



Creating an Interactive Performance Dashboard for a Large Size MPO ARC

Harnessing Big Data and Navigate Complex
Challenges by Creating Dashboards



Nasim Rezvanpour, Ph.D.
Sr Transportation Planner
nrezvanpour@atlantaregional.org



- Numerous programs within the Transportation Access & Mobility
- Various dataset, Maps and links
- We required a cohesive visualization platform to encompass and integrate all these.

EXPLORE TRANSPORTATION PLANNING

- + MPO Process
- + Bicycle & Pedestrian Planning
- Community Engagement
- + Freight Planning
- + Modeling
- + MTP / Long-Range Planning
- Regional Transportation Electrification Plan
- + Roadway Planning
- + Safety Planning
- Technology
- + TIP / Short-Range Planning
- + Transit Planning
- Transportation Dashboard



MPOs bridge the gap between data acquisition and actionable insights

- MPOs can transform complex datasets into user-friendly dashboard formats.
- These dashboards not only make the data more accessible but also empower smaller agencies to make informed decisions and drive meaningful change in their communities.



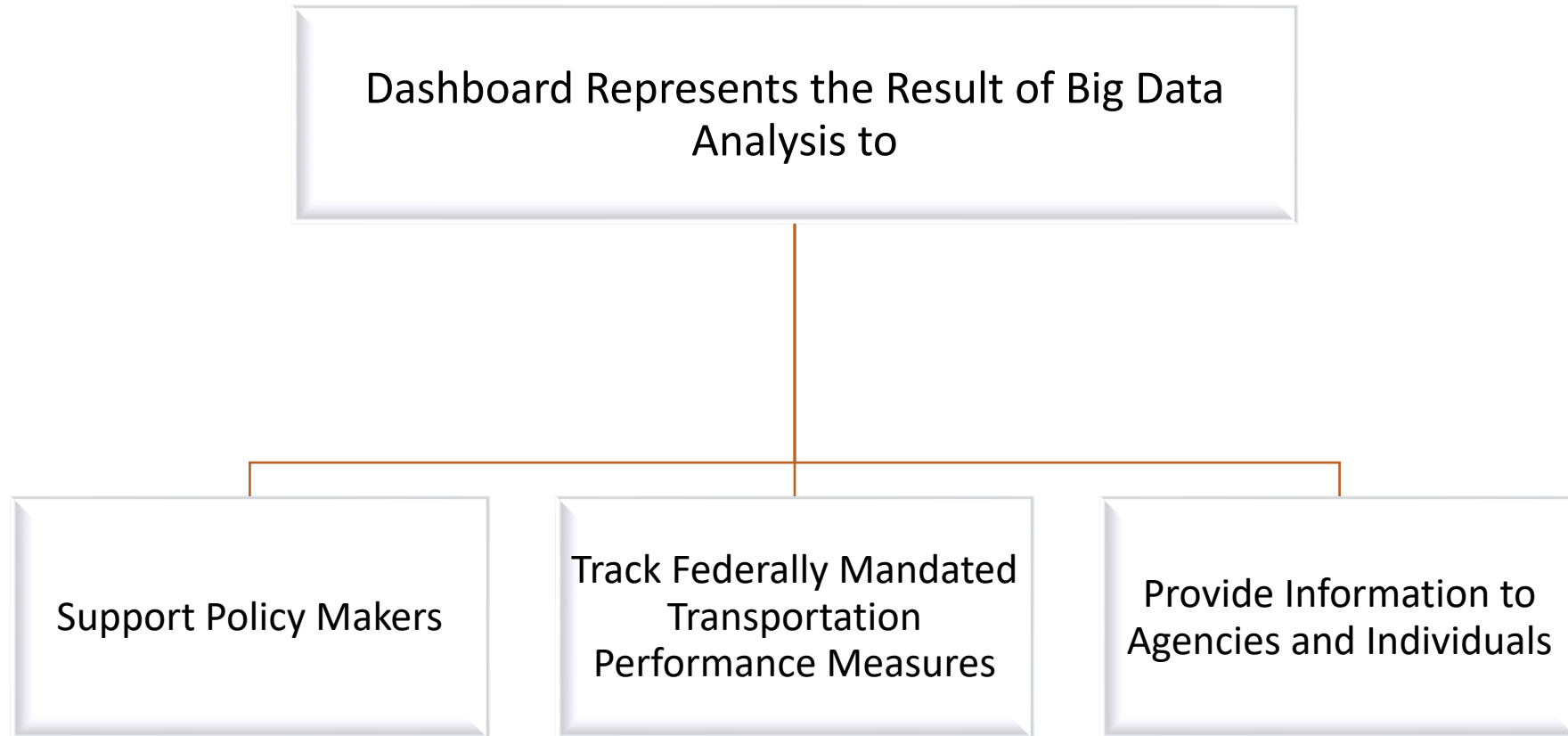
The necessity of creating performance measure webpage

- Transportation Performance Measure & Target is a metric to evaluate the performance of transportation systems at the federal level.

- Three measures mandated by the Federal Highway Administration (FHWA)
 - PM1: Safety
 - PM2: Asset Management
 - PM3: National Highway System Performance

- Two measures mandated by the Federal Transit Administration (FTA)
 - PM4: Transit Safety
 - PM5: Transit Asset Management

Dashboard Objectives



The Page Structure, Software

📊 The Outcome of Meetings and Discussions

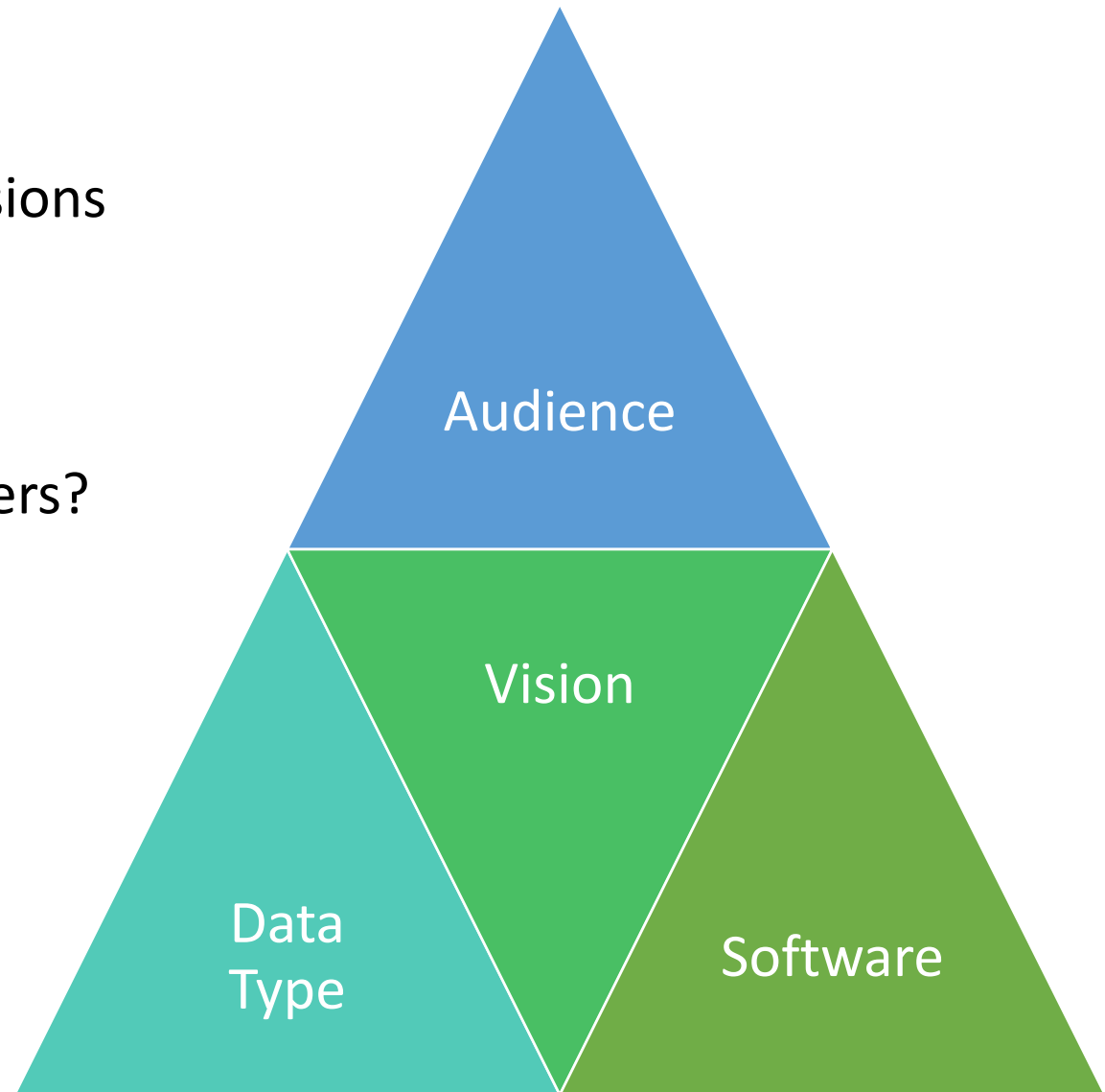
Who are the audience?

What insights it should provide to its users?

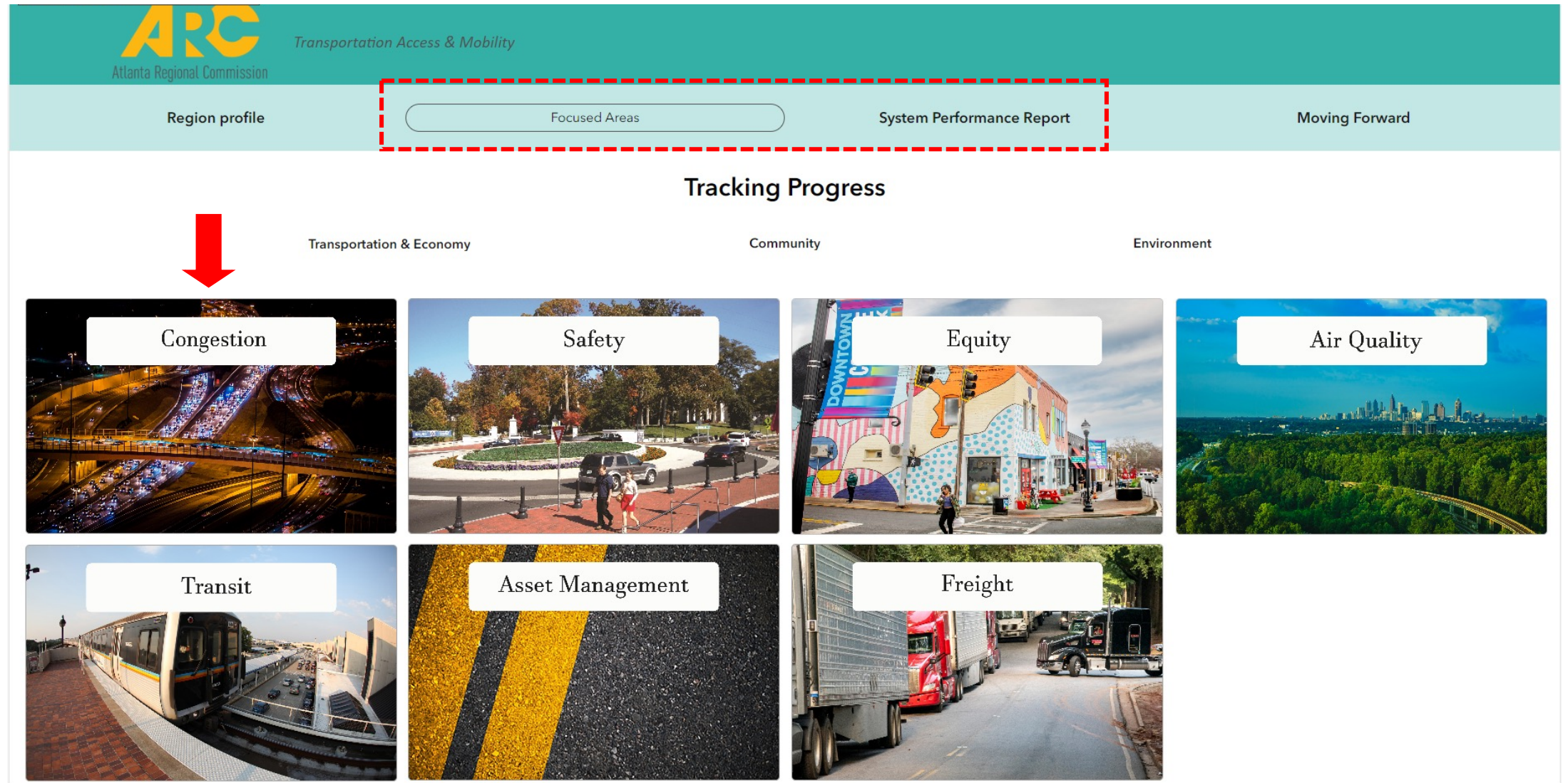
What type of data the group is using?

Which software?

- ▶ Tableau
- ▶ PowerBI
- ▶ Shiny RStudio
- ▶ Exb



[Transportation Dashboard - ARC \(atlantaregional.org\)](http://atlantaregional.org)



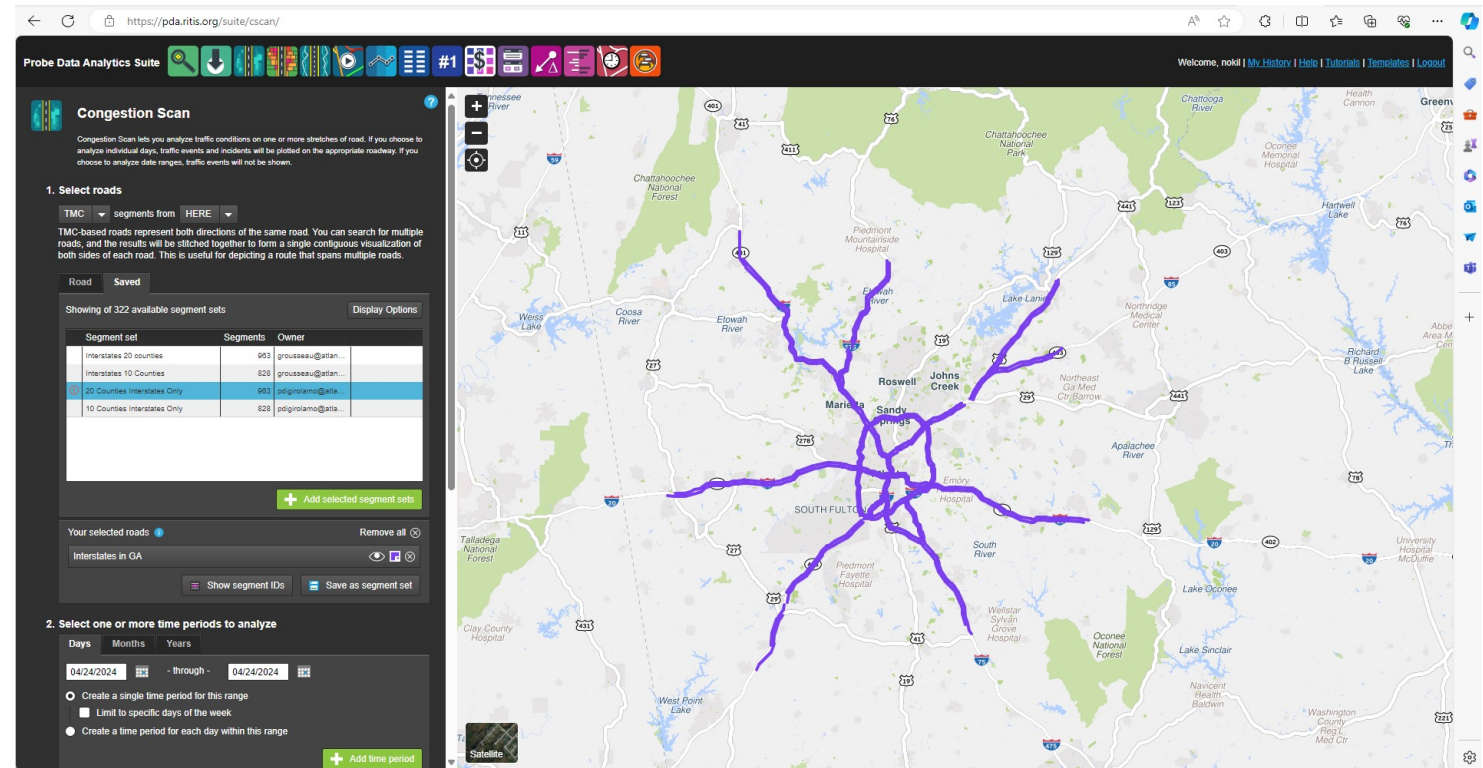
Vision for Congestion Management

- Represent congested routes within the Atlanta Region
- Evaluate safety, equity and air quality in each route
- Illustrate the changes in trip travel time and distance across the region before and after the pandemic
- Connect individual corridor report to our online platform



Dataset for Congestion Management

- INRIX
- Numetrics
- American Community Survey (ACS)
- Visum Model Output



 [Transportation Dashboard - ARC \(atlantaregional.org\)](https://atlantaregional.org/transportation-dashboard)

 Email: nrezvanpour@atlantaregional.org