How Can Urban Planning Engage in the AV Revolution?:

Make AVs Work for Us

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What is the Role of Urban Planning?
How can Urban Planning guide the AV Revolution?

“How can Urban planning can be described as a technical and political process concerned with the welfare of people, control of the use of land, design of the urban environment including transportation and communications networks, and protection and enhancement of the natural environment.”

(Wikipedia)
1. Articulate what is at stake with the Introduction of Automated Vehicles
AV: Greatest Disruption in 100 Years?

Impact to cities could be as significant as the invention of the car. **Policy decisions** will determine their impact.

Utopian vision: Automated vehicles complement active transportation and mass transit, radically reduce the total number of cars, increase safety and mobility options, and free up public space currently used for parking.

Nightmare vision: Automated vehicles induce longer commutes and sprawling development, compete with walking and cycling, and reduce investment in high capacity mass transit.
Is This What 10,000 Steps Looks Like?

How will society in the future interact?
How should the streets in cities function in the future?

Do “driverless” cars mean a people-less city?
How will streets in cities function in the future?
Automated Vehicles & Congestion

Our current transportation systems are imbalanced and inefficient. We use our cars 5% of the time and at 25% seat utilization.
2. Establish Clear Policy Outcomes and Long Range Plans to place AVs in context and connect the dots between transportation and land use
AV’s should advance the outcomes/goals in Comprehensive Plan

- **Vision Zero**: Prioritize Safety on our streets particularly for most vulnerable travelers
- **Health**: support active transportation and healthy communities
- **Economic Opportunity**: Support local economic growth and great places
- **Equity**: ensure benefits accrue to disadvantaged people without increased burden
- **Congestion & Climate**: reduce burden on the transportation system and environment
Policy: Prioritize!

- Walking
- Bicycling
- Transit
  - FAVES
  - Other shared
  - No & low

- Fleet
- Autonomated Vehicles
- Electric & Shared
3. Create A Clear Operating Landscape And Role For Local Agencies
Federal Role
- Vehicle safety testing and certification
- Funding for state and local V2I and pilot projects

State Role
- Vehicle Registration
- AV operations on state roads
- Funding for V2I and pilot projects

Local Role
- AV operations on local roads (City Engineer authority)
- Pilot projects
- Managing Mobility Services
Getting Ahead: Portland’s Smart Autonomated Vehicle Initiative

Mayor & Transportation Commissioner announced Portland’s Smart Autonomated Vehicle Initiative in April 2017

Invites AV Testing and Piloting in Portland

Directed staff to prepare four elements:
1. Policy foundation
2. Request For Information (RFI)
3. Administrative Rule: framework for permitting, data collection
4. Public Engagement Strategy

“We want to do AV right.”
What will determine the outcome?
Policy & Actions

Portland Administrative Rule and Permit Process

Establishes clear path for AV test approval/permit
• Requires a Permit for use of city streets
• Establishes clear approval criteria
• Requests basic info: what, when, where
• Builds on TNC permitting framework
• Lays out public engagement process (if needed)
• Clarifies data reporting
• Indemnifies City
• Creates interim fee structure
Local Role: Managing AV Operations

Tools
• Street design
• Parking
• Pick-up and drop-off zones
• Speeds
• Freight loading and unloading
• Efficiency incentives
• EV charging
• Smart V2I infrastructure
• Technology on poles or in pavement
• New maintenance requirements
• Pricing
4. Continually Invite Private Sector Partnerships
• Invites organizations to identify potential AV tests/Pilots that advance Portland’s goals
• Builds off AV proving grounds application
• Asks them what they need from us (e.g. pick-up & drop-off zones, testing facility (PIR), permit to operate, Transit last mile funding partnership)
• Identifies what outcomes we want and what data we need to evaluate success
• Informs public engagement approach
• First step toward partnerships, to be followed by permit assistance and/or specific RFP for operating partnerships

RFI Received 19 responses from 5 states
5. Measure Against Goals
Invest In the Good- Regulate the Bad
SAVI: Goals-Based Policy

How do we assess the impact of specific AV proposals?

Public Action
Regulate    Enable    Partner

Vision Zero
Health
Economic Opportunity
Equity
Congestion & Climate
Pricing: Price Inefficiency & Reward Efficiency

Create Pricing Structures based on Number People Served

Pricing = Rewarding Efficiency
- Location/congestion level
- Time of day
- Number of passengers
- Fuel efficiency
- Parking > Pick-up and drop-off zones
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Most effective way to move 60 people?

Personal gain or system efficiency?
Technology can calculate for system efficiency better than humans. But only if we tell it what to prioritize...
Embed Pricing Principles into existing processes

Draft Portland AV Permit Fee structure

**Connected and Autonomous Vehicle Fee Schedule**
The following fees must be paid before a permit will be issued.

**Pilot Application fees**
- AV Permit Application Fee - $250.00 (non-refundable)
- Public Road Right-of-Way Operator Fee - $100.00/Operator
- Operator Background Check - $75.00/Operator
- Company Permit Fee - $500.00
- Public Right-of-Way Vehicle Fee - $250.00/Vehicle

**Pilot Road User Charges**
- Infrastructure Connection Fee - $XX/usage or $XX/monthly bulk usage charge
- Congestion Fee - $XX per trip in congestion zones during peak hours (TBD)
- Efficiency fee - Rate TBD by vehicle fuel efficiency
- OreGo Registration Required* - $0.015/mile

*Information about OreGo registration can be found at [http://www.myorego.org/about/](http://www.myorego.org/about/).

**Full Deployment Fees**
This fee structure will be developed over time in consultation with stakeholders.

Will Gas Tax and Parking Revenues will go away?

How Can we increase the use of OreGo now?

Could TNCs “ridefees” be modified to focus on infrastructure use and system efficiency?

Is a Curb Zone Access Fee the new Parking?
7. Iterate To Help Your Community Adapt

Convene, Adapt, Convene Again
Thanks!

For more information go to: Portlandoregon.gov/SAVI

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