The National Academies of
SCIENCES · ENGINEERING · MEDICINE

TRANSPORTATION RESEARCH BOARD

TRB Webinar: Managing and Sharing Research Data for Public Access

April 20, 2022

2:00- 3:00 PM Eastern

@NASEMTRB
#TRBwebinar

Learning Objectives

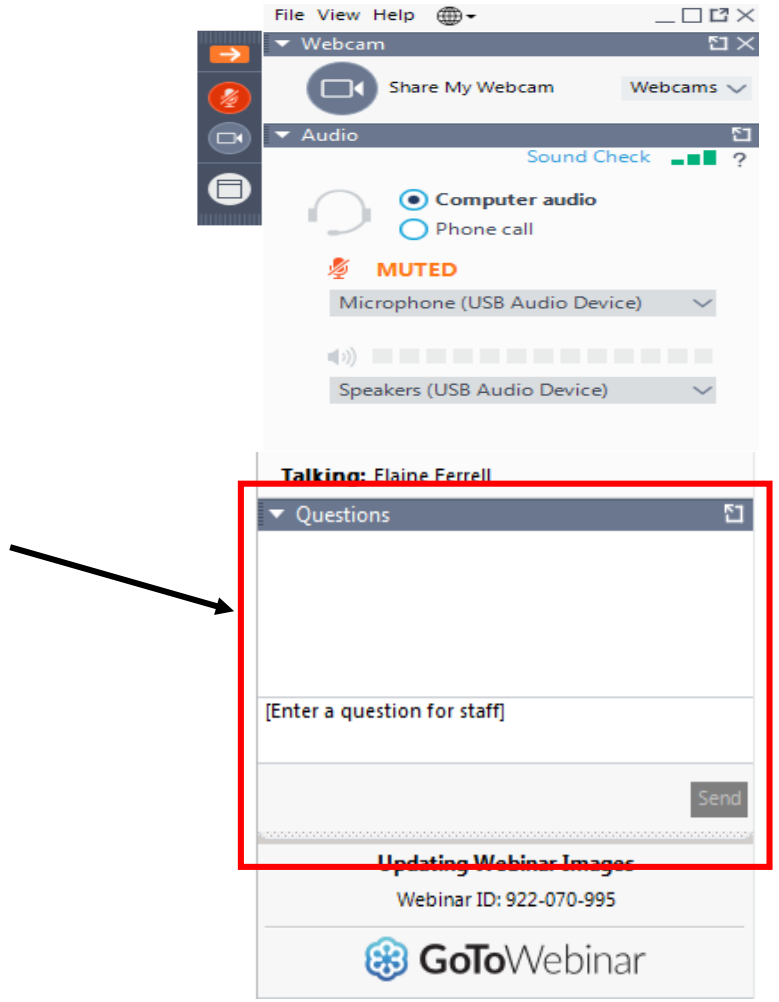
1. Implement data management best practices

2. Identify how to make data discoverable via TRID and ROSA P

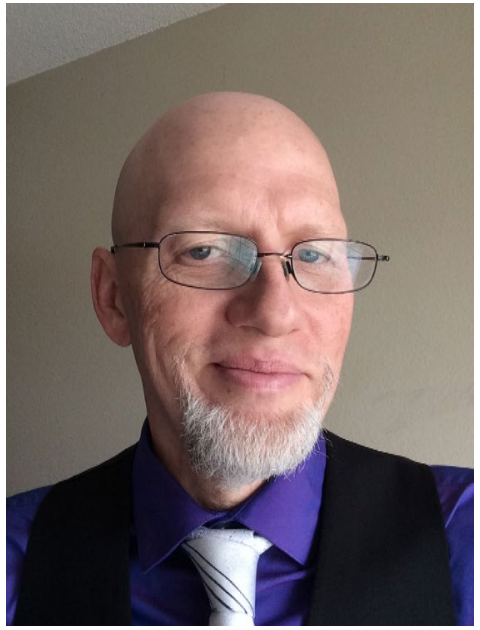
#TRBwebinar

Questions and Answers

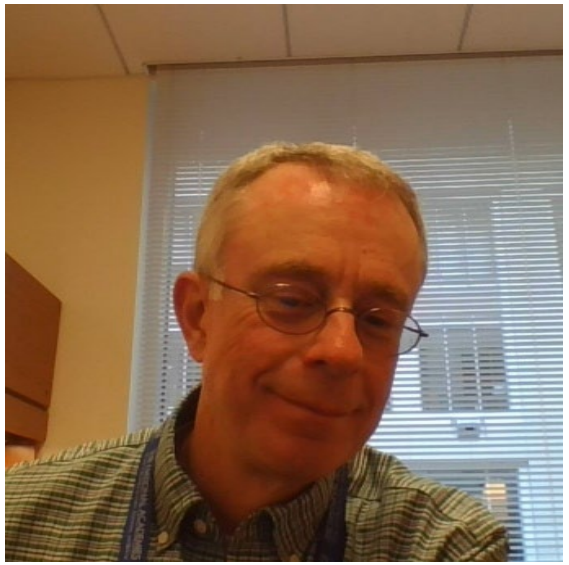
- Please type your questions into your webinar control panel
- We will read your questions out loud, and answer as many as time allows



#TRBwebinar



Leighton Christiansen
Leighton.christiansen@dot.gov



Bill McLeod
wmcleod@nas.edu

Managing and Sharing Research Data for Public Access

Leighton L Christiansen https://orcid.org/0000-0002-0543-4268
Data Curator, National Transportation Library (NTL), Bureau of Transportation Statistics (BTS), U.S. Department of Transportation (U.S. DOT)
leighton.christiansen@dot.gov

Bill McLeod
TRIS Manager, Transportation Research Information Services, Transportation Research Board (TRB), The National Academies of Sciences, Engineering, and Medicine
wmcleod@nas.edu

Presented for: Transportation Research Board Webinars, 2022-04-20

Disclaimer

Opinions expressed by me during this presentation, the discussion period, or at other times during the webinar are mine alone, and do NOT necessarily represent the opinions, practices, polices, and/or laws of the National Transportation Library, the Bureau of Transportation Statistics, the U.S. Department of Transportation, or the United States government.

(Typographic errors are also mine.)

Webinar Description

NCHRP Report 936, “Guide to Ensuring Access to the Publications and Data of Federally Funded Transportation Research,” devotes a few chapters on helping research managers manage and share their research data.

This webinar will focus first on best practices for managing your research data, focusing on chapter 7 of the guide.

Secondly, the webinar will go into strategies and tools for sharing research data in pursuit of public access goals.

Access NCHRP 936 at: https://doi.org/10.17226/25704

Webinar Outcomes

1. Attendees will be able to implement new data management best practices.
2. Attendees will understand how to make their data discoverable via TRID and ROSA P.

Access NCHRP 936 at: https://doi.org/10.17226/25704

Webinar Outline

- Best Practices for Managing Your Research Data (Chapter 7)
- Sharing Your Research Data
- Questions
- Supplemental Slides
- Links to resources

Managing Research Data

Chapter 7

1. Definition of Research Data
2. Explaining Essential Requirements for Research Data
3. Going Beyond: Research Data Management and Access
4. Understanding Data Preservation
5. Deciding What to Preserve: Data Scope and Coverage
6. Deciding Which Formats to Preserve
7. Managing Quality of Research Data
8. Understanding Metadata Standards and Metadata for Transportation Data
9. Deciding Where to Preserve Data
10. Understanding How Long to Preserve Data
11. Chapter Checklist

Defining Research Data: 1

Research Data Topics

- Air transportation
- Crashes and safety
- Driver and transport user
- Environment
- Marine transportation
- Public transit
- Rail transportation
- Statistics
- Transportation infrastructure engineering and construction
- Weather and climate

Research Data Types

- GIS data
- Research lab observation data
- Sensor and log data
- Statistics
- Survey data
- Video and photo data

Defining Research Data: 2

Research Data Definition 2013

…the digital recorded factual material commonly accepted in the scientific community as necessary to validate research findings including data sets used to support scholarly publications…

Research Data Definition 2022

FAR 52.227-14 (https://www.acquisition.gov/far/52.227-14) defines data as: "…recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software."

Best Practice:

Read all contracts with, or grants from, U.S. DOT carefully.

Explaining Essential Requirements for Research Data

Essential Requirements

1. Data used to draw research conclusions
2. Data stored in an open format, or explanation of chosen format
3. Include a Package of Data Documentation
4. Store data in conformant repository
5. Create descriptive metadata to support search and retrieval

Best Practice: Data Package

A “Data Package” is the dataset, the data management plan (DMP), and all other documentation needed to contextualize the dataset for any and all users and re-users.

Data Package Elements:

1. Research Output(s): Dataset, Software, Code, Model, etc..
2. README.txt which includes a data dictionary
3. Metadata file
4. Data Management Plan (DMP)
5. Other supporting codes, scripts, or tables

For more info: https://doi.org/10.21949/1500456

Going Beyond: Research Data Management and Access

Going Beyond

1. Expanding the scope and coverage of research data
2. Include data preservation services
3. Choose metadata standards and provide metadata services
4. Building an institutional repository

Reminder: Include Costs in Project Proposal

U.S. DOT Public Access Plan Section 4.2 (https://doi.org/10.21949/1503647) : DOT will allow the inclusion of appropriate costs for data management and access in **proposals** for federal funding for Scientific Research.

How Much?: UK Data Service has a nice costing tool: https://ukdataservice.ac.uk//app/uploads/costingtool.pdf

Best Practice:

Use existing repositories, such as academic library or generalist third party repository. https://doi.org/10.21949/1520566

Understanding Data Preservation

Chapter 7

- Data Storage is NOT the same at Data Preservation
- Data Storage is a passive activity.

Data Preservation and Curation is Active over Data Lifecycle

1. 3-2-1 Backup strategy
2. Robust documentation
3. Bit fixity checking
4. Format migration as needed
5. Data Disposition Decision-making

Best Practice:

Use a repository that actively preserves and curates data.

Deciding What to Preserve: Data Scope and Coverage

Chapter 7

1. Not all data can or should be preserved
2. Essential: preserve all data needed to replicate research findings.

Significance Factors

1. Substantive value and influence on scientific knowledge;
2. Likely value to science, society, funder, and/or stakeholders over time;
3. Uniqueness
4. Impact on transportation policy and safety

Best Practice:

Discuss scope of data for preservation with funder prior to research.
May require additional funding.

Deciding Which Formats to Preserve

Chapter 7

1. Quantitative tabular data most frequent: Should be preserved as .CSV
2. Open, non-proprietary formats best for long-term preservation.

Considerations

1. Data can be saved in more than 1 format: Sensor output format AND .CSV for example
2. When contracting for software and sensors, require output file formats that are open and nonproprietary. This may by tricky for simulation and VR outputs.

Best Practices:

Default to ubiquitous, open formats, or the format most commonly used, from the beginning of the project. Avoid proprietary or bespoke formats if you can. Document choices in DMP.

Managing Quality of Research Data

Chapter 7

Data Curation enhances collections so they are complete and self-explanatory for future users, "…without the assistance of the information producer."

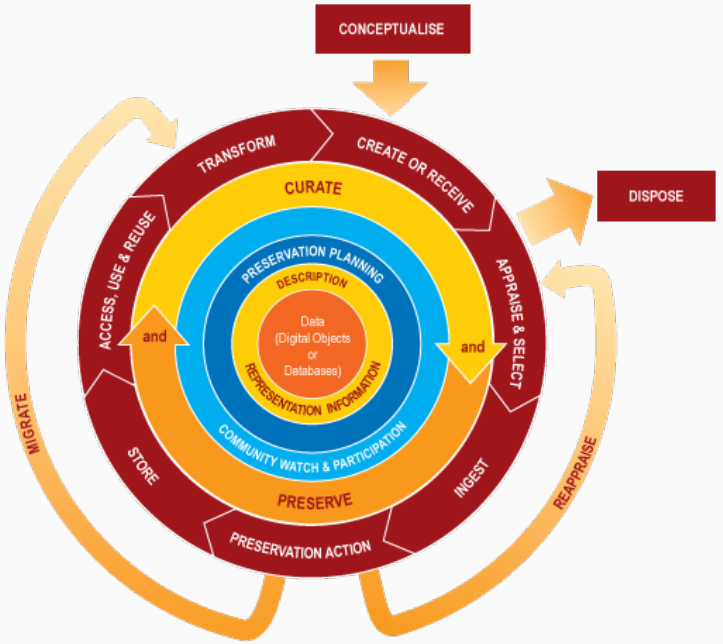
Definition: Data Curation enables data discovery and retrieval, maintains data quality, adds value, and provides for re-use over time.

Best Practice:

Use a repository that actively curates data.

Data Curation Centre:
Data Curation Lifecycle Model

https://www.dcc.ac.uk/guidance/curation-lifecycle-model



Understanding Metadata Standards and Metadata for Transportation Data

Chapter 7

1. Essential: Include metadata file based on Project Open Data Metadata Schema (now DCAT-US Schema v1.1 at https://resources.data.gov/resources/dcat-us/
2. Also include other metadata files appropriate to data type, discipline, instrument, sensor, and/or software

Example

1. For GIS files, Esri ArcMap exports metadata in ISO 19139 Geographic information — Metadata — XML schema implementation or Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM) XML format

Best Practices:

Include as much metadata as possible. Look for ways to automate metadata creation or metadata export by tools or software.

Deciding Where to Preserve Data

Chapter 7

1. **General Research Data Repository**: Benefits: Breadth and Low Cost
2. **Institutional Data Repository**: Benefits: Breadth, Local, Institutional cost sharing
3. **Domain-Specific Data Repository:** Benefits: Depth and Curation

Shortcomings

1. **General Research Data Repository**: May be hard to find a dataset among the many; little to no curation; outside institutional control
2. **Institutional Data Repository**: Curation may be limited by budget and staff skills
3. **Domain-Specific Data Repository:** Extra cost of curation services; outside institutional control

Best Practices:

Any repository is better than none. Check with your home institution first. Then look to research partners. Your best option may be to contract for repository services.

Understanding How Long to Preserve Data

Chapter 7

1. How long? “As long as data is of value to the community of users.”
2. How much re-use over time?
3. Who depends upon having access to the data?
4. Are the data connected to other outputs?

Public Access

1. DOT Public Access Plan Section 7.4.2: “…long-term access…”
2. When offering guidance since 2016, we have been saying at least 5 years.
3. Plan and budget for preservation in proposal.

Best Practices:

Clarify with funder. Plan for decades-long preservation, depending on the research and its utility.

Data Management Plans (DMPs)

Chapter 8

1. Data Management Plans are tool for your team. DMPs Help Research Team as collective memory of data management roles, access limitation, ethical guidelines, etc.. This is not just a government required check-off.
2. Focuses data discussion between researchers and funders.
3. Living Document: Updated as needed, and present updates to funder at each check-in.

Sharing Research Data

Tools

1. Transportation Research International Documentation database (TRID)
2. Repository & Open Science Access Portal (ROSA P)

TRID

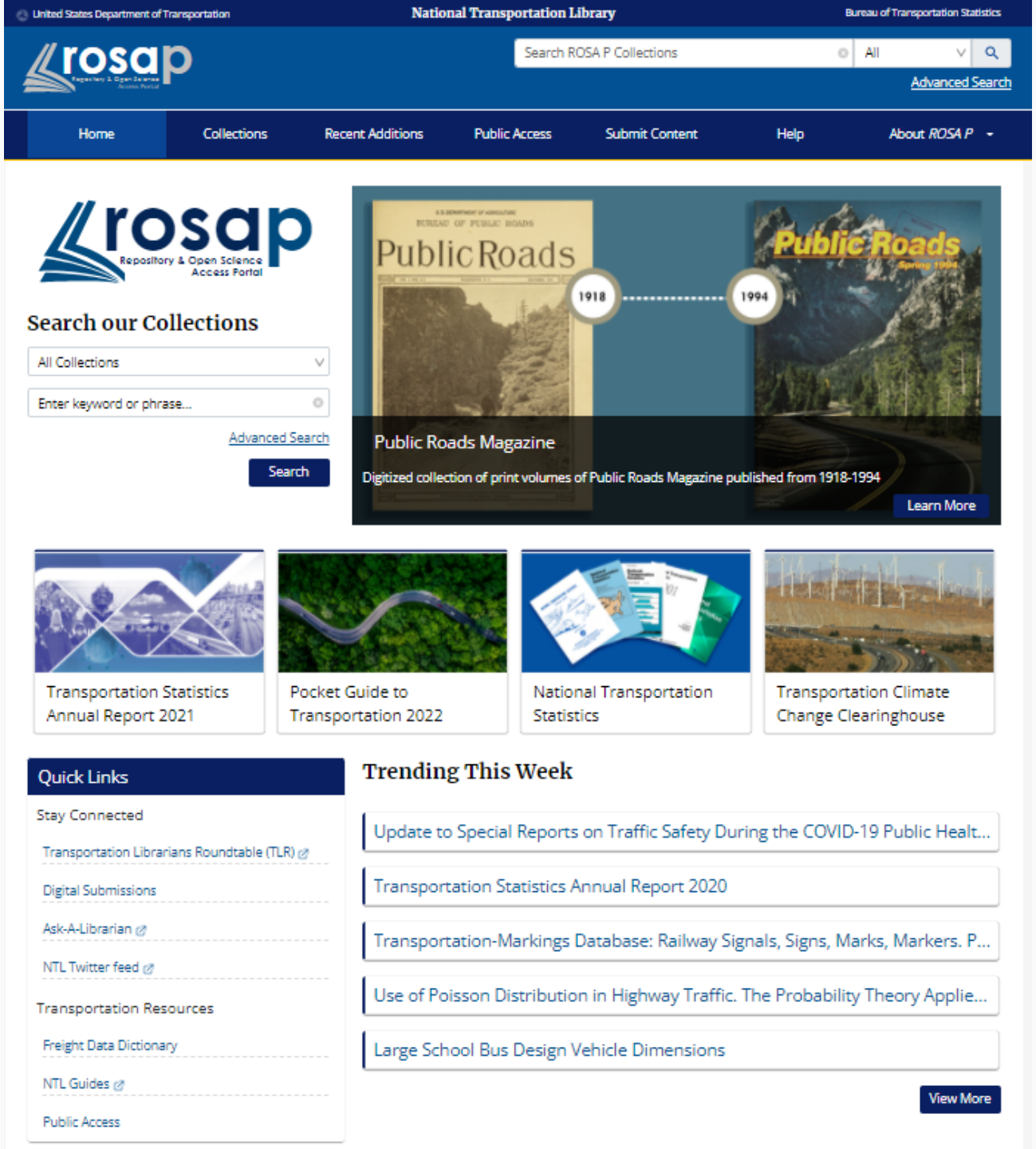
ROSA P

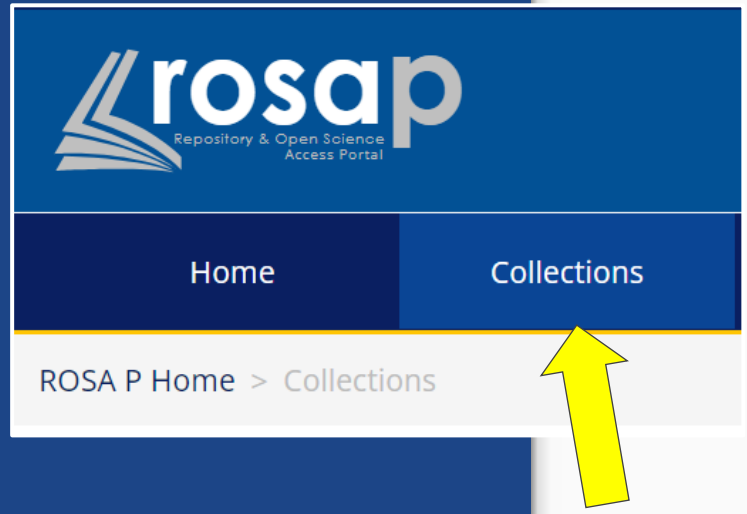
Repository & Open Science Access Portal

(ROSA P)

ROSA P is the National Transportation Library's *Repository and Open Science Access Portal*. The name *ROSA P* was chosen to honor the role public transportation played in the civil rights movement, along with one of the important figures, Rosa Parks.

[Visit ROSA P at: https://rosap.ntl.bts.gov/welcome](https://rosap.ntl.bts.gov/welcome)

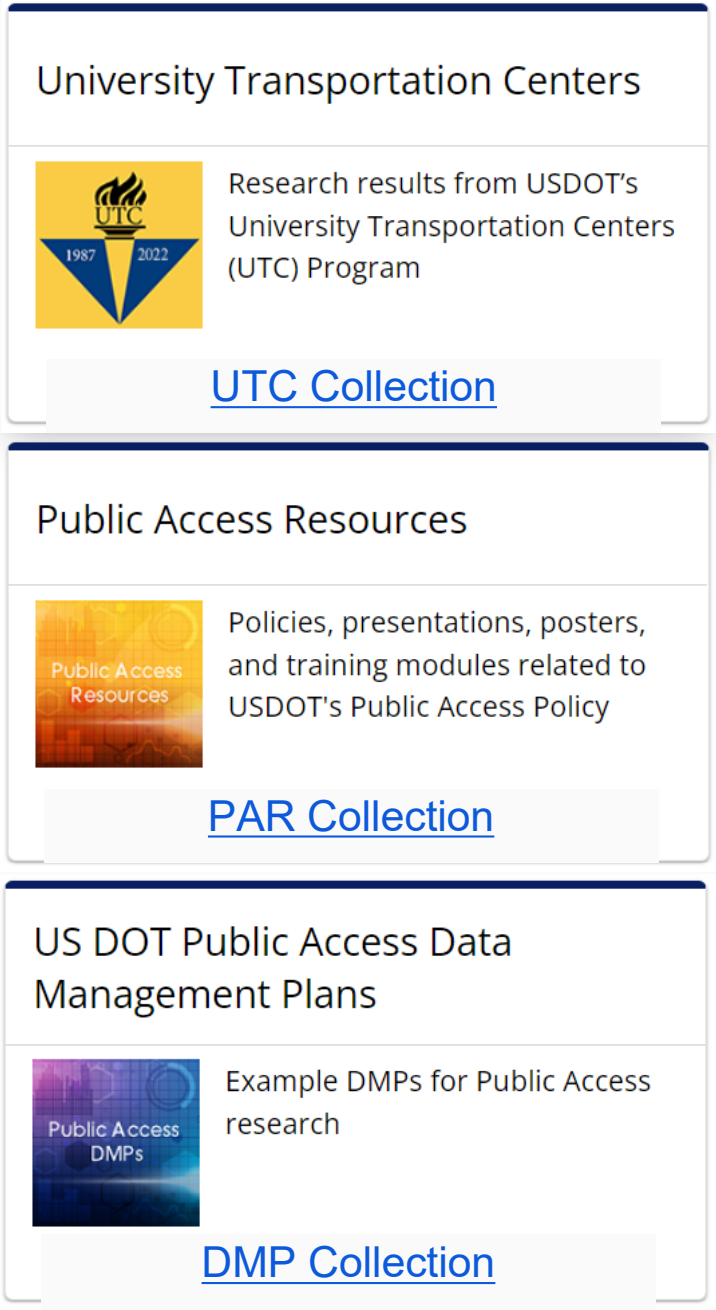




ROSA P Collections

Collections in *ROSA P* organize related materials together for easy search and retrieval.

Visit ROSA P Collections at:
https://rosap.ntl.bts.gov/browse/collections



Submitting Datasets to ROSA P

Submit Content to ROSA P at:
https://rosap.ntl.bts.gov/submitContent

Submitting Datasets

1. Dataset (or link to dataset in its home repository)
2. Other Data Package Elements (slide 10)
    1. README.txt which includes a data dictionary
    2. Metadata file
    3. Data Management Plan (DMP)
    4. Codes, and Scripts
    5. Other supporting tables
3. Submission should include names of other related research outputs (reports, software, etc..), if not all included at same time.

Note:

The DOT Public Access Plan does not require DOT to have a copy of all datasets, unlike reports.

Some datasets are too large, and DOT does not have ability to store or share these yet.

However, DOT must have the metadata so we can create a metadata entry in ROSA P that links through to the home repository.

Questions

Thank you!

Supplemental Slides

The following Supplemental Slides are shared in the interest of knowledge sharing. If you would like to discuss any of these, please email leighton.christiansen@dot.gov

160 Years of Sharing U.S. Research Data

U.S. Government Publishing Office (GPO)

https://www.gpo.gov/

- Opens March 4, 1861, as Government *Printing* Office
- Printing and binding for the Senate and House of Representatives, the Executive Branch, and the federal Judiciary.
- Embraces digital future, and rebranded Government *Publishing* Office in 2014

National Technical Information Service (NTIS)

https://www.ntis.gov/

- Established by law on September 9, 1950, as "Publication Board," a Clearinghouse for scientific, technical, and engineering information (STEI)
- Federal agencies send a copy of STEI products to NTIS

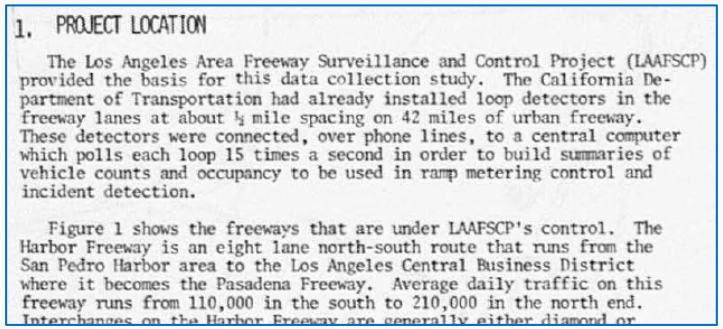
National Academy of Sciences (NAS)

https://www.nationalacademies.org/

- Incorporated March 3, 1963, under the signature of President Lincoln
- "... the Academy shall, whenever called upon by any department of the Government, investigate, examine, experiment, and report upon any subject of science or art."
- Added the National Research Council in 1916, the National Academy of Engineering in 1964, and the Institute of Medicine (later the National Academy of Medicine) in 1970.
- TRB, first known as the "National Advisory Board on Highway Research" began in 1920
- NAS has produced thousands of research outputs

Science Imprisoned in PDFs

Low Rez Text Scan

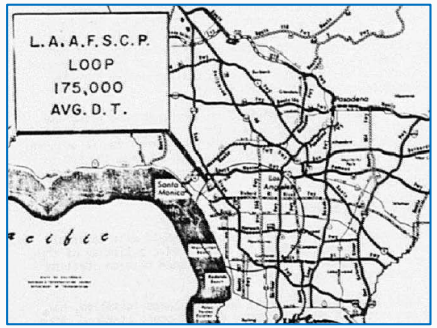


1. PROJECT LOCATION

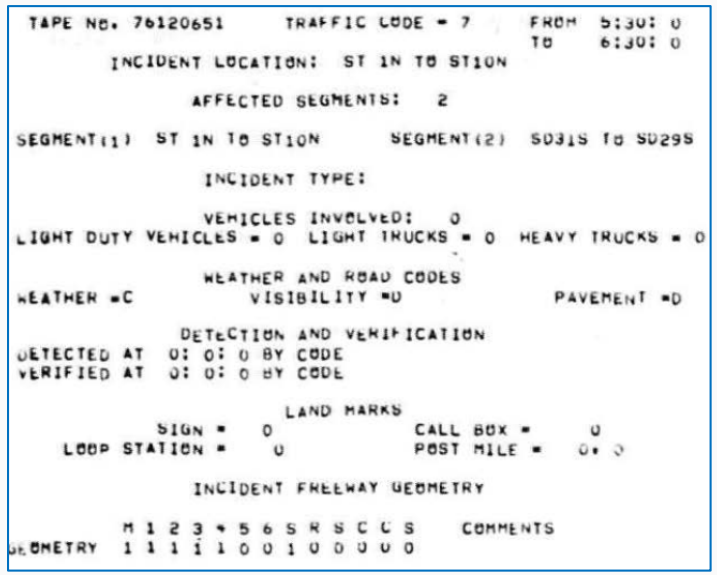
The Los Angeles Area Freeway Surveillance and Control Project (LAAFSCP) provided the basis for this data collection study. The California Department of Transportation had already installed loop detectors in the freeway lanes at about ½ mile spacing on 42 miles of urban freeway. These detectors were connected, over phone lines, to a central computer which polls each loop 15 times a second in order to build summaries of vehicle counts and occupancy to be used in ramp metering control and incident detection.

Figure 1 shows the freeways that are under LAAFSCP's control. The Harbor Freeway is an eight lane north-south route that runs from the San Pedro Harbor area to the Los Angeles Central Business District where it becomes the Pasadena Freeway. Average daily traffic on this freeway runs from 110,000 in the south to 210,000 in the north end. Interchanges on the Harbor Freeway are generally either diamond or

No GIS Map Coordinates



Data NOT Machine-Readable



TAPE NO. 76120651 TRAFFIC CODE = 7 FROM 5:30: 0
TO 6:30: 0

INCIDENT LOCATION: ST IN TO STION

AFFECTED SEGMENTS: 2

SEGMENT(1) ST IN TO STION SEGMENT(2) SD31S TO SD29S

INCIDENT TYPE:

VEHICLES INVOLVED: 0
LIGHT DUTY VEHICLES = 0 LIGHT TRUCKS = 0 HEAVY TRUCKS = 0

WEATHER AND ROAD CODES
WEATHER =C VISIBILITY =D PAVEMENT =D

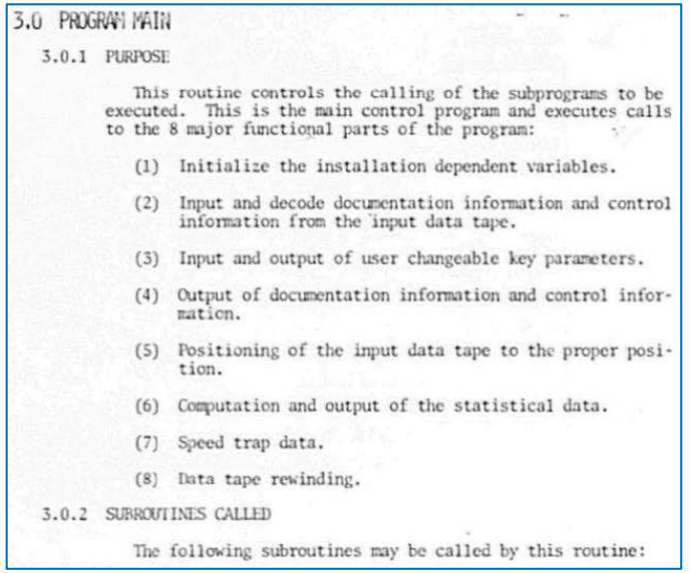
DETECTION AND VERIFICATION
DETECTED AT 0: 0: 0 BY CODE
VERIFIED AT 0: 0: 0 BY CODE

LAND MARKS
SIGN = 0 CALL BOX = 0
LOOP STATION = 0 POST MILE = 0. 0

INCIDENT FREEWAY GEOMETRY

M 1 2 3 4 5 6 S R S C C S COMMENTS
GEOMETRY 1 1 1 1 1 0 0 1 0 0 0 0 0

Code, Comments, & Data Dictionary NOT Machine-Readable



3.0 PROGRAM MAIN

3.0.1 PURPOSE

This routine controls the calling of the subprograms to be executed. This is the main control program and executes calls to the 8 major functional parts of the program:

(1) Initialize the installation dependent variables.

(2) Input and decode documentation information and control information from the input data tape.

(3) Input and output of user changeable key parameters.

(4) Output of documentation information and control information.

(5) Positioning of the input data tape to the proper position.

(6) Computation and output of the statistical data.

(7) Speed trap data.

(8) Data tape rewinding.

3.0.2 SUBROUTINES CALLED

The following subroutines may be called by this routine:

How Public Access Came to Be: Open Science

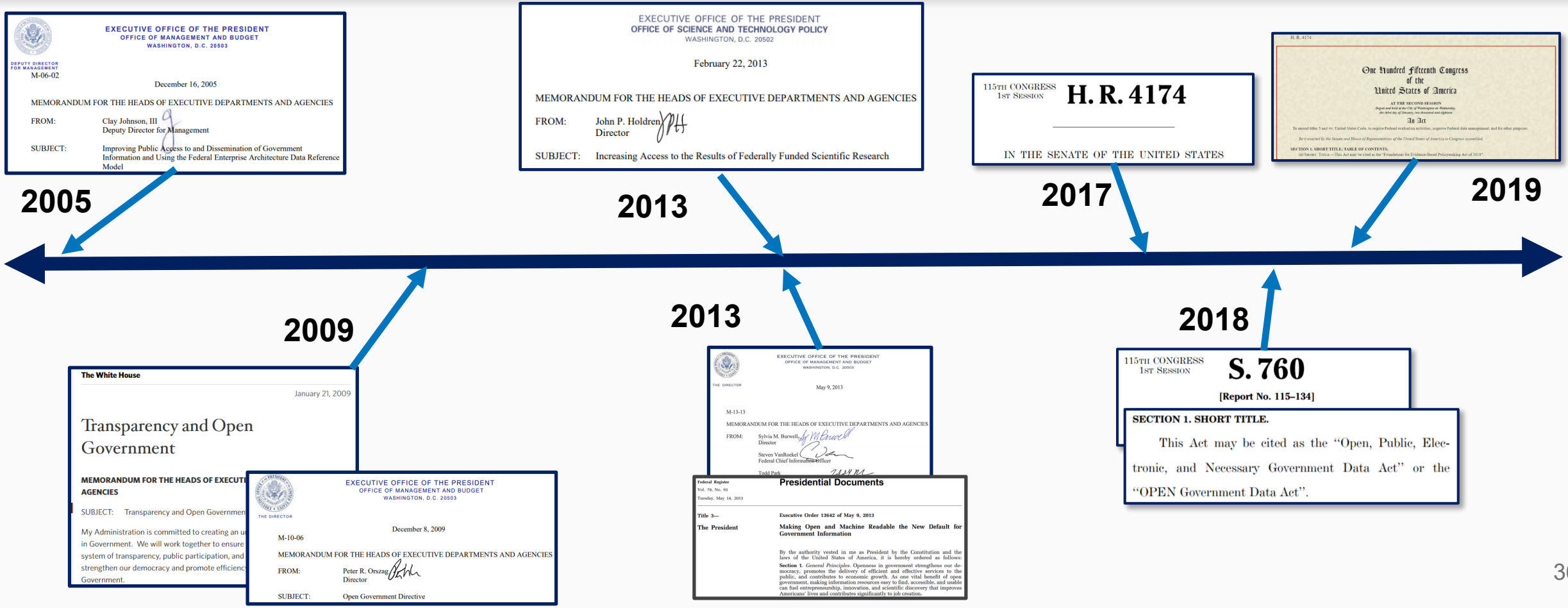
Image from UNESCO:
https://unesdoc.unesco.org/ark:/48223/pf0000374837

U.S. federal public access plans have their roots in the global Open Science movement.

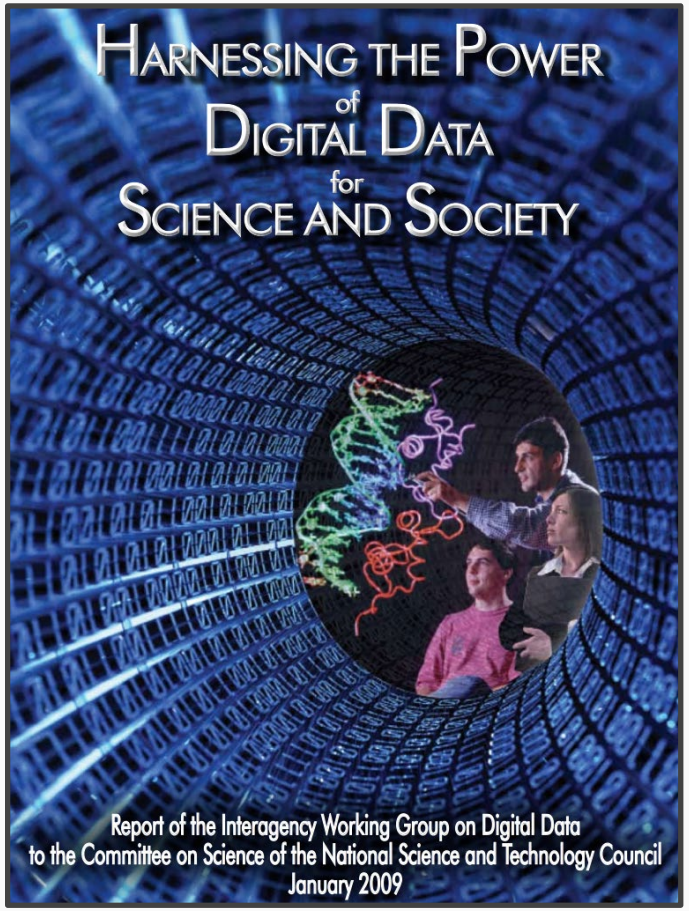
Opening U.S. Government-Funded Science

- Polices
- Practices
- Technology
- Resources

Opening U.S. Government-Funded Science: Polices 2005 to 2019



Opening U.S. Government-Funded Science: Practices



Guiding Principles

- Science is global and thrives in the digital dimensions;
- Digital scientific data are national and global assets;
- Not all digital scientific data need to be preserved and not all preserved data need to be preserved indefinitely;
- Communities of practice are an essential feature of the digital landscape;
- Preservation of digital scientific data is both a government and private sector responsibility and benefits society as a whole;
- Long-term preservation, access, and interoperability require management of the full data life cycle; and
- Dynamic strategies are required

https://www.nitrd.gov/Publications/PublicationDetail.aspx?pubid=25

OSTP Subcommittee on Open Science

SOS Strategic Objectives

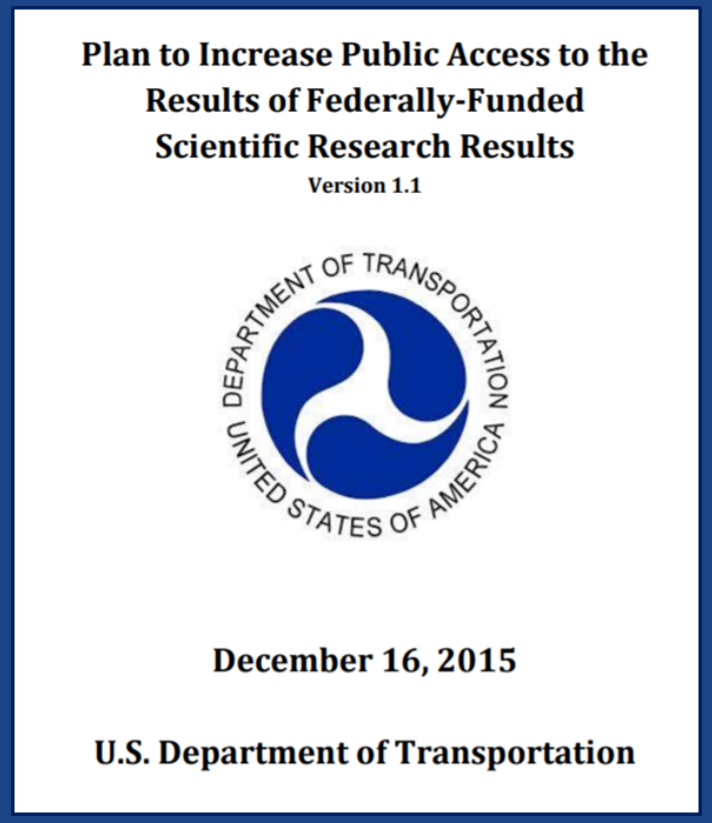
1. Increase the impact and benefit from federally funded scientific research products by making them more accessible to the public, machine-readable, and aligned with FAIR (findable, accessible, interoperable, and reusable) principles.
2. Assess opportunities to increase access to scientific research products while managing associated risks.
3. Collaborate with academia, research communities, and industry to achieve open science objectives in ways that are efficient, effective, and advance national science and engineering priorities. Engage international partners to strengthen open science objectives.

SOS Working Groups for 2020

- Data Management & Repositories
- Data Dictionaries
- Persistent Identifiers
- Publications
- Access Risks
- Collaboration

https://www.whitehouse.gov/ostp/

Public Access Implementation Working Group (PAIWG)



- Mission: Enable cross-modal collaboration to ensure the best possible public access to USDOT scientific research through implementation of the DOT Public Access Plan, common best practices, and shared resources.
- Scope:
  - USDOT Public Access Plan development, implementation, and compliance monitoring
  - Charters time-limited implementation task forces with modal and OST experts;
  - Reports Public Access Plan progress and obstacles to the RD&T Planning Team, including compliance monitoring; and
  - Coordinates U.S. DOT participation in U.S. Federal, domestic and international Public Access, Open Science, and Data Strategy efforts and activities.

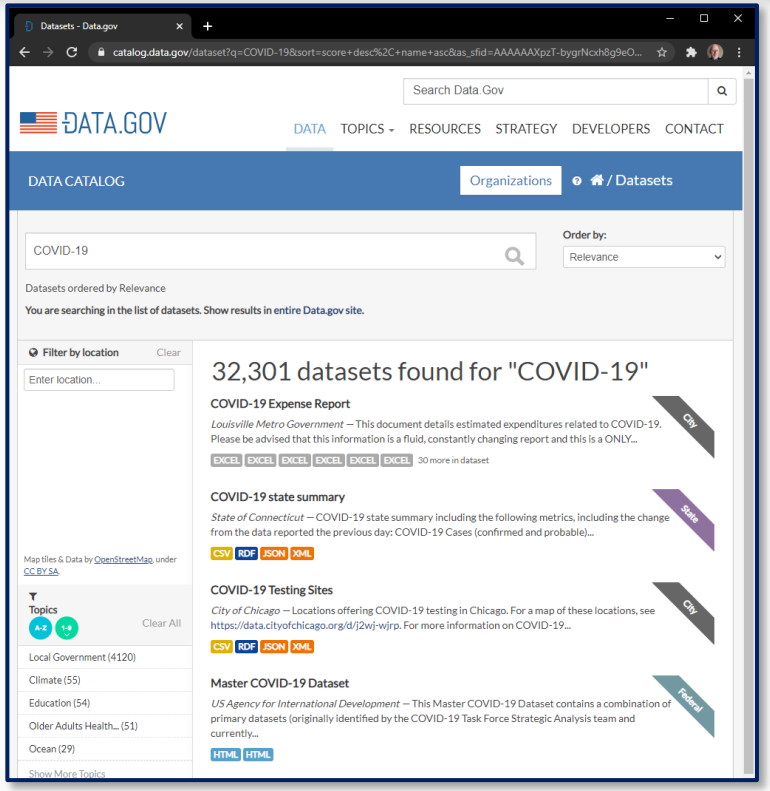
Opening U.S. Government-Funded Science: Technology: Data.gov

Data.gov
Quick Stats

217,000+ datasets

32,000+
COVID-19-related datasets

7
U.S. DOT COVID-19-related datasets



Want just the DOT data in data.gov?
https://catalog.data.gov/organization/dot-gov

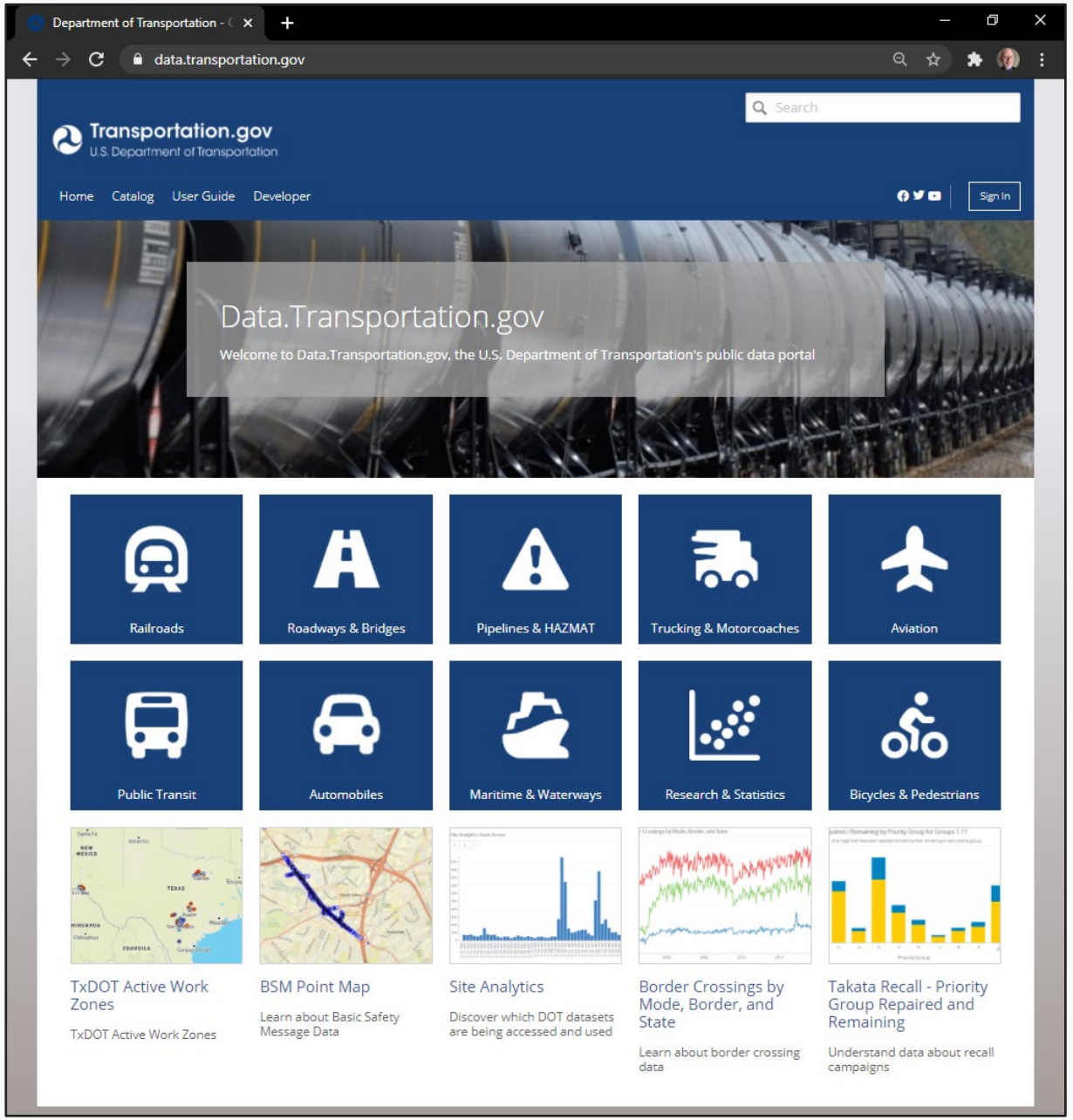
U.S. DOT's Open Data

Data.transportation.gov

Highlights:

- 4000+ datasets
- All transport modes
- Visualization tools
- Data management best practices:
  - Machine-readable datasets and subsets
  - Open formats
  - API access

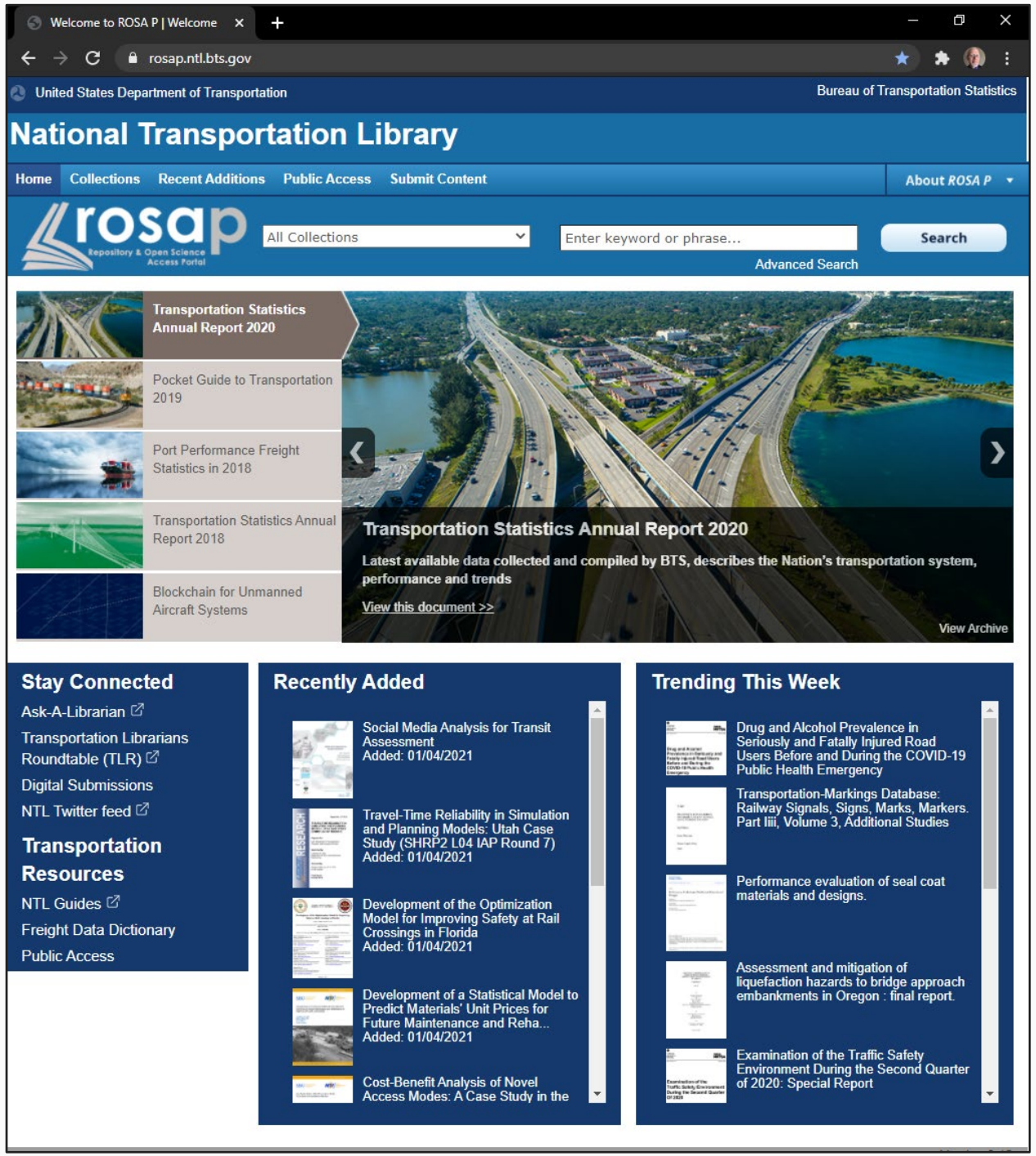
https://data.transportation.gov/



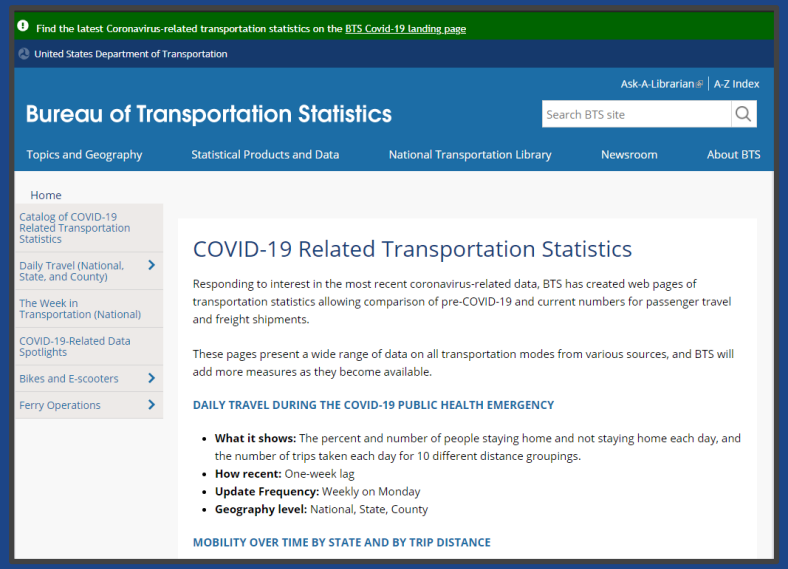
Repository & Open Science Access Portal (ROSA P)

ROSA P is the National Transportation Library's *Repository and Open Science Access Portal*. The name *ROSA P* was chosen to honor the role public transportation played in the civil rights movement, along with one of the important figures, Rosa Parks.

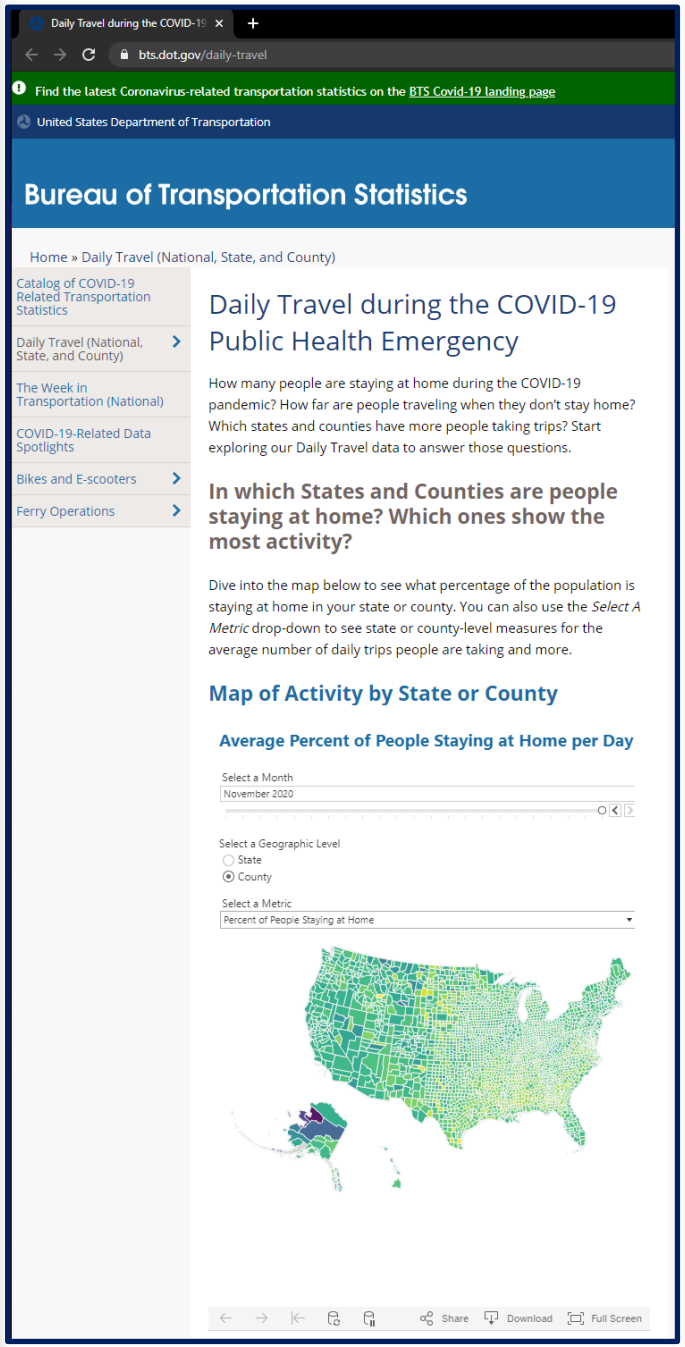
Visit ROSA P at: https://rosap.ntl.bts.gov/welcome



COVID-19 Transportation Statistics from BTS



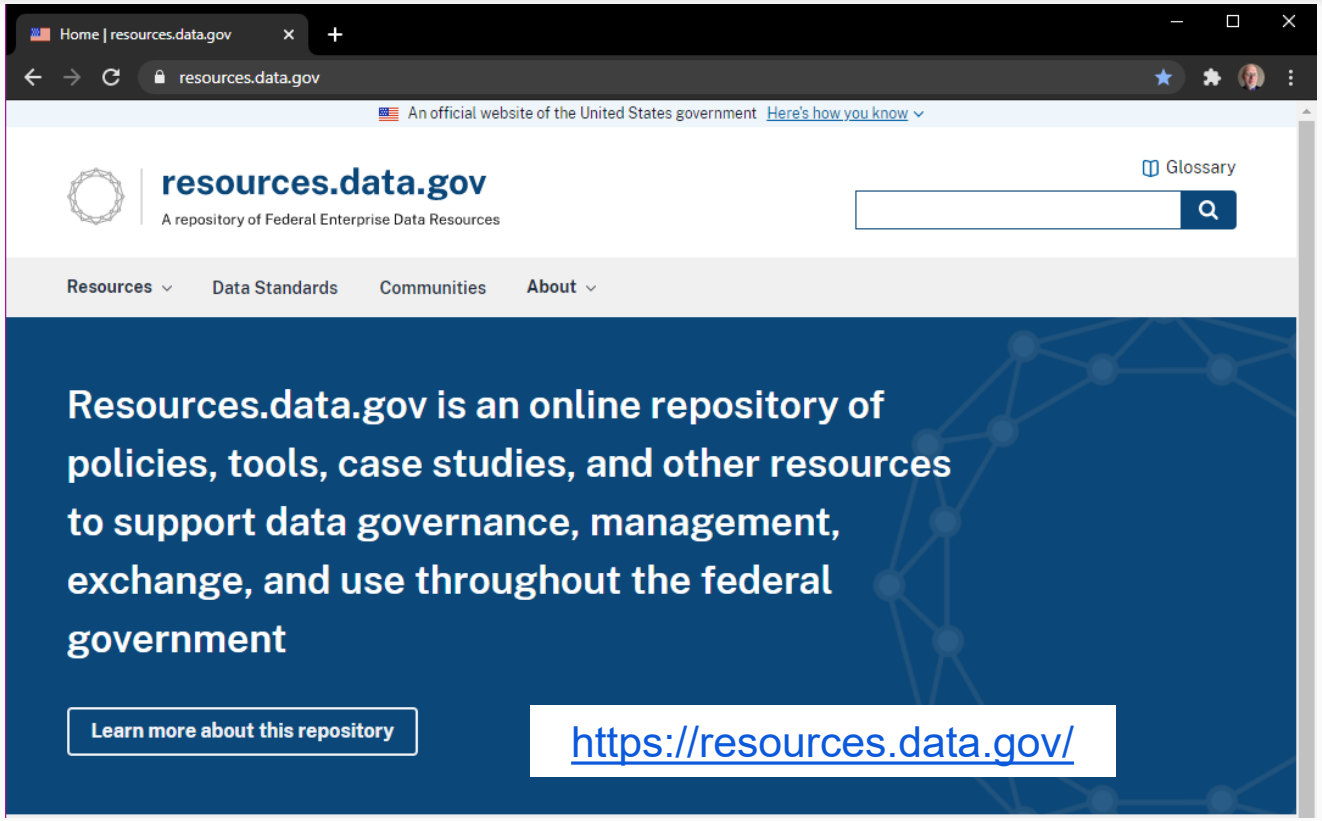
https://www.bts.dot.gov/covid-19



COVID-19 Related Statistics

- Daily Travel During the COVID-19 Public Health Emergency
- Mobility Over Time by State and By Trip Distance
- The Week in Transportation: Selected Measures During COVID-19
- Monthly Transportation Statistics
- County Transportation Profiles
- Daily Vehicle Travel
- Effects of COVID-19 On Travel Behavior
- Effects of COVID-19 On Travel Behavior by Income Groups
- Effects of COVID-19 On Bikeshare and E-Scooter Operations
- Docked Bikeshare Ridership: COVID-19 Effects
- Ferry Operators Status
- Ferry Routes for Top Ten Operators

Opening U.S. Government-Funded Science: Resources.data.gov



Some Available Resources:

- DCAT-US Schema v1.1 (Project Open Data Metadata Schema)
- Principles of Open Government Data
- Data Ethics Framework
- Geoportal Server
- JSON Validator
- Digital Analytics Program (DAP)
- Improving Agency Data Skills Playbook
- Case studies & examples

Opening U.S. Government-Funded Science: Challenges

Policy Challenges

- Policy writing can take time
- Leadership changes can mean policy changes
- Open Science policy ROI can be hard to measure
- New policy socialization & implementation can be uneven

Practice Challenges

- Culture change is hard
- Researcher resistance to openness
- Retraining and reskilling existing employees

Technology Challenges

- Existing infrastructures may not be adaptable
- System integrations can be complex

Resource Challenges

- Flat research funding
- Resistance to creating new positions
- Creating new resources takes time

COVID-19

- Good examples: NLM expands access to coronavirus research in PubMed Central in March 2020
- Learn from COVID-19 experience, and prepare for next time

Opening U.S. Government-Funded Science: Conclusions

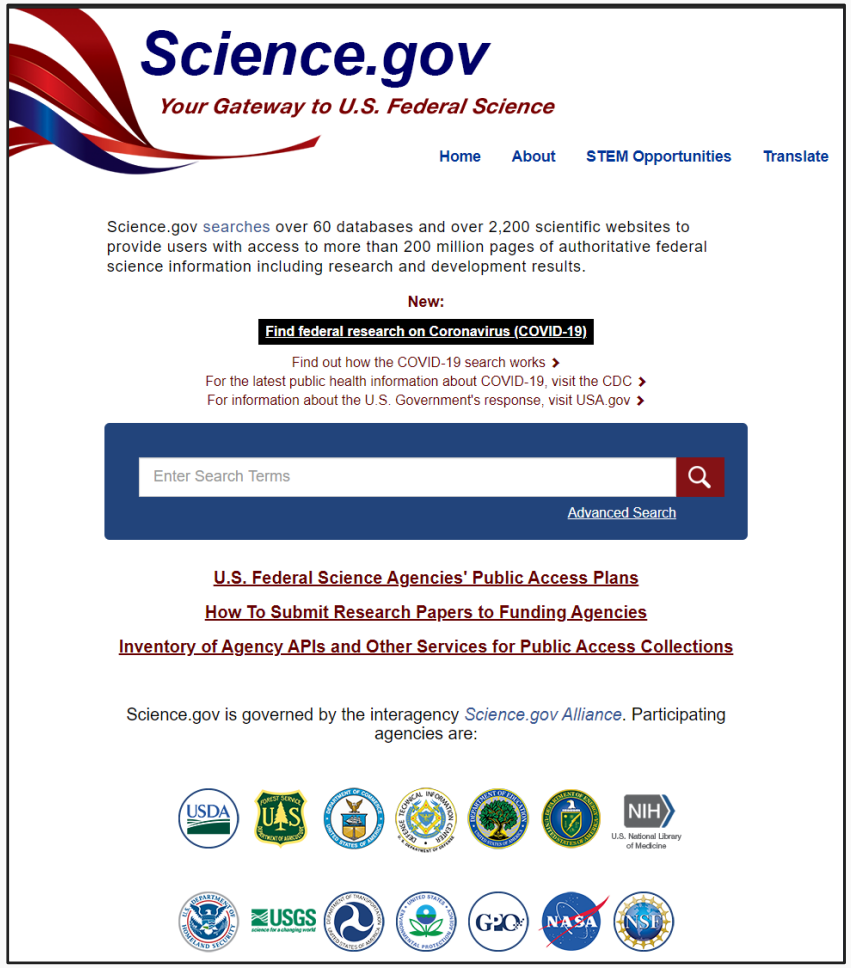
U.S. Government & U.S. DOT:

- Have long histories of sharing research results
- Are implementing policies and practices; deploying technologies; and gathering resources to keep in step with current Open Science movement
- Have deployed a number of systems, including Data.gov, to open federally-funded science to the public
- Are working to fund COVID-19-related research projects, and share results with public, as quickly as possible, as best practices and privacy/security concerns allow
- We still face many challenges to sharing research outputs, especially datasets, and software code

Science.gov

- Interagency federated search
- Focused COVID-19 search
- Results include:
  - Journal articles
  - Technical reports
  - Datasets
  - Conference papers
  - Videos
  - Audio files
  - Images

https://www.science.gov/



Science.gov Alliance Members

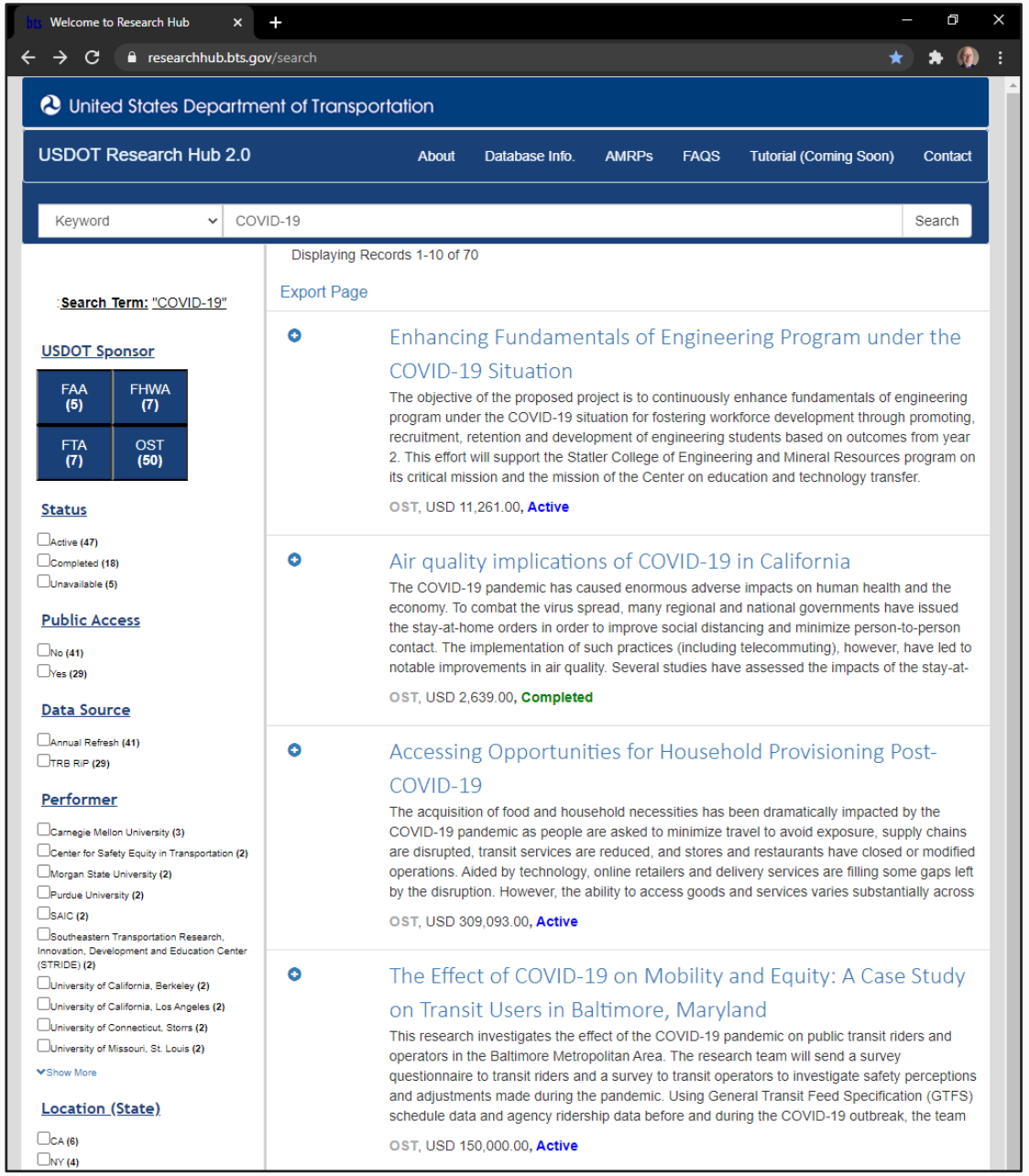
- Department of Agriculture (USDA, Forest Service)
- Department of Commerce (NTIS, NIST)
- Department of Defense
- Department of Education
- Department of Energy
- Department of Health and Human Services (NIH)
- Department of Homeland Security
- Department of Transportation
- Environmental Protection Agency
- Government Publishing Office
- National Aeronautics and Space Administration
- National Science Foundation

Click here for the Science.gov COVID-19 search results.

U.S. DOT Research Hub

Research Hub is a publicly accessible database of USDOT-sponsored research, development, and technology project records.

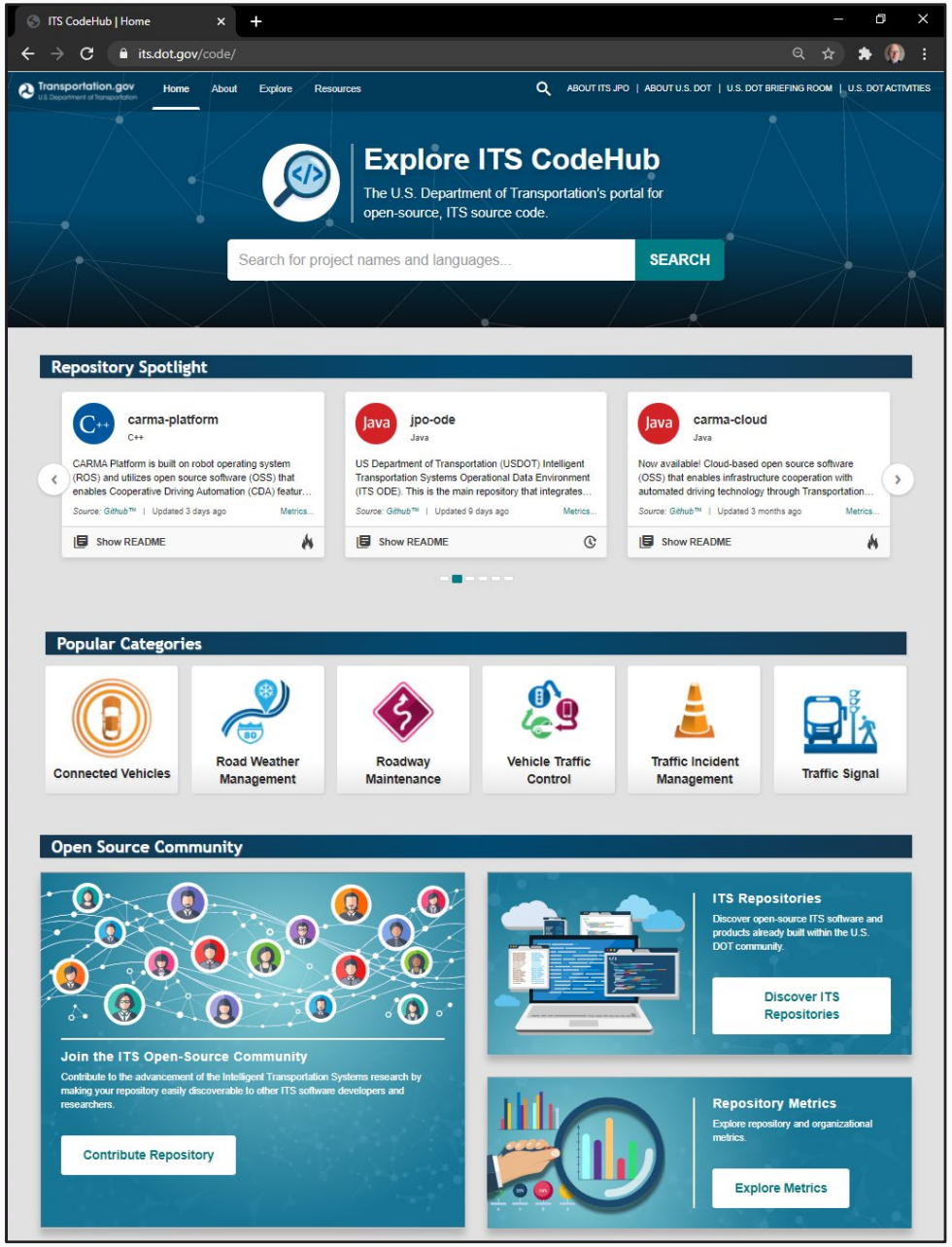
https://researchhub.bts.gov/search



ITS JPO CodeHub

ITS CodeHub promotes a reuse-first mentality and aims to support the discovery of open source code by putting it directly into the hands of developers to customize, transform, expand, and improve, as trends evolve and needs change

https://its.dot.gov/code/



Purpose

Empower innovation through code reuse, collaboration, and continuous improvement in the open

Capabilities

- Discover projects and modules
- Evaluate code health for reuse
- Connect to developers and other re-users
- Analyze development trends

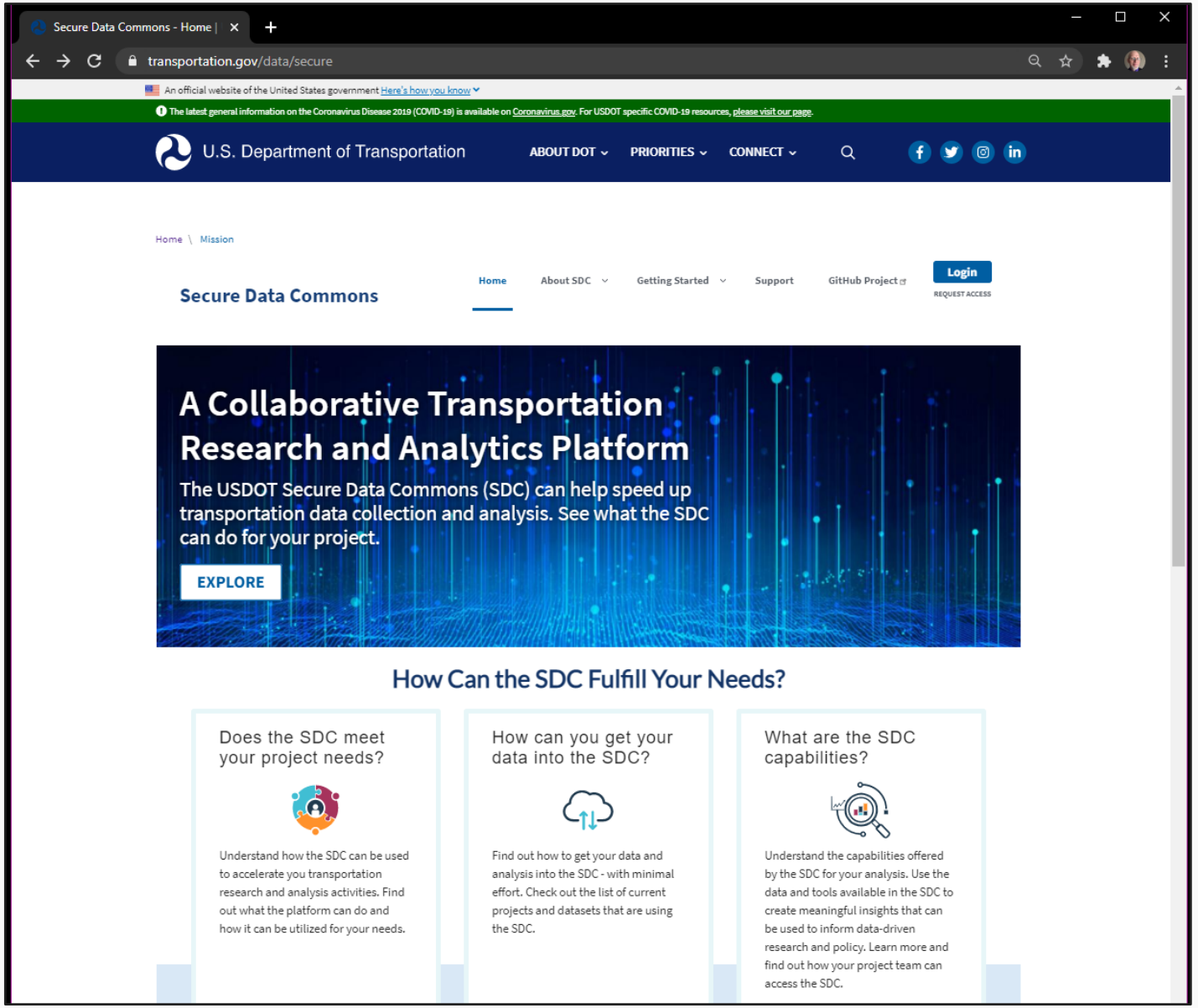
Community

Grassroots, collaborative development of open-source ITS software

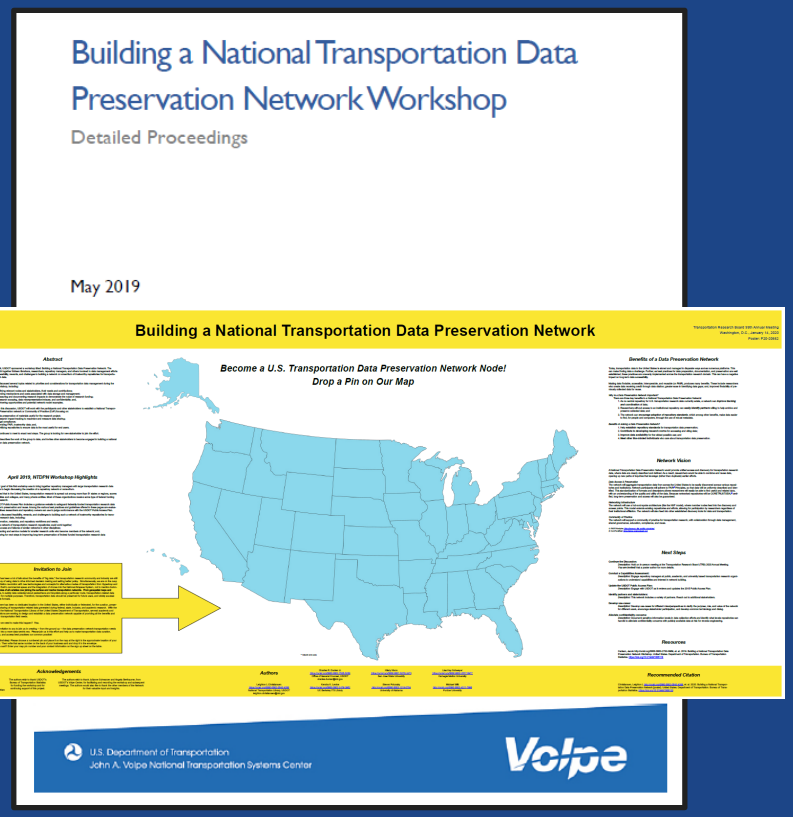
U.S. DOT Secure Data Commons

The USDOT Secure Data Commons (SDC) can help speed up transportation data collection and analysis.

https://www.transportation.gov/data/secure



National Transportation Data Preservation Network (NTDPN)



Initial Meeting: Building a National Transportation Data Perseveration Network Held at RDA's 13th Plenary, Philadelphia, PA, April 2019

Key Goals:

- To help searchers find transportation-related data in the numerous organizational and institutional repositories and archives where it now resides.
- Help researchers find reliable homes for the digital data if their organization does not have a repository of its own.

Building a National Transportation Data Preservation Network Workshop Notes https://doi.org/10.21949/1506118

- Includes notes and summaries from Workshop 1 (April 2019) and Workshop 2 (January 2020)

Building a National Transportation Data Preservation Network Workshop [poster] https://doi.org/10.21949/1506103

NCHRP Report 936

NCHRP 936: A Guide to Ensure Access to the Results of Federally Funded Transportation Research

- Report Link: http://www.trb.org/main/blurbs/180230.aspx
  - Project NCHRP 20-110: https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4062
  - Designed to help DOT-funded researchers improve data management and data sharing
  - Already a little out of date because of things like Federal Data Strategy that came about while report in publication limbo
  - National Transportation Library planning series of video trainings

Links to resources

United States. Government Publishing Office (GPO). (2021). Washington, D.C. https://www.gpo.gov/

United States. Government Publishing Office (GPO). (2021). *GPO Style Manual*. Washington, D.C. https://www.govinfo.gov/content/pkg/GPO-STYLEMANUAL-2016/pdf/GPO-STYLEMANUAL-2016.pdf

United States. National Technical Information Service (NTIS). (2021). Washington, D.C. https://www.ntis.gov/

United States. National Technical Information Service (NTIS). (2021). *National Technical Reports Library (NTRL)*. Washington, D.C. https://ntrl.ntis.gov/NTRL/

United State. Department of Transportation. Federal Highway Administration. (1976). *Freeway Data for Incident and Nonincident Conditions – Vol. 1: Traffic Data Sets from Widely Spaced Detectors.* Washington, D.C. https://doi.org/10.21949/1520658

United State. Department of Transportation. Federal Highway Administration. (1977). *Freeway Data for Incident and Nonincident Conditions – Vol. 2: Traffic Data Sets from Closely Spaced Detectors.* Washington, D.C. https://doi.org/10.21949/1520659

United State. Department of Transportation. Federal Highway Administration. (1977). *Freeway Data for Incident and Nonincident Conditions – Vol. 3: FORTRAN Program Documentation for Analyzing Individual Data Sets.* Washington, D.C. https://doi.org/10.21949/1520660

Links to resources (continued)

United States. Office of Management and Budget (OMB). (2005). Memo M-06-02, “Improving Public Access to and Dissemination of Government Information and Using the Federal Enterprise Architecture Data Reference Model.” https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2006/m06-02.pdf

United States. White House. (2009). “Transparency and Open Government.” [Memorandum]. https://obamawhitehouse.archives.gov/the-press-office/transparency-and-open-government

United States. Office of Management and Budget (OMB). (2009) Memo M-10-06, “Open Government Directive.” https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2010/m10-06.pdf

United States. White House. Office of Science and Technology Policy (OSTP). (2013). “Increasing Access to the Results of Federally Funded Scientific Research.” [Memorandum.] https://web.archive.org/web/20130308142014/https://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf

United States. Office of Management and Budget (OMB). (2013). Memo M-13-13, “Open Data Policy – Managing Information as an Asset.” https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2013/m-13-13.pdf

United States. White House. (2013). Executive Order 13642, “Making Open and Machine Readable the New Default for Government Information.” https://www.govinfo.gov/content/pkg/FR-2013-05-14/pdf/2013-11533.pdf

Links to resources (continued)

United States. House of Representatives. (2017). H.R. 4174, "Foundations for Evidence-Based Policymaking Act of 2018." https://www.congress.gov/bill/115th-congress/house-bill/4174

United States. Senate. (2017). S.760 - "Open, Public, Electronic, and Necessary Government Data Act." https://www.congress.gov/bill/115th-congress/senate-bill/760/text

United States. (2019). Public Law No. 115-435 "Foundations for Evidence-Based Policymaking Act of 2018." https://www.congress.gov/115/plaws/publ435/PLAW-115publ435.pdf

United States. National Science and Technology Council. Interagency Working Group on Digital Data. (2009). *Harnessing the Power of Digital Data for Science and Society*. Washington, D.C. https://www.nitrd.gov/Publications/PublicationDetail.aspx?pubid=25

White House. Office of Science and Technology Policy (OSTP). (2020). https://www.whitehouse.gov/ostp/

United States. Department of Transportation. (2015). "Plan to Increase Public Access to the Results of Federally-Funded Scientific Research." https://doi.org/10.21949/1520559

United States. General Services Administration. Technology Transformation Services. (2021). "Data.gov." https://www.data.gov/

United States. General Services Administration. Technology Transformation Services. (2021). "Department of Transportation Data Catalog." https://catalog.data.gov/organization/dot-gov

United States. Department of Transportation. (2021). "Data.transportation.gov." https://data.transportation.gov

Links to resources (continued)

United States. Department of Transportation. Bureau of Transportation Statistics. National Transportation Library. (2021). “Repository & Open Science Access Portal (ROSA P).” https://doi.org/10.21949/1398953

United States. Department of Energy. Office of Scientific and Technical Information. (2021). “Science.gov.” https://www.science.gov/

United States. Department of Transportation. Office of the Assistant Secretary for Research and Technology. (2021). “Research Hub.” https://researchhub.bts.gov/search

United States. Department of Transportation. Bureau of Transportation Statistics. (2021). “COVID-19 Related Transportation Statistics.” https://www.bts.dot.gov/covid-19

United States. General Services Administration. Technology Transformation Services. (2021). “resources.data.gov.” https://resources.data.gov/

United States. Department of Health and Human Services. National Institutes of Health. (2020). “*The National Library of Medicine expands access to coronavirus literature through PubMed Central.*“ https://www.nih.gov/news-events/news-releases/national-library-medicine-expands-access-coronavirus-literature-through-pubmed-central

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

TRANSPORTATION RESEARCH BOARD

Submitting and Finding Datasets in TRID

Bill McLeod
TRIS Manager,
Transportation Research Information Services,
TRB
wmcleod@nas.edu

TRB's Transportation Research Information Services

Includes:

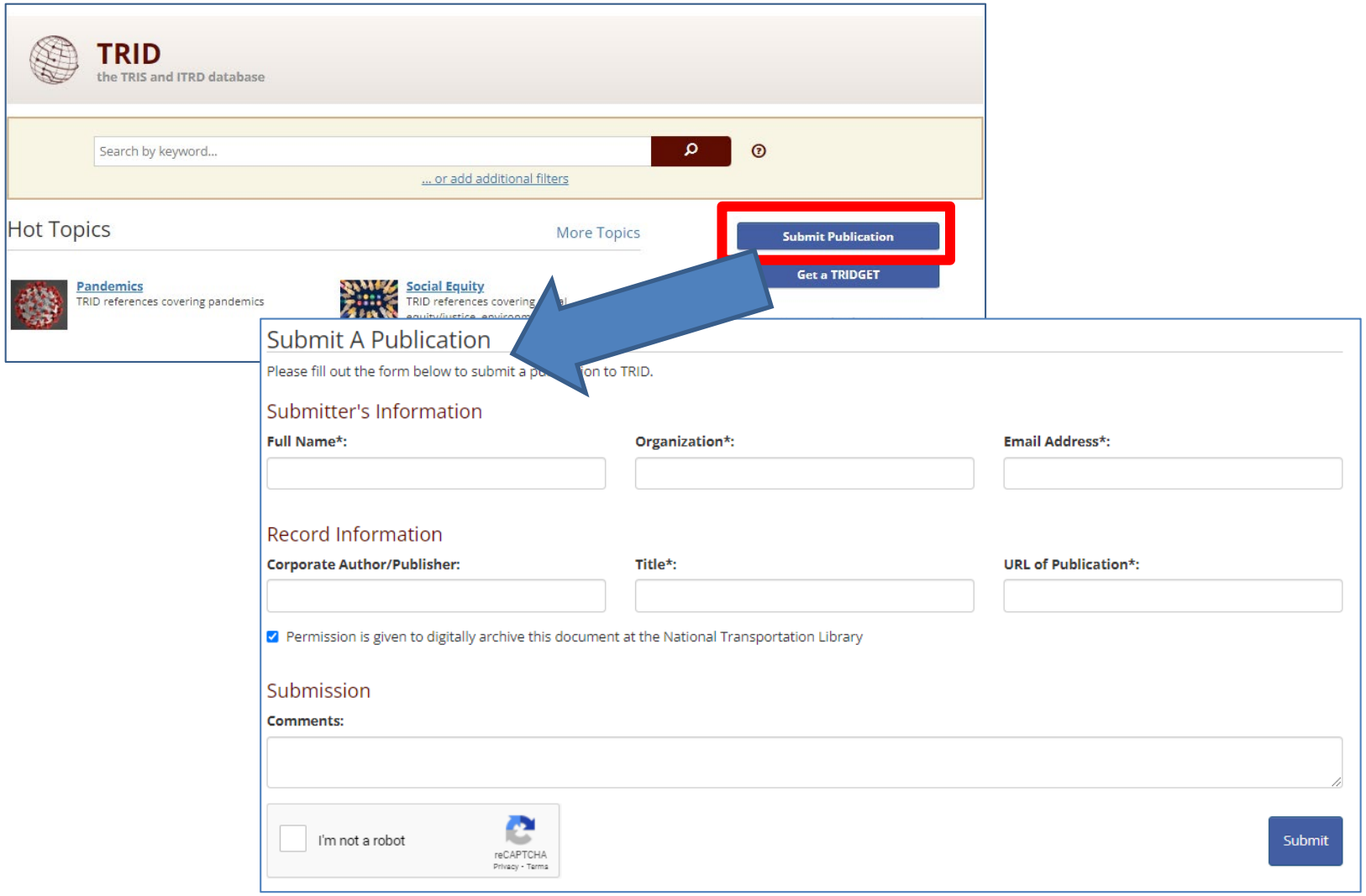
- TRIS Databases:
  - TRID https://trid.trb.org – **find Datasets here!**
  - Research in Progress (RIP) https://rip.trb.org
  - Research Needs Statements (RNS) http://rns.trb.org
  - PubsIndex http://pubsindex.trb.org
  - Transportation Research Thesaurus http://trt.trb.org
- TRB Library:
  - Snap Searches: http://www.trb.org/InformationServices/Snap.aspx

Submitting Dataset to TRID…

…is identical to submitting final reports.

- Use our Submit Publication form, found on the TRID home page: https://trid.trb.org/submit
- If you would like to send one email to multiple institutions/agencies, include: tris-trb@nas.edu
- US DOT compliance with Public Access https://ntl.bts.gov/ntl/public-access/how-comply

Submitting Datasets



Indexing Datasets

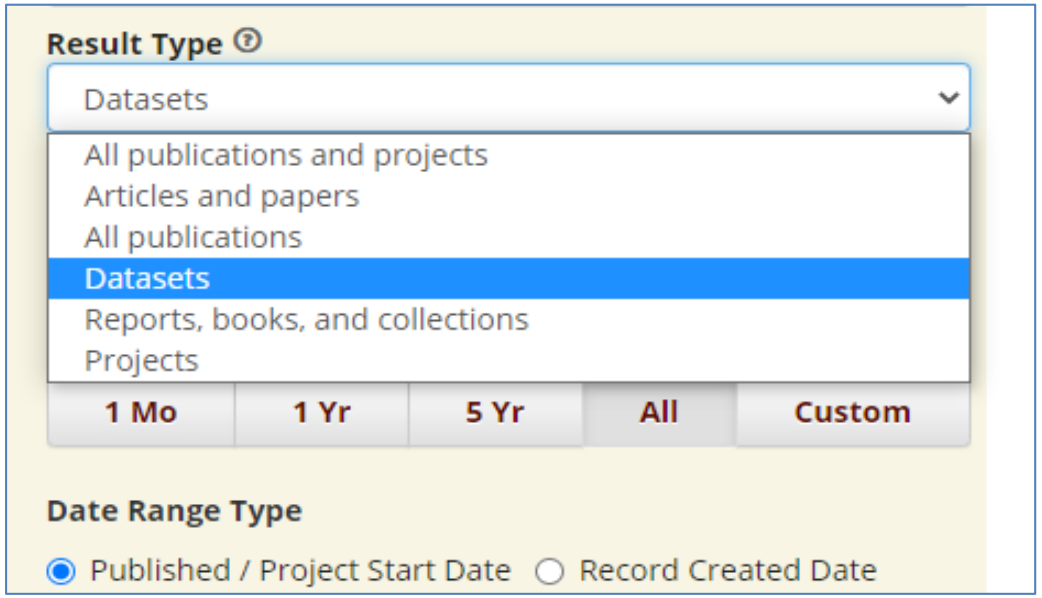
- As with reports from Departments of Transportation and University Transportation Centers, Datasets are given top priority in our indexing queue
- ROSA P links are added to existing or new records, same as final reports

Datasets in TRID!

- 550+ in TRID presently, mainly from University Transportation Centers and ROSA P
- In search results: [supporting dataset] OR [dataset] at end of ***Title*** field
- ***Dataset URLs*** in both Dataset record and final report record if applicable
- Dataset limit is now available: ***Result Type***

Finding Datasets

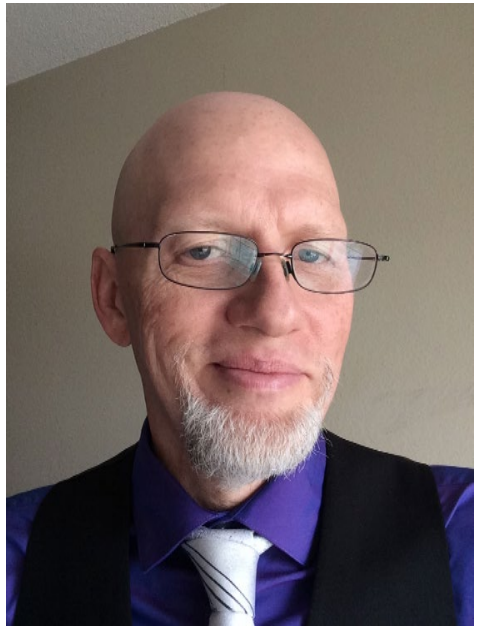
- From the TRID home page, select add additional filters under the *Search by keyword* box
- Using the ***Result Type*** dropdown menu, select ***Datasets***



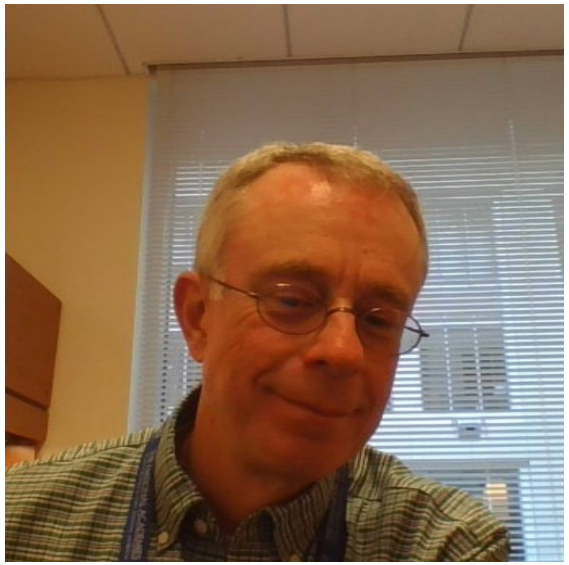
Thank you!

Don’t hesitate to contact us!

- Questions about TRIS Databases: tris-trb@nas.edu
- Library Services & Snap Searches: trblibrary@nas.edu



Leighton Christiansen
Leighton.christiansen@dot.gov
National Transportation Library (NTL)



Bill McLeod
wmcleod@nas.edu
Transportation Research Information Services (TRIS)

- Subscribe to the newsletter for the most recent TRB news & research

https://bit.ly/ResubscribeTRBWeekly

TRB's Podcast!

- Have you heard TRB's Transportation Explorers?
- Listen on our website or subscribe wherever you listen to podcasts!

#TRBExplorers

Get involved with TRB

- Receive emails about upcoming webinars: https://mailchi.mp/nas.edu/trbwebinars

- Find upcoming conferences: https://www.nationalacademies.org/trb/events

#TRBWebinar

Get Involved with TRB

Getting involved is free!

Be a Friend of a Committee bit.ly/TRBcommittees
- Networking opportunities
- May provide a path to Standing Committee membership

Join a Standing Committee bit.ly/TRBstandingcommittee

Work with CRP https://bit.ly/TRB-crp

Update your information www.mytrb.org