California AutoTech Testing and Development Center

Solicitation: Proposals for Designation of Automated Vehicle Proving Grounds Pilot
Docket # DOT-OST-2016-0233

Submitted by

Merced County, California
University of California Berkeley, Partners for Advanced Transportation Technology
University of Southern California, Center for Advanced Automotive Technology
Carnegie Mellon University, Traffic21 Institute
University of California Merced, School of Engineering
Port of Los Angeles
Global Logistics Development Partners | GLDPartners

Strategic Advice From

Stanford University – Center for Automotive Research
Faraday Future

Partners

Strategic Advisors

Project Name
California AutoTech Testing and Development Center

Asset Owner
Merced County, California
Castle Airport / Mid-California International Trade District

Owner Contact Information

Adam Wasserman	adam@gldpartners.com	623 341 1383
Mark Hendrickson	mhendrickson@co.merced.ca.us	209 628 6147

Project Partners
- Merced County Government (local government and asset owner)
- Univ of Cal Berkeley - Partners for Advanced Transportation Technology (research institution)
- Univ of Southern California – Advanced Transportation Technologies Center (research institution)
- Carnegie Mellon University – Traffic21 Institute (research institution)
- University of California Merced (research institution)
- Port of Los Angeles (global trade and logistics)
- GLDPartners (investment project management)

Project Advisors:
- Stanford University, Center for Automotive Research, Stephen Zoepf, Dir. (research institution)
- Faraday Future, Dr. Jan Becker, Senior Director Automated Driving (vehicle manufacturer), Lecturer Automated Driving Stanford University (research institution)

Onsite Operating Tenant:
- Google/Waymo

Support Letters From:
- Merced County Board of Supervisors
- Secretary, California State Transportation Agency (on behalf of DMV, CalTrans)
- California Governor's Office of Business and Economic Development
- California State Senator Anthony Canella
- Univ of Cal Berkeley - Partners for Advanced Transportation
- Carnegie Mellon University

About the Project's Partners
Merced County – Merced County is a political subdivision of California and is governed by an elected five member Board of Supervisors. The County provides an array of services ranging from and including law enforcement, transportation, elections, property assessment, tax collection, public health, health care, social services, libraries, flood control, fire protection, agricultural regulations, building inspections and education. Merced County is located directly east of San Jose and is in the San Joaquin Valley (also known as the Central Valley). As of the most recent United States Census, the County's population was 255,793 and the total area of the county is approximately 1980 square miles. The County owns the site of the project which has been known as the Castle Airport. A previous Strategic Air Command Air Force Base, Castle Airport occupies about 2000 acres of land. Merced County has developed plans for and is implementing an investment strategy for a large-scale $1B public-private partnership that will contain 8M square feet of testing, technology and manufacturing space.
Main Contact: Mark Hendrickson, Director of Merced County Department of Community and Economic Development and Director of Castle Airport/Development Project

California Partners for Advanced Transportation Technology (PATH) A research and development program of the University of California, Berkeley, PATH has been a leader in Intelligent Transportation Systems research since its founding in 1986. In collaboration with the California Department of Transportation (Caltrans), administered by the university's Institute of Transportation Studies (ITS), PATH is a multi-disciplinary program with staff, faculty, and students from universities worldwide and cooperative projects with private industry, state and local agencies, and nonprofit institutions. The organization bring together deep expertise in both research and deployment and is redefining the concept of "intelligent transportation systems" to meet the realities of the Information Age. PATH's mission is to develop solutions that address the challenges of California's surface transportation systems through advanced ideas and technologies and with a focus on greater deployment of those solutions throughout California.
Main Contact: Dr. Steven Shladlover, PATH Program Manager for Mobility. Dr. Shladlover was one of the pioneers in the creation of the ITS program in the US and is internationally renowned for more than forty years of research on road vehicle automation, with a particular emphasis on cooperative and connected vehicle automation systems. Dr. Shladover's work is widely recognized internationally, and he has held many leadership positions in professional organizations. He chaired the TRB ITS Committee from 2004-2010 and the TRB Committee on Vehicle-Highway Automation since 2013. He chaired the ASME Dynamic Systems and Control Division (DSCD) in 1995-6 and has been leading the US delegation to ISO TC204/WG14, developing international standards for vehicle-roadway warning and control systems for the past 23 years. He is on the editorial advisory boards of the leading journals in intelligent transportation systems, Transportation Research Part C, Journal of Intelligent Transportation Systems and IET Intelligent Transport Systems.

USC Center for Advanced Transportation Technology (CATT) The USC Center for Advanced Transportation Technology (CATT) is the focal point for intelligent transportation systems with emphasis on intelligent vehicle technologies at the University of Southern California. Established in 1991 and directed by Petros Ioannou, Professor of the Department of Electrical Engineering, Systems and Director of the Center. CATT's mission is to perform high-impact research on vehicle automation and its impact on traffic. CATT collaborated with major car manufacturers that include Ford Motor Co., General Motors and Audi in demonstrating intelligent vehicle technologies. It has also been supported by the California Department of Transportation in collaboration with PATH for deployment and testing of advanced vehicle technologies. CATT is a part of the USDoT funded center METRANS which focuses on the transportation needs of large metropolitan areas. In 2016 METRANS was awarded a DOT University Transportation Center which is a partnership center with several Universities in Region 9. With the Pacific Southwest Region UTC, the Project partner team can also harness the contributions of the other research institutions which are located in California, Arizona and Hawaii.
Main Contact: Dr. Petros Ioannou, Director of the Center for Advanced Transportation Technology. Dr. Ioannou has been recognized for his research on Adaptive Cruise Control Systems and has received numerous awards including the IEEE ITSS Outstanding ITS Research Award for Transportation Technologies. He is Editor in Chief of the IEEE Transactions on Intelligent Transportation Systems and a founding member of IVHS America, later renamed ITS America. He is a member of the Board of Governors of the IEEE Intelligent Transportation Society and a founder of the University Transportation Center, METRANS, at USC and Cal State University Long Beach. Dr. Ioannou is author of 8 books and over 300 research papers in the area of controls, vehicle dynamics, neural networks, nonlinear dynamical systems and intelligent transportation systems. He has served as a technical consultant to several automotive and aerospace companies and as an expert on automotive control and sensor systems and safety.

Carnegie Mellon University – Traffic21 Institute

Within the Traffic21 Institute, HUMANS is a new research initiative involving faculty from the ECE and CEE Departments and strong collaboration with Silicon Valley industry. The new research initiative on Human Mobility Analytics and Services (HUMANS) is based at CMU's Silicon Valley Campus located on Moffett Field in Mountain View. The CMU-SV campus currently houses a total of about 20 faculty members and 400 graduate students from three departments in the College of Engineering. The Electrical & Computer Engineering Department has a dozen faculty, ~200 MS students, and ~50 PhD students at the CMU-SV campus. The HUMANS Initiative involves four faculty from the Electrical & Computer Engineering (ECE) Department and two faculty from the Civil & Environmental Engineering (CEE) Department. The initiative focuses on the Sensing, Analytics, and Services of/for the mobile population with the vision of "Distilling Human Mobility Data Into Valued Services for Societal Good." Current industry collaborators include automotive companies, automotive suppliers, ride sharing services, mobile devices vendors, and wireless services providers.

Main Contact, John Shen, Director HUMANS (Human Mobility Analytics and Services) Initiative. After spending 15 years in the industry, Mr. Shen returned to CMU in 2015 and is currently based at the CMU-Silicon Valley campus. John was a Nokia Fellow and the founding director of the Nokia North America Research Lab, which had research teams in Palo Alto, Berkeley, and Cambridge, pursuing research in mobile computing and mobile services. Prior to joining Nokia in the fall of 2006, John was the Director of the Microarchitecture Research Lab at Intel. MRL had research teams in Santa Clara, Portland, and Austin, pursuing research on aggressive superscalar and multi-core processor designs. Prior to joining Intel in 2000, John was a tenured full Professor in the ECE Department at CMU where he supervised a total of 17 PhD students, received multiple teaching awards, and published over 100 research papers and two textbooks.

University of California Merced

UC Merced is the newest campus of the University of California, and is a research university with recognized specialties throughout the sciences. The UC Merced School of Engineering has a strong faculty team that provides students with a comprehensive research experience based on the latest developments of the analytical, numerical and experimental tools available in the field. Judicious application of the fundamental principles of mechanics allow specialized mechanical engineers to impact a range of research areas of research including: biomechanics & mechano-biology, dynamics & controls, energy conversion & storage, innovative design, mechatronics, embedded systems & automation, plasmas & fluid mechanics, radiative heat transfer, solar concentration, sustainable water & energy technologies, thermal & electrochemical energy devices, thermal science and energy conversion and friction, wear and lubrication. From advanced manufacturing processes to novel and sustainable energy production systems, from sensors and actuators to virtual reality, and from advanced materials to artificial intelligence, UC Merced brings new approaches to meeting the challenges of building the next generation of transportation infrastructure.

Main Contact: Dr. Peter Schuerman, Associate Vice Chancellor for Research and Economic Development. Dr. Schuerman manages a range of partnerships and research alliances and oversees the UC Merced Venture Lab, which ties together mentors, incubators, innovators, legal assistance and business consulting, supporting startup companies. Dr. Schuerman is the architect of UC Berkeley's Industry Alliances Office and oversaw licensing and intellectual property management in Texas A&M University's Office of Technology Commercialization.

Port of Los Angeles

The Port of Los Angeles is the busiest seaport and supply chain hub in North America and one of the most important global logistics centers in the world. It is the number-one freight gateway in the US when ranked by the value of shipments. The Port's top trading partner countries are: 1) China/Hong Kong, 2) Japan, 3) South Korea, 4) Taiwan and 5) Vietnam and the most-significant volumes of goods are: furniture, automobile parts, apparel, electronic products and footwear. The Port has a strong interest to use its global network of trade relationships to support California's growth, especially in key manufacturing and export sectors.

Main Contact: Gene Seroka, Executive Director. Nominated by Mayor Eric Garcetti in 2014, Mr. Seroka is responsible for managing a more than $1B budget, advancing major capital projects, growing trade volumes and promoting innovative, sustainable practices that strengthen the region's economy. Previously Mr. Seroka led APL's Americas operations, responsible for all commercial, port terminal, intermodal, land transportation and labor activities throughout the region.

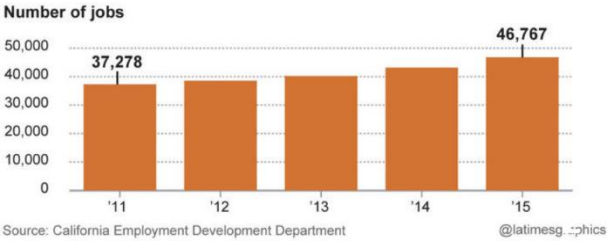
Global Logistics Development Partners | GLDPartners

GLDPartners is an international investment and advisory firm that focuses on two main issues. The firm 1) provides cutting-edge strategic supply chain and facility advice to global manufacturers, including a range in the automotive sector, and 2) help create project development and infrastructure at and around key national logistics assets, like airports, seaports and strategic multimodal hubs. The firm is comprised of senior-level experts in a range of fields including supply chain management, transportation (port, rail, truck, air), project finance, economic development and market competitiveness modelling. The firm is based in the US with offices in Arizona, Washington DC and New York, and also has offices in Canada, Mexico and the UK.

Main Contact: Adam Wasserman, Managing Partner. Mr. Wasserman has had lengthy career in the areas of transportation, corporate supply chain and infrastructure. Leading GLDPartners, he oversees the company's international projects and directly works with corporations and government bodies. Mr. Wasserman has a special knowledge about the automotive sector & frequently advises on its technology transformation from a corporate growth, supply chain & economic development perspective.

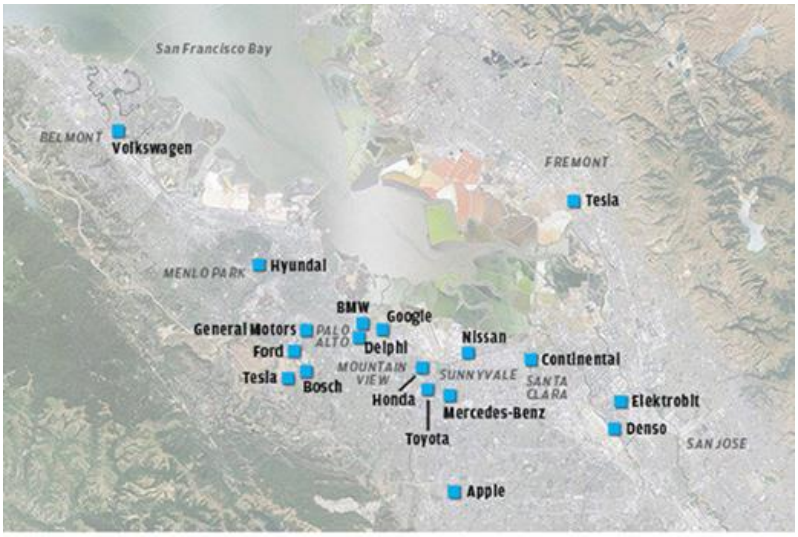
California's Burgeoning Automotive Sector: Global Innovation Hub, for Development & Manufacturing

In large part resulting from its status as the undisputed international epicenter for software engineering, innovation and technology business finance, California has become a quite significant global center for the automotive industry. Coinciding with the rapid acceleration of technology integration in the automotive sector, over the past decade the State has clearly emerged as a global hub for next-generation automotive technology research. This investment growth trend in California is evidenced by the sharp increase in sector employment, now directly employing over 50,000 people in 2016 and beyond that several multiples more in technology companies that are not classified as pure automotive companies, at firms like Google and Nvidia for example. These employees are classified as "technology employment", many of which are software engineers but with automotive-related solutions responsibilities. In the end and without any question, California has become a global center for the next-generation automotive industry. Tesla is the current manufacturing automotive manufacturing leader in the State with over 18,000 employees and currently growing significantly in the ramp-up to producing the new Model 3 which will be in production within a year.



California, with its access to venture capital and a large population of technically adept first adopters, is culturally set up to drive innovation in the auto industry. The growing reliance on software and electronics makes it crucial for automakers to have operations in California. Silicon Valley continues to be where the best software engineers in the world congregate to work on the most advanced technologies. Traditional automakers are rapidly opening or expanding research centers in Silicon Valley to make sure they are able to tap this technological expertise.

Practically every global automaker has now established a research, design presence and/or manufacturing in the State, attracted by the critical mass of software and innovation expertise. Much of that presence is in the San Francisco Bay Area, with Silicon Valley now home to literally many hundreds of established and start-up automotive technology suppliers that have now spurred the formation of a global center for automotive technology. There are five tiers of automotive technology business presence in the region: 1) established global automakers (like Toyota, Honda, Hyundai, Renault, Volkswagen, BMW, Mercedes-Benz and Nissan), 2) newly established but global automakers (such as Tesla, BYD, Proterra) 3) pure-technology firms that have turned automotive players (like Intel, Qualcomm, Nvidia, Baidu), 4) traditional automotive suppliers that are growing their technology



Ford, GM, BMW, Honda, Hyundai, Mercedes-Benz, Nissan-Renault, and Toyota have all opened R&D centers in Silicon Valley over the past several years. Credit: IDG, Wall Street Journal, Carmaker data

businesses (like Continental, Delphi and Denso) and 5) start-up specialty technology companies (like Mobileye, AC Propulsion, Arynga, Capio, EV Solutions, Nauto, Peloton, Quanergy), some of which are home grown and some are foreign firms that have established a Silicon Valley presence.

This growth is extremely dynamic with regular corporate announcements. Recently Ford announced the development of its "Western hub". The region is also a concentration for the mobility/ride sharing subsector, with tech-driven ride/car sharing services such as Uber, Lyft, Turo and Getaround all starting-up and centered in Silicon Valley and electric car charging companies like Chargepoint. There is also a fast growing automotive industry headquarters and manufacturing presence in the Los Angeles area with companies like Faraday Future in Gardena, Fisker in Costa Mesa, Proterra in City of Industry and BYD in Lancaster, with both headquarters and manufacturing plants.

As California is a testbed for new auto technologies, the State Department of Motor Vehicles (CDMV) has been heavily involved in defining the rules by which testing will be allowed under State Law. With the magnitude of interest in on road testing from companies, CDMV has now issued on-road testing permits to a range of companies that have been approved to operate of California public roadways, including:

- Volkswagen Group
- Mercedes Benz
- Google
- Delphi Automotive
- Tesla Motors
- Bosch
- Nissan
- GM Cruise
- BMW
- Honda
- Ford
- Zoox
- Drive.ai
- Faraday Future
- Baidu USA
- Wheego Electric Cars
- Valeo North America
- NextEV USA
- Telenav
- NVIDIA Corporation

An Important and Growing Phenomenon: Foreign Research & Manufacturing Investment in California

Five recently formed Chinese automakers are building strategic bases in California and their main reason for being there is access to technology and talented engineers to produce the most advanced electric vehicles in the world. As these firms plan manufacturing in both Asia and North America, another critical factor for these firms is access to quick and efficient supply chain connections between China and the US West Coast. Several of these firms were started-up in past 12-18 months and are presently undergoing rapid scale-up.

Faraday Future Plans for an advanced self-driving electric vehicle. Headquarters in Gardena and manufacturing site in NV. Funded by Le Eco (China's Netflix).

BYD China's leading electric vehicle maker, funded by billionaire Wang Chuanfu and Berkshire Hathaway. Focus is trucks and buses in North America, manufacturing in CA.

NextEV Bases in Shanghai, Munich and San Jose. Founded by Chinese billionaire (Bitauto creator China auto ecommerce) William Li. Investors: Tencent, Temasek, Sequoia, Lenovo and TPG.

蔚来汽车 NEXTEV

Karma Former Fisker Automotive, bought out of bankruptcy by China's Wanxiang Group. Operates from Costa Mesa, manufacturing plants planned in China and California.

Atieva/Lucid Beijing Automotive with Mercedes and Hyundai in China. Faraday owner Jia Yueting. Headquarters in Silicon Valley, just announced manufacturing plant in AZ.

Future Mobility Backed by Chinese luxury-car dealer Harmony New Energy Auto and Foxconn Technology Group. New facilities in Costa Mesa, Gardena, Los Angeles, San Jose and Palo Alto. Plans to sell electric, highly automated, China-built vehicles annually.

California's Growth Potential

California is a large and diversified economy and notably one of the largest singular economies in the world. The State's extraordinary technology base, complimented by a huge production and consumption market, and combined with some of the most important logistics assets in North America, provide the State an extraordinarily strong business case for growth in the automotive sector. From the perspective of investment competitiveness modelling, the State has the core attributes to attract more global investment supporting the sector's research, development and manufacturing. With global supply chain connections through the seaports in Los Angeles, Long Beach and Oakland, and international airports at LAX and SFO, the State is extraordinarily well-positioned to support commerce between the US and key automotive technology supply chain hubs in both Asia and Europe. Combined with the complimentary economic attractiveness some sector supply chain elements of surrounding states like Nevada, Arizona and New Mexico, California is poised to further develop as the global center for automotive research and development and manufacturing for the Western US.

<u>California AutoTech Testing and Development Center Project Framework</u>

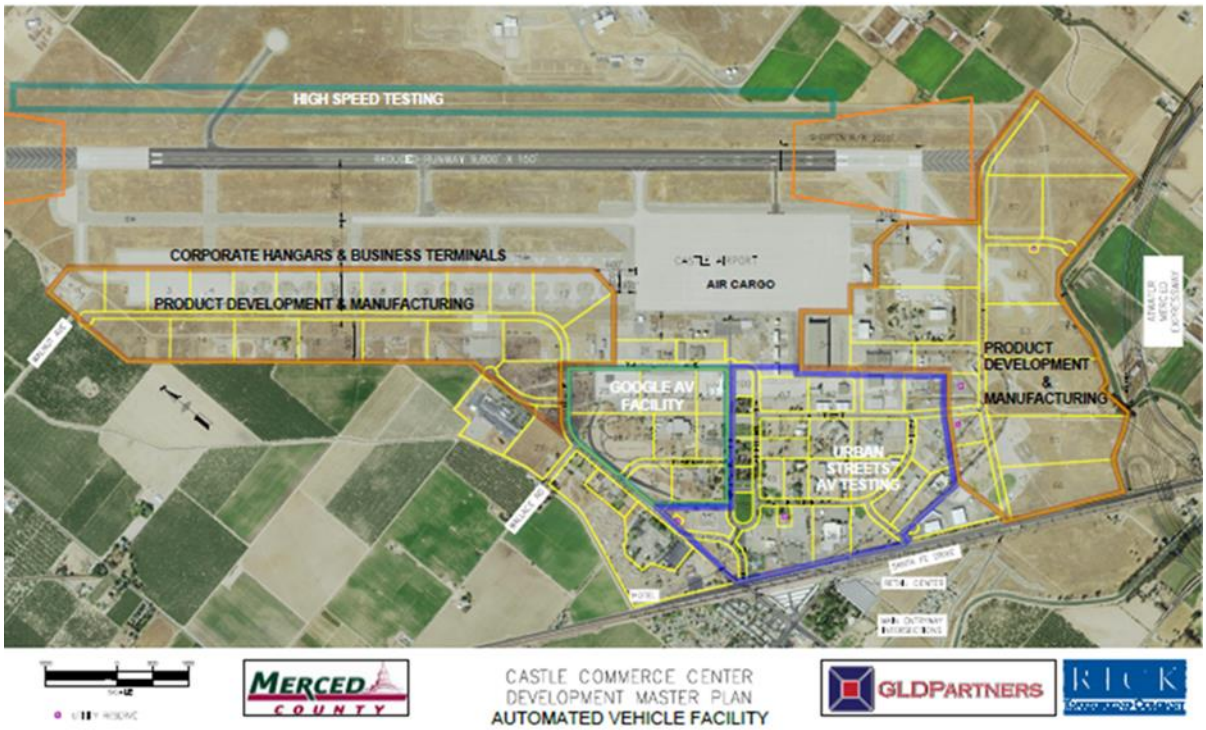
Located 80 miles directly east of San Jose, the California AutoTech Testing and Development Center (CATDC) will be an integral part of the Mid-California International Trade District (MCITD). A former Strategic Air Command Air Force Base, the MCITD is a $1B project and is being developed to be an important statewide trade and logistics center, capitalizing on the site's extremely strategic location for key supply chains. That the CATDC is part of the MCITD provides a real and practical value in that it can benefit from a tremendous amount of project planning, infrastructure investment and corporate presence that has occurred over the past few years, and that is programmed over the next several years. Unlike some other project in other places, the CATDC is permanent and supported by millions of dollars of private investment.

<u>AutoTech Project Concept</u>

The project partners believe that they represent a unique and powerful assemblage of automotive technology knowledge and experience. This collection of research professionals/development and testing capabilities, industry leading practitioners and community participants believe that it is critical that a national system of research and collaboration be created to support the development of the American automotive industry. It is an extremely critical period for both transportation technology development and technology integration, and the California AutoTech Testing and Development Center has been purpose-designed to support the development of the industry and maximize the national economic benefit. It is certain that this facility intends to use the industry presence and collaborative testing to support a wider objective, and for that a system or network of research needs to develop.

The CATDC is designed to be a one of a kind automotive research and development center that capitalizes on California's substantial technology, research, software development and tech financing presence as an integrated research, testing and manufacturing complex. The practical efficiency of being proximate to the Bay Area and Los Angeles and key technology brainpower and supply chains allows the project extraordinary access for supporting the development of auto technology. The project is a partnership of respected and nationally–known research institutions, automotive tech companies and local government to create a strategic national R&D asset. For this proposal, the project team was weighted toward research institutions with the expectation that once sanctioned as part of the national R&D network, that further private firm involvement would be formalized.

As shown below, the CATDC combines distinct onsite districts for: 1) urban streets testing, 2) high speed testing and product development and 3) manufacturing, providing a fully integrated complex for next-generation automotive technology research and prototype development, real-world product testing and technology manufacturing in one place. In addition, as a multidimensional testing and business complex, the project will practically benefit from its direct access to a cargo and high-capacity general aviation airport, to the national mainline rail system and from a brand-new highway that links the project to the national highway grid and to the aforementioned markets and global logistics assets. It is also important to note that the UC Merced main campus is located nearby and the school has invested in specialized research facilities inside the MCITD currently including its Drone Policy Hub and its Solar Research Institute.



Many automotive sector companies have described an intense requirement for this kind of asset in the vicinity of their Silicon Valley research labs and studios and with practically every motor vehicle industry corporate player in the world having a presence there, the need is high and growing. Google has invested onsite because of the site's capabilities and due to easy proximity to their Mountain View headquarters.

Numerous companies have visited the site in search of either a proprietary testing or a manufacturing location, or a combination facility leading the project team to develop this proposal. As designed, the CATDC provides for those capacities in one master-planned environment and provides California an opportunity to harness the enormous technology power of the region to become a major international automotive development and manufacturing center.

Mid-California International Trade District

The MCITD is a true multi-modal international trade complex that has valuable highway, rail and air cargo infrastructure and connectivity, with direct access to the Bay Area and Los Angeles metro regions and their international port and airport logistics assets. The project will be supported by a new $200M highway which will guarantee fast, all-highway connections to critical seaports and airports, and key supply chains in the Los Angeles and the Bay Area markets. The project will house 8M square feet of development housing research, testing and manufacturing uses. The main markets for the project include: automotive, medical products, aerospace and food production. The project's design includes several distinct sub-districts including an urban grid district and modern district housing development for large greenfield project for prototyping, product development and manufacturing investment.

Project Area	Land Area
Autonomous Vehicle Testing	247 acres
- Urban Streets Testing District	155 acres
- Google Autonomous Vehicle Testing Center	92 acres
High Speed Testing	25 acres
Product Development and Manufacturing District	750 acres

The MCITD supports investment in a dedicated automotive sector project structure that enables the site to function as an integral national automotive research and development center. Merced County and GLDPartners have conducted extensive research in competitiveness modelling, and from our analytics we see this site as extremely well-positioned to attract a range of technology and manufacturing investment. There are a number of companies already located in the project, and importantly for the CATDC this includes Google who has invested millions of dollars in their dedicated off-road automated vehicle testing complex. Moreover, the site is proving to be quite attractive to a wide range of other automotive sector firms that are seeking a proximate location to their research partners, university partners and to their proprietary R&D facilities in Silicon Valley, or in some cases in the Los Angeles metro region. The former Castle Airport site was the California site for the Tesla gigafactory project and we've been in regular contact with a range of other automotive and autotech firms who have indicated desire to use the site for testing.

Merced County has population of 250,000, but serves as center of labor shed region with 2.4M population. Overall, the MCITD development is expected to create 6000-9000 jobs ranging from mid skilled to very highly skilled technical jobs. This growth is hugely important to the entire California Central Valley, which has generally underperformed from an economic standpoint. This region has significantly higher unemployment than the State's urban centers and its population has higher poverty rates than State averages. As developer of the MCITD, Merced County has established objectives to support economic development specifically for minority and a range of disadvantaged communities. This includes special emphasis to support onsite project opportunities for minority and woman-owned businesses.

Merced County has made a significant investment to date and is managing plans for substantial new investment. The County has rezoned entire site which will enable the full range of use activities, ranging

from testing to scale manufacturing and has prioritization County funding for the new $200M Atwater-Merced Expressway. Additionally, the County has actively redefined the Castle Airport site and is revising airport planning with the FAA.

Project Operational Business Model

The CATDC will be managed by a Project Operational Board and staffed by a Project Manager who will oversee day to day activities. The Board will be comprised of founding members of the project and this body will set one and five year business plans for the project. The CATDC will also have "members" which will be part of the project's overall research ecosystem. The project will operate on a shared-asset basis, where pure research and corporate members will conduct individual and collective research and testing in the shared-use assets. Members will receive the right to utilize some or all of the project component facilities, with some of this use being on a proprietary basis and some being on a shared basis. The Board will define the Project's infrastructure and technology plan and will collaborate with the asset owner and members to refine on an ongoing basis. The Project Manager will serve as the Project Safety Officer and will be the main liaison with the national research network of proving grounds and research facilities. A project website will be activated in early 2017.

Project Commitments to USDoT and the National Research and Proving Ground Network

Safety

Historically automakers have built vehicles to meet federal safety standards and regulators largely enforced those standards once cars were sold to the public. But the advent of automation technology radically changes everything from vehicle design to driver control mechanisms and the definition of whether a human or software is doing the driving. Because of these dynamics, federal auto safety guidelines are being altered to accommodate automated technology. The new USDoT guidelines for automated vehicles are an important milestone in defining how the federal government will approach the groundbreaking technology and also define a more proactive role by auto safety regulators and greater cooperation with automakers and others in the space. We recognize that increased transparency and collaboration with US regulators is critical to create the right kind of national playing field.

We believe that federal leadership is critical as automotive technology is developing quickly and collaboration between automakers and agencies like NHTSA is critical to avoid policies that become obsolete. We recognize that we need to be clear about safety and policy as the technology enables advances through the SAE automation levels 2 and beyond. If policy doesn't keep up with the realities of the technology then there is the danger of limiting progress in the quest to reduce the number of crashes and save lives. We see this Project and the wider network of national testing facilities as a fundamental component for creating an overarching system that will guide the development of our future mobility systems.

The CATDC project partners understand that the USDoT seeks to create a system of qualified proving grounds "for the safe testing, demonstration and deployment of automated vehicle technology". The partners understand the importance of establishing a proactive system of project safety that promotes responsibility and accountability in testing activities.

As mentioned earlier, the CATDC will designate a Safety Officer who will be responsible for the Center's Safety Management Plan. This Plan will articulate operational standards and protocols for testing. The Safety Officer will participate in the National Community of Practice's regular quarterly meeting of Safety Officers in Washington DC and will be the regular interface with other proving grounds in an ongoing manner throughout the year.

Sharing and National Network Collaboration

The California AutoTech Center is fully committed to sharing approaches to safety and non-proprietary/non confidential safety data generated through testing and operation with a national network of research and development centers. Moreover, the CATDC and its partners are excited to join allied entities in developing a state of the art system to build a robust system architecture to support the national interests. We foresee a wide range of sharing and joint development, but clearly there will be a focus on automated driving systems object detection, information and alerts and displays, testing and validation methods, and also cybersecurity measures. A proactive sharing system can shorten learning curves and improve the overall safety of the self-driving fleet, and speed innovation to the practical marketplace.