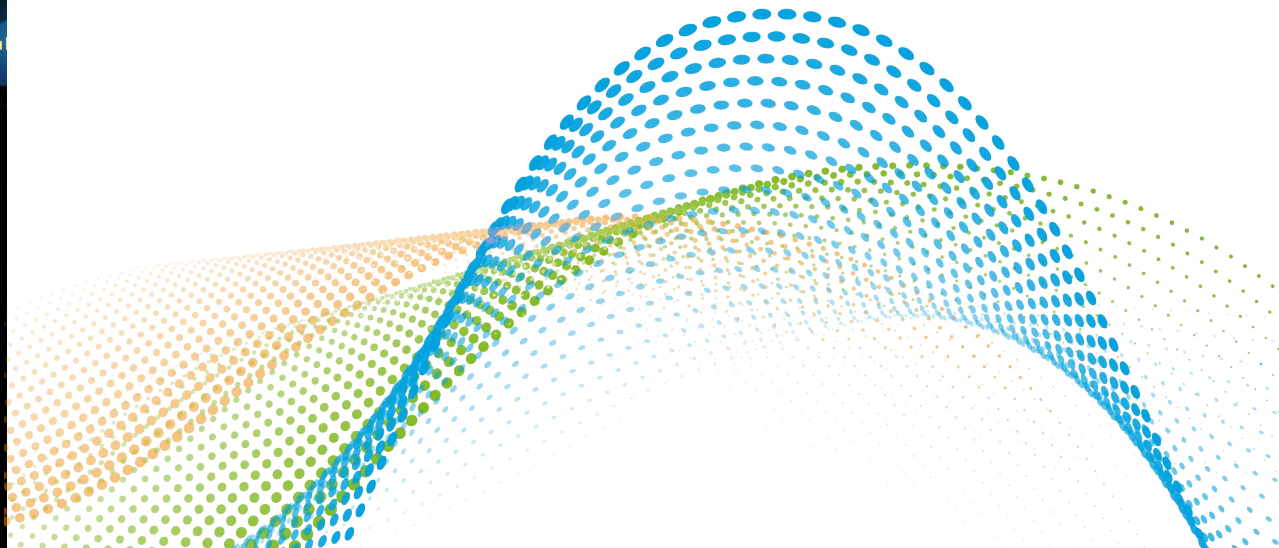




Mcity creates an Autonomous Vehicle Data Library on AWS to accelerate AV commercialization

## Executive Summary

In an increasingly autonomous world, more and more organizations are leaning on data to power artificial intelligence (AI) innovation. Deloitte and Amazon Web Services (AWS) are at the forefront of **developing capabilities to enhance data management to fuel AI**. Until recently, data for autonomous vehicle (AV) testing and deployment has been isolated in proprietary silos. Now, the AWS Data Library has the potential to unlock AV data sets to assist the entire industry in accelerating AV commercialization.



# Customer Challenge

Mcity is a public and private partnership formed at the University of Michigan to **accelerate commercialization and value from Autonomous Vehicles (AV's)** by improving transportation safety, accessibility, development efficiency. The partnership is comprised of a diverse ecosystem of automakers, suppliers, telecommunications, technology, legal and insurance companies.

Mcity and its constituents identified the opportunity to improve AV development insights and speed through an AV Data Library that could be easily searched and accessed by users to obtain test data from various AV driving scenarios. Rapid access to organized data sets in the Data Library can help researchers and engineers significantly reduce AV development cycle times and training of AV software.



# Solution

Deloitte developed an AV Data Library on AWS cloud to answer several questions:



What data should we curate and store?



How long should we store the data?



What data should be prioritized for sharing and commercialization?



How should we organize the data (data model by usage, test type, scenario, date, location, conditions, etc.)?



How would AV players access the data?



What security and privacy protocols need to be in place?

# About Mcity

The University of Michigan launched Mcity, an advanced mobility research center in 2015. Mcity's vision is to lead the transformation to a new world of mobility by bringing together diverse expertise and the required resources to further develop emerging mobility technologies and their economic viability. Currently, Mcity is collaborating with 25 industry partners on future mobility solutions and has invested \$28.2M in the research, development, and launch of projects. Mcity is recognized as a trusted pioneer in mobility innovation and is expected to continue to grow and develop innovative solutions in the future.



# Results and Benefits

The AWS Data Platform and Data Library supports AV testing and deployment at Mcity, including the City of Detroit's Automated Driving System Demonstration Grant funded by the U.S. Department of Transportation. **The system automates data ingestion and privacy compliance** through proprietary algorithms.

Deloitte and AWS leveraged many services to support Mcity such as Amazon ECS, S3, RDS, and QuickSight.



## Contact us:

**Jeff Hood**  
Principal  
Deloitte Consulting LLP  
jeffhood@deloitte.com

# Deloitte.

As used in this document, “Deloitte” means Deloitte Consulting LLP, a subsidiary of Deloitte LLP. Please see [www.deloitte.com/us/about](http://www.deloitte.com/us/about) for a detailed description of our legal structure. Certain services may not be available to attest clients under the rules and regulations of public accounting. This publication contains general information only and Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor. Deloitte shall not be responsible for any loss sustained by any person who relies on this publication.

Copyright © 2023 Deloitte Development LLC. All rights reserved.