

Mainstreaming TSMO Through Policies and Processes

FHWA Office of Operations
National Operations Center of Excellence

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Arizona Department of Transportation
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Background and Current Efforts

- Organizational Structure
 - ADOT and Division Launch – October 2015
- FHWA-related activities
 - Capability Maturity Model – March 2014 and February 2017
 - TSMO Program Planning Workshop – December 2017
 - Mainstreaming TSMO – 2020-2021
- ADOT TSMO Focused Planning Efforts
 - TSMO Strategic Plan – February 2017
 - ITS Masterplan – October 2021
 - Smart Highway Technology Subprogram Funding



Traffic Maintenance

- *Statewide Signing and Striping*
- *Sign Factory*

Traffic Management

- *Traffic Operations Center*
- *Traffic Incident Management*
- *Emergency Management*
- *Weather Management*

Systems Technology

- *Emerging Technologies*
- *System Performance*
- *ITS Operations and Communication*
- *Project Development Support*

Systems Management

- *Maintenance Administration*
- *Contracts and Management Services*
- *Feature Inventory Systems*
- *Statewide Permits*
- *Rest Area Management*
- *Level-of-Service and Needs Based Budgeting*

Transportation Systems Management & Operations Division (TSMO)

Systems Maintenance

- *Signal Operations*
- *ITS Maintenance*
- *Pump Stations*
- *Lighting and Tunnel Operations*
- *Fiber Management*

Operational Traffic & Safety

- *Regional Traffic Engineering*
- *Road Safety Assessments*
- *Strategic Transportation Safety Plan*
- *Traffic Safety and Data*
- *Rural Signals and Lighting Operations*

Business Administration


- *Administration*
- *HR*
- *Budget*
- *Procurement*
- *Signal ITS Warehouse*

Governor FY 2022 Strategic 2-Pager

ADOT X-Matrix FY 2021–FY 2023

Department of Transportation
Fiscal Year 2022 Strategic Plan 2-pager Current Annual Focus

Strategy #	FY22 Annual Objectives	Objective Metrics	Annual Initiatives
1	Reduce roadway crashes	<ul style="list-style-type: none"> Crash report backlog Percent overweight CVS @ POEs 	<ul style="list-style-type: none"> Improve safety outcomes in high crash locations Reduce unpermitted overweight commercial carriers
2	Improve our ability to recruit and retain the best talent	<ul style="list-style-type: none"> Percent remote capable EE survey scores Percent regrettable attrition 	<ul style="list-style-type: none"> Define and implement Work from Anywhere Program Improve slowest scores on employee engagement survey Reduce regrettable attrition
3	Maximize efficiencies and confidence in MVD service delivery	<ul style="list-style-type: none"> Office experience time Level 2 call center hold time Number REAL-ID licenses issued 	<ul style="list-style-type: none"> Improve customer experience time Transition drivers to Travel ID
4	Improve/maintain the transportation system condition based on existing revenues	<ul style="list-style-type: none"> Achieve project milestones Pavement treatments (miles) 	<ul style="list-style-type: none"> Deliver federal and state funded life expansion projects I-10 improvements from Phoenix to Casa Grande I-17 expansion from Anthem to Sunset Point Install broadband on I-17 and I-19
	Improve reliability of core business processes	<ul style="list-style-type: none"> Incident Resolution Time 	<ul style="list-style-type: none"> Improve core IT business processes
	Finalize the transition of state fleet to ADOT	<ul style="list-style-type: none"> Achieve transition plan milestones 	<ul style="list-style-type: none"> Phase 1: complete transition of licensed over the road light duty fleet owned by ADOA Phase 2: transition licensed over the road light duty fleet purchased outside of ADOA fleet program t

FY 2021 - 2023 Strategic Plan - Arizona Department of Transportation												
Correlation		FY 2021 Objectives					Correlation / Contribution					Accountability
		4										
		3										
		2										
		1										
<p>Annual Objectives</p>  <p>Annual Actions</p>												
<p>Long-Term Strategies</p>												
<p>3-Year Outcomes</p>												
<p>KPI Categories</p>												
<p>Legend</p>												

Transportation Systems Management & Operations (TSMO) Division FY22 Strategic Plan				Plan	Complete	On Track	At Risk	Behind-Overdue	Timing Summary						
				FY22 Q1			Q2			Q3			Q4		
Annual Objectives	Annual Actions	Action Owners	Metrics	J	A	S	O	N	D	J	F	M	A	M	J
2	System Reliability	3 Traffic Signal Detection	Dave Locher/George Williams	Improve statewide traffic signal detection to 95% functionality by 6/30/22											
		4 Provide Signal Timing Options	Dave Locher/George Williams	Develop and implement signal timing plans for peak and off peak for two corridors by 6/30/2022 <i>Time of day plans have installed on section of Grand Ave</i>											
		5 ATSPM	Dave Locher/George Williams	Develop and implement Automated Traffic Signal Performance Measures at one location (ATSPM) - by 6/30/2022 <i>ATSPM data is being pulled where time of day plans have been implemented</i>											
		6 Reduce Phx Metro Full Closure Times	Derek Arnson	Full closure times within 120 minutes (= closure ended)											
		7 ICM	Susan Anderson	L101 ICM Concept of Operations and Operations Plan by November 2021											
		8 Phx Metro Quick Clearance time reduction	Derek Arnson	Response times for ALL incidents within 28 minutes											
	Owner: Brent Cain														
3	System Safety	1 Assess High Crash Locations	George Williams	Perform targeted RSA's at 50 high crash locations in FY21											
		2 Implement Countermeasures from RSA's	George Williams	Implement countermeasures at 25 high crash locations											
		3 Real time Travel Notifications - Color DMS	Susan Anderson / John Roberts	Enable color operations for existing color DMS by February 2022											
		4 Dust Detection	David Locher/John Roberts	Measure effectiveness of the new dust detection system for FY21 monsoon season											
		5 Crowdsourcing Data	Susan Anderson	Define the feasibility of crowdsourcing data usage for back of queue by December 2021											
		6 Perform Network Screening of the State's System	George Williams	Network screen the 2020 crash data for the state system by Dec 1 2021											
		7 Program HSIP Projects	George Williams	Program FY21 HSIP funds by Mar 31											
		8 Crash Reporting	George Williams	Reduce crash reporting backlog to goal of 45 days by Jan 1st 2022											
	Owner: Brent Cain														
4	Infrastructure Health	1 ITS Inventory	Susan Anderson/Jerry James	Establish current, available ITS feature inventory and define technology targets as part of the ITS Master Plan by January 2022											
		2 TOC-Device Maintenance Status	Derek Arnson	Daily checks of a CCTV, DMS, WWD and other ITS equipment to identify systems health and readiness (below 95% is RED)											
		4 Fiber Network	David Locher	Procure and populate a statewide fiber management system by Sept. 2021, team is review proposals											
		5 Data Quality	Susan Anderson/David Locher	Develop a prioritized plan to update controllers by February 2022											
		6 Maintain Striping Retroreflectivity	Kip Carroll	Maintain striping to retroreflectivity levels as prescribed in FHWA's NPRM - 100 Mcd for speeds of 55 mph or greater, and 50 Mcd for speeds between 35 and 55 mph											
			Owner: Brent Cain												

Score Card – TSMO Division

SYSTEMS MAINTENANCE & OPERATIONS			
Percent of Statewide Traffic Signals with Communications Equipment	Quality	Target	100%
		Actual	63%
Maintain Phoenix Metro Roadway Lighting Operability at 95%	Quality	Target	95%
		Actual	93%
Metro Phoenix CCTV Camera Operability at 100%	Quality	Target	100%
		Actual	98%
Maintain Phoenix Metro Pump Stations at 90% Operability (Pump stations that dewater the freeway)	Quality	Target	90%
		Actual	64%
Perform Targeted RSA's at 50 High Crash Locations in FY22	Quality	Target	50
		Actual	0
Implement Countermeasures at 25 High Crash Locations	Quality	Target	25
		Actual	3

SYSTEMS TECHNOLOGY			
Maintain the average speed of the Phoenix Metro system at 50 mile per hour or greater	Quality	Target	50 MPH
		Actual	64.3
Average Phoenix Metro Travel Time Index	Quality	Target	1.4
		Actual	1.18
Average Planning Time Index (Annual Rolling Average) for the Phoenix Metro Freeway System during the AM Peak Hours	Quality	Target	
		Actual	1.87
Average Planning Time Index (Annual Rolling Average) for the Phoenix Metro Freeway System during the PM Peak Hours	Quality	Target	
		Actual	2.05
Number of wrong-way vehicle mainline entries within the I-17 pilot corridor	Quality	Target	0
		Actual	2
Number of ramp incursions properly detected in the I-17 wrong-way vehicle detection pilot corridor	Quality	Target	
		Actual	18

National Efforts to Support TSMO

- Regional Operations Leadership Forum (ROLF) Program
 - Build upon FHWA ROLF Program to engage TSMO Champions, share best practices, etc.
- NCHRP 03-126 - Transportation Operations Manual
 - Authoritative source representing state operations practice
- National Operations Centers of Excellence



Thank you!

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