

## DRAFT AV Strategies

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This document contains a set of draft strategies for the San Mateo Countywide Automated Vehicles (AV) Strategic Plan. The draft strategies were developed based on findings from the Existing Conditions Report which investigated the San Mateo County's existing transportation network, policies and programs at the local, regional, state and federal level, existing technologies, and current AV companies and operators. The Existing Conditions Report, and by extension, this summary of draft strategies, was also informed by dialogue with key stakeholders including:

- Beep
- California Department of Motor Vehicles
- California Public Utilities Commission
- Caltrans
- City of Burlingame
- City of Hillsborough
- Commute.org
- May Mobility
- Metropolitan Transportation Commission
- SamTrans
- San Francisco County Transportation Authority
- San Francisco Municipal Transportation Agency
- Undisclosed Transportation Network Company

Finally, input from stakeholders and members of the public received during a Virtual Public Workshop on November 15, 2023, will be used to inform further refinement of the draft AV strategies.

The AV strategies are draft and are subject to further refinement. This document is for discussion purposes and is not intended for broad distribution. Other draft foundational elements of the San Mateo Countywide Automated Vehicles Strategic Plan, including the draft vision statement and draft goals can be found in Appendix A: Draft Vision & Goals.

### AV Strategy Pillars

Five pillars have been identified as focus areas for the development of AV Strategies for the Countywide AV Strategic Plan. The pillars are intended to provide coherent organization to the strategies. The five pillars are as follows:

- Agency Readiness
- Infrastructure Readiness
- Public Outreach and Partnerships
- Policy
- Pilots and Testing

These pillars are described in more detail below.

**Agency Readiness** – Agencies operating in San Mateo County will need to be resourced and ready to manage the various aspects of AV operations on public roadways as AV technologies continue to be deployed in the Bay Area. Considerations include AV operations on public roadways, safety, regulation, and highway operations.

**Infrastructure Readiness** – Local agencies may consider investments into advancing transportation infrastructure networks to support AVs operating on public roadways. Infrastructure advancement may include physical changes such as improving pavement markings and striping or creating dedicated right of ways for AVs to separate them from other road users. Advancements may also include digital infrastructure such as improving the county’s fiber network, data management capabilities, and wireless connectivity (e.g., broadband, 5G). Lastly, infrastructure readiness may also include making datasets available for AV use such as work zones and curb space.

**Public Outreach and Partnerships** – The operation of AVs in San Mateo County has broad implications for a wide variety of stakeholders and communities in the region. Information about AVs should be communicated to the public in an accessible, transparent, and equitable way. Facilitating increased awareness of the technology among the public, legislators, and local agencies can build trust and facilitate information sharing. There are also opportunities to build partnerships with private AV companies to increase awareness and leverage private sector investments.

**Policy** – Public sector agencies will be required to develop policies to manage the safe, cost-effective, equitable and environmentally sustainable deployment of AVs in the county. Policies should be consistent at the local, regional, and state level and they should align with federal AV policy (as it evolves). In California, most AV regulatory policy (i.e., permitting) is set by the Department of Motor Vehicles (DMV) and the California Public Utilities Commission (CPUC) but local agencies can provide input to these state agencies to influence policy updates.

**Pilots and Testing** – The proliferation of AV technology requires agencies to have access information on performance, capabilities, applications, and data collection. Testing and pilots will enable agencies to understand potential benefits and see what is needed to support them in the future, paving the way for further developments.

There are a variety of different use cases that could be explored via testing and pilots – including transit, paratransit, ride hailing, last mile goods delivery, and private passenger AVs – to better understand each use case’s specific needs, opportunities, and impacts in real-world context to identify realistic opportunities and actions the county can make to prepare for AVs.

### Draft AV Strategies

The following tables identify the draft AV strategies in more detail. A table of proposed strategies or actions has been developed for each pillar.

Pillar 1: Agency Readiness

Strategy or Action	Timeframe	Goal Alignment
<b>Strategy 1.1 – Joint AV Working Group</b> Establish a joint AV Working Group within SMCTA, C/CAG and SamTrans to coordinate AV activities and monitor developments in the AV industry.	Near-term	<ul style="list-style-type: none"> <li>Community Engagement</li> <li>Support Local Agencies</li> </ul>
<b>Strategy 1.2 – AV Outreach and Awareness Program for Agencies</b> Establish an Internal AV Outreach and Awareness Program to educate agency staff on potential AV benefits and impacts.	Near-term	<ul style="list-style-type: none"> <li>Community Engagement</li> <li>Support Local Agencies</li> </ul>
<b>Strategy 1.3 – Determine AV Staffing Needs</b> Investigate AV staffing needs for county agencies and develop AV staffing plan.	Near-term	<ul style="list-style-type: none"> <li>Workforce Development</li> </ul>
<b>Strategy 1.4 – AV Training</b> Develop training resources for agencies in the county to remain current on the AV industry. For example, job training for agency staff to help them understand the benefits and challenges of AVs and how to appropriately include AVs in agency projects.	Medium-term	<ul style="list-style-type: none"> <li>Support Local Agencies</li> <li>Workforce Development</li> </ul>
<b>Strategy 1.5 – Integrate AV into Planning Process</b> Integrate AV into the county's planning process by considering their impact on future traffic (e.g., congestion, safety, mode choice) in long-term plans like the Countywide Transportation Plan update and Travel Demand Model.	Medium-term	<ul style="list-style-type: none"> <li>Accessibility and Equity</li> <li>Connectivity</li> <li>Safety</li> <li>Sustainability</li> </ul>

Pillar 2: Infrastructure Readiness

Strategy or Action	Timeframe	Goal Alignment
<b>Strategy 2.1 – Investigate AV Needs for Changes to Physical Infrastructure</b> Investigate the need to change physical infrastructure (e.g. pavement markings, bus stops) to support AVs and promote safe interactions between AVs and other road users (e.g., pedestrians/bikes). Outcome is a set of design guidelines for Cities to use.	Near-term	<ul style="list-style-type: none"> <li>Safety</li> <li>Support Local Agencies</li> </ul>

Strategy or Action	Timeframe	Goal Alignment
<b>Strategy 2.2 – Investigate AV Needs for Digital Infrastructure</b> Investigate AV needs for digital infrastructure (e.g., work zone data, curb space data, V2I connectivity, digital mapping, etc.). Outcome is guidance for the Cities to consider.	Near-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Safety</li> <li>• Support Local Agencies</li> </ul>
<b>Strategy 2.3 – Infrastructure Assessment</b> Building on strategies 2.1 and 2.2, assess existing county infrastructure to determine locations with deficiencies or opportunities to upgrade county infrastructure to support AVs.	Medium-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Safety</li> <li>• Support Local Agencies</li> </ul>
<b>Strategy 2.4 – Upgrade County Infrastructure to Make it AV-ready</b> Building on strategy 2.3, strategically upgrade county physical and digital infrastructure to support AVs.	Long-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Safety</li> <li>• Support Local Agencies</li> </ul>

### Pillar 3: Public Outreach and Partnerships

Strategy or Action	Timeframe	Goal Alignment
<b>Strategy 3.1 – Industry Collaboration</b> Actively engage in dialogue with industry organizations and peers through working groups, conference attendance, conversations, and more.	Near-term	<ul style="list-style-type: none"> <li>• Accessibility &amp; Equity</li> <li>• Community Engagement</li> <li>• Support Local Agencies</li> </ul>
<b>Strategy 3.2- Public Education</b> Develop public outreach plans and fund outreach efforts that lay the groundwork for focus groups, user testing, public meetings, and other community events related to AV engagement and education.	Near-term	<ul style="list-style-type: none"> <li>• Accessibility &amp; Equity</li> <li>• Community Engagement</li> </ul>
<b>Strategy 3.3- Legislative Outreach</b> Develop outreach plans to educate and engage public officials for future policy and regulation needs. AV will need to be incorporated into the TA's legislative platform and will need to consider C/CAG's legislative committee.	Near-term	<ul style="list-style-type: none"> <li>• Community Engagement</li> <li>• Workforce Development</li> </ul>
<b>Strategy 3.4 – Public Private Partnerships</b> Explore new public-private business models and partnerships to facilitate AV deployment.	Medium-term	<ul style="list-style-type: none"> <li>• Community Engagement</li> <li>• Support Local Agencies</li> <li>• Workforce Development</li> </ul>

Pillar 4: Policy

Strategy or Action	Timeframe	Goal Alignment
<b>Strategy 4.1 – Support Regional AV Goals</b> Work with MTC and other local agencies to support regional goals and policies related to implementation of AV. For example, pursue policies that limit workforce displacement resulting from AVs.	Near-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Safety</li> <li>• Sustainability</li> <li>• Support Local Agencies</li> <li>• Workforce Development</li> </ul>
<b>Strategy 4.2 – Engage with State Regulatory Agencies</b> Monitor state regulations set by California DMV and CPUC on AVs. Engage with these agencies as appropriate to understand and influence state rules about how AVs interact with law enforcement/first responders and data sharing with AV companies.	Near-term	<ul style="list-style-type: none"> <li>• Safety</li> <li>• Support Local Agencies</li> </ul>
<b>Strategy 4.3 – Establish a Data Sharing Policy for AVs</b> Establish metrics for measuring AV impacts (e.g., VMT, transit ridership, crash rates, near misses, etc.) and establish a list of data desired from AV companies that deploy in the county. Share data needs with State agencies.	Near-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Safety</li> <li>• Sustainability</li> <li>• Support Local Agencies</li> </ul>
<b>Strategy 4.4 – Establish an Equity Policy for AVs</b> Develop policy that requires the consideration of equity as part of any public spending supporting AV testing and deployment. Equity considerations may include racial equity, low income, physical and cognitive disabilities.	Near-term	<ul style="list-style-type: none"> <li>• Accessibility and Equity</li> </ul>
<b>Strategy 4.5 – Incorporate AVs into County Funding Programs</b> Look for opportunities to incorporate AV concepts into existing county funding programs to encourage local municipalities and/or companies to explore and lead their own AV projects.	Medium-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Safety</li> <li>• Sustainability</li> <li>• Support Local Agencies</li> </ul>

Pillar 5: Pilots and Testing

Strategy or Action	Timeframe	Goal Alignment
<b>Strategy 5.1 – AV Pilot Planning</b>	Near-term	<ul style="list-style-type: none"> <li>• Community Engagement</li> </ul>

Strategy or Action	Timeframe	Goal Alignment
Hold open discussions with self-certified, permitted AV companies and the public about testing in San Mateo County. Compile a list of potential funding sources and concepts for future pilot and testing activities.		<ul style="list-style-type: none"> <li>• Support Local Agencies</li> </ul>
<b>Strategy 5.2 – Shared AV Shuttle Pilot</b> Fund and execute a shared AV shuttle pilot at one or more locations in the county to improve first/last mile connections to transit. (Description of this action in the final report will include the recommended approach, goals, partners, and roles.)	Medium-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Support Local Agencies</li> <li>• Sustainability</li> </ul>
<b>Strategy 5.3 – Transit ADAS Pilot</b> Fund and execute for an AV pilot to equip SamTrans buses with ADAS to improve driver safety. (Description of this action in the final report will include the recommended approach, goals, partners, and roles.)	Medium-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Safety</li> <li>• Support Local Agencies</li> <li>• Sustainability</li> </ul>
<b>Strategy 5.4 – AV Data Sharing Pilot</b> Fund and execute an AV pilot focused on providing work zone data and curb use data to an AV partner. (Description of this action in the final report will include the recommended approach, goals, partners, and roles.)	Medium-term	<ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Safety</li> <li>• Support Local Agencies</li> <li>• Sustainability</li> </ul>

## Appendix A: Draft Vision & Goals

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### 2.1. Draft Vision Statement

SMCTA and C/CAG will support strategic measures toward implementing automated vehicle technologies that promote equitable levels of access, safety, reliability, and sustainability in San Mateo County.

### 2.2. Goals (or Guiding Principles)

**Accessibility & Equity** – leverage AV technologies to make traveling more accessible and affordable for people of all ages, abilities, and income levels.

**Engagement** – conduct outreach with communities and the private sector to increase awareness about AV technologies and assess community priorities.

**Connectivity** – utilize AV technologies that connect to regional transit and community destinations to reduce traffic congestion and vehicle miles traveled.

**Safety** – apply AV technologies to enhance the safety of all road users and support local agencies in meeting their Vision Zero targets.

**Support Local Agencies** – provide technical assistance, funding, and training to local agencies to promote successful AV deployments.

**Sustainability** – prioritize AV technologies that reduce greenhouse gas emissions and support local agencies in meeting their climate action goals.

**Workforce Development** – utilize AV research, development, and deployment to promote job creation and economic vitality.