



ATMA for Work Zone Safety

Colorado Department of Transportation

PROJECT PARTNERS

Minnesota Department of Transportation
Oklahoma Department of Transportation
Wisconsin Department of Transportation
Pennsylvania State University
University of Oklahoma
University of Wisconsin, Madison

Kratos Defense
Royal Truck



COLORADO
Department of Transportation

PROJECT CHALLENGE

North Carolina's freeways experience sudden unexpected slowdowns and work zones that require drivers to change lanes. These situations, encountered at high speeds, can negatively impact traveler safety and mobility. Providing in-vehicle hands-free, eyes free alerts for these conditions will give drivers specific, timely and actionable information. To achieve this, the AARA system will leverage and integrate public agency and private sector datasets, advanced algorithms, and open data feeds to enable motorists to receive detailed actionable alerts on their existing smartphone applications and navigation systems.

IMPACT

This project will be deployed to a variety of locations in Colorado, Oklahoma, Minnesota, and Wisconsin. These locations offer a variety of ODDs for deployment of the ATMA, in large, mid-size and rural communities with varying weather environments, geographical terrains (midwestern plains, varying elevations, mountainous and straight away rural roads), traffic volumes (majority of rural, with two urban areas) and diverse arrangement of transportation workers featured. Each location will demonstrate the potential to leverage the autonomous maintenance technology to remove the driver from the follower vehicle.

CURRENT STATE OF THE ISSUE

From 2003-2020, 2,222 workers lost their lives at road construction sites, an average of 123 per year. Driving a TMA is recognized as one of the most dangerous assignments in a work zone.

STAGE 1 OUTCOMES

ATMA technology was invented to enhance safety, to remove DOT workers from the maintenance vehicles and reduce their fatalities. Sharing information of the ATMA for Work Zone Safety project with other ATMA development efforts will facilitate accelerated wider-range adoption of ATMA solutions supporting our overall objective for fast-tracking increased safety to the workers maintaining our critical transportation infrastructure.

STAGE 2 VISION

A Stage 2 project will feature the use of the final report and toolkit developed in Stage 1 to deploy an ATMA in an area that doesn't currently use this technology. Sharing information of the ATMA for Work Zone Safety project with other ATMA development efforts will facilitate accelerated wider-range adoption of ATMA solutions supporting our overall objective for fast-tracking increased safety to the workers maintaining our critical transportation infrastructure.