is open, accessible, transparent and shared</td>
</tr>
<tr>
<td><strong>3. RELIABLE</strong>: Data quality and extent is fit for a variety of applications</td>
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<tr>
<td><strong>4. AUTHORIZED</strong>: Data is secure and compliant with regulations</td>
</tr>
<tr>
<td><strong>5. CLEAR</strong>: There is a common vocabulary and data definition</td>
</tr>
<tr>
<td><strong>6. EFFICIENT</strong>: Data is not duplicated</td>
</tr>
<tr>
<td><strong>7. ACCOUNTABLE</strong>: Decisions maximize the benefit of the data</td>
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Transportation agencies adopting these principles – and putting them into action – should realize steady improvements to data value, and an increased return on their data investments.
Without Strong Data Management…

- Data may be collected but not well utilized because of insufficient quality, access or documentation
- Data may not be easily integrated to provide for meaningful analysis
- Data may be duplicated resulting in inefficiencies, inconsistencies and conflicting information
- Data may be collected that no longer adds value while other more pressing data needs go unmet
- Staff resources may lack tools and systems to effectively and efficiently respond to critical information requests
The NCHRP 8-92 project included:

- A literature review of strong data assessment methods and frameworks
- Interviews with state and regional transportation executives and AASHTO and US DOT representatives
- Focus groups in five state transportation agencies – Colorado, Kentucky, Maryland, Minnesota and Oregon
- Case studies in two state transportation agencies – Utah and Michigan piloted the data value and data management assessment tools at several business area levels and at an enterprise level
The NCHRP 8-92 project resulted in:

- A refined model and methodology for conducting agency data self-assessments
- A Guide that provides step-by-step guidance for agencies wishing to do transportation data-self assessments
- A set of assessment tools for gauging the maturity of data management practices and the quality of data for meeting business functions
- Examples of what agencies can do to “step up” and advance data management maturity levels and the value that can be derived from such actions
The data self-assessment framework features two assessment tools to examine current needs and practices:

- **Data Value Assessment** – assesses the degree to which *data users feel that data are providing value and meeting business needs*.

- **Data Asset Management Maturity Assessment** – assesses the current level of *agency capabilities* for managing data assets to maximize their value.
Assessment Process

**Prepare**
- Assemble Team
- Establish Goals
- Set Scope and Timeline

**Assess**
- Data value
- Business area assessments
- Data management
- Agency wide assessment
- Data-specific assessments

**Improve and Monitor**
- Consolidate list of initiatives and recommendations
- Prioritize improvements
- Update action plan
- Track progress
Implementing a Transportation Agency Data Self-Assessment

**Prepare**

**ASSEMBLE TEAM**
Assemble a broad-based team to guide the effort.

**ESTABLISH ASSESSMENT GOALS**
Set a clear direction for what is to be accomplished.

**SET SCOPE AND TIMELINE**
Select data programs and assessment elements to include and establish a scope and schedule for the effort.

**Assess**

**ASSESS DATA VALUE**
Assess current data availability, quality, and usability.

**ASSESS DATA MANAGEMENT**
Assess maturity level for current data management processes.

**DETERMINE GAPS**
Identify gaps between current state and desired state and identify candidate actions to close gaps.

**Improve**

**PRIORITIZE IMPROVEMENTS**
Analyze the results and prioritize actions for improvement.

**DEVELOP ACTION PLAN**
Develop a plan of specific actions to address the priority gaps.

**IMPLEMENT PLAN**
Assign responsibilities, allocate resources and track implementation.

**Assessment**

**DATA VALUE**
Rating:
- Poor
- Fair
- Good
- Excellent
- Availability
- Quality
- Usability

**DATA MANAGEMENT**
Maturity Level
- Data Strategy and Governance
- Data Architecture and Integration
- Life Cycle Data Management
- Data Collaboration
- Data Quality Management

**Actions**
- Data Consolidation and Standardization
- Data Collection, Processing, and Quality Improvements
- Data Management Staffing and Responsibilities
- Data Policies, Procedures, and Standards
- Data Mapping and Documentation
- Data Presentation and Analysis Improvements
- Information System Improvements
# Data Value Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Rating</th>
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</table>
| **Data availability** – are data available at the right level of detail, with sufficient coverage? | - Poor. Little or no data available to support this activity  
- Fair. Limited data available - large gaps remain  
- Good. Basic data are available - some gaps remain  
- Excellent. Sufficient data are available to meet needs |
| **Data quality** – are data sufficiently accurate, credible and current to support decision making? | - Poor. Quality not sufficient – data not useful  
- Fair. Lack of currency, reliability or completeness limits value  
- Good. Acceptable but needs improvement  
- Excellent. Sufficient to meet needs |
| **Usability** – can data be easily integrated, analyzed and presented as needed to support decision making? | - Poor. Requires *substantial* effort to get data into usable form  
- Fair. Requires *moderate* effort to get data into usable form  
- Good. In usable form but reporting improvements helpful  
- Excellent. In usable form, no improvement needed |
<table>
<thead>
<tr>
<th>Business Area</th>
<th>Availability</th>
<th>Quality</th>
<th>Usability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Management</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Pavement Management</td>
<td>Excellent</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Safety Planning</td>
<td>Excellent</td>
<td>Good</td>
<td>Fair</td>
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<tr>
<td>Performance Management</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
</tr>
<tr>
<td>Project Scoping</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
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<td>Construction Management</td>
<td>Good</td>
<td>Good</td>
<td>Fair</td>
</tr>
<tr>
<td>Corridor Planning</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
</tr>
</tbody>
</table>
## Data Value Results – Sample Gaps

<table>
<thead>
<tr>
<th>Type of Data</th>
<th>Gaps</th>
<th>Business Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Work History</td>
<td><strong>Availability:</strong> We need historical information for budgeting, but we only have aggregate expenditures, not costs by activity</td>
<td>Better data would improve ability to link budget estimates with expected outputs</td>
</tr>
<tr>
<td>Sign Inventory</td>
<td><strong>Quality:</strong> Sign inventory is 3 years old and doesn’t reflect recent work done</td>
<td>Districts won’t use the inventory because they don’t trust the data. They will spend time re-collcetng data.</td>
</tr>
<tr>
<td>Traffic</td>
<td><strong>Usability:</strong> We must submit a request to IT in order to get the traffic data reports we need</td>
<td>Strains IT resources and limits business value of the data</td>
</tr>
</tbody>
</table>
Data Management Assessment Elements

- **Data Strategy and Governance**: how decisions are made about what data to collect and how to manage and deliver it -- including roles, accountability, policies and processes.

- **Life-Cycle Data Management**: how data are maintained, preserved, protected, documented and delivered.

- **Data Architecture and Integration**: practices to standardize and integrate data to minimize duplication and inconsistencies, including spatial referencing.

- **Data Collaboration**: processes to coordinate data collection and management with internal and external users.

- **Data Quality Management**: practices to define, validate, measure and report data quality.
<table>
<thead>
<tr>
<th>Maturity Level Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Initial</td>
<td>Processes, strategies and tools are generally <em>ad-hoc</em> rather than proactive or enterprise-wide; successes are due to individual efforts</td>
</tr>
<tr>
<td>2 - Developing</td>
<td>Widespread awareness of more mature data management practices; <em>recognition of the need</em> to improve processes, strategies and tools</td>
</tr>
<tr>
<td>3 - Defined</td>
<td>Processes, strategies and tools have been developed, agreed-upon and <em>documented</em></td>
</tr>
<tr>
<td>4 – Functioning</td>
<td>Processes, strategies and tools are generally being <em>implemented</em> as defined</td>
</tr>
<tr>
<td>5 – Optimizing</td>
<td>Strategies, processes and tools are routinely <em>evaluated and improved</em></td>
</tr>
</tbody>
</table>
• Agency data can be used as intended and can be used to produce reliable information that is valuable for decision making – because:
  – Data quality is addressed proactively, using standard quality control and quality assurance processes
  – Data are validated based on established business rules
  – Data cleansing processes are automated
  – Efficient error reporting and correction processes are in place
## Data Management – Sample Results

<table>
<thead>
<tr>
<th>Data Program</th>
<th>Strategy &amp; Governance</th>
<th>Life Cycle Mgt.</th>
<th>Arch.&amp; Integration</th>
<th>Collab-oration</th>
<th>Quality</th>
<th>Overall Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency-wide</td>
<td>2-Developing</td>
<td>3-Defined</td>
<td>2-Developing</td>
<td>2-Developing</td>
<td>Not Assessed</td>
<td>2-Developing</td>
</tr>
<tr>
<td>Traffic Monitoring</td>
<td>3-Defined</td>
<td>4-Functioning</td>
<td>3-Defined</td>
<td>5-Sustained</td>
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</tr>
<tr>
<td>Crash Data</td>
<td>5-Sustained</td>
<td>4-Functioning</td>
<td>3-Defined</td>
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</tr>
<tr>
<td>Pavement Inspection</td>
<td>1-Initial</td>
<td>4-Functioning</td>
<td>3-Defined</td>
<td>1-Initial</td>
<td>5-Sustained</td>
<td>3-Defined</td>
</tr>
<tr>
<td>STIP/Capital Projects</td>
<td>3-Defined</td>
<td>5-Sustained</td>
<td>1-Initial</td>
<td>2-Developing</td>
<td>2-Developing</td>
<td>3-Defined</td>
</tr>
<tr>
<td>Financial</td>
<td>5-Sustained</td>
<td>5-Sustained</td>
<td>4-Functioning</td>
<td>Not Assessed</td>
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# Data Management – Sample Gaps

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<tr>
<th>Assessment Element</th>
<th>Gaps</th>
<th>Business Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Strategy and Governance</td>
<td>Accountability for data hasn’t been established.</td>
<td>Data aren’t meeting user needs.</td>
</tr>
<tr>
<td>Data Architecture and Integration</td>
<td>Coding for districts and jurisdictions hasn’t been standardized across data sets.</td>
<td>Takes a lot of manual effort to integrate different data sets to provide value for management decisions</td>
</tr>
<tr>
<td>Data Collaboration</td>
<td>Several different districts are independently collecting the same type of data.</td>
<td>Missed opportunity for a more efficient statewide approach</td>
</tr>
<tr>
<td>Data Quality</td>
<td>Pavement data are being collected without an established QA process</td>
<td>Districts don’t trust the data and are reluctant to use it</td>
</tr>
</tbody>
</table>
Data Improvements: Architecture and Integration

- Common Geospatial Referencing
- Standardized Approach to Temporal Data
- Reference Data Management
- Master Data Management
- Data Architecture Practices and Roles
- Business Glossaries
- Data Integration Tools
The Self-Assessment Process is Flexible

- Conduct the **data management** assessment at an enterprise level
- Conduct the **data management** assessment for one or more data management areas (e.g. traffic or maintenance)
- Conduct the **data value** assessment in one or more business areas
- Conduct a combination of **data value** and **data management** assessments for a logical cluster of business functions and data types
- Pursue a **comprehensive** agency-wide approach using all of the above for priority business areas or data categories
The Self-Assessment Process Recognizes Resource Limitations

- Resources for data improvements are limited – staff, expertise, money and time
- All data “wants” and “needs” cannot be met
- It is not necessarily cost-effective to be at the highest maturity level for any given data management element
- *Self-Assessment Process encourages agencies to be selective and prioritize actions based on support for agency priorities and risks of not taking action*
The Transportation Data Self-Assessment can help agencies to:

- Understand how well their data is working for them
- Understand what investments in data are not paying off – and why
- Make strategic investments to get data programs in alignment with current and future agency priorities
- Focus and strengthen data management roles, structures, policies, practices and processes to minimize risks and improve efficiencies
- Periodically check on the progress of improvements – and readjust as needed
NCHRP 8-92: Implementing A Transportation Agency Data Program Self-Assessment

TRB Webinar: Data to Support Transportation Agency Business Needs: A Self-Assessment Guide
Stan Burns, Integrated Inventory, LLC
Reason for This Effort

- MAP -21, Performance not Process
- Agencies Either Organize their Data or are Buried by their Data
- Transparency, Trust, Credibility
Self Assessment Tool

**Data Value**
- Do you have the Right data?
- What is the Data Quality?
- Is the Data in Silos or Integrated?

**Data Management**
- Strategy & Governance
- Life-Cycle Management
- Architecture & Integration
- Collaboration
- Quality Management
Maturity Level “Processes, Strategies, Tools”

- Initial – Ad-Hoc, Rather than Proactive or Enterprise-wide
- Developing – Widespread Awareness but Recognize need for Improvement
- Defined – Has been Developed and Documented
- Functioning – Generally been Implemented
- Optimizing – Routinely Evaluated and Improved
## Sample Results

### Data Value

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Tool Customization for Freight Data Application

Freight Demand Modeling and Data Improvement Self Assessment Tool
Presentation Outline

• Introductions
  Birat Pandey
  FHWA Office of Freight Management and Operations
  birat.pandey@dot.gov

  Jeffrey Trombly, Ph.D.
  Leidos
  tromblyj@leidos.com

• SHRP2 C20: Freight Demand Modeling and Data Improvement
• Goal of Self-Assessment (SA) Tool
• Tool Structure
• Application
• Summary and Next Steps
Implementation Assistance Program Purpose:

To foster fresh ideas and new approaches to freight demand modeling and data collection that ultimately enhance decision-making.
Goals of Freight Data Self-Assessment Tool

- Foster understanding of freight data sources and applications.
- Engage users in evaluating the suitability of available data sources to support freight related applications.
- Guide users to projects or strategies developed through the SHRP2 C20 effort that may be applicable to their situation.
Importance of Freight Data

• Improve decision making process
• Inform the judicious use of public fiscal resources
• Assist in effective planning for freight projects and programs
• Support evaluating and monitoring impacts of freight policies
• Meet transportation performance management requirements
Freight Data Uses

- Strategy, Policy and Development
- Needs Identification, Project/Program Selection, Prioritization, and Evaluation
- System Management and Operations
- Performance Management
Freight Analytical Applications

- Applied to characterize, understand, and plan for freight transportation
- Analyze freight trend analysis
- Project freight demand
- Conduct impact analysis
Self-Assessment Tool Structure

Based on NCHRP Report 814 – *Data to Support Transportation Agency Business Needs: A Self-Assessment Guide*

- Assess the availability, quality, and usability of data required to support a particular business area and related activities.

1. Define Business Area
2. List Related Activities
3. Identify Data Types
4. Evaluate Data
5. Summarize Results
Example Application

- **Activity:** Conduct a trade flow analysis among three metropolitan areas located in three states.
- **Data Currently Available:**
  - Freight Analysis Framework (FAF)
  - Commodity Flow Survey (CFS)
  - NTAD
  - Transearch Data
- **Assess availability, quality, and usability of currently available data to support trade flow analysis**
Step 1: Identify Business Area

Example: Freight Planning
## Step 2: List Related Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Freight Data and Modeling Purpose and Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify trade flow by mode</td>
<td>Understand freight flows among various levels of geography and various modes</td>
</tr>
<tr>
<td>Develop of truck trip tables</td>
<td>Identify truck travel patterns for input to travel demand model</td>
</tr>
<tr>
<td>Conduct feasibility analysis of new modal services</td>
<td>Analyze demand for new or altered service for a specific mode and level of geography</td>
</tr>
<tr>
<td>Estimate economic impact of freight activity</td>
<td>Determine the size of freight related components of regional economy</td>
</tr>
<tr>
<td>Prepare freight plan</td>
<td>Support preparation of comprehensive freight plan</td>
</tr>
<tr>
<td>Conduct corridor study</td>
<td>Identify truck travel patterns in corridor</td>
</tr>
<tr>
<td>Analyze modal diversion</td>
<td>Estimate impact of diverting freight from one mode to another</td>
</tr>
</tbody>
</table>
Step 3: Identify Data Sources

- Freight Analysis Framework (FAF)
- Commodity Flow Survey (CFS)
- National Transportation Atlas Database (NTAD)
- Transearch Data
- Other Federal Sources
- Private Sector Data
- Establishment Surveys
- Roadside Truck Intercept Surveys
- Supplemental Sources of Local Economic Activity
- Local Data Sources
Step 4: Evaluate Data

Takes the assessment team through a process of rating the availability, quality, and usability of data required to support user defined freight activities:

- **Data Availability** – addresses whether the agency has the data in place, at the right level of detail, with sufficient coverage to support specific activities
- **Data Quality** – addresses whether data are current, accurate, and complete for performing activities
- **Data Usability** – addresses whether the data can be accessed, in a convenient form, to execute activities
## Data Importance

How would you rate the importance of each data set for the following activities?

- **3** High Importance: Essential; can’t perform activity without it.
- **2** Medium Importance: Valuable; could do without it, but it would impact value or credibility of result.
- **1** Low Importance: Helpful; but could do without it.

<table>
<thead>
<tr>
<th>Activity: Identify trade flow by mode</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data: Freight Analysis Framework (FAF)</td>
<td>3</td>
</tr>
<tr>
<td>Data: Commodity Flow Survey (CFS)</td>
<td>3</td>
</tr>
<tr>
<td>Data: NTAD</td>
<td>1</td>
</tr>
<tr>
<td>Data: Transearch Data</td>
<td>2</td>
</tr>
</tbody>
</table>
Data Availability

<table>
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<tbody>
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<td>Data: Freight Analysis Framework (FAF)</td>
<td>4</td>
</tr>
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</tr>
<tr>
<td>Data: NTAD</td>
<td>1</td>
</tr>
<tr>
<td>Data: Transearch Data</td>
<td>4</td>
</tr>
</tbody>
</table>
## Data Quality

### Data Quality Rating

How would you rate the quality of each data set for the following activities

<table>
<thead>
<tr>
<th>Quality Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Poor</td>
<td>Data aren’t detailed, current, accurate or complete enough to be useful</td>
</tr>
<tr>
<td>(2) Fair</td>
<td>Data are useful but lack of currency, accuracy or completeness limits value</td>
</tr>
<tr>
<td>(3) Good</td>
<td>Data quality is acceptable but should be improved</td>
</tr>
<tr>
<td>(4) Excellent</td>
<td>Data quality is sufficient for this activity – no improvements needed</td>
</tr>
</tbody>
</table>

### Quality Rating

<table>
<thead>
<tr>
<th>Activity: Identify trade flow by mode</th>
<th>Quality Rating</th>
<th>Average Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data: Freight Analysis Framework (FAF)</td>
<td>3 4 3 3.3</td>
<td></td>
</tr>
<tr>
<td>Data: Commodity Flow Survey (CFS)</td>
<td>2 2 3 2.3</td>
<td></td>
</tr>
<tr>
<td>Data: NTAD</td>
<td>1 1 1 1.0</td>
<td></td>
</tr>
<tr>
<td>Data: Transearch Data</td>
<td>4 3 2 3.0</td>
<td></td>
</tr>
</tbody>
</table>
## Data Usability

<table>
<thead>
<tr>
<th>Data Usability Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor:</td>
<td>Data are available but require substantial effort to translate into usable form.</td>
</tr>
<tr>
<td>Fair:</td>
<td>Data are available but require moderate efforts to translate into usable form.</td>
</tr>
<tr>
<td>Good:</td>
<td>Data are available in a usable form but improvements to reporting capabilities would be helpful.</td>
</tr>
<tr>
<td>Excellent:</td>
<td>Data are available in a usable form – no improvements are needed.</td>
</tr>
</tbody>
</table>

### Activity: Identify trade flow by mode

<table>
<thead>
<tr>
<th>Data</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight Analysis Framework (FAF)</td>
<td>3</td>
</tr>
<tr>
<td>Commodity Flow Survey (CFS)</td>
<td>2</td>
</tr>
<tr>
<td>NTAD</td>
<td>1</td>
</tr>
<tr>
<td>Transearch Data</td>
<td>4</td>
</tr>
</tbody>
</table>
## Step 5: Summary

<table>
<thead>
<tr>
<th>Results</th>
<th>Importance</th>
<th>Availability</th>
<th>Quality</th>
<th>Usability</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity: Identify trade flow by mode</td>
<td>3</td>
<td>4</td>
<td>3.3</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>Data: Freight Analysis Framework (FAF)</td>
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<td>3</td>
<td>2.3</td>
<td>2</td>
<td>2.6</td>
</tr>
<tr>
<td>Data: Commodity Flow Survey (CFS)</td>
<td>1</td>
<td>1</td>
<td>1.0</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Data: NTAD</td>
<td>2</td>
<td>4</td>
<td>3.0</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>Data: Transearch Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Next Steps

• Develop final tool
• Document approach
Next Steps

• Develop final tool
• Document approach
AASHTO’s Approach

Penelope Weinberger
AASHTO CTPP and Transportation Related Data Program Manager
Wholeheartedly Support

- NCHRP 8-36 Task 100 (2010) – through current
- Data Self-Assessment Workshop at AASHTO annual in Chicago (2015)
- SCOP Subcommittee on Data and SCOP Subcommittee on Capacity Building coordinated effort
• 2016 Capacity Building tasks: Two regional data self-assessment workshops
  – Goal of developing pilot projects
  – Desire to pilot a full agency implementation
  – Partial implementations work due to tool scalability

• 2017 Capacity Building tasks: Data Self-assessment peer exchange
  – Review, refine, apply