I-95 Corridor Coalition

Travel Information Services Committee Meeting

March 15, 2018

Meeting Requests

This is an in-person & virtual meeting – we would like to achieve the same experience for all participants

- **All Participants – in-person and via webcast**
  - Questions will be addressed at the end of each presentation
  - Please give your name and agency before asking your question (at least the first time)
- **Participation in-person**
  - Please remember all sounds are picked up by the audio system
- **Participation via web**
  - Please keep your phone muted until asking a question or speaking (press *6 to mute/unmute individual phone lines)
  - Please do not place call “on hold” as your hold music will be heard by the group

Housekeeping Items

Additional Webcast & Audio Information

- **This meeting is being recorded**
- Please call xxx.xxx.xxxx for difficulties with the web or audio
- Contact Information will be available at the end of the presentation

Presentations & Contacts

- Presentations will be posted to the I-95 Corridor Coalition website. Participants will receive a link to the presentations after they are posted
- Contact Information will be available at the end of the presentation

Welcome from NJTPA

Mary Ameen, Deputy Executive Director

North Jersey Transportation Planning Authority

Welcome from our TIS Co-Chairs

Mary Ameen, NJTPA

Mark Kopko, PennDOT

Web Meeting Participants

Agency	Representative	Agency	Representative
District DOT	2	New Jersey DOT	3
DVRPC	1	North Carolina DOT	3
Federal Motor Carrier Safety Admin	1	Pennsylvania DOT	2
FHWA	3	Pennsylvania Turnpike Commission	3
Florida DOT (IBI, HNTB)	3	Rhode Island DOT	3
Georgia DOT	3	South Carolina DOT	4
I-95 Corridor Coalition	1	Tennessee DOT	1
Maine DOT	1	UMD CATT Lab	1
Massachusetts DOT	4	Vermont AOT	1
New Hampshire DOT	1	Virginia DOT	1

In-Person Attendees

Agency	Representative	Agency	Representative
Acus Learning Systems, LLC	1	NJTPA	3
City of Norwalk	1	NYMTC	1
Delaware DOT	1	Pennsylvania DOT	2
District DOT	3	Port Authority of NY NJ	1
FHWA	1	Stantec	1
I-95 Corridor Coalition	1	Total Traffic & Weather Network	1
INRIX	1	TRANSCOM	2
Maryland SHA	1	USDOT/OST-R/Volpe Center	2
New Jersey DOT	1	Virginia DOT	1
New Jersey Institute Technology	1		

Please confirm you are
MUTED

For your phone line - press *6
&
Mute your computer

Thank
You!

Agenda

Time	Topic	Speaker
9:00am to 9:30am	Networking & Continental Breakfast	
9:30am to 9:35am	Housekeeping Items	Karen Jehanian, KMJ Consulting, Inc.
9:35am to 10:00am	Welcome from NJTPA	Mary K. Murphy, NJTPA & Mary Ameen, NJTPA (TIS Co-Chair)
	Coalition Welcome & Update	Denise Markow, PE I-95 Corridor Coalition
10:00am to 10:15am	Break	
10:15am to 10:30am	Understanding How Truckers are Getting/Using Real-time Information	Marygrace Parker, I-95 Corridor Coalition
10:30am to 11:00am	DelDOT – Trucker Travel Information	Silvana Croope, PhD DelDOT
11:00am to 11:30am	VDOT's Truck Parking Program and how they are disseminating Parking Information to Truckers	Scott Cowherd, Virginia DOT
11:30am to 11:45am	Truck Travel Information Wrap Up	Denise Markow, PE I-95 Corridor Coalition
11:45am to 12:20pm	Lunch Break	
12:20pm to 1:50pm	Agency Roundtable Discussion • Travel Information Updates	Mark Kopko, PennDOT (TIS Co-Chair)
1:50pm to 2:00pm	Coalition Upcoming Events and Meeting Wrap Up	Mark Kopko

Coalition Welcome & Update

Denise Markow, PE, TSMO Director,

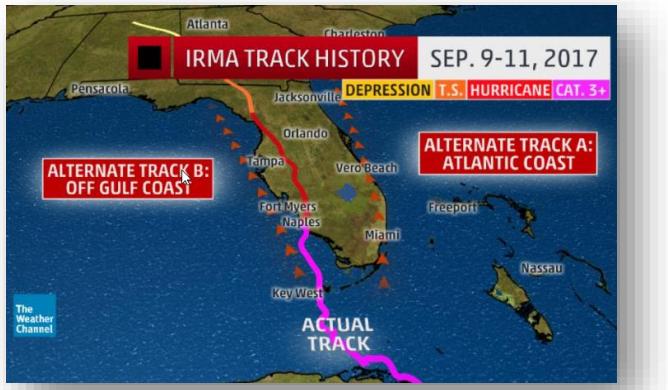
I-95 Corridor Coalition

Coalition Update – Recent Meetings

–RITIS User Group
–January 18, 2018

–Coalition Steering Committee January 25, 2018
–Executive Board Strategic Planning Session February 27, 2018

–Semi-Annual Validation Meetings
–January 29, 2018



–Southern HOGS Exchange
–Hurricane Irma January 31-February 1, 2018

–Volume and Turning Movement Steering Committee
–February 13, 2018

PROBE DATA ANALYTICS SUITE

–PDA Suite User Group
–March 8, 2018

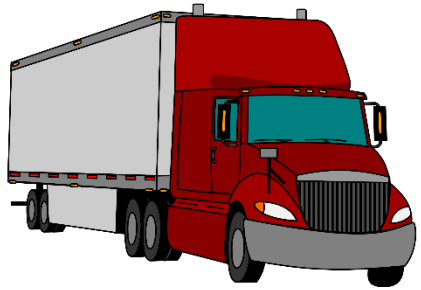
Coalition Update- Current Meetings

- TSMO Strategic Planning Session
- March 14, 2018

- Traveler Information Services Annual Meeting
- March 15, 2018 – TODAY!

Coalition Update- Upcoming Meetings

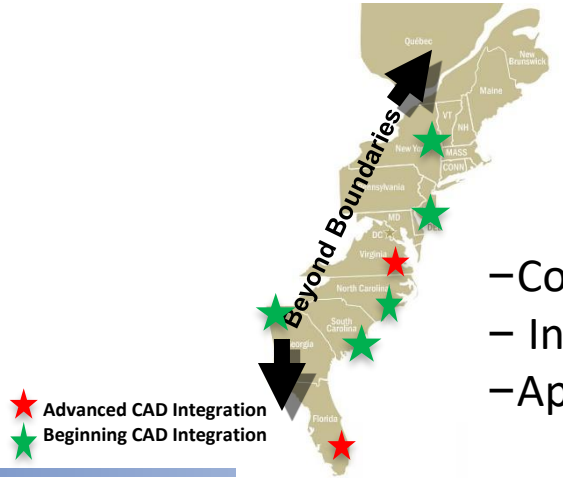
- Maine Heavy Towing Workshop #2
- March 2, 2018 – Being Rescheduled



- Intermodal Committee Web Meeting
- March 21, 2018

- Steering Committee Work Plan Session
- April 12, 2018

- Work Zone Monitoring Tools National Webinar
- April 19, 2018



- Computer Aided Dispatch Data
- Integration Workshop
- April 23-24, 2018

Break
(15 minutes)

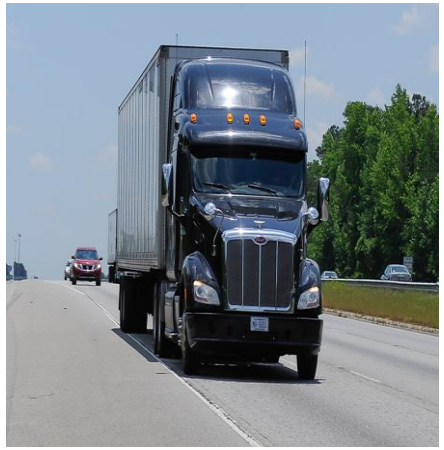
Understanding How Truckers are Getting/Using Real Time Information

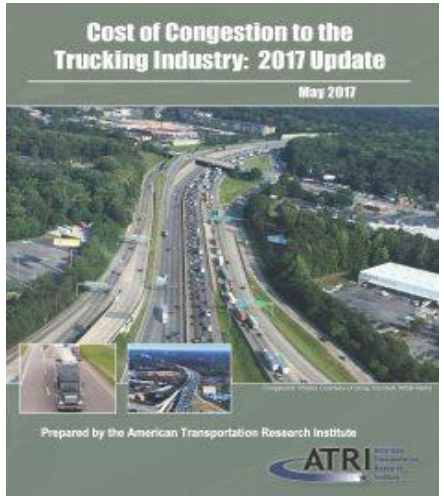
Marygrace Parker

Director - Freight and Innovation in Transportation

I-95 Corridor Coalition

Why do truckers need real time traffic and related information?





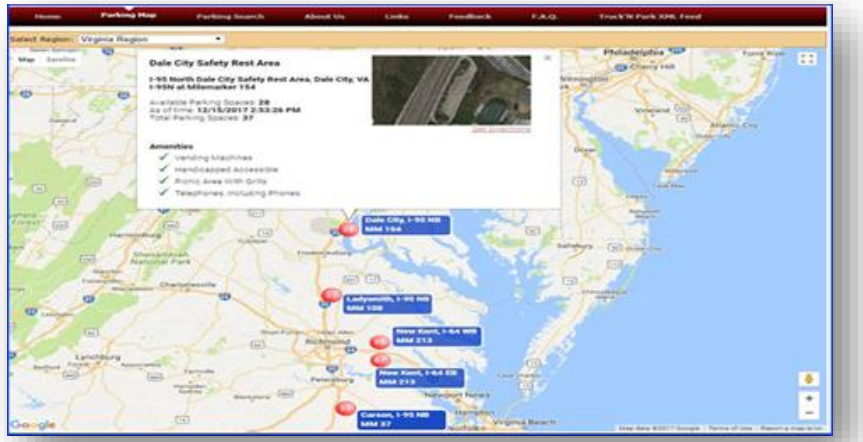
- Truck Driving "$ margins" are relatively slim – delays contribute to losses for companies AND drivers (i.e. reaching maximum Hours of Service, penalties for delivery delays, additional fuel costs…)

- Traffic Congestion/delays impact trucking industry*
  - $63.4 billion in operational costs to the trucking industry in 2015
  - Equivalent to 362,243 commercial truck drivers sitting idle for a working year.
  - Congestion costs on a per-truck basis totaled an average increase cost of $22,676 for trucks that travel 100,000 miles annually

* Source: "Cost of Congestion to the Trucking Industry: 2017 Update" - report by American Trucking Research Institute, May 2017

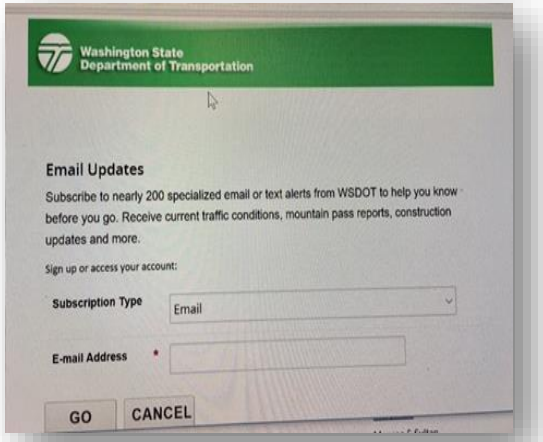
What information do truckers want/need for economics, efficiency and/or safety?

- Road conditions:
  - Incidents/delays/closures (including detours, travel times)
  - Construction and work zone locations and status (i.e. active, lane restrictions/shifts, dimensional/weight limitations)
  - Oversize/overweight restrictions
  - Weather/pavement conditions
- Real Time Truck Parking availability
  - (public and private facilities)
- Weigh station/electronic screening sites
- Detour information (must be “truck friendly”)
- *Additional information such as: truck stops/fueling stations, hotels, restaurants, “load matching”….and more*



How are truckers getting traffic and related Information

- On Board Systems
- “Apps” (trucker specific apps or general apps)
- Transportation agencies: 511, Dynamic Message Signs, website
  - Email, text alerts
- Public Websites
- Smartphones/Tablets
- Company dispatcher (fleet drivers)
- Radio (i.e. Sirius, others)
- Weather services (i.e. NOAA, other weather sources)
- “Other drivers” and or Crowdsourced sites (i.e., Instant message boards, “WAZE”, “word of mouth”)

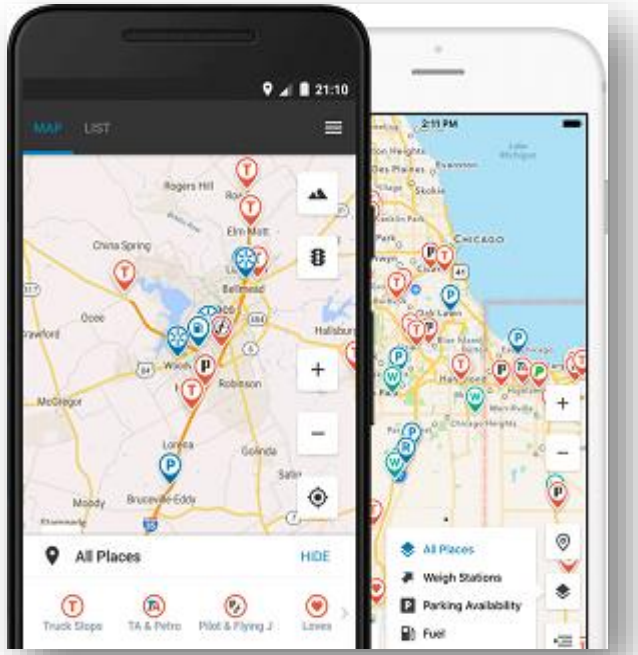


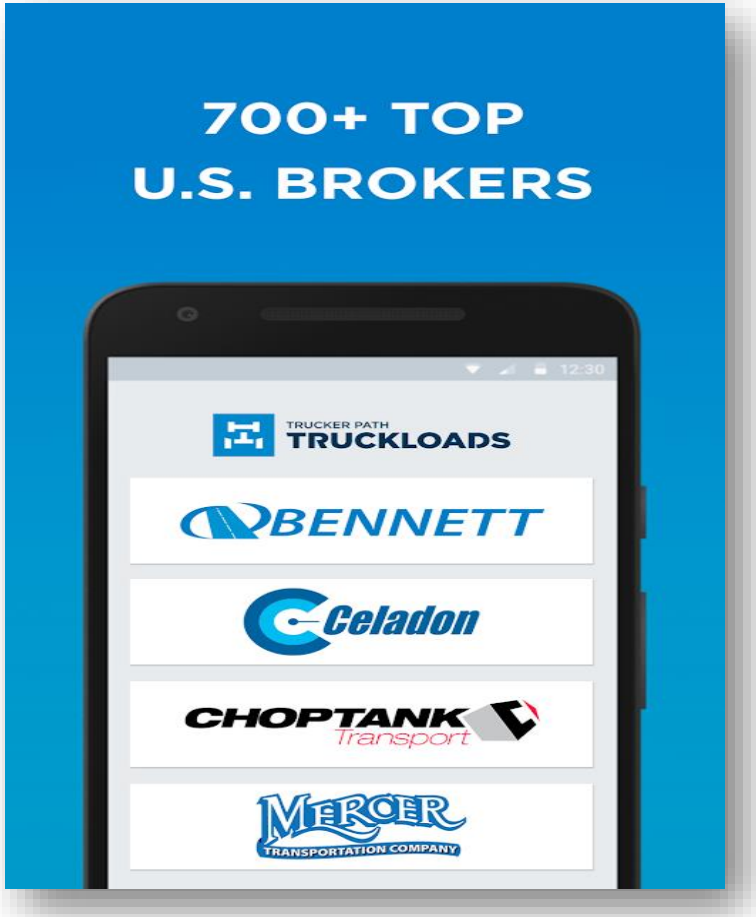
Trucker” Apps offer various resources related to travel information and truck parking

With live updates on traffic and weather radar, ONE20 also maps parking and weigh station statuses based on crowd-sourced updates by ONE20 and other truckers

ParkMyTruck was developed by Truck Parking Leadership Initiative and administered by National Association of Truck Stop Operators (NATSO)

Emerging trends in “trucker” apps – “Multi-faceted or one stop shop” content





What Can Public Agencies Do To Meet Trucker Information Needs?

- Provide information that is accurate, reliable, timely and accessible to truckers
  - Via agency outlets (dynamic message signs, 511, website, media notifications, “freight alerts”)
  - Increase capability to provide information access to 3rd parties (companies, drivers, onboard system providers, app/system developers)
    - Creating agency portals
    - Enhancing capabilities to source information from underlying legacy systems (i.e. OS/OW dimensional information, bridge/pavement information)
- Make sure “sources” of information or “outlets” recognize trucker vs passenger operational world/needs
- Don’t “reinvent the wheel”
  - Share experiences/learn from agencies that are doing this well!

DelDOT – Trucker Travel Information

Silvana Croope, PhD

Resilience and Sustainability Strategist

Delaware Department of Transportation

DelDOT's Work Zone & Incident Communication System (WZIC) Feasibility Study

I-95 Corridor Coalition Travel Information Services Committee Meeting – 3/15/2018

Silvana V Croope, Ph.D., ENV SP

Terance McNinch
Fernando de Melo e Silva

TEAM DelDOT
Transparent Efficient Accountable Measured

PublicWorks Training.com

Why Do We Need a WZIC System?

Lack of Information Results in Poor Decisions

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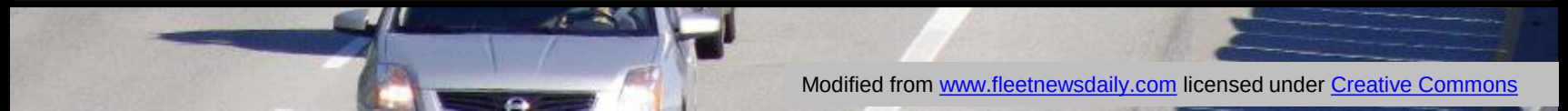
Why?

Informed Drivers = Better Decisions

Safety Issues

Operations Efficiencies

Better Decisions = Safer Highways



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Additional Trucker Information:

Parking

Height, Width, Weight Restrictions

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OSOW

Automatic Routing

HAZMAT Corridors

Reduction of Information:

Only Need to Know Traffic Restrictions

Work Zones

Incidents

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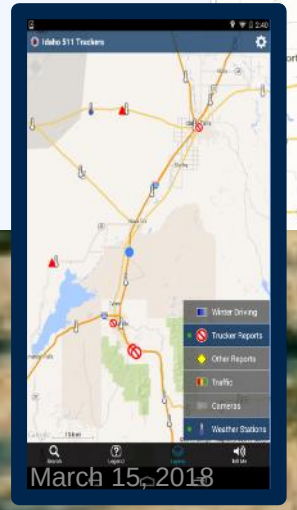
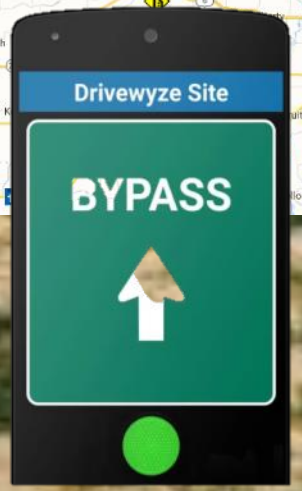
Driver's Needs: Moving the Economy





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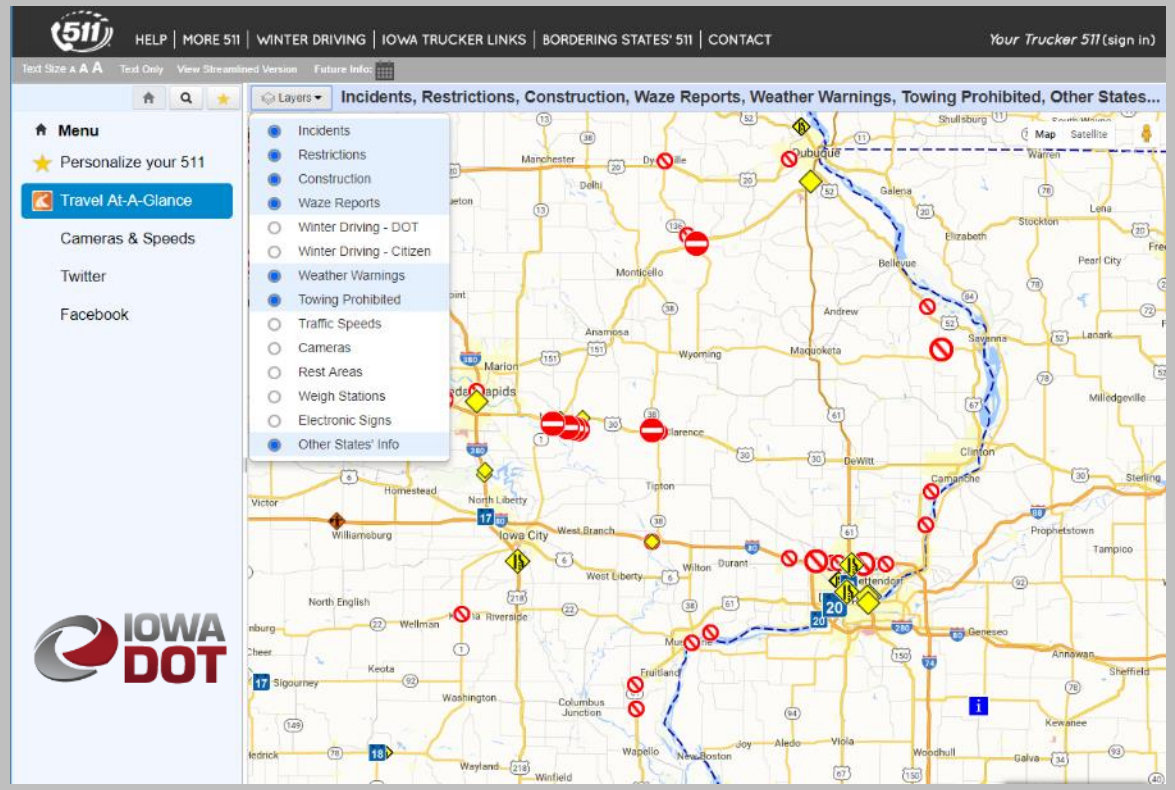
Website Portal for Truckers

Trucker Specific Information

Only What Is Necessary

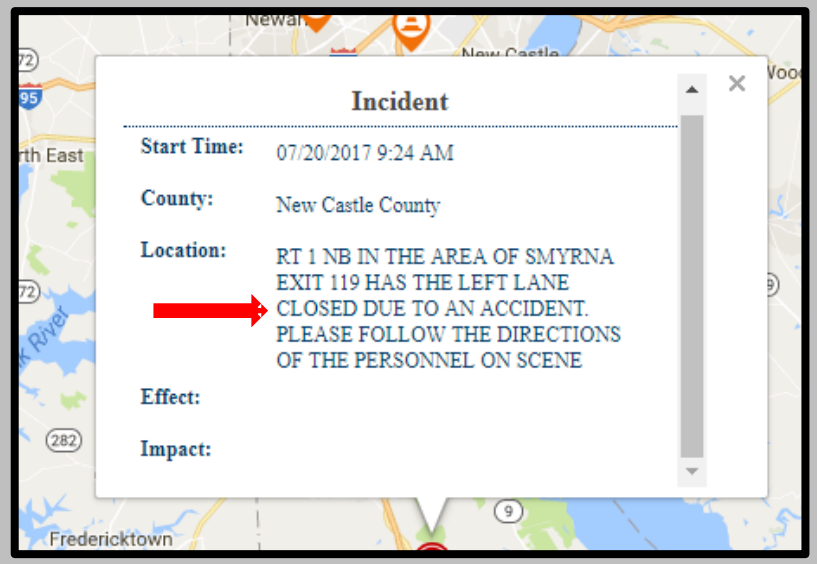
Least Amount of Words

Least Amount of Distraction

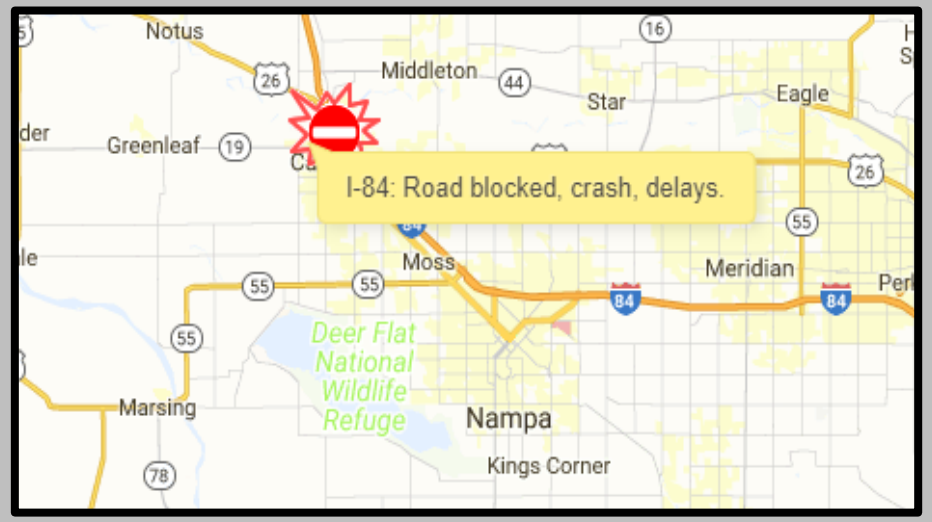


Website Portal for Truckers

DelDOT

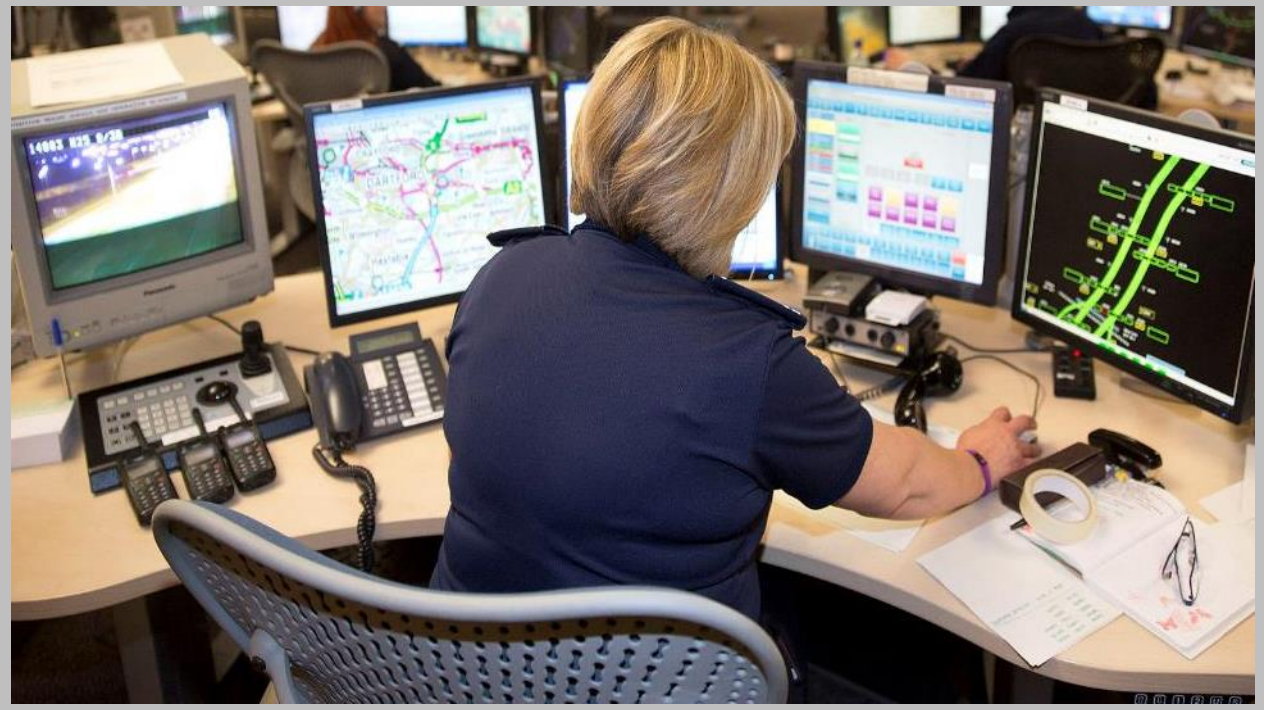


Idaho DOT



Least Amount of Information

Commercial Vehicle Operator Communication



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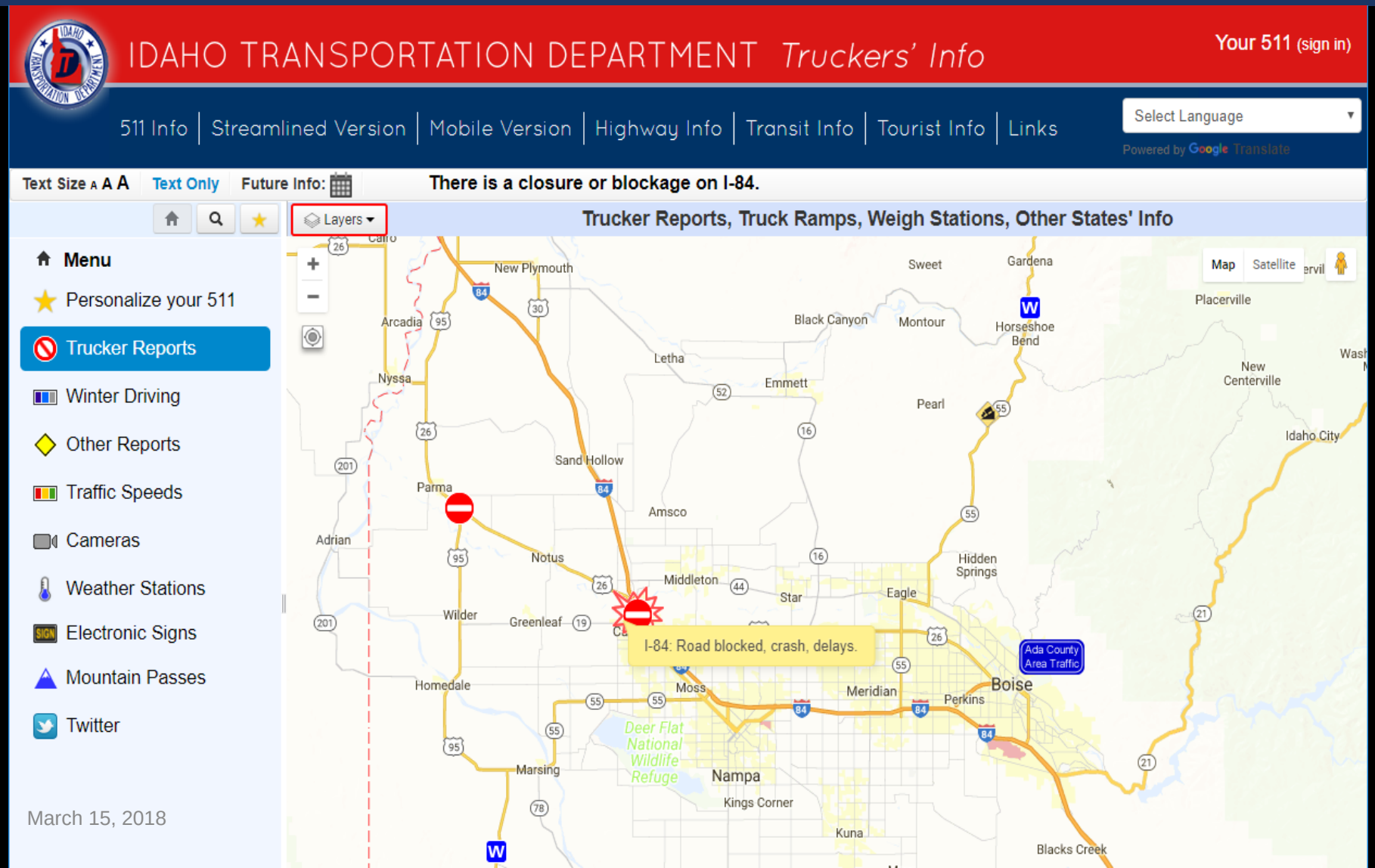
Out-of-the-Cab **In-the-Cab**

Idaho DOT Website Portal for Trucker



Smart Phone Solutions

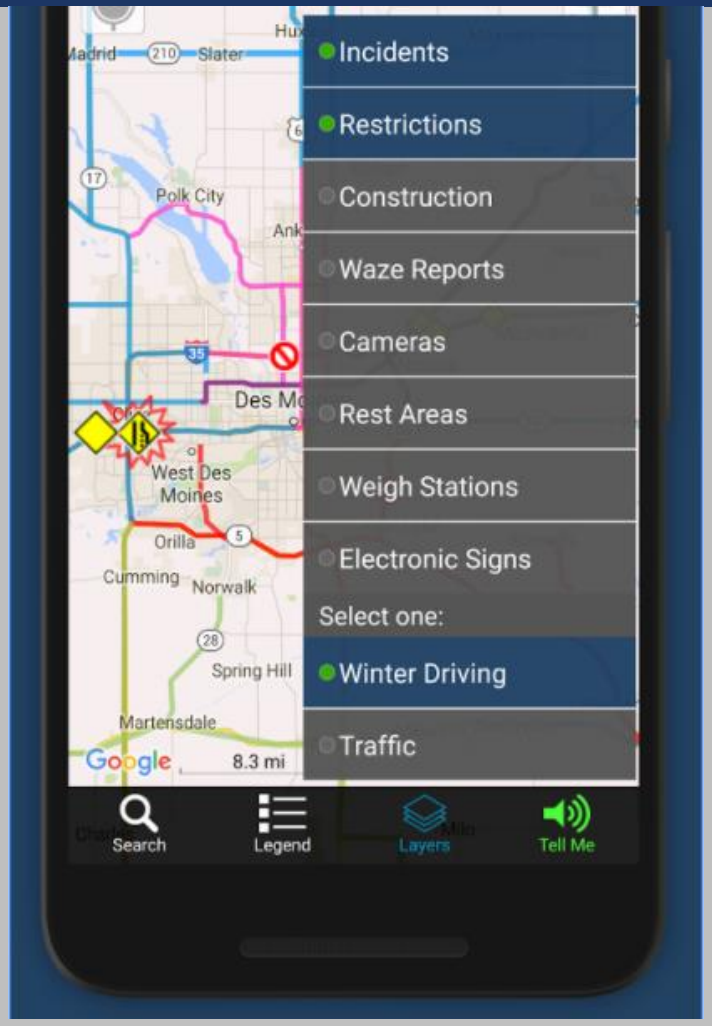
FMCSA Restrictions

- Hands Free – One Touch
- Voice Alerts
- Voice Commands

Smart Phone:
Iowa DOT Trucker App (Hands - Free)

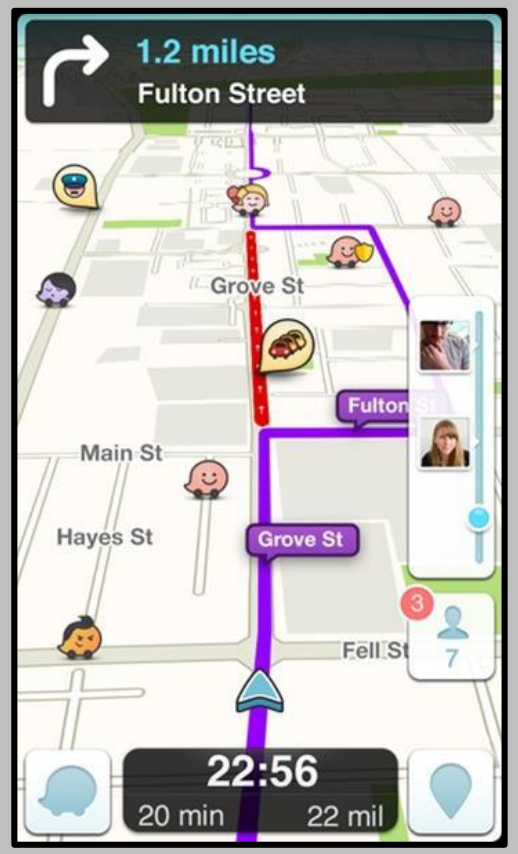
IOWA DOT
SMARTER | SIMPLER | CUSTOMER DRIVEN

- Trucker Specific Data
- Trucker Data Formatting
- Clustering of Waze icons

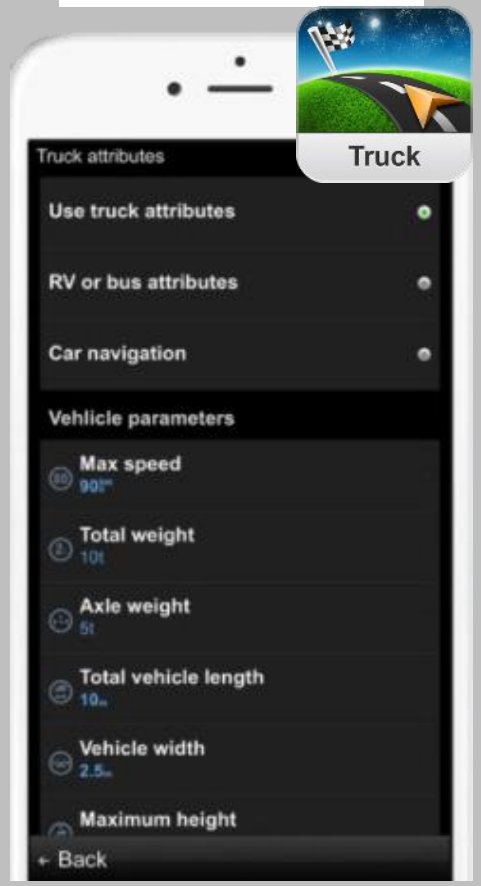


3rd Party Apps

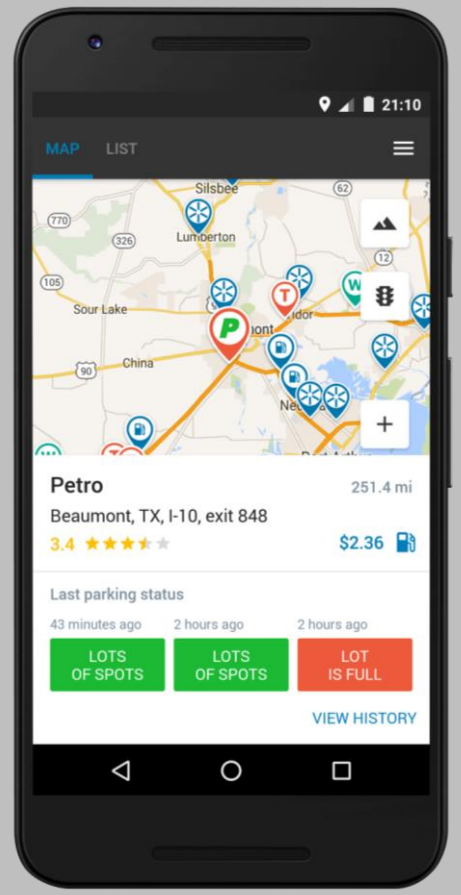
waze



Sygic
GPS Navigation



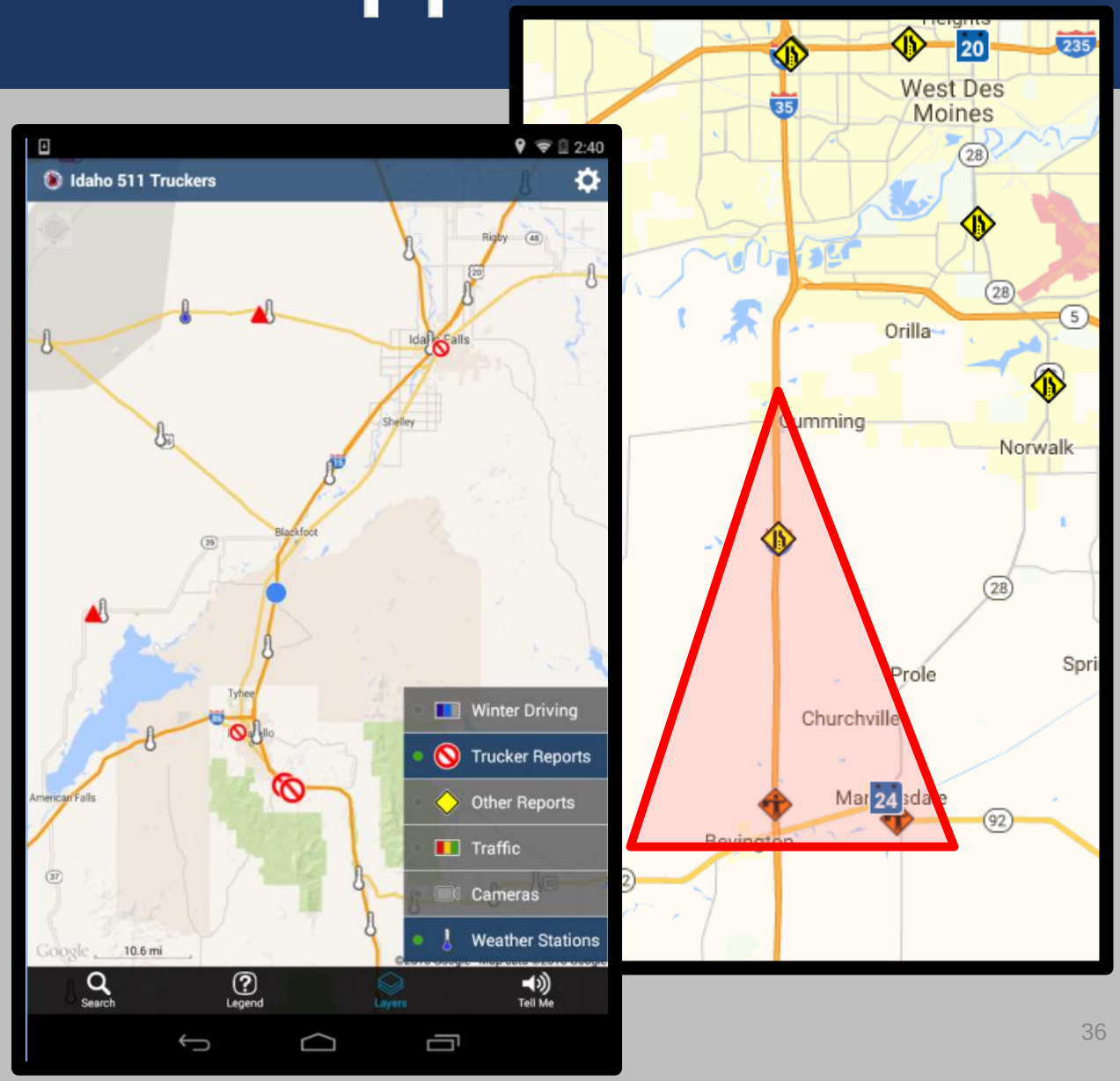
TRUCKER PATH



Smartphone 511 Trucker App

Hands - Free
Voice Commands
Voice Alerts

Trucker Specific App
or
Standard App with
Trucker Features



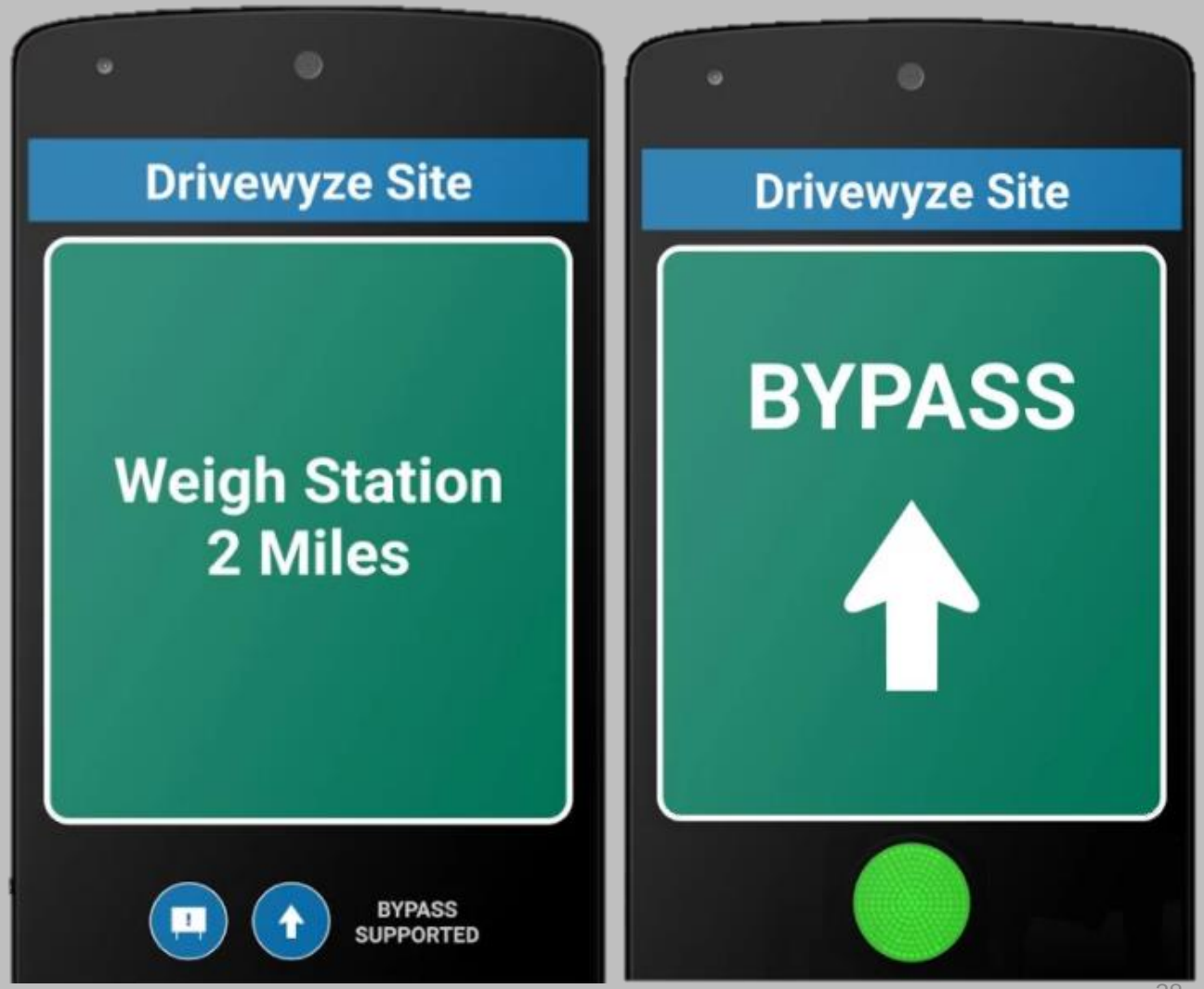
Cell Phone Banned from Cab

50%
Small Fleets & OO/ID

50%
Large Fleets

Drivewyze PreClear

- Scale Bypass System
- 600 Scales (US & Canada)
- Installed in over 850,000 trucks



GPS Navigation Devices

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Fleet Management Systems (FMS)

- **Extended Interface to ELD**
- **Communication with Driver**

Lack of Assessment Method
No Performance Measures

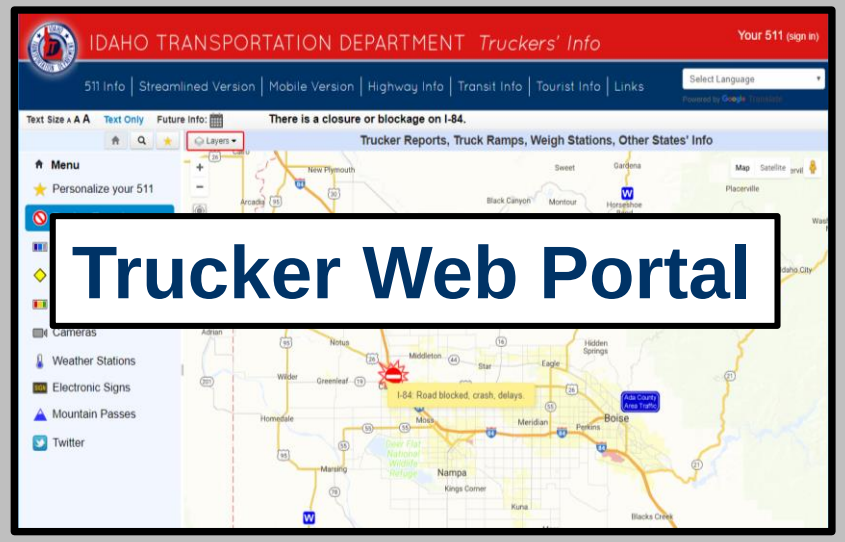
Mistaking Statistics

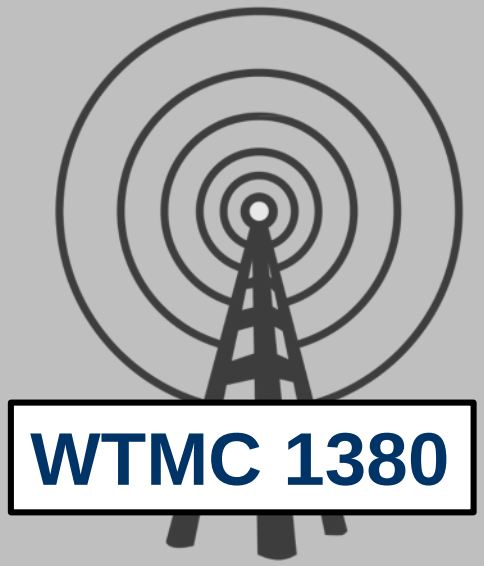
- Website Hits
- App Downloads

For Performance Measures

- Usability
- Satisfaction
- Productivity
- Cost Benefit

Multi - Sided Solution





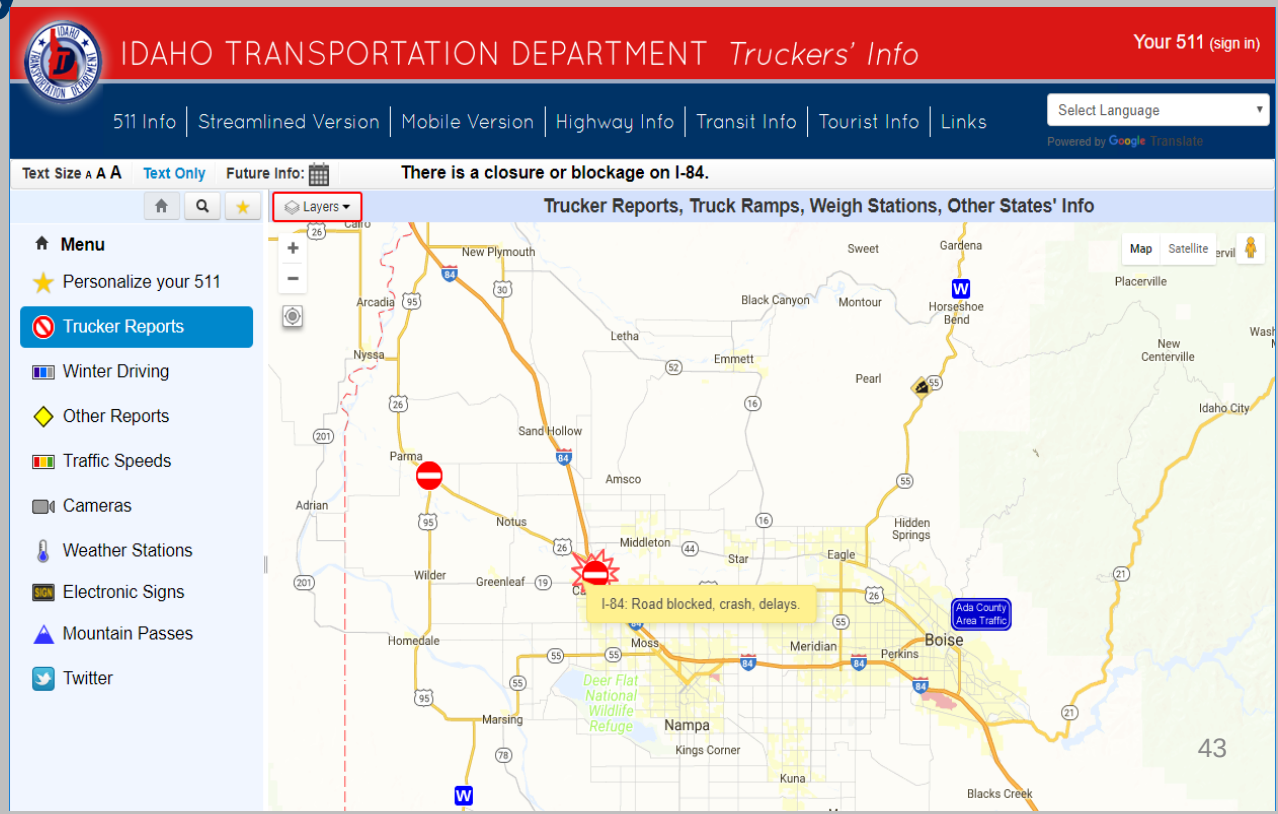
Trucker Information & Format

Iowa & Idaho already doing this

DelDOT Internal process – make it happen

Preparation toward V2I Technology

Website Portal for Truckers



In Cab Solution – ELD, FMS, etc.

ELD, FMS – number of potential candidates

Drivewyze – moving in this direction

NAV – technology is there

Form a coalition of State DOTs to make this happen

In Cab Solution – Trucker App?

DE Trucker App – Will Truckers Even Use It?

July 25, 2017, 7:15 am
23 minutes to cross DE

Regional Solution

Supply Data to 3rd Party Apps. Let them do it.

Delaware critical to avoid disruption and detour delays

In Cab Solution – 3rd Party

Waze

Trucker Path

Sygic

Same coalition of State DOTs makes this happen

Both In-Cab Solutions . . . Present a Good Business Case

Capitalizes On

- Existing Technology
- Existing Services

Strategic

- Regional Solution
- Leverage Cooperation

Doesn't Spend Tax Dollars On

- Software Development
- Software Maintenance

Focuses On

- Information Distribution
- Information Processing

WZIC – A Transitional Solution

While waiting for V2I & V2V . . .

. . . WZIC fills in the Gap

Data process will be ready for future technology

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Marketing Campaign – WZIC Solutions

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WZIC Needs Champions

- DelDOT
- DSP
- DMTA
- Trucking Companies
- Owner Operators
- Delaware Travel Plaza

Assessment Method & Performance Measures

Demonstrate Worth

Enable Incremental Improvement

Good Business Practice

Assessment Method & Performance Measures

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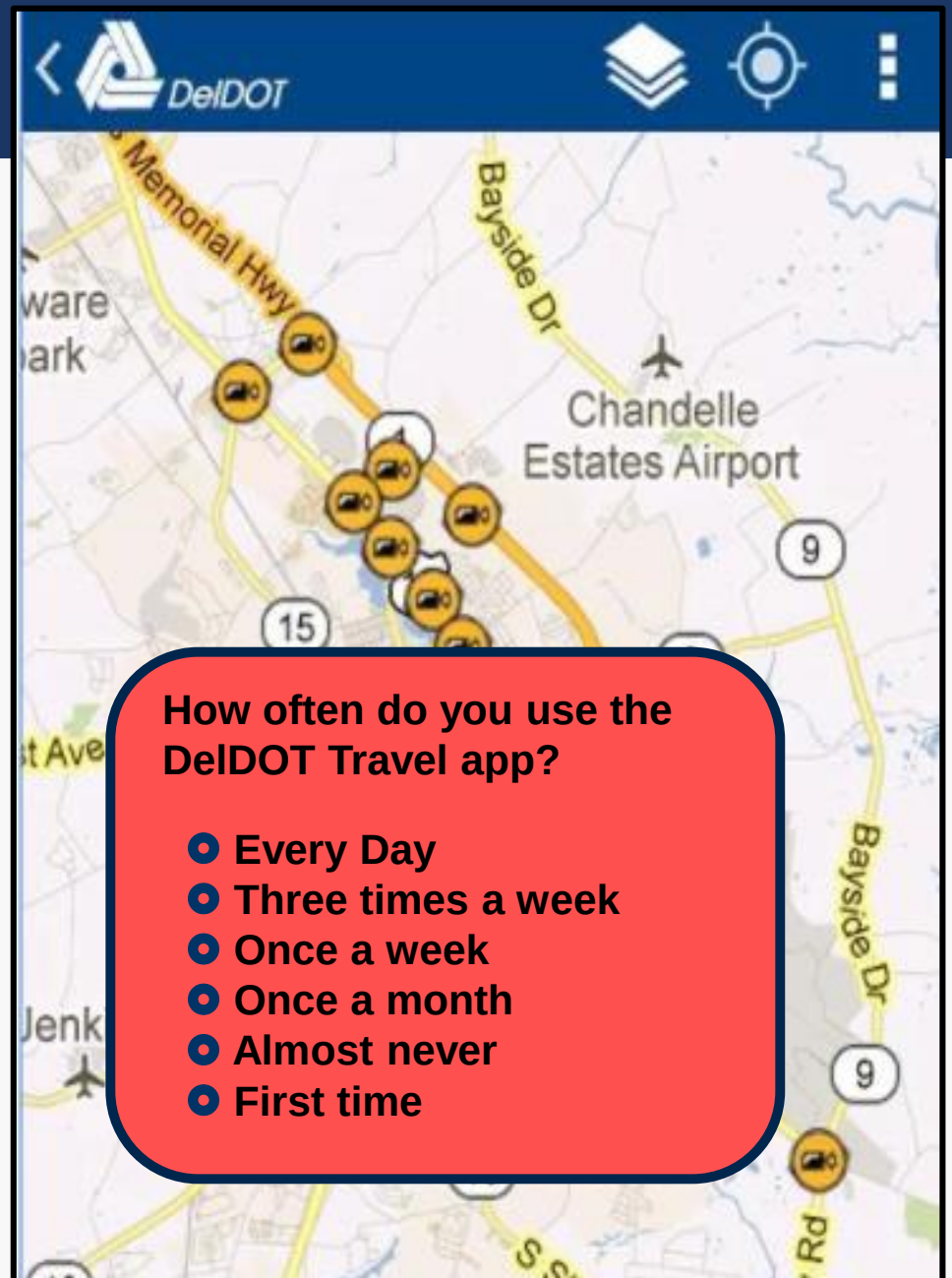
Assessment Method

Approach customer in small bits

Accumulate usability data over time

Apps and websites are uniquely suited for this approach



QUESTIONS?

Silvana V Croope, Ph.D., ENV SP
Resilience and Sustainability Strategist
Delaware Department of Transportation
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Acknowledgements

Terance McNinch
Acus Learning Systems, LLC
PublicWorksTraining.com

Fernando de Melo e Silva
Research Engineer

PublicWorks Training.com

VDOT's Truck Parking Program and how they are disseminating Parking Information to Truckers

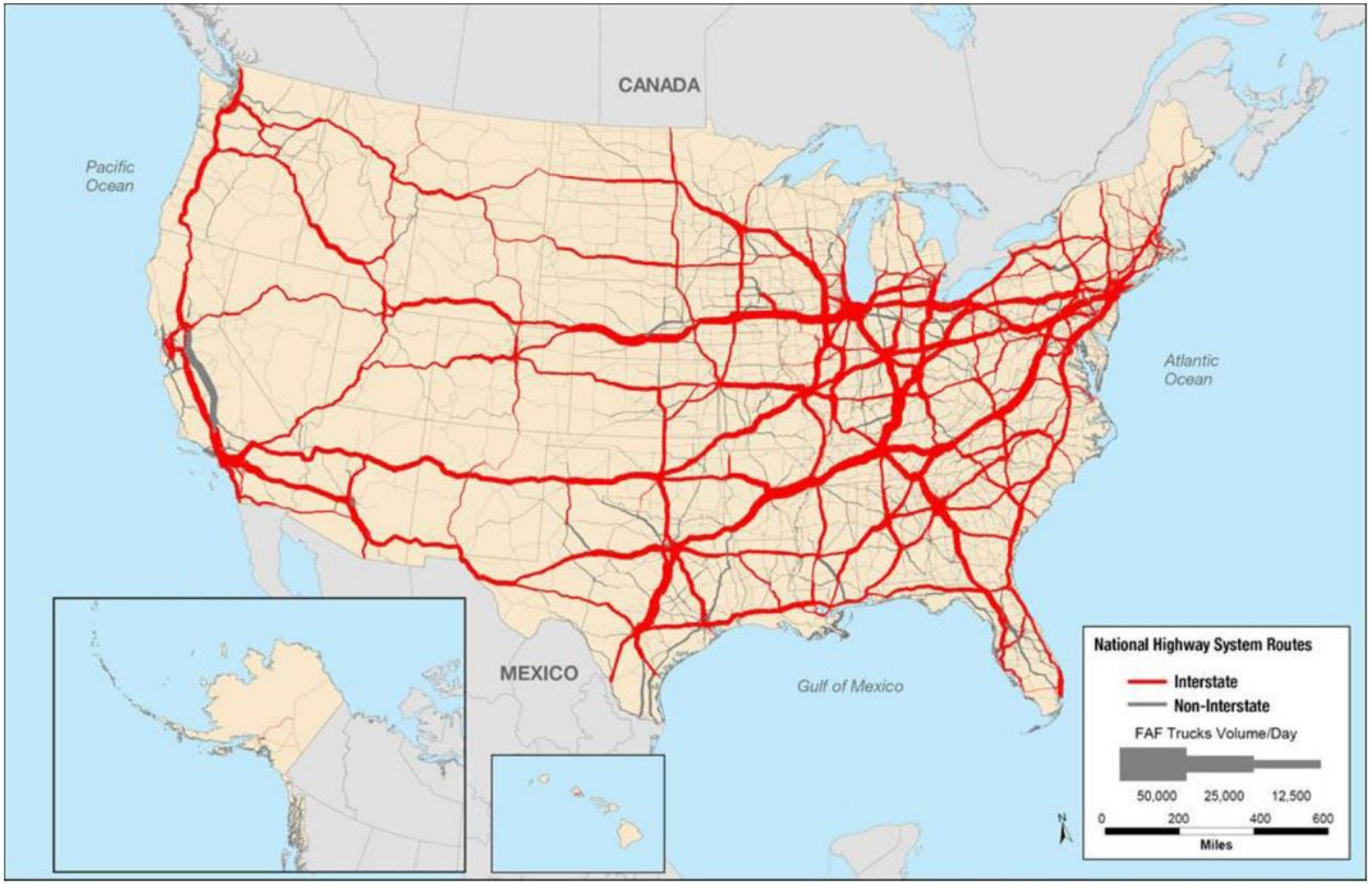
Scott Cowherd, Statewide Traveler Information Program Manager

Virginia Department of Transportation

Statewide Truck Parking Solution

Scott Cowherd
Statewide Traveler Information Program Manager

Virginia is a key National Freight Corridor



Source: *Freight Analysis Framework version 3.4 (2013)*

Combination Truck Volumes on the Nation's Highways

Federal Truck Parking policies

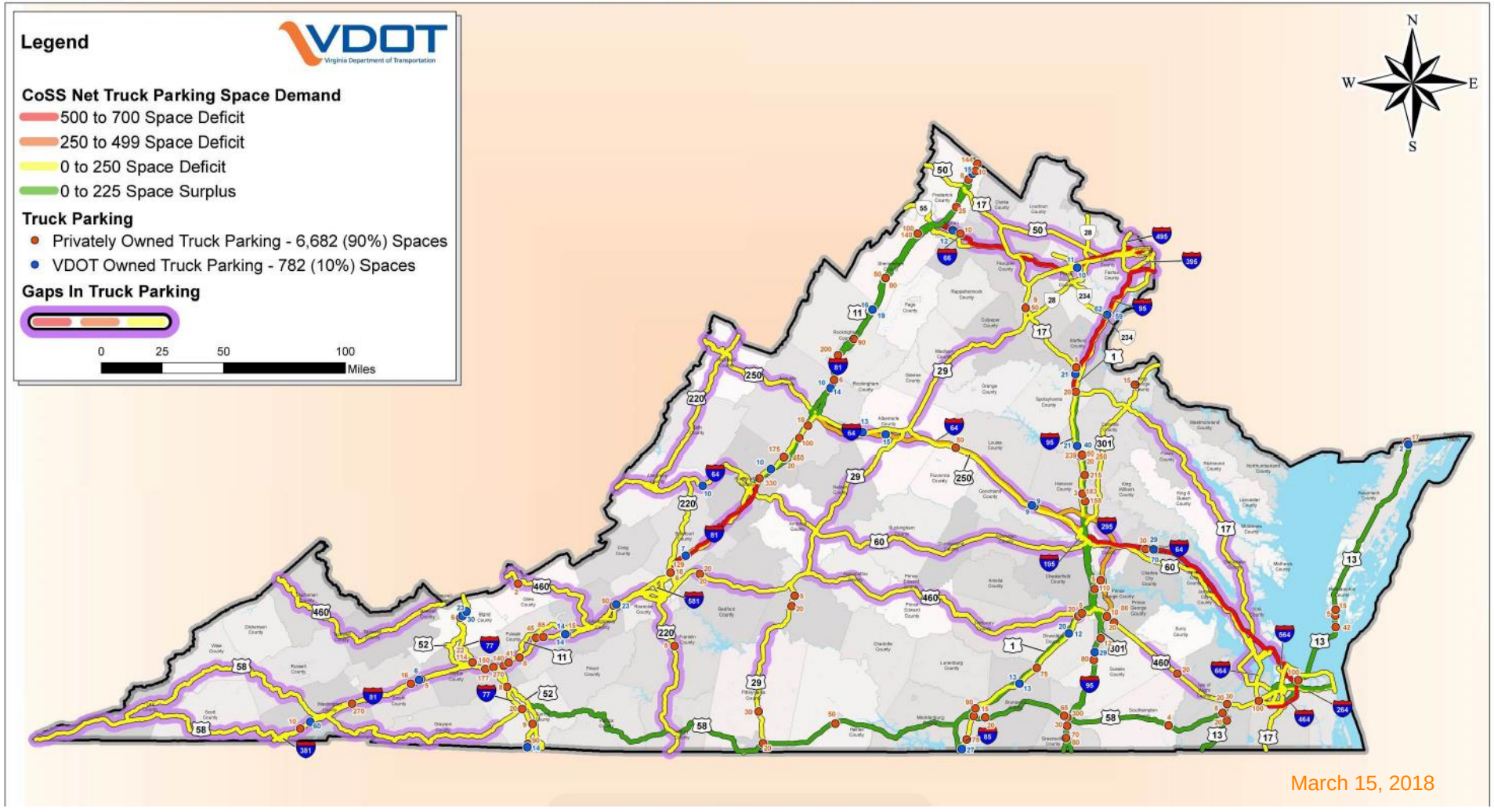
- **MAP-21**
  - **§ 1115 National Freight Policy – improve performance of national freight network**
  - **§ 1401 Jason's Law – extended eligibility of federal funds for truck parking projects and requires state to conduct a truck parking study**
- **CFR 49, Part 395 (Hours of Service)**
  - **11-hour driving limit** (after 10 hrs off)
  - **14-hour limit** (after 10 hrs off following on-duty)
  - **Rest Breaks** (8 hr limit since last rest period)
  - **60/70 Hr on-duty limit** (in 7/8 days)
- **CFR 23, Part 752 (defines Rest Areas)**
- **CFR 23, § 111 (limits commercialization)**

Virginia truck parking policies

- 24VAC30-50-10 – Waysides/Rest Areas parking and sleeping
- COV § 46.2-888 – no stopping on highways
- COV § 46.2-889 – location of parked vehicles
- COV § 46.2-1220, 1222.1, 1222.2, and 1224 – locality authority to regulate parking
- COV § 46.2-1223 – authority for VDOT Commissioner to regulate parking on primary/secondary system
- DMV Driver's Manual – guide on where to park and prohibitions.

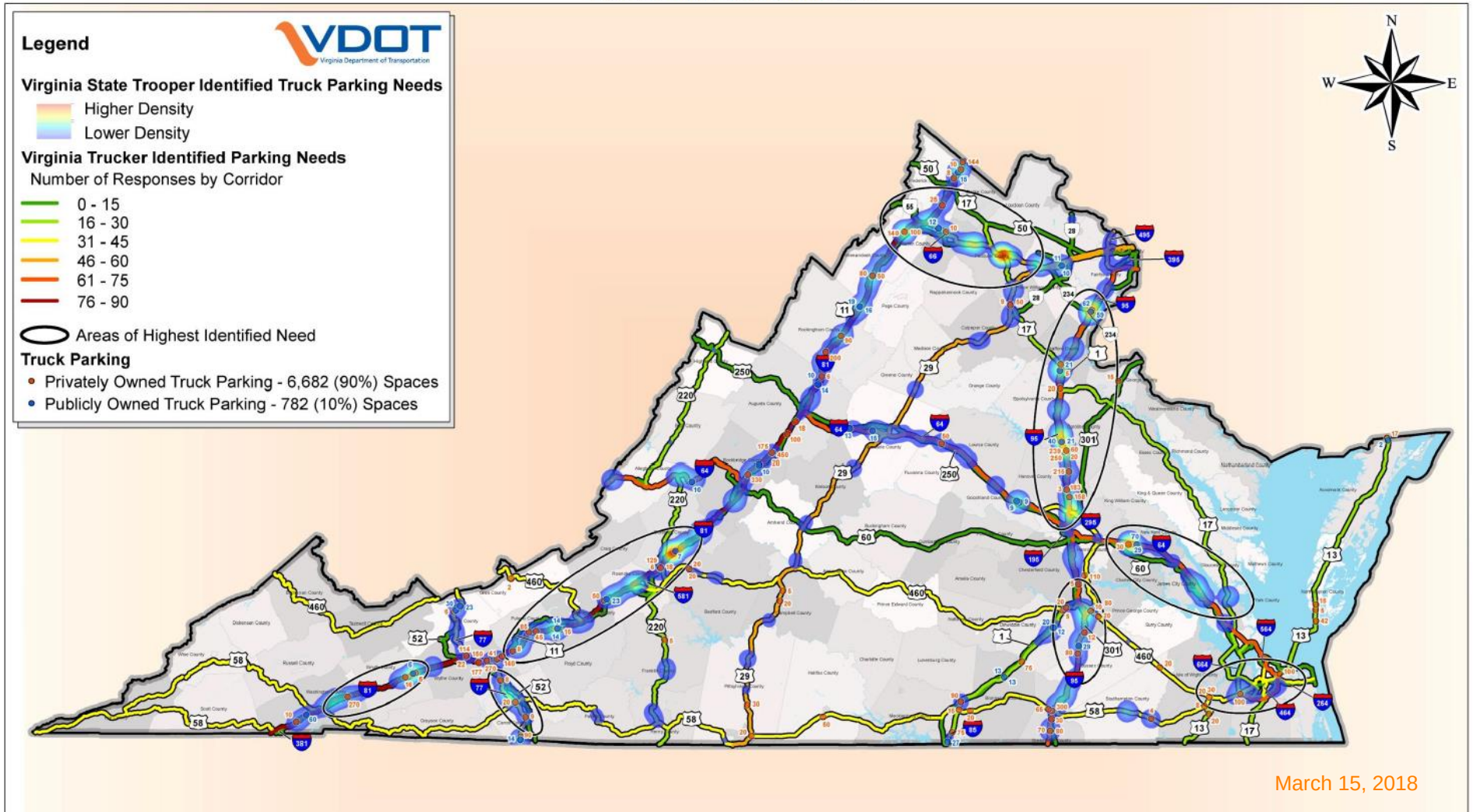
VDOT Truck Parking Study identified gaps in available parking

Figure 16: Truck Parking Gaps on Study Corridors



Virginia State Police and Virginia Trucker identified areas of need

Figure 17: Truck Parking Survey Demand



35 Rest Areas have truck parking

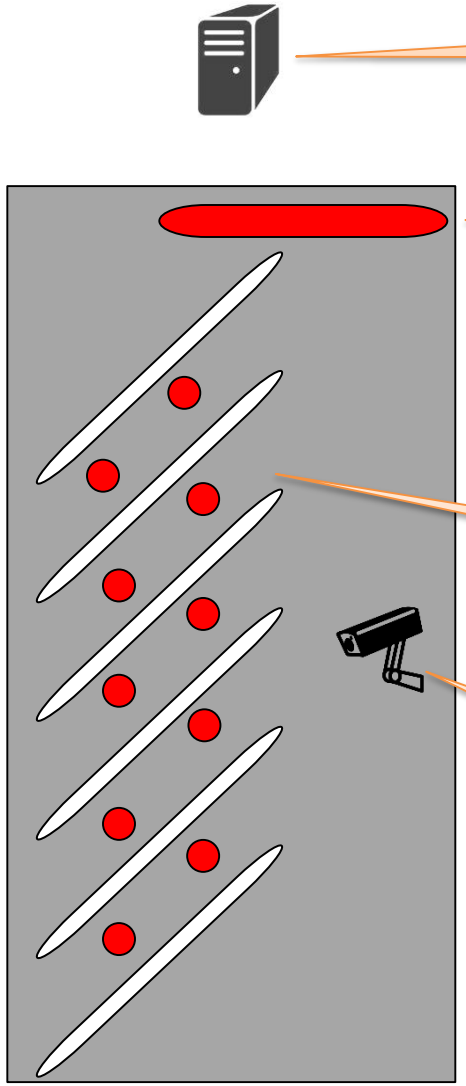
Corridor	MM	Lot Name/Task	Spaces
I-64	2	Jerry Run E	11
	34	Longdale Furnace E	6
	34	Longdale W	2
	105	Charlottesville E	13
	113	Charlottesville W	14
	145	Louisa E	2
	145	Louisa W	2
	169	Goochland E	9
	168	Goochland W	9
	213	New Kent E	70
	213	New Kent W	29
I-66	3	Front Royal E	18
	16	Fauquier	2
	48	Manassas E	9
	48	Manassas W	9
I-77	1	Lambsburg N	14
	59	Rocky Gap S	24
	61	Rocky Gap N	26

Corridor	MM	Lot Name/Task	Spaces
I-81	1	Bristol NB	7
	13	Abingdon	48
	53	Smyth	6
	61	Rural Retreat	2
	108	Radford N	14
	108	Radford S	14
	129	Ironto	24
	158	Troutville	7
	199	Fairfield	10
	232	Mount Sidney N	13
	232	Mount Sidney S	9
	262	New Market N	18
	262	New Market S	16
	320	Winchester	11
I-85	32	Alberta N	13
	0.5	Bracey N	22
	32	Alberta S	13
	55	Dinwiddie N	13
	55	Dinwiddie S	20
I-95	1	Skippers W	14
	37	Carson N	35
	104	Ladysmith S	20
	104	Ladysmith N	39
	131	Fredricksburg WC S	23
	154	Dale City Trucks N	59
	154	Dale City Trucks S	62

Truck Parking Management Goals

- **Provide truck drivers access to real-time and accurate information about the availability of safe, legal parking places (public & private)**
- **Increase utilization of public truck parking spaces**
- **Reduce the time truck drivers take searching for available safe, legal parking spaces (public & private)**

Parking System uses multiple sensors



Controller sends raw data to central system

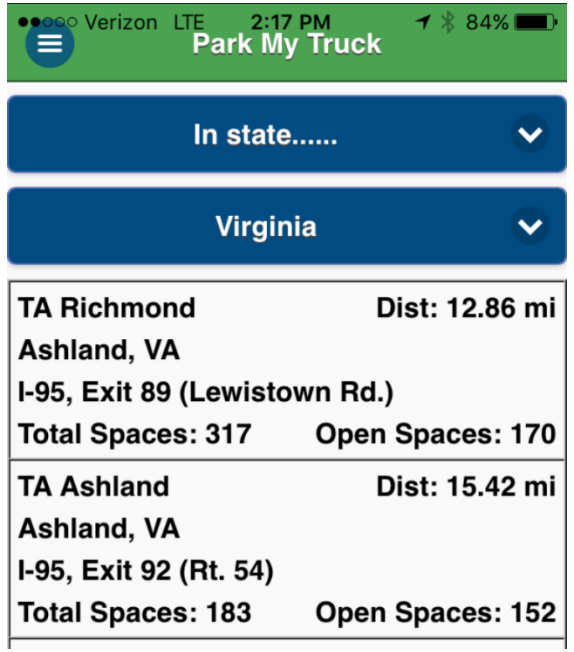
Entrance/exit detectors count vehicles in and out

Individual space detection identifies empty/occupied spaces

Pole mounted PTZ camera allows operators to resolve errors/issues

Real-time truck parking info can be shared using various tools

- Using a dynamic parking sign in advance has mixed results.
  - A 2007 study by University of California, Berkley campus report driver's preferred the VMS method for receiving information
  - A 2017 study by American Transportation Research Institute (ATRI) report driver's prefer using apps/websites.



- 511 Virginia product suite (mobile app, website and phone)
- 3rd Party Applications (Park My Truck, Roadbreakers, Flying J, TA, etc.)

Developed a prioritized list based on truck volume and occupancy

RANK	Interstate Facility	SITE NAME	Number of Spaces	ADT (Trucks)	OCCUPANCY (24 hr)
1	81 SB	Troutville	7	**1499**	**892%**
2	81 SB	Smyth	6	**249**	**173%**
3	81 NB	Mt Sidney NB	14	**555**	**165%**
4	81 SB	Winchester	15	**499**	**139%**
5	81 SB	Mt Sidney SB	10	**332**	**138%**
6	77 NB	Lambsburg	14	**442**	**131%**
7	81 NB	Radford SB	14	**412**	**123%**
8	81 SB	Fairfield	10	**286**	**119%**
9	81 NB	Radford NB	14	**394**	**117%**
10	81 NB	New Market NB	19	**415**	**91%**
11	81 SB	New Market SB	16	**323**	**84%**
12	95 SB	Fredericksburg	23	**461**	**83%**
13	64 EB	Goochland EB	9	**176**	**82%**
14	95 NB	Ladysmith NB	40	**676**	**70%**
15	64 WB	Goochland WB	9	**148**	**68%**

Truck Parking Management System

Implementation Plan

- **Integrate lots by corridor (I-66, I-81, and I-95)**
- **Post real-time space availability on 511 & DDMS**

14 locations for Phase I:

- I-81 NB Abingdon
- I-81 SB Troutville
- I-81 NB Ironto
- I-81 NB Mt Sidney
- I-81 SB Winchester
- I-81 SB Mt Sidney
- I-81 NB Radford
- I-81 SB Fairfield
- I-81 NB Radford
- I-81 NB New Market
- I-81 SB New Market
- I-95 SB Fredericksburg
- I-95 SB Dale City Trucks Only
- I-95 SB Ladysmith

Pilot Project:

- I-66 EB Front Royal

Completed:

- I-64 EB New Kent
- I-64 WB New Kent
- I-95 NB Carson
- I-95 NB Dale City
- I-95 NB Ladysmith

Truck Parking System will provide operational and safety benefits

- **Travel Time**
  - Knowledge of space availability
  - Depletion of available hours of service
- **Operating Cost**
  - Improve freight delivery and reliability
  - Shipping time efficiency
- **Safety**
  - Eliminates fatigue
- **Operation and Maintenance**
  - Saves the cost of repairing shoulders and other roadways not built for CVO weights, which leads to pavement degradations
- **Maximizes use of existing infrastructure, no new infrastructure needed**

Lessons Learned

1) Your initial cost estimate may not be the actual cost!
2) Sign placement matters! Do not distract drivers from the private sector Truck Stops.
3) Coordinate with the private sector on your project before deploying. Let them know you are interested in a partnership.
4) Evaluate what business model would be acceptable to offer a 3rd party to enter into a partnership.
5) Do your own survey of CVO driver influence.

Lessons Learned

6) Evaluate locations of roadway where public and private entities partnership makes sense (i.e. coverage for 30 miles). What would that structure look like?

7) Always keep in mind risks associated with such partnerships and how best could they can be alleviated?

8)Try to cluster your deployments to offer the best resources for the CVO drivers.

9) Make sure you coordinate with all internal stakeholders (regions) on their part. (I.E. On going O and M Cost)

Thank you for your time

Truck Travel Information Wrap Up

Denise Markow, PE, TSMO Director,

I-95 Corridor Coalition

Questions

Working Lunch

Break between sessions (11:45am - 12:20pm)

Please note that we will be muting the conference call line at NJTPA during this break – you may stay on the line & we will resume after the break

Meeting Reminders

Participation

- **All Participants – in-person and via webcast**
  - Questions will be addressed at the end of each presentation
  - Please give your name and agency before asking your question (at least the first time)
- **Participation in-person**
  - Please remember all sounds are picked up by the audio system
- **Participation via webcast**
  - Please keep your phone muted until asking a question or speaking (press *6 to mute/unmute individual phone lines)
  - Please do not place call “on hold” as your hold music will be heard by the group

Additional Webcast & Audio Information

- **This meeting is being recorded**
- Please call xxx.xxx.xxxx for difficulties with the web or audio application

Presentations will be posted

- Presentations will be posted to the I-95 Corridor Coalition website. Participants will receive a link to them after they are posted

Please confirm you are
MUTED

For your phone line - press *6
&
Mute your computer

Thank
You!

Afternoon Agenda

Time	Topic	Speaker
12:20pm to 1:50pm	Agency Roundtable discussion – What's going on with Travel Information?	Agency Members Facilitated by Mark Kopko, PennDOT (TIS Co-chair)
1:50pm to 2:00pm	Coalition Upcoming Events and Meeting Wrap Up	Mark Kopko

Agency Roundtable discussion – *What's going on with Travel Information?*

Participating Agency Members

Facilitated by Mark Kopko, PennDOT (TIS Co-chair)

Participating Agencies

Agency	Speaker	Agency	Speaker
North Carolina DOT	Kelly Wells	PA Turnpike Commission	Mike Pack
Massachusetts DOT	Lorenzo Parra	Pennsylvania DOT	Mark Kopko
Virginia DOT	Scott Cowherd	Delaware DOT	---
Maine DOT / New Hampshire DOT	Cliff Curtis / Nick King	Maryland DOT/SHA	Joey Sagal
Vermont AOT	Robert White	District DOT	Suzette Robinson
Rhode Island DOT	Russell Holt/Mike Wreh	South Carolina DOT	Tisha Dickerson
Port Authority NY & NJ	Ted Bobowsky	Georgia DOT	Mark Demidovich
New Jersey DOT	Jonathan Martinez	Florida DOT	JoAnn Oerter

North Carolina DOT

Transition from IVR to Live Operators for 511

IVR	Live Operators
2004 – 2017	2017 – present
Atkins IVR / Voxeo	T&T Call Center / AT&T
24 X 7	Daytime Only
500 Simultaneous Calls	20 Simultaneous, 20 in queue
Amber & Silver Alerts on 511	Ambers & Silvers on DMS
50% no call request	50% “bad calls”
35,000 calls/month avg	2,400 calls/month avg
Promoted during emergencies	Directed to web for emergencies
$360 k >$120 k / year	$40 k / year

NCDOT

For more information, contact:

Kelly Wells
919-825-2615
kwells@ncdot.gov

Massachusetts DOT

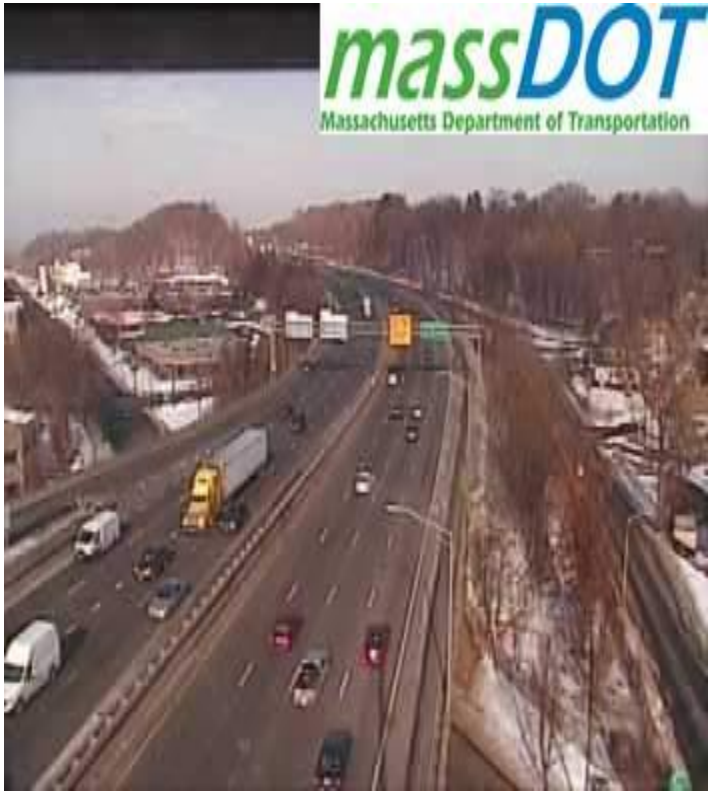
Research Project to Inform Traveler Information Policy Decisions

For more information, contact:
Lorenzo Parra
617-946-3029
lorenzo.parra@dot.state.ma.us

Massachusetts Department of Transportation
Highway Division- Highway Operations Center (HOC)
I-95 Corridor Coalition Traveler Information Services Meeting
EVALUATION AND ENHANCEMENT OF MASSDOT TRAVELER INFORMATION PROGRAMS
March 2018

Background

- Traveler Information
- Multiple Outlets and Platforms
- Targeted Customer Service Groups
- Single Service
- Developed Over Time
- Conduct Gap Analysis
- Inform Process
- Consider Multi-Modal Information
- Leverage Sector Services



Research Project

MassDOT
Office of Transportation Planning
Research Section

2018
Problem Statements
Research Projects

Application- June 2017

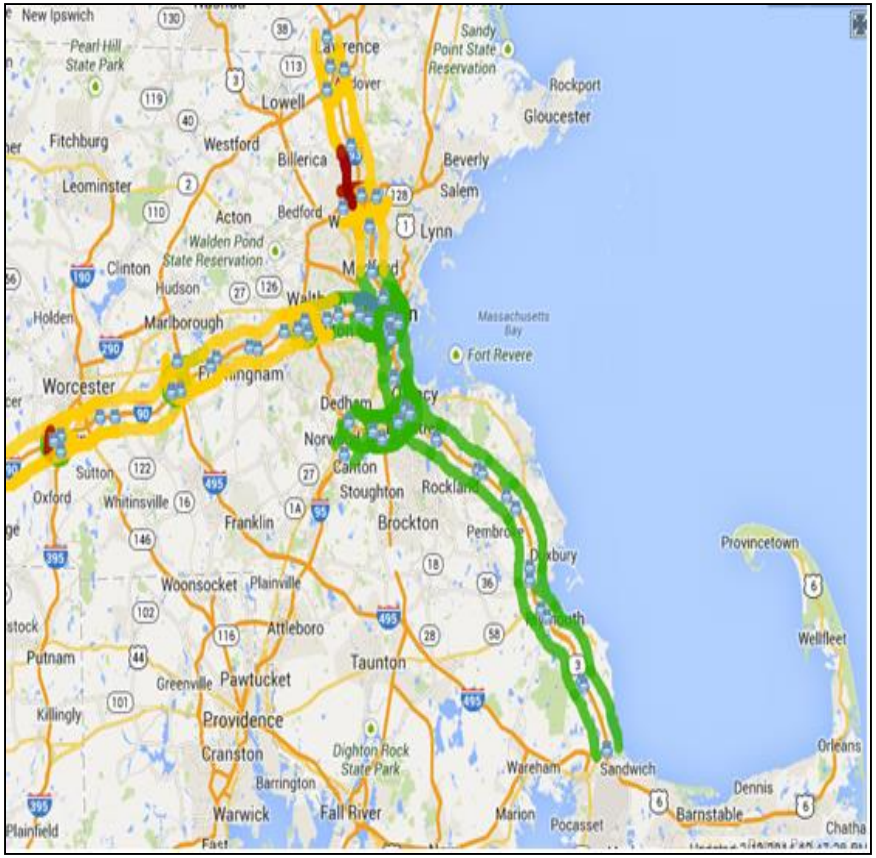
Selected - January 2018

Project Start- April 2018

Completion- December 2018

Objectives

- **Assess Gaps**
- **Recommendations**
- **Program Enhancements**
- **Consider Information Integration**
- **Dissemination Platform**
- **Impact Mode Choice**
- **Operations Service Delivery**
- **Diverse Customer Base**



Scope of Work

- **Proposed Structure**
- **Multi Modal Information**
- **Platforms Integrated**
- **Latest Technologies**
- **Public Demand/Need**
- **Facilitate Mode Shift**
- **Require Change in Service Provision**

Five Research Tasks

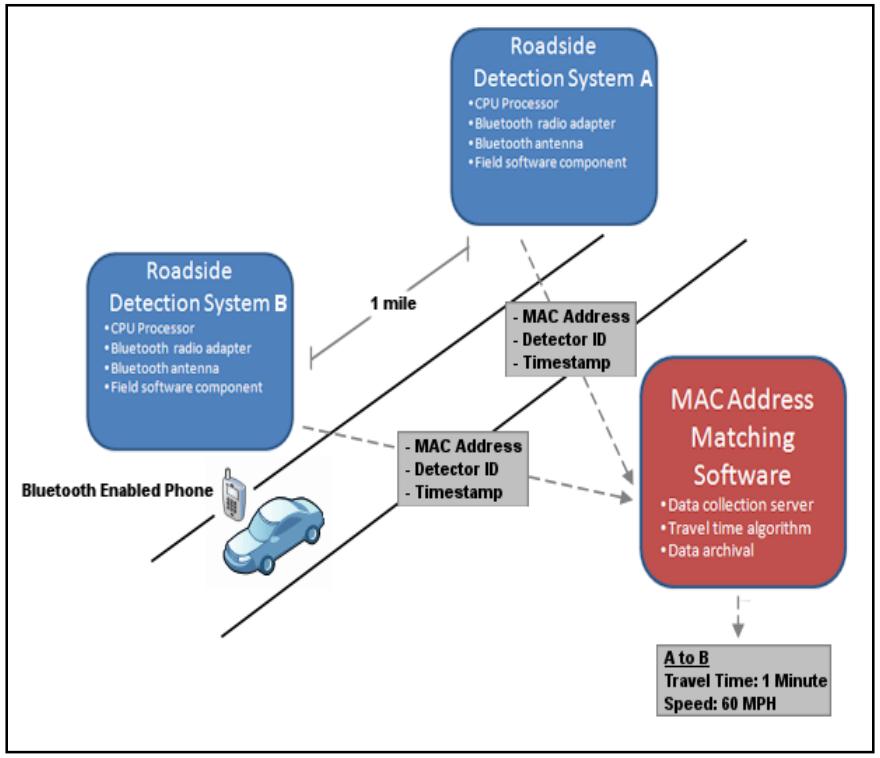
Task 1: Literature Review

Task 2: Gap Analysis

Task 3: Analyze and Evaluate Options

Task 4: Assemble Recommendations

Task 5: Technology Transfer



Literature Review

- **Traveler Information**
- **Assembled and Disseminated**
- **Public Transportation**
- **Private Sector**
- **Separate Services**
- **Integration Practices**
- **Metropolitan Areas**
- **Publications and Procedures**
- ***Deliverable 1 — Task 1 Report: Literature Review***

Gap Analysis

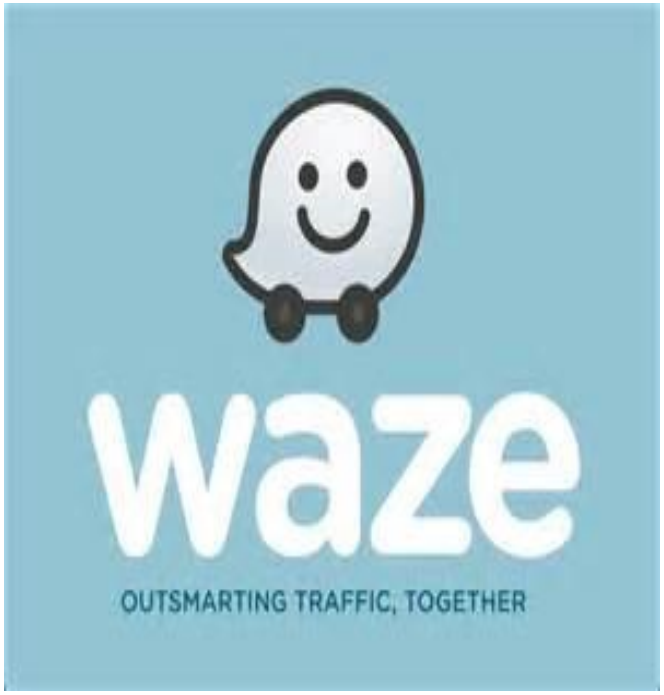
- **Holistic Approach**
- **Manner and Type of Delivery**
- **Level of Detail**
- **Accuracy and Timeliness**
- **Connected/Automated Vehicles**
- **Innovations in Data Collection**
- **Advanced Data Analysis**
- **Generate Guidance**
- **Data Reception and Utility**
- ***Deliverable 2 — Task 2 Report: Gap Analysis***

Analyze and Evaluate Options

- **Pros and Cons**
- **Third Party Use**
- **Single or Multiple Interfaces**
- **Process Data**
- **Customized Solutions**
- **Origins and Destinations**
- **Travel Habits**
- **Costs and User Experience**
- **Future Needs**
- ***Deliverable 3 — Task 3 Report: Traveler Information Options***

Recommendations

- **Task Summary Reports**
- **Written Monthly Reports**
- **Review of Gap Analysis**
- **Recommend Actions**
- **Draft Final Report**
- **Formal Presentation**
- **Comment and Review**
- **Final- December 31, 2018.**
- ***Deliverable 4 — Final report and presentation***



Technology Transfer

- **Project Team**
- **Technical Papers**
- **Presentation Materials**
- **Associations and Organizations**
- **MassDOT Policy**

Project Management Team

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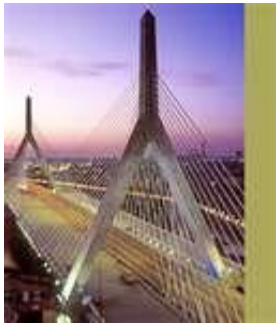
Massachusetts Department of Transportation
Highway Division- Highway Operations Center

massDOT
Massachusetts Department of Transportation



VDOT Smarter Roads Portal - http://smarterroads.org/login

March 15, 2018

Scott Cowherd
Statewide Traveler Information Program Manager
804-786-2451
scott.cowherd@vdot.virginia.gov

OVER-LIMIT PERMITTING STREAMLINING

Automation through system integration

Maine Department of Transportation

New Hampshire Department of Transportation

HOW

- ProMiles has been selected to perform automated over-limit permitting.
- DOT is making improvements to the ATMS and TIS for ease of use.

FOCUS AREAS

- DOT will provide list of bridges with known limits
- ProMiles will integrate data feed from ATMS for:
  - Construction
  - Maintenance
  - Crashes
  - Weather

IMPROVEMENTS

- New England Compass (ATMS) – Create explicit data with values.
  - Add value fields to event creation
  - Update xml to reflect these value fields for ProMiles to consume.
- NewEngland511 (TIS) – making it easier for truck drivers to view any issues that would temporarily impact their ability to move.
  - Create new icons for planned and unplanned events that impact over-limit moves.
  - Standardize snow event creation on the Interstate that reduces speed, which suspend over-limit moves

Maine Department of Transportation
Clifton Curtis
Clifton.W.Curtis@maine.gov
(207) 624-3568

New Hampshire Department of Transportation
Susan Klasen
susan.klasen@dot.nh.gov
(603)-271-6862

Nicholas King
nking@dot.state.nh.us
(603) 271-6862

QUESTIONS?

Vermont AOT

UPDATE

- Vermont is still investigating incorporating WAZE incidents into ATMS for TMC after hours

For more information, contact:

Robert White
Vermont Agency of Transportation
802-522-9867, Robert.T.White@vermont.gov

Rhode Island DOT

For more information, contact:

Russell Holt
russell.holt@dot.ri.gov

Michael Wreh
michael.wreh@dot.ri.gov

Port Authority of New York & New Jersey

For more information, contact:

Ted Bobowsky
973-666-0524
tbobowsky@panynj.gov

NJDOT – Transportation Systems Management

"Improving Lives by Improving Mobility"

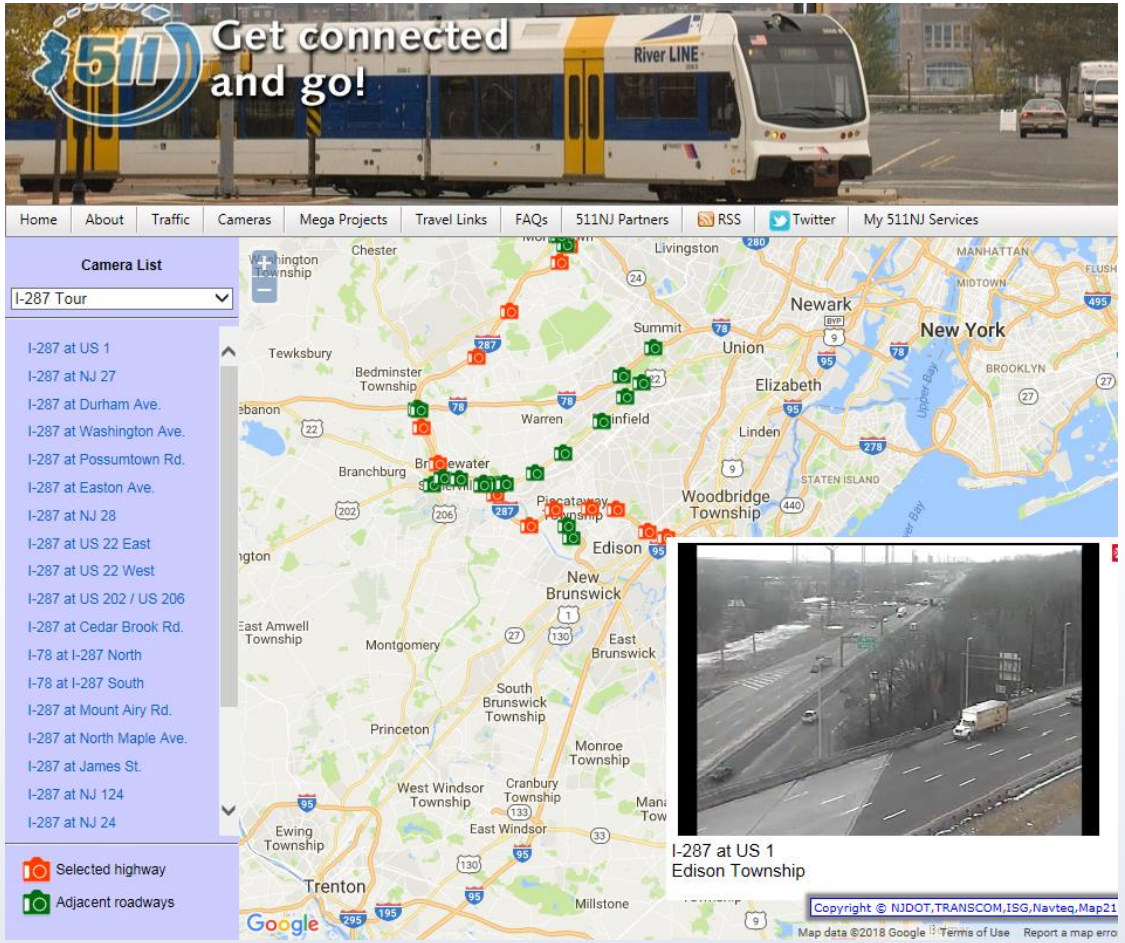
NJDOT 511 New Jersey

Travel Information Updates

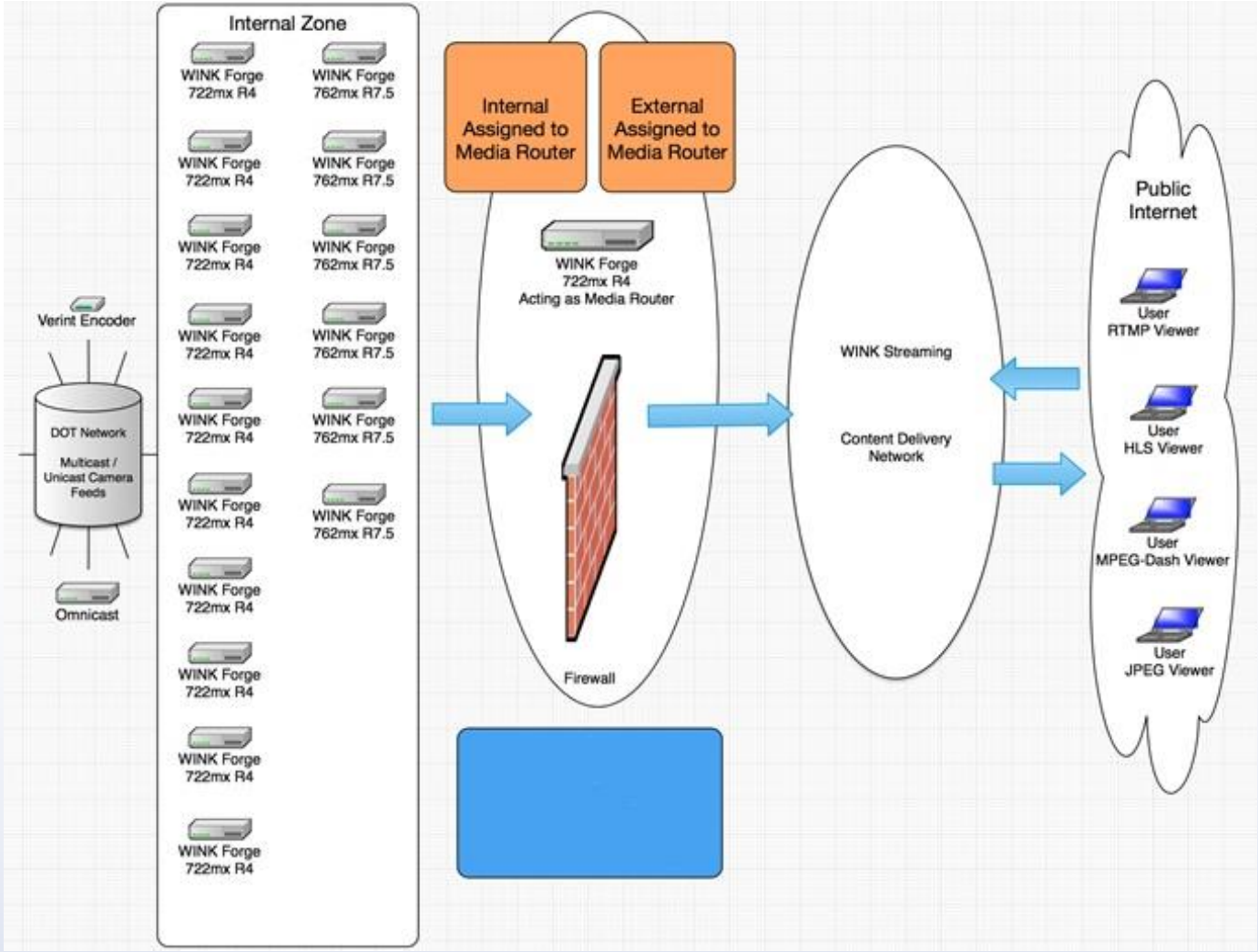
Jonathan Martinez
Principal Engineer, Traffic
New Jersey Department of Transportation
Transportation Systems Management

Current Upgrades

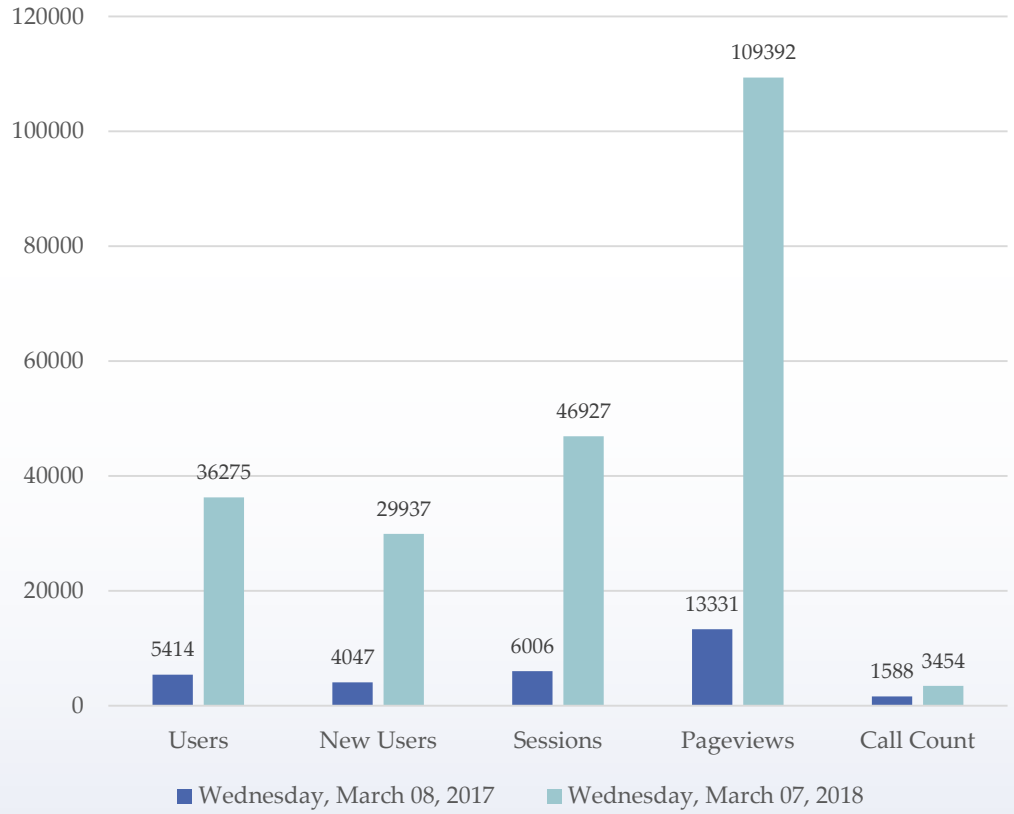
- As March 2018
  - 448 Feeds into WINK System
  - 400+ into the 511NJ System
- NJDOT Future Outlook
  - Over 5 years
  - 200+ Traffic
- 511NJ Future
  - ≈ 700 Live Feeds

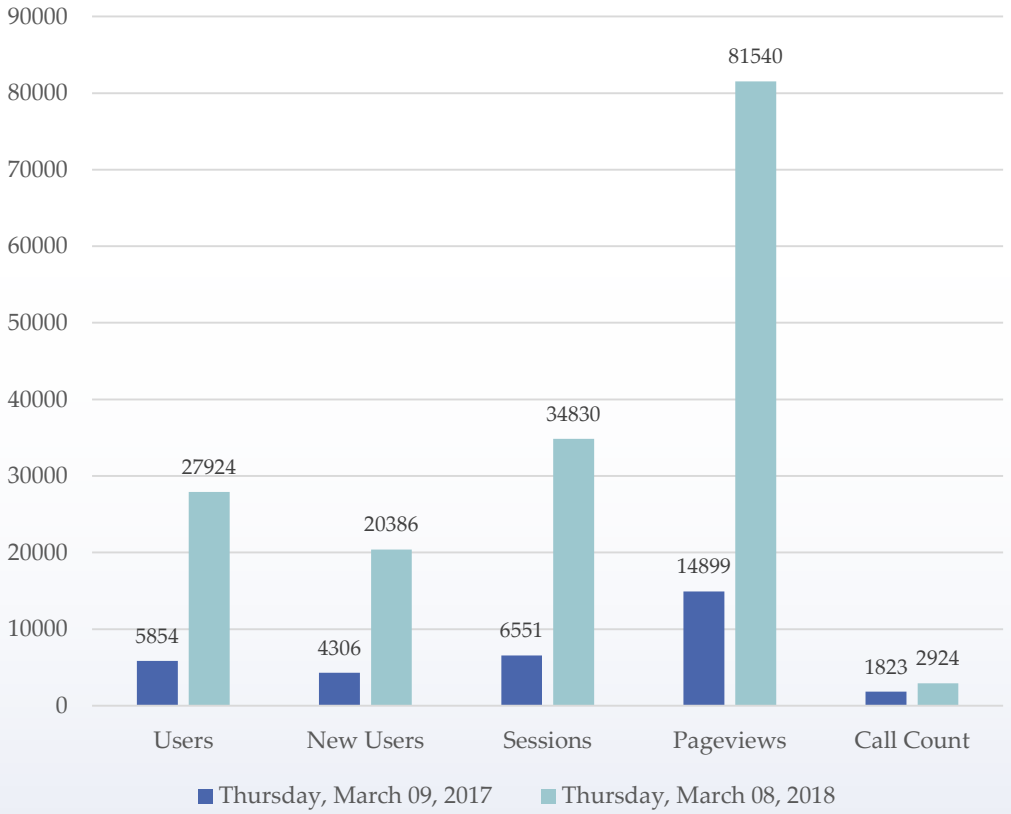


Future Upgrades



Last Week's Snowstorm Data





Questions?

Jonathan Martinez

609-530-8346

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Susan Catlett

609-530-3194

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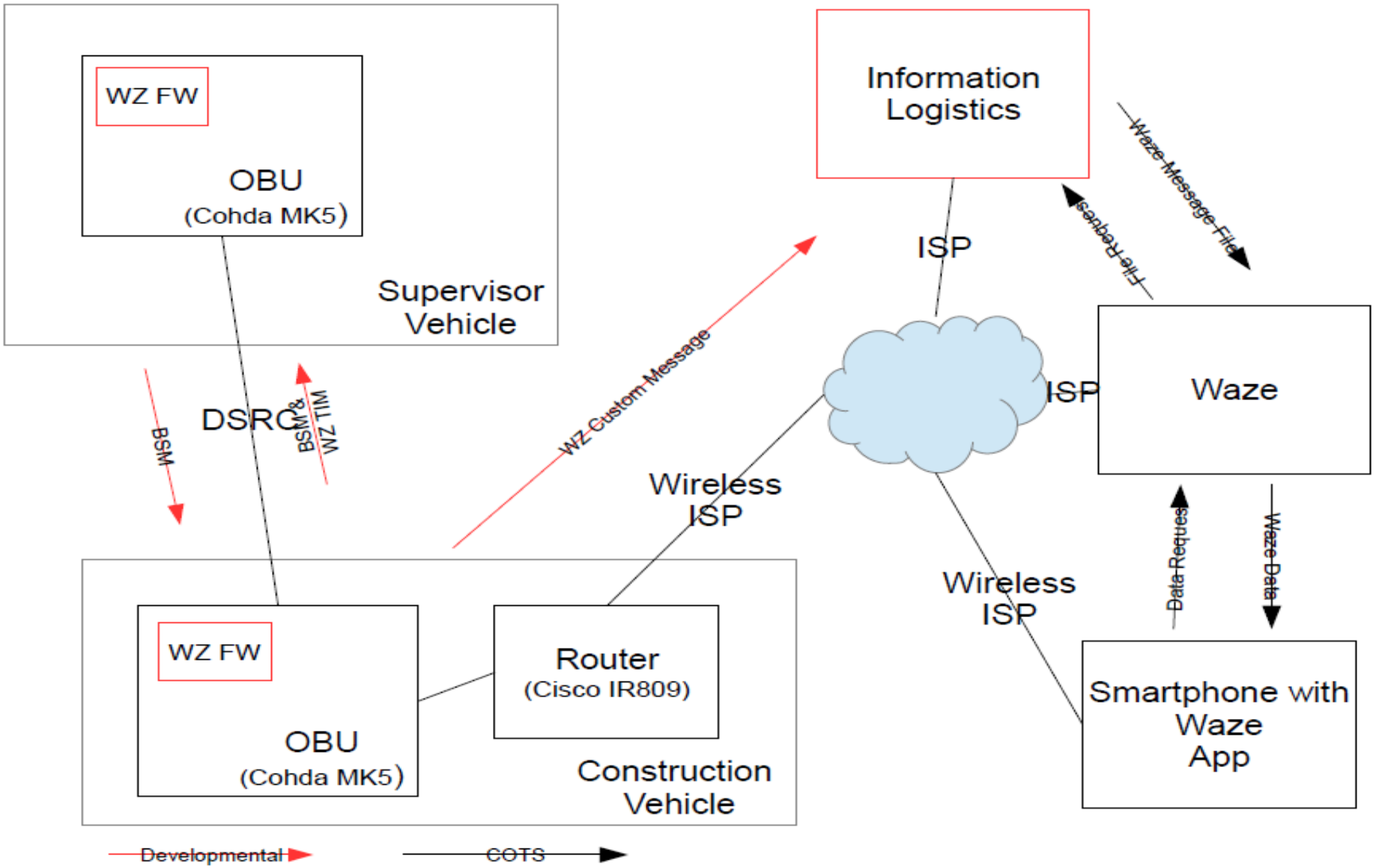
Pennsylvania Turnpike Commission

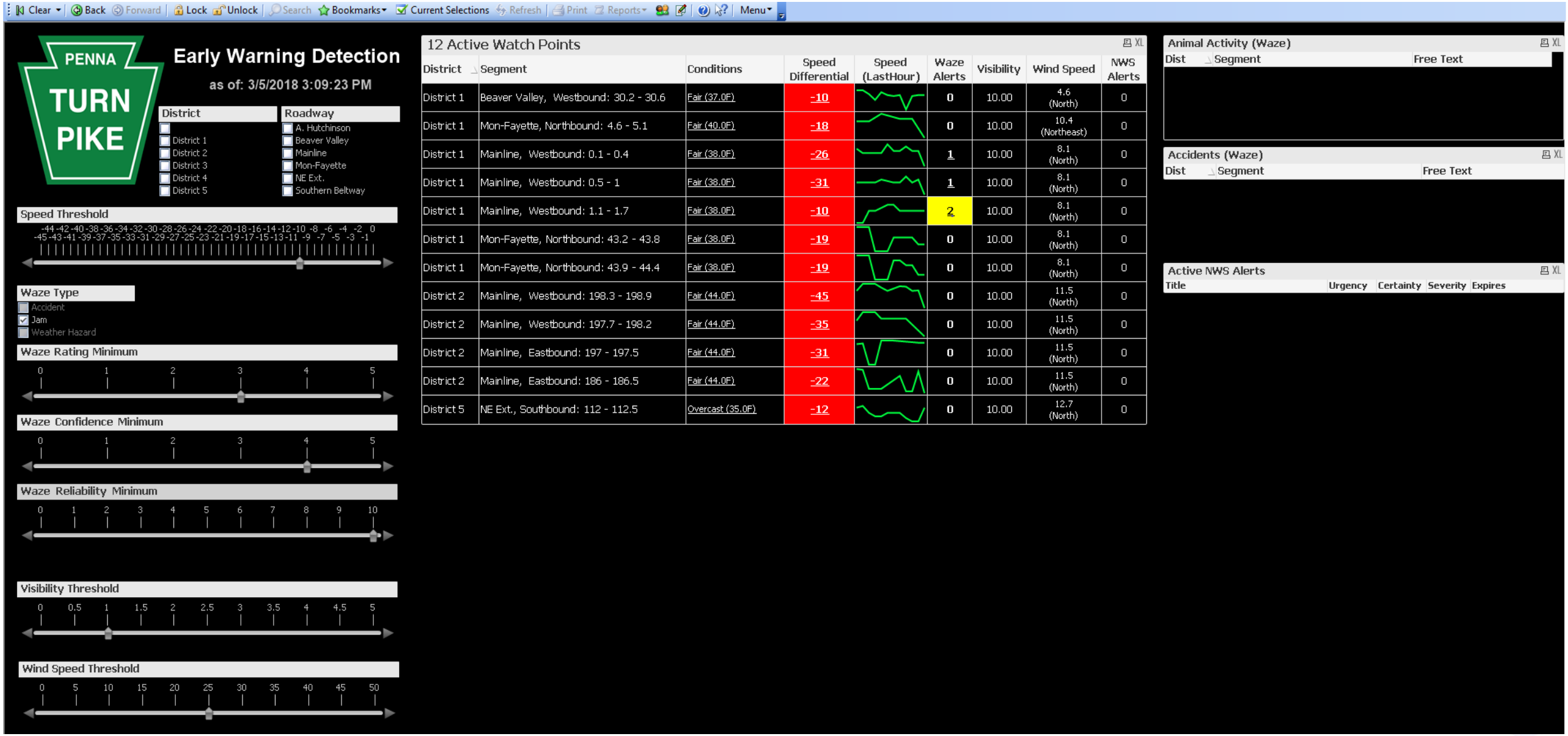
CV and Social Media

- Completed CAV Roadmap April 2017
- Selected connected work zone as CV pilot project
- Developing DSRC architecture
- Deploy DSRC units to test
- Early Warning Detection tool
- New ATMS live in 2019

CV Work Zone Pilot High-level Design



Early Warning Detection tool



Pennsylvania Turnpike Commission

For more information, contact:

Michael Pack

717-831-9659

mpack@paturnpike.com

Pennsylvania CV and AV Deployments

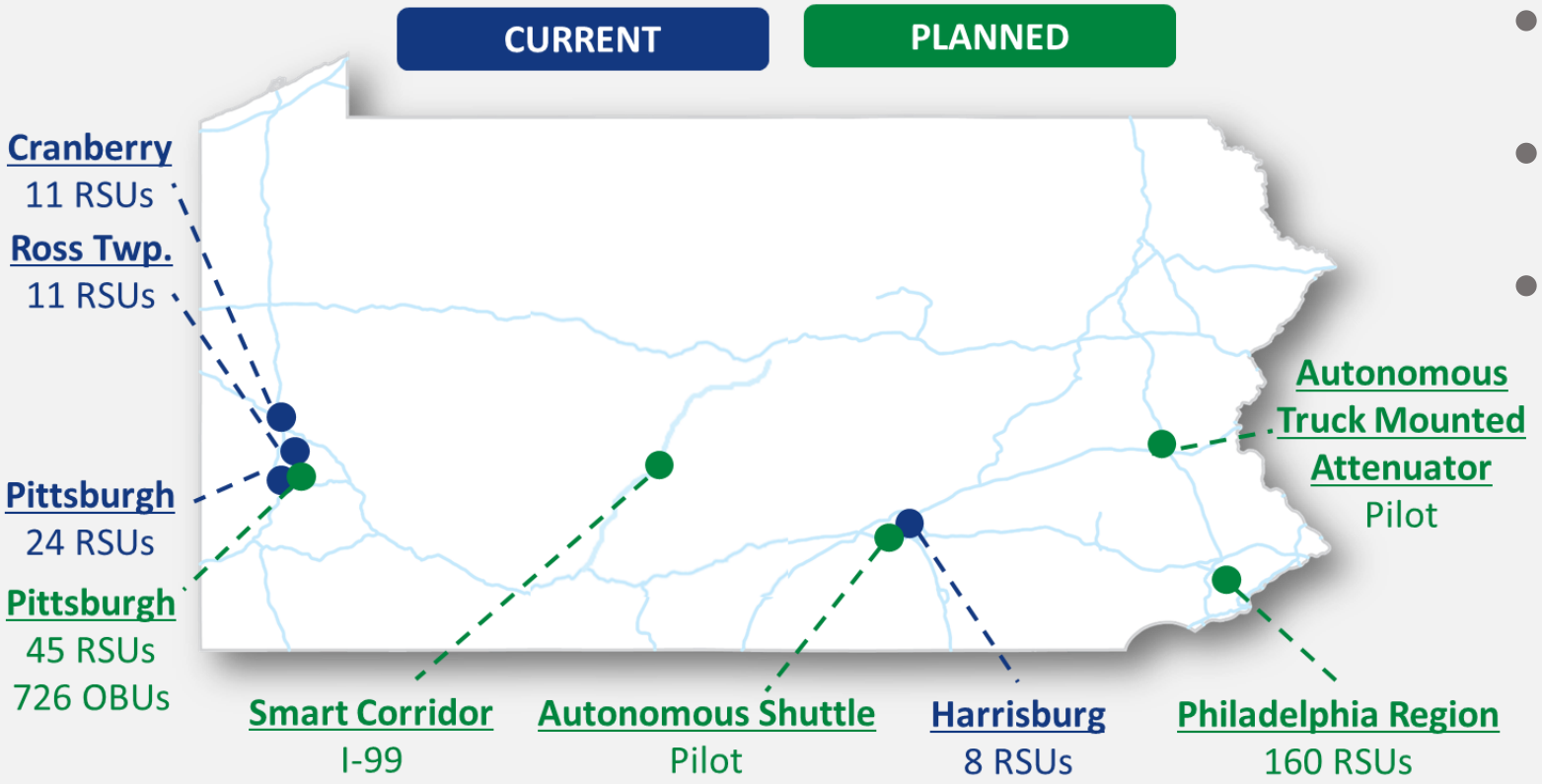
I-95 Corridor Coalition

March 15, 2018

Mark C. Kopko
Manager, Advance Vehicle Technology

Pennsylvania Department of Transportation

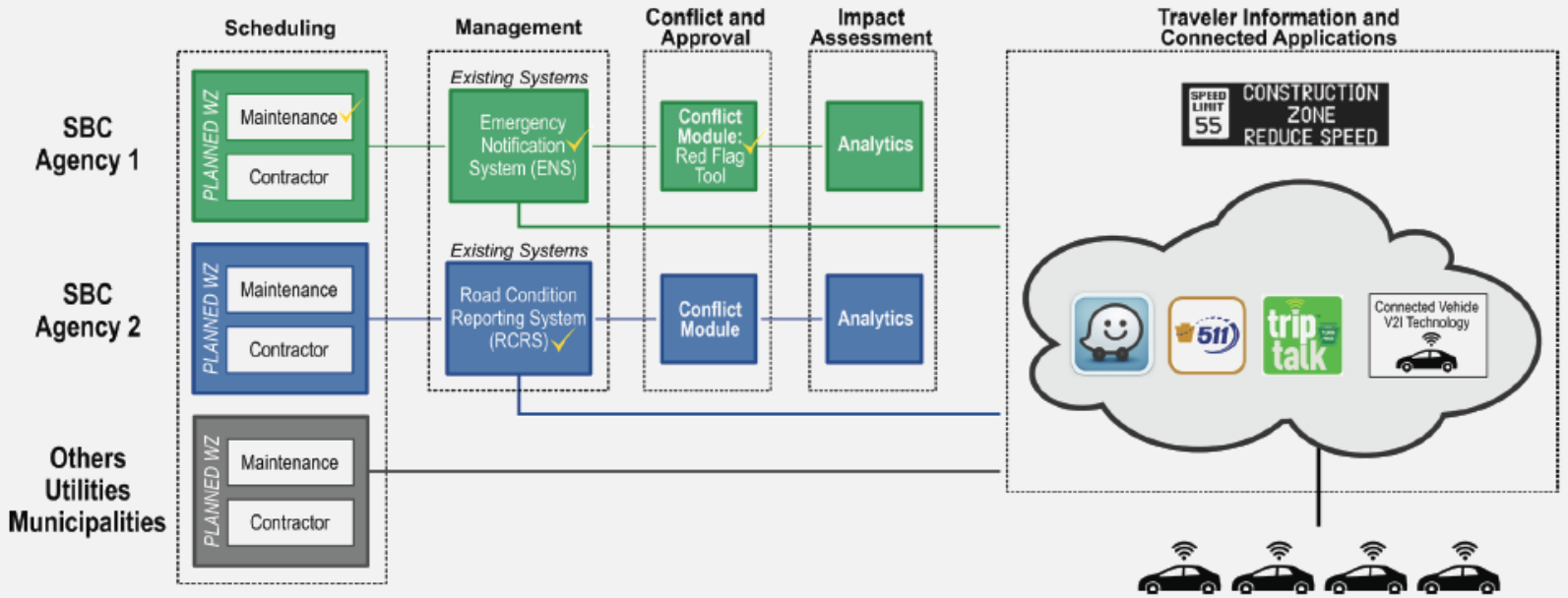
PA CAV Deployments



- Smart Belt Coalition
- AV Shuttle
- CV Deployments
  - **54** Connected Intersections
  - **205** Planned Connected Intersections
  - **726** Planned Connected Buses

Smart Belt Coalition Work Zone Reservation and Traveler Information System

- **Multi-User Lane Reservation and Conflict Resolution**
- **Traveler Information**
- **Vehicle-to-Infrastructure**
- **Predictive Data Analytics**
- **Open System**



Autonomous Shuttle
1
2
3
4
5
6
8
9
10

Active Corridor Management Project

Rail Lines
Super Critical Corridors
U.S. Hwy / Interstates
SEPTA Active Parking Management Garage
Conshohocken Station

Valley Forge
Upper Merion Twp
Bridgeport
King of Prussia
Plymouth Meeting
Flourtown
Springfield Twp
Lafayette Hill
Whitemarsh Twp
Wyndmoor
Conshohocken
West Conshohocken
Wayne
Radnor Twp
Villanova
Bryn Mawr
Gladwyne
Haverford
Ardmore
Narberth
Newtown Twp
Haverford Twp
Penn Wynne
Havertown
Marple Twp
Lawrence Park
Millbourne
Upper Darby
Drexel Hill
East Lansdowne
Philadelphia
Camden
Edgmont Twp

March 15, 2018

Mark C. Kopko
Manager, Advance Vehicle Technology

markopko@pa.gov
717.783.1903

Questions?

DelDOT's Mobile App

Features

- **Traffic Map**
  - Live Video
  - Travel times
  - 24-hour real-time travel advisories
  - Real-time Bus Info
  - Travel restrictions
  - Snow plow movement
  - Waze Info
- **Other**: Report an Issue, News, Projects, DMV Sample Driving Test, Events, Radio Station

DelDOT

For more information, contact:

Gene Donaldson
302-659-4601
gene.donaldson@state.de.us

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Agency Roundtable Update

I-95 CORRIDOR COALITION TIS ANNUAL MEETING

MARCH 15, 2018

Joseph Sagal, Director
Office of CHART & ITS Development

CHART

MDOT-SHA CAV Activities

- Participation in the MDOT CAV Working Group: Technical and Policy Sub-groups
  - Exploring Enforcement Issues
  - Testing Expressions of Interest and Permits
  - Identifying Test Bed Locations
  - Intermodal Project Coordination

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

CHART

MDOT-SHA CAV Strategic Action Plan

- MDOT SHA CAV Strategic Action Plan
  - Vision: Embrace technology and next generation mobility trends to provide safe & reliable travel for people and goods within Maryland
  - Goals:
    - Be an attractive partner; Maryland is "open for business."
    - Begin deploying CAV technology to gain experience through pilot projects.
    - Establish foundational systems to support future CAV deployment.
    - Enable CAV benefits for customers.
    - Look for opportunities to leverage CAV technologies to support existing business processes.

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

CHART

MDOT-SHA CAV Projects

- US-1 CAV Pilot and Smart Signals DSRC for SPaT
  - Meeting the AASHTO/FHWA SPaT Challenge
  - Focus on Back-haul Communication Infrastructure
  - Interest in Short-haul Freight Data and Services
  - Interest in Transit Coordination

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

CHART

District DOT

For more information, contact:

Suzette Robinson
District DOT
202-763-8654
suzette.robinson@dc.gov

South Carolina Department of Transportation

SC 511 Travel Information Service Update

- Advertising for 3rd Generation 511 Travel Information Service provider within 30 days.

My511 Personal

Smartphone App Users 132,289

Followers 12,482

Tweets 139,686

511 Calls 1,169,361

All web Site Data Sessions 21,071,041

Mobile App Data Sessions 4,930,132

South Carolina Department of Transportation

For more information, contact:
Tisha M Dickerson
803-737-1165
dickersotm@scdot.org

Georgia DOT

For more information, contact:

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(404) 635-2838
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Georgia Department of Transportation

I-95 Corridor Coalition: Traveler Information Services Meeting March 15th, 2018

Florida Department of Transportation

Russell Allen, P.E.
ITS Program Development Engineer
Florida Department of Transportation
Traffic Engineering and Operations,
TSM&O Section

FL511

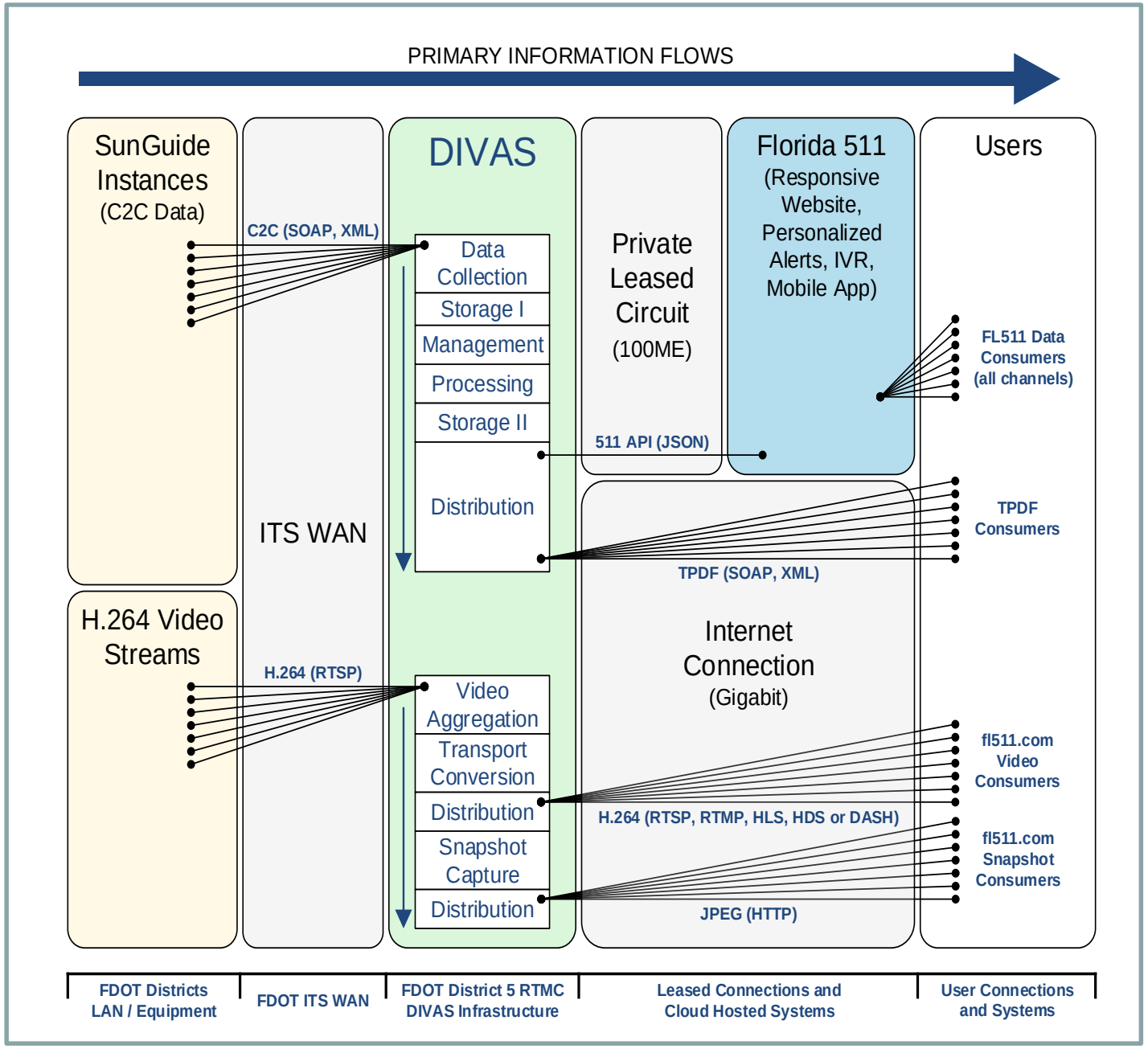
FL511 Proposed Enhancements

- Increase simultaneous users on the FL511 website to 50,000
- Event Reporting System (ERS) (EM locations)
- Helios road weather data integration into the FL511 website
- Truck Parking System on FL511 Mobile Applications and FL511 website
- Integrate road closure events and detour information into FL511 website and mobile apps
- Integrate streaming video where applicable on the FL511 website and the Fl511 mobile applications

FL511 Future Enhancements

- Incident Reporting on FL511 mobile applications
- Road Ranger Reporting
- Create incident alerts without having to create a route

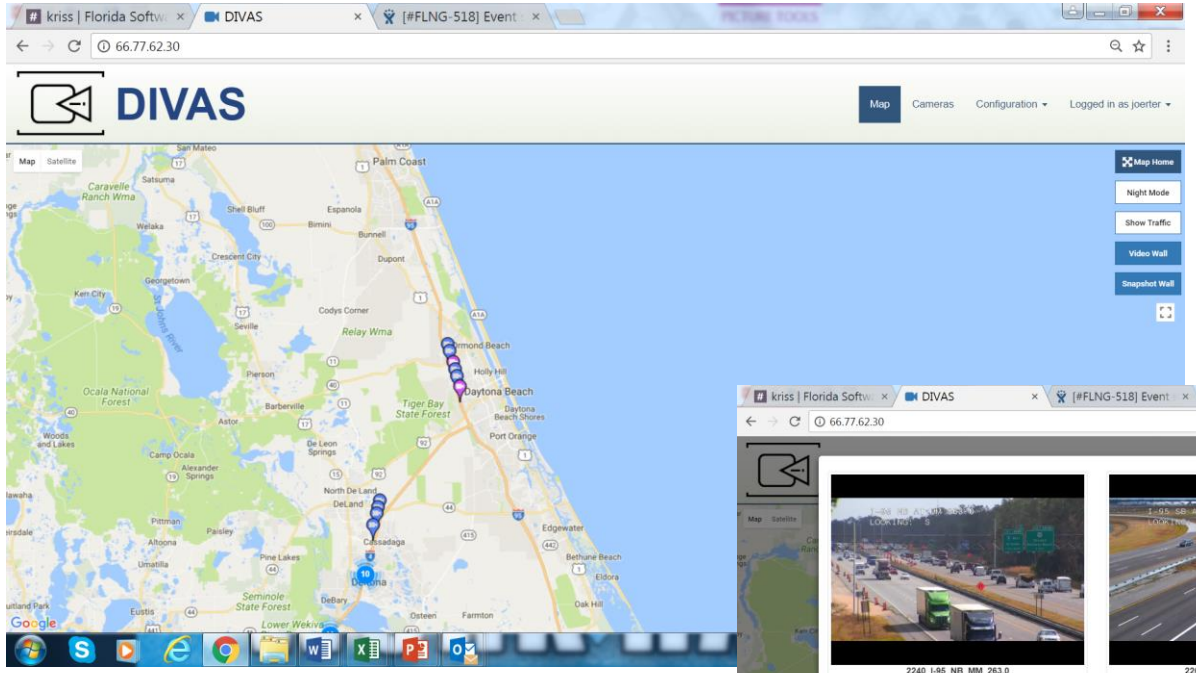
Data Integration and Video Aggregation System (DIVAS)

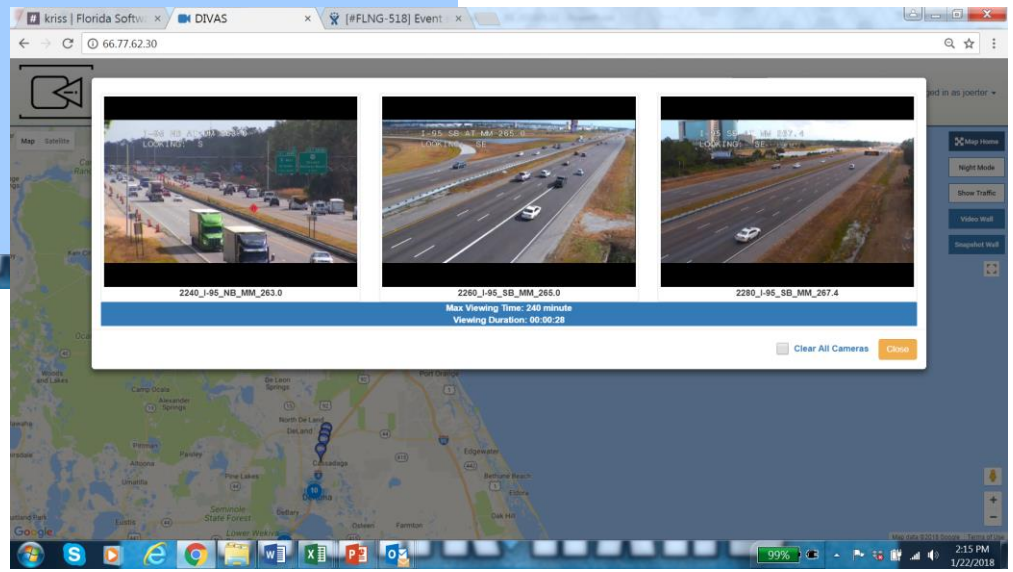


DIVAS Architecture

Video Aggregation System

- Phase 1:
  - Display h.264 images on the website
  - Non h.264 images will have snapshots displayed until CCTV's are upgraded





Data Integration System

- Ingest Data from Districts and third party agencies
- Store into a single data hub
- Disseminate all data from the DIVAS system

Florida Department of Transportation

What's New with Traveler Information in Florida

- Florida's Truck Parking Availability System
- Truck parking shortages are a national safety concern. Florida has developed and is deploying a statewide automated system to provide availability of truck parking spaces. This will address safety concerns with fatigued drivers searching for spaces, reduce environmental impacts and increase economic vitality as drivers will maximize their hours of service.

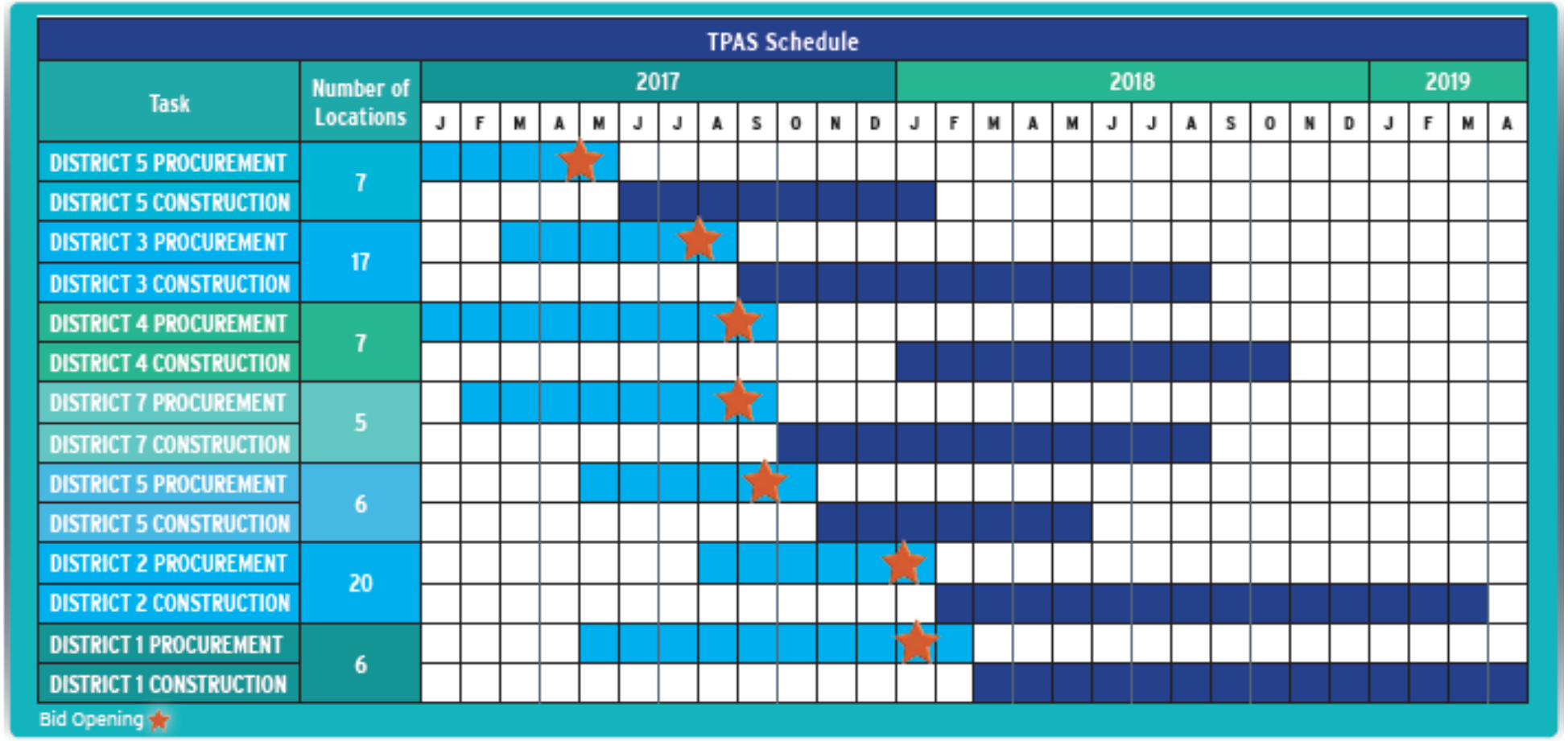
Florida Department of Transportation

What's New with Traveler Information in Florida

- Lessons Learned:
  - Many technologies available. Florida chose in-pavement wireless sensors.
  - Research project (BDV-31-977) evaluated available manufacturers (Sensit, Synsys and CivicSmart)
  - Developmental Specification 660 used for criteria

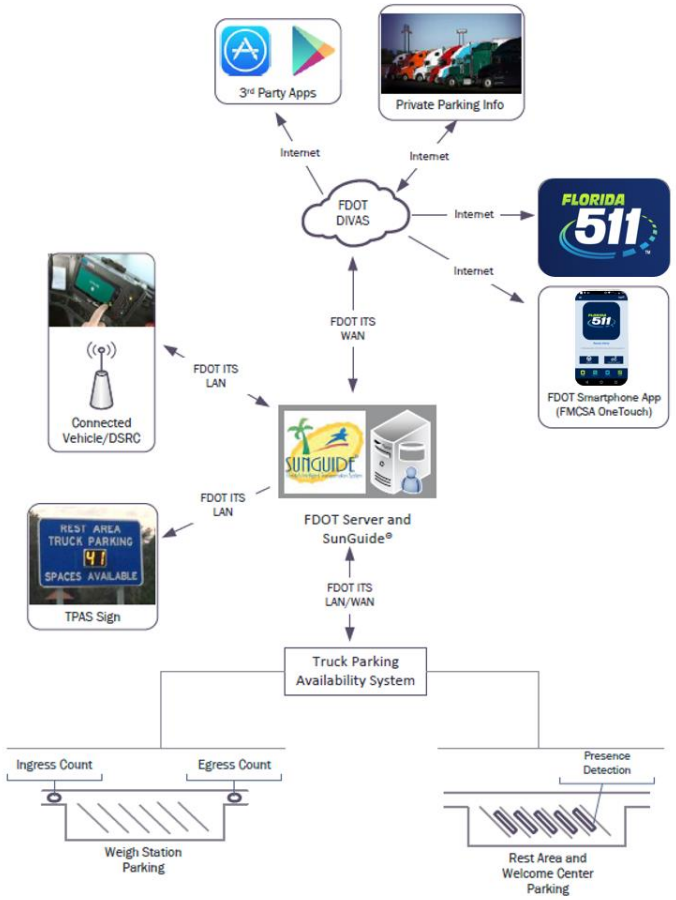
Florida Department of Transportation

What's New with Traveler Information in Florida



Florida Department of Transportation

What's New with Traveler Information in Florida



Florida Department of Transportation

For more information, contact:
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Russell.Allen@dot.state.fl.us

FDOT TSM&O
Transportation Systems Management & Operations

General Questions & Discussion

Coalition Upcoming Events & Meeting Wrap Up

Mark Kopko, TIS Co-chair,

PennDOT

Coalition Meetings of Interest

- Coalition
  - I-95 CC Steering Committee Web Meeting – April 12, 2018
- TSMO Related
  - Work Zone Monitoring Webinar: April 19, 2018
  - Computer Aided Dispatch Data Integration Workshop: April 23-24, 2018
  - Transit /GTFS2 webinar: June 2018
  - Maine Heavy Towing Workshop #2: Rescheduling
- Data Tools Web Meetings: Meetings are planned for the **second Thursday of the month from 10:30pm - 12:00pm**:
  - RITIS User Group: May 10, 2018
- Intermodal Freight Meetings
  - Committee (Agency) Meeting: March 21, 2018
  - Truck Parking Summit (Agency by Invitation): May 1-2, 2018

Other Meetings of Interest

- 2017 AASHTO Spring Meeting
  - May 22-24, 2018, Franklin, TN
- ITS American Annual Meeting
  - June 4-7, 2018, Detroit, MI
- NaTMEC (National Travel Monitoring Exposition and Conference)
  - June 10-13, 2018, Irvine, CA
- NASTO Annual Meeting
  - July 9-11, 2018, National Harbor, MD
- AASHTO Annual Meeting
  - Sept 20-24, 2018, Atlanta, GA

Questions

Thank You!

For Additional Information and Questions

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