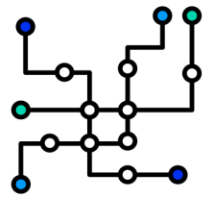# SMART
GRANTS PROGRAM

CV SAFETY ALERT AND PREDICTIVE CRASH LOCATION INTEGRATION

The Ohio Department of Transportation

PROJECT PARTNERS

Ohio State Highway Patrol
Delaware County Sheriff's Office
American Honda Motor Co.

Jacobs
ETCH, LTD
Polygon Solutions
Trihydro
Moove.ai

PROJECT CHALLENGE

Ohio DOT has been developing the Event Streaming Platform (ESP) over the past few years. ESP is a data streaming platform that processes high volumes of real-time data streams with the intention of making the streams accessible to public and private entities by providing self-service discovery and use of datasets which leads to quicker insights and decision making.
The combination of the real-time data streams with ODOTs existing data sets promotes the possibility of developing solutions for multiple future transportation related use cases and Business Intelligence analytics. Our project aims to address two use cases: accident detection and response, and accident prediction and mitigation.

IMPACT

Ohio has an extensive and robust multimodal transportation system that is owned, operated, and maintained by an interconnected combination of state and local governments, and private industry transportation stakeholders. This system is a large-scale statewide installation with specific use cases that will return value to the entire transportation information system. This project is for planning statewide implementation of these ESP use cases, regardless of location, individual make up, or heritage.

CURRENT STATE OF THE ISSUE

Despite Ohio's best efforts to achieve Vision Zero with a $180mm annual investment in the Highway Safety program and a $20mm investment in TSMO Traffic Management strategies, crashes, severity, and fatalities remain trending in the wrong direction to achieve zero deaths, with 1,150 Ohio traffic fatalities in 2023. Additionally, mobility suffers after every incident increasing the likelihood of a secondary crash.

STAGE 1 OUTCOMES

Development of automated procedures in response to air-bag deployment alerts to reduce the response time to accident locations. 2. Development of an analytical model, using a variety of data sets, to determine the probability of an accident occurring on a specific segment of roadway and respond accordingly with measures to reduce that probability.

STAGE 2 VISION

The current Stage 1 effort is highly focused on specific locations that have the capability to provide a high percentage of the data sets, identified through the project data identification efforts. Stage 2 would utilize the lessons learned in Stage 1 and expand the focus area of the efforts to the entire state.