
Authority Board **STAFF REPORT**

Meeting Date: June 21, 2023

Subject	NEW ITEM: Development of Shared Autonomous Vehicle (SAV) Coalition
Summary of Issues	As a leader in testing and deploying SAV technology, the Authority is familiar with the regulatory barriers for large-scale deployment of SAVs as first- and last-mile solutions. In order to facilitate broader understanding, use, and deployment of SAVs, the Authority is proposing to facilitate and participate in a coalition of public agency partners interested in advancing this technology for relevant use cases. The coalition will be called Autonomous. Connected. Electric. Shared.
Recommendations	Staff seeks Authority Board approval to take a leadership role in facilitating and participating in a SAV coalition with an initial contribution of \$25,000 and authorize the Executive Director to make annual contributions of the same amount.
Staff Contact	Linsey Willis
Financial Implications	The initial \$25,000 has been budgeted for the upcoming fiscal year beginning July 1, 2023. Future installments will need to be included in the budget for future years, pending Executive Director authorization.
Options	The Authority Board may choose to not participate in a SAV coalition.
Attachments	None
Changes from Committee	N/A

Background

The Authority has a long history of leading safe testing and deployment of SAVs, dating back to the development of the 2014 Countywide Transportation Plan. One concern we heard over and over again from residents during this planning process was that we had a first- and last-mile problem in Contra Costa County. At that time, many of our residents indicated they would choose to use public transit; however, when they arrived at the Bay Area Rapid Transit (BART) station there was no parking available, so they drove to their destination. Other residents told us the bus station was too far to walk to from their home, or the bus doesn't drop them off close to their workplace, school, or medical appointments.

Our search for a solution to this problem coincided with the advent of SAV testing in Europe showcasing the potential for SAV shuttles to eventually fill in the gaps of traditional public transportation, with a focus on getting people from their homes to public transportation, and from that last subway stop to their destination. The small size and advanced technology of the SAVs make them ideal for following flexible routes and addressing the first- and last-mile challenge of public transportation. Cities/Towns could expand service lines to suburban areas without having to also build massive and expensive parking structures. The use of electric shuttles for these services has the potential to drastically drop the levels of greenhouse gas emissions produced by commuters.

In 2014, the Authority founded GoMentum Station at the former Concord Naval Weapons Station, the nation's largest secure connected and automated vehicle proving grounds. The goal was to facilitate automated and connected vehicle technology development in order to help the Authority better plan for the future by having a front row seat to the future of transportation technology. One of our first endeavors was to test and deploy an EasyMile EZ10 autonomous shuttle to determine if SAVs could provide that first- and last-mile solution our residents indicated was missing from our transportation network. In short, this was a pilot demonstration project to test electric, low-speed, multi-passenger autonomous shuttles manufactured by EasyMile, that were not equipped with a steering wheel, brake pedal, or accelerator.

Through this process, Authority staff learned a lot about the regulatory process and challenges surrounding these special types of vehicles. We partnered with Assemblymember Susan Bonilla and the California State Legislature to pass pioneering legislation in 2016,

Assembly Bill 1592, to allow for the Authority to conduct a pilot program for SAVs. After successful testing at the GoMentum Station autonomous vehicle proving grounds in the City of Concord and in parking lots at Bishop Ranch, the Authority received permission from the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) in October 2017 and permission from the California Department of Motor Vehicles in January 2018, to operate the EasyMile shuttle on public streets within the Bishop Ranch business park.

Throughout testing and deployment, the Authority developed a strong relationship with NHTSA. These types of specialized vehicles do not have a home in the current vehicle code, and therefore live in a regulatory 'gray-area' requiring special permission and exemptions from NHTSA for each vehicle and route. This has required quite a bit of communication and collaboration, but the Authority has continued forward with this work on the understanding that by sharing our testing results and continuing to have an open dialogue about test cases and deployments, we can contribute to a national understanding of how low-speed automated shuttles can serve a variety of communities and constituencies.

Because of our leadership in this field, the Authority was the recipient of a 2019 Federal Highway Administration grant to enhance Mobility-on-Demand applications in the Bay Area. This grant is part of the Advanced Transportation and Congestion Management Technologies Deployment program, which funds early deployment of cutting-edge technologies that can serve as a national model to improve the experience for all travelers. The goals of this project include delivering a one-stop shop providing information on multiple transportation options to travelers based on point of origin and destination, including trip planning and travel times, a seamless payment system, and rewards program. We are making progress on this grant opportunity, as evidenced by the April 2023 launch of our PRESTO shuttle in the Bishop Ranch business park, which will enable us to begin to incorporate SAVs as a travel option into this application.

The Authority also received a federal Automated Driving Systems (ADS) grant, and part of this grant is to safely and collaboratively advance the learning around SAV implementation on public roads through testing and demonstration in Rossmoor. Rossmoor is a private community with a little more than 9,500 residents, fourteen miles of roadways without traffic signals, and community members who average 78 years old. The ADS grant provides an optimal opportunity to provide future mobility conveniences to this population and ensure that as this technology

advances, they are not left behind.

Due to not having a regulatory framework for scaling, testing, and deployment of SAVs, it can be burdensome and difficult to navigate the maze of exemptions and approvals necessary to launch one of these shuttles for public use, even as a pilot program. Approvals are often granted for pilot program use only, so there is little incentive for the industry to manufacture these types of specialized vehicles since they currently have such limited use cases, and it is hard for start-ups to find continued funding. In fact, we intended to contract with Local Motors, one of the only domestic manufacturers of SAVs for our federal grant projects, which had to pivot since they filed for bankruptcy.

The Authority continues to see a need for SAVs in the transportation landscape of Contra Costa County, especially as travel behavior shifts towards more local trips. Many of our peer agencies are also realizing the potential for SAVs to provide zero-emission, accessible transit solutions in office parks, campuses, suburbs, and town centers. After many shared discussions and collaborative efforts with public agencies to further regulations that will ensure the safety and viability of this type of transit option, Authority staff believes that the most effective way forward is through facilitating the creation and participation of a public-sector led SAV coalition. Currently, there is no roadmap for deploying this type of technology on public roads, and the Authority remains a national leader in taking incremental steps towards utilizing this technology to better serve the members of our community who need it most.

SAV technology represents a distinct first- and last-mile use case with unique safety attributes that should be factored into regulatory decision making, which is currently overshadowed in the regulatory process by broader autonomous use cases. As public agencies, entities like the Authority have a unique role in shaping regulations in that we serve as a trusted voice to government officials who understand that we also have an obligation to the public, not to shareholders or profits. This membership-based organization will be guided by public-sector agencies and funded through dues from a multitude of stakeholders in the automated, connected, electric, and shared mobility spaces. By taking a leadership role in founding this coalition, the Authority will be able to better influence the regulatory and legislative landscapes to ensure the success of our own SAV deployments and facilitate a clear path forward for this industry in the United States.

The next few years will be critical in terms of creating a sustainable pathway forward for SAV

technology, which is why Authority staff recommends the creation of a membership-based coalition that will be funded through dues to educate and promote appropriate regulation and adoption of shared mobility options.

Staff seeks Authority Board approval to take a leadership role in facilitating and participating in a SAV coalition with an initial contribution of \$25,000 and authorize the Executive Director to make annual contributions of the same amount.

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