

# A National Transportation Knowledge Network for the Transportation Information Infrastructure

Amanda J. Wilson

Director, National Transportation Library

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Louisiana Transportation Conference

*Innovation for a Nation on the Move*



U.S. Department of Transportation  
Research and Innovative Technology Administration

# Problem of Findability

- World Wide Web consists of "surface web" and "invisible web"
- Search Engines index the surface web
- Invisible web is not accessible by web crawlers
  - 550 times larger than surface web\*\*
  - (more) high quality information
  - excluded by search engine policy
- \*\*number varies

# The Invisible Web

- **Dynamic content**

- database-driven



- **Unlinked content**

- pages not linked to by others

INSPEC

- **Private web**

- sites requiring login or registration



- **Contextual web**

- content governed by access controls

- **Limited access content**

- sites blocking web crawlers

WEB OF SCIENCE

# Accessing the Invisible Web

- Google SiteMaps Protocol
  - [www.sitemaps.org](http://www.sitemaps.org)
  - Web servers advertise accessible URLs
- Open Archives Initiative
  - Protocol for Metadata Harvesting
  - Object Reuse and Exchange (forthcoming)
- Federated Search Engines
  - Topical (example: Science.gov)
  - Usually narrow topics allowing vertical search



# Information at the Speed of Life

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Already using

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# Information Overload

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E-GOV

7e everyone.  
iPod nano



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# Solution:

# Transportation Knowledge Networks

- **Benefits of TKNS:**

- Provide the **combined resources** of all institutions to members;
- Deliver a wider **pool of expertise** to locate and provide needed information;
- Create a platform for **interoperability for tools and information**;
- Enable **leveraging of resources** through coordinated acquisitions and lending agreements;
- Serve as the point of contact for **access to local, regional, and national information** resources;
- Offer **improved and new services and tools** for the transportation community;  
and
- Ensure access and **preservation** of all participant institution's information products.

# National Transportation Library



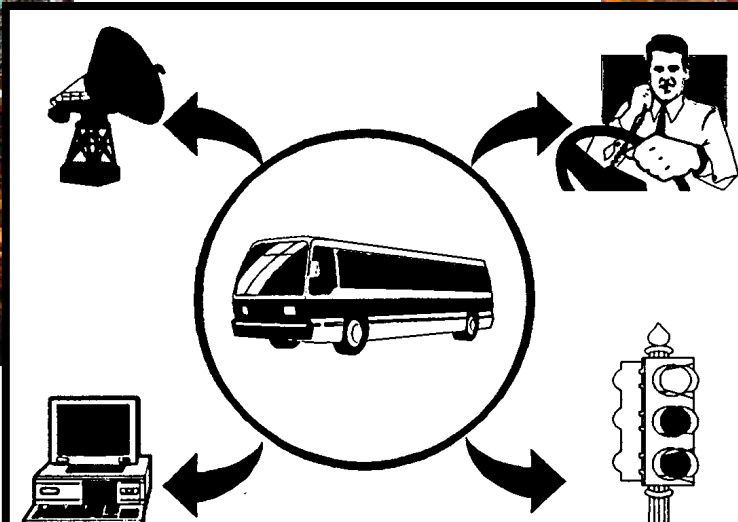
- Part of the U.S. DOT Research and Innovative Technology Administration's Bureau of Transportation Statistics
  - Steven K. Smith, PhD, Acting RITA Deputy Administrator
  - Steven D. Dillingham, PhD, BTS Director
- **Mandate**
  - Collection of statistical and other transportation information
  - Facilitate information access and sharing
  - Coordinate with transportation entities to achieve these goals

# NTL Perspective

- Primary focus is libraries and information centers
- Broader information community
  - Within transportation
  - In the national and international LIS communities



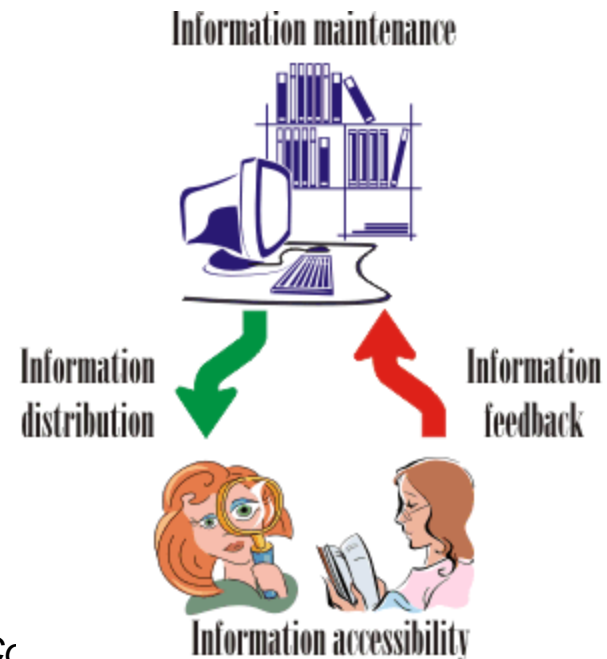
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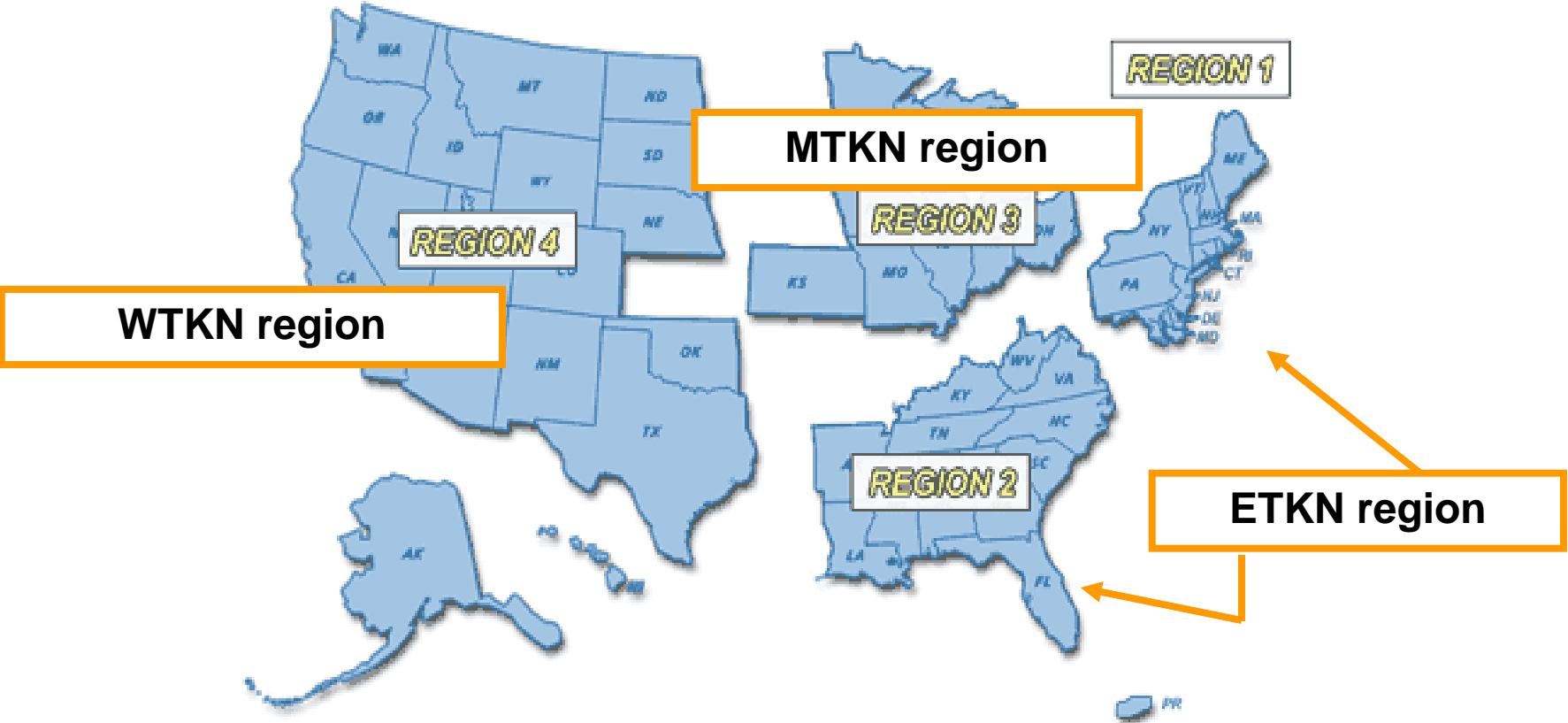
# Librarians as Information Managers

Information Management is set of skills, standards, protocols, and use of technology to help users . . .

- Find
- Identify
- Select
- Obtain
- Synthesize



# TKN Coverage





- Founded: November 9, 2007
- Membership profile:
  - State DOTs
  - University
  - Non-profits
  - Federal
  - Metropolitan Planning Organizations
  - Corporate
- Current Projects:
  - ETKN Digital Collaboratory

# Making Connections

MIDWEST  
TRANSPORTATION  
KNOWLEDGE  
NETWORK



- Founded: 2003
- Membership:
  - State DOTs
  - University
  - Non-profits
  - Federal
  - Corporate
- Flagship project:
- Transportation Libraries Catalog

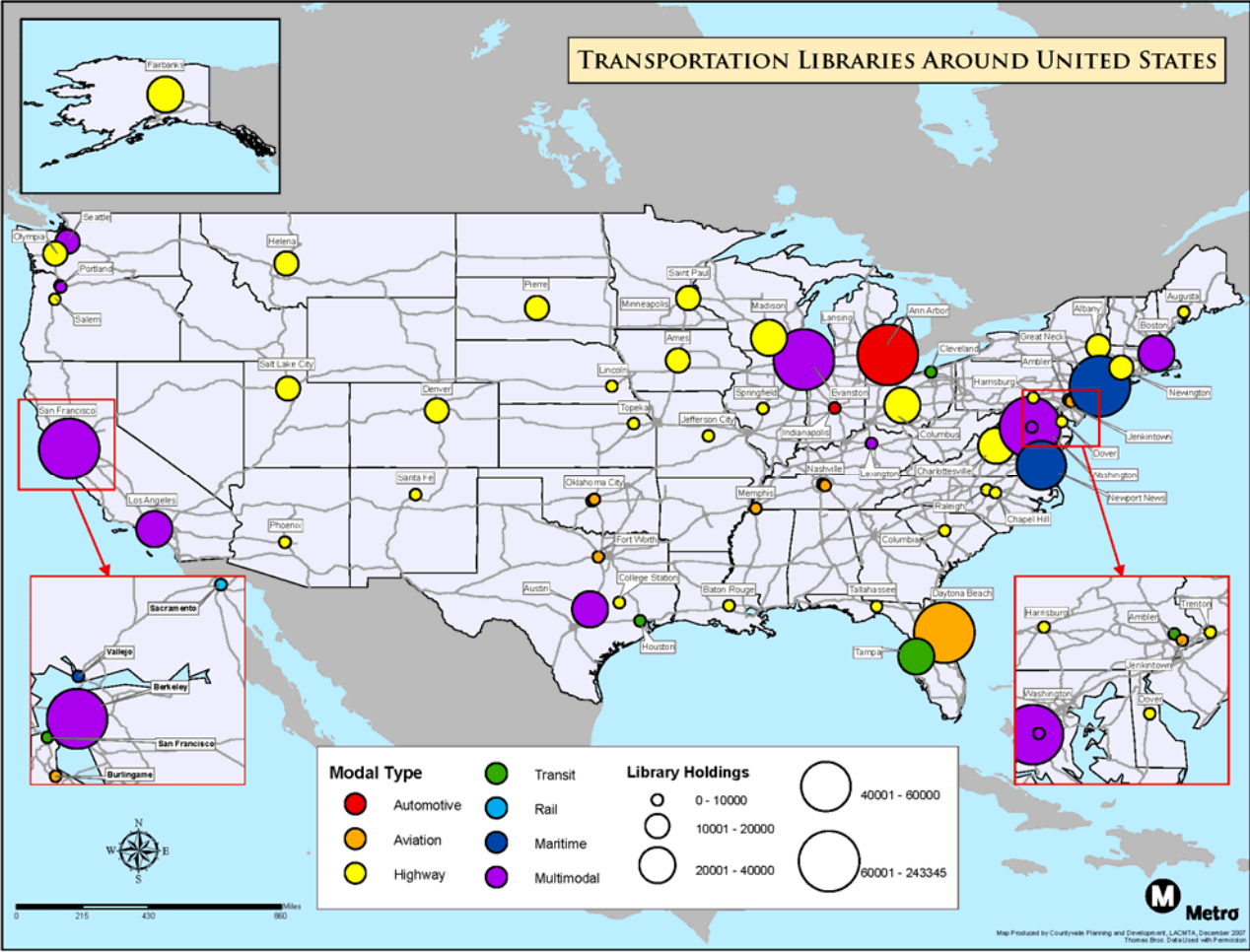


# WTKN

*The Western Transportation Knowledge Network: Connecting transportation information throughout the western United States.*

- Founded: December 2006
- Membership
  - State DOTs
  - University
  - Non-profits
  - Federal
  - Metropolitan Planning Organizations
  - Corporate
  - Transit agencies
- Significant Project:
- Cooperative Collection Maintenance

# Uncovering Hidden Collections



# Other Collaborative, Baseline Activities

- AASHTO RAC Task Force
  - Climate Change portal
  - Transportation Funding portal\*
- \*proposed



- TKNs Resource Sharing Network
- Census of Transportation Libraries and Information Centers

[Home](#) > [All Resources](#)

**Enter search criteria**

[Basic Search](#)

[Advanced Search](#)

<input type="text" value="Keyword"/>	<input type="text"/>	<p><b>Publication date</b></p> <p><input checked="" type="radio"/> All dates   <input type="radio"/> Year range</p> <p>From <input type="text" value="1900"/> To <input type="text" value="2008"/></p>
<input type="text" value="And"/>	<input type="text" value="Keyword"/>	
<input type="text" value="And"/>	<input type="text" value="Keyword"/>	

**Select category**

- |  |   |
|--|---|
| <input type="checkbox"/> <a href="#">VDOT &amp; UVA Library Catalogs</a> | <input type="checkbox"/> <a href="#">TRB Tools: TRIS, RiP &amp; RNS</a>             |
| <input type="checkbox"/> <a href="#">Transportation Research Tools</a>   | <input type="checkbox"/> <a href="#">OCLC Library Union Catalogs</a>                |
| <input type="checkbox"/> <a href="#">Search Popular &amp; News Tools</a> | <input checked="" type="checkbox"/> <a href="#">Transportation Library Catalogs</a> |

**Include library catalog in search**

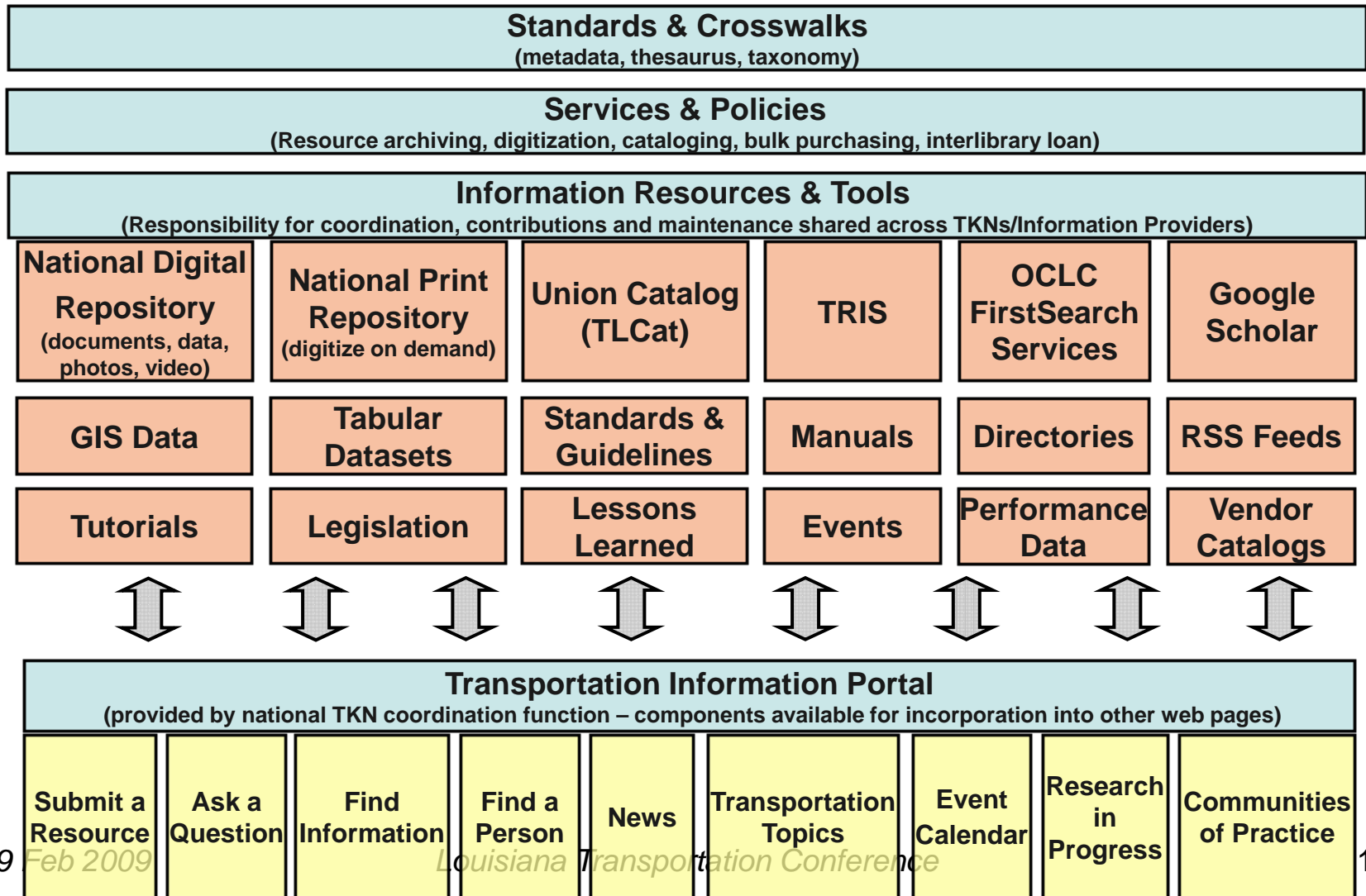
[Search](#)   [Clear All](#)

**List of resources**

**Select/Deselect all**

<input type="checkbox"/>	<b>VDOT Research Library Catalog</b>	Search more than 28,000 titles of transportation-focused research material, including extensive collections of TRB, AASHTO, FHWA and other key transportation publishers.
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# Transportation Information Infrastructure: Portal



# NCHRP20-75 TKN Ten – TII Products

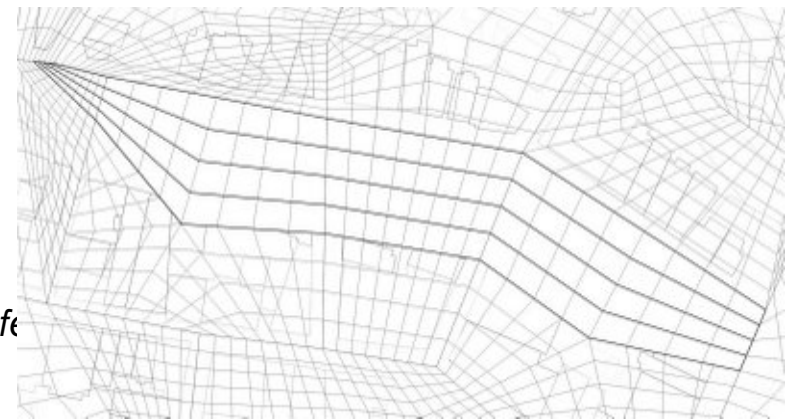
1. National Digital Repository – including documents & data
2. National Print Repository
3. National Transportation Portal with Federated Search
4. Information Modules
5. Research/ Literature Review Services
6. Standards Coordination + Thesaurus
7. Targeted Collection & Digitization Efforts
8. Information Provider Outreach, Coordination and Communication
9. Library Connectivity Support and Advocacy
10. User Outreach & Education

# Implementation of the NTKN - Users

- Establish a sophisticated federated search [portal](#)
  - Connect major transportation information sources
  - Free and for-fee resources
- Targeted digitization efforts
  - MPO long-range plans (other images) and other textual resources
  - Ensure deposit in print and digital repositories, as well as TRIS
- Support for implementation of TKN Strategic Plans activities
  - User-focused products and projects
  - Grant opportunities for member libraries
  - Outreach to other transportation and library networks
- Provide research and literature review services
  - Funding to transportation libraries for additional support
  - Support for embedded librarian activities

# Implementation of the NTKN - TII

- Create NTL “partners” in each TKN region
- Targeted collection development
  - Funds for transportation knowledge hubs
  - Funds for transportation libraries to purchase specific collections
- Expand digital repository and TRIS
  - Including digital curation network
- Establish print repository
  - Funding to ship items to repository
  - “last copy” and digitization-on-demand center
- Cooperative licensing and purchases
  - Electronic resources
  - ILS systems
- Technology/Innovation grant program
  - Support in transition to primarily digital operations



Questions?

Thank you!

Amanda J. Wilson  
National Transportation Library

[amanda.wilson@dot.gov](mailto:amanda.wilson@dot.gov)

(202)366-2480

<http://ntl.bts.gov>

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