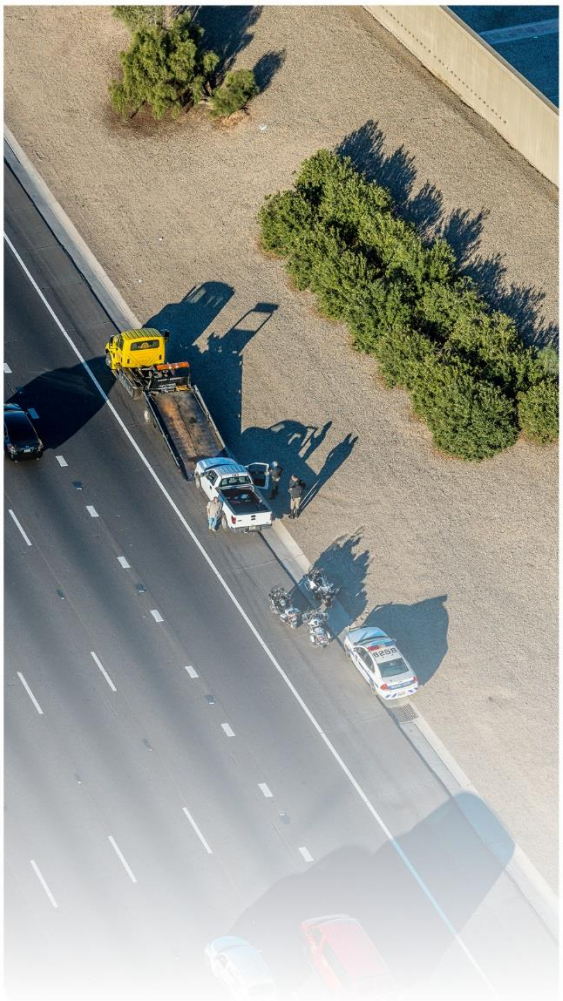
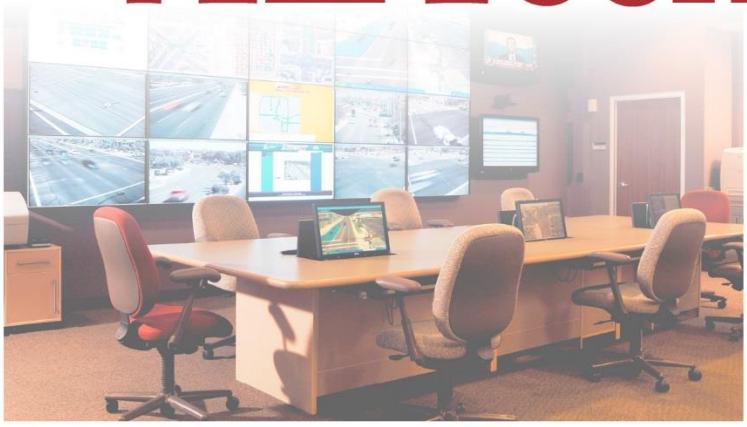
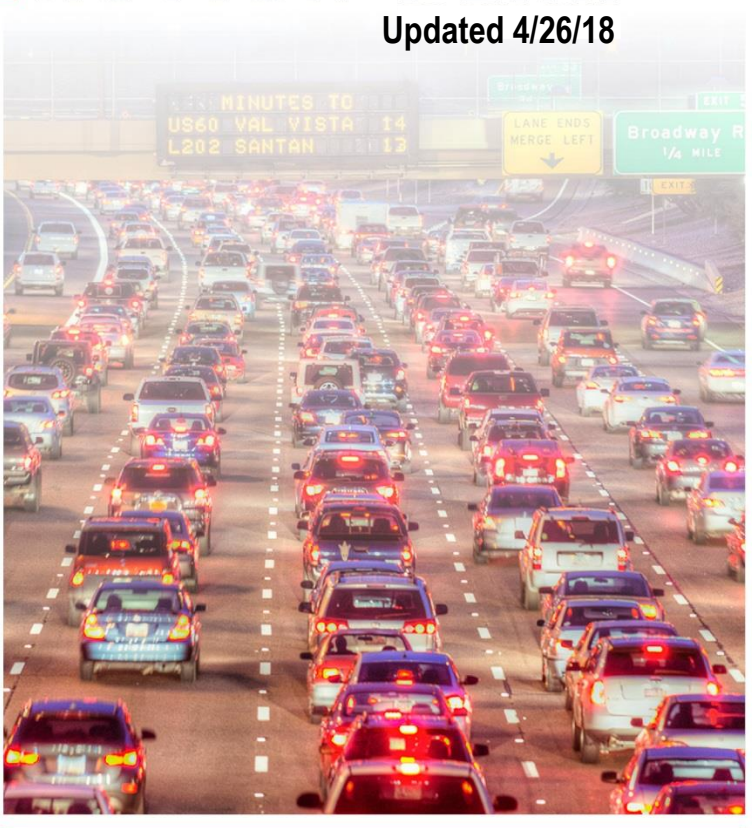


FY19 AZTech ACTION PLAN

Updated 4/26/18





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AZTech Program Management
AZTech Program Manager: Nicolaas Swart, MCDOT
AZTech Co-Program Manager: Susan Anderson, ADOT
AZTech Technical Manager: Faisal Saleem, MCDOT

AZTech Operations Committee Chair
David Lucas, City of Tempe

AZTech Media and Communications Task Force Co-Chairs
Steve Elliott, Co-Chair, ADOT
Traci Ruth, Co-Chair, MCDOT

AZTech TIM Coalition Chair
Captain John Paul Cartier, AZ DPS

AZTech Strategic Steering Committee Chair / Vice Chair
Bruce Littleton, Chair, City of Phoenix
Leslie Bubke, Vice Chair, City of Scottsdale

AZTech TMC Operators Working Group Co-Chairs
Derek Arnson, ADOT
Barbara Hauser, MCDOT

MCDOT Support Staff
April Wire, ITS Project Manager
Cynthia Lopez, ITS Management Assistant
Luz Rubio, TMC Office Assistant

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AZTech Executive Committee
AZTech Strategic Steering Committee
AZTech Operations Committee
AZTech Media & Communications Task Force
AZTech TIM Coalition
AZTech TMC Operators Working Group

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Arizona Department of Transportation

Arizona Department of Public Safety

Maricopa Association of Governments

Maricopa County Department of Transportation

City of Avondale

City of Chandler

City of Glendale

City of Goodyear

City of Mesa

City of Peoria

City of Phoenix

City of Scottsdale

City of Surprise

City of Tempe

Phoenix Sky Harbor International Airport

Town of Buckeye

Town of Fountain Hills

Town of Gilbert

Town of Paradise Valley

Town of Queen Creek

Valley Metro

Arizona Broadcasters Association

APTRA (Arizona Professional Towing and Recovery Association)

Arizona Department of Health Services

Arizona Division of Emergency Management

Arizona State University

Total Traffic & Weather Network

University of Arizona

List of Acronyms

AAP – AZTech Action Plan

ADHS – Arizona Department of Health Services

ADOT – Arizona Department of Transportation

AEC – AZTech Executive Committee

AOC – AZTech Operations Committee

ARID – Anonymous Re-IDentification

ARIS – AZTech Regional Information System

ASSC – AZTech Strategic Steering Committee

ATCMTD – Advanced Transportation and Congestion Management Technologies Deployment

ATIS – Advanced Traveler Information Systems

ATM – Active Traffic Management

AV – Autonomous Vehicles

AZ DPS – Arizona Department of Public Safety

CCTV – Closed Circuit Television

CIP – Capital Improvement Program

CMM – Capability Maturity Model

CRD – Central Resource Database

CV – Connected Vehicles

CV/AV – Connected Vehicles/Autonomous Vehicles

DEM – Department of Emergency Management

DMS – Dynamic Message Sign

DPS – Department of Public Safety

DSS – Decision Support System

EDC-4 – Every Day Counts Round 4

EMS – Emergency Medical Services

ERMA – Event Registration and Management Application (online portal)

EVTTM – East Valley Travel Time Map

FHWA – Federal Highway Administration

FTP – File Transfer Protocol

FY – Fiscal Year

ICM – Integrated Corridor Management

IGA – Intergovernmental Agreement

ITS – Intelligent Transportation Systems

MAG – Maricopa Association of Governments

MCDOT – Maricopa County Department of Transportation

MCTF – Media and Communications Task Force

MDI – Model Deployment Initiative

MPO – Metropolitan Planning Organization

NOCoE – National Operations Center of Excellence

PI Book – AZTech Traffic Management and Operations Performance Indicators Book

PIO – Public Information Officer

PSAP – Public Safety Answering Point

RADS – Regional Archive Data System

RCN – Regional Community Network

SHRP2 – Second Strategic Highway Research Program

SPaT – Signal Phasing and Timing

SPM – Signal Performance Measures

SWZ – Smart Work Zone

TIM – Traffic Incident Management

TIP – Transportation Improvement Program

TMC – Traffic Management Center

TMC OWG – TMC Operators Working Group

TSM&O – Transportation Systems Management and Operations

UA – University of Arizona

UDOT – Utah Department of Transportation

USDOT – United States Department of Transportation

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Introduction to the AZTech Action Plan

The *AZTech Action Plan* is a five-year operations planning document with a near-term focus to help AZTech advance the priority implementation strategies that were identified in the 2015 AZTech Operations Implementation Plan. The Action Plan is owned and driven by the AZTech members, and reflects past, current and future priorities of each of the AZTech Committees and Working Groups from Fiscal Years 2017 through 2021. Projects and initiatives that are included in this Action Plan are not assigned or dictated, but instead were selected by an AZTech Committee or Working Group as a priority warranting action. This Action Plan will be updated annually to provide updates on past activities and to reflect new activities and initiatives planned for each fiscal year.

The purpose of the Action Plan is to translate the strategies in the Implementation Plan into tangible projects and activities to advance operations priorities identified in the Implementation Plan. Each project and activity is broken down into specific actions required or suggested inputs identified for the project and tasked to the champions from the Committees and Working Groups. The individual project sheets for the FY19 update are at the end of the document.

Overview of AZTech

AZTech began as a Federal Highway Administration (FHWA) Intelligent Transportation Systems (ITS) Model Deployment Initiative (MDI) for the Phoenix metropolitan area in 1996. As part of the MDI, AZTech's mission was to provide a champion for the integration of intelligent transportation and communication systems technologies focused on implementing and improving strategies that reduce travel time, reduce travel cost, and improve the safety of the traveling public. Since completion of the MDI, AZTech has evolved into an ongoing regional operations initiative that continues to pursue opportunities to increase inter-agency collaboration between federal, state, county, MPO and municipalities across the greater Phoenix metropolitan region. AZTech has become an integrating mechanism that has demonstrated the distinct advantages of a regional operations-related partnership.

AZTech adopted several Values and Goals to guide its growth from a demonstration project to what has become a sustainable regional partnership. The AZTech Values include:

- Collaboration;
- Leadership;
- Integration; and
- Results.

Driven by these Values, the AZTech Goals are to:

- Integrate the existing ITS infrastructure into a regional system;
- Establish a regional integrated traveler information system; and
- Expand the transportation management system for the Phoenix metropolitan area.

AZTech is organized into committees and working groups that each have a strategic focus and role for the organization as a whole. All of the groups have a charter, some of which were developed in 2017, that delineates their role, mission and values. Currently, there are six committees and working groups, including:

- AZTech Executive Committee;
- AZTech Strategic Steering Committee;
- AZTech TIM Coalition;
- AZTech Operations Committee;
- AZTech Media & Communications Task Force; and
- AZTech TMC Operators Working Group.

The **AZTech Executive Committee (AEC)** is comprised of agency leaders and decision makers representing transportation, emergency management, public safety and public information. The role of the Executive Committee is to provide the top-level buy-in and support for AZTech initiatives and outputs, help clear significant political, institutional, or resource barriers that might exist, and resolve issues that might arise amongst the other committees and working groups.

The **AZTech Strategic Steering Committee (ASSC)** is comprised of public agency ITS and Public Safety leaders and serves as the liaison between the AEC and all other AZTech committees and working groups. The mission of the ASSC is to champion the implementation of Transportation Systems Management and Operations (TSM&O) strategies in the region by collaboration among AZTech partner agencies. They report progress to the AEC and forward the requests and recommendations from the other committees.

The **AZTech Traffic Incident Management (TIM) Coalition** is a multi-disciplinary partnership including state, tribal and local emergency responders, transportation management staff and towing companies in the Phoenix metropolitan area. The TIM Coalition is focused on bringing key stakeholders together to collaborate on improvements to traffic incident management. The goal of the TIM Coalition is to meet the objectives of the National Unified Goal, which includes ensuring responder safety, executing safe and quick clearance of hazards on the road, and providing prompt, reliable and interoperable communications.

The **AZTech Operations Committee (AOC)** specializes in public traffic operations and transportation management in the region. The AOC coordinates and seeks to attain consensus on traffic operations and management issues that span agency boundaries in the region. The goal of the AOC is to ensure that policies adopted by the AEC are carried out in their member agencies.

The **AZTech Media & Communications Task Force** is comprised of public information officers from AZTech partners and news media representatives to improve the quality, accessibility and timeliness of the traveler information offered to the public in order to increase safety and mobility in the Phoenix metropolitan area.

The **AZTech Traffic Management Center (TMC) Operators Working Group** is made up of traffic management and traffic operations center operators throughout the region. The purpose of the group is to improve the working relationships among local TMCs in the region and explore how to better integrate TMCs into regional transportation operations and management functions.

The Action Plan is organized in a way that each of these committees or groups can tackle projects related to their specializations and priorities. Through simultaneous efforts on behalf of all groups, AZTech as a whole can make strides towards addressing the major focus areas and strategic actions put forth in the *2015 AZTech Operations Implementation Plan* for FY17 through FY21.

Developing the AZTech Action Plan

The development of the Action Plan was the final step in a two-year process of identifying gaps, goals and priorities for AZTech for the 2021 planning horizon. The graphic below provides an overview of the key steps and milestones during this planning process that resulted in this Action Plan.

In 2014, as part of a federal Strategic Highway Research Program 2 (SHRP2) assistance project, AZTech agencies participated in a Regional Capability Maturity Model (CMM) Workshop. The CMM workshop is conducted by the Federal Highway Administration (FHWA) and is a self-assessment tool to help evaluate the state of an organization or region with respect to TSM&O. The tool looked at TSM&O from six dimensions, including business processes, systems and technology, performance measurement, culture, collaboration and organization and staffing. Based on the results of this self-assessment, AZTech participants identified a set of key goals and recommendations to advance TSM&O in the region at both the local and regional levels.

Building on the results of the CMM workshop and including input from AZTech committees and from the Operations Implementation Priorities workshop in 2015, AZTech developed its *2015 Operations Implementation Plan*. The Implementation Plan is a five-year vision for operational strategies and collaboration to help advance key, regional operations initiatives. The Action Plan documents key gaps that were identified and that would be tracked over the next five years. These gaps were organized into seven vision statements which include:

- We have a well-informed traveling public;
- We have qualified, well-trained staff and a pipeline of new talent;
- We leverage our regional infrastructure and partnerships to support proactive system management;
- Incident management is responsive and effective on freeways and arterials;
- Our performance measures tell our story;
- Upper management, the public, and elected/appointed officials appreciate our value; and
- Technology supports operations with innovation.

For each of these focus areas, a set of implementation strategies were identified that further define the focus areas in terms of specific gaps and strategies.

Finally, starting in 2015 and continuing into 2016, AZTech began to develop its first **Action Plan**. The AZTech committees and working groups identified the projects and initiatives for the first fiscal year (FY17).

The process used to develop the Action Plan involved an iterative approach that was highly participatory amongst AZTech members. The development process began with a Core Team that included committee chairs and other AZTech champions who would be the champions of the Action Plan. This committee provided direction on the Action Plan's foundation, and helped define its purpose and objectives, the basis for its content and its structure.

Inputs into the Action Plan included the Operations Implementation Plan, the most recent FHWA TIM Self-Assessment, and the outputs from the CMM workshop, as described above. Based on these inputs, a summary of priorities and initiatives were compiled into a master table. The Core Team reviewed the list and made updates as appropriate, which included adding actions or redefining some actions based on updated information or shifts in the region's priorities or state of the practice. With a final list of priorities and actions assembled, the Core Team then underwent a prioritization activity where they ranked the list of actions based on a high, medium and low ranking system. They also identified the most likely and appropriate committee or group associated with each action.

Based on these initial prioritizations and committee identifications, a list of projects specific to each individual committee or group was developed and presented to the group at their respective meetings. Each group engaged with the Action Plan at three meetings. The first meeting provided an introduction to the Action Plan, its goals and purpose, and the expectations for participation by AZTech members. The second meeting involved a discussion about that committee's list of actions that was developed from the master table. Each committee or group was asked to verify that the actions in their table were those that were important and those that they would be willing to address between FY17 and FY21. During these conversations, actions were added, removed and refined as necessary, and a set of actions for each fiscal year were identified. The final meeting with each group involved final refinement of actions that would be started during this time period and the identification of individual champions for each.

The result of this process was the *FY17 AZTech Action Plan*. Because this Action Plan had a one-year focus, it was anticipated that the later part of this development process, where each group or committee would be asked to identify and specify projects for that fiscal year, will be undertaken on a yearly basis. It is important to note that many actions identified in the Action Plan will be completed over a series of steps. The following portions of the Action Plan, which provide information on the specific projects for the past and current fiscal years, are being updated annually to reflect the projects that are selected for implementation in each of the subsequent years through FY21.

This update of the Action Plan summarizes the FY17 plan, covers projects identified and initiated in FY18 and identifies specific projects for FY19.

Summary of the Action Plan (FY17- FY19)

PROJECT TITLE	RESPONSIBLE PARTY/CHAMPIONS	ANTICIPATED OUTPUTS	STATUS
AZTech Executive Committee			
17-01 AZTech Business Case	AEC, ASSC / Committee Chairs / Nicolaas Swart*, Susan Anderson	Develop a succinct business case for AZTech and its value to the region, as well as identify key audiences for outreach focus.	**In Progress**
AZTech Strategic Steering Committee			
		FY17	
17-02 AZTech 20th Anniversary Celebration	ASSC / Nicolaas Swart, Faisal Saleem, Cynthia Lopez	Plan and execute a 20th Anniversary Celebration that highlights the accomplishments and value of AZTech to the region.	**Completed (FY17)**
17-03 AZTech Performance Indicators Book	ASSC / AZTech Core Team / Bruce Littleton, Dana Owsiany	**FY17**	
		Develop the 2015 Traffic Management and Operations Performance Indicators Book (3rd Edition) that provides an overview of the performance of the regional transportation system.	**Completed (FY17)**
	ASSC / AZTech Core Team / Bruce Littleton, Leslie Bubke	**FY18**	
		Develop the 2017 Traffic Management and Operations Performance Indicators Book (4th Edition)	**In Progress**
17-04 AZTech Action Plan	ASSC / AZTech Core Team	**FY17**	
		Develop AZTech Action Plan for FY17 (year 1 of 5)	**Completed (FY17)**
		FY19	
		Update the Action Plan with new projects planned for FY19 (this plan) (years 2 & 3 of 5)	**In Progress**

PROJECT TITLE	RESPONSIBLE PARTY/CHAMPIONS	ANTICIPATED OUTPUTS	STATUS
17-05 Media and Communications Task Force	ASSC, ATIS WG / Faisal Saleem, Steve Elliott, Traci Ruth, Monica Hernandez, and Gil Estrada	Convene a task force of agency Public Information Officers (PIOs) to host bi-annual forums with different local media (TV, radio, print) to identify media engagement & traveler information enhancement opportunities.	**Completed (FY17)**
17-06 Central Resource Database	ASSC / April Wire*, Bruce Littleton, Cynthia Lopez, David Lucas	Create a database of resources, system inventories and guidance materials that AZTech members can access through a secure website. Align with AZTech website updates.	**In Progress**
17-07 West Valley Loop 101 ICM Plan	ASSC / Faisal Saleem*, April Wire	Develop Integrated Corridor Management strategies for the Loop 101 in the West Valley.	**Completed (FY17)**
17-08 AZTech Job Description Templates	ASSC / Nicolaas Swart*, Reza Karimvand, Faisal Saleem	Develop a set of job description templates for ITS and traffic operations / management positions that can be used by agencies to support new or updated job descriptions.	**In Progress**
FY19			
19-01 Regional Goals and Guidelines for Emerging and Future Technologies	ASSC / Bruce Littleton*, Faisal Saleem, April Wire, David Lucas	Regional operational goals and policies for dealing with emerging and future technologies.	**Approved**
19-02 Regional Traffic Control System Interoperability	ASSC / AOC / Bruce Littleton*, David Lucas, Simon Ramos, April Wire	White Paper to inventory systems and data exchange that support interoperability across jurisdictional boundaries, and identifying gaps. Develop guidelines for addressing the gaps.	**Approved**

PROJECT TITLE	RESPONSIBLE PARTY/CHAMPIONS	ANTICIPATED OUTPUTS	STATUS
19-03 Loop 101 Mobility Project Update Reporting	ASSC / ADOT / MCDOT / Nicolaas Swart*, Susan Anderson*, Faisal Saleem*, Partnering Agency Project Leads	Regular updates to AEC, AOC & ASSC on the activities & processes for all the project phases - initiation, design and implementation.	**Approved**
AZTech Traffic Incident Management Coalition			
FY17			
17-09 TIM Coalition Outreach and Engagement Plan	TIM Coalition / Captain John Paul Cartier*, Barbara Hauser), Derek Arnson, Jeff King, Dr. David Harden, Scott Crawford, John Ford	Develop a list of priority agencies in the region that are not currently active in the TIM Coalition and have been contacted by MCDOT regarding participation. Plan for outreach to these agencies, including identification of a peer agency that can support the outreach.	**Ongoing**
17-10 TIM Training Materials Update	TIM Coalition / Captain John Paul Cartier*, Derek Arnson, Sergeant Dan Williams, John Ford, Mark Brown, Barbara Hauser	Develop locally relevant TIM training materials that include freeway & arterial examples.	**Ongoing**
17-11 TIM Training Tracking and Reporting Enhancements	TIM Coalition / Captain John Paul Cartier*, Derek Arnson, Mark Brown, John Ford, Luz Rubio	Create a single location on the AZTech website where trainers can find all relevant TIM training websites and links for tracking and reporting on training activities.	**Completed (FY18)**
17-12 TIM Trainer Binder	TIM Coalition / Captain John Paul Cartier*, Sergeant Dan Williams	**FY17**	
		Phase I: Develop an electronic & hard copy binder accessible to TIM trainers that includes training materials, lesson plans, & other guidance to support improved training.	**Completed (FY18)**
		FY18	
		Phase II: Update binder content as needed.	**Ongoing**
17-13 TIM Trainer Mentorship Program	TIM Coalition / All TIM Coalition Participants / Captain John Paul Cartier*	Develop a trainer mentorship program that provides support and encourages trainers to continue to remain active.	**Ongoing**

PROJECT TITLE	RESPONSIBLE PARTY/CHAMPIONS	ANTICIPATED OUTPUTS	STATUS
17-14 TIM Training Evaluation	TIM Coalition / All TIM Coalition Participants / Captain John Paul Cartier*	Develop a set of performance measures relevant to TIM training in the region that can be collected and tracked to support future updates to the training and support the TIM Coalition business case.	**Ongoing**
FY19			
19-04 EDC-4 Arizona Initiative for Using Data to Improve Traffic Incident Management	TIM Coalition / All Coalition participants / Captain John Paul Cartier*	Identify Arizona responders in need of TIM training. Develop Arizona's business case supporting TIM training, technologies, best practices, policies, and procedures. Standardize TIM training in public safety agencies curriculums. Improve data collection & reporting methodologies.	**Approved**
AZTech Operations Committee			
FY17			
17-15 Training and Discussion Topics Review	AOC / Cynthia Lopez*, David Lucas	Update the AZTech Operations Committee Discussion Topics and Training and Staff Development with topics of interest to the committee as well as organizing and conducting those topics and training that are a priority.	**Ongoing**
17-16 AZTech DMS Guidelines Update	AOC / David Riley*, Tricia Boyer, Albert Garcia, Barbara Hauser	Update the AZTech Dynamic Message Sign (DMS) Guidelines to reflect current practices for using and coordinating DMS messages in the region.	**On Hold**

PROJECT TITLE	RESPONSIBLE PARTY/CHAMPIONS	ANTICIPATED OUTPUTS	STATUS
17-17 Construction and Other Closure / Restriction Data Project	AOC / ATIS WG / Faisal Saleem*, David Lucas, Tricia Boyer	**FY17**	
		PHASE II: Use lessons learned from Phase 1 pilot project to incorporate and make available the planned construction and incident-related closures data from 8 agencies into the Regional Archived Data System (RADS).	**Completed (FY17)**
		FY18	
		PHASE III: Address system issues and develop a system to verify data feeds from all agencies that were integrated in Phase II.	**In Progress**
17-18 Wireless Systems White Paper Update	AOC / Albert Garcia*, Ryan Gish	Update the Wireless Systems White Paper that reflects the current state of practice for communications infrastructure and sharing in the region.	**Completed (FY17)**
17-19 Signal Performance Measures (SPMs) Workshop	AOC / April Wire*, Simon Ramos, Ray Ramirez	Plan and host a Traffic Signal Performance Measures Workshop locally to raise awareness and identify regionally significant SPMs to use in the future.	**Completed (FY17)**
17-20 Data Analytics to Support Operations	AOC / Vahid Goftar*, Faisal Saleem	Develop a high-level concept that highlights existing strategies and gaps related to identifying, analyzing and utilizing data to support improved real-time operations.	**Will be incorporated within the "Loop 101 Mobility Project" AAP #19-03**
17-21 ICM Decision Support System Requirements	AOC / Faisal Saleem, Susan Anderson	Develop a set of requirements for a Decision Support System that can support improved, real-time operations and coordination in the region.	**Will be incorporated within the "Loop 101 Mobility Project" AAP #19-03**

PROJECT TITLE	RESPONSIBLE PARTY/CHAMPIONS	ANTICIPATED OUTPUTS	STATUS
17-22 AZTech Performance Indicators Book Analysis and Plan for Progress	AOC / David Lucas*, Faisal Saleem	Review and analyze the 2015 Traffic Management & Operations Performance Indicators book and develop a plan to address declining performance in some key areas in the region.	**Completed**
17-23 Smart Work Zone (SWZ) Project	AOC / Faisal Saleem*, April Wire	**FY17**	
		Phase I: Develop a concept of operations for deploying Smart Work Zone technology and systems in MCDOT work zones, with a specific focus on the MC-85 project.	**Completed (FY17)**
		Phase II: Develop the SWZ design and bid documents for MC85 road construction project.	**Completed (FY17)**
		FY19	
		Phase III: Implement SWZ pilot on MC85 and prepare a lessons learned report for AZTech members.	**Approved (FY19)**
17-24 Connected and Automated Vehicles (CV/AV) Outreach and Plans	AOC / Faisal Saleem*, Dr. Larry Head*, Reza Karimvand	**FY17**	
		Phase I: Develop Implementation Plan	**Completed**
	AOC / Faisal Saleem*, Dr. Larry Head*, Susan Anderson, April Wire	**FY19**	
		Phase II: Anthem SMART*Drive* Test Bed Phase II Plan	**In Progress**
FY19			
19-05 Regional ARID Data Integration, Dissemination and Analysis	AOC / David Lucas*, Tricia Boyer	Develop a standardized format / interface to integrate regional ARID data sources into RADS and disseminate the data to the public.	**Approved**
19-06 Organizational TMC Structure	AOC / TMC OWG / Brandon Forrey*, Simon Ramos, Barbara Hauser, Bruce Littleton	Identify specific TMC functions that will be evolving based on the emerging regional operations priorities.	**Approved**

PROJECT TITLE	RESPONSIBLE PARTY/CHAMPIONS	ANTICIPATED OUTPUTS	STATUS
AZTech Traffic Management Center Operators Working Group			
FY17			
17-25 Public Safety Dispatch Outreach	TMC OWG / Barbara Hauser*, Ray Ramirez	Develop a presentation for MAG Public Safety Answering Point (PSAP) Managers Group to raise local agency TMC capabilities awareness.	**Completed**
17-26 TMC Operators WG Performance Strategy	TMC OWG / Barbara Hauser*, Luz Rubio	Create a performance measurement strategy for traffic management center metrics identified.	**In Progress**
17-27 TMC Contact List	TMC OWG / Barbara Hauser*, Luz Rubio	Update and expand the TMC contact list to distribute to all members.	**Ongoing**
17-28 TMC Resource Database	TMC OWG / Barbara Hauser*, Luz Rubio	Collect useful documents and resources that are available to TMC operators to share and upload on the AZTech Central Resource Database.	**In Progress (Supporting AAP #17-06)**
17-29 Loop 101 Integrated Corridor Management Tabletop Exercises	TMC OWG / Barbara Hauser*, Mark Brown, Derek Arnson	Engage AZTech partners on regional Integrated Corridor Management initiatives through tabletop exercises, with the goal of promoting awareness and preparedness for ICM expansion in the region.	**Ongoing**
FY18			
18-01 TMC Operators Working Group Charter	TMC OWG / Barbara Hauser, Derek Arnson, Luz Rubio	Develop a guiding document to help TMC OWG members understand the purpose, function and objectives of the group, while identifying roles and scope, establishing boundaries, and addressing resources to illustrate and clarify the focus and direction of the group & reflect AZTech's purpose & mission.	**Completed (FY18)**
FY19			
19-07 Advance Training Priorities	TMC OWG / Barbara Hauser*, Mark Brown	Coordinate class that will meet current training needs of TMC OWG.	**Approved**

PROJECT TITLE	RESPONSIBLE PARTY/CHAMPIONS	ANTICIPATED OUTPUTS	STATUS
AZTech Media & Communications Task Force			
FY18			
18-02 Media & Transportation Forum	MCTF / Steve Elliott*, Susan Tierney, Monica Hernandez, Jennifer Banks, Tyson Milanovich, Luz Rubio, Traci Ruth	Plan an event to exchange ideas on traveler information among media, transportation agencies, public safety, and PIOs.	**Completed (FY18)**
18-03 Arterial Camera Accessibility Pilot	MCTF / Faisal Saleem*, Tyson Milanovic, Jennifer Banks, Gil Estrada	Acquire consensus on a CCTV image sharing process. Develop & implement tool / technology.	**In Progress**
18-04 Public Information Communication Network Protocol	MCTF / Traci Ruth*, Monica Hernandez	Develop a network for communication practices/protocol among jurisdictions to be used in emergency situations	**In Progress**
18-05 Alternate Route Information Dissemination Guidance	MCTF / Faisal Saleem*, Gil Estrada, Traci Ruth, Steve Elliott	Develop a guidance document for disseminating alternate route information for incidents, planned construction/maintenance events & special events.	**In Progress**
18-06 Media & Communications Task Force Charter	MCTF / Traci Ruth*, Luz Rubio	Develop a guiding document to help MCTF members understand the purpose, function and objectives of the group, while identifying roles and scope, establishing boundaries & addressing resources to illustrate and clarify the focus and direction of the group & reflect AZTech's purpose and mission.	**Completed (FY18)**
FY19			
19-08 AZTech Performance Indicators Book Marketing	MCTF / Steve Elliott*, Traci Ruth*, MCTF PIOs	Develop communication plan and materials, in addition to the book, to share with stakeholders, the public & elected officials to illustrate AZTech partner's success.	**Approved**

The graphic on the following page shows how each of the projects relates to the Focus Areas found in the AZTech Operations Implementation Plan. All of the Focus Areas are being addressed with FY17 – FY19 projects and many of them are being addressed by multiple AZTech Committees or Groups.

FY17 - FY19 AZTech Committee Projects Aligned to the Implementation Plan Focus Areas

Operations Implementation Plan Vision Statement	FY17	FY18	FY19	FY20	FY21
We Have a Well-Informed Traveling Public	Media & Communications Task Force Completed AZTech DMS Guidelines Update On Hold Construction and Other Closure / Restriction Data Project Ph. II: Completed Ph. III: In Progress	Media & Transportation Forum Completed Public Information Communication Network Protocol In Progress AZTech Media & Communication Task Force Charter Completed Alternative Route Information Dissemination Guidance In Progress Arterial Camera Accessibility Pilot In progress			
We Have Qualified, Well-Trained Staff and a Pipeline of New Talent	AZTech Job Description Templates In Progress TIM Trainer Binder Ph. I: Completed Ph. II: Ongoing Training & Discussion Topics Review Ongoing				
We Leverage Our Regional Infrastructure & Partnerships to Support Proactive System Management	AZTech Central Resource Database In Progress TIM Trainer Mentorship Program Ongoing TMC Resource Database In progress Signal Performance Measures Workshop Completed Wireless Systems White Paper Update Completed	TMC OWG Charter Completed	Regional ARID Data Integration, Dissemination and Analysis Proposed Regional Traffic Control Systems Interoperability Proposed Organizational TMC Structure Proposed		
Incident Management is Responsive & Effective on Freeways and Arterials	TMC Contact List Ongoing TIM Training Materials Update Ongoing Loop 101 ICM Tabletop Exercises Ongoing TIM Coalition Outreach & Engagement Plan Ongoing Public Safety Dispatch Outreach Completed West Valley Loop 101 ICM Plan Completed TIM Training Tracking and Reporting Enhancements Completed		EDC-4 Arizona Initiative for Using Data to Improve Traffic Incident Management Proposed Advance Training Priorities Proposed		
Our Performance Measures Tell Our Story	TIM Training Evaluation Ongoing PI Book Analysis and Plan for Progress Completed AZTech PI Book 2015 Completed 2017 In Progress TMC OWG Performance Strategy In Progress		AZTech Performance Indicators Book Marketing Proposed		
Upper Management, the Public, and Elected/Appointed Officials Appreciate Our Value	AZTech Action Plan FY17 Completed FY19 In Progress AZTech Business Case In Progress				
Technology Supports Operations Innovation	AZTech 20th Anniversary Celebration Completed Data Analytics to Support Operations Ref. AAP #19-03 Smart Work Zone Project Ph. I & Ph. II: Completed Ph. III: Proposed FY19 Connected and Automated Vehicles Outreach & Plans Ph. I: Completed Ph. II: In Progress Ref: #19-03 ICM Decision Support System Requirements Ref. AAP #19-03		Regional Goals & Guidelines for Emerging & Future Technologies Proposed Loop 101 Mobility Project Update Reporting Proposed		

AZTech Executive Committee | AZTech Strategic Steering Committee | AZTech Operations Committee | AZTech TIM Coalition | AZTech Media & Communications Task Force | AZTech TMC Operators Working Group

Note: FY17 and FY18 projects indicated as "In Progress" or "Ongoing" will carry over to the following fiscal years.

AZTech Action Plan FY17 – FY21 Individual Projects

This section provides details on the specific projects that each AZTech committee or group initiated and/or accomplished in FY17, initiated in FY18 and will plan to initiate and/or accomplish in the FY19 timeframe. Each project includes specific actions, required inputs, anticipated outcomes and measures of success. A majority of the projects are identified for leadership by a specific committee or group, but there are cases where collaboration or partnering between groups will be necessary in order to complete a project or address priority that is overarching across AZTech. It is anticipated that each group or committee will be asked to identify and specify projects for the remaining two (2) fiscal years, on an annual basis.

A quick index of the projects identified to date follows:

FY17

AEC
AAP #17-01: AZTech Business Case

ASSC
AAP #17-02: AZTech 20th Anniversary Celebration
AAP #17-03: AZTech Performance Indicators Book
AAP #17-04: AZTech Action Plan
AAP #17-05: Media & Communications Task Force
AAP #17-06: Central Resource Database
AAP #17-07: West Valley Loop 101 ICM Plan
AAP #17-08: AZTech Job Description Templates

TIM
AAP #17-09: TIM Coalition Outreach and Engagement Plan
AAP #17-10: TIM Training Materials Update
AAP #17-11: TIM Training Tracking and Reporting Enhancements
AAP #17-12: TIM Trainer Binder
AAP #17-13: TIM Trainer Mentorship Program
AAP #17-14: TIM Training Evaluation

AOC
AAP #17-15: Training and Discussion Topics Review
AAP #17-16: AZTech Dynamic Message Sign Guidelines Update
AAP #17-17: Construction and Other/Closure Restriction Project
AAP #17-18: Wireless Systems White Paper Update
AAP #17-19: Signal Performance Measure Workshop
AAP #17-20: Data Analytics to Support Operations
AAP #17-21: ICM Decision Support System Requirements
AAP #17-22: AZTech Performance Indicators Book Analysis and Plan for Progress
AAP #17-23: Smart Work Zone (SWZ) Project
AAP #17-24: Connected and Automated Vehicles (CV/AV) Outreach and Plans

TMC OWG
AAP #17-25: Public Safety Dispatch Outreach
AAP #17-26: TMC Operators Working Group Performance Strategy
AAP #17-27: TMC Contact List

FY17 CONT.

AAP #17-28: TMC Resource Database
AAP #17-29: Loop 101 Integrated Corridor Management Tabletop Exercises

FY18

TMC OWG
AAP #18-01: TMC Operators Working Group Charter

MCTF
AAP #18-02: Media & Transportation Forum
AAP #18-03: Arterial Camera Accessibility Pilot
AAP #18-04: Public Information Communication Network Protocol
AAP #18-05: Alternate Route Information Dissemination Guidance
AAP #18-06: AZTech Media & Communication Task Force Charter

FY19

ASSC
AAP #19-01: Regional Goals and Guidelines for Emerging and Future Technologies
AAP #19-02: Regional Traffic Control Systems Interoperability
AAP #19-03: Loop 101 Mobility Project Update Reporting

TIM
AAP #19-04: EDC4 Arizona Initiative for Using Data to Improve Traffic Incident Management

AOC
AAP #19-05: Regional ARID Data Integration, Dissemination and Analysis
AAP #19-06: Organizational TMC Structure

TMC OWG
AAP #19-07 Advance Training Priorities

MCTF
AAP #19-08: Performance Indicators Book Marketing

AEC FY17 - FY19 Projects (1 project)

Project #17-01	AZTech Business Case	In Progress
Timeframe	**Complete in FY16 – FY19**	
Responsible Party	**Committee/Group Lead:** AEC (ASSC Support)	
	Lead Champion: Nicolaas Swart (MCDOT), Susan Anderson (ADOT) **Individual Champion(s):** AZTech Committee Chairs	
Project Description	This project involves updating the AZTech background and mission, developing a strategic vision to guide initiatives and partnership focus for AZTech as well as updating documentation that highlights the value of AZTech to the region. This project will establish a business case for AZTech that captures the successes of the partnership over the last 20 years, and takes a forward-looking approach to AZTech's next 20 years. Another important goal is to examine and potentially redefine the role of the AZTech Executive Committee going forward, including executive level engagement in AZTech policy-level planning and decision-making activities. This could result in a realignment of current AZTech Committees and Working Groups. This project also will involve identifying specific audiences (such as policy/decision-makers and legislators) that will require specific messages about AZTech's impact and benefits to the region. The project will build on feedback from the AZTech Strategic Visioning Workshop held in September 2017. As an organization, AZTech has an opportunity to focus on some key areas to help advance operations, partnerships and institutional processes in the region. The AZTech leadership will prepare a strategic vision that captures these new focus areas, including smart region concepts, next-generation workforce needs, and expanded partnerships.	
Required Inputs / Prerequisites	• Case studies and successes from the Center-to-Center Concept document, the AZTech Traffic Management and Operations Performance Indicators Books, the AZTech Operations Implementation Plan and others that highlight AZTech's successes and value. • Updated mission and vision. • Updated strategy for committee alignment, composition and coordination. • Feedback from the AZTech Strategic Visioning Workshop	
Anticipated Outcomes	• One page brochure for executives, decision-makers and the media aligned with the AZTech 20th anniversary celebration that will be developed by the MCTF under AAP #18-06 Performance Indicators Book Marketing. • Easy-to-communicate "elevator speech" to highlight the AZTech business case that will be developed by the MCTF under AAP #18-06. • Interim strategic vision document • Interim business case for AZTech's role • Draft Strategic Vision and Business Case • Final AZTech Strategic Vision and Business Case	
	How will success be measured? • Growth in AZTech participation after development of business case and dissemination of brochure. • Partner consensus for the vision and business case.	

ASSC FY17 - FY19 Projects (10 projects)

Project #17-02	AZTech 20th Anniversary Celebration	Completed
Timeframe	**Begin in FY16 – FY17**	
Responsible Party	**Committee/Group Lead:** ASSC (with support from other AZTech Committees)	
	Lead Champion: Nicolaas Swart (MCDOT) **Individual Champion(s):** Faisal Saleem (MCDOT), Cynthia Lopez (MCDOT)	
Project Description	This project will include organizing an event and prepare appropriate materials to celebrate AZTech's 20th anniversary. This event could include: • Guest speakers and presentations; • Media/press releases about AZTech accomplishments over the last 20 years and next steps looking ahead to future priorities; • Articles in industry publications; and • Brief presentation to be able to present at MAG Regional Council, Local City Council Meetings, and other local opportunities.	
Required Inputs / Prerequisites	• Small group to lead strategic planning for the anniversary acknowledgement. • Schedule strategic planning meetings and develop timeline of activities, working back from October 2016 AZTech Executive Committee meeting. • Identify appropriate budget parameters for event and materials.	
Anticipated Outcomes	• Understanding from local decision makers regarding AZTech's achievements and benefits to travelers. • Updated collateral materials and presentation materials that can be presented by any AZTech committee member. Materials will be tailored with specific messages for specific audiences (such as media, policy/decision-makers, elected officials).	
	How will success be measured? • Successful completion in time for the October 2016 Executive Committee meeting.	

Project #17-03	AZTech Performance Indicators Book	Ongoing
	2015 (3rd Edition 2014/2015 Data)	**Completed**
Timeframe	**Complete in FY16**	
Responsible Party	**Committee/Group Lead:** ASSC / AZTech Core Team	
	Lead Champion: Bruce Littleton (City of Phoenix) **Individual Champion(s):** Committee Chairs, Dana Owsiany (City of Surprise)	
Project Description	This project involves working with the designated consultant to develop the 2015 edition of the AZTech Traffic Management and Operations Performance Indicators (PI) Book. The PI Book is completed every two years and is a compilation of 2 calendar years of key regional transportation management and operations performance measures that provide a snapshot of the regional transportation network. Each AZTech agency is asked to participate in the development of the PI Book through provision of data and/or submittal of stories about successes or innovations in operations or system management. The development of the PI Book helps to document and track performance of the region's freeways and arterials over time.	
Required Inputs / Prerequisites	• Input from agencies on stories that they would like to share. • Specific data from agencies used to track performance measures for the region.	
Anticipated Outcomes	• Published document that provides overview of the 2014-2015 performance of operations and management of the regional transportation network.	
	How will success be measured? • Completion of the PI Book. • Number of agencies that contribute to the PI Book's contents.	
	2017 (4th Edition - 2016/2017 Data)	**In Progress**
Timeframe	**Complete in FY18 (Spring)**	
Responsible Party	**Committee/Group Lead:** ASSC / AZTech Core Team	
	Lead Champion: Bruce Littleton (City of Phoenix) **Individual Champion(s):** Committee Chairs, Leslie Bubke (City of Scottsdale)	
Project Description	This project involves working with the designated consultant to develop the 2018 edition of the AZTech Traffic Management and Operations Performance Indicators Book.	
Required Inputs / Prerequisites	• Input from agencies on stories that they would like to share. • Specific data from agencies used to track performance measures for the region.	
Anticipated Outcomes	• Published document that provides overview of the 2016-2017 performance of operations and management of the regional transportation network.	
	How will success be measured? • Completion of the PI Book. • Number of agencies that contribute to the PI Book's contents.	

Project #17-04	AZTech Action Plan	Ongoing
	FY17 (Year 1 of 5)	**Completed**
Timeframe	**Complete in FY17**	
Responsible Party	**Committee/Group Lead:** ASSC	
	Lead Champion: Bruce Littleton (City of Phoenix) **Individual Champion(s):** ASSC, AZTech Core Planning Team, Dana Owsiany (City of Surprise)	
Project Description	This project will finalize the *FY17 AZTech Action Plan* for the AZTech Committees, including the individual Action Plan for the ASSC. The Action Plan identifies specific priorities to be acted upon to help achieve the goals outlined in the *AZTech Operations Implementation Plan* (2015).	
Required Inputs / Prerequisites	• Feedback from all AZTech Committees on specific priorities and action items that align with their group's focus and support the Implementation Plan priorities. • Consensus on priority timeframes, identification of specific champions	
Anticipated Outcomes	• Consensus-based action plan for each AZTech Committee to present for approval by the AZTech Executive Committee for FY 2016-2017.	
	How will success be measured? • Actions and priorities completed by individual AZTech Committees.	
	FY19 Plan (Years 2 and 3 of 5)	**In Progress**
Timeframe	**Complete in FY18**	
Responsible Party	**Committee/Group Lead:** ASSC	
	Lead Champion: Bruce Littleton (City of Phoenix) **Individual Champion(s):** ASSC, AZTech Core Team, Leslie Bubke (City of Scottsdale)	
Project Description	This project will finalize the FY19 update to the *AZTech Action Plan* for the AZTech Committees, including the individual Action Plan for the ASSC. The Action Plan identifies specific priorities to be acted upon to help achieve the goals outlined in the *AZTech Operations Implementation Plan* (2015).	
Required Inputs / Prerequisites	• Review by the AZTech Committees and Working Groups of the FY17 plan and identification of the projects that are completed, in progress and ongoing. • Feedback from all AZTech Committees/Working Groups on specific priorities and action items that align with their group's focus and support the AZTech Operations Implementation Plan priorities to begin and/or be completed in FY19. • Consensus on priority timeframes, identification of specific champions.	
Anticipated Outcomes	• Consensus-based action plan for each AZTech Committee to present to the AZTech Executive Committee for approval.	
	How will success be measured? • Actions and priorities completed by individual AZTech Committees.	

Project #17-05	Media and Communications Task Force	Completed
Timeframe	**Complete in FY17**	
Responsible Party	**Committee/Group Lead:** ASSC/ATIS WG	
	Lead Champion: Faisal Saleem (former ATIS WG Chair) **Individual Champion(s):** Steve Elliott (ADOT), Traci Ruth (MCDOT), Monica Hernandez (City of Phoenix) and Gil Estrada (Total Traffic and Weather Network)	
Project Description	This project is an effort to build on the relationships and results from the 2015 Media and Transportation Lunch Forum to promote communication with and participation of media and communications stakeholders in AZTech. • The goal is to establish a task force of key public information officers within the AZTech partnership to be able to identify unique needs with various media partners • This activity will organize separate focus groups with television, radio and print media stakeholders to identify specific coordination and information needs of each.	
Required Inputs / Prerequisites	• Attendance list/contact information from Media and Transportation Forum. • Identification and scheduling of a meeting time and location.	
Anticipated Outcomes	• A plan for future, regular engagement with media and PIOs as part of AZTech.	
	How will success be measured? • Existence of a plan related to ongoing media/PIO participation in AZTech.	

Project #17-06	Central Resource Database (CRD)	In Progress
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** ASSC (with support from AOC & TMC OWG)	
	Lead Champion: April Wire (MCDOT) **Individual Champion(s):** Bruce Littleton (City of Phoenix), Faisal Saleem (MCDOT), Cynthia Lopez (MCDOT) and David Lucas (City of Tempe)	
Project Description	This project involves developing a centralized location to collect and make available resources for AZTech members. The ASSC identified a need to facilitate the sharing of best practices, lessons learned and other guidance to help improve transportation operations and maintenance functions at agencies. There are many other resources that could be identified for inclusion into the database. A few of the desired resources that have already been identified include: • Guidance on the development of IGAs and other master agreements between agencies to allow for sharing of resources; • Training materials and resources developed by the different committees; • Guidance on staffing and job descriptions; • Inventory of systems and equipment used by each agency; • Presentations and outreach materials for various audiences; and • Lessons learned and best practices on specific devices or systems. • TMC resources (see AAP #17-28) • TIM Coalition resources This project will involve the following steps: 1. Identify a database that can be accessed via the AZTech website where members can login and access resources; 2. Elicit additional agency needs in terms of desired guidance or information. These will be more easily identified when the initial foundation of materials is available; 3. Identify an owner of this database and a structure for maintaining it; and 4. When materials are identified, assess the need for a hard-copy binder of materials to distribute to each AZTech agency as deemed necessary. 5. Identify and establish a CRD maintenance structure. 6. Develop membership guidelines 7. Develop user guidelines 8. Share user credentials with AZTech members	
Required Inputs / Prerequisites	• Initial resources to populate the database (including those already identified and additional resources that are available). • Identification of a secure location for the database that can be accessed by AZTech members (via login).	
Anticipated Outcomes	• Database of guidance, training and reference materials. • Structure of ownership and maintenance of the database.	
	How will success be measured? • 100% of AZTech members are able to access the database. • The database is easily managed (documents can be added or updated). • Agencies identify additional guidance needs that become available on the database. • Agencies are able to leverage experience and resources from other partners.	

Project #17-07	West Valley Loop 101 ICM Plan	Completed
Timeframe	**Complete in FY17**	
Responsible Party	**Committee/Group Lead:** ASSC (with support from the AOC)	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** April Wire (MCDOT)	
Project Description	Based on the successes and lessons learned from the Loop 101 ICM program in the East Valley (Scottsdale), this project will involve developing an ICM plan for Loop 101 in the West Valley. This plan should look to designate coordination processes as well as detour plans that will be used during closures on Loop 101.	
Required Inputs / Prerequisites	• Lessons learned from Loop 101 ICM in Scottsdale • Inputs from local agencies regarding arterial detour options and coordination processes	
Anticipated Outcomes	• Coordination plan and detour guidebook to execute an ICM strategy for Loop 101 in the West Valley	
	How will success be measured? • Completion of detour plans that are supported upon by MCDOT, ADOT and local agencies • Full agreement to utilize ICM strategy from traffic operations and incident management staff from all involved agencies	

Project #17-08	AZTech Job Description Templates	In Progress
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** ASSC	
	Lead Champion: Nicolaas Swart (MCDOT), Reza Karimvand (ADOT) **Individual Champion(s):** Faisal Saleem (MCDOT)	
Project Description	This project involves developing standardized templates for ITS-related job descriptions that agencies can use when developing or updating job descriptions, titles or responsibilities. Previous work has been done to survey agencies in the region and collect their staff positions and descriptions so that they can be compared. As part of this project, the previously collected information should be revisited and updated where necessary. It should then be used as a foundation for developing recommended language for a spectrum of ITS positions that might be present within an agency. The goal is to have resources available to those agencies who may have the opportunity to update current job descriptions or develop new job positions related to ITS and traffic operations and management.	
Required Inputs / Prerequisites	• Job descriptions (titles, responsibilities, required education/certifications, etc.) from various agencies within the region. • Input from AZTech members about those that are most favorable to be supported by AZTech.	
Anticipated Outcomes	• Series of templates for ITS and traffic operations / management staff positions.	
	How will success be measured? • Availability of job descriptions on the AZTech Central Resource Database.	

Project #19-01	Regional Goals and Guidelines for Emerging and Future Technologies	Approved
Timeframe	**Begin in FY19**	
Responsible Party	**Committee/Group Lead:** ASSC	
	Lead Champion: Bruce Littleton (City of Phoenix) **Individual Champion(s):** Faisal Saleem (MCDOT), April Wire (MCDOT), David Lucas (City of Tempe)	
Project Description	This project involves developing regional goals and guidelines to address emerging and future technologies such as, but not limited to, enhanced signal performance including collection of performance metrics; connected vehicles, with or without vehicle to infrastructure communications; participating in the SPaT challenge; as well as advancements in detection, traffic controllers, and other intersection or corridor based real time traffic data collection devices. The project will leverage the relationships of AZTech partners to develop or further refine regional goals, guidelines, and policies which are the foundation of AZTech. This project will involve the following steps: 1. Identifying current related AZTech initiatives 2. Identifying individual AZTech partners initiatives 3. Determining opportunity for setting regional goals and guidelines 4. Developing goals and guidelines for adoption by executive committee As a first step, the partners will develop guidelines for sharing the traffic signal data.	
Required Inputs / Prerequisites	• List of AZTech committee initiatives (existing guidelines, agreements regarding the technology and systems) • List of AZTech partner's individual initiatives • Assessment of potential legal ramifications of emerging and future technologies upon the region	
Anticipated Outcomes	• Revised *Traffic Signal Data Sharing Policies and Best Practices* white paper • Identification of regional operational goals for emerging and future technologies • Development and adoption of regional guidelines and policies	
	How will success be measured? • Adoption of regional goals and guidelines by the Executive Committee • Adoption/Use of the regional goals and guidelines by individual AZTech partners	

Project #19-02	Regional Traffic Control Systems Interoperability	Approved
Timeframe	**Complete in FY18 – FY20**	
Responsible Party	**Committee/Group Lead:** ASSC (with support from the AOC)	
	Lead Champion: Bruce Littleton **Individual Champion(s):** Simon Ramos (City of Phoenix), David Lucas (City of Tempe), April Wire (MCDOT)	
Project Description	In support of regional data sharing, communication between central computer signal systems, and leveraging previous investments in the Regional Community Network (RCN) and the Regional Archived Data System (RADS); this project will identify opportunities to enhance interoperability and set guidelines to address gaps. Steps include: • Developing a White Paper to inventory systems and data exchange that support interoperability across jurisdictional boundaries, and identifying gaps. Currently, various jurisdictions use TranSuite, Centracs, Intelight, and KITS. • Exploring ability to set guidelines for real-time data collection devices to populate real-time data in RADS that can be analyzed seamlessly across jurisdictional boundaries • Exploring Center-to-Center communications between neighboring systems either on the same platform or across multiple platforms • Developing guidelines for addressing the gaps. • Conducting survey of regions to find out what they are doing and how this type of data sharing facilitates other efforts such as ICM, sub-regional TMCs, etc. (Survey will be done through the TMC Functions White Paper development).	
Required Inputs / Prerequisites	• Input from agencies (local and other) on their current signal and traffic data collection systems. • Input from agencies (local and other) on their data sharing practices • Input from manufacturers with product in the valley as to formatting of data collected	
Anticipated Outcomes	• Delivery of the white paper • Better coordination of data sharing across jurisdictional boundaries. • Actions/open discussion to bridge some of the gaps • Concept of Operations for interoperability system to support sub-regional TMC's. • Formal agreements and processes in place (as a first step, the agreements and processes are anticipated to be completed through the Loop 101 mobility project).	
	How will success be measured? • Expanded arterial coverage of travel time and speed map on 511. • Fewer delays and improved coordination across jurisdictional boundaries. • Improved connectivity between systems across the jurisdictional boundaries.	

Project #19-03	Loop 101 Mobility Project Update Reporting	Approved
Timeframe	**Complete in FY18 – FY21**	
Responsible Party	**Committee/Group Lead:** AZTech Strategic Steering Committee Supported by the AZTech Operations Committee	
	Lead Champion: Nicolaas Swart (Project Administration), Susan Anderson (Project Management), Faisal Saleem (Technology) **Individual Champion(s):** Partnering Agency Project Leads	
Project Description	**L101 Mobility Project Background:** In 2017, the Arizona Department of Transportation (ADOT) and Maricopa County Department of Transportation (MCDOT), in partnership with Valley Metro and several cities, were selected to receive federal funding to implement advanced traffic management technologies on the Loop 101 corridor in the Phoenix metropolitan area. This grant is funded through the United States Department of Transportation's (USDOT) Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) program. The Loop 101 Project will implement advanced technologies to manage traffic congestion, improve response and management of traffic incidents, and improve freeway and arterial coordination on the Loop 101 corridor. **Purpose of this Project:** To update the AEC, ASSC and AOC and seek input on the project that will implement advanced Integrated Corridor Management (ICM) transportation technology systems on L101 and show how emerging transportation technologies, data and their applications can be effectively deployed and integrated with existing systems to improve access to essential services, destinations, and key corridors. The specific transportation systems include: • Decision Support System (DSS) • Enhanced ramp metering • Adaptive Traffic Signal Control Systems to support special event traffic management • Connected vehicle applications • A traveler mobility application to provide real-time traffic and conditions information to travelers The champions for this initiative will provide timely updates on the project activities to the AOC, ASSC and AEC. The AZTech members will provide input and feedback to the project as needed.	
Required Inputs / Prerequisites	• Scheduling of standing agenda item on the ASSC and AOC meeting agendas for the updates	
Anticipated Outcomes	• Regular updates to AEC, AOC and ASSC on the activities and processes for all the project phases - initiation, design and implementation. • Wide regional participation for project input and feedback from AZTech partners to support the design and implementation of the project.	
	How will success be measured? • Timely sharing of information with AEC, ASSC and AOC on the project activities, technology plans, design, implementation and as well lessons learned.	

TIM Coalition FY17 - FY19 Projects (7 projects)

Project #17-09	TIM Coalition Outreach and Engagement Plan	Approved
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AZTech TIM Coalition	
	Lead Champion: Captain John Paul Cartier (AZ DPS) **Individual Champion(s):** Barbara Hauser (MCDOT), Derek Arnson (ADOT), Jeff King (FHWA), Dr. David Harden (ADHS), Scott Crawford (Mesa Fire and Medical), John Ford (Mesa Fire and Medical)	
Project Description	This project is an effort to identify and contact agency responders critical to TIM successes in the region near-term and long-term. This project will consist of four supporting actions: 1. Developing/updating a priority list of local agencies and towing companies who should be involved in TIM in the region. 2. Identifying a local peer agency/individual who can advocate for participation in the TIM coalition and its benefits to each of the priority agencies. 3. Developing a specific plan to follow up and close the loop with agencies that have already been contacted via letters from MCDOT regarding the TIM coalition or those that will be involved in meetings with ADOT. 4. Developing informational documents for distribution to agencies that provide information about the TIM Coalition, what it means to be involved, and the benefits/value of being involved.	
Required Inputs / Prerequisites	• General understanding of agencies currently involved, agencies involved in the past but not in the present, and agencies that have not been involved. • List of agencies who were sent a letter from MCDOT regarding the TIM Coalition. • Coordination with ADOT who holds quarterly meetings with various local agencies.	
Anticipated Outcomes	• List of priority agencies or groups to reach out to and each having an identified peer agency that is active with the TIM Coalition. • Action plan for following up with agencies who have already been contacted.	
	How will success be measured? • 20% of the agencies from the public safety list that are participating in the TIM Coalition by the end of 2016 and 50% participation by the end of 2022.	

Project #17-10	TIM Training Materials Update	Ongoing
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AZTech TIM Coalition	
	Lead Champion: Captain John Paul Cartier (AZ DPS) **Individual Champion(s):** Barbara Hauser (MCDOT) Derek Arnson, Sergeant Dan Williams (AZ DPS), John Ford (Mesa Fire and Medical), Mark Brown (MCDOT), Barbara Hauser (MCDOT)	
Project Description	This project involves updating existing TIM Training materials to help make them more relevant to the local agencies in the region. This project will include the following supporting actions: 1. Updating training materials to include local and arterial incident management examples pertinent to all responders. 2. Providing appropriate inputs to the statewide TIM training program.	
Required Inputs / Prerequisites	• Identification of local TIM photos, case studies, etc. to tailor TIM training materials to an Arizona (state, county and municipal) agency audience	
Anticipated Outcomes	• TIM training presentations and materials that have local examples of both freeway and arterial TIM. • All TIM training materials include Arizona-specific legislation. • Include TIM training materials on AZTech Central Resource Database and AZTech website.	
	How will success be measured? • 100% of TIM training materials have at least two Arizona case studies and at least one arterial example.	

Project #17-11	TIM Training Tracking & Reporting Enhancements	Completed
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AZTech TIM Coalition	
	Lead Champion: Captain John Paul Cartier (AZ DPS) **Individual Champion(s):** Derek Arnson (ADOT), Mark Brown (MCDOT), John Ford (Mesa Fire and Medical), Luz Rubio (MCDOT)	
Project Description	This project involves taking initial steps to compile and review individuals and agencies that are trained in TIM as well as track training activities for certified TIM trainers. This project will include the following supporting actions: 1. Identifying databases and resources (ERMA, DEM, and FHWA) used to report on and track TIM training activities and participation, and provide links for each in a single location on the AZTech TIM website. 2. Developing a list of steps required to create and conduct a training class and to track/report training activities. 3. Developing a plan for compiling and organizing the data on those who have been trained and make sure it is properly inputted into the appropriate database. 4. Identifying databases used to track individuals who are TIM trainers and develop a plan for tracking the level of activity/participation of trainers. An important component of these later steps is to create an understanding that TIM training is not exclusively done by the Department of Public Safety (DPS) and that there is buy-in from local agencies as well.	
Required Inputs / Prerequisites	• Understanding of and access to existing databases used for tracking TIM training participants and TIM trainer activity. • Coordinating with MCDOT for AZTech website updates with resource and database links.	
Anticipated Outcomes	• Single location to access all training and reporting links. • Document of step by step processes for recording training activities. • Plan for how to encourage improved tracking of training participants. • Plan for encouraging trainers to remain active.	
	How will success be measured? • 100% compliance with TIM tracking requirements. • Meeting annual TIM training goal set by FHWA.	

Project #17-12	TIM Trainer Binder	Ongoing
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AZTech TIM Coalition	
	Lead Champion: Captain John Paul Cartier (AZ DPS) **Individual Champion(s):** Sergeant Dan Williams (AZ DPS)	
	Phase I: Assemble TIM Trainer Binder	**Completed**
Project Description	Assemble a single binder (in both physical and electronic format) that compiles all relevant materials and guidance to support TIM trainers. Materials might include: • Lesson plans; • A variety of example presentations given for different audiences; and • Lessons learned from past experiences on successes and challenges as part of a training session.	
Required Inputs / Prerequisites	• Identification of active TIM trainers to get feedback and provide materials. • Existing TIM training materials provided to trainers. • Feedback from TIM trainers on lesson plan successes and challenges in TIM classes.	
Anticipated Outcomes	• Provide electronic and hardcopy binder to trainers allowing more effective and adaptable training. • Make TIM training information and materials available as part of the Resource Database.	
	How will success be measured? • Availability of materials to all TIM trainers. • Standard format for trainer binder.	
	Phase II: Update TIM Trainer Binder	**Ongoing**
Timeframe	**Begin in FY18**	
Responsible Party	**Committee/Group Lead:** TIM Coalition	
	Lead Champion: Captain John Paul Cartier (AZ DPS) **Individual Champion(s):** Sergeant Dan Williams (AZ DPS)	
Project Description	Phase II of this project is a continuation of Phase I (assembling a binder) to do regular maintenance and updates of the content.	
Required Inputs / Prerequisites	• Identification of active TIM trainers to get feedback and provide materials. • Existing TIM training materials provided to trainers. • Feedback from TIM trainers on lesson plan successes and challenges in TIM classes.	
Anticipated Outcomes	Periodic updates of binder content as needed.	
	How will success be measured? • Availability of updated materials to all TIM trainers.	

Project #17-13	TIM Trainer Mentorship Program	Ongoing
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AZTech TIM Coalition	
	Lead Champion: Captain John Paul Cartier (AZ DPS) **Individual Champion(s):** All TIM Coalition Participants	
Project Description	This project involves the development of a program to engage trainers in the region and encourage active training. The program should include some or all of the following: • A 'trainer mentorship' program that provides newer or less active trainers with an experienced mentor to provide support and accountability. • An annual luncheon or recognition ceremony to acknowledge trainers who have been active in the region encouraging others to stay active and engaged in training activities. • Bi-annual meetings where trainers meet to discuss training activity, provide lessons learned or guidance, and facilitate collaboration between trainers.	
Required Inputs / Prerequisites	• List of active trainers and their monthly training activity.	
Anticipated Outcomes	• A community of trainers that share experiences and lessons learned. • Trainers feel encouraged to providing training opportunities. • More training classes are available throughout the year by a variety of instructors.	
	How will success be measured? • 50% of trainers in the state hold at least two (2) training sessions each year.	

Project #17-14	TIM Training Evaluation	Ongoing
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AZTech TIM Coalition	
	Lead Champion: Captain John Paul Cartier (AZ DPS) **Individual Champion(s):** All TIM Coalition Participants	
Project Description	The focus of this project is to develop performance metrics for the TIM training program to generate targeted and strategic data. The measures chosen should be twofold: • To collect meaningful participant feedback on training activities to inform updates or changes to the training to maximize its efficiency and benefits; and • To generate data on the benefits of TIM to inform the development of a business case for participation in TIM. There are three activities associated with this project: 1. Develop specific performance measures that can be collected to support the business case and value of participation in TIM in the region. 2. Develop incentives program for training participants to complete the post-training evaluation and establish a response target for these evaluations. 3. Integrate feedback into updated TIM training materials or training strategy.	
Required Inputs / Prerequisites	• Understanding the types of data that are or can be collected regarding TIM activities and TIM training outcomes. • The FHWA has resources in development that look to support the performance measurement of TIM. These resources may be useful for this project.	
Anticipated Outcomes	• This project is anticipated to identify and begin collecting data on the measures that will help improve TIM training and inform the development of a business case for TIM, which will be undertaken starting 2018.	
	How will success be measured? • Identification of at least 5 measurable metrics that will help inform the development of a business case for participation in TIM. • At least 75% of people who participate in a training session complete the post-training evaluation.	

Project #19-04	EDC-4 Arizona Initiative for Using Data to Improve Traffic Incident Management	Approved
Timeframe	**Begin in FY19**	
Responsible Party	**Committee/Group Lead:** AZTech TIM Coalition	
	Lead Champion: Captain John Paul Cartier (AZ DPS) **Individual Champion(s):** All TIM Coalition Participants	
Project Description	As part of the FHWA Every Day Counts (EDC-4) innovations using data to improve Traffic Incident Management, this project involves analyzing the TIM performance measures, specifically secondary collisions involving responders, on the Arizona state crash report form and Arizona first responder CAD data. The project will leverage the AZTech TIM Coalition relationships to assess the impact of TIM training on response times, roadway clearance times, incident clearance times, and secondary crashes. This project will involve the following steps: 1. Identifying CAD data sources collected by first responders 2. Collecting CAD data and analyze TIM performance measures 3. Collecting secondary collision data from state crash report forms 4. Assessing the secondary collision rates for disciplines 5. Partnering with public safety agencies to set goals of improving incident management practices through TIM training and after-action reports (AAR).	
Required Inputs / Prerequisites	• TIM performance measures on the state crash report form • CAD data for traffic incidents • Approval to collect, analyze, and report on TIM performance measures	
Anticipated Outcomes	• Improved incident management • Identify regional initiatives to advance TIM • Reduced response times, reduce roadway and incident clearance times, reduce secondary collisions	
	How will success be measured? • Comparative analyses of TIM performance measures annually • Improved public and responder safety • Improved economic loss productivity to the state of Arizona	

AOC FY17 – FY19 Projects (12 projects)

Project #17-15	Training and Discussion Topics Review	Ongoing
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Cynthia Lopez (MCDOT) **Individual Champion(s):** David Lucas (City of Tempe)	
Project Description	This project is a continuation of an annual AOC initiative to identify and conduct technical training or workshops for other AOC members on various topics related to ITS and operations. This project involves three steps: 1. Review and update the training and discussion topics documents that the AOC has compiled; 2. Facilitate an exercise to identify priority training/discussion topics to be held in 2016 and beyond; and 3. For each of the topics that are prioritized, identify champions to help organize each training, including identifying the appropriate speakers/presenters.	
Required Inputs / Prerequisites	• List of AOC training/discussion topics. • Additional AOC input.	
Anticipated Outcomes	• Organization and execution of trainings or workshops hosted by the AOC and provided to AOC members.	
	How will success be measured? • Execution of at least two (2) trainings from the priority list. • Attendance at the training/workshop.	

Project #17-16	AZTech Dynamic Message Sign (DMS) Guidelines Update	On Hold
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: David Riley (ADOT) **Individual Champion(s):** Tricia Boyer (City of Mesa), Albert Garcia (City of Surprise), Barbara Hauser (MCDOT)	
Project Description	The AOC recently updated the AZTech Regional Video Feed and Camera Control Guidelines to make sure they stay current. This project will follow a similar process for the Dynamic Message Sign Guidelines, which have not been updated in 10 years. As part of the update, the Guidelines should include a process for local agencies to coordinate with ADOT to have freeway DMS display messages about events or construction in a local agency jurisdiction that may have a regional impact.	
Required Inputs / Prerequisites	• Current guidelines to be updated found on the AZTech website. • Input from AOC and ASSC members.	
Anticipated Outcomes	• Updated and approved guidelines for interagency posting of messages on DMS within the region.	
	How will success be measured? • Completion of updates and approval from AOC, ASSC and AEC.	

Project #17-17	Construction and Other Closure/Restriction Data Project	In Progress
	Phase II: Planned Construction Closure Data RADS and 511 Integration	**Completed**
Timeframe	**Complete in FY17**	
Responsible Party	**Committee/Group Lead:** AOC / ATIS WG	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** David Lucas (City of Tempe), Tricia Boyer (City of Mesa)	
Project Description	This project is a continuation of a current MCDOT initiative to incorporate agency planned construction and emergency closure data into the Regional Archived Data System (RADS). A consultant team has undergone the first phase of a project where planned construction data from two agencies was collected and shared via RADS. The next phase of this project involves expanding this initiative to other agencies and including emergency road closure data from local police dispatch. The steps required in the project include: • Identifying lessons learned from the first phase of the project; • Provide outreach to priority agencies and identify those who are willing to participate in Phase II of the project; and • Working with those agencies to facilitate the data sharing through RADS.	
Required Inputs / Prerequisites	• Lessons learned from the initial pilot. • List of priority agencies for Phase II.	
Anticipated Outcomes	Planned construction data and emergency road closure data being provided to RADS and being available via the AZTech Regional Information System (ARIS) and/or the via the ADOT File Transfer Protocol (FTP) site for the following agencies: 1. City of Avondale 2. Town of Gilbert 3. City of Goodyear 4. City of Phoenix 5. City of Tempe 6. City of Chandler 7. City of Scottsdale 8. City of Surprise	
	How will success be measured? • Successful completion of Phase II of the pilot project.	
	Phase III: Data Feed Verification System	**In Progress**
Timeframe	**Complete in FY18**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** David Lucas (City of Tempe), Tricia Boyer (City of Mesa)	
Project Description	This project is a continuation of a current MCDOT initiative to incorporate agency planned construction and emergency closure data into the Regional Archived Data System (RADS). Phase I and Phase II of the project resulted in planned construction data from ten (10) agencies electronically integrated and shared via RADS and AZ511. Phase III of this project involves ensuring data freshness in AZ511 from the contributing agencies. Currently, if an agency data feed has not been contributing any new data for a while, there is no notification. In such case, the agency may be having a problem with the data that they are not aware of. A notification system to alert agencies if there have been no changes to their data feed and a cloud based data process will be set up.	
Required Inputs / Prerequisites	• Lessons learned from the Phase I and Phase II	
Anticipated Outcomes	• An automated email notification system to the agencies to alert them about the data staleness issues.	
	How will success be measured? • Agency data is consistently fresh and reliable.	

Project #17-18	Wireless Systems White Paper Update	Completed
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Albert Garcia (City of Surprise) **Individual Champion(s):** Ryan Gish (MAG)	
Project Description	There have been previous efforts to document information about communications infrastructure in the region, including fiber optics and wireless communications. This project will look at these documents and update them to reflect the current state of these technologies in the region based on agency input. The document may also include any current best practices in communications technology that might be informative for AZTech participants.	
Required Inputs / Prerequisites	• Past white papers on communications and/or wireless infrastructure (from Cynthia Lopez). • Identify appropriate personnel from Committee agencies. • Input from agencies on the current state of communications infrastructure. • Research on current best practices for communications.	
Anticipated Outcomes	• Updated white paper that reflects the current state of communications infrastructure in the region as well as best practices nationally and/or internationally.	
	How will success be measured? • Updated document that is available on the AZTech website.	

Project #17-19	Signal Performance Measures Workshop	Completed
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: April Wire (MCDOT) **Individual Champion(s):** Simon Ramos (City of Phoenix), Ray Ramirez (City of Phoenix)	
Project Description	Signal Performance Measures (SPMs) are an important tool to improve signal operations and efficiency. Generating SPMs helps to identify intersections that are not operating correctly or efficiently. In 2015, two AOC members participated in a workshop held at the Utah DOT (UDOT) to get introduced to SPMs and their value to agencies. The findings were presented at an AOC meeting and there was interest surrounding the topic. Based on interest and on the anticipated value that local agencies could gain by using SPM, the goal of this project is to coordinate with UDOT and Purdue University to have them conduct an SPM workshop in the region for AZTech partners. This could be coordinated through the FHWA as a peer-to-peer exchange or through the National Operations Center of Excellence (NOCoE), to bring both the workshop instructors as well as UDOT signal technicians that can provide a demonstration of how UDOT actually uses SPMs in real-time to improve their intersection functions. One agenda item of the workshop should be a discussion about a way forward with respect to SPMs in the region, including development of a list of recommended and standardized SPMs that agencies who eventually gather SPMs should collect. Future years will build on this initial effort concerning SPMs and how to integrate them into the region.	
Required Inputs / Prerequisites	• Work with FHWA to explore options for funding the workshop through ITS peer-to-peer exchange. • Work with the NOCoE to explore peer exchange opportunities. • Garner/identify interest among AZTech members and identify a time and location for the workshop.	
Anticipated Outcomes	• A full-day workshop on SPMs held locally. • A list of recommended and standardized SPMs for the region.	
	How will success be measured? • Coordinating with FHWA to fund the workshop as a peer exchange. • Attendance at the workshop. • Identification of standard SPMs and guidance for agencies on how to collect and use them. • Number of agencies that implement signal performance measures.	

Project #17-20	Data Analytics to Support Operations	In Progress (Refer to AAP #19-03)
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Vahid Goftar (ADOT) **Individual Champion(s):** Faisal Saleem (MCDOT)	
Project Description	The project involves exploring how the region can more effectively collect, analyze and use current and future data to inform real-time operations. Actions within this project should include: • Identifying best practices for using data to support operations. Some examples might include existing integrated corridor management (ICM) or active traffic management (ATM) deployments, signal performance measures, or dynamic variable speed limits; • Testing commercial products that support improved or expanded data collection and analysis; • Completing an inventory of the current and anticipated data available on ARIS and what the data is currently used for; and • Identifying gaps and recommending strategies to make better use of the data that is available.	
Required Inputs / Prerequisites	• Best practices research. • Product and system testing. • Information on data available on ARIS currently and in the near-term. • Understanding of how various types of data are currently used in the region.	
Anticipated Outcomes	• A high-level concept for how the region can more effectively use data to support operations based on current gaps and opportunities as well as current best practices.	
	How will success be measured? • Completion of concept that includes strategies for using current and future data in the region.	

Project #17-21	ICM Decision Support System Requirements	In Progress (Refer to AAP #19-03)
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** Susan Anderson (ADOT)	
Project Description	This project looks to develop a set of requirements for a decision support system (DSS) to support implementation of ICM activities along Loop 101 in Scottsdale and future ICM activities. A DSS would assist MCDOT and other agencies involved in deciding what actions should be executed during a freeway closure, such as recommended detours or signal timing plans to use.	
Required Inputs / Prerequisites	• Input from agencies involved in ICM activities to understand the type of functionality such a DSS would provide. • Systems and software engineering principles and expertise.	
Anticipated Outcomes	• High level functional requirements for an ICM DSS for the region.	
	How will success be measured? • Completion of requirements report such that software could be developed in the future.	

Project #17-22	AZTech Performance Indicators Book Analysis and Plan for Progress	Completed
Timeframe	**Complete in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: David Lucas (City of Tempe) **Individual Champion(s):** Faisal Saleem (MCDOT)	
Project Description	The 2015 AZTech Traffic Management and Operations Performance Indicators (PI) Book reported on the performance of the current state of the regional transportation system with respect to operations and management. The results of the 2015 analysis found that some key performance measures in the region, such as travel time, congestion and crashes, have increased in the past two years, which is a trend that the region does not want to continue into the future. Based on these results, this project involves reviewing and analyzing the 2015 PI book results and devising a plan for addressing the reduced performance in some measures.	
Required Inputs / Prerequisites	• *2015 AZTech Traffic Management and Operations Performance Indicators Book*. • Input from AOC members regarding what might have caused declined performance and the types of activities they can take individually and collectively to improve system performance.	
Anticipated Outcomes	• Plan for how to address areas where performance has declined between 2013 and 2015.	
	How will success be measured? • All measures that declined in performance in 2015 show improvement in the 2017 PI book.	

Project #17-23	Smart Work Zone (SWZ) Project	In Progress
	Phase I: Concept of Operations	**Completed**
Timeframe	**Complete in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** April Wire (MCDOT)	
Project Description	This project involves developing a smart work zone (SWZ) concept that can be used throughout the region to support improved operations and safety within work zones. The concept will include recommended equipment and systems as well as their placement within a work zone. It will also look at processes for improved communications, coordination and data sharing based on the concept.	
Required Inputs / Prerequisites	• Research best practices. • Input from agencies on current work zone practices and procedures. • Input from SWZ vendors on equipment and placement within the work zone.	
Anticipated Outcomes	• An SWZ concept that AZTech agencies can use to plan, design and implement a SWZ on any roadway within the region.	
	Phase II: Design	**Completed**
Timeframe	**Begin in FY18**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** April Wire (MCDOT)	
Project Description	The concept will be used to design SWZ for the MCDOT construction project. The design specifications will be included in the construction contract to procure SWZ equipment and deploy in a pilot MCDOT project along MC-85, which is set to begin construction in 2018.	
Required Inputs / Prerequisites	• Approved Concept of Operations.	
Anticipated Outcomes	• An SWZ design and specifications for pilot deployment along MC-85	
	Phase III: Deployment	**Approved**
Timeframe	**Begin in FY19**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** April Wire (MCDOT)	
Project Description	The SWZ system will be deployed in MC85 (107th Avenue – 75th Avenue) in conjunction with the MCDOT construction project scheduled for Spring 2018.	
Required Inputs / Prerequisites	• System design and procurement	
Anticipated Outcomes	• Deployment of SWZ along MC-85 and documentation of lessons learned.	
	How will success be measured? • An SWZ pilot is successfully deployed for the start of construction for MC-85. • Lessons learned from this deployment are used to make adjustments for Phase 2 of the MC-85 project and are shared with all AZTech members in the form of a report or white paper.	

Project #17-24	Connected and Automated Vehicles (CV/AV) Outreach and Plans	In Progress
	Phase I: Connected Vehicle Implementation Plan	**Completed** (Refer to AAP #19-03)
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Faisal Saleem (MCDOT), Dr. Larry Head (UA) **Individual Champion(s):** Reza Karimvand (ADOT)	
Project Description	Maricopa County, ADOT and the University of Arizona have deployed the SMART*Drive* Testbed in Anthem. Phoenix has recently become the fourth city in which Google will test autonomous vehicles. This project will help investigate the operational readiness of the region with respect to connected and autonomous vehicles (CV/AV). It should also identify opportunities and challenges in the region with respect to CV/AV. Action as part of this project will include development of a plan for implementing a CV project in the region. In addition, ongoing actions for all phases include: • Gathering lessons learned from the Anthem CV test bed that could be applicable to other areas in the region. • Share information on national developments in CV and AV (e.g. National SPaT Challenge). • Engage industry leaders in CV/AV technology and progress. • Conduct research on best and innovative practices internationally concerning CV/AV.	
Required Inputs / Prerequisites	• Lessons learned from Anthem test bed. • Best and innovative practices research.	
Anticipated Outcomes	• White paper that provides an assessment of the opportunities and challenges that the region faces with respect to current and future CV and AV initiatives as well as future initiatives.	
	How will success be measured? • Technologies and systems for future CV/AV needs begin to be included in agency Capital Improvement Programs (CIPs) and the MAG Transportation Improvement Program (TIP).	
	Phase II: Anthem SMART*Dri*ve Test Bed Phase II Plan	**In Progress** (Refer to AAP #19-03)
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: Faisal Saleem (MCDOT), Dr. Larry Head (UA) **Individual Champion(s):** Susan Anderson (ADOT), April Wire (MCDOT)	
Project Description	Anthem Phase II: The study will focus on expanding the Anthem Test Bed, in pursuit of further exploration of connected & automated vehicle and cooperative infrastructure systems. The study will evaluate opportunity to convert pilot projects into permanent operational deployments that provide benefits to the citizens of Anthem and provide an early-adoption pool of participants.	
Required Inputs / Prerequisites	• Lessons learned from Anthem test bed. • Gather stakeholder and industry input.	
Anticipated Outcomes	• Anthem Phase II Plan report	
	How will success be measured? • Technologies and systems for future CV/AV needs begin to be included in agency and regional project plans. • Periodic sharing of national and local CV and AV advancements at AZTech Committee meetings	

Project #19-05	Regional ARID Data Integration, Dissemination and Analysis	Approved
Timeframe	**Begin in FY19**	
Responsible Party	**Committee/Group Lead:** AOC	
	Lead Champion: David Lucas (City of Tempe) **Individual Champion(s):** Tricia Boyer (City of Mesa)	
Project Description	Three AZTech member agencies (City of Mesa, City of Tempe and the Town of Gilbert) completed the East Valley Travel Time Map (EVTTM) project in 2017 to integrate and disseminate their ARID data via AZ511 through RADS. This project will build on that effort by developing a standardized format/interface to integrate regional ARID data sources into RADS and AZ511 for dissemination to the public. Existing systems/processes created for the EVTTM project will be used as a framework to add in other existing ARID data sources. The existing method is system agnostic and should work across vendors but may need to be modified to ensure this is so and that it collects all the required data and will work across jurisdictional boundaries. Data may also be archived in RADS for future use and to facilitate sharing with other interested parties, and as part of AAP #19-02. The arterial travel time map data is already available on AZ511, but only the "East Valley (Phoenix)" region is currently listed in the map regions, so additional "regions" may need to be added. This project will also conduct a detailed analysis of the accuracy of the resulting travel time data to compare how different system vendors and sensor types (BT or Wi-Fi) affect system performance. The ability to generate useful system-wide performance measures will also be explored as will the various schema used by agencies to assign color-coded congestion levels to their arterial roadways in order to ensure consistency across the region.	
Required Inputs / Prerequisites	• Survey of agencies' current/planned use of ARID sensors and color-coded congestion schema • Documentation from existing EVTTM system	
Anticipated Outcomes	• Development of a standard specification/process for sharing ARID data with RADS	
	How will success be measured? • Number of agencies/ARID sensors online and reporting data to AZ511 map • Results of system/sensor type comparative analysis of travel time accuracy and other parameters	

Project #19-06	Organizational TMC Structure	Approved
Timeframe	**Begin in FY19**	
Responsible Party	**Committee/Group Lead:** AOC with input from the TMC OWG and Oversight by the ASSC	
	Lead Champion: Brandon Forrey (City of Peoria) **Individual Champion(s):** Simon Ramos (City of Phoenix), Barbara Hauser (MCDOT), Bruce Littleton (City of Phoenix)	
Project Description	The project tasks include coordinating with MCDOT and AZTech Committees (including the AOC and the TMC OWG) to document potential expanded functionality of local TMCs, including expanded coordination functions among TMCs and other entities, and how new and emerging capabilities will influence TMC functions. The project will document current capabilities across the range of local TMCs in the region, and identify which specific TMC functions will be evolving based on new and emerging regional operations priorities. Examples of current capabilities include traditional coordination among agencies for special events and sharing traffic signal timing plans. Examples of new and emerging priorities include adaptive traffic signal systems (agencies are starting to operate adaptive systems), impacts and roles of TMCs for after-hour operations, as well as how TMCs can make use of new data for traveler information.	
Required Inputs / Prerequisites	• AZTech agency partner participation and input to the consultant team.	
Anticipated Outcomes	• Identification of specific TMC functions that will be evolving based on the emerging regional operations priorities.	
	How will success be measured? • Agency acceptance of the future TMC functions and developing internal processes for implementation of identified function.	

TMC Operators Working Group FY17 - FY19 Projects (7 projects)

Project #17-25	Public Safety Dispatch Outreach	Completed
Timeframe	**Complete in FY17**	
Responsible Party	**Committee/Group Lead:** TMC Operators Working Group	
	Lead Champion: Barbara Hauser (MCDOT) **Individual Champion(s):** Ray Ramirez (City of Phoenix)	
Project Description	A priority of TMC/TOC operators at ADOT, MCDOT and local agencies is to improve coordination and communications with local agency emergency responders (fire, police, EMS). The type of assistance that a TMC and its operators can provide is often unknown to local emergency responders, and an entity that could help improve coordination with local agency responders is local Dispatch centers. The MAG Public Safety Answering Point (PSAP) Managers Group consists of PSAP mangers from MAG member agencies, oversees technical needs, and provides coordination of the Maricopa County 9-1-1 system. The group meets quarterly in February, May, August and November of every year. This project involves: • Developing a presentation that the TMC OWG can give to this MAG Group about the roles and benefits that can be provided by TMCs. • Coordinating with the Group to get onto the agenda and provide the presentation during one of the quarterly meetings. The project will also include engaging with Phoenix emergency management which involves: • Using the presentation from the MAG committee to present at the quarterly Phoenix and Phoenix Police Department coordination meetings. • Identifying a strategy to engage Phoenix Fire Dispatch.	
Required Inputs / Prerequisites	• Identification of appropriate contacts within the MAG 911 PSAP Group. • Input from best practices and working group participants about the benefits provided by TMC Operators (both ADOT, MCDOT and local) to emergency responders.	
Anticipated Outputs	• A presentation at the MAG PSAP group to convey the capabilities of TMCs and the benefits that emergency response agencies could get from coordinating with them.	
	How will success be measured? • TMCs see an increase in coordination with local agency emergency responders.	

Project #17-26	TMC Operators Working Group Performance Strategy	In Progress
Timeframe	**Begin in FY18**	
Responsible Party	**Committee/Group Lead:** TMC OWG	
	Lead Champion: Barbara Hauser (MCDOT) **Individual Champion(s):** Luz Rubio (MCDOT)	
Project Description	The goal of this project is to identify and begin tracking some performance measures related to participation in the TMC OWG. As a fairly new group, it will be important to be able to point to specific benefits or added value that operators can gain by participating in the group, and these will be most easily identified and developed by tracking and analyzing some targeted performance measures. For example, it was noted that there was a lot of value in holding meetings at various TMCs/TOCs in the region to get an understanding of the devices, systems and procedures used – it will be important to capture both the efforts put in and the benefits that arise from these efforts. Performance tracking is a process that will take time to develop, implement and have enough data to identify results. This project is the first step and involves identifying measurable performance metrics and a platform for tracking them over time. Such measures might include: number of events coordinated across multiple agencies; and number of direct multi-agency incident notifications that occur. Other measures will be determined.	
Required Inputs / Prerequisites	• Identification of measurable datasets or metrics to highlight the benefits of participating in the TMC OWG.	
Anticipated Outputs	• Performance measurement strategy including data and a tracking mechanism that can be used to support the WG's business case. • Based on the metrics, a future project will include development of a business case for participating in the TMC OWG which should be shared with agencies throughout the region.	
	How will success be measured? • At least 5 performance measures are identified that include data that is measurable and easily tracked. • 100% of agencies participating in the WG begin to track the agreed upon measures by the beginning of 2019.	

Project #17-27	TMC Contact List	Ongoing
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** TMC OWG	
	Lead Champion: Barbara Hauser (MCDOT) **Individual Champion(s):** Luz Rubio (MCDOT)	
Project Description	A TMC contact list (AZTech Public Agency TOC-TMC Incident Contact List) was developed for the region so that information about all TMCs was in a centralized location. The list includes information such as contact information (names and numbers) and the TMC addresses. The goal of this project is to update the list and make sure that it is still accurate and complete. During this update, there should be discussions with the Working Group members about the types of additional information that would be helpful to include. Examples might include hours of operation, or identification of regional resources available at that TMC. After the update, the list should be distributed to all members of the TMC OWG (and other AZTech committees) for reference. The list is not intended for public or media distribution. Ideally, this process of updating the contact list would be undertaken annually to make sure that it is always accurate and reflects the most up-to-date information.	
Required Inputs / Prerequisites	• Existing contact list. • Updated contact information (names, numbers, addresses, etc.) for participating TMCs and operators. • Input from Working Group about additional desired information or additional agencies who should be involved.	
Anticipated Outputs	• Updated and expanded contact list for TMCs and operators.	
	How will success be measured? • 100% of the time, the information on the list is accurate when one TMC operator tries to call another.	

Project #17-28	TMC Resource Database	In Progress (supporting AAP #17-06)
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** TMC OWG	
	Lead Champion: Barbara Hauser (MCDOT) **Individual Champion(s):** Luz Rubio (MCDOT)	
Project Description	In FY16, the ASSC will begin a project that involves developing an AZTech shared resource database that will be accessible (via login) to all AZTech members. The goal of this database is to create a centralized location for agencies to share ITS and operations resources such as guidance documents, manuals, lessons learned, example documents that could be useful to other agencies. This FY17 project for the TMC OWG involves collecting existing resources from TMCs in the region that could be helpful to AZTech partners if shared. Documents that might be collected include: • TMC manuals; • Response manuals; • Lessons learned and helpful tips regarding systems, devices, or processes dealt with at TMCs; • Specific knowledge, skills or expertise that a staff member might have. These documents should be collected into a single location so that they can easily be uploaded to the AZTech shared resource database (led by the ASSC) upon its completion.	
Required Inputs / Prerequisites	• Input from TMC OWG participations on existing TMC guidance and resource manuals that should be shared with the group.	
Anticipated Outputs	• Collection of useful TMC resources that can be uploaded and shared via a future AZTech resource database.	
	How will success be measured? • 100% of TMC OWG participants provide materials or input on materials. • Availability of materials on the AZTech resource database (when available).	

Project #17-29	Loop 101 Integrated Corridor Management Tabletop Exercises	Ongoing
Timeframe	**Begin in FY17**	
Responsible Party	**Committee/Group Lead:** TMC OWG	
	Lead Champion: Barbara Hauser (MCDOT) **Individual Champion(s):** Mark Brown (MCDOT), Derek Arnson (ADOT)	
Project Description	This project involves engaging agency stakeholders throughout the region about the lessons learned from the planning and execution of an ICM strategy on Loop 101 in Scottsdale through tabletop exercises. ICM has emerged as a high priority strategy and is expanding to freeways through the region. Providing a hands-on exercise about the processes and lessons learned from the first ICM deployment in the region can help spread awareness amongst operations and emergency response staff throughout the region so that they can be prepared to participate in ICM as it continues to grow.	
Required Inputs / Prerequisites	• Lessons learned from the Scottsdale ICM project. • Outreach with agencies or groups of agencies to schedule time for the exercise.	
Anticipated Outputs	• A series of tabletop exercises that are held throughout the region to support awareness and understanding of ICM strategies.	
	How will success be measured? • For all agencies who have a freeway running through their jurisdiction, at least one person attends the ICM tabletop exercise.	

Project #18-01	TMC Operators Working Group Charter	Completed
Timeframe	**Complete in FY18**	
Responsible Party	**Committee/Group Lead:** TMC OWG	
	Lead Champion: Barbara Hauser (MCDOT), Derek Arnson (ADOT) **Individual Champion(s):** Luz Rubio (MCDOT)	
Project Description	• Develop charter to serve as a guiding document to help AZTech TMC OWG members understand the purpose, function and objectives of the Working Group.	
Required Inputs / Prerequisites	• Review AZTech Committee charters for format consistency	
Anticipated Outputs	• Submit TMC OWG Charter following uniform template to ASSC for review	
	How will success be measured? • Charter approval by TMC OWG, AZTech Strategic Steering Committee and final approval by the AZTech Executive Committee.	

Project #19-07	Advance Training Priorities	Approved
Timeframe	**Complete in FY19**	
Responsible Party	**Committee/Group Lead:** TMC OWG	
	Lead Champion: Barbara Hauser (MCDOT) **Individual Champion(s):** Mark Brown (MCDOT)	
Project Description	This project involves partnering with other AZTech committees to advance training priorities for TMC operators, including training needs for emerging technologies such as Transportation Center System Specialists (Level 1, 2), and other TMC related training. The project will leverage opportunities available through FHWA and other national and professional resources.	
Required Inputs / Prerequisites	• Identify training needs and interests of the Working Group members • Garner/identify interest among Working Group members and identify a time and location for the training	
Anticipated Outputs	• Prioritized training needs of the Working Group • Identified funding source(s) • Identified training that will be offered in FY19	
	How will success be measured? • Coordinating funding source for FY19 training • Attendance at training	

Media & Communications Task Force FY18 – FY19 Projects (6 projects)

Project #18-02	Media and Transportation Forum	Completed
Timeframe	**Complete in FY18**	
Responsible Party	**Committee/Group Lead:** AZTech Media and Communications Task Force	
	Lead Champion: Steve Elliott (ADOT) **Individual Champion(s):** Susan Tierney (Valley Metro), Monica Hernandez (City of Phoenix), Jennifer Banks (City of Scottsdale), Tyson Milanovich (ABC15), Traci Ruth (MCDOT), Luz Rubio (MCDOT)	
Project Description	Coordinate a forum to interchange ideas among media, transportation agencies, public safety, and public information officers and identify issues and gaps associated with dissemination of traveler information. Update and provide status on outcomes from 2015 Media & Transportation Lunch Forum.	
Required Inputs / Prerequisites	• Review agenda / format from previous events.	
Anticipated Outcomes	• Host event to interchange ideas among media, transportation agencies, public safety, and public information officers. Provide status on outcomes from 2015 Media & Transportation Lunch Forum.	
	How will success be measured? • Diverse attendance that includes, agency PIOs, AZTech agency representatives, radio and television media representatives, and public safety representatives. • Identification and addressing of gaps that will lead to improved dissemination of traveler information to the public.	

Project #18-03	Arterial Camera Accessibility Pilot	In Progress
Timeframe	**Complete in FY18**	
Responsible Party	**Committee/Group Lead:** AZTech Media and Communications Task Force	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** Tyson Milanovich (ABC15), Jennifer Banks (City of Scottsdale), Gil Estrada (Total Traffic Network)	
Project Description	The pilot project entails dissemination of arterial CCTV images to advance arterial traveler information sharing with the public. The project will identify tools/technologies to provide media access to arterial CCTV images to foster dissemination of traveler information on arterial roadways. The Media and Communications Task Force as well as AOC and ASSC will coordinate to determine the appropriate technology and process for dissemination of the CCTV images. The identified process(es) and the associated tools will be developed through the project.	
Required Inputs / Prerequisites	• Authorization from AZTech public agencies • Video feeds/images from the agencies	
Anticipated Outputs	• Consensus on the CCTV image sharing process. • Development and implementation of tool/technology	
	How will success be measured? • Consensus on image sharing process by February 2018 • Pilot CCTV image sharing by June 2018	

Project #18-04	Public Information Communication Network Protocol	In Progress
Timeframe	**Begin in FY18**	
Responsible Party	**Committee/Group Lead:** AZTech Media and Communications Task Force	
	Lead Champion: Traci Ruth (MCDOT) **Individual Champion(s):** Monica Hernandez (City of Phoenix)	
Project Description	Develop a Public Information Officer (PIO) network for communication practices/protocol to be used in emergency situations.	
Required Inputs / Prerequisites	• Contact list of all transportation related PIOs in the Phoenix Metro area • Establish regular meetings/conference calls • Benchmarking information for other regional PIO communication practices	
Anticipated Outputs	• Standard operating procedure regarding communication between agencies/jurisdictions in the event of an emergency	
	How will success be measured? • Develop the first draft of a regional transportation emergency communication protocol	

Project #18-05	Alternate Route Information Dissemination Guidance	In Progress
Timeframe	**Begin in FY18**	
Responsible Party	**Committee/Group Lead:** AZTech Media and Communications Task Force	
	Lead Champion: Faisal Saleem (MCDOT) **Individual Champion(s):** Gil Estrada (Total Traffic and Weather Network),Traci Ruth (MCDOT), Steve Elliott (ADOT)	
Project Description	The grid road network system in the Phoenix metropolitan region offers an opportunity to divert traffic to alternate routes to minimize the effect of non-recurring congestion event. The alternate provides additional capacity. In partnership with media, AZTech has identified the primary alternate routes to the freeways. The project will develop process and standard practice for disseminating information on regional alternate routes. These standard processes will be developed for incidents, planned construction/maintenance events and special events.	
Required Inputs / Prerequisites	• Review and finalization of identified alternate routes.	
Anticipated Outcomes	• A guidance document for disseminating alternate route information for incidents, planned construction/maintenance events and special events.	
	How will success be measured? • Improved alternate route information to the public through radio, social media, websites and Dynamic Message Signs.	

Project #18-06	AZTech Media and Communications Task Force Charter	Completed
Timeframe	**Complete in FY18**	
Responsible Party	**Committee/Group Lead:** AZTech Media and Communications Task Force	
	Lead Champion: Traci Ruth (MCDOT), **Individual Champion(s):** Luz Rubio (MCDOT)	
Project Description	Develop a charter to serve as a guiding document to help MCTF members understand the purpose, function and objectives of the group, while identifying roles and scope, establishing boundaries, and addressing resources to illustrate and clarify the focus and direction of the group and reflect AZTech's purpose and mission.	
Required Inputs / Prerequisites	• Review AZTech Committee charters for format and consistency • Present draft charter to MCTF members for review and approval	
Anticipated Outcomes	• Development of MCTF Charter	
	How will success be measured? • Charter will be approved by the MCTF, the ASSC and the AEC	

Project #19-08	AZTech Performance Indicators Book Marketing	Approved
Timeframe	**Complete in FY19**	
Responsible Party	**Committee/Group Lead:** AZTech Media and Communications Task Force	
	Lead Champion: Steve Elliott (ADOT), Traci Ruth (MCDOT) **Individual Champion(s):** MCTF PIOs	
Project Description	This project is to promote the *2017 AZTech Traffic Management and Operations Performance Indicators Book* and will include developing a communication plan and materials (brochures, social media posts, talking points and messaging, etc.) to share with stakeholders, the public and elected officials to illustrate AZTech partner's success.	
Required Inputs / Prerequisites	• Create a subcommittee from the MCTF members to only include public agency representatives (no members of the media) • Review the 2017 Performance Indicators Book • Evaluate data that can be used to succinctly tell the AZTech story	
Anticipated Outcomes	• Create awareness of AZTech's success in the region • AZTech Traffic Management and Operations Performance Indicators Book and marketing products will be shared with elected officials and senior level agency management	
	How will success be measured? • Each AZTech partner will share the book and the marketing products with their stakeholders and outreach audiences. • Successful sharing of the PI Book and materials per the communication plan.	