

# Impact of Today's Technologies – Integrated Corridor Management (ICM)

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**April 6, 2016**

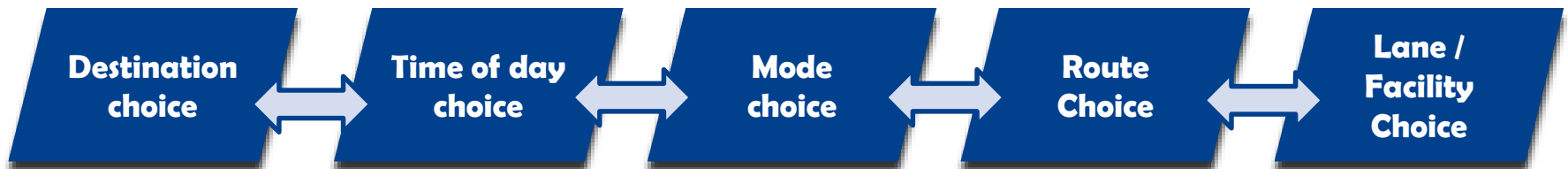
## What is ICM to Virginia?

# Choice for customers

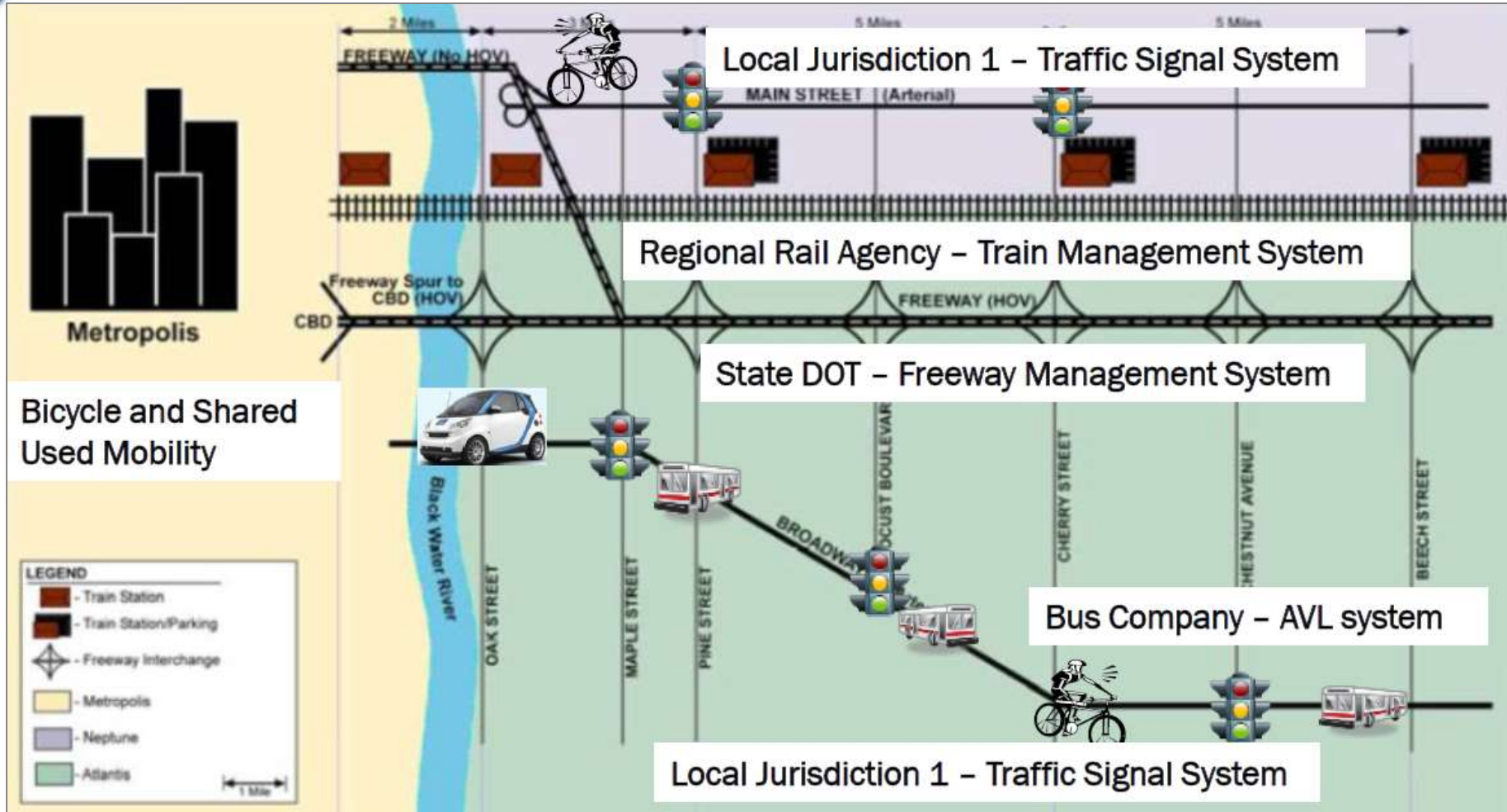
It's the **freedom** to move **where** you want to, **when** you want to, and **how** you want to

Utilizing “all seats” (bus, train, car), all travel lanes, all parking, and all modes in a corridor.

The integrated, joint management of a multimodal transportation system.



# Why ICM?



(Source: USDOT ICM Initiative)

## ICM – A Paradigm Shift

- From moving vehicles to **moving people** and freight.
- From Individual Modes and Facilities to **End-to-End Trips** focusing on multiple modes and **connectivity**.
- From **Individual Jurisdictions to Multiple** adopting a more balanced approach meeting local, regional and national transportation needs.
- **Intermodal** - opportunities to structure freeway, arterial, and transit operations where modes can work together and thrive in a corridor .



## I-95/395 ICM Elements



- **511 Multimodal Enhancements** – one-stop resource for multimodal info
- **Travel Time Expansion** – by mode and route to support en-route decision
- **Active Traffic Management** – learn from the I-66 ATM experience
- **Adaptive Ramp Metering Expansion** – by site & function
- **Enhanced Arterial Operations** – active mgt., adaptive signal, controller
- **Enhanced Incident Management** – multimodal response plan
- **Parking Management** – real-time guidance to maximize space usage
- **Multimodal Traveler Information Displays** – bring info to the large trip generator sites where people congregate
- **ICM Performance Measures** – robust way of objectively measuring success
- **ICM Decision Support Module** – ICM decision support into VDOT's ATMS and other agencies' native operating systems

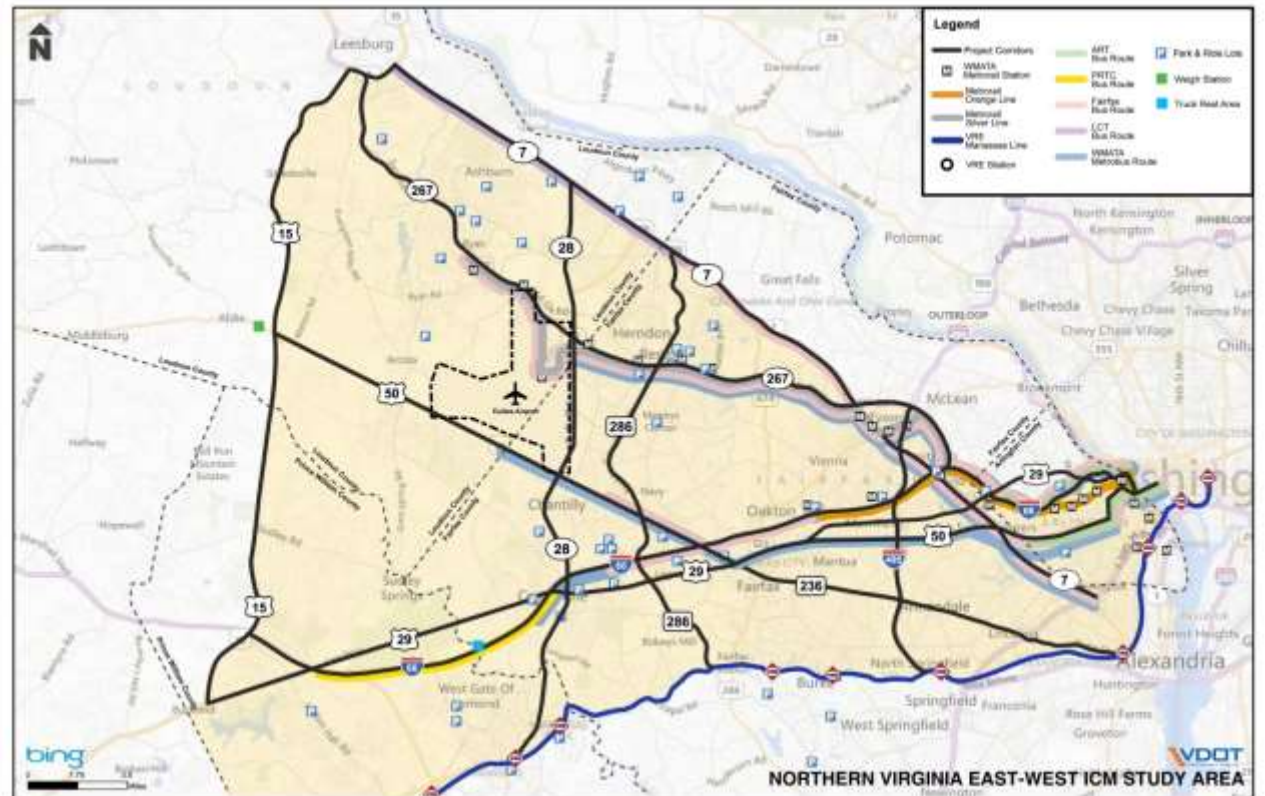
## Will ICM Work for I-95?

Simulation of a set of ICM strategies on 11-mile I-95/US 1 corridor by VA Research Council concluded...

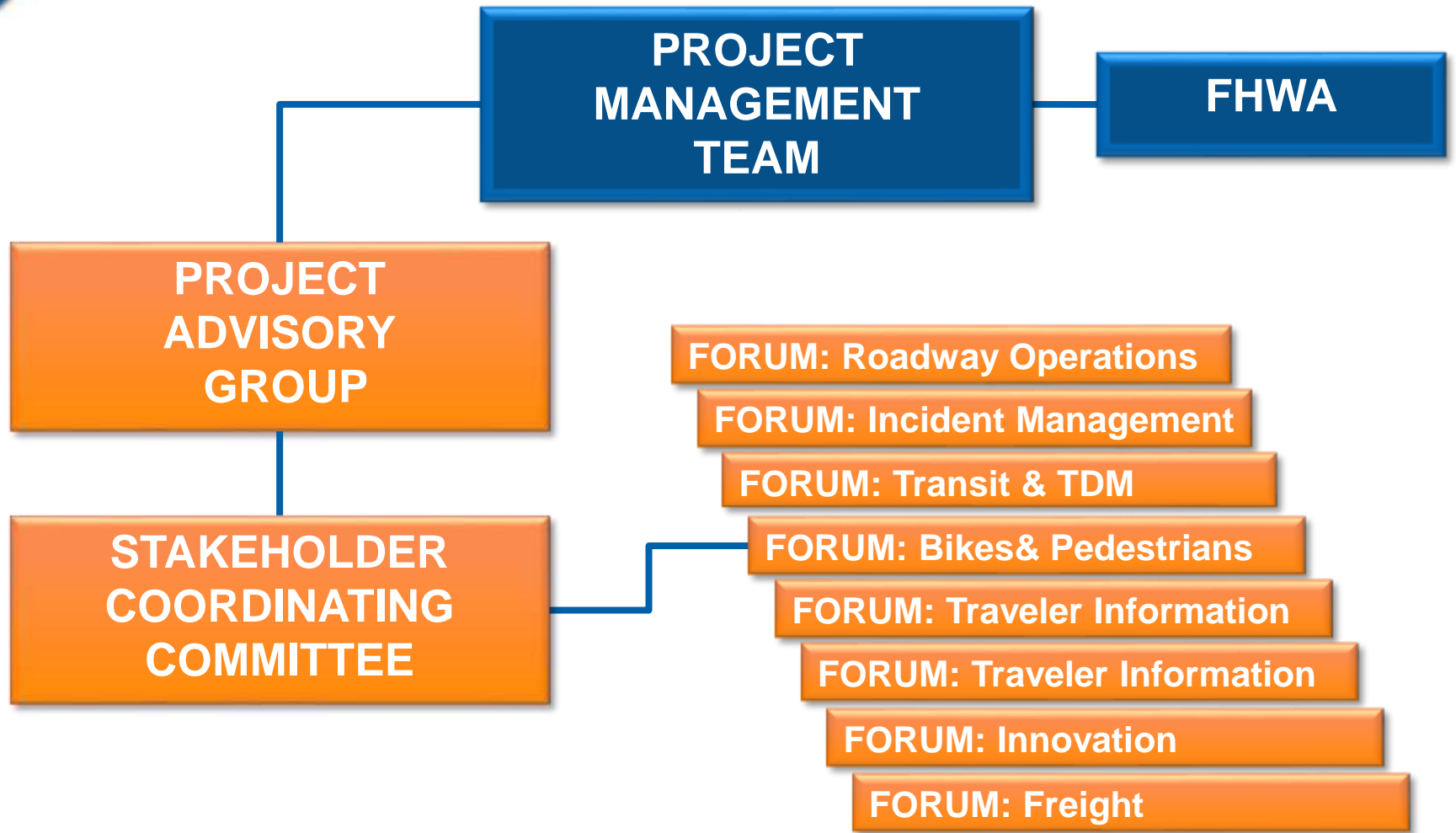
- **2 necessities...**
  - Stakeholders partnership is a must: focus on customers
  - Must share info across the modes to formulate strategies with intent to influence driving behavior and traveler decision making
- **Potential benefits ...**
  - Increase corridor person flow per hour by 14% – 38%
  - Potential reduction of 48% – 58% travel time along I-95
  - Average travel time on US 1 could improve by 29%
  - Fuel usage could be reduced by 33%
  - Benefit-cost ratios of 4:1 – 6:1

## NoVA East-West Travel Shed ICM Project Overview – Study Area

- E-W Roadways: I-66, Rt. 29, Rt. 50, Rt. 236, DTR, Greenway, Rt. 7
- Connecting Roadways: Rt. 15, Rt. 28, Fairfax Co. Pkwy, I-495
- Commuter Rail: VRE
- Metro: Silver Line and Orange Line
- Bike Trails
- Park and Ride Lots
- Bus Services
- Freight



# ICM Project Organization Structure



*A Stakeholder-driven, multi-agency, and multi-modal plan.*

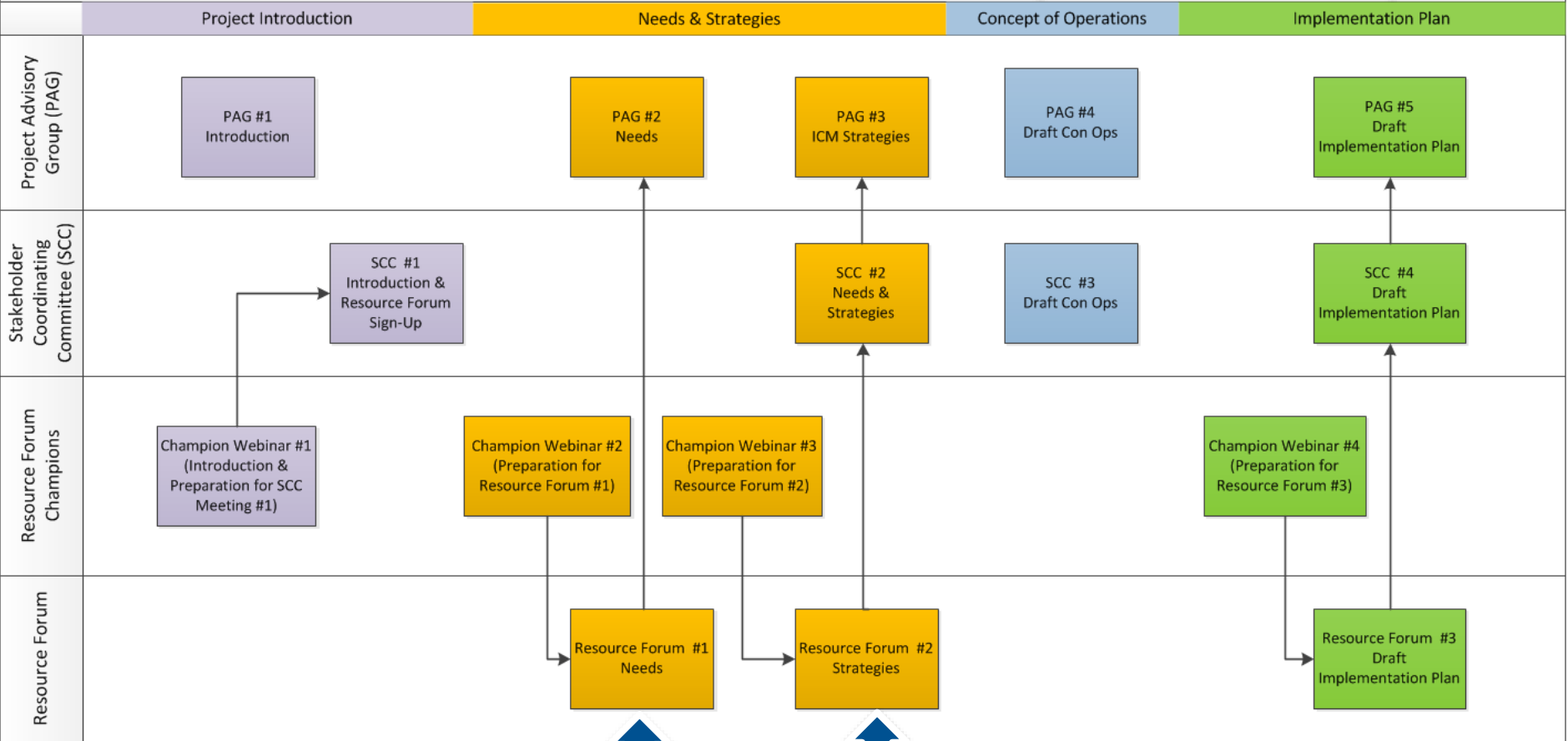


# Stakeholder Meeting Summary Flowchart

Output:  
Dec 2016

Output:  
May 2017

Stakeholder Meeting Summary Flow-Chart



We are here

5/2-5/5

## Preliminary Summary of Issues – Samples

- **Roadway Operations:** Most agencies do not have access to data across modes.
- **Incident Management:** Insufficient formal collaboration, coordination, cooperation and info-sharing during incidents: status, detour, staging.
- **Transit and TDM:** Important transit/TDM data are unavailable or in multiple systems, making it difficult for partner agencies to access and aggregate. This includes real-time parking data as well.
- **Bicycles and Pedestrians:** Inadequate access to rail stations from bike trails and inadequate amenities to park the bikes.
- **Traveler Information:** No true end-to-end trip planning tool that combines mode and route shifts and options for “first/last mile”.
- **Innovation:** Data-sharing contracts are effort-intensive to form and usually do not facilitate multiple-agency data-sharing.
- **Freight:** Lack of local freight O-D information to understand the extent of freight issues in the study area and truckers needing guidance on route restrictions.

***A solvable issue or need within the context of ICM will be linked to implementation strategies.***

