CATT LABORATORY

RITIS User Group

Web Meeting | October 1, 2020

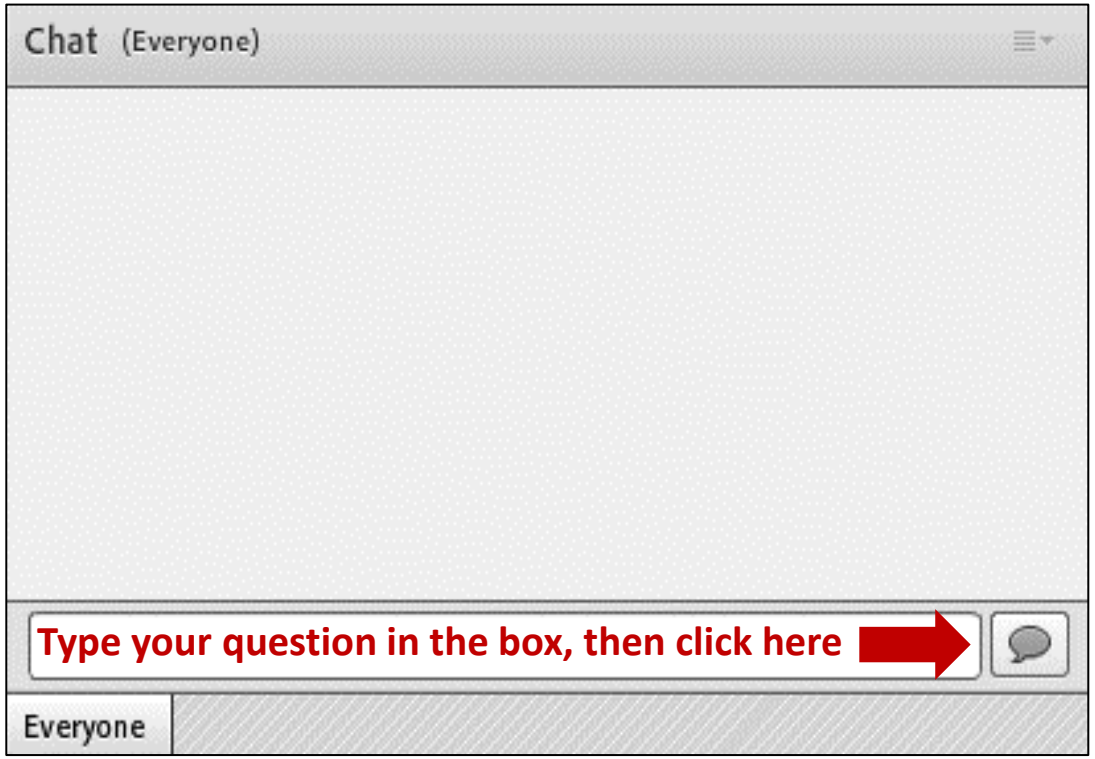
In collaboration with THE EASTERN TRANSPORTATION COALITION

Web Meeting & Audio Information

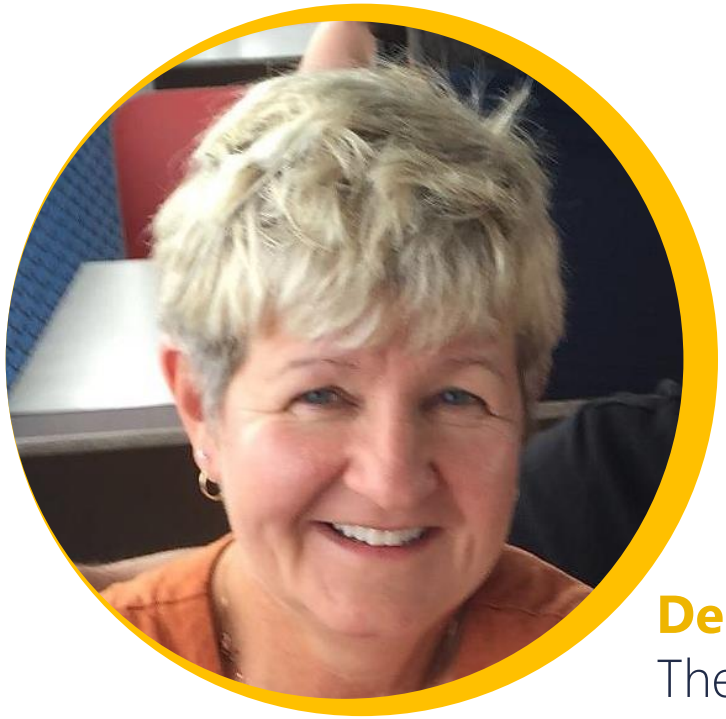
- Participants will be in “Listen Only” mode throughout the web meeting
- Please press *0 to speak to an operator for questions regarding audio
- Please call Justin for difficulties with the web or audio application
- **This web meeting will be recorded**

Asking Questions

- Please pose your questions using the **chat box**
- Questions will be monitored then answered by the speakers either at the end of the session or at the end of the web meeting



Coalition Update



THE EASTERN TRANSPORTATION COALITION

CONNECTING FOR SOLUTIONS

Denise Markow
The Eastern Transportation Coalition
TSMO Director

Coalition Update

RECENT

- ✓ VPP State Point of Contact Semi-Annual Meeting - August 19, 2020
- ✓ VPP III RFP Meetings (Overview & Dataset Review) - August 19, 20, and 26, 2020
- ✓ TSMO Performance Measures Web Meeting - August 27, 2020
- ✓ COVID-19 Discussion: TSMO & Freight Issues - September 22, 2020
- ✓ Webinar: Communicating CAV for DOTs: Public Perception, Awareness, and Education - September 24, 2020

UPCOMING

- ✓ Operations Academy - October 19 - 30, 2020
- ✓ COVID-19 Discussion: Road & Weather Issues - November 17, 2020
- ✓ State Traveler Information Corridor Roundtable - November 19, 2020
- ✓ TSMO Webinar: Monitoring Traffic - Available Options - December 10, 2020
- ✓ RITIS User Group Web Meeting - February 4, 2021

Welcome & Introductions

Jesse Buerk
Delaware Valley Regional Planning Commission
User Group Co-chair

Today's Meeting

Spotlight Presentation: RITIS Leveraged for Maryland DOT's Common Operating Picture	Jason Dicembre, Maryland DOT - SHA
Results from the Feature Ranking & Prioritization on Data Tools	Michael Pack, UMD CATT Lab
Working Group Updates	John Allen, UMD CATT Lab
RITIS & PDA Suite Updates	Michael Pack, UMD CATT Lab
Agency Input Session	Michael Pack, UMD CATT Lab

Today's Speakers

Michael Pack
UMD CATT Lab
Director

Jason Dicembre
Operations, Maryland DOT – SHA
Division Chief – TMC

John Allen
UMD CATT Lab
Faculty Assistant, Outreach & Education

Meeting Participants

Agencies and Other Participants

AECOM	Florida DOT	KISNN Associates	Montachusett Regional Planning Commission	Pennsylvania Turnpike Commission	Texas AM Trans Inst.
Arizona DOT	Florida DOT (HNTB)	Knoxville Regional TPO	Montgomery County DOT	Piedmont Authority for Regional Transportation	Texas DOT (SwRI)
Athey Creek Consultants	Florida DOT (RK&K)	Loudoun County	MWCOG	Prince George's County Government	University of Maryland
Atkins Global	Florida's Turnpike Enterprise	Maricopa Association of Governments	New Hampshire DOT	Region 1 Planning Council	University of Maryland CATT Lab
Atlanta Regional Commission	Gannett Fleming	Maryland DOT	New Jersey DOT	Rhode Island DOT	University of North Carolina at Chapel Hill
AutoReturn	Georgia DOT	Maryland DOT - SHA	New Jersey Sports and Exposition Authority	Rhode Island Statewide Planning	US DOT / FHWA
Baltimore Metropolitan Council	Georgia DOT (CHA)	Maryland Motor Vehicle Administration	New York City DOT	Richmond Regional Planning Agency	Vermont AOT
CAMPO (Raleigh)	Georgia Office of Planning (RS&H)	Maryland State Police	New York State DOT	Regional Transportation Commission - Washoe	VHB
Central Massachusetts Regional Planning Commission	GEWI North America	Massachusetts Bay Transportation Authority	New York State Thruway Authority	Sacramento Area Council of Governments	Virginia DOT
Central Shenandoah Planning District Commission	Grand Valley Metro Council	Massachusetts DOT	NJTPA	South Carolina DOT	Virginia DOT/Virginia Transportation Research Council
Central Texas Regional Mobility Authority	Howard County Police Department	Memphis MPO	North Carolina DOT	South Carolina DOT (DADN Associates)	Virginia Office of Intermodal Planning and Investment
Chattanooga-Hamilton County/ North Georgia TPO	Illinois DOT	Metropolitan Transportation Commission	Northern Virginia Transportation Authority	South Jersey Transportation Planning Organization	Waycare Technologies
City of Charlotte, NC	IMCAL	Metropolitan Washington Airports Authority	Ohio DOT	Southwestern Pennsylvania Commission	Western Upper Peninsula Planning
City of Franklin, TN	INRIX	Michigan DOT	Oregon DOT	State of Rhode Island - Division of Planning	York County Planning Commission
District DOT	Kimley-Horn	Middlesex County, NJ	Pennsylvania DOT	SwRI	
DVRPC	Kingsport Metro TPO	Missouri DOT	Pennsylvania DOT (Pennoni)	Tennessee DOT	

Spotlight Presentation: RITIS Leveraged for MDOT's Common Operating Picture

Jason Dicembre

Operations, Maryland DOT – SHA

Division Chief – TMC

MARYLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ADMINISTRATION

RITIS Leveraged for MDOT's Common Operating Picture

Jason Dicembre

The Eastern Transportation Coalition - RITIS User Group Web Meeting
October 1, 2020

#1 – Provide Exceptional Customer Service

#2 – Use Resources Wisely

#3 – Provide a Safe & Secure Transportation Infrastructure

#4 – Deliver Transportation Solutions & Services of Great Value

#5 – Provide an Efficient, Well Connected Transportation Experience

5.2 – Restoring Transportation Services

#6 – Communicate Effectively With Our Customers

#7 – Be Fair and Reasonable to our Partners

#8 – Be a Good Neighbor

#9 – Be a Good Steward of Our Environment

#10 – Facilitate Economic Opportunity in Maryland

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION

EXCELLERATOR

Performance Management System

5.2 - RESTORING TRANSPORTATION SERVICES

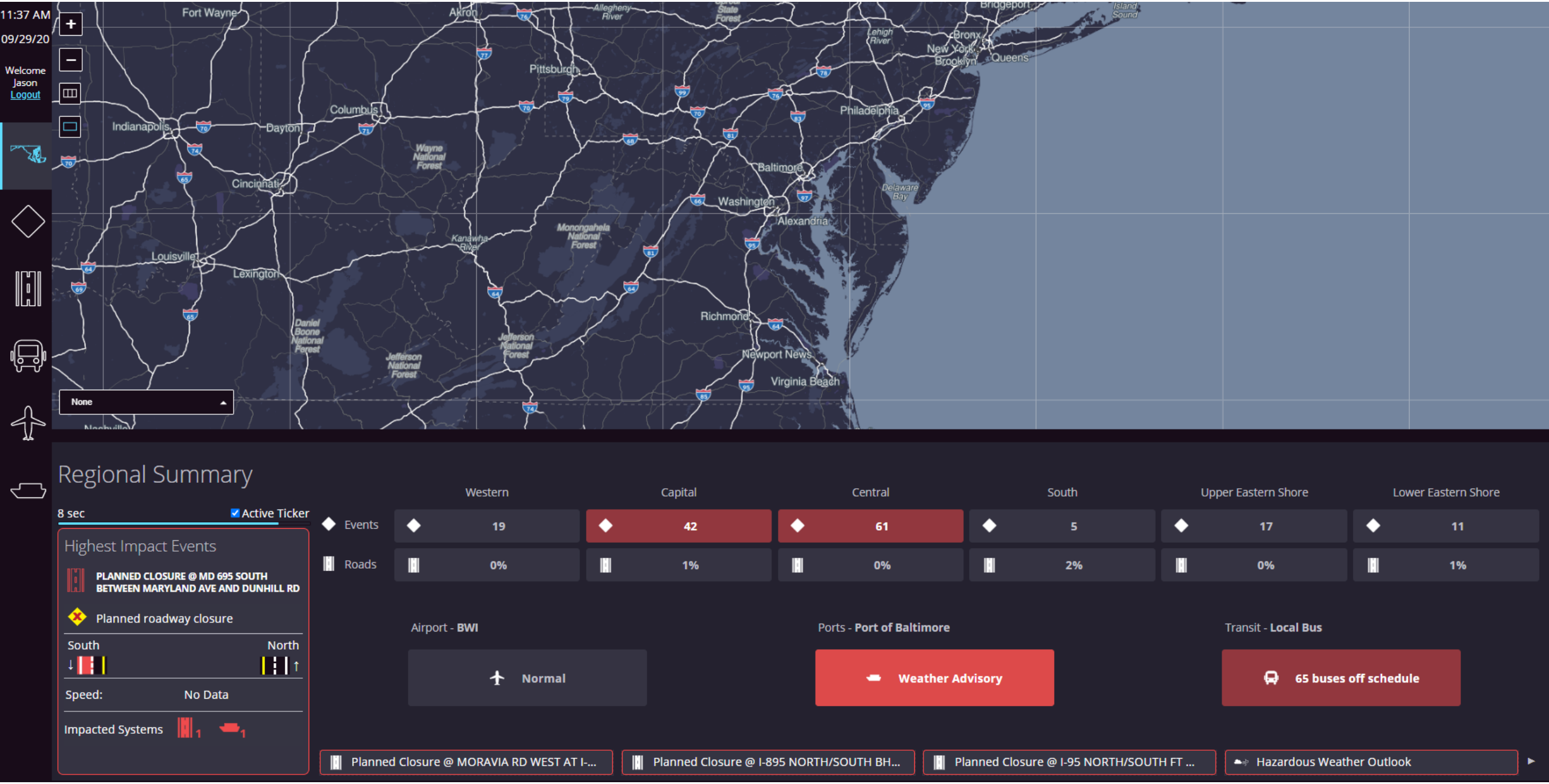
- 5.2a – Time to Restore Normal Operations After Disruptions
  - Used data from MDOT SHA CHART's Advanced Traffic Management System to calculate event and lane closure duration averages. Final number came from CHART's annual evaluation by UMD

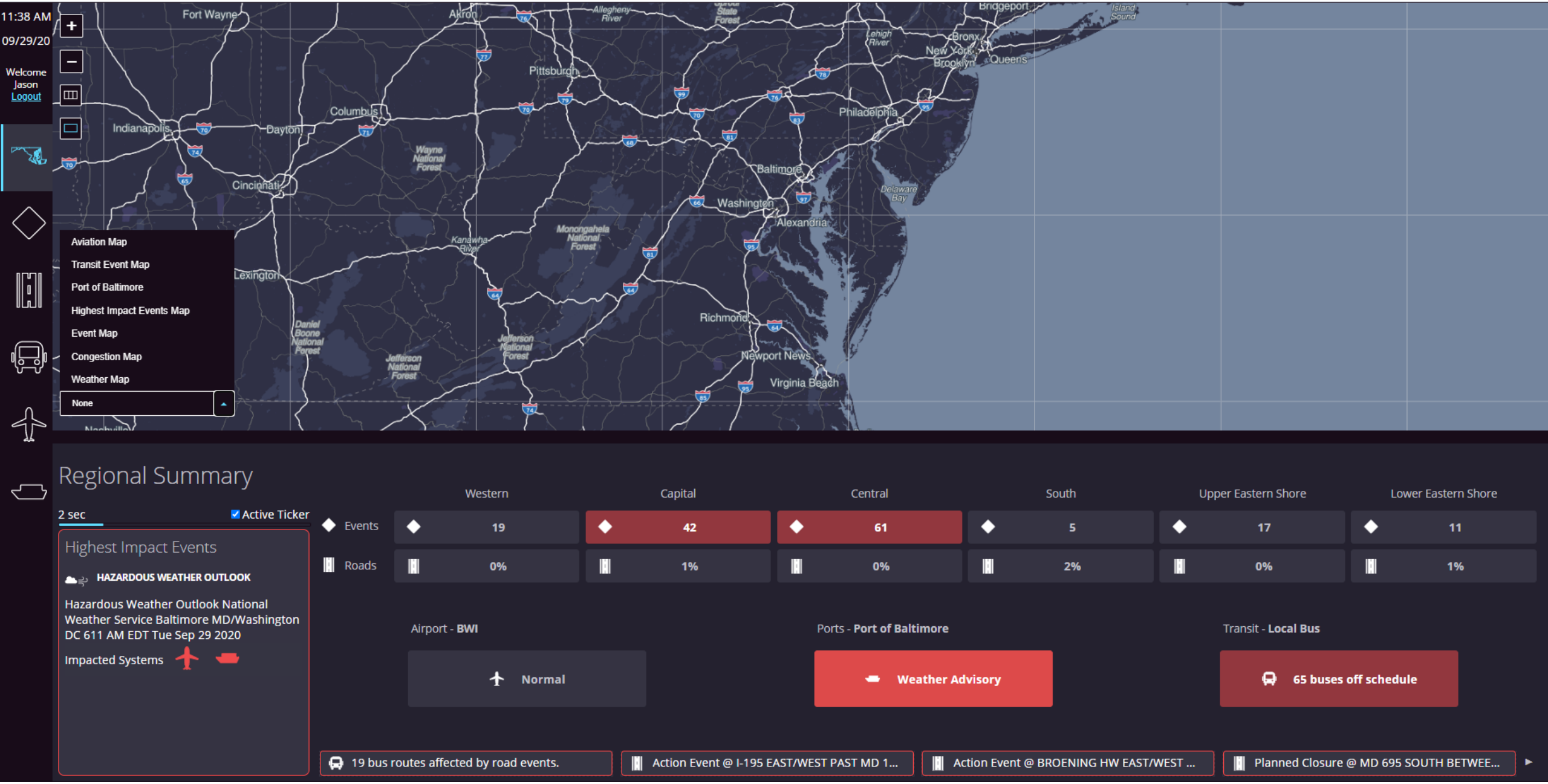
- 5.2b – Time to Restore Normal Operations After a Weather Event
  - Used data from MDOT SHA's Emergency Operations Reporting System to judge the time to reach bare pavement for storms under 8"

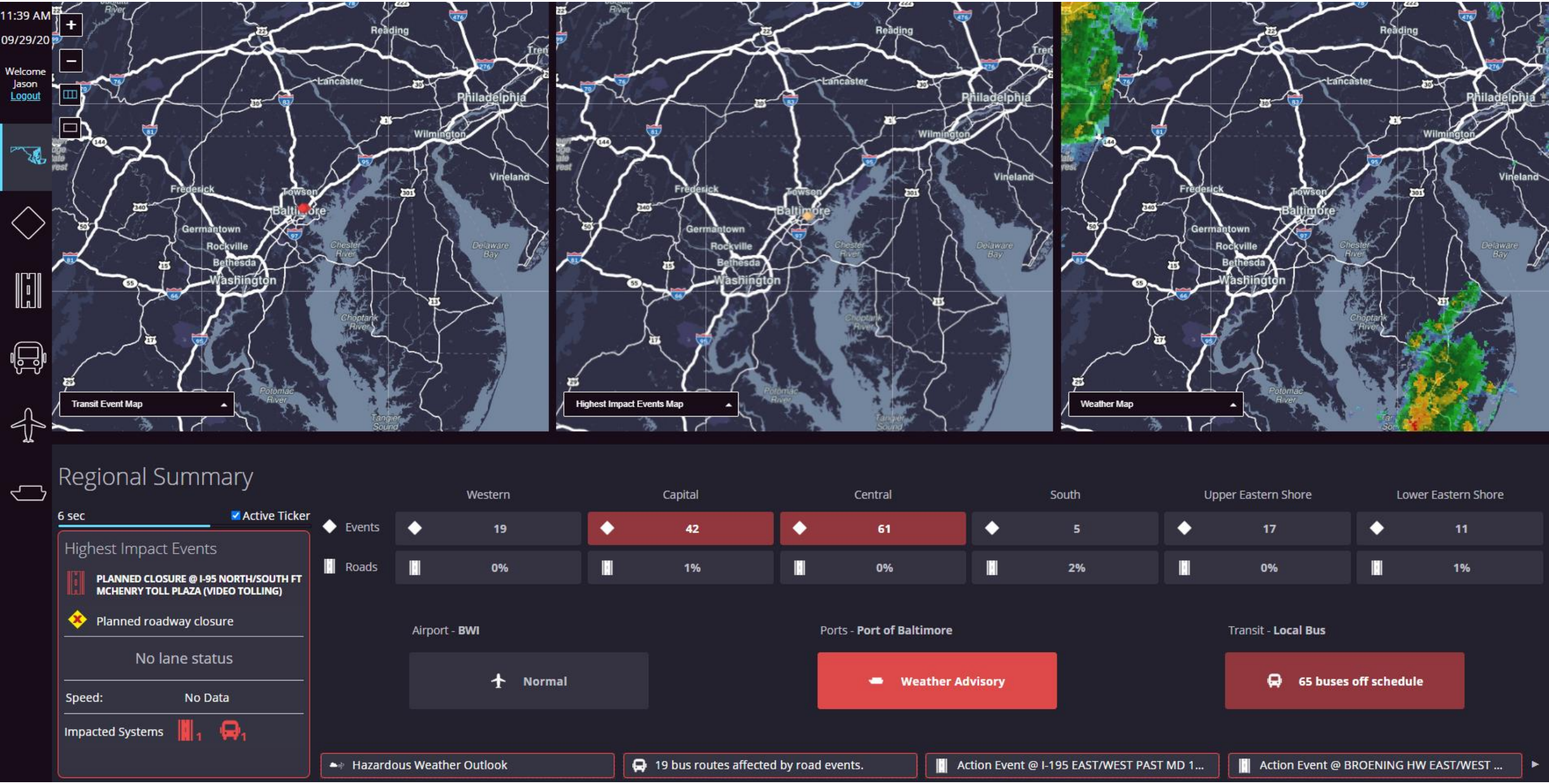
The problem?

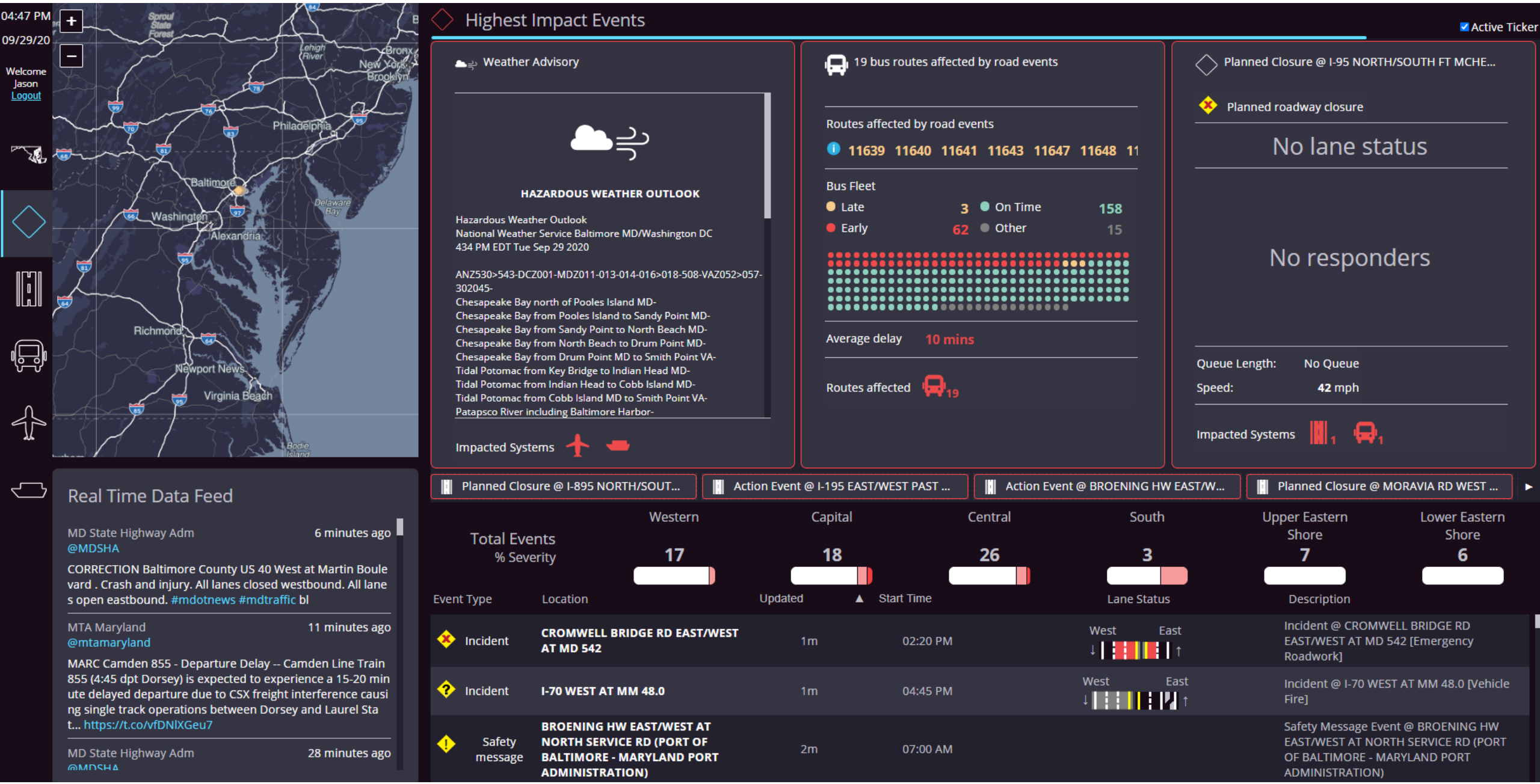
- Both metrics were focused almost solely on highway operations data
- Both metrics didn't show us what was wrong now or how it connected across business units

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION


11:37 AM
09/29/20
Welcome Jason
Logout
Fort Wayne
Akron
Pittsburgh
Columbus
Indianapolis
Dayton
Cincinnati
Louisville
Lexington
Philadelphia
Baltimore
Washington
Alexandria
Richmond
Newport News
Virginia Beach
Bridgeport
Bronx
New York
Brooklyn
Queens
Island Sound
Wayne National Forest
Monongahela National Forest
Jefferson National Forest
Daniel Boone National Forest
Delaware Bay
None
Regional Summary
8 sec
Active Ticker
Highest Impact Events
PLANNED CLOSURE @ MD 695 SOUTH BETWEEN MARYLAND AVE AND DUNHILL RD
Planned roadway closure
South
North
Speed:
No Data
Impacted Systems
Western
Capital
Central
South
Upper Eastern Shore
Lower Eastern Shore
Events
19
42
61
5
17
11
Roads
0%
1%
0%
2%
0%
1%
Airport - BWI
Normal
Ports - Port of Baltimore
Weather Advisory
Transit - Local Bus
65 buses off schedule
Planned Closure @ MORAVIA RD WEST AT I-...
Planned Closure @ I-895 NORTH/SOUTH BH...
Planned Closure @ I-95 NORTH/SOUTH FT ...
Hazardous Weather Outlook

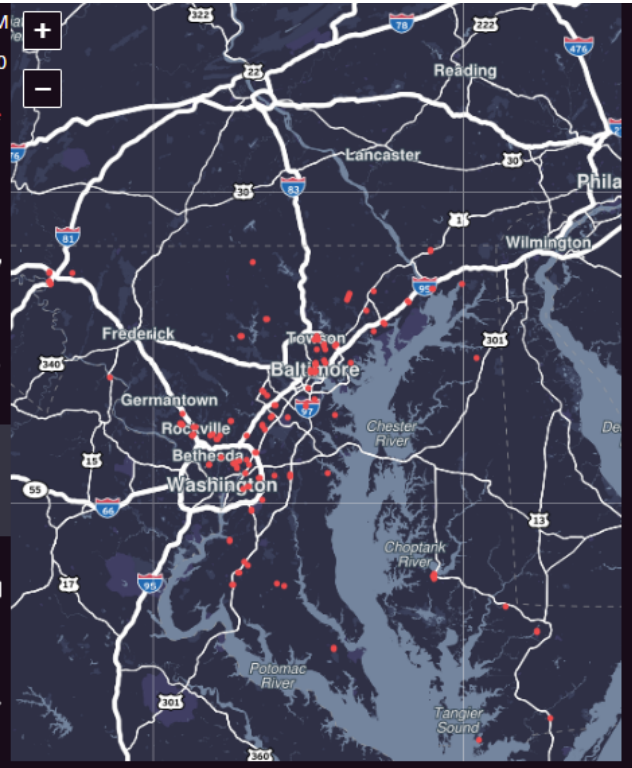

11:38 AM
09/29/20
Welcome Jason
Logout
Aviation Map
Transit Event Map
Port of Baltimore
Highest Impact Events Map
Event Map
Congestion Map
Weather Map
None
Regional Summary
2 sec
Active Ticker
Highest Impact Events
HAZARDOUS WEATHER OUTLOOK
Hazardous Weather Outlook National Weather Service Baltimore MD/Washington DC 611 AM EDT Tue Sep 29 2020
Impacted Systems
Western
Capital
Central
South
Upper Eastern Shore
Lower Eastern Shore
Events
19
42
61
5
17
11
Roads
0%
1%
0%
2%
0%
1%
Airport - BWI
Normal
Ports - Port of Baltimore
Weather Advisory
Transit - Local Bus
65 buses off schedule
19 bus routes affected by road events.
Action Event @ I-195 EAST/WEST PAST MD 1...
Action Event @ BROENING HW EAST/WEST ...
Planned Closure @ MD 695 SOUTH BETWEE...


11:39 AM
09/29/20
Welcome Jason
Logout
Transit Event Map
Highest Impact Events Map
Weather Map
Regional Summary
6 sec
Active Ticker
Highest Impact Events
PLANNED CLOSURE @ I-95 NORTH/SOUTH FT MCHENRY TOLL PLAZA (VIDEO TOLLING)
Planned roadway closure
No lane status
Speed: No Data
Impacted Systems
Western
Capital
Central
South
Upper Eastern Shore
Lower Eastern Shore
Events 19 42 61 5 17 11
Roads 0% 1% 0% 2% 0% 1%
Airport - BWI
Normal
Ports - Port of Baltimore
Weather Advisory
Transit - Local Bus
65 buses off schedule
Hazardous Weather Outlook
19 bus routes affected by road events.
Action Event @ I-195 EAST/WEST PAST MD 1...
Action Event @ BROENING HW EAST/WEST ...


04:47 PM
09/29/20
Welcome Jason
Logout
Highest Impact Events
Active Ticker
Weather Advisory
HAZARDOUS WEATHER OUTLOOK
Hazardous Weather Outlook
National Weather Service Baltimore MD/Washington DC
434 PM EDT Tue Sep 29 2020
ANZ530>543-DCZ001-MDZ011-013-014-016>018-508-VAZ052>057-302045-
Chesapeake Bay north of Pooles Island MD-
Chesapeake Bay from Pooles Island to Sandy Point MD-
Chesapeake Bay from Sandy Point to North Beach MD-
Chesapeake Bay from North Beach to Drum Point MD-
Chesapeake Bay from Drum Point MD to Smith Point VA-
Tidal Potomac from Key Bridge to Indian Head MD-
Tidal Potomac from Indian Head to Cobb Island MD-
Tidal Potomac from Cobb Island MD to Smith Point VA-
Patapsco River including Baltimore Harbor-
Impacted Systems
19 bus routes affected by road events
Routes affected by road events
11639 11640 11641 11643 11647 11648 11
Bus Fleet
Late 3
Early 62
On Time 158
Other 15
Average delay 10 mins
Routes affected 19
Planned Closure @ I-95 NORTH/SOUTH FT MCHE...
Planned roadway closure
No lane status
No responders
Queue Length: No Queue
Speed: 42 mph
Impacted Systems
Philadelphia
Baltimore
Washington
Alexandria
Richmond
Newport News
Virginia Beach
Real Time Data Feed
MD State Highway Adm @MDSHA 6 minutes ago
CORRECTION Baltimore County US 40 West at Martin Boulevard . Crash and injury. All lanes closed westbound. All lanes open eastbound. #mdotnews #mdtraffic bl
MTA Maryland @mtamaryland 11 minutes ago
MARC Camden 855 - Departure Delay -- Camden Line Train 855 (4:45 dpt Dorsey) is expected to experience a 15-20 minute delayed departure due to CSX freight interference causing single track operations between Dorsey and Laurel Stat... https://t.co/vfDNlXGeu7
MD State Highway Adm @MDSHA 28 minutes ago
Planned Closure @ I-895 NORTH/SOUT...
Action Event @ I-195 EAST/WEST PAST ...
Action Event @ BROENING HW EAST/W...
Planned Closure @ MORAVIA RD WEST ...
Total Events
% Severity
Western 17
Capital 18
Central 26
South 3
Upper Eastern Shore 7
Lower Eastern Shore 6
Event Type
Location
Updated
Start Time
Lane Status
Description
Incident CROMWELL BRIDGE RD EAST/WEST AT MD 542 1m 02:20 PM West East Incident @ CROMWELL BRIDGE RD EAST/WEST AT MD 542 [Emergency Roadwork]
Incident I-70 WEST AT MM 48.0 1m 04:45 PM West East Incident @ I-70 WEST AT MM 48.0 [Vehicle Fire]
Safety message BROENING HW EAST/WEST AT NORTH SERVICE RD (PORT OF BALTIMORE - MARYLAND PORT ADMINISTRATION) 2m 07:00 AM Safety Message Event @ BROENING HW EAST/WEST AT NORTH SERVICE RD (PORT OF BALTIMORE - MARYLAND PORT ADMINISTRATION)

11:43 AM
09/29/20

Welcome Jason
Logout



Real Time Data Feed

MD State Highway Adm @MDSHA — about 1 hour ago

UPDATE: Anne Arundel County; utility problem on MD 794 n orth at Mt. Zion Road fixed. All lanes are now open. #MDTra ffic #mdotnews tr

MD State Highway Adm @MDSHA — about 2 hours ago

RT @mcfrsPIO: Ready, set....fire drill! @mcfrs Fire Chief Scott Goldstein is asking families to make sure your "home schoo l curriculum" @Mo...

MD State Highway Adm @MDSHA — about 2 hours ago

RT @TheMDTA: Work to result in weekend-long detour of S

Roads Experiencing Delay

MD-143 — Normal

Eastbound →

← Westbound

Comparative Speed
- 75% of average speed or more
- Between 55% and 75% of the average speed
- Between 25% and 55% of the average speed
- 25% of average speed or less

No Data

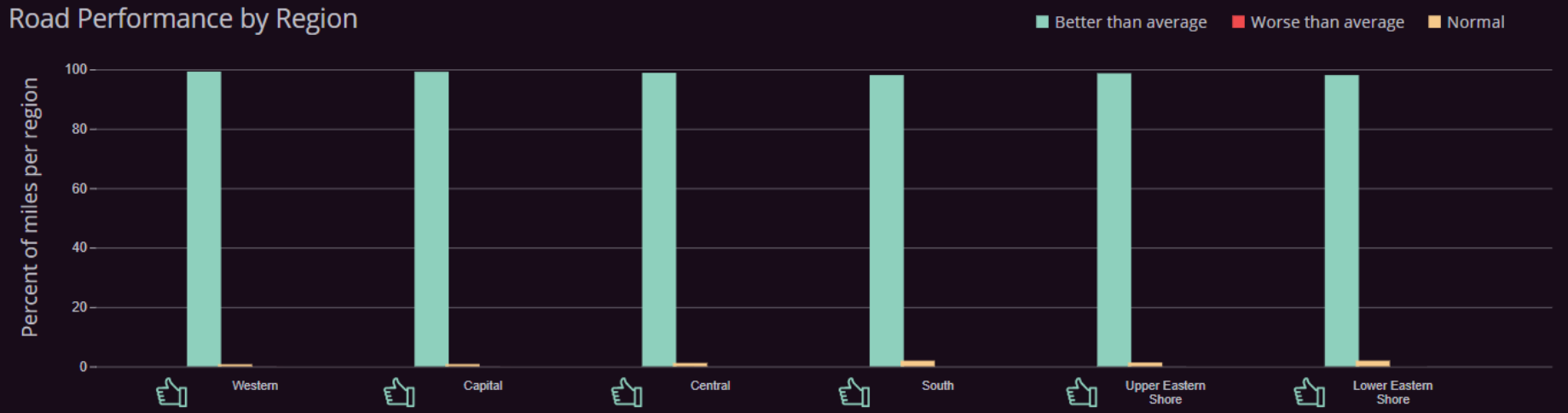
No Data

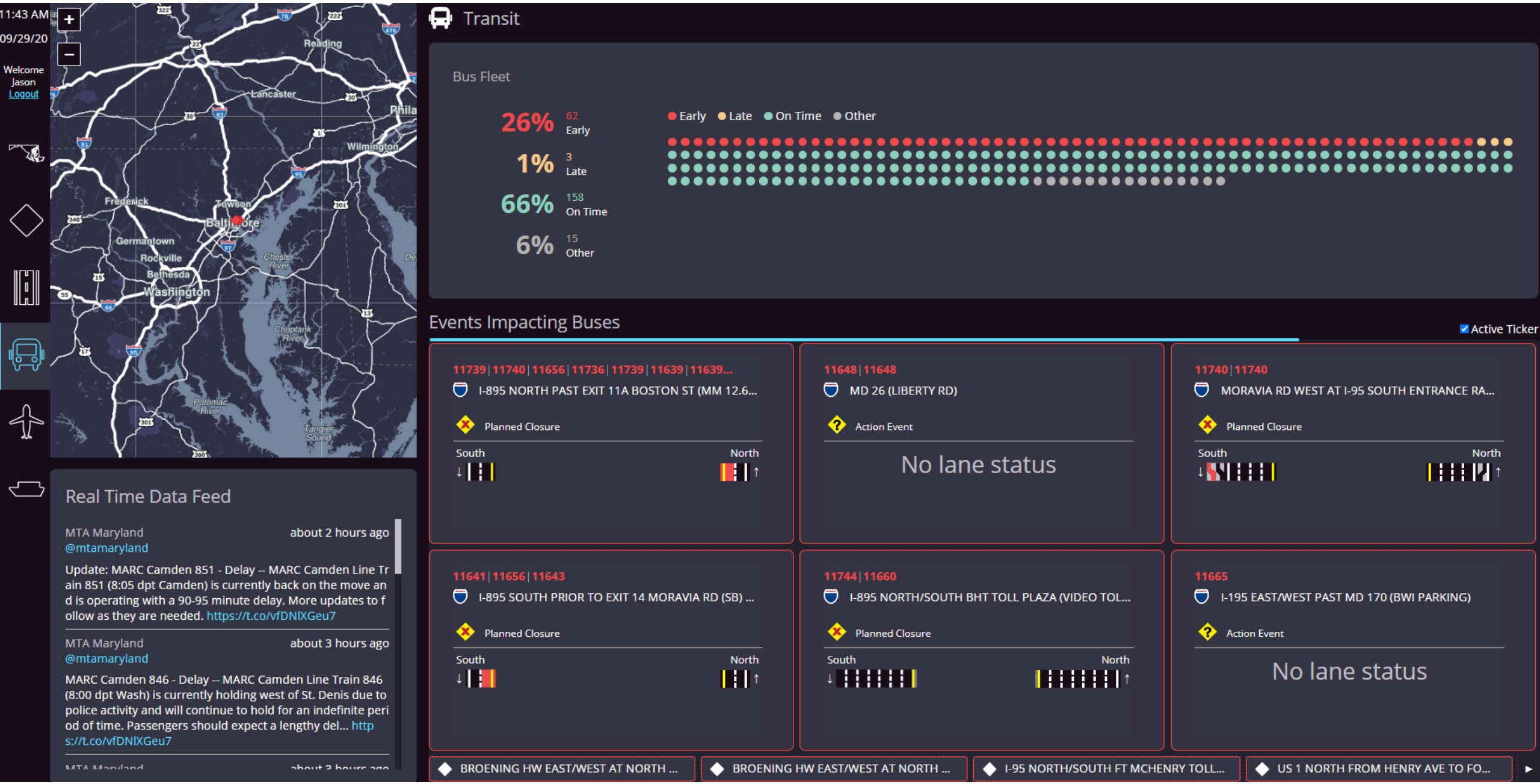
No Data

No Data

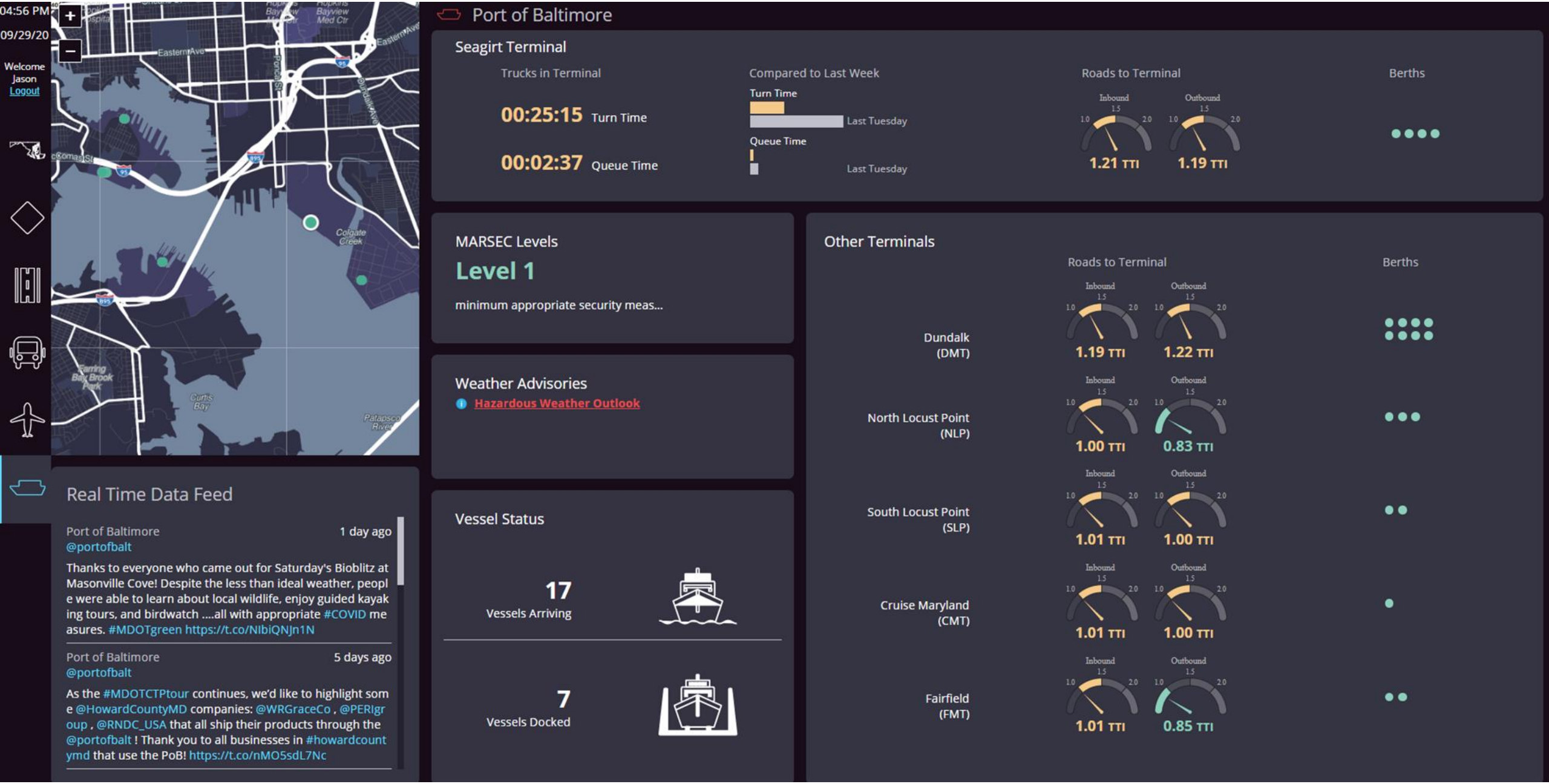
No Data

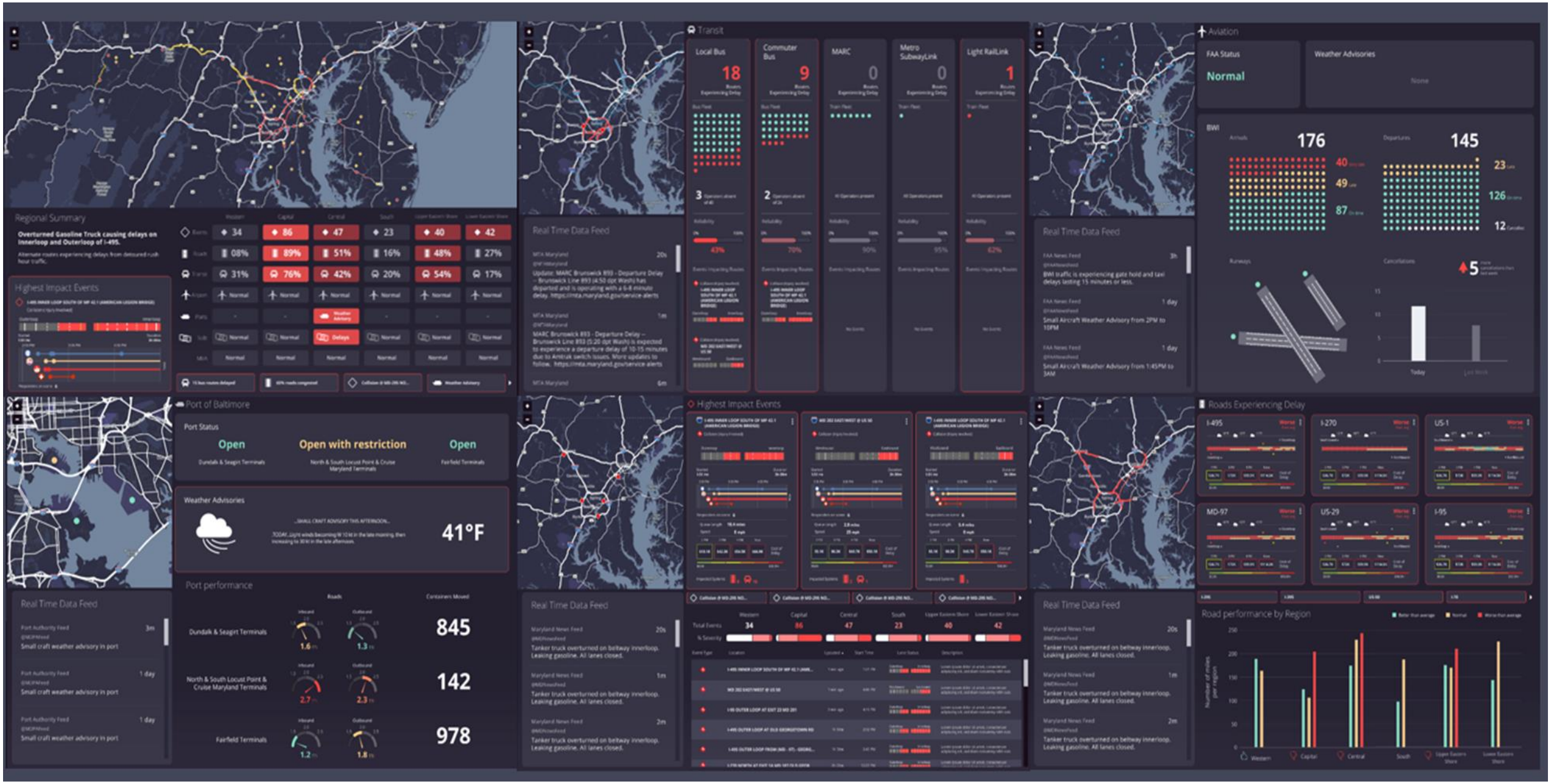
Road Performance by Region




11:43 AM
09/29/20
Welcome Jason
Logout
Reading
Lancaster
Wilmington
Frederick
Towson
Baltimore
Germantown
Rockville
Bethesda
Washington
Chester River
Choptank River
Potomac River
Tangier Sound
Transit
Bus Fleet
26% 62 Early
1% 3 Late
66% 158 On Time
6% 15 Other
Early Late On Time Other
Events Impacting Buses
Active Ticker
11739|11740|11656|11736|11739|11639|11639...
I-895 NORTH PAST EXIT 11A BOSTON ST (MM 12.6...
Planned Closure
South
North
11648|11648
MD 26 (LIBERTY RD)
Action Event
No lane status
11740|11740
MORAVIA RD WEST AT I-95 SOUTH ENTRANCE RA...
Planned Closure
South
North
11641|11656|11643
I-895 SOUTH PRIOR TO EXIT 14 MORAVIA RD (SB) ...
Planned Closure
South
North
11744|11660
I-895 NORTH/SOUTH BHT TOLL PLAZA (VIDEO TOL...
Planned Closure
South
North
11665
I-195 EAST/WEST PAST MD 170 (BWI PARKING)
Action Event
No lane status
BROENING HW EAST/WEST AT NORTH ...
BROENING HW EAST/WEST AT NORTH ...
I-95 NORTH/SOUTH FT MCHENRY TOLL...
US 1 NORTH FROM HENRY AVE TO FO...
Real Time Data Feed
MTA Maryland @mtamaryland about 2 hours ago
Update: MARC Camden 851 - Delay -- MARC Camden Line Train 851 (8:05 dpt Camden) is currently back on the move and is operating with a 90-95 minute delay. More updates to follow as they are needed. https://t.co/vfDNlXGeu7
MTA Maryland @mtamaryland about 3 hours ago
MARC Camden 846 - Delay -- MARC Camden Line Train 846 (8:00 dpt Wash) is currently holding west of St. Denis due to police activity and will continue to hold for an indefinite period of time. Passengers should expect a lengthy del... https://t.co/vfDNlXGeu7


04:54 PM
09/29/20
Welcome Jason
Logout
Aviation
BWI
FAA Status
Normal
Weather Advisories
Hazardous Weather Outlook
Arrival/Departure Flights
97
Total arrivals
80
Total departures
Roads to and from Airport
I-195
Inbound Queue Length
No Data
Inbound Wait Time
0m 00s
Better than Avg
Inbound
0.96 TTI
Outbound
0.96 TTI
MD-170
Inbound Queue Length
No Data
Inbound Wait Time
0m 53s
Worse than Avg
Inbound
1.14 TTI
Outbound
1.04 TTI
Parking Availability
Hourly Garage 72% 3619 spaces
Daily Garage 65% 5491 spaces
Express Parking --% -- spaces
Long Term Lot A --% -- spaces
Long Term Lot B --% -- spaces
Arrivals Log
Flight No. | Updates | Sched.
413 American | 5:25 PM On Time | 2:30 PM Gate: C5
655 American | 3:17 PM Arrived | 2:57 PM Gate: C4
Real Time Data Feed
BWI Marshall Airport @BWI_Airport about 2 hours ago
A reminder of special reduced rates in both our Hourly and Daily Garages. Park and walk to your gate from the Hourly Garage. Free shuttle to/from our Daily Garage. https://t.co/N7HNi68Aed #Open4BizMD #airports https://t.co/DYsnlfveaJ
BWI Marshall Airport @BWI_Airport about 7 hours ago
Peeking over a cup of coffee and watching airplanes is pretty much a perfect morning. #NationalCoffeeDay #Open4BizMD #avgeek #coffee #planespotting https://t.co/T1OVZ6GNqX
Events near Airport
Planned Closure @ I-895 NORTH/SOUTH AT MP 9.4 (BALTIMORE HARBOR TUNNEL)
South
North
Safety Message Event @ BROENING HW EAST/WEST AT NORTH SERVICE RD (PORT OF BALTIMORE - MARYLAND PORT ADMINISTRATION)
No lane status
Action Event @ I-195 EAST/WEST PAST MD 170 (BWI PARKING)
No lane status
Passenger Waiting Time
By Concourse
General | Priority | TSA Pre. | Clear
A: Closed | Closed | Closed | Closed
B: 1 m | 1 m | 1 m | 1 m
C: 2 m | 2 m | Closed | 1 m
D/E: 2 m | 1 m | 1 m | 1 m
Departures Log
Flight No. | Updates | Sched.
2182 Southwest | 2:45 PM Departed | 2:30 PM Gate: B3
1904 Southwest | 3:39 PM Departed | 3:00 PM Gate: B10


04:56 PM
09/29/20
Welcome Jason
Logout
Port of Baltimore
Seagirt Terminal
Trucks in Terminal
00:25:15 Turn Time
00:02:37 Queue Time
Compared to Last Week
Turn Time
Last Tuesday
Queue Time
Last Tuesday
Roads to Terminal
Inbound
1.21 TTI
Outbound
1.19 TTI
Berths
MARSEC Levels
Level 1
minimum appropriate security meas...
Weather Advisories
Hazardous Weather Outlook
Vessel Status
17
Vessels Arriving
7
Vessels Docked
Other Terminals
Roads to Terminal
Berths
Dundalk (DMT)
Inbound 1.19 TTI
Outbound 1.22 TTI
North Locust Point (NLP)
Inbound 1.00 TTI
Outbound 0.83 TTI
South Locust Point (SLP)
Inbound 1.01 TTI
Outbound 1.00 TTI
Cruise Maryland (CMT)
Inbound 1.01 TTI
Outbound 1.00 TTI
Fairfield (FMT)
Inbound 1.01 TTI
Outbound 0.85 TTI
Real Time Data Feed
Port of Baltimore @portofbalt 1 day ago
Thanks to everyone who came out for Saturday's Bioblitz at Masonville Cove! Despite the less than ideal weather, people were able to learn about local wildlife, enjoy guided kayaking tours, and birdwatch ....all with appropriate #COVID measures. #MDOTgreen https://t.co/NIbiQNJn1N
Port of Baltimore @portofbalt 5 days ago
As the #MDOTCTPtour continues, we'd like to highlight some @HowardCountyMD companies: @WRGraceCo , @PERIgroup , @RNDC_USA that all ship their products through the @portofbalt ! Thank you to all businesses in #howardcountymd that use the PoB! https://t.co/nMO5sdL7Nc


Regional Summary
Overturned Gasoline Truck causing delays on Inserloop and Outerloop of I-495.
Highest Impact Events
Transit
Local Bus
18
Commuter Bus
9
MARC
0
Metro SubwayLink
0
Light RailLink
1
Real Time Data Feed
Aviation
FAA Status
Normal
Weather Advisories
None
BWI
Arrivals
176
Departures
145
Runways
Cancellations
5
Port of Baltimore
Port Status
Open
Dundalk & Seagirt Terminals
Open with restriction
North & South Locust Point & Cruise Maryland Terminals
Open
Fairfield Terminals
Weather Advisories
41°F
Port performance
Roads
Containers Moved
Dundalk & Seagirt Terminals
845
North & South Locust Point & Cruise Maryland Terminals
142
Fairfield Terminals
978
Highest Impact Events
Roads Experiencing Delay
I-495
I-270
US-1
MD-97
US-29
I-95
Road performance by Region

OUTCOMES…A PLATFORM THAT…

- Shows major events in real-time based on current impact not necessarily traditional factors
- Can be used by multiple levels in the organization for awareness
  - In TBU Operations Centers
  - By executive leadership on mobile devices
  - Placed in a building lobby
- Can be expanded as new real-time data sets become available and measurements get refined

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Jason Dicembre
Maryland Department of Transportation
State Highway Administration
Division Chief – TMC Operations
jdicembre1@mdot.Maryland.gov

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

RITIS | Probe Data Analytics suite

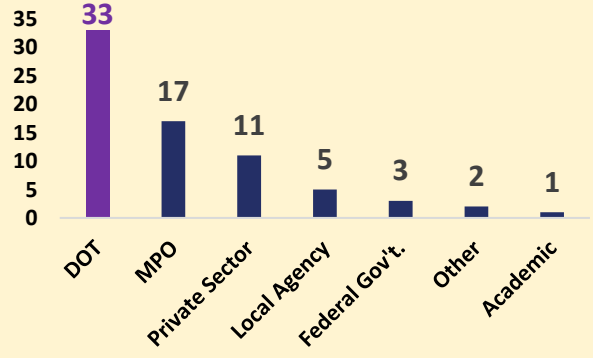
Prioritizing & Ranking New Features
Survey Results

Michael Pack
UMD CATT Lab
Director

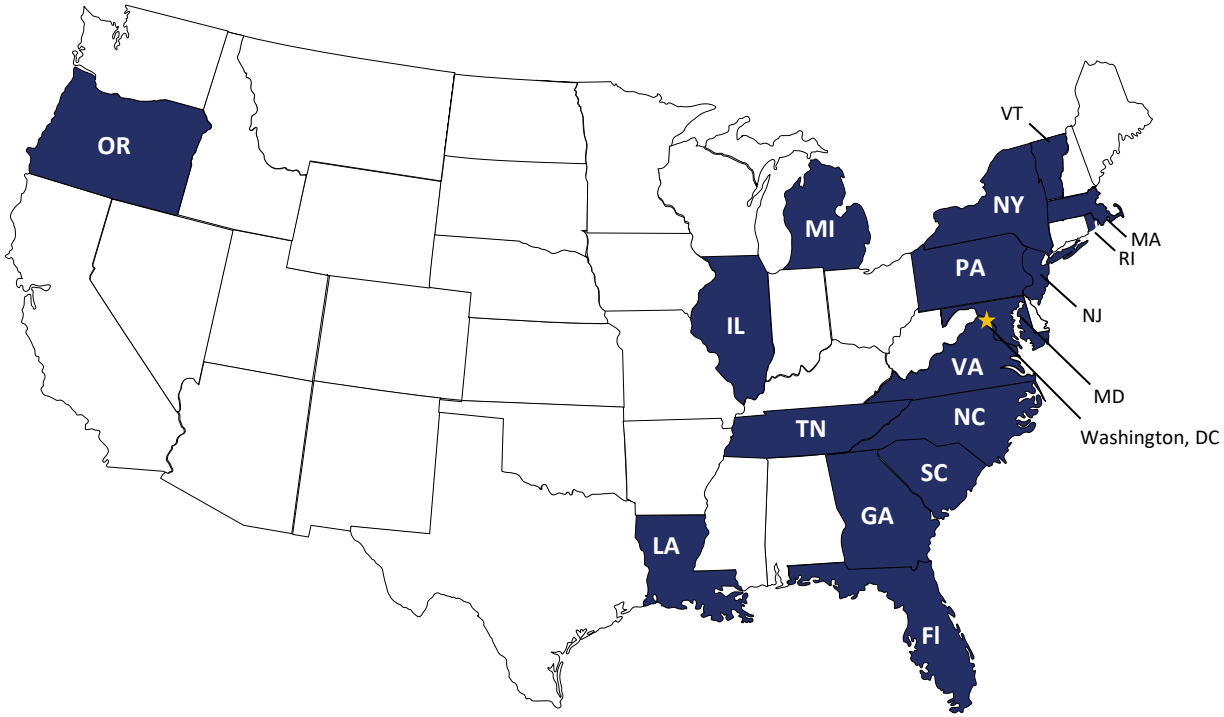
Survey Results | Respondent Overview

Who they represent

46% of respondents were from **state DOTs**

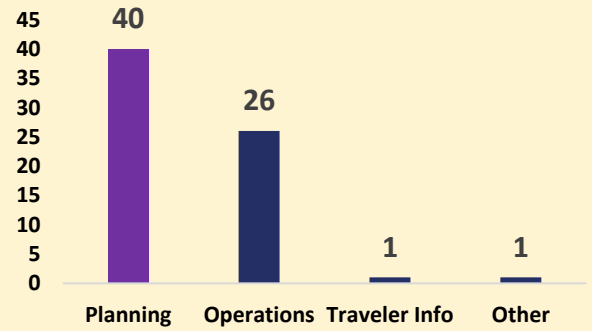


Where they come from



How they use the tools

59% of respondents use the tools for **planning**



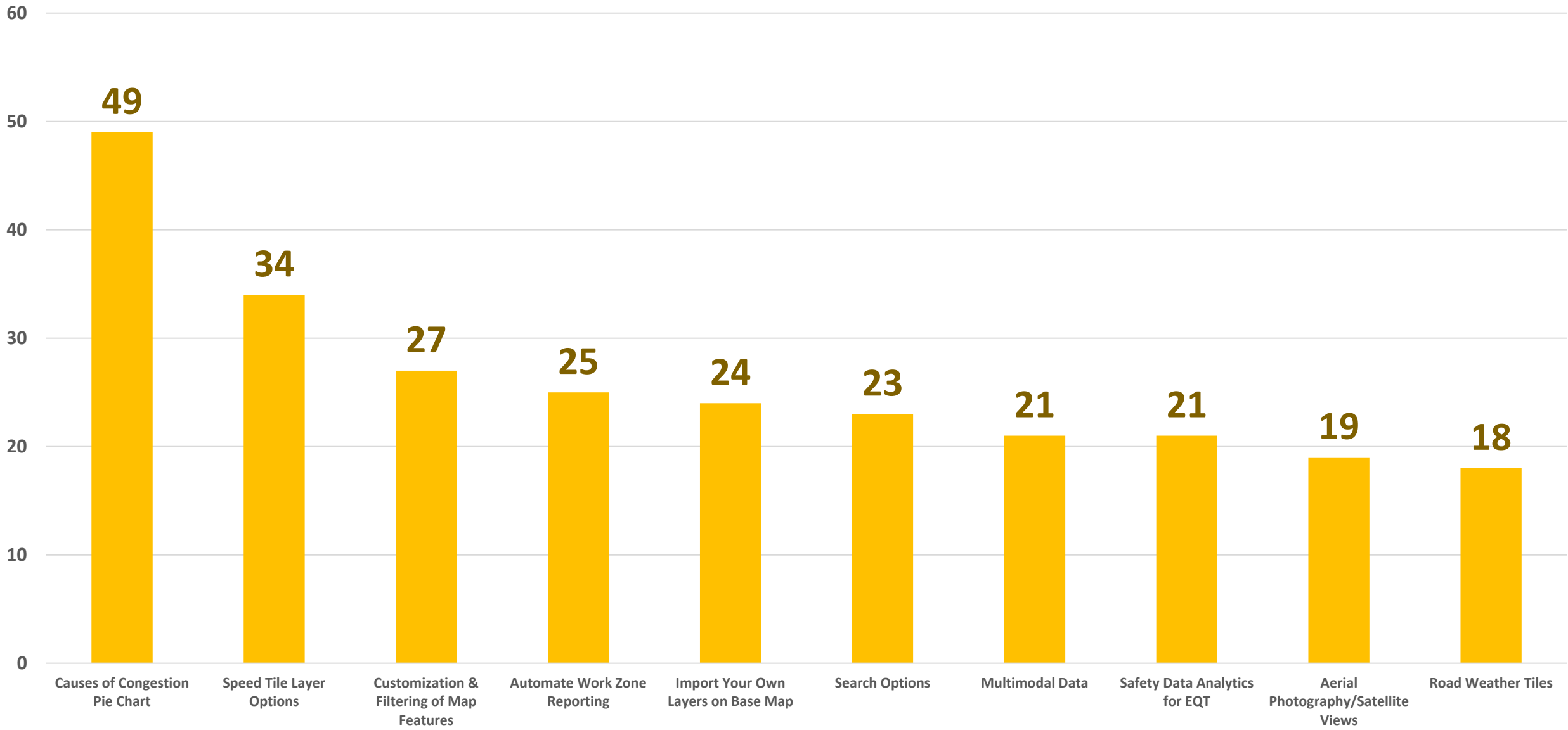
RITIS FEATURES

SURVEY RESULTS

RITIS Feature Requests

1. Aerial Photography / Satellite Views
2. Speed Tile Layer Options:
   a) Only show congestion
   b) Only show bottlenecks
   c) High speed alerts
   d) Etc.
3. Road Weather Tiles
4. Import your own layers to overlay on existing base map
5. Customization and filtering of map features (road names, shields, sizing)
6. Search options
7. Causes of Congestion Pie Charts
8. Automated Work Zone Reporting
9. COVID-19 (or other) Impacts Analytics
10. More Transit Layers/Integration
11. Multi-modal data (bike, ped, etc.)
12. Multi-modal Impacts Dashboard
13. Support for mobile devices
14. More Alerting
15. 3rd party incident/event data
16. Waze enhancements
17. Detailed Operations Reporting
18. Local Administration/Management
19. Input tool for local agencies (ATMS)
20. Safety Data Analytics for EQT
21. EQT & Timeline media display and management

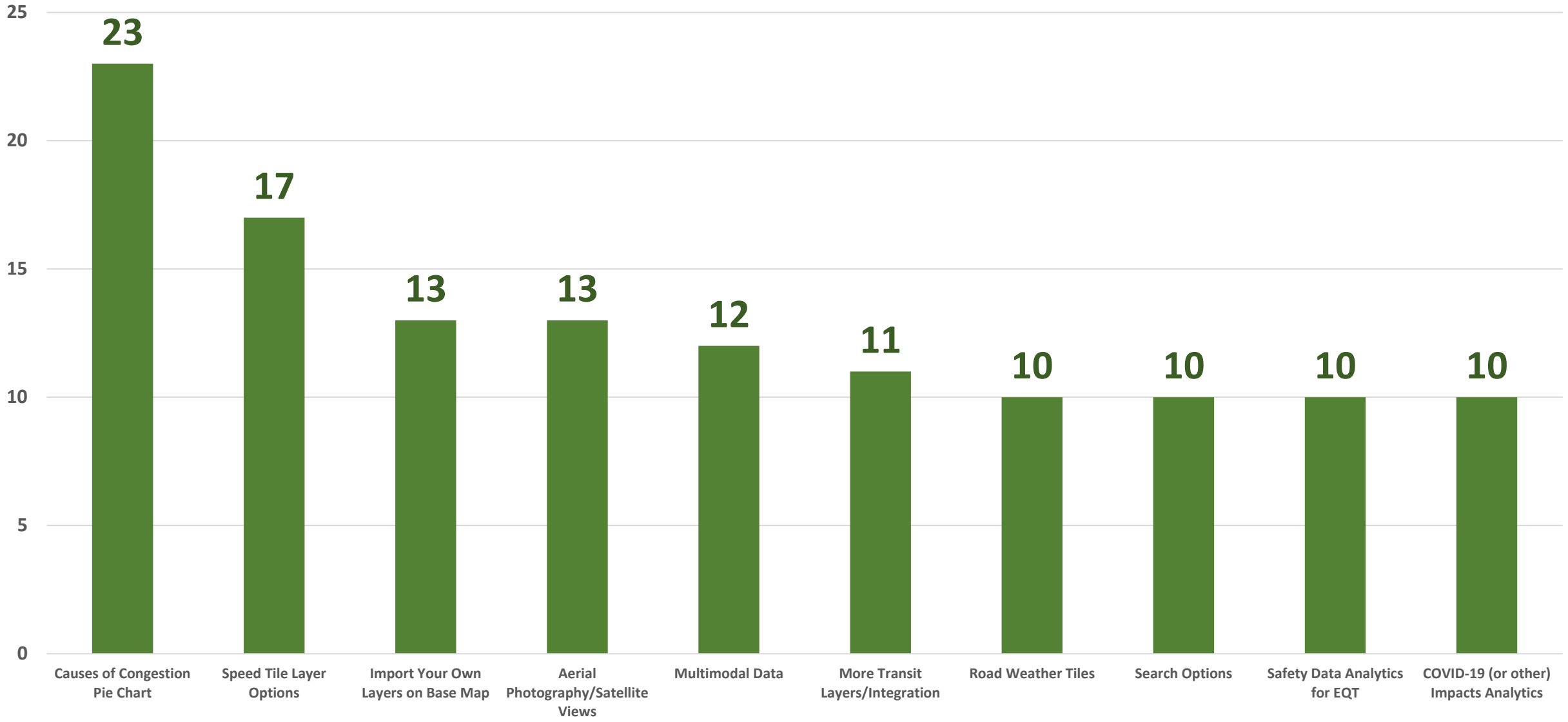
Survey Results | Top 10 **RITIS** Priorities (**Overall**)



Survey Results | Top 10 **RITIS** Priorities (**Overall**)

1. Causes of Congestion Pie Chart
2. Speed Tile Layer Options
3. Customization & Filtering of Map Features
4. Automate Work Zone Reporting
5. Import Your Own Layers on Base Map
6. Search Options
7. Multimodal Data
8. Safety Data Analytics for EQT
9. Aerial Photography / Satellite Views
10. Road Weather Tiles

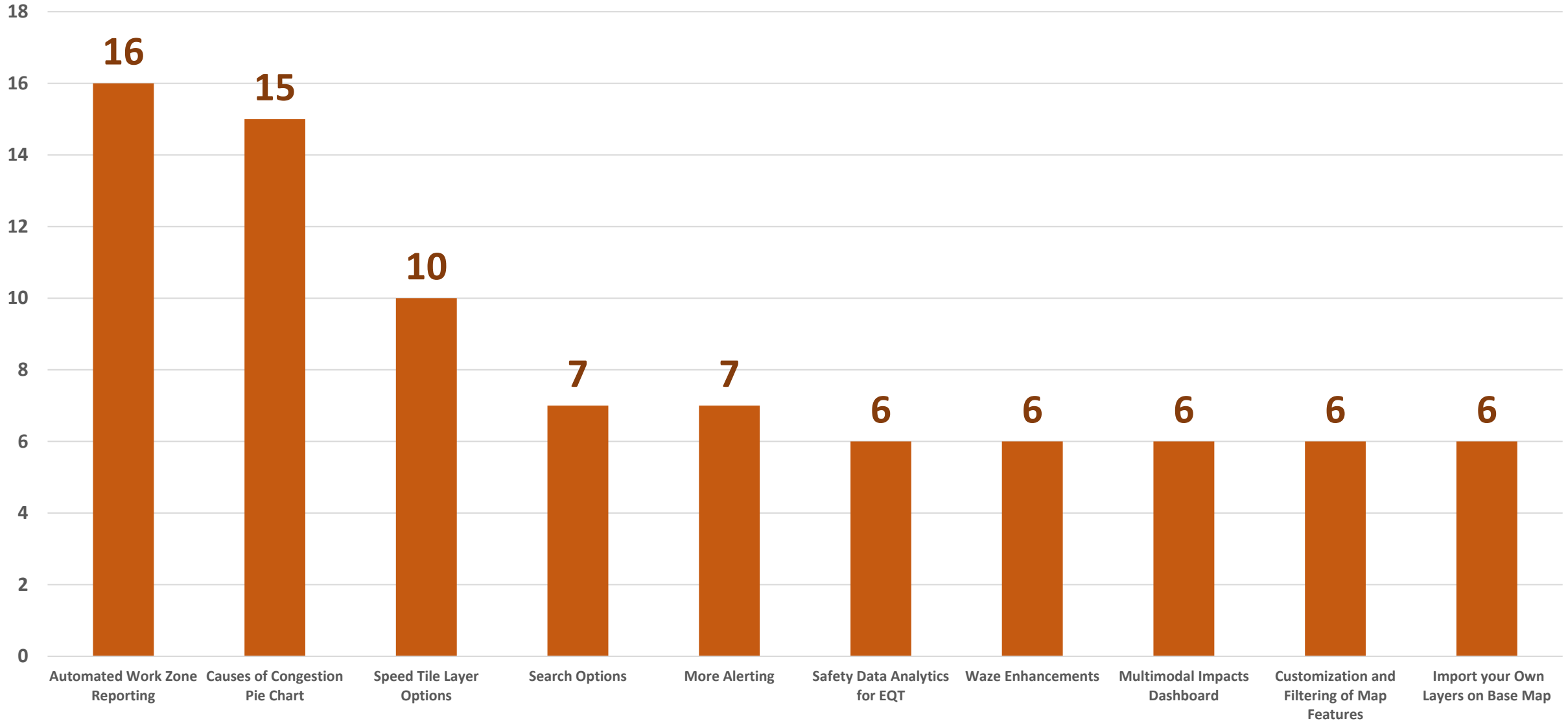
Survey Results | Top 10 **RITIS** Priorities (**Planning**)



Survey Results | Top 10 **RITIS** Priorities (**Planning**)

1. Causes of Congestion Pie Chart
2. Speed Tile Layer Options
3. Import Your Own Layers on Base Map
4. Aerial Photography / Satellite Views
5. Multimodal Data
6. More Transit Layers / Integration
7. Road Weather Tiles
8. Search Options
9. Safety Data Analytics for EQT
10. COVID-19 (or other) Impacts Analytics

Survey Results | Top 10 **RITIS** Priorities (**Operations**)



Survey Results | Top 10 **RITIS** Priorities (**Operations**)

1. Automated Work Zone Reporting
2. Causes of Congestion Pie Chart
3. Speed Tile Layer Options
4. Search Options
5. More Alerting
6. Safety Data Analytics for EQT
7. Waze Enhancements
8. Multimodal Impacts Dashboard
9. Customization and Filtering of Map Features
10. Import your Own Layers on Base Map

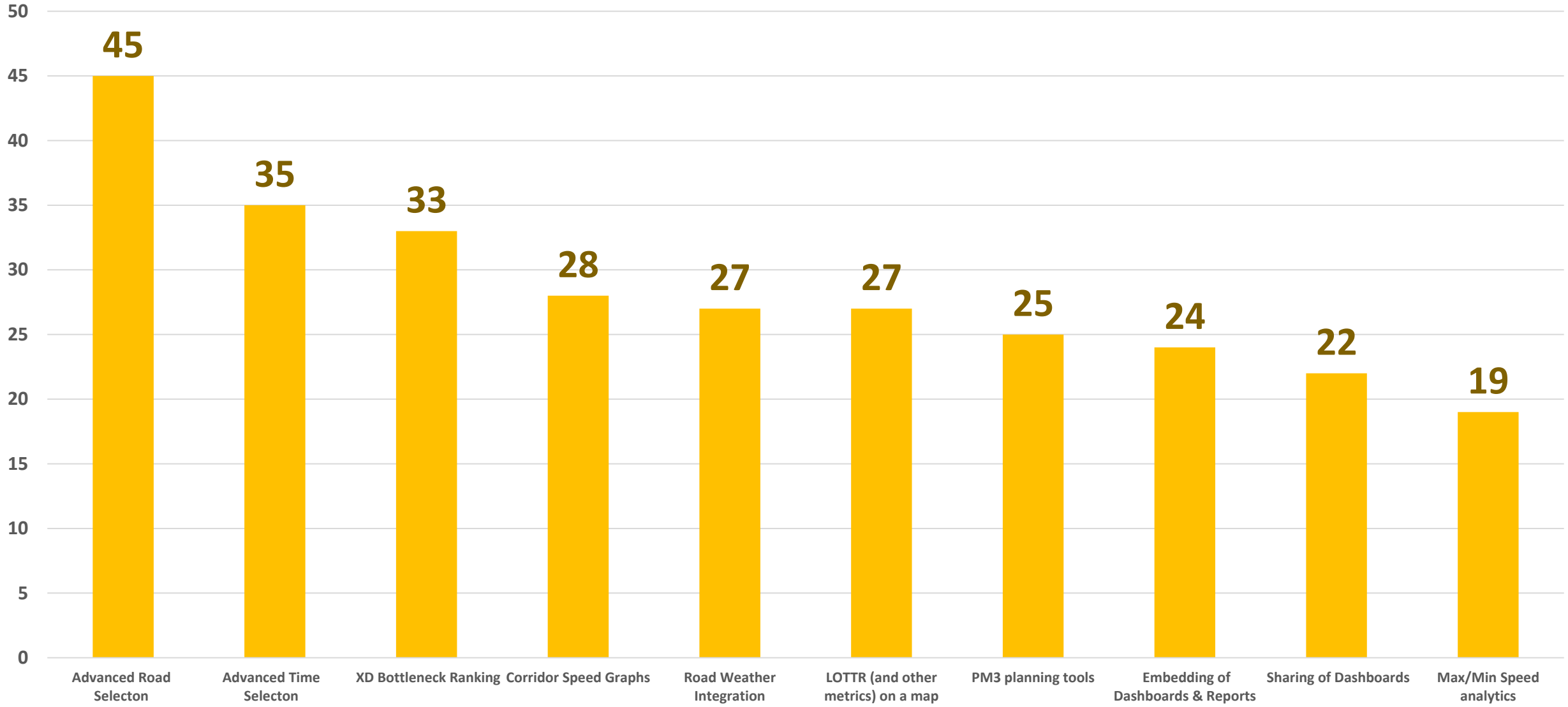
Probe Data Analytics suite

Survey Results

PDA Suite feature requests

1. Advanced Road selection
2. Advanced Time selection
3. Road Segment Metadata Versioning
4. Road Weather Integration
5. DMS on Congestion Scans
6. Custom Color & Scales for UDC
7. XD Bottleneck Ranking
8. XD UDC
9. Sharing of Dashboards
10. Embedding of Dashboards & Reports
11. PDA API Enhancements
12. LOTTR (and other metrics) on a map
13. Max/Min Speed analytics
14. Speed bin visualization
15. Corridor Speed Graphs
16. Road Name Aliasing
17. Speed Threshold Breakdown
18. Partial Segment Selection
19. Increase segment limit for map displays
20. Region Explored bottleneck filters
21. Segment-based volume data downloads
22. Scheduled reports
23. PM3 planning tools
24. Share Saved Segments across orgs
25. My history notes
26. Widget route name labeling
27. Multi-state MPA Analysis
28. Slope Charts for PM3 metrics
29. Current/Predictive Emissions
30. Energy Use Matrix
31. Energy & Emission Trend Map
32. Energy & Emission Charts
33. Vehicle Ownership Charts

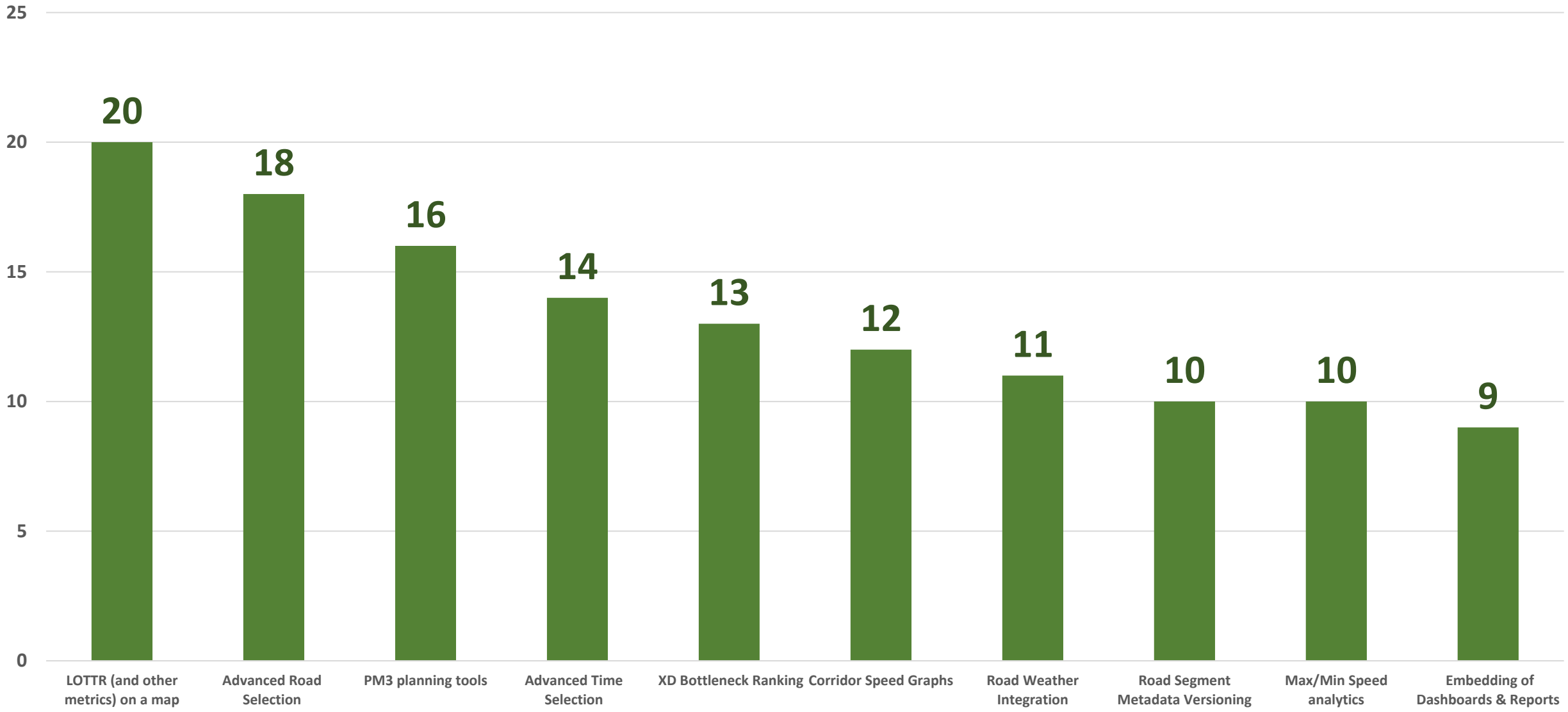
Survey Results | Top 10 **PDA Suite** Priorities (**Overall**)



Survey Results | Top 10 **PDA Suite** Priorities (**Overall**)

1. Advanced Road Selection
2. Advanced Time Selection
3. XD Bottleneck Ranking
4. Corridor Speed Graphs
5. Road Weather Integration
6. LOTTR (and other metrics) on a map
7. PM3 planning tools
8. Embedding of Dashboards & Reports
9. Sharing of Dashboards
10. Max/Min Speed analytics

Survey Results | Top 10 **PDA Suite** Priorities (**Planning**)



Survey Results | Top 10 **PDA Suite** Priorities (**Planning**)

1. LOTTR (and other metrics) on a map
2. Advanced Road Selection
3. PM3 planning tools
4. Advanced Time Selection
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8. Road Segment Metadata Versioning
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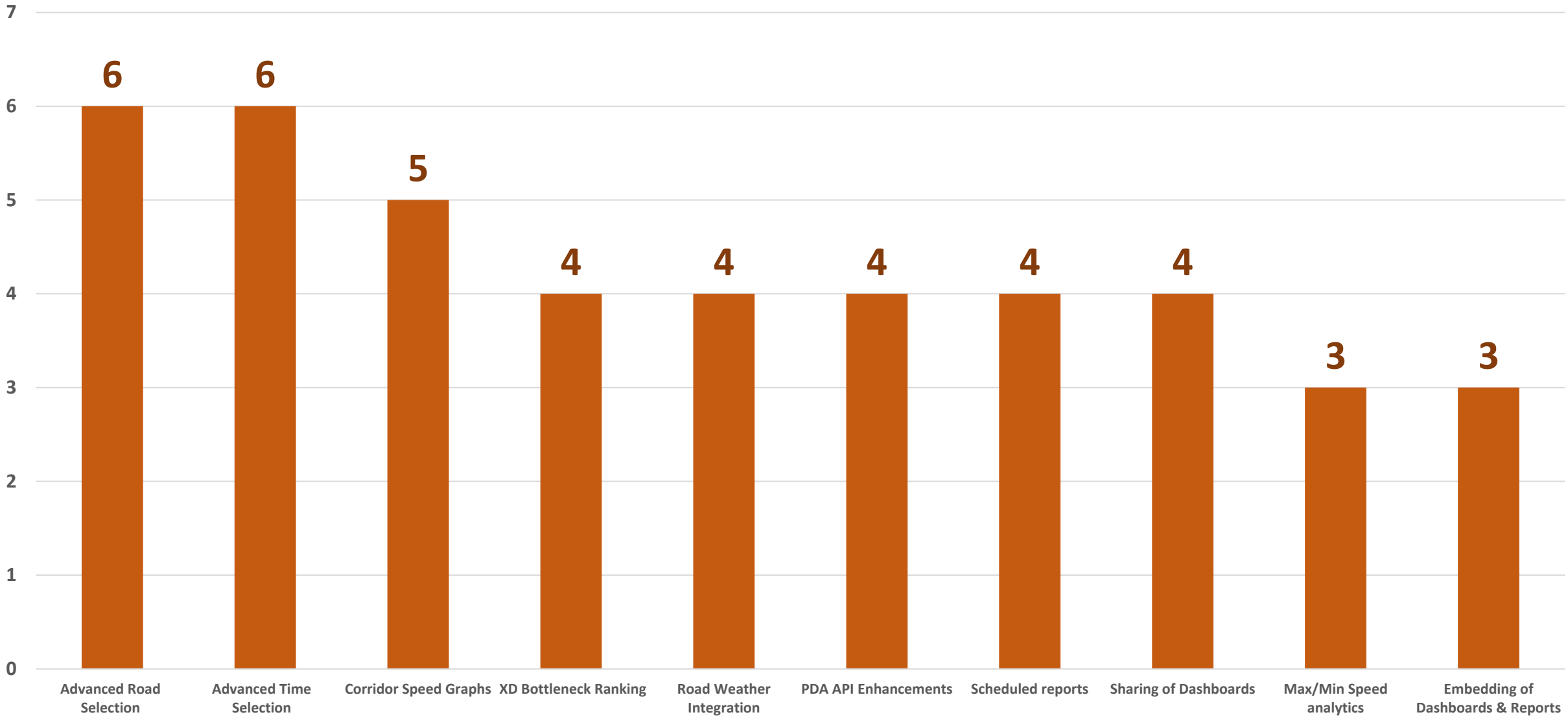
Survey Results | Top 10 **PDA Suite** Priorities (**Operations**)



Survey Results | Top 10 **PDA Suite** Priorities (**Operations**)

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4. XD Bottleneck Ranking
5. Road Weather Integration
6. PDA API Enhancements
7. Scheduled reports
8. Sharing of Dashboards
9. Max/Min Speed analytics
10. Embedding of Dashboards & Reports

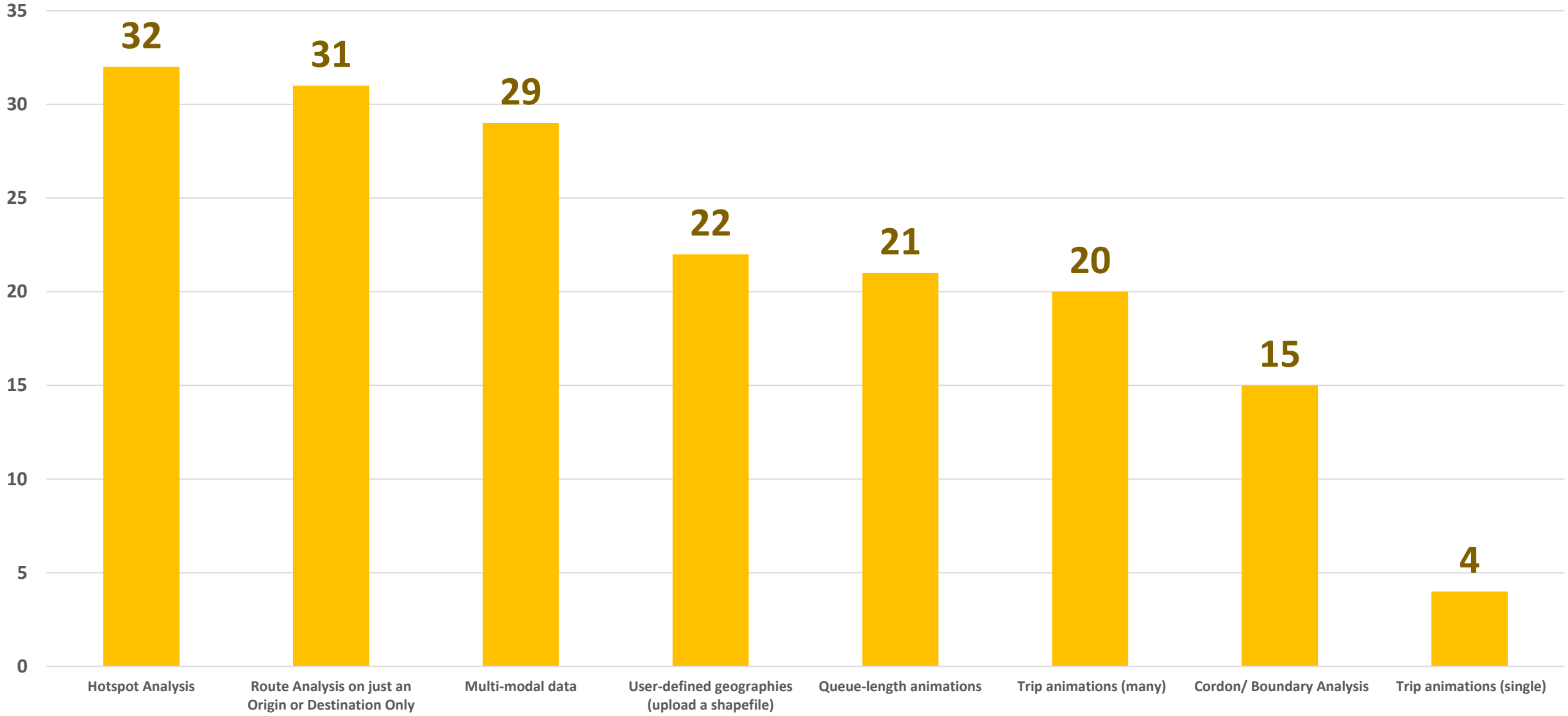
Trip Analytics

Survey Results

Trip Analytics Feature Requests

1. Multi-modal data
2. User-defined geographies (upload a shapefile)
3. Trip animations (many)
4. Trip animations (single)
5. Queue-length animations
6. Cordon/Boundary Analysis
7. Hotspot Analysis
8. Route Analysis on just an Origin or Destination Only

Survey Results | **Trip Analytics** Priorities (**Overall**)



Survey Results | **Trip Analytics** Priorities (**Overall**)

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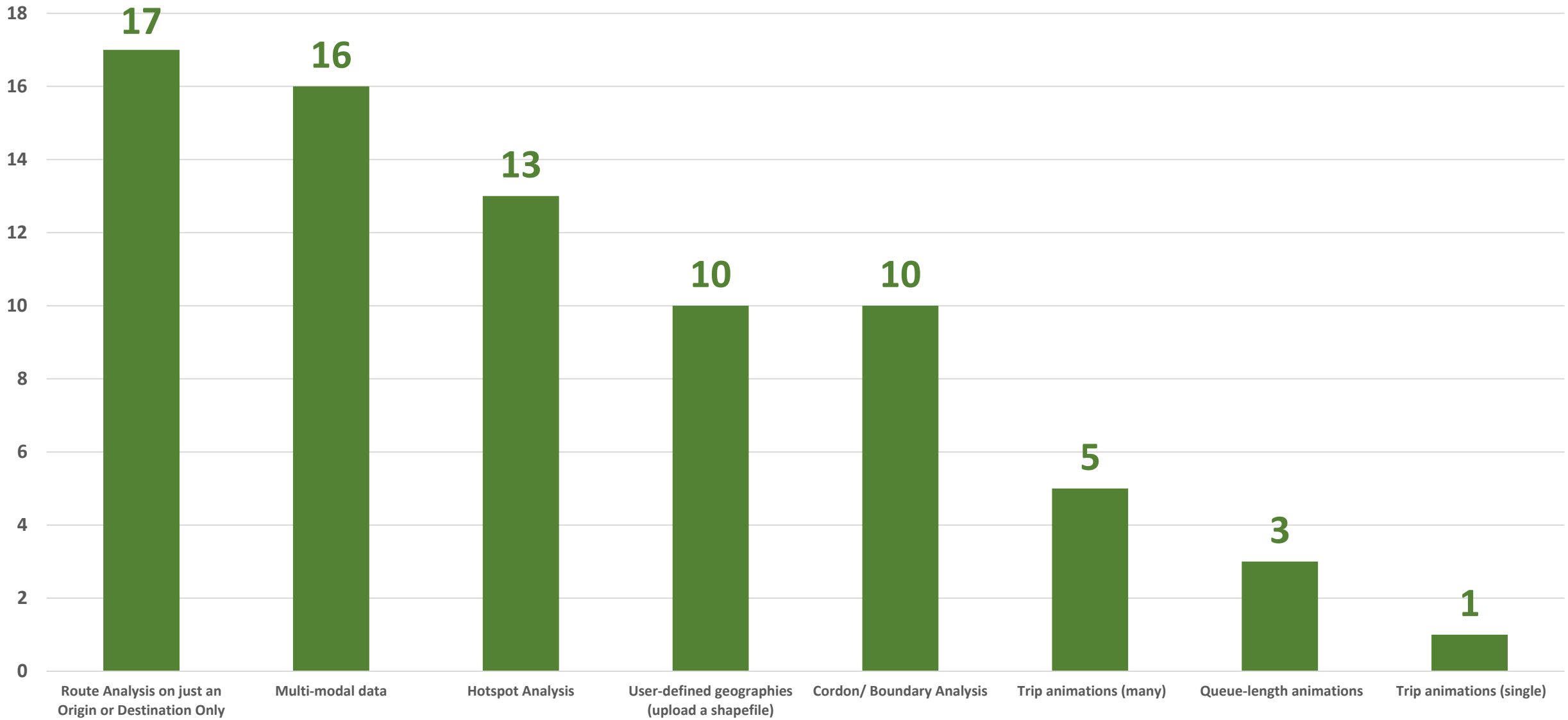
Survey Results | **Trip Analytics** Priorities (**Planning**)



Survey Results | **Trip Analytics** Priorities (**Planning**)

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2. Multi-modal data
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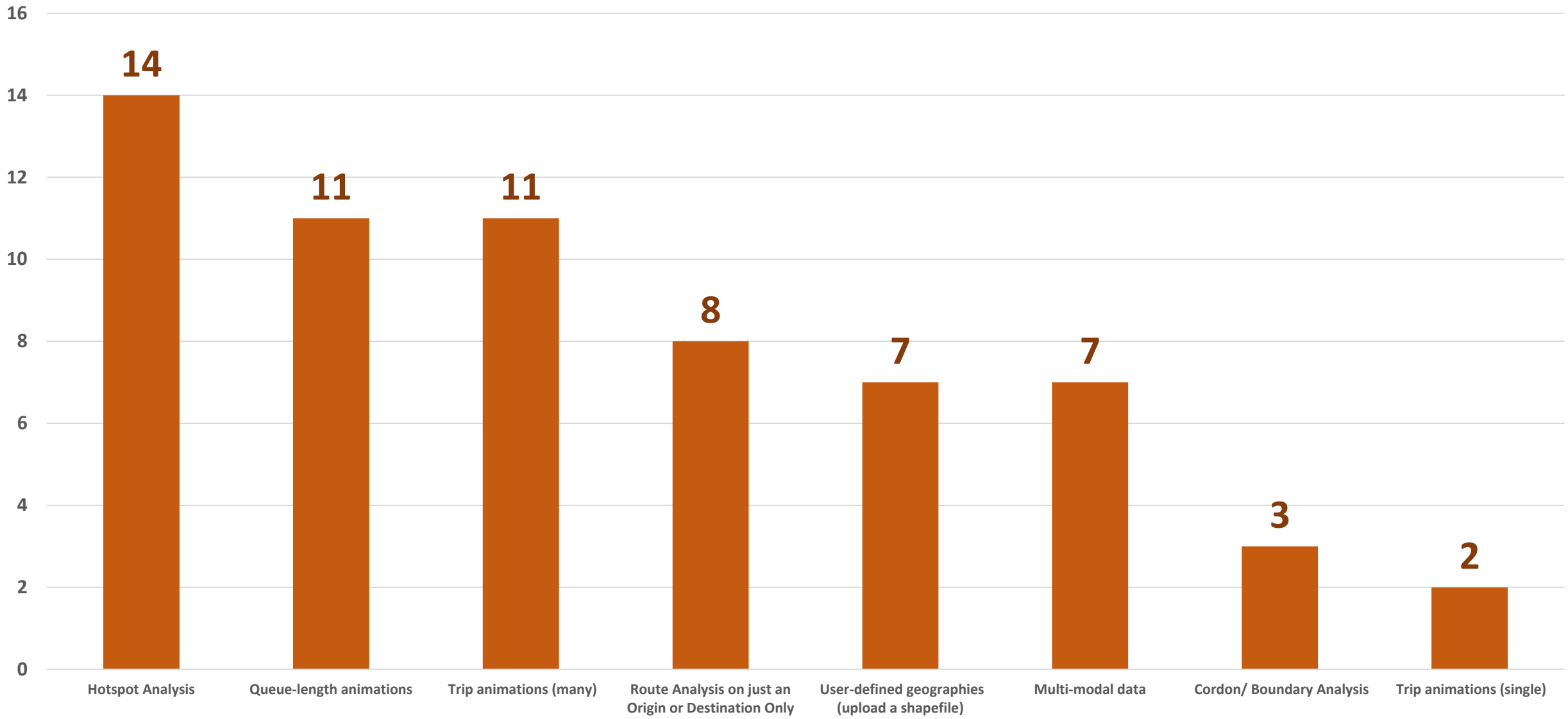
Survey Results | **Trip Analytics** Priorities (**Operations**)



Survey Results | **Trip Analytics** Priorities (**Operations**)

1. Hotspot Analysis
2. Queue-length animations
3. Trip animations (many)
4. Route Analysis on just an Origin or Destination Only
5. User-defined geographies (upload a shapefile)
6. Multi-modal data
7. Cordon/Boundary Analysis
8. Trip animations (single)

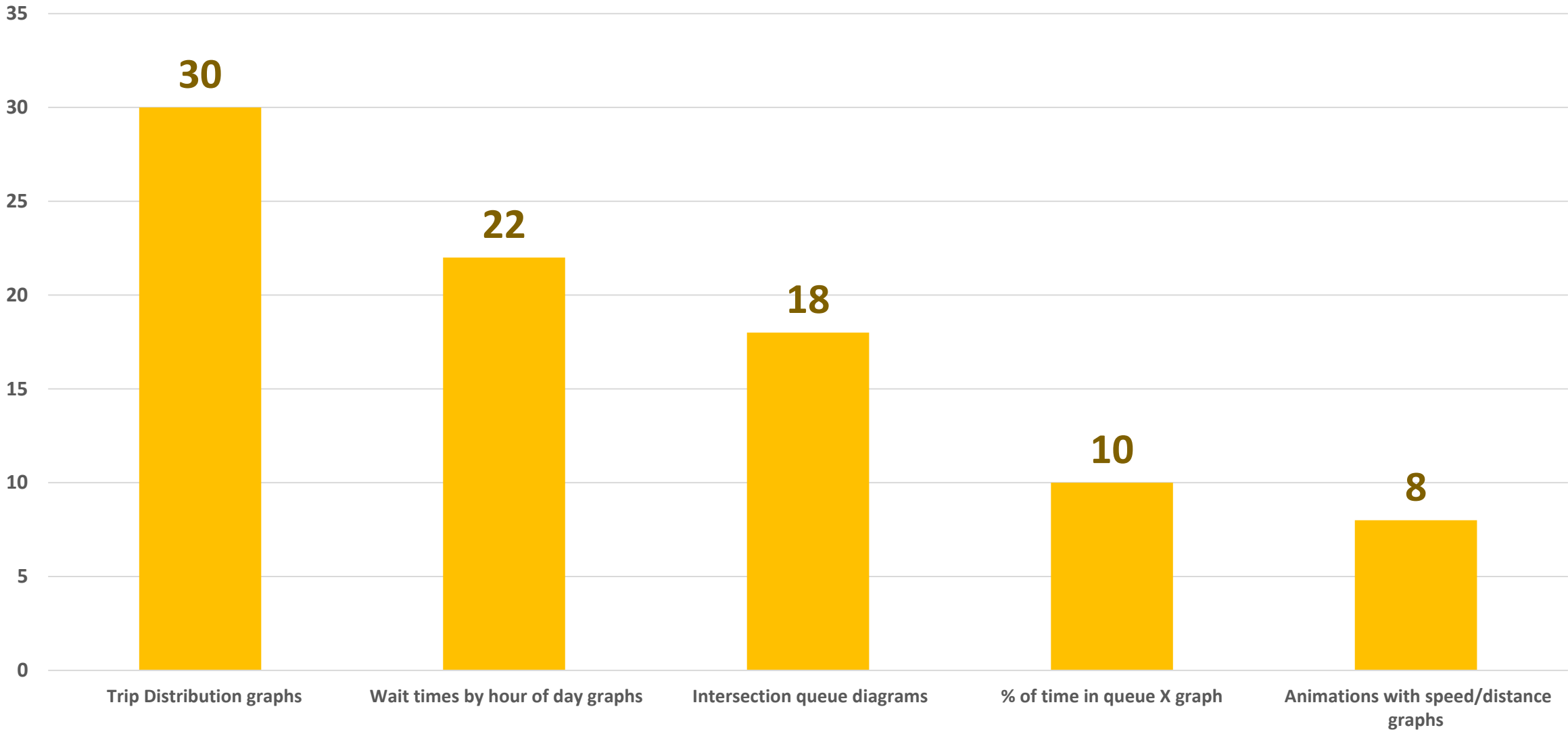
Signal Analytics

Survey Results

Signal Analytics Feature Requests

1. Trip Distribution graphs
2. Wait times by hour of day graphs
3. Animations with speed/distance graphs
4. % of time in queue X graph
5. Intersection queue diagrams

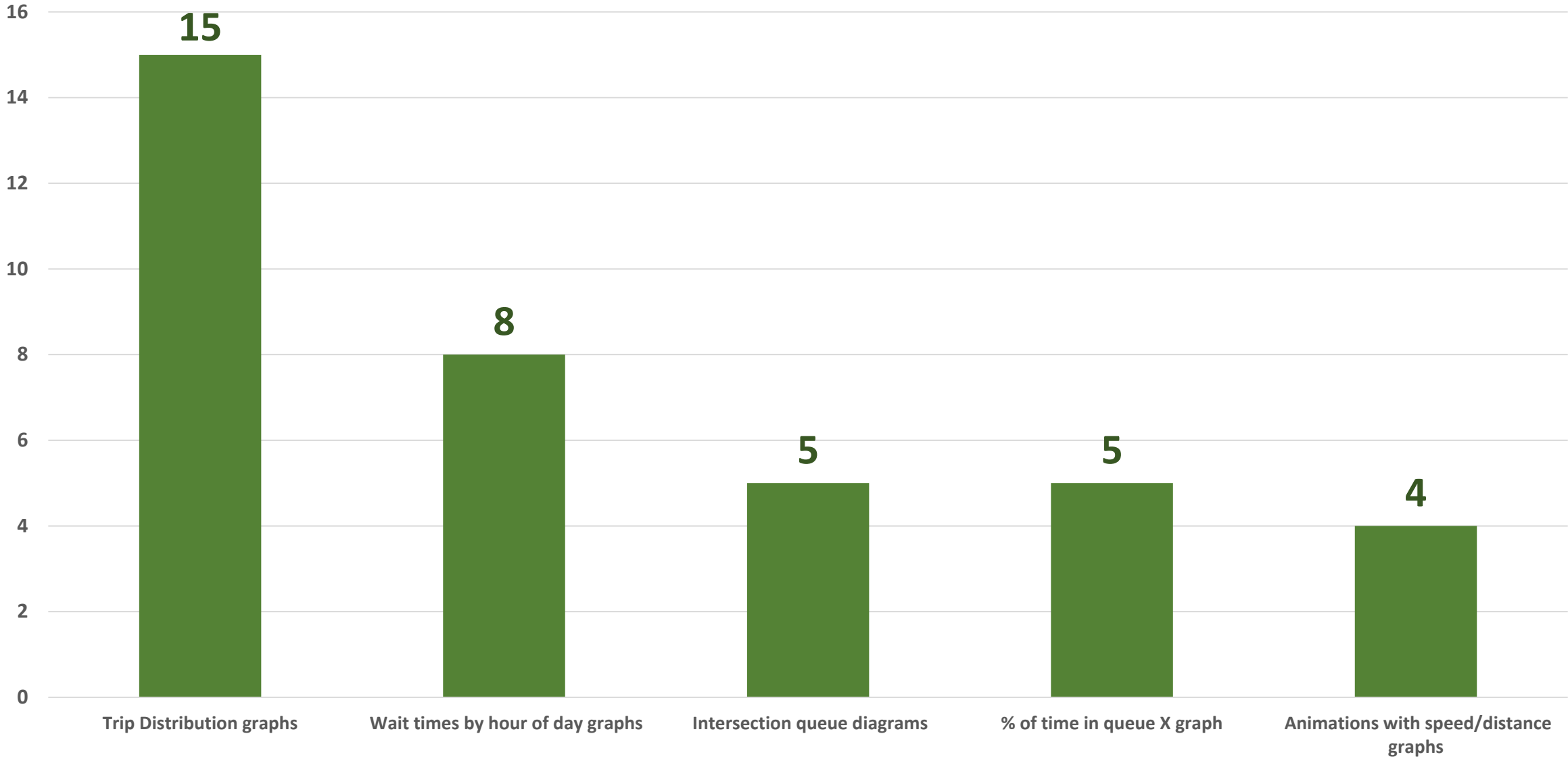
Survey Results | **Signal Analytics** Priorities (**Overall**)



Survey Results | **Signal Analytics** Priorities (**Overall**)

1. Trip Distribution graphs
2. Wait times by hour of day graphs
3. Intersection queue diagrams
4. % of time in queue X graph
5. Animations with speed/distance graphs

Survey Results | **Signal Analytics** Priorities (**Planning**)



Survey Results | **Signal Analytics** Priorities (**Planning**)

1. Trip Distribution graphs
2. Wait times by hour of day graphs
3. Intersection queue diagrams
4. % of time in queue X graph
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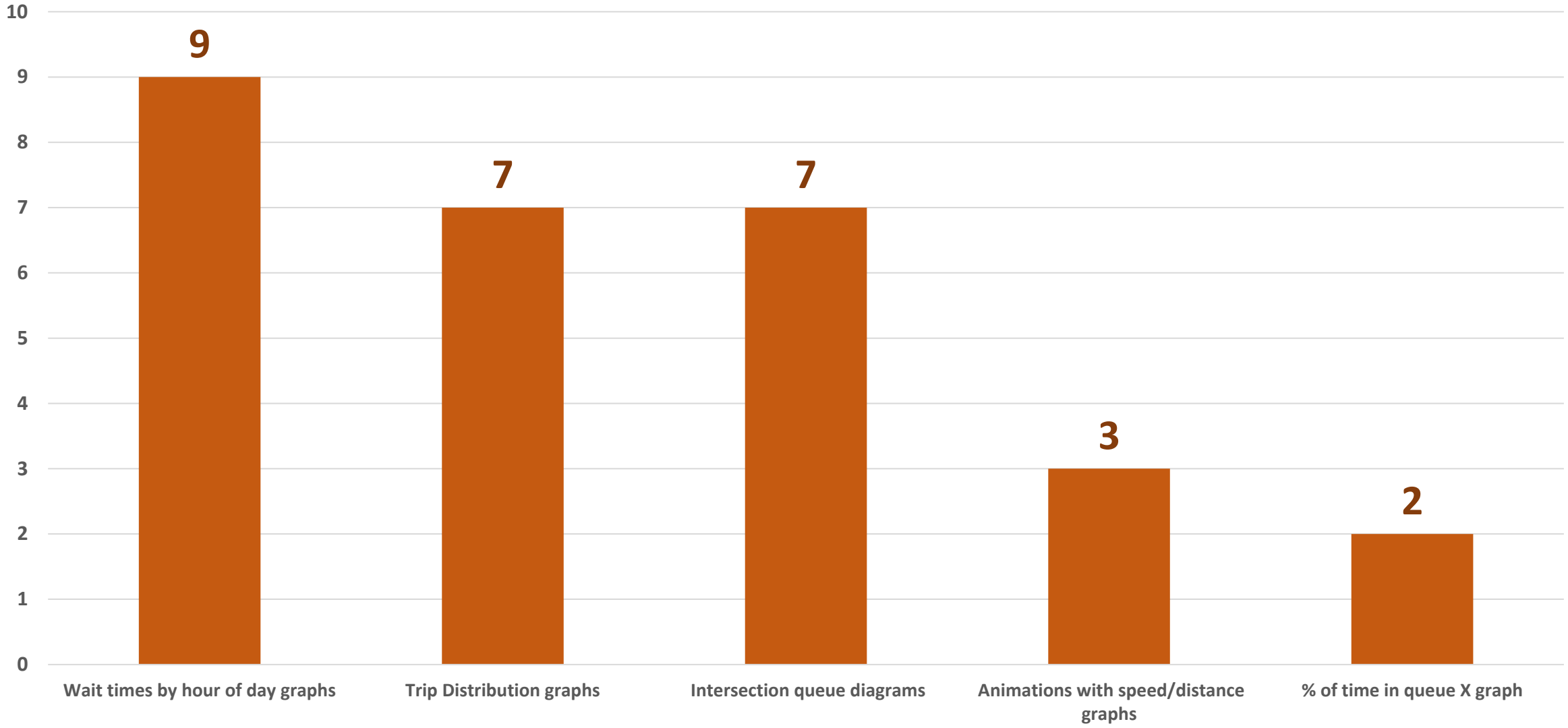
Survey Results | **Signal Analytics** Priorities (**Operations**)



Survey Results | **Signal Analytics** Priorities (**Operations**)

1. Wait times by hour of day graphs
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3. Intersection queue diagrams
4. Animations with speed/distance graphs
5. % of time in queue X graph

RITIS | PROBE DATA ANALYTICS SUITE

Working Group Update

John Allen
UMD CATT Lab
Faculty Assistant, Outreach & Education

Meet the Working Group

John Allen
UMD CATT Lab

Jesse Buerk
DVRPC

Matt Glasser
GDOT

Charles Lattimer
UMD CATT Lab

Keith Miller
NJTPA

Zoe Neaderland
VAOT

Ed Stylc
BMC

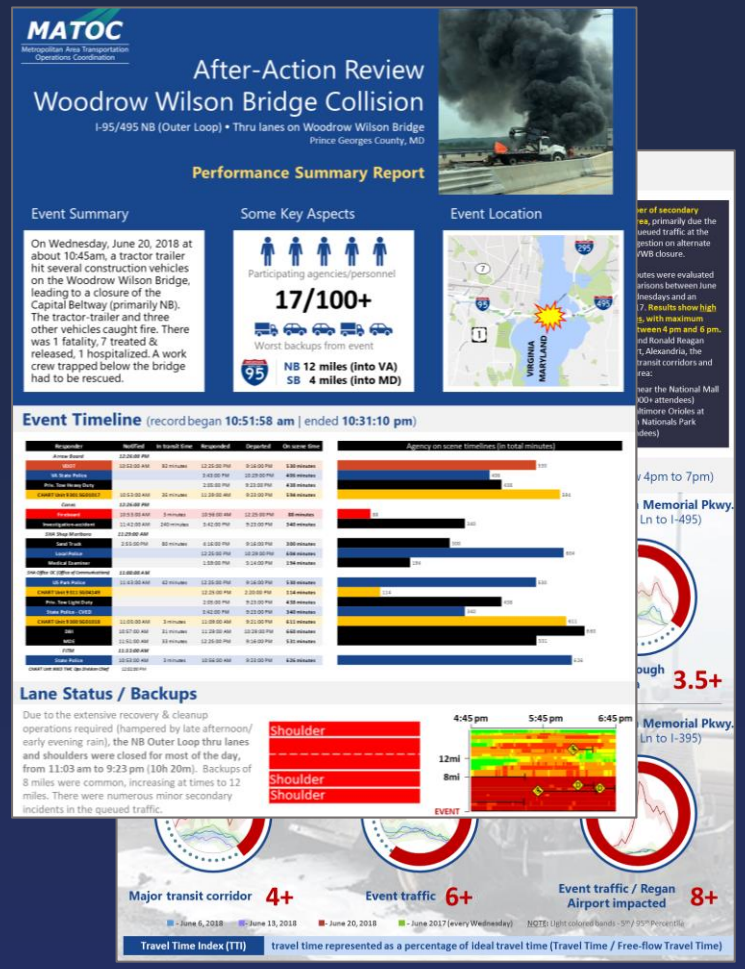
Kelly Wells
NCDOT

Since the Last Update (05/07/2020)

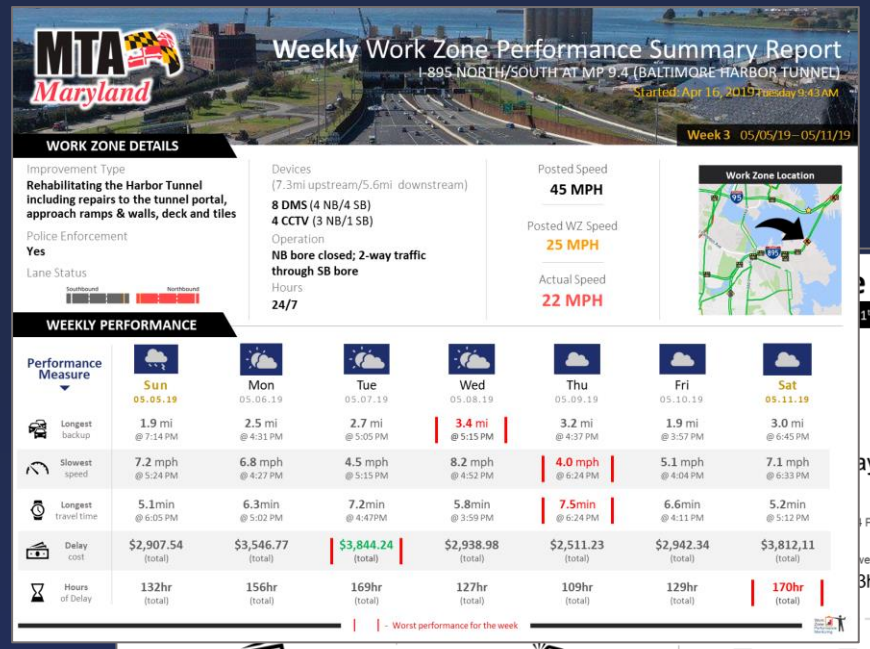
- Held 2 meetings with **Performance Reporting Working Group**
- Some key guidance we're following:
  - Keep it simple
  - Give folks options
  - Use performance measures that make sense for most people
- Developed a few more draft products
- Finalizing How-to Guide layouts

Some Draft Product (shown at the 5/7/20 meeting)

After-action Review



Work Zones



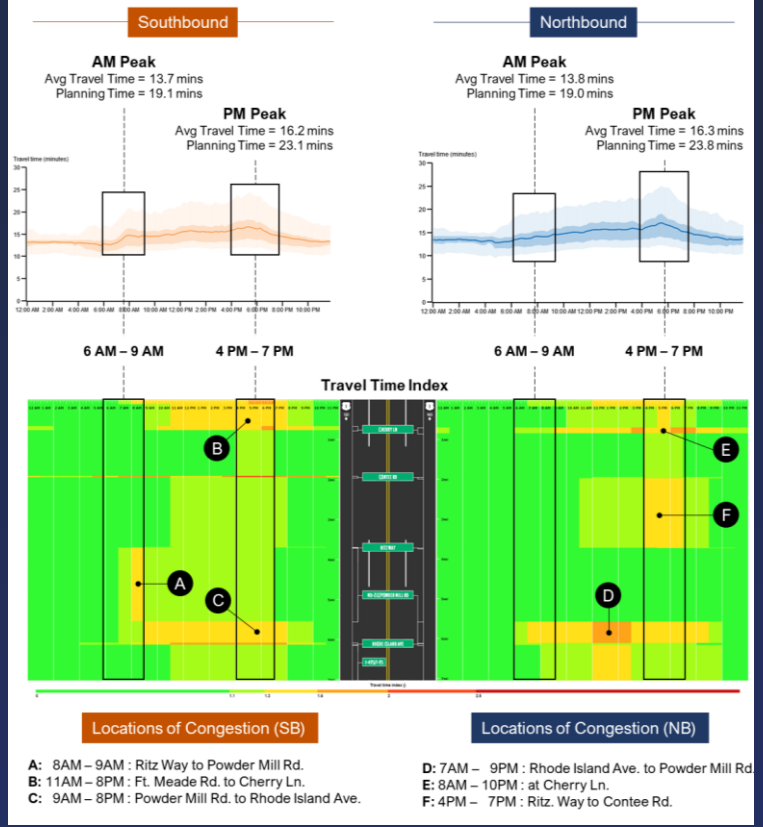
Before & After Project Assessment

Corridor Performance (in the works)

Corridor Travel Times

2019 Corridor Travel Times

Weekday travel times for the US-1 corridor were aggregated over the entire year and are presented below. This corridor does not exhibit a clear peak travel direction in either the AM or PM peak periods. Instead, the PM peak travel times are consistently higher than the AM peak travel times. In each direction, the average PM peak travel time is approximately 3 minutes longer than the AM peak period travel time, with the planning time being approximately 4 minutes longer. The heat map at the bottom of the page shows the geographic location of typical congestion through the day.

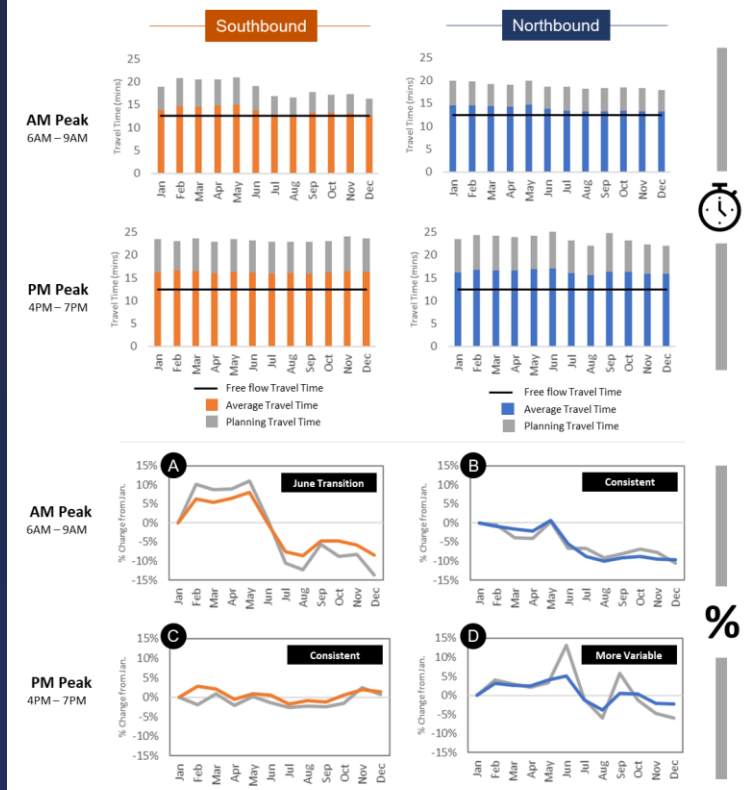


A: 8AM – 9AM : Ritz Way to Powder Mill Rd.
B: 11AM – 8PM : Ft. Meade Rd. to Cherry Ln.
C: 9AM – 8PM : Powder Mill Rd. to Rhode Island Ave.
D: 7AM – 9PM : Rhode Island Ave. to Powder Mill Rd.
E: 8AM – 10PM : at Cherry Ln.
F: 4PM – 7PM : Ritz. Way to Contee Rd.

Travel Times Throughout the Year

Travel times through the year

How much did travel times change over the course of 2019? This depends on time of day and direction of travel. The bar charts show monthly travel times by peak period and direction. The line charts show the percentage change in travel times as compared with January 2019.



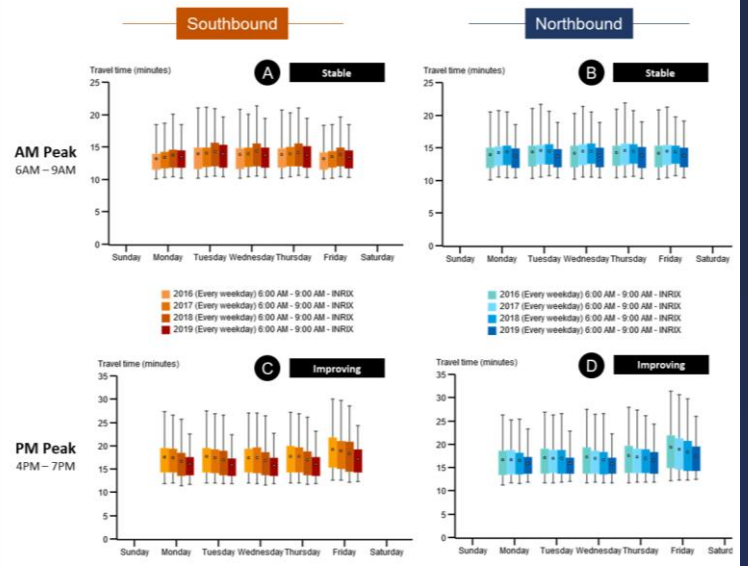
Observations

Ⓐ In the southbound AM peak period, travel times increased Feb. to May, then dropped below January levels from July to Dec. Ⓑ In the northbound direction during the AM peak period, travel times were mostly constant through May, then decreased June to Dec. Ⓒ Travel times in the southbound PM peak direction remained relatively constant throughout 2019. Ⓓ Travel times in the northbound PM peak direction were more variable, becoming more unpredictable between June and Dec.

Comparisons with Previous Years

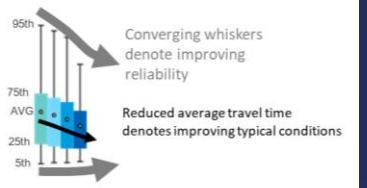
Comparison with previous years

How much did travel times change compared with previous years? In the AM peak period, average travel times and travel time reliability were fairly constant from 2016 to 2019.

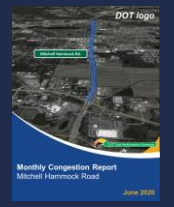


Ⓐ Travel time and reliability remained stable and relatively constant over the past four years in the southbound direction during the AM peak period. Ⓑ In the AM peak period northbound direction, travel times and reliability were relatively constant from 2016 – 2018, with a slight improvement in 2019. Ⓒ / Ⓓ In the PM peak period, a steady improvement in travel times and reliability has been seen over the years 2016 – 2019, with a stepwise improvement for some days in 2019.

The box plot presents a simplified distribution of the range of travel times throughout the period of interest, based on percentiles.



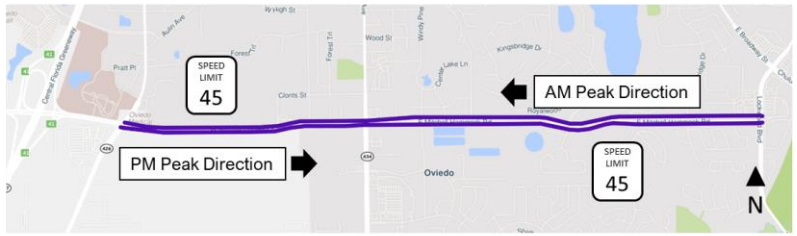
Monthly Congestion Report (in the works)



Roadway Info / Performance Summary

June 2020 Congestion Report
Mitchell Hammock Rd.
(between CR-426 and Lockwood Blvd.)

Length: 2.8 miles
AADT: 39,000 vpd (2-way)
AM Peak: 1,965 vph • Avg. speed: 32 mph (WB)
PM Peak: 2,025 vph • Avg. speed: 27 mph (EB)



Performance Summary

Percent change calculated based on change from last month and the same month last year.

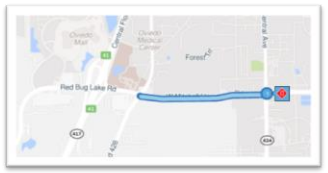
Average Travel Time (mins)

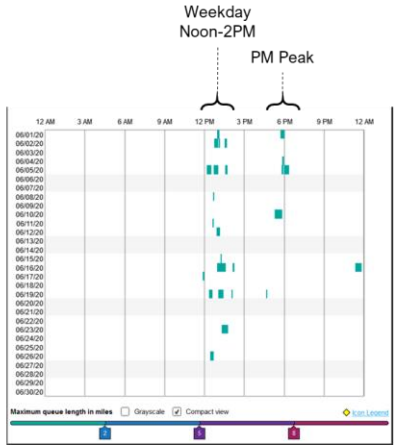
	June 2020	May 2020	June 2019
AM Peak 6AM – 9AM	4.9	4.9 ● 0%	5.1 ▼ -4 %
PM Peak 4PM – 7PM	5.4	5.2 ▲ 4%	6.4 ▼ -16%

I took out the Planning Time since some on the Focus Group felt these kinds of measures don't resonate well with audiences. We could do avg. speed / travel time, or add some narrative here, or even a photo.

Top Bottleneck Location

Eastbound between CR 426 & Alafaya Trail

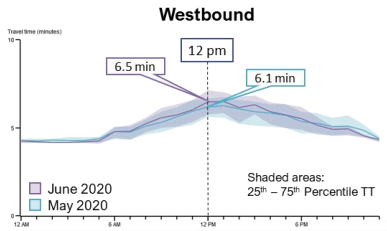


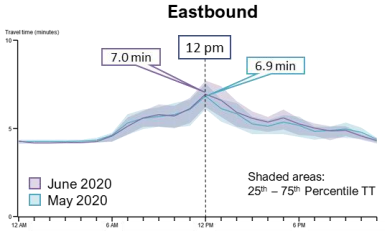


Monthly / Yearly Travel Time Profiles

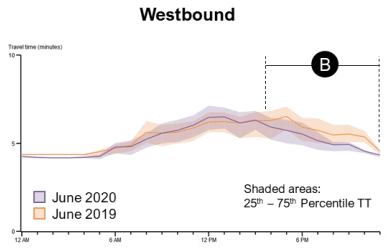
Weekday Travel Time Profiles

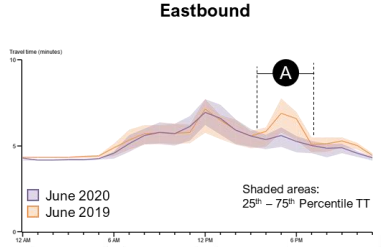
Compared with last month: Typical travel times for June 2020 were similar to May 2020, with the highest travel times recorded at mid-day.





Compared with last year: Typical travel times for June 2020 were similar to June 2019 prior to 3PM. Eastbound traffic in June 2020 did not experience the PM peak period observed in June 2019 Ⓐ. In addition, westbound traffic from 4PM onward in June 2019 was higher than was observed in June 2020 Ⓑ.



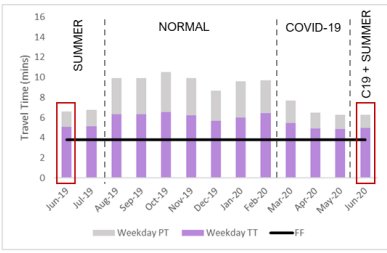


COVID-19 Impacts

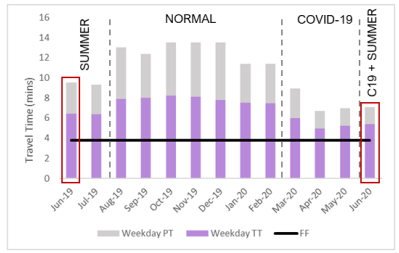
COVID-19 Travel Impacts

As shown in the travel time graphs below, travel times increased in August 2019 at the end of summer and remained at normal levels until March 2020, when they sharply decreased due to COVID-19 travel reductions. In June 2020, AM peak travel times are very similar to summer travel times recorded in June 2019. However, PM peak travel times in June 2020 are significantly lower than June 2019 PM peak travel times.

Westbound (AM Peak)

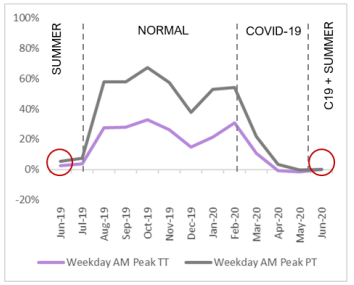


Eastbound (PM Peak)

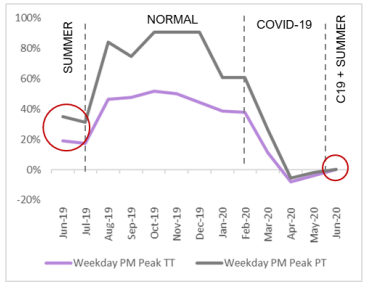


The graphs below show peak period travel times from previous months compared to the current month on a percentage basis. For the AM peak period, average travel times from June 2019 were 3% higher than June 2020. In contrast, in the PM peak period, average travel times from June 2019 were 19% higher than June 2020, with a planning time that was 35% higher.

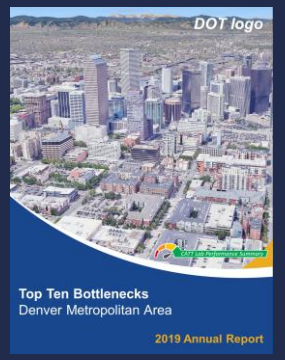
Westbound (AM Peak)



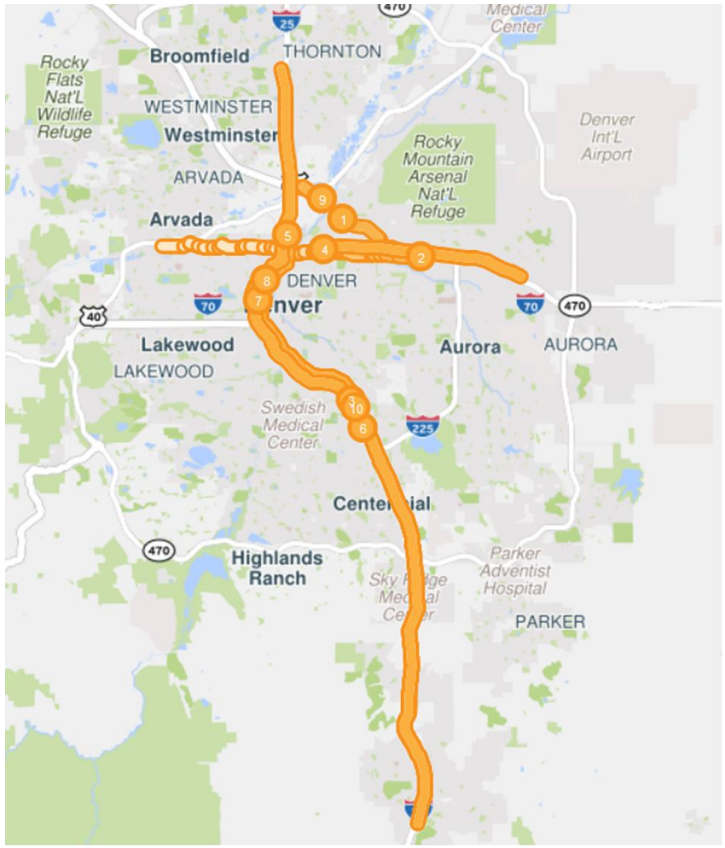
Eastbound (PM Peak)



Bottleneck Report Example (in the works)

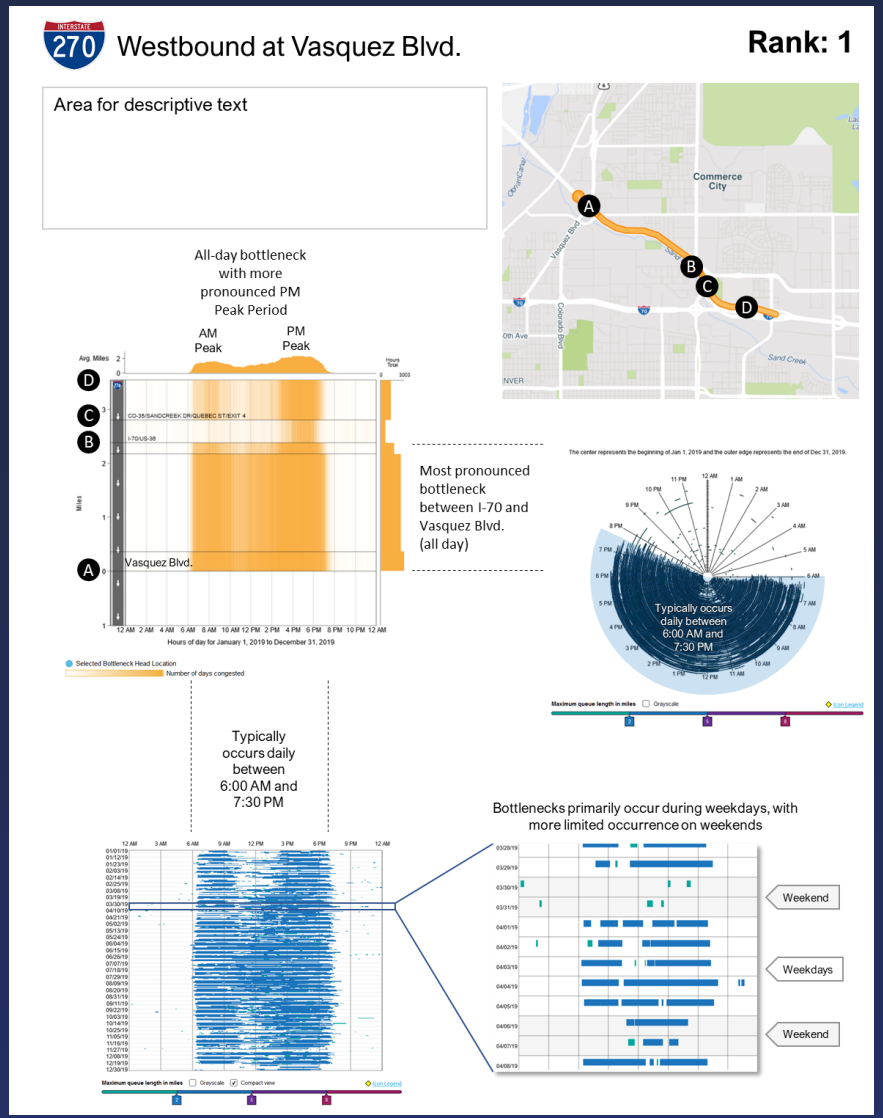


Top 10 Locations



Placeholder for overview sheet(s)

Infographic-style Summary



After-Action Reviews (one-pager)

Event Summary

A tractor trailer hit several construction vehicles on the Woodrow Wilson Bridge, leading to a closure of the Capital Beltway (primarily NB). The tractor-trailer and three other vehicles caught fire. There was 1 fatality, 7 treated & released, 1 hospitalized. A work crew trapped below the bridge had to be rescued.

Some Key Aspects

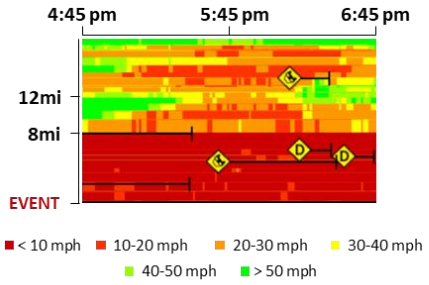
Participating agencies/personnel

17/ 100+

Worst backups from incident

NB 12 miles (into VA)
SB 4 miles (into MD)

Backups of 8 miles were common, increasing at times to 12 miles. There were numerous minor secondary incidents in the queued traffic (worst hours shown below).

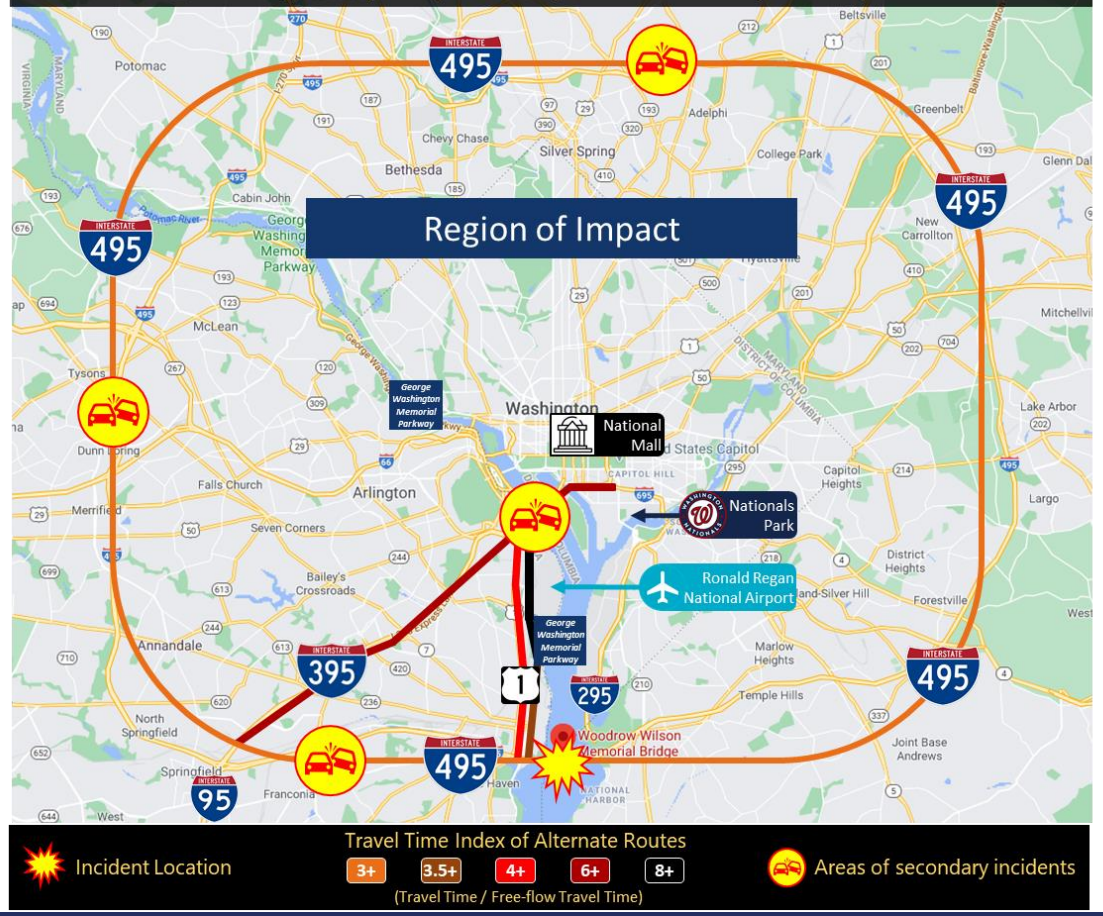


MATOC
Metropolitan Area Transportation Operations Coordination

After Action Review - Performance Summary Report

I-95/495 NB (Outer Loop) • Thru lanes on Woodrow Wilson Bridge
Prince Georges County, MD

Incident Date: Wednesday, June 20, 2018 | Occurrence/Notification: 10:45 am/10:52 am | Duration: 11h 39m



Lane Status

Due to the extensive recovery & cleanup operations required (hampered by late afternoon/ early evening rain), the NB Outer Loop thru lanes were closed for most of the day - from 11:03 AM to 9:23 PM (10h 20m).

User Delay Cost Comparisons

Delay Cost	% Increase
For the region on this day	compared to typical Wednesdays
$3,153,861	285% ▲

Hours of Delay	% Increase
For the region on this day	compared to typical Wednesdays
127,939 per.-hrs.	285% ▲
104,440 veh.-hrs.	295% ▲

Other Regional Impacts

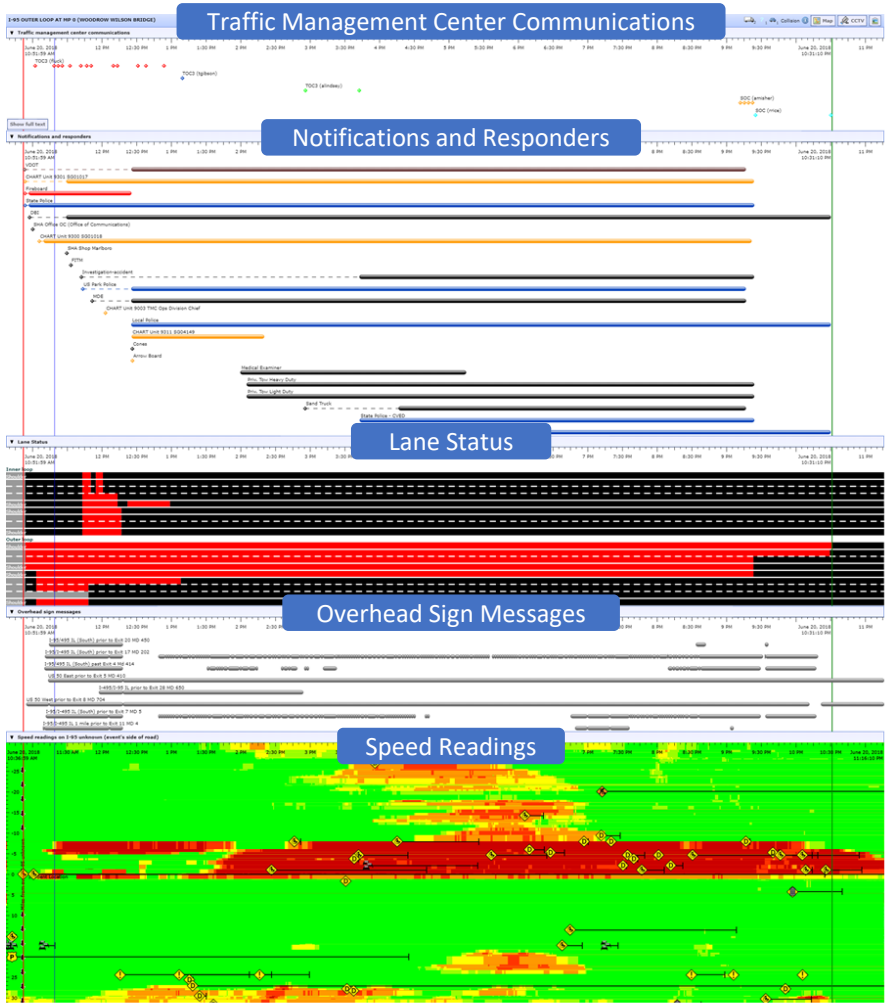
Significant Impacts were also felt around Ronald Reagan Washington National Airport, Alexandria, the District of Columbia, major transit corridors (particularly along Route 1) and two planned events in the area:

National Mall Midday Rally/March near the National Mall & Pennsylvania Ave (**5,000+ attendees**)

Nationals Park The Baltimore Orioles at Washington Nationals in Nationals Park (**41,000+ attendees**, late afternoon / early evening)

After-Action Reviews (one-pager – possible flip side)

Summary Results from **Incident Timeline**



After Action Review **Takeaways**

What worked well?

Overall the response was a success given the complicated nature of the incident; there were no single points of failure.

What needs improvement?

Some DOT response trucks could have been delayed in responding to the incident given they are not classified as emergency response vehicles.

Delays in opening retractable barriers to bleed off queued traffic lead to additional delays in opening lanes.

Queued motorists upstream from the incident sometimes self-diverted, often reversing down on-ramps which created additional hazards; other factors to consider are knowledge of alternate routes and the influence of personal navigation devices.

There were numerous minor secondary incidents in queued traffic, including an increase in incidents on roadways that served as alternate routes.

Local transit bus operations in the area were severely impacted (but rail services served as a good alternate).

Recommendations

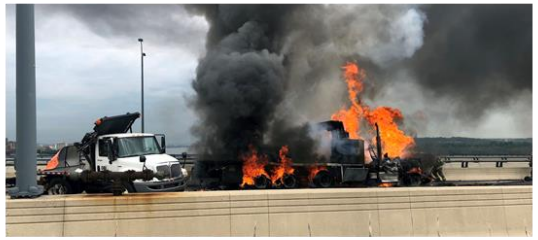
- Examine Unified Command & Command Post locations as they related to the WWB
- Regularly train responders on how to operate and open the retractable barriers to address staff turnover (and get the barrier(s) back into a state of good repair)
- Explore opportunities to conduct bridge related training for DOTs and responders
- Expand TMARS access to select field users like Incident Management Coordinators
- Consider periodic reporting via conference calls for major incidents
- Update and share Maryland and Virginia FITM plans; including updates in RITIS
- Explore conducting a broader multi-jurisdiction/multi-discipline AAR for this incident

Next Steps

Develop an on-going and comprehensive training program for transportation agencies – DOTs, transit, etc. – law enforcement, fire, safety, contractors and others that focuses on high-profile facilities and catastrophic events. Investigate **Virtual Incident Management Training** to supplement and enhance traditional training methods.

After-Action Reviews (one-pager – alternate flip side)

Event **Photos**



Add Photo captions or descriptions here

After Action Review **Takeaways**

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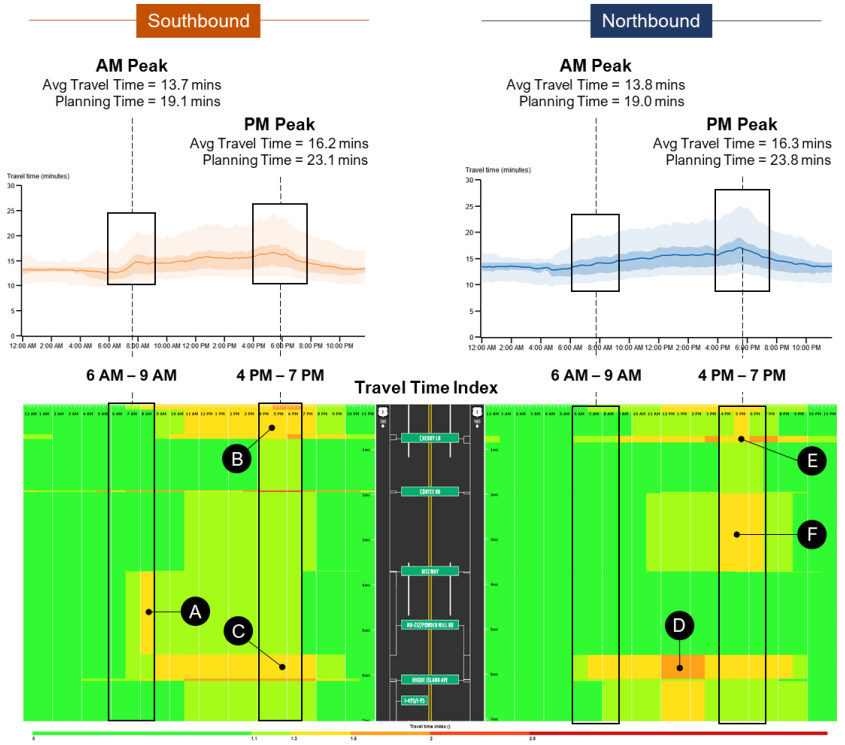
Corridor Performance Report (one-pager)

Corridor Performance Report
I-495 to Fort Meade Rd.

Year 2019

Weekday travel times for the US-1 corridor were aggregated over the entire year and are presented below. This corridor does not exhibit a clear peak travel direction in either the AM or PM peak periods. Instead, the PM peak travel times are consistently higher than the AM peak travel times. In each direction, the average PM peak travel time is approximately 3 minutes longer than the AM peak period travel time, with the planning time being approximately 4 minutes longer. The heat map at the bottom of the page shows the geographic location of typical congestion through the day.



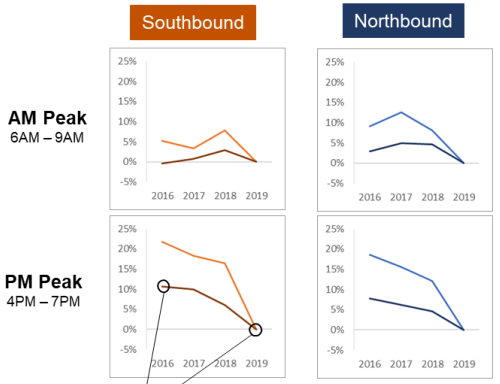
A: 8AM – 9AM : Ritz Way to Powder Mill Rd.
B: 11AM – 8PM : Ft. Meade Rd. to Cherry Ln.
C: 9AM – 8PM : Powder Mill Rd. to Rhode Island Ave.

D: 7AM – 9PM : Rhode Island Ave. to Powder Mill Rd.
E: 8AM – 10PM : at Cherry Ln.
F: 4PM – 7PM : Ritz. Way to Contee Rd.

How much did travel times change during 2019?

Observations
A In the southbound AM peak period, travel times increased Feb. to May, then dropped below January levels from July to Dec. B In the northbound direction during the AM peak period, travel times were mostly constant through May, then decreased June to Dec. C Travel times in the southbound PM peak direction remained relatively constant throughout 2019. D Travel times in the northbound PM peak direction were more variable, becoming more unpredictable between June and Dec.

How much did travel times change compared with previous years?



How to read:
Travel times **were 10% higher in 2016** than in 2019

AM Peak Travel Times Relatively Stable / Slight Improvement

Travel time and reliability remained relatively stable over the past four years in during the AM peak period. A slight improvement was noted in the NB direction in 2019.

PM Peak Travel Times Improving

In the PM peak period, a steady improvement in travel times and reliability has been seen over the years 2016 – 2019.

Corridor Performance Report (one-pager)

Corridor Performance Report
I-495 to Fort Meade Rd.

Year 2019

Region of Study:
US-1 between I-495 and Fort Meade Rd.

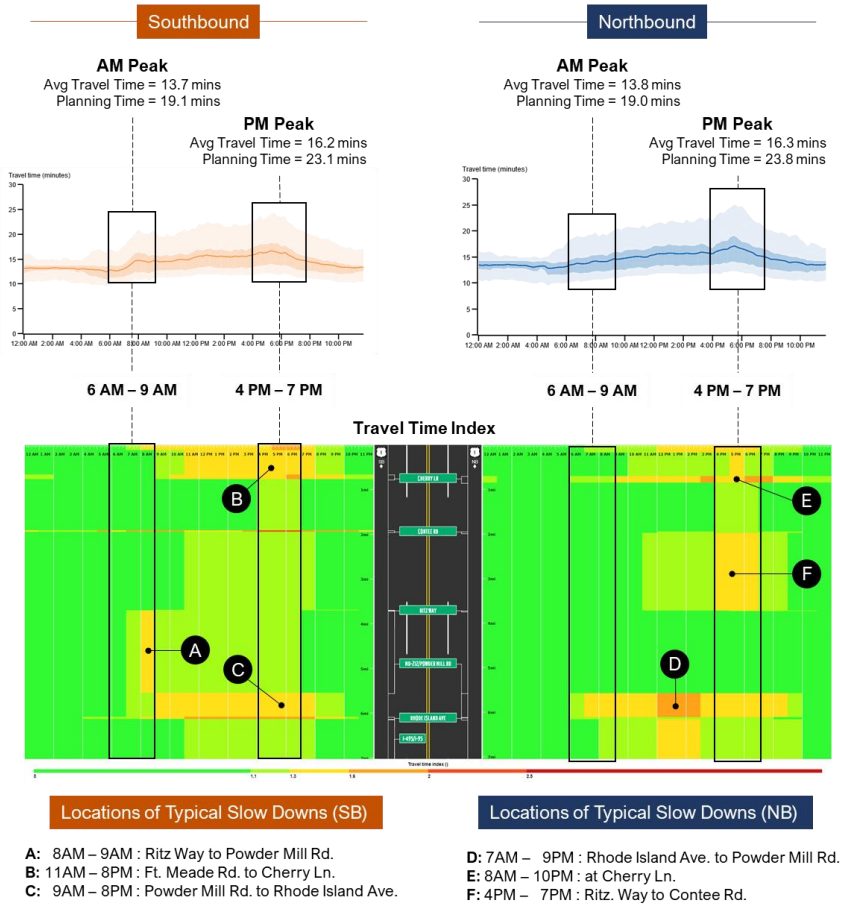
U.S. Highway 1 is the primary north-south corridor connecting Beltsville and Laurel, Maryland. This portion of US-1 is paralleled by Interstate 95 to the west and the Baltimore Washington Parkway to the east. All three of the routes connect Washington, DC and Baltimore, MD.

This seven-mile section of US-1 between I-495 and Fort Meade Rd. is mostly a four-lane undivided highway. Some sections are four-lane divided, four lane with bi-directional median turns, and six-lane divided.

Average bidirectional weekday daily traffic for this section of highway in 2018 ranged from 41,000 near I-495 to 35,500 in Laurel to 31,500 between MD-200 and MD-212.

Purpose of Study:
This annual study examines the yearly performance of this critical business corridor and compares it to performance in previous years.

2019 Corridor Travel Times
Weekday travel times for the US-1 corridor were aggregated over the entire year and are presented below. This corridor does not exhibit a clear peak travel direction in either the AM or PM peak periods. Instead, the PM peak travel times are consistently higher than the AM peak travel times. In each direction, the average PM peak travel time is approximately 3 minutes longer than the AM peak period travel time, with the planning time being approximately 4 minutes longer. The heat map at the bottom of the page shows the geographic location of typical congestion through the day.



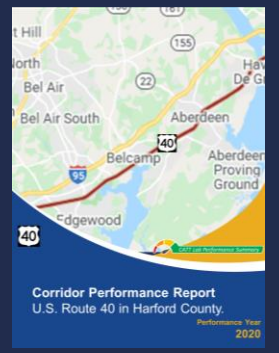
Locations of Typical Slow Downs (SB)

A: 8AM – 9AM : Ritz Way to Powder Mill Rd.
B: 11AM – 8PM : Ft. Meade Rd. to Cherry Ln.
C: 9AM – 8PM : Powder Mill Rd. to Rhode Island Ave.

Locations of Typical Slow Downs (NB)

D: 7AM – 9PM : Rhode Island Ave. to Powder Mill Rd.
E: 8AM – 10PM : at Cherry Ln.
F: 4PM – 7PM : Ritz. Way to Contee Rd.

Test Drive: Corridor Performance (MWCOG)



Performance Measures for US-40

West segments from US-40 bearing east and US-40 bearing west using INRIX data

June 2020

	Speed (mph)	Buffer time (minutes)	Buffer index	Planning time (minutes)	Planning time index	Travel time (minutes)	Travel time index	
	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	
Mon	43.07	5.44	0.19	33.62	1.30	25.81	1.00	Mon
Tue	43.39	4.84	0.17	32.94	1.28	25.62	0.99	Tue
Wed	42.55	7.00	0.25	35.26	1.37	26.13	1.01	Wed
Thu	42.78	5.70	0.20	33.91	1.31	25.99	1.01	Thu
Fri	42.78	5.31	0.19	33.85	1.31	25.99	1.01	Fri
Weekdays	42.94	5.44	0.19	33.69	1.30	25.89	1.00	Weekdays
Sat	42.48	7.28	0.27	34.41	1.33	26.17	1.01	Sat
Sun	43.46	8.12	0.31	34.12	1.32	25.58	0.99	Sun
Weekends	42.96	7.60	0.29	34.17	1.32	25.88	1.00	Weekends
All Days	42.95	6.02	0.22	33.82	1.31	25.89	1.00	All Days

East segments from US-40 bearing east and US-40 bearing west using INRIX data

June 2020

	Speed (mph)	Buffer time (minutes)	Buffer index	Planning time (minutes)	Planning time index	Travel time (minutes)	Travel time index	
	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	8:00 AM - to - 5:00 PM	
Mon	42.51	7.19	0.26	34.52	1.36	25.54	1.01	Mon
Tue	42.55	7.07	0.26	34.43	1.36	25.52	1.01	Tue
Wed	42.41	7.20	0.26	34.60	1.37	25.60	1.01	Wed
Thu	42.00	7.94	0.29	35.50	1.40	25.85	1.02	Thu
Fri	42.44	5.90	0.21	33.92	1.34	25.58	1.01	Fri
Weekdays	42.39	7.40	0.27	34.91	1.38	25.61	1.01	Weekdays
Sat	42.87	7.68	0.29	33.93	1.34	25.33	1.00	Sat
Sun	43.52	8.64	0.34	34.09	1.34	24.94	0.98	Sun
Weekends	43.19	8.10	0.31	33.95	1.34	25.14	0.99	Weekends
All Days	42.61	7.60	0.28	34.67	1.37	25.48	1.01	All Days

Speed: The current estimated harmonic mean speed for the roadway segment in miles per hour.

Buffer Time: The extra time (or time cushion) that travelers must add to their average travel time when planning trips to ensure on-time arrival (95% Travel Time - Average Travel Time).

Buffer Index: The buffer index is expressed as a percentage and its value increases as reliability gets worse ((95% Travel Time - Average Travel Time) / Average Travel Time). For example, a buffer index of 4 (40 percent) means that for a 20-minute average travel time, a traveler should budget an additional 8 minutes (20 minutes x 40 percent = 8 minutes) to ensure on-time arrival most of the time.

Planning Time: How much total time a traveler should allow to ensure on-time arrival (Average Travel Time + Buffer Time).

Planning Time Index: The total travel time that should be planned when an adequate buffer time is included (95% Travel Time / Free-flow Travel Time). The planning time index differs from the buffer index in that it includes typical delay as well as unexpected delays. Thus, the planning time index compares near-worst case travel time to a travel time in light or free-flow traffic. For example, a planning time index of 1.60 means that for a 15-minute trip in light traffic, the total time that should be planned is 24 minutes (15 minutes x 1.60 = 24 minutes).

Travel Time: Time it will take to drive along the roadway segment (Distance Traveled / Speed).

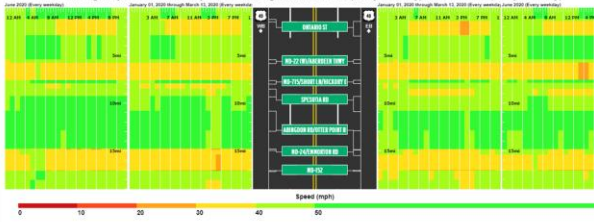
Travel Time Index: Travel time represented as a percentage of the ideal travel time (Travel Time / Free-flow Travel Time).

Data Sources

TMC data is used here to show that there wasn't much change in conditions on the corridor pre and post Covid-19 shutdowns. The date used for before after data was March 16th when the bulk of the closures occurred. The following congestions scans show data before and after the shutdowns. It's use here is beneficial to see before/after Covid-19 shutdowns. For the rest of this document **INRIX XD** will be utilized.

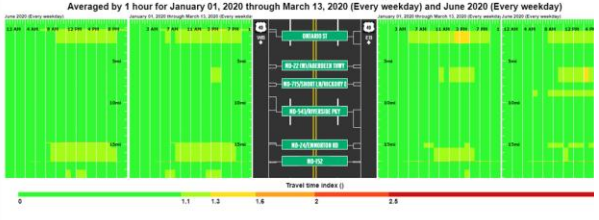
Speed for US-40 using INRIX data

Averaged by 1 hour for January 01, 2020 through March 13, 2020 (Every weekday) and June 2020 (Every weekday)



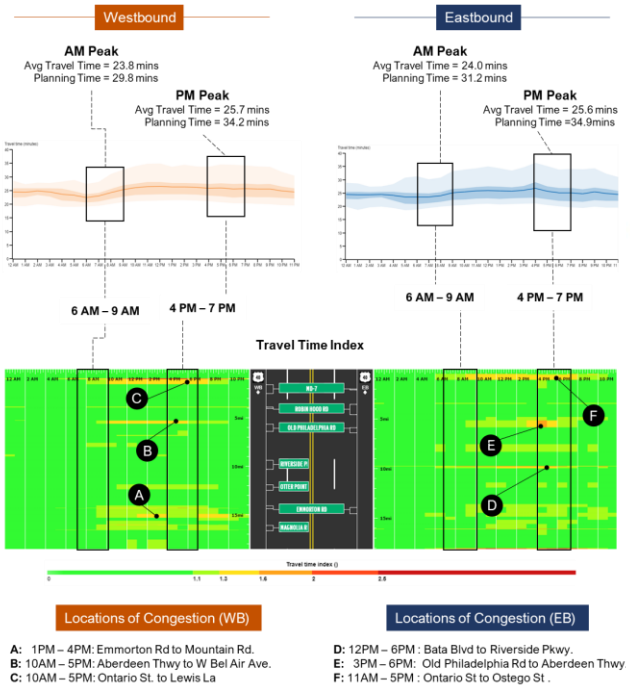
Travel time index for US-40 using INRIX data

Averaged by 1 hour for January 01, 2020 through March 13, 2020 (Every weekday) and June 2020 (Every weekday)



June 2020 Corridor Travel Times

Weekday travel times for the US-40 corridor were aggregated over the entire month of June (weekdays) and are presented below. This corridor exhibits a fairly flat travel time regardless of time of day. AM peak travel times are slightly lower than mid day or PM peak. In each direction, travel times are virtually the same. The PM peak travel times are generally around 2 minutes longer than the AM peak. The heat map at the bottom of the page shows the geographic location of typical congestion through the day.



Locations of Congestion (WB)

A: 1PM – 4PM: Emmorton Rd to Mountain Rd.
B: 10AM – 5PM: Aberdeen Thwy to W Bel Air Ave.
C: 10AM – 5PM: Ontario St. to Lewis La

Locations of Congestion (EB)

D: 12PM – 6PM : Bata Blvd to Riverside Pkwy.
E: 3PM – 6PM: Old Philadelphia Rd to Aberdeen Thwy
F: 11AM – 5PM : Ontario St to Ostego St .

Location A

US-40 WB Emmorton Rd to Mountain Rd

Location A: US-40 WB Emmorton Rd to Mountain Rd

Speed Limit: 45 mph

Lanes: 2 WB. Becomes 3 lanes at the Extra Space Storage driveway on the approach to MD-152

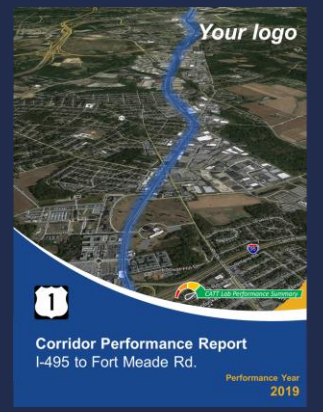
Signalized intersections:

1 Paul Martin Dr
2 Gateway Dr
3 Mountain Rd

Time of Day with most Congestion
1 – 4pm

Notes: Edgewood Business District. Mostly commercial

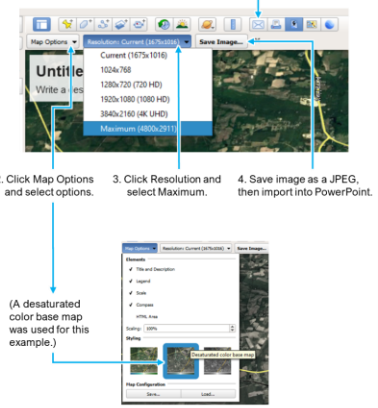
How-to Guide example (new format & layout)



How to make the cover page

1 Create a background map image (from Google Earth Pro)

1. Click Save Image



2. Click Map Options and select options.
3. Click Resolution and select Maximum.
4. Save image as a JPEG, then import into PowerPoint.

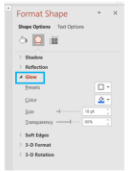
(A desaturated color base map was used for this example.)

2 Overlay a road highlight

1. Select "Curved Line" from the shape menu.

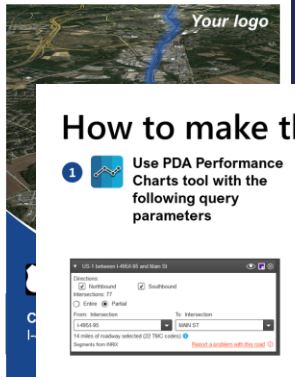
2. Left-click along the path of the roadway to draw the line. Double-click to end the curve. Right-click the finished line to bring up an edit menu to add or move curve point.

3. Under Shape Effects, apply **Glow**. Using the Format Shape dialog, change the color to the same color as the line. Adjust the size and transparency bars to produce the effect based on your personal preferences.



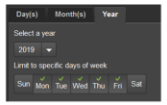
3 Add some finishing touches

1. Insert your logo at the top of the cover.
2. Add a bottom graphic that allows for text, matching your color palette
3. Include things like report title, Route, location, analysis timeframe, etc.



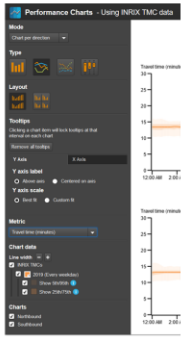
How to make the hourly travel time graph

1 Use PDA Performance Charts tool with the following query parameters

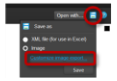


Data Source: INRIX
Granularity: 15 minutes

2 Tailor chart using the settings below

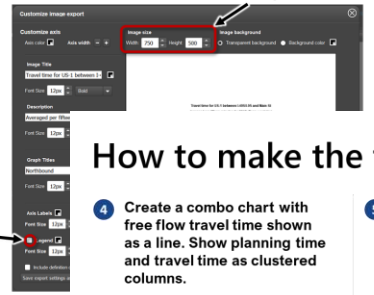


3 Save chart using the "customize image export" tool



4 Change the image size to improve legibility at the scale you will be utilizing

Change image size to a width of 750 and a height of 500.

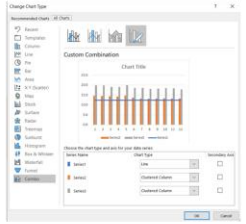


You can turn off the legend display here.

5 In PowerPoint, into document "Picture" butt "Images" tool

How to make the travel time column charts (part 2)

4 Create a combo chart with free flow travel time shown as a line. Show planning time and travel time as clustered columns.



5 The resulting chart looks like this. We need to do some work to clean up the visualization.

6 Label the horizontal axis by month

1. Right click on a column and pick "Select Data…"
2. Edit the horizontal axis labels
3. Highlight the month range in your Excel workbook, press enter, and then OK.

7 Name each data series

1. Right click on a column and pick "Select Data…"
2. Edit the Legend Entries (Series)
3. Under Edit Series, click the cell in the Excel worksheet that contains the corresponding category. Repeat for all three series.

8 Under Format Data Series, use Series Options to overlap the data columns.

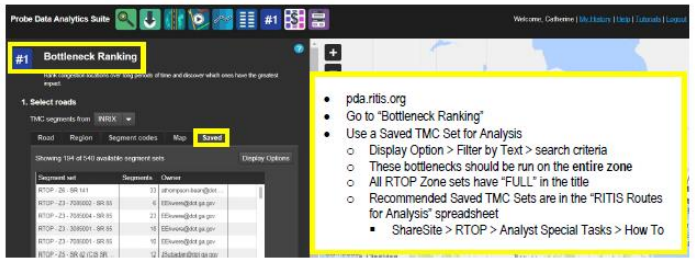
Change the series order if the planning time column obscures the travel time column.

GDOT's How-to Guide Example

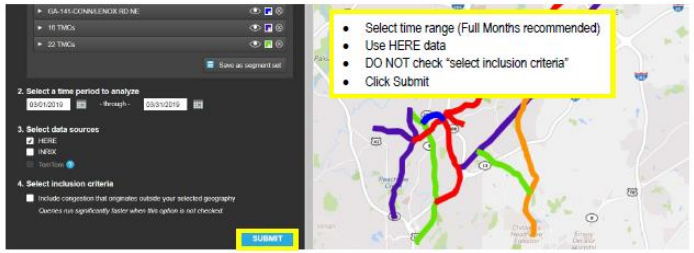
ZM/CM Monthly Report - Bottleneck Analysis
Last Updated: 04/30/2019

Objective: Provide ZM/CM with an overview of the top Bottlenecks on the RTOP Zone

- Cost Analysis is performed on the entire corridor
- RITIS Information is available on the 1st after the month is completed
- Information will be gathered from RITIS, inputted into an Excel Spreadsheet, and formatted into the Monthly Report



- pda.ritis.org
- Go to "Bottleneck Ranking"
- Use a Saved TMC Set for Analysis
  - Display Option > Filter by Text > search criteria
  - These bottlenecks should be run on the **entire zone**
  - All RTOP Zone sets have "FULL" in the title
  - Recommended Saved TMC Sets are in the "RITIS Routes for Analysis" spreadsheet
    - ShareSite > RTOP > Analyst Special Tasks > How To



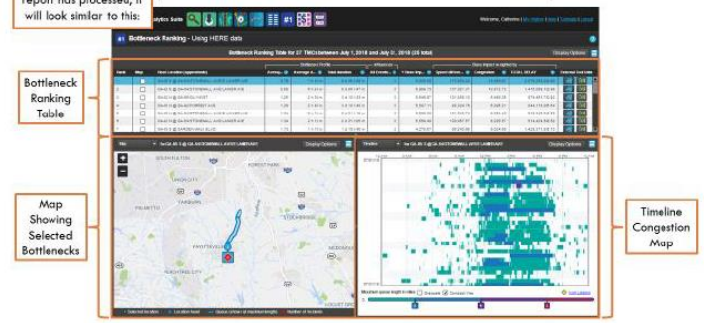
- Select time range (Full Months recommended)
- Use HERE data
- DO NOT check "select inclusion criteria"
- Click Submit

- If this screen comes up, click the "lock symbol" next to the URL bar
- There should be a small menu with "Flash"
- The drop-down menu next to flash may say "Ask (default)"
- Change it to "Allow"
- Refresh the page

RITIS Bottleneck Reports 1

BOTTLENECK RANKING VISUALIZER

When your bottleneck report has processed, it will look similar to this:



BOTTLENECK RANKING TABLE

Data is Ranked According to Base Impact

Bottleneck Profile: Most useful information

Base Impact: Bottleneck reports weighted by this metric

Base Impact Weighted By: Technical Parameters calculated by RITIS

Base Impact:
The aggregation of que length over time for congestion originating at each location in mile-minutes

RITIS Bottleneck Reports 2

BOTTLENECK RANKING MAP & CONGESTION CHARTS

Map View: shows a visual representation of bottleneck

Timeline View: shows congestion severity based on Date & Time of Day

Bottlenecks

Table 2: Top 10 Bottlenecks – Feb 2019 Vs. Previous Year

Feb 2019	Head Location (Approximate)	Direction	Feb 2018
1	N Druid Hills Rd @ Azalea Cir	S	48
2	SR 141 @ I-285	S	2
3	W Paces Ferry Rd @ SR 9/SR 141	E	4
4	SR 13 @ I-285	S	5
5	SR 155 @ I-85	S	8
6	SR 9 @ Collier Rd	N	39
7	SR 237 @ Sidney Marcus Blvd	N	29
8	SR 237 @ SR 9	N	17
9	SR 237 @ SR 141-Conn/Lenox Rd NE	N	13
10	N Druid Hills Rd @ SR 155/Clairmont Rd	W	139

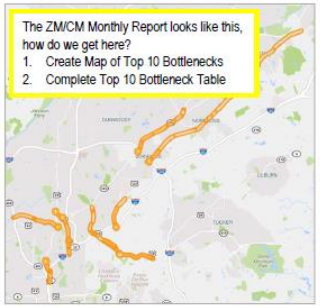


Figure 1: Top 10 Bottlenecks in February 2019
Note: Bottlenecks May Overlap

RITIS Bottleneck Reports 3

Thanks!

CATT LABORATORY

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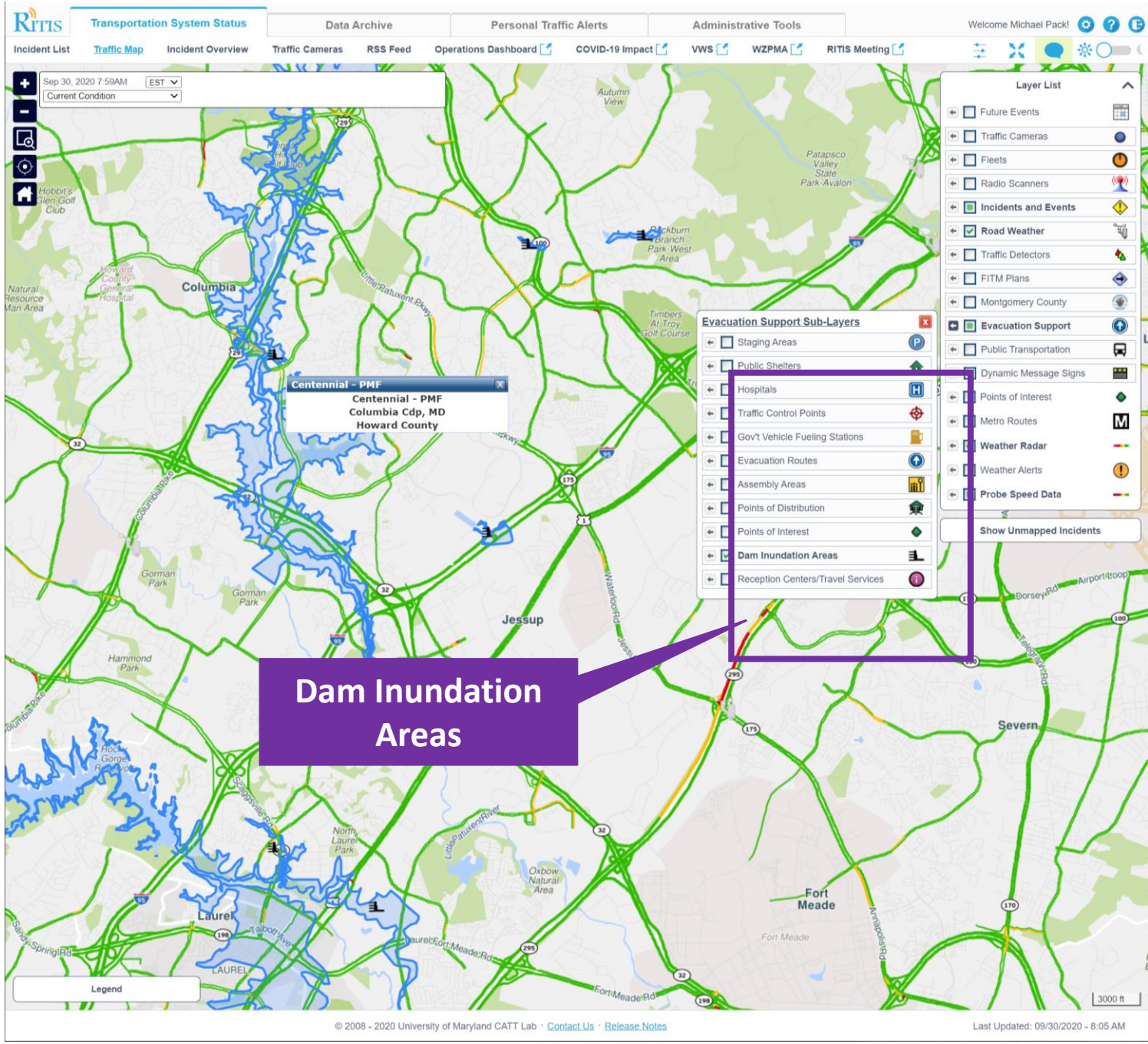
RITIS | Probe Data Analytics suite

RITIS Updates

Michael Pack
UMD CATT Lab
Director

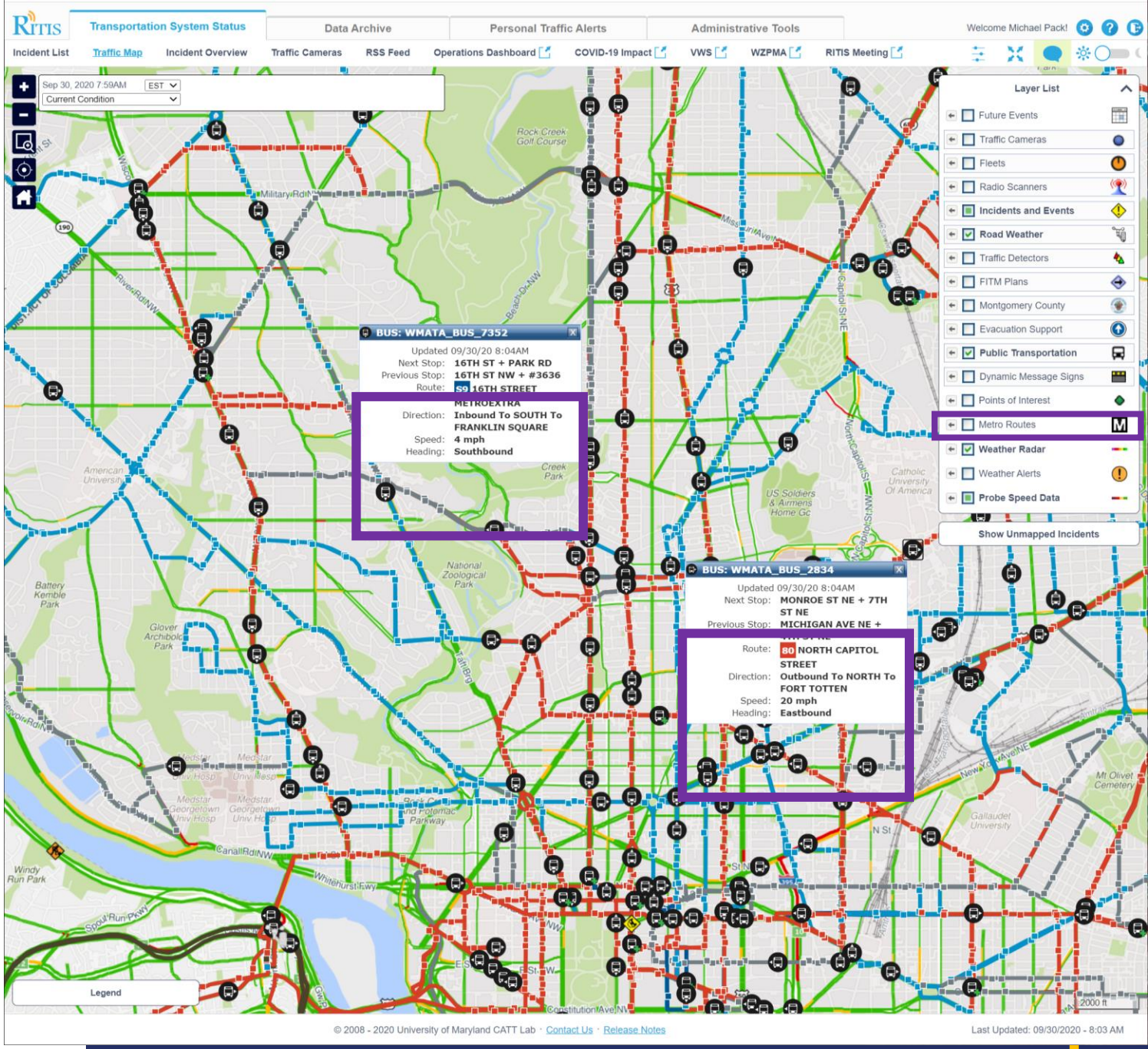
RITIS

1. Updated Evacuation Layers and Files in the NCR including new Dam Inundation Areas
2. Added Oregon Work Zone Data
3. CCTV Image Server Enhancements



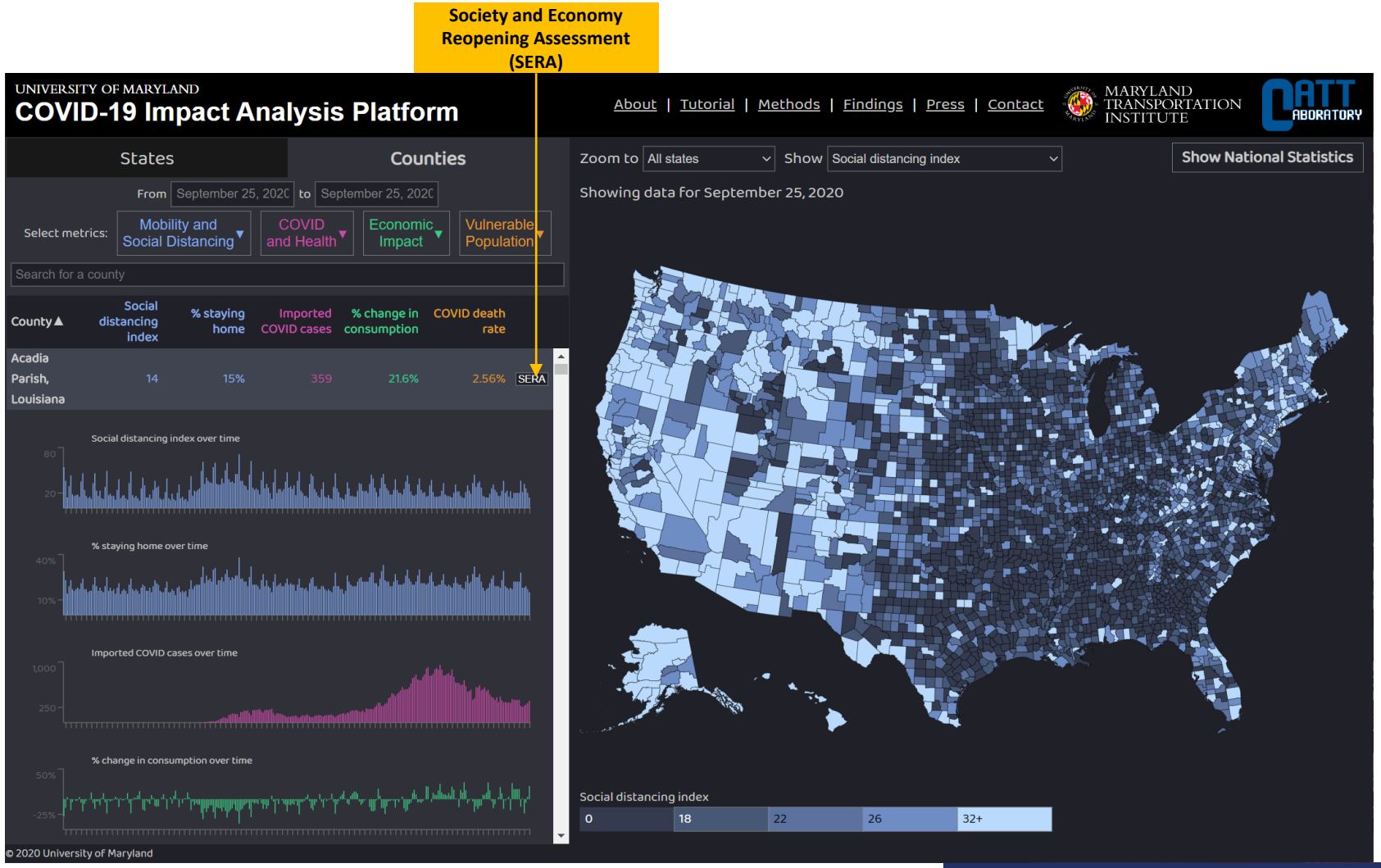
RITIS

4. Added several Transit systems
5. Fixed bugs with WZPMA

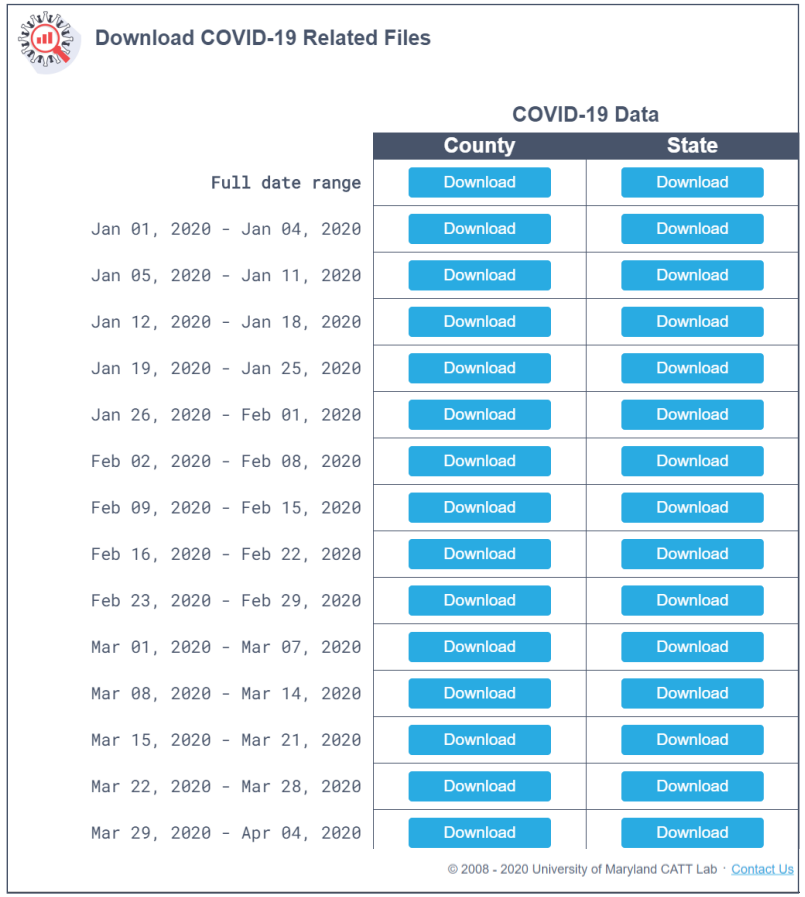


RITIS

6. MANY updates to the COVID-19 Impacts Platform

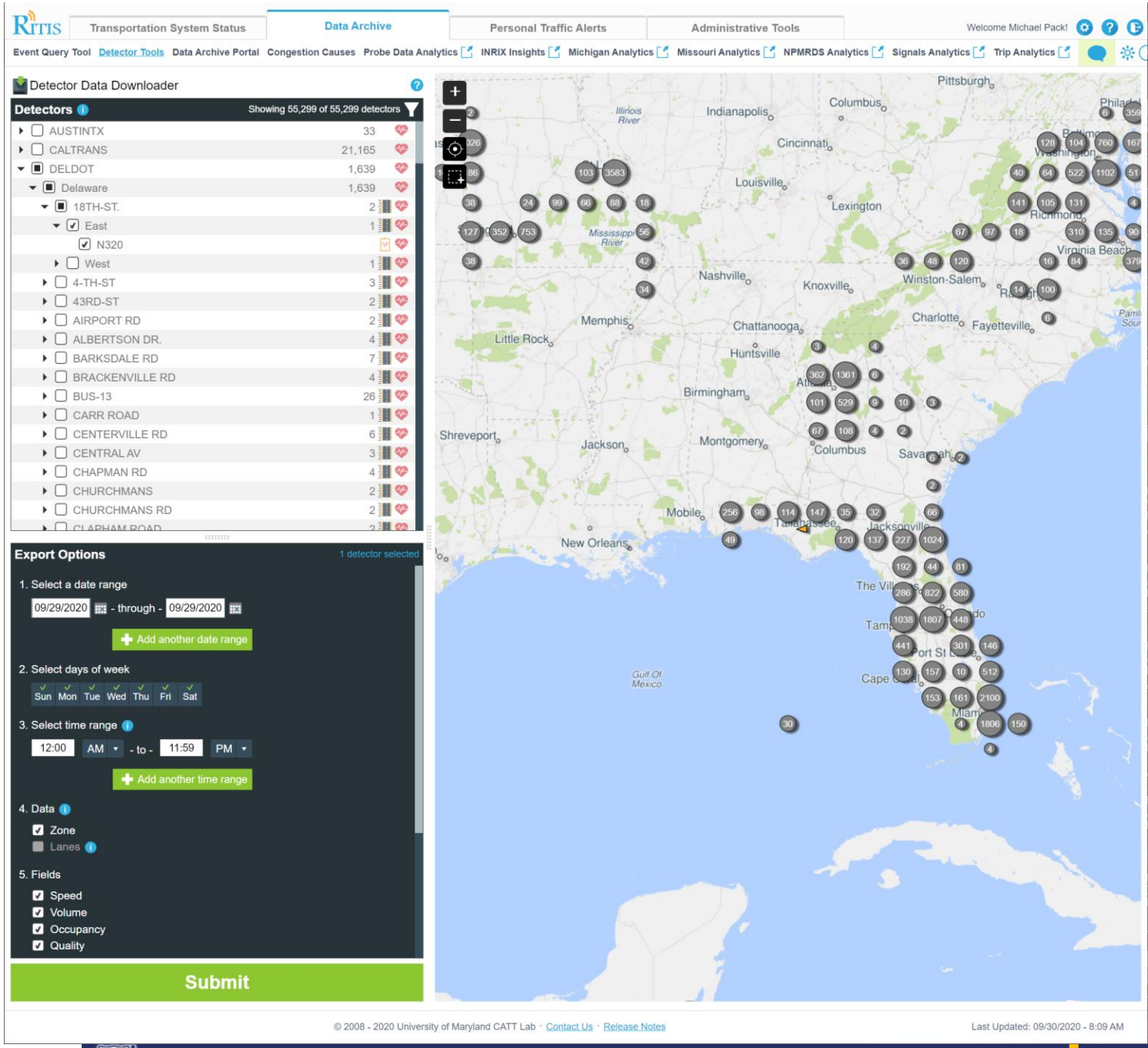


7. COVID Data Portal for downloading raw data



RITIS

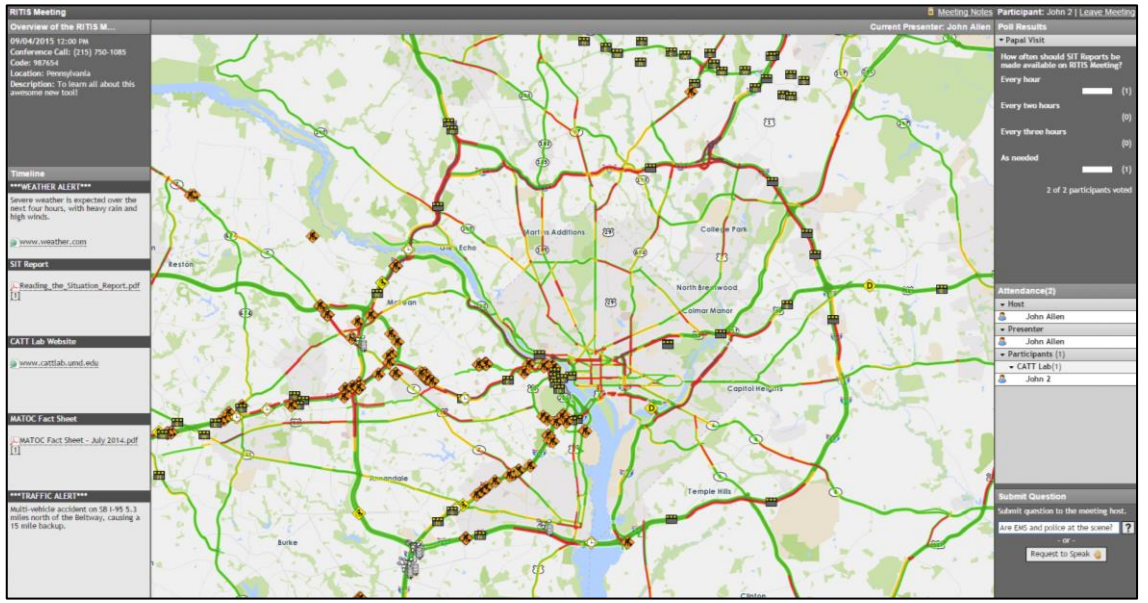
8. Significant enhancements and modernization for Detector Analytics Tools
   a) Downloader
   b) Sensor Health
   c) Sensor Profile



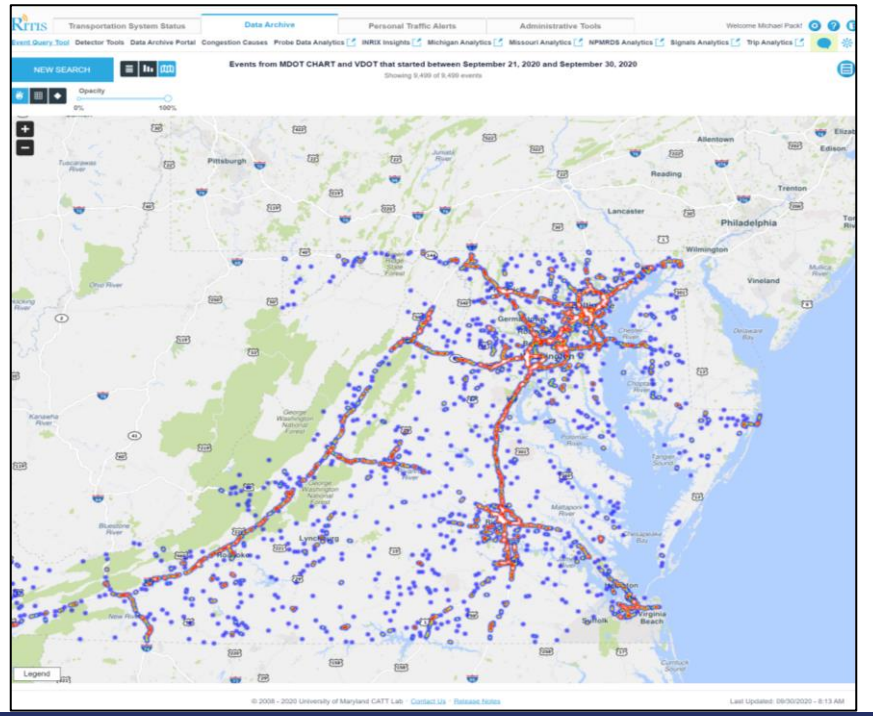
RITIS

9. Added multiple-hosts/handoff functionality to RITIS Meeting
10. Deployed the Ops Dashboard (MD only)
11. Night-mode visualization improvements
12. EQT Directionality Search improvements
13. Administration and Permissions Mgmt.

RITIS Meeting



EQT



RITIS

14. Updated BTS COVID website background data with prior year stats for comparison between 2019 and 2020.

Find the latest Coronavirus-related transportation statistics on the BTS Covid-19 landing page

United States Department of Transportation

Ask-A-Librarian | A-Z Index

Bureau of Transportation Statistics

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Home » COVID-19-Related Data Spotlights

- Catalog of COVID-19 Related Transportation Statistics
- Daily Travel (National, State, and County)
- The Week in Transportation (National)
- Bikes and E-scooters
- Ferry Operations
- COVID-19-Related Data Spotlights

Overall Travel Down, Long-Distance Travel Up for Labor Day Weekend as Americans Bid Goodbye to COVID-19 Summer

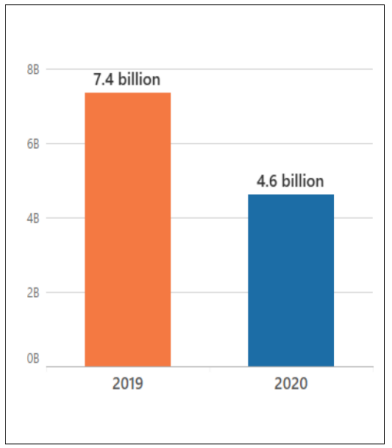
Overall, Americans took 2.8 billion fewer total trips (4.6 billion) during the Labor Day weekend this year than they did in 2019 (7.4 billion). That overall drop of 38% included declines in travel for each day of the 3-day weekend plus the 2 days before the weekend when many people traditionally get a head start on their trips. For both 2019 and 2020, the number of trips was highest on Thursday, Friday and Saturday, with lower numbers on Sunday and Monday.

The overall decrease is driven by an equivalent 38% drop (2.7 billion) in the number of local trips (under 50 miles). The number of long-distance trips (50 or more miles), however, increased by 10% (16.6 million) over last year. That long-distance increase was led by a 47% rise (18.2 million) in the number of trips between 100 and 250 miles but muted by a 54% drop (8.8 million) in the number of trips longer than 500 miles.

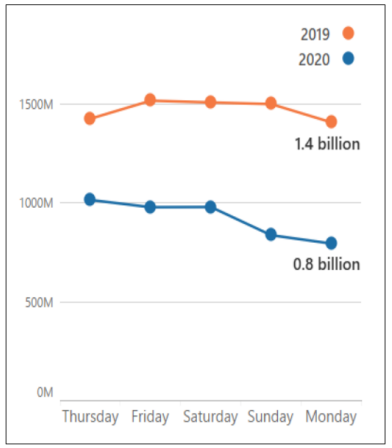
In 2019, on average, 19.3% of Americans stayed home each day during the holiday weekend. In 2020, that number rose to an average of 26.3% staying home each day.

Total Trips

Total Trips Taken Thursday-Monday During the Labor Day Weekend, 2019 and 2020



Total Trips Taken Daily Thursday-Monday Labor Day Weekend, 2019 and 2020

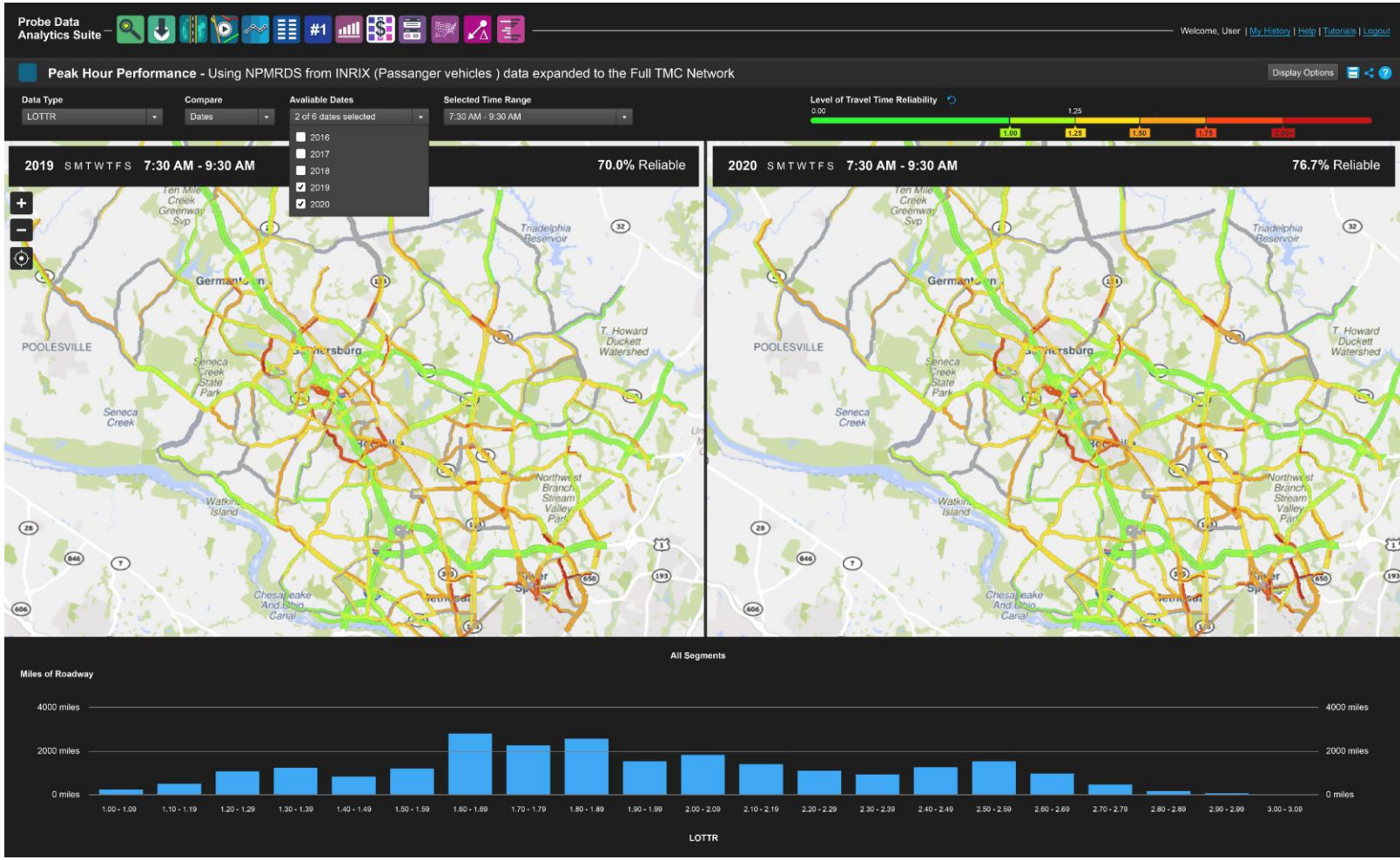


PDA

1. Numerous backend bug fixed
2. Bug fixes related to large downloads
3. MAP-21 reporting updates
4. UI updates to denote when segmentation/mapping changes may affect reports

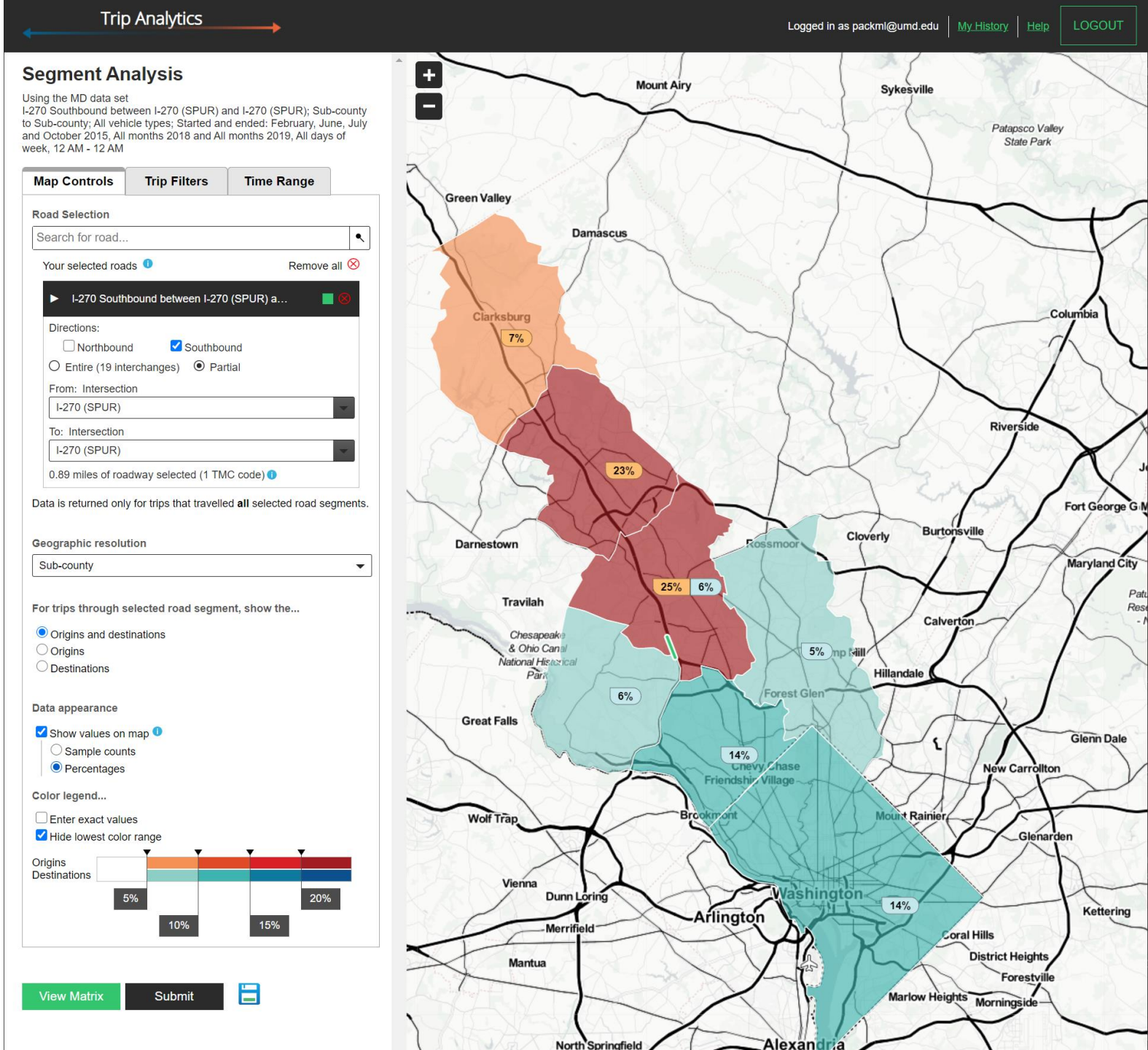
PDA

5. Many LARGE works-in-progress including
   a) Metadata Versioning for XD segmentation changes
   b) MassDOT GoTime Bluetooth Sensors
   c) HERE subsegment integration work
   d) LOTTR (and other MAP-21 measures) on a map



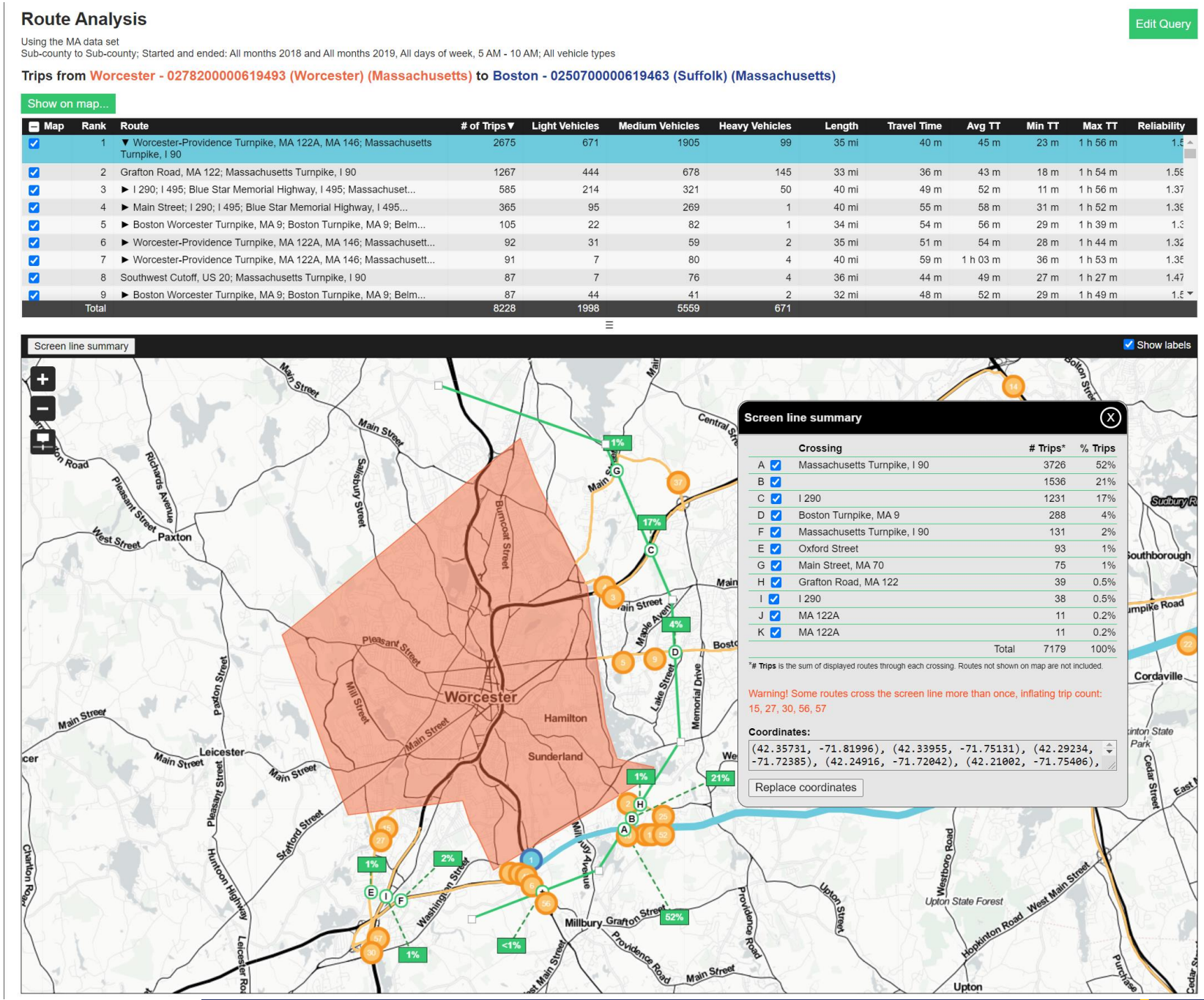
Trips

1. Data Access Permissions Enhancements
2. Filter Summaries with geographic summaries
3. Segment Analysis Enhancements for:
   a) Coloring/thresholds updated
   b) Dynamic handles/color sliders
   c) Numbers and percentages on maps
   d) Visual enhancements for reading clarity (word layout)



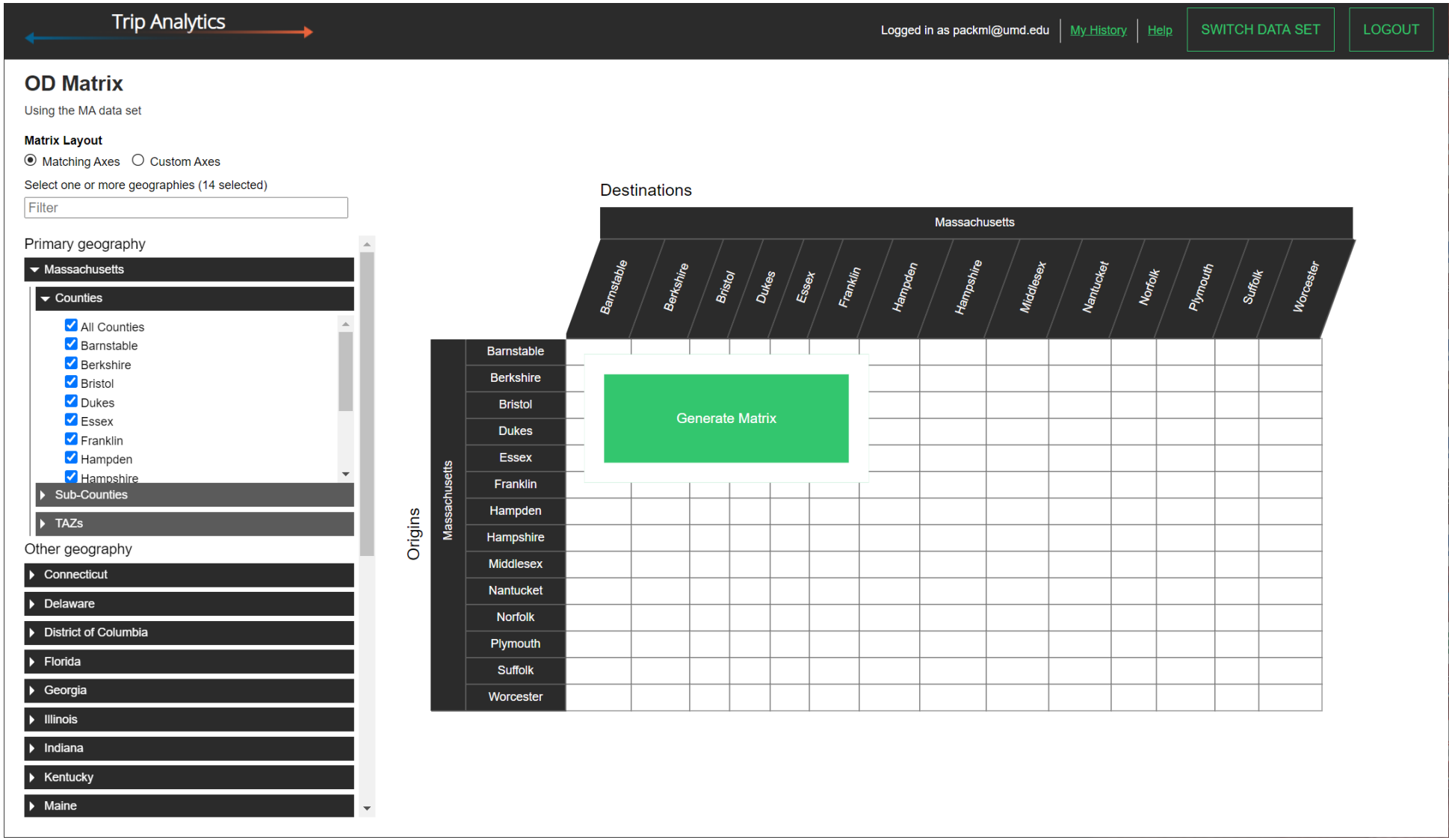
Trips

4. Route Analysis Enhancements for:
   a) Geography menu layout enhancements
   b) Screen lines update dynamically as they are moved
   c) Repositioning of screen line crossings stay in place
   d) Numerous bug fixes
5. My history enhancements



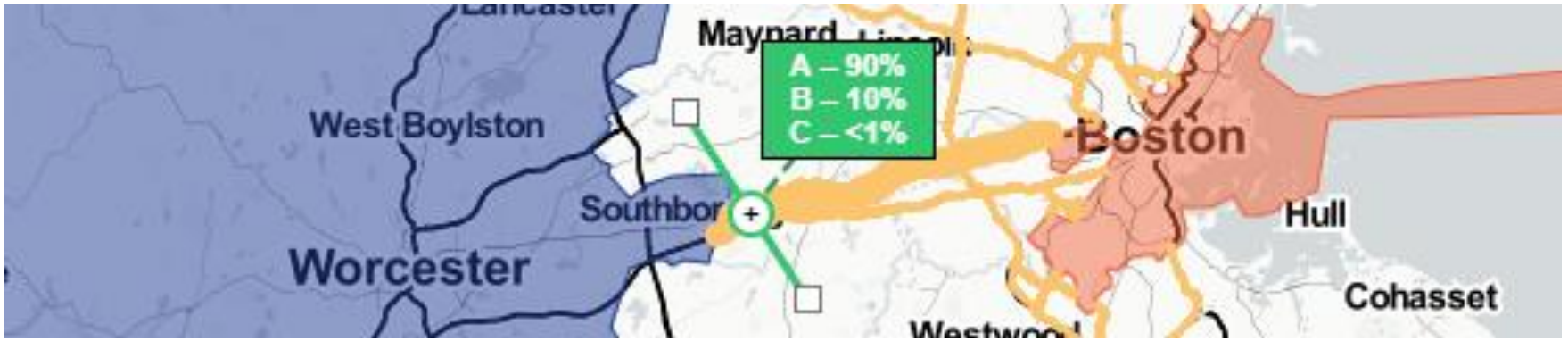
Trips

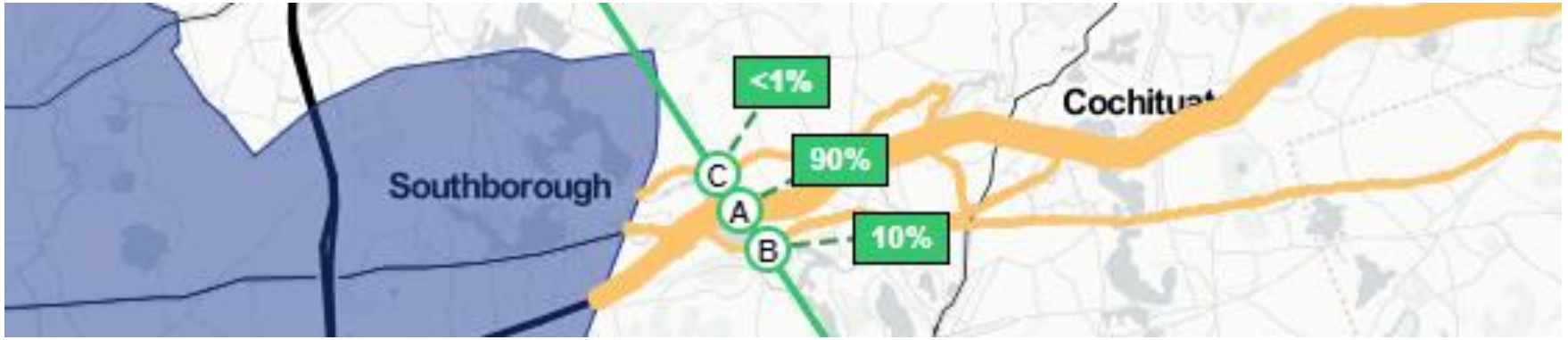
6. OD Matrix: language consistency in filters and selections
7. Segment Analysis: larger mapping and changed color schemes



Trips

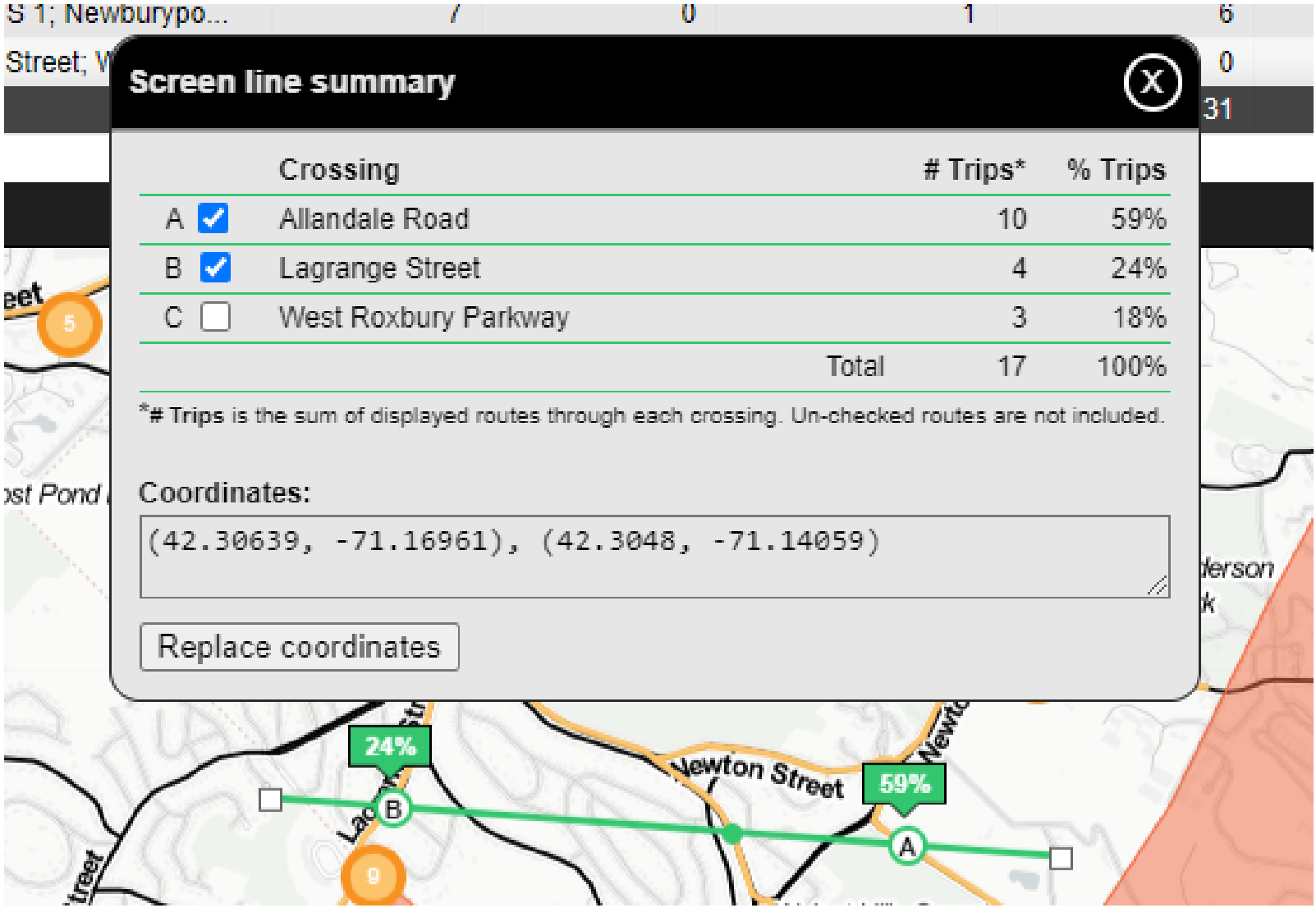
8. Segment Analysis road search sorting
9. Route Analysis
   a) The screen line's crossings clustering
   b) Draggable overlays





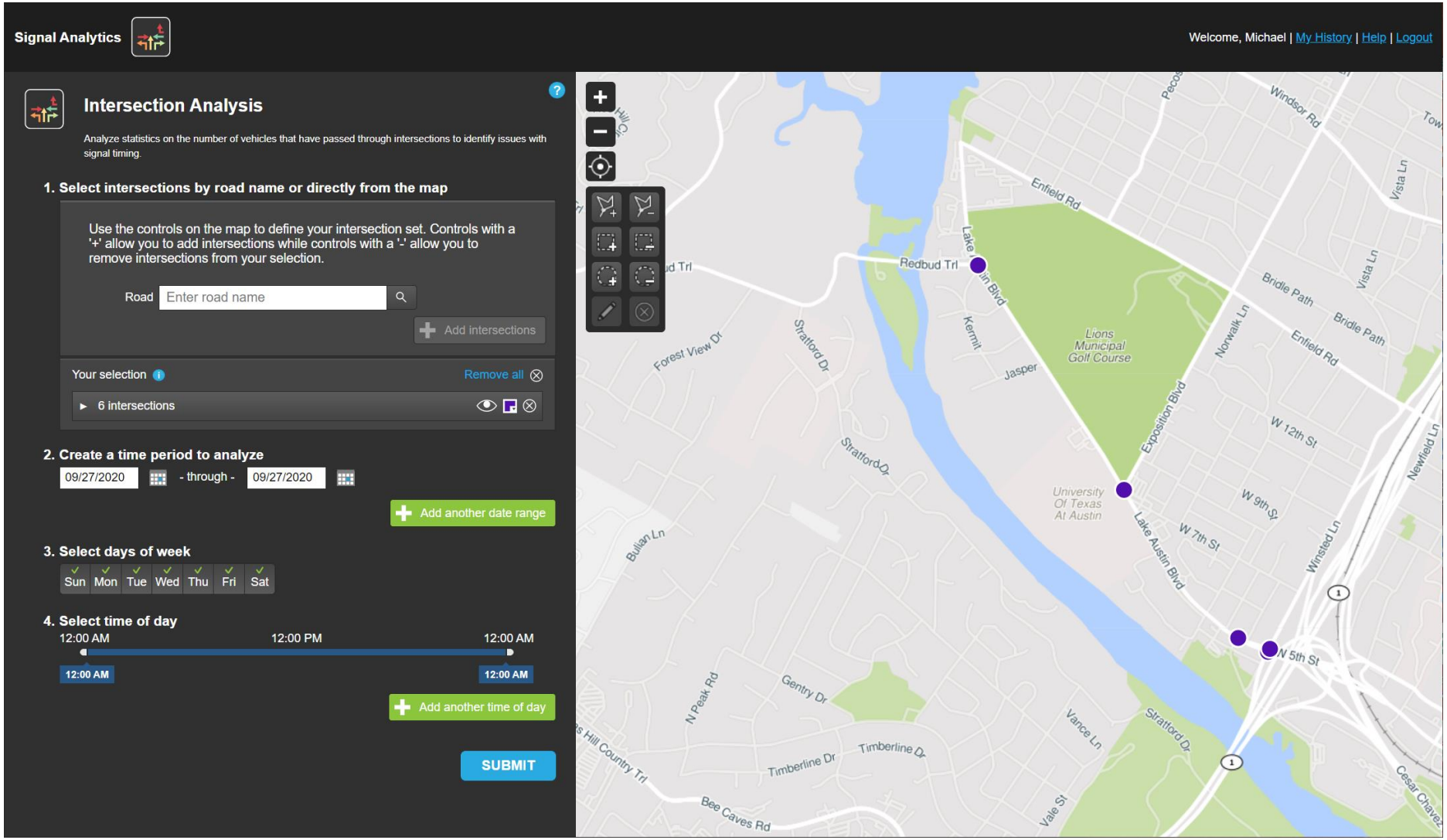
Trips

10. “What’s New” page
11. “Help” page added.
12. “My History” page added
13. Segment Analysis
    a) Road searches will now list results from your data set’s primary state first.
14. Route Analysis
    a) Screen line’s summary report lets you hide individual crossings.

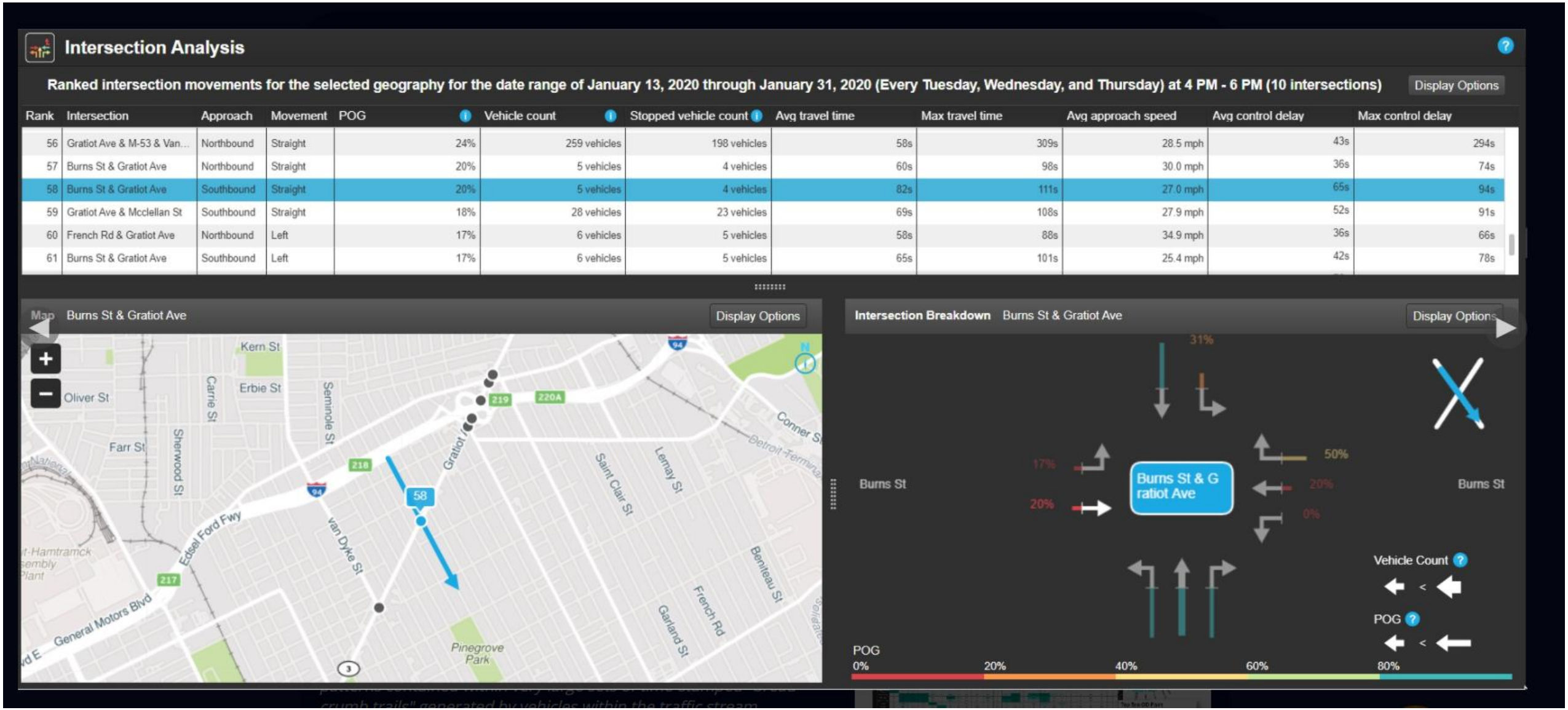


Signals

1. Date Range Selection Enhancements
2. Numerous Bug Fixes
3. Enhancements that speed up setup and deployment capabilities



Signals (Work in Progress)



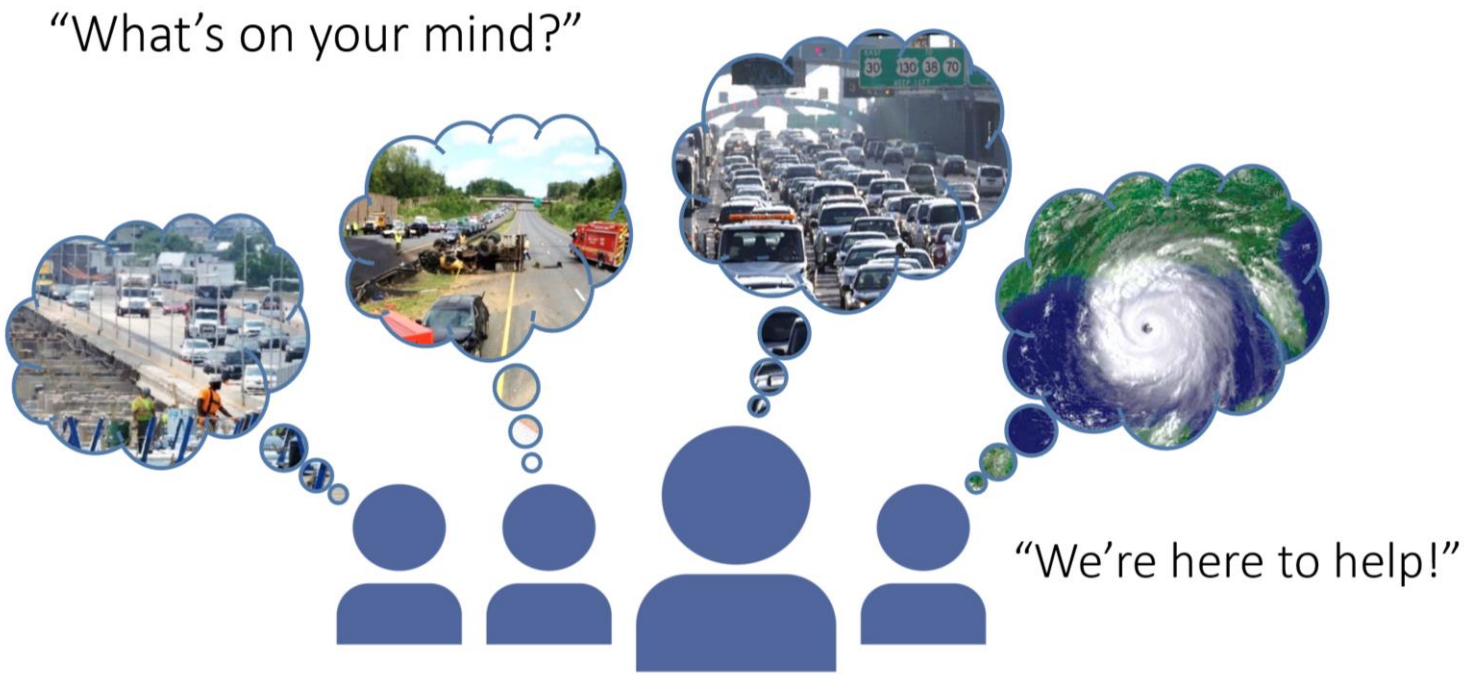
RITIS | PROBE DATA ANALYTICS SUITE

Agency Input Session

Michael Pack
UMD CATT Lab
Director

Your Input is Needed!

- All features and functionality are driven by state/mpo users.
- You are welcome to join any of our User Groups / Working Groups / Listening Sessions to brainstorm/define these new features and functionality.
- You can also type your comments to us today either in the chat box below, or with an email to support@ritis.org



Wrap Up

Jesse Buerk
Delaware Valley Regional Planning Commission
User Group Co-chair

Questions?



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Thank you!

CATT LABORATORY

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