

Visualizing Research Collections in the National Transportation Library's Digital Repository

ROSA P

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U.S. Department of Transportation

Office of the Secretary of Transportation



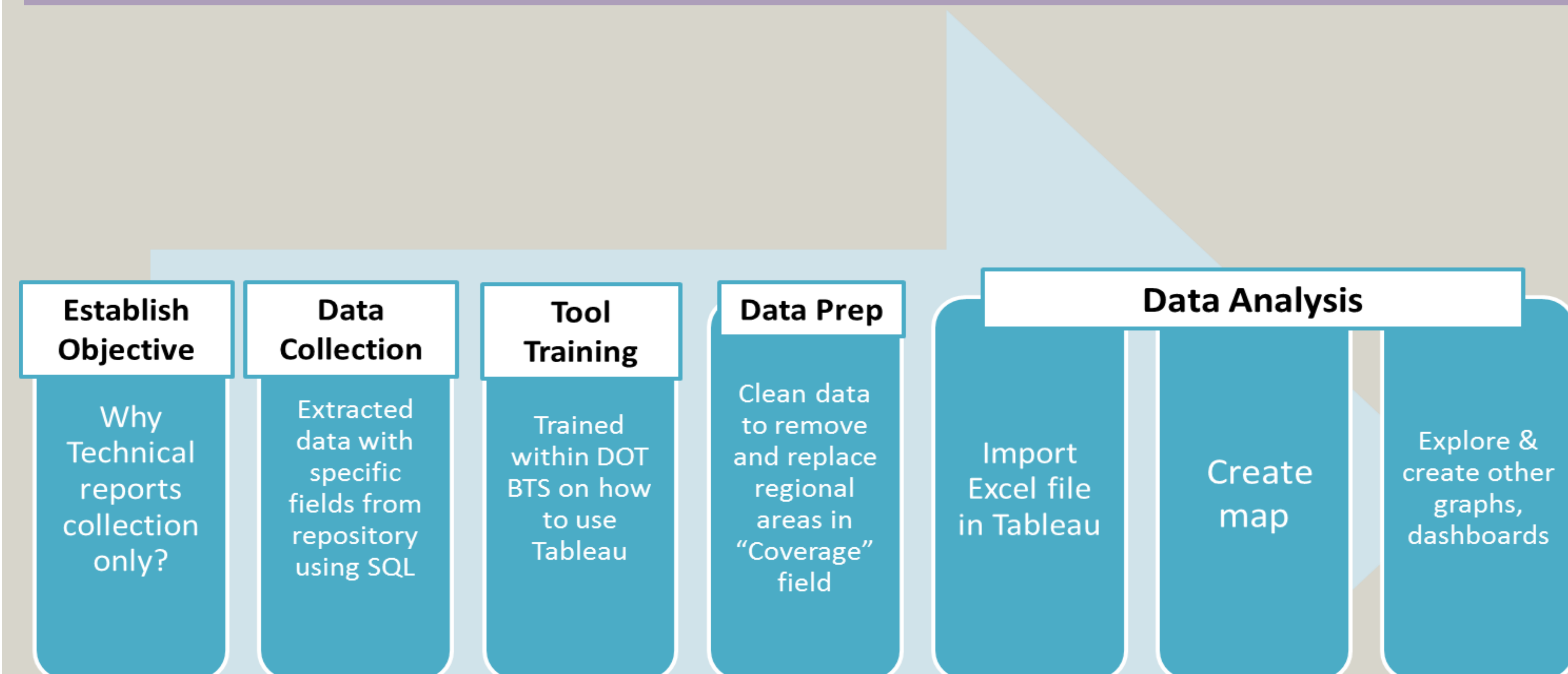
Abstract

The National Transportation Library's (NTL) Repository and Open Science Portal (ROSA P) is a digital library for transportation, including U. S. Department of Transportation sponsored research results and technical publications, other documents and images related to U.S. transportation, and a central clearinghouse for transportation research data. The analysis and visual display of institutional repository data is an emerging assessment method for communication of digital collection trends and identification of coverage gaps, including subjects, dates, geographic locations and resource types. In 2012, NTL partnered with the Center for Advanced Transportation Technology Laboratory at the University of Maryland to conduct a feasibility test of bibliographic data visualization. In 2016, NTL employed Tableau visualization software as a pilot tool to analyze its collection content. This poster demonstrates different visualization methods as collection assessment and management tools for digital repositories. Although data cleansing and formatting for a tool like Tableau can be a time intensive activity, the resulting visualizations enable quick, comprehensive analysis of collections. Repository visualizations also have potential uses for scholarly communication and compliance with USDOT's Public Access Plan. As a baseline for NTL's benchmarking and metrics, we anticipate that this product will be used to influence future policy and planning.

ROSA P Collection Content Types

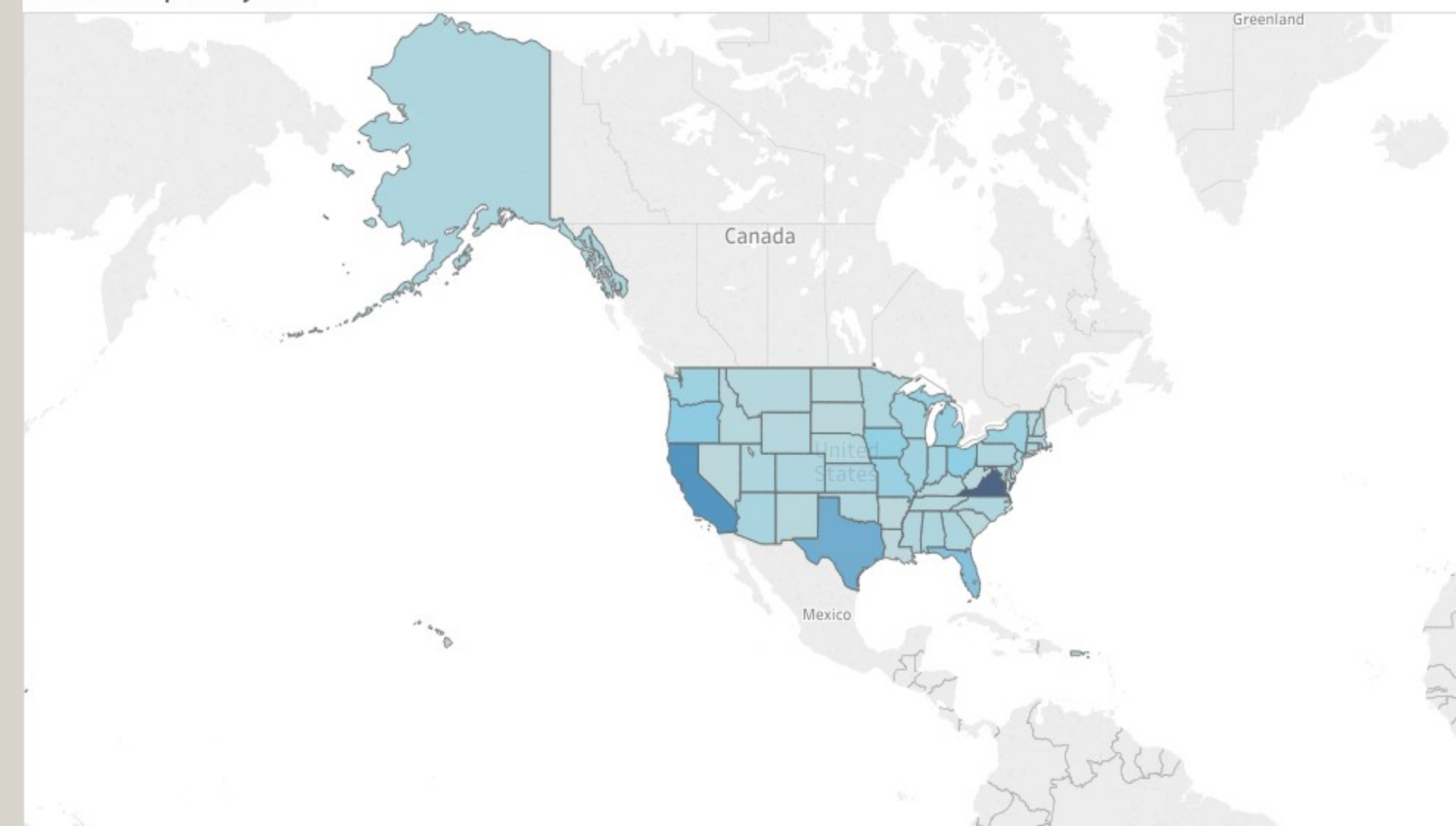
	Text	59.0%
	Websites	14.9%
	Data	23.6%
	Multimedia	0.4%
	Maps	0.4%
	Other	1.6%

Methods

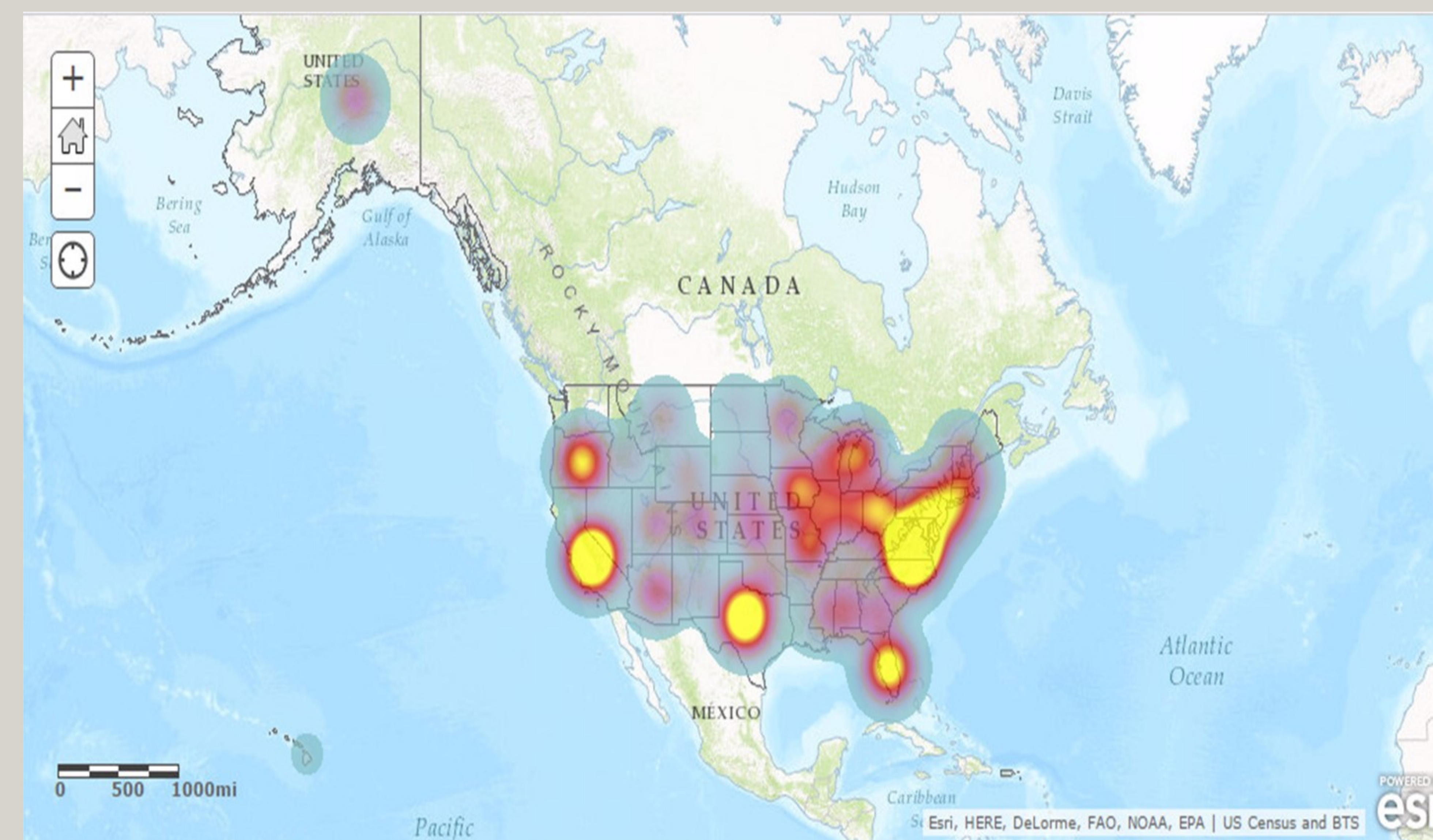


Findings

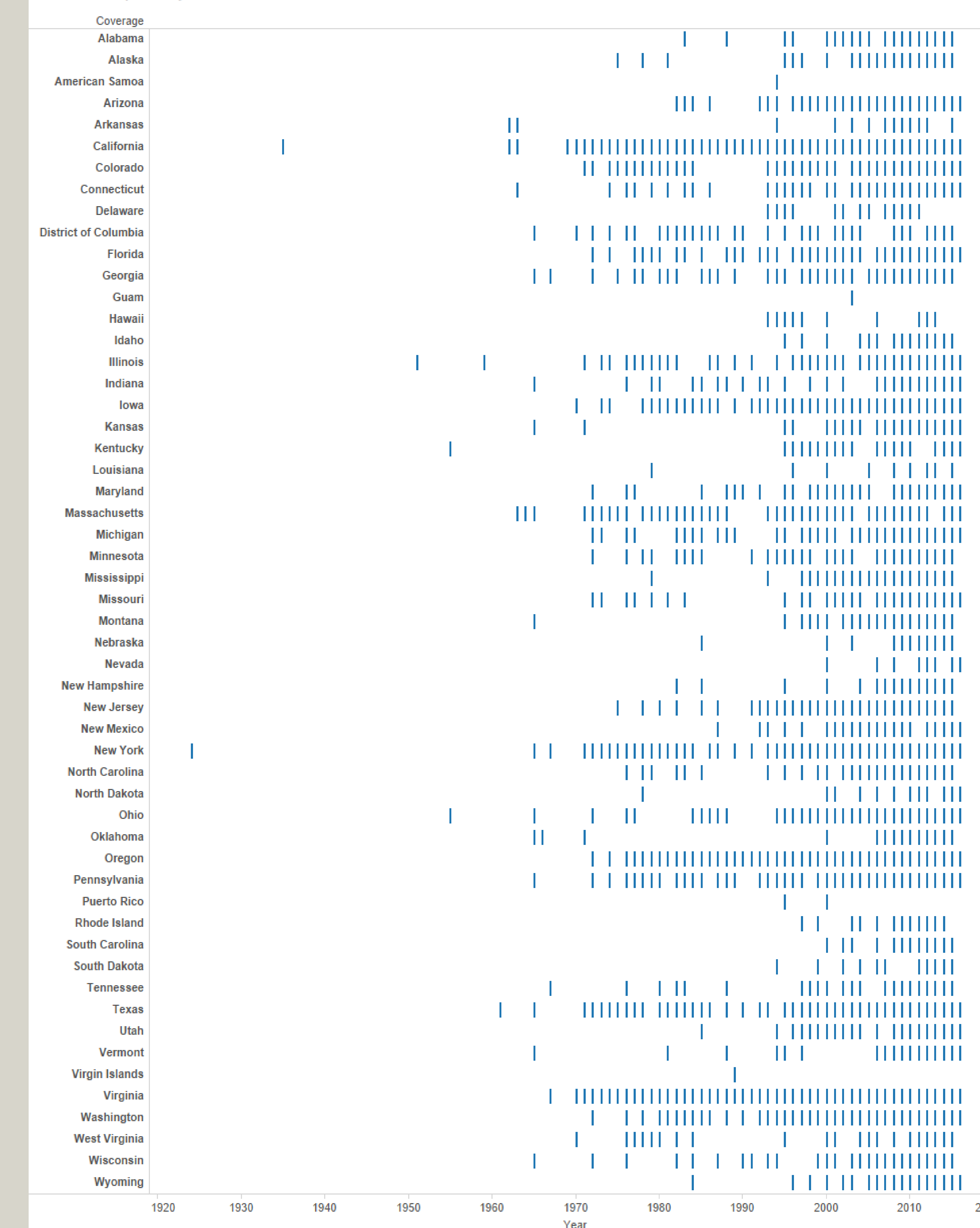
Technical Reports By State



The map was created with Tableau, while the map below was created with ArcGIS Online. Geocoding was not necessary for Tableau as it automatically recognized the state and territory names. However, geocoding was required for ArcGIS Online.

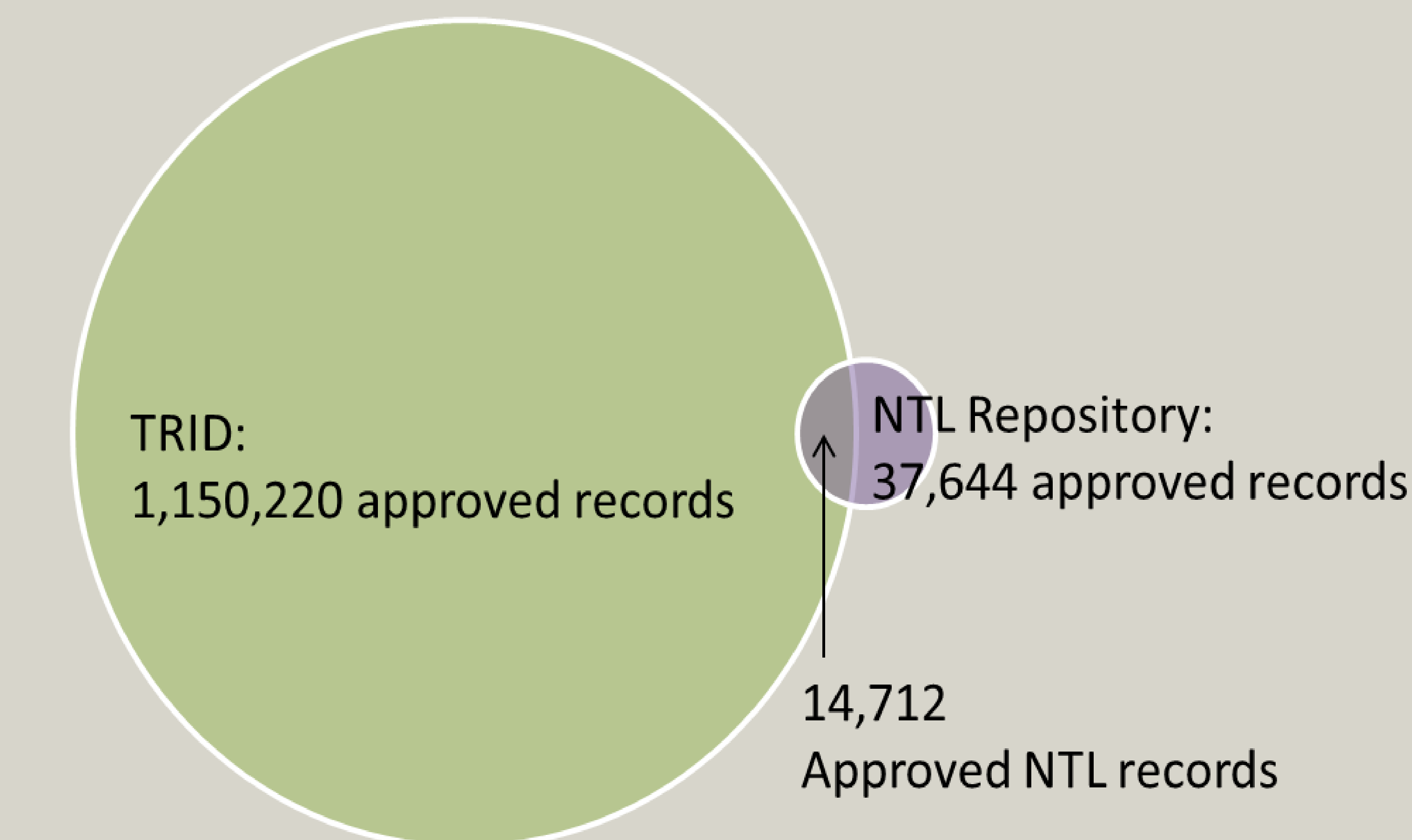


Technical Reports By Year



The graph above is called a gannt chart. generated in Tableau. This shows the technical reports by year and state.

Number of Approved NTL Records in TRID
Report data generated on 20 October 2016



This representation was generated in MS Power Point using pre-calculated areas of the collections.

Lessons Learned & Future Ideas

- . Need data consistency
- . Training is necessary
- . Most feasible tool for analysis—Tableau vs ArcGIS Online
- . Expand analysis for all NTL collection
- . Look at different ways to view the data or add dimensions; perhaps by transportation subjects