PROBE DATA ANALYTICS SUITE

u s e r g r o u p

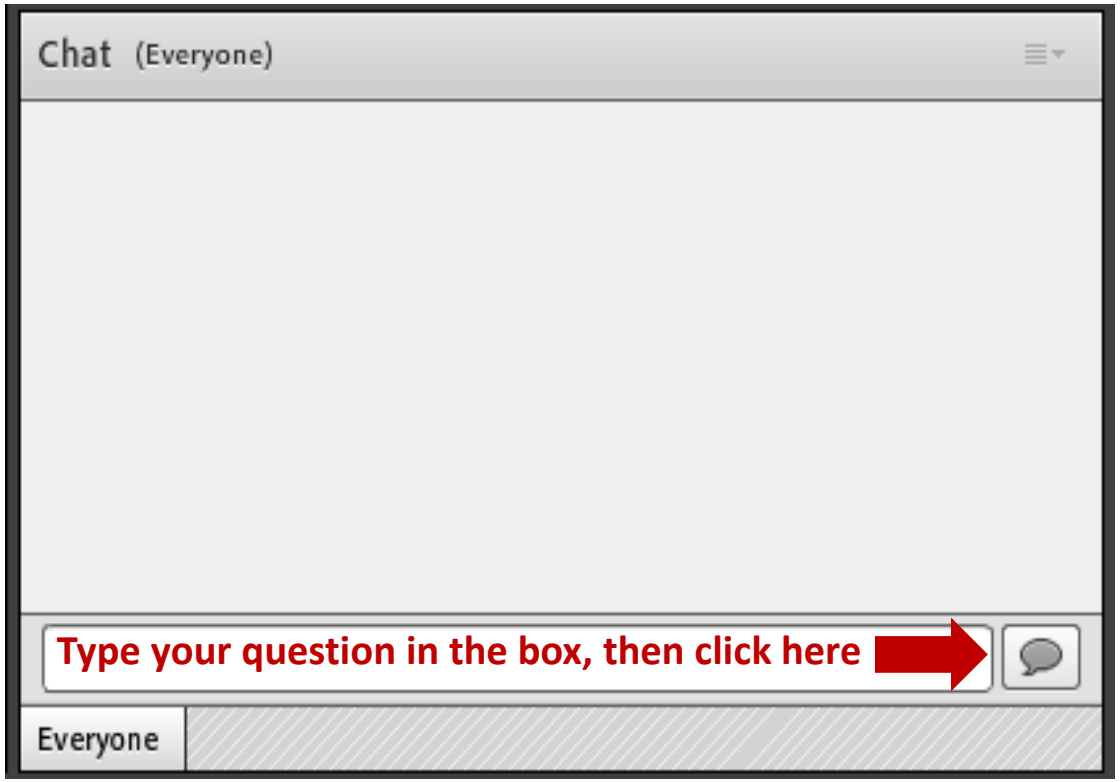
Web Meeting – February 6, 2020

Webinar & Audio Information

- The call-in phone number is: xxx-xxx-xxxx & enter xxxxxxx# at the prompt
- Participants will be in "Listen Only" mode throughout the webinar
- Please press *0 to speak to an operator for questions regarding audio
- Please call xxxxxx at xxx-xxx-xxxx for difficulties with the web or audio application
- This webinar will be recorded
- Presentations will be posted to the I-95 Corridor Coalition website. Participants will receive a link to the presentations after they are posted.

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 presentation or at the end of the webinar



Welcome & Introductions

Matt Glasser, PE, Georgia DOT

User Group Co-chair

Agenda

Welcome & Introductions	Matt Glasser, Georgia DOT & User Group Co-chair
Coalition Update	Denise Markow, I-95 Corridor Coalition
Integrating RITIS-PDA Suite analytics into Esri's ArcGIS Platform	Greta Ryan, Richmond Regional Planning Organization (MPO)
TDADS Project Update	Mark Franz, UMD CATT Laboratory
RITIS and PDA Suite Features – What's New & What's Coming	Michael Pack, UMD CATT Laboratory
Agency Input Session – questions, comments…..	All
Wrap Up	Matt Glasser, Georgia DOT & User Group Co-chair

Introductions

Greta Ryan
Richmond Regional Planning Organization (MPO)
Senior Planner

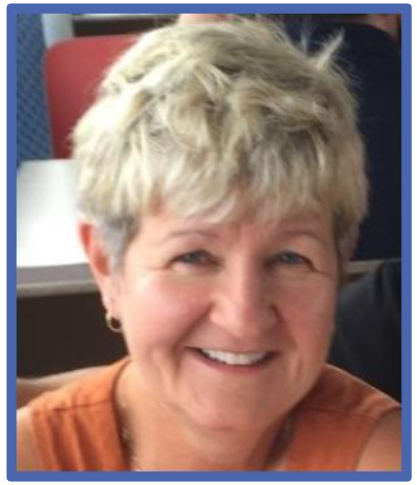
Mark Franz, PhD
UMD CATT Lab
Lead Transportation Analyst

Michael Pack
UMD CATT Lab
Director

Participants

Agency			
AECOM	Florida DOT	Maryland DOT – SHA	Port Authority of NY NJ
AEM Corporation	Florida DOT – D6 TMC (Florida International University)	Maryland Transportation Authority	Rhode Island DOT
Anne Arundel County	FDOT – D4	Massachusetts DOT	Rhode Island Statewide Planning
Anne Arundel County of Emergency Management	Federal Highway Administration	Massachusetts DOT – Highway Division	RK&K
ARC	Florida DOT	MDTA	Roanoke Valley-Allegany Regional Commission
Baltimore Metropolitan Council	Gannett Fleming	Metric Engineering	Rockingham Planning Commission/MPO
CAMPO	Georgia DOT	Miami – Dade TPO	SJTPO
Cape Fear RPO	HDR	Michigan DOT	Southwestern Pennsylvania Commission
University of Maryland CATT Lab	I-95 Corridor Coalition	Missouri DOT	TTI
CHA	INRIX	Montgomery County (PA) Planning Commission	University of Virginia
City of Atlanta, GA	Jacob's Engineering	MWCOG	Vermont AOT
City of Charlotte, NC	Kimley-Horn	New Jersey DOT	Virginia DOT
City of Norwalk, CT	KMJ Consulting, Inc.	North Carolina DOT	VTRC/Virginia DOT
Collier County Traffic Ops (FL)	Lehigh Valley Planning Commission	NJTPA	WMATA-MTPD-OEM
Kimley-Horn	LVPC	PANYNJ	WSP
CORE-MPO	Manatee County	Pennsylvania DOT	
District DOT	Maricopa Associate of Governments	Pennsylvania Turnpike Commission	
DVRPC	Maryland DOT	Plan RVA	

Coalition Update



Denise Markow, PE, I-95 Corridor Coalition

TSMO Director

Coalition Update

RECENT

- ✓ **Webinar on Phase II: Ubiquitous Traffic Volume from Probe Data** – November 13, 2019
- ✓ **Waze Product Roadmap Working Group Meeting** – November 14, 2019
- ✓ **TDADS Congestion Pie Chart Web Meeting** – November 21, 2019
- ✓ **New England Exchange on Heavy Towing** – December 4, 2019
- ✓ **Emerging Technologies in Transportation Management Webinar** – January 30, 2020

UPCOMING

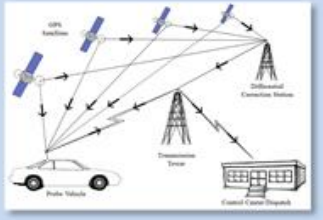
- ✓ **TSMO/CAV/Freight Strategic Planning Summit** – March 18, 2020
- ✓ **New Technologies providing Traveler Information Meeting** – March 19, 2020
- ✓ **Southern HOGs Exchange on Hurricane Evacuation & Plans** – April 29-30, 2020
- ✓ **RITIS-PDA Suite User Group Web Meeting** – May 7, 2020

Optimal Traffic Monitoring – Newest Deliverable

Conventional Sensors

- Still needed and viable, and will be for the foreseeable future.
- Justified on critical portions of the roadway where ownership and direct control of the data stream trump the value proposition of probe data.
- Needed to continue to sample across a broad array of road classes and types as ground-truth sources for spot speed and counts.
- Data are owned by the agency and can be shared and used without being subject to licensing.

Commercial Probe Data



- Useful for any state DOT and sub-jurisdictions.
- High value proposition, scalability and usefulness for a variety of applications from planning to operations.
- Analytics options are robust and growing, and supported by a number of industry players.
- Key personnel within the DOT should be well-versed in its capabilities and limitations.
- **Useful Applications: Travel Time on Signs, Signal Performance Studies, Smart Work Zones**

Re-identification Data

- Bluetooth and WiFi
- Should be viewed as travel time sensors (as opposed to speed sensors). Such data is needed for travel time or O-D studies.
- Re-identification is typically used as ground truth for validating accuracy of sources of travel time data (such as commercial probe data).
- **Useful Applications: Travel Time on Signs, Travel Time Validation, Signal Performance Studies, Origin-Destination Studies, Smart Work Zones**

HRCD (High-Resolution Controller Data)

- HRCD and the corresponding Automated Traffic Signal Performance Measures (ATSPMs) are in the domain of traffic signal engineers.
- Signal upgrades should include consideration for acquisition and processing of HRCD and ASTPMs.
- **Useful Applications: Signal Performance Studies (ATSPMs)**

Emerging, Leading Edge Technologies

Trajectory Data

- Waypoint data every 1 second
- OD studies, arterial analysis, freight studies
- Market-ready by 2021

Estimated Volumes from Probe Data

- AADTs, turning movements, vehicle/hour
- I-95CC Validation
- Market-ready by 2021

VPP III – Coming Summer 2021

VPP III

- Current VPP expires in 2022 – Coalition goal is to have VPPIII operational by July 1, 2021
- Consisting of Data and Ancillary Products
- Validation Analyses
- Data Sharing and Use Agreements

VPP III Next Steps

Step 1: Initial Vendor Meetings have been conducted

Step 2: Technical Requirements are under review

Step 3: Outreach to states to staff the Steering Committee

In the spotlight…

Integrating RITIS PDA Suite analytics into Esri's ArcGIS Platform

Greta Ryan

Senior Planner, Richmond Regional Transportation Planning Organization (MPO)

Advances in the Congestion Management Process

- INRIX data 2010
- RITIS Probe Data Analytics 2014
- ArcGIS StoryMap 2019

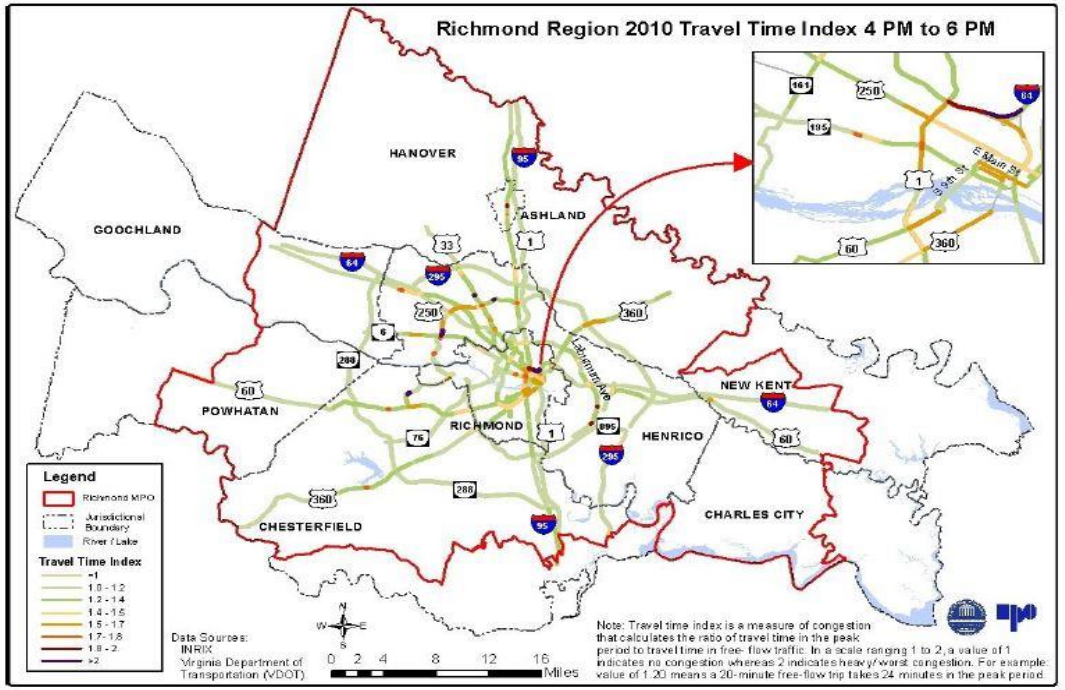
Richmond Regional Transportation Planning Organization

INRIX data 2010

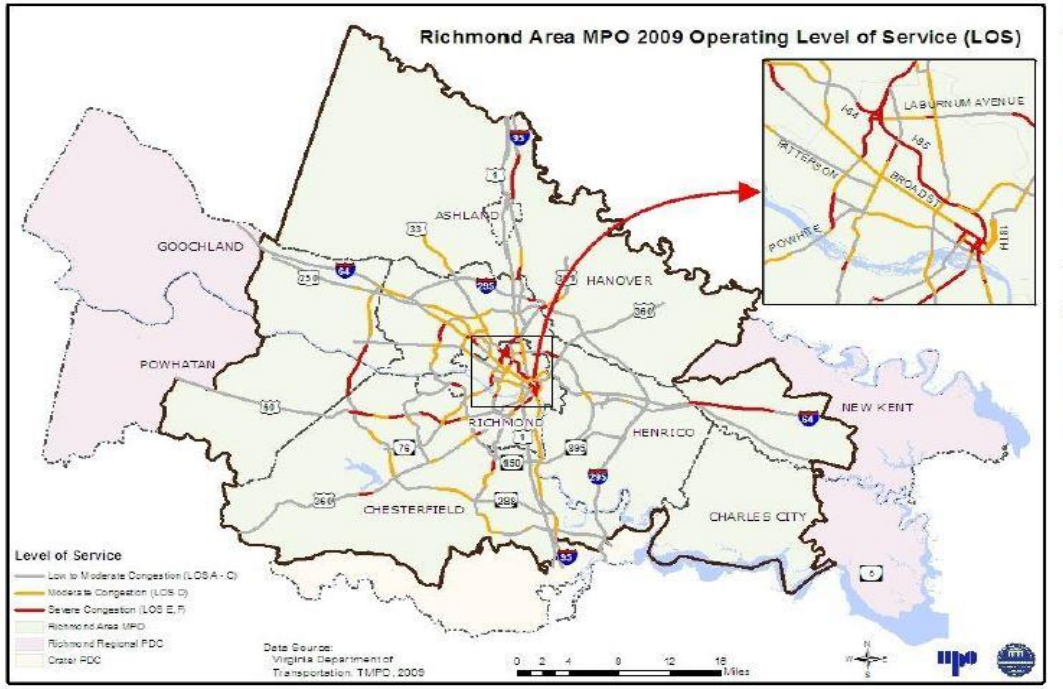
- Large dataset difficult to work with in MS Access and Excel
- Analyzed one month of data because of the file size
- Calculated average AM and PM Travel Time Index

Richmond Regional Transportation Planning Organization

2011 CMP Examples



Map 5: Richmond Region 2010 Travel Time Index 4 PM to 6 PM



Map 6 Richmond Area MPO 2011 Operating Level of Service

Richmond Regional Transportation Planning Organization

RITIS PDA Suite 2014

Analysis

- Trend Maps
- Performance Summaries
- Bottleneck Rankings

Metrics

- Travel Time Index
- Speed
- Congestion

Richmond Regional Transportation Planning Organization

Additional Calculations

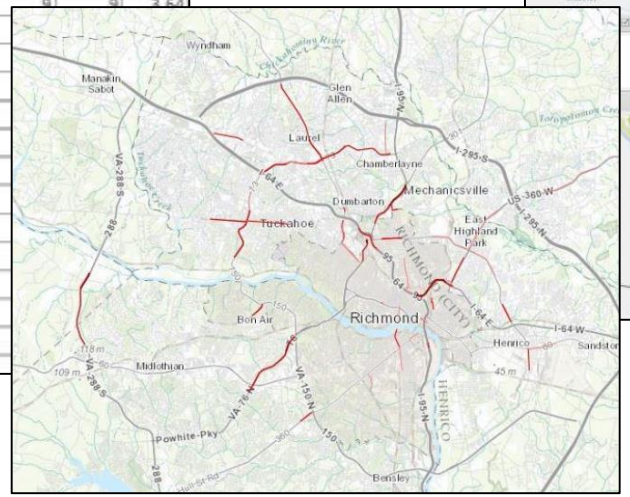
3:15 PM	3:30 PM	3:45 PM	4:00 PM	4:15 PM	4:30 PM	4:45 PM	5:00 PM	5:15 PM	5:30 PM	5:45 PM	6:00 PM	6:15 PM	6:30 PM	6:45 PM	7:00 PM	7:15 PM	Max AM TTI	Max AM TTI Time	Max PM TTI	Max PM TTI Time	Max TTI	Max TTI Time
1.21659	1.185035	1.184217	1.256869	1.307431	1.266924	1.294071	1.234602	1.288411	1.283227	1.261416	1.210777	1.211516	1.139489	1.125678	1.101295	1.071981	1.224	8:45 AM	1.307	4:15 PM	1.307	4:15 PM
1.299724	1.301618	1.309048	1.308202	1.369676	1.303356	1.454946	1.40441	1.414687	1.363231	1.351	1.29143	1.241707	1.246162	1.18957	1.101978	1.09694	1.170	8:45 AM	1.455	4:45 PM	1.455	4:45 PM
1.296154	1.310205	1.356691	1.454064	1.699595	1.67255	1.677713	1.673681	1.709181	1.719071	1.635306	1.485359	1.433812	1.382793	1.348503	1.2234	1.177678	1.302	8:45 AM	1.719	5:30 PM	1.719	5:30 PM
1.155495	1.163514	1.168075	1.208163	1.197821	1.235543	1.26165	1.338641	1.361072	1.415794	1.375102	1.340509	1.270052	1.224271	1.206335	1.153787	1.118521	1.259	8:00 AM	1.416	5:30 PM	1.416	5:30 PM
1.099744	1.091226	1.080978	1.078251	1.128097	1.157973	1.169102	1.137102	1.169317	1.191739	1.139192	1.137785	1.123707	1.101973	1.084979	1.032996	1.027942	1.149	8:00 AM	1.192	5:30 PM	1.192	5:30 PM
1.597428	1.43105	1.524186	1.556193	1.542451	1.583143	1.623834	1.52864	1.482657	1.624855	1.474948	1.541147	1.469271	1.496036	1.599737	1.455031	1.362828	1.482	8:15 AM	1.625	5:30 PM	1.674	3:00 PM
1.197441	1.172201	1.150031	1.150077	1.149559	1.165396	1.204624	1.227621	1.287583	1.330867	1.336839	1.272769	1.224888	1.176731	1.137677	1.081592	1.065817	1.218	8:15 AM	1.337	5:45 PM	1.337	5:45 PM
1.742284	2.011793	2.109805	2.044917	2.046447	2.156695	2.409279	3.089722	3.390812	3.529675	3.385985	2.769539	2.317088	2.076411	1.879307	1.28046	1.14706	2.037	8:15 AM	3.530	5:30 PM	3.530	5:30 PM
1.91456	1.876033	2.090053	1.979937	1.964596	2.058022	2.023863	2.290168	2.238434	1.999688	2.050184	1.78131	1.834707	1.769999	1.913935	1.546113	1.49533	2.097	8:15 AM	2.290	5:00 PM	2.290	5:00 PM
1.350685	1.314979	1.319005	1.309851	1.362739	1.360674	1.393659	1.47239	1.552898	1.543024	1.534942	1.347747	1.313982	1.264718	1.285707	1.120542	1.108694	1.400	8:00 AM	1.553	5:15 PM	1.553	5:15 PM
1.089665	1.088046	1.078088	1.074007	1.095689	1.102101	1.125632	1.172686	1.222174	1.257266	1.225024	1.160638	1.105508	1.091576	1.064734	1.04124	1.047231	1.172	8:15 AM	1.257	5:30 PM	1.257	5:30 PM
1.16456	1.195171	1.1968	1.224656	1.322255	1.283903	1.336226	1.37722	1.526433	1.567388	1.540818	1.330279	1.342408	1.266018	1.186667	1.153369	1.153556	1.223	8:30 AM	1.567	5:30 PM	1.567	5:30 PM
0.96659	0.967367	0.972479	0.966855	0.97383	0.972302	1.008083	1.04688	1.13389	1.279837	1.350318	1.278774	1.168155	1.090686	1.073805	1.01577	0.973317	0.981	8:15 AM	1.350	5:45 PM	1.350	5:45 PM
0.951031	0.95252	0.959646	0.955637	0.965437	0.962686	1.004641	1.050953	1.151858	1.316517	1.366094	1.263399	1.128276	1.055115	1.078675	1.00215	0.958383	0.973	8:15 AM	1.366	5:45 PM	1.366	5:45 PM
0.967481	0.969458	0.976556	0.972584	0.980999	0.982512	1.028439	1.081772	1.20626	1.409816	1.429557	1.290725	1.130848	1.081268	1.094156	1.032151	0.967252	0.976	8:15 AM	1.430	5:45 PM	1.430	5:45 PM
0.983416	0.984101	0.991247	0.985773	0.992943	0.997244	1.042305	1.104509	1.227852	1.453405	1.478133	1.310409	1.146015	1.136238	1.132538	1.048271	0.977034	0.987	8:15 AM	1.478	5:45 PM	1.478	5:45 PM
0.975802	0.977412	0.98388	0.975911	0.986954	0.994074	1.046505	1.10934	1.240792	1.469798	1.485333	1.308627	1.143581	1.119659	1.103369	1.045386	0.984284	0.982	8:15 AM	1.485	5:45 PM	1.485	5:45 PM
0.95051	0.950468	0.957788	0.950178	0.962076	0.975133	1.009875	1.082204	1.240676	1.424797	1.41768	1.221961	1.060905	1.018664	1.043313	0.9717	0.95526	0.961	8:15 AM	1.425	5:30 PM	1.425	5:30 PM
0.960463	0.960899	0.971161	0.968974	0.975249	0.989157	1.030024	1.109283	1.276352	1.477875	1.408318	1.210179	1.060148	0.987763	0.977641	0.973934	0.974594	0.971	8:30 AM	1.478	5:30 PM	1.478	5:30 PM
0.976808	0.978268	0.983757	0.983571	0.997554	1.021008	1.073792	1.219963	1.507322	1.792945	1.727389	1.416038	1.150338	1.012841	0.986416	0.997676	0.992703	0.988	8:30 AM	1.793	5:30 PM	1.793	5:30 PM
0.995408	0.992543	0.998951	1.015759	1.034198	1.055222	1.152571	1.4499	1.822619	2.20821	2.039627	1.624822	1.159656	1.042256	1.007505	1.017845	1.022904	0.993	8:15 AM	2.208	5:30 PM	2.208	5:30 PM
0.977249	0.979978	0.991845	0.997422	1.014251	1.028244	1.096744	1.261741	1.464187	1.607951	1.477626	1.291855	1.073525	0.999776	0.980726	0.981208	0.982023	0.973	8:30 AM	1.608	5:30 PM	1.608	5:30 PM
0.969703	0.96935	0.976432	0.974616	0.995532	1.001412	1.061875	1.193427	1.410963	1.509239	1.440343	1.273456	1.065896	0.975207	0.97141	0.980393	0.971462	0.972	8:30 AM	1.509	5:30 PM	1.509	5:30 PM
0.961697	0.961265	0.965415	0.96504	0.988011	0.997172	1.063602	1.171924	1.355631	1.434648	1.41707	1.27685	1.068642	0.972689	0.963912	0.968139	0.969134	0.994	8:30 AM	1.435	5:30 PM	1.435	5:30 PM

Richmond Regional Transportation Planning Organization

2016 CMP Examples

Parham Road From River Road To US 301 Chamberlayne Road

From	TO	AADT	Eastbound 2014 Tuesday Wednesday Thursday 7-9 AM ar								
			Travel Time Index (TTI)		Time of Max TTI		Lowest % of Freeflow		# of Congested 15 Min Intervals		Max Pl Time
			AM	PM	AM	PM	AM	PM	AM	PM	AM
VER RD	RIVER RD		1.387	1.385	8:15 AM	5:45 PM	72.11	72.21	0	0	1.81
VER RD	RIDGE RD		1.902	1.498	8:30 AM	5:45 PM	52.57	66.77	9	3	3.67
DGE RD	RIDGE RD		2.367	2.057	8:00 AM	5:30 PM	42.25	48.61	9	9	4.5
DGE RD	VA-6/PATTERSON AVE	29000	1.87	2.045	8:00 AM	5:15 PM	53.46	48.89	6	9	4
A-6/PATTERSON AVE	VA-6/PATTERSON AVE		0.955	0.997	8:45 AM	5:30 PM	100	100	0	0	1.28
A-6/PATTERSON AVE	QUIOCCASIN RD	27000	1.411	1.538	9:00 AM	5:30 PM	70.86	65	0	9	2.06
UIOCCASIN RD	QUIOCCASIN RD		1.485	1.791	8:30 AM	5:00 PM	67.33	55.83	4	9	3.6
UIOCCASIN RD	THREE CHOPT RD	25000	1.476	1.716	9:00 AM	4:15 PM	67.76	58.27	1	9	2.31
HREE CHOPT RD	THREE CHOPT RD		1.279	1.417	8:45 AM	4:00 PM	78.17	70.58	0	0	2.57
HREE CHOPT RD	I-64	31000	1.304	1.279	7:45 AM	5:30 PM	76.68	78.2	0	0	2
64	I-64		1.444	1.596	8:00 AM	5:15 PM	69.27	62.68	2	6	2.47
64	US-250/W BROAD ST	22000	1.21	1.284	9:00 AM	4:15 PM	82.66	77.86	0	0	
S-250/W BROAD ST	US-250/W BROAD ST		1.902	1.927	8:45 AM	5:15 PM	52.58	51.9	9	9	3.64
S-250/W BROAD ST	HUNGARY SPRING RD	21000	1.573	1.615	8:45 AM	5:30 PM	63.57	61.9			
UNGARY SPRING RD	HUNGARY SPRING RD		0.885	0.955	8:00 AM	4:45 PM	100	100			
UNGARY SPRING RD	US-33/STAPLES MILL RD	24000	1.54	1.893	8:30 AM	4:45 PM	64.93	52.82			
S-33/STAPLES MILL RD	US-33/STAPLES MILL RD		1.7	2.098	9:00 AM	4:15 PM	58.83	47.66			
S-33/STAPLES MILL RD	WOODMAN RD	26000	1.466	1.516	8:00 AM	5:30 PM	68.2	65.98			
OODMAN RD	WOODMAN RD		1.352	1.329	8:45 AM	5:30 PM	73.98	75.26			
OODMAN RD	US-1/BROOK RD	20000	1.516	1.524	8:00 AM	5:15 PM	65.98	65.6			
S-1/BROOK RD	US-1/BROOK RD		0.926	0.803	8:15 AM	4:30 PM	100	100			
S-1/BROOK RD	I-95		1.248	1.063	8:45 AM	5:00 PM	80.11	94.11			
95	I-95		1.19	1.083	8:30 AM	4:15 PM	84	92.36			
95	ST CHARLES RD		1.126	1.097	7:45 AM	5:45 PM	88.78	91.14			
CHARLES RD	US-301/CHAMBERLAYNE RD	17000	1.401	1.28	8:15 AM	5:15 PM	71.35	78.13			
S-301/CHAMBERLAYNE RD	US-301/CHAMBERLAYNE RD		0.405	0.39	8:00 AM	5:15 PM	100	100			



VA-288 N @ HUGUENOT TRL

Location	Year	Bottleneck Rank	Average Duration	X	Average Max Length (miles)	X	Occurrences	=	Impact Factor	All Even or Incide
VA-288 N @ HUGUENOT TRL	2013	3	54 m		2.35		48		6,097	17
	2014	4	63 m		2.71		54		9,214	23
	2015	4	80 m		3.38		47		12,698	65

4th Quarter 2013

Richmond Regional Transportation Planning Organization

ArcGIS StoryMap 2019

Esri's ArcGIS StoryMaps are

- **An easy to use web-based sharing application**
- **Template based, no programming required**
- **Accepted for use by PlanRVA staff**

Richmond Regional Transportation Planning Organization

CMP StoryMap

Richmond Regional
Transportation
Planning Organization

Findings and Next Steps

- People like interacting with the online maps
- The RRTPO policy board is asking questions about congestion and further analysis using the PDA suite
- There is interest in using INRIX XD data in future analysis to uncover hidden congestion
- StoryMaps have released new features which will be incorporated into the next CMP

Richmond Regional Transportation Planning Organization

Questions

Greta Ryan

Senior Planner

gryan@PlanRVA.org

link to the CMP StoryMap

FY20 Congestion Management Process

Richmond Regional Transportation Planning Organization

In the spotlight…

Transportation Disruption and Disaster Statistics (TDADS) Project Update

Mark Franz

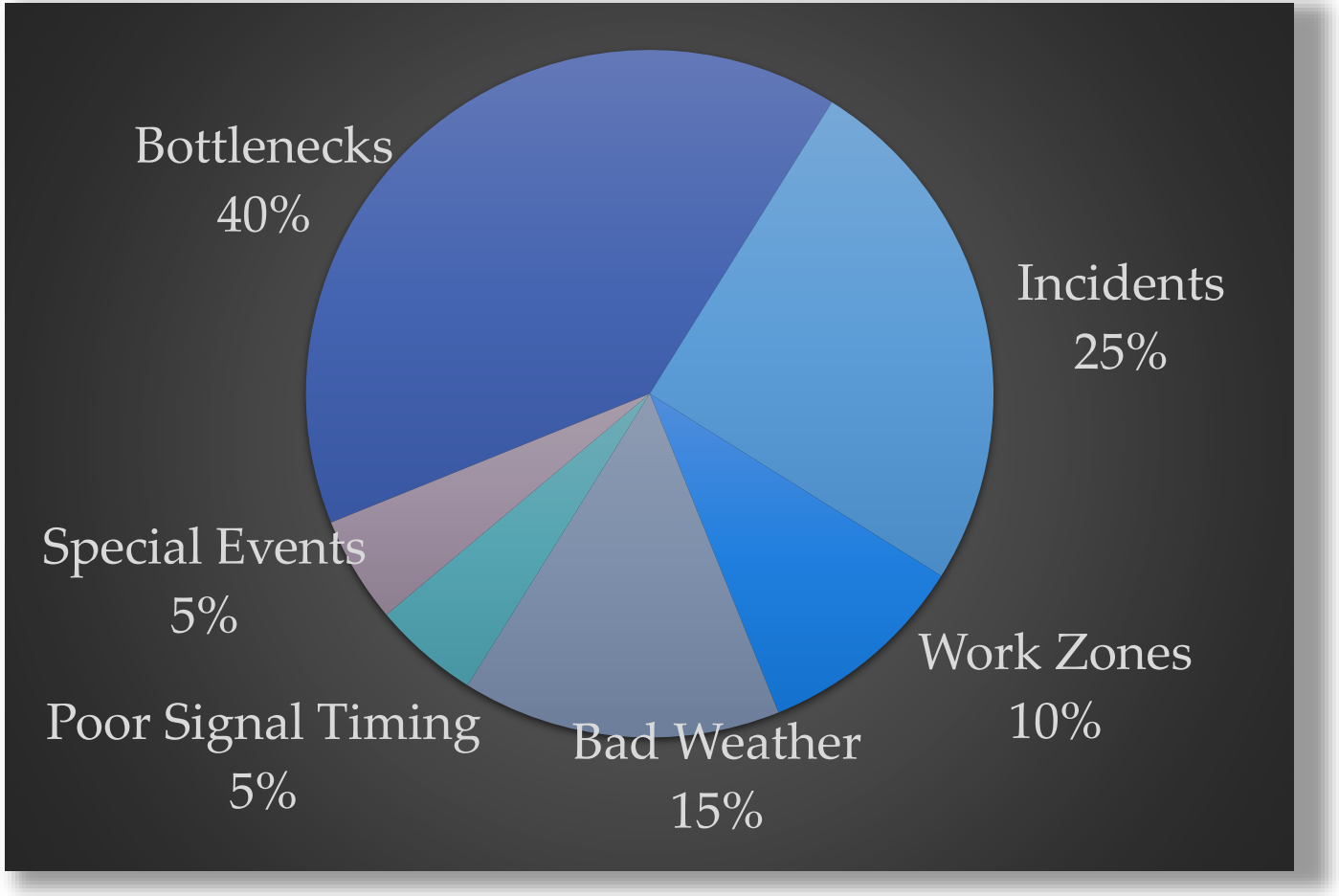
UMD CATT Lab, Lead Transportation Analyst

Topics

1. Overview of project motivation and objectives
2. Initial results for MD and CO
3. Results from multi-factor causes of disruption/congestion analysis
4. Next steps

Moving Past Old Assumptions
"The Pie Chart"

- National statistic
- 14+ years old
- Largely modeled
- In a nutshell… outdated



Transportation Disruption & Disaster Statistics (TDADS) - Project Objectives

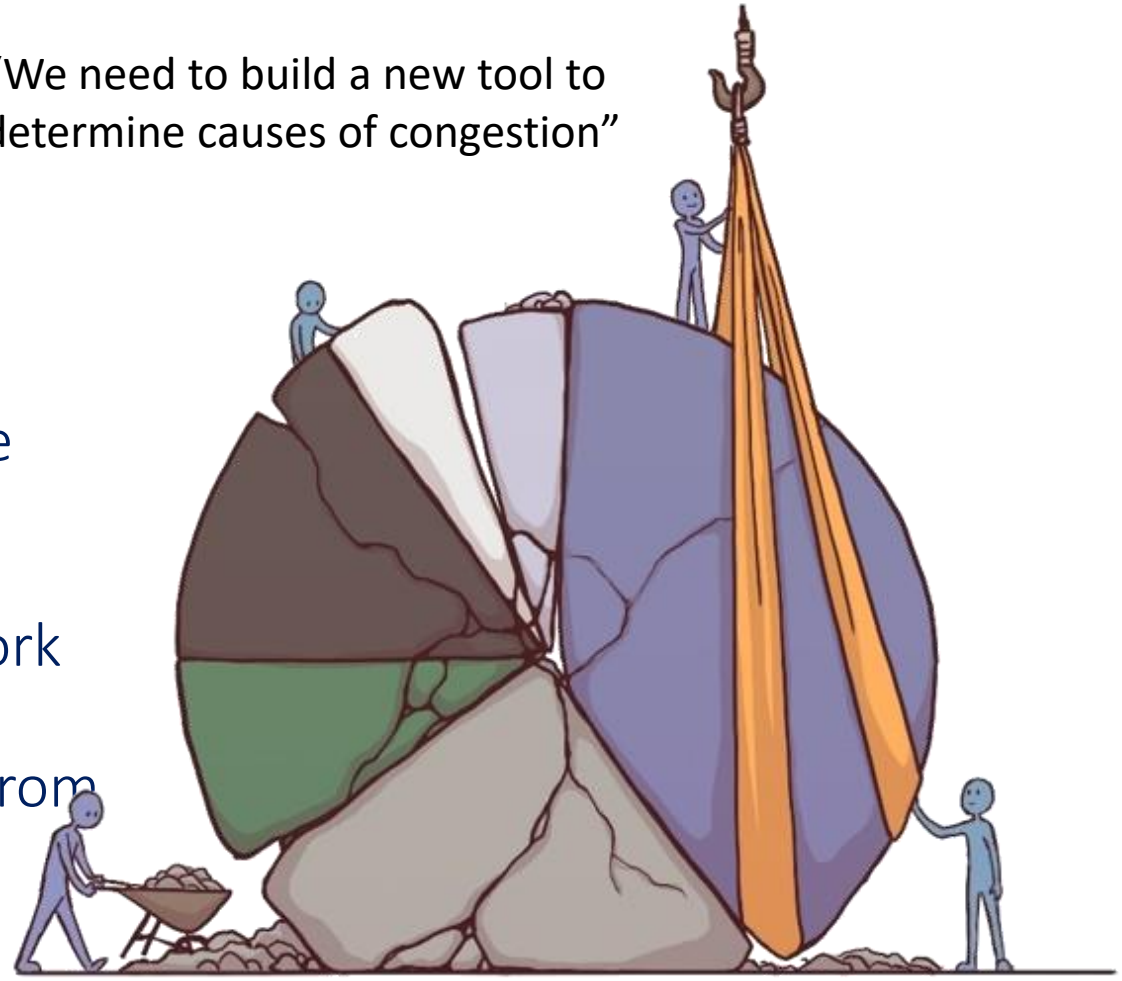
1. Upgrade the ancient “pie chart”
   - ✓ Across entire U.S.
   - ✓ Using the nation’s best data

2. Create interactive, easily-accessible tool in the hands of decision makers

3. Practitioner Steering Committee guide ALL work

4. Using entire National Highway System (NHS) from August 2018 – July 2019

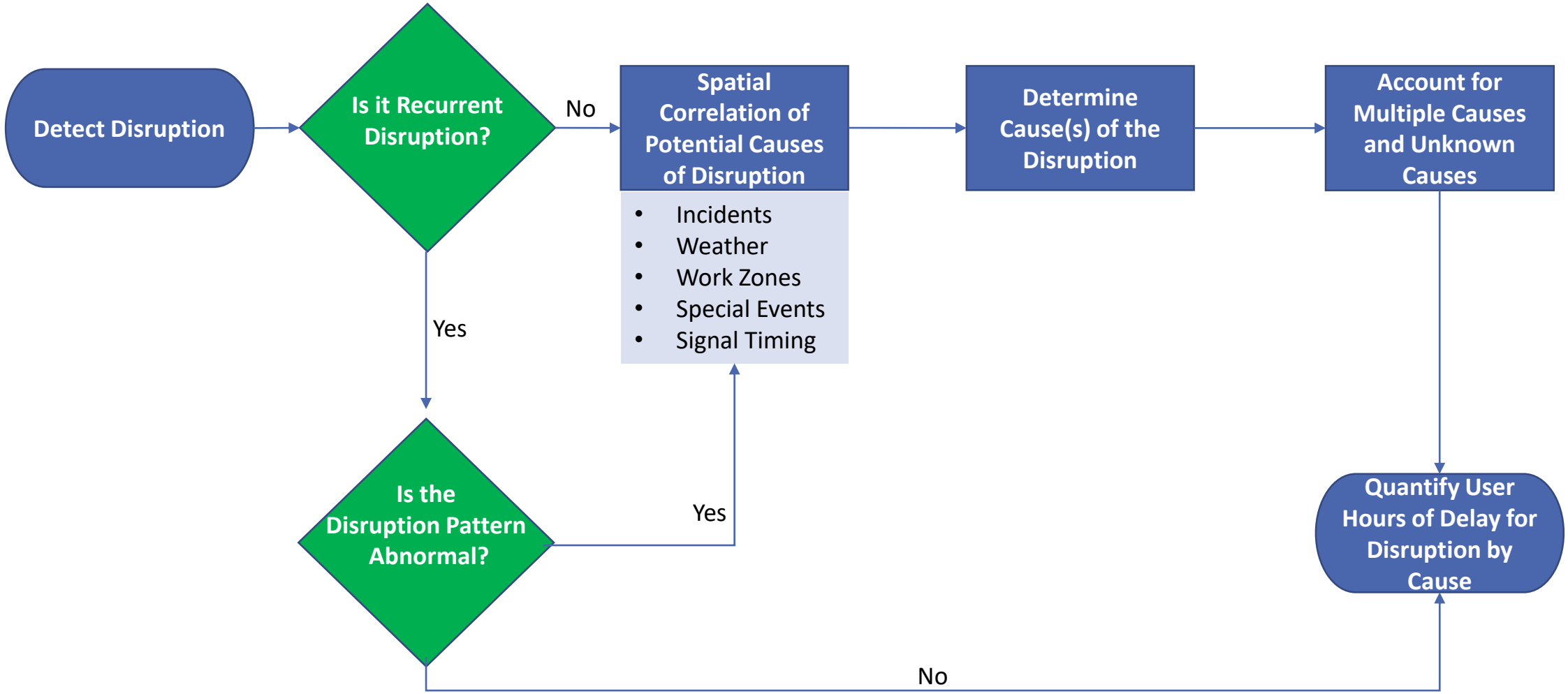
“We need to build a new tool to determine causes of congestion”



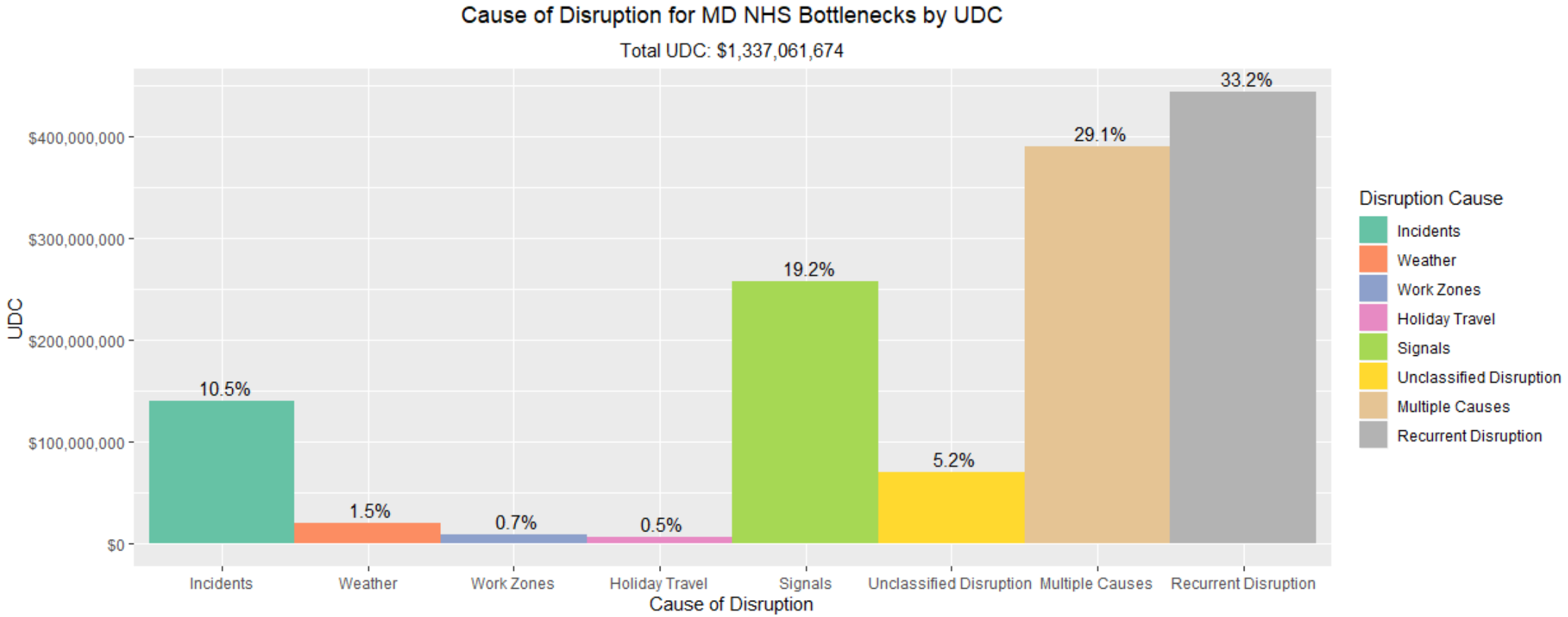
TDADS Data Sources and Terminology

Recommended Terminology		Data Sources	Definition
Disruption		• 1- minute probe data	A sustained interruption in the flow of traffic that results in travel delay.
Disruption Sources	**Recurrent Disruption**	• 1-minute probe data	A predictable and regular pattern of interruption in traffic flow that results in travel delay.
	Incidents	• ~~DOT data~~ • ~~FARS~~ • Waze (national archiving since August 2018) • ~~CAD~~	Interruption in traffic flow caused by an unplanned in-road or roadside obstruction that results in travel delay.
	Weather	• NOAA Radar	Interruption in traffic flow caused by inclement weather conditions.
	Work Zones	• ~~State or Agency provided~~ • Waze	Interruption in traffic flow caused by a planned construction or maintenance project/activity.
	Holiday Travel	• Holidays & Travel Days	Interruption in traffic flow caused by a scheduled occasion.
	Signals ~~Timing~~	• ~~DOT asset management records/maps~~ • OSM Traffic Signal Database	Interruption in traffic flow caused by improperly timed traffic signals.
	Multiple Causes	• Multiple	Disruption/congestion event caused by more than 1 factor
	Unclassified Disruption	• 1-minute probe data	Interruption in traffic flow with no discernable cause.

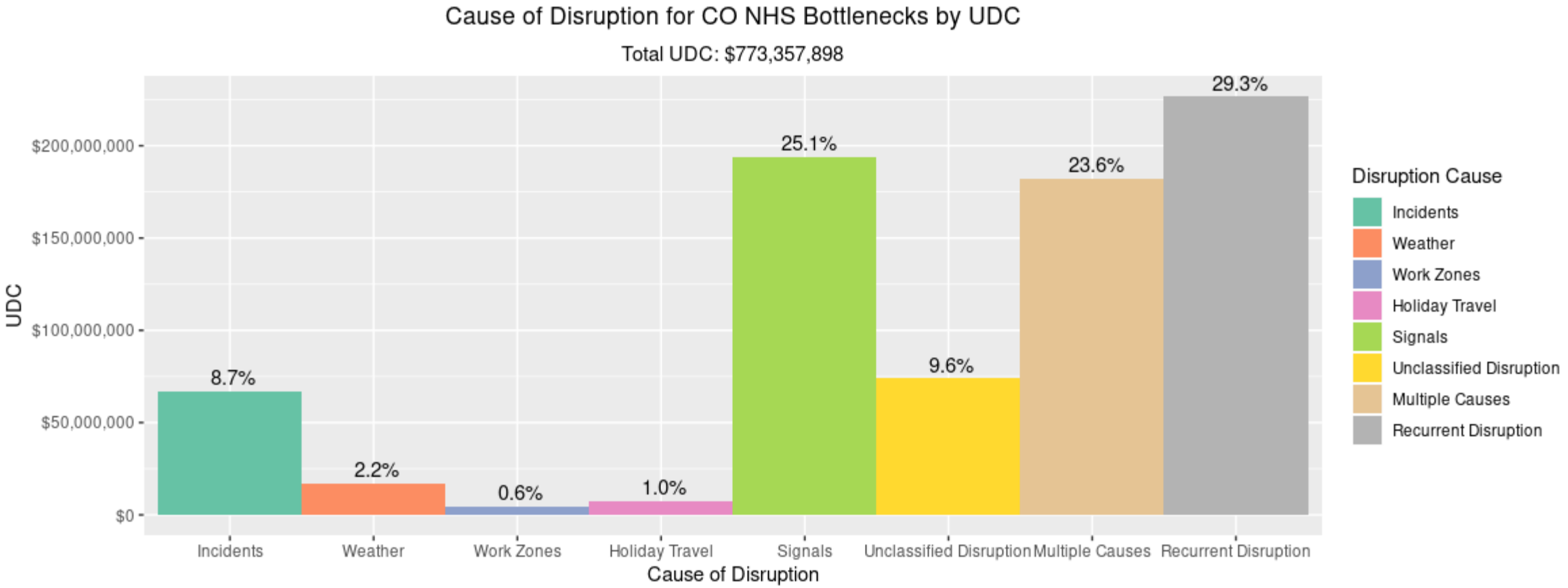
High Level Approach to Quantifying Disruptions



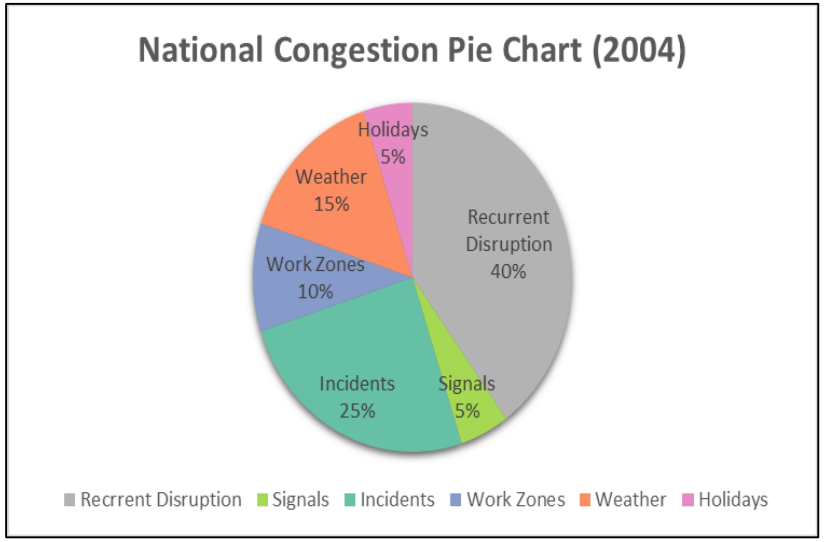
Preliminary Results: Maryland NHS – Aug 2018 – July 2019



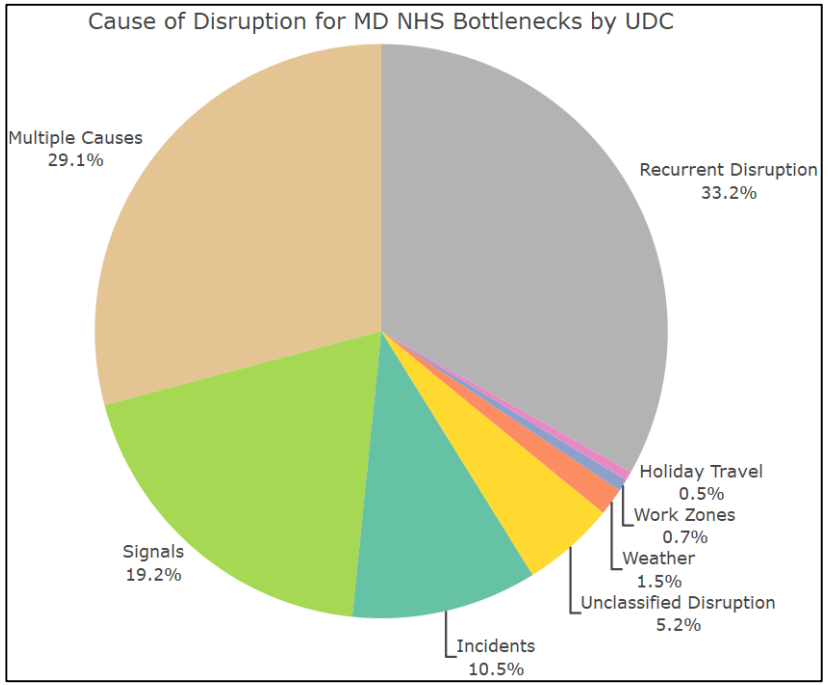
Preliminary Results: Colorado NHS – Aug 2018 – July 2019



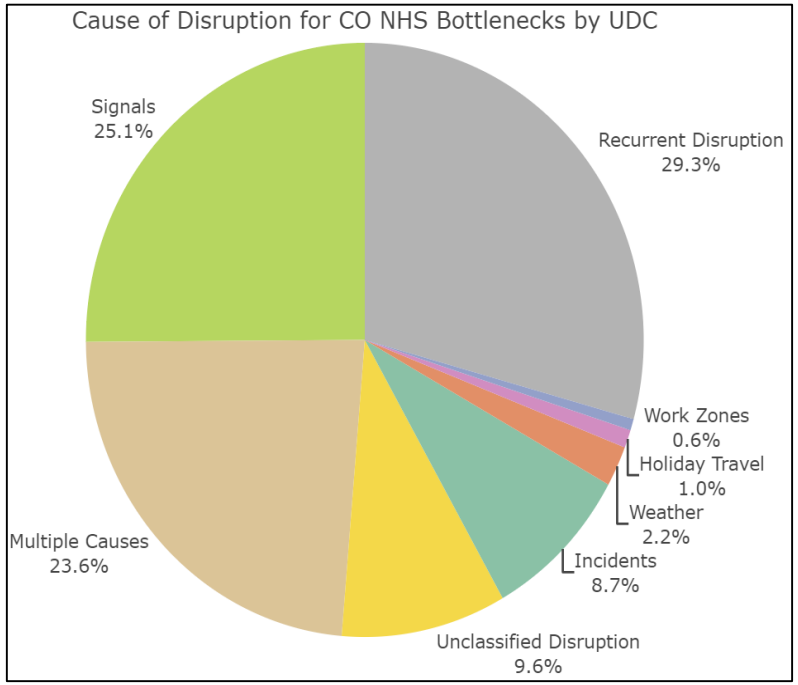
Comparison to the 2004 National Study



Maryland
(8/2018- 7/2019)



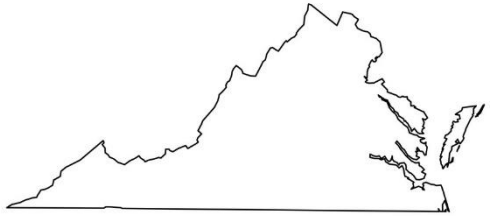
Colorado
(8/2018- 7/2019)

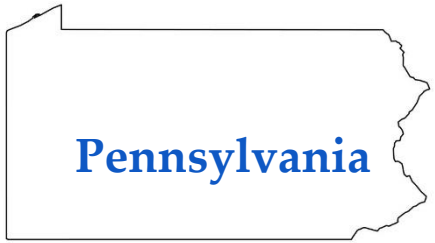


Note:

1. The 2004 categories in the chart above were renamed to match the categories in the MD and CO charts
2. The MD and CO results include multiple causes and unclassified disruption, the 2004 study did not

Identifying Top Multi-Factor Causes





Months to Analyze

- February (Winter)
- May (Spring)
- August (Summer)
- October (Fall)

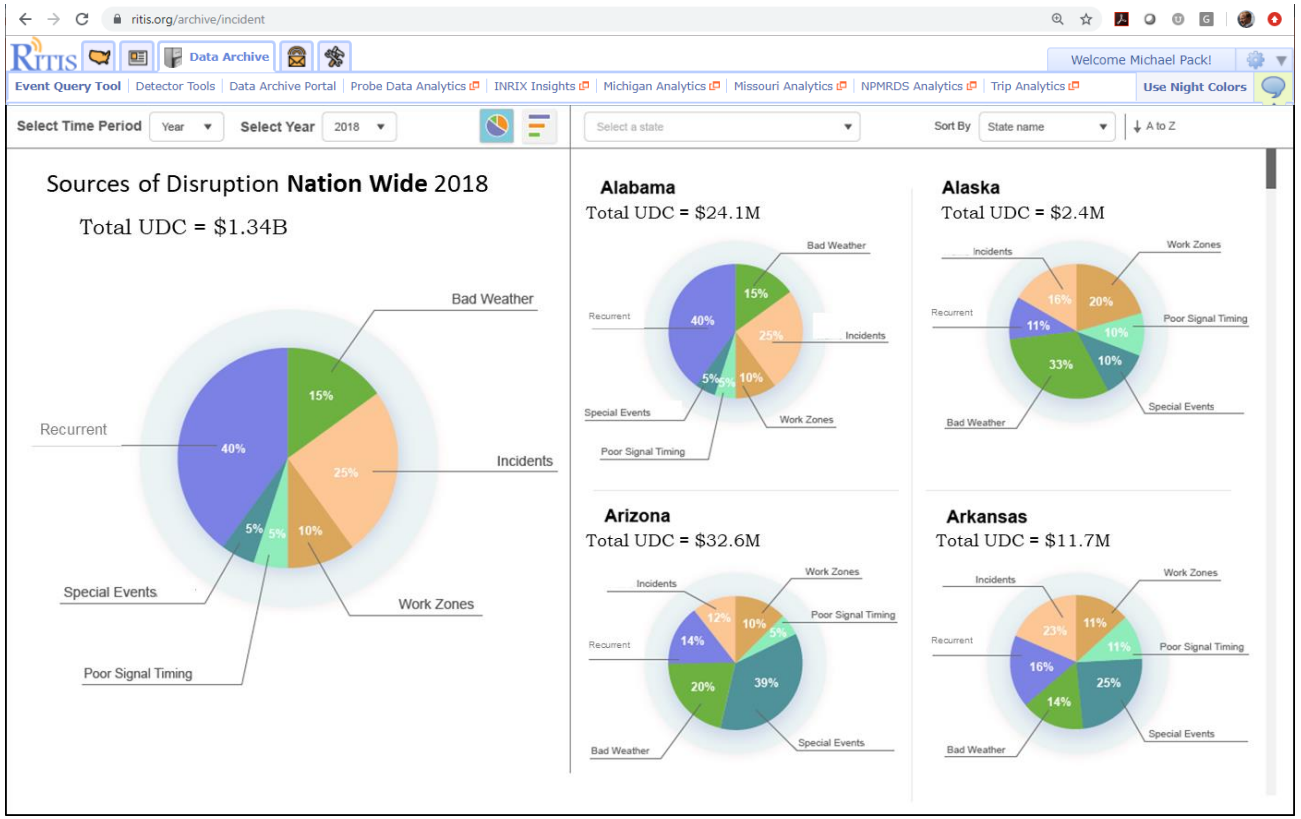
Multi-Factor Causes Results

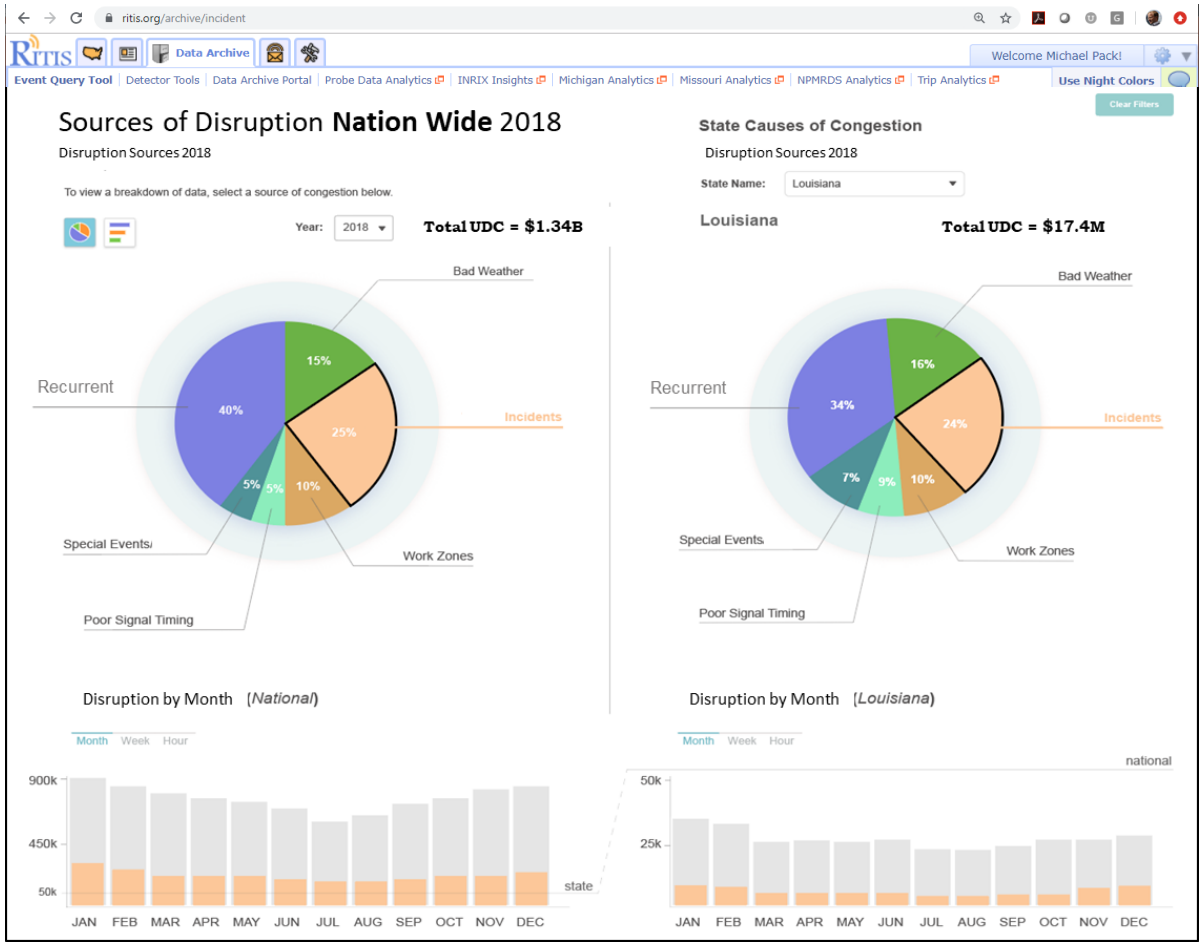
- Goal: Discover the top 4 multi-factor causes
- 7 states were analyzed
- Here are the number of times that the specific multi-factor combo was in the top 4 ranked combos across the 7 states

Cause Combinations	Occurrence in Top 4 for each state
Incident & Weather	7 of 7
Signal & Weather	6 of 7
Incident & Workzone	5 of 7
Recurrent & Incident	4 of 7
Signal & Holiday Travel	3 of 7
Incident & Workzone & Weather	3 of 7

Next Steps

1. Finalize interface development
2. Acquire and analyze full data set
3. Ingest data into online interface





Poll Question #1 – Using the Data Tool

1 How would you envision your agency using this data tool? *(check all that apply)*

___ Congestion Management

___ Work Zone Management

___ Significant Event Planning

___ Traffic Studies

___ Other

RITIS & PROBE DATA ANALYTICS SUITE

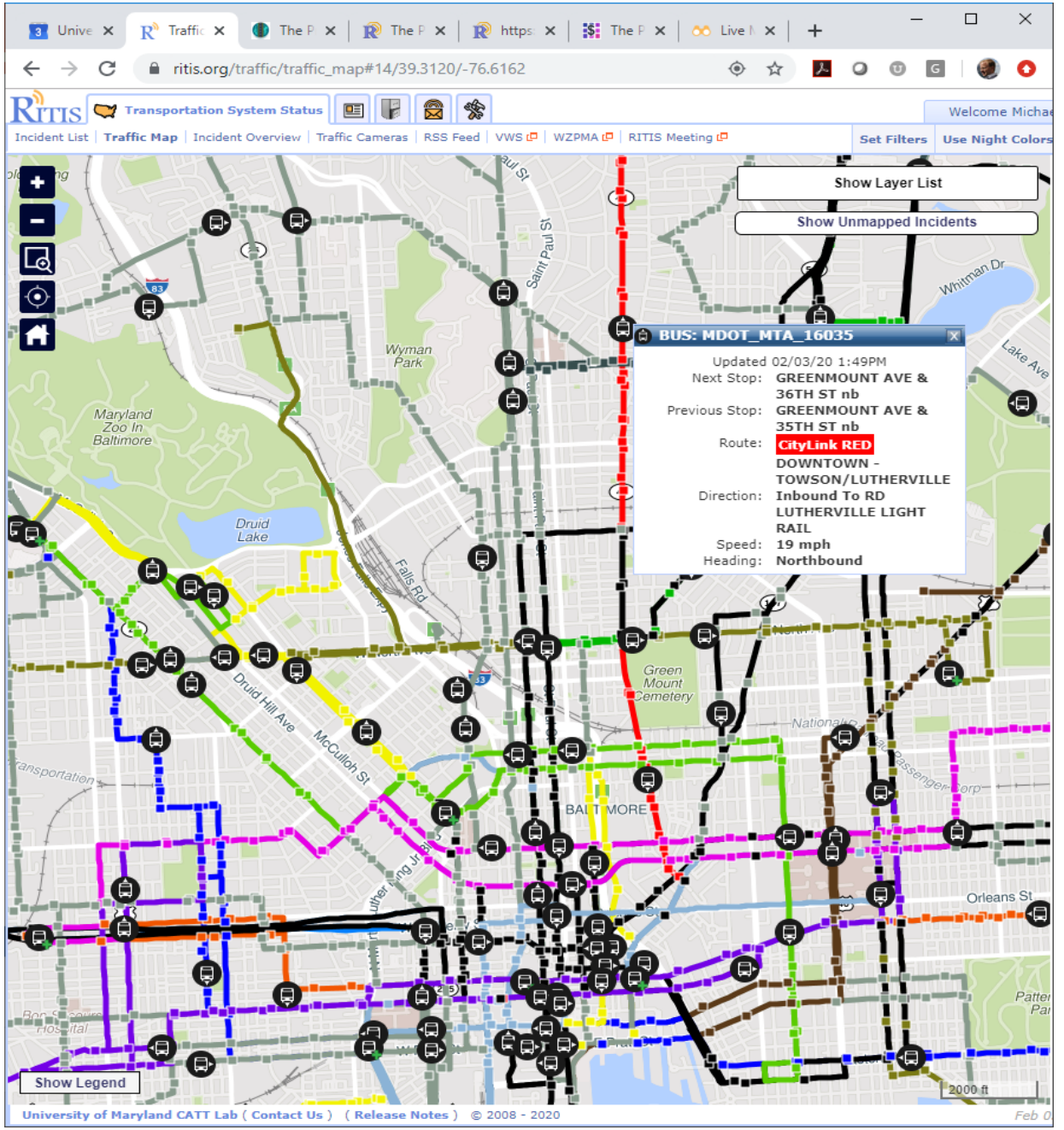
u s e r g r o u p

What's new & what's coming

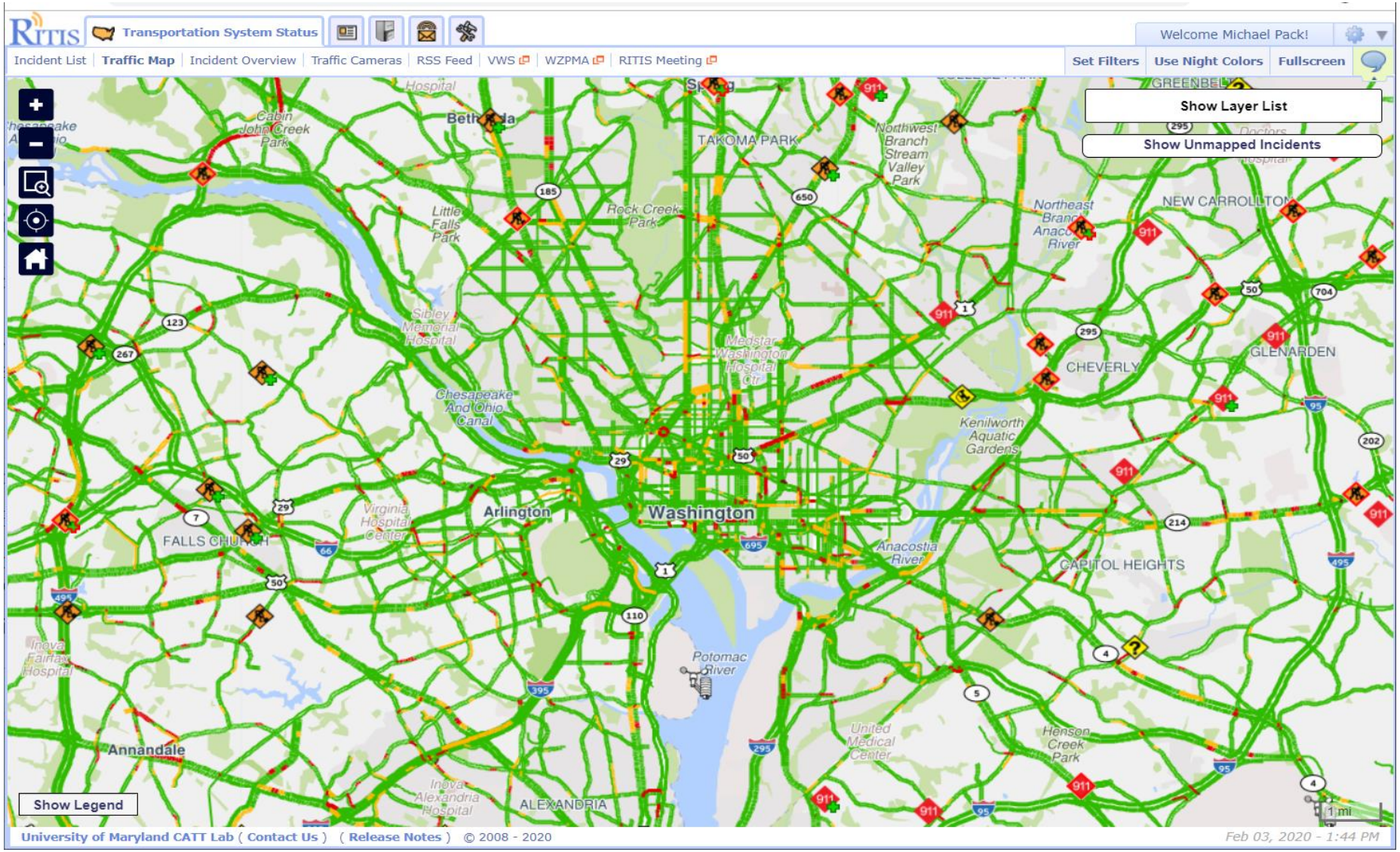
Michael Pack
UMD CATT Laboratory
Director

General Updates

- Improved weather tile rendering at high zoom levels
- Significant speed/responsiveness to public transit layer (bus AVL, routes, and stops)
- Selecting ROI allows for rectangle or circle with greater precision
- **Added HERE Subsegment probe data on RITIS Map**
- UI Redesign being implemented

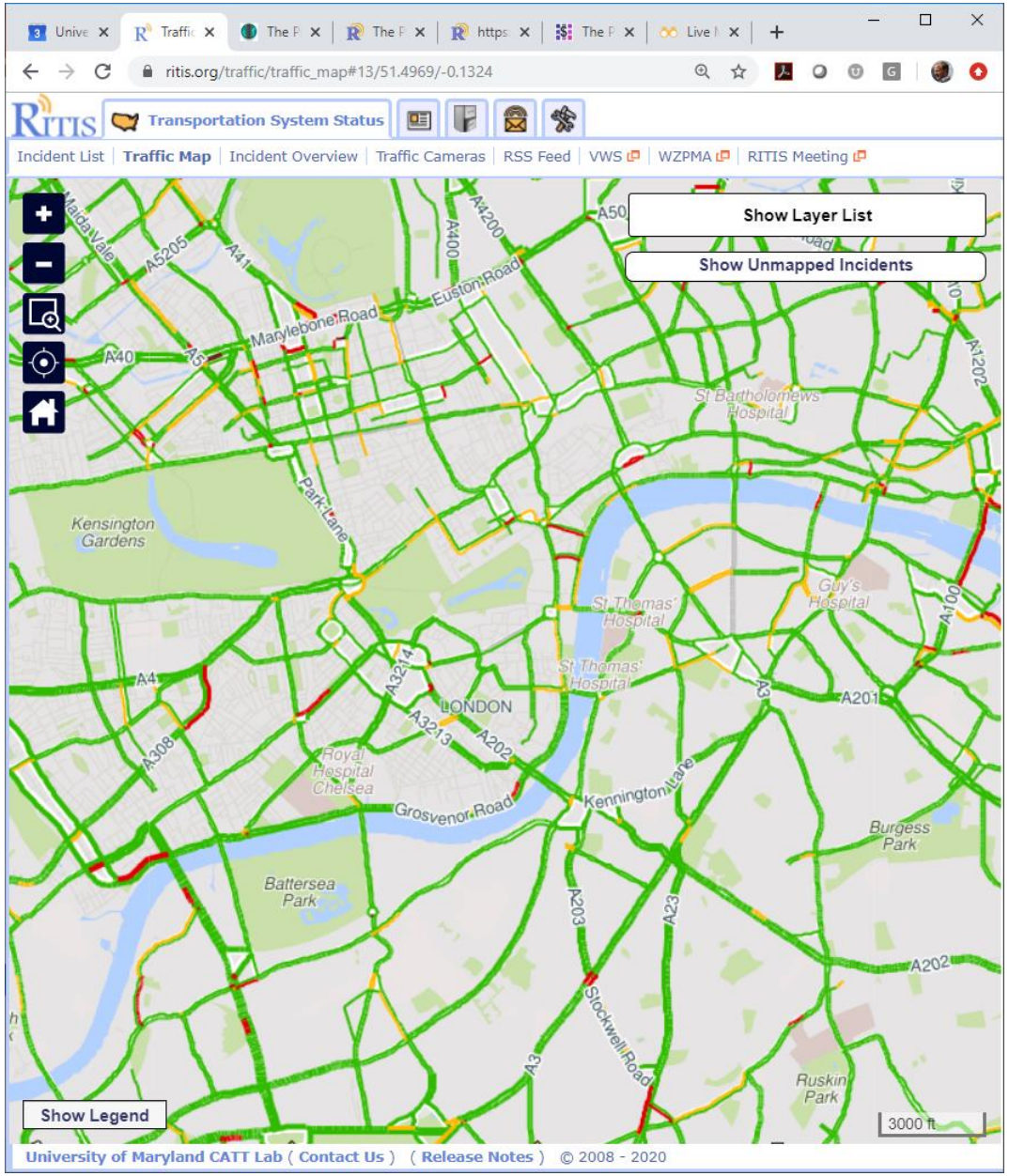


Denser Road Network Displayed at Zoom Levels

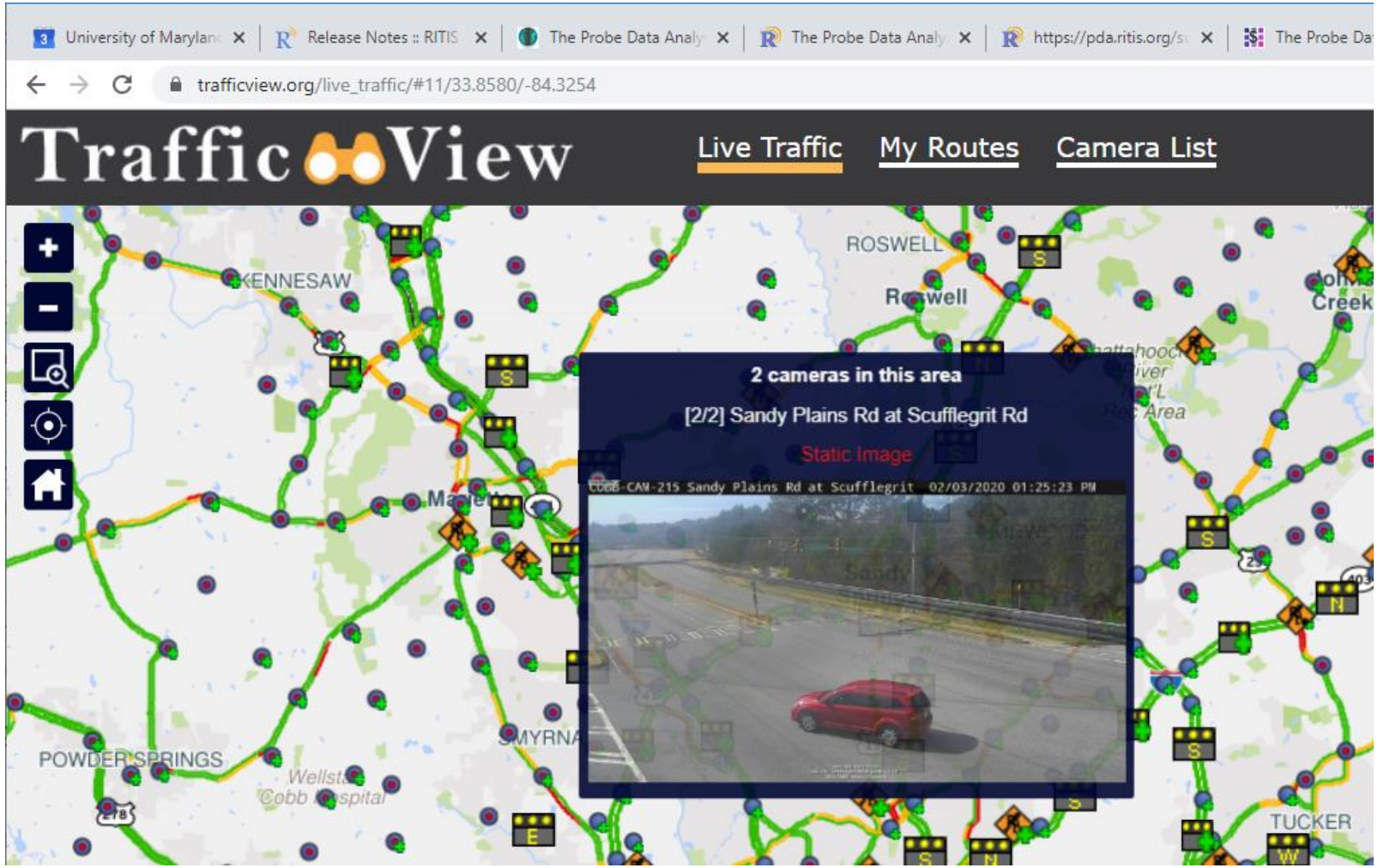


UK is live


ritis.org/traffic/traffic_map#7/52.987/-1.990
Transportation System Status
Incident List | Traffic Map | Incident Overview | Traffic Cameras | RSS Feed | VWS | WZPMA | RITIS Meeting
Show Layer List
Show Unmapped Incidents
Show Legend
30 mi
University of Maryland CATT Lab (Contact Us) (Release Notes) © 2008 - 2020

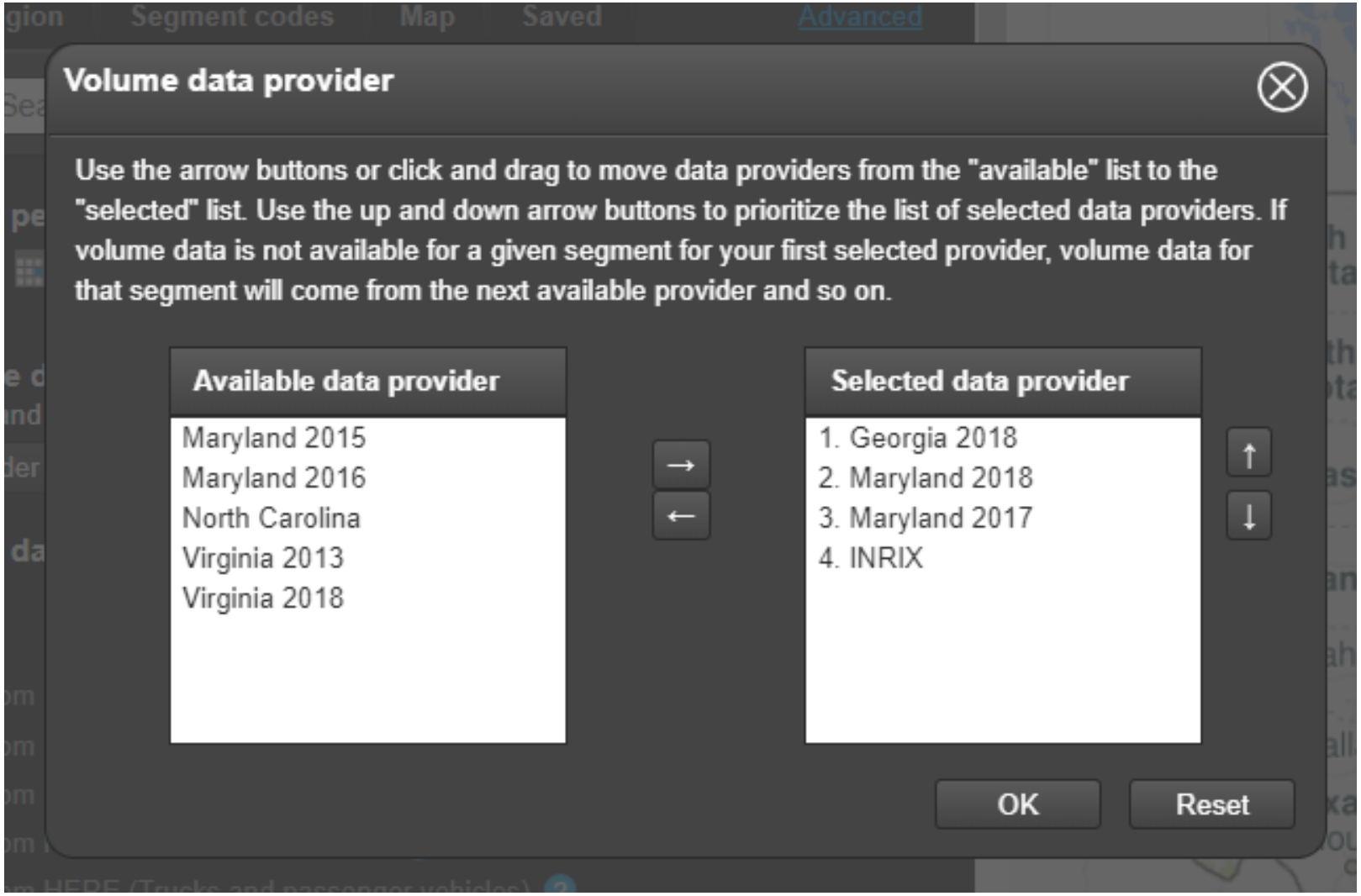

ritis.org/traffic/traffic_map#13/51.4969/-0.1324
Transportation System Status
Incident List | Traffic Map | Incident Overview | Traffic Cameras | RSS Feed | VWS | WZPMA | RITIS Meeting
Show Layer List
Show Unmapped Incidents
Show Legend
3000 ft
University of Maryland CATT Lab (Contact Us) (Release Notes) © 2008 - 2020

Static CCTV images now available in TrafficView

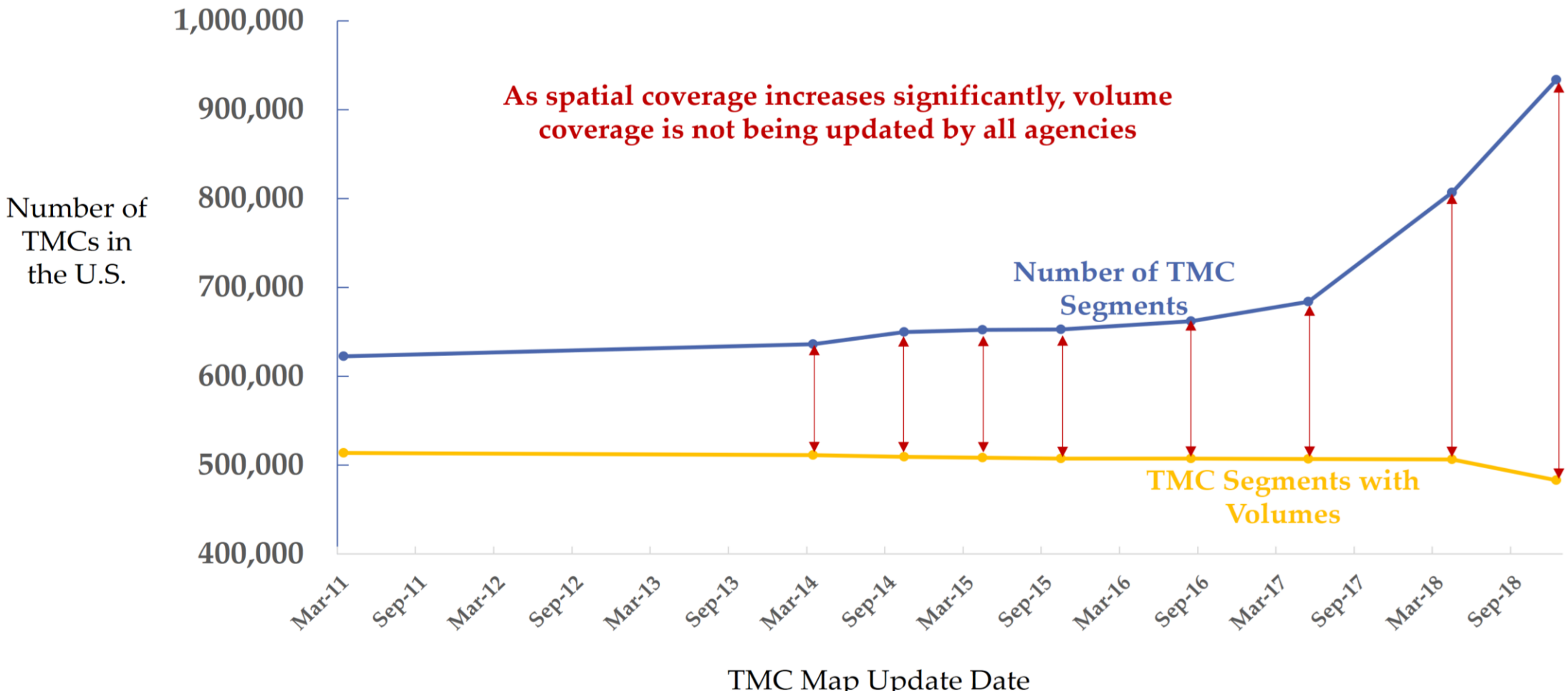


PDA Updates

- Updated GDOT Volumes (thank you!!!!)

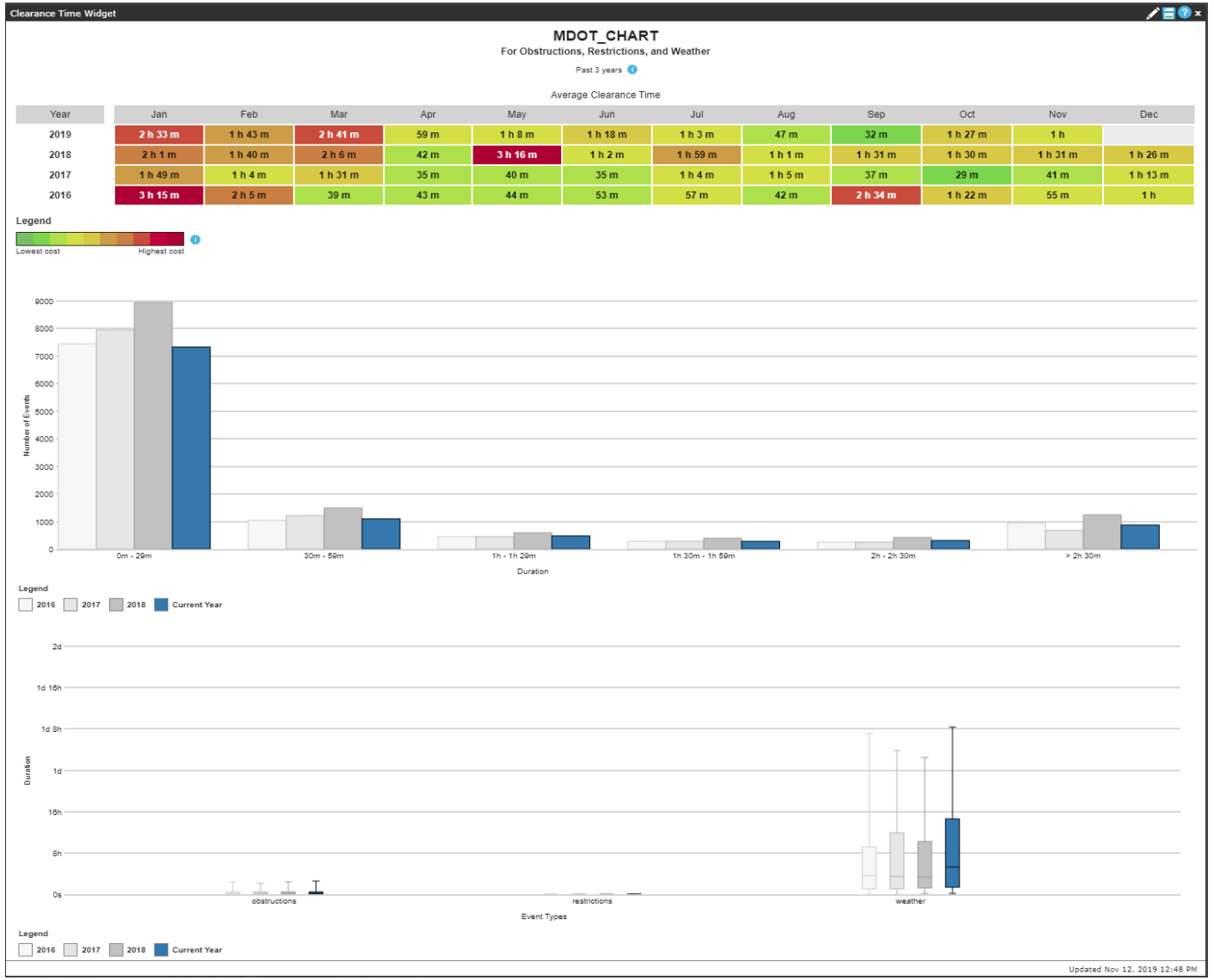


Providing us your volume data is important!!!



New Clearance Time Widget

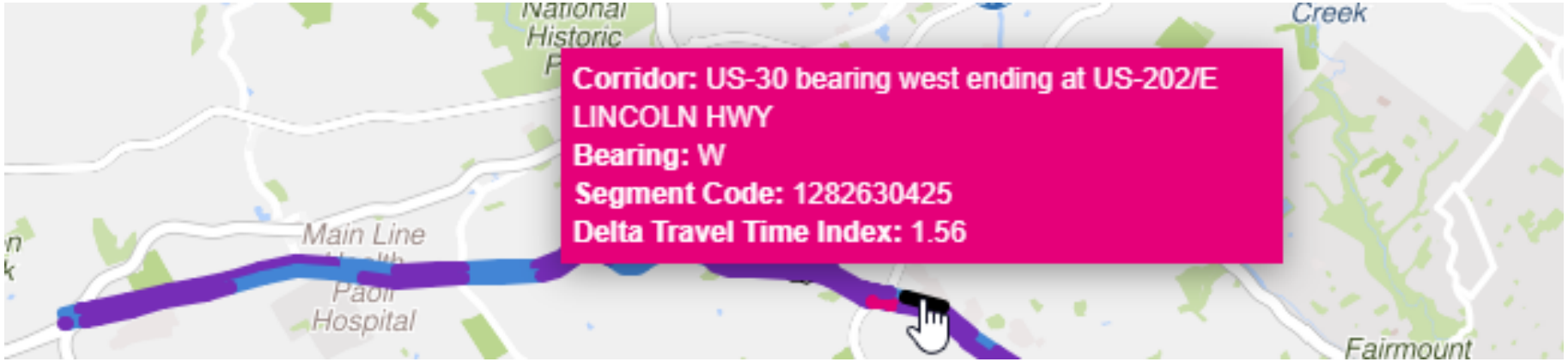
- Compares the clearance times of different event types between the current year and the past year(s).
- Up to three different visualizations can be selected:
  - Clearance time matrix
  - Distribution chart
  - Box and whisker charts



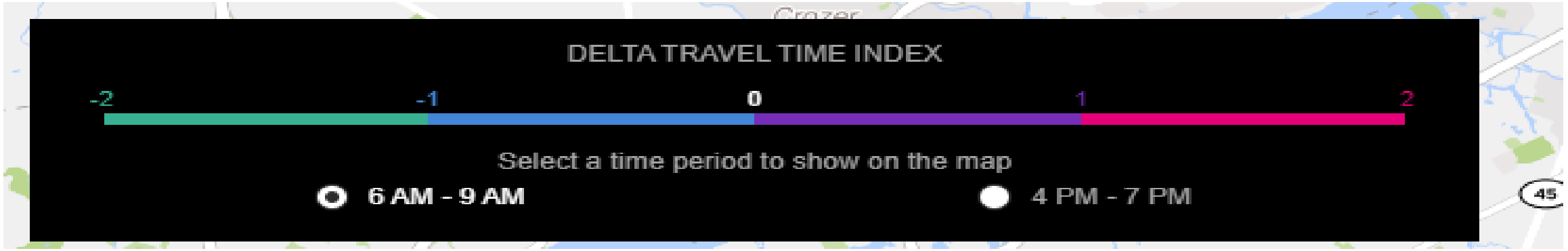
Signal Analytics Enhancements

Signal Analytics Enhancements

- When reports include exactly two date ranges, the map shows the Delta in TTI.

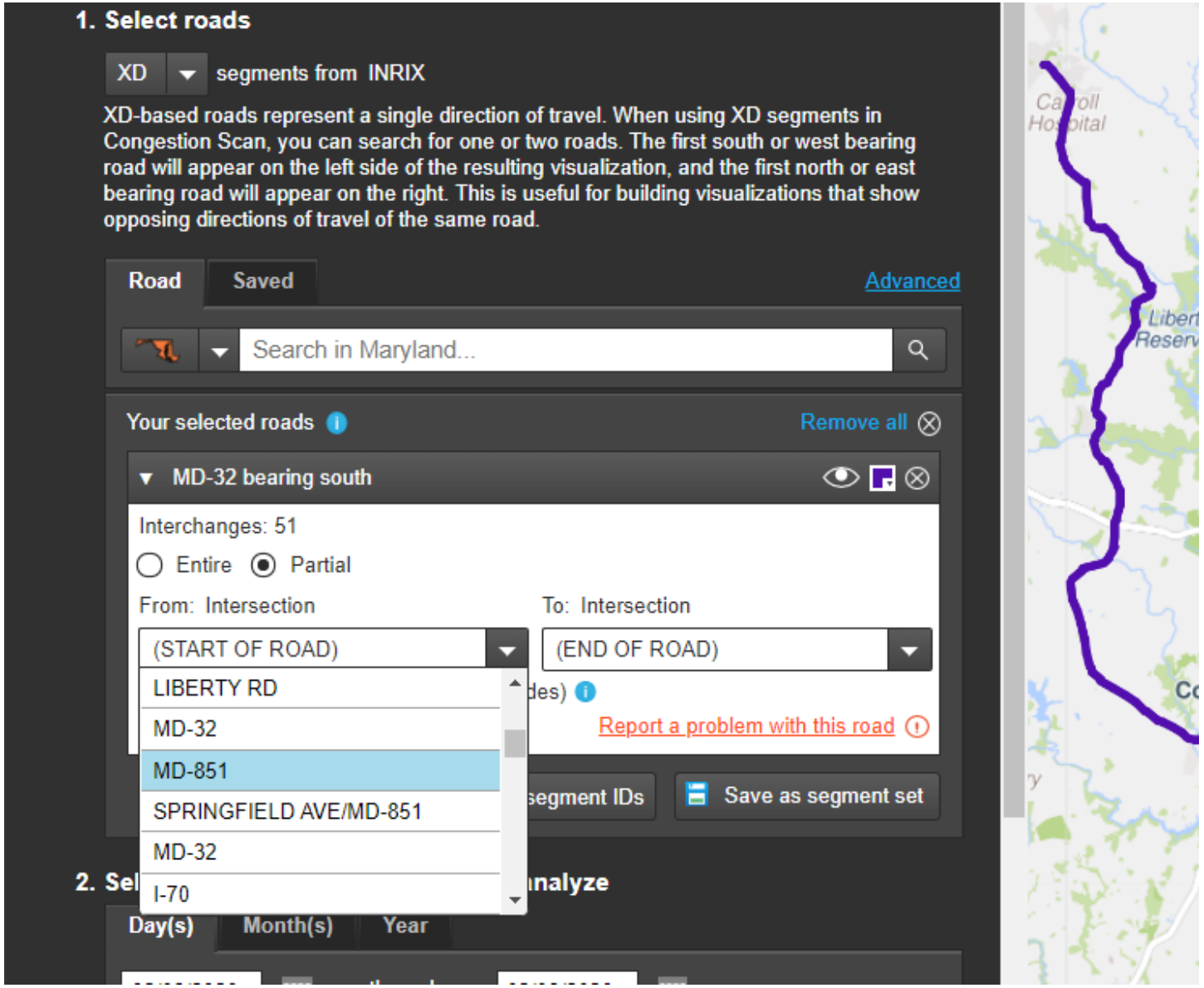


- Legend allows you to select time-of-day range to display on the map



XD Road Search

- Added alternative road names to search index to it's easier to narrow down road searches to specific intersections



Route Analytics

LIVE DEMO

Work in Progress

- New Detector Tools (rolling out in phases this month)
- MANY new video tutorials
- New Templates
  - Work Zone Audits
  - After Action Reviews
  - Etc.
- RITIS Re-skinning and Modern UI
- Causes of Congestion (seen earlier)

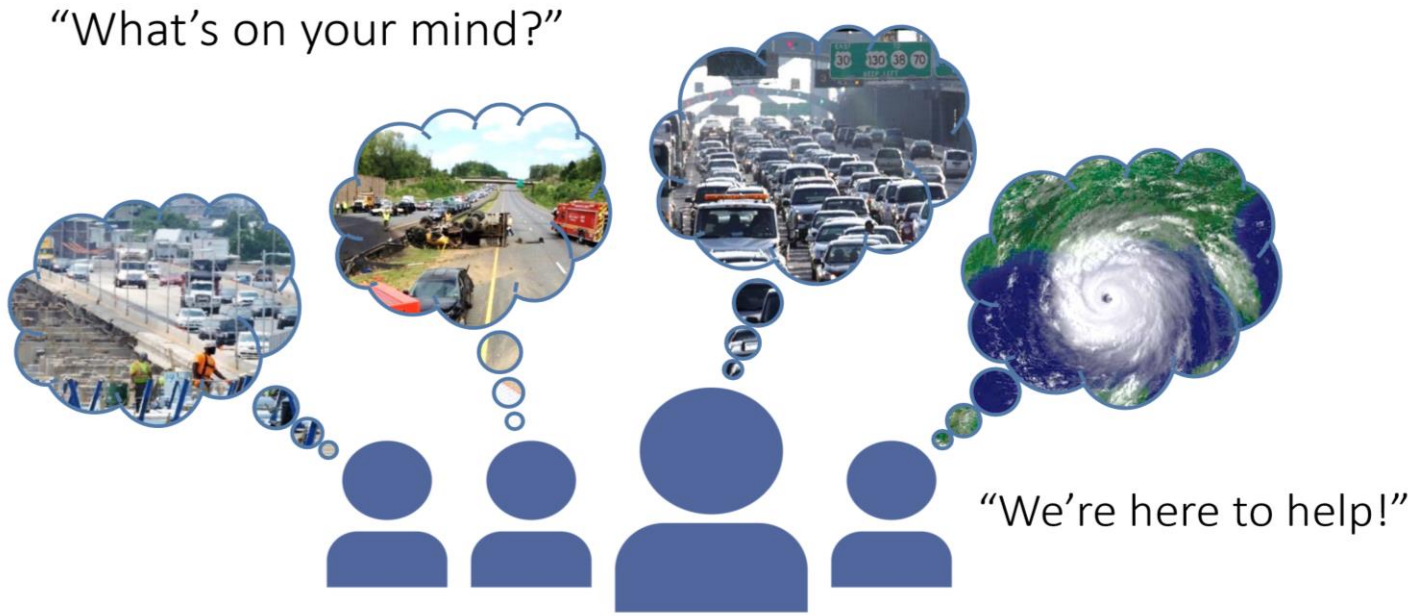
RITIS

PROBE DATA ANALYTICS SUITE

u s e r g r o u p

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



Agency Input Session

"What's on your mind?"

Wrap Up

Matt Glasser, PE, Georgia DOT

User Group Co-chair

Questions?

Please contact:

I-95 Corridor Coalition – Denise Markow 301.789.9088 or dmarkow@i95coalition.org

RITIS or PDA Suite – Michael Pack at PackML@umd.edu

RITIS Technical Support – support@ritis.org

PDA Suite Technical Support – pda-support@ritis.org

Logistics – Joanna Reagle 610.228.0760 or jreagle@kmjinc.com

thank you!