

Integrated Corridor Management

*Applied Research to
Improve Mobility in Virginia*

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Overview

- VCTIR Partnership
- Integrated Corridor Management Project
- Research and Education to Prepare for Future Transportation Challenges



VCTIR Partnership

- The Virginia Center for Transportation Innovation and Research (VCTIR) was founded in 1948 as a partnership of VDOT and UVA.
- Benefits to Virginia
 - ◆ Conduct applied research leading towards innovation and improved mobility
 - ◆ Educate next generation of transportation leaders at undergraduate and graduate level
 - ◆ Train Virginia's transportation workforce to take advantage of new technology



Smart Travel Laboratory (STL)

- Facility developed to support applied intelligent transportation systems research
- Distinguishing characteristics
 - ◆ Direct integration with VDOT and local traffic control systems
 - ◆ Access to rich probe data from multiple sources
 - ◆ Development of prototype systems
 - ◆ Extensive simulation capabilities
- Provide ability to investigate modern integrated corridor challenges



Laboratory Facility





ICM Project - Motivation

- Significant congestion problems in Virginia
 - ◆ Corridor congestion requires an integrated approach across modes
- Integrated corridor management (ICM) strategies seek to combine strengths from the planning and operations communities, by integrating travel management tools to coordinate the travel demands between facilities and modes, thus improving travel reliability and predictability



Purpose and Scope

- To identify applicable ICM strategies that hold high potential for success in Virginia.
 - ◆ Identify best practices in the nation and investigate key ICM strategies in practice
 - ◆ Develop an evaluation methodology to assist decision makers in identifying ICM strategies to apply on Virginia corridors
 - ◆ Prototype the identified strategies to demonstrate the benefits resulting from ICM



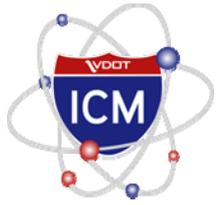
Methodology

1. Literature Review
2. Identification of Best Practice and Potential Strategies
3. Development of ICM Evaluation Methodology
4. Evaluation of Proposed ICM Strategies
5. Evaluation Results Assessment for Future ICM Development
6. Final Report

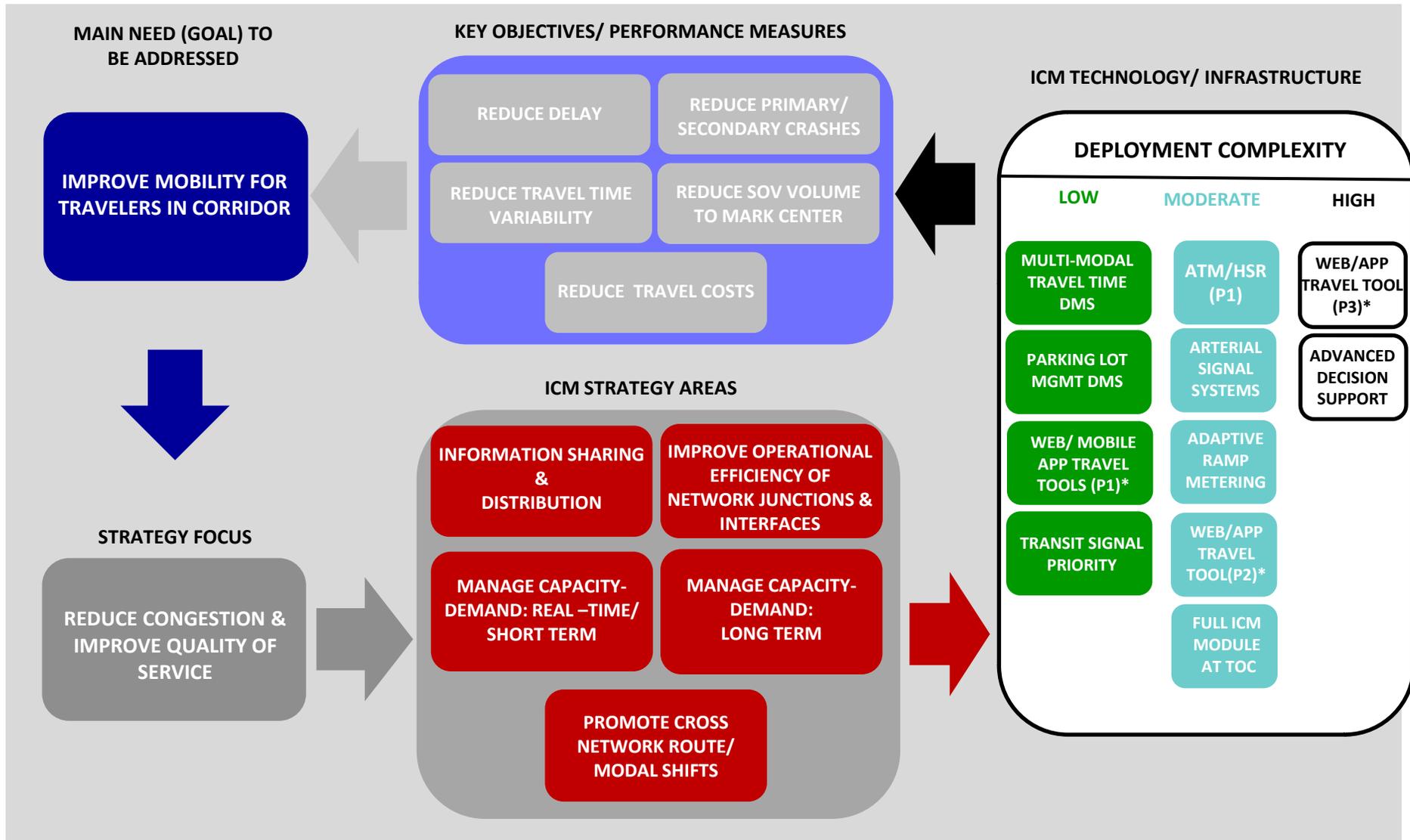


Status

- Project completion date – March 31, 2013
- Simulation-based evaluation methodology has been developed
- Working with VDOT staff to apply the methodology on strategies identified in the I-95/I-395 ICM project
- Benefit – Will have estimates of benefits using methodology to guide further implementation of ICM on I-95/I-395



ICM Vision for I-95 / I-395 Corridor





Research & Education to Prepare for Future Challenges

- Connected Vehicles
- Transportation Training Academy
- Transportation Project Management Institute



Connected Vehicles

- Connected vehicles – the application of wireless communications to create a more cooperative, safe transportation system – will fundamentally change travel
- UVA CTS, along with Virginia Tech and VDOT, is developing innovative applications to test and demonstrate in a Northern Virginia connected vehicles testbed in 2013.
- UVA CTS has created a sophisticated simulation environment to test large-scale connected vehicles applications



Transportation Training Academy

- Develop and deliver targeted training courses to meet the needs of Virginia's transportation professionals
- On an annual basis TTA trains 2,000 professionals in 100 courses
- Partners with VDOT and industry to transfer technology from research to implementation



Transportation Project Management Institute

- Residential, 2-week program designed to develop professionals from industry and government to lead the development and delivery of transportation projects.
- Developing skills to lead projects using innovative delivery methods



TPMI Objectives

- Provide hands-on experience in relevant transportation project management issues/challenges through a **case study**.
- **Solidify fundamental project management knowledge and skills** through lectures/discussions with experienced faculty from academia, government, and industry
- **Build communities** of project managers.



TPMI 2013

- There are well over 100 TPMI alumni leading major projects in Virginia
- 5th annual TPMI will be offered May 7-16, 2013
- Enrollment limited to 15 public sector / 15 private sector

<http://cts.virginia.edu/tpmi/>



For More Information

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