ATCMTD

Advanced Transportation and Congestion Management Technologies Deployment

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VIRTUAL COORDINATION CENTER FOR MULTIMODAL INTEGRATED CORRIDOR MANAGEMENT PROJECT EXECUTIVE SUMMARY

The ATCMTD Program awarded the Washington State Department of Transportation (WSDOT) a grant in fiscal year 2019.

Project Goals

Under this ATCMTD grant, WSDOT led an effort to develop, deploy, and evaluate the Virtual Coordination Center (VCC) for the Seattle urban corridor. The VCC is a digital collaborative environment for integrated multimodal corridor management through which transit, fire department, police, Washington State Patrol (WSP), and WSDOT partners coordinate incident response.

The Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94) (2015) set goals for the ATCMTD Program. WSDOT's goals included the following:

- Improved Safety
- Improved System Performance
- Reduced Emissions
- Reduced Costs
- Improved Real-Time Information
- Administrative Benefits
- Improved Mobility

Key Features and Capabilities

Integrated dispatch feed: This provides a running account of dispatch events, operational dispatches from the King County Metro Transit Control Center, and information from the WSDOT Transportation Management Center log.

Incident models: Launched by system users or the system when a high-impact event is likely in progress, the models provide information for coordinated action.

Situational map: This feature is linked to the dispatch feed and has numerous informational layers such as traffic, construction sites, and cameras.

Records management: This capability enables agencies to address issues of data retention and management.

Population movement hub: This feature helps coordinate public messaging.

Note: The ATCMTD program was renamed the Advanced Transportation Technology and Innovation (ATTAIN) Infrastructure Investment and Jobs Act (IIJA). For more information, click here.

From February 27 to September 30, 2023, the researchers evaluated the VCC model deployment. During this time, 354 incident models were launched, of which 52 were removed because they were not sufficiently severe for the VCC. Of the remaining 302 incidents, the VCC automatically launched 85 of the incidents, WSDOT launched 197, and City of Seattle staff launched 20. The average incident duration was 5 hours and 22 minutes, with a median duration of 1 hour and 36 minutes.

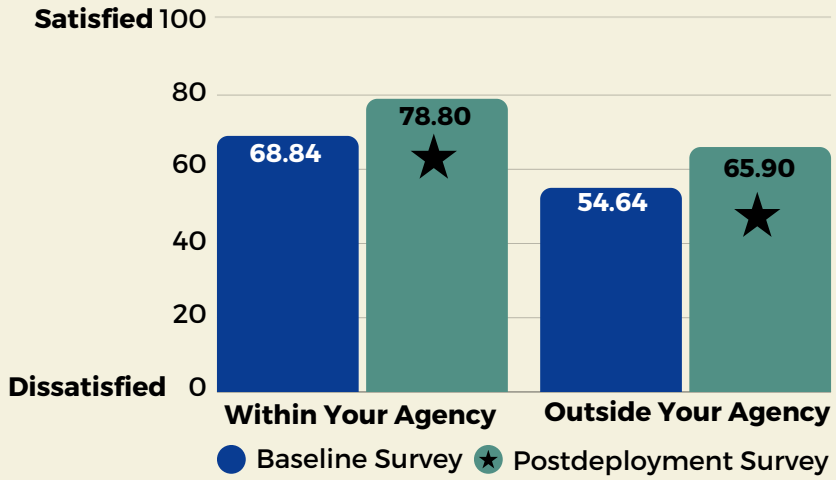
Efficiency Gains: Improved Real-Time Information

The VCC was primarily evaluated through surveys and interviews of VCC users.

The VCC satisfaction survey found that users generally trusted the information provided in the VCC, although there was some indication of certain users losing trust in the VCC over time. One survey respondent credited the VCC with improving the speed at which information is updated and stated that the information in the VCC is always the best available. Most respondents reported that the VCC was useful for their work, saved them time when working an incident, and improved their ability to coordinate with other agencies. Users reported the VCC provided relevant information not easily obtained elsewhere. The evaluators also found that the use of legacy systems had not changed significantly. For example, the WSDOT Traffic Management Center personnel continue to use a legacy WSP computer-aided dispatch client as their primary source of information. Nevertheless, the WSDOT Incident Response Team staff members reported relying on the VCC and using it daily.

As shown in figure 1, survey respondents' average satisfaction rating for communication and coordination during VCC-level incidents (both within their agency and with external partners) increased following deployment of the VCC.

Figure 1. Chart. Average satisfaction with communication and coordination.



Future Additions

WSDOT is considering adding more geographic areas, such as the corridor from Vancouver, WA, to Portland, OR, as well as additional data points.

For WSDOT's final report, please go to: https://ops.fhwa.dot.gov/fastact/atcmtd/ATCMTD_FY19_FinalReport.pdf.

U.S. Department of Transportation
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