



City of Bellevue

# **Update on Smart Mobility and Introduction to Automated Vehicle Strategic Vision**

Andrew Singelakis | Transportation Department

Daniel Lai | Transportation Department

Sam Van Hecke | Cambridge Systematics

June 6, 2022

A blue L-shaped line starting from a solid blue circle, extending horizontally to the left and then vertically down to the left of the word 'Information'.

# Information

Tonight's Study Session will provide Council with an update on the Smart Mobility program and an introduction into the Automated Vehicle Strategic Vision project.

# AGENDA



Smart Mobility Vision & Initiatives



Smart Mobility Recent Accomplishments



Automated Vehicles Strategic Vision



Smart Mobility Upcoming Opportunities

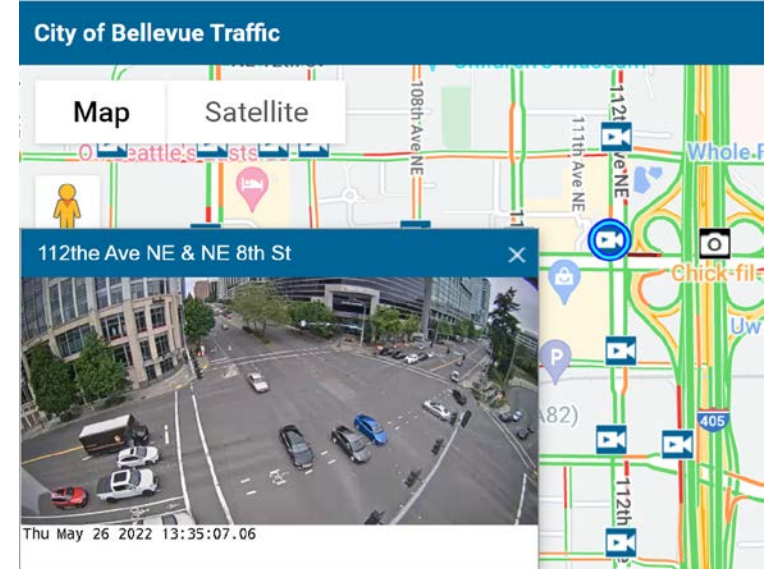
# Smart Mobility Vision

Use innovation and partnerships to deploy emerging technologies that enhance the safety, sustainability, efficiency, and accessibility of Bellevue's transportation system.



# Smart Mobility Initiatives

1. Traffic Management
2. Real-time Traveler Information
3. Data Management
4. Electric Vehicles
5. Autonomous & Connected Vehicles
6. Shared Mobility

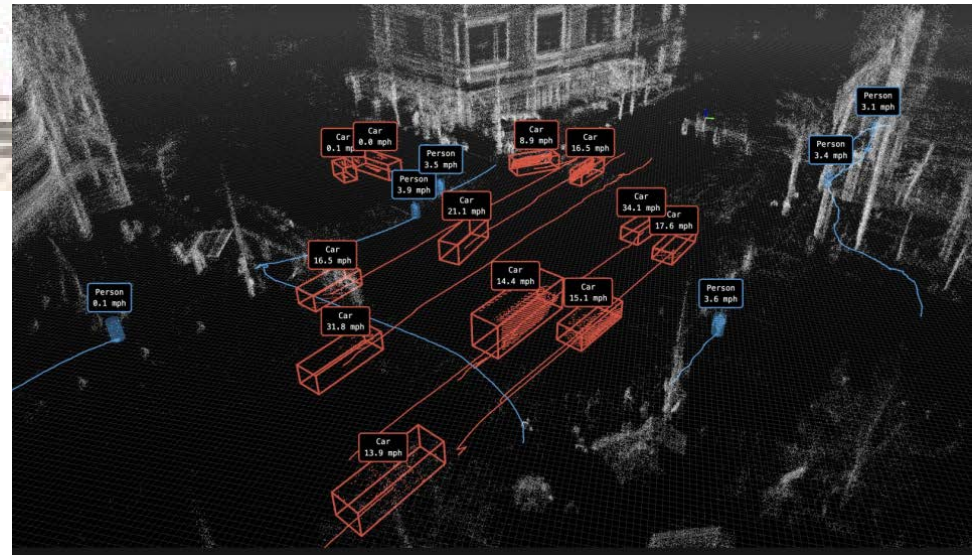


# Smart Mobility Accomplishments



Advanced sensor technology at  
two pilot intersections in  
Downtown Bellevue

- Bellevue reached 100% adaptive signal control in 2016
- 100% high speed network connectivity between traffic signal and city hall





# Smart Mobility Accomplishments

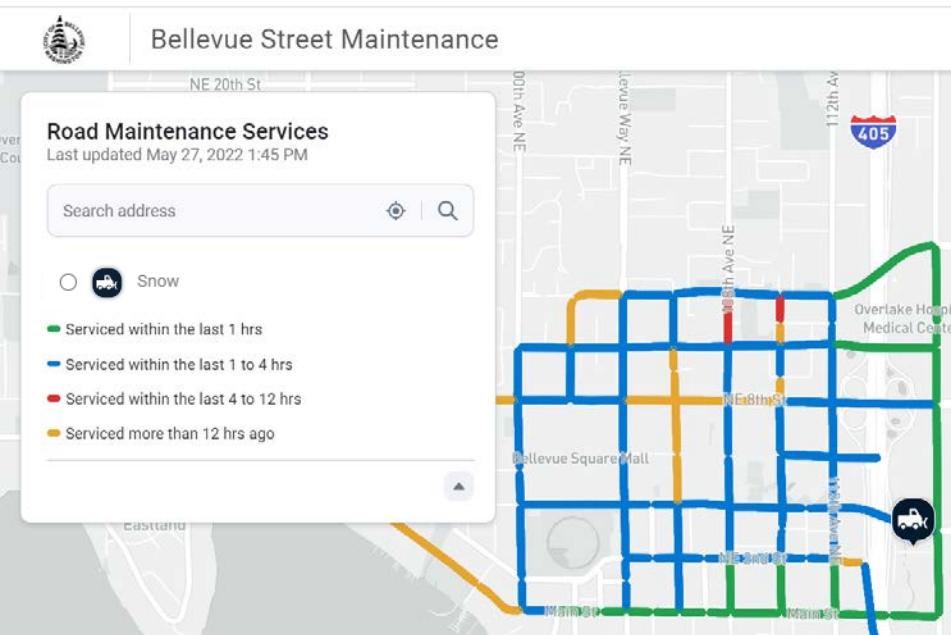


Next Generation Transit Signal  
Priority Partnership with King  
County Metro

Advanced signal timing capabilities  
to manage at-grade LRT crossings

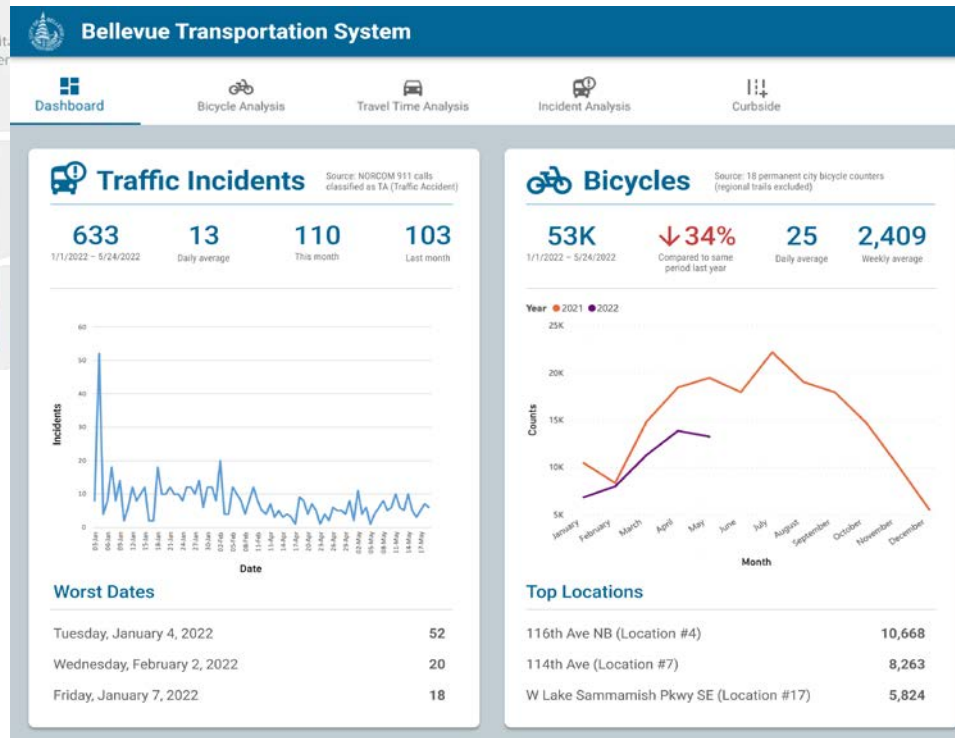


# Smart Mobility Accomplishments



Automated dashboard for monitoring system performance

Public-facing winter weather road response map for winter 2022/2023





# Strategic Vision for Automated Vehicles



City of Seattle



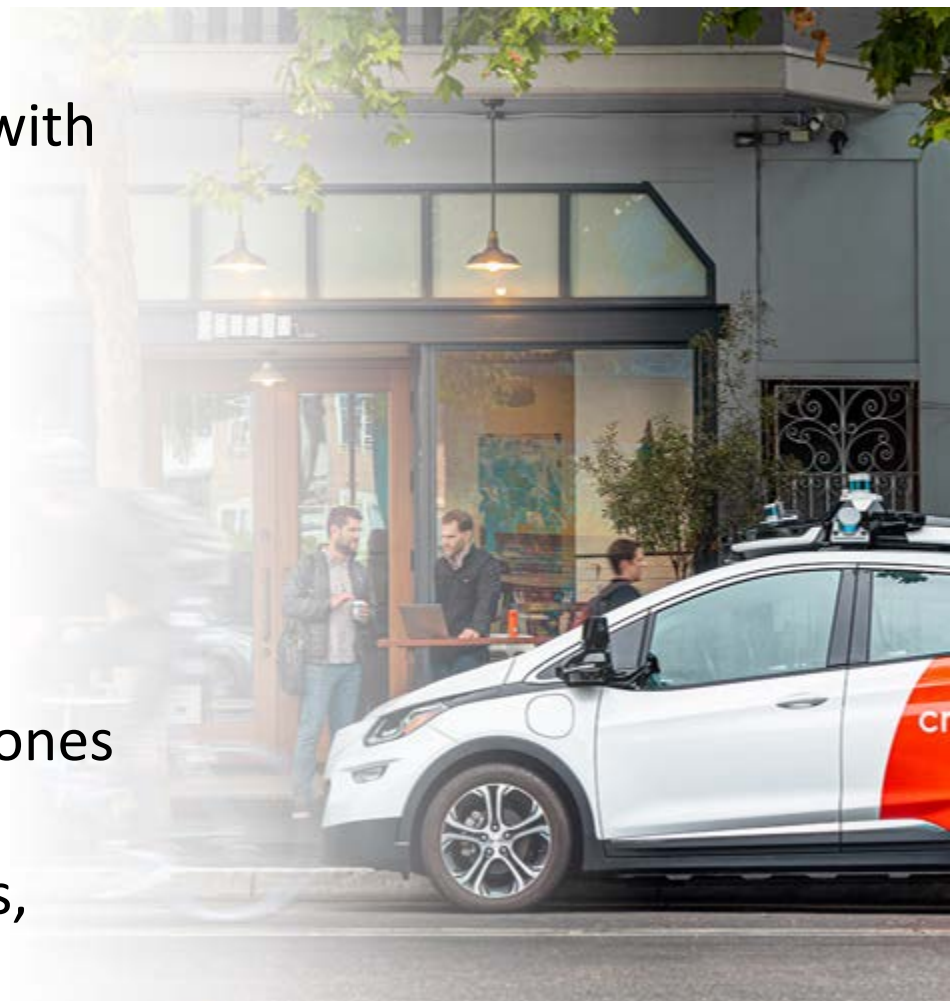
# AV Strategic Vision

## 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:



**Seattle**  
Department of  
Transportation



Puget Sound Regional Council



WASHINGTON STATE  
AUTONOMOUS VEHICLE  
WORK GROUP

## AV Manufacturer Outreach:



**cruise**



**ZOOX**

## Key Themes:

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



# Regulatory and Policy Roles



## Federal Role

- Setting Federal Motor Vehicle Safety Standards (FMVSS) for new motor vehicles and equipment
- Enforcing compliance with FMVSS
- Investigating/managing noncompliance
- Public education of motor vehicle safety issues

## State Role

- Licensing human drivers
- Registering motor vehicles
- Enacting/enforcing traffic laws
- Conducting safety inspections
- Regulating motor vehicle insurance and liability

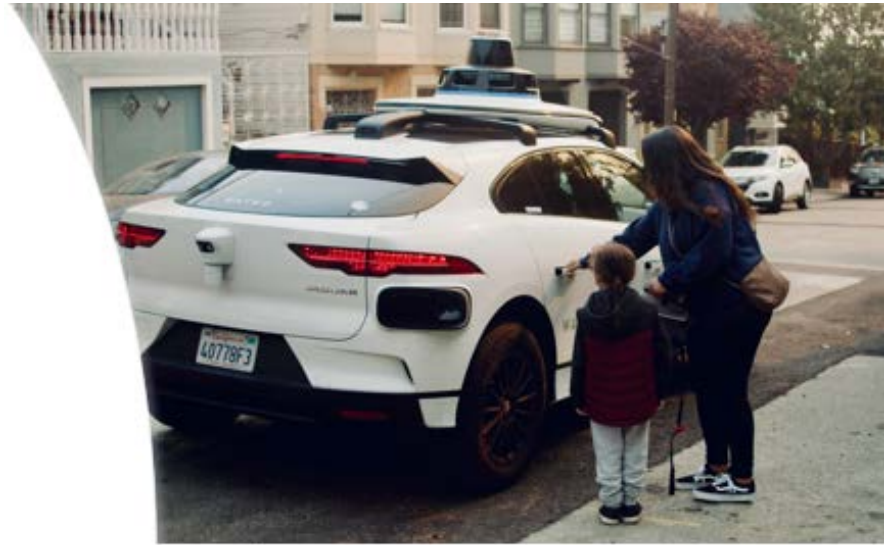
## Local Role

- Implement AV policies that are aligned and complementary with state AV policies
- Develop a localized approach to AV deployment that helps to achieve regional goals
- Manage and operate local infrastructure/systems

# AV Case Studies

## San Francisco, CA

- Commercial driverless robotaxi operations (Waymo, Cruise)
- Commercial driverless goods delivery (Nuro)
- Launched robotaxi service in 2021



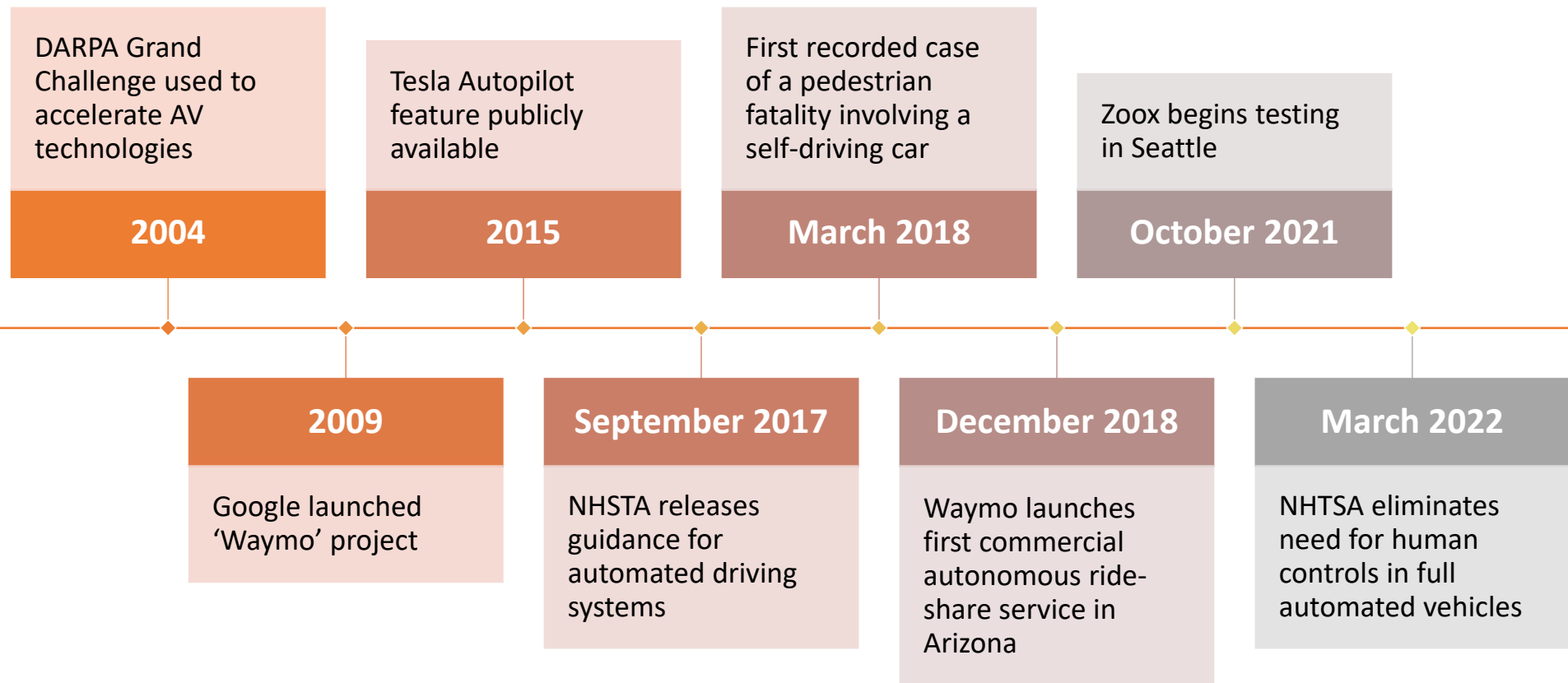
## Las Vegas, NV

- First-last mile low-speed shuttle service (25mph top speed)
- Providing mobility option for seniors and the disabled





# Major Milestones in AV Technology



# Next Steps

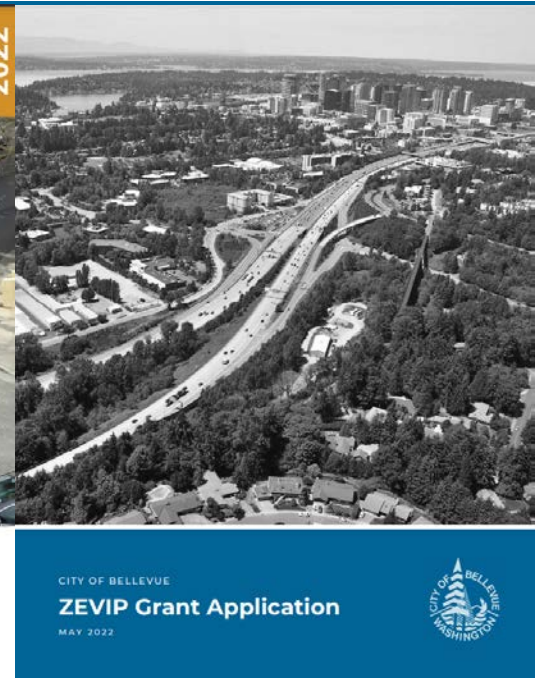
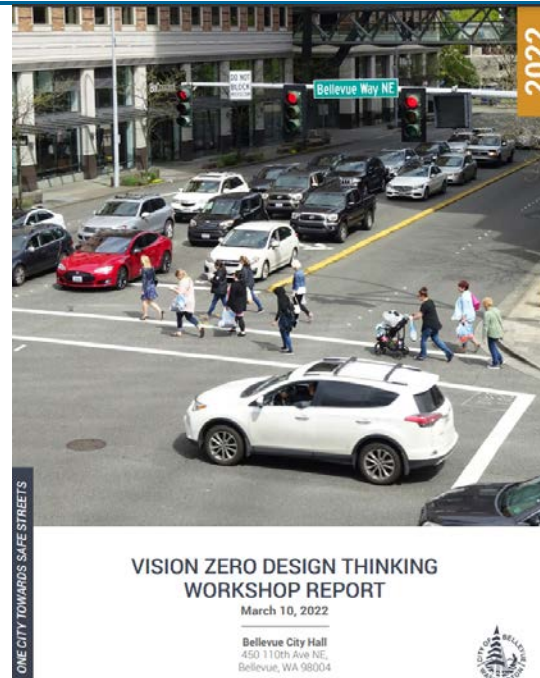
---

## AV Roadmap

- Identify candidate AV regulatory tools
- Document best practices
- Describe projected timeframes for arrival of AVs
- Identify local agency actions:
  - Do Something vs. Do Nothing
  - Map out Near-term, Mid-term, or Long-term Actions
  - Coordinate Federal/State/Local Roles and Responsibilities
- Update Council with Roadmap in Q4 2022

# Upcoming Opportunities

- USDOT Safe Streets and Roads for All
- USDOT Strengthening Mobility and Revolutionizing Transportation (SMART) Grant
- WSDOT Zero-Emissions Vehicle Infrastructure Partnership Grant
- USDOT Small Business Innovation Research Grant
- USDOT \$10K Intersection Safety Challenge



Partners:

**AIWAYSION**



Advanced  
Mobility  
Analytics



**Shell**  
**Recharge**

**W**  
UNIVERSITY of  
WASHINGTON

**iteris**

