MCDOT
Transportation Systems Management (TSM)

Nicolaas P. Swart, P.E.
Transportation Systems Management
Division Manager
AZTech Program Manager
Maricopa County Department of Transportation

TSMO Regional and Local Agency Peer Exchange
May 8, 2019
Phoenix, Arizona
Maricopa County, Arizona

- Approximately 9,226 sq. miles
- 4th largest County in United States
- Greater in population than 24 States (about 4 million)
- County Seat: Phoenix
- 24 cities and towns
- 5 Indian Communities
Core Purpose

Providing Connections that Improve People’s Lives

Core Values

Service Minded
Team Builder
Get it done with a smile
What is TSM&O?

TSM&O is an integrated program to optimize the performance of existing infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety and reliability of the transportation system.
What is TSM&O?

With fewer funds and space available to build our way out of congestion, improving our current roadway system has become critical.
Integrating TSM&O into the Agency’s Plan for the System
## Integrating TSM&O Into the Agency’s Plan for the System

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<th>Typical Transportation Planning</th>
<th>TSM&amp;O Systems Planning</th>
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<tr>
<td>Capital Improvements, Budgeting</td>
<td>Operational Improvements, Budgeting</td>
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<tr>
<td>$$ Billions</td>
<td>$$ Millions</td>
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<tr>
<td>Infrastructure &amp; related services</td>
<td>Services &amp; related infrastructure</td>
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<td>Long term horizon</td>
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<tr>
<td>Route/segment specific improvements</td>
<td>Area or system-wide applications</td>
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<tr>
<td>Level of Service performance</td>
<td>Reliability, Delay performance</td>
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<td>Federal $, planning processes</td>
<td>State and local $</td>
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<td>One and done</td>
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**SHRP2**

STRATEGIC HIGHWAY RESEARCH PROGRAM

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES
Transportation System Management and Operations
MCDOT Work Flow Chart

- Administrative Services Division
- Engineering Division
- Financial Services Division
- Infrastructure Technology Division
- Permitting, Construction & Inspections Division
- Roadway Maintenance & Operations Division
- Strategic Communications & Outreach Division
- Transportation Systems Management (TSM) Division
Benefits of TSM&O Structure

Integration of Planning & Design to accommodate operational goals

Operational Agreements (IGA’s’)

Efficient use of Funding

Mainstream Operations
Transportation Systems Management & Operations (TSM&O)

Leveraging TSM&O for Regional Operations

- AZTech partnerships to realize regional operational goals
- Strategies to operate the existing network to its fullest service potential
- Advance Technology
AZTech Partnership

**Mission**
- To champion the integration of intelligent communication and transportation systems technologies for regional solutions that provide timely and accurate information, save lives, improve mobility and enhance quality of life.

**Goals**
- Integrate the existing Intelligent Transportation System infrastructure into a regional system.
- Establish a regional integrated traveler information system.
- Expand the transportation management system for the Phoenix metropolitan area.

**Strategies**
- Establish Education and Outreach Programs
- Expand & Strengthen Partnerships
- Optimize Regional Operations and Management
- Plan, Develop, & Deploy Integrated Regional Systems (for operations)
- Research and Test New Technological Opportunities
AZTech Partnership

- 26 members
  - 15 Cities and Towns
  - FHWA
  - MAG (Local MPO)
  - State DOT
  - County DOT
  - Public Safety
  - Phoenix International Airport
  - Public Transit
  - State Universities

- Key Function: Traffic Management and Operations
Current AZTech Organizational Structure

AZTech ORGANIZATIONAL STRUCTURE

AZTech Program Management
Maricopa County Department of Transportation (MCDOT)
& Arizona Department of Transportation (ADOT)

EXECUTIVE COMMITTEE

STRATEGIC STEERING COMMITTEE

ADVANCED TRAVELER INFORMATION SYSTEMS (ATIS) WORKING GROUP
OPERATIONS COMMITTEE
TRAFFIC MANAGEMENT CENTER (TMC) OPERATORS WORKING GROUP
TRAFFIC INCIDENT MANAGEMENT (TIM) COALITION
AZTech History At-A-Glance

MDI Phase
- Establish Partnerships
- Develop and Test Technologies

Post MDI
- Strengthen AZTech Connectivity
- Expand to Public Safety

Operations Transition
- Deployment to Operations

ICM
- Planning and Implementation

Strategies to Operate the Existing Network to its Fullest Service Potential

- Operational Partnership Agreements
- Integrated Corridor Management (ICM)
- Integrated Signal Systems
- Incident Support for Major Special Events
- Training and Exercises
- Technology
  - Adaptive Signal Control
  - Connected Vehicles and Automated Vehicles
Challenges

- Organizational Culture Change
- Selling the Message
- Cost and Resources
- Qualified/Trained Staff
- Impact

- Impact Organizational Culture Change
- Selling the Message
- Cost and Resources
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- Impact

- Qualified/Trained Staff
- Selling the Message
- Cost and Resources
- Impact Organizational Culture Change
- Impact

- Organization of Culture Change
- Selling the Message
- Cost and Resources
- Qualified Staff
- Impact
Questions?

Nicolaas P. Swart, P.E.
Transportation Systems Management Division Manager
Maricopa County Department of Transportation
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602-506-0599
nicolaasswart@mail.maricopa.gov