



Transportation System Management & Operations

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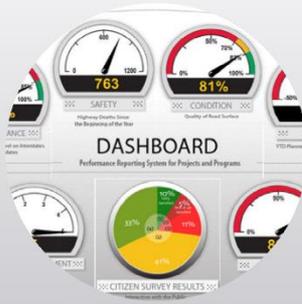
Integrated Approach



1. Strategic Plan Overview



Innovation



Performance Measures



Pilot Projects



Optimize Existing Systems

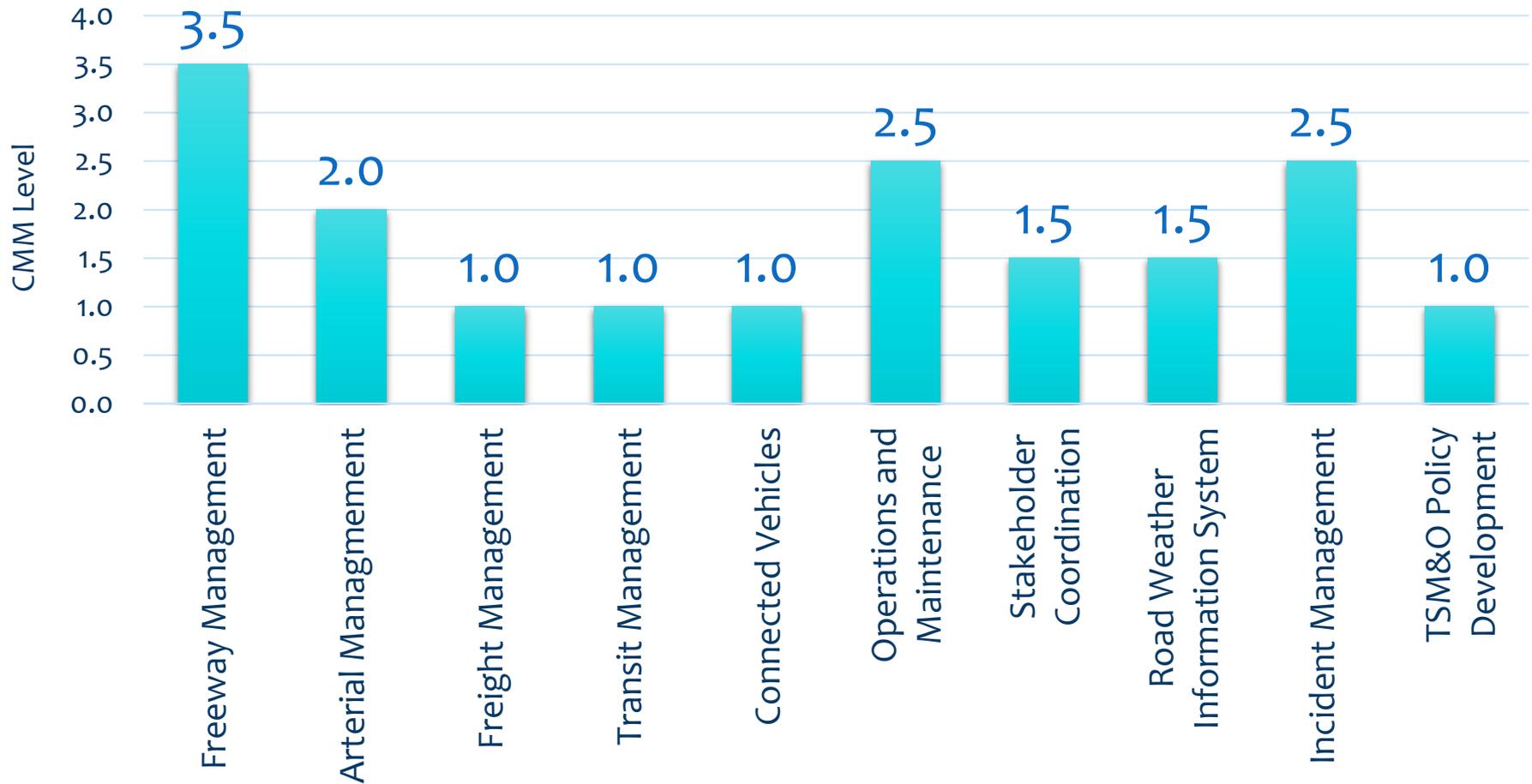


Best Practices



Stakeholder Coordination

Strategic Plan – District Capability Maturity Model



Strategic Plan – Districts Basic Needs



TSM&O Plan

- I. Executive Summary
- II. Strategic Plan Background
- III. Reference, Acronyms and Definitions
- IV. Challenges and Opportunities
- V. TSM&O Snapshot – Where We Are Today
- VI. Roadmap to Achieving TSM&O Goals
- VII. Action Plan

Strategic Plan – Vision and Mission

Vision

Optimize the use of transportation infrastructure for improved safety and mobility moving from facility to mobility management.

Mission

Lead and collaborate to provide guidance for TSM&O project delivery and deployment, performance measures, strategy implementation, prioritization, operations and maintenance funding, interdisciplinary and stakeholder coordination, and emerging solutions.



Florida Transportation Systems Management and Operations

Strategic Plan

Final: Version 2

December 13, 2013



Prepared for:
Florida Department of Transportation
Intelligent Transportation Systems Program
605 Suwannee Street, M.S. 90
Tallahassee, Florida 32399-0430
(850) 410-5600



Strategic Plan – Goals

“Big Goals”

Increase the rate of decline for traffic fatalities and serious injuries in Florida

Decrease the rate of increase of congestion in Florida

Improve mobility options for more travelers

TSM&O Centric Goals

Deliberately drive accomplishment of TSM&O focus area to:

Increase miles of active management on (SIS) freeways and arterials thru:

Hard Shoulder Running and Ramp Metering

Adaptive traffic signal control systems and Performance-based traffic signal operations and maintenance

Multi-modal Connected Vehicle applications

Integrated corridors

Identifying and implementing strategies to optimize effectiveness and costs of operations and maintenance



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Strategic Plan – Collaborative Development

Central Office Stakeholders

Planning

Work Programming

Traffic Operations – all units

Design

Maintenance

Freight

District Office Stakeholders

Planning

Traffic Operations (STAMP Team)

ITS (ITS Working Group)

TSM&O (TSM&O Task Team)

Change Management Board (CMB)

Sunguide Users Group (SUG)



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Strategic Plan – Focus Areas

Qualitative and Quantitative Ranking Processes

Highest potential benefits

Implementable – Costs, partners

Maintainable – Costs, staffing

Prioritized Focus Areas

Freeway management systems → beyond basic ITS

Arterial management systems → next generation(s) of control

Integrated corridors → multi-modal integrated corridors

Pilot projects for CV applications leading to a statewide implementation approach

Automated vehicle research and demonstration projects

Strategy development and implementation for optimized operations and maintenance

Policy and technical guidance documents

TSM&O training and technical support



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Strategic Plan – After the Plan

Accountable Plan Implementation

District TSM&O strategic and business plans

Cost feasible plans and budgets

Integrate TSM&O more completely with SIS project planning and implementation

Results Measurement

Fatality/major injury trends

Congestion trends

Mobility trends

Status of focus area implementation

Bi-annual plan updates



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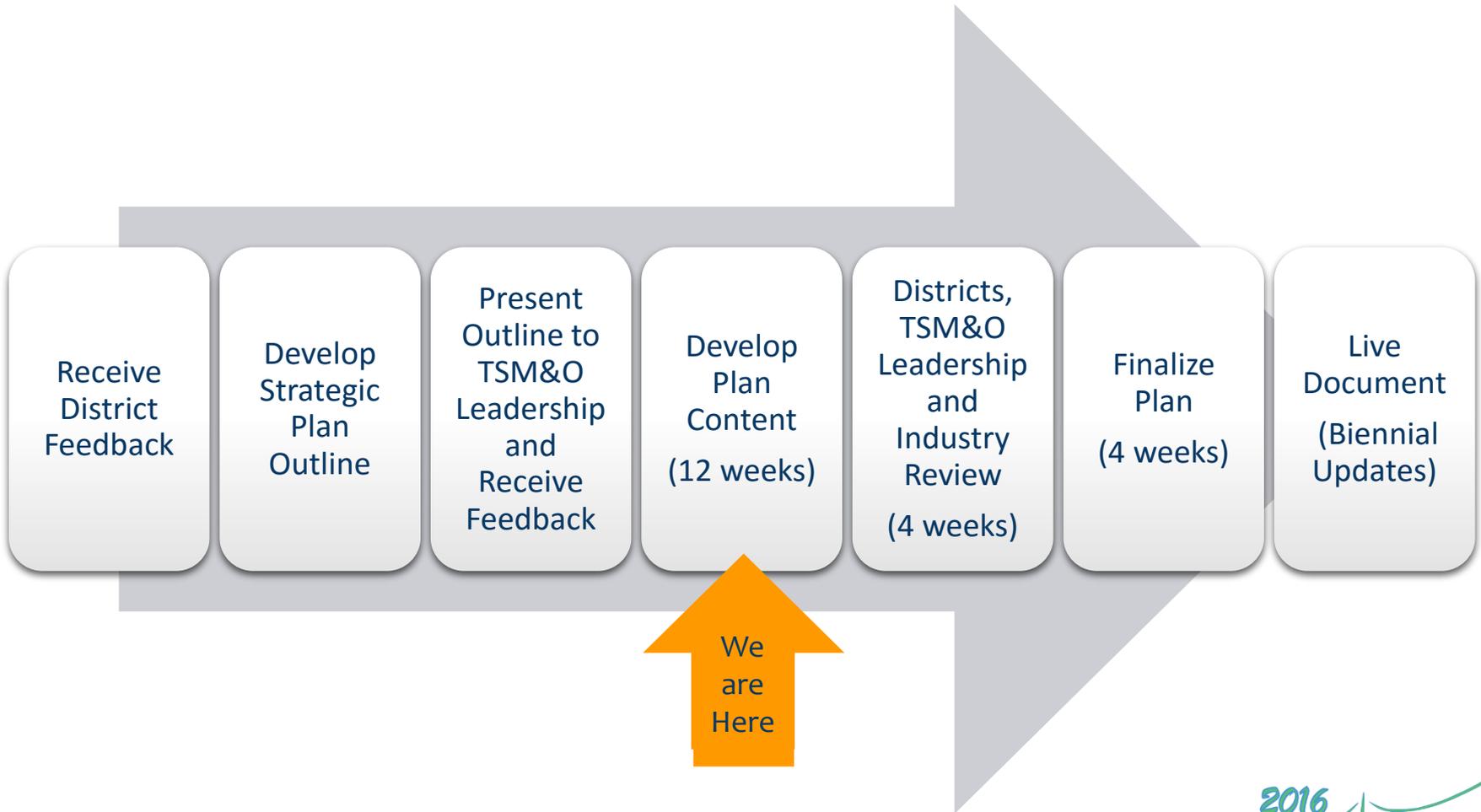
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Strategic Plan – Developmental Cycle



2. Planned Assignments

- Ramp Metering
 - Completed High-level Framework
 - Developing Guidelines and Criteria for Corridor/Technology Selection
- Hard Shoulder Running
 - Developing Guidelines
 - Developing Criteria for Corridor and Technology Selection
- Adaptive Signal Guidelines
 - Completed High-level Framework
 - Developing Guidelines
 - Developing Criteria for Corridor and Technology Selection
- Wrong Way Driving

3. Statewide TSM&O Excellence Program (STEP)

- Audiences
 - High-level Executives
 - Mid-level Professionals
 - Entry-level Professionals
- Training Methods
 - Webinar
 - Video Conference
 - In Person/Hands On

STEP – Priority Course Development

1. ITS CEI
2. ITSFM Training
3. Work Program Instructions for TSM&O
4. Ramp Metering
5. Hard Shoulder Running
6. Signal Performance Measures
7. Traffic Signals 101 (Basic)
8. Traffic Signals 102 (Advanced)
9. Current requests
 - Systems Eng. Mgmt. Plan

4. US DOT Grant Applications

1. FASTLANE Grant

- 1. Statewide Truck Parking Availability System (TPAS)
- 2. Submitted April 14
- 3. Requested \$11.5 million

2. Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Initiatives

- 1. Due Date June 24, 2016
- 2. Grant: \$60 million/year – FY 2016 through 2020 (50%)
- 3. Awards: Five to 10 Awards, up to \$12 million



FDOT - 2016 FASTLANE GRANT APPLICATION
TRUCK PARKING AVAILABILITY SYSTEM (TPAS)

CONTACT INFORMATION
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PHONE NUMBER: (850)-410-5607
EMAIL: jeff.frost@fdot.state.fl.us
GRANT REQUEST: \$11.5M
GRANT TYPE: Minor Project, Predominantly Rural



4. USDOT Grants Applications

1. Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Initiatives

1. 2016 Due Date June 24
2. Grant: \$60 million/year – FY 2016 through 2020 (50%)
3. Awards: Five to 10 Awards, up to \$12 million
4. FDOT 2016 Applications
 1. D5 multimodal integrated corridor in Orlando
 2. I-75 Florida Regional Advanced Mobility Elements (FRAME) Ocala to Gainesville

• Future FDOT Applications Tied to:

- TSM&O Strategic Plan Focus Areas
- Local & Regional Stakeholder Support
- Smart Cities/Regions



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TSM&O Research: Evaluation of Process

→ Objectives

- Comprehensive review of TSM&O incorporation in existing planning and design processes
 - Florida
 - Nationwide
- Revise the state-of-practice to better accommodate TSM&O components
- Explore the potential of using various project development processes such as the Agile Framework in lieu of conventional methods
- Develop procurement framework for TSM&O projects

TSM&O Research → Benefits

- Congestion management
 - Increased safety and mobility
- Higher Benefit/Cost ratios
- High impact-low cost
- Case Study: Cincinnati, Ohio
 - Regional traffic management and traveler information program, ARTIMIS

Selected Measure	ARTIMIS	Added Lane Project
Miles of improvements	88	10
Fatality accidents	-3.2%	+0.3%
Mobility (time savings)	500 hours	800 hours
Travel time reliability saving	6,900 hours	5,800 hours
Emissions	-3.6% to -4.5%	+0.3% to +1.4%
Estimated annual benefit	\$53 Million	\$ 35 Million
Total project cost	\$ 40 Million	\$ 800 Million
B/C ratio	12:1	1.1:1

TSM&O Research → Mainstreaming in Other States

- California (Caltrans)
 - Corridor System Management Plans (CSMP) to address bottlenecks
- Washington (WSDOT)
 - System Operations and Management (SOM) Committee to implement Operational solutions in the design process
- Delaware (DeIDOT)
 - Departmental review of M&O requirements conducted during the design phase
- Alabama (ALDOT)
 - Statewide and Regional TSM&O initiatives using the CMM approach



Thank you