Northern Virginia’s Integrated Corridor Management (ICM) Planning Effort for the East-West Travel Shed

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What is ICM to Virginia?

Choice for customers

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

Coordinated Actions for Operators

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.
ICM – Virginia’s Approach

• **Customer Focused**
  End-to-end trip planning with options

• **Stakeholder-Driven**
  Multi-agency collaboration & coordination

• **Technology-Enabled**
  Technology is the tool, not the goal
  Make all travel options more attractive

• **Performance-Based & with Targeted-Outcomes**
  Objective ways to ensure sustainability & appropriate investment

• **Building Blocks**
  Don’t let the “perfect” be the enemy of “good”
  Flexible and adaptable to demonstrate early results
NoVA East-West Travel Shed – Study Area

- **E-W Roadways:** I-66, Rt. 29, Rt. 50, Rt. 236, Rt. 620, DTR, Greenway, Rt. 7
- **Connecting Roadways:** Rt. 15, Rt. 28, Fairfax Co. Pkwy, Rt. 123, I-495
- **Metro:** Silver Line and Orange Line
- **Commuter Rail:** VRE
- **Bike Trails**
- **Park and Ride Lots**
- **Bus Services**
- **Freight**
Bottleneck within E-W ICM Scope Limit

2015 Data: All Time

(Source: Vehicle Probe Project Suite) Courtesy of Wenjing Pu, MWCOG
Time Lapse Travel Time Index Trend Map
2015 Data: Tuesday – Thursday (4:00AM – 9:00PM)

(Source: Vehicle Probe Project Suite)
Impact on Metro Service/Capacity Reduction

- Bottleneck locations are substantially similar, with some changes in ranking.
- The most west-end bottleneck at Rt. 15 and I-66 was dropped from the ranking.
- A new bottleneck near Rt. 28 and I-66 was materialized.
- The severity of congestion in the corridor increased.

(Source: Vehicle Probe Project Suite) Courtesy of Wenjing Pu, MWCOG
Morning Peak MetroRail Occupancy
2015 AM Peak Hour; West to East
Dedicated Biking Trails

Nearly 40% survey responders indicated that they use Bike to commute

Top reason for bicycling...

53% Recreation or exercise
37% Commute to work or school
10% Other trips
NoVA E-W ICM Project Overview

VDOT’s Commitment to FHWA per ICM Grant

• Define a Concept of Operations and Implementation Plan for deploying ICM in the NoVA East-West travel shed.

• Collaborate among partner agencies and engage stakeholders across the study area.

• Project tasks:
  1. Start-up and organize project.
  2. Profile study corridor.
  3. Define ICM framework and identify operational needs in corridor.
  4. Identify, explore, and prioritize ICM strategies to address operational needs.
  5. Prepare a Concept of Operations.
  7. Request broad regional support for the ICM concept.

• Schedule for planning effort: POP – 20 months.
ICM Project Organization Structure

**PROGRAM ADVISORY GROUP**

**STAKEHOLDER COORDINATING COMMITTEE**

**PROJECT MANAGEMENT TEAM**

- FHWA
- FORUM: Roadway Operations
- FORUM: Incident Management
- FORUM: Transit & TDM
- FORUM: Bikes & Pedestrians
- FORUM: Traveler Information
- FORUM: Innovation
- FORUM: Freight

*A Stakeholder-driven, multi-agency, and multi-modal plan.*
Agencies and Organizations Participating in Resource Forum Workshops
Strawman ICM Framework

Problems/Issues/Needs

Goals

OPTIMIZATION

Optimize performance of existing infrastructure

CHOICE

Support on-demand, multi-modal trip options for travelers

RELIABILITY

Enhance travel time reliability in study area

Objectives

Foundational Initiatives

Expanded Real-Time Conditions Monitoring

Data Warehouse

Support Initiatives

Enhanced Decision Support

Next-Generation Traveler Information

Advanced Incentivization

Objectives

Optimize performance of existing infrastructure

Support on-demand, multi-modal trip options for travelers

Enhance travel time reliability in study area

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Support Initiatives
Challenges and Next Steps

**Challenges**

- Identifying “pockets” of excess capacity on roads and transit
- Lacking consistent arterial condition monitoring
- Maintaining stakeholder involvement and commitment beyond the planning phase

**Next Steps**

- Refining the Corridor Profile
- Developing the Concept of Operations
- Gathering ConOps-related input from stakeholders
- Preparing the Implementation Plans
Questions

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