MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

FREIGHT DATA EXCHANGE PROJECT

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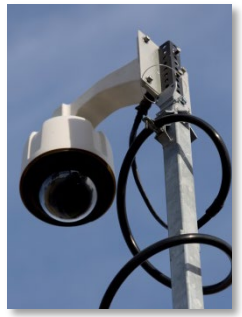
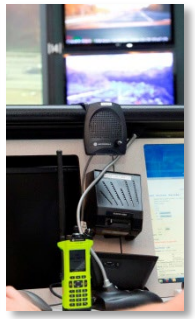
OFFICE OF TRANSPORTATION MOBILITY & OPERATIONS

Focus Areas

- Incident Management
- Traffic and Roadway Monitoring
- Traveler Information
- Emergency Operations
- Intelligent Transportation Systems
- **Traffic Management**
- Connected & Automated Vehicles

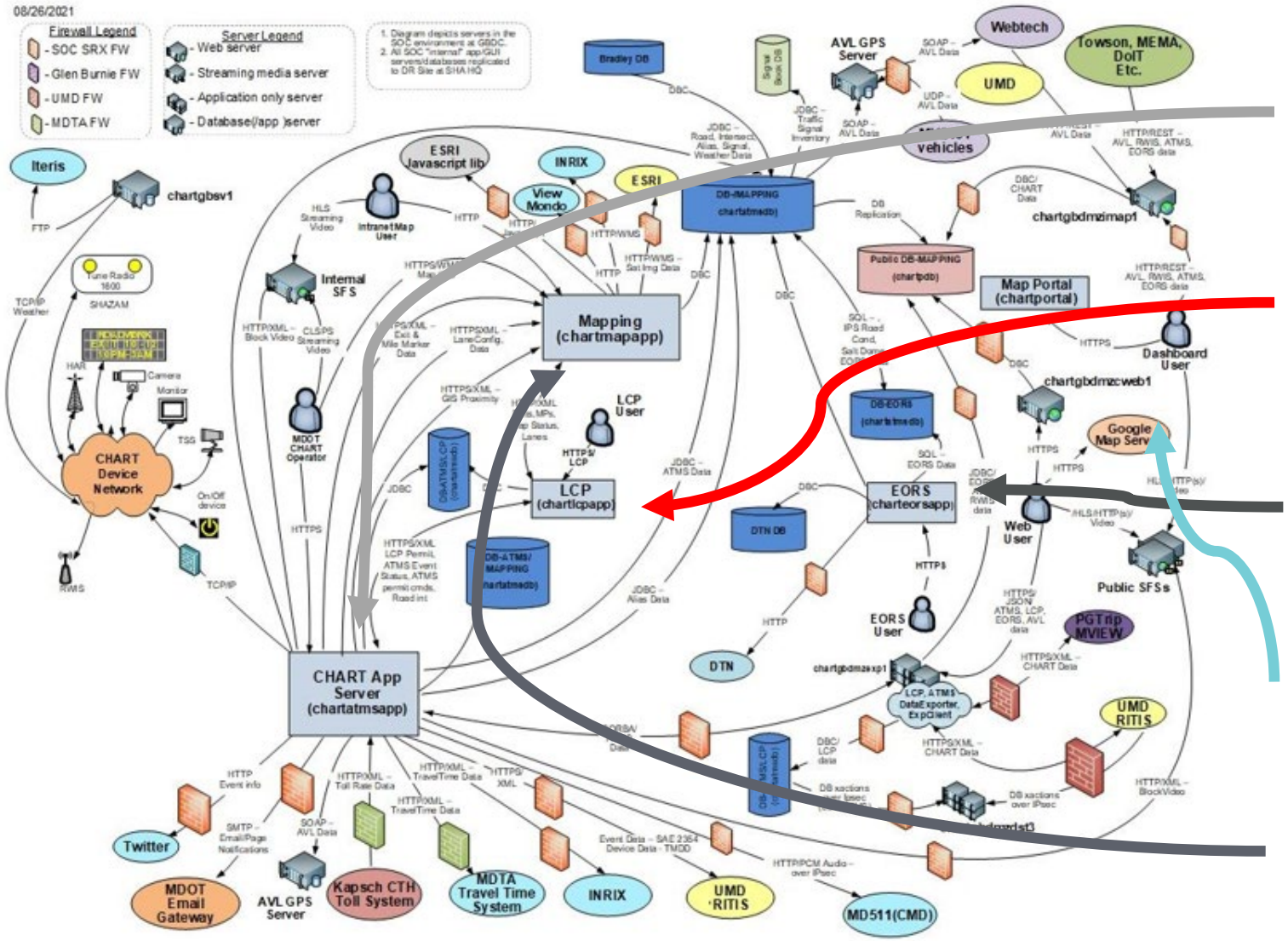




TSMO MARYLAND TRANSPORTATION SYSTEMS MANAGEMENT & OPERATIONS

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

DATA IS KEY IN ATMS



Advanced
Traffic
Management
System (ATMS)

Lane
Closure
Permitting
System (LCP)

Emergency
Operations
Reporting
System (EORS)

World Wide
Web Presence

Integrated GIS
Mapping

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

TSMO
MARYLAND TRANSPORTATION SYSTEMS MANAGEMENT & OPERATIONS

PROJECT BACKGROUND

- Transportation Systems Management & Operations (TSMO)
  - Capability Maturity Model was performed with freight partners
  - Identification of coalesced data streams for internal and external partners
  - Supports a core goal of TSMO
- Connected and Automated Vehicles (CAV)
  - Data exchange was a deliverable in the MDOT SHA CAV Implementation Plan
  - Truck Platooning now legal in Maryland

PROJECT GOALS & PURPOSE

- Goals:
  - Phase 1: create a specifications requirement document
  - Phase 2: build out the data exchange

- Purpose:
  - The data exchange platform will support ingesting and hosting of real-time and potentially static transportation information of interest to freight partners
  - This data exchange will offer a single point of focus for stakeholders to pull information needed for their respective initiatives and allow third party vendors to share their data into the system in real-time

CURRENT EFFORTS

- Completed To Date:
  - Completed Research & Findings Document – July 2022 *(Complete)*

- Recent Activities:
  - Stakeholder Discovery Sessions – September - October 2022 *(In Progress)*
  - RFI *Published* for Industry Information – October 2022 *(In Progress)*
    - *Please respond!*
  - Requirements Documentation – October 2022 – November 2022 *(In Progress)*
  - Design / Solutions Options Analysis – December 2022 – March 2023

USER GROUPS

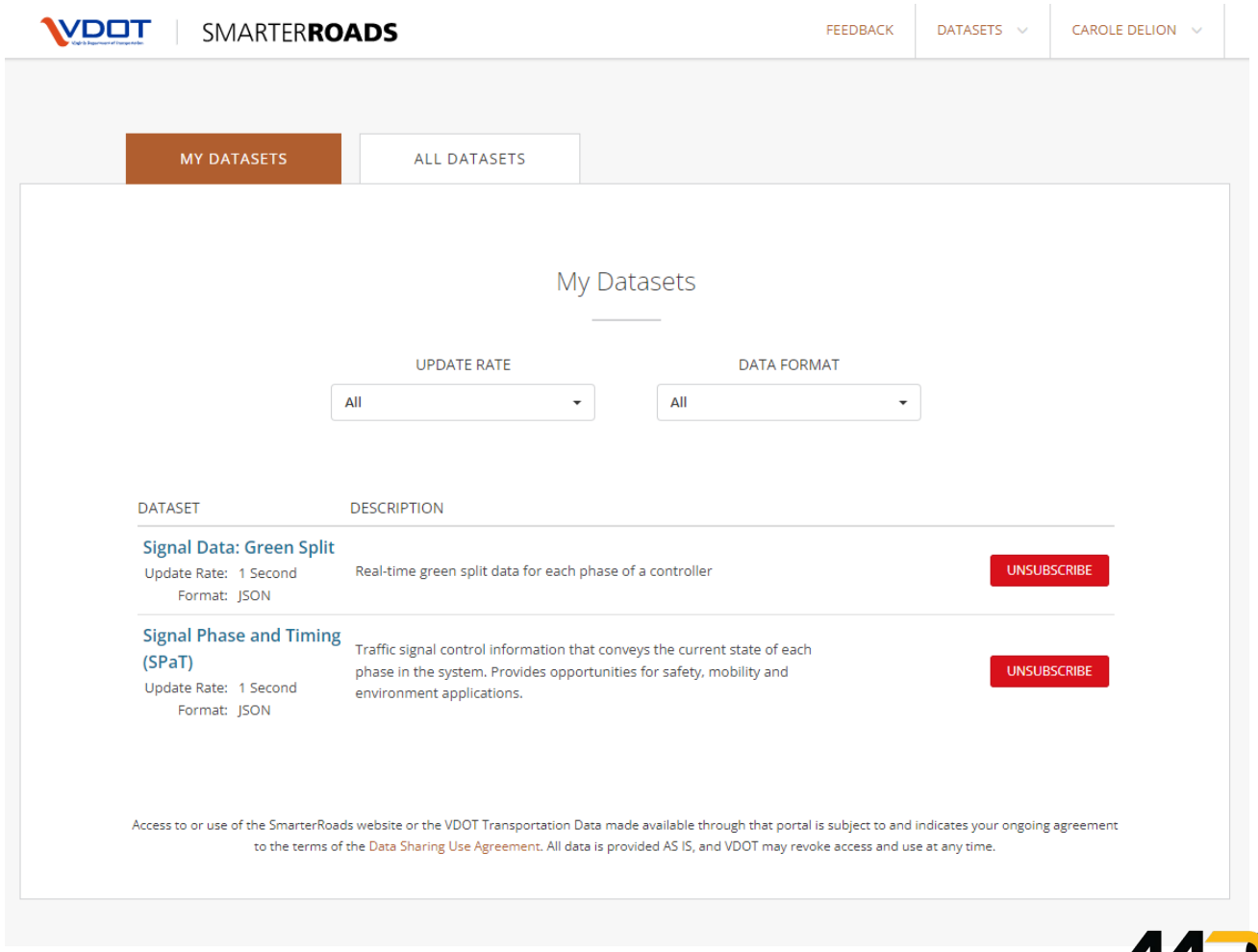
Systems	Route Planning Engines	Analytics Engine
Freight Drivers	Dispatchers	Planners
Passengers	Traffic Operations	Drivers

DATA SETS

Data Groups	Description of Data
Congestion and Reliability	Delay, Mobility and Reliability (e.g., Delay per Mile, Travel Time Index, Planning Time Index)
Commodity information	Characteristics of Truck, Industry, Contents
Curve/Grade/Bridge Warnings	Speed
HAZMAT movements/awareness	Description, Class
Highway Message Signs	Closures, Detours, Events
Historical Data Analysis	24 hr PTI/TTI, Road Condition
Load Management	Backhauls
Loading Zone Support	Availability
Parking	Availability, Services
Platooning Management	Location, Direction
Freight Analysis Framework (FAF)	Modes, Commodities, Geography, Network
Ports, Rail	Service Times
Road Closures	Lanes, Length
Safety Data	Areas of High Crashes, Bridge Hits, Fatalities versus Injuries
Snow Emergency Plan	Closures, Detours, Speed
Tariffs, Tolling, Taxes	Cost
Traffic Incidents	Duration, Details, Lanes
Traffic Speeds, real-time	Speed
Weather Stations	Precipitation, Wind Gusts, Icing, Snow
Weigh Stations	Location, Service Time, Parking Availability
Weight, Wide Loads, Height Restrictions	Virtual Closures
Work Zones	Lanes, Speeds, Detours

WHAT COULD IT LOOK LIKE?

- User based registration
- Feed selection subscription
- Will **NOT** include analytics (just feed)



Source: smarterroads.org

NEXT STEPS

- Complete discovery sessions with stakeholders
- Compile responses from the RFI
- Establish baseline requirements document
- Follow up to fill in any gaps or further any concepts
- Determine the procurement and/or solution to building out the data exchange

OTHER PROJECTS

- Freight AV Feasibility Analysis (10 routes)
- Freight EV Fleet Capabilities
- Freight Truck Parking Technology
- WIM Station Upgrades

QUESTIONS / DISCUSSION