Pre-Publication Conference
Connected Vehicle Ecosystem

Galen McGill, Intelligent Transportation System
Maureen Bock, Chief Innovation Officer
Jim Atkins, Business Partner Manager
October 26, 2021

Oregon Department of Transportation

Conference Information

- 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.

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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

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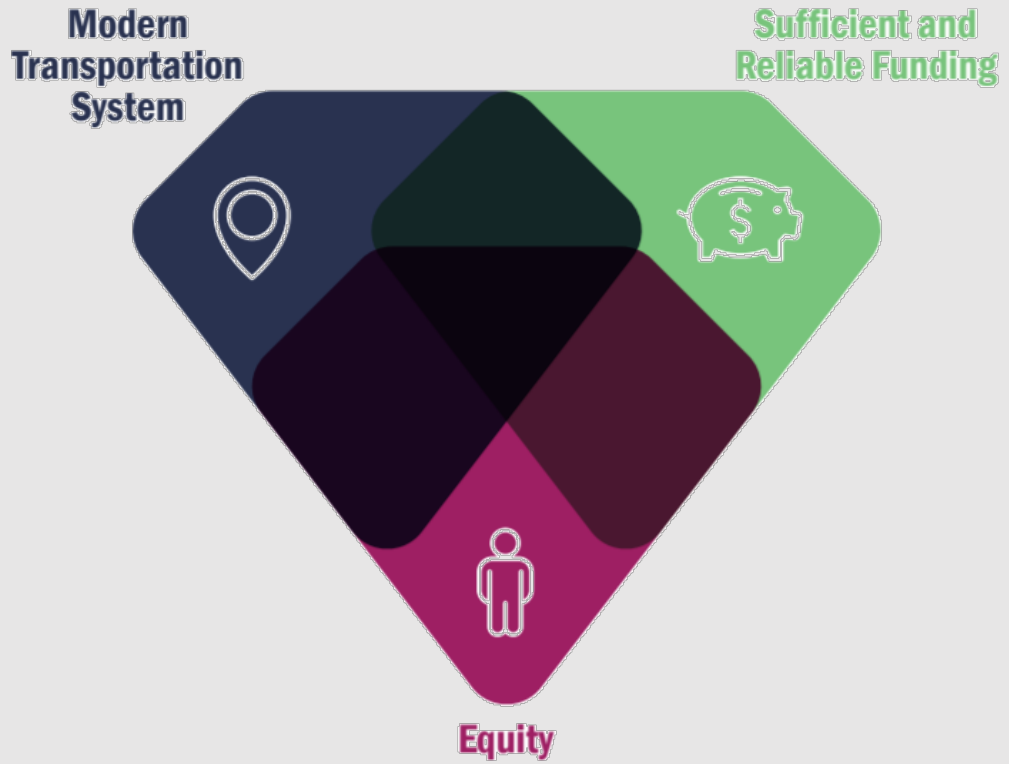
Overview of Connected Vehicle Ecosystem Project

Galen McGill
System Operations & ITS Manager

ODOT Strategic Priorities



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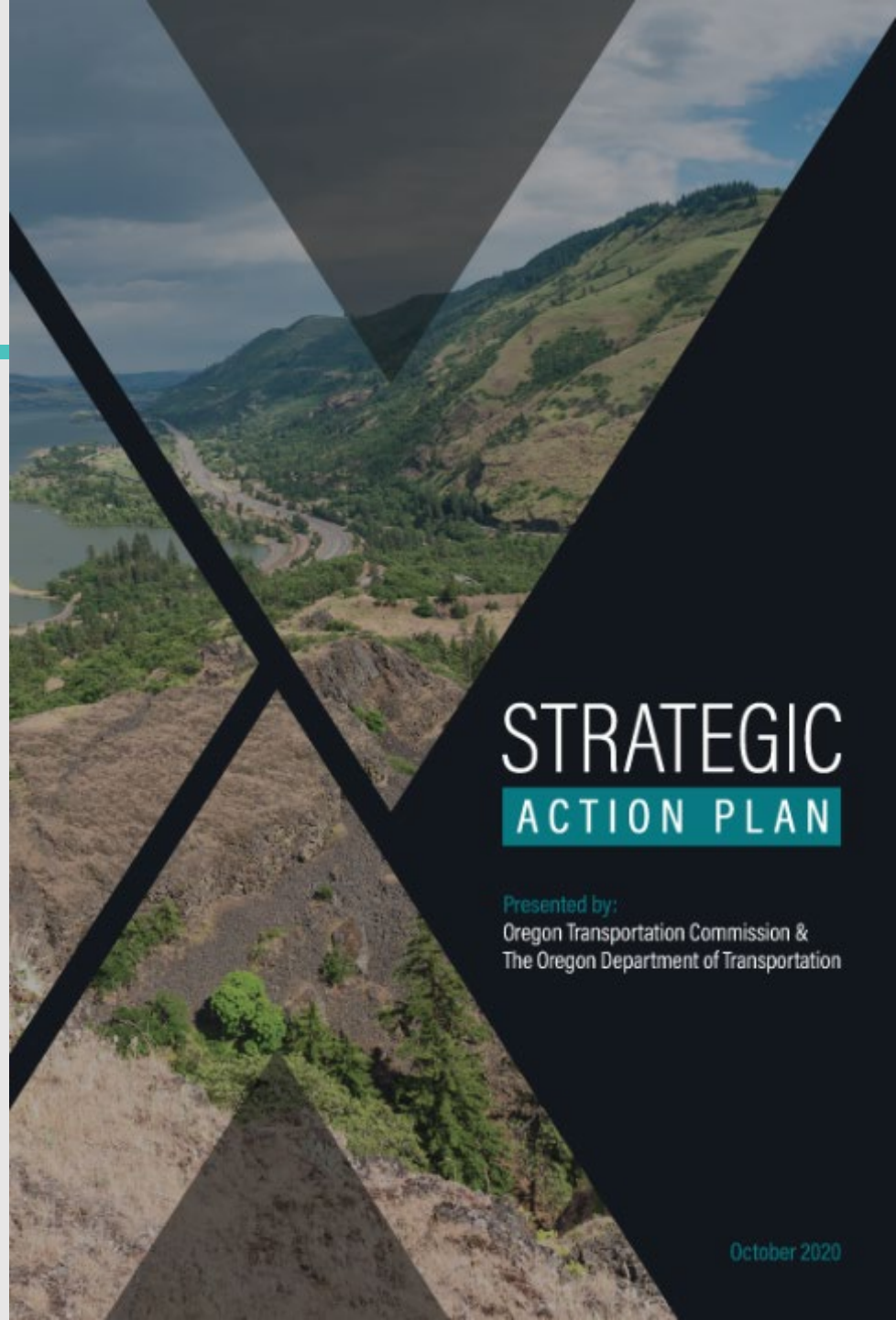

Implement Transformative Technologies

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

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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

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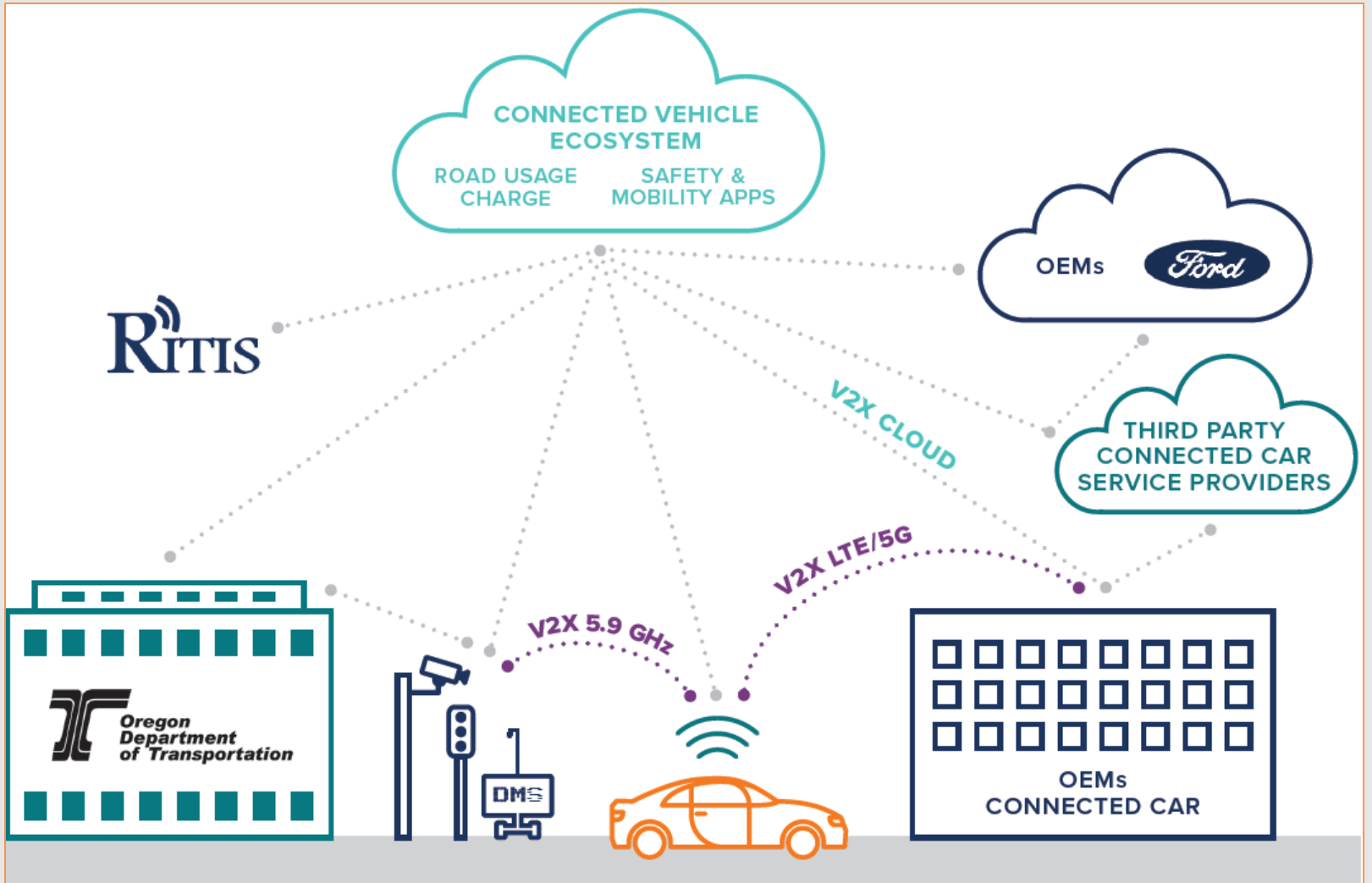
V2X Data Platform



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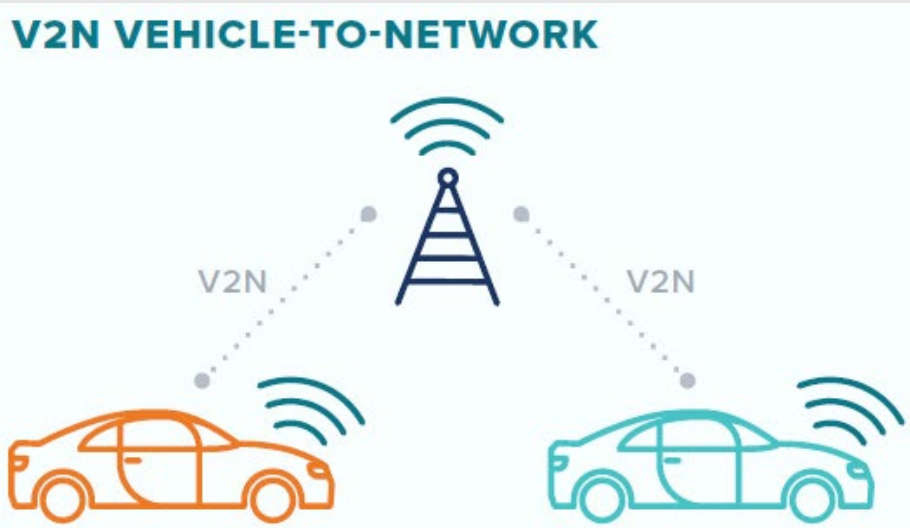
Connected Vehicle Ecosystem Enabling V2I, I2V, V2V, and V2X

DIRECT COMMUNICATIONS

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



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**

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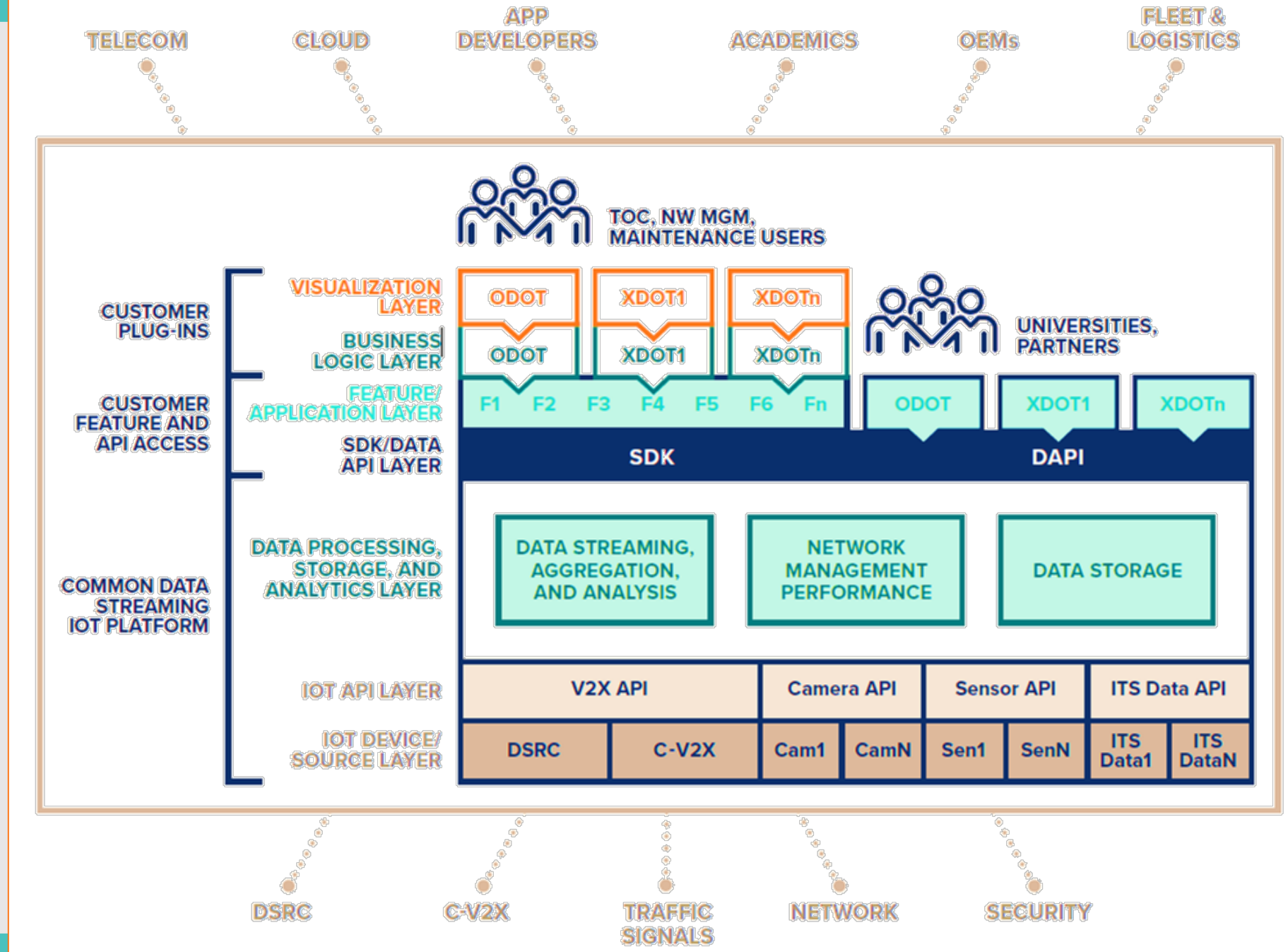
TELECOM
CLOUD
APP DEVELOPERS
ACADEMICS
OEMs
FLEET & LOGISTICS
TOC, NW MGM, MAINTENANCE USERS
UNIVERSITIES, PARTNERS
CUSTOMER PLUG-INS
CUSTOMER FEATURE AND API ACCESS
COMMON DATA STREAMING IOT PLATFORM
VISUALIZATION LAYER
BUSINESS LOGIC LAYER
FEATURE/ APPLICATION LAYER
SDK/DATA API LAYER
DATA PROCESSING, STORAGE, AND ANALYTICS LAYER
IOT API LAYER
IOT DEVICE/ SOURCE LAYER
ODOT
XDOT1
XDOTn
F1
F2
F3
F4
F5
F6
Fn
SDK
DAPI
DATA STREAMING, AGGREGATION, AND ANALYSIS
NETWORK MANAGEMENT PERFORMANCE
DATA STORAGE
V2X API
Camera API
Sensor API
ITS Data API
DSRC
C-V2X
Cam1
CamN
Sen1
SenN
ITS Data1
ITS DataN
DSRC
C-V2X
TRAFFIC SIGNALS
NETWORK
SECURITY

Oregon's ITS Plan

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TripCheck API v1.3

Search operations

Group by tag

TripCheck API v1.3

API definition Changelog

TripCheck API is designed to provide developers with access to the data available on ODOT's traveler information website, including incidents, cameras, message signs, weath
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 speci
Cameras may be ODOT owned and maintained or owned and maintained by a partner agency.

Cctv

Request

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

Request parameters

Name	In	Required	Type	Description
`DeviceId`	query	false	`string`	Accepts single device-id, or multiple comma delimited de "157-160,281"
`DeviceName`	query	false	`string`	Accepts single device-name, or multiple comma delimite contains search. Ex. "I-5 at Siskiyou Summit, Tollgate, I-84

Audi Personal Signal Assistant

PRESS RELEASE

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

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ODOT DSRC Pilot

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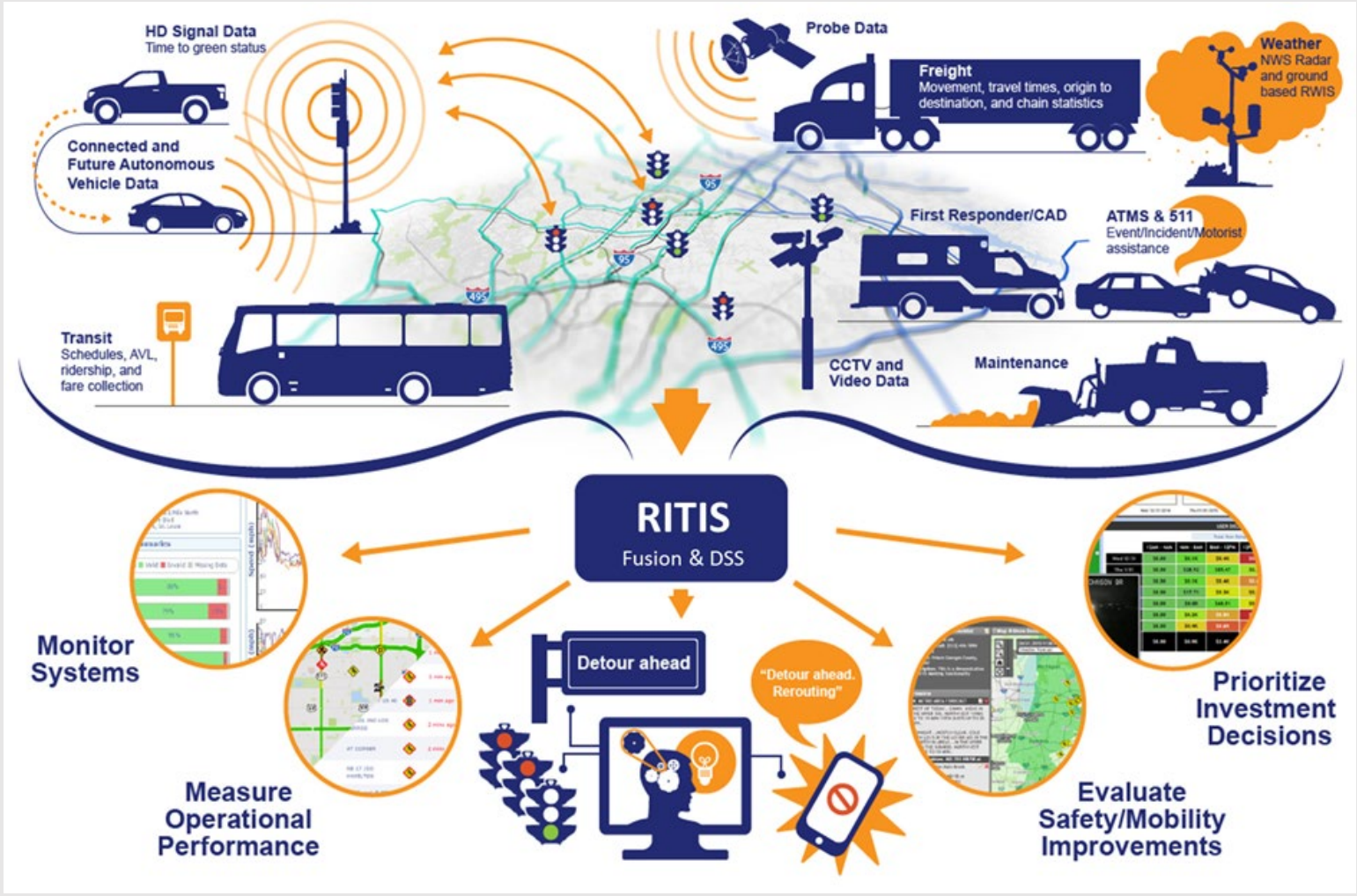
Data Analytics



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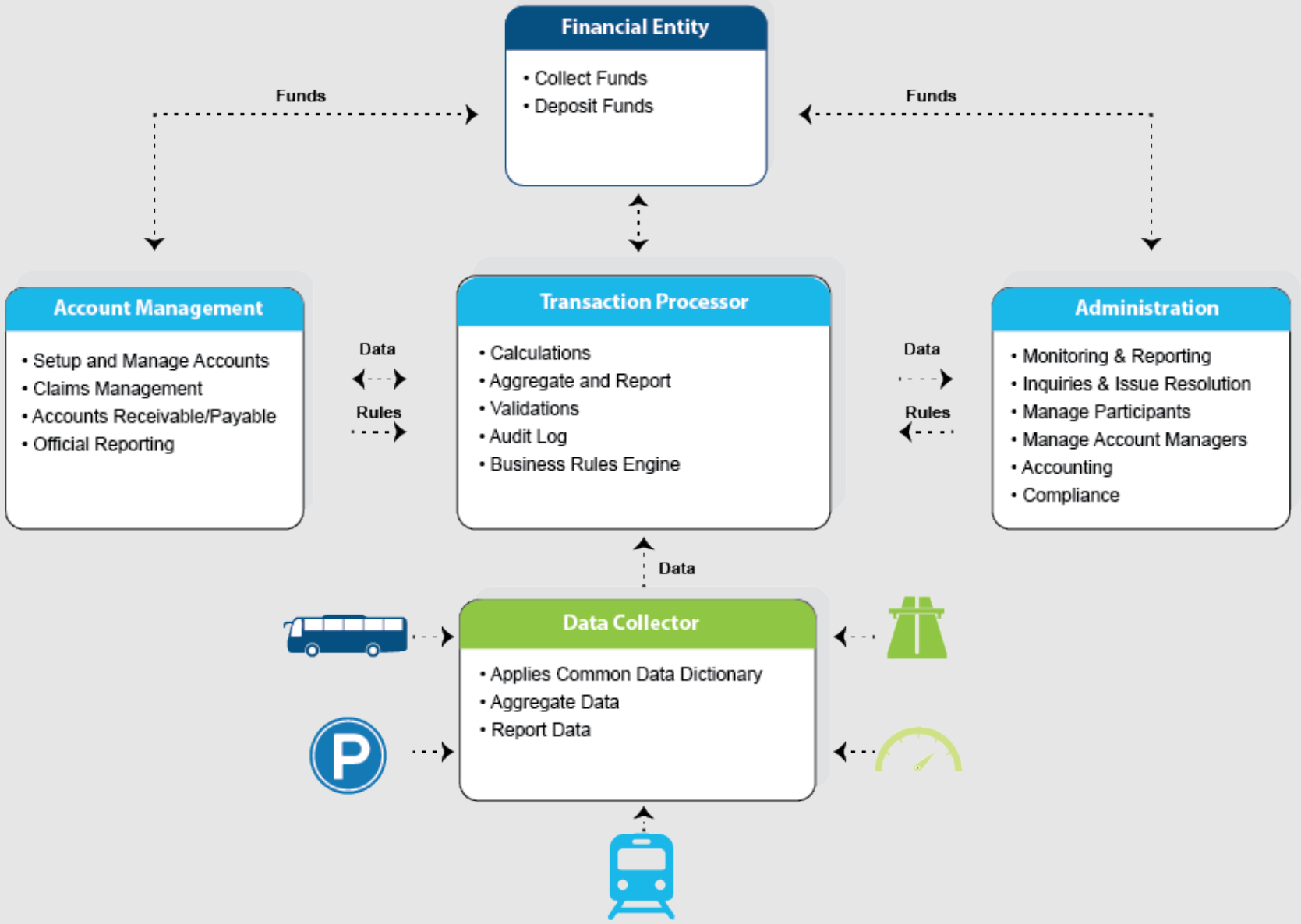
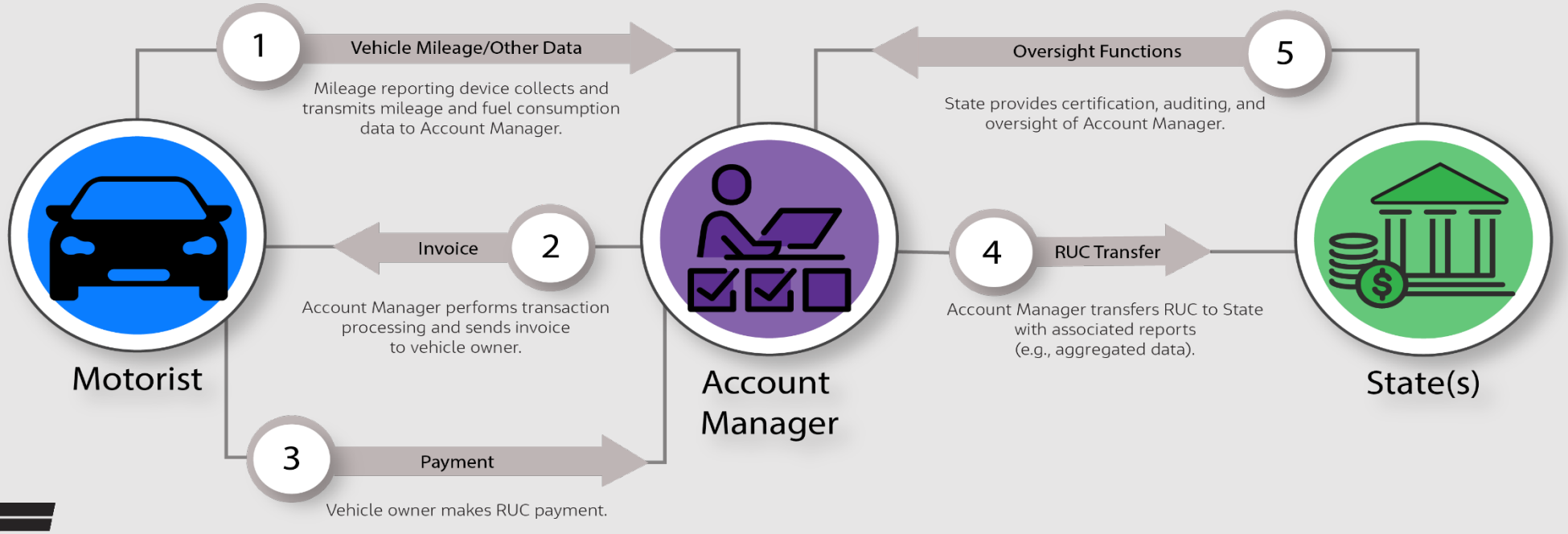
Connected Vehicle Ecosystem & Road Use Charging

Maureen Bock
Chief Innovation Officer

RUC: Open Architecture is required



CVE & RUC – How it works



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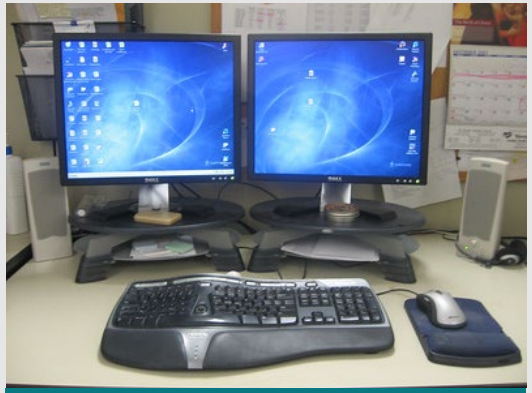
Overview of Funding Opportunity

Jim Atkins
Business Partner Manager

Application Scoring

Relevant Experience	*E.g., Telematic OEMs; 'big data' applications; data security strategies;* how it leverages the expertise consortium members, if applicable.
Project Team Qualifications	*E.g., Members of the project team; backgrounds and relative experience.*
Proposed Solution	*E.g., How it will meet the project objectives.*
Understanding Approach	*E.g., Approach to phases; critical elements of project; evolution of solution over time.*
Financial Responsibility	*E.g., Sustainable business model; sufficient resources.*
Value-added Offerings (**optional**)	*E.g., "Above and beyond" the stated requirements.*

Next Steps

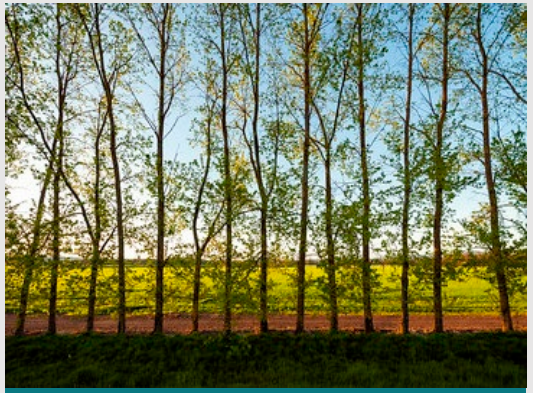


Register

RFP posted to OregonBuys

Respond

Timely & responsive proposal



Review

Panel will review & score responsive RFPs

Negotiate

Looking for best value including price

Questions?