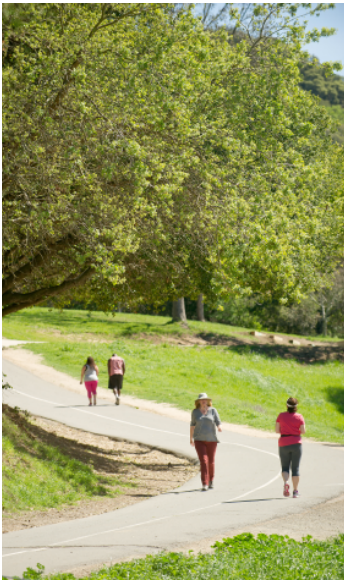




CONTRA COSTA  
transportation  
authority



The Contra Costa Transportation Authority (CCTA) is a public agency formed by Contra Costa voters in 1988 to manage the county's transportation sales tax program and oversee countywide transportation planning efforts. With a hard-working staff of twenty people managing a multi-billion-dollar suite of projects and programs, CCTA is responsible for planning, funding and delivering critical transportation infrastructure projects and programs that connect our communities, foster a strong economy, increase sustainability, and safely and efficiently get people where they need to go. We utilize the tax-exempt municipal bond market to accelerate construction and delivery of our projects to the public. Because of this important tool, we've been able to deliver 25 years' worth of construction projects in 10 years. We believe the solutions we're testing to our county's transportation challenges can be replicated in most communities across the country.

## The Future of Transportation is Bright

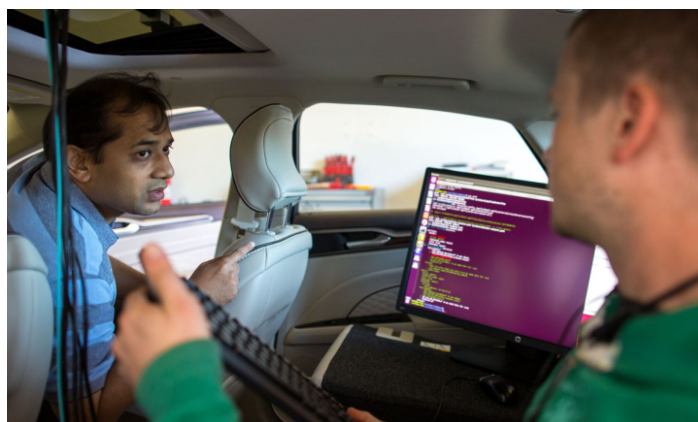
In addition to planning, funding, and delivering the transportation projects and programs the voters approved, we're also the county's congestion management agency and long range transportation planning agency. With this in mind, we are deeply involved in identifying and applying ground-breaking new developments in transportation and technology. Technology is redefining mobility and disrupting the transportation industry on a global scale, as it is doing in most industries. CCTA wants to make sure that the plans we make for the county's transportation infrastructure take these emerging technologies into account so we can best serve the needs of Contra Costa's 1.1 million citizens. Our over-arching goals are to ensure that our plans use taxpayer dollars wisely and that we are investing in the technology of the future – not yesterday's technology. We are addressing the challenges of proactively engaging with and preparing for future transportation technologies through GoMentum Station.



## Collaboration and Innovation

Founded by CCTA and its partners, GoMentum Station is a secure, automated and connected vehicle testing facility built on a public/private partnership model, offering the private sector a space to innovate and test while providing the public sector access to new technologies as they are developed. Because of our proximity to Silicon Valley, we are close to where major auto manufacturers are conducting research and development for connected and autonomous vehicles. Named one of ten federally designated automated vehicle proving grounds by the U.S. Department of Transportation (DOT), GoMentum Station is one of the largest secure proving grounds in the United States, featuring 20 miles of paved roadway, two 1,400-foot tunnels, curbs, gutters and sidewalks, railroad crossings, potholes and a mini-city. The unique features offered by GoMentum Station enable partners to safely push their technology to its limits while testing in a controlled environment.

GoMentum Station is also a magnet for start-up companies. We receive a wide variety of promising ideas presented to us by companies looking for partners and a place to test. Partnering is a philosophy that we try to employ in all aspects of our work, and we're very proud of our national and international partnerships. GoMentum Station has developed cooperative agreements with the governments of Japan and the Netherlands, and is one of a handful of facilities which support multimodal testing. In addition to testing self-driving cars for companies like Lyft and Honda, GoMentum Station has also hosted testing of freight vehicles by Uber ATG and electric, shared autonomous EasyMile shuttles. We're exploring how these technologies can most efficiently contribute to our future transportation system by bringing in partners to test wireless charging and fleet management.





# Striving for the Best Solutions – Locally & Globally

Our work with GoMentum Station has enabled our agency's commissioners and staff to keep their finger on the pulse of innovative transportation research. Armed with this knowledge, we can then incorporate the best available information and resources on what is truly working to improve mobility and safety, and deploy it across the county, like inductively charged electric buses with our transit partner County Connection. We're also changing the way we plan for the future. We're using the latest technology to gather public input — from social media to telephone town halls and webinars — and to bring our information directly to the public, instead of making them come to us in traditional public meetings. Because of this, we received more public comments on the last update of our Countywide Transportation Plan than we had in the previous 25 years combined.

One concern we heard over and over again from residents was that we have a first- and last-mile problem in our county. Many of our residents would choose to use public transit – but when they arrive at the train station there is no parking available, so they drive to their destination. Other residents have told us the bus station is too far to walk to from their home, or the bus doesn't drop them off close to their workplace, school, or medical appointments. We're working hard to solve these problems by using innovative new technologies.

For example, CCTA is leading a pilot demonstration project to test an electric, low-speed, multi-passenger autonomous vehicle manufactured by EasyMile that are not equipped with a steering wheel, brake pedal, or accelerator. These vehicles can help connect residents to existing transit options, schools, and business centers with zero emission, and offer a smart solution to the first- and last-mile challenge. We have been coordinating with the National Highway Traffic Safety Administration (NHTSA) to ensure this pilot project is conducted as safely as possible.



And in March of this year, CCTA received permission from the Department of Motor Vehicles to deploy the first-ever shared autonomous vehicle on public roads in California. We believe these vehicles show great promise and are poised to become a cornerstone of publicly-accessible shared vehicle technology for Mobility-on-Demand (MOD) programs worldwide.

CCTA is committed to identifying alternatives to transportation solutions that attempt to build our way out of congestion. Instead, we're evaluating and developing our long-range plans to apply current and future technologies to improve our regional transportation system. A great example is our comprehensive plan to innovate Interstate 680, one of the most congested corridors in our county. We're looking at integrating traditional corridor management techniques such as carpool lanes and adaptive ramp meters with modern transit management. We're adding cutting-edge concepts like neighborhood mobility hubs to centralize bike share, car share, electric scooters, and provide a pick-up place for shared autonomous vehicles to connect with transit. We're also looking at using incentives to encourage mode shift away from single-occupant vehicles. We know that if we can persuade some of our residents and commuters — not all of them — to leave their single-occupant vehicles at home, we can make a big dent in congestion in our area.

Incorporating technology into our transportation systems holds a lot of promise – not just to eliminate those annoying moments where you're the only vehicle waiting for the red light to change at an otherwise empty intersection, but to improve the quality of life for your constituents as well. Think about the benefits of a system that could give emergency vehicles priority, clearing the path for an ambulance by initiating signal timing changes ahead of the vehicle, which could potentially shave life-saving minutes off its trip.

If it sounds like we are working on a lot of interesting projects and ideas, it's because we are. I'd like to recognize the visionaries on the Contra Costa Transportation Authority Board who enable our staff to really think big and try out new ideas. There's not a lot of incentive for government to innovate, because innovation sometimes involves failure. And given our responsibility to taxpayers, it's not easy for elected officials to embrace the uncertainty of untested solutions. I am fortunate to work with a forward-thinking Board, staff and community.

This is an exciting time for public agencies, like CCTA, to participate in and contribute to the conversation about how this new technology can best be put to use. Whether it's an 81-year old grandmother who no longer drives but still wants to visit her granddaughter, or finding a workable solution for the first- and last-mile challenges of public transportation, by staying abreast of new and emerging technologies, public agencies like CCTA can lead the way in reimagining how



we get where we need to go. I firmly believe these new technologies will have a transformative and positive effect on our transportation systems, our cities, and our lives. Thank you for giving me the opportunity to share highlights of the work we are doing to plan for the future of transportation in our region and beyond.