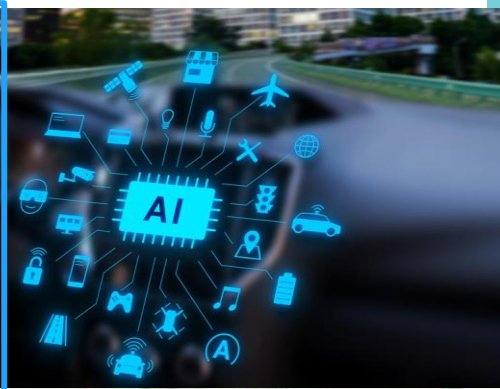




Oregon's Road Usage Charge Program

Maureen Bock, Chief Innovation Officer, ODOT



New technology presents new challenges and opportunities



Our transportation funding system is old. *Really* old.

Oregon Introduces
1st State Fuel Tax
in U.S.

1932

Oregon Levies 1st
Weight-Mile Tax

1993

Oregon Begins
Nation's 1st
RUC Program

2021

1919

U.S. Institutes 1st
Federal Fuel Tax

1947

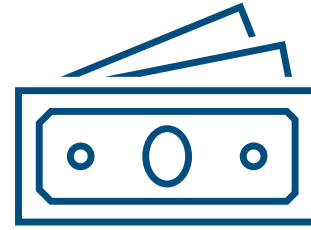
Congress Approves
Last Federal Fuel
Tax Increase

2015

13 States Introduce
RUC Legislation

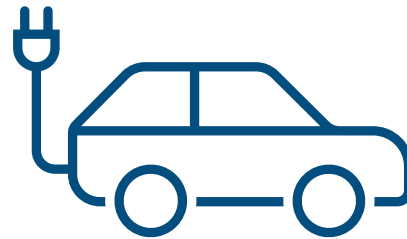
Why is the current funding model unsustainable?

1



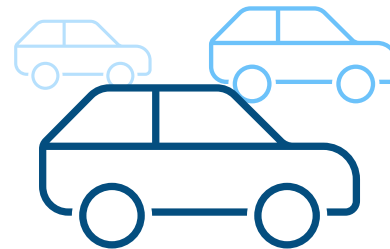
Declining purchasing power.

2



Increased fuel efficiency.

3

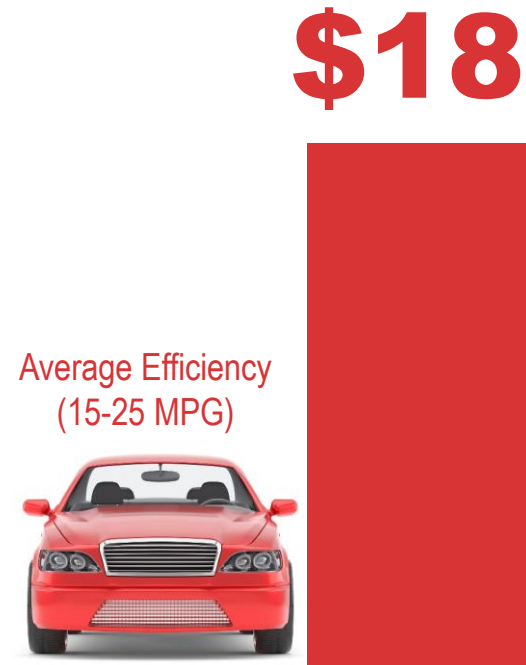


More people.
More VMT.

Impact of increase fuel efficiency.

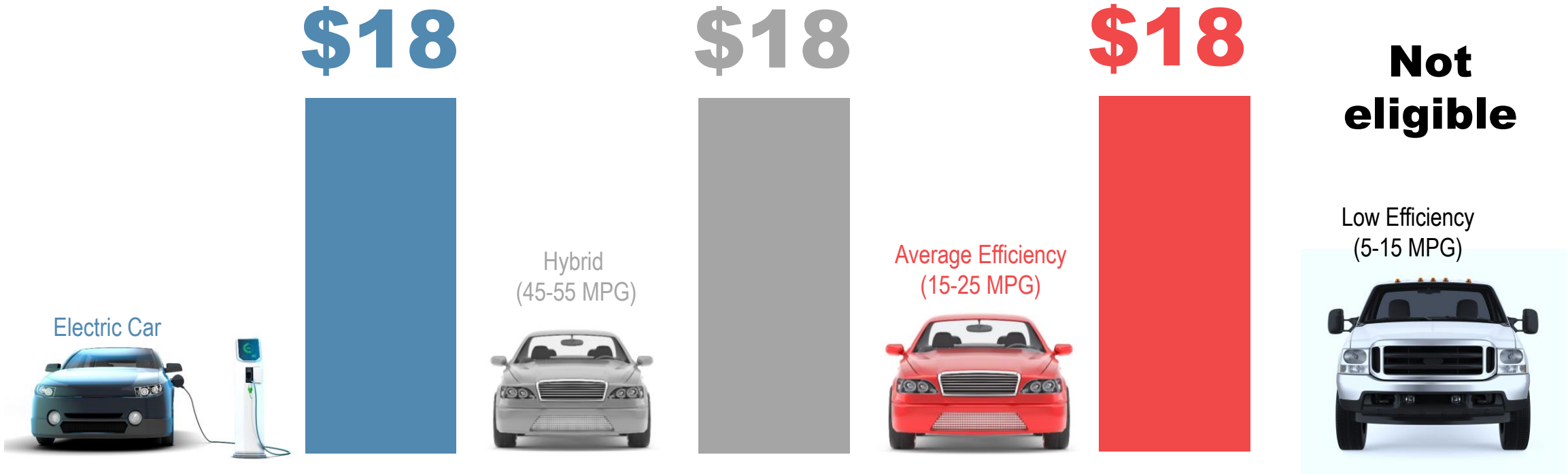
\$36

Ex: Monthly fuel-tax paid for 1,000 Miles Driven



OR RUC Model: Pay for impact of what you use.

Ex: Monthly RUC paid for 1,000 Miles Driven



Electric vehicle owners want to help pay for roads, too.

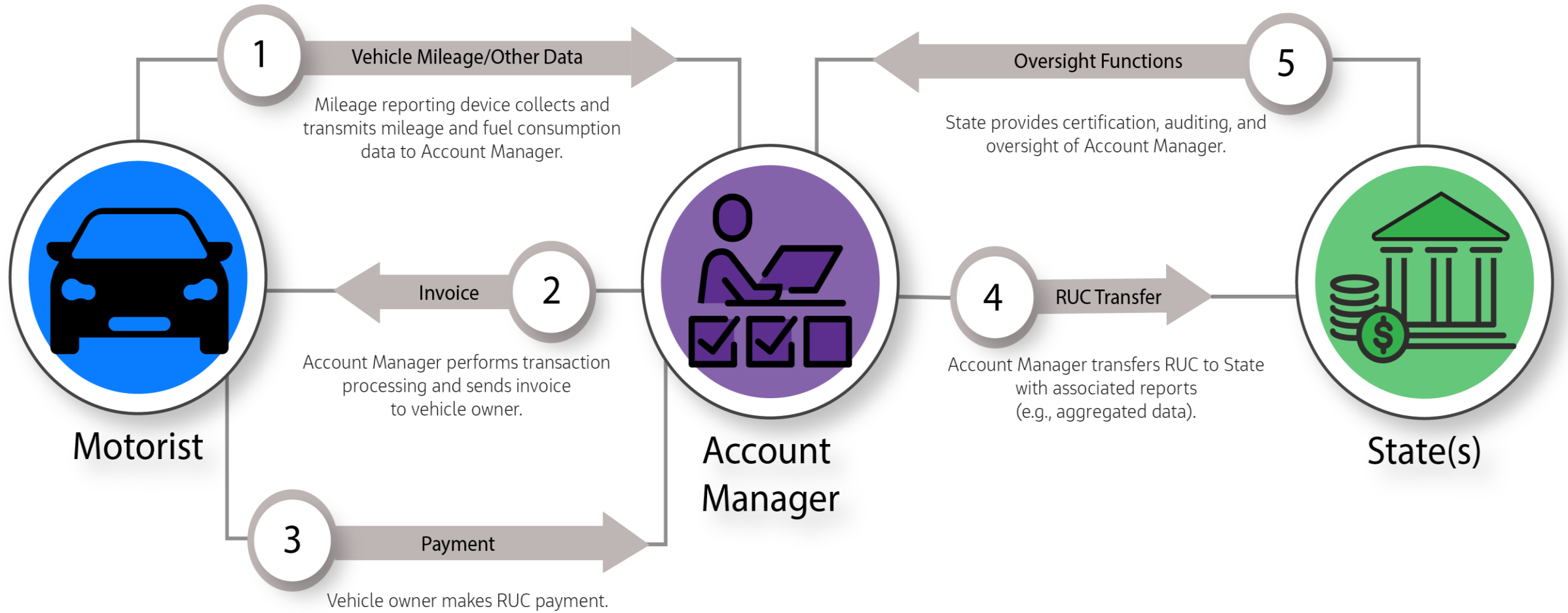


supports the eventual development of a road usage charge program.”

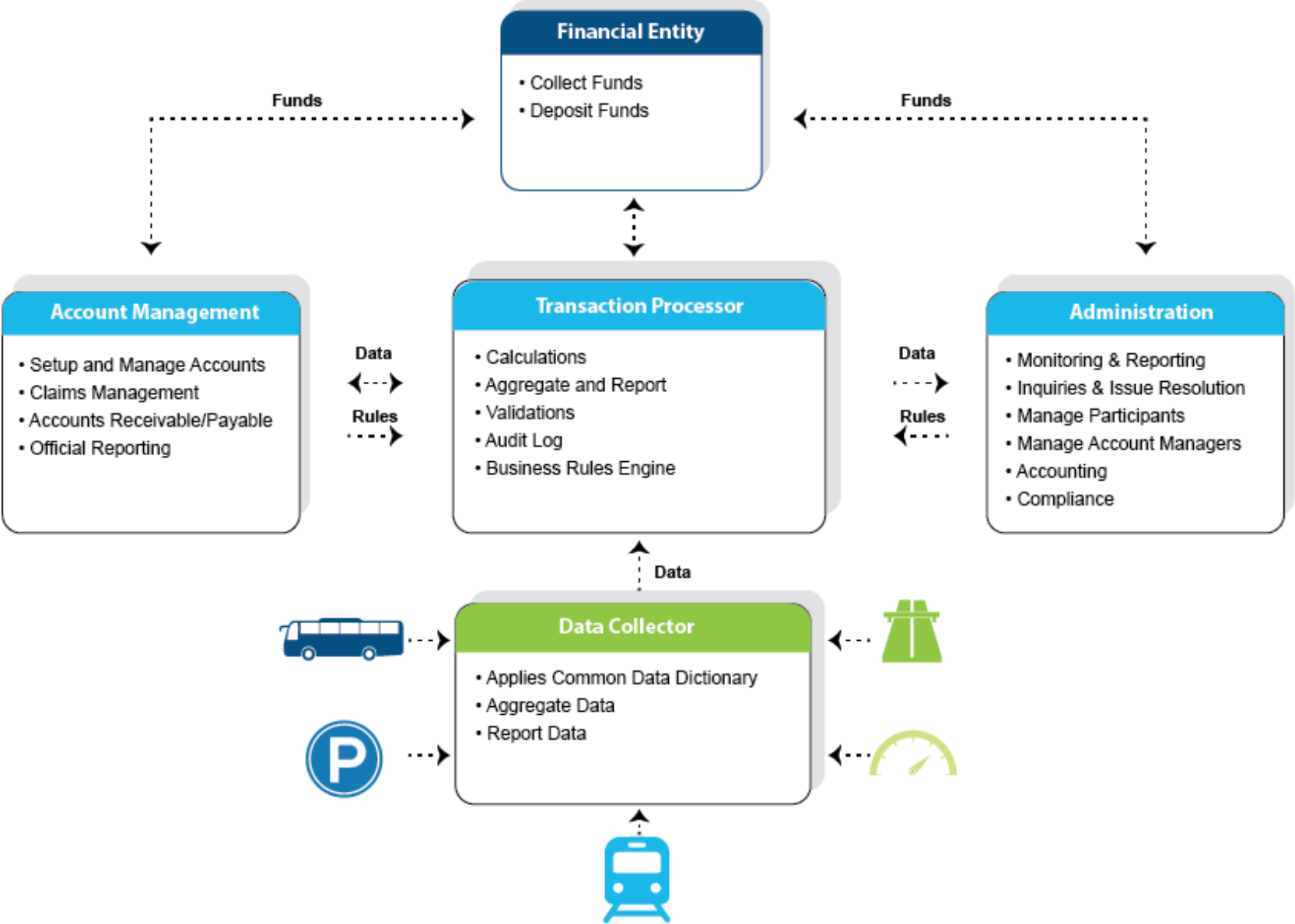


- 48% of OReGO participants are hybrid / electric vehicle owners
- OReGO supporters are more likely to drive hybrid or electric vehicles.

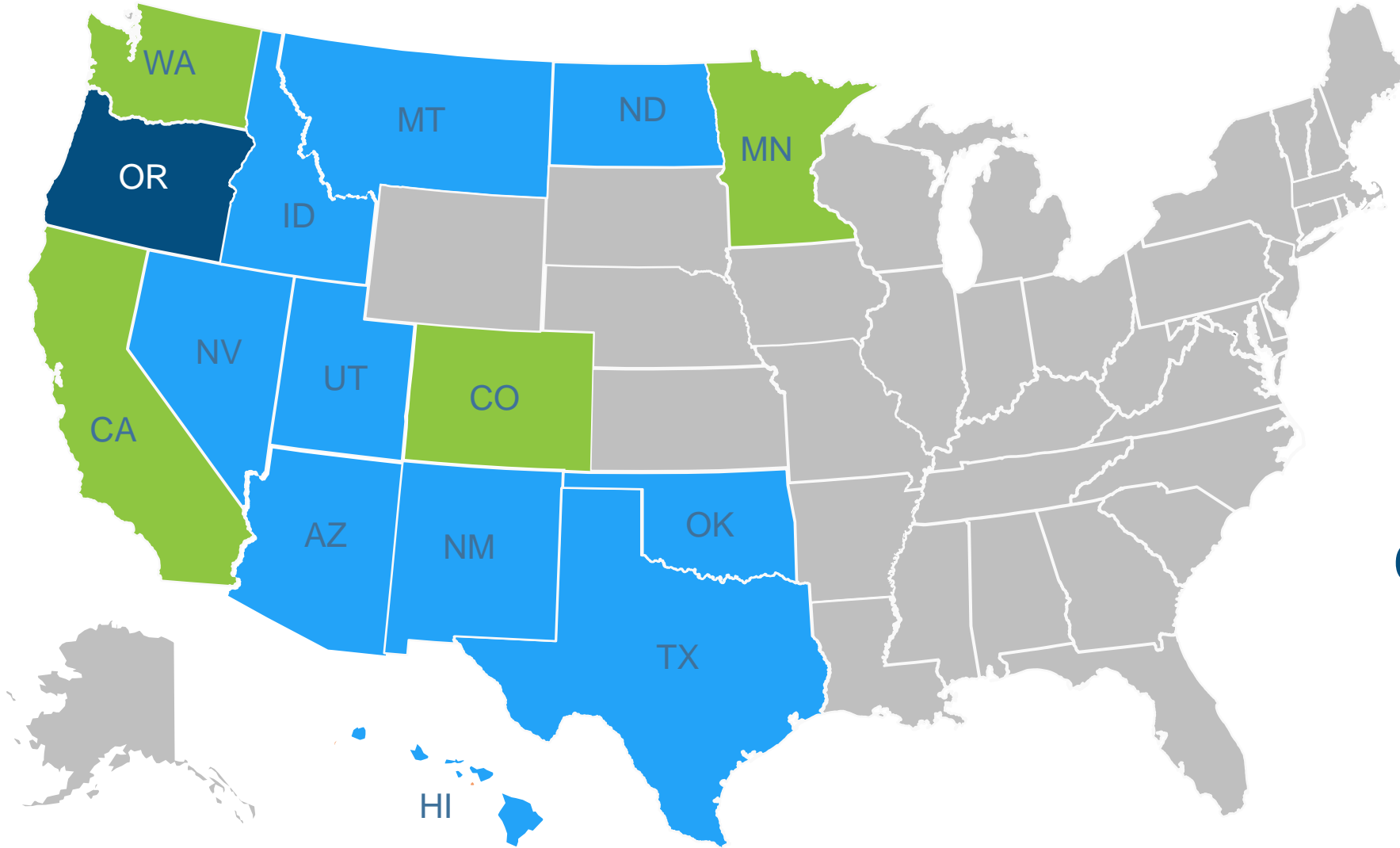
How it works now:



Open Architecture is essential



 **2016**



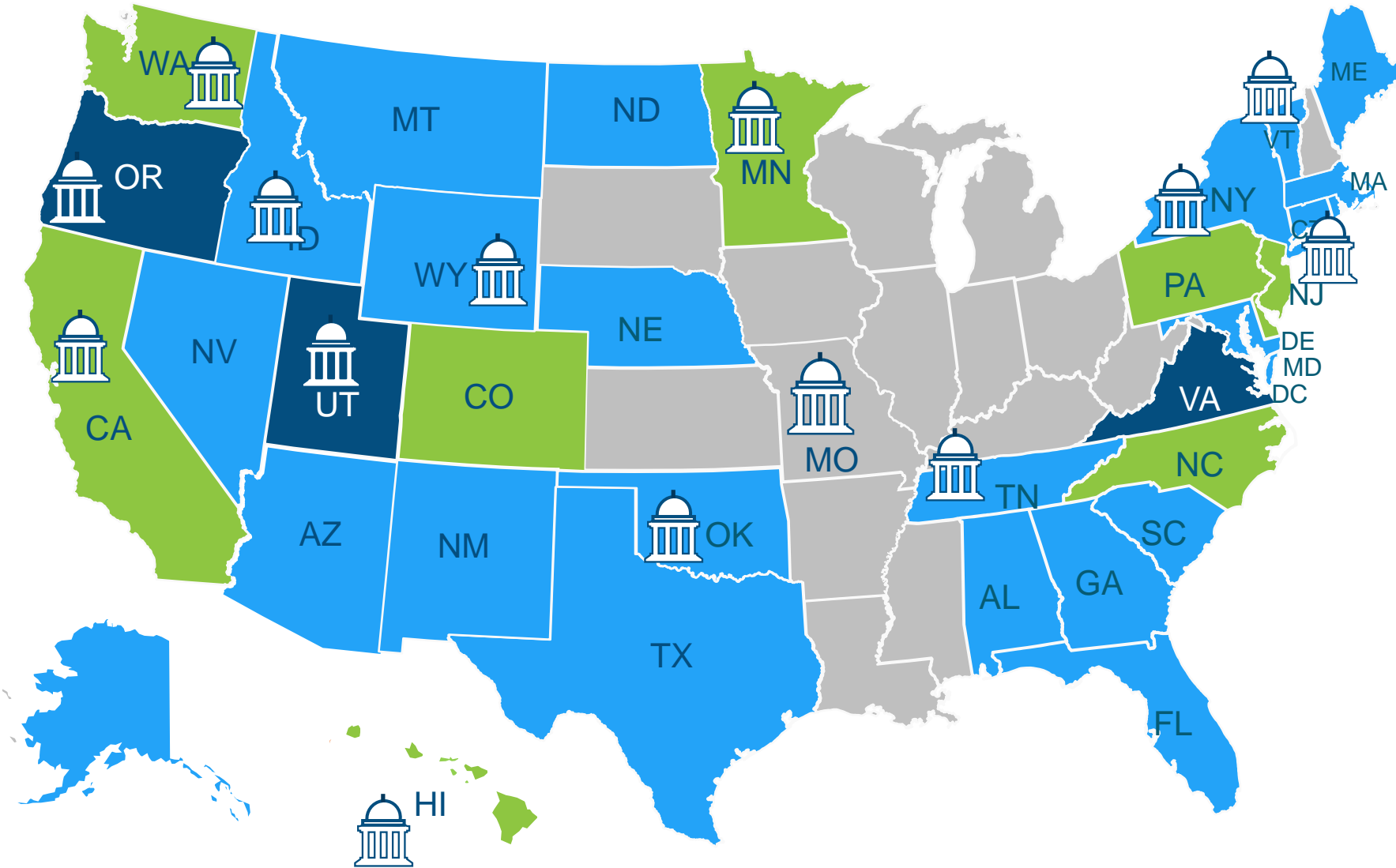
**States
across the
country are
exploring
RUC.**

 Conducted MBUF Pilot

 Legislation for Voluntary MBUF Program

 MBUF Studies through Multistate Consortium

 **2021**



 **In 2021
alone, 14
states
introduced
RUC
legislation
& many are
exploring it.**

 Conducted MBUF Pilot

 Legislation for Voluntary MBUF Program

 MBUF Studies through Multistate Consortium

Communication is key. Outreach can change attitudes.

Fairness

“I don’t get it.”

Research shows that messaging is needed around fairness to address myths about RUC.

“Seems fair, convince me.”

Messages about everyone paying their fair share and sustainable funding are the most convincing regarding a road usage charge.

“RUC is fair and necessary?”

More Oregonians think RUC is fairer than ever because they understand the need for alternative funding.

Data privacy

“I don’t trust government to do this.”

The top three concerns of using RUC are privacy, infringement on personal freedom, and overall distrust in the government.

“Can I trust the OReGO system?”

Privacy issues came up in every group as the major hurdle standing in the way of acceptance of road use charging, in spite of the fact that OReGO offers a non-GPS option.

More trust, comfort.

Data privacy is still a priority for respondents, but the level of privacy concerns with OReGO has dropped by 6% compared to 2016.

2014

2016

2020

Highway Cost Allocation Study



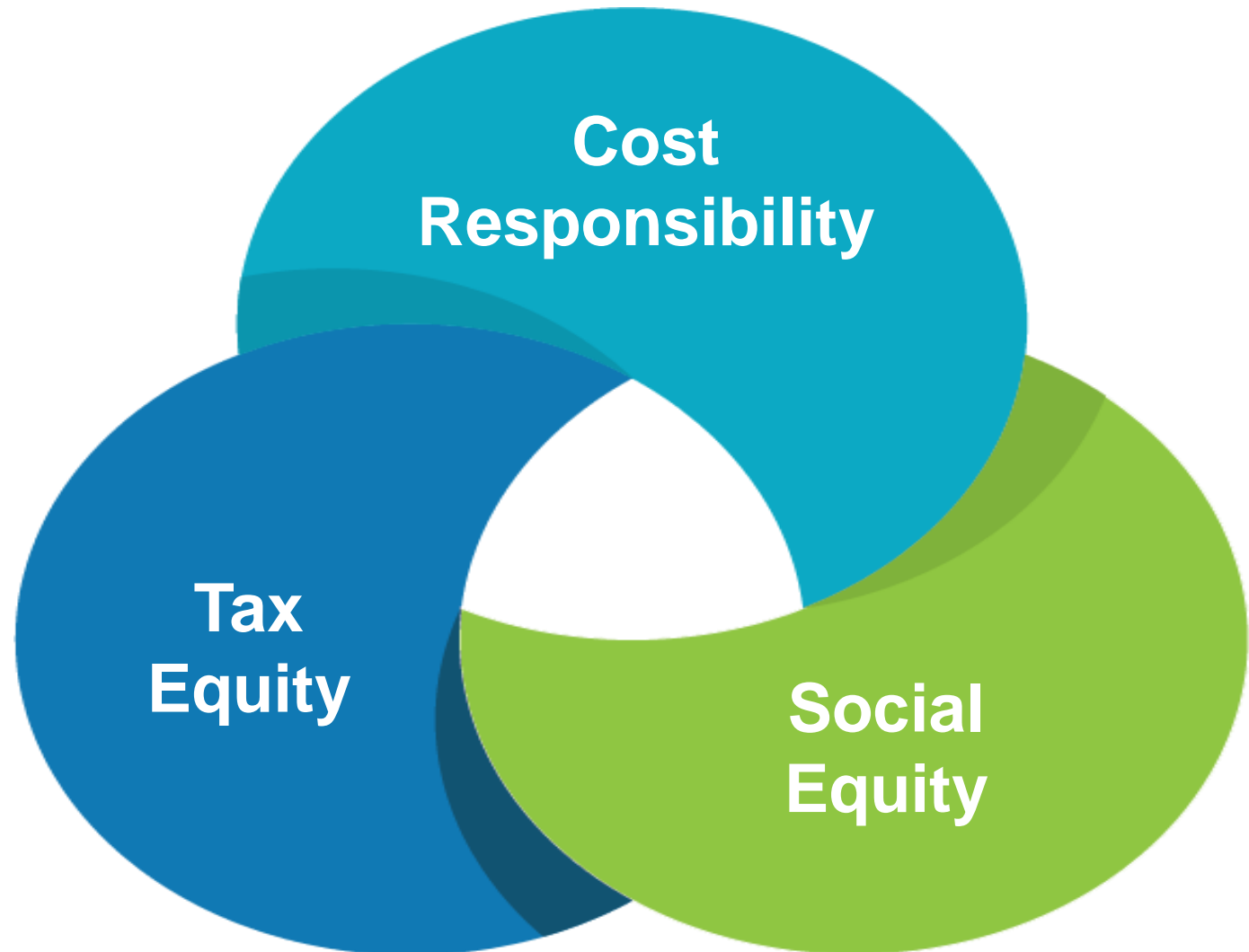
Purpose

- Determine the share each class of road users should pay based on their respective share of costs
- Recommend adjustments to existing tax rates and fees

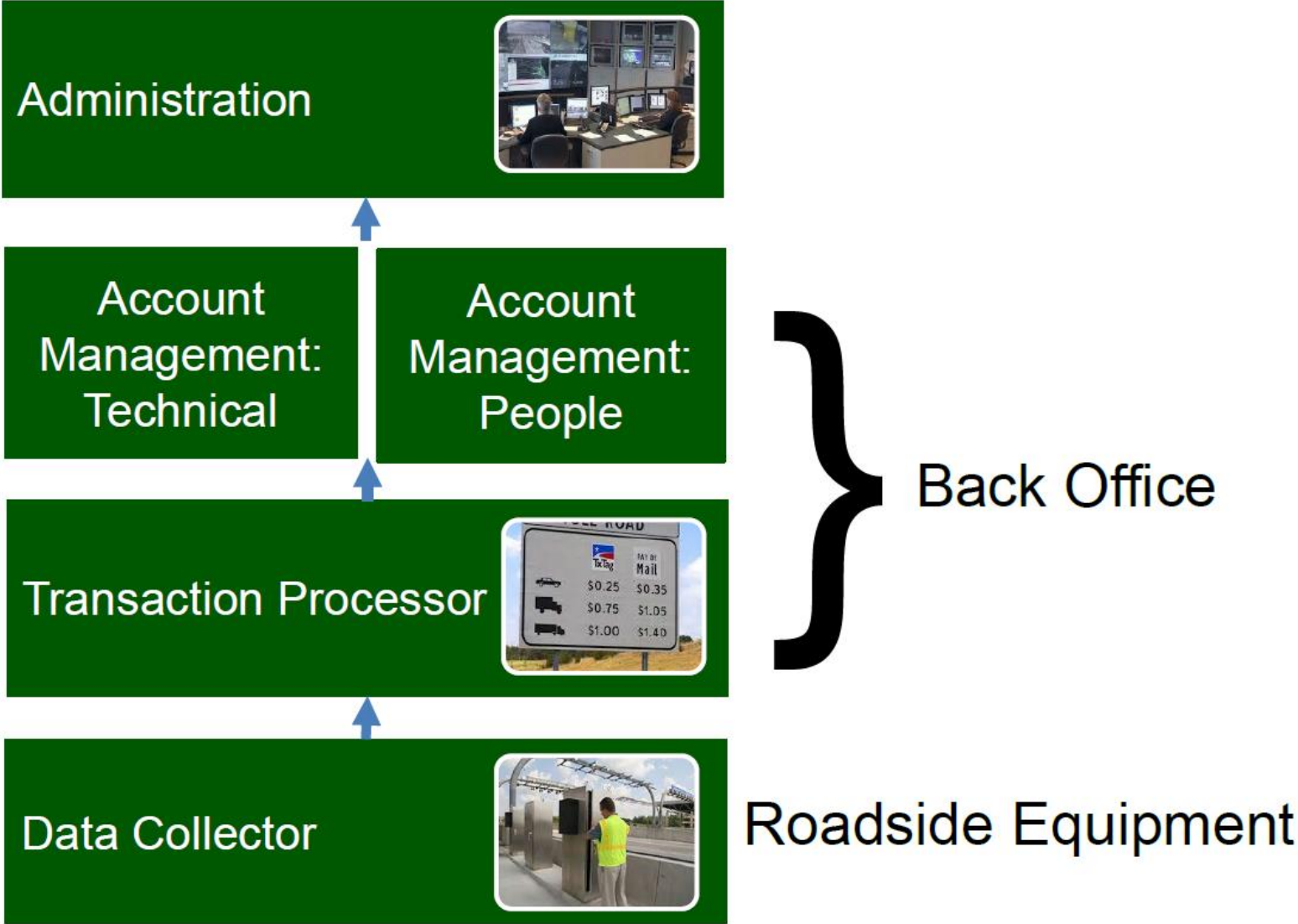
See Oregon Constitution, Article IX, Section 3a (3). Oregon voters ratified the principle of cost responsibility in the November 1999 special election.

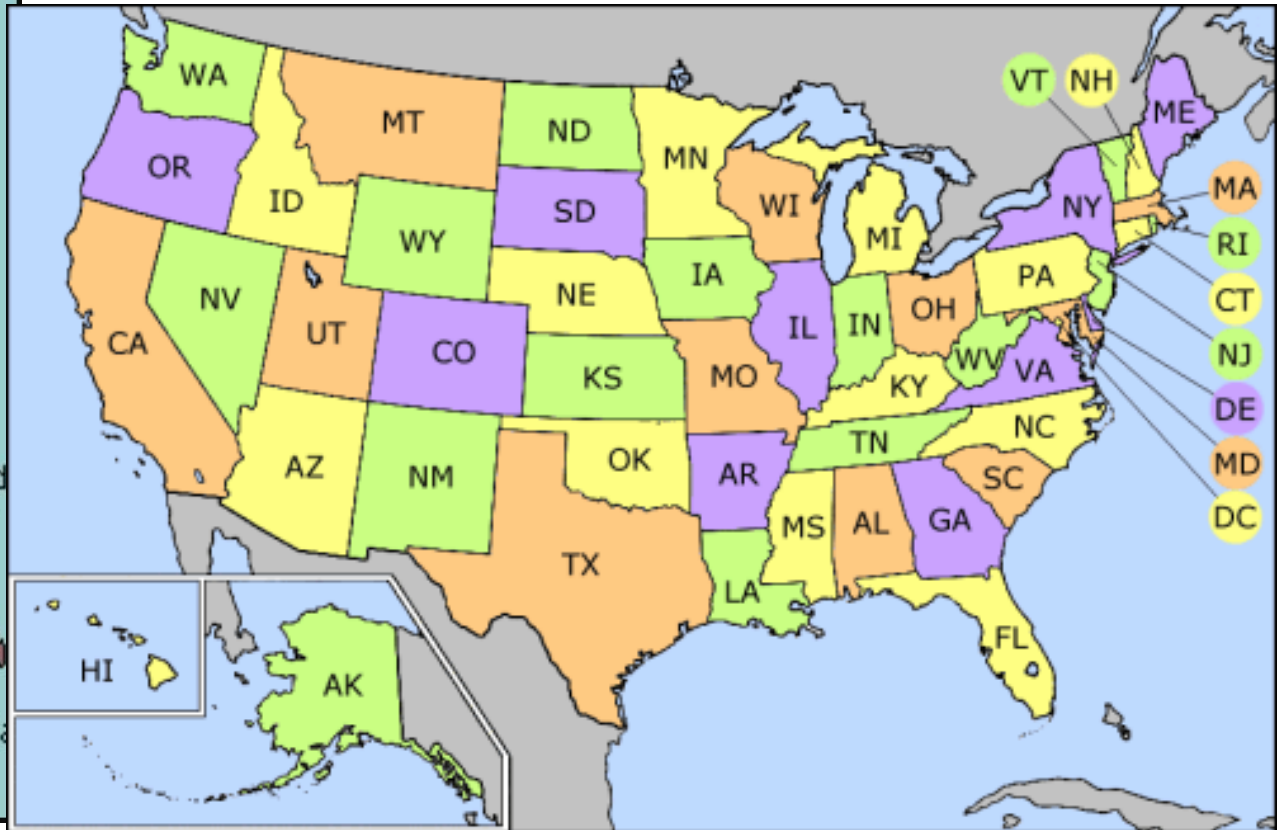
RUC vs Fuel Taxes: Equity

1. Each class of vehicle pays its share based on respective share of costs
2. Those in similar economic circumstances face a similar tax burden
3. Fair access to transportation services – rural/suburban/urban; other communities

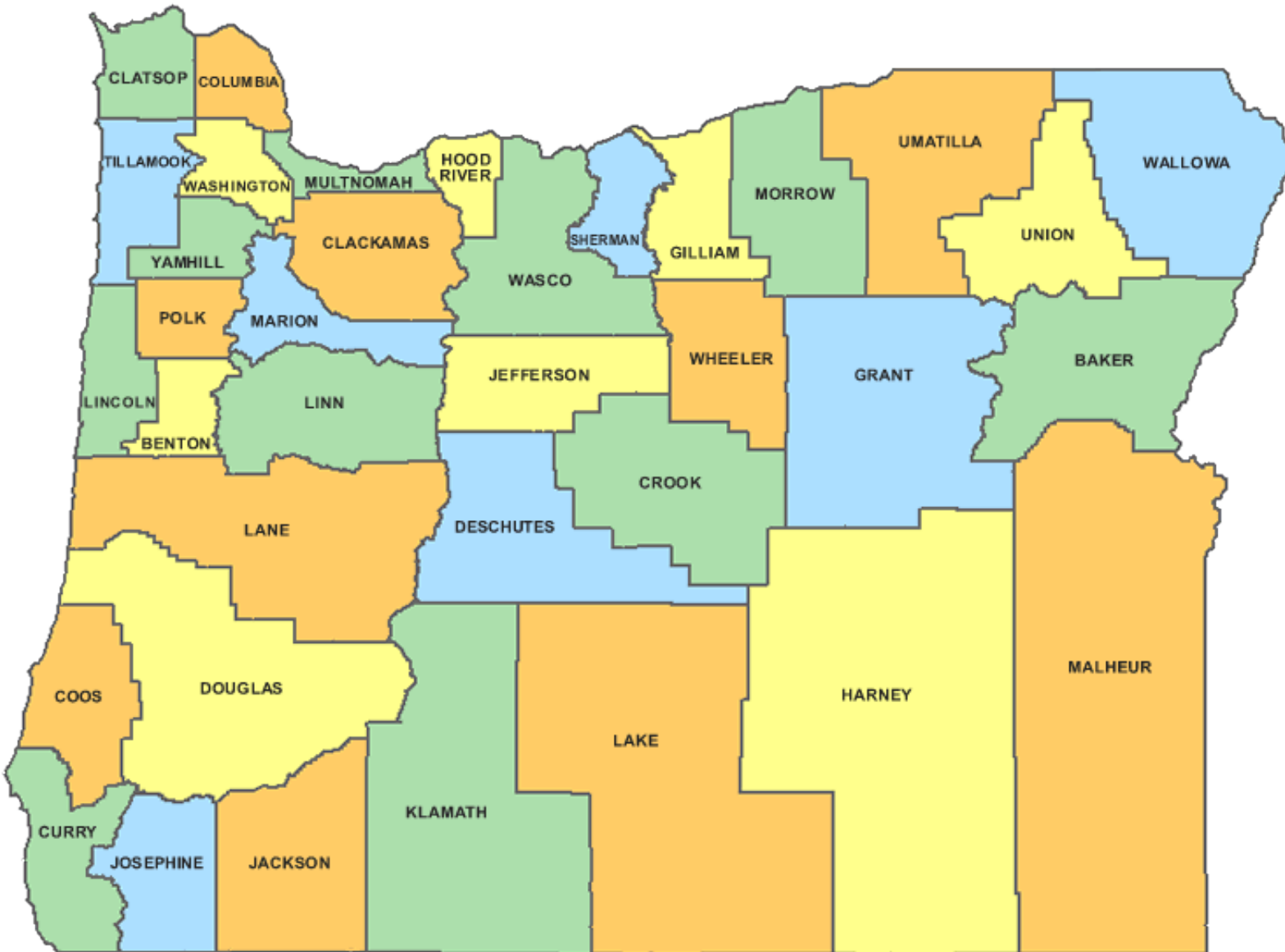


RUC & Tolls





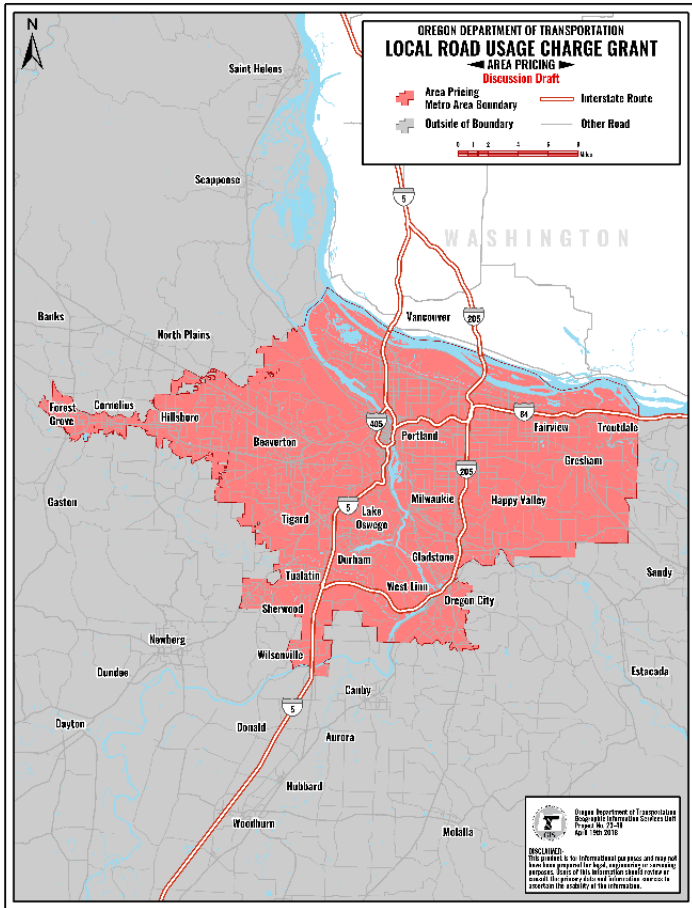
Rule ID – an identifier for each state or province in North America, with boundaries defined by GPS coordinates



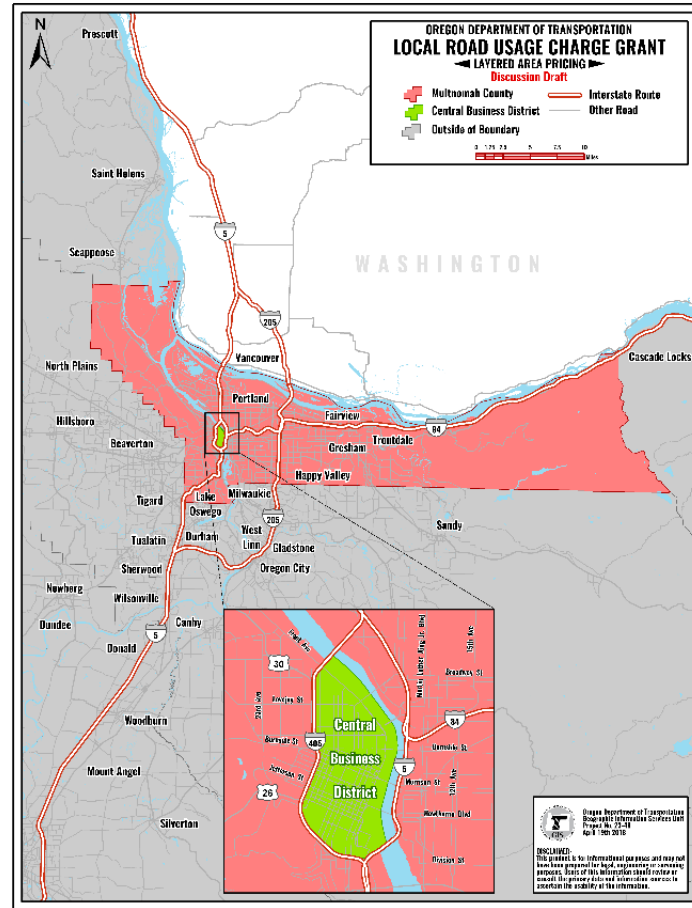
Subrule Id – an identifier for a political subdivision, such as a county or city

Zone Rule ID – another layer for reporting travel data, applying different rates depending on day/time/location

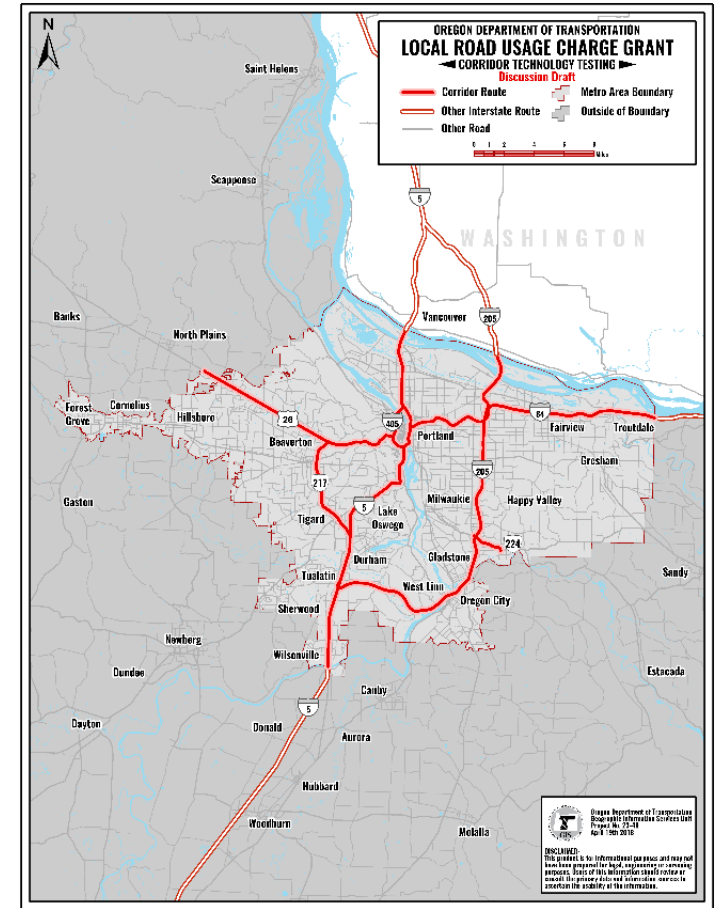
Applicability of Zone Rule ID



Static and variable rates



Layered options



Corridor options

Local Funding – Key Findings

Oregon's Local Option Pilot

- People need & want more information about OReGO
- RUC is complex but time & experience lead to understanding
- Many found the cost of RUC affordable relative to their driving needs

Participants were demographically representative of people in the study area

- Many people would not change travel behavior due to inflexibility of trips
- A quarter of participants would change travel behavior based on variable pricing

People like contributing to Oregon's future & were comfortable sharing data

- Education changes opinions about road charging fairness
- Support for variable tolling is mixed
 - May help with congestion
 - May unfairly impact low income households

Barriers: people not wanting two devices, confusion about pricing, and difficulty installing devices

Proposed Legislative Concept

Original (2021)

Mandate RUC enrollment for:

- Start with model year 2029
- Rated at 30+ mpg
- Beginning July 1, 2028

Update

Mandate RUC enrollment for:

- Start with model year **2028**
- Rated at 30+ mpg
- Beginning July 1, **2027**
- **Apply mandate to new vehicles rated at 20+ mpg by 2035**

Next RUC project - Dealership engagement

Enrolling at point of sale

Registration
surcharge or
OReGO?



Impact on Bonding

RUC revenue is pledged revenue for the payment of debt service.



Oregon
Highway Use Tax Bond

ROAD MAINTENANCE
Oregon highway use and fuel taxes fund road maintenance and improvements

HIGHWAY USE TAX BOND



Connected Vehicle Ecosystem



IoT/Edge
Connected devices,
systems & facilities



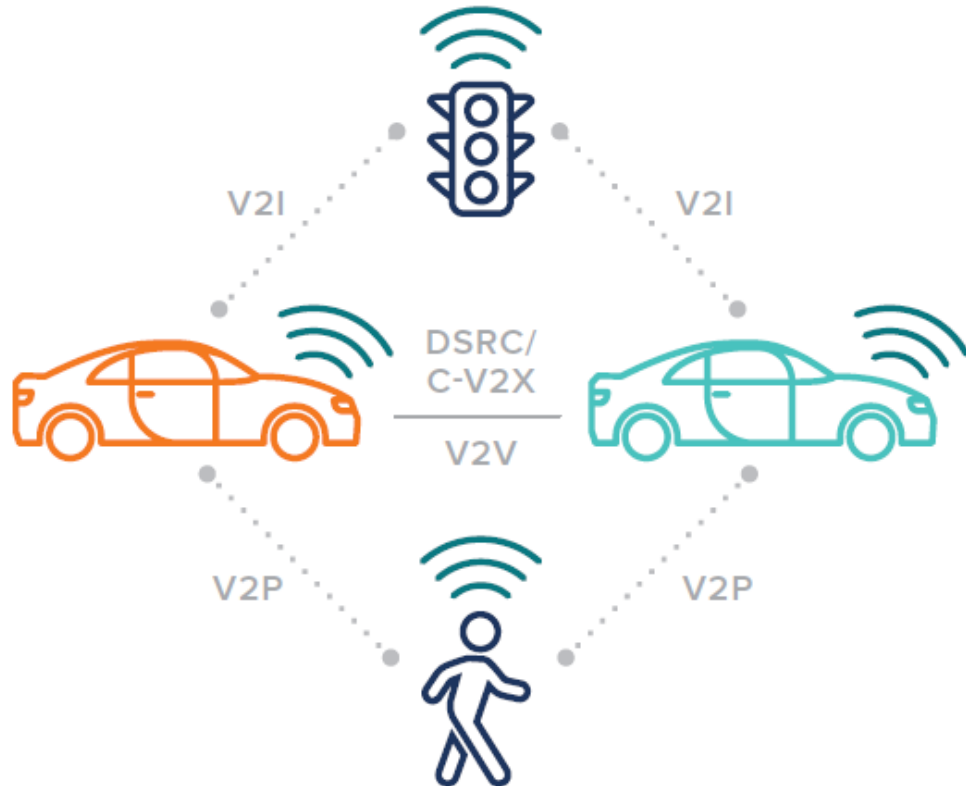
Cloud Analytics
Data processing, analytics
& storage



Open Ecosystem
Open development environment
for 3rd party partners to deliver
services & apps

Connected Vehicle Ecosystem

V2X VEHICLE-TO-EVERYTHING



DIRECT COMMUNICATIONS

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

V2N VEHICLE-TO-NETWORK



NETWORK COMMUNICATIONS

- LTE/5G FOR V2N
- OPERATES IN LICENSED CELLULAR SPECTRUM AND OVER THE INTERNET



Lessons

- Transportation is important to the public
- Education matters
 - Public
 - Private sector
 - Political
- Public expects seamless delivery if possible
- Emerging technologies are disruptors
- Broadband connectivity is key
- Standards are being developed that enable road usage charging

The world is changing.

Transportation funding should too.

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