

Active Transportation and Demand Management



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**Wednesday, May 4
ITS Virginia 2011 Annual Meeting
Richmond, VA**



**Federal Highway Administration
Office of Operations – Transportation Management**

ATDM philosophy and concept

- Pro-active approach
- Dynamic management and control based upon real-time data and information
- Transportation demand & available capacity
- Full range of strategies considered
- Performance and reliability driven
- Addressing congestion before breakdown



Motivation for FHWA ATDM Program

- *Desirable Policy Outcomes*

- Reliability
- Safety
- Mobility
- Environmental sustainability
- Customer expectations and choices
- Accountability for performance

- *International Experience*


- Successful ATM and MTD integration

- *Domestic Experience*

- Successful ATM deployment, ICM development, and MTD adoption

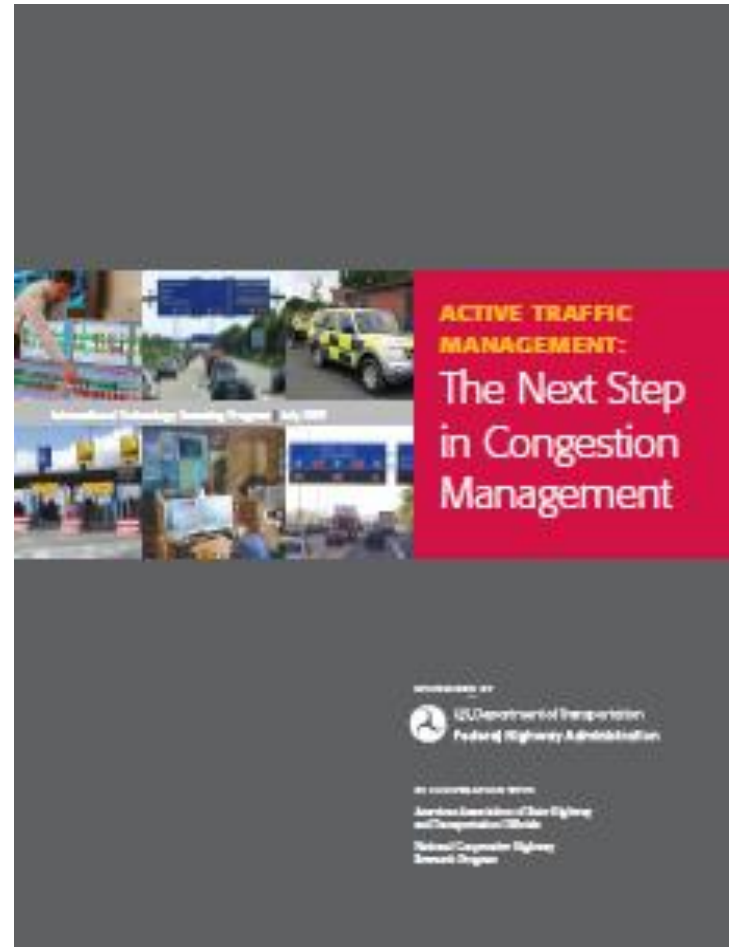


International Scans




MANAGING TRAVEL DEMAND

APPLYING EUROPEAN PERSPECTIVES TO U.S. PRACTICE



ACTIVE TRAFFIC MANAGEMENT:
The Next Step in Congestion Management

introduced by
 U.S. Department of Transportation
Federal Highway Administration

an executive order from
American Oversight of Data Rights
and Transparency (ROAD)

National Cooperative Highway
Research Program



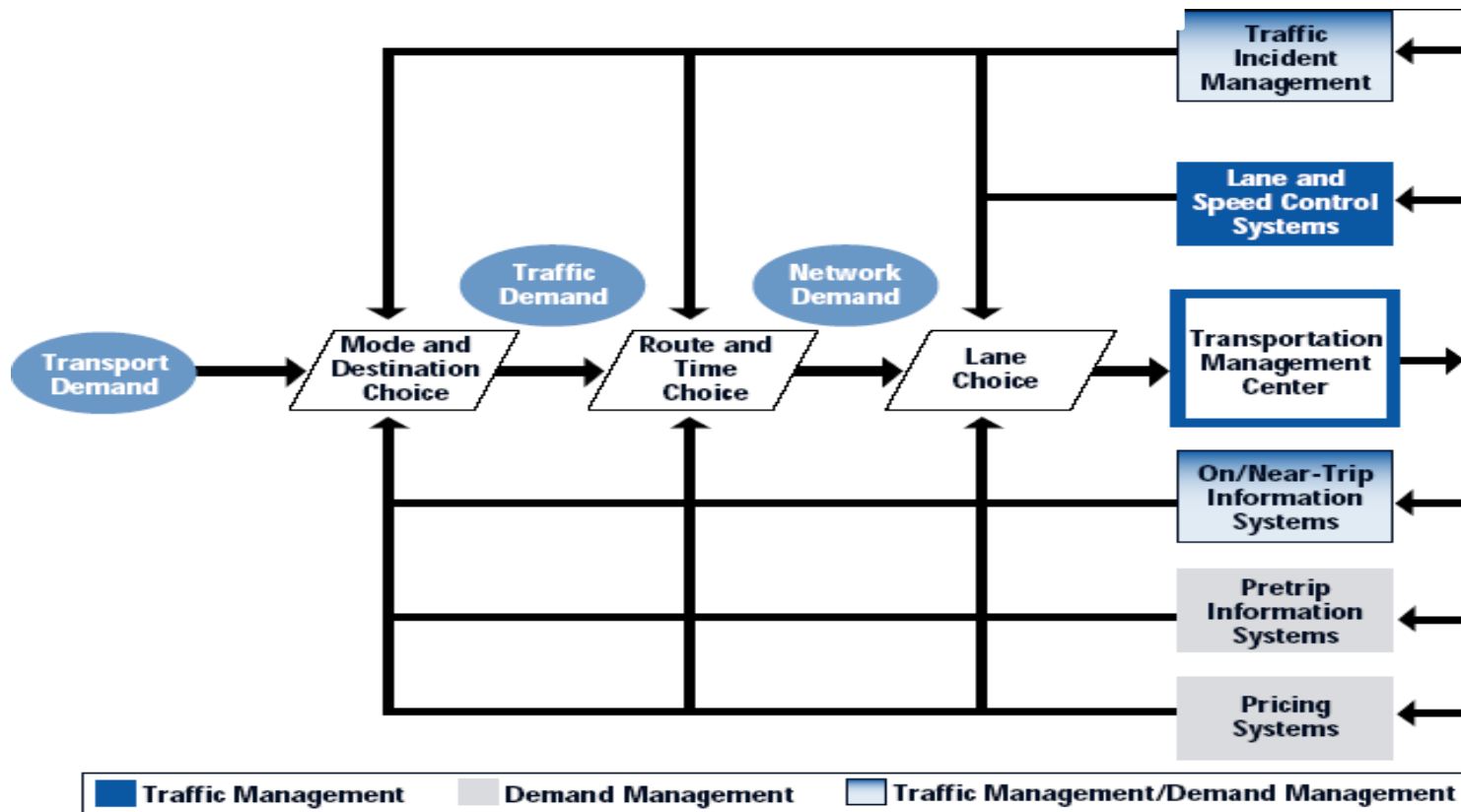
Focused on Action & Management

- Strategies are not ATDM
- Active management is a strategic approach to operate technologies/tactics differently

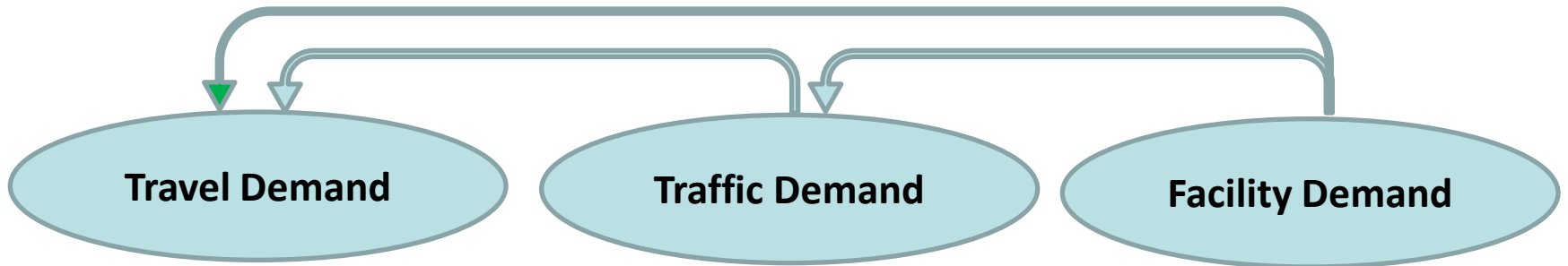


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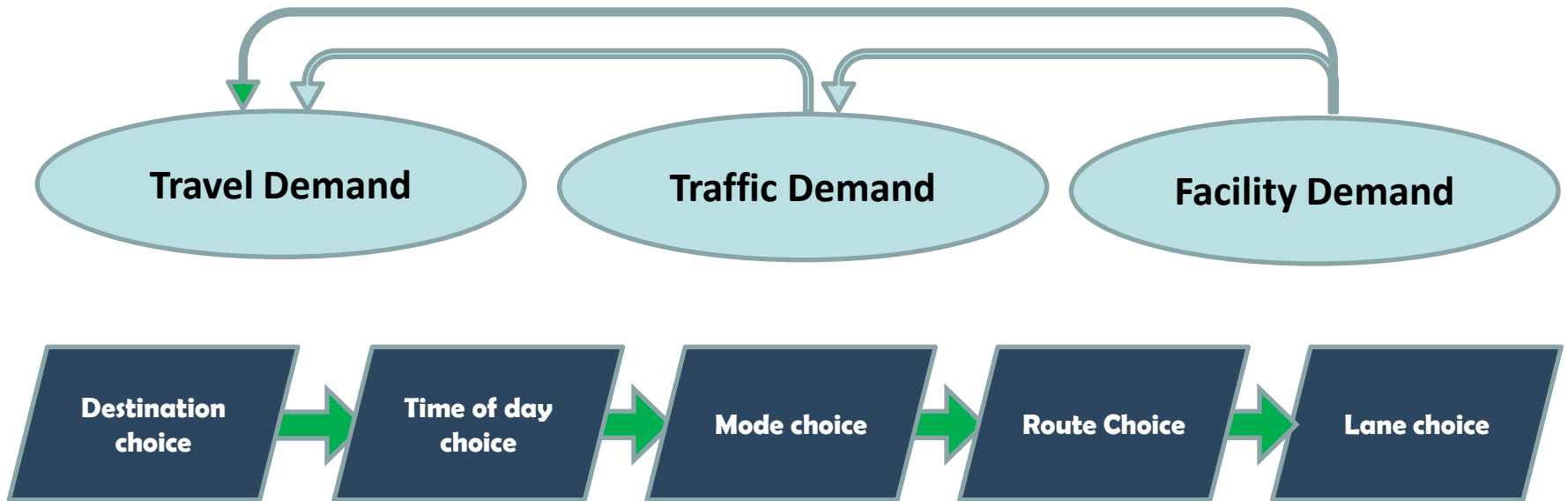
An integrated and holistic approach to transportation management



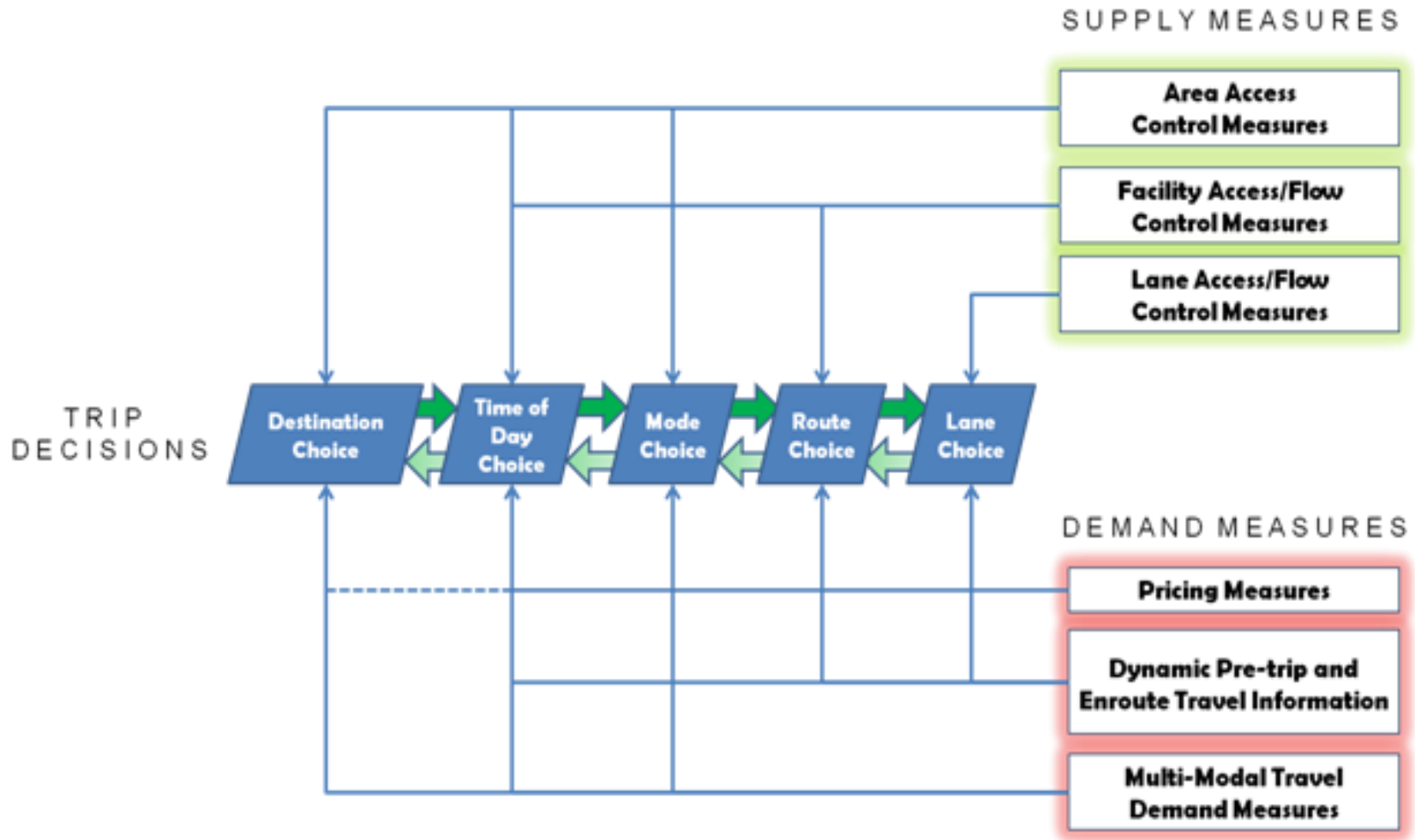
Demand



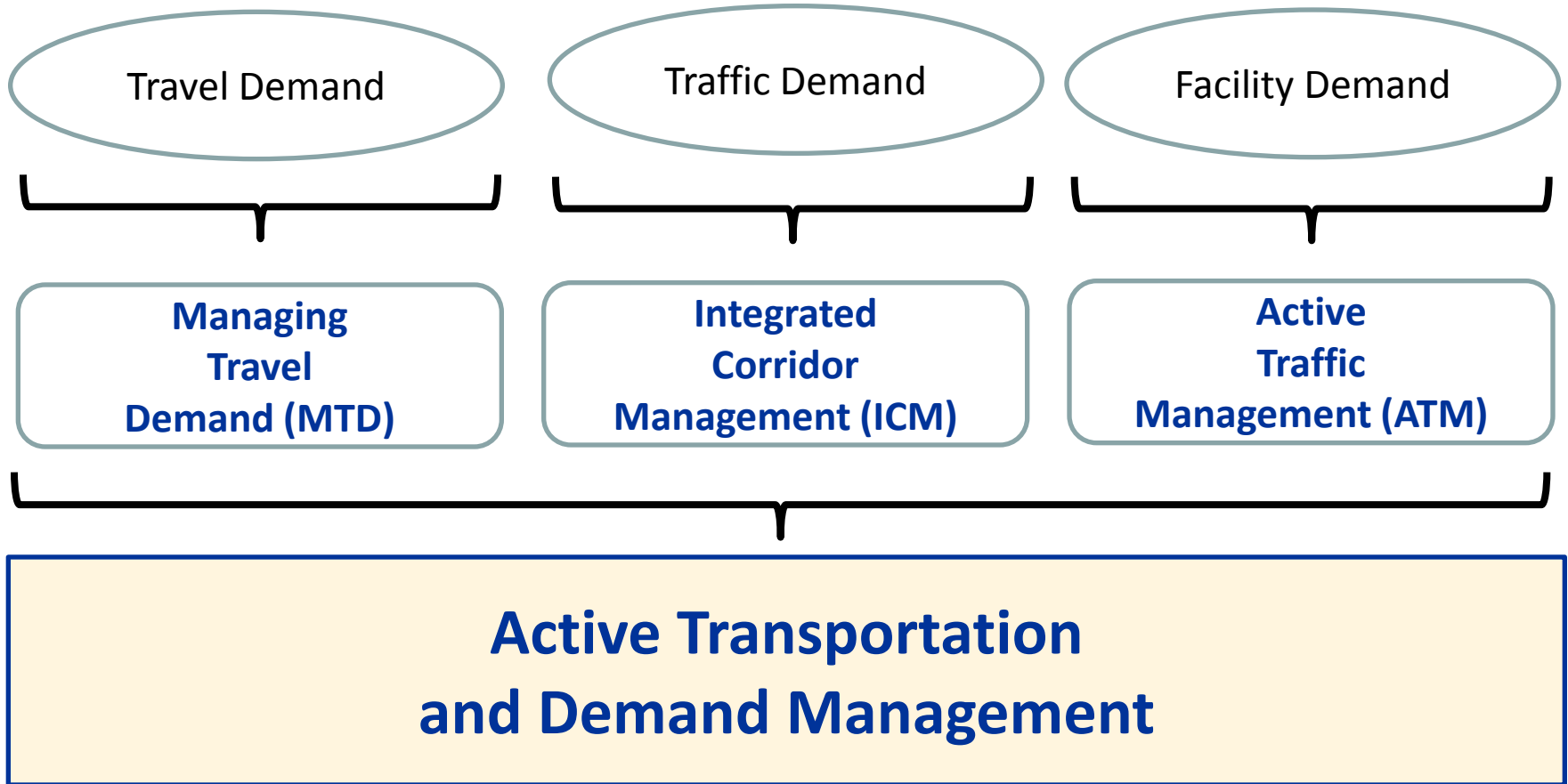
Demand



Modified framework *working*



ATDM relationships

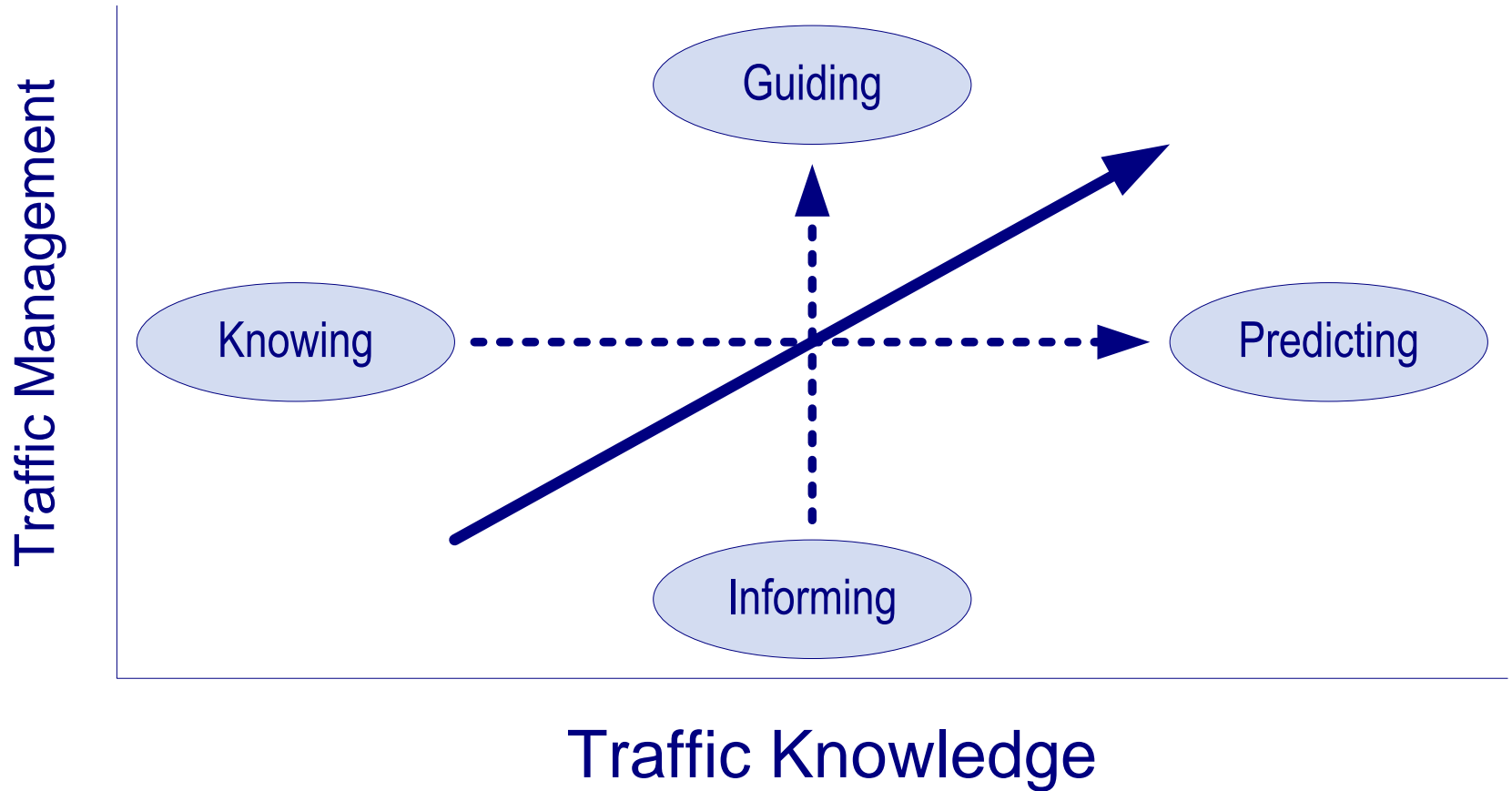


ATDM philosophy and concept

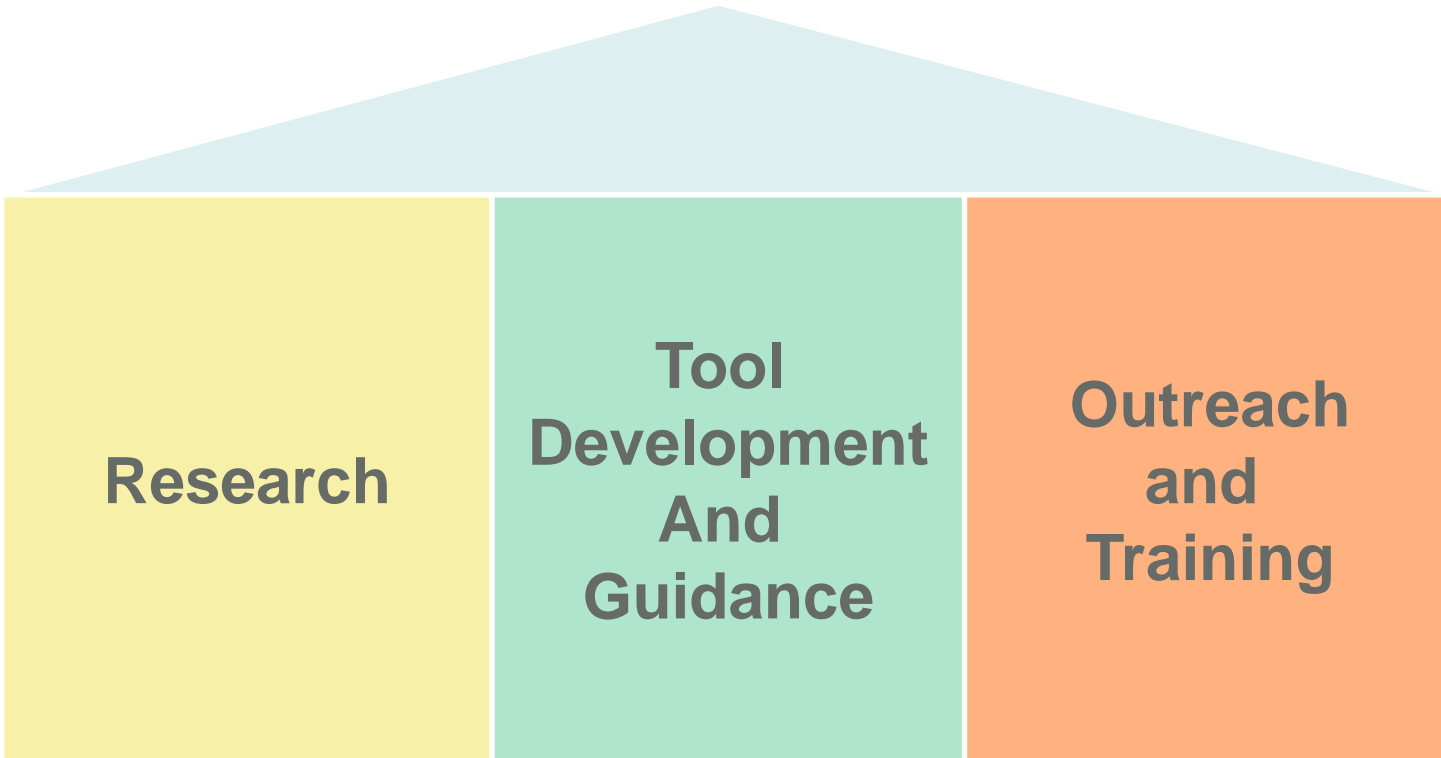
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Moving the State of Practice



FHWA ATDM Program



Program Development/Focus Areas

■ Six Tracks

- Stakeholder Engagement
- Program Planning
- Research and Development
- Operational Tests and Deployment
- Evaluation
- Outreach and Knowledge and Technology Transfer



Current Efforts

- ATDM High-Level Guidance
 - Guiding principles for ATDM development
- ATDM HCM Methodology
- ATDM Program Development
- Stakeholder workshops
- Technology transfer workshops
- Foundational Research



Foundational Research

- Objectives for the foundational research:
 - Support the development of the ATDM research plan
 - Support the development of an ATDM Analysis, Modeling, and Simulation Methodology and Test-bed High level Operational Concept
 - Identify operational test and deployment opportunities
- Includes:
 - High-level Operational Concept, Requirements and Needs
 - Variable Speed Limit/Automated Speed Enforcement Field Operational Test
 - Analysis, Modeling, and Simulation assessment



AMS Framework and Test-bed

- ATDM Analysis, Modeling, and Simulation (AMS) Framework & Test-bed
 - Detailed ConOps and Requirements
 - Deployment packages
 - Analysis plans
 - AMS assessment
 - AMS Methodology development
 - AMS test-bed development



Factors for Feasibility of ATDM

- Operations characteristics
- Needed infrastructure/roadway facilities
- Construction activity and opportunity
- Data availability
- Cost/benefit estimates
- Institutional policies and issues
- Transportation Department priorities
- Legislative environment
- Public support and acceptance



Indicators for ATDM Deployment

- High traffic volumes/recurrent congestion
- Capacity bottlenecks
- High prevalence of collisions
- Work zone congestion
- Special events
- Changes in prevailing conditions
- Adverse weather
- Trip reliability variability



Challenges to ATDM Deployment

- Funding
- Policy commitment
- Institutional cooperation and agreement
- Departmental focus and objectives
- Enforcement
- Liability issues
- Public support and acceptance
- Driver workload and distractions

