Strategic Vision for Automated Vehicles

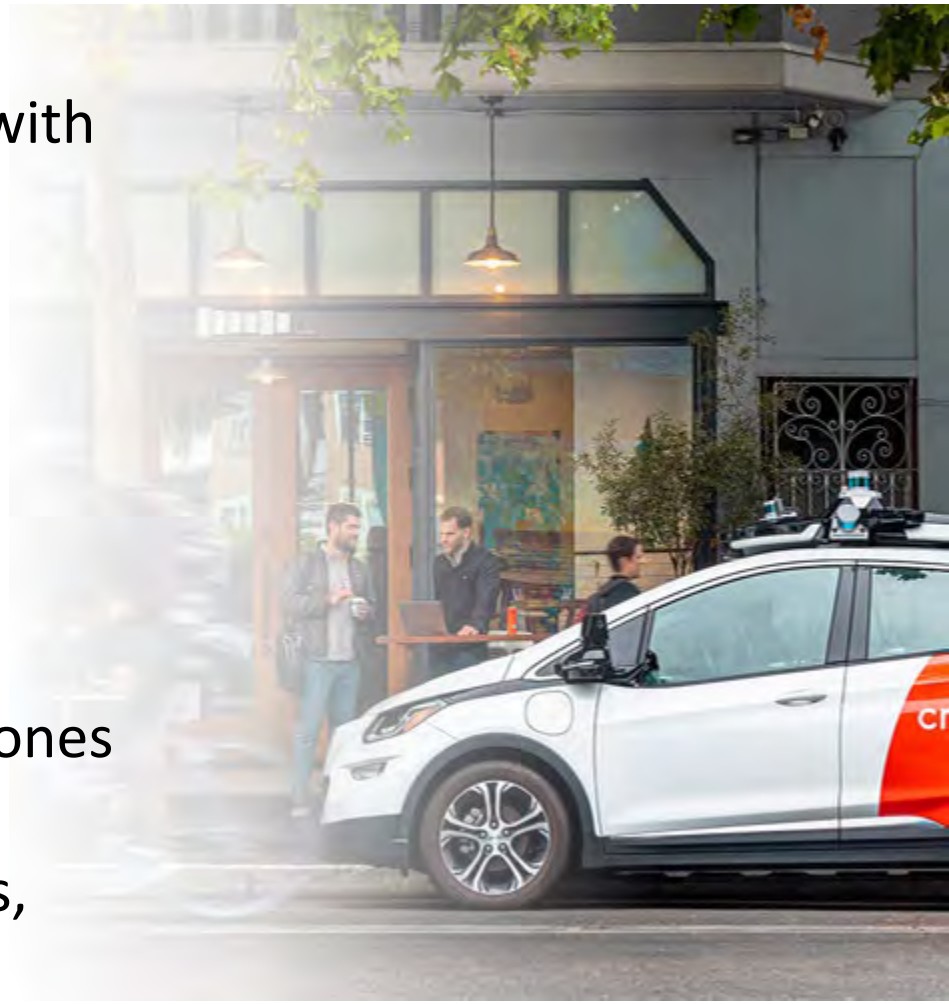
AV Strategic Vision

Why?

- Prepare for automated mobility, with a focus on ensuring that programming, resources, and investments are maximizing the readiness at varying levels of AV deployment in the region.

How?

- State of the Industry Review
- Technology Readiness and Milestones
- Needs Assessment
- Recommendations, Opportunities, and Risk



Regional Goals for Bellevue/Seattle

- Improve Safety
- Invest in Innovation
- Ensure Transportation Equity
- Leverage Strategic Partnerships
- Increase Mobility Options
- Enhance Sustainability

Adapted from City of Bellevue 2018 Smart Mobility Plan; SDOT 2017 New Mobility Playbook, and Washington State AV Work Group 2018 Cooperative Automated Transportation Policy Framework

AV Applications

Stakeholder Outreach Findings

Public Agency Outreach:

City of Bellevue Washington

WSDOT

Seattle Department of Transportation

Puget Sound Regional Council

Washington State Autonomous Vehicle Work Group

AV Manufacturer Outreach:

Motional

cruise

mobileye An Intel Company

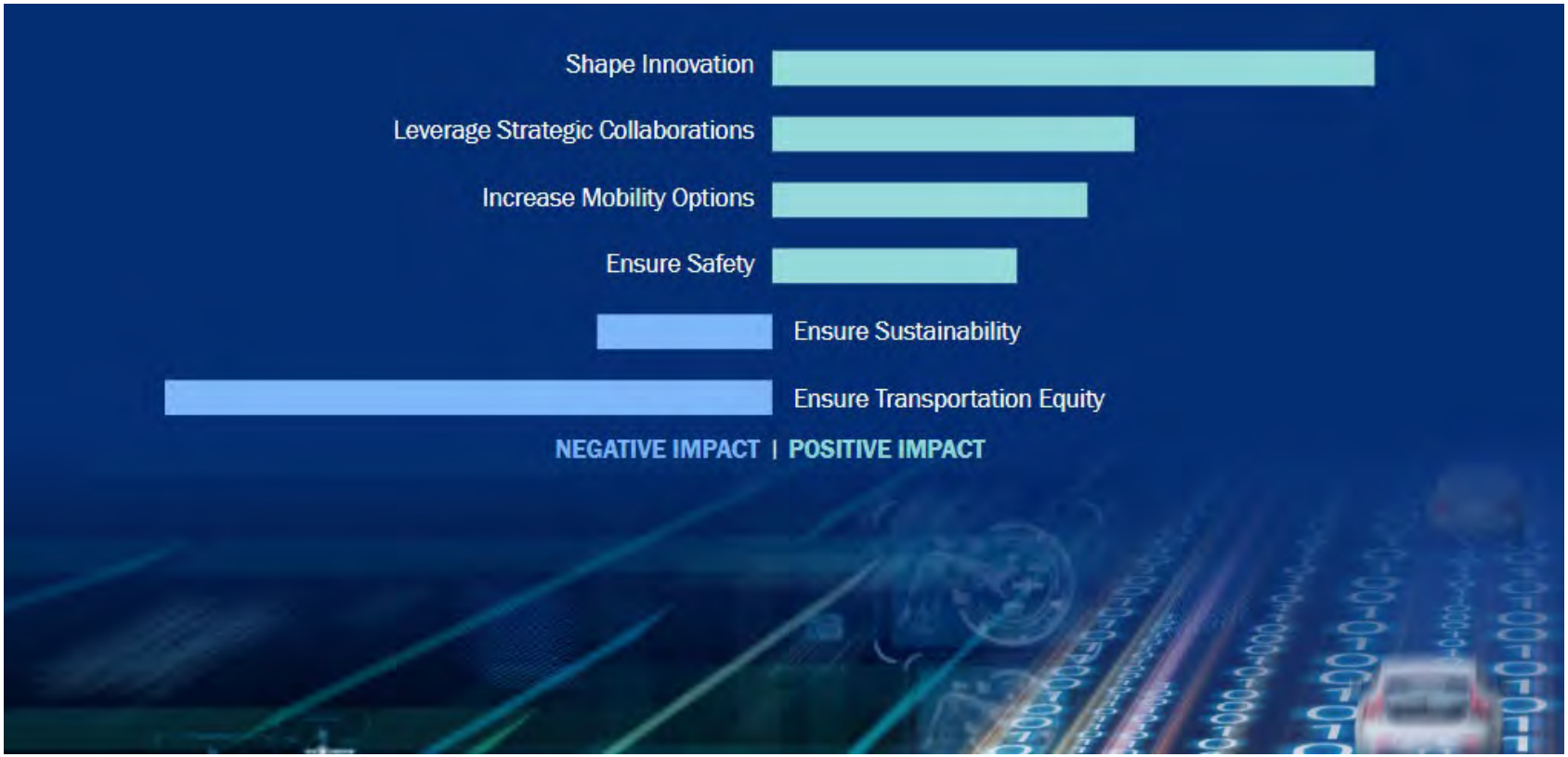
ZOOX

WAYMO

Key Themes:

- **Consider AV Curb Usage**
- **Ensure Safety of AVs on Public Roads**
- **Improve Public Awareness for Technology**
- **Develop Streamlined Permitting Process**

Sentiment Regarding AVs



Top Opportunities and Risks for AVs

Opportunities

Risks

Stakeholder Outreach Findings

Major AV Developer Needs

- Designated legal pick-up/drop-off locations for AV activities
- Operating needs of profitable AV business models
- Permit requirements and regulations across jurisdictions that are streamlined and clear (i.e., minimize variation between states)
- Funding opportunities to further AV deployments

Outreach Completed:

Motional

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Regulatory and Policy Roles

Federal Role

- Setting Federal Motor Vehicle Safety Standards specific to AVs
- Establishing rulemaking to ensure AV and occupant safety
- Incentivizing increased research and development via federal transportation programs
- Establishing AV manufacturer standards for cybersecurity and data privacy

State Role

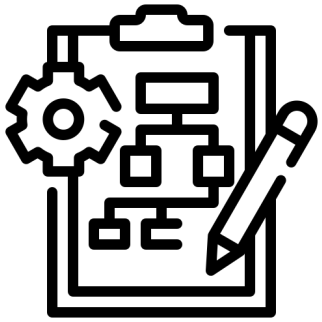
- Enacting/enforcing AV laws that allow for increased testing on public roads
- Establishing regulatory framework and oversight process that ensures safety requirements are met
- Expanding regulations for motor vehicle insurance and liability to encompass AVs
- Updating areas of state law, such as law enforcement, emergency response, vehicle registration, and environmental regulations as necessary to accommodate AVs

Local Role

- Implementing AV policies that are aligned and complementary with state AV policies or help fill in gaps where state AV policies are lacking
- Developing a localized approach to AV deployment that helps to achieve regional goals and ensures the safe operation of AVs on public streets
- Managing and operating local infrastructure and systems

Contrasting Between Two Approaches

Shaping the Outcome:



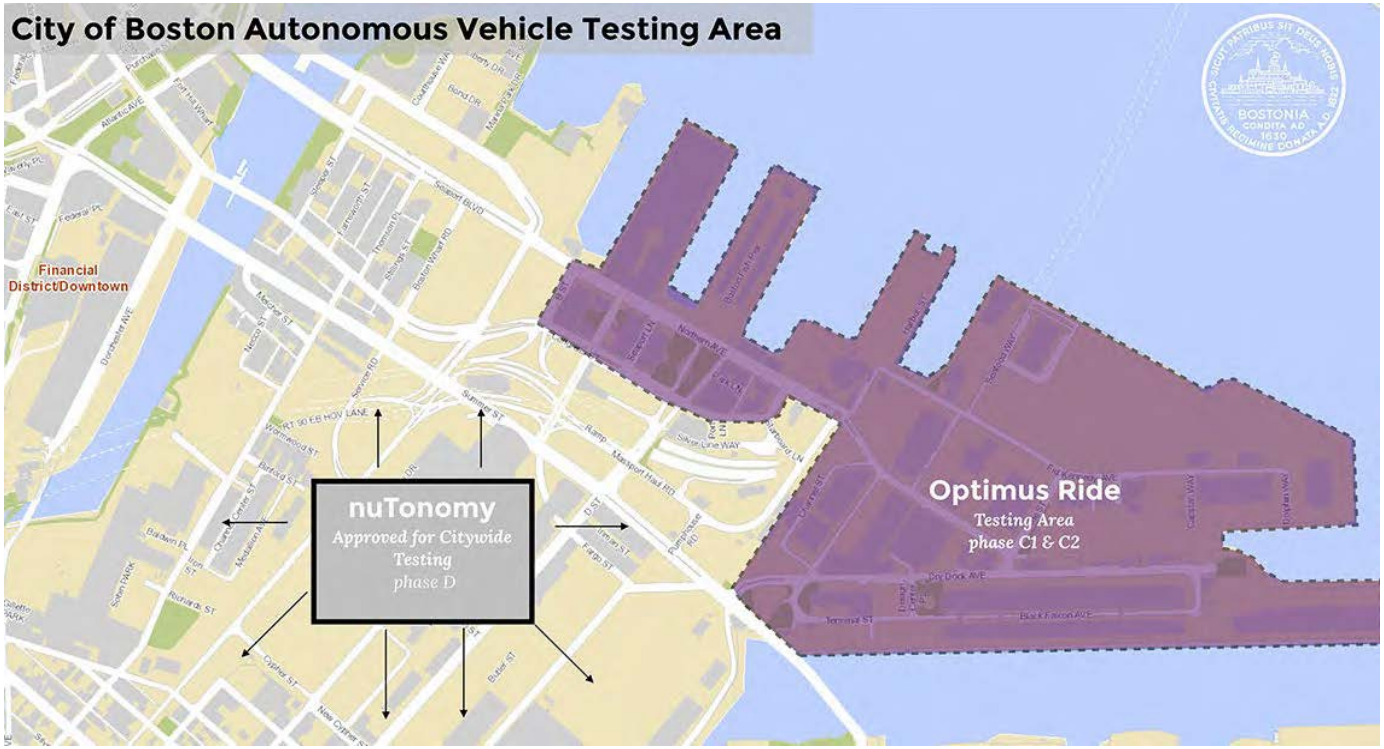
- Bellevue and Seattle can identify AV service models that enhance livability.

Leaving it to Chance:

- AV companies may rely on services models that are profitable, which may not meet regional goals.

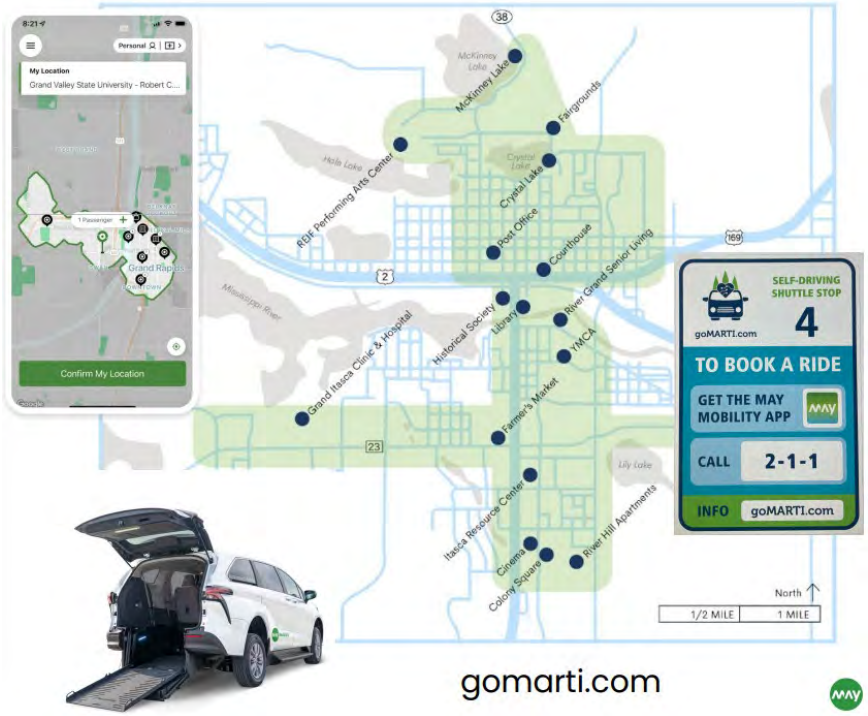
Boston Case Study: Graduated Testing

Developed graduated test plan that slowly increases level of complexity



goMARTI Case Study: AV Shuttle Deployment

- First accessibility-focused, rural, self-driving pilot
- 5 AVs including 3 accessible vehicles
- On-demand service with 69 predefined stops
- Provided 3 public community sessions to provide awareness, education, and feedback
- Operation hours compliment public transit service

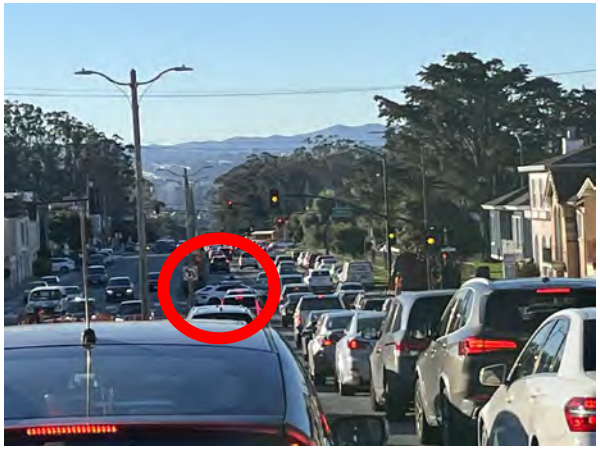


San Francisco Case Study: Waymo One

- Launched robotaxi service in 2021
- App-based services similar to TNCs
- Humanless automated driving operations
- Using Jaguar I-PACE EV platform
- Important considerations:
  - Incrementalism
  - Transparency
  - Improved reporting

Lessons from San Francisco

- 92 unique stops obstructing travel lanes in 216-day period
- 70% of obstructions occurred on SF High Injury Network streets
- 88% of obstructions occurred on streets with transit service
- Reports of AVs blocking fire department vehicles, driving over fire hoses, entering active firefighting scenes



AV Technology Timeline