The Eastern Transportation Coalition
RITIS Workshop: Understanding O-D Data – April 8, 2022
Question and Answer Summary

Note: Results from polling questions asked during this workshop are at the bottom of the document.

Q1: **Keith Miller (NJTPA):** Can you list which states have currently purchased O-D data that's available through the RITIS tool? Which states are contributing to the pooled fund?

A: Michael Pack (University of Maryland CATT Lab): Sixteen US states have some form of O-D data in our tools today with a handful of others on the way. However, that number doesn't include non-US agencies funding our tools (Canadian, UK, etc.) and NHTS pooled-fund states who also have access to a version of what you're seeing today, but on a different geographic scale. There are several pooled funds to keep track of. If you have further questions, please send an email to support@ritis.org.

Q2: **Sooraz Patro (Baton Rouge MPO):** Can you tell us who has purchased the O-D data available through the RITIS tool? I am from Baton Rouge MPO and believe Louisiana DOTD is vested in RITIS. BR MPO and Capital Regional Planning Commission are interested in the Trip Analytics module.

A: Greg Jordan (University of Maryland CATT Lab): LADOTD is not yet sponsoring the Trip Analytics module (although it is sponsoring many of the other suites). However, Rick is collecting the names of users and agencies who are interested in non-sponsoring states, so the DOT is more likely to sign on.

Q3: **Alan Warde (NYSDOT):** Does the vehicle type in the O-D tool include a separate Electric Vehicle category?

A: Michael Pack (University of Maryland CATT Lab): It depends on the data provider. Each provider gives us different classifications of vehicles. The one we are showing here does not provide an electric vehicle category, but others might.

Q4: **Michael Iacono (Minnesota DOT):** Is the O-D data derived from the NHTS anonymized when it is aggregated up to the zone level, or is it possible to retain the traveler and household characteristics?

A: Greg Jordan (University of Maryland CATT Lab): My understanding is that demographic characteristics (like income level) are based on zone statistics and not individual users.

Note: **Josh O'Neill (Rhode Island MPO):** Happy to see our maps again! We conducted a Truck Study of our Port of Providence a year after this analysis that confirmed some of the O-D information we saw in our initial mapping using the INRIX O-D data. The O-D data can be used to help identify areas for potential freight priority projects that could be included in a state freight plan update. Although we haven't necessarily done that here in Rhode Island, I can see where the data could play a useful role in helping to shape priority project selection.

Q5: **Alex Oberg (USDOT):** Does USDOT have access to any of Trip Analytics via FHWA?

A: Michael Pack (University of Maryland CATT Lab): Partially - USDOT is funding the integration of basic O-D data integration into Trips Analytics through the next-gen NHTS project. It's high-level O-D data only. The more fine-grained data that is being presented in the use-cases have been funded by state and local DOTs who are buying data directly from vendors. There are data use agreements that agencies have to sign when they buy data from different vendors (INRIX, Wejo, Geotab, etc.). To our knowledge, FHWA has not partnered with any of the states that have bought data and FHWA has not yet signed the necessary DUAs. Call or write (support@ritis.org), and we'll figure out your specific access.

Q6: **Gil Grodzinsky (GA Environmental Protection):** In reference to freight data, what range of vehicles? Long haul combination trucks? Class 4 or heavier?

A: Greg Jordan (University of Maryland CATT Lab): These are the weight ranges used by INRIX to classify vehicles:

1. Light Duty Truck/Passenger Vehicles: Ranges from 0 to 14,000 lb.
2. Medium Duty Trucks/Vans: Ranges from 14,000 - 26,000 lb.
3. Heavy Duty Trucks: Greater than 26,000 lb.

Q7: **John Arrieta (Colliers Engineering & Design):** Do you have an example of O-D between three interchanges? Do you have an example of O-D within one interchange, along with the arterial a couple of intersections away from the interchange in each direction? Is the application micro-level enough to do these scenarios?

A: Greg Jordan (University of Maryland CATT Lab): Version 4 of the tool will support those applications. Users may load any appropriate study area.

Q8: **Gil Grodzinsky (GA Environmental Protection):** Please reiterate sources of vehicle type data for links. Are there vehicle type splits for each link or just ones that have vehicle type data?

A: Michael Pack (University of Maryland CATT Lab): The sources of the vehicle types vary by vendor. For the use-case being shown now in Memphis, this data came from INRIX. They have access to data from connected vehicles (passenger vehicle locations directly from OEMs and Wejo), plus they have telematics data from commercial vehicle fleets (drayage, long-haul, etc.) We don't claim to know exactly how they figure out which is which. Sending a question directly to them would be better. But we know that each vehicle can be tracked individually between each link. So, you can get down to see *raw* data if that's what you desire or need.

Q9: **Tom Sills (Bartow County, GA):** Does using the data purchased by Georgia allow me access to the data outputs from other states in RITIS? What about non-RITIS locations? For example, can I map trip frequencies from Atlanta to Chicago?

A: Greg Jordan (University of Maryland CATT Lab): When a state sponsors a region (like Georgia), the INRIX dataset provides the entire pathway of all trips in the INRIX nationwide database that "touched" Georgia. Therefore, as long as one region is inside Georgia (like Atlanta), then all trips in the dataset to places outside Georgia can be analyzed.

Q10: **Amy Zhou (Wayne State University):** Will the number of lanes for each approach be offered in the route analysis attribute table?

A: Michael Pack (University of Maryland CATT Lab): I don't think we know the number of lanes from the data provided right now. If that becomes available in the future, we could certainly add it.

Q11: **Hari Mk (University of Texas at San Antonio):** All the trips shown here are only one-directional (Knoxville to Ashville). Does the data also include the reverse direction (Ashville to Knoxville) trips?

A: Michael Pack (University of Maryland CATT Lab): This query only shows Knoxville to Asheville. However, you could reverse the query to see the opposite.

Q12: **Zhang Huang (Atkins):** Does the "origin" polygon include only the trips starting there or includes trips that also pass through it? Same with the "destination" polygon.

A: Greg Jordan (University of Maryland CATT Lab): Pass-through filtering is an important addition to Trip Analytics for Version 4 of the tool. It is not included in V3, where the origins and destinations are based only on where trips started or ended.

Q13: **Ira Levinton (New Jersey DOT):** For these areas, where the bridges get closed, are the number of trips crossing through the screenlined area reduced as longer distance trips would completely bypass the area going through different metro areas and/or states? An example could be trips from Texas to east coast states that could avoid traveling in the affected corridor.

A: Greg Jordan (University of Maryland CATT Lab): The user gets to decide where to place the screen-line — it will always add to 100%. An analysis of the full impacts does require less-granular analyses as well as volume collection at key points.

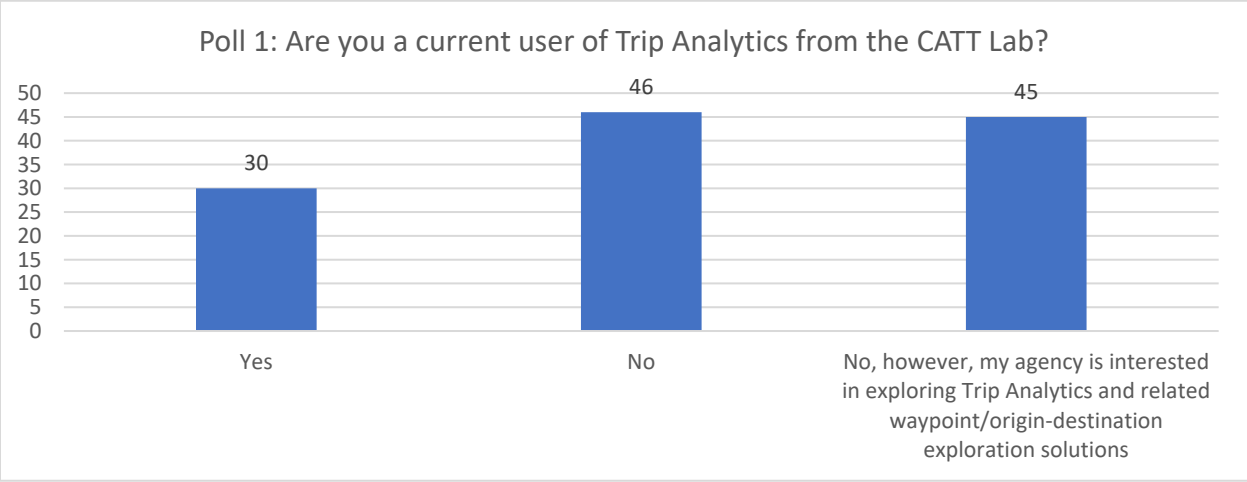
A: Michael Pack (University of Maryland CATT Lab): You would have to expand the search area to include those additional metro areas to see if long-distance trips completely bypassed the area on an ultra-long detour. That type of analysis is doable. However, keep in mind that you'll only have access to data from the region that you purchased. In the example presented, he was analyzing a data set from the state of Tennessee. This dataset includes trips that touched TN during a part of their trip. If you wanted to analyze trips that completely bypassed the entire state of TN, you'd need a larger dataset.

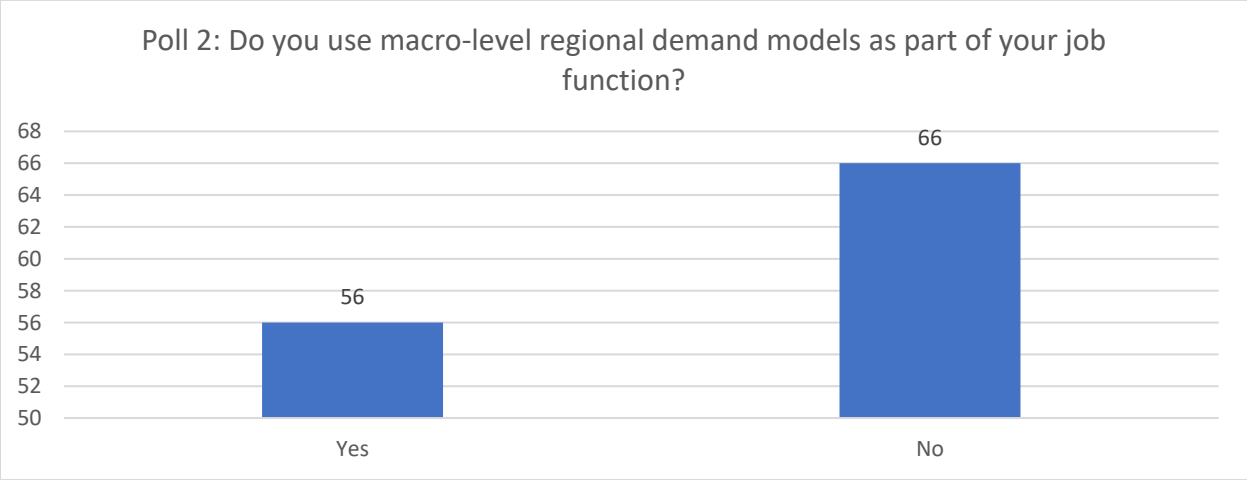
Note: Keith Miller (NJTPA): Also remember that this isn't a count of *all* trips, only those that are in the probe dataset.

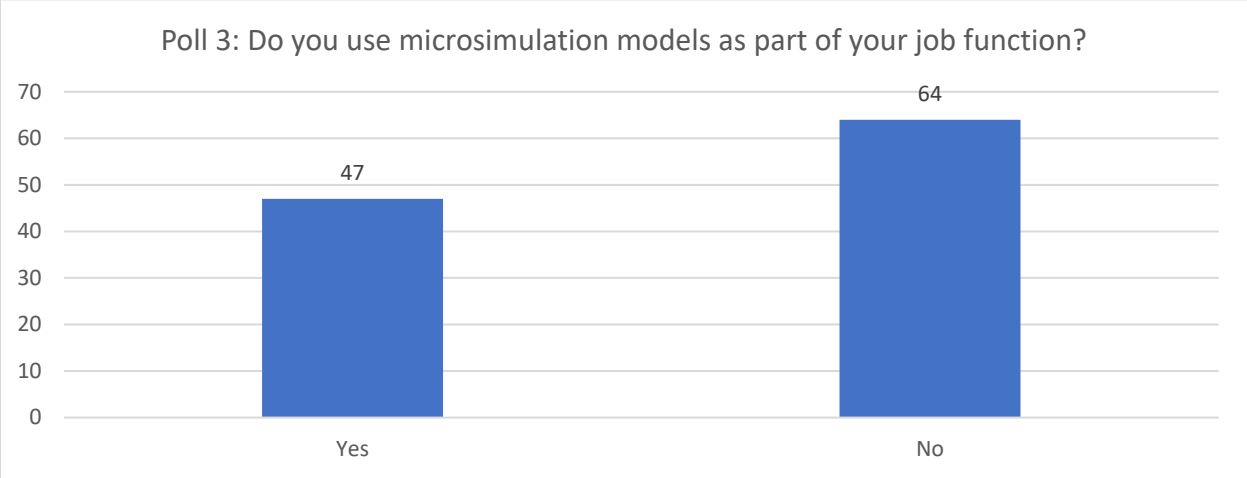
Note: Ira Levinton (New Jersey DOT): Some trips can instead go through other states avoiding using US 40 through Tennessee. These trips would not show up on these screenlines.

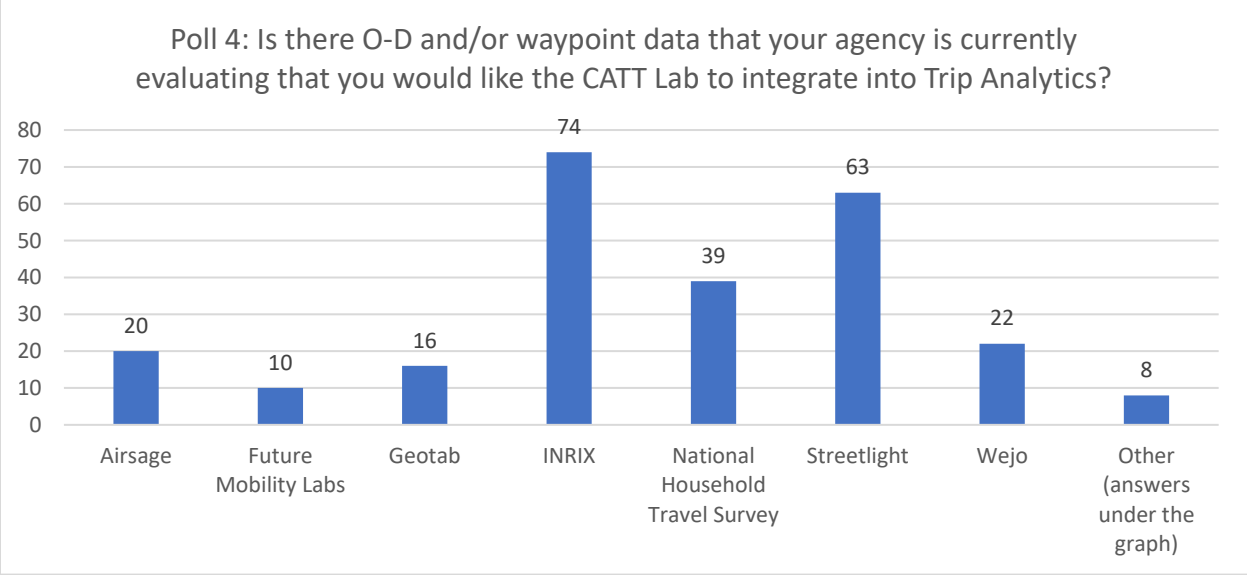
Q14: **Keith Miller (NJTPA):** How long did it take Greg to do that analysis?

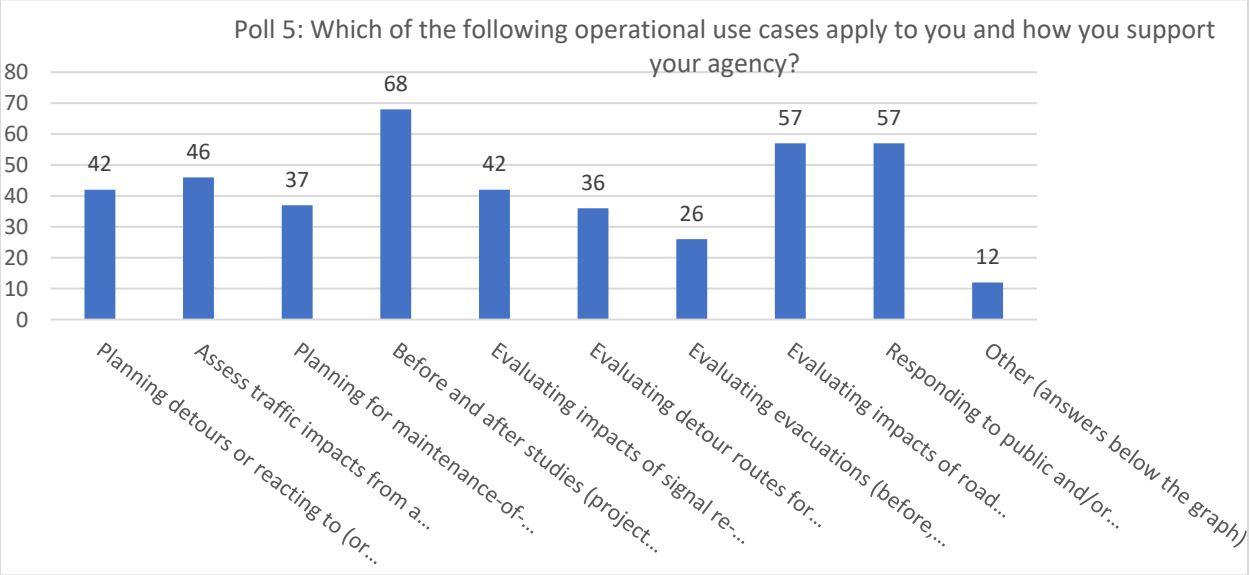
A: Michael Pack (University of Maryland CATT Lab): Setting up the query, like setting up the lines and input, only takes a few minutes after you've thought about what you want to ask. As for results – it wholly depends on the date range and other query parameters. If you're looking at a day or a week's worth of data that'll be a faster query than three years of data, which can have millions of trips. Some of the longer queries may take a few hours to complete – you can hit submit and go get lunch and when you come back it'll be done in most cases.

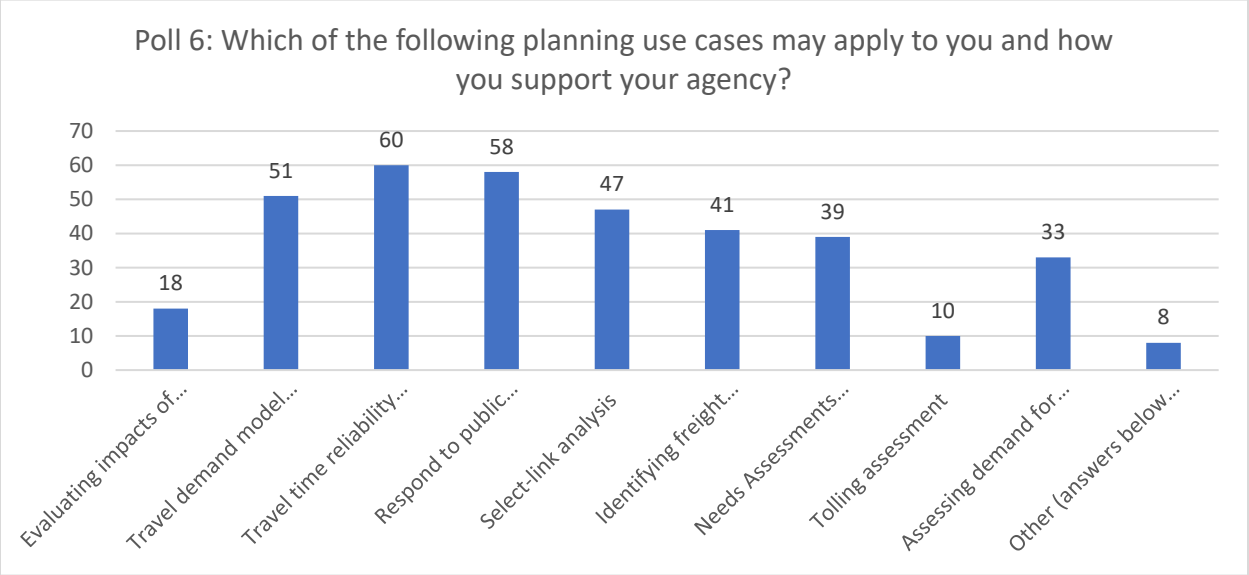


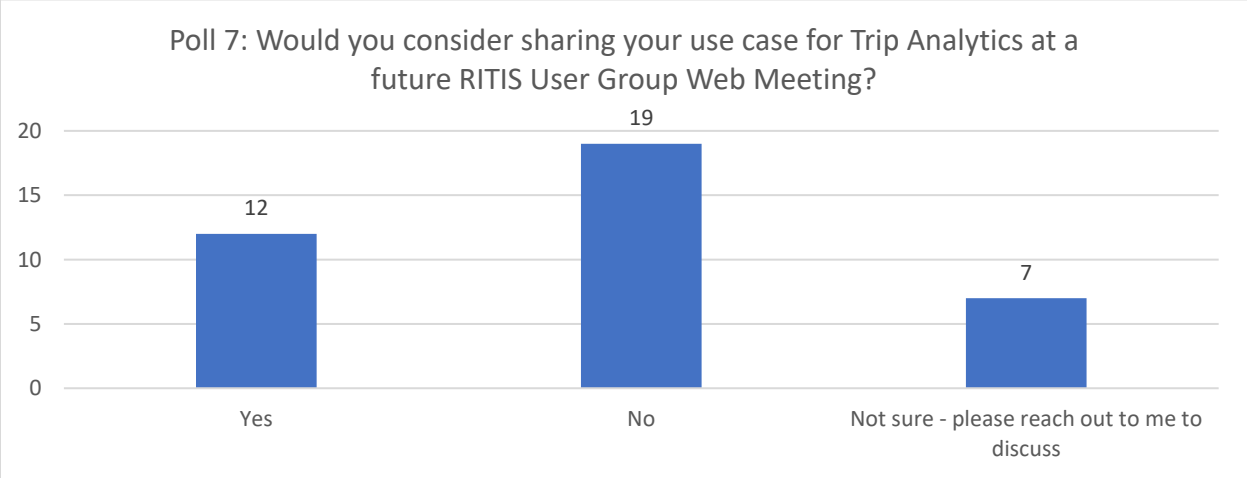


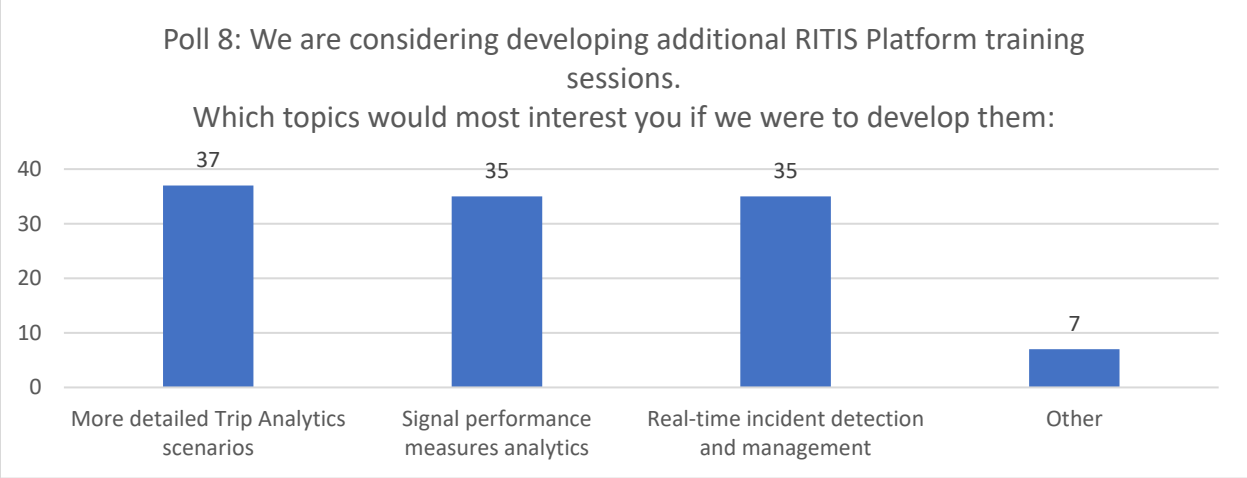

Poll 3: Do you use microsimulation models as part of your job function?
70
60
50
40
30
20
10
0
47
64
Yes
No

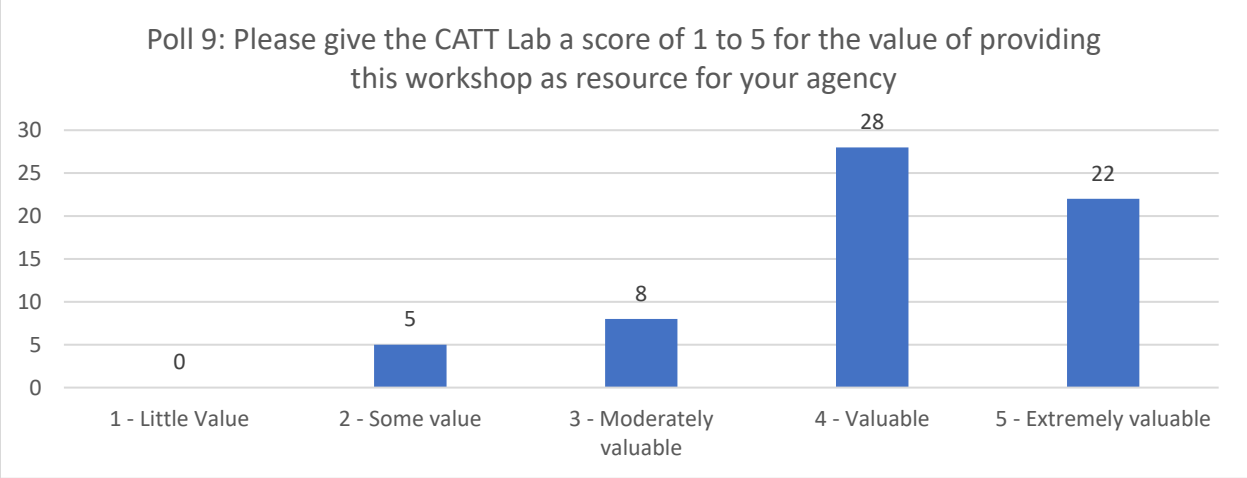

Poll 4: Is there O-D and/or waypoint data that your agency is currently evaluating that you would like the CATT Lab to integrate into Trip Analytics?
80
70
60
50
40
30
20
10
0
20
10
16
74
39
63
22
8
Airsage
Future Mobility Labs
Geotab
INRIX
National Household Travel Survey
Streetlight
Wejo
Other (answers under the graph)


Poll 5: Which of the following operational use cases apply to you and how you support your agency?
80
70
60
50
40
30
20
10
0
42
46
37
68
42
36
26
57
57
12
Planning detours or reacting to (or...
Assess traffic impacts from a...
Planning for maintenance-of-...
Before and after studies (project...
Evaluating impacts of signal re-...
Evaluating detour routes for...
Evaluating evacuations (before,...
Evaluating impacts of road...
Responding to public and/or...
Other (answers below the graph)


Poll 6: Which of the following planning use cases may apply to you and how you support your agency?
70
60
50
40
30
20
10
0
18
51
60
58
47
41
39
10
33
8
Evaluating impacts of...
Travel demand model...
Travel time reliability...
Respond to public...
Select-link analysis
Identifying freight...
Needs Assessments...
Tolling assessment
Assessing demand for...
Other (answers below...


Poll 7: Would you consider sharing your use case for Trip Analytics at a future RITIS User Group Web Meeting?
20
15
10
5
0
12
19
7
Yes
No
Not sure - please reach out to me to discuss


Poll 8: We are considering developing additional RITIS Platform training sessions.
Which topics would most interest you if we were to develop them:
40
30
20
10
0
37
35
35
7
More detailed Trip Analytics scenarios
Signal performance measures analytics
Real-time incident detection and management
Other


Poll 9: Please give the CATT Lab a score of 1 to 5 for the value of providing this workshop as resource for your agency
30
25
20
15
10
5
0
0
5
8
28
22
1 - Little Value
2 - Some value
3 - Moderately valuable
4 - Valuable
5 - Extremely valuable