Arizona Department of Transportation
The Loop-101 Mobility Plan
Integrated Corridor Management

The ADOT Vision:
Moving Arizona.
Connecting Arizona.
Safely Home.

Operational Responsibilities within
Integrated Corridor Management

ADOT Transportation Systems Management and Operations Program Manager - Derek Arnson
ADOT Traffic Operations Center Dispatch Manager - Mark DeLugt

History of Integrated Corridor Management in Arizona

The Arizona Department of Transportation (ADOT) and the Maricopa County Department of Transportation (MCDOT) partnered to secure funding through joint leadership through the Federal Highway Administration (FHWA) Advanced Transportation Congestion Management and Technology Demonstration (ATCMTD) program in 2017 to implement Integrated Corridor Management (ICM) systems on the entire 61-mile Loop-101 corridor in the Phoenix metropolitan area.

Prior to this initiative, ICM was an informal agreement between ADOT and MCDOT where both entities agreed on a combined/mutual response plan related to high impact incidents on a few selected areas on Loop-101.

Goal of the Loop-101 Mobility Plan

The plan's goal is to leverage state, county, municipal, and private investments to facilitate improved, real-time freeway-arterial coordination when incidents impact Loop-101 and divert traffic onto local streets.

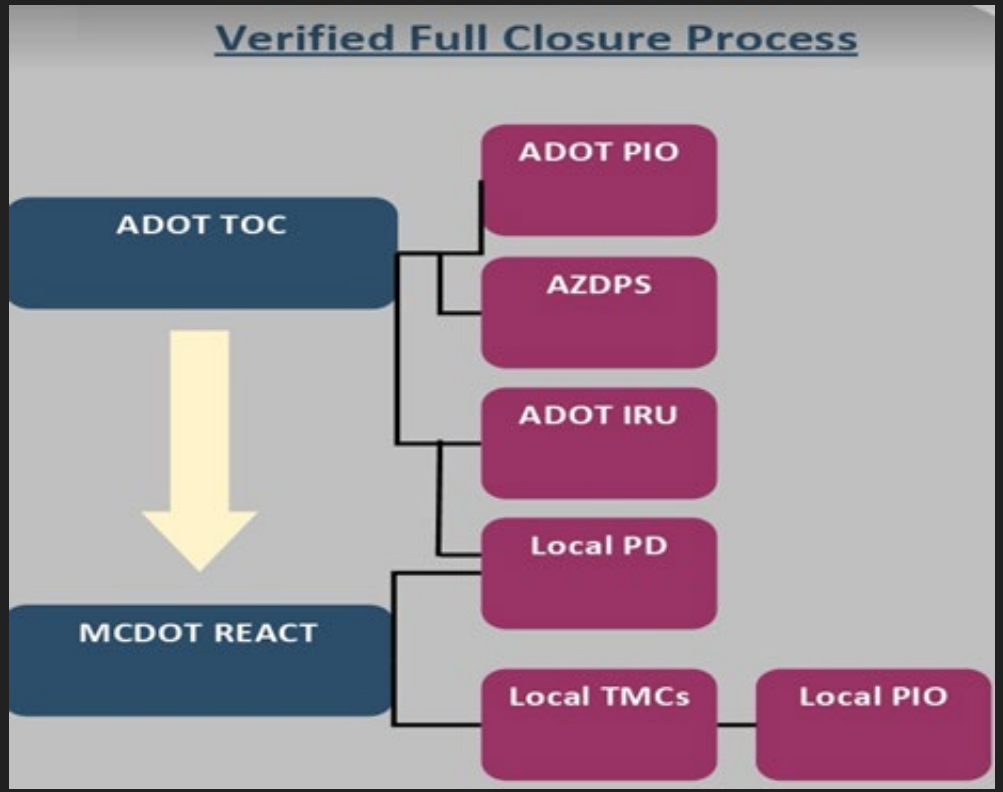
The ICM program will increase agency awareness of incidents, develop enhanced Decision-Support System (DSS) capabilities for advanced Transportation System Management and Operations (TSMO) strategy implementation, promote cross-agency information sharing, and provide advanced warning and alerts to travellers on the corridor to promote trip decision-making and awareness.

Operational Responsibilities within Loop-101 ICM

Within ICM, ADOT's operational responsibilities fall to two primary entities - the statewide Traffic Operations Center (TOC) and the Incident Response Unit (IRU).

ICM activation occurs upon recognition and/or verified report of a full closure (all lanes blocked) on Loop-101. Due to its day-to-day, close working relationship with the Arizona Department of Public Safety (DPS) - which has Troopers stationed in the TOC who are connected to DPS Computer Aided Dispatch (CAD) - TOC staff will be the first ADOT personnel to receive, process, and verify this report utilizing the ADOT Closed Circuit TV (CCTV) system based on 9-1-1 calls received by DPS.

Initiation of ICM



TOC Operational Responsibilities - Post-ICM Activation

Timeliness of initial notification to all stakeholders is a critical task for the TOC; as is to be expected, any significant event - ICM or not - comes along with a host of responsibilities, i.e. activating internal resources, ensuring administrative notifications, etc. As such, we have emphasized that the ICM notification process must be fluid, transparent, and free of task duplication.

The TOC utilizes a CAD system to track and document all aspects of the response, including the details/updates of the event as it runs its course, and of course highlighting the benchmarks of the TIM timeline.

IRU Operational Responsibilities - ICM Management

The IRU is ADOT's field operations/mobile response entity. The IRU will work with the law enforcement entity that has jurisdiction/disposition of the event and with any other affected governmental entities regarding the management of the event (i.e. closure specifics, alternate routes, etc.) to minimize the collateral effects of the Highway impediment.

Conclusion of the ICM Event

Once the event has been assigned a proper clearance and disposition, a repeat of initial notification process once again is initiated, allowing for the release of resources and dissemination of news/updates to the travelling public.

Supervisory verification of data collecting, documented thresholds, and a de-brief allow for the instilling of legacy knowledge and fine-tuning of individual processes.

Challenges, Dealing with Non 24-x-7 Partners

The ADOT TOC is a 24-x-7 operation while many municipal Traffic Management Centers (TMC) are open only during business hours, with an after-hours on-call; this can result in extensive delays and/or having TOC staff make repeated calls.

For after-hours ICM activations, TOC Dispatchers found themselves gravitating towards calling the local Police Department instead; this then placed the burden of local TMC notification on them.

TMC ability to access their resources in a timely manner are inherent limitations of non 24-x-7 staffing.

Challenges, Dealing with Partners with Fewer Resources

For the Loop-101 ICM Mobility Project, there are a wide variety of cities and communities who are connected to Loop-101. Some of these partners have outstanding infrastructure and are well-equipped to handle a significant event and/or reroute through their jurisdictions while others are less capable.

Awareness of partner resources and capabilities are a necessary component in multi-jurisdictional field management.

Map of the Loop-101

ADOT Traffic Operations Center

ADOT Incident Response Unit - 14 Mobile Units

Loop-101 Mobility Project - ICM

The operational aspect of ICM is critical, but must be seen as one of many factors - including but not limited to wide-ranging and impactful administrative and technical aspects and applications - to ensure its success and adaptability regardless of the situation or stakeholders involved.

Questions.