

VPP Suite User Group Meeting



July 28, 2016



VPP Suite User Group Agenda

#	Topic	Speaker
1	Welcome & Introductions Agenda & Meeting Overview	Trish Hendren, I-95 Corridor Coalition Jesse Buerk, DVRPC
2	Spotlight Presentation <ul style="list-style-type: none">SJTPO – Using VPP Suite for the CMP & “Transportation Matters” Performance Report	Bill Schiavi, SJTPO
3	Project Briefing <ul style="list-style-type: none">Volume & Turning Movements from Probe Data	Stan Young, NREL
4	VPP Suite Improvements <ul style="list-style-type: none">Survey ResultsDeploy Status Table	John Allen, UMD CATT Lab
5	MAP-21 <ul style="list-style-type: none">Dashboard/Widget Feature Update	John Allen, UMD CATT Lab
6	Agency Input Session	All agencies

VPP Tools for SJTPO's Congestion Management Process & Performance Based Planning

July 28, 2016

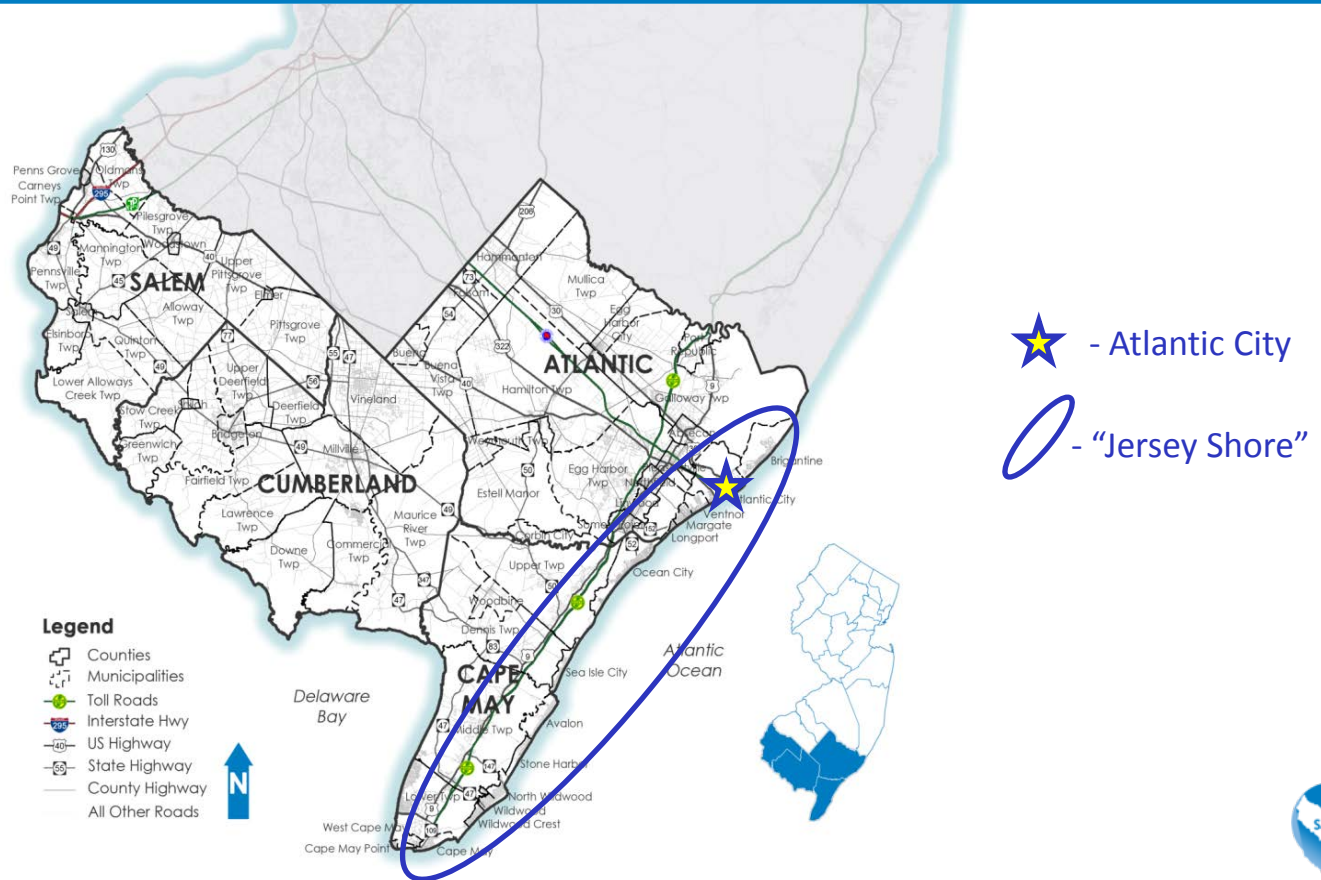
Bill Schiavi

South Jersey Transportation Planning Organization



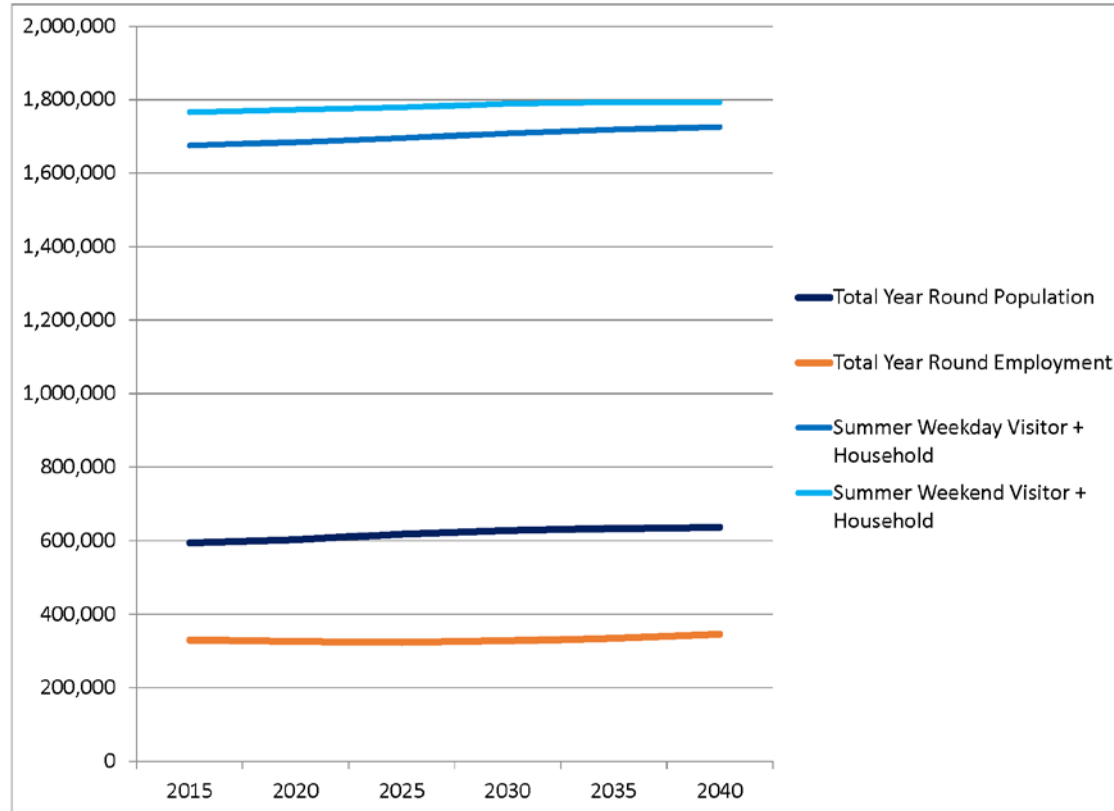
**SOUTH JERSEY TRANSPORTATION
PLANNING ORGANIZATION**

Regional Profile

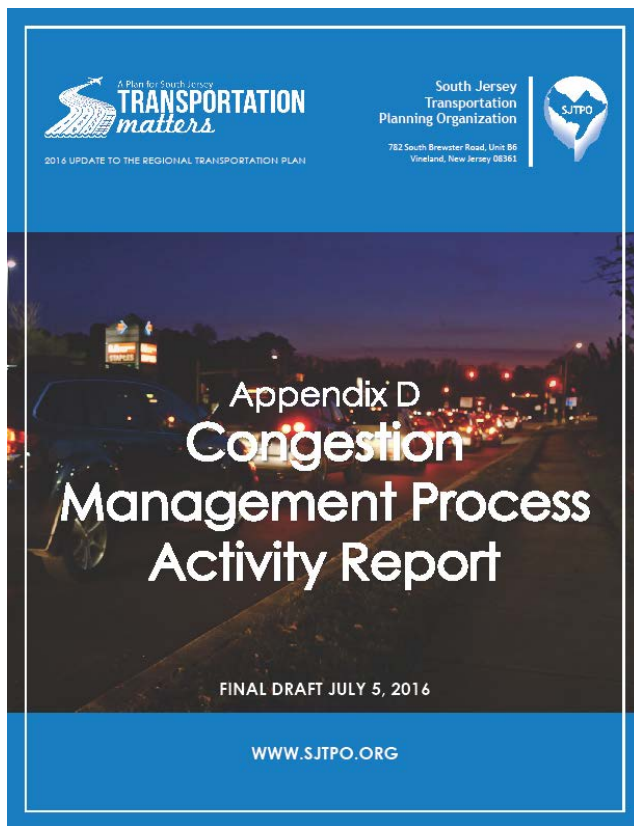


Baseline Scenario—Population & Employment

(from Transportation Matters, RTP 2040 Update 2016)



SJTPO Reports Utilizing VPP Suite Tools & Data



Steps to the Congestion Management Process

CMP Steps	Report	VPP Suite Used
Step 1 Establishing Regional Objectives	Methodology	
Step 2 Defining the CMP Network	Methodology	
Step 3 Developing Multi-modal Performance Measures	Methodology	
Step 4 Collect Data/Monitor System Performance	Activity Report	✓
Step 5 Analyze Congestion Problems and Needs	Activity Report	✓
Step 6 Identify and Assess Strategies	Activity Report	✓
Step 7 Program and Implement Strategies	Activity Report	
Step 8 Evaluate Strategy Effectiveness	Activity Report	✓

Locations of Interest - State Roads

Rank	Location	Direction	Ave Duration	Ave Max Length Miles	Occurrences	Impact Factor
1	GARDEN STATE PKWY N @ ATLANTIC CITY EXPY/EXIT 38	NORTHBOUND	2 h 17 m	5.48	94	70,606
2	NJ-47 N @ CR-670/E CREEK MILL RD	NORTHBOUND	1 h 36 m	4.75	95	43,327
3	NEW JERSEY TPKE S @ DEEP WATER SLAPES CORNER RD	SOUTHBOUND	2 h 49 m	3.24	66	36,131
4	US-322 E @ CR-575/ENGLISH CREEK AVE	EASTBOUND	38 m	1.96	437	32,553
5	CR-575 S @ US-40/US-322/BLACK HORSE PIKE	SOUTHBOUND	35 m	2.00	434	30,434 a
6	NJ-52 S @ CENTRAL AVE	SOUTHBOUND	48 m	0.92	565	25,085
7	US-9 N @ GARDEN STATE PKWY (SOMERS POINT)	NORTHBOUND	1 h 33 m	3.28	82	25,040 b
8	NJ-47 S @ NJ-83	SOUTHBOUND	50 m	2.13	231	24,627
9	ATLANTIC CITY EXPY E @ GARDEN STATE PKWY/EXIT 38A	EASTBOUND	1 h 36 m	2.65	95	24,208
10	US-322 W @ CR-575/WRANGLEBORO RD	WESTBOUND	39 m	1.76	415	23,002

a: The name of this location includes a local road because the bottleneck backs-up into the local road.

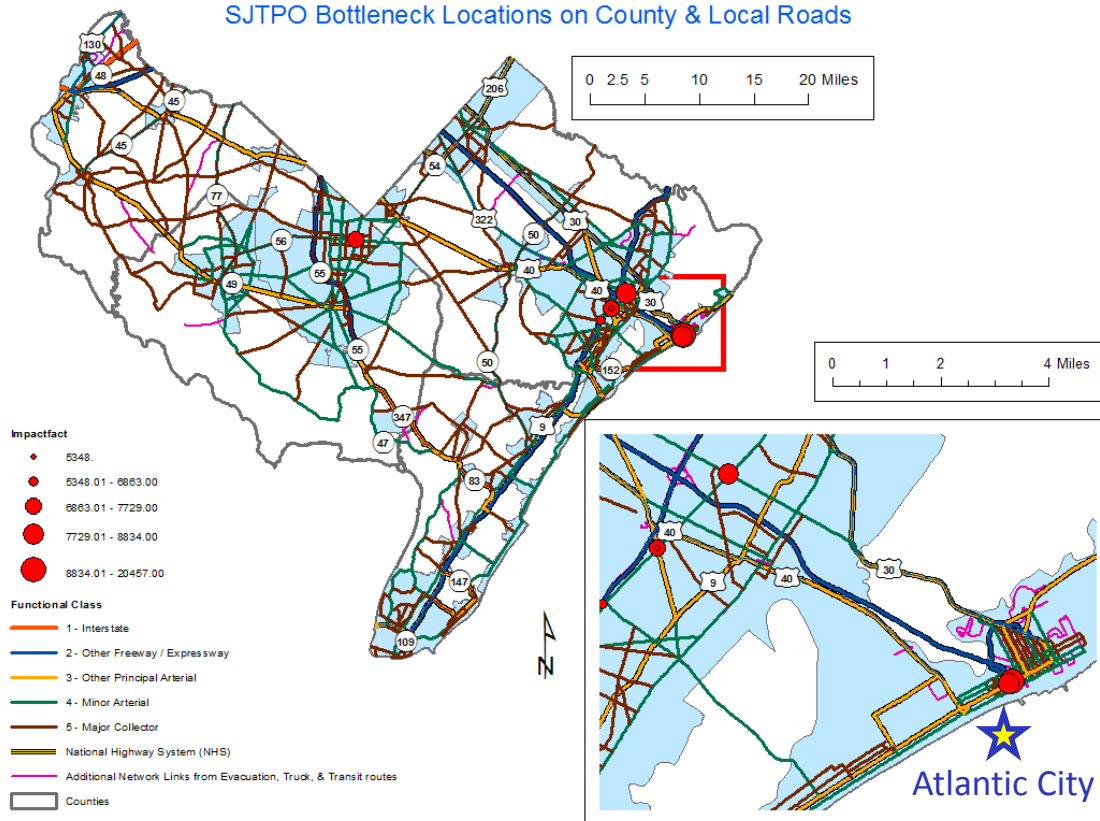
b: The actual queue likely backs-up into GAP/US-9 bridge.

Locations of Interest - Local Roads

Rank	Location	Direction	Ave Duration	Ave Max Length Miles	Occurrences	Impact Factor
1	ATLANTIC AVE W @ N ARKANSAS AVE	WESTBOUND	39 m	1.13	464	20,457
2	N MISSOURI AVE S @ ATLANTIC AVE	SOUTHBOUND	33 m	0.34	776	8,834
3	FIRE RD N @ DELILAH RD	NORTHBOUND	50 m	0.35	492	8,655
4	FIRE RD S @ TILTON RD	SOUTHBOUND	36 m	0.30	713	7,729
5	MAIN RD N @ E LANDIS AVE	NORTHBOUND	23 m	2.86	115	7,562
6	FIRE RD S @ MILL RD	SOUTHBOUND	38 m	0.48	375	6,863
7	FIRE RD N @ TILTON RD	NORTHBOUND	42 m	0.21	593	5,348

Bottleneck Location and Impact

SJTPO Bottleneck Locations on County & Local Roads



Path: J:\Maps for RTP\2016 Transportation Matters\TM Maps\2016 CMP VPP Bottlenecks.mxd







Network - Overall Performance Monitoring

Network Congestion Management Performance

Travel Delay Planning Time Index	2013	2014	2015
NJ & US Routes	1.16	1.38	1.34
Local Routes	1.19	1.45	1.42

Travel Delay Travel Time Index	2013	2014	2015
NJ & US Routes	1.08	1.16	1.15
Local Routes	1.11	1.21	1.19

Vehicle Hours of Delay - All Vehicles

Road	Counties	Miles	Vehicle Hours of Delay - All Vehicles ¹			Comparison
			2013	2014	2015	2015 vs 2013 Delay
Garden State Parkway ⁺	Atlantic and Cape May	49.5	126,114	198,045	181,214	
Atlantic City Expressway ⁺	Atlantic	27.5	79,905	46,867	74,438	
New Jersey Turnpike ⁺	Salem	9.5	24,911	25,409	84,518	
I-295 ⁺	Salem	9.5	8,429	10,762	6,816	
NJ-55	Cumberland	18.5	5,959	18,795	22,895	
SUBTOTAL		114.5	245,318	299,878	369,881	
Other Roads*	All	—	175,838	1,383,296	961,022	
TOTAL			421,156	1,683,174	1,330,903	

⁺Limited Access Roads included in VPP. ^{*}Other Roads—The VPP also includes a select number of county roads.

¹Data from Vehicle Probe Project Suite. Delay is defined as additional travel time needed when travelling 10 mph or more under the free-flow speed.

Vehicle Hours of Delay - Commercial

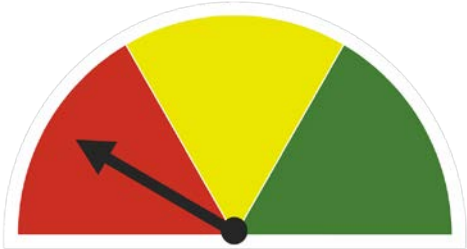
Table 2.3: Vehicle-Hours of Delay, Commercial Vehicles

Road	Counties	Miles	Vehicle Hours of Delay-Commercial Vehicles			Comparison
			2013	2014	2015	2015 vs 2013 Delay
Garden State Parkway	Atlantic and Cape May	49.5	12,611	19,805	18,121	↑
Atlantic City Expressway	Atlantic	27.5	7,990	4,687	7,444	↓
New Jersey Turnpike	Salem	9.5	2,491	2,541	8,452	↑
I-295	Salem	9.5	843	1,076	682	↓
NJ-55	Cumberland	18.5	596	1,879	2,290	↑
SUBTOTAL		114.5	24,531	29,988	36,989	↑
Other Roads*	All	_____	17,624	138,330	96,102	
TOTAL		-----	42,155	168,318	133,091	
The number of road miles with delay information available increased during 2013.						

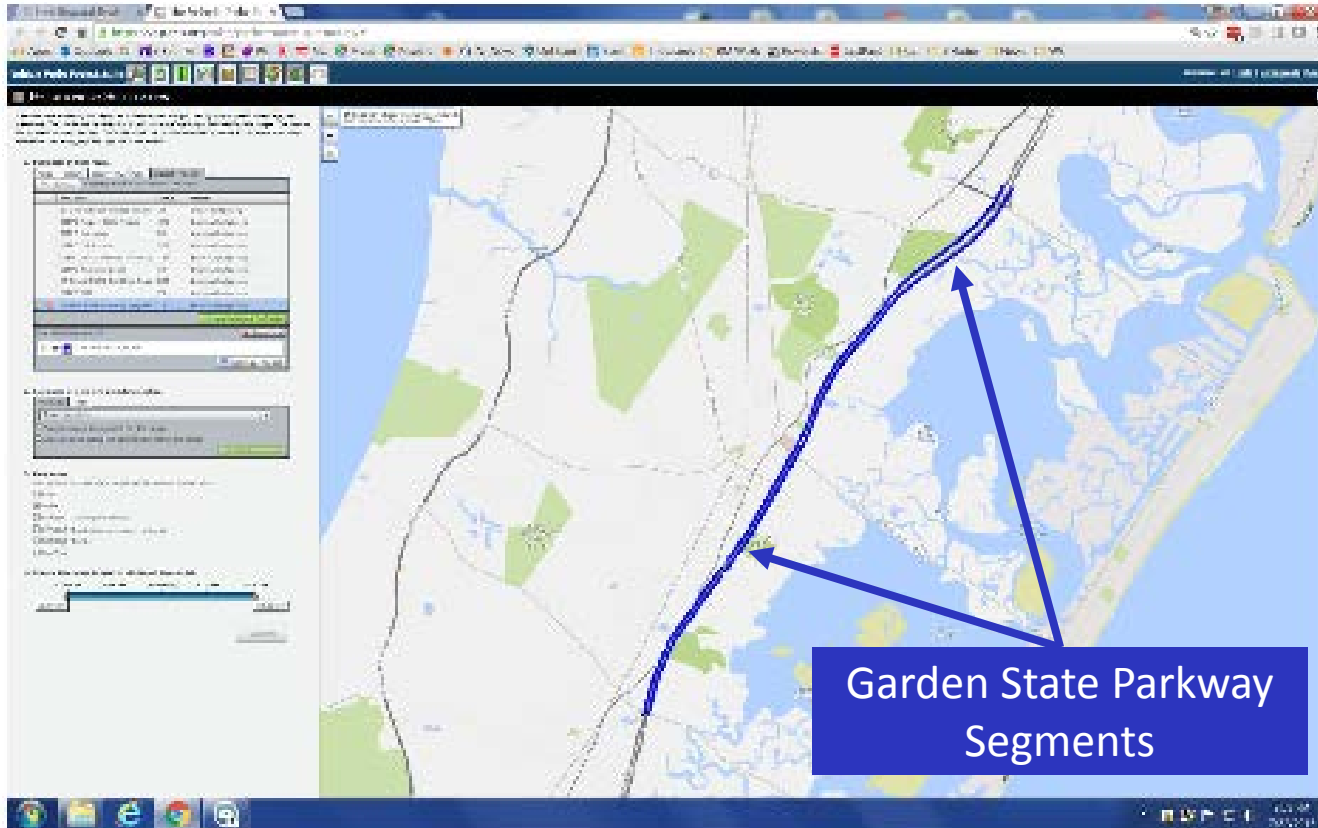
SOURCE: VPP Suite

Example “Report Card” Performance Report Graphic

Indicator 5.2: Are there fewer vehicle-hours of delay?

Measure(s)	2013	2015	% Change	
Vehicle-Hours of Delay, (Limited-Access Roadways ⁺)	245,000	370,000	50.8%	

Before & After: Three GSP Interchange Improvements



Performance Summary

Performance Summaries for GARDEN STATE PKWY using INRIX data
Before (2012) Southbound January 2012 through May 2012

	Planning time (minutes) 7:00 AM - 10:00 PM	Speed (mph) 7:00 AM - 10:00 PM	Travel time (minutes) 7:00 AM - 10:00 PM
Monday	8.48	59.21	7.79
Tuesday	8.57	58.55	7.88
Wednesday	8.69	58.77	7.85
Thursday	8.63	58.43	7.89
Friday	8.74	58.53	7.88
Saturday	8.76	59.16	7.80
Sunday	8.09	59.96	7.69
Weekends	8.66	59.56	7.74
Weekdays	8.71	58.70	7.86
All Days	8.70	58.94	7.83

Performance Summaries for GARDEN STATE PKWY using INRIX data
After (2016) Southbound January 2016 through May 2016

	Planning time (minutes) 7:00 AM - 10:00 PM	Speed (mph) 7:00 AM - 10:00 PM	Travel time (minutes) 7:00 AM - 10:00 PM
Monday	8.07	63.56	7.26
Tuesday	7.99	64.64	7.14
Wednesday	8.00	63.39	7.28
Thursday	7.82	64.93	7.10
Friday	8.08	64.61	7.14
Saturday	7.96	64.42	7.16
Sunday	7.77	64.67	7.13
Weekends	7.88	64.55	7.15
Weekdays	8.02	64.21	7.18
All Days	7.95	64.32	7.17

Before (2012)	8.70	58.94	7.83
After (2016)	7.95	64.32	7.17
Change	(0.75)	5.38	(0.66)
Change %	-8.62%	9.13%	-8.43%
	Favorable	Favorable	Favorable

Condition/ Change	Planning Time	Speed	Travel Time
Before	8.70	58.94	7.83
After	7.95	64.32	7.17
Change	-0.75	5.38	-0.66
Change %	-8.62%	9.13%	-8.43%
Result	Favorable	Favorable	Favorable



Thank you!

Questions?

For more information, please contact:

Bill Schiavi

South Jersey Transportation Planning Organization

bschiavi@sjtpo.org

Volume & Turning Movements from Probe Data Project



Update for the VPP Suite User Group

July 28, 2016

Volume & Turning Movements from Probe Data Project

- Coalition project funded through MCOM2 Grant
- Work being conducted in collaboration with the:
 - UMD Center for Advanced Transportation Tech (**CATT**)
Kaveh Sadabadi
 - National Renewable Energy Laboratory (**NREL**), US DOE
Stan Young



Background

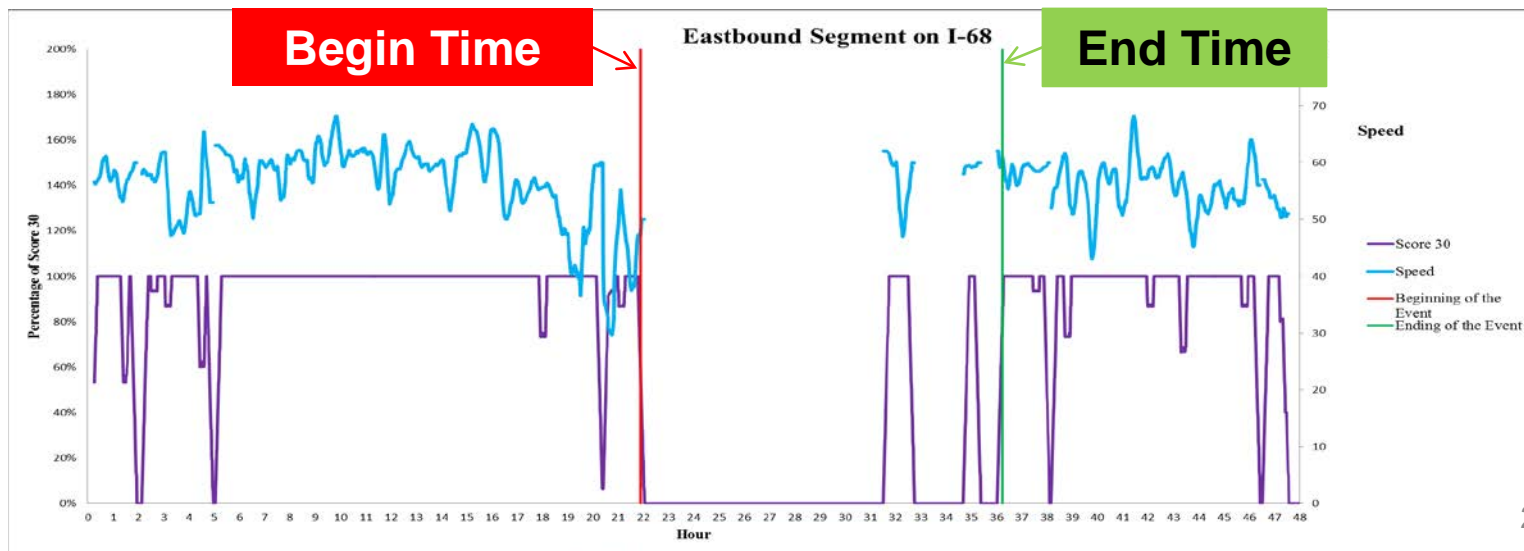
- Network wide volume and turning movement data remains key missing dimensions for operational awareness and assessing transportation system performance
- Highway Performance Monitoring System (HPMS) data is currently state-of-the-practice in providing volume data, BUT it is limited and aggregated into hourly volumes for a typical day and there is a 2-3 year lag in reporting
- Turning movement data is only available in special studies

〔 NEED 24x7x365 VOLUME ESTIMATE ACROSS THE NETWORK 〕

- > One segment
- > Between MD-42 / Exit 4 intersection and US-219 / Exit 14 intersection
- > Eastbound with 9.2 miles length.

Hurricane Sandy impact on I-68 in Western Maryland (2012)

Begin Time	End Time	Duration
21:53	36:13	14:20



Project Goal

Accelerate the timeframe to a viable real-time volume and turning movement data feed, and to make every effort to ensure that initial data products meet the I-95 Coalition members' information needs for operations, performance measurement, and planning.

Objectives

- Define a *practical and logistical framework* for the delivery of probe-based volume and turning movement data
- Understand, document, and share *data requirement needs for a variety of DOT applications* requiring such data
- Create a *calibration and validation testbed* to assist vendors' initial development efforts.
- Provide *representative data products, and set appropriate expectations* for data fidelity, form, granularity, and usability
- Anticipating the need for an ongoing calibration network, *estimate resources needed to maintain/operate* a national calibration/validation testbed

Volume Data Uses

- **Public Sector**

- Performance measurement needs (weighted average)
- Planning/Energy/Environment (projections, fuel, air & noise)
- Project Development (design & maintenance)
- Operational Awareness (signal timing, HOV, work zone)
- ???

- **Private Sector**

- Retail and marketing
- Automotive industry
- Insurance companies
- Financial services

⌈ Unlike speed/travel time, the Public Sector *may be primary market* for volume data ⌋

Steering Committee Formed

Expectations

- **Provide feedback**
 - Participate in the use/application survey
 - Volunteer perspectives and experience
 - Articulate agency needs
- **Achieve Economies of Scale**
 - Contribute to the calibration and validation testbed
 - Quality volume data is expensive, pool our resources
- **Volunteer perspectives and experience on...**
 - Product specifications (coverage, granularity, accuracy, etc.)
 - Product delivery (archive, real-time, etc.)
 - Product use (performance management, operations, planning, etc.)

Steering Committee Membership

Colorado DOT

DVRPC

Florida DOT

Georgia DOT

Virginia DOT

Maryland DOT

MassDOT

MWCOG

New Hampshire DOT

New Jersey DOT *

NJTPA *

North Carolina DOT

PennDOT

South Carolina DOT

USDOT / FHWA

UMD CATT Lab

Texas AM Trans Inst

* Invited

Vendor Participation

- I-95 Corridor Coalition aims to foster cooperative relationship with industry
- All VPPII vendors have expressed desire to collaborate:
 - HERE
 - INRIX
 - TomTom
- Currently in contract phase for participation to evaluate probe data feasibility for use as volume surrogate

Considerations

- **Coverage area** (functional road class, corridor, etc.)
- **Event identification** (accident, planned road closure, weather, special events, etc.)
- **Historic archive** (and/or extent of real-time)
- **Aggregation in space and time** (Space: TMC/LRS; Time: 1,5,10,... minute)
- **Fidelity expectations accuracy levels** (± 100 , ± 200 ,... vphpl, $\pm 20\%$ if capacity)
- **Reporting** (API, FTP, monitoring site, etc.)
- **Validation method** (sampling, error measures, etc.)
- **Use of volume to capacity relationship** (to augment sampling data for better accuracy / self-calibration)
- **Freight** (heavy vehicle applications)

Project Timeline/Deliverables

- **Phase 1: Proof of concept (Jan-Mar 2017)**
 - Vendors under contract – end of Sep 2016
 - Survey, compiled feedback – start now, complete end of Sep 2016
 - Test bed – functional by end of Dec 2016, refined in 2017
 - Specifications & validation/calibration methodology – Jan-Mar 2017
- **Go / No-Go / Re-Scope Decision (End of Mar 2017)**
- **Phase 2: Product development and refinement (Oct-Dec 2017)**
 - Begin Apr 2017
 - Test historical archive products/concepts
 - Test real-time assessment of data products

Next Project Web Meeting

- **Thursday, October 13, 2016**
1:30p.m.- 3:00p.m. (EDT)
– Spotlight: TAMTI & Minnesota concept

Questions



Project Contact Info

General Project Questions:

Patricia Hendren, I-95 CC at 301-405-8271 or phendren@i95coalition.org

Kathy Frankle, UMD CATT Project Mgr. at 301-405-8271 or kfrankle@umd.edu

Technical Questions:

Stan Young, NREL, at 301-792-8180 or stanley.young@nrel.gov

Kaveh Sadabadi, UMD CATT at 301-405-1352 or kfarokhi@umd.edu

Logistics:

Joanna Reagle at 610-228-0760 or jreagle@kmjinc.com

Thank You



**I-95 CORRIDOR
COALITION**

VPP Suite Tool Improvement Prioritization Survey

Suite Improvement Survey

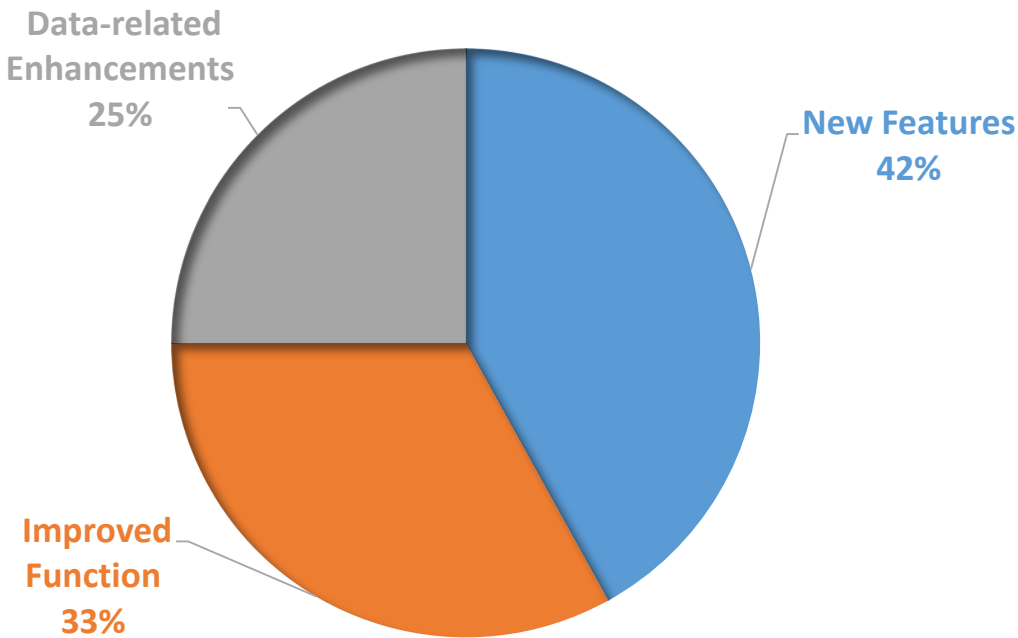
- Conducted in July 2016
- Included a list of 25 potential new features, improved functions, and data-related enhancements
- 13 responses from 8 agencies (BMC, DVRPC, NCDOT, NJDOT, NJTPA, PennDOT, SJTPO, VDOT)
- Comments and suggestions were received in addition to the rankings
- Results will help smartly enhance the VPP Suite with improvements *important to you!*

Thanks to all that participated!

Suite Improvement Survey Results – Overall Category

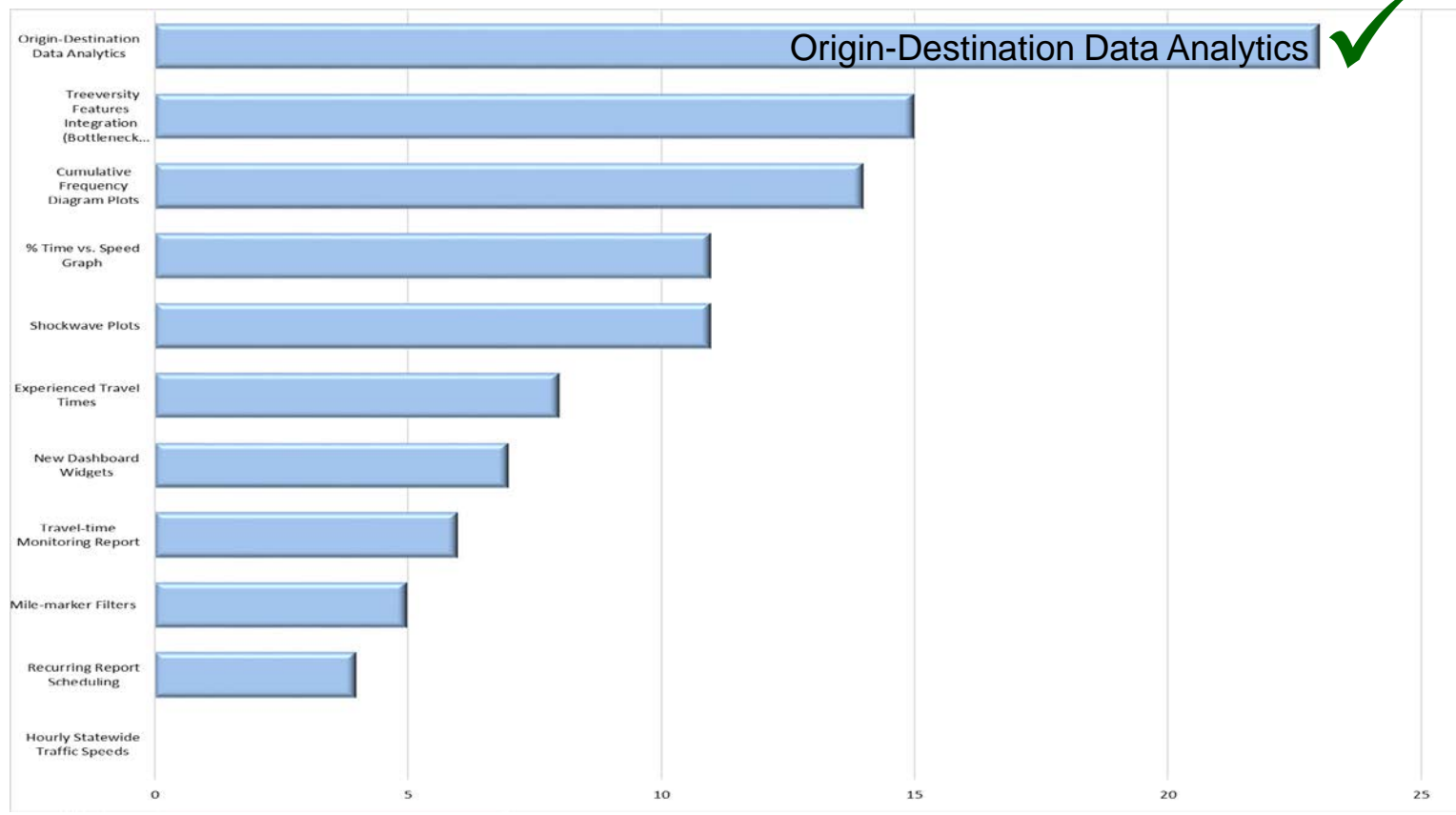
IMPORTANCE OF EACH CATEGORY

Overall, how would you rank the three categories of improvements – new features, improved functions and data-related enhancements – in terms of importance?



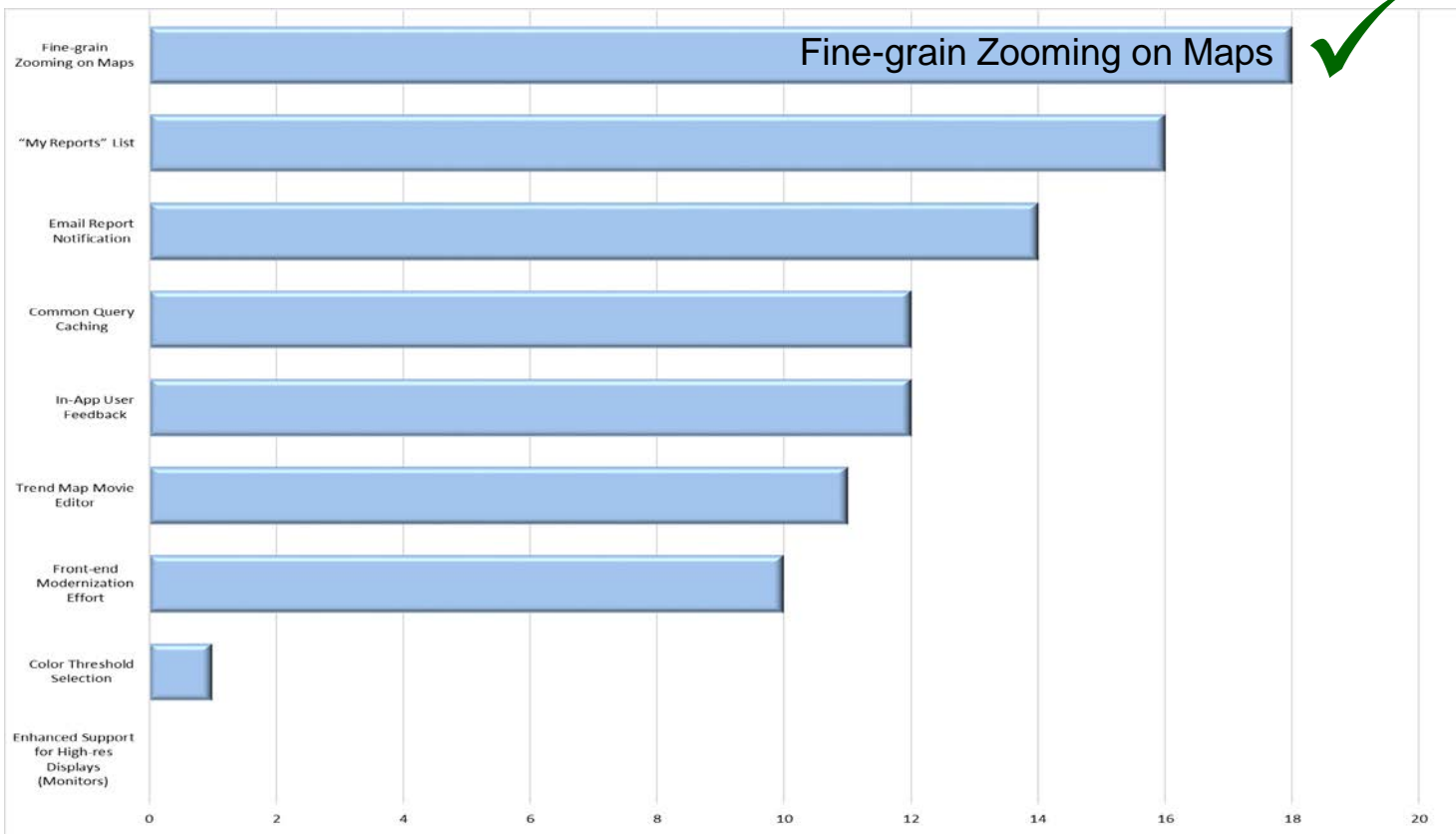
Suite Improvement Survey Results – New Features

Which potential
New Features
would you like
advanced?



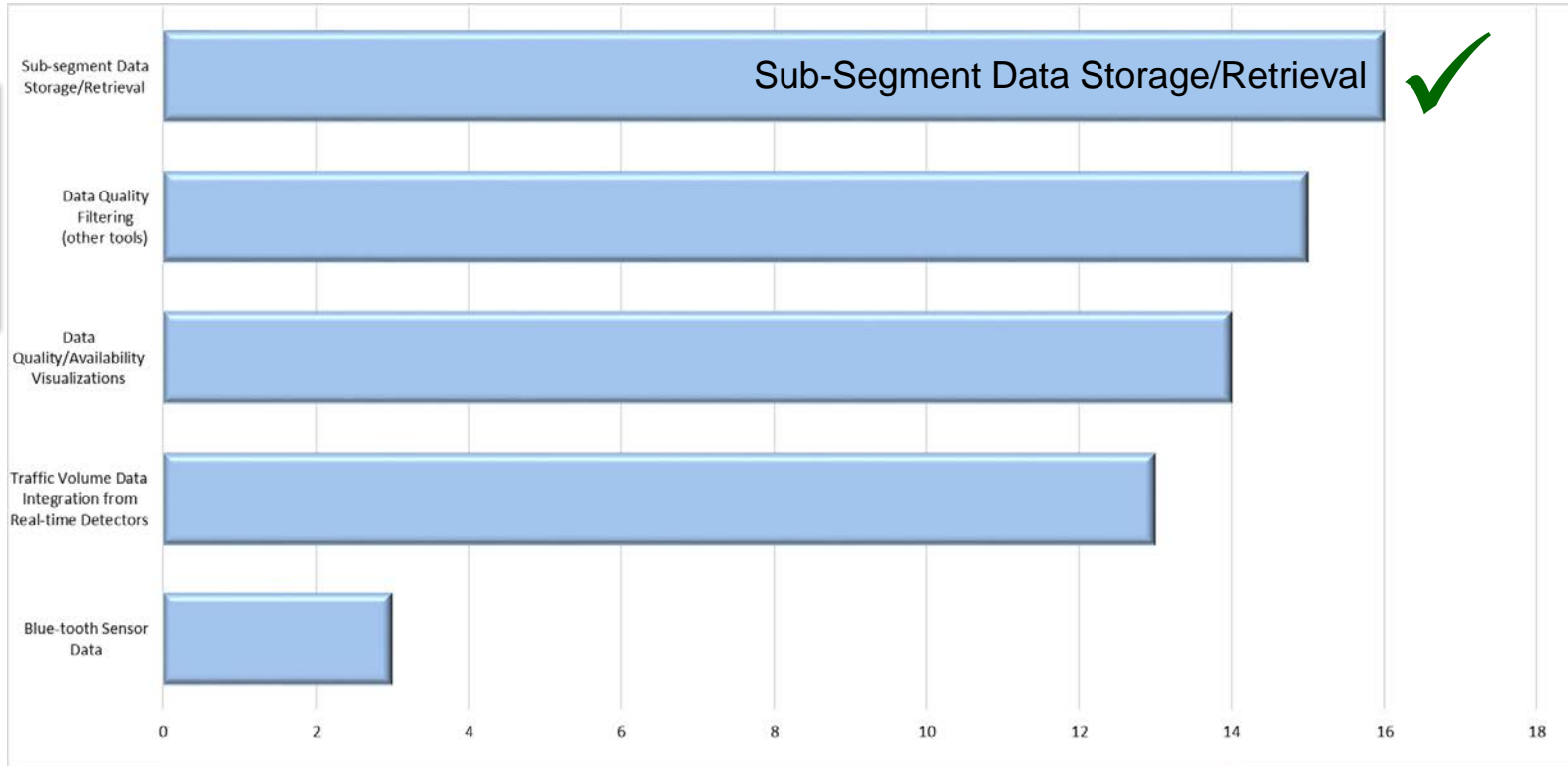
Suite Improvement Survey Results – Improved Functions

Which potential
Improved Functions
would you like
advanced?



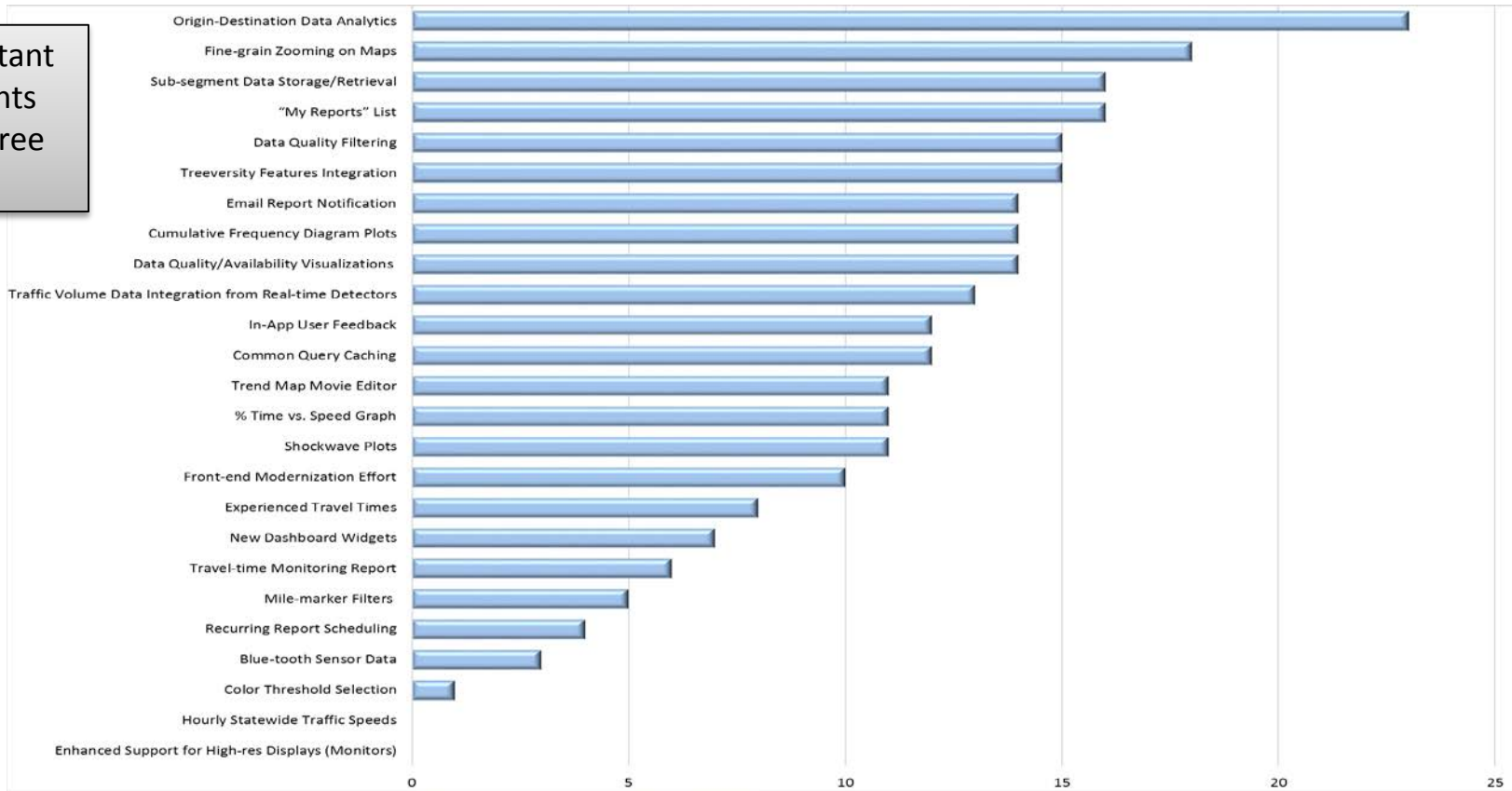
Suite Improvement Survey Results – Date Related Enhancements

Which potential
**Data-Related
Enhancements**
would you like
advanced?



Suite Improvement Survey – Results

Most important improvements across all three categories



Suite Improvement Survey Results – Comments

- Provide more information about the road names in the vicinity of routes with VPP data to allow for easier identification of segments
- Additional alignment with USDOT Performance Measures
- Ability to use map selection or county/sub-area and partial roadway segments (instead of just TMCs)
- Allow querying a greater number of TMCs (region or statewide level)
- More detailed information on freight
- Integration of transit data

Suite Improvement Survey Results – Next Steps
















- Review, organize, structure and finalize all results
- Same goes for additional suggestions (w/ member follow-up as necessary)
- Review all results/suggestions with Lab developers for viability, barriers, scheduling, timeframe, etc.
- Develop a deployment plan
- Share the plan with members
- Repeat the cycle

Deploy Status Table

Deployment Status Table - Refresher

- Created to better inform members of improvements to the Suite:
 - New Features
 - Improved Functions
 - Data Enhancements
 - Important Bug Fixes
- The table will be updated on a quarterly basis:
 - Feature (Improvement) name
 - Tool(s) affected
 - Description
 - Deploy Status
- Suggested improvements (survey results/other) vetted and incorporated as appropriate
- A calendar year “accomplishments” table created to summarize YTD deploys, also to be updated quarterly

Deploy Accomplishments (for Q2)

CY 2016 Deployments				Q1	Q2	Q3	Q4
Feature	Tool(s) Affected	Description	Deploy Date				
TomTom Probe Data Set		A Data-related Enhancement that provides TomTom data across the Vehicle Probe Project Suite (this dataset was purchased by the state of Maryland, goes back to March 2015, and is updated in real-time).	✓ Deployed 06.24.2016				
Resizable and Moveable Dashboard Widgets		An Improvement that allows users to resize and move Dashboard widgets, providing maximum flexibility to dashboard real estate and in particular, map viewing and saving.	✓ Deployed 06.15.2016				
MAP-21 Interstate and Non-Interstate Reporting		An Improvement that allows users to specify whether a widget shows interstate or non-interstate roads, in accordance with the NPRM.	✓ Deployed 06.13.2016				
MAP-21 Map Widget Data Export		An Improvement that gives users the option to export the underlying data in your MAP-21 map widgets as a CSV file. Click the save icon in the top right corner of the widget to download the data.	✓ Deployed 06.13.2016				
Dashboard Access to Multiple Probe Data Providers		An Improvement that allows users who have access to real-time data from multiple probe data providers to use those data sources for all dashboard widgets.	✓ Deployed 06.08.2016				
MAP-21 widget caching layer		An Improvement that moves the caching layer for MAP-21 widgets so less post processing is necessary, significantly decreasing load times.	✓ Deployed 05.12.2016				
MAP-21 widgets		An Important Bug Fix and an Improvement - corrects a rounding issue with target %s; and adds a tenth of a decimal for targets and measures in keeping with the NPRM's definition of "significant progress" (0.1 percent improvement over the baseline)	✓ Deployed 05.09.2016				
MAP-21 widgets		A New Feature in Dashboard that allows users to create MAP-21 widgets to understand current State/MPO/Urbanized Area performance, and to assist in target-setting and required performance measure reporting to FHWA.	✓ Deployed 05.03.2016				
Long-running Queries		An Improvement that ensures log-running queries will not timeout.	✓ Deployed 04.14.2016				
Multivendor Access in Bottleneck Ranking		An Improvement that adds checkboxes to Bottleneck Ranking for each of the platform's data sources that support bottleneck data (NPMRDS does not support bottleneck data). When the user clicks the submit button, the app will open one new tab per checkbox clicked.	✓ Deployed 04.14.2016				
INRIX TMC Map Update (v16.1)		An Improvement to the INRIX TMC Map in VPP Suite.	✓ Deployed 04.01.2016				
Partial Road radio button affects TMC segment selection		An Important Bug Fix that corrects some segments disappearing from either end of the selected road after clicking the partial road radio button.	✓ Deployed 03.03.2016				
Faster Data Downloads		An Improvement in Massive Data Downloader that achieves 4-5x faster data exports.	✓ Deployed 02.08.2016				
Multi-Road Congestion Scan		A New Feature in Congestion Scan that allows you to stitch together multiple roads to define travel routes and corridors for more comprehensive analyses.	✓ Deployed 11.30.2015				
Download by Quality		A New Feature in Massive Data Downloader that allows you to choose to filter out data that does not match your agency's criteria for quality (can also significantly reduce the size of a data export).	✓ Deployed 10.15.2015				

16 YTD
Improvements

New Features

3

Improved
Functions

10

Data
Enhancements











3

Important Bug
Fixes

2



Deployment Status Table (Q3)

 2016 Deploy Status Table (the latest features, functions and fixes for the VPP Suite) Q1 Q2 Q3 Q4			
Category/Feature	Tool(s) Affected	Description	Status
Recent Deploys			
NPMRDS Dataset		Added the June 2016 NPMRDS data (all tools EXCEPT Region Explorer, Bottleneck Ranking and User Delay Cost).	✓ Deployed 07.20.2016
Scheduled for Deployment			
Freight Movement on the Interstate System - Subpart F Performance Measures		Allows users to select freight performance measures in the MAP-21 Dashboard query page.	3 rd Q 2016
NJDOT PDA Fixes		A number of improvements and bug fixes affecting various Suite tools: standardize the naming of XML exports and screenshots; add partial road selection to the Advanced Road Selection; road selection, and segments to be removed should be different colors; data tooltips move when saving screenshots in Congestion Scan; missing endpoints in Congestion Scan titles; measures in data tips not updating when switching metrics; correct road TMC gaps.	3 rd Q 2016
Backend Hadoop Architecture (Raptor)		Greatly improves storage and tool processing speeds, allowing for faster results, longer date ranges and larger geographies.	3 rd Q 2016
Bottleneck Algorithm/Ranking Tool		An updated algorithm and additional graphing features will significantly improve the usability of the Bottleneck Ranking tool.	3 rd Q 2016
Embedded Dashboards		Allows users to embed (publish) the dashboards they have created in the VPP Suite on other web sites (like agency websites, for press releases, etc.) This feature exists for the trend maps today.	3 rd Q 2016
Advanced Time Selection and Filtering & Query Date Range Summary		Allows users to perform advanced time-based filtering for all reports including things like: excluding outlier dates (weather events, holidays, sporting events, etc.), aggregating non-consecutive date ranges (the last four Thanksgivings), etc. Enhance all summary reports so that it is more clear as to which dates, roads, filters, and other query parameters were selected by the user.	Late Q3/Early Q4 (must follow Raptor release)
A "State's Choice" Layer (In Region Explorer)		This enhancement will allow states to save their default preferences for data sources (HERE, INRIX, or TomTom) and share that with other states so that agencies that view data across borders will know which data source is being used in that particular state.	On hold
The National Volume Dataset		This will be a volume dataset that we will offer for free to agencies who do not already provide their volume data to the VPP Suite. It can be used to make UDC reports or in any future reports that require volume data.	On hold



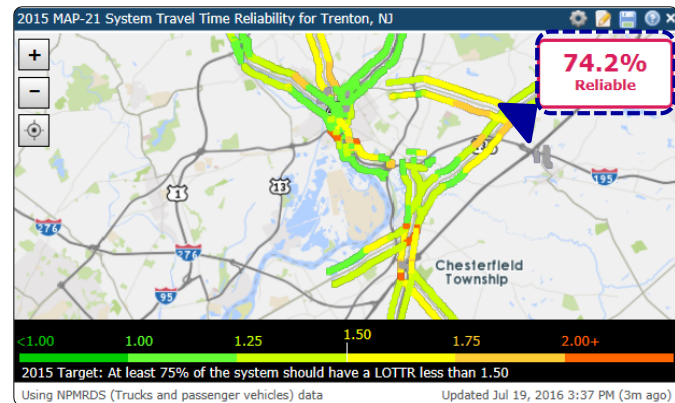
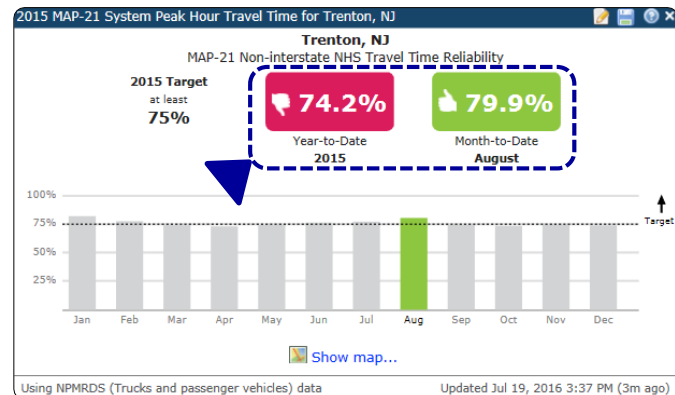
MAP-21

Dashboard/Widget Updates

MAP-21 – Dashboard Feature

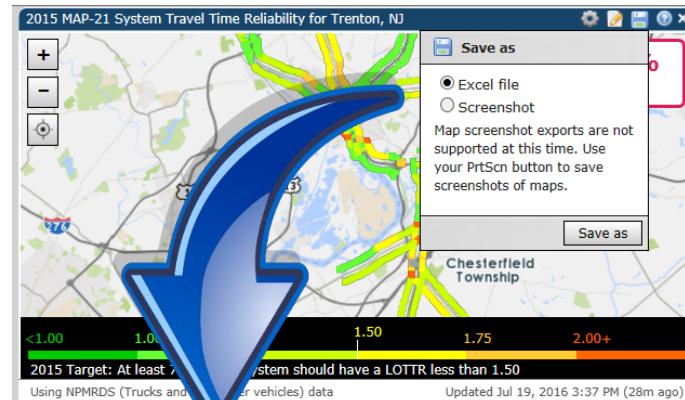
- An **Important Bug Fix** - corrects a rounding issue with target %s;
- An **Improvement** - adds a tenth of a decimal for targets and measures*

(* - in keeping with the NPRM's definition of "significant progress" as 0.1 percent improvement over the baseline)



MAP-21 – Dashboard Feature

- Export underlying data in MAP-21 maps as a csv file*



tmc	road	direction	intersection	county	miles	lottr
103+11956	ARENA DR	NORTHBOUND	CR-620/S OLDEN AVE/WELLER AVE	MERCER	0.602563	1.34375
103+11954	ARENA DR	NORTHBOUND	CR-533/WHITEHORSE MERCERVILLE RD	MERCER	0.647813	1.105263
103+11955	ARENA DR	NORTHBOUND	I-295	MERCER	0.505481	1.277778
103N11953	ARENA DR	SOUTHBOUND	I-195/CR-524/S BROAD ST	MERCER	0.118807	1
103N11955	ARENA DR	SOUTHBOUND	I-295	MERCER	0.257602	1.076923
103N11956	ARENA DR	SOUTHBOUND	CR-620/S OLDEN AVE/WELLER AVE	MERCER	0.046397	1
103P11953	ARENA DR	NORTHBOUND	I-195/CR-524/S BROAD ST	MERCER	0.46348	1
103P11956	ARENA DR	NORTHBOUND	CR-620/S OLDEN AVE/WELLER AVE	MERCER	0.023205	1.34375
103P11955	ARENA DR	NORTHBOUND	I-295	MERCER	0.202719	1.277778
103-11954	ARENA DR	SOUTHBOUND	CR-533/WHITEHORSE MERCERVILLE RD	MERCER	0.549874	1.075
103-11955	ARENA DR	SOUTHBOUND	I-295	MERCER	0.505103	1.076923
103-11953	ARENA DR	SOUTHBOUND	I-195/CR-524/S BROAD ST	MERCER	0.647813	1
103P16360	ATLANTIC AVE	NORTHBOUND	US-206	BURLING.	0.142549	1
103-16361	ATLANTIC AVE/NEW YORK AVE	SOUTHBOUND	CR-543/MAIN ST	BURLING.	0.438215	1

* - limited data shown for clarity; some formatting applied

MAP-21 – Dashboard Feature

- > Specify whether a widget shows interstate or non-interstate roads, in accordance with the NPRM

2. Select measures:

☐ Interstate System Travel Time Reliability

☐ Non-interstate NHS Travel Time Reliability

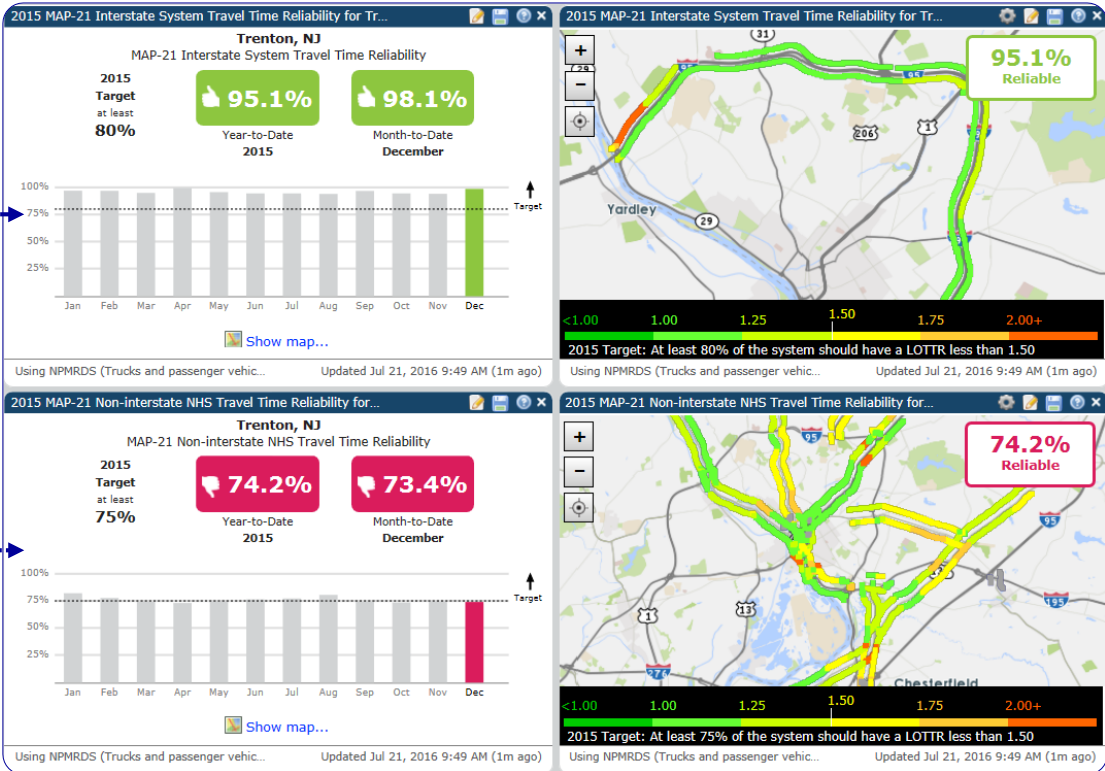
☐ Interstate System Peak Hour Travel Time

☐ Non-interstate NHS Peak Hour Travel Time

☐ Truck Travel Time Reliability

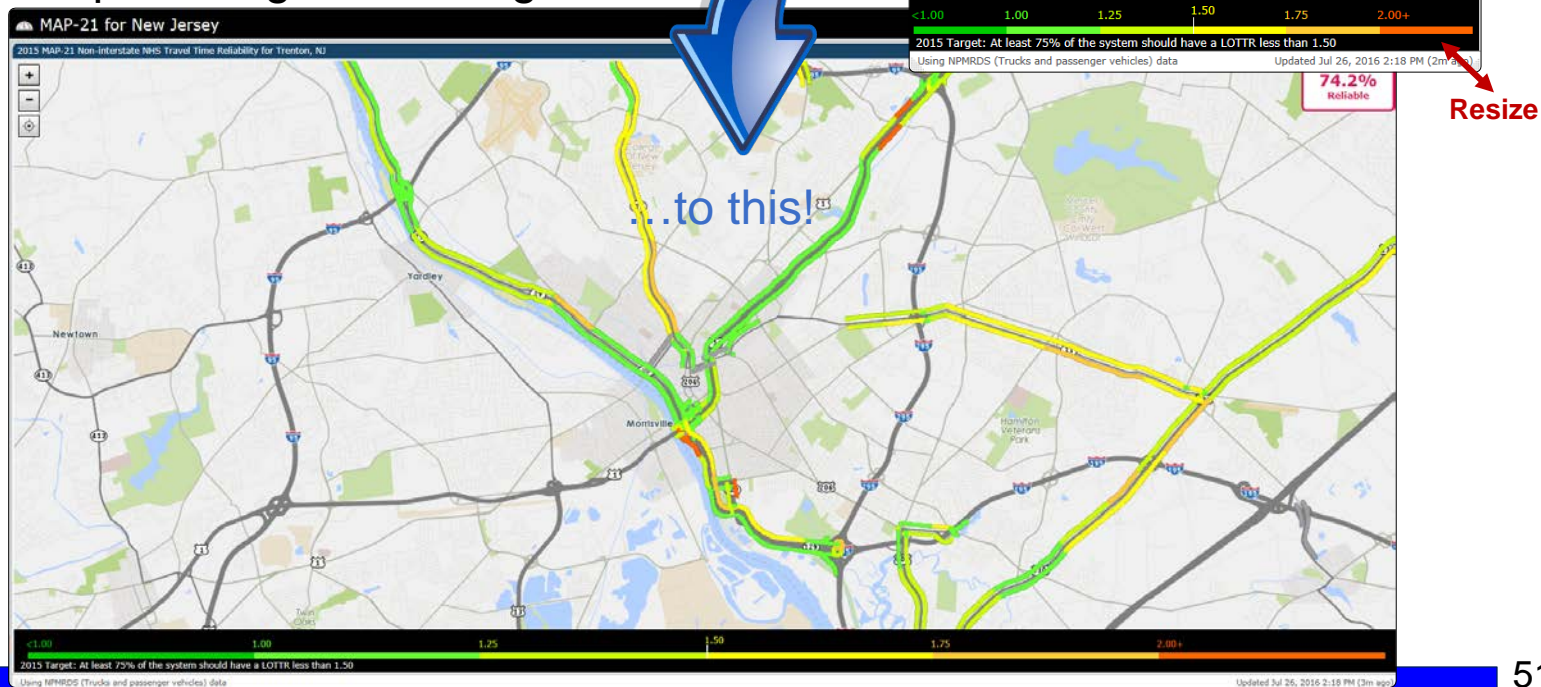
☐ Average Truck Speed

☐ Annual Hours of Excessive Delay per Capita



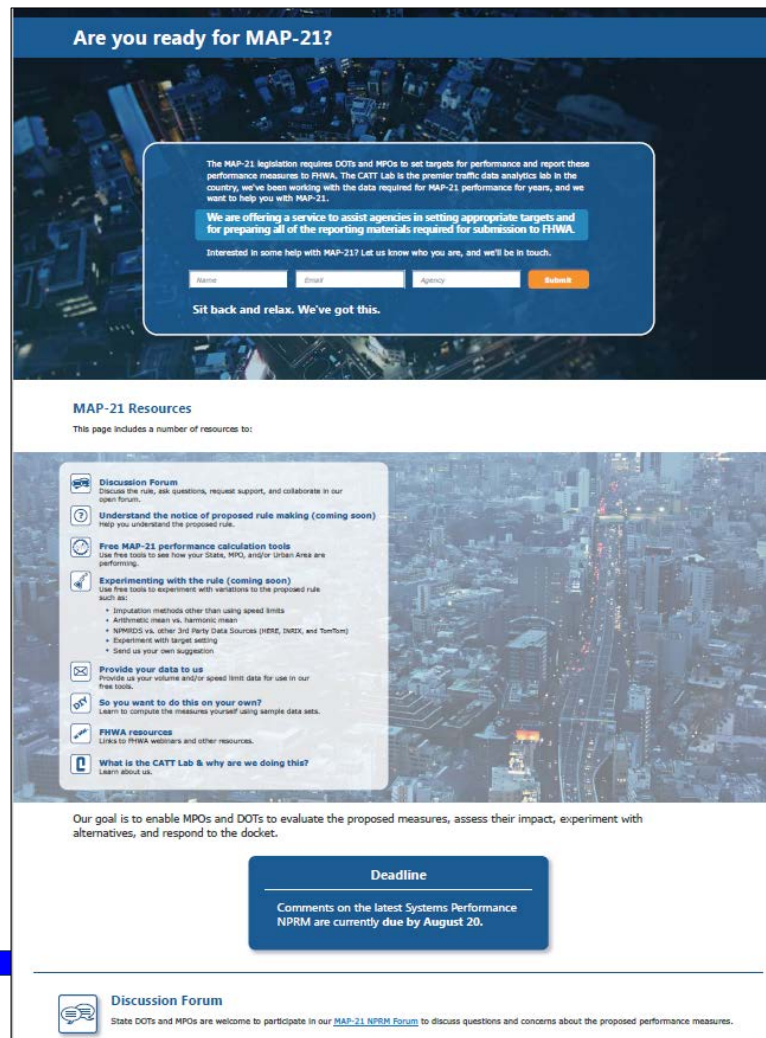
MAP-21 – Dashboard Feature

- › Resize and move Dashboard widgets
 - better use of dashboard real estate
 - Better map viewing and saving



MAP-21 – Resource Page

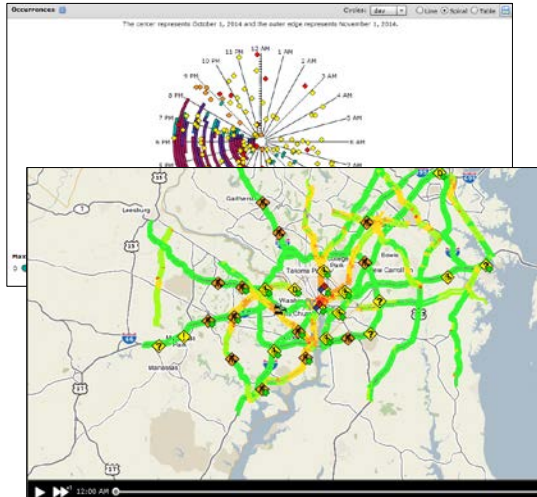
- Redesigned MAP-21 “about” page is coming soon...
 - Cleaner layout
 - Easier to navigate

The screenshot shows a website for MAP-21 resources. At the top, a blue banner asks "Are you ready for MAP-21?". Below this, a text box explains that MAP-21 legislation requires DOTs and MPOs to set performance targets and report them to FHWA. The CATT Lab is identified as the premier traffic data analytics lab in the country, having worked with the data required for MAP-21 performance for years. A service is offered to assist agencies in setting targets and preparing reporting materials. A form with fields for Name, Email, and Agency, and a Submit button, is provided. Below the form, it says "Sit back and relax. We've got this." The main section is titled "MAP-21 Resources" and states "This page includes a number of resources to:". A list of resources follows, each with an icon and a brief description: "Discussion Forum" (discuss rule, ask questions), "Understand the notice of proposed rule making (coming soon)" (help understand rule), "Free MAP-21 performance calculation tools" (use free tools to see how your State, MPO, or urban area is performing), "Experimenting with the rule (coming soon)" (use free tools to experiment with variations to the proposed rule), "Provide your data to us" (provide your volume and/or speed limit data for use in free tools), "So you want to do this on your own?" (learn to compute measures yourself), "FHWA resources" (links to FHWA webinars and other resources), and "What is the CATT Lab & why are we doing this?" (learn about us). A "Deadline" box states "Comments on the latest Systems Performance NPRM are currently due by August 20." At the bottom, a "Discussion Forum" link is provided, with a note that State DOTs and MPOs are welcome to participate in the MAP-21 NPRM Forum to discuss questions and concerns about the proposed performance measures.

Agency Input Session

Focus on New Features

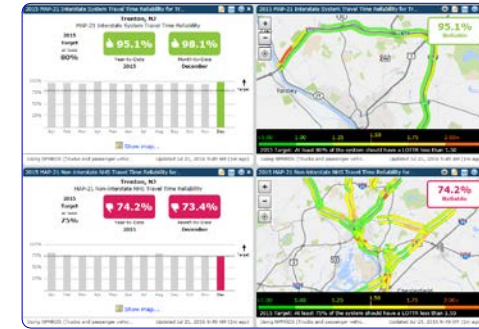
Event Data Integration



Dashboard Functionality



MAP-21



➡ Or Any Other Topics of Interest!

VPP Suite

Comparative Speed

For specific time periods of the year

Kelly McVeigh – NJDOT segue

Problem Statement

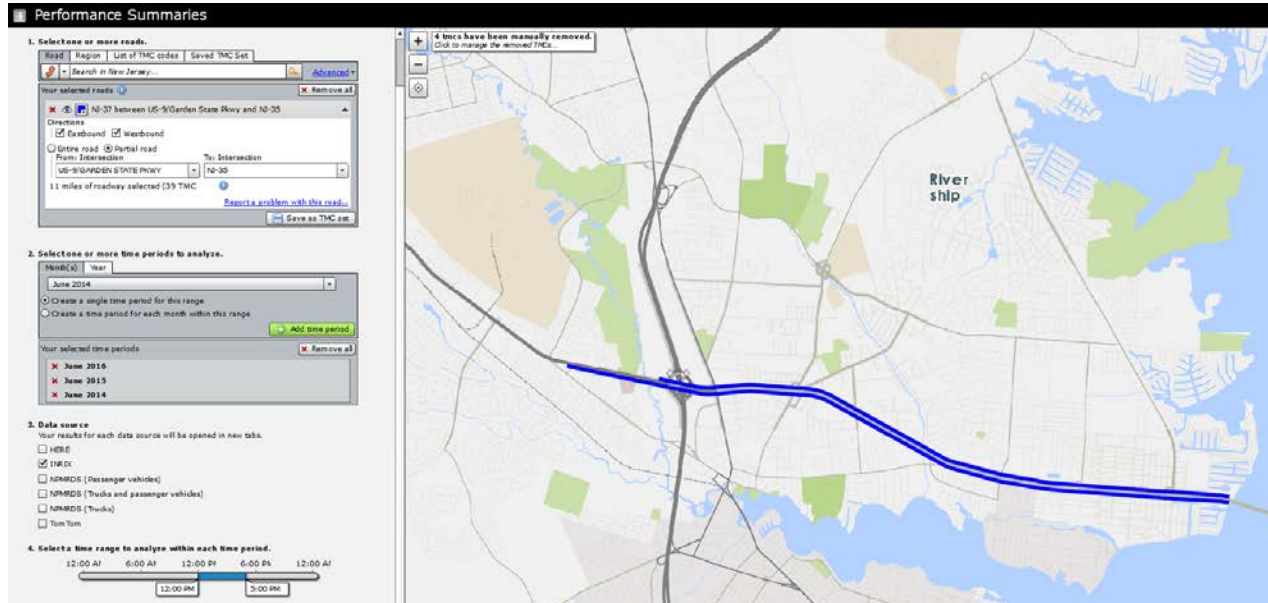
- How are current traffic conditions on a specific corridor in comparison to the same:
 1. Hour of the Day
 2. Day of Week
 - 3. Month of the Year**
- Numbers 1 and 2 are captured in the existing Comparative Speed calculation of vehicle probe data.
- Number 3 currently requires some manual collection and interpretation of data.

Example

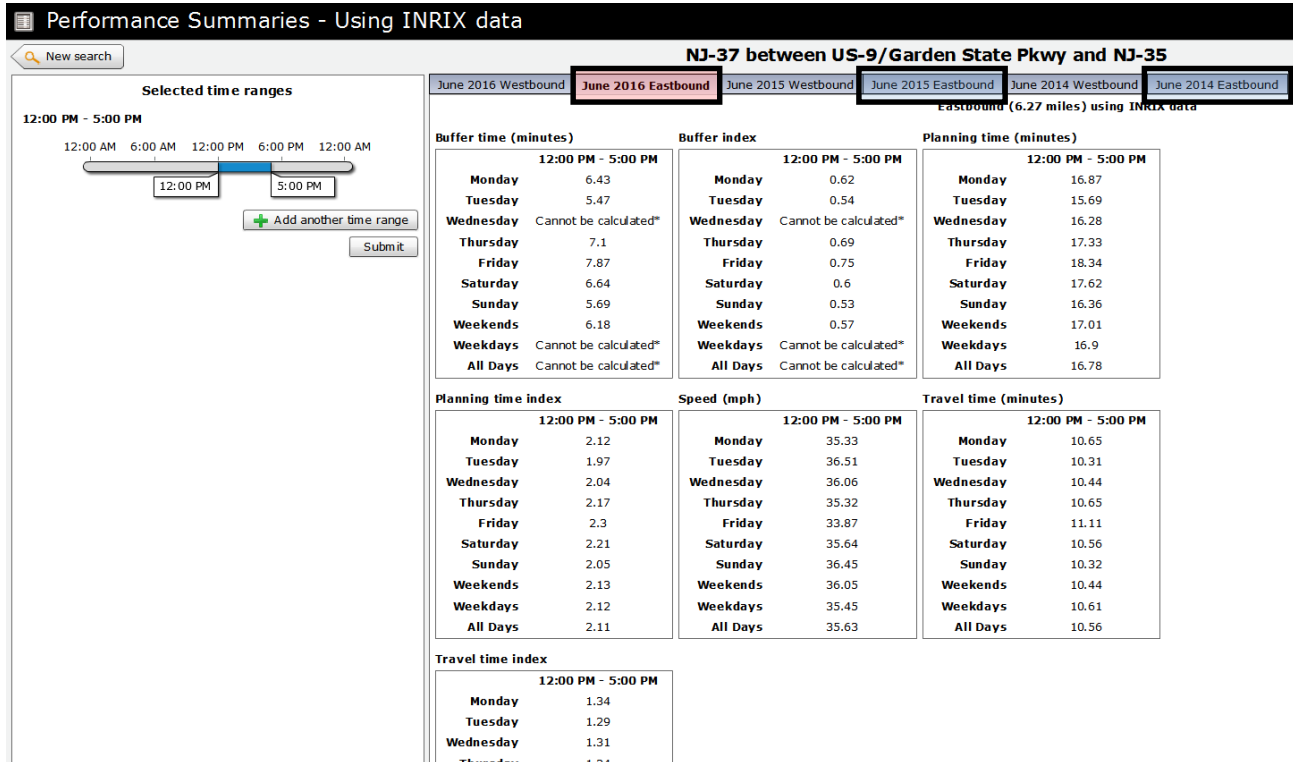
- Route NJ-37 in New Jersey is significantly impacted by seasonal traffic.
 - Summer Traffic travelling to and from the shore areas: Seaside Heights, Island Beach State Park.
- The NJDOT Advanced Arterial Management (AAM) Unit may want to know how traffic conditions compared this June (2016) to June from previous years (2014 and 2015).
 - This could help determine how well the traffic signal timings are performing from a standpoint of vehicle speed and corridor travel time.
- ❖ It is understood to use caution when monitoring Vehicle Probe Data signalized arterials. **NJ Report #13, November 2015 (NJ-37 INRIX Validation).

Use of VPP Suite

- Performance Summaries Tool



Use of VPP Suite - Continued



Use of VPP Suite - Continued

2016 Eastbound

Speed (mph)

12:00 PM - 5:00 PM	
Monday	35.33
Tuesday	36.51
Wednesday	36.06
Thursday	35.32
Friday	33.87
Saturday	35.64
Sunday	36.45
Weekends	36.05
Weekdays	35.45
All Days	35.63

2015 Eastbound

Speed (mph)

12:00 PM - 5:00 PM	
Monday	35.79
Tuesday	36.12
Wednesday	35.87
Thursday	35.94
Friday	34.42
Saturday	36.58
Sunday	36.1
Weekends	36.34
Weekdays	35.65
All Days	35.83

2014 Eastbound

Speed (mph)

12:00 PM - 5:00 PM	
Monday	36.36
Tuesday	36.41
Wednesday	35.32
Thursday	35.94
Friday	34.97
Saturday	36.9
Sunday	36.12
Weekends	36.46
Weekdays	35.82
All Days	36.01

Real-Time Application

Speed and Travel Time Table						
Corridor	Differential	Current	Historic	Differential	Current	Historic
NJ-37 Eastbound between US-9/Garden State Pkwy a...	↓ 2	34 mph	36 mph	0	11 min	11 min

Based on Hour of Day and Day of Week back to 2011

Using INRIX data

Updated Jul 27, 2016 1:43 PM (26s ago)

June Historic Speed (2011 – 2015) = **36.2 mph**

AAM June Historic Speed (2014 – 2015) = **34.55 mph**

****Tuesdays 1:00 PM – 2:00 PM**

VPP Suite – Upcoming meetings

Coalition Activities/Presentations/Meetings	Date	Location
VPP Agency Project Team Webcast	Sept 2016	Web meeting
VPP Suite User Group Webcast	Oct 2016	Web meeting
TISPTC Meeting	Fall 2016	TBD

Questions/Other Topics

