

# STATE **FREIGHT** ADVISORY COMMITTEE

*presented to*

*Members of the Committee*

*presented by*

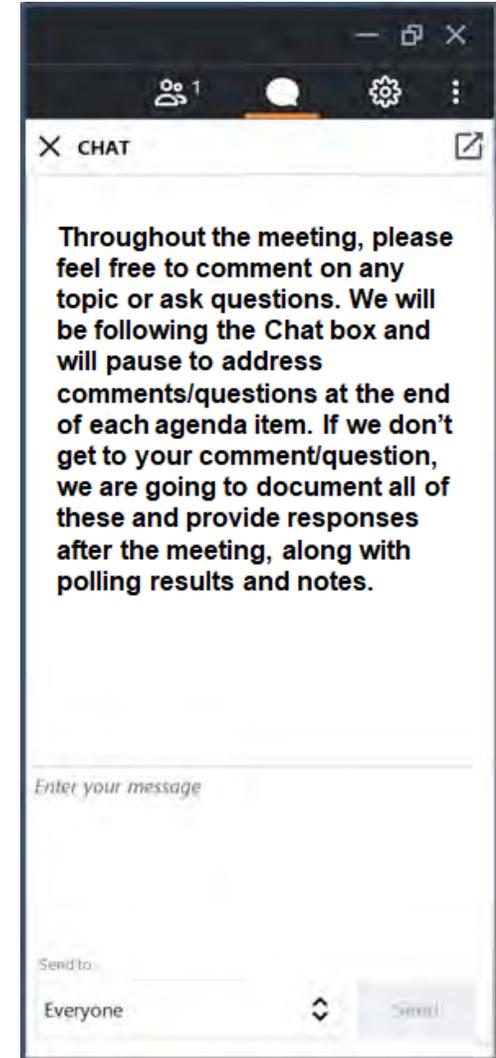
*MDOT*

MARCH 3, 2021



# MEETING LOGISTICS

- Keep your computer/phone on mute
- Please keep your video off until/unless you are presenting
- Use Teams Chat window to share questions/thoughts
- We will pause at the end of each agenda topic/presentation to address comments/questions as time allows
- For Chat comments we do not address, we will document all comments and provide responses in meeting notes



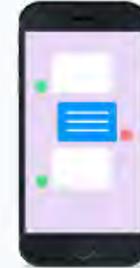
# HOW TO JOIN

## Web



- 1 Go to **PolleEv.com**
- 2 Enter **CAMBRIDGESYS310**

## Text



- 1 Text a **CODE** response to **22333**



*WORD CLOUD | POLLEV.COM | CAMBRIDGESYS310*

**What is the most important thing  
about freight to you?**





# What is the most important thing about freight to you?

# ***WELCOME***

*Jeffrey Hirsch*

*MDOT Assistant Secretary*

*Office of Transportation Policy Analysis & Planning*



STATE **FREIGHT** ADVISORY COMMITTEE

# MEMBERS

Tradepoint Atlantic

Amazon

Community College of Baltimore

Maryland DOC, DOE, DOL, DOP, DOT

Weller Development

The Terminal Corporation

Aberdeen Proving Ground

Virginia DOT

Cowan Systems, LLC

Consumer Brands Association

FHWA

WVDOT

SYSCO Eastern Maryland

Norfolk Southern

FMCSA

Delaware DOT

D.M. Bowman, Inc

CSX

Baltimore City

Pennsylvania DOT

Ports America Chesapeake

Maryland and Delaware Railroad

BMC

FedEx

Canton Railroad Company

Calvert-St. Mary's MPO

Belt's Transportation Services

Aviation Facilities Company Management, LLC

CAMPO

UPS

Baltimore Development Corporation

HEPMPO

Wallenius Wilhelmsen Line

Baltimore Industrial Group

Salisbury/Wicomico

W.R. Grace Inc.

Maryland Motor Truck Association

WILMAPCO

Perdue Agri Business

Specialized Carrier and Rigging Association

MWCOG



# ***GOALS AND OBJECTIVES***





# GOALS AND OBJECTIVES

## Goal of the State Freight Advisory Committee (SFAC)

To **represent** the **freight community at large** and **advise** the **State** on freight-related priorities, policies, issues, projects, and funding needs in order to advance freight Goals and Objectives in Maryland.



# GOALS AND OBJECTIVES

## Goal of the State Freight Advisory Committee (SFAC)

To **represent** the **freight community at large** and **advise** the **State** on freight-related priorities, policies, issues, projects, and funding needs in order to advance freight Goals and Objectives in Maryland.

- » **Support State Freight Plan Update.**
- » **Provide feedback on freight project prioritization.**
- » **Provide guidance on freight program activities.**
- » **Communicate freight experience and bottlenecks.**
- » **Advise on next generation supply chain operations and how the State can support industry.**
- » **React to Freight Performance and advise on solutions to address bottlenecks.**



# ***INTRODUCTION AND MISSION STATEMENT***

*Michelle D. Martin*  
*MDOT Deputy Director*



STATE **FREIGHT** ADVISORY COMMITTEE

# INTRODUCTION AND MISSION

## » **Role of the State Freight Advisory Committee:**

1. Advise the State on freight-related priorities, policies, issues, projects, and funding needs;
2. Serve as a forum for discussion of state transportation decisions affecting freight mobility;
3. Communicate and coordinate regional priorities with other organizations (for example, among state, regional and local planning organizations);
4. Promote the sharing of information between the private and public sectors on freight issues;
5. Participate in the development of the State freight plan, and other relevant freight plans;
6. Provide recommendations for Critical Urban and Rural Freight Corridors, which should be done as part of the State freight plan process; and
7. Review and provide guidance on freight-related performance measures and performance data.



# ***FREIGHT PLAN UPDATE***



STATE **FREIGHT** ADVISORY COMMITTEE

# FREIGHT PLAN OVERVIEW

- » The State Freight Plan update will focus on:
  - Meeting the latest **federal freight planning requirements** of MAP-21, FAST Act, or beyond
  - Updating a **comprehensive overview of freight movement** in Maryland
  - Expanding insights into the latest freight **supply chain** or **technology** influences
  - Identifying **policy needs and strategies** to ensure the efficient movement of freight in Maryland
  - Identifying freight **project priorities** and related **investment plans** for a five-year forecast period
  - Be a **collaborative** effort amongst freight stakeholders as well as amongst state, regional and local partners
  - Include **coordination** with existing/ongoing plans and resources



# FAST ACT REQUIREMENTS

1. Freight System Trends, Needs, and Issues
2. Freight Policy, Strategy, and Performance Measure Evaluations
3. Freight Network
4. Implementation Alignment with National Freight Policy Goals
5. Innovative Technologies
6. Asset Preservation and Improvement Strategies
7. Freight Bottlenecks, Mobility Issues, and Mitigation Strategies
8. Freight Congestion and Mitigation Strategies
9. Freight Investment Plan
10. Freight Advisory Committee Consultation

*\* Pending any changes due to Reauthorization*



# PURPOSE/VISION



» **Purpose:** To examine existing and projected conditions, and identify policy positions, strategies, and freight projects to improve freight movement efficiency and safety.

» **2017 Freight Plan Vision:**

***Freight travels freely and safely through an interconnected network contributing to economic viability and growth for Maryland businesses.***

A safe and reliable freight system leads to lower costs of goods that consumers and companies need for good quality of life and successful enterprise. Ensuring that the network of highways, railways, waterways, and airports are ready to handle the current level and anticipated growth of goods movement is a priority of the Maryland Department of Transportation (MDOT).





# TASK DETAILS

- » Peer Assessment & State Freight Plan Outline (Note 2017 Plan outline below)
  - Introduction
  - Multimodal Goods Movement Network
  - Goods Movement and the Economy
  - Goods Movement Strategic Direction
  - Tracking Performance
  - Congestion Measurement and Bottleneck Strategies
  - Critical Freight Corridors
  - Freight Financial Plan
  - Innovation and Technology Opportunities
  - Freight and Asset Management
  - Truck Parking
  - Implementing the Plan
  - List of Acronyms
  - Glossary
  - Appendices



# TASK DETAILS

- » Maryland's Freight Network, Existing Conditions & Performance Trends,
  - Jason's Law Truck Parking
  - Primary Highway Freight System (PHFS)
  - Critical Urban Freight Corridors (CUFC)
  - Critical Rural Freight Corridors (CRFC)
  - Multimodal Networks and Facilities
  - Freight Industry and Supply Chain Insights / Maryland Supply Chain Analytics
  - Freight Technology Coordination (ITS, CAV, TSMO)
  - Freight Transportation Performance Measures (TPM) and current/future assessments
  - Freight Economic Trends
  
- » **Milestone 1:** Visioning with Goals/Objectives and Performance Measures (Spring 2021)
  
- » Identify Needs and Issues
  - Project needs statewide by mode
  - Policy and programmatic needs statewide
  - Operational needs and issues (i.e., TSMO solutions)
  - Technology/Connected and Automated Vehicle and Electric Vehicle needs and issues



# TASK DETAILS

- » Prioritize Projects and Program Identification
- » **Milestone 2:** Projects and Programs (Summer 2021)
- » Freight Investment Plan
- » State Freight Plan and Implementation
  - Statewide Freight Vision, Goals, and Objectives
  - Statewide Policy Needs, Priority Projects, and Freight Program/Planning Strategies
  - Freight Operations Needs (e.g., TSMO/CAV priorities)
  - Freight Financial and Investment Planning, including NHFP resources
  - Unfunded Needs Listing
- » **Milestone 3:** Draft Plan Development (late 2021)
- » **Milestones 4-5:** Final Plan Reviews and Federal Approval (throughout 2022) MDOT will work toward achieving final FHWA approval by no later than November 20, 2022.



# MILESTONE SCHEDULE



# STAKEHOLDER OUTREACH

- » State Freight Advisory Committee (SFAC) – March and September meetings, or more if needed.
- » Metropolitan Planning Organizations (MPOs) – Quarterly meetings and at key milestones
- » Regional Stakeholders – Meetings at key milestones, or as appropriate
- » FHWA – Briefings at key milestones
- » MDOT Freight Roundtable – Quarterly meetings
- » Others – Upon request



**2017 Freight Vision:** Freight travels freely and safely through an interconnected network contributing to economic viability and growth for Maryland businesses.





**What is missing from the 2017 Freight Plan Vision?: Freight travels freely and safely through an interconnected network contributing to economic viability and growth for Maryland businesses.**

# FREIGHT PLAN GOALS

2040 Maryland Transportation Plan Goals	2017 Strategic Goods Movement Plan Goals
 <p>Ensure a Safe, Secure, and Resilient Transportation System</p>	<p>Improve the safety and security of goods movers, the public at large, transportation assets, and cargo</p>
 <p>Facilitate Economic Opportunity and Reduce Congestion in Maryland through Strategic System Expansion</p>	<p>Maintain and improve Maryland's economic competitiveness</p>
 <p>Maintain a High Standard and Modernize Maryland's Multimodal Transportation System</p>	<p>Maintain and improve the performance of Maryland's multimodal freight system</p>
 <p>Improve the Quality and Efficiency of the Transportation System to Enhance the Customer Experience</p>	<p>Maintain and enhance the service experience for users of Maryland's multimodal freight system</p>
 <p>Ensure Environmental Protection and Sensitivity</p>	<p>Support environmental stewardship</p>
 <p>Promote Fiscal Responsibility</p>	
 <p>Provide Better Transportation Choices and Connections</p>	<p>Support the vitality of Maryland's communities</p>







# Open question: What would you change or add to the goals?

# *FREIGHT PRIORITIES*

**What are your freight priorities?**



# What are your freight priorities?

*STATE OF THE PRACTICE  
COVID SUPPLY CHAIN  
PUBLIC SECTOR  
AND  
INDUSTRY PERSPECTIVES*



# ***COVID SUPPLY CHAIN: PUBLIC SECTOR***

*Heather Murphy, Director, MDOT Office of Planning and Capital Programming*

*Mark Crampton, MDOT Assistant Secretary of Operations*



# COVID SUPPLY CHAIN: PUBLIC SECTOR

- » We are recovering.
  - Revenues: Down \$350 million FY20
  - Offset by CARES Act
  - Port of Baltimore: Cargo volumes bottomed out in May and June.
  - BWI Marshall Airport cargo operations in receiving medical supplies and PPE.
  - Howard Street Tunnel expansion funding (\$125 million)
  - \$3 billion in funds for freight in the 2021-2026 Consolidated Transportation Program



# COVID SUPPLY CHAIN: PUBLIC SECTOR

## FREIGHT ORIGINATING AND TERMINATING IN MARYLAND\*

METHOD FOR MOVING FREIGHT	TOTAL VALUE (MILLIONS)	TOTAL TONNAGE (THOUSANDS) SATISFIED
Air	\$7,433	103
Other**	\$60,162	6,405
Pipeline	\$8,005	26,553
Rail	\$13,662	35,503
Truck	\$304,289	203,652
Water	\$1,580	7,019
All Freight	\$395,132	279,235

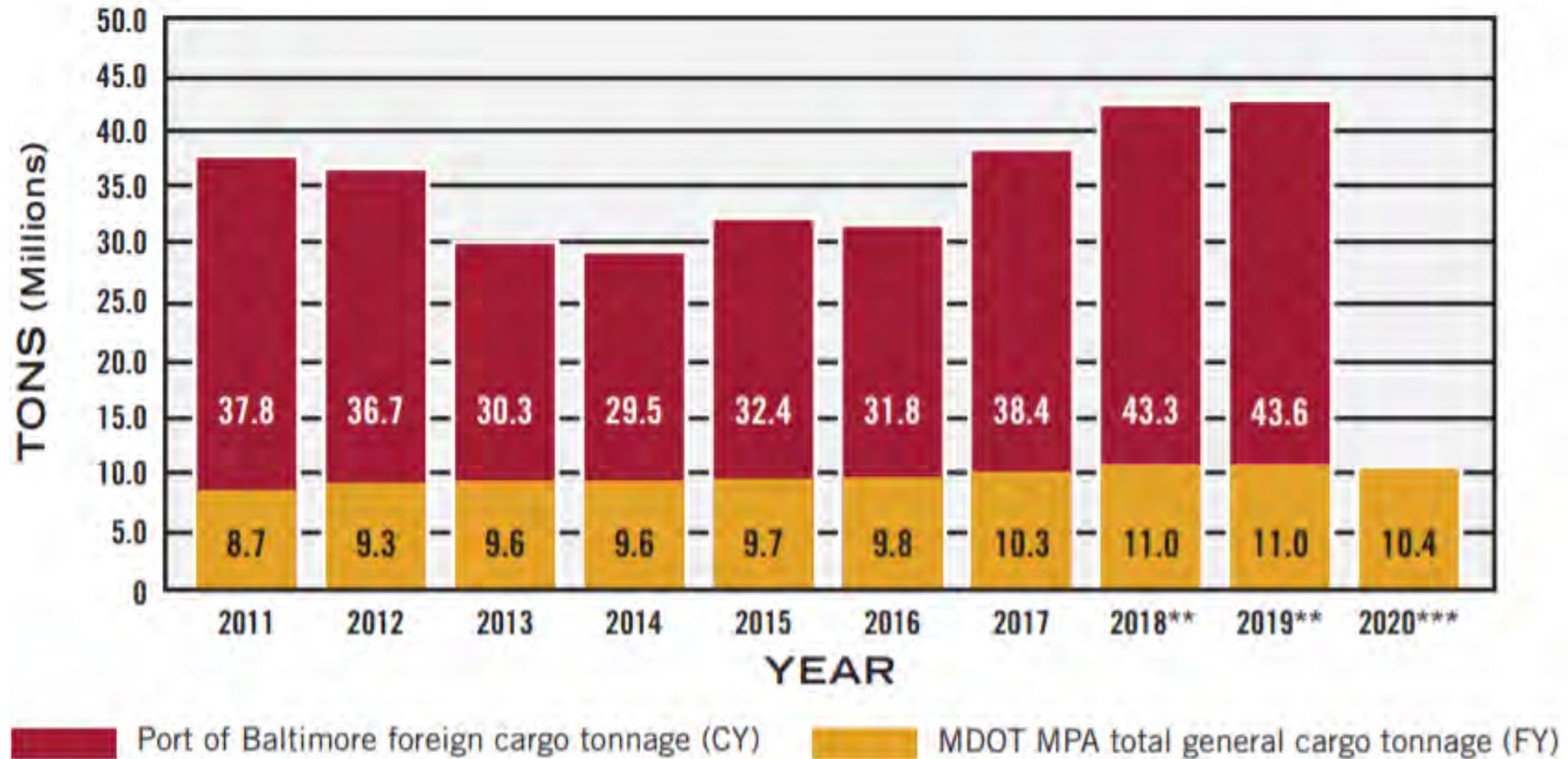
\* Source: U.S. Department of Transportation Freight Analysis Framework (FAF4) Version 4.5.1. that was refactored using 2019 data. To report 2019 data, a 3% annual growth rate was applied. FAF generates estimates based on a base year of data. Therefore, tonnage and values represented are estimates, not exact amounts. The water tonnage data based is for 2019, based on U.S. Army Corps of Engineers reporting.

\*\* Category "Other" includes multiple modes, mail, and other and unknown categories from data from the Freight Analysis Framework Version 4.5.1.

- » Crucial node in the mid-Atlantic
  - I-95, I-81, and I-83
  - Top commodities: mining, agriculture, pharmaceuticals, manufacturing, retail trade, and health care
  - BWI air cargo was up **36.2%** in comparing June 2020 to June 2019, while neighboring airports Washington Dulles International and Reagan National were seeing **declines** of 47% and 50%, respectively.



# FOREIGN AND GENERAL CARGO AT MD PORTS





# COVID SUPPLY CHAIN: PUBLIC SECTOR

## Looking Ahead

### » Capital projects

- Midfield Cargo Complex to accommodate growing BWI cargo volumes
- Bay Crossing Study
- Nice Bridge

### » Partnerships

- Metsa Group | Port of Baltimore
- Testing Kits from South Korea



# COVID SUPPLY CHAIN: PUBLIC SECTOR

## Looking Ahead

- » Planning MDOT is involved in several freight planning efforts, including:
  - Logistical Support to Maryland Department of Health
  - Statewide Truck Parking Study and Opportunities for Partnerships and Implementation
  - State Rail Plan Update
  - State Freight Plan



# COVID SUPPLY CHAIN: PUBLIC SECTOR

## State of Supplies

### » PPE

- History
- Small and Repurposed Businesses to Supply Items
- Current Status

### » DME/CME

- Volumes of Items
- Ordering and Timing of Delivery
- Eventual Decommissioning



# COVID SUPPLY CHAIN: PUBLIC SECTOR

## MDOT Support of COVID Efforts

- Business Units Involved
  - SHA, MPA, MDTA
- Service Provided
  - Use of Space at TSO Offices
  - MPA Spaces at Broening Highway for Storage and Battelle Operations
  - Use of Staff and equipment by SHA, MDTA and MPA
  - Assets to support Testing and Vaccination Sites



# ***COVID SUPPLY CHAIN: INDUSTRY***

*Michael Levy*  
*Senior Vice President, Digital and Innovation, USP*

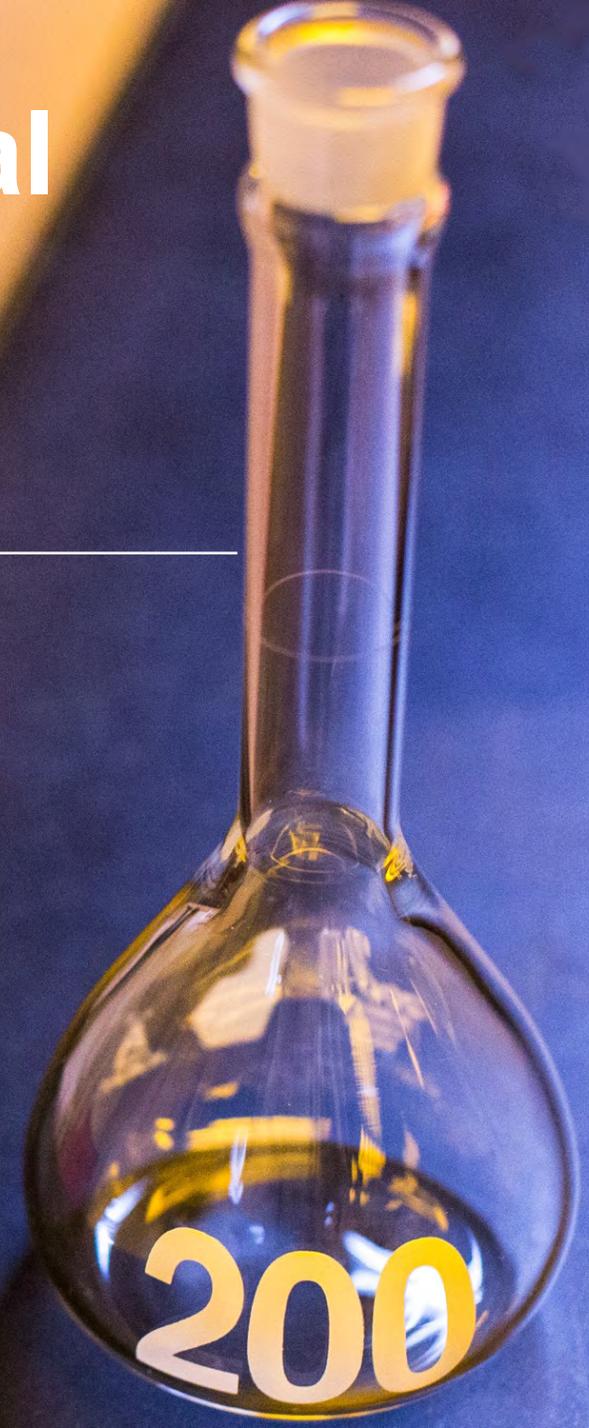


# Strengthening pharmaceutical supply chains: USP insights to drive transparency

---

**Michael Levy**  
**Senior Vice President, Digital and Innovation**

Maryland State Freight Advisory Committee  
March 3, 2021



# Agenda

- ▶ Who is USP?
- ▶ Challenges surfaced due to the COVID-19 pandemic
  - Pharmaceutical supply chain resilience
  - Development, manufacturing, and distribution of COVID-19 vaccines and treatments



# Who is USP?

---

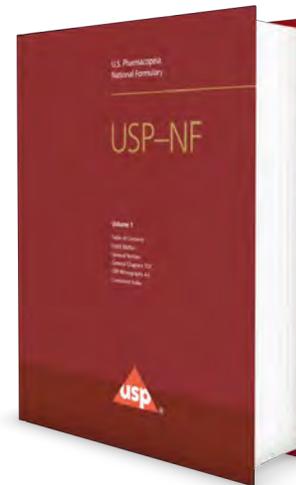


# USP Mission

To improve global health through public standards and related programs that help ensure the quality, safety, and benefit of medicines and foods.



# More than 9,000 USP Standards provide quality benchmarks across the supply chain



## Documentary standards

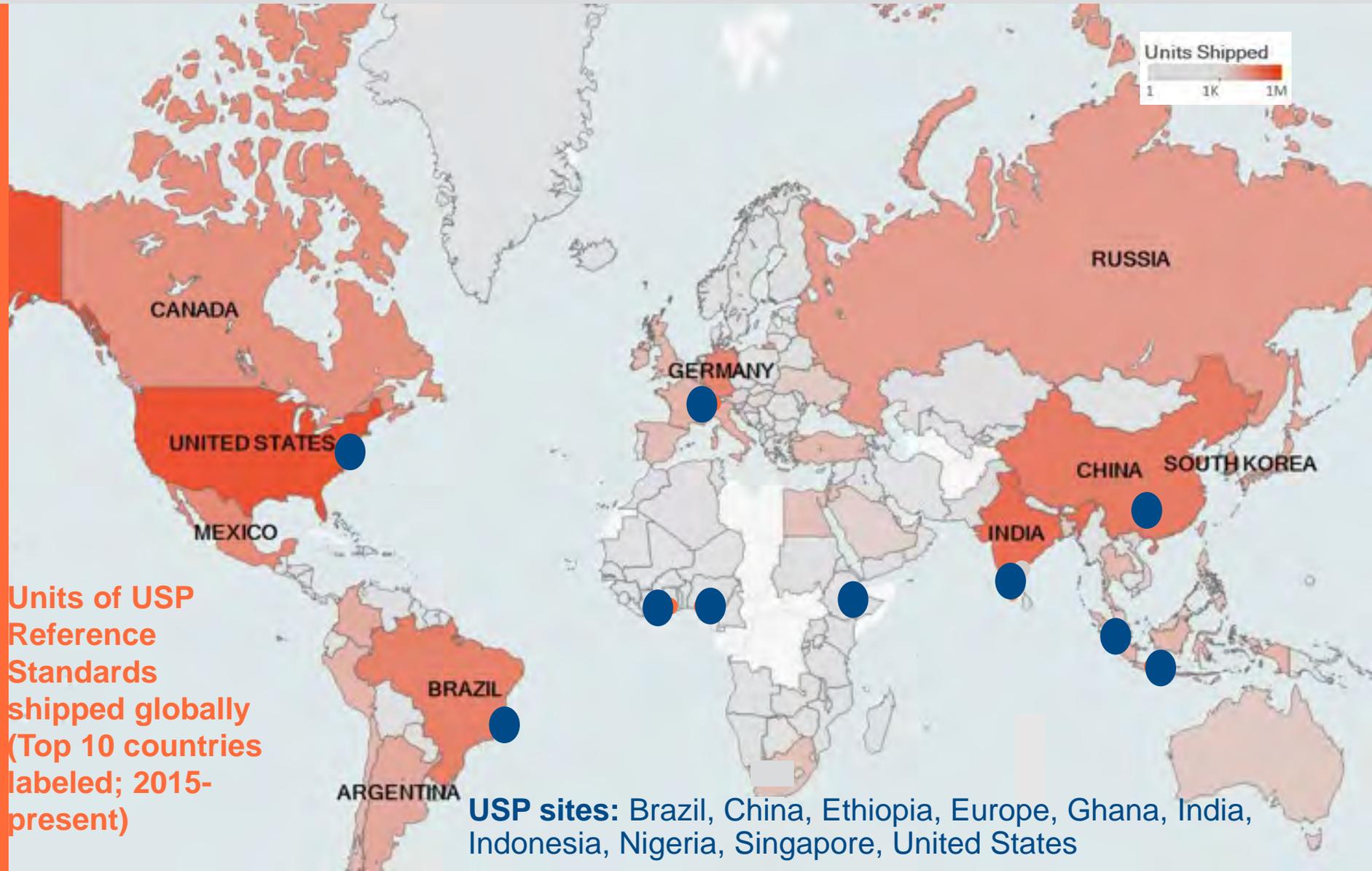
Provides information and methods needed to assess quality

## Reference standards

A benchmark against which to compare tested material

USP Reference Standards were shipped to over **22,000** entities in FY19

USP Staff are located across more than **10** global sites



Units of USP Reference Standards shipped globally (Top 10 countries labeled; 2015-present)

# USP's work to address challenges surfaced by the COVID-19 pandemic



**Supply chain vulnerabilities**



**Delivering vaccines and treatments for COVID-19**

1

# Pharmaceutical supply chain resilience: vulnerabilities and solutions

# There are many participants in the modern pharmaceutical supply chain...driving complexity



### Ingredient Suppliers

- Pharmaceuticals typically contain active ingredient(s) or API and excipient(s)
- The starting materials for producing these are also often outsourced



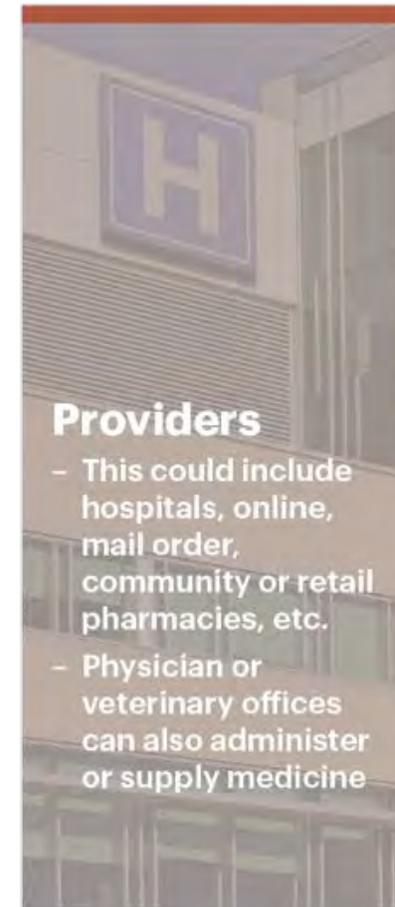
### Pharmaceutical Manufacturers

- Contract manufacturing orgs (CMOs) are often turned to for their specific expertise, so the manufacturer and labeler might be different entities



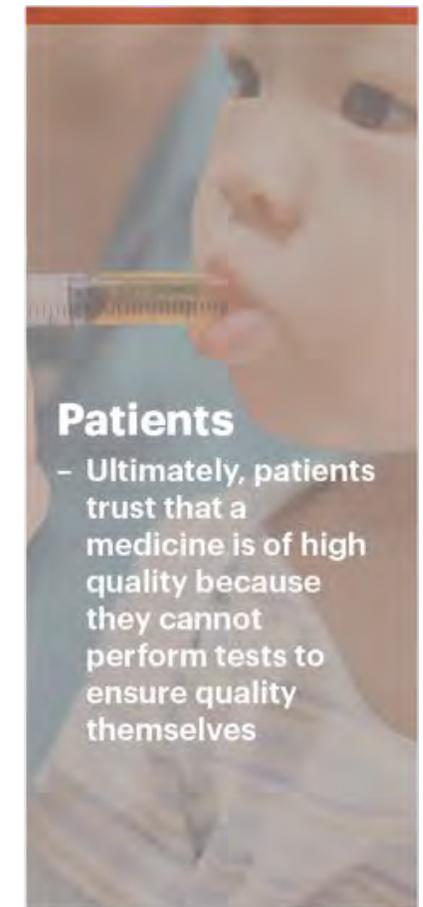
### Wholesalers or Distributors

- There may be several intermediaries and procurement channels (publicly-funded, privately-funded, donor-funded)
- Buying groups or warehouses



### Providers

- This could include hospitals, online, mail order, community or retail pharmacies, etc.
- Physician or veterinary offices can also administer or supply medicine



### Patients

- Ultimately, patients trust that a medicine is of high quality because they cannot perform tests to ensure quality themselves

Upstream

Downstream

# New vulnerabilities are driven by greater complexity of the upstream supply chain

## Root causes

- ▶ Increased pressure on margins, particularly for generics
- ▶ Insufficient incentives for quality
- ▶ Regulatory and logistical hurdles that prevent agile responsiveness to market events

## Leading to....

- ▶ “Just-in-time” manufacturing with little redundancy to absorb demand or supply shocks
- ▶ Increased outsourcing of ingredients and even final product manufacturing
- ▶ Lack of transparency limiting the ability of stakeholders to take mitigative action before it’s too late

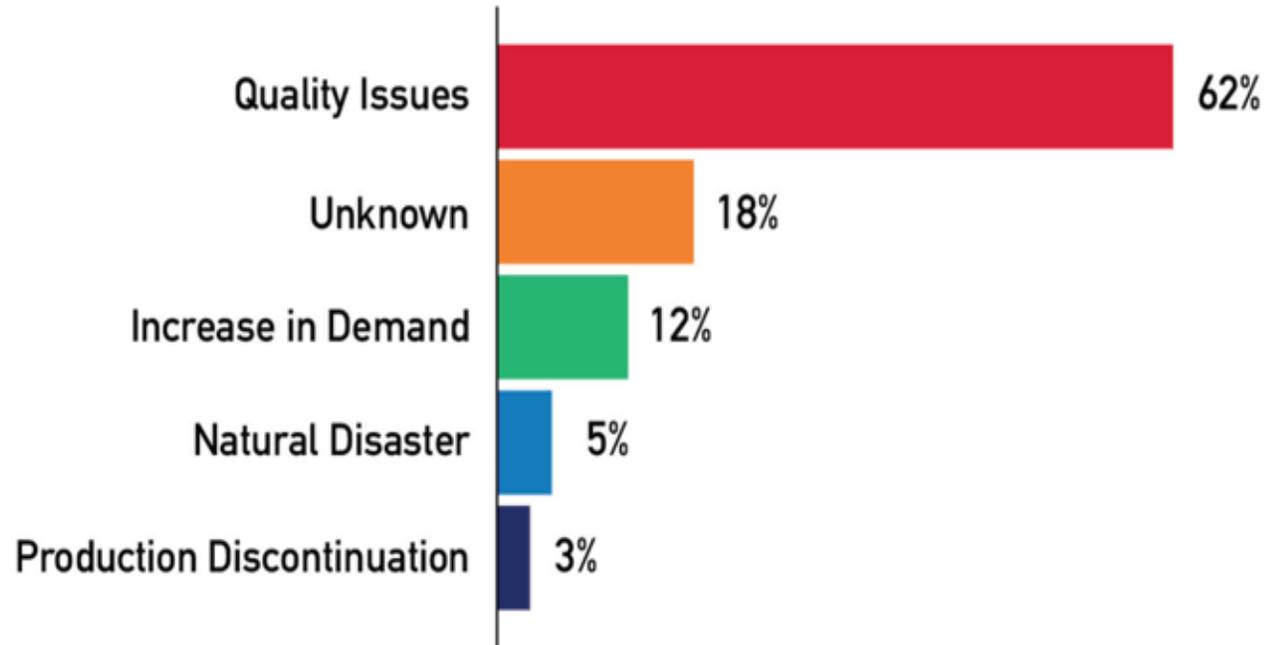
# A sustained supply of quality medicines relies on stakeholders balancing cost, quality and supply chain resilience





# Drug shortages overwhelmingly have quality issues as root cause

Percentage of Drugs Newly in Shortage by Reason, Calendar Years 2013-2017



Most drugs in shortage were experiencing supply disruptions, specifically quality issues.

Sources: FDA. "Drug Shortages: Root Causes and Potential Solutions." Oct. 2019



The European Association of Hospital Pharmacists (EAHP) reported that 43.7% of shortages were related to quality issues.

Source: FIP. "Report of the International Summit on Medicines Shortage June 2013

# USP has published a white paper identifying key actions to secure a more resilient supply chain

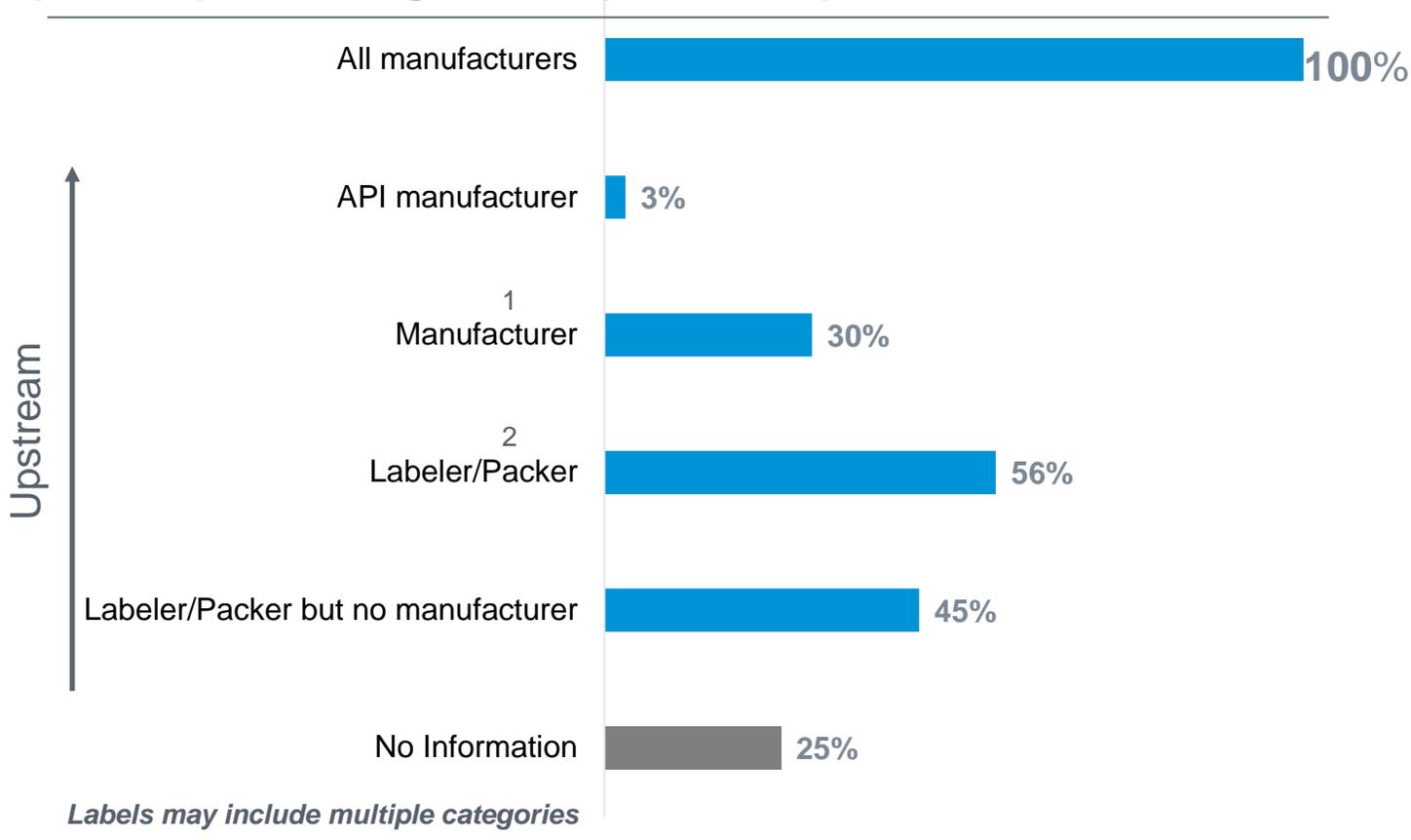
- ▶ Foster more, not less, supply chain diversity
- ▶ Invest in more manufacturing capacity for critical medicines (e.g., continuous manufacturing)
- ▶ **Enable more transparency and data sharing**
- ▶ Conduct crisis contingency planning and action
- ▶ Strengthen regulatory systems and quality assurance globally

<https://www.usp.org/sites/default/files/usp/document/our-impact/covid-19/global-policy-supply-chain.pdf>



# There is a need for greater upstream supply chain transparency

## Information listed on U.S. approved human prescription drug labels (N=40,178)



- ▶ While approval information is known, we don't know how many are manufacturing the medicine/API
- ▶ All labels specify ANDA filer, an entity responsible for the drug's quality. However, manufacturing is often done by a different entity than the filer
- ▶ While manufacturers are required and do report suppliers to U.S. FDA, also sharing supply chain information publicly could help providers proactively safeguard patient health. (e.g., when a safety issue is identified with an API manufacturer, providers will have on-hand information about impacted brands)

Source: USP analysis of DailyMed

1 Includes 'Analysis', 'FDF Manufacturer', 'Manufacturer', 'Particle size reduction', 'Positron Emission Tomography Drug Production', 'Recovery', 'Sterilize', 'Transfill'

2 'Label, Relabel, Pack, Repack'

# Driving transparency in the supply chain: Generating proactive insights through the USP-Pharmaceutical Supply Chain Center



- ▶ We created the [USP Medicine Supply Map](#) as an early warning system to identify, characterize and quantify risk in the upstream pharmaceutical supply chain
- ▶ Data model links across 10+ datasets and dozens of data elements, including USP's proprietary insights
- ▶ “In-the-field” data gathering, including through USP's subject matter expert network
- ▶ More than 1 million medicines globally included
- ▶ Graph-based data model is capable of tracking quality issues up the supply chain

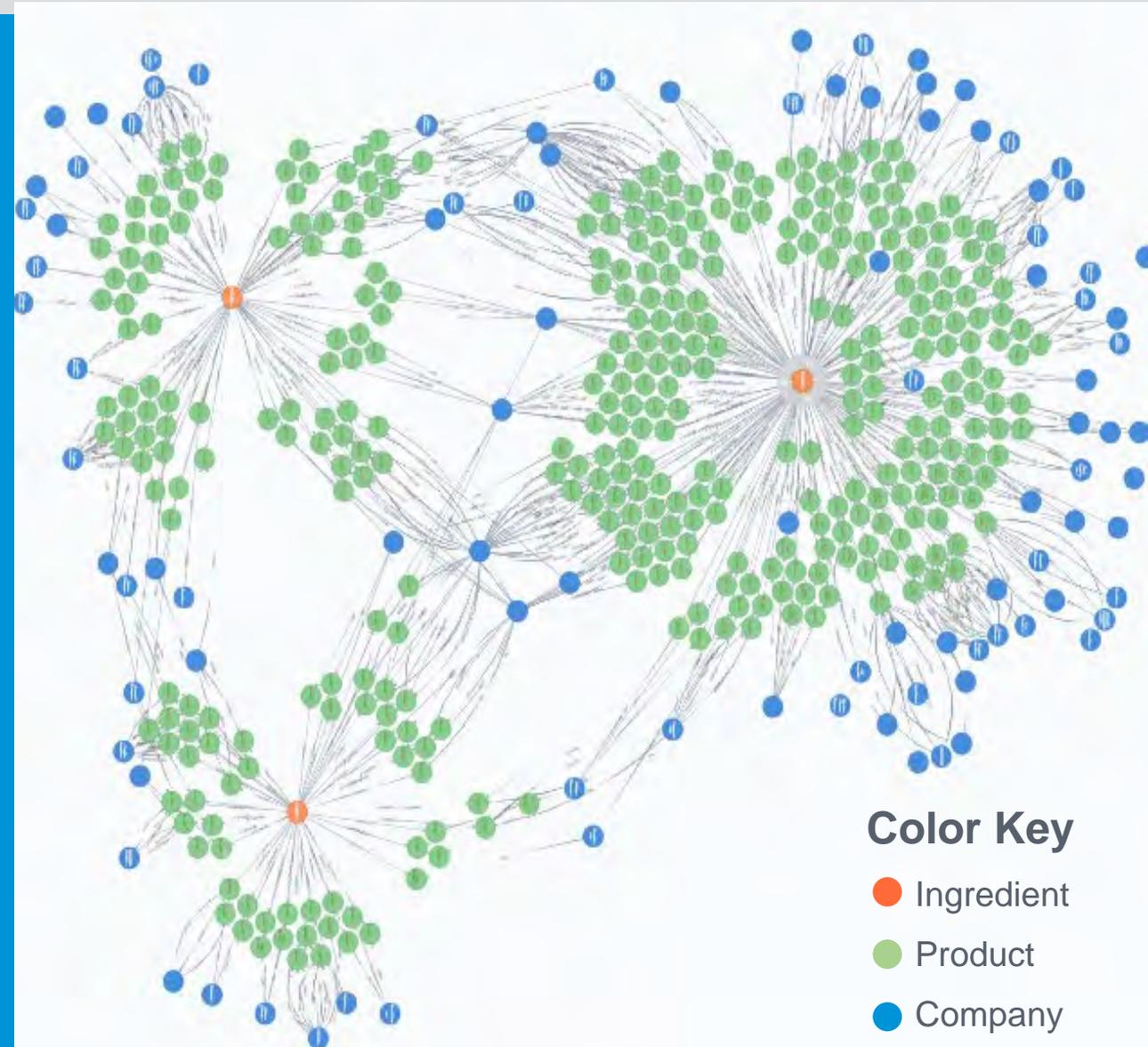


# Graph-based data model enables tracing of quality

## Example illustrates the case of Bumetanide, Furosemide and Chlorthalidone

Graph-based data model can identify manufacturers that make some or all products, and discern spillover implications – e.g., company A gets warning letter for one drug, what are potential implications on quality for other products made by company A, and what are some alternate supplier options for the basket of products?

Source: internal analysis based on regulatory approvals in several countries, including the US



# 2 Development, manufacturing, and distribution of COVID-19 vaccines and treatments

---

# Agile approach to support COVID-19 vaccines and treatments

## Vision:

- 1 Improve access to innovative vaccines through reductions in development times and increased scalability, launching the *Trust Accelerated* program with free technical assistance
- 2 Provide a safeguard against poor quality vaccines, ensuring public trust and safety

USP standards are publicly available tools that vaccine manufacturers can use to help answer questions such as:



### 1 Ingredients

How can I be sure my ingredients are appropriate for my vaccine process? Are they pure? Is there a consistent supply from a reliable supplier?



### 2 Containers

Will the items used, such as syringes, make it easy for the patient to get the vaccine? Do they leak? Does the container react with the vaccine and change its quality?



### 3 Sterility

Is the vaccine sterile? For multi-dose vials, is the antimicrobial agent effective?



### 4 Labeling

Does the label clearly and accurately indicate the name, dose and how it should be administered?



### 5 Packaging and distribution

Is the vaccine packaged correctly to avoid damage and temperature fluctuations during storage and shipping?

<sup>1</sup> List not exhaustive

# Stay Connected

[msl@usp.org](mailto:msl@usp.org) | [www.usp.org](http://www.usp.org) | @USPharmacopeia

<https://www.usp.org/supply-chain/medicine-supply-map>

Or search for "USP Medicines Supply Map"





*NEXT... POLLEV.COM/CAMBRIDGESYS310*

**What should we discuss at the next meeting?**



## Next Topic: What Should It Be?

Industry Spotlight (ex. Agriculture, Retail)

Freight Data Visibility

Innovative Technologies

Economic / Workforce Development

# Next Topic: What Should It Be?

Industry Spotlight (ex.  
Agriculture, Retail)

Freight Data Visibility

Innovative  
Technologies

Economic / Workforce  
Development

# Next Topic: What Should It Be?

Industry Spotlight (ex.  
Agriculture, Retail)

Freight Data Visibility

Innovative  
Technologies

Economic / Workforce  
Development

# ***FHWA UPDATE***

*Caitlin Hughes  
Director of Freight Management and Operations  
Federal Highway Administration (FHWA)*





U.S. Department of Transportation  
**Federal Highway Administration**

**Office of Operations**  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590  
[www.ops.fhwa.dot.gov/freight](http://www.ops.fhwa.dot.gov/freight)

# Topics in State Freight Planning, 2021

## Presentation to the Maryland State Freight Advisory Committee

Caitlin G. Hughes, FHWA

March 3, 2021



# Overview

- State Freight Plan Update and Implementation Toolkit
- Freight Formula Funding and Discretionary Grant Programs
- Freight Analysis Framework
- Freight Mobility Trends
- Bottlenecks
- Truck Parking Information
- Vehicle Size and Weight



# State Freight Plan Update and Implementation Toolkit

- The State Freight Plan Toolkit defines the fundamental elements of State freight plan updates.
- Between 5 - 9 States with freight plans that need to be updated in 2022 will pilot the strategies developed in the interim Toolkit.
- The Toolkit will include case studies describing effective State freight plan practices. A second edition will be developed for States with plan updates due in late 2022 or 2023.



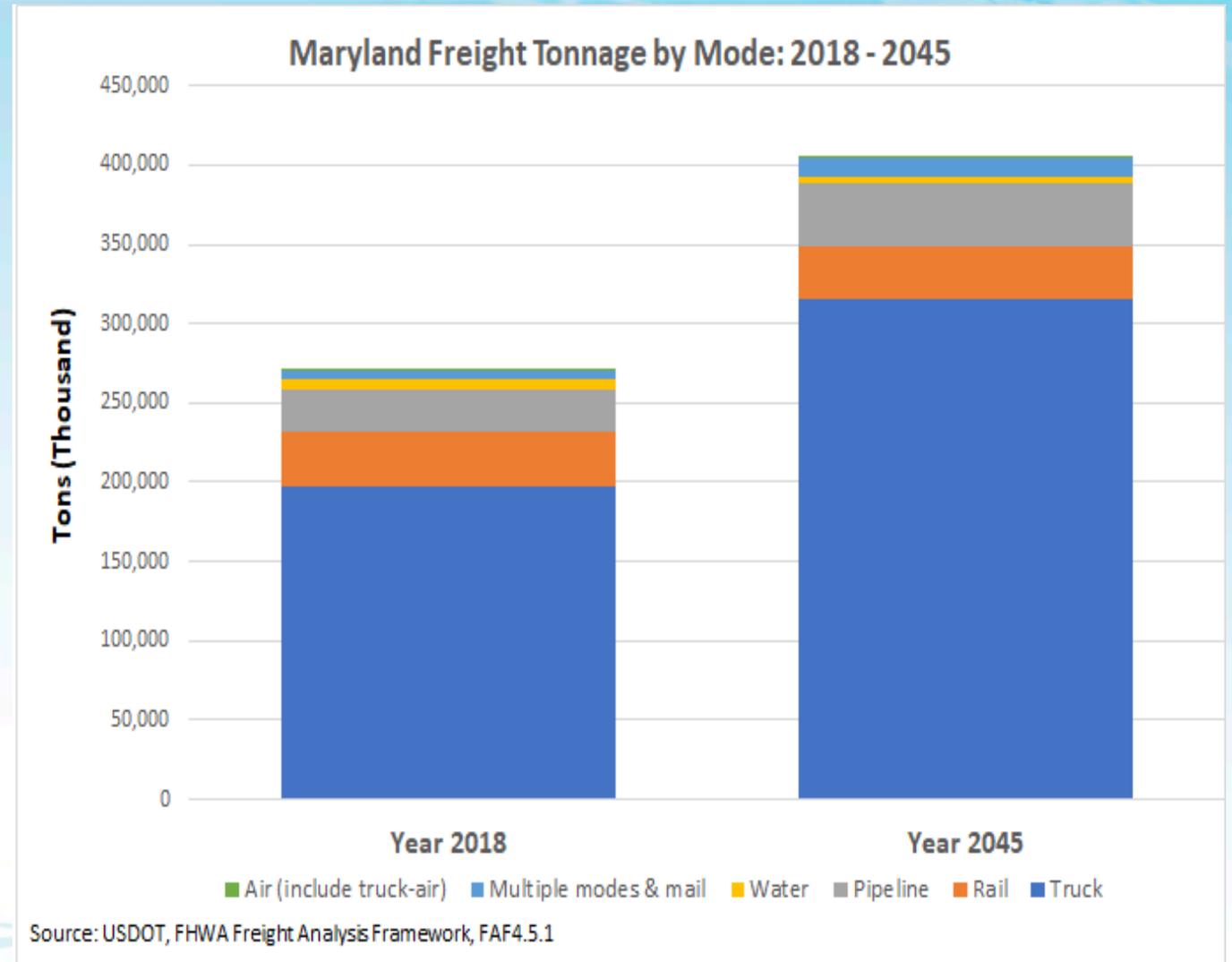


# Freight Formula Funding and Discretionary Grant Programs

- The FAST Act established the National Highway Freight Program (NHFP), which provides \$1.2 billion annually for freight transportation improvements:
  - Between FY 2016-2020, nearly \$17 Billion of NHFP and other funding sources were identified for projects in State freight plans.
- The Notice of Funding Opportunity (NOFO) for the 2021 round of the Better Utilizing Investments to Leverage Development (BUILD) program will be published soon. Congress provided \$1 billion for the BUILD program in 2021.
- The NOFO for the 2021 round of the Infrastructure for Rebuilding America (INFRA) round was published in February, 2021. Approximately \$889 million will be available for INFRA grants in 2021. Applications are due on March 19, 2021

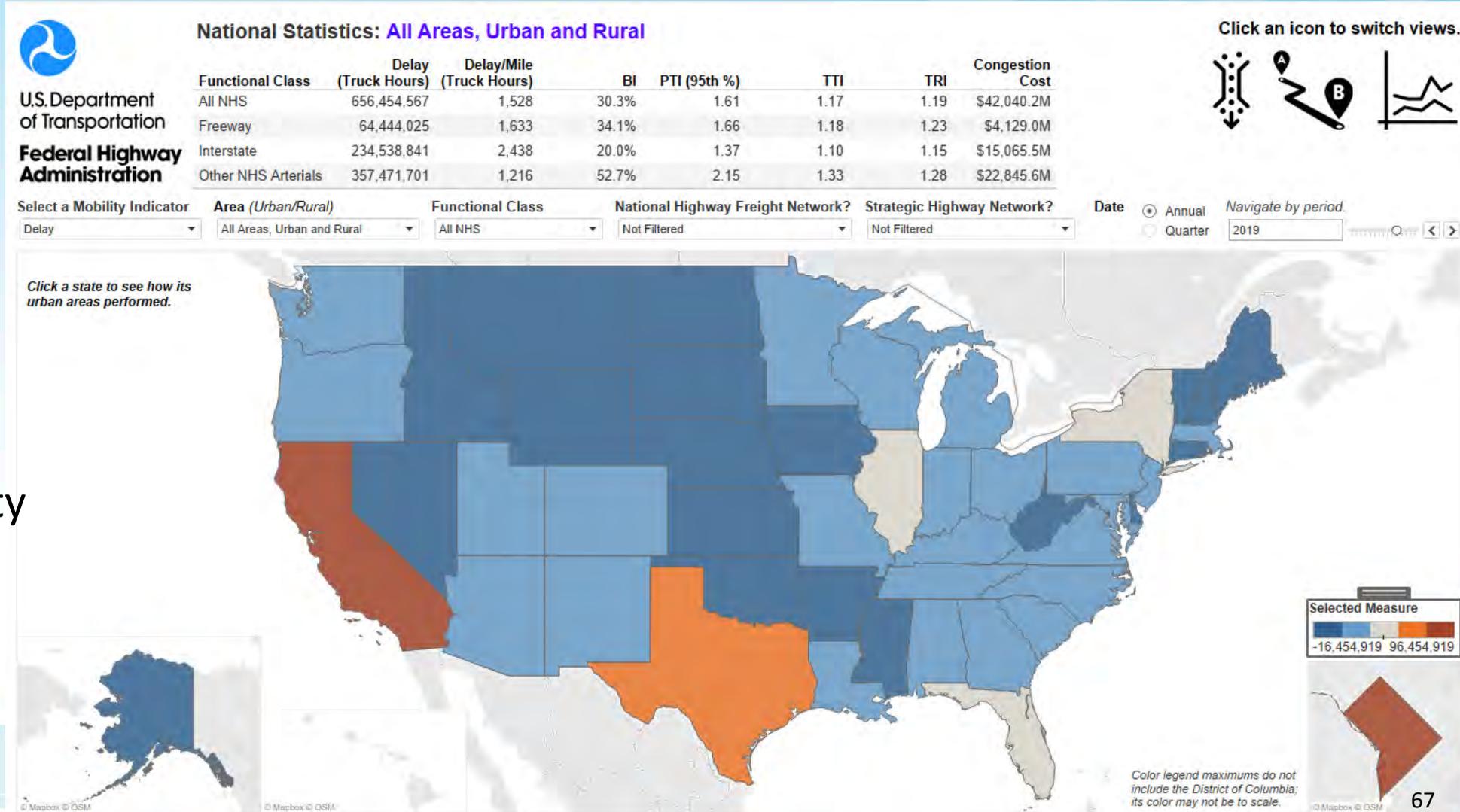
# Freight Analysis Framework (FAF)

- Trucks carry 73 percent of the freight for Maryland by weight.
- Freight tonnage by truck in Maryland is projected to increase by 50 percent between 2018 and 2045.

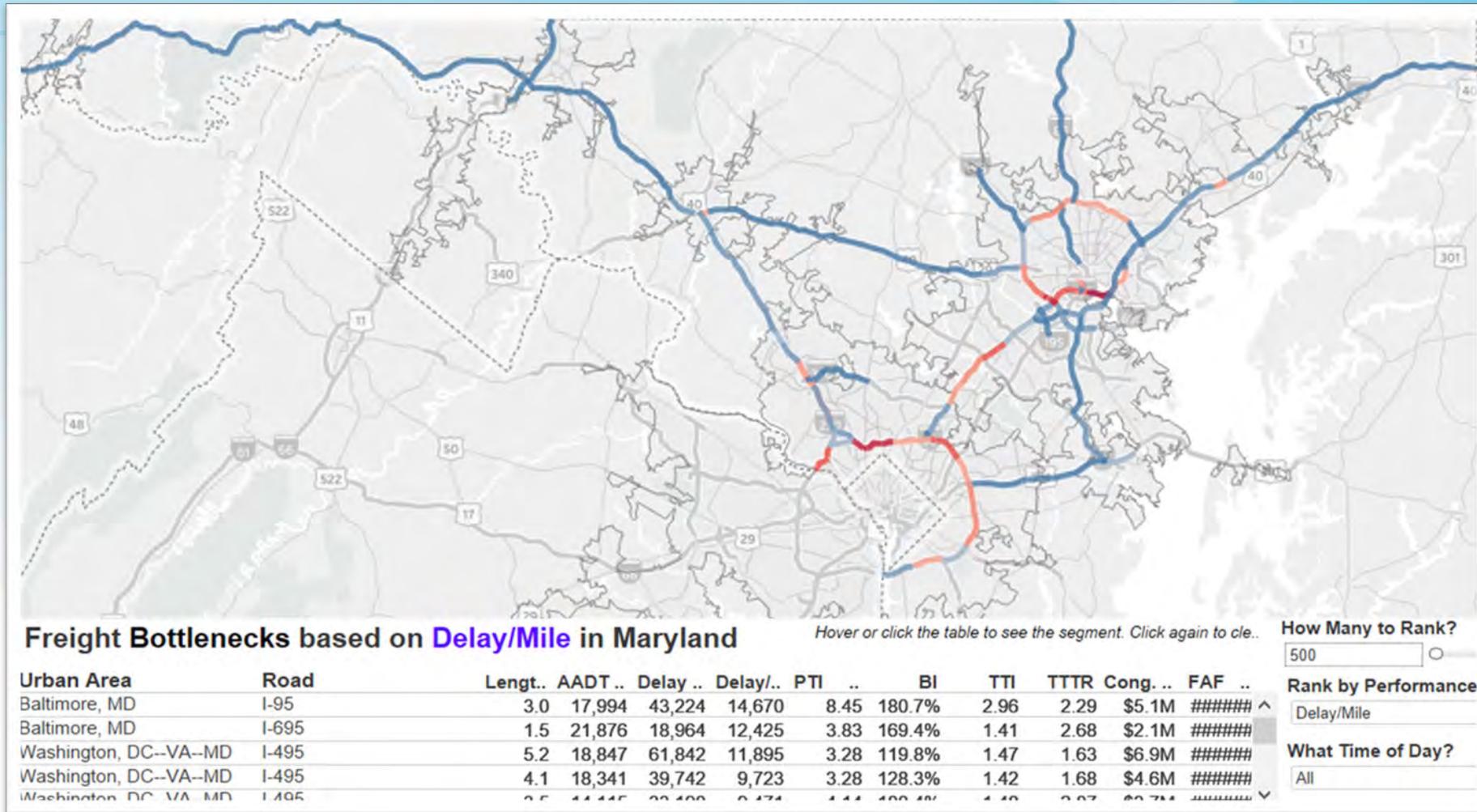


# Freight Mobility Trends Dashboard

- Total delay
- Delay per mile
- Travel Time Index
- Planning Time Index
- Buffer Index
- Travel Reliability Index
- Congestion Cost



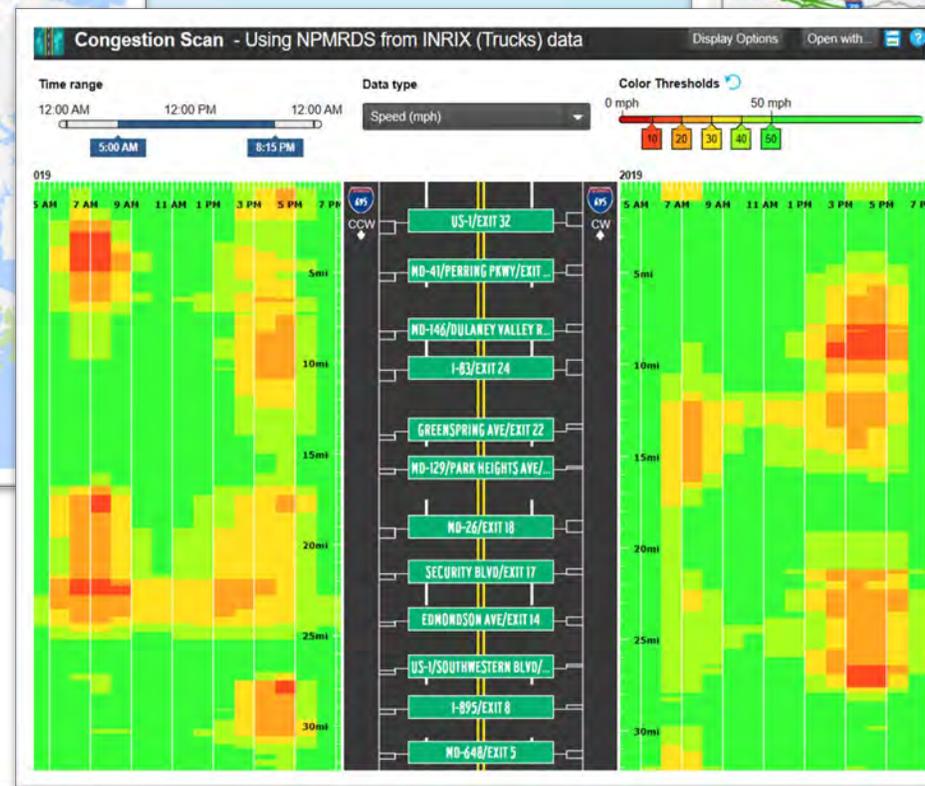
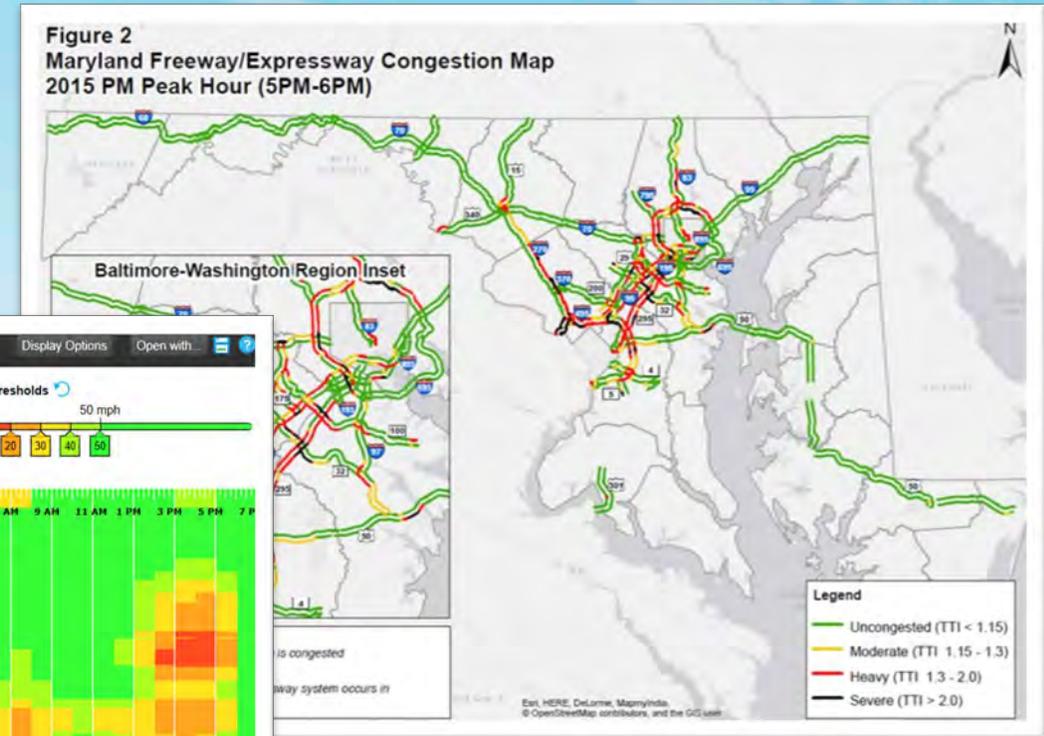
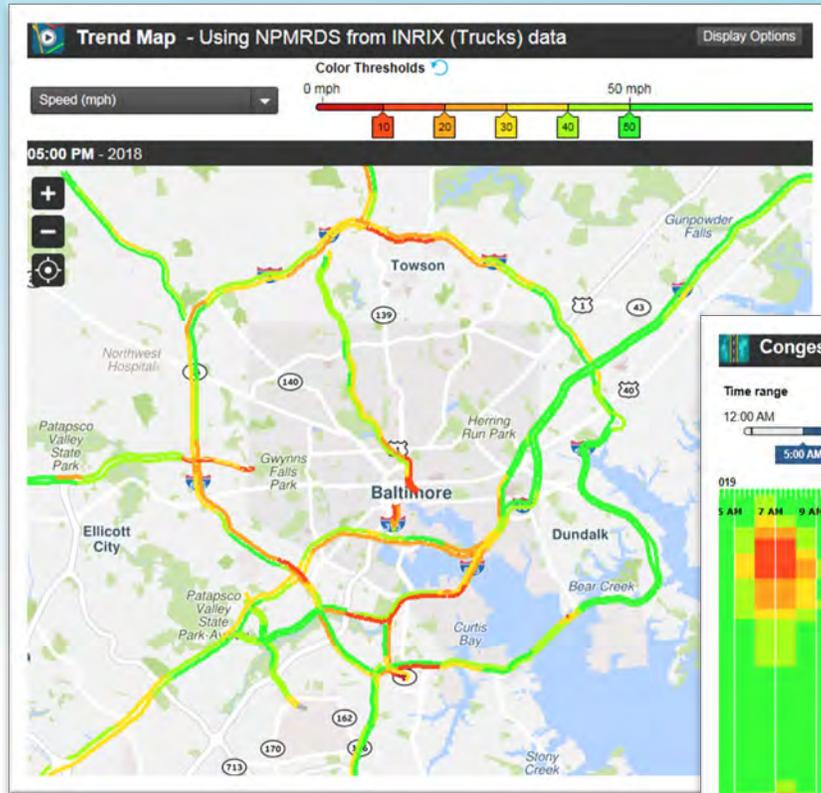
# Freight Bottlenecks and Congested Corridors



Source: FHWA 2019 NPMRDS



# National Performance Management Research Data Set (NPMRDS) and Other Sources of Information



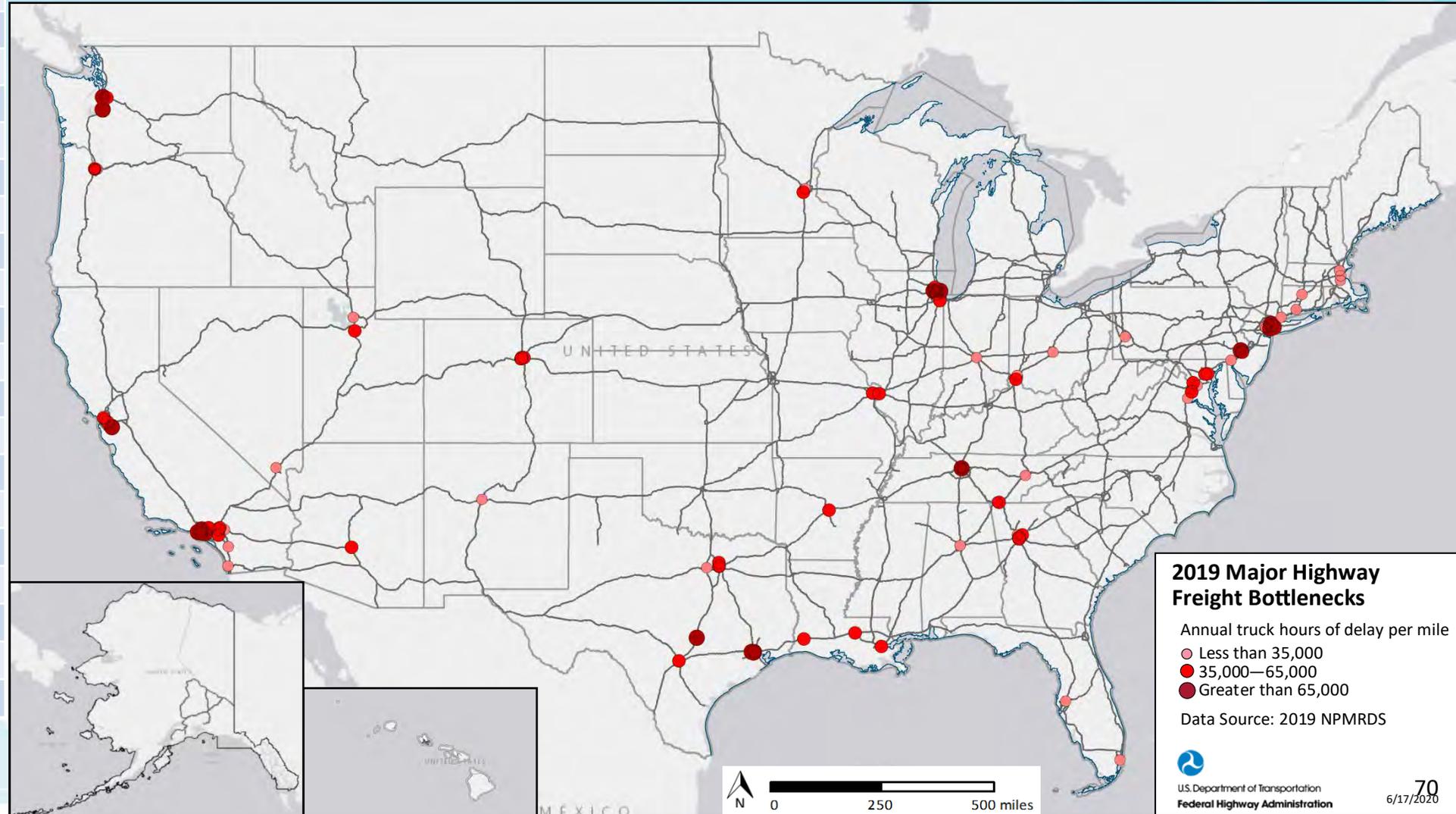
Sources:  
National Performance Management Research Data Set, (NPMRDS), University of Maryland (UMD) Center for Advanced Transportation Technology Laboratory (CATT Lab)

Source: Maryland Department of Transportation

Source: NPMRDS, UMD CATT Lab

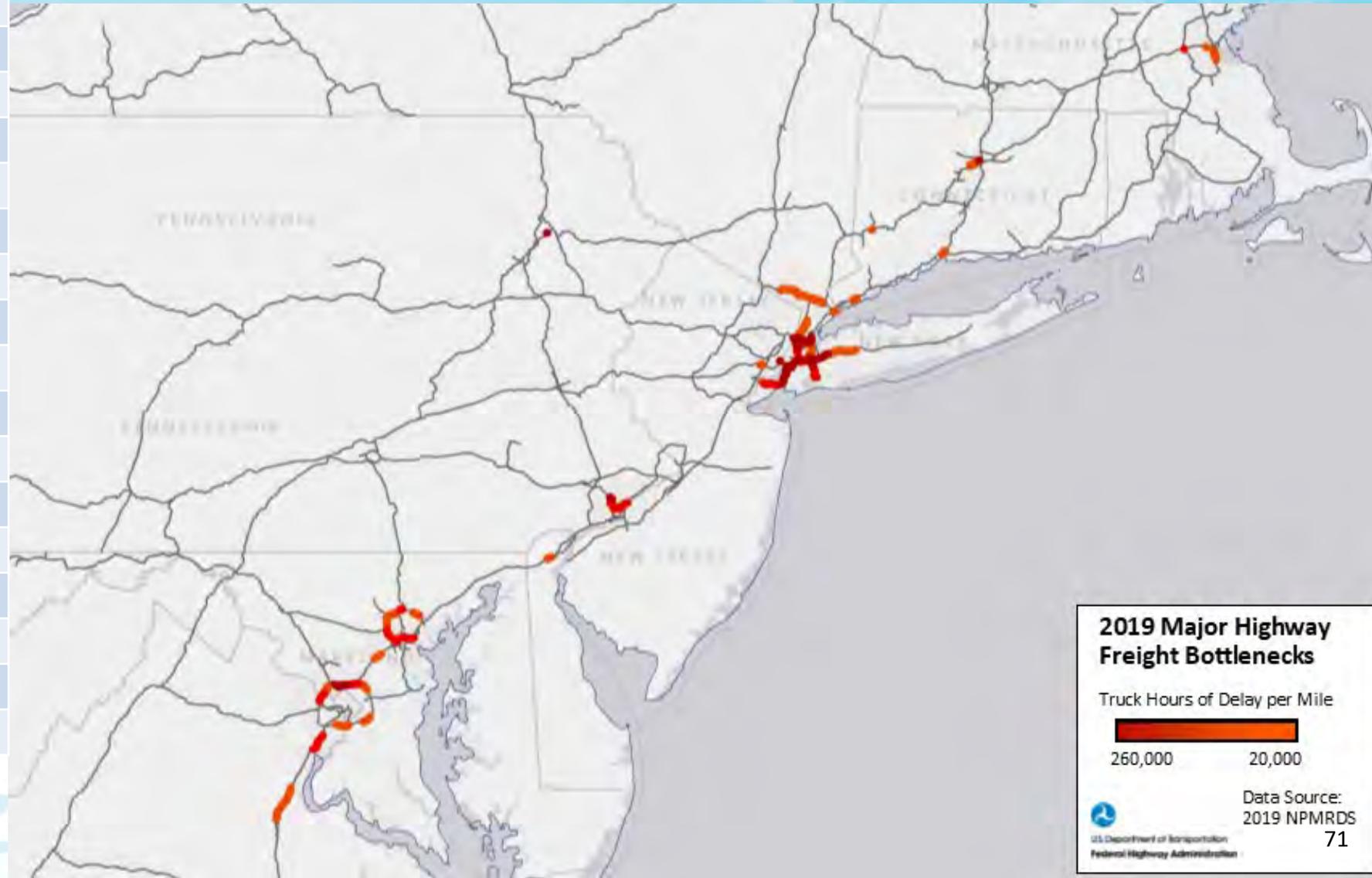
# Major Interstate Freight Bottlenecks and Congested Corridors 2018

Rank	Road	Urban Area
1	I-95/I-295	New York, NY/NJ
2	I-90/I-94	Chicago, IL
3	I-605	Los Angeles, CA
4	I-35	Austin, TX
5	I-610	Houston, TX
6	I-678	New York, NY
7	I-405	Los Angeles, CA
8	I-290	Chicago, IL
9	I-69	Houston, TX
10	I-278	New York, NY
11	I-24	Nashville, TN
12	I-10	Los Angeles, CA
13	I-710	Los Angeles, CA
14	I-45	Houston, TX
15	I-680	San Francisco, CA
16	I-495	New York, NY
17	I-5	Seattle, WA
18	I-5	Los Angeles, CA
19	I-76	Philadelphia, PA
20	I-87	New York, NY
21	I-5	Seattle, WA
22	I-75/I-85	Atlanta, GA
23	I-45	Houston, TX
24	I-110	Los Angeles, CA
25	I-495	New York, NY



Rank	Road	Urban Area
1	I-95	New York-Newark, NY-NJ
6	I-678	New York, NY
10	I-278	New York, NY
16	I-495	New York, NY
19	I-76	Philadelphia, PA
20	I-87	New York, NY
34	I-495	Washington, DC- MD-VA
40	I-95	Washington, DC- MD-VA
47	I-695	Baltimore, MD
56	I-676	Philadelphia, PA
65	I-95	Baltimore, MD
66	I-95	Philadelphia, PA
84	I-84	Hartford, CT
86	I-95	Wilmington, DE
90	I-95	Fredericksburg, VA
91	I-93	Boston, MA
92	I-95	Bridgeport, CT
94	I-95	New Haven, CT
95	I-287	New York, NY
98	I-78	Newark, NJ

# Northeast Corridor Major Interstate Freight Bottlenecks



**2019 Major Highway Freight Bottlenecks**

Truck Hours of Delay per Mile

260,000 20,000

Data Source:  
2019 NPMRDS

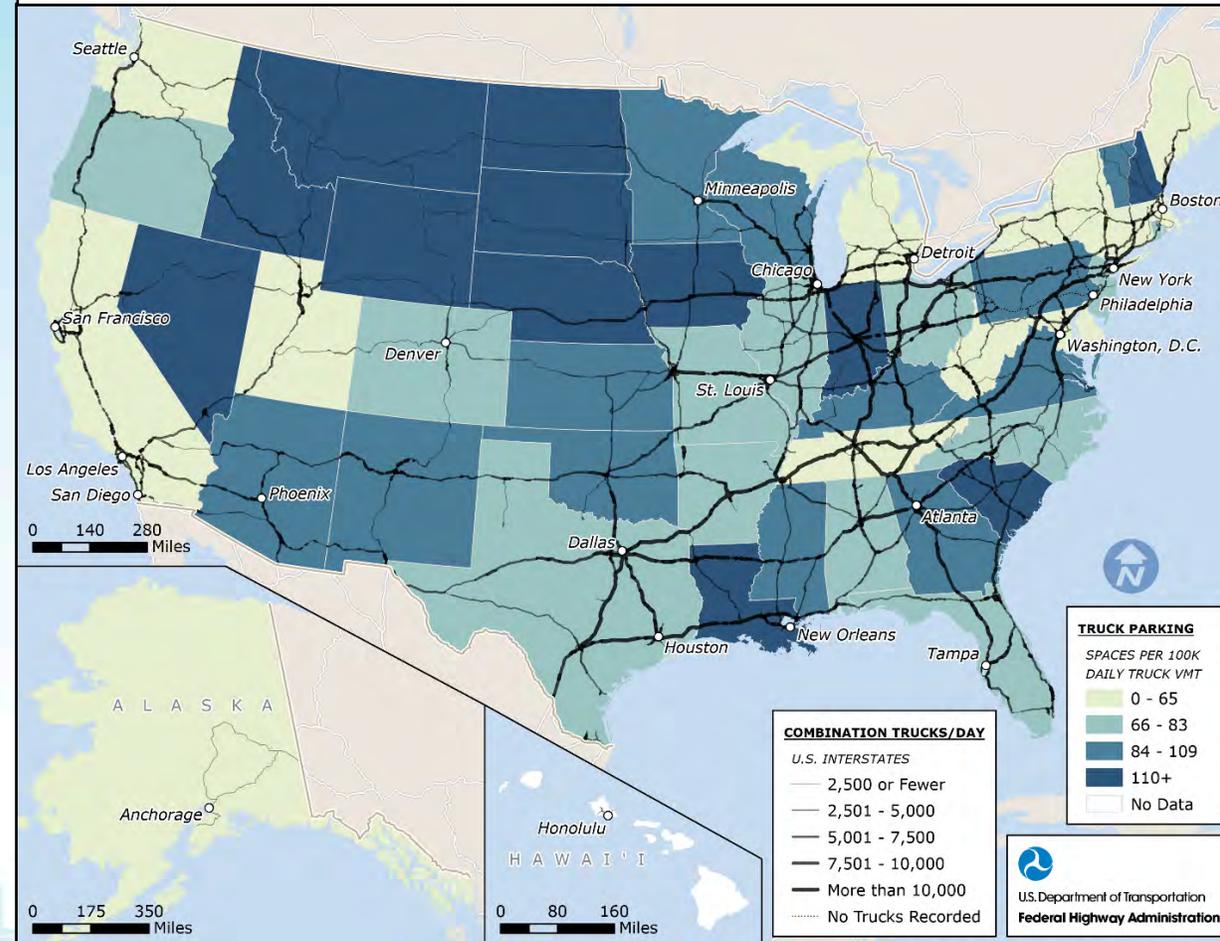
U.S. Department of Transportation  
Federal Highway Administration

71

# Truck Parking

- Truck parking shortages are a major problem in every State and region.
- Major freight corridors and large metro areas have the most acute shortages.
- Truck Parking Information and Management Systems (TPIMS) to inform drivers:
  - Florida Statewide TPIMS
  - Texas I-10 Corridor Coalition TPIMS
  - Virginia I-95 Corridor Coalition
- Challenges in funding truck parking facilities.
- Local government involvement needed.

**Number of Truck Parking Spaces per 100K Daily Truck Vehicle Miles Traveled (TVMT), 2019**





# Vehicle Size & Weight

Agricultural and rural topics in truck size and weight:

- Permit Data Harmonization Project, Federal Highway Administration (FHWA) and American Association of State Highway Transportation Officials (AASHTO):
  - Identified opportunities to harmonize how information is displayed on commercial vehicle special permits.
  - <https://systemoperations.transportation.org/wp-content/uploads/sites/22/2020/11/Permit-Data-Harmonization-Report-FINAL.pdf>
- Special permits during an emergency:
  - [https://ops.fhwa.dot.gov/freight/sw/permit\\_report/index.htm](https://ops.fhwa.dot.gov/freight/sw/permit_report/index.htm)



# Other Resources

- 23<sup>rd</sup> Edition of the Highway Freight Conditions and Performance Report, published in 2018:
  - <https://ops.fhwa.dot.gov/freight/infrastructure/nfn/rptc/cp23hwyfreight/index.htm>
- National Freight Strategic Plan (NFSP), published in September 2020:
  - <https://www.transportation.gov/freight/NFSP>
- Networks and Data Brochure to be released in 2021



U.S. Department of Transportation  
**Federal Highway Administration**

**Office of Operations**  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590  
[www.ops.fhwa.dot.gov/freight](http://www.ops.fhwa.dot.gov/freight)

**For additional information on freight programs,  
contact:**

Caitlin G. Hughes  
Office of Operations  
Director of Office of Freight Management and  
Operations  
[Caitlin.Hughes@dot.gov](mailto:Caitlin.Hughes@dot.gov)  
202-493-0457



# ***MARYLAND STATE UPDATE***

*Harry Romano, Rail Program and Policy Manager, MDOT  
Brad Smith, General Manager for Strategic Initiatives, MDOT  
Nicole Katsikides, MDOT Consultant/Texas Transportation Institute*



STATE **FREIGHT** ADVISORY COMMITTEE



# Maryland State Rail Plan



## Maryland State Rail Plan Update

*Presented to: State Freight Advisory Committee*

*Presented by: Maryland Department of Transportation*

*Date: March 3, 2021*



# Agenda

- » Background
- » Plan Outline and Schedule
- » Types of Projects and Initial Feedback
- » Vision and Goals
- » Outreach
- » Next Steps





# Background



# Background – Why Is MDOT Updating the State Rail Plan?

## » Federal requirements

- First required by the Passenger Rail Investment and Improvement Act (PRIIA) of 2008
- The Fixing America's Surface Transportation (FAST) Act of 2015 provides for updates every four years

## » Positions rail stakeholders for federal funding

## » Outlines public and private investments and policies needed to ensure the efficient, safe, and sustainable movement of freight and passenger by rail



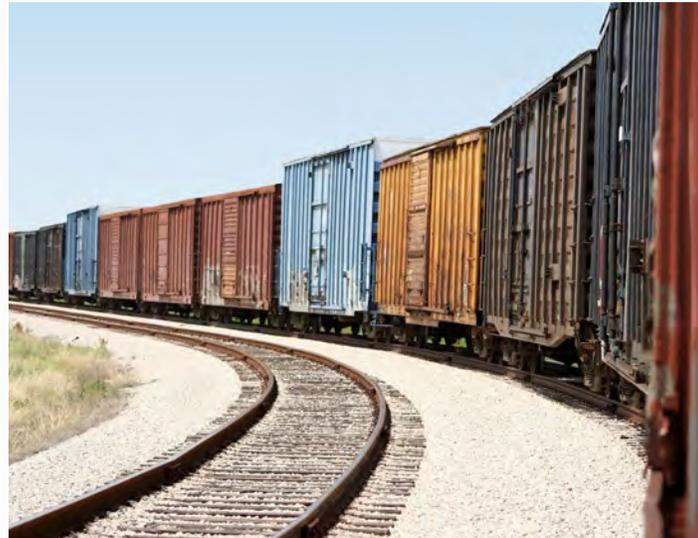


# Background – What Does a State Rail Plan Cover?

Commuter Rail



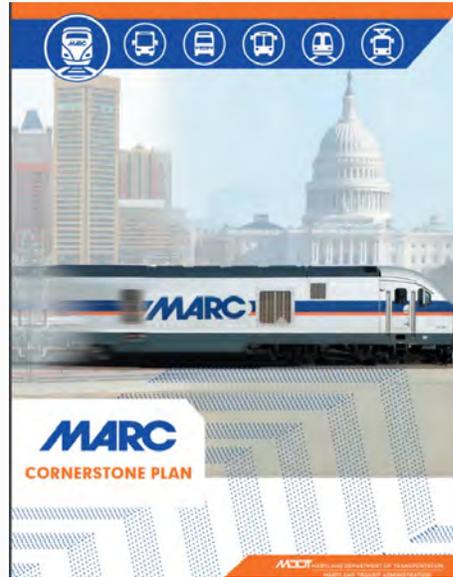
Freight Rail



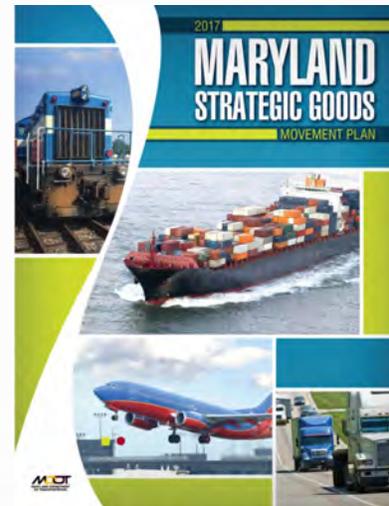
Intercity Passenger Rail



# CONNECT 2035



Background –  
Coordination with  
other Plans





# Plan Outline & Schedule



# Plan Outline



Articulates state transportation goals and how rail fits in, how the state is organized to support rail

Summarizes freight and passenger rail infrastructure and services

Assesses the performance of rail lines

Identifies trends that will impact future

Identifies top issues and opportunities

Identifies initiatives and strategies to address the issues and opportunities

Articulates vision, goals, and objectives

Lists projects

Provides prioritization and a funding plan

Summarizes stakeholder involvement



# Plan Schedule

	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug 2021	Sept 2021
<b>Outreach</b>												
Information Request to Railroads												
Online Survey												
Advisory Committee Meeting												
Topic Meetings					★							
Interviews												
<b>Chapter 1 – Role of Rail</b>												
<b>Chapter 2 – Current Rail System – Railroad Data</b>												
<b>Chapter 2 – Current Rail System – Public Data</b>												
<b>Chapter 3 - Proposed Passenger Rail Improvements</b>												
<b>Chapter 4 - Proposed Freight Rail Improvements</b>												
<b>Chapter 5 – Rail Service and Investment Program</b>												
<b>Chapter 6 – Rail Plan Coordination</b>												
<b>Draft State Rail Plan</b>												
<b>Final State Rail Plan</b>												





# Types of Projects & Initial Feedback



# Types of Projects Included in the 2015 Plan

Freight	Intercity Passenger Rail	Commuter
Double Stack Clearance Projects	NEC Bridge and Tunnel Replacement, Upgrades	Additional Tracks on Host Rail Lines
Bridge Replacements	Station Additional Tracks/Platforms	Station Additional Tracks/Platforms
Additional Main Line Trackage	Maglev	Other Station Improvements
Track Upgrades	NEC Additional Tracks	Replace Stations
Yard Improvements	Other Station Improvements	New Stations
New Connections	NEC Interlocking and Turnout Replacements	Ticketing Improvements
Short Line Rehabilitation	Track Upgrades	Storage and Maintenance Facility
Short Line Upgrade to 286K		Service Extension to Virginia



# Feedback So Far

## Railroad Surveys

Projects on the NEC (e.g., Susquehanna Bridge Project) can benefit freight, although NEC freight operations are limited

Transload facilities enable increased access to rail

Need for better marketing of rail and potential rail-served sites in Maryland

Better zoning could help rail-served industrial development

Freight rail supports retention of good jobs, helps to keep trucks off the road

Short line railroad needs

## Public Surveys (initial results)

Three most valued freight options for the Rail Plan Update were:

- enhanced rail access to the Port of Baltimore,
- new intermodal facilities (e.g., truck to rail), and
- rail served industrial and commercial sites.

Concern with blocked grade crossings in rural areas and hazmats.

Rail access to the Port of Baltimore, TradePoint Atlantic, and direct access to industrial sites.

Additional capacity on rail lines for freight and passenger operations.





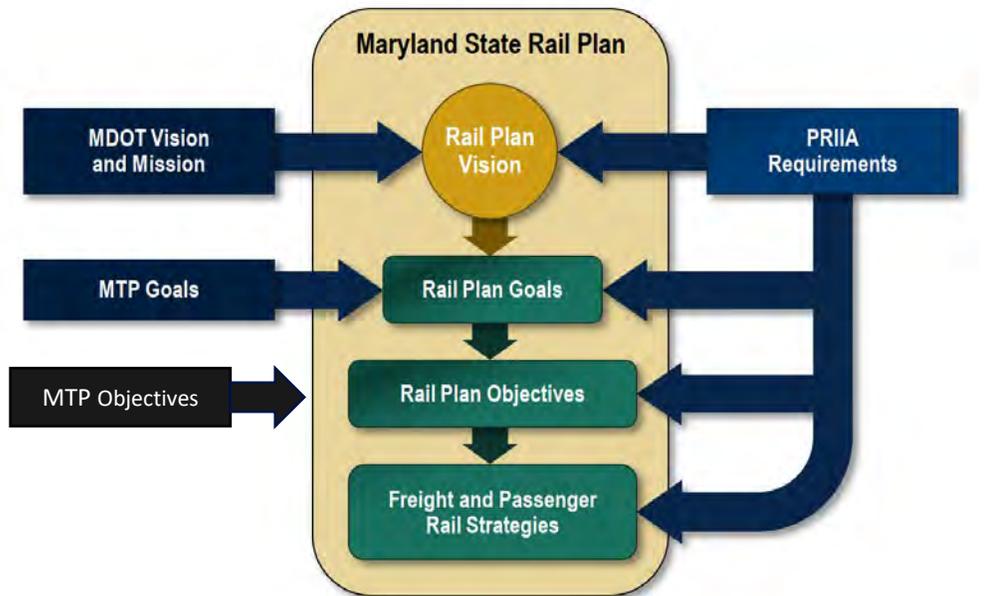


# Vision & Goals



# Relationship between Vision, Goals, Objectives, Strategies

## Relationship between MTP/Rail Plan



## 2015 Statewide Rail Plan Vision

*“The State’s Shared vision for freight and passenger rail is to provide a well-maintained, sustainable and intermodal, linked rail transportation system that facilitates the safe, convenient, affordable, and efficient movement of people, goods, and services within and between population and business centers.”*



# 2015 Rail Plan Goals/2019 MTP Plan Goals

2015 Goals	2019/2020 Goals
Safety and Security	Safety, Security, Resilience
System Preservation	Maintain and Modernize
Quality of Service	Quality, Efficiency, Customer Experience
Environmental Stewardship	Environmental Protection, Sensitivity
Community Vitality	Transportation Choices and Connections
Economic Prosperity	System Expansion for Economic Opportunity, Congestion Reduction
	Fiscal Responsibility





# Outreach



# Outreach Initiatives

- » Website/Email broadcasts at key milestones
- » MetroQuest Survey
- » Stakeholder Committee Meetings at key milestones
- » Topical Focus areas
  - Class I / Metropolitan Freight (February 10<sup>th</sup>)
  - Short Line / Rural Freight (February 24<sup>th</sup>)
  - Passenger (March 9<sup>th</sup>)
- » Interviews with Railroads and other stakeholders
- » Coordination with Freight Plan Update and State Transit Plan
- » Share Draft & Final Plans



# Stakeholder Advisory Committee

- » Who: Group of 16 stakeholders representing MPOs, railroads, state agencies in order to:
  - Provide strategic direction
  - Ensure the plan is grounded
  - Help identify key stakeholders
  - Vet vision and goals
  - Identify issues, needs, and opportunities
  - Inform the rail investment program
  - Recommend draft policies, programs, projects
- » Next Advisory Committee Meeting: May 19, 2021



# Next Steps

- » Topical Meetings: February through March
- » One-on-one Interviews with Select Stakeholders: February through April
- » Contact:
  - Harry Romano, Rail Program and Policy Manager, MDOT, 410-684-7063, [hromano@mdot.maryland.gov](mailto:hromano@mdot.maryland.gov)
  - Rail Plan Web page: [https://bit.ly/MD\\_StateRailPlan](https://bit.ly/MD_StateRailPlan)



Thank you.





# Howard Street Tunnel Update

*Bradley M. Smith*  
*General Manager, Strategic Initiatives*  
*Maryland Port Administration*



Presentation to the  
**Maryland State Freight Advisory Committee**  
March 3, 2021

# Howard Street Tunnel Project



# HOWARD STREET TUNNEL (HST)

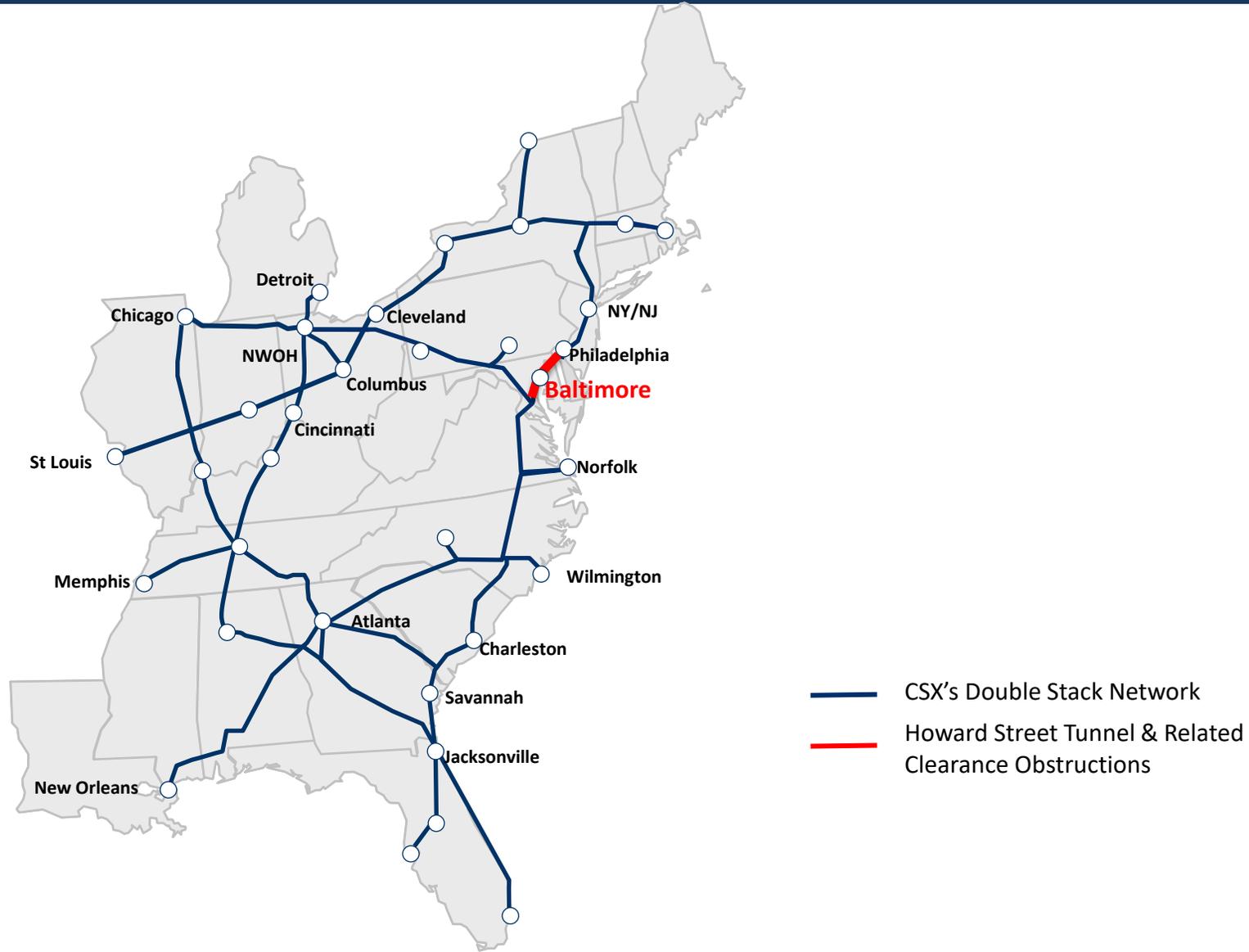
- The Howard Street Tunnel is a single-track rail tunnel in Baltimore City
  - Built between 1890 and 1895, extended in 1980's
  - 1.7 miles long
  - Owned, maintained and used by CSX
  - Approximately 18 inches too short for double-stack
- The HST Project will break a long-standing rail bottleneck and create a double-stack rail network to/from the Port of Baltimore and along the entire I-95 Rail Corridor



# HST PROJECT

- The HST Project costs \$466 million and consists of three components
  1. Camden Street Storm Line Project – Completed by CSX in 2019
    - Relocation of 48-inch drainage structure
    - \$22.5 million
  2. Howard Street Tunnel Clearance Project
    - Reconstruction of 1895 tunnel
    - \$263.2 million
  3. Highway/Rail Grade Separation Projects
    - Clearance improvements at 22 locations between Baltimore and Philadelphia
    - \$180.3 million

# CSX INTERMODODAL NETWORK (2021)



# PROJECT STATUS - NEPA

- The HST Project is being evaluated in accordance with the National Environmental Policy Act (NEPA)
  - Federal INFRA grant triggers the NEPA review
- On Friday, February 26, 2021, the Federal Railroad Administration (FRA) approved the project's Environmental Assessment (EA) for NEPA
  - The EA documented the potential for only minor temporary and permanent impacts as a result of the undertaking
- The EA is currently under a 30-day public review and comment period

# 30-DAY NEPA COMMENT PERIOD

- The EA document has been made available to the public for review and comment at [mpa.maryland.gov/HST](https://mpa.maryland.gov/HST)
  - Website also contains public outreach video
- The public comment period began on Monday, March 1, 2021, and goes through Tuesday, March 30, 2021

**Please send any questions or comments on the Project or the EA:**

Via email: [hst@marylandports.com](mailto:hst@marylandports.com)

Via mail: Bradley Smith

Maryland Port Administration

401 E. Pratt Street, 19th Floor

Baltimore, Maryland 21202

# NEXT STEPS

- The project team will consider comments received during the EA comment period when drafting the final NEPA document
  - FRA is expected to approve the final NEPA document in the spring of 2021
- Following final NEPA approval, CSX will be able to finalize engineering, obtain permits, and advance to construction
- CSX is expected to begin construction, in phases, later in 2021



# THANK YOU

Bradley M. Smith

General Manager, Strategic Initiatives

Maryland Port Administration

[bsmith9@marylandports.com](mailto:bsmith9@marylandports.com)

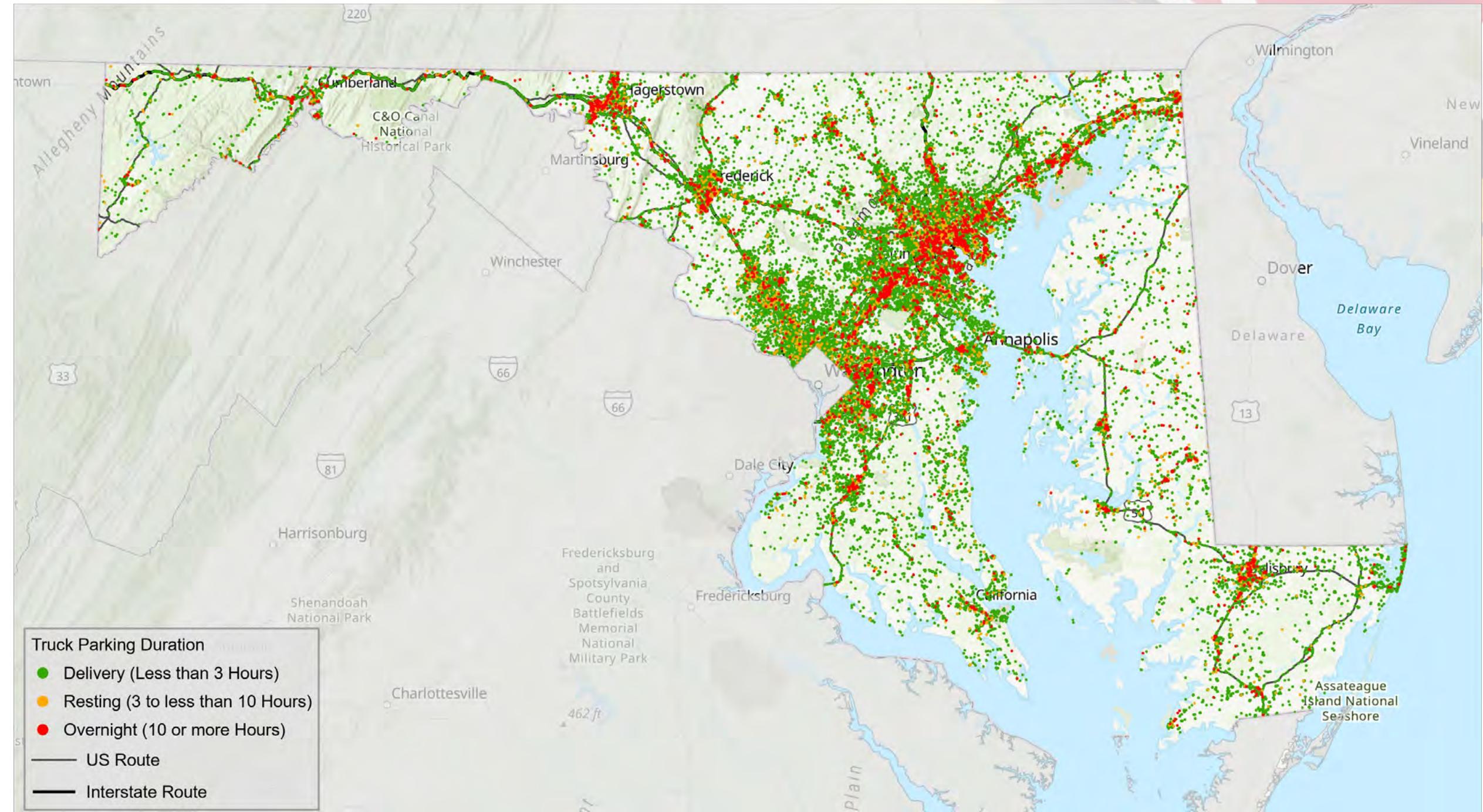
410-385-4830

# USING INRIX TRIPS DATA TO SUPPORT STATE TRUCK PARKING PROGRAMS

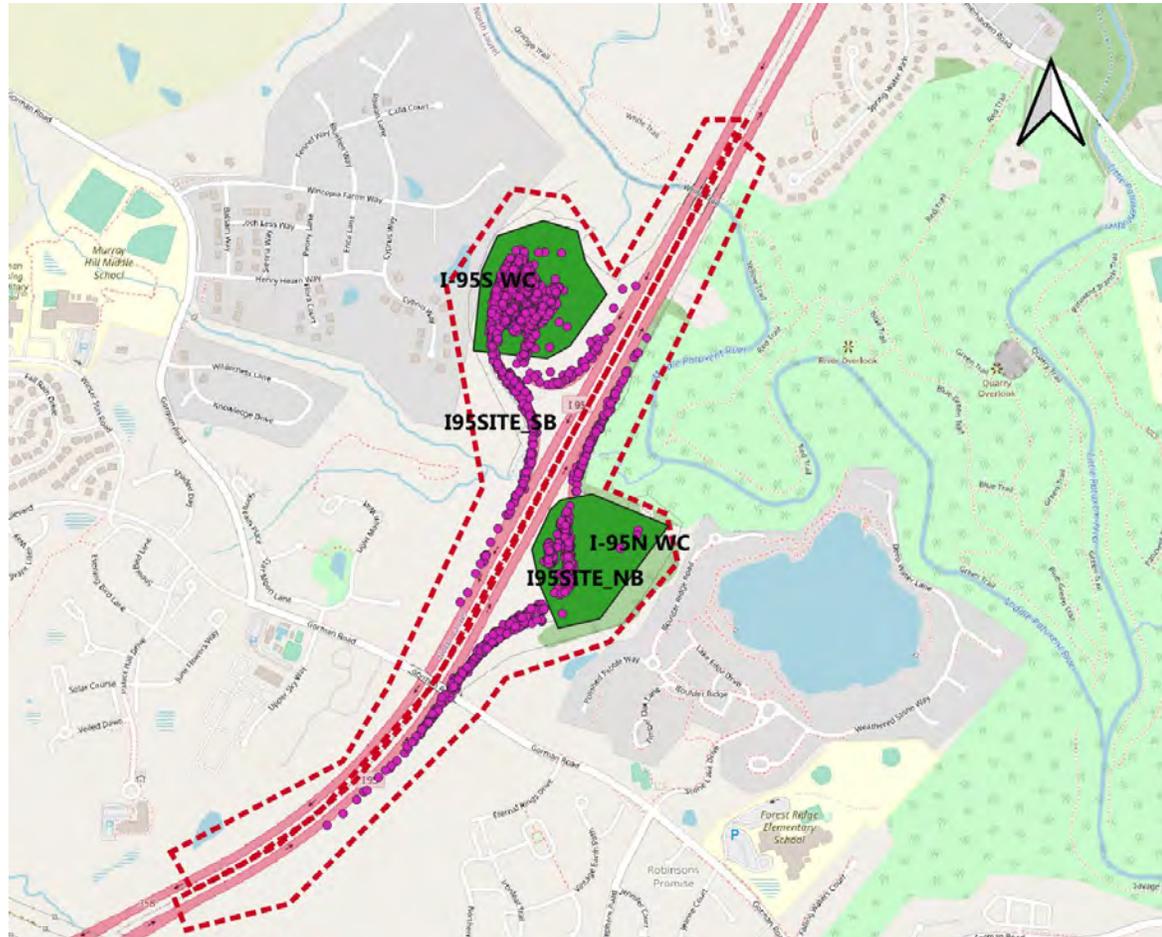
NICOLE J. KATSIKIDES, PH.D., TEXAS A&M TRANSPORTATION INSTITUTE  
FOR  
MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY  
ADMINISTRATION

# TRUCK PARKING ANALYTICS

# MARYLAND TRUCK PARKING BY DURATION



# QUARTER SNAPSHOT OF TRUCKS PARKED IN LOT AND RAMPS



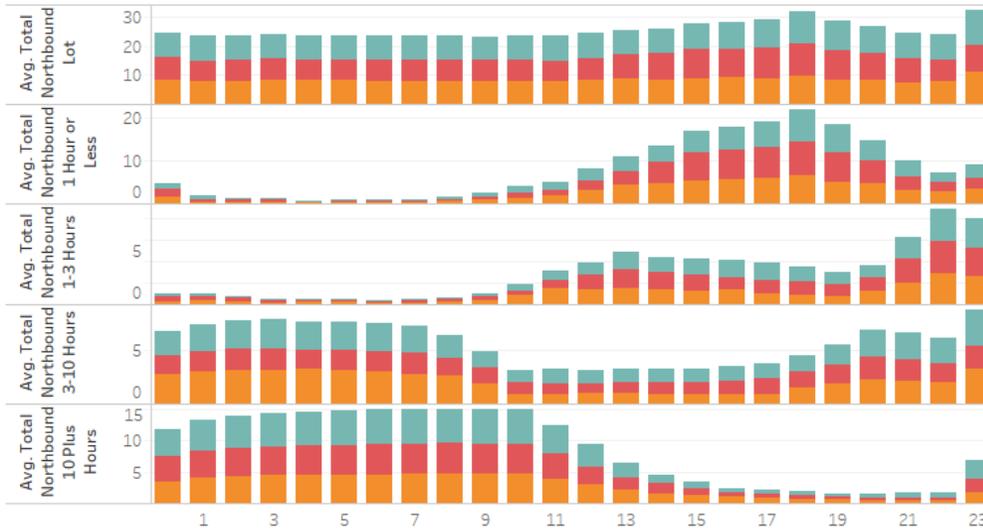
During the first quarter of 2019, the data from INRIX shows 31% of trucks parked in this area longer than 10 hours were on the ramps.

Rest Time

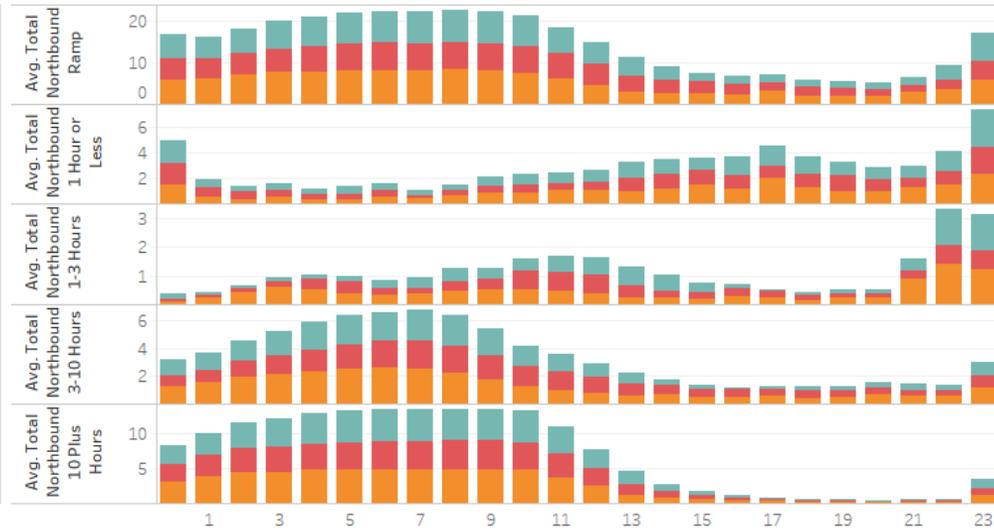
- longer than 10 hours

# PARKING TRENDS, LAUREL NORTHBOUND AND SOUTHBOUND

Parking by Day, Month and Length of Parking

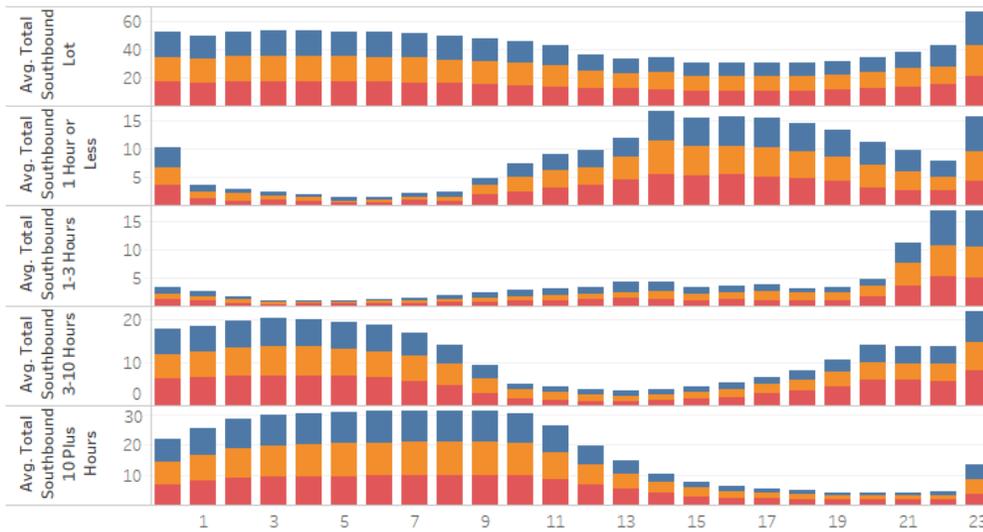


Parking by Day, Month and Length of Parking

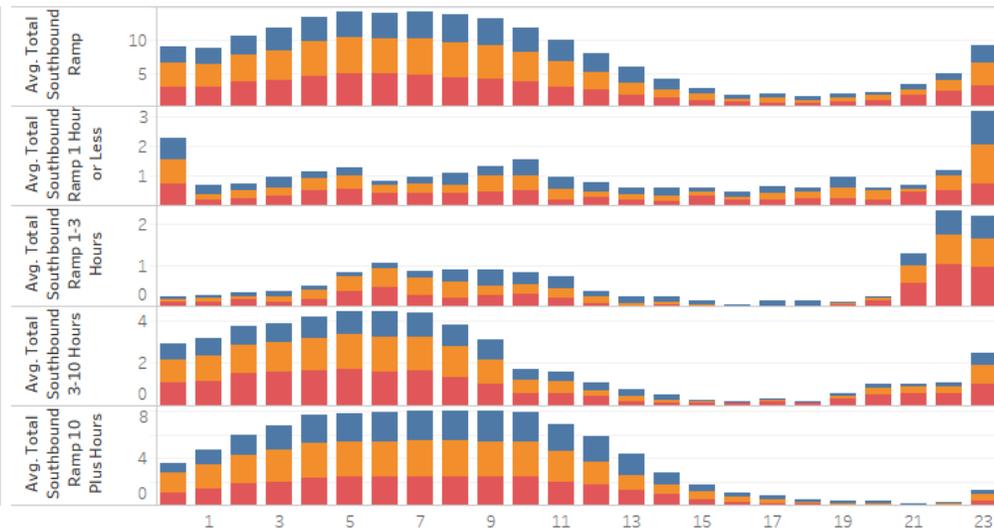


- Northbound
  - January
  - February
  - March
- Southbound
  - January 2019
  - February 2019
  - March 2019

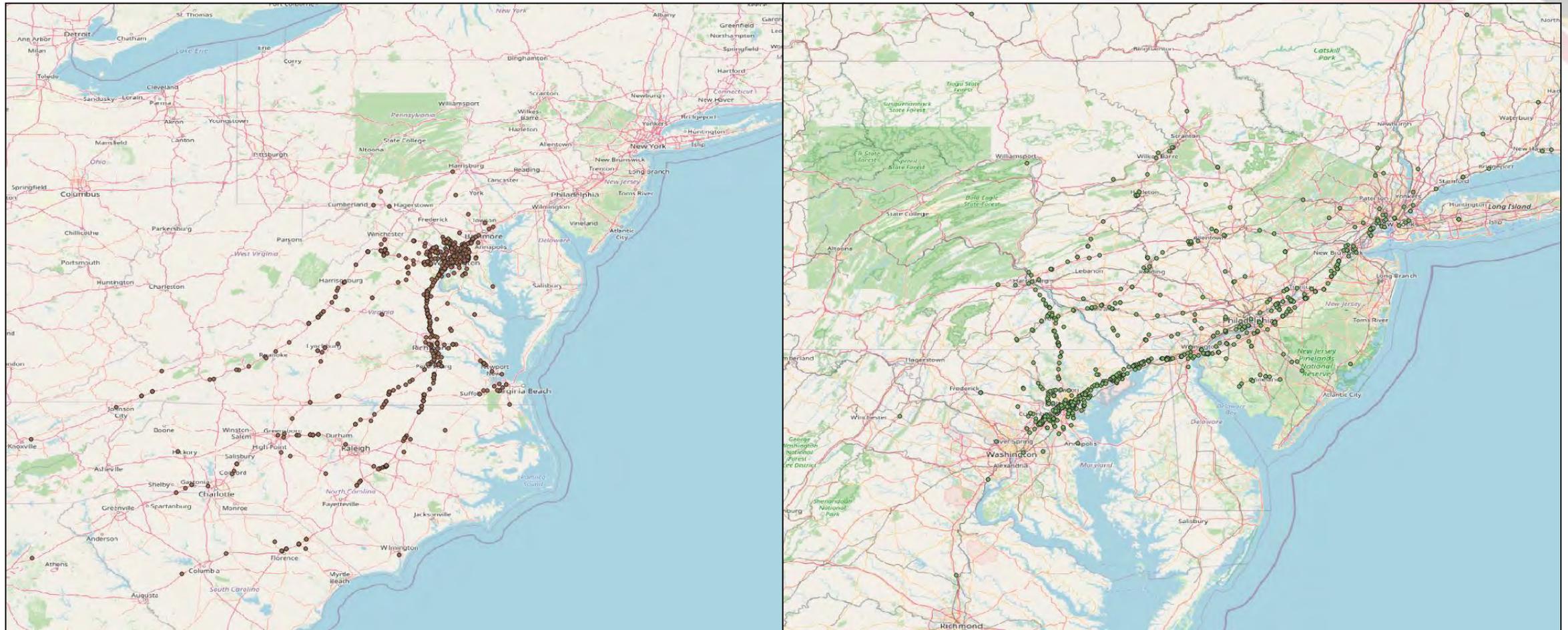
Utilization by Hour, Month and Length of Parking



Utilization by Hour, Month and Length of Parking



# ORIGINS AND DESTINATIONS OF LESS THAN 1 HOUR RAMPS TRUCKS, NORTHBOUND



# UTILIZATION NUMBERS

Based on one to two nights a year of manual counts taken.

Truck Stop	Roadway	County	Municipality	Usage (%)				
				2012	2013	2014	2016	2017
Youghiougheny Overlook Welcome Center	I-68 EB Friendsville	Garrett	Friendsville	82%	77%	95%	86%	95%
Mason Dixon Welcome Center ***	US 15 S of PA State Li	Frederick	Emmitsburg					
I 95 Welcome Center - Northbound	I-95 SB Laurel	Howard	Laurel	152%	257%	238%	248%	376%
I 95 Welcome Center - Southbound	I-95 NB Laurel	Howard	Laurel	87%	83%	93%	126%	111%
Maryland House - Northbound	I-95 NB Aberdeen	Cecil	Aberdeen	129%	N/A	154%	150%	243%
Maryland House - Southbound	I-95 SB Aberdeen	Cecil	Aberdeen	176%	N/A	148%	157%	67%
Chesapeake House - Northbound	I-95 NB North East	Cecil	North East	57%	74%	71%	83%	77%
Chesapeake House - Southbound	I-95 SB North East	Cecil	North East	49%	43%	38%	51%	35%
U.S. 13 Welcome Center - Northbound	US 13 NB at VA State	Worcester	Pocomoke City	129%	143%	143%	21%	7%
Bay Country Welcome Center	US 301 Centerville	Queen An	Centerville	56%	56%	76%	88%	96%
I-70 Welcome Center - Eastbound	I-70 EB South Mount	Frederick	Myersville	158%	150%	146%	142%	158%
I-70 Welcome Center - Westbound	I-70 WB South Mount	Frederick	Myersville	109%	104%	130%	100%	143%
I-70 Truck Rest Arera	I-70 EB New Market	Frederick	New Market	111%	156%	144%	144%	178%

Hours Overnight	Northbound Parking Count	Northbound Ramp Count	Space Ratio	Ramp Ratio	Adjusted Parking Count	Adjusted Space Ratio
10:00 PM	7.98	3.12	38%	28%	39.89	190%
11:00 PM	10.93	5.71	52%	34%	54.67	260%
12:00 PM	8.12	5.58	39%	41%	40.61	193%
1:00 AM	7.82	5.36	37%	41%	39.11	186%
2:00 AM	7.92	6.04	38%	43%	39.61	189%
3:00 AM	8.01	6.66	38%	45%	40.06	191%
4:00 AM	7.87	7.00	37%	47%	39.33	187%
5:00 AM	7.92	7.34	38%	48%	39.61	189%
6:00 AM	7.97	7.49	38%	48%	39.83	190%
Spaces	21					
Hours Overnight	Southbound Parking Count	Southbound Ramp Count	Space Ratio	Ramp Ratio	Adjusted	Adjusted Space Ratio
10:00 PM	14.40	1.61	31%	10%	72.00	157%
11:00 PM	22.58	3.03	49%	12%	112.89	245%
12:00 PM	17.63	2.97	38%	14%	88.17	192%
1:00 AM	16.78	2.91	36%	15%	83.89	182%
2:00 AM	17.54	3.55	38%	17%	87.70	191%
3:00 AM	17.77	3.97	39%	18%	88.83	193%
4:00 AM	17.79	4.48	39%	20%	88.94	193%
5:00 AM	17.57	4.78	38%	21%	87.83	191%
6:00 AM	17.50	4.70	38%	21%	87.50	190%
Spaces	46					

Based on one quarter of INRIX data in 2019. It is more detailed and accurate.



# APPROXIMATING UTILIZATION

The INRIX data successfully matched manual count data. Space ratios are similar.

## Manual Counts by MDOT

Truck Stop	Roadway	County	Municipality	2012	2013	2014	2016	2017	Average Space Ratio
I 95 Welcome Center - Northbound	I-95 NB Laurel	Howard	Laurel	152%	257%	238%	248%	376%	254%
I 95 Welcome Center - Southbound	I-95 SB Laurel	Howard	Laurel	87%	83%	93%	126%	111%	100%

## INRIX Counts

Location	INRIX 2019 Quarter 1 Average Count (Lot and Ramp)	Space Ratio
I 95 Welcome Center - Northbound Lot and Ramp Combined	52	248%
I 95 Welcome Center - Southbound Lot and Ramp Combined	57	124%

# NEXT STEPS

- Continue to explore data use and how it supports MDOT's projects.
- Develop a truck parking widget and use waypoint data to assess truck parking capacity and areas of need.

# ***UPDATES FROM THE COMMITTEE***

*Louis Campion, Maryland Motor Truck Association  
John Magness, Canton Railroad Company  
Tom Madrecki, Consumer Brands Association*



# Trucking Industry Update



**Louis Champion**  
President & CEO  
Maryland Motor Truck Association



# Economic Importance in Maryland

- 96% of manufactured freight
- 111,500 employees
- \$6.1 billion wages
- Essentiality of industry



# Economic Impact of COVID

- Trucking has fared better than most industries
- “Essential” service
  - Importance of supply chain
- Not all freight is the same
  - Winners
    - Groceries, refrigerated, e-commerce
  - Losers
    - Fuel haulers, restaurants, construction, office moving

# ATRI's Top 10

1. Driver shortage
2. Driver compensation
3. Truck parking
4. Compliance & safety
5. Insurance cost/availability
6. Driver retention
7. Tort reform
8. Economy
9. Detention
10. Hours of service

**MOST OF THESE ARE INTER-RELATED!**

# GHG Reduction

- Industry is fuel neutral

- Available
- Affordable
- Accessible

**Cummins Outlines the Future of Hydrogen Fuel Technologies**

- Options

- Electric
- Hydrogen
- Natural gas
- Biofuels/Renewable diesel

**Volvo Plans to Sell First Heavy-Duty Electric Trucks in December**

**Hyundai Readies Fuel Cell Truck for US Market**



# Challenges to Widespread Adoption

- Differ by sector
  - Medium duty v. heavy duty; long v. short haul
- Battery capacity/range – 300 to 500 miles
- Battery weight – estimated 5 to 7 tons
- Interoperable charging
- Parking with charging – today 300,000 spaces for 3 million drivers

# Thank you



**Louis Champion**  
**President & CEO**  
**Maryland Motor Truck Association**  
410-644-4600  
[louis@mdtrucking.org](mailto:louis@mdtrucking.org)



# Freight Movement in Maryland

...one man's opinion

John Magness  
President & CEO



from where I stand....

## Technology & Innovation

Reduced train crew size & autonomous operations

Environment (Private Investment vs. Government Supported)

Innovate: Stay Current, Look Ahead

Workforce Development



# from where I stand....

## Infrastructure

Evaluating rail, truck, barge & port operations to develop balance

Level Playing Field for all modes



# from where I stand....

**Clustering Freight (It Takes a Village....)**

**Commerce, MDOT and Industrial Development Coordination**

**Zoning and Development joined with  
Transportation Planning**



# Responding to CPG Demand in COVID-19 and Rapid E-Commerce Acceleration

**MARCH 3, 2021**

**MDOT SFAC MEETING**



# Our Mission

The Consumer Brands Association unites the \$2 trillion consumer packaged goods industry to shape the landscape for growth across three areas:

Supply Chain, Packaging, and Product Regulation.





# PORTRAIT OF AN AMERICAN SUPPLY CHAIN

**The coronavirus pandemic put supply chains front and center for Americans who never had to think about it before.**

Though many high-demand items are back in stock, the pressure on the supply chain has not let up. Across the consumer packaged goods (CPG) industry, supply chain leaders continue to work overtime to ensure Americans have access to the essential goods they rely on to keep them safe and keep them home.

These efforts didn't just keep products on the shelf – they renewed Americans' trust in the industry.



# COVID-19 CHALLENGES

- **Worker Health & Safety**
- **Absenteeism & Labor Availability**
- **PPE Scarcity & Sourcing**
- **Rising Transportation Costs & Capacity Crunch**
- **Essential Worker Definitions & Business Continuity**
- **Radical Demand Shifts & Elevated Purchasing Levels**
- **Retailer Collaboration & Shift to E-Commerce**
- **Global Pandemic = Global Supply Chain Disruptions**

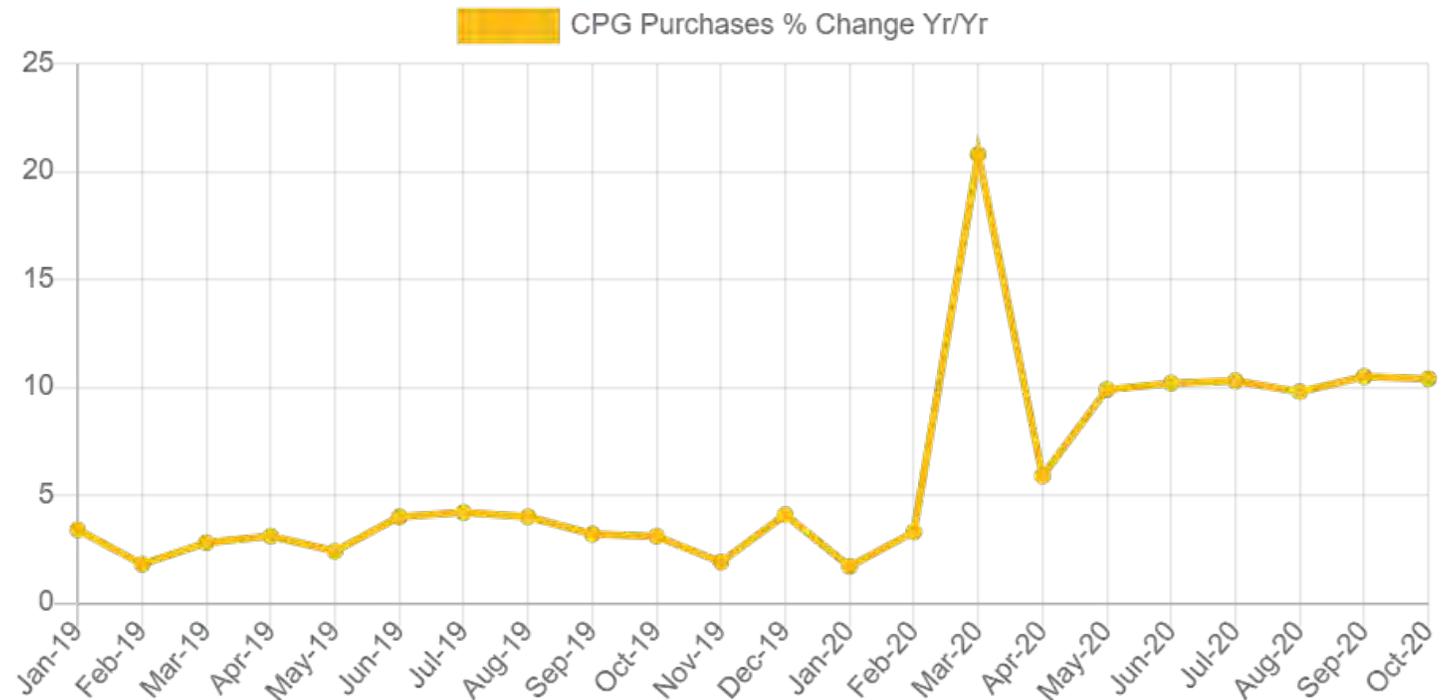


# BY THE NUMBERS

**Continued at-home consumption keeps demand high, with certain categories still at record levels.**

CPG posted strong growth rates going into the holiday, with year-over-year growth of 10.4% in October, putting four of the last five months above 10% annual growth.

The trend suggests that, as people continue to stay at home, spending on food, beverage, household and personal care products will keep pace over the holidays. Consumer Brands anticipates that CPG purchases will be up between 9.5-11.5% for the 2020 holiday season.

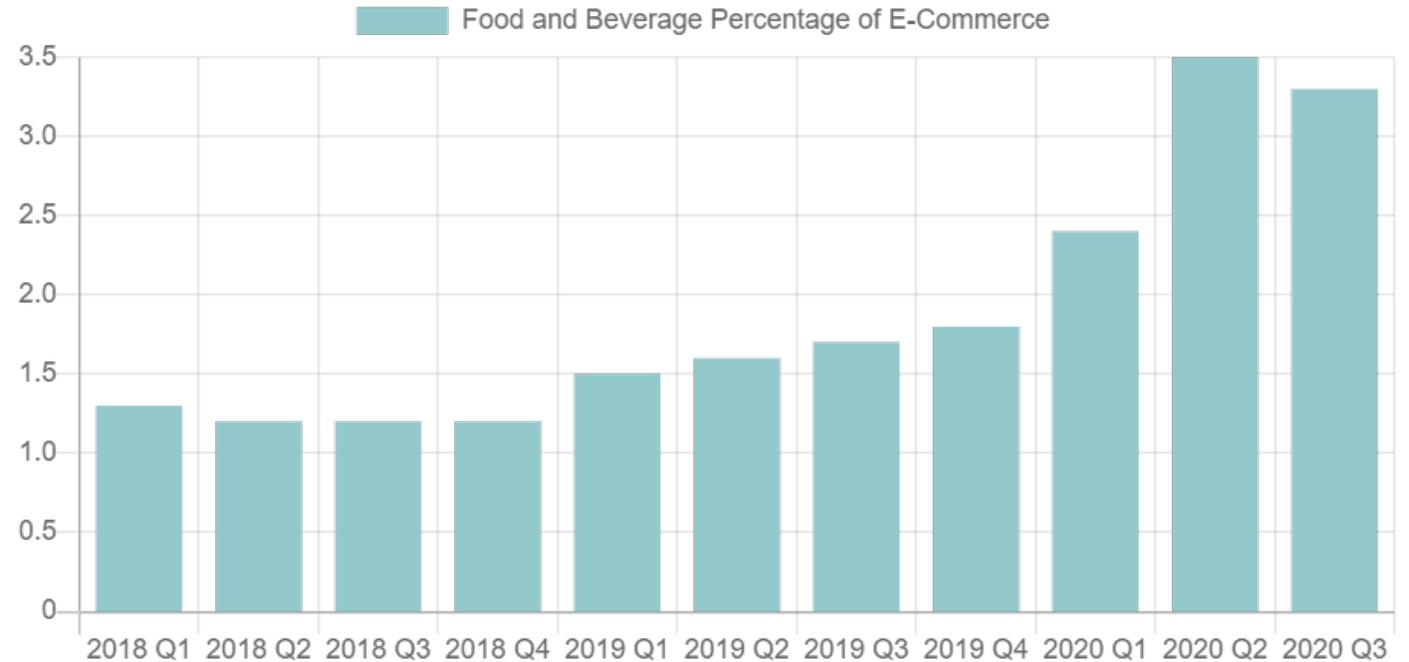


# BY THE NUMBERS

**E-commerce exploded for food and beverage products.**

Changed circumstances have led to new habits, pushing more grocery shopping online.

The Census Bureau's e-commerce release in November showed third quarter online spending for food and beverages totaled \$6.5 billion, an increase of 162% over the same quarter a year earlier.



In 2019, the food and beverage portion of e-commerce averaged a sleepy 1.6% share of all e-commerce purchases; in 2020, that share has doubled to 3.3% of all e-commerce measured in the third quarter.

# We think of digital grocery retail in 4 buckets

Biggest

Smallest



Examples

			<p>(Frito-Lay)</p>
			<p>Neutrogena</p>

Characteristics

<p>3<sup>rd</sup> party inventory Can be shipped to customer Delivery is sometimes also available locally</p>	<p>Owned inventory by merchant Usually pickup (often curbside) Sometimes delivery to home</p>	<p>Owned inventory by merchant Delivery to consumers Sometimes local fulfillment centers</p>	<p>Owned inventory by brand Delivery to customers Long distance shipments</p>
---	---	--	---

# Certain players have captured the lion's share

Share of online total

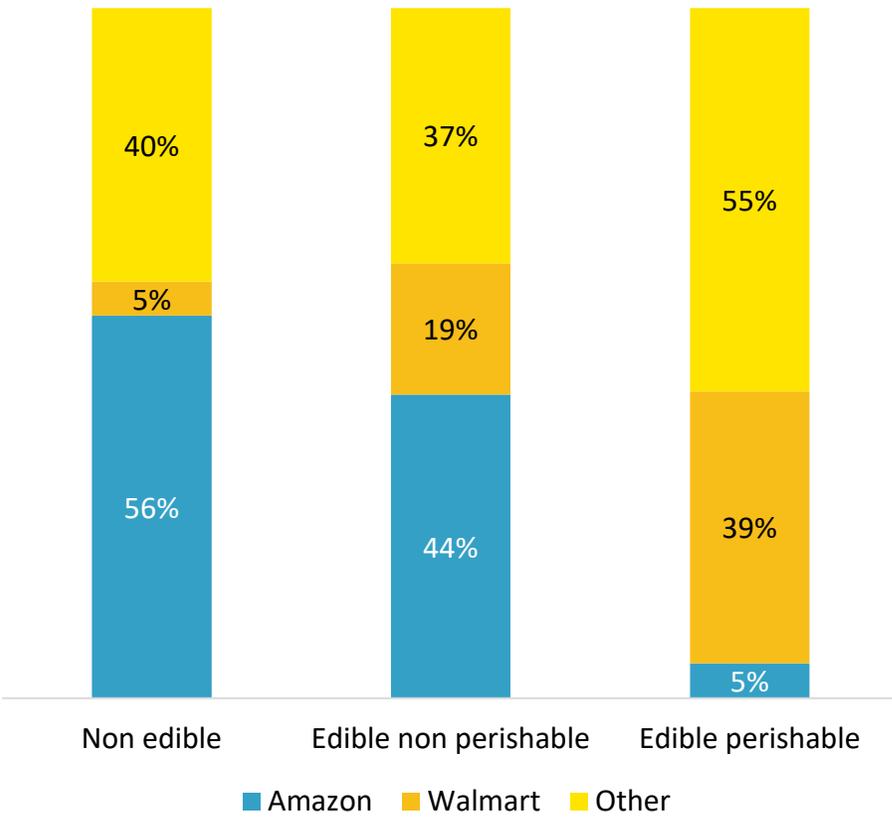
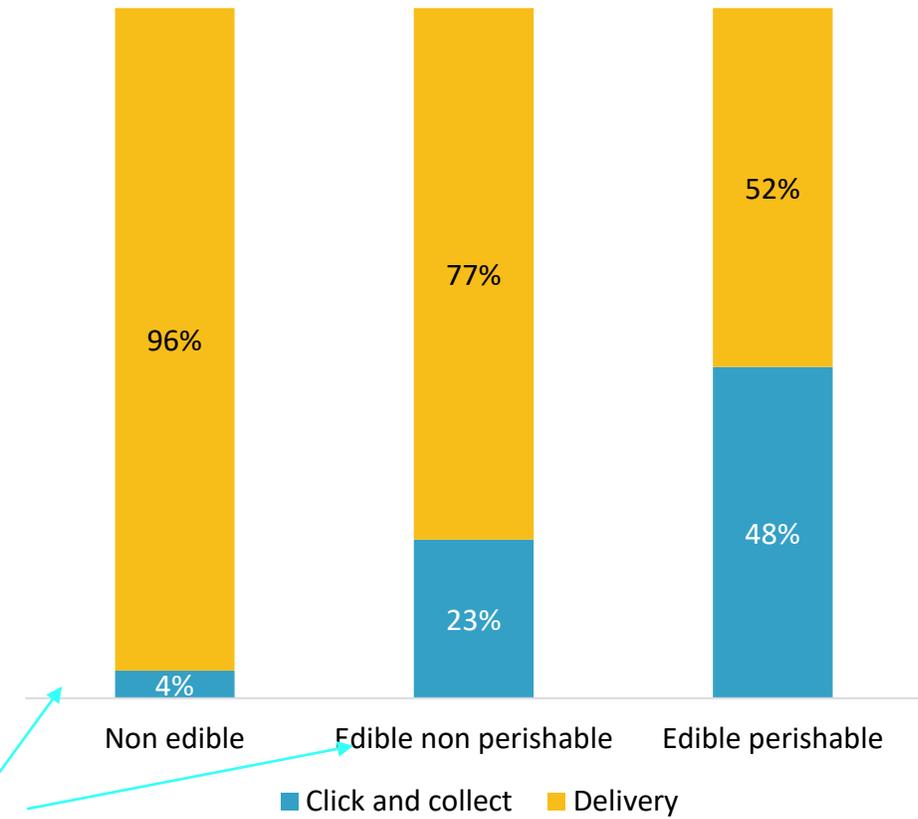
73%

20%

6%

Click and collect penetration

Top online grocers



CPG Strongholds

# BY THE NUMBERS

**The dramatic rise reveals a growing confidence in shopping online for grocery products that is expected to develop into a lasting behavior for the majority of consumers.**

Nearly 80 percent of consumers surveyed in a recent Consumer Brands poll indicated that they would continue to use online ordering for at least some grocery purchases.

Did you use online ordering before the COVID-19 pandemic hit?

	<b>Total</b>
Yes, frequently	16%
Yes, occasionally	45%
No, I started using it frequently after the pandemic hit	16%
No, I started using it occasionally after the pandemic hit	22%
<b>Yes (net)</b>	<b>61%</b>
<b>No (net)</b>	<b>38%</b>

Do you plan to use online ordering after the pandemic is over?

	<b>Total</b>
Yes, frequently	30%
Yes, occasionally	48%
No, probably not	15%
No, definitely not	3%
I don't know	5%
<b>Yes (net)</b>	<b>77%</b>
<b>No (net)</b>	<b>17%</b>

# BY THE NUMBERS

The rise of e-commerce stands to fundamentally reshape how consumers purchase products, with deep implications for supply chain management – not to mention policymaking.

Consumer decisions also do not occur in a vacuum – consider these statistics in conjunction with broader e-commerce expansion as well as declining personal automobile ownership, rideshare, alternative mobility options, etc.

The sum total is a permanently changed landscape, which will demand new approaches from both the private and public sectors.

## Before the pandemic

	Total
Frequent small trips to the grocery store (more than once a week)	52%
Infrequent larger trips to the grocery store (a week or more's supply)	47%

## During the pandemic

	Total
Frequent small trips to the grocery store (more than once a week)	27%
Infrequent larger trips to the grocery store (a week or more's supply)	72%

## After the pandemic

	Total
Frequent small trips to the grocery store (more than once a week)	38%
Infrequent larger trips to the grocery store (a week or more's supply)	61%



# IN PRACTICAL TERMS

- **Demands Unprecedented CPG Response & Around-the-Clock Action**
- **Forces Conversation on Network Redesign and Corporate Transformation**
- **Accelerates E-Commerce Strategies by 5-10 Years**
- **Creates New Replenishment, Ordering and Inventory Dynamics**
- **Highlights Need for CPG-Retailer Collaboration**
- **Exposes Margin Issues for Click-and-Collect and Home Delivery**
- **Puts Onus on Retailers, Delivery Companies and Platform Providers to Figure Out the Last-Mile**
- **Poses New Questions About How to Manage Curbside, Facilitate Efficient Urban Deliveries and Take Holistic Approach to Improving Performance**



# THE START OF SOLUTIONS

- **Unfortunately, No Single Solution**
- **Consumer Brands Contactless Delivery Task Force**
- **New Pick-Up and Delivery Concepts**
- **Product Design, SKU and Packaging Changes**
- **Differentiated Retail and Fulfillment Models**
- **Rise of Autonomy**



# LESSONS LEARNED

- **Take a Multifaceted Approach**
- **Consider Varying Delivery and Distribution Models**
- **Understand Supply Chain Complexity and Support Linkages**
- **Plan for Accelerated E-Commerce Growth**
- **Seize Upon ‘Silver Linings’**
- **Encourage Government Focus on Supply Chain Competitiveness and Resiliency – *recent report from Consumer Brands, CSCMP and Iowa State University***



**Thank you**



# ***HOUSEKEEPING AND ADMINISTRATION***

*Michelle Martin  
MDOT Deputy Director*



STATE **FREIGHT** ADVISORY COMMITTEE

# MEMBERSHIP

- Annually, each member will assess whether they remain in a position to serve on the SFAC.
- Annually, MDOT will assess membership to determine if changes in membership would benefit the SFAC.



*WHEN WE MEET AGAIN...*

**Should we meet another time besides September 1?**



# Should we meet another time besides September 1?

No, September is good.

We must meet again before that meeting.

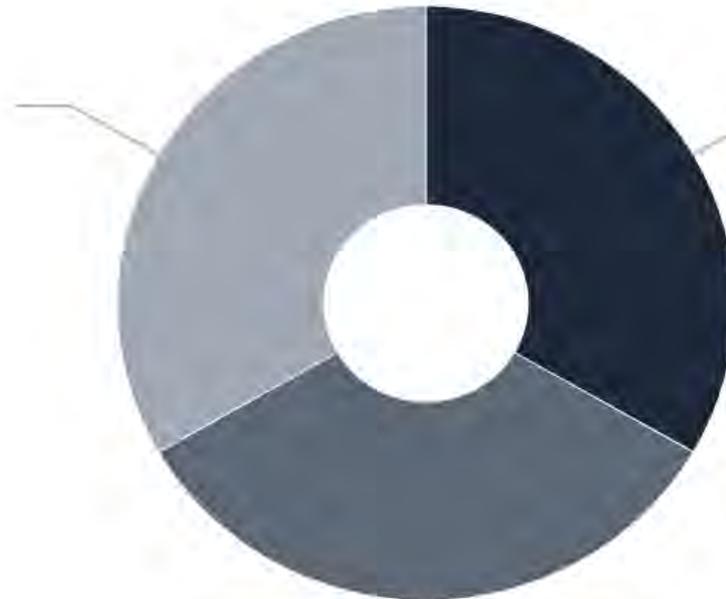
I would meet again after September. Not before.



# Should we meet another time besides September 1?

- No, September is good. **A**
- We must meet again before that... **B**
- I would meet again after Septe... **C**

I would meet again after September. Not before.



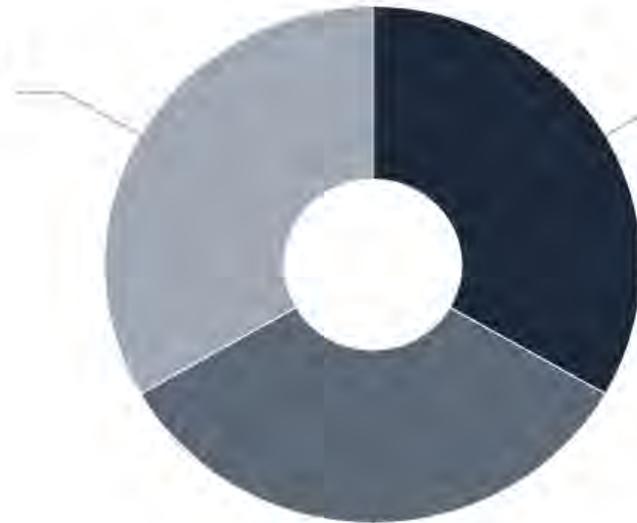
No, September is good.

We must meet again before that meeting.

# Should we meet another time besides September 1?

 No, September is good. **A**  We must meet again before that... **B**  I would meet again after Septe... **C**

I would meet again after September. Not before.



No, September is good.

We must meet again before that meeting.

***THANK YOU***



STATE **FREIGHT** ADVISORY COMMITTEE



# *COFFEE AND DONUTS*

**MDOT** MARYLAND DEPARTMENT OF TRANSPORTATION  
**STATE FREIGHT**  
ADVISORY COMMITTEE

# *BREAKOUT ROOMS*

**AIR** [Click here to join the meeting](#)

**PORT** [Click here to join the meeting](#)

**RAIL** [Click here to join the meeting](#)

**TRUCK** [Click here to join the meeting](#)

