Pre-Publication Conference
Connected Vehicle Ecosystem

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Maureen Bock, Chief Innovation Officer
Jim Atkins, Business Partner Manager
October 26, 2021
This webinar is being recorded. A copy of the presentation will be posted to ODOT’s Office of Innovation website. URL: Oregon Department of Transportation : Connected Vehicles : Programs : State of Oregon

Type in questions in the Chat Box and we will respond at the end of the webinar. The questions and answers will be posted with the presentation materials.

Further written questions will be answered in writing and published on the website. To submit questions, please email us officeinnovation@odot.state.or.us

Input will be considered when finalizing the Request for Proposals.

The requirements in this presentation are intended to be illustrative and those in the Request for Proposal will be more definitive.
Pre-Publication Conference Agenda

- Welcome and Agenda
- Overview of CV Ecosystem Project and the Road Use Charging (RUC) program
- Description of Funding Opportunity
- Question & Answer Session
- Closing & Contact Information
Overview of Connected Vehicle Ecosystem Project

Galen McGill
System Operations & ITS Manager
ODOT Strategic Priorities

Modern Transportation System

Equity

Sufficient and Reliable Funding
Implement Transformative Technologies

By the end of 2023, ODOT will make advancements in projects that bring transformative technology to Oregon’s Transportation System.
Connected Vehicles

- Vehicles are becoming mobile sensor platforms
- Growing importance of digital infrastructure in addition to physical
- Connectivity can improve safety and mobility
- Connectivity can support road usage charging
V2X Data Platform
Connected Vehicle Ecosystem
Enabling V2I, I2V, V2V, and V2X

**V2X VEHICLE-TO-EVERYTHING**

- V2I
- V2I
- V2P
- V2P
- V2V

**DIRECT COMMUNICATIONS**
- USES DSRC/C-V2X
- OPERATES IN THE ITS BAND (5.9 GHz)

**V2N VEHICLE-TO-NETWORK**

- V2N
- V2N

**NETWORK COMMUNICATIONS**
- LTE/5G FOR V2N
- OPERATES IN LICENSED CELLULAR SPECTRUM AND OVER THE INTERNET
CVE Project Objectives

- Partnership with Industry on CV Applications
  - V2X and Cellular
  - Safety/Mobility and Road Usage Charging
- Develop cloud based production platform
  - Multi-year, Multi-phase
  - Demonstrate and Implement applications
- Establish long term business model
- OEM applications vs after market device
Oregon’s ITS Plan
TripCheck API v1.3

TripCheck API is designed to provide developers with access to the data available on ODOT's traveler information website, including incidents, cameras, message signs, weather, and more information. For more information, go to https://www.tripcheck.com/.

CCTV Inventory

The CCTV Inventory datafeed provides an inventory of all available cameras currently displayed on TripCheck, along with an Internet URL that can be used to access the specific cameras. Cameras may be ODOT owned and maintained or owned and maintained by a partner agency.

Request

GET https://api.odot.state.or.us/tripcheck/Cctv/Inventory[?DeviceId][&DeviceName][&RouteId][&Bounds]

Request parameters

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<thead>
<tr>
<th>Name</th>
<th>In</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>DeviceId</td>
<td>query</td>
<td>false</td>
<td>string</td>
<td>Accepts single device-id, or multiple comma delimited devices (e.g. &quot;157-160,281&quot;)</td>
</tr>
<tr>
<td>DeviceName</td>
<td>query</td>
<td>false</td>
<td>string</td>
<td>Accepts single device-name, or multiple comma delimited names, contains search. Ex. &quot;I-5 at Siskiyou Summit, Tollgate, I-84...&quot;</td>
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Traffic Technology Services, Inc. Establishes Oregon DOT as First Statewide Vehicle-to-Infrastructure Service, Escalates Virginia DOT to Largest

- Six state and District of Columbia Departments of Transportation (DOTs) providing data for TTS V2I system
- Audi expands Traffic Light Information feature based on TTS service

February 20, 2019
ODOT DSRC Pilot
Data Analytics
Connected Vehicle Ecosystem & Road Use Charging

Maureen Bock
Chief Innovation Officer
RUC: Open Architecture is required
CVE & RUC – How it works

1. Vehicle Mileage/Other Data
   Mileage reporting device collects and transmits mileage and fuel consumption data to Account Manager.

2. Invoice
   Account Manager performs transaction processing and sends invoice to vehicle owner.

3. Payment
   Vehicle owner makes RUC payment.

4. RUC Transfer
   Account Manager transfers RUC to State with associated reports (e.g., aggregated data).

5. Oversight Functions
   State provides certification, auditing, and oversight of Account Manager.

Motorist

Account Manager

State(s)
Overview of Funding Opportunity

Jim Atkins
Business Partner Manager
## Application Scoring

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Relevant Experience</td>
<td>E.g., Telematic OEMs; ‘big data’ applications; data security strategies; how it leverages the expertise consortium members, if applicable.</td>
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<tr>
<td>Project Team Qualifications</td>
<td>E.g., Members of the project team; backgrounds and relative experience.</td>
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<tr>
<td>Proposed Solution</td>
<td>E.g., How it will meet the project objectives.</td>
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<tr>
<td>Understanding Approach</td>
<td>E.g., Approach to phases; critical elements of project; evolution of solution over time.</td>
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<tr>
<td>Financial Responsibility</td>
<td>E.g., Sustainable business model; sufficient resources.</td>
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<tr>
<td>Value-added Offerings (optional)</td>
<td>E.g., “Above and beyond” the stated requirements.</td>
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Next Steps

RFP posted to OregonBuys

Timely & responsive proposal

Panel will review & score responsive RFPs

Looking for best value including price
Questions?