



Traveler Information Web Summit:

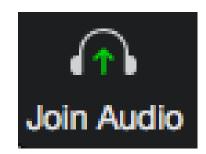
Improving Safety - Implementing New Travel Information Services for Commercial Vehicles

March 17, 2022



Welcome!

- We are using Zoom Webinar
- AUDIO (Computer): Use your computer speakers and microphone by clicking the "Join Audio" button at the bottom left of the screen. You will be muted.
- Alternate Audio (Phone): Call into the meeting by dialing the phone number based on your location (provided in the confirmation email) and enter the Meeting ID at the prompt. You will be muted.
- This web meeting is being recorded.
- Questions with the audio or web? Please contact Esther via email (<u>ekleit@kmjinc.com</u>)
- The Chatbox is not available to participants. Please use the Q&A box for questions to the presenters





Asking Questions in the Q&A Box



Click on the Q&A icon at the bottom of your screen



- The questions in the Q&A box will be monitored and answered either between presentations or at the end of the meeting
- You can keep track of your questions in the "My Questions" tab in the Q&A box





Asking Questions Verbally



Please raise your hand (click on the hand icon at the bottom of the screen),
 and a host will unmute you.



- Please give your name and agency before asking your question
- Please mute yourself when you are finished asking a question







Denise Markow, TSMO Program Director The Eastern Transportation Coalition



Coalition Update

RECENT

- ✓ Rebuilding the Causes of Congestion Pie Chart with Real-World Data November 10, 2021
- ✓ **Bi-Annual Waze Technical Working Group Web Meeting -** November 18, 2021
- ✓ Transportation Data Marketplace State & Vendor Meetings (33) August 2021 January 2022
- ✓ **RITIS User Group Meeting -** February 24, 2022

UPCOMING

- > Building a Corridor Performance Summary Report: RITIS Workshop #1 March 29, 2022
- > RITIS Product Enhancement Working Group Web Meeting April 6, 2022
- New England HOGs Using RWIS in Winter Operations April 7, 2022
- Understanding Origin-Destination Data: RITIS Workshop #2 April 8, 2022
- **Electric Vehicle Workshop -** April 12-13, 2022 (invite only)
- > FY2023 Strategic Planning starts April 21, 2022 (Committee members only)
- > RITIS User Group Meeting May 5, 2022
- ➤ Potomac HOGs Getting Better Information out to Travelers in Winter Operations- May 11, 2022





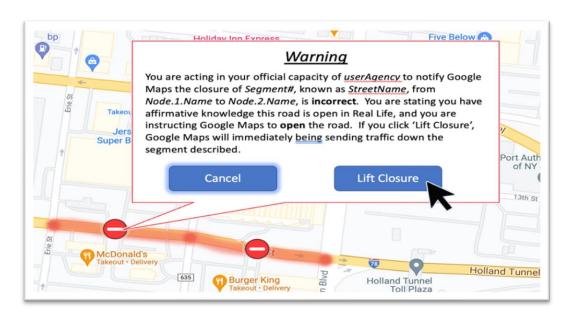
Traveler Information - 3rd Party Mapping

WAZE



Coordinating with WAZE Map Editors on Road Closures

Google Maps

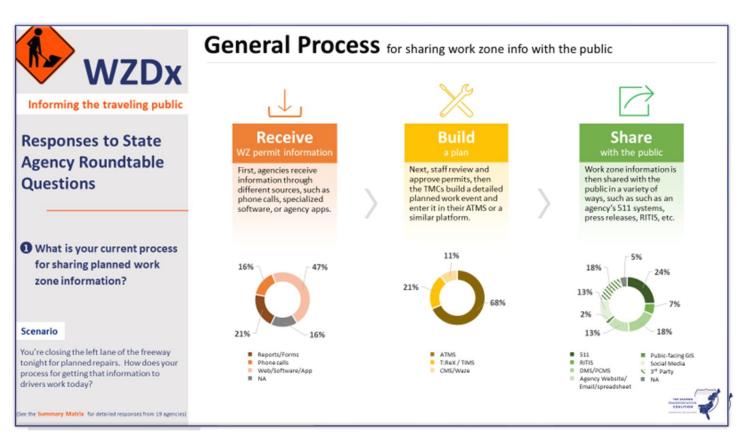


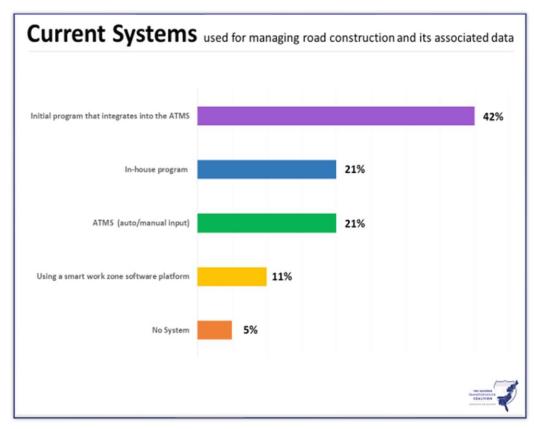
Capitalizing on our WAZE success
Coordinating with the Executive Board
on a request letter to Google



Work Zone Data Exchange Update

- Fall 2021 Member agency representatives discussed how their agency shares work zone data The Existing Condition
- Graphics were compiled summarizing the information







WAZE-RITIS-WZDX Data Integration Update

The Coalition is proposing to evaluate the data feed requirements for the following

- to look at the viability of consolidating resources to create a common feed.









Why are we here today?

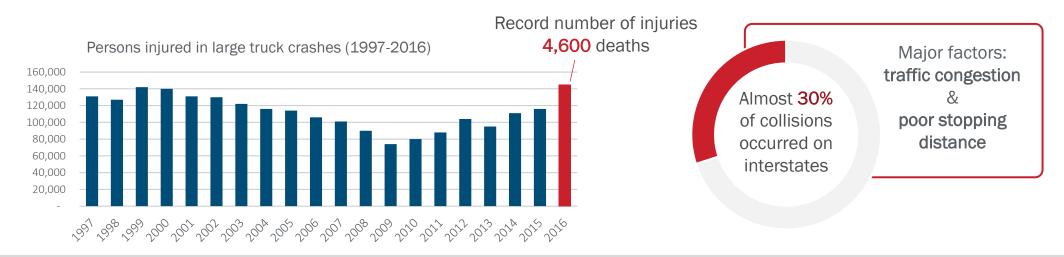


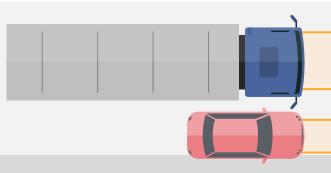
Marygrace Parker, Freight Program Director The Eastern Transportation Coalition



Road Congestion is a Critical Safety Issue

Reducing congestion reduces dangerous and unanticipated slowdowns – and reduces collisions





A fully loaded truck traveling 65 mph takes 66% longer to brake and stop than a passenger car



Why is it important that truckers get good, reliable Traveler Information?



Tractor-trailer crash cause over 10 mile backup on I-95 south in Caroline County



Thank you for your many years of dedicated service to the Coalition







We will miss you Mary!



Welcome from our TIS Co-Chairs



Mary Ameen, PE
Executive Director
NJTPA



Kelly Wells, PE
State Traveler Info Engineer
North Carolina DOT

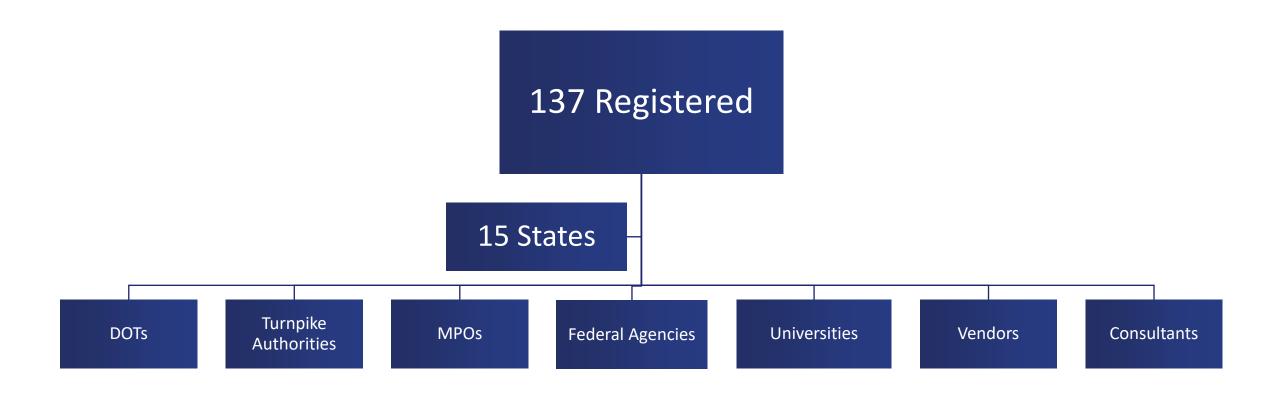


Agenda

Topic	Speaker
Welcome & Update on the Eastern Transportation Coalition	Denise Markow, TSMO Program Director, The Eastern Transportation Coalition Mary Ameen, Executive Director, NJTPA & TIS Co-chair
Web Summit Introduction	Marygrace Parker, Freight Program Director, The Eastern Transportation Coalition
Raising the Bar in Pennsylvania on Low Bridge Information	Ryan McNary, Manager, Traffic Systems and Performance, Pennsylvania DOT Mary Farrell, President, Information Logistics, Inc
Eyes On The Ground, Anywhere, Anytime: A Technology Demonstration	Mary Farrell John Farrell, Vice President of Product Management, Information Logistics, Inc
Break (10 min)	
North Carolina Pilot: Using Drivewyze/INRIX for Commercial Vehicle Alerts	Kelly Wells, State Traveler Info Engineer, North Carolina DOT & TIS Co-chair
Using Technology to Enhance Commercial Vehicle Safety on New Jersey Roads	Sal Cowan, Senior Director - Mobility, New Jersey DOT Marc Nichols, Director, Government & Industry Partnerships, Drivewyze Amy Lopez, Director of Public Sector Services and Smart City Strategy, INRIX
Wrap Up and Remaining Questions	Kelly Wells



The Eastern Transportation Coalition Sponsored Event





Introductions



Ryan McNary
Manager, Traffic Systems and
Performance
Pennsylvania DOT



Mary Farrell
President
Information Logistics, Inc.



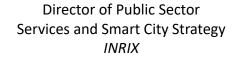
Sal Cowan
Senior Dir. – Mobility
New Jersey DOT



John Farrell,
VP of Product Management,
Information Logistics, Inc.



Marc Nichols
Director, Government &
Industry Partnerships
Drivewyze



Amy Lopez



Raising the Bar in Pennsylvania on Low Bridge Information



Ryan McNary, Manager, Traffic Systems and Performance *Pennsylvania DOT*



Mary Farrell, President, Information Logistics, Inc.

Raising the Bar on PA Low Bridge Information

Ryan McNary, Manager
Traffic Systems and TSMO Performance
Bureau of Maintenance & Operations PennDOT

Mary Farrell, President Information Logistics

Communicating Public-Facing Low Bridges

 Original concept focused on enforcing posted bridges and low bridge communication to the public was an afterthought

2016

2018

- 511PA Re-Focus
- Several initiatives began to be more CMV supportive

- 511PA CMV community successes helped reopen conversation
- Simple map layer and label wins
- Disclaimer

2020

March 17, 2022



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Problem is not just in Pennsylvania



Bridge strikes happen in many areas:

- Railroad bridges
- Overpasses
- Tunnels
- Covered bridges
- Truss bridges
- Pedestrian walkways



Bridge strikes are caused by both trucks and RVs.



How is low bridge information getting out commercially?

<u>SIGNAGE</u>

WAZE²: No

"Unfortunately, Waze does not support bridge heights at this time and I am unaware of any plans to do so." ²

²https://support.google.com/waze/thread/122839170/trying-to-plan-a-route-to-avoid-low-clearance-bridges?hl=en

Google³: No

"Nearly every driver of every truck that crashes into our bridge utters the fateful words, "I was just following Google."³

³https://support.google.com/maps/thread/14284030/does-google-maps-have-a-vehicle-height-warning-feature?hl=en

Garmin Navigation¹: Yes, on certain devices – Nearby as you go, or on your preset route.

"Your device will provide low bridge clearance alerts based on your vehicle profile even if a route hasn't been calculated. The distance at which this alert appears can vary depending on the road, but it should provide sufficient distance to choose an alternative route. The usage mode on your device must be set to either a truck or Camper/RV type profile that you have entered height data for.

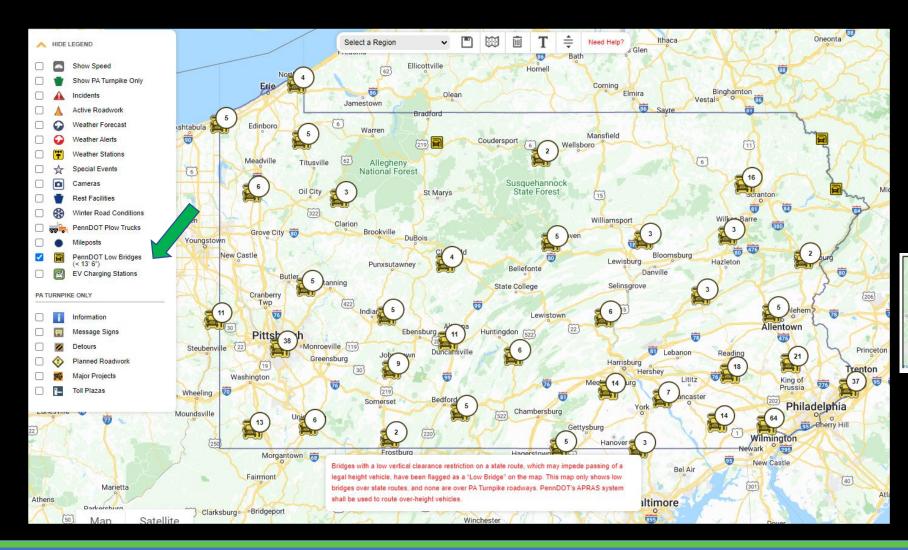
For best results, calculate a route to your destination. Bridges shorter than the vehicle profile setting will be avoided on the recommended route automatically."

¹https://support.garmin.com/en-US/?faq=rKQl0d6C0b9YaFKiSgfzh5

<u>Pay-For-Services:</u> *Yes, to different degrees* Such as:

- Lowclearances.com
- Rand McNally RV GPS
- Printed maps, search tools

PA Low Bridge Information Using 511PA Traveler Information Services - Web map

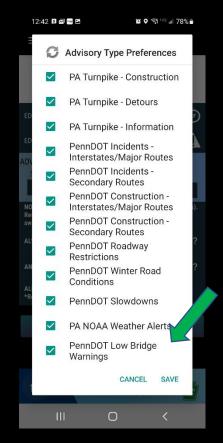


- Interactive Website Layer Clearly Marked
- Zoom and Click for details



PA Low Bridge Information Using 511PA Traveler Information Services - Mobile App





- Mobile Application
- Added Selection for Commercial v Passenger Vehicle
 - Commercial Options defaulted with Low Bridges
- Drive Mode
 - Announces low bridge when in range







Since the start of the program, there have been a minimum of almost 500 layer activations/month, reaching more than 2,000 activations in January alone.

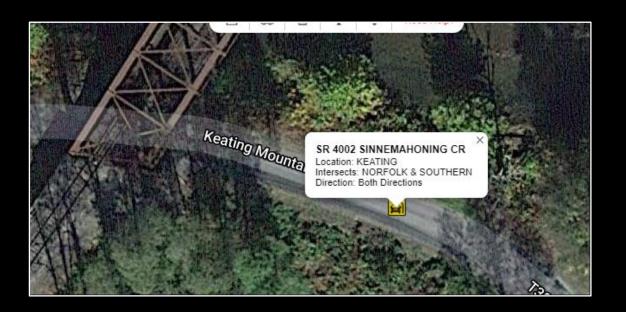
Usage Results So Far



Lessons Learned

- Data availability. Data updates.
 PA has a team who facilitates this well.
- Projection matters.

The GIS data available might not always plot precisely on different base maps. May need make location adjustments.













& Leasing













March 17, 2022

Last Saturday, I was driving my new Coleman 202rd on a back road up to Cades Cove. I had gone under one bridge and was approaching a second slowly. I now know the sickening feeling of being yanked to a halt and getting out to find a towable but basically destroyed trailer.





- https://www.irv2.com/forums/f59/bridgestrike-443381.html https://rvshare.com/blog/low-bridges/
- https://rvlife.com/low-clearance-accidents/
- https://blog.goodsam.com/rv-overheadclearance-issues/
- https://www.rvtravel.com/video-rvsmashes-into-vehicle-killer-underpass/
- and many more..

Does anyone know of a good app that lists low clearances by state and route? The GS trip planner only indicates clearances under 13' which could end up being expensive.

https://www.rv.net/forum/index.cfm/fuseaction/thread/tid/29559155/print/true.cfm

I don't think that there is anything out there that will show all the low bridges on back roads. I don't even think that all the low bridges in metropolitan areas are shown. Your only defense is your own diligence. My wife's number one job when we travel is to watch for low bridges. My number one job is to catch the ones that she doesn't.





More ideas ...?

- Add a "Check My Route" feature so that low bridges are seen for specific route.
- Add route-specific feature to mobile app with low bridges.
- Campaign to add low bridges to Waze/Google.
- Target part-time drivers
 - Truck Rental companies
 - RV organizations



Questions?



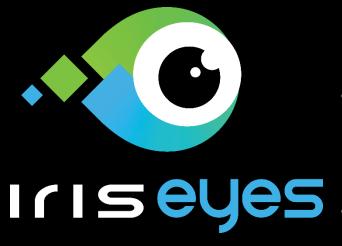
Eyes On The Ground, Anywhere, Anytime: A Technology Demonstration



John Farrell, VP of Product Management, Information Logistics, Inc.

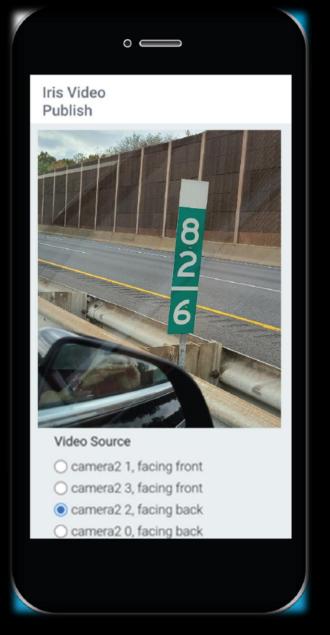
TRIS EyesTM

Remote cameras, everywhere, on demand.



Get live video streams from remote cell phones into your operations center!

- Staff can share the viewing link so that several people can view the live stream simultaneously.
- Rewind the video to view earlier parts of the stream.
- Download the video afterward for after action review





Break – 10 minutes



We will resume at 11:00am



North Carolina Pilot: Using Drivewyze/INRIX for Commercial Vehicle Alerts



Kelly Wells, PE, State Traveler Info Engineer *North Carolina DOT*

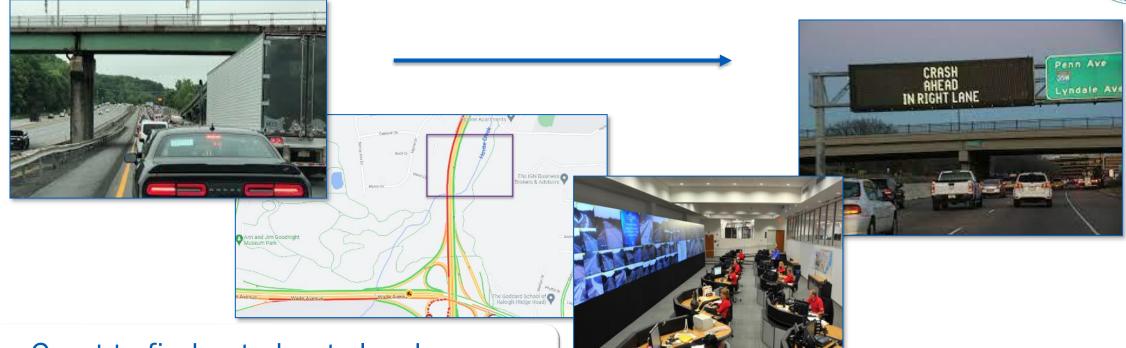


Commercial Vehicle Safety Alerts in North Carolina



Slowdown Alerts





- Great to find out about slowdowns and tell drivers
- But what if we could do it more quickly and at the point of need?

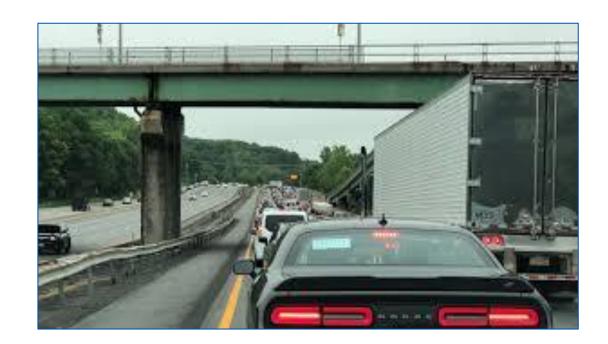








Alerting Trucks of Slowdowns in Real-Time





INRIX + Drivewyze = real time in cab alerts for slow downs and congestion





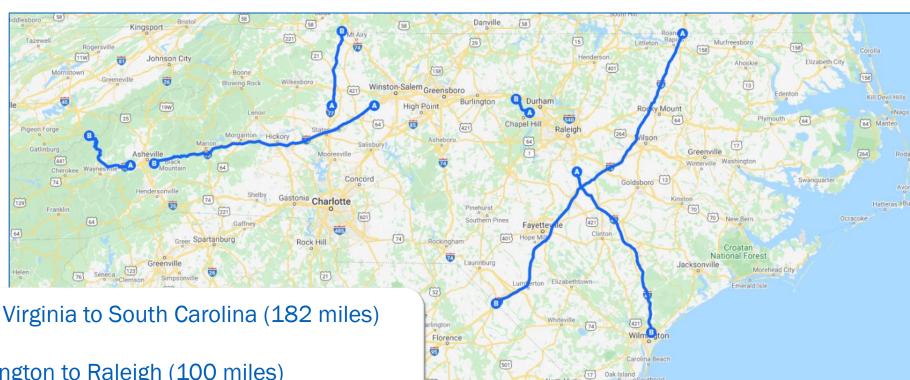






Locations: 500 Total Rural Miles





- I-95 from Virginia to South Carolina (182 miles)
- I-40 from
 - Wilmington to Raleigh (100 miles)
 - Durham to Hillsboro (11 miles)
 - Winston Salem to Asheville (127 miles)
 - Asheville to Tennessee (40 miles)
- o I-77 in 2 counties south of VA (40 miles)









CMV Safety Alerts Contract



- Through The Eastern Transportation
 Coalition "VPP 2"
- Soft Launch: May 2021
- Official Launch: September 2021
- Duration: 1 year
- Annual Fee: \$250,000











About INRIX



Expertise

- Real-time monitoring nationwide road network
- Detects + characterizes closures, queues, slowdowns
- Updates every minute, including location and severity

Foundational Data

- **Consumer Devices**
 - Connected Cars
 - **Mobile Phones**
- Local Fleets (service, delivery, etc.)
- Long Haul Trucks



















Drivewyze



The largest single network of trucks with in-cab presence

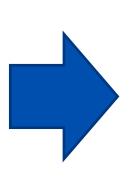
ELD (Electronic Logging) Partners
2.7m CMVs

Hands Free **Driver App**

Always-On Applications for CMV Drivers



















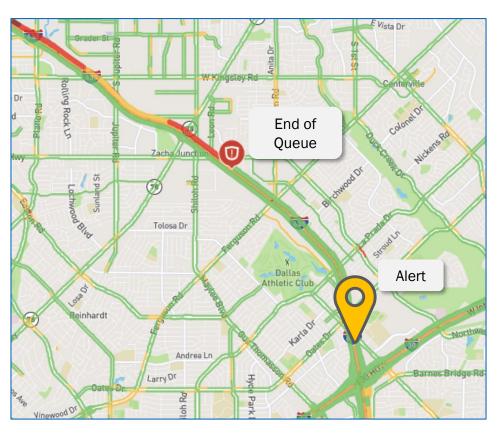
INRIX Traffic Alerts



Dangerous Slowdowns

- Significant drop in speed ahead vs current speed
- Alert will be issued if speed drops 35 mph +
- 2 miles ahead





Congestion

- Delay vs. Free flow
- Alert will be issued if 3 minutes or more of delay
- 3 miles ahead















CMV Traffic Alerting - How it Works

Alerting, analyzing and optimizing driver behavior.

NCDOT-Defined Alert Corridors

Rural Interstates

Drivewyze Monitors INRIX for Events

- Sudden Slowdowns
- Congestion

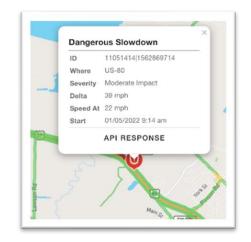
Drivewyze Distributes Alerts

- **Subscribed Fleets**
- **Subscribed Drivers**

Drivewyze Provides Analytics Results

- **Alert Location**
- **Alert Frequency**
- **Alert Density**





















CMV Alerts Reporting

1/19/2022 11:11:32 AM North Carolina DOT



▼ 9/1/2021 12:00:00 AM





I-95SB MM182-0

I-95NB MM0-182

I-40WB MM180-53 WS to Asheville

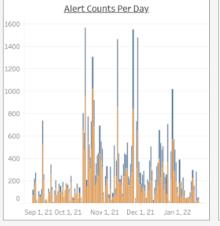
I-40WB MM40-0 Asheville to TN I-40EB MM53-180 Asheville to WS I-40EB MM0-40 TN to Asheville

I-40WB MM270-259 Hillsborough I-77 SB MM 105 to MM 55 I-40EB MM259-270 Hillsborough

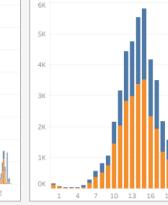
I-77 NB MM 55 to MM 105 I-40EB MM320-420 Raleigh to Wilm I-40WB MM420-320 Wilm to Raleigh

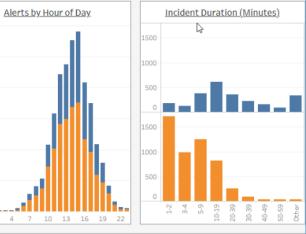






Jurisdiction





▼ (AII)

Incident Type

Sudden Slowdo.

▼ Congestion





- Interactive dashboard with historical alert and event trends
- Drill into time windows for specific event
- Near real-time event data
- Access to full raw event data











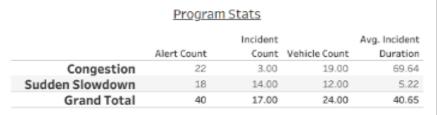


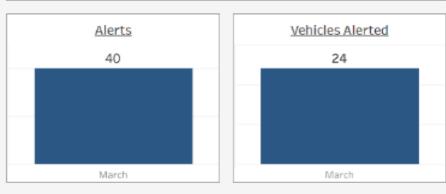


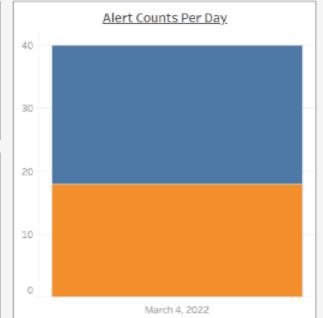
CMV Traffic Alert Dashboard - NC

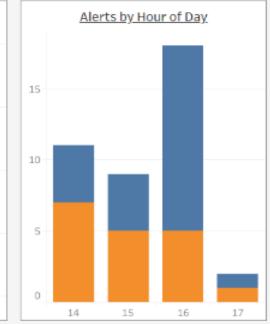
Through 3/4/2022 5:19:27 PM

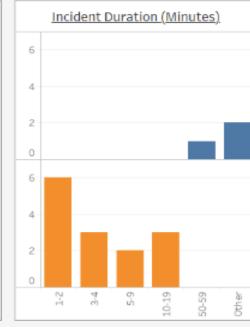


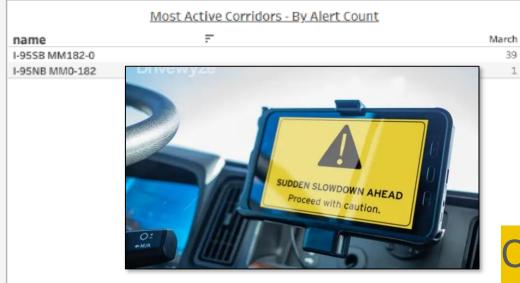


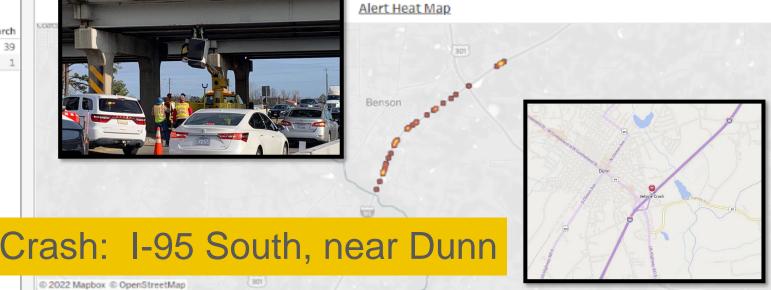




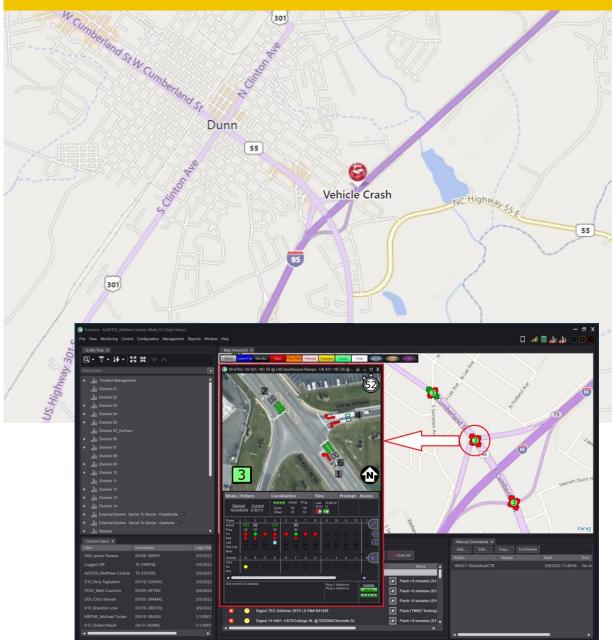








Crash: I-95 South, near Dunn, 3/4/22









We have issued 50,000 alerts to date.... We saw it "work" warning of I-95 crash queues...

But what is Benefit/Cost???











CMV Safety Alert Effectiveness Study



Preliminary results show that alerts do positively impact driving behavior relative to drivers not alerted.



Study conducted for I-95 Southbound Work Zone near Fayetteville, for January 14, 2022 – March 4, 2022 based on 4220 visits.





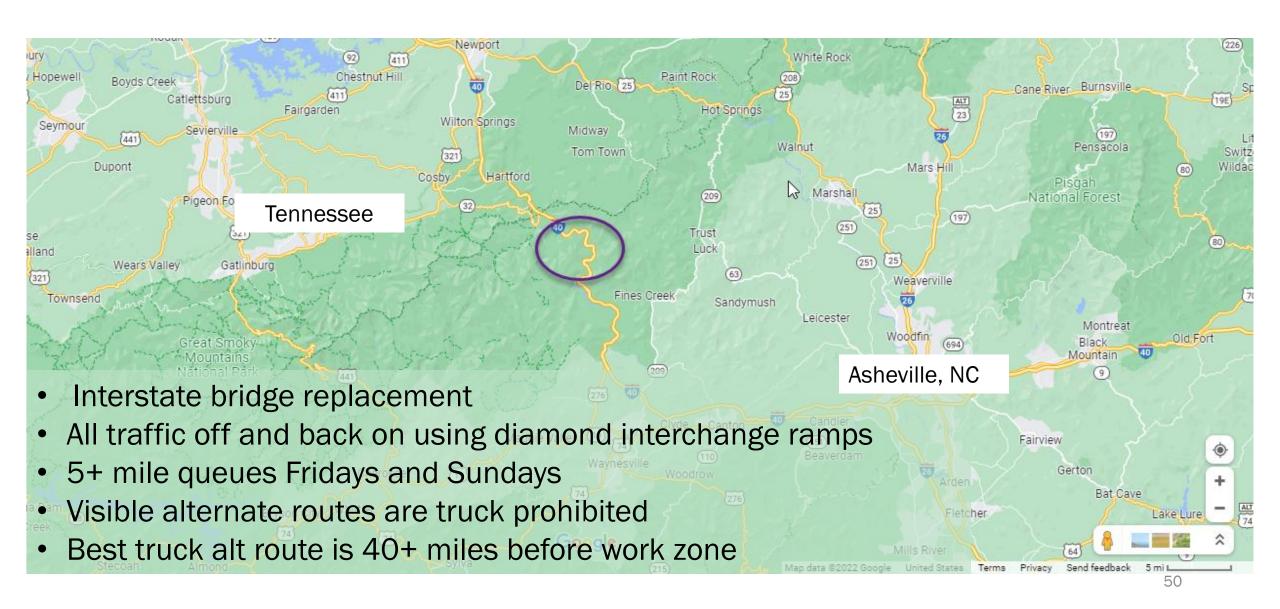








I-40 Work Zone in Western NC



"Agency Generated Safety Alerts"



1. I-26 West in NC

- Location = I-26 west @ Milemarker 49 (in NC)
- Preferred title message (25 characters) = I40 Delays before MM 7
- Preferred body message (25 characters) = Consider I26 to I81 to TN

2. I-40 West in NC

- Location = I-40 west @ Milemarker 40 (in NC)
- Preferred title message (25 characters) = Work Zone @ MM 7 Delays
- Preferred body message (25 characters) = Stay on I-40

3. I-40 East in TN

- Location = I-40 east Milemarker 400 (in TN)
- Preferred title message (25 characters) = Work Zone Delays in NC
- Preferred body message (25 characters) = Consider I81 to I26 to NC











Drivewyze Safety Notification service to fleets (No cost to NCDOT)



	High	NC Cary i440 & i40 NB	35.766624 -78.733381		
l	Rollover	NC Charlotte I-85 & Harris Road SB	35.311518 -80.759468		_
		NC Charlotte I-85 & I-77 EB	35.271867 -80.847583	Low	NC Durk
		NC Charlotte I-85 & I-77 NB	35.274336 -80.845508	Grade	NC Durk
		NC Charlotte I-85 & I-77 SB	35.271875 -80.845903		NC Durk
		NC Clyde 74 - i40 NB	35.543802 -82.915932		NC Durk
		NC Fines Creek I-40 near Forest Service Rd 288 NB	35.739593 -83.026598		NC Durk
					NC Durk
	Steep	3	35.273732 -82.372902		NC Durk
	<u> </u>	NC TN Border I-26 Steep Grade NB	35.967915 -82.553483		NC Gree

NC Durham 9th St EB	36.006555	-78.921865
NC Durham 9th St SB	36.006003	-78.922292
NC Durham S Alston Ave NB	35.984416	-78.889417
NC Durham S Alston Ave SB	35.983896	-78.889971
NC Durham S Roxboro St NB	35.99283	-78.89916
NC Durham W Peabody St NB	35.999116	-78.910281
NC Durham W Peabody St SB	35.998844	-78.910665
NC Greensboro E Lindsay St EB	36.075942	-79.785046
NC Greensboro E Lindsay St WB	36.076329	-79.785885
NC Greensboro E Washington @ Lyndon St WB	36.070459	-79.785634
NC Greensboro E Washington St EB	36.070093	-79.784234
NC Greensboro S Aycock St NB	36.063084	-79.815501

-Data sets

Grade

High Rollovers – from NCDOT – 2018ish

Steep Grade - publicly available (signage)

Low Bridges – licensed data set from partner

-NCDOT validating these against truck crash data

NC TN Border I-26 Steep Grade SB

-Considering asking DW to reinforce truck prohibitions, esp. on mountain roads





35.924458 -82.556657











Commercial Vehicle Safety Alerts in North Carolina





Using Technology to Enhance Commercial Vehicle Safety on New Jersey Roads



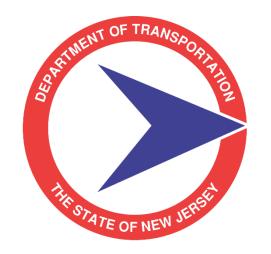
Sal Cowan, Senior Director - Transportation Mobility *New Jersey DOT*



Amy Lopez, Director, Sales and Business Development Public Sector Eastern Region, INRIX



Marc Nichols, Director, Government & Industry Partnerships *Drivewyze*



New Jersey Commercial Vehicle Alerts





Who Are We Working With?

Drivewyze®

Provider of North America's largest weigh station bypass system (Drivewyze PreClear)



Provider of real time traffic data and analytics to state agencies, cities and transportation authorities worldwide





Which Agencies Are Involved?











What Roads Are Covered?

	Northern New Jersey Cor	mmercial Vehicle Alert Secti	ons
Route	Begin Milepost	End Milepost	Total Miles
1-78	0	58.5	58.5
I-80	0	68.5	68.5
I-280	0	17.85	17.85
I-287	0	67.54	67.54
NJ 440	0	5.15	5.15
		Total	217.54
	Southern New Jersey Cor	mmercial Vehicle Alert Secti	ions
Route	Begin Milepost	End Milepost	Total Miles
I-195	0	34.2	34.2
1-295	0	76.56	76.56
1-76	0	3.08	3.08
1-676	0	4.75	4.75
NJ 42	6.2	14.3	8.1
		Total	126.69
	New Je	rsey Turnpike	
Route	Begin Milepost	End Milepost	Total Miles
PHMTE			6.6
NBHCE			8.4
Mainline			118
Vestern Spur			10.5
-95 Extension			5
		Total	148.5

	Garden S	State Parkway	
Route	Begin Milepost	End Milepost	Total Miles
	0	106	106
		Total	106
	Atlantic C	ity Expressway	
Pourto			Total Miles
Route	Begin Milepost	End Milepost	lotal Miles
	0		48
		Total	48

<u>Total Centerline Miles</u> (all three agencies)

647



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What Are We Doing?





- Provide commercial drivers with real-time slowdown and congestion alerts.
- Help commercial drivers react before encountering stopped traffic or slowdowns

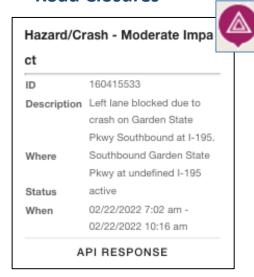


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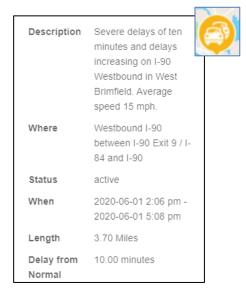


How Is It Done?

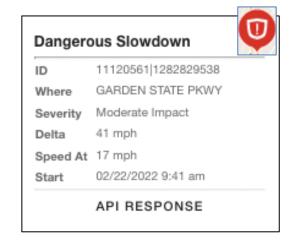
Road Closures



Congestion/Queues



Sudden Slowdowns



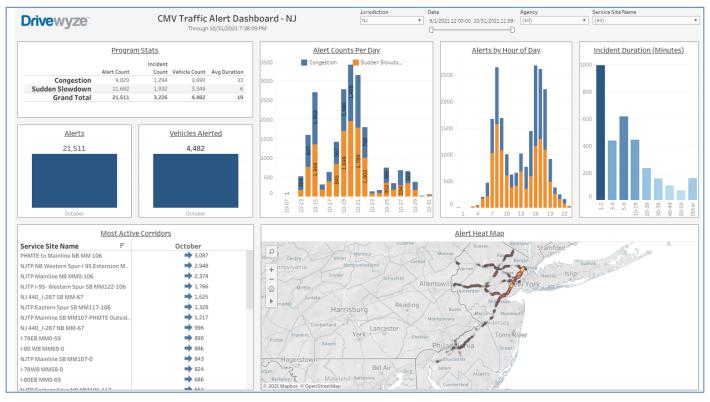
- INRIX Traffic Intelligence -- Real-time monitoring of nationwide road network
- Detects and characterizes closures, queues, and slowdowns
- Updates every 60-seconds includes location and severity



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What Are We Getting?



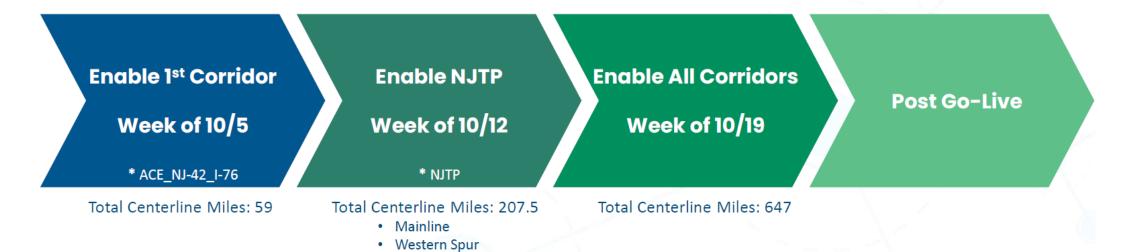
Web-based dashboard showing # of alerts and vehicles alerted in NJ



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Deployment Timeline



THE EASTERN TRANSPORTATION COALITION

I-95 Extension

NBHCEPHMTE



Short-Term Next Steps

- Provide app to agency field staff for use and evaluation
- Analyze alerts compared to TMC data

Long-Term Next Steps

- Reviewing over 300,000 datapoints from SLD and TAMS
- Determine static signage (rollover, low bridge, etc.) to send in-cab

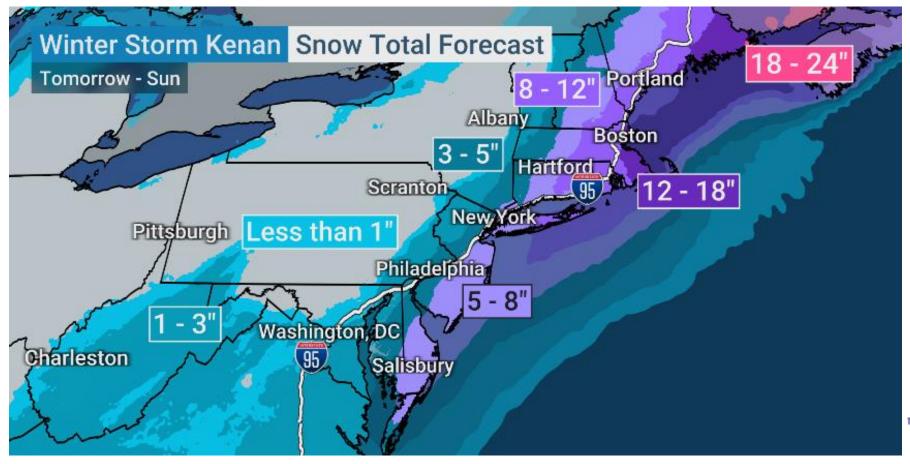








Winter Storm Kenan





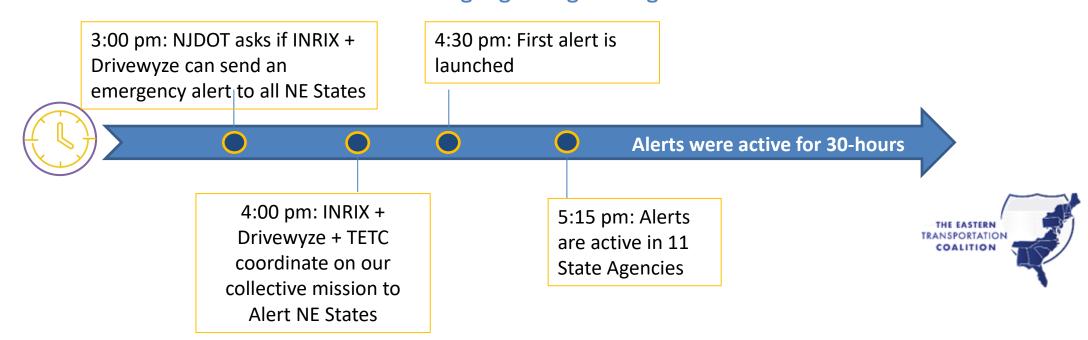
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Request from NJDOT to Alert the Northeast Drivewyze Commercial Vehicle Alerts

- Q Can INRIX + Drivewyze provide alerts for Truck Restrictions due to the upcoming storm?
- A Yes!
- Q Can you alert the entire Northeast (even though only NJDOT has the service)??
- A Yes we did!!!....we did because of the NJ request and the concern for the NE states...

It didn't take long to get things moving!



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"Major Winter Storm Alert" Drivewyze Commercial Vehicle Alerts



• 11 states activated 2 ¼ hours after initial request

10 states that do NOT subscribe CMV Alerts



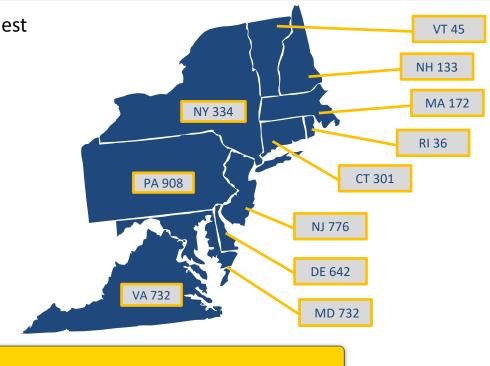
• 11 State agencies

• 1956 NB interstate road miles



• 4,811 Trucks alerted over 30-hours

State	Location of Alert	Number of Trucks
CT	North I-95 NB	301
DE	North I-95 NB	642
MD	North I-495 NB	732
MA	North I-91 NB	165
MA	North I-495 NB	7
NH	North 195 NB	133
NJ	North I-95 NB	260
NJ	North I-295 NB	516
NY	North I-87 NB	25
NY	North I-495 NB	4
NY	North I-95 NB	305
PA	I-80 East EB	908
RI	North I-95 NB	36
VT	North I-91 NB	45
VA	North 195 NB	732
Total Number of Trucks Alerted		4811





This is the actual alert shown on the in-cab ELD and on the Drivewyze App on any smart device.





Geo-Fence Alert Example

PA Major Snowstorm Alert North I-80 East EB



State	Location of Alert	Number of Trucks
CT	North I-95 NB	301
DE	North I-95 NB	642
MD	North I-495 NB	732
MA	North I-91 NB	165
MA	North I-495 NB	7
NH	North 195 NB	133
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NY	North I-95 NB	305
PA	I-80 East EB	908
RI	North I-95 NB	36
VT	North I-91 NB	45
VA	North I95 NB	732
Total Number	4811	

- 90 Alerts Sent Out
- Date and Time Site was Activated: 01/28/22 at 5:47 PM EST
- Date and Time Site was Deactivated: 01/30/22 at 9:59 AM EST



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Wrap Up



Kelly Wells, PE, State Traveler Info Engineer *North Carolina DOT*



Additional Questions



Meeting information & presentations will be posted to The Eastern Transportation Coalition website.

Participants will receive a link to the presentations after they are posted.





THANK YOU!

For Questions or Additional Information, please contact:

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