

Regional Operations Forum

Transportation Systems Management & Operations

PLANNING FOR OPERATIONS

Shaping Caltrans' Future

District 8 – TSM&O Workshop
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Transportation System Management & Operations Planning for Operations

What is Transportation System Management & Operations (TSM&O)?

Integration of projects, processes, systems, technology, performance measurement, organization and workforce to actively and efficiently manage and operate our transportation system.

What is Planning for Operations?

Supporting transportation system management and operations strategies in our multimodal planning



Planning for Operations

What is Planning for Operations?

Supporting system management and operations strategies in our multimodal planning.

- Multi-modal collaboration between agencies and jurisdictions
- Collaboration between planners and operators
- Focus on specific outcomes and regional objectives
- Prioritize investments to achieve operations objectives
- Demonstrate accountability through performance measures

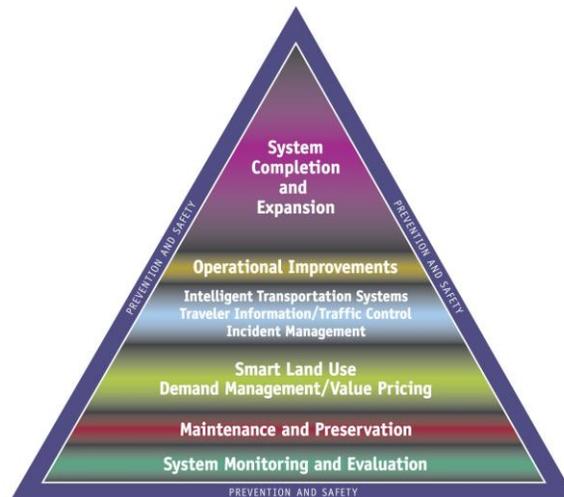
Objectives-Driven, Performance Based



Transportation System Management & Operations Planning for Operations

Where We Have Been: Insights from Past Practice

- *Traffic Operations Strategies (TOPS)*
- *ITS Mainstreaming / ITS Architectures initiatives*
- *System Management Pyramid*
- *Strategic Growth Plan / CMIA Program, CSMPs*

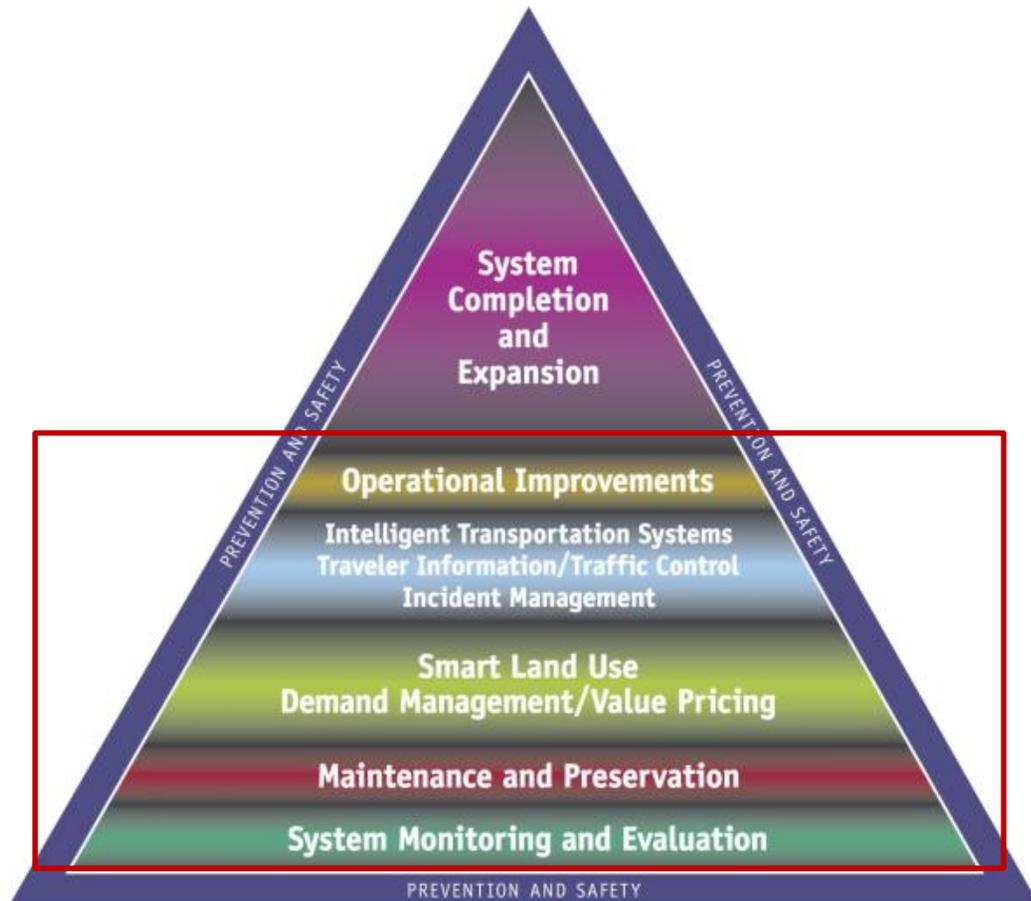


Transportation System Management & Operations Planning for Operations

Our Charge: Transition to a Sustainable, System Management Culture

Caltrans emphasis shifting to O&M

New Mission/Vision/Goals



Transportation System Management & Operations

The Planning Process

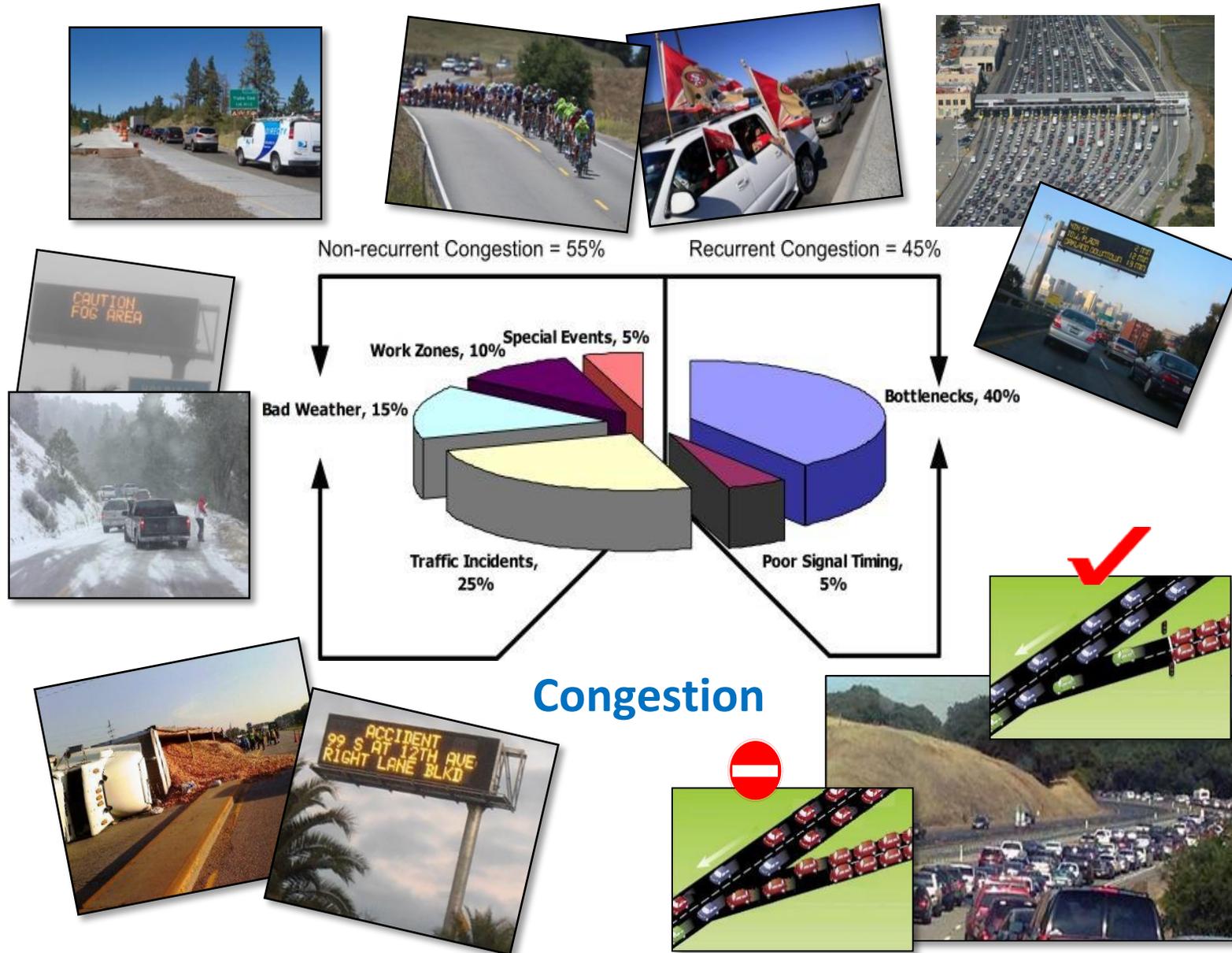
Traditional Approach to Transportation System Planning

- Predict future (long range) traffic volumes
- Fund major capital projects to provide additional capacity
This only addresses 45% of the congestion problem
- Also becoming more and more difficult to provide new capacity

Transportation System Management & Operations

The Planning Process

Managing Transportation



Transportation System Management & Operations Planning for Operations

System Management links the Planning and Operations functions

Organizational Focus



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TSM&O Cornerstones

- **TSM&O Policy: Draft DP-08 R1**
- **Intelligent Transportation Systems: DD-70-R1**

California Department of Transportation

*Serious drought.
Help save water!*

Director's Policy

<i>Number:</i>	DP-08-R1
<i>Effective Date:</i>	TBD by DBFS Administrator
<i>Supersedes:</i>	DP-08 (12/30/1992), DP-26 (08/2006)
<i>Responsible Program:</i>	Traffic Operations

TITLE Transportation System Management and Operations

POLICY

In order to optimize California's transportation system's performance for all system users and modes, the California Department of Transportation (Caltrans) commits to effective Transportation System Management and Operations (TSM&O). TSM&O is the integration of projects, business processes, systems, technology, performance measurement, organization and workforce to actively and efficiently manage California's transportation system. In partnership with others, Caltrans uses TSM&O to preserve system capacity, while improving safety, security, reliability, and sustainability.

INTENDED RESULTS

The intent of this policy is to promote TSM&O strategies as crucial tools in meeting Caltrans mission to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. TSM&O strategies are essential to a performance-based decision making process Caltrans will use to improve the efficient and effective operation of the transportation network. Examples of TSM&O strategies include:

- Ramp metering
- Traffic signal synchronization
- Intelligent Transportation Systems (ITS)
- Real time traveler information
- Incident and special event management
- Managed lanes
- Traffic Management Plans (TMPs)
- Dynamic lane management



THE VISION SUSTAINABILITY

California's transportation system is safe, sustainable, and globally competitive. It provides reliable and efficient mobility and accessibility for people, goods, and services while meeting our greenhouse gas emission reduction goals and preserving community character. This integrated, connected, and resilient multimodal system supports a prosperous economy, human and environmental health, and social equity.

THE GOALS

- 1**
 Improve Multimodal Mobility and Accessibility for All People
- 2**
 Preserve the Multimodal Transportation System
- 3**
 Support a Vibrant Economy
- 4**
 Improve Public Safety and Security
- 5**
 Foster Livable and Healthy Communities and Promote Social Equity
- 6**
 Practice Environmental Stewardship

THE POLICIES

POLICY 1 Manage and Operate an Efficient Integrated System	POLICY 1 Apply Sustainable Preventative Maintenance and Rehabilitation Strategies	POLICY 1 Support Transportation Choices to Enhance Economic Activity	POLICY 1 Reduce Fatalities, Serious Injuries, and Collisions	POLICY 1 Expand Engagement in Multimodal Transportation Planning and Decision Making	POLICY 1 Integrate Environmental Considerations in All Stages of Planning and Implementation
POLICY 2 Invest Strategically to Optimize System Performance	POLICY 2 Evaluate Multimodal Life Cycle Costs in Project Decision Making	POLICY 2 Enhance Freight Mobility, Reliability, and Global Competitiveness	POLICY 2 Provide for System Security, Emergency Preparedness, Response, and Recovery	POLICY 2 Integrate Multimodal Transportation and Land Use Development	POLICY 2 Conserve and Enhance Natural, Agricultural, and Cultural Resources
POLICY 3 Provide Viable and Equitable Multimodal Choices Including Active Transportation	POLICY 3 Adapt the Transportation System to Reduce Impacts from Climate Change	POLICY 3 Seek Sustainable and Flexible Funding to Maintain and Improve the System	POLICY 3 Integrate Health and Social Equity in Transportation Planning and Decision Making	POLICY 3 Reduce Greenhouse Gas Emissions and Other Air Pollutants	POLICY 4 Transform to a Clean and Energy Efficient Transportation System

Planning for Operations relates to many of the CTP's goals and policies



Planning for Operations

Planning for Operations Charter Team

Will identify and prioritize performance-based multi-modal planning practices that support TSM&O. This will be accomplished by advising on the development of a Planning for Operations Strategic Work Plan.

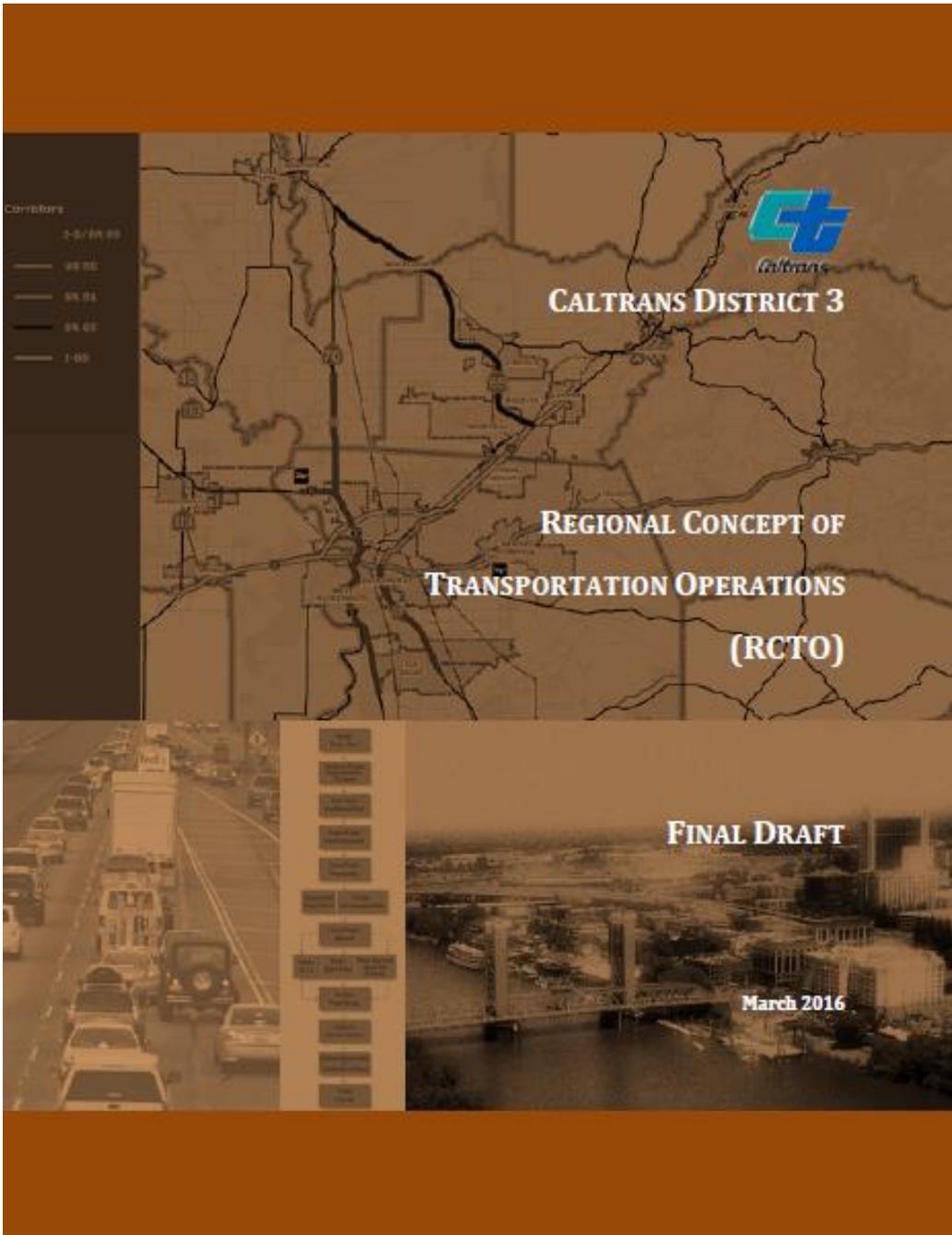
Planning for Operations Strategic Work Plan

Will create a statewide framework for planning for operations.

- Define Planning for Operations Program Goals
- Inventory Existing System Management-related Policies, Programs and Processes
- Review System Management Planning Organizational Relationships, Staff Capabilities and Expertise
- Evaluate Roles and Responsibilities Related to System Management Planning at Caltrans
- Evaluate Opportunities for System Management Planning Process Improvements
- Identify Information Gaps and Responsibilities for Data Gathering and Analytics
- Identify Collaboration and Communication Needs
- Develop Planning for Operations Strategic Work Plan and Implementation Framework

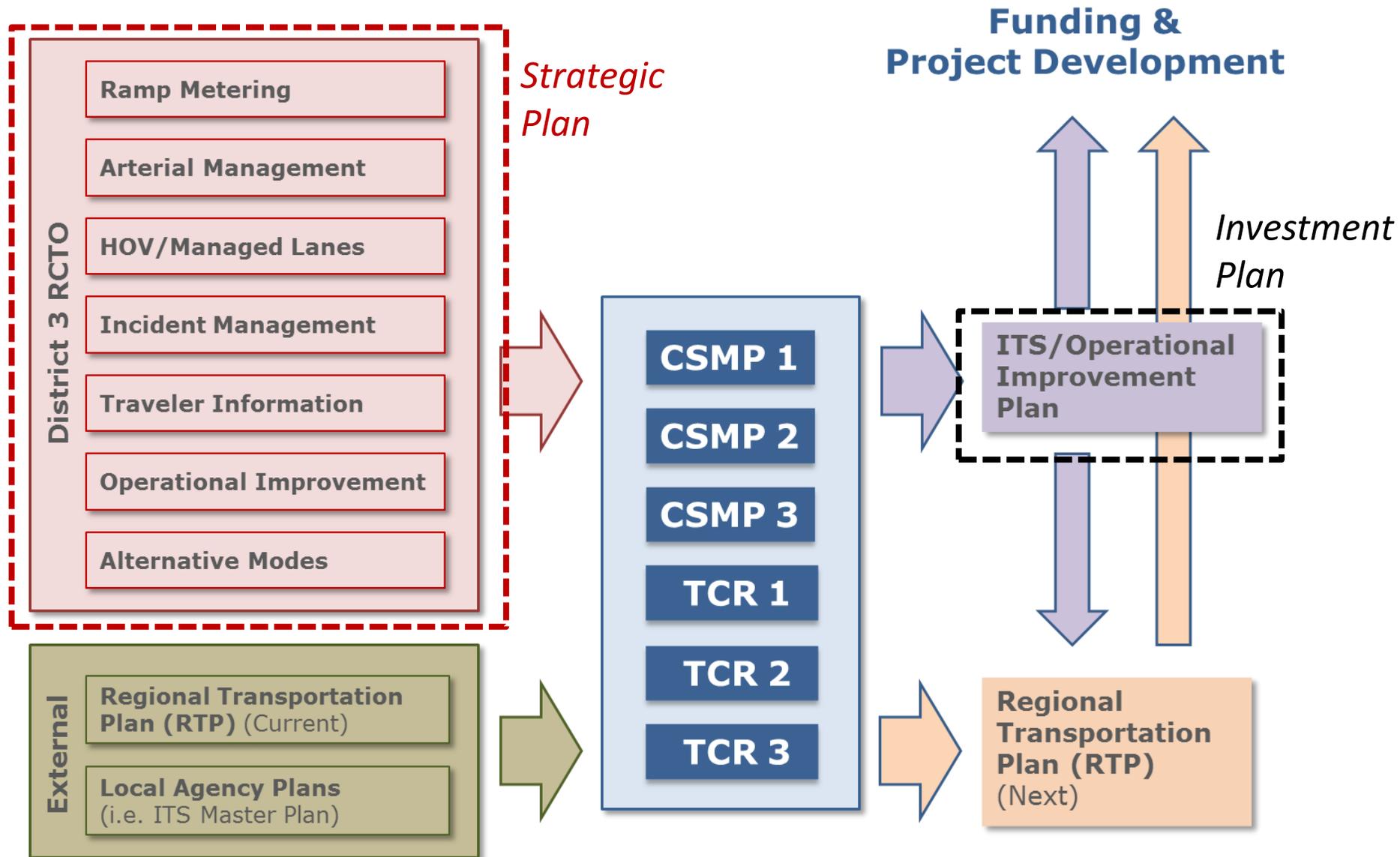


Planning for Operations: Regional Concept of Transportation Operations



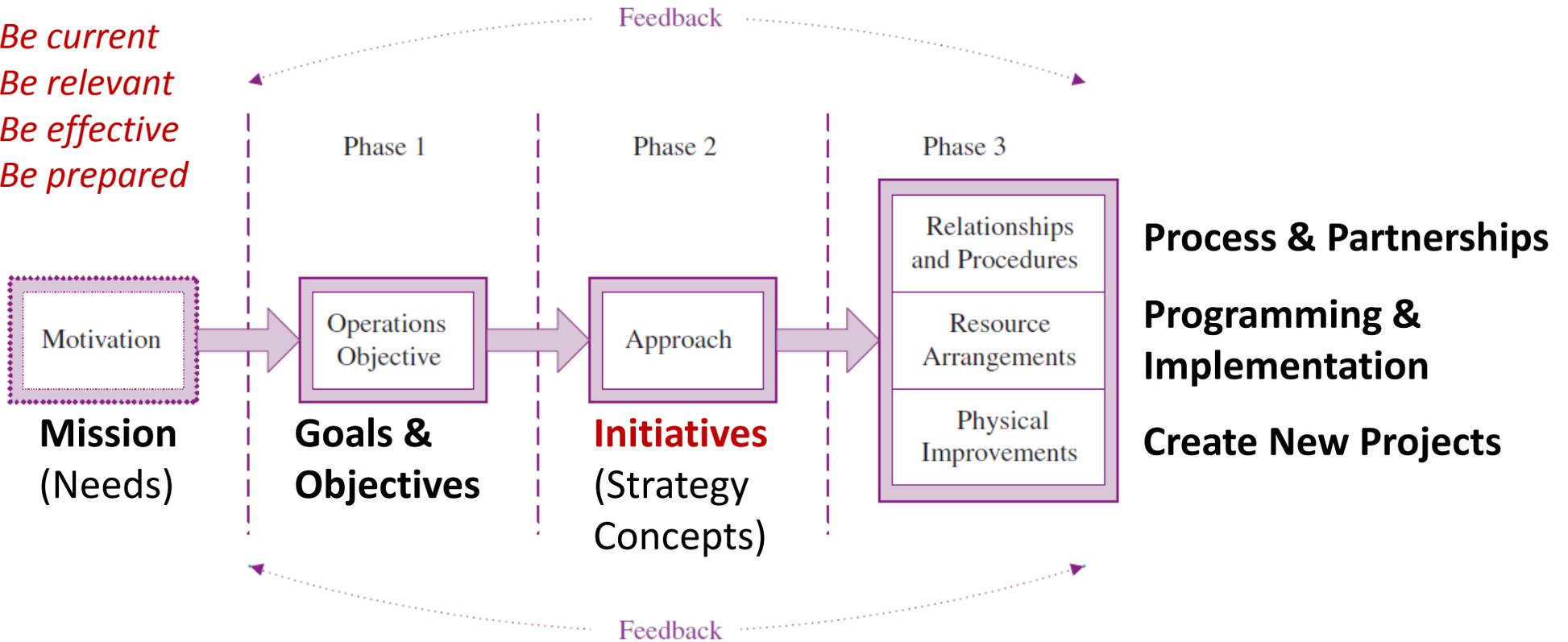
District 3 Planning for Operations Process

Process for planning for future operations



District 3 Planning for Operations Process

*Be current
Be relevant
Be effective
Be prepared*



- Ramp Metering
- HOV/Managed Lanes
- Arterial Management
- Incident Management
- Operational Improvements
- Alternative Modes
- Traveler Information



RCTO Goals, Objectives, and Performance Targets

District 3 RCTO Goals & Objectives	District 3 Performance Targets
Goal 1 (Caltrans SMP Goal #1) - Safety and Health	
1 Reduce user fatalities and injuries	<ul style="list-style-type: none"> ♦ Result in 0.5 or less fatalities per 100 million VMT on SHS every year ♦ 10% reduction in number of fatalities in calendar year in each mode type
Goal 2 (Caltrans SMP Goal #2) - Stewardship and Efficiency	
1 Effectively manage transportation assets with asset management plan (fix-it-first)	♦ By 2020, maintain 90% or better ITS elements health
Goal 3 (Caltrans SMP Goal #3) - Sustainability, Livability, and Economy	
1 Provide mobility choice, increase accessibility to all transportation modes and create transportation corridors	♦ By 2020, increase non-auto modes (triple bicycles, double pedestrians, and double transit ridership)
2 Support statewide reduction of GHG emissions	<ul style="list-style-type: none"> ♦ By 2020, 15% reduction of GHG (from 2010 levels) ♦ By 2020, 20% increase incorporating green infrastructure into projects
Goal 4 (Caltrans SMP Goal #4) - System Performance	
1 Improve travel time reliability for all modes	♦ By 2020, improve buffer time index reliability ranking by one level or 15%
2 Reduce peak period travel times and delays for all modes	♦ By 2020, reduce to 8% rate of growth in daily vehicle hours delay (DVHD) under 35 mph on urban SHS
3 Improve integration and operations	♦ By 2020, provide real-time multimodal system information to public of integrated corridors
4 Increase number of Complete Streets features on SHS	♦ By 2020, increase annual number of Complete Streets features by 5%
5 Develop integrated corridor management (ICM) strategies	<ul style="list-style-type: none"> ♦ By 2020, complete one ICM implementation plan in District 3 ♦ By 2025, implement one ICM corridor in District 3, reduce to 6% rate of DVHD growth on corridor
Goal 5 (Caltrans Goal #5) - Organizational Excellence	
1 Improve internal and external communication to demonstrate professionalism and service levels to the public and stakeholders	♦ By 2020, increase approval rating by stakeholders by at least 5% annually
2 Improve collaborative partnerships	♦ By 2020, have at least 75% approval rating by collaborative partners



Using RCTO

1. Create New Projects from the Initiatives

- Projects in the short, medium, and long range
- Identify new projects for CSMP inclusion

2. Make Extra Effort for Collaboration and Partnership

- Collaborate with local and regional agencies on course of actions and projects
- Collaborate on project prioritization, funding, and implementation process
- Develop agreements as needed

3. All About Programming and Implementation

- Leverage partnerships, leverage funding, and strategize programming
- Think progression, to build systems by layers

Transportation System Management & Operations Planning for Operations

Gaps and Opportunities

- *Defining roles, responsibilities and necessary skills*
- *Making the case for operational investments, link to goals*
- *Articulating a system management vision with quantifiable benefits*
- *Institutionalizing collaboration, partnerships*
- *Performance-based decision-making and system monitoring*
- *Better integrate operations into planning and funding processes*

THANK YOU!

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