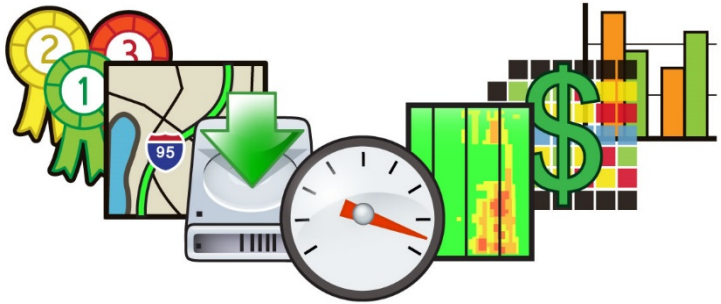
VPP Suite User Group



April 21, 2016

I-95 CORRIDOR COALITION

Housekeeping Items

- Please call Joanna at 610-662-5569 for difficulties with the web or audio application
- This is a **virtual meeting experience**
  - **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**
- All materials & contact information will be available to participants after the webcast

Welcome & Introductions

Karen Jehanian
For the I-95 Corridor Coalition

Jesse Buerk
DVRPC

VPP Suite User Group Meeting Participants

#	Agency	Name(s)	#	Agency	Name(s)
1	Baltimore Metropolitan Council	Ed Stylc, Victor Henry, Eileen Singleton	10	NJIT	Branislav Dimitrijevic
2	DVRPC	Jesse Buerk	11	NJTPA	Keith Miller, Sutapa Bhattacharjee
3	Florida DOT	Kim Samson (AECOM)	12	Pennsylvania DOT	Mike Crowley, Scott Benedict, Ted Lucas (KMJ), Bob Davis (Pennoni)
4	Fort Meade Region (MD)	Jean Friedberg	13	Richmond Regional MPO	Greta Ryan
5	FHWA	Rich Taylor	14	South Carolina DOT	Dipak Patel
6	MWCOG/NCRTPB	Wenjing Pu	15	Virginia DOT	Jun Jungwook, Mena Lockwood, Ram Venkatanarayana, Sanhita Lahiri
7	North Carolina DOT	Kelly Wells, Mike Bruff, Christopher Ricks,	16	UMD CATT Lab	John Allen, Kaveh Farokhi, Michael Pack, Drew Lund, Bob Winick (Motion Maps)
8	North Carolina State University	Tai-jin Song, Ishtiak Ahmed, Thomas Chase	17	I-95 Corridor Coalition	Trish Hendren, Patty Reich
9	New Jersey DOT	Simon Nwachukwu, Sudhir Joshi, Neha Galgali, Tineen Howard, Amir Ibrahim, Ira Levinton	18	KMJ Consulting (Coalition Support)	Karen Jehanian, Joanna Reagle

Please confirm that your line is muted *6

Thank you!

Meeting Overview

Jesse Buerk
DVRPC

Today's Meetings

Time	Topic
10:00am - 11:00am	**VPP Suite User Group Webcast** • What's Hot - MAP-21 Widgets & INRIX O-D Data • VPP Suite Features - Deployment Status & Agency Input • User Group Activities Update - Probe Data Analytics Forum & Focus Group
11:00am – noon	**VPP Suite Bottleneck Tool Webcast** • Introduction to the new process • Explanation on how to use new features • Sample graphics from the new tool

VPP Suite User Group Agenda

Time	Topic	Speaker
10:00am - 10:10am	Welcome & Introductions Agenda & Meeting Overview	Karen Jehanian, For the I-95 Corridor Coalition Jesse Buerk, DVRPC
10:10am - 10:20am	What's Hot • MAP-21 Widgets • INRIX O-D Data	John Allen, UMD CATT Lab All agencies
10:20am - 10:50am	VPP Suite Features • Deployment Status • Agency Input	John Allen, UMD CATT Lab All agencies
10:50am - 10:55am	User Group Activities • VPP Suite Probe Data Analytics Forum Update • Focus Group Update	John Allen, UMD CATT Lab
10:55am – 11:00am	Meeting Wrap Up	Karen Jehanian, For the I-95 Corridor Coalition

MAP-21 NPRM Coordination

- Official version should be in the Federal Register - April 22nd
- FHWA webinar - April 21st (1:00 PM to 3:30 PM)
- Opportunities to discuss and plan commenting:
  - TISPTC Meeting on April 26th
  - Partners (using Archived Operations Data) web-based conference call (beginning of May)
  - I-95 Corridor Coalition webcast (after the Partners call)

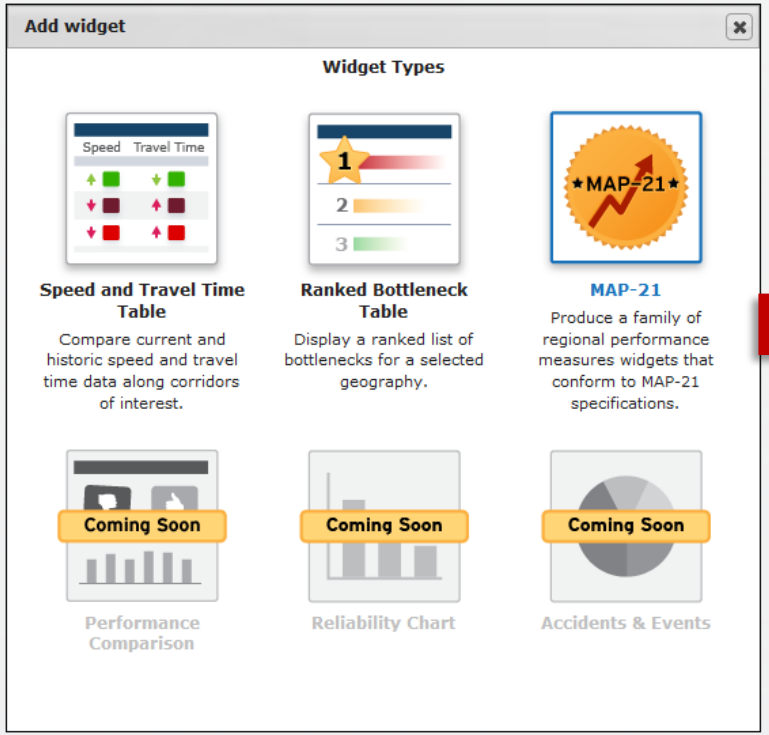
Please keep an eye out for correspondence from Zoe, the Partners, the I-95 Corridor Coalition or KMJ Consulting, Inc.

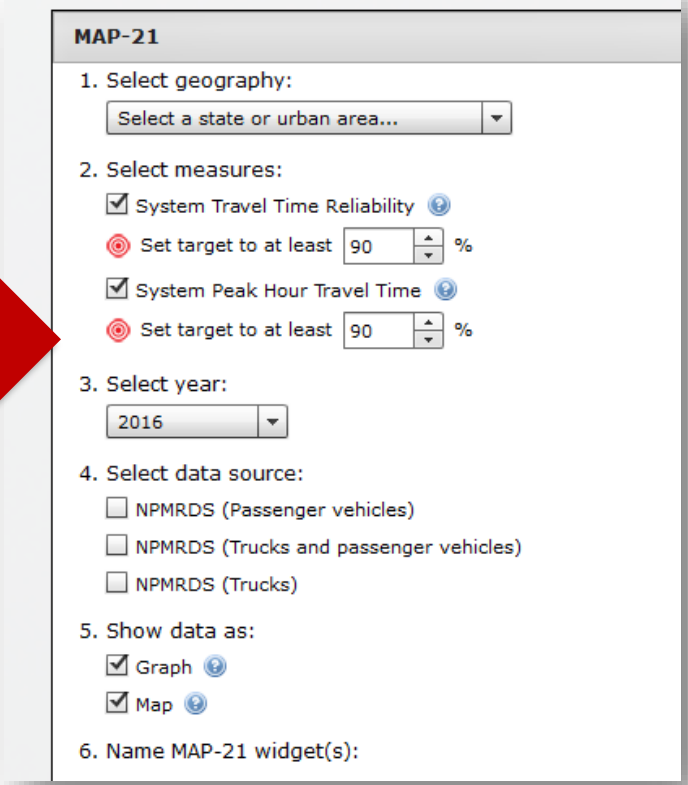
What's Hot!

- MAP-21 Widgets
- INRIX O-D data

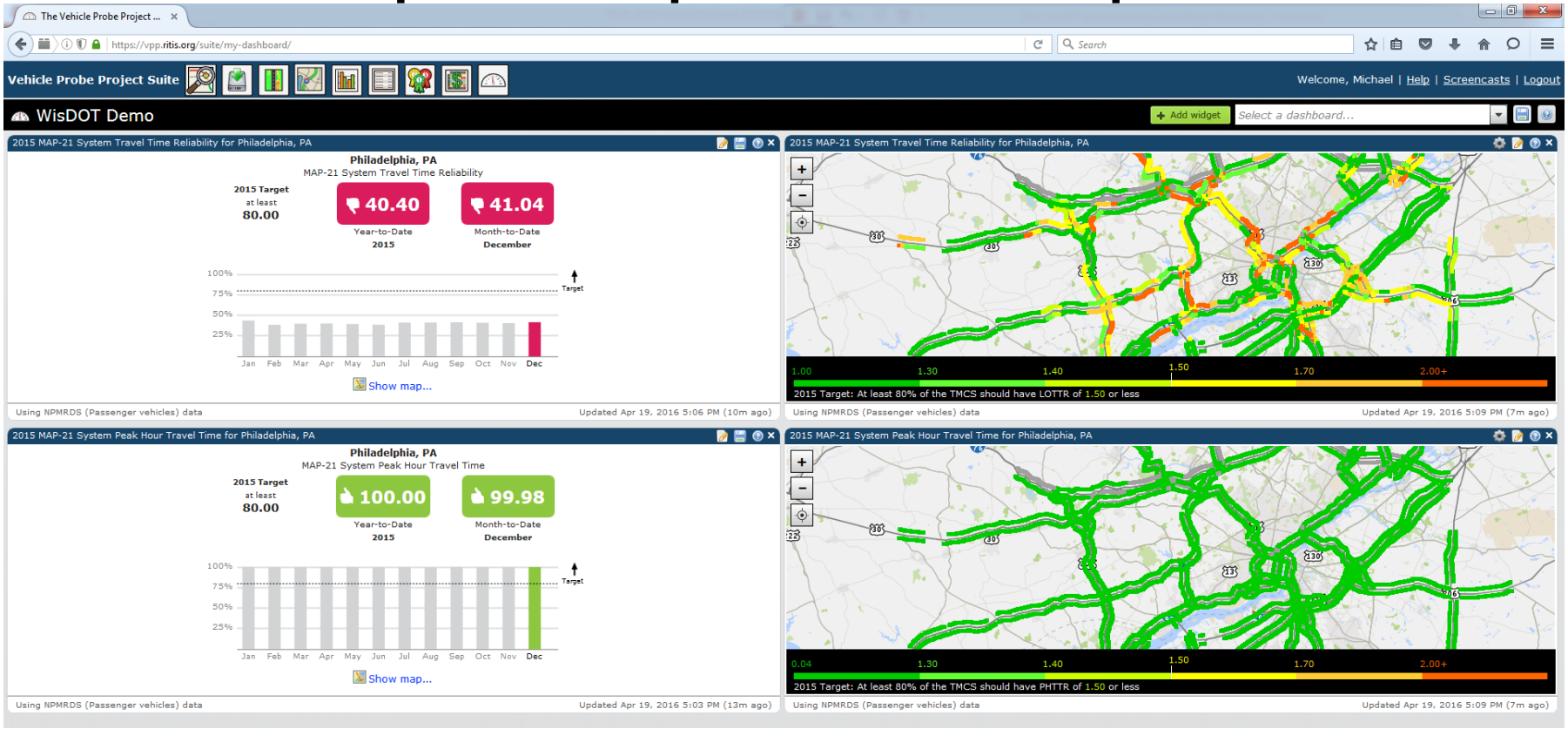
John Allen
UMD CATT Laboratory

Sys Performance for the NPRM



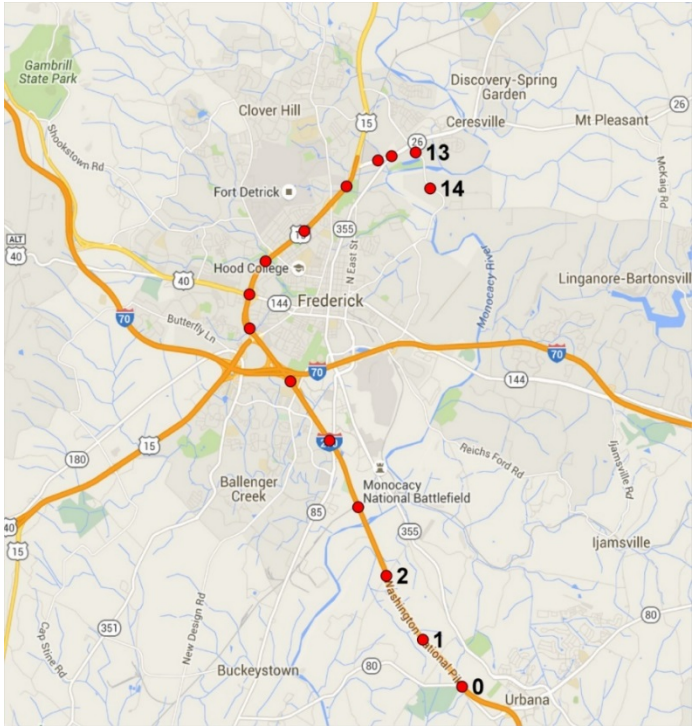


Maps, Graphs, and Exports



INRIX O-D Data Analysis

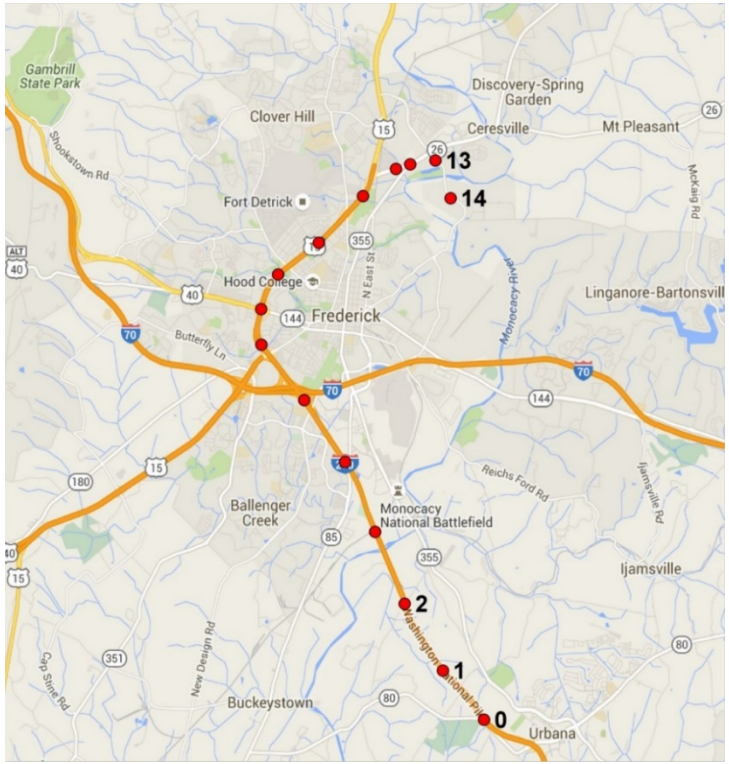
- MD SHA has purchased 4-months of trip Origin-destination data for exploration
- We've been playing with it for a few weeks now.

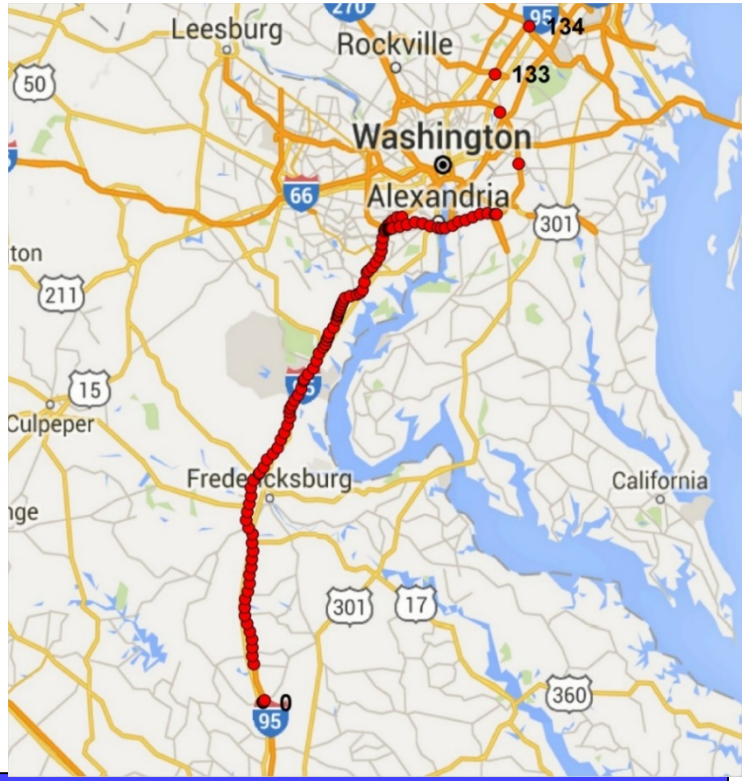


Each waypoint has:

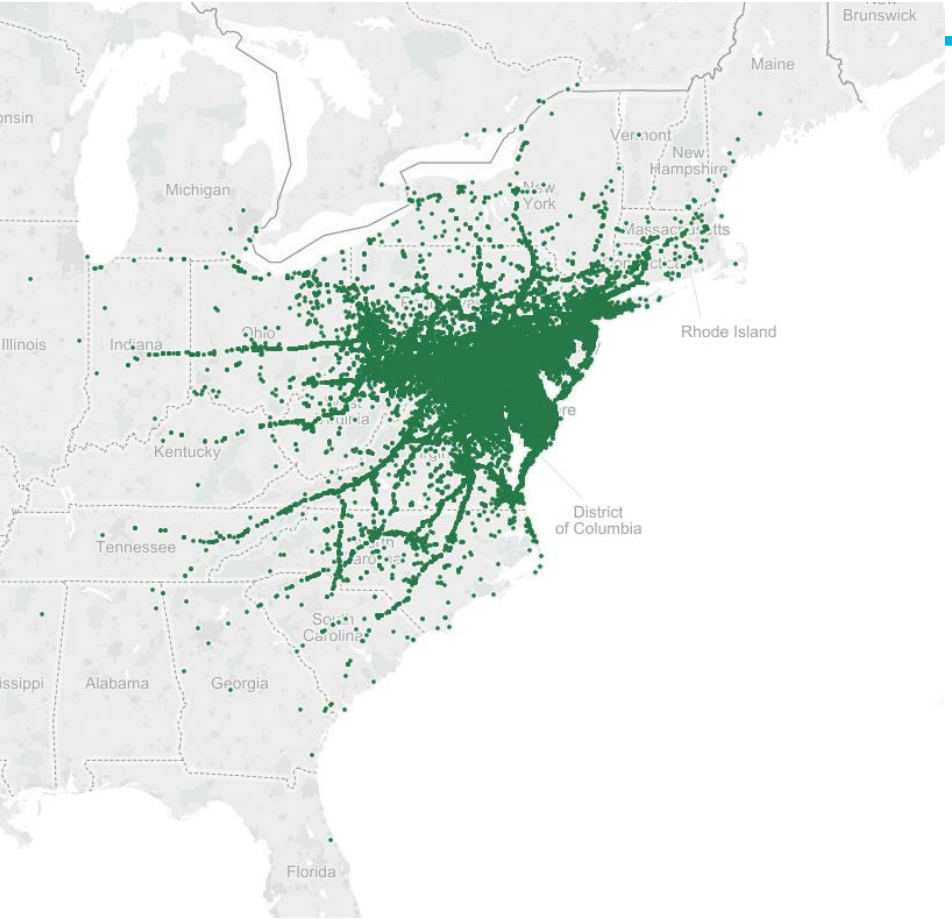
- Order ID (0, 1, …, n)
- Latitude and Longitude
- Time stamp (with sec)

Waypoints for a Single Trip





Trip records (July 2015)



4.9 M trips (1 GB)

- Average distance: 14 miles
- Average duration: 29 min
- Average waypoints: 20

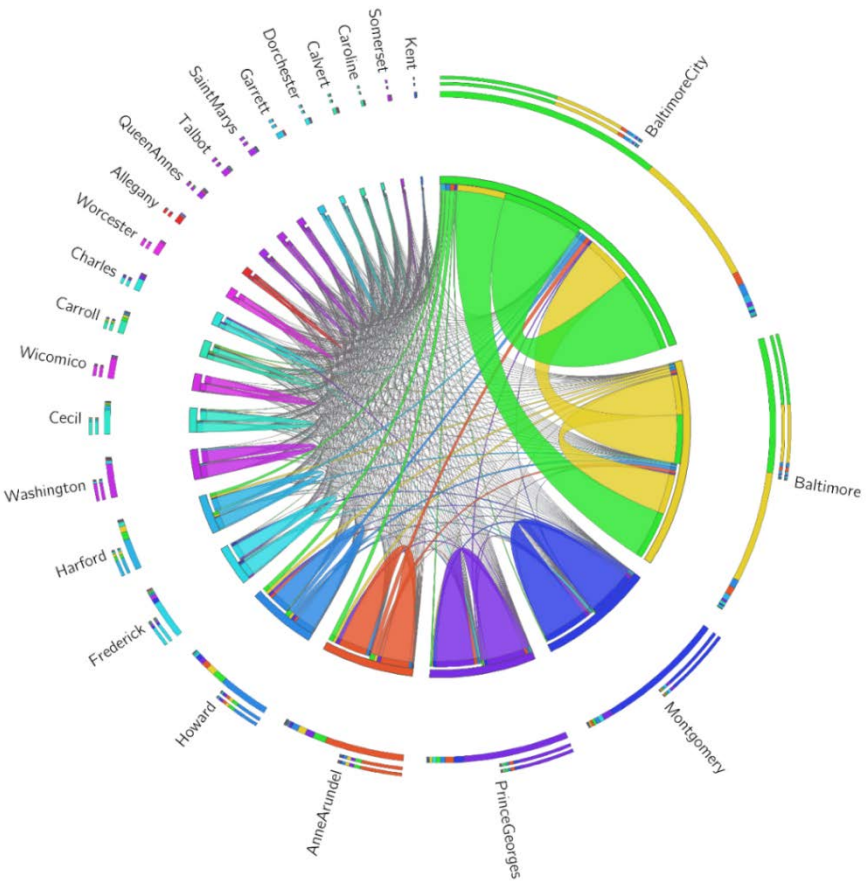
Trip Waypoints (July 2015)

Waypoint Locations

100 M waypoints (7 GB)

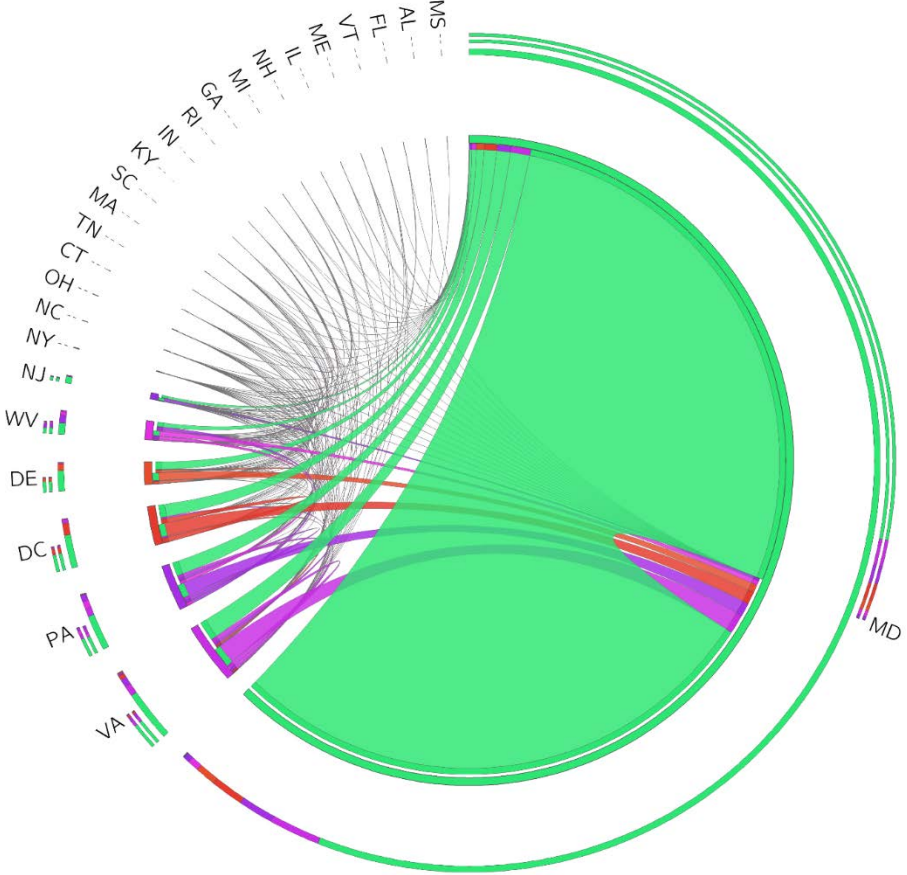
- Average distance: 0.9 miles
- Average duration: ~1.5 min

County OD matrix for MD-MD trips (July 2015)



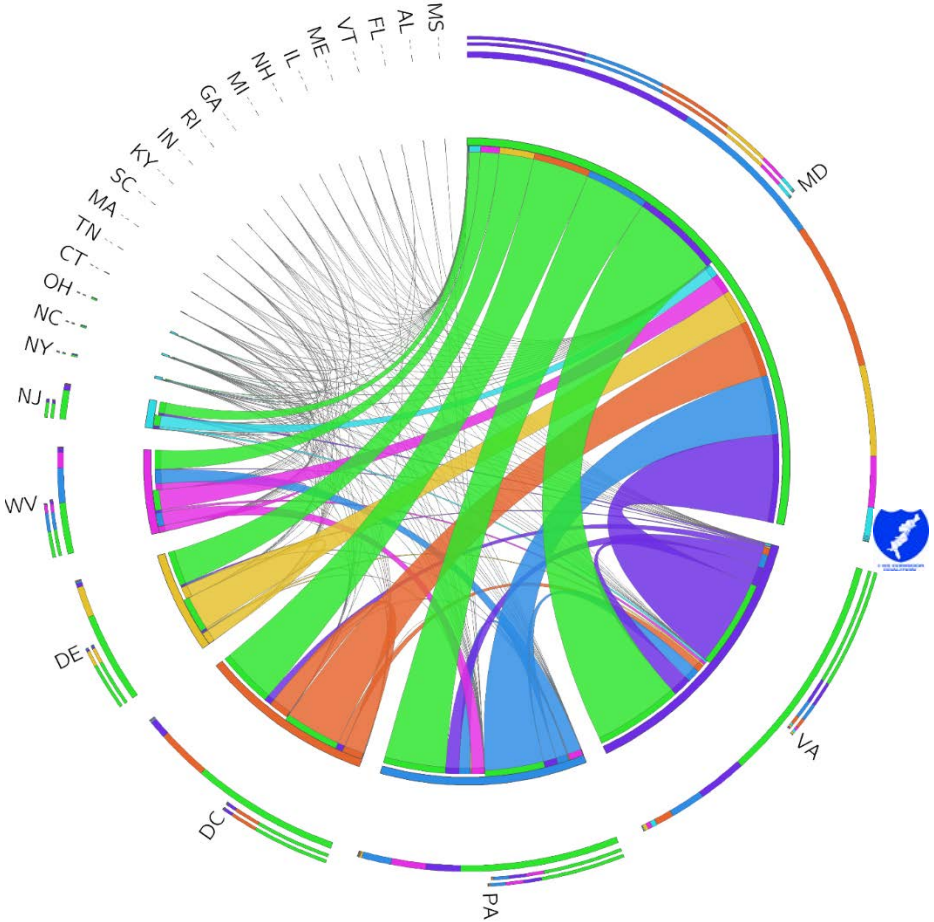
- Focus: OD of trips that originate and end in MD
- Most trips are within the same county

State OD matrix for MD-other state trips (July 2015)



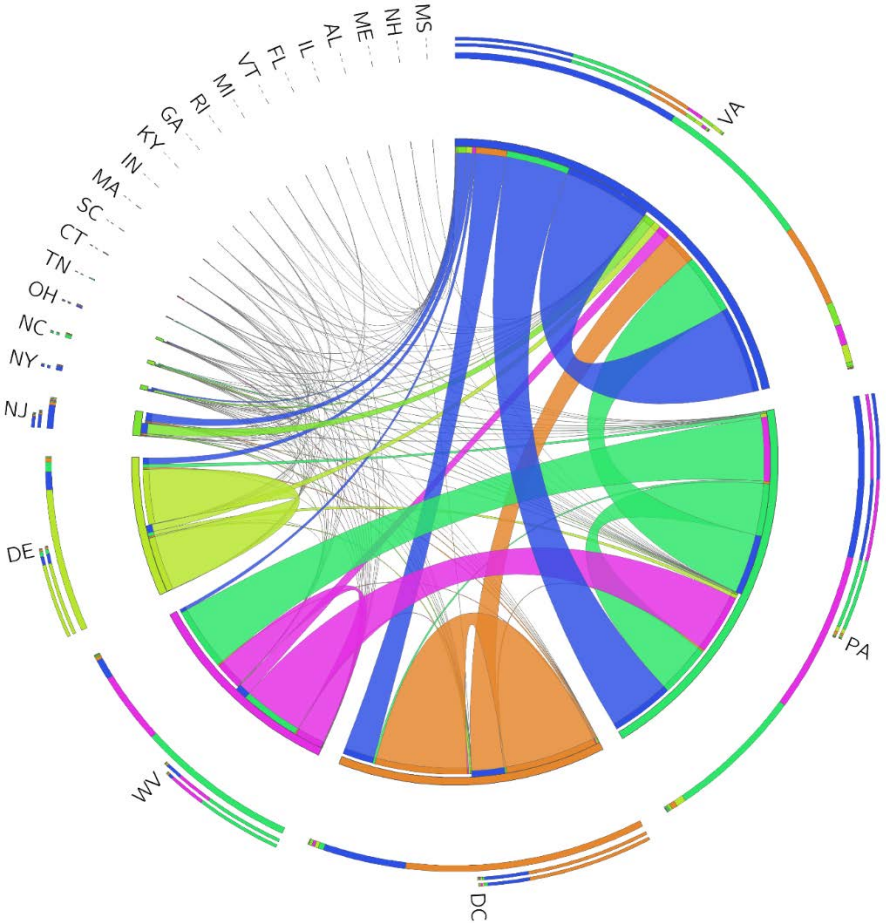
- Most trips originate and end in MD
- Other links are thus less represented

State OD matrix visuals (July 2015)



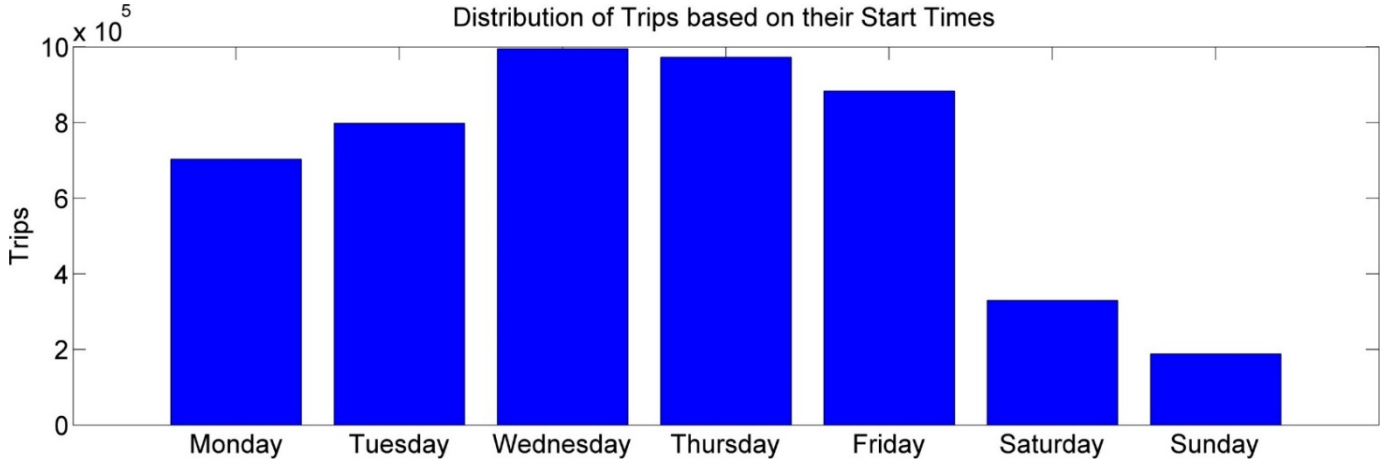
- MD-MD trips are filtered out
- Focus: traffic between MD and other states

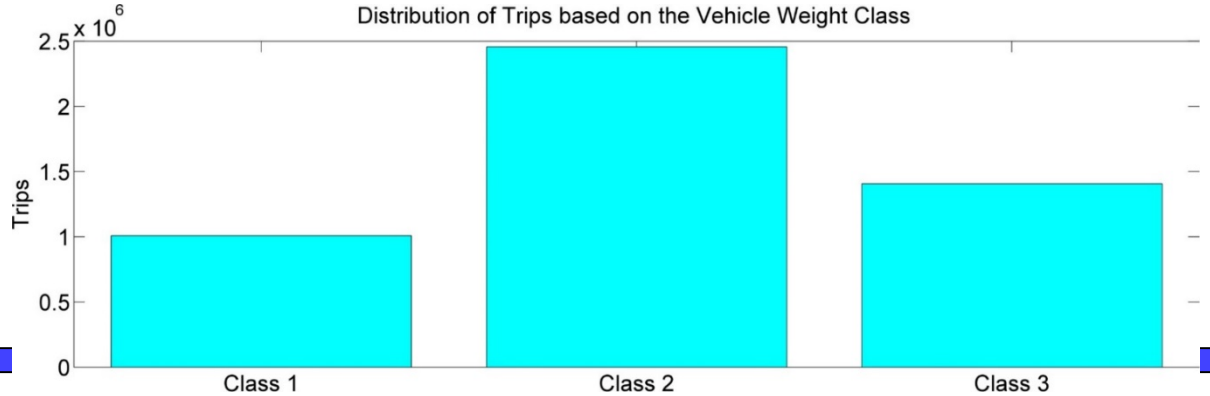
State OD matrix visuals (July 2015)



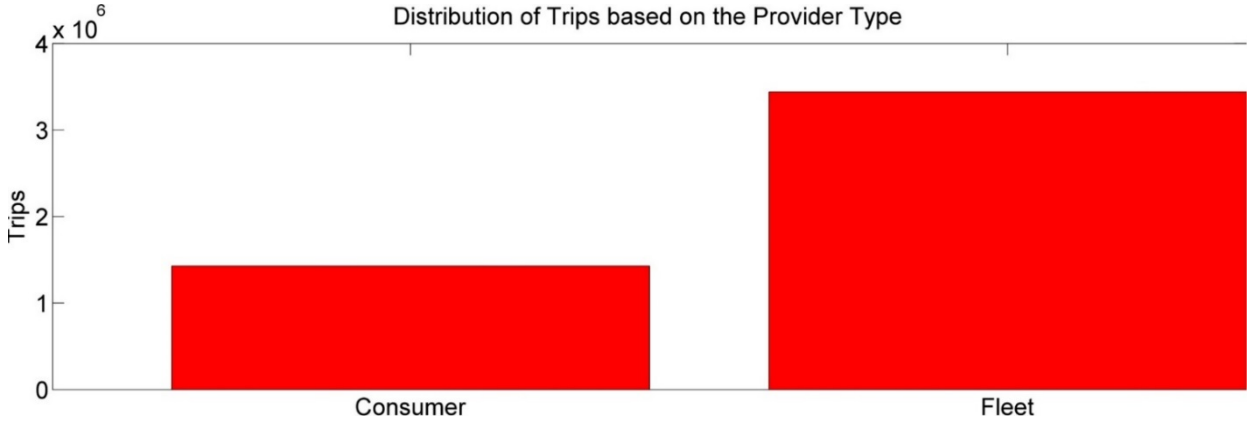
- Trips with origins/destinations in MD are filtered out
- Focus: OD of trips that traverse MD

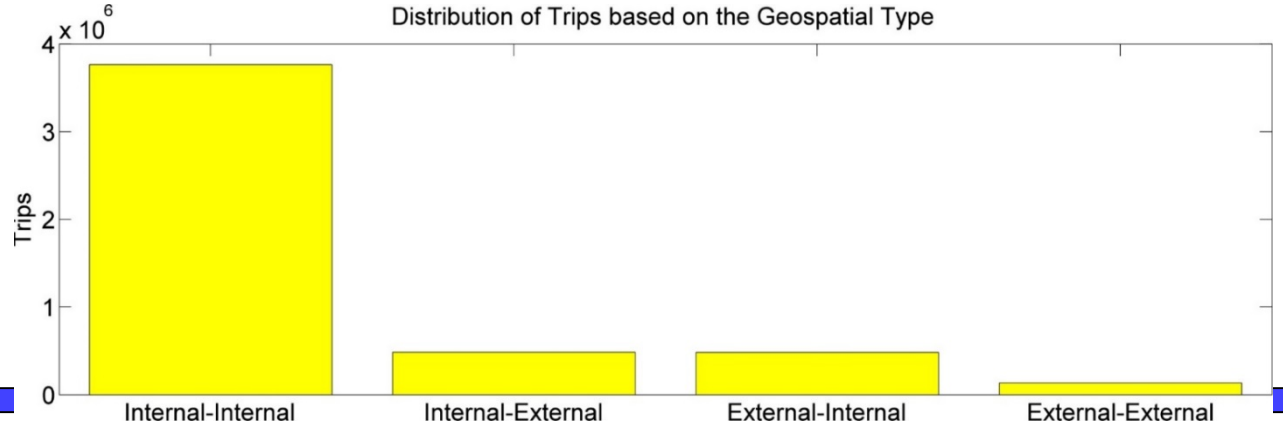
Descriptive statistics (July 2015)





Descriptive statistics (July 2015)





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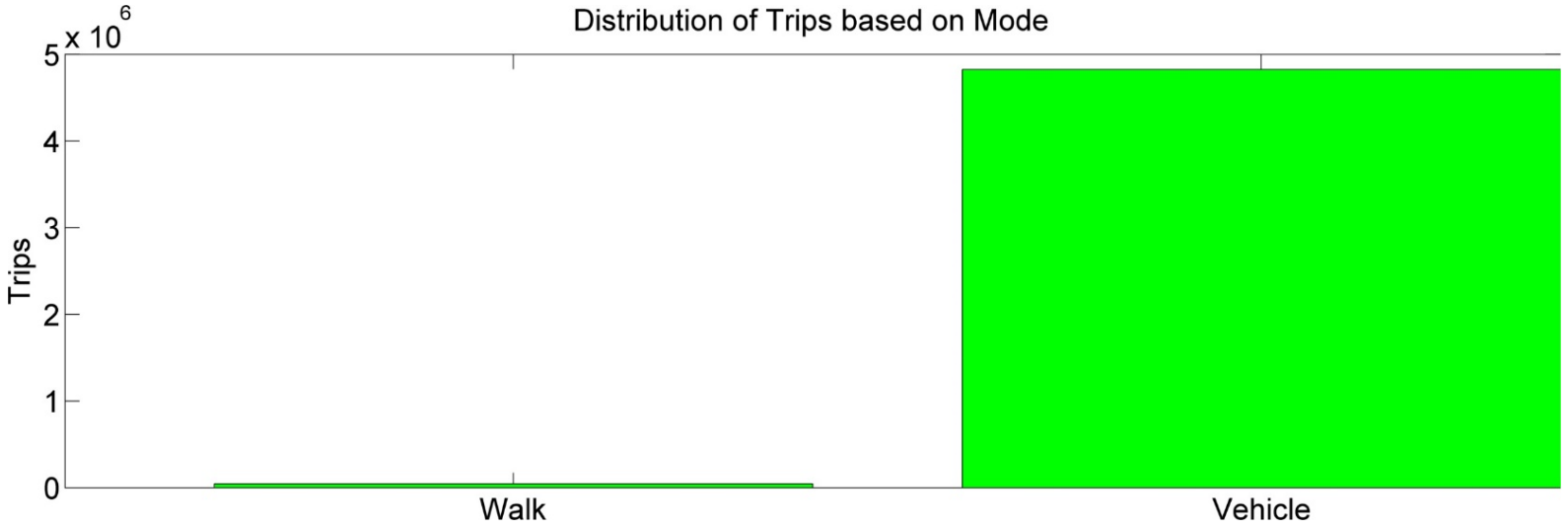


VPP Suite Features

- Deployment Status
- Agency Input

John Allen
UMD CATT Laboratory

Deploy Status Table – Recent Deploys

In the Works (the latest features, functions and fixes for the VPP Suite) — April 22, 2016

Category	Tool(s)	Description	Deployment Status
Recent Deploys			
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 datasources 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		A **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

Deploy Status Table – Scheduled for Deployment

In the Works (being developed for the VPP Suite)			April 22, 2016
Scheduled for Deployment			
Backend Hadoop Architecture (Raptor)		Greatly improves storage and tool processing speeds, allowing for faster results, longer date ranges and larger geographies.	2nd Q 2016
Bottleneck Algorithm/Ranking Tool		An updated algorithm and additional graphing features will significantly improve the usability of the Bottleneck Ranking tool.	2nd Q 2016
TomTom data		TomTom data will be integrated into the Suite in the same way that HERE, INRIX, and the NPMRDS are integrated into the Suite.	2nd 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.	3rd 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)
MAP-21 widgets		Dashboard-style widgets that make it easy to produce MAP-21 systems performance reports. Results are displayed on interactive maps and graphs. They display actual performance compared to state, MPO, and/or federal targets.	Pending release of NPRM/Final Rule
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

Deploy Status Table – Potential New Features

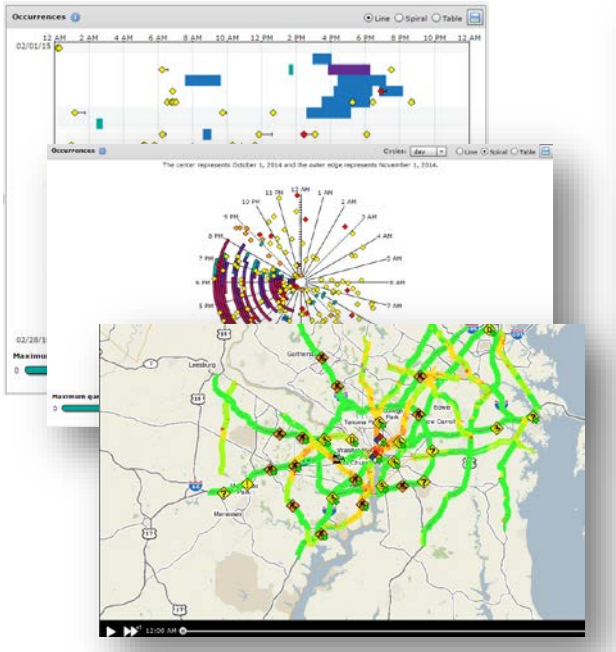
In the Works (potential features & functions for the VPP Suite)			April 22, 2016
Potential New Features			
Origin-Destination Data Analytics		This new feature would allow users to analyze OD data from INRIX within the Suite. Various visualizations, analytics, and summary statistics will be provided.	**TBD**
Sub-segment data storage and retrieval		This significant enhancement will allow users who choose to purchase XD or sub-segment granularity within the Suite. This requires both front-end and back-end software development.	**TBD**
In-App User Feedback		Integrated survey and feedback forms that allow users to provide instant, detailed feedback from within the app (no email required). Examples of feedback might include bug reporting, enhancement request, "how do it," etc.	**TBD**
Color threshold selection in UDC reports		Similar to the color threshold selection in Trend Map and Congestion Scan, change the color-coding of each cost in the User Delay Cost app by using slider bars (and choose your own color palate).	**TBD**
Multivendor support in the Dashboard		Other tools in the suite already allow you to choose between data sources. This will bring that selection to the Dashboard.	**TBD**
Travel-time Monitoring Report		Develop a reporting protocol w/form that emulates NCDOT's Fortify reporting process	**TBD**
Email report notification for long duration queries		This feature will allow users to submit a query for any and all analytics, walk away (or log out) from the suite, and simply wait for their query to complete via email notification. When an email is received, the user will be able to click on a link, and their query results will appear.	**TBD**
Scheduling Reoccurring Reports		For users that frequently run the "same" type of report, this feature will allow users to schedule certain types of reports and downloads to automatically run: every X-days, hours, or minutes; the first day of each month; every 2nd Wednesday; etc.).	**TBD**
Data quality filtering in other tools		The massive data downloader already allows users to filter data based on quality indicators provided by the data vendors. This new features would allow users to request that the Suite filter out data of low quality for certain reports.	**TBD**
Data quality/availability visualizations throughout the suite		The User Delay Cost tool already allows users to visualize data availability indicators. This new feature would allow users visualize both data quality and data availability in all other tools within the Suite.	**TBD**
More dashboard widgets (safety, reliability, trends, etc.)		The current offering of widgets is relatively small (travel times, bottlenecks, MAP-21 reports, etc.) We are looking to add more widgets related to safety data, weather, trends, etc. We are also soliciting ideas from Coalition members.	**TBD**
Experienced travel times		Current travel times in the Suite are "instantaneous" travel times. This enhancement would enable the calculation of user experienced travel times, which is significantly more processor intensive), and we would then allow users to choose which travel time they want to view: experienced or instantaneous.	**TBD**
Graphics showing percent of time at certain speeds		For any given TMC or set of TMCs, this graph would show what percent of time the segments were reporting a given speed over any date/time range. For example: 65% at 55MPH, 20% @ 50MPH, 10% @ 25 MPH, etc.	**TBD**

Deploy Status Table – Potential New Features (continued)

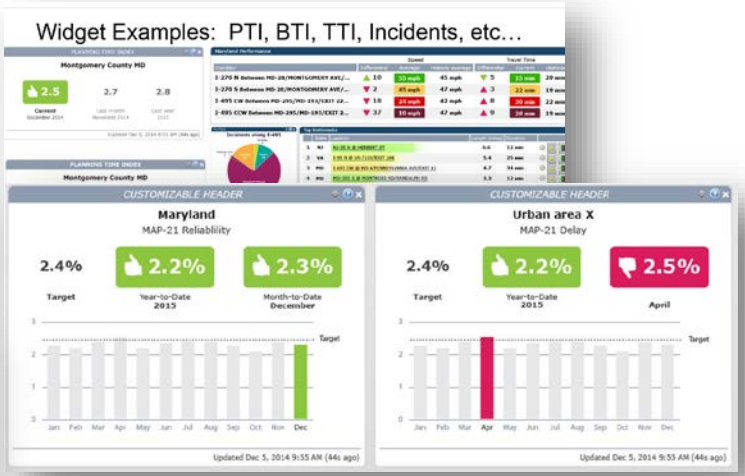
In the Works (potential features & functions for the VPP Suite - cont'd.)			April 22, 2016
Potential New Features (cont'd.)			
Integrating Treeversity features into the Suite (bottleneck ranking)	TreeVersity2	The TreeVersity2 application has the capability to show users how congestion, bottlenecks, and travel times have changed from one time period to another (Month X compared to Month Y, Year X to year Y, etc.) and how those changes are reflected in various geographies (nation compared to state compared to MPO compared to county compared to city). This enhancement would enable certain TreeVersity2 functionality within the Suite.	TBD
Shockwave plots		This animated map would allow users to visualize how bottlenecks grow and shrink over time in various locations.	TBD
Mile marker filters		For agencies that can provide their mile-marker data in appropriate formats, this feature will add mile marker filters to the road selection alongside the existing intersection filters.	TBD
More comprehensive caching of queries		This enhancement will allow our servers to store the results of your common queries for longer periods of time. Therefore, if you run the same report every day, you won't have to wait as long for your results to be returned.	TBD
Front-end Modernization Effort		This significant enhancement effort will rework front-end components to be more in-line with current web standards--enabling mobile analytics on certain devices, removing dependence on the Flash player, and revamping outdated color-schemes and layouts.	TBD
Enhanced support on 4K and higher resolution displays		Many users are updating their monitors to ultra-high-definition (UHD), 4K, or other resolutions that are higher than HD. This enhancement would handle scaling and visibility at these higher resolutions more gracefully--ensuring the best possible user experience for all display types.	TBD
Finer grained zooming on the map		This enhancement will allow users to zoom in further on the map to allow for finer analysis, especially with sub-segment resolutions becoming available.	TBD
"My Reports" list (i.e. query history or bookmarks)	Report Archive	This feature will enable users (and potentially agencies) to save commonly used query parameters in a "my reports" or "report history" section of the Suite for quick reuse.	TBD
Blue-tooth sensor data		This data enhancement would make it easier for agencies with significant Bluetooth sensors to integrate that data as another probe data source in the Suite.	TBD
Integrating volume data from real-time detectors		This feature will make it possible for agencies to integrate their real-time volume sensors into the Suite for use in the User Delay Cost reports and other features requiring volume data.	TBD
Hourly Statewide Traffic Speeds		This new feature would allow users to view statewide traffic speeds on all primary routes (e.g.; what are all the speeds on preselected routes for 8 AM? For 5 PM?)	TBD

Agency Input

Event Data Integration



Dashboard Functionality



MAP-21 Working Group

Committed to ★MAP-21★ Coming Soon

Any Other Topics of Interest?

VPP Suite User – Peer Exchange

- **Share your experience with the Suite!**
  - Share an experience
  - Ask a question of your peers
  - Discuss a potential use you are considering
- **Hit the basics**
  - Why? What was the question you are trying to answer?
  - Who? Who made this request? Who is going to use the results?
  - What? How did you approach the question? What VPP Suite tool did you use?
  - What next? What did you learn? (positives and negatives)
- **We all learn from each other!**

User Group Updates

- VPP Suite Probe Data Analytics Forum
- Focus Group

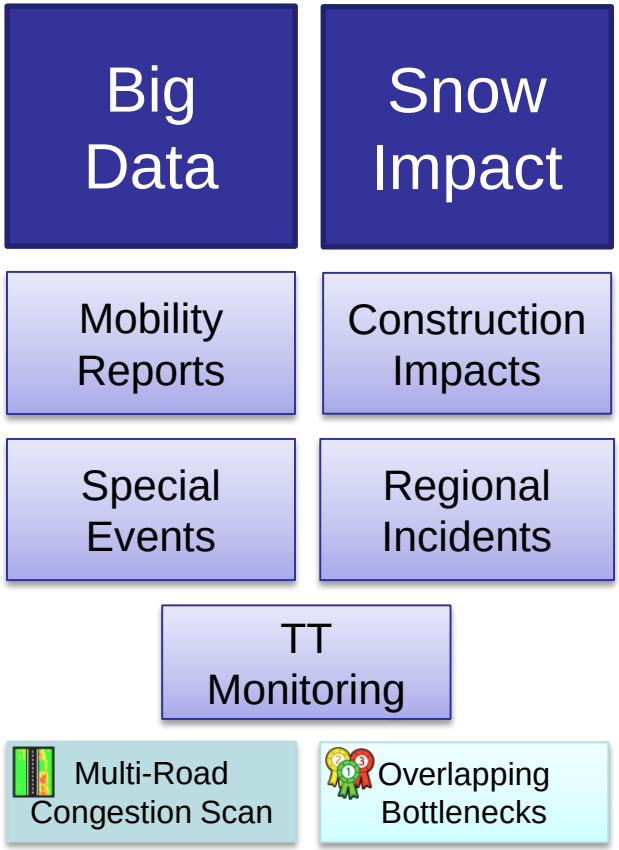
John Allen
UMD CATT Laboratory

Probe Data Analytics Forum

3,792

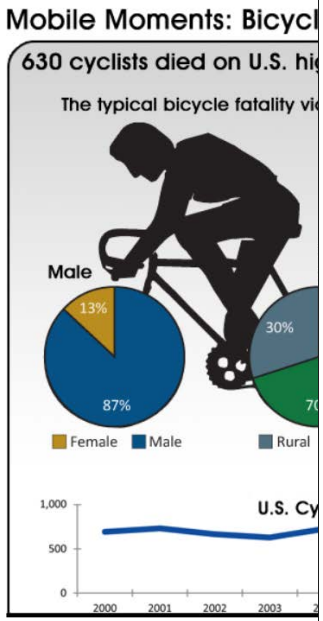
views

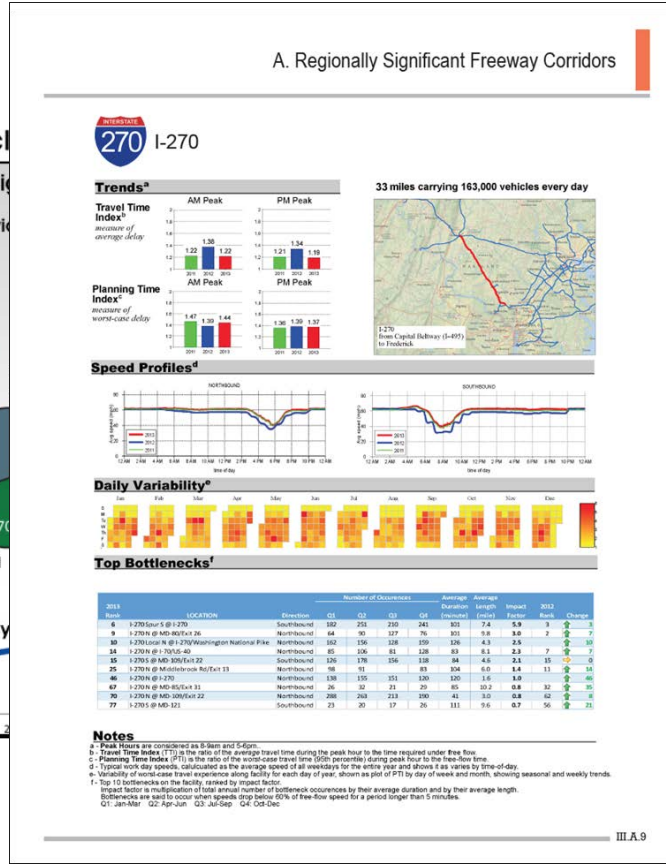
http://i95coalition.org/forum/



Focus Group Performance Summary Report Templates

- Meeting # 2 on 03.15.2016
- Goal: review reporting examples and choose elements/layouts that work
- Next Step is to develop layouts/mock-ups for corridor-level summaries:
  - Public
  - Practitioners
- Will share with full user group for feedback





Next Steps & Meeting Wrap-up

Karen Jehanian
For the I-95 Corridor Coalition

Next User Group Meeting:

Coming in July 2016

Look for Info in upcoming VPP newsletter

Contact Information

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VPP Suite questions/feedback

vpp-support@ritis.org

Thank you!