

The RM3P Journey: Innovation Concept to Real World Implementation

FHWA / WSDOT WORKSHOP:

INTEGRATING EMERGING MOBILITY INTO TRANSPORTATION MANAGEMENT







The Mission

Leverage the collaborative use of real-time data

by Virginia's public and private sectors
to improve travel safety, reliability, and mobility,
and

to give public the tools to make better informed travel choices.





Evolution of RM3P

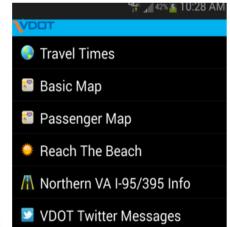


- Advanced ICM using 3 project bundles;
 - Traveler Information
 - Operations
 - Decision Support System
- Operations included advanced roadway technologies such as ramp metering, adaptive signals, parking information systems, freeway active traffic management, etc.
- Stakeholders included Counties, NVTA, MWCOG, VDOT, DRPT, VRE, etc.



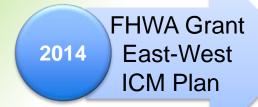
- Received Smart Road Technology funding
- Began signal upgrades
- Installed Travel Time signs
- Added travel time & transit information to 511







Evolution of RM3P









- Received an FHWA planning grant
- Developed a Regional ICM approach
- Five Focus areas: real-time monitoring, data warehouse, decision support, traveler information and advanced incentivization
- Stakeholders included Counties, NVTA, MWCOG, VDOT, DRPT, VRE, localities, public safety, etc.

- Combined the I-95 / I-395 ICM & East-West Corridor into RM3P
- Developed a VDOT-DRPT-NVTA partnership
- Applied for a 2016 FHWA ATCMTD grant (Denied)
- Requested internal funding to advance a program without the grant (Denied)



Evolution of RM3P





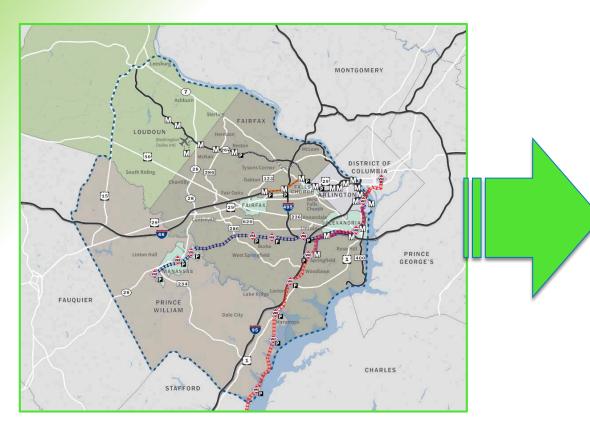
- NVTA submitted a Virginia SmartScale application
- The Commonwealth agreed to fund RM3P through the Innovation Transportation Technology Fund (ITTF) – not SmartScale
- Scope reduced to:
 - Include only the Northern Virginia District
 - Exclude advanced roadway technologies

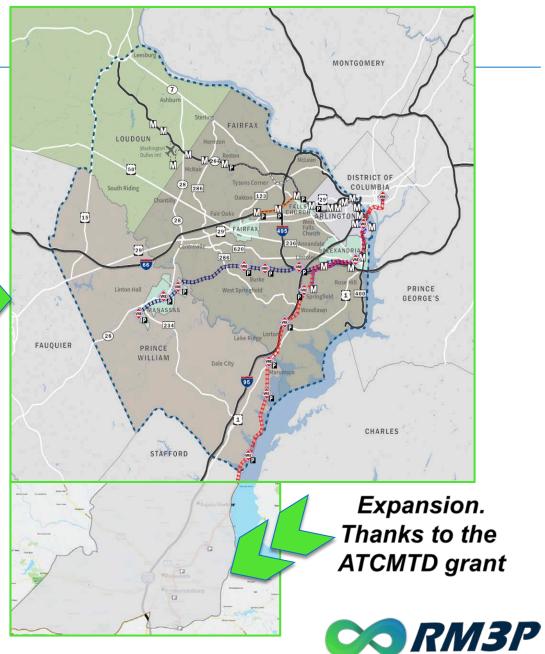


- I-95 Corridor study program included the Advanced Roadway Technologies
- VDOT applies for an ATCMTD grant
 - Added AI to DSS and parking
 - Partnered with FAMPO
 - Expanded DSS into Fredericksburg
- Regional ICM Framework received recognition



RM3P Boundary







Virginia Regional Multi-Modal Mobility Program (RM3P)

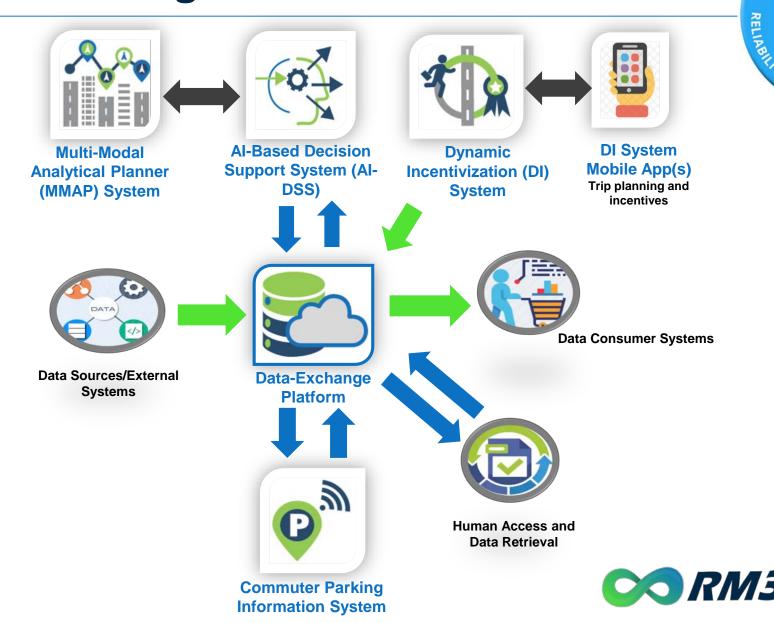
RM3P is a collaborative program to improve safety, reliability, and mobility for travelers in the Northern Virginia region. Through the RM3P initiative, public and private sector transportation safety and service providers across Northern Virginia will adopt technologies to improve multimodal travel conditions. Funded under the Commonwealth of Virginia's Innovative Technology and Transportation Fund (ITTF), the RM3P is led by the Virginia Department of Transportation (VDOT), the Northern Virginia Transportation Authority (NVTA), and the Virginia Department of Rail and Public Transportation (DRPT).







One Program



RM3P

Multimodal Response to the Incidents



Today

Agency operates within its domain

Ad-hoc coordination Limited multi-mode

ITS are primary on Interstate & Express Lanes

Signal technology is being modernized

React to what's already occurred

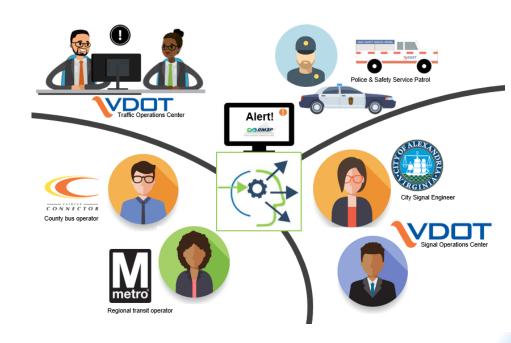
Tomorrow

Systematic multimodal response with an Al-based Decision Support System

Single authoritative source of multi-modal transportation information

Collective response improves entire transportation network

Proactive incident response with AI-prediction





Park and Ride -- a Real Option



Today

Park-and-Ride is not an option for trip planning

Users need basic knowledge and know where to search for the lot and available services.

Limited real-time parking availability info and from different platforms.

Build it they will come.

Slugging culture for I-95.

Tomorrow

"Power" public- and private-sector parking information and navigation

"Home" for parking data from agencies

Infrastructure-light or free solution ... sustainable

Piggyback procurement

Static, historic, trend, realtime, predicted availability – power the trip planning







Link Traffic Management with TDM



Today

Strong regional TDM program

Multiple TDM and Incentive programs – not automatically synced

User registration process takes days for approval

Rewards to encourage longterm travel choice change, not based on real-time conditions.

Rewards are typically made avail thru employers

100% government subsidy

Tomorrow

Backend-syncing

TDM program-agnostic & app-agnostic

App-based user registration

Data-driven & dynamic offering based on real-time traffic

Users are part of the incident / traffic management solutions

Gamification for sustaining long-term travel choice change

Sustainable rewards offering





Source: HW&Co.



Existing TDM Portfolio in Northern Virginia & DC Metro Area

Ride Sharing



Regional Carpool Match



Slug-Lines.com
Instant Carpooling





App-based on-demand Carpooling

Guaranteed Ride Home









Incentive Programs

Regional



Avoid selected routes at certain time of the day





Pool Rewards

Localities' & Military TDM:

mainly transit fare subsidy through employers

TMAs:

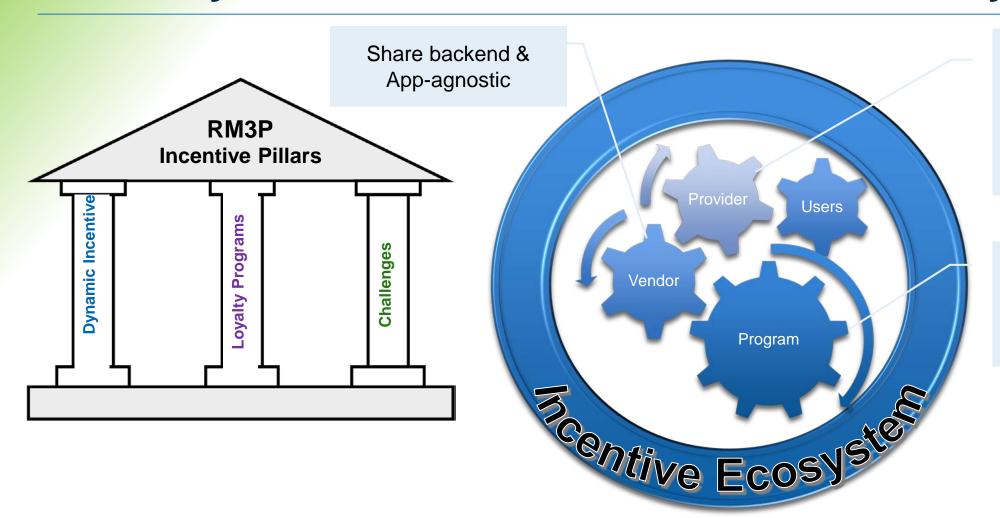
partner w/ localities to outreach to employers

Ad-hoc via Construction Project TMP incentive offered through localities

Statewide not available for NoVA yet



RM3P Dynamic Incentivization – Join the Ecosystem



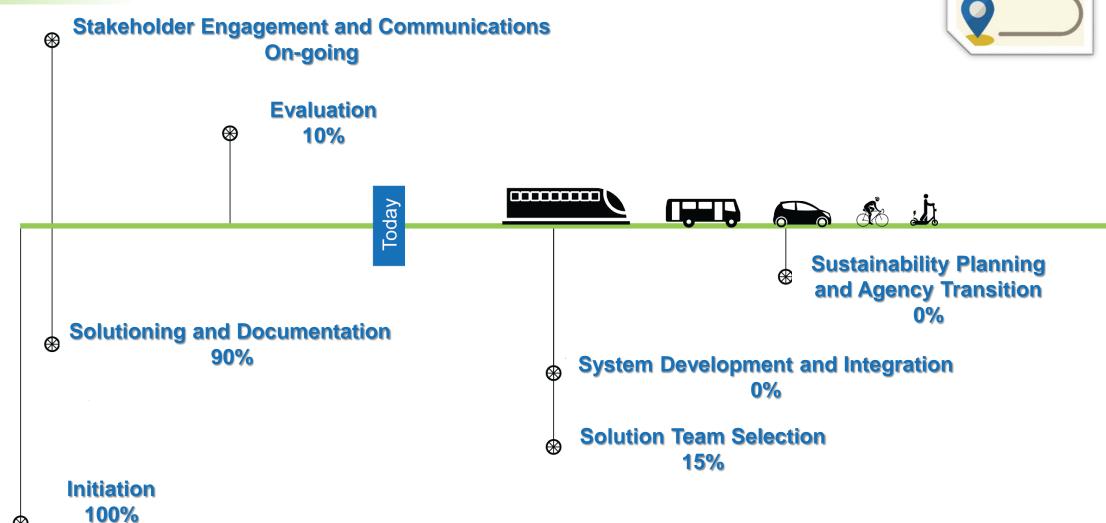
- Partner on employer outreach, challenge development & promotion
- Rewards through the backend to commuters

Partner on marketing, employer outreach, and challenge development & promotion



Where We Are on our Journey









Thank You!

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