

REGIONAL MULTI-MODAL MOBILITY PROGRAM: ARTIFICIAL INTELLIGENCE-BASED DECISION SUPPORT SYSTEM

CTB Briefing

Cathy McGhee, VDOT Chief Deputy Commissioner

July 19, 2022

History of Regional Multi-Modal Mobility Program (RM3P)

- **Integrated Corridor Management (ICM) Plans**
- **NVTA identifies ICM as important to meeting the vision of its long-range regional plan, TransAction**
- **NVTA and Commonwealth develop a plan for RM3P and include it in the Innovative Technology Transportation (ITTF) program**
- **Federal Advanced Transportation and Congestion Management Technologies Deployment Program (ATCMTD) grant allows expansion of geographic scope into Fredericksburg**

The RM3P Mission

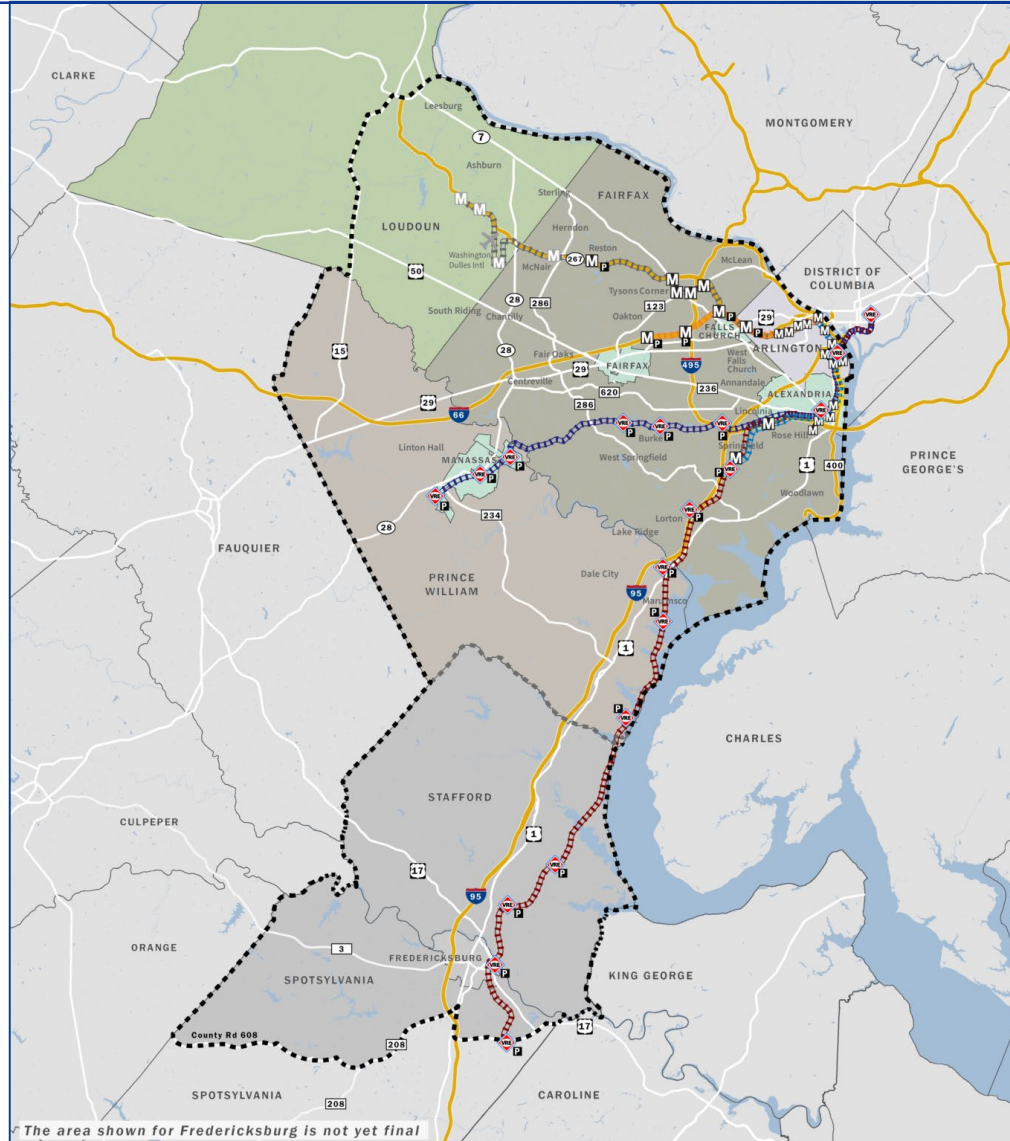
Leverage the collaborative use of real-time data to improve travel safety, reliability, and mobility, as well as to give the public the tools to make better informed travel choices.



The Goals of RM3P

- *Optimize transportation system performance by improving the efficiency of agency responses to travel disruptions.*
- *Enhance travel time reliability.*
- *Support on-demand, multi-modal trip choices for travelers.*

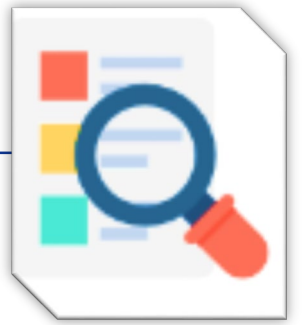
RM3P Scope



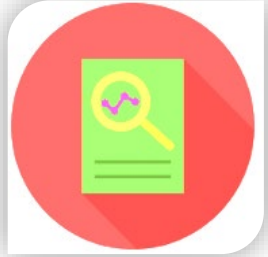
This data-driven multi-modal mobility program, serving Northern Virginia and Metropolitan Fredericksburg, is comprised of 4 active projects:

- **Data-Exchange Platform (DEP)**
- **AI-Based Decision Support System (AI-DSS)**
- **Dynamic Incentivization (DI)**
- **Commuter Parking Information System (CPIS)**

RM3P AI-DSS Overview



Description



- Travel Data: Monitor emerging conditions.
- Data-Informed Plans: Solve multi-modal transportation challenges by providing coordinated incident response options to transportation agencies in the region.
- Artificial Intelligence: Predict the impacts of disruptions to the transportation network.

AI-DSS Objectives

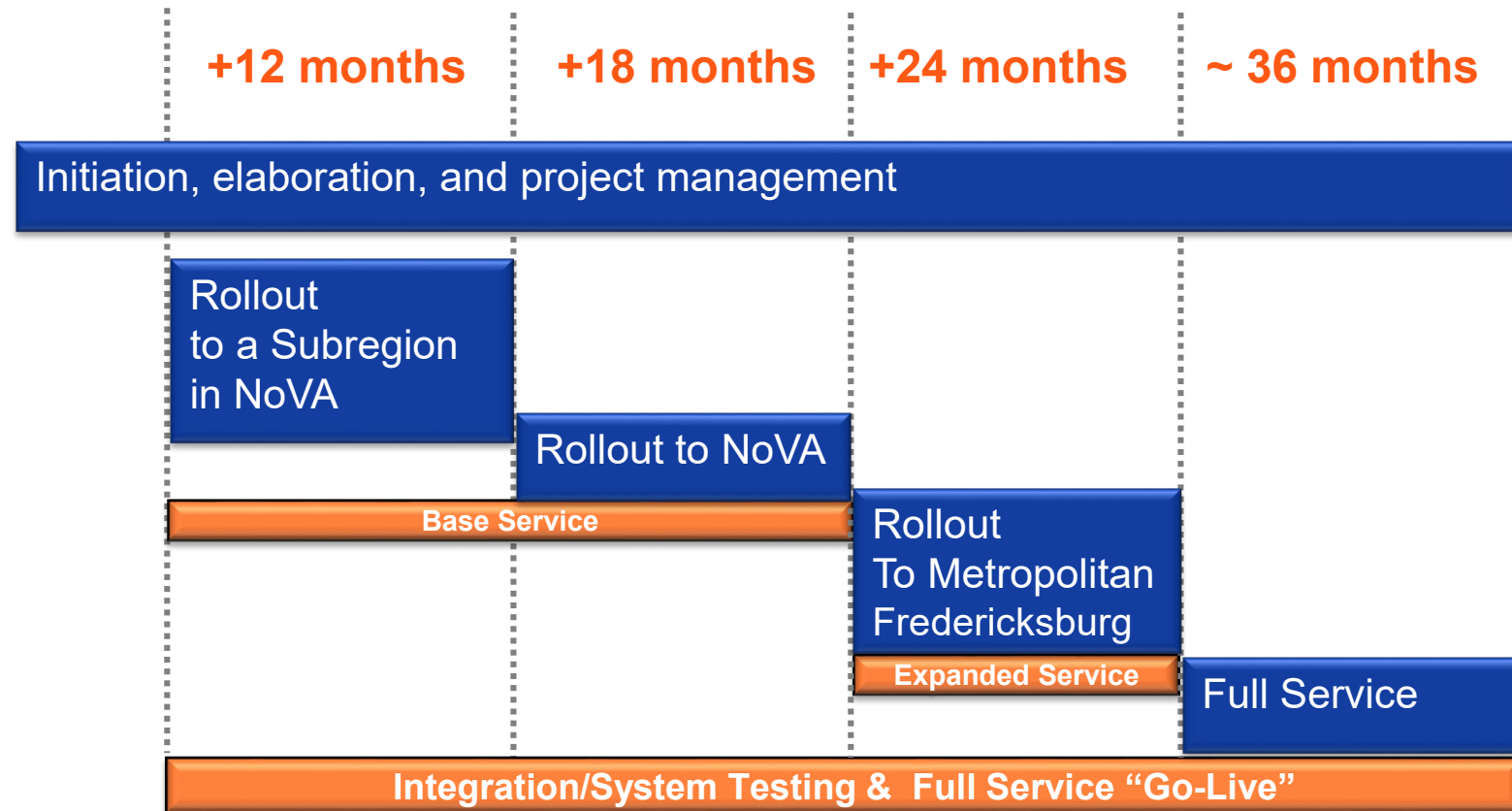


- Improve effectiveness of real-time integrated transportation information.
- Reduce congestion by improving mobility and travel time and enhancing travel time reliability.
- Improve safety by reducing traffic crashes.
- **Shift from reactive to proactive operations for optimized response time and performance.**

Milestone Overview



Next Steps: Looking Forward after Contract Award



Initial contract term: 36 months

- 24 months, development & deployment
- 12 months, operational support

- Begin with a single subregion within Northern Virginia (NoVA)

- Expand to multiple NoVA subregions

- Extend activities to Metropolitan Fredericksburg area

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