

OREGON TRAFFIC CONTROL DEVICES COMMITTEE

Meeting Agenda

May 17, 2019

[ODOT TLC Bldg.](#), Alsea Conf. Room,
4040 Fairview Industrial Dr., Salem

9:00 – 9:10	Welcome / Building Orientation / Introductions / Approve Previous Minutes	Pam O'Brien
9:10 – 9:15	Business from the Audience <i>Public Comment on Non-Agenda Topics</i>	Pam O'Brien
9:15 – 9:45	Connected and Autonomous Vehicles, Panasonic demos <i>Information / Discussion</i>	Galen McGill
9:45 – 10:15	2019 Signal Policy & Guidelines Update <i>Information / Discussion</i>	Julie Kentosh
10:15 – 10:25	BREAK	
10:25 – 10:30	MUTCD Comment Review Planning <i>Information / Discussion</i>	Eric Leaming
10:30 – 10:40	Legislative Update <i>Information</i>	Eric Leaming
10:40 – 11:05	New Speed Setting Process Update <i>Information / Discussion</i>	Doug Bish
11:05 – 11:20	Red Light Running Guidelines Update <i>Information / Discussion / Recommendation for Approval</i>	Doug Bish
11:20 – 11:35	Sign Policy & Guidelines Update, OR2-1 Speed XX & P. 5-4, General Information Signs <i>Information / Discussion / Recommendation for Approval</i>	Marie Kennedy
11:35 – 11:50	Roundtable <i>Local Jurisdiction Issues - Discussion</i>	All Committee Members
11:50 – 11:55	Not-on-Agenda Items	Pam O'Brien
11:55 – 12:00	Agenda Items for Future Meetings	Pam O'Brien

2019 OTCDC Meeting Schedule

<i>Date</i>	<i>Location</i>
January 18	ODOT TLC Bldg., Alsea Conf. Rm., 4040 Fairview Ind. Dr., Salem
March 15	ODOT TLC Bldg., Alsea Conf. Rm., 4040 Fairview Ind. Dr., Salem
May 17	ODOT TLC Bldg., Alsea Conf. Rm., 4040 Fairview Ind. Dr., Salem
July 19	ODOT TLC Bldg., Alsea Conf. Rm., 4040 Fairview Ind. Dr., Salem
September 20	ODOT TLC Bldg., Alsea Conf. Rm., 4040 Fairview Ind. Dr., Salem
November 15	ODOT TLC Bldg., Alsea Conf. Rm., 4040 Fairview Ind. Dr., Salem

Oregon Traffic Control Devices Committee

[March 15, 2019](#)

Meeting Minutes

[ODOT TLC Bldg.](#), Alsea Conference Room
4040 Fairview Industrial Drive, Salem

[Members](#) Present: [Pam O'Brien](#), Chair, DKS Associates; [Mike Kimlinger](#), Secretary, ODOT State Traffic-Roadway Engineer; [Brian Barnett](#), City of Springfield; [Janet Hruby](#), City of Bend; [Darrin Lane](#), Linn County; [Joseph Marek](#), Clackamas County; [Jeff Wise](#), ODOT Region 5; [Tristan Wood](#), Columbia County

[Present via skype](#): [Karl MacNair](#), Vice-Chair, City of Medford

[Member Absent](#): [Patrick Huskey](#), OSP

[Others Present](#): Nick Fortey, FHWA; Doug Bish, Kevin Haas, Marie Kennedy, Julie Kentosh, Eric Leaming, Sarah McCrea, Gary Obery, ODOT Traffic/Roadway Section; Peter Koonce, Matthew Machado, Oliver Smith, City of Portland; Eric Niemeyer, City of Springfield

[Present via skype](#): Tina Bailey, City of Hillsboro; Christopher Monsere, Portland State University; Brian Worley, Association of Oregon Counties

Introduction/Building Orientation/Approval of Minutes

Chair Pam O'Brien called the meeting to order at 9:00 a.m. and then asked attendees to introduce themselves (see above).

Joe Marek then moved, Darren Lane seconded, and the committee approved the [January 18, 2019 minutes](#) with three minor changes in the first paragraph on page 2.

Business from the Audience/Public Comment

None.

Bicycle Detector Confirmation Light Findings and PBOT's Consideration of Improving the 9C-7 Stencil

Peter Koonce and Oliver Smith provided PowerPoint [information](#) on Portland's efforts to improve bike infrastructure with smarter traffic control devices. Portland is trying to

design a system for all users. Their work is partly inspired by work in Austin, Texas. This has been done with FHWA Request to Experiment 4(09)-63 (E). They've experimented under [ODOT SPR Project 825](#). They've worked with blue 'tattle-tale' lights to acknowledge bike detection, pavement stencils over detection devices, signs, signals and push buttons. The lights are triggered by loop detectors. Other detection strategies have not proven as effective as the loops.

Portland has partnered with PSU and OSU, done mail and intercept surveys on blue light comprehension, sign alternatives and countdown timer alternatives with measurable success. They've also worked on variations of the 9C-7 Bicycle Stencil and the R10-22 Bicycle Sign.

Gary Obery said ODOT has done some testing in partnership with the City of Salem with similar results including a learning curve for bicyclists.

2019 Signal Policy & Guidelines – Yellow Change and Red Clearance Intervals

Julie Kentosh provided an [informational update](#) on proposed changes for 2019 Traffic Signal Policy and Guidelines. She wanted to concentrate on one of six bullets regarding bike guidance – crossing time, minimum green, etc. Julie discussed the manuals which have information on signals – the [Signal Policy and Guidelines](#), [NCHRP's Report 812](#), [A Discussion of Basic Signal Timing Elements](#), and the [Traffic Signal Design Manual](#).

Julie asked for discussion of what kind of policy we want, which manual(s) does it best fit in, and other thoughts from attendees. Reliability/accuracy of current technology and possibilities for new technology was discussed. The consensus was the Signal Policy should have something to the effect of we should accommodate bikes crossing intersections.

There was discussion on shortcomings of current technology, possible new technology and what issues we can practically foresee for some of them. In regard to the difficulty of finding new, better technology, Kevin said there's a new research project just selected for funding that's based on detecting and establishing an evaluation frame for when a vendor promises capabilities, and whether they come through on them.

Joe said he was glad Julie is working on this issue. Julie will return to the committee with further updates in future meetings.

Update on Proposed Developments for New Speed Setting Process

Doug Bish and Mike Kimlinger briefed the committee on the latest information on the proposal, referring to committee presentations (see box below), activity at the January 17th Oregon Transportation Commission meeting in Salem ([video is here](#)). The OTC gave the go ahead to move forward with changing some of our rules such as flexibility in urban areas to give more consideration to vulnerable users.

The [NCHRP 17-76](#) (Guidance for the Setting of Speed Limits) process has experienced some delays in getting out a draft report. This may delay getting adequate guidance to move forward on. We may have more information in June after the [AASHTO meeting in Columbus, Ohio](#).

The last week has been busy in the Legislature and speed bills are in flux. Possible amendment to HB 2702 is being negotiated to where Portland would relax their proposal and ODOT would delegate the authority to set speeds for cities which are certified and follow the guidance from the Roundtable. ODOT would set up the criteria and make sure local jurisdictions are following it. Whether they issue their own orders (or even if there are orders) is still under discussion. Oversight for these new orders is also going to need discussion.

The Legislature is looking at expanding the ability of all cities to set 20 MPH residential speed limits. They are also looking at allowing residential speed limits on roads in front of new developments having access to residences at the back of the houses. Doug will ask Government Relations whether there is an amendment which can be shared with the Committee. Monday afternoon is the next Transportation Committee public hearing on these bills.

ODOT plans to make changes in the Administrative Rules which will have to do with differences in setting speeds regarding rural/urban context and the process for each, which will be related to the NCHRP 17-76 research process. Accommodating bicyclists on rural roads is an ongoing issue. The SZRP Panel is expected to be used in the Oregon Administrative Rule changing process regarding speed limits.

Legislative Update

Eric Leaming updated the committee on bills being considered during the current legislative session. The deadline to file most bills was February 26th so most of what the Legislature is dealing with has been set. The Session is set to end by June 30th but they can do a special session afterwards if they want. March 29th is the deadline for scheduling a work session on a bill. If a work session isn't held by April 9th for a bill, it is defunct for the session, unless it's in a committee that is exempt from those deadlines (such as the Joint Committee on Transportation).

[SB 397](#) – Speeds on Rural Eastern Oregon Highways (a sheriff can ask for a speed limit on specific road(s) east of the Cascades in smaller population counties). No meetings or work sessions currently scheduled

[HB 2702](#) – Speed setting authority on Portland Roads No meetings or work sessions currently scheduled

[SB 558](#) – Residence District Speeds – amendments in process

[HB 2236](#) – Low-Speed Vehicles on Highways No meetings or work sessions currently scheduled

[SB 559](#) – Fixed Photo Radar in All Cities Proposed amendment by Portland changing definition of high crash corridor. Scheduled for hearing on March 22nd

[SB 560](#) – Mobile Photo Radar in All Cities – Scheduled for hearing on March 22nd

[HB 2770](#) – Automated Vehicles - No meetings or work sessions currently scheduled

[HB 2682](#) – Bike lanes through intersections – proposed amendment clarifying bikes can go through intersections where there is a bike lane on both sides of road and bike lanes continue through the intersection – safety for bicyclists is a difficult issue on this subject due to bikes rapidly approaching other (right-turning) vehicles from behind - Scheduled for hearing on March 27th

[HB 2314](#) – Motorcycle Lane Splitting – Hearing held February 20th with a lot of testimony evenly split

[HB 2846](#) – Jurisdictional Transfers – of ODOT highways to cities and counties – new bill – No hearings scheduled yet

[SB 528](#) – Roadside Firefighter Memorial Signs – passed out of House Veterans and Emergency Preparedness, scheduled for House Floor on March 18th

[HB 3213](#) – Safety Corridors on County Roads (fines double added) – No hearing scheduled yet.

Joe Marek noted a safety related bill, [SB 942](#) which eliminates requirement for children under 2 years of age to be in rear-facing seats.

MUTCD Comment Review Planning

Eric Leaming brought forward the [current list of identified volunteers](#) for MUTCD Review when the new Manual comes out later this year. He encouraged all jurisdictions to contribute further members to all the MUTCD Sections except, maybe, Signals. [Send Eric an email](#) to volunteer. Portland said they will send a list this afternoon. Number of meetings hasn't been decided yet, it will depend on the changes to be dealt with. The comment period is expected to close by the end of December. So once the draft is out, the committees/OTCDC will have to move fast. Priorities may need to be set, based upon issues identified and time to do the review work.

Sign Policy & Guidelines Update, W6-1 & W6-2 (Divided Highway Warning Signs)

Marie Kennedy updated the committee on a [proposed change to the Sign Policy and Guidelines](#). The existing Guidance in the MUTCD is adequate for the signs and the current language is largely an oversight. The committee consensus was the change made sense.

Decision: Joe Marek moved, Brian Barnett seconded and the committee voted in favor of cutting Oregon-specific language out of the Sign Policy and Guidelines so the only guidance for W6-1 & W6-2 signs will be in the MUTCD.

Roundtable

None

NOA Discussion

Mike Kimlinger brought up information he's been hearing about rule/regulations, standards prepared on [Small Cell/5G by the FCC](#), effective last October to make additional spectrum available for 5G services. They are updating regulations to facilitate the 5G industry which may adversely affect the ability of local jurisdictions to regulate for how they impact on local communities. The industry is allowed to install their facilities pretty much anywhere.

Mike encouraged everybody to look into this on-line. Some links in addition to what you find on line are below.

- [FCC Fact Sheet](#)
- [More than a dozen cities are challenging the FCC over how to deploy 5G cell sites](#)
- [Riverdale Park Maryland Draft Ordinance authorizing wireless and wireline broadband deployment in public rights-of-way](#)
- [OATOA - Oregon Association of Telecommunications Officers and Advisors](#)

The committee discussed the new regulations. ODOT will find a way to update OTCDC members and interested others of anything new/significant we learn.

Tina Bailey of Hillsboro said she's actively working on this for her city and provided the following information: There's a larger organization working to modify or overturn regulations which adversely affect cities. Tina said the appeal is now in the 12th District Court. Hillsboro has set standards which restrict use of signal equipment for 5G infrastructure. You can't regulate what may affect public health. You can encourage use of certain facilities over others. If a jurisdiction doesn't have something in place now, the industry can come in and request a permit which must be addressed within 60 days. The City of Tigard is also heavily involved in this.

Agenda Items for Future Meetings

- Connected and Autonomous Vehicles, [Panasonic](#) demos (Galen McGill)
- MUTCD Update

- PBOT - Bicycle Considerations at Traffic Signals at top of a T-Intersection
- Update on Proposed Developments for New Speed Setting Process
- Legislative Update

Adjournment

Pam O'Brien adjourned the meeting at 11:59 a.m.

Next Meeting: May 17, 2019 at 9:00 a.m. at the [TLC Building in Salem](#) (the Joint OTCDC-ITE meeting is not going to work out this year)



Oregon's Task Force on Autonomous Vehicles

Oregon Traffic Control Devices Committee
May 17, 2019

Galen McGill
ITS Manager



House Bill 4063

79th OREGON LEGISLATIVE ASSEMBLY--2018 Regular Session

Enrolled House Bill 4063

Introduced and printed pursuant to House Rule 12.00. Pre-session filed (at the request of House Interim Committee on Transportation Policy)

CHAPTER

AN ACT

Relating to autonomous vehicles; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. The Department of Transportation is the lead agency responsible for coordination of autonomous vehicle programs and policies.

SECTION 2. (1) The Task Force on Autonomous Vehicles is established.

(2) The task force consists of 31 members appointed as follows:

(a) The President of the Senate shall appoint two members from among members of the Senate who are not members of the same party.

(b) The Speaker of the House of Representatives shall appoint two members from among members of the House of Representatives who are not members of the same party.

(c) The Director of Transportation shall appoint 27 members as follows:

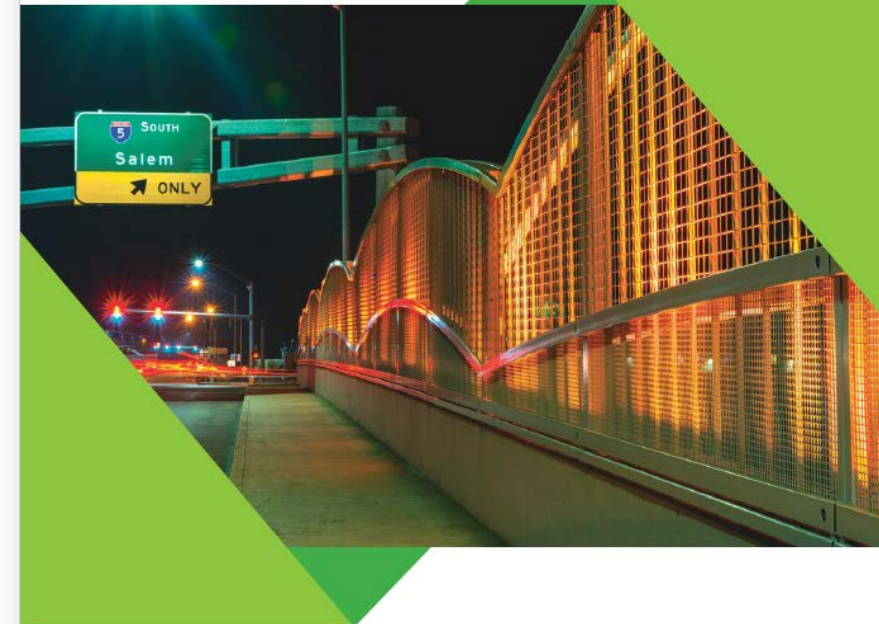
(A) Six members representing state agencies that will be affected by the deployment of autonomous vehicles.

(B) Twenty-one members as follows:

(i) One representative of the automotive industry;

(ii) One representative of the cybersecurity industry;

STATE OF OREGON



TASK FORCE ON AUTONOMOUS VEHICLES

2018 FINAL REPORT TO THE OREGON STATE LEGISLATURE

Sept. 10, 2018





Task Force subcommittees

Round 2



Land use

Road and
infrastructure
design

Public transit

Workforce
changes

Cybersecurity,
privacy and
data

Vehicle code
amendments &
public safety

Road & Infrastructure Design



Final Product Goals



- 1) A document outlining national guidance and what other state or local jurisdictions are doing related to road and infrastructure design
- 2) Documents assessing road and infrastructure impact areas to prepare for future transportation system

National Guidance & Initiatives

- Updates to Manual on Uniform Traffic Control Devices (MUTCD)
- AASHTO Coalition on National Strategy for Highway Automation
- Cooperative Automated Transportation Coalition
- NACTO: Blueprint for Autonomous Urbanism
- ITE: Curbside Management Practitioners Guide
- FHWA: National Dialogue on Highway Automation
- National Operations Center of Excellence – TSMO Workforce Development
- SAE Committee on Infrastructure Needs Related to Automated Driving



National Guidance & Initiatives, continued

- National Cooperative Highway Research Project (NCHRP)
 - 03-126: Operational Standards for Highway Infrastructure
 - 03-127: Cybersecurity of Traffic Management Systems
 - 03-137: Algorithms to Convert Basic Safety Messages into Traffic Measures
 - 20-102: Impacts of CAVs on State and Local Agencies
 - 20-102(06): Road Markings for Machine Vision



National Guidance & Initiatives, continued

- National Cooperative Highway Research Project (NCHRP)
 - 20-102(15): Impacts of CAVs to Highway Infrastructure
 - 20-102(21): Infrastructure Modifications to Improve Operation Domain of AVs
 - 20-102(24): Infrastructure Enablers for CAVs and Shared Mobility – Near-Term and Mid-Term
 - 20-102(14) Data Management Strategies for CV/AV Applications for Operations



Impacts Assessment to Prepare for Future Transportation System

Template for Impacts Assessment to Prepare for Future Transportation System

Impact Area (Example: Communications infrastructure)	
Descriptions	(Example: To maximize the safety and congestion benefits of AVs by providing additional information that is not available via sensors and visual recognition.)
Certainty/potential time horizon	(Example: Fiber is already used for...)
Co-benefits/advancing established goals	(Example: Investing in connectivity promotes safety, traffic management, signal timing, variable speed control, etc.)
Barriers	(Example: There is currently no standard for vehicle communication protocol, costs of installation.)
Impact to infrastructure owner/operator	(Example: Costs to state agencies will include...)
Relevant national guidance/key decision makers	(Example: FCC)
Next steps	(Example: Identify and invest in multi-purpose communications infrastructure.)

Potential Topics

- Road Markings
- Curb Space Management
- Traffic Signals
- LED Signs
- Parking
- Work Zones
- School Zones
- Road Signs
- Communications Infrastructure
- Vehicle to Infrastructure Applications
- Cybersecurity for Vehicle to Infrastructure communications
- Vehicle Data Needs
- Lane Width
- EV Charging
- Equity

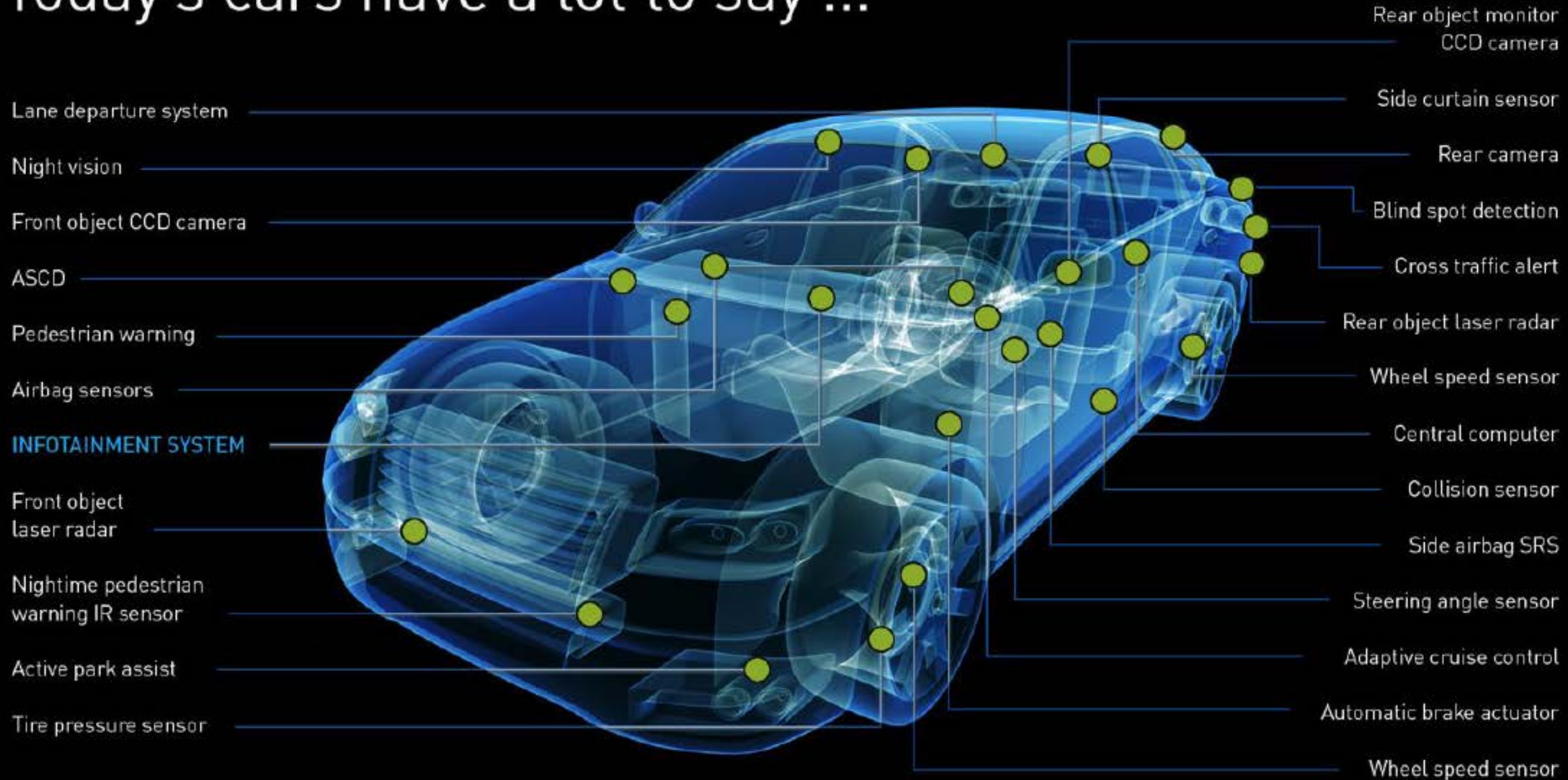


Colorado V2X Ecosystem

Colorado DOT – Panasonic CV
Infrastructure Project



Today's cars have a lot to say ...



Projected 2035 numbers with 100% of cars instrumented and full BSM coverage

I-70 Mountain
Corridor
(90 miles)

- 0.082 billion messages/hr
- 22.9 GB/hr

All of I-70 in
Colorado

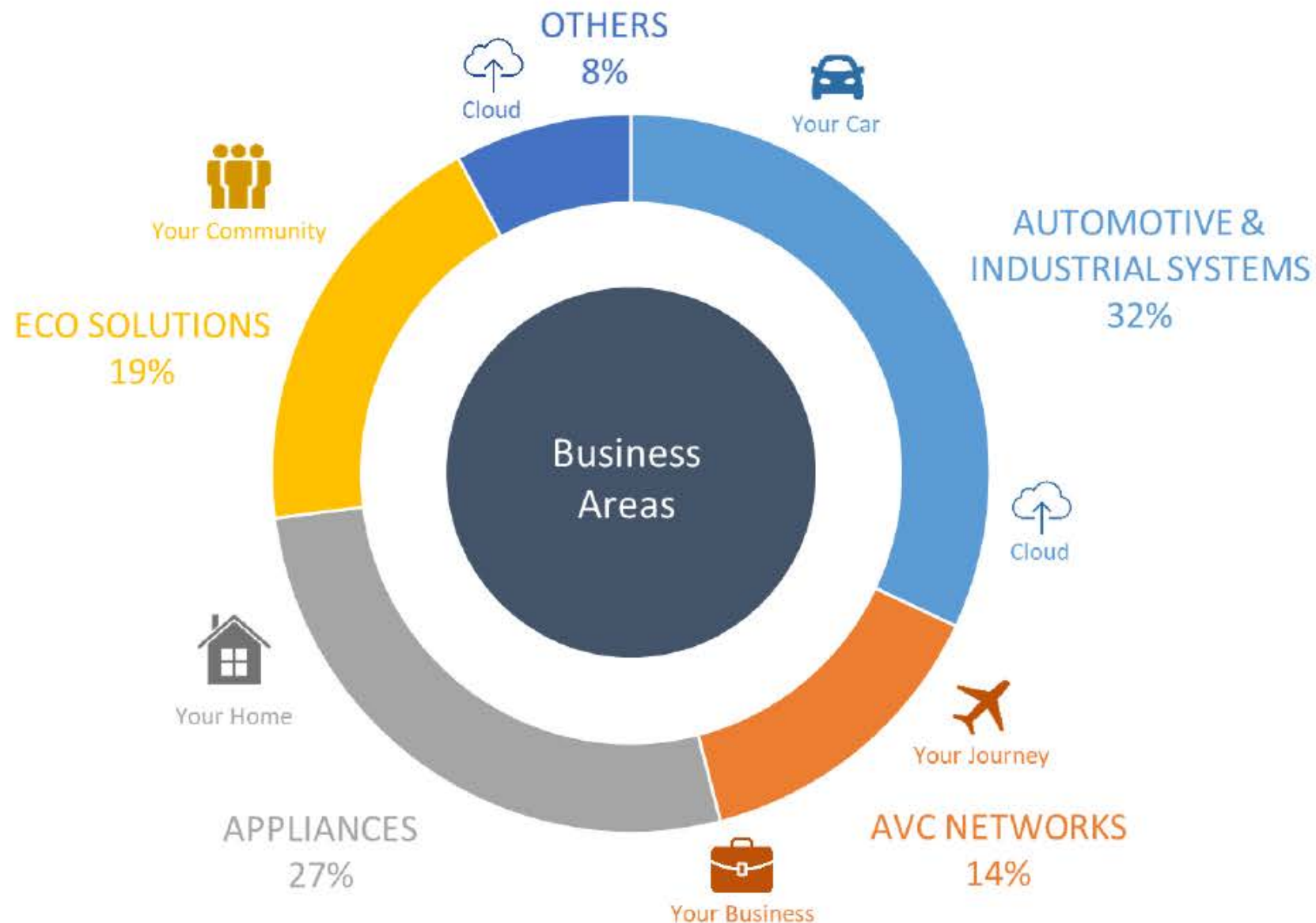
- 0.27 billion messages/hr
- 76.3 GB/hr
- 0.64 PB/yr

Entire State of
Colorado

- 2.12 billion messages/hr
- 592.3 GB/hr
- 4.95 PB/yr

A Better Life ... With A Lifetime of Technology

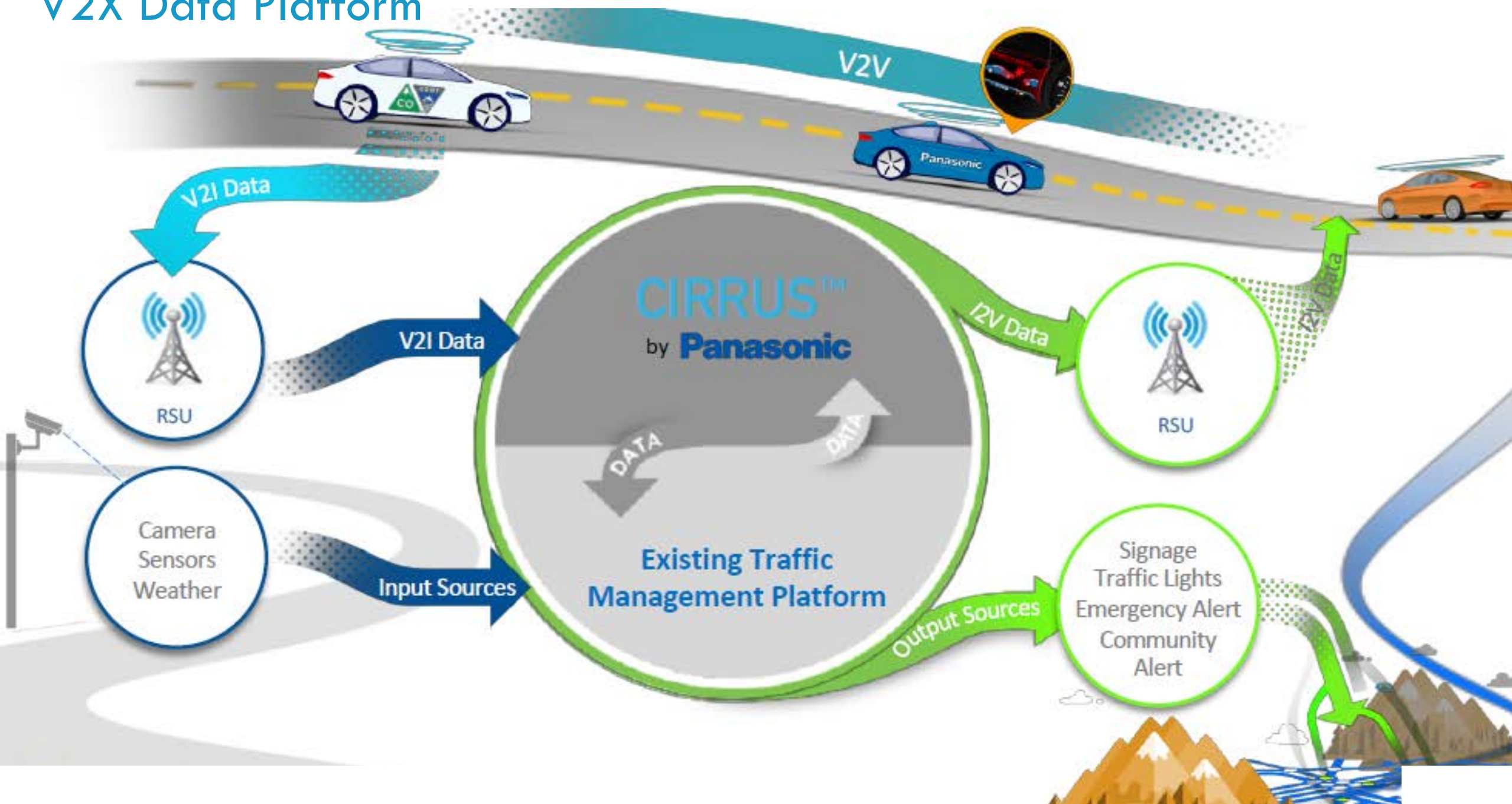
DNA of Consumer Electronics





Innovation and a sharp focus on values in service and quality strengthen the relationships between PASA and its partners.

V2X Data Platform



The V2X Ecosystem Unlocks More Than Just V2V

SAFETY



Prevent **419,000** additional crashes
Save **5,000** more lives
Avoid **5,000** more fatal crashes

MOBILITY



Improve freeway travel times by **42** percent
Improve arterial travel times by **27** percent
Reduce poor weather incidents by **25** percent

ENVIRONMENT



Improve fuel savings by **22** percent
Reduce VMT by **20** percent
Improve freeway travel times by **42** percent

V2X ecosystem gives roadway operators the ultimate situational awareness of all roadways, providing:

- Highly accurate, geo-located traveler information
- Highly accurate, localized weather data
- Faster emergency response times
- Improved incident management
- More intelligent, coordinated traffic signal systems
- Improved truck parking information/availability
- Enhanced maintenance decision support systems (e.g., snow plow operations)
- Improved infrastructure diagnostics (e.g., pothole identification, roadway friction)

Benefit to DOTs:

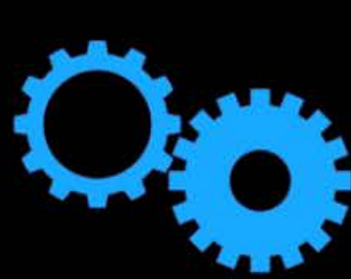
1. Empowers DOTs with data ownership and delivers open data for the world.
2. Prepares DOTs for autonomous vehicles



Open Ecosystem

Siloed to Connected

SDK/Data API Layer



IoT/Edge



Cloud Analytics



Open Ecosystem

Cloud Analytics

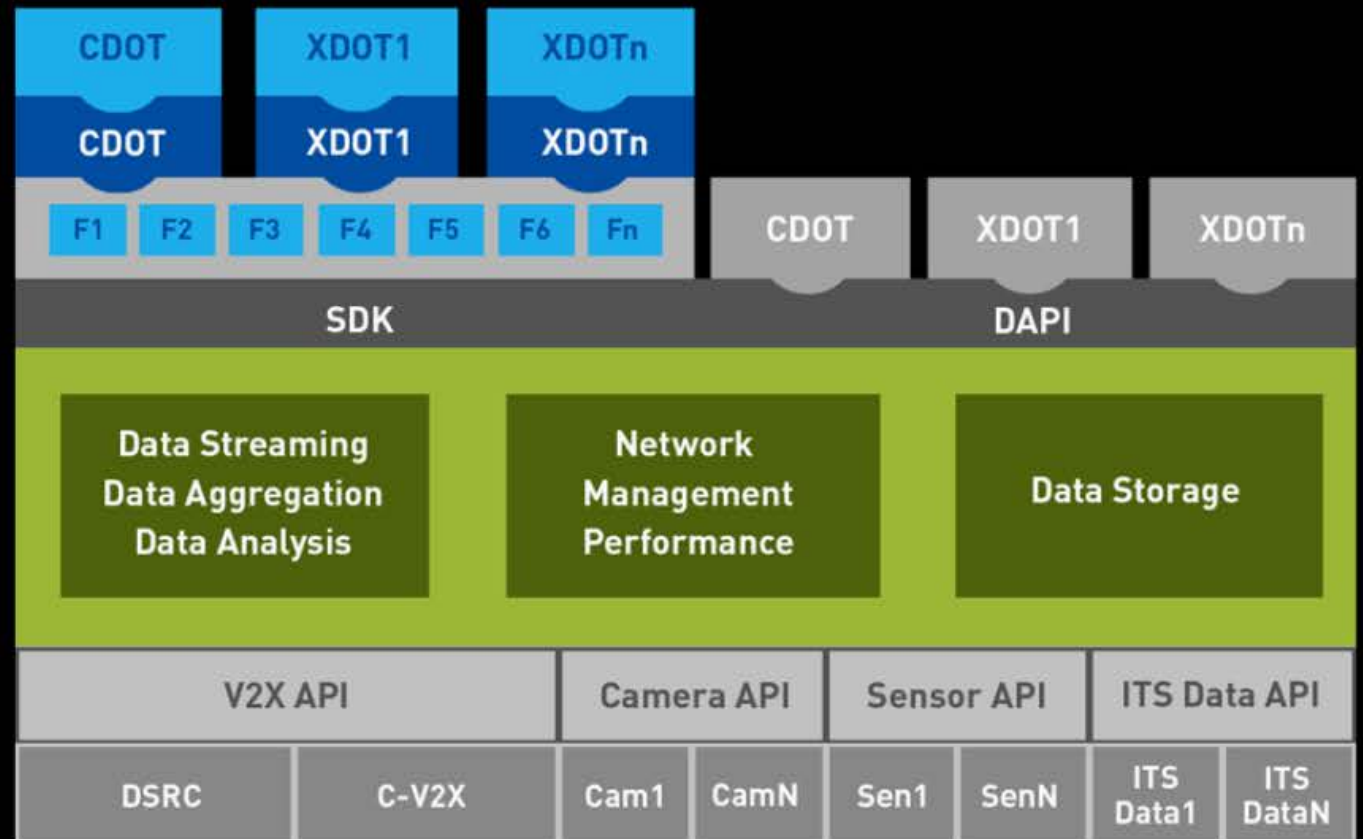
Hindsight to Foresight

Data Processing, Storage
& Analytics Layer

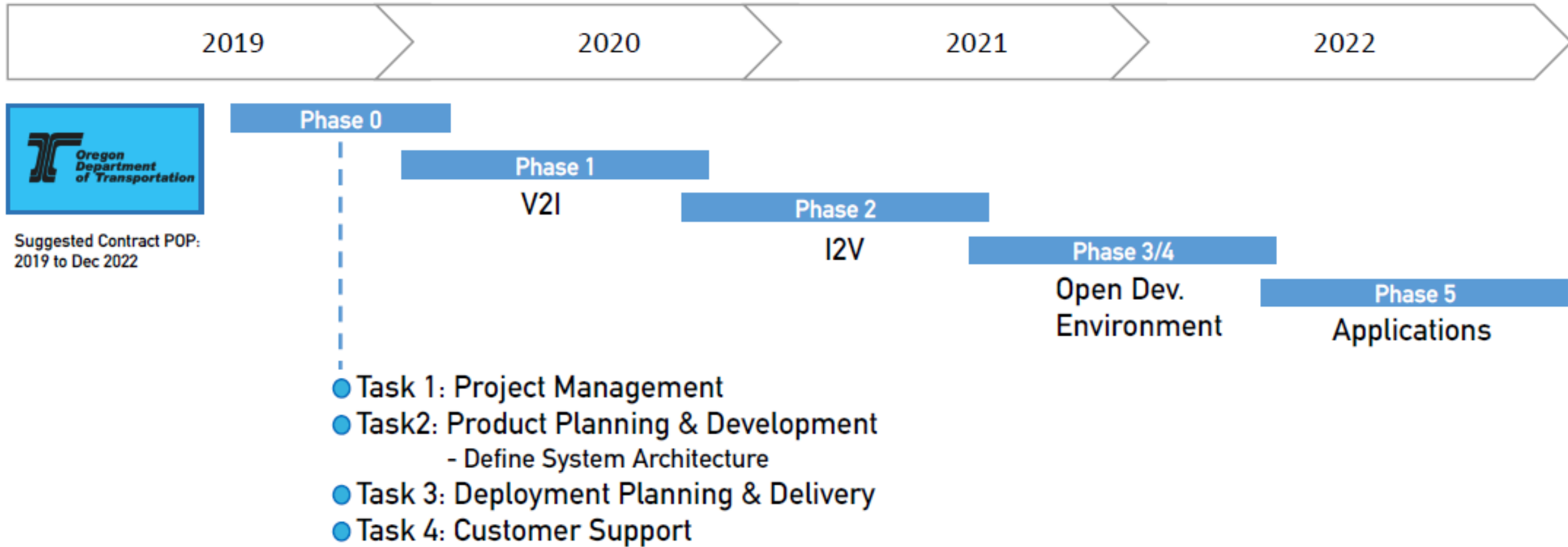
IoT/Edge

Sense to Action

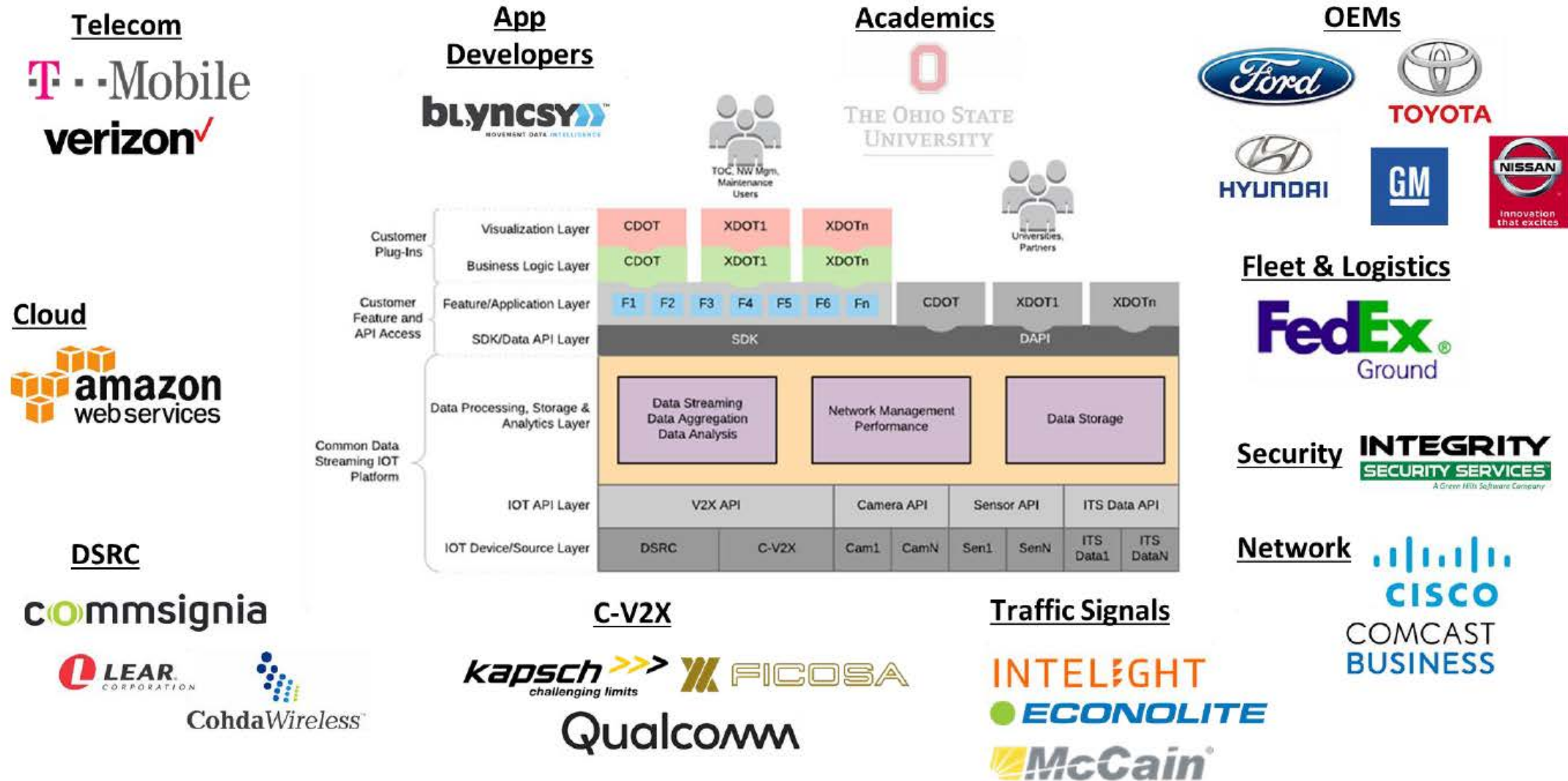
IoT API Layer



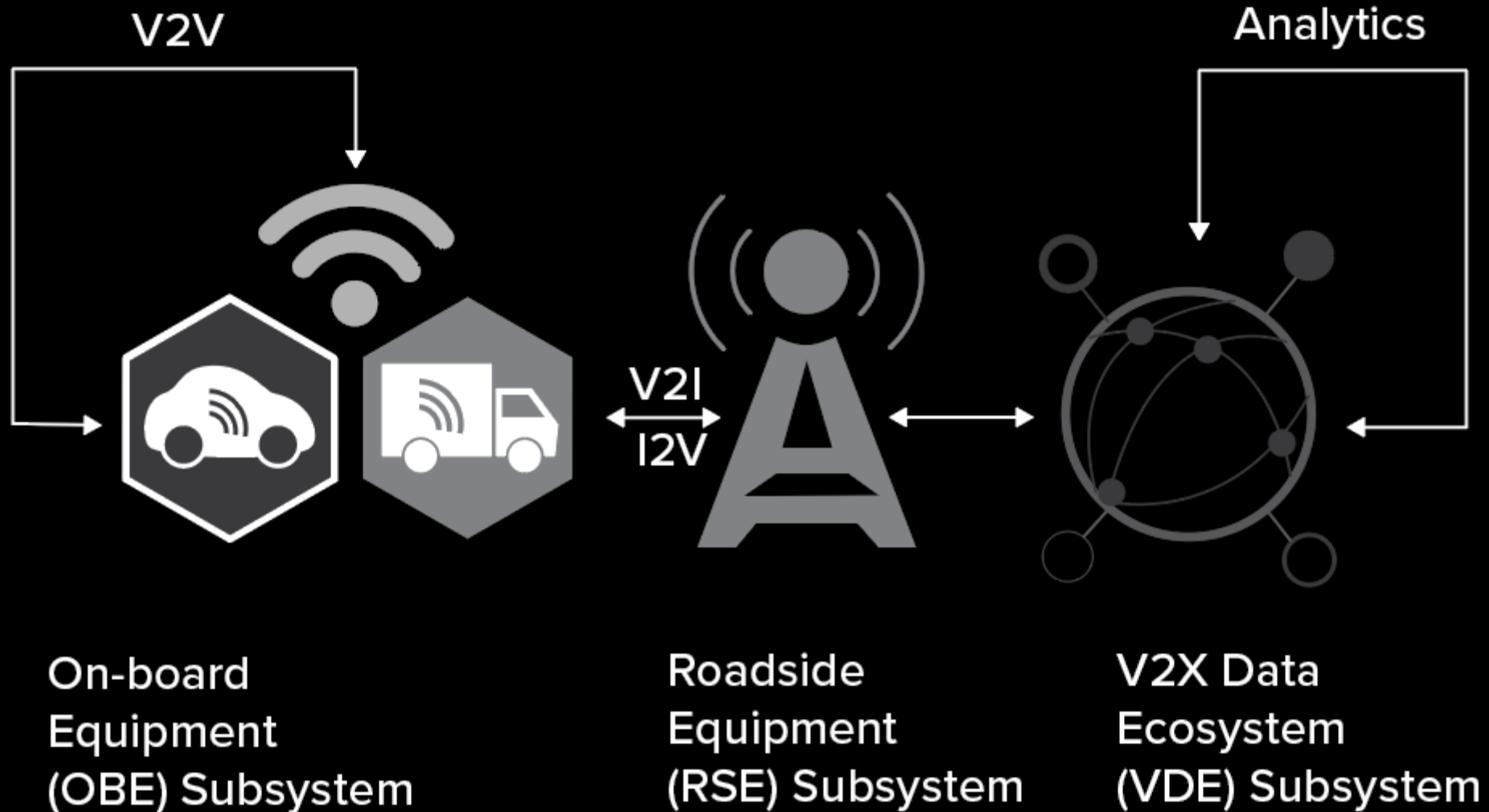
ODOT Phased Approach



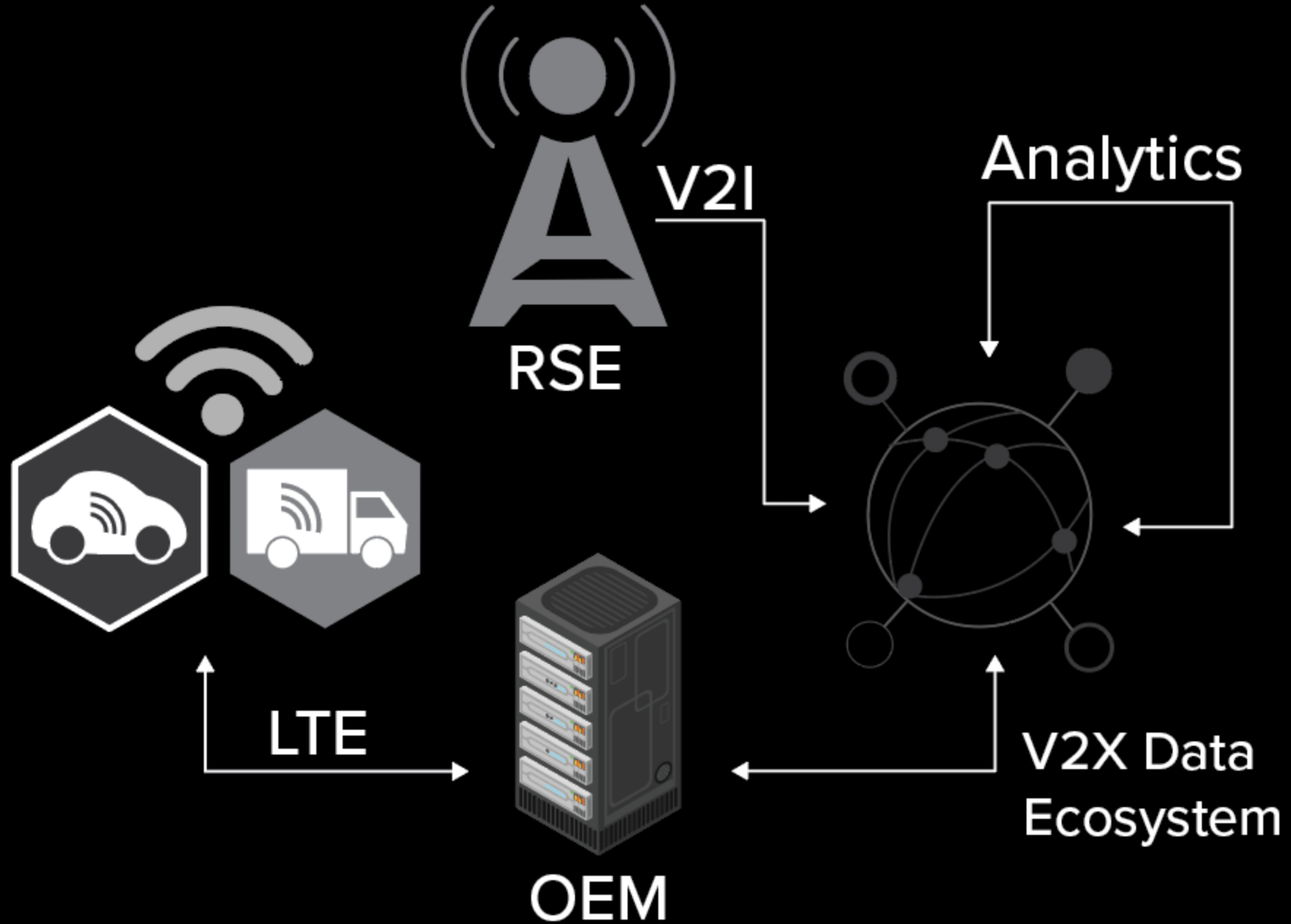
V2X partnerships



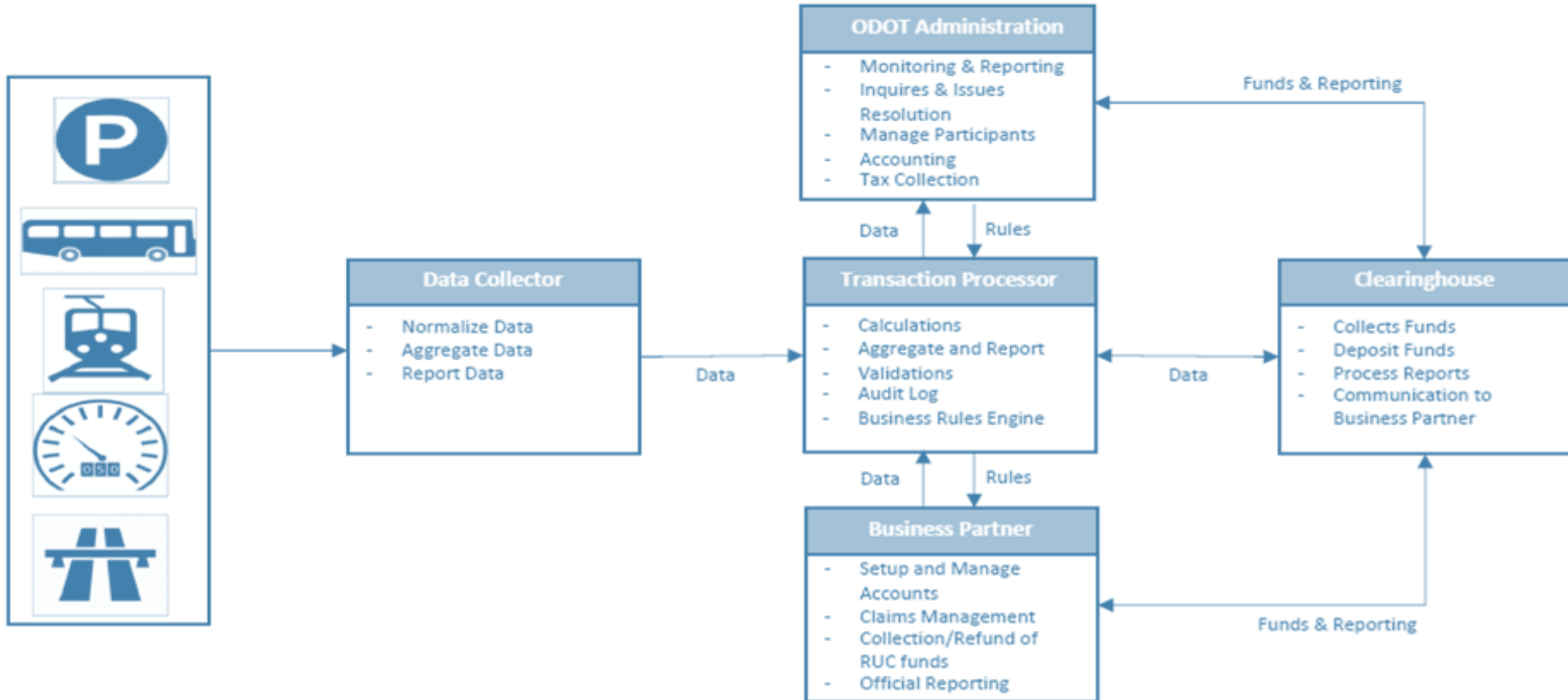
V2X System



LTE V2X System



Opportunities for RUC and Tolling



Summary of Opportunities/Risks

Opportunities

- Collaboration with OEMs – access to vehicle data
- Path to eliminate/reduce roadside infrastructure
- CV application mobility, safety, and environmental benefits
- Achieve vehicle integrated RUC
- Perpetual Software license
- ODOT can define project phases to match interests

Risks

- Opportunity cost of a large investment/staff effort
- Dependent on industry adoption/OEM agreements
- System doesn't exist today
- Immature standards
- Will other business models emerge?



Questions?

Issue-

Page 3-1 of the Sign Policy – Speed Limit signs does not match the language of Page 3-4 of the Speed Sign.

Speed Limit Sign (R2-1)

(MUTCD 2B.13)

The SPEED XX (R2-1) sign is to be used for posting of all non-interstate speed zones that do not fall within city limits or designated school zones.

In keeping with legislative changes which establish speeds on interstate highways as speed limits (see ORS 810.180), all speed signs installed on Oregon interstates shall be SPEED LIMIT XX (R2-1) signs. This applies only to interstates (I-5, I-82, I-84, I-105, I-205 and I-405) and not to other state highways.

Per ORS 811.111, all speed signs installed at school zones shall be SPEED LIMIT 20 (R2-1) signs.


All speed zones that fall within city limits shall be posted with SPEED LIMIT XX (R2-1) signs.

From page 3-1

From 3-4

The SPEED XX sign may be used to inform motorist of the designated speed or speed limit. This includes Truck speed Restrictions, school speed zones, and other special speed restrictions allowed by law as well as the designated speed or speed limit by statute, rule or written order.

OR2-1



Sign Background: White, Standard Retroreflective Sheeting
Sign Legend: Black, Non-reflective Sheeting

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
MIN.	30	36	1/2	3/4	4	6D	3 1/2	18C	4 1/2	1 7/8
STD.	36	48	5/8	7/8	7	8C	7	18D	8	2 1/4
FWY/ EXPWY.	48	60	3/4	1 1/4	7	10D	6	30C	7	3

The SPEED XX sign may be used to inform motorists of the designated speed or speed limit. This includes truck speed restrictions, school speed zones, and other special speed restrictions allowed by law as well as the designated speed or speed limit by statute, rule or written order.

Speed sign indicating either statutory or revised speed values shall be located at the beginning of each section, at the point of change from one speed to another and at intermediate locations, if necessary, to remind motorists of the speed that is applicable. In general, in urban and suburban areas, the interval between intermediate speed signs should not be less than 1/4 mile nor more than 2 miles, nor should there be less than one intermediate speed sign for each direction of travel in each speed zone. In rural areas, the interval between intermediate signs may be 2 to 10 miles.

OREGON DEPARTMENT OF TRANSPORTATION

Approved By: O.T.C.	Date: 01/1990	Updated: 03/2015
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Proposal –

Cut part of the wording from 3-4.

The SPEED XX sign may be used to inform motorist of the designated speed ~~or speed limit~~. This includes Truck speed restrictions, ~~school speed zones~~, and other special speed restrictions allowed by law as well as the designated speed ~~or speed limit by statute~~, rule or written order.

Second issue- SP&G on page 5-4 about bus stations.

Current SP&G reads:

The BUS STATION symbol sign (I - 6) shall be used on state highways to indicate the location of a bus stop on the state highway. When used the BUS STATION symbol sign should be accompanied by a supplemental plaque below the sign to identify the bus service that stops there.



I have had many comments that the shall language is too strong, especially when the bus stop sign does have the logo of a very recognizable bus system like Tri-met.

Proposal-

Change the 'shall' to a 'should'. A simple written explanation of why the symbol is not needed would suffice.

The BUS STATION symbol sign (I - 6) should be used on state highways to indicate the location of a bus stop on the state highway. When used the BUS STATION symbol sign should be accompanied by a supplemental plaque below the sign to identify the bus service that stops there.



Oregon Department of Transportation
and
Oregon Traffic Control Devices Committee

Red Light Running (RLR) Camera Guidelines For State Highways



**OREGON DEPARTMENT of TRANSPORTATION
TRANSPORTATION OPERATIONS DIVISION
TECHNICAL SERVICES
TRAFFIC MANAGEMENT SECTION**
<http://www.odot.state.or.us/traffic>

-RLR Camera Guidelines 20198

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Approved by the State Traffic-Roadway Engineer, in consultation with the Oregon Traffic Control Devices Committee for use on State Highways and adopted by the Oregon Traffic Control Devices Committee as a guide to assist Oregon cities in the deployment of Red Light Running (RLR) Cameras.

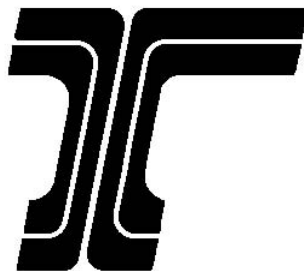
Mike Kimlinger
State Traffic-Roadway Engineer
May 2019

Major Revisions included in this version:

1. Clarifications for requirements to send ODOT a copy of the biennial report.
2. Clarifications for Engineering study to accompany biennial report.
- 4.3. Clarification of requirements for engineering study to add speed enforcement to an existing RLR camera with the addition of a checklist.

Major Revisions included in previous versions:

1. Added Section on using Red Light cameras for Automated Speed Enforcement.
2. Added Paragraph requiring agencies to provide ODOT a copy of Legislative Report.
3. Revised Legislative Report requirement from “Regular Session” to “Odd-numbered year” to reflect legislative change in 2013.
4. New bullets in the Crash History requirements for the Safety and Operations Report
5. New Section- Future Changes to the Intersection
6. Various Changes in the section Procedure for State Highways to clarify the procedure
7. New section - Removal Procedure for Red Light Running Cameras
8. New Section – Conditions of Approval
9. New Appendix with web link to the Red Light Running Toolbox
10. Removed the requirement that the Oregon Department of Transportation provide an executive summary of evaluations of the systems to the Oregon Legislature.
11. Added a requirement that each city that operates cameras present an evaluation of the use and administration of the cameras to the Oregon Legislature.



Red Light Running (RLR) Camera Guidelines

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Red Light Running (RLR) Camera Guidelines

Introduction

This document has been prepared by the Oregon Department of Transportation (ODOT) and the Oregon Traffic Control Devices Committee (OTCDC) to assist local jurisdictions in the deployment of Red Light Running (RLR) Cameras on State Highways. Local jurisdictions should follow this guidance for installation of RLR cameras off state highways or develop their own guidance for application.

Supporting Legislation

In response to what appeared to be a growing disrespect for traffic laws in general and disobeying red traffic signal indications in particular, the Oregon Legislature enacted a law in 1999 to help Oregon communities effectively enforce and reduce red light running. The law was revised and expanded several times since. These guidelines are based on Oregon Revised Statutes (ORS) 810.434 through 810.436. The Oregon legislature last revised ORS 810.434 and 810.436 in 2017 to allow RLR cameras to also be used to cite for violating the posted speed.

RLR Camera System Justification

In 2016, 811 people were killed and in 2015 an estimated 137,000 were injured in crashes that involved red light running in the US. About half of the deaths in red light running crashes are pedestrians and occupants in other vehicles who are hit by the red light runners. Studies have reported that red light cameras reduce angle and turning crashes, but can increase rear-end crashes. Because the types of crashes prevented by red light cameras tend to be more severe than rear-end crashes, research has shown there is also a reduction in the severity of crashes.

The Highway Safety Manual (published by AASHTO) quantifies the expected crash reductions of different measures. These measures are only included if there is known statistical stability and reliability. The Highway Safety Manual¹ lists the expected crash effects for installation of red-light cameras as a 26 percent crash reduction in right-angle and left-turn crashes and an 18 percent increase in rear-end crashes.

¹Council, F.; Persaud, B.; Eccles, K.; Lyon, C.; and Griffith, M. 2005. Safety evaluation of red-light cameras: executive summary. Report no. FHWA HRT-05-049. Washington, DC: Federal Highway Administration.

RLR/SpeedRLR Cameras are not a panacea for intersection safety problems and should be installed only after other means have failed to solve the problems (see appendix A - RLR Toolbox).

RLR/SpeedRLR Cameras have the potential to reduce the number and severity of crashes, but because of the concern for increasing rear-end crashes, RLR/SpeedRLR Cameras should be installed only where a RLR crash problem within the last 5 years can be documented. When used, they should be a part of a process that considers education, enforcement and engineering, which are essential to any traffic safety program. Enhanced traffic safety is the principal aim of RLR/SpeedRLR Camera enforcement programs.

The following are means of improving intersection safety prior to RLR Cameras the jurisdiction should consider:

- (1) Proper sight distance;
- (2) Speed zones are consistent with engineering practice;
- (3) The number, size and location of vehicle heads are consistent with the MUTCD and ODOT's "Traffic Signal Policy and Guidelines";
- (4) Proper yellow change and red clearance intervals are consistent with ODOT's "Traffic Signal Policy and Guidelines" or other jurisdiction's adopted policy;
- (5) Corridor progression timing does not contribute to red light running;
- (6) Enforcement "tattle-tale" lights; and
- (7) The traffic signal timing is consistent with traffic volume, speed and specific intersection design elements.

RLR/SpeedRLR Camera System Implementation

RLR/SpeedRLR Cameras monitor both the flow of traffic at the stop location and the condition (or color) of the traffic signal indication on the approach. Special detectors, commonly loops cut into the pavement, check for the passage of vehicles into the intersection and if the traffic signal phase condition is red, cause pole mounted cameras to record pictures of the vehicle position, license plate and driver. Upon verification by a police officer, the vehicle owner is issued a citation through the mail. Camera systems should differentiate between vehicles running a red light and those vehicles stopping slightly beyond the stop bar or those vehicles, after stopping, making a legal turn against a red indication.

Typically RLR/SpeedRLR Camera Systems are installed under contract, by a commercial firm that specializes in such systems. These contracts cover the furnishing, installation and operation of the RLR/SpeedRLR Cameras. The firm may also prepare the evidence for verification by local law enforcement and mail the citation. As compensation, the firm usually collects a predetermined fee for this service when the citation fine is received.

Costs that the local jurisdiction must cover include internal expenses for engineering plan review, site evaluation and field engineering during the installation phase of the RLR/SpeedRLR Camera System. Local jurisdictions also can purchase, install and operate RLR/SpeedRLR Camera Systems or can enter into agreements with other jurisdictions to provide all or a portion of this service.

If the candidate location is at a state highway intersection or on a state highway approach, application to and approval of the Oregon Department of Transportation is required.

Automated Speed Enforcement

Oregon law allows Red Light Running Cameras to also detect and issue speeding violations for motorists violating speeds by 11 mph or greater. Cities may not issue a speeding violation concurrently with a red light running violation, unless the motorist was exceeding the posted speed by more than 20 mph.

The placement of the ~~RLR/Speed~~RLR devices is primarily for the purpose of reducing red light running crashes and may only be placed at signalized intersections. The placement of ~~RLR/Speed~~RLR cameras should be limited to locations that demonstrate a history of red light running crashes and not specifically to curtail speed related crashes. The primary consideration will be to reduce severe red light running crashes. Reducing speed related crashes will be a secondary consideration.

When there is also a history of speed related crashes, the Safety and Operations report should take into account any pertinent considerations found in the [Fixed Photo Radar \(FPR\) Camera Guidelines](#).

Placement of ~~RLR/Speed~~RLR camera systems are proven to have a favorable effect on traffic safety, in particular reducing severe crashes². However since less severe rear-end crashes are still likely to increase, due to the presence of the RLR camera, it is still necessary to demonstrate that there has been a history of severe red light running crashes that are being mitigated by the RLR camera.

To request adding speed enforcement to an existing RLR Camera installation or at the time of installation of the RLR Camera complete a RLR Camera Speed Enforcement Request Form and attach appropriate documentation. When adding Speed Enforcement to an existing RLR if field changes are required to the RLR system this may require additional costs for an ODOT Permit and inspection of the device.

Public Information Campaign and Sign Requirements

Oregon Law requires that cities provide a public information campaign to inform local drivers about the use of ~~RLR/Speed~~RLR Cameras before citations are actually issued. Educating the public is a critical step in reducing red light running. In order to effectively change poor driving habits, drivers must be made aware that ~~RLR/Speed~~RLR Cameras are in use. It is recommended that cities hold well-publicized kickoff events and issue periodic press releases about the effectiveness of ~~RLR/Speed~~RLR Camera enforcement within their jurisdictions.

Oregon law also requires that signs be posted, so far as practicable, on all major routes entering the jurisdiction indicating that compliance with traffic control devices is enforced through cameras. The law further requires that signs indicating that a camera may be in operation be posted near each intersection where a camera is installed.

Signs should be of appropriate size so as to be easily readable at the posted speed. Signs should be placed in such a manner that the motorist can easily see them, without undue visual clutter or obstruction.

²De Pauw September 2014. "To brake or to accelerate? Safety Effects of combined speed and red light cameras". Journal of Safety Research Volume 50, Transportation Research Institute, Hasselt University, Belgium.

If the RLR camera will be used for citing speed violations, consideration should be given to placing speed signs prior to the intersection approach or as near as possible to remind motorists of the posted speed.

Operational Considerations

- **RLR/SpeedRLR** Cameras shall not affect the display or the operation of the traffic signal.
- Power for **RLR/SpeedRLR** Camera equipment may be provided from the traffic signal cabinet and should be on its own clearly identified circuit breaker.
- Contact closures, as may be required for red and yellow indications on RLR Camera approaches, should be electrically isolated from traffic signal equipment.
- Detection loops for **RLR/SpeedRLR** camera equipment should not be wired through the traffic signal cabinet, associated electrical conduit, or junction boxes and shall not interfere with the operation of detector loops used for traffic signal operation. At state highway intersections, segregated wiring is required.
- Traffic signal timing changes shall not be made to increase the possibility of vehicles running red lights. If a review of traffic signal timing prior to RLR Camera installation identifies inappropriate yellow change and red clearance interval values that require adjustment, these adjustments shall be made prior to operation of the RLR Camera system.
- Traffic signal timing changes may be made in response to substantial changes in approach speed, significant changes to traffic patterns, routine timing reviews, design changes, etc.
- Plans showing the location of all proposed and existing equipment shall be prepared.
- Signs at each City Limit, informing the public that compliance with traffic control devices is enforced through the use of cameras, shall be provided if not already in place. An automated enforcement sign on each covered approach shall be installed and should be shown on or as an attachment to the signal plans. Refer to the *Manual on Uniform Traffic Control Devices* and the Oregon Adopted Supplements for guidance on signs that should be posted.

Site Considerations

RLR Cameras may not be appropriate at locations where:

- Recent geometric or traffic signal design changes have been made. Supporting crash records may not be applicable in the new configuration.
- Traffic signals have been installed within the previous year. Crash history may be too short to support RLR Camera use.
- Geometric or traffic signal design changes are scheduled and an engineering evaluation indicates such changes may substantially alter the need for **RLR/SpeedRLR** Camera enforcement.
- Road or utility work is anticipated during the first year of **RLR/SpeedRLR** operation.
- Traffic pattern changes resulting from development, construction detours or similar events are anticipated during the first year of **RLR/SpeedRLR** operation.
- An electrical interconnect with “railroad active warning devices” is provided on the approach.
- Design, operation or maintenance is inconsistent with state or local standards and practices.

Safety and Operations Report

A Safety and Operations Report is required for all RLR Camera Systems to be installed at intersections on state highways and is strongly recommended for all other locations since it can provide the basis for the process and outcome evaluation required in ORS 810.434(3)(b). It may be desirable to secure the services of a Professional Engineer to conduct the necessary study.

In addition to a general project narrative, the Safety and Operations Report should address to the extent practical the following:

Crash History - An engineering study of the crash experience at the intersection should be conducted.

- Target crashes for reduction at a RLR installation are angle crashes where the driver of one of the vehicles disregarded the traffic control device. Oregon crash records include codes for driver error and crash cause that describe these crashes (code for Participant Error code 020: "DISREGARDED TRAFFIC SIGNAL" and Crash Cause code 04: "DISREGARDED R-A-G TRAFFIC SIGNAL").
- Target crashes coded to driver inattention may also be included in the study.
- The study should identify the relative crash problem of the intersection and each approach or movement of the intersection based on nearby intersections of similar volume, geometry, and traffic control.
- The study shall identify the approaches and movements to the intersections the applicant is requesting to be monitored by a RLR camera.
- Approaches should be those that have target crashes identified.
- Right turn approaches may have a high rate of violation but typically result in low severity or low crash occurrence and should not be included unless there is associated evidence of a significant crash history of high severity.

Safety Concerns – Documentation detailing other safety concerns may be included in the report. Concerns may be supported by any of the following (or other relevant data):

- Traffic citation data
- Complaints
- Enforcement observations
- Speeds, traffic volumes and grades
- Traffic signal spacing
- Proximity to freeway or expressway ramp terminals

Design, Operations, and Maintenance Issues – Copies of signal plans showing the location of all proposed and existing equipment should be included. A description of how the RLR Camera System will be operated and maintained should be provided. Any design, operations, or maintenance issues that could affect the potential effectiveness of a RLR Camera System should be identified.

Public Information Campaign – The public information requirements as outlined in ORS 810.434 (3)(a) should be addressed.

Budget – A budget for system implementation and operation should be developed.

PE Certification – The jurisdiction proposing to install a RLR Camera System should secure the services of a Professional Engineer (PE) to attest that the traffic signal is operated and maintained

in accordance with the MUTCD and appropriate state and local guidelines. This certification should be made available to the enforcing jurisdiction.

Future Changes to the Intersection

While every effort should be made to determine appropriate modifications and changes to the signal system prior to the installation of RLR cameras, land use and traffic patterns may change over time. Such changes may require a road authority to make changes to the signal system that may impact the operations of the RLR Cameras equipment. At no time shall the presence of RLR cameras obstruct an agency from making necessary changes to improve the safety of the driving public or the operation of the traffic signal.

When problems affecting the safety of the public arise (whether part of the signal system or are attributed to the operation of the RLR cameras) and traffic solutions to improve geometry, remove or add lanes or change the operational characteristics of the signal system are identified, the RLR camera operations and the associated costs of changing the RLR cameras shall not be taken into account as the reason for not making such changes. Any changes to the RLR cameras and associated costs shall be the responsibility of the commercial firm under contract for operation of the RLR cameras and the jurisdiction overseeing the operation of the RLR camera system, depending on their agreements.

Biennial Report Requirement

Oregon Law requires that once each biennium all cities using RLR Camera Systems must conduct a process and outcome evaluation that includes:

- The effect of the use of cameras on traffic safety
- The degree of public acceptance of the use of cameras
- The process of administration of the use of cameras

Regardless of the jurisdiction in the position of road authority, the jurisdiction overseeing the operation of a RLR Camera System shall prepare the Biennial Report and submit the report by March 1st of the year of each regular session to the Legislative Assembly. The Biennial Report should include the following information:

- Name, address, and phone number of person who will be the main RLR contact for this jurisdiction.
- Date of implementation.
- Number of intersections at which RLR Cameras are installed.
- RLR contractor name.
- Crash data specific to RLR locations for the 3-year period prior to RLR Camera installation and post RLR camera installation data to identify average crash rate and annual change.
- Public information surveys (if available) regarding jurisdiction's use of RLR Cameras.
- Copies of media releases sent as a part of the public RLR awareness program.
- Description of areas of concern or difficulty in administering the RLR Camera enforcement program.
- Available information on the local courts ability to handle the increase in citations.

- “Success stories” to share with the legislature about local RLR program such as major reductions in serious injuries and fatalities in the local jurisdiction due to RLR Camera systems.

Each city that operates a camera system is responsible for presenting a report to the Legislative Assembly by March 1st of the odd-numbered year. Each city that operates a camera system on state highways shall provide ODOT with a copy of the biennial report to the legislature.

In addition to the biennial report to the legislature, the city shall submit an Engineering Report to ODOT once per biennium for each intersection on a state highway where the city operates a camera system and does signal timing for ODOT through an Intergovernmental Agreement.~~In addition to the statute requirements, given that conditions do change over time, ODOT requires a once a biennium Engineering Report detailing the signal timing parameters for signals on state highways.~~ The report should:

1. Detail the signal timing parameters.
2. Include the Engineer’s recommendations and indicate whether or not the signal timing is appropriate for surrounding land uses, speeds and roadway character, and
3. Indicate whether or not the timing complies with ODOT policies and guidance including the red/yellow clearance times, and:~~The Report should include~~
4. If the local jurisdiction maintains and manages signal timing for the state highway signal, report whether or not any changes to signal timing have been made during the biennium.

Approval Procedure for State Highways

State Traffic-Roadway Engineer approval is required for RLR Camera installation and operation at all State-owned intersections regardless of operation or maintenance responsibilities. The following procedure should be followed:

- The Applicant:
 - Submits letter to ODOT Region requesting authorization to install and operate a RLR Camera at a specific State-owned intersection and specific movements monitored.
 - The letter shall identify a responsible party to whom an ODOT permit will be issued and the point of contact responsible for the construction, operation, and public information requirements.
 - The letter shall be accompanied by:
 1. The Safety and Operations Report.
 2. A statement of consistency with the Operational Considerations.
 3. A statement of agreement with the Conditions of Approval
- Region Traffic:
 - Reviews RLR design and supporting documents and works with applicant to ensure the RLR Camera Enforcement Installation Checklist (see page 11) is complete.
 - If supportive of the proposal, prepares all documents for the State Traffic-Roadway Engineer with a recommendation to approve.
 - Receives State Traffic-Roadway Engineer response of approval or denial of the RLR camera and any conditions.
 - Leads development of an Intergovernmental Agreement (IGA), laying out terms of agreement

as to the responsibilities and obligations of each jurisdiction for the RLR camera.

- The District Office:
 - Establishes an account number through ODOT Financial Services identifying responsible party and budget in an Order to Render Service.
 - Establishes the amount of deposit to be paid by the applicant. If cost are more than the deposit the applicant will be charged for the additional cost, if less then reimbursed.
 - Issues Miscellaneous Permit to applicant stating conditions of approval. Conditions include the need for State Traffic-Roadway Engineer approval.
- The Applicant:
 - Signs the permit, acknowledging the conditions of approval.
 - Agrees to pay for all actual costs incurred by ODOT relating to the installation, inspection, or repair, and any incidental costs.
 - Pays a monetary deposit as determined by the District office. Below are examples of typical costs and services:
 1. Plan review by the Traffic-Roadway Section estimated between \$200 and \$1000 per RLR Camera installation.
 2. Traffic signal cabinet and intersection modifications required to protect ODOT equipment and provide proper communication to RLR equipment estimated at \$1000 per intersection.
 3. Sign installation estimated at \$200 per sign, \$600 for sign and post.
 4. Relocation or repair of existing traffic control devices resulting from the installation of RLR equipment (costs are based on time and materials plus any damages).
 5. Inspection of installation estimated between \$200 and \$1000.
- The District Office:
 - Upon receipt of signed permit and deposit, forwards plans and supporting documents to the Region Traffic Manager.
 - Notify the Electrical Crew responsible for the traffic signal and arranges for inspections of permit work.

State Traffic-Roadway Engineer approval will be based on review of supporting documents and completion of final, ODOT approved plans and may stipulate further conditions of approval. The State Traffic-Roadway Engineer will specify which movements are approved to receive RLR Cameras.

Removal Procedure for State Highways

When considering removal of a **RLR/SpeedRLR** camera, a study should be performed to determine if the **RLR/SpeedRLR** Camera should be removed or remain. A **RLR/SpeedRLR** camera may be ordered removed by the State Traffic-Roadway Engineer for an intersection or a particular approach to an intersection or a particular movement at an intersection.

If for instance the study shows there is little or no reduction in the number, severity or targeted crashes (i.e., angle crashes) or if similar results can be obtained from engineering countermeasures such as improving sight distance, conspicuity of the signal heads, signal timing or installation of “tattle tale” lights the Region Traffic Engineer may recommend removal to the State Traffic-Roadway Engineer.

Intersections where engineering or geometric improvements are proposed may require study of the new intersection geometry and may result in a request to remove RLR/SpeedRLR camera equipment. The study may include a determination of changes in conflicts, phasing changes to traffic signals, addition of turn lanes or diversions of traffic patterns that change the operations of the traffic signal.

The following procedure should be followed when considering removal of RLR/SpeedRLR cameras:

- ODOT Region Traffic shall conduct a study.
 - The study shall determine the safety effectiveness of the RLR/SpeedRLR camera at reducing crashes, severity of crashes and/or types of crashes (especially as they relate to angle crashes vs. rear-end crashes).
 - The study shall recommend continued operation of the camera, removal of the camera and/or modifications to the operation of the camera or intersection.
 - Other safety concerns such as changes in violations and compliance rates may be considered but are not the primary measure of safety.
 - The study shall also consider the extent to which other countermeasures had been implemented prior to implementation of the RLR/SpeedRLR cameras or proposed changes to the intersection.
 - Other considerations may include traffic volumes and delay, unusual or unique geometry, signal timing, operation and cycle lengths, driver behavior, and other engineering countermeasures to improve safety.
 - The study shall include any proposed changes to the intersection such as engineering or geometric improvements that reduce or eliminate conflicts or change the operations of the traffic signal.
- If the recommendation is to remove the RLR/SpeedRLR Camera, ODOT should work together with the Jurisdiction responsible for the RLR/SpeedRLR cameras to come to agreement for how to proceed with the recommendations of the study.
- Additional input may include the public and/or enforcement to determine support or opposition to the removal.
- Whether or not an agreement can be reached, ODOT Region Traffic will submit a recommendation to the State Traffic-Roadway Engineer along with the study.
- The Jurisdiction responsible for the RLR/SpeedRLR camera may submit a recommendation with supporting documentation to the State Traffic-Roadway Engineer.
- The State Traffic-Roadway Engineer decisions will be based on review of the study, the recommendations submitted and any other input received.
- The State Traffic-Roadway Engineer may hold a meeting of interested parties to go over the issues.

The State Traffic-Roadway Engineer may approve removal of the RLR/SpeedRLR Camera, may approve the RLR/SpeedRLR camera remaining, and/or require engineering countermeasures or other changes to the intersection or roadway or cameras. The State Traffic-Roadway Engineer's decision is

final and will be based primarily on safety.

Upon request of the jurisdiction responsible for the ~~RLR/Speed~~RLR Camera the State Traffic-Roadway Engineer may approve removal of the ~~RLR/Speed~~RLR Camera without study of the intersection. Typically this occurs under special conditions such as the vendor of the equipment goes out of business, a political entity passes an ordinance to remove the ~~RLR/Speed~~RLR Camera or other circumstances as determined by the State Traffic-Roadway Engineer.

~~RLR~~/Speed~~RLR~~ Camera Enforcement Installation Checklist **Non-State Highway**

Location Information

File Code: _____

Acct. No.: _____

Street Name: _____

Intersecting Street: _____

RLR Camera Approaches: _____

☐ Traffic safety need based on crash history and safety concerns has been documented.

☐ A public information contact has been identified.

Contact Name: _____ Email: _____

Address: _____ Telephone: _____

☐ Location approaches and movements have been clearly identified.

☐ Traffic signal indications on the approach are clearly visible from an adequate distance based on field observation. Current MUTCD signal visibility standards are met.

☐ Yellow change and red clearance intervals are displayed for at least the recommended time.

☐ No significant improvement (project) is scheduled or planned that would substantially alter the need for a RLR Camera.

☐ Signs indicating that compliance with traffic control devices is enforced through cameras are posted (or will be provided by this project) on all major routes entering the jurisdiction.

☐ Signs indicating that a camera may be in operation will be posted on all approaches where a camera is to be installed.

☐ Signs indicating the correct speeds are nearby (in advance of the intersection)

☐ No known reason why a RLR Camera should not be installed.

Checklist completed by: _____ Date: _____

RLR/SpeedRLR Camera Enforcement Installation Checklist **State Highway**

Location Information

File Code: _____

TSSU Location ID: _____ Region: _____ District: _____ Acct. No.: _____

Street Name: _____

Intersecting Street: _____

RLR Camera Approaches: _____

Applicant (City/County): _____

☐ Local jurisdiction has documented traffic safety need based on crash history, and safety concerns.

☐ A local jurisdiction point-of-contact has been identified.

Contact Name: _____ Email: _____

Address: _____ Telephone: _____

☐ Location and approaches have been clearly identified.

☐ Traffic signal indications on the approach are clearly visible from an adequate distance based on field observation. Current MUTCD signal visibility standards are met.

☐ Yellow change and red clearance intervals are displayed for at least the recommended time.

☐ Existing traffic signal coordination with adjacent traffic signals is in place and properly timed.

☐ No significant improvement (project) is scheduled or planned that would substantially alter the need for a **RLR/SpeedRLR** Camera.

☐ Signs indicating that compliance with traffic control devices is enforced through cameras are posted (or will be provided by this project) on all major routes entering the jurisdiction.

☐ Signs indicating that a camera may be in operation will be posted on all approaches where a camera is to be installed.

☒ ~~Signs indicating the correct speeds are nearby (within 300-400 feet of intersection)~~

☐ No known reason why a **RLR/SpeedRLR** Camera should not be installed.

Checklist completed by: _____ Date: _____

Conditions of Approval

The applicant agrees:

1. The cost of any required changes to the ~~RLR/Speed~~RLR camera equipment as a result of changes or modifications to the intersection, regardless of who implements the changes, shall be the responsibility of the applicant and/or any commercial firm under contract for operation of the cameras.
2. When problems affecting the safety of the public arise whether part of the signal system or the ~~RLR/Speed~~RLR cameras, ODOT has the discretion to modify geometry, remove or add traffic lanes or change the operating characteristics of the intersections to protect the safety of the public, up to and including the ordering of the removal of the camera systems or the removal of cameras for particular movements.
3. When ODOT desires to modify an intersection with a ~~RLR/Speed~~RLR camera to improve operations or safety it may do so without consideration to the cost of changes to the camera system or impact to revenue generation on camera system or agreements between the applicant and any commercial firm operating the camera system. ODOT shall not be subject to any costs for changes, modifications, or removals of the camera system.
4. Applicant shall make available to ODOT all reasonable requests for records concerning the operations of the ~~RLR/Speed~~RLR cameras and the intersection, including but not limited to, number of violations by particular cameras or movements, total violations, distribution of violations, percentages of violations within specific time periods, crash records and/or operating parameters of the ~~RLR/Speed~~RLR camera.
5. Applicant shall ensure that signs at each City Limit, informing the public that compliance with traffic control devices is enforced through the use of cameras, are provided if not already in place. An automated enforcement sign on each covered approach shall be provided and shown on or as an attachment to the signal plans.
6. Applicant shall ensure a method for ODOT staff to turn off the camera system to perform routine maintenance of the signal system, including cabinet or controller replacement or timing changes.
7. Failure to comply with any of the conditions of approval listed herein or stipulated by the State Traffic-Roadway Engineer shall be sufficient reason for the State Traffic-Roadway Engineer to order removal of the ~~RLR/Speed~~RLR camera system.

RLR Camera Speed Enforcement Request Form
State Highway

Location Information _____ File Code: _____

TSSU Location ID: _____ Region: _____ District: _____ Acct. No.: _____

Street Name: _____

Intersecting Street: _____

Speed Enforcement Approaches: _____

Applicant (City/County): _____

☐ Local jurisdiction has documented speed related safety concerns

Posted Speed:

Spot Speed Check –

85th percentile speed: _____

Mean Speed: _____

Pace Limits: _____

Percent over posted: _____

Percent 11 mph or more over posted: _____

☐ A local jurisdiction point-of-contact.

Contact Name: _____ Email: _____

Address: _____ Telephone: _____

☐ Local Jurisdiction has identified speed related crash problems and target crashes.

☐ Other Safety Concerns raised by public or others

☐ Enforcement Concerns, Observations, Support.

☐ Public information campaign efforts to inform public of new enforcement.

☐ Signs indicating the correct speed will be posted on all approaches where enforcing speeds

☐ Copy of the current Speed Zone order for the intersection area (if applicable)

☐ Copies of plans for modifications of the system (if applicable)

☐ No known reason why speed enforcement should not be used at the RLR Camera (Review the Fixed Photo Radar Camera Guidelines).

Form completed by: _____ Date: _____

(Attach documentation to this form and send to ODOT Region Traffic)

Appendix A – Red Light Running Toolbox

See the following websites:

Red Light Running Tool Box-

https://safety.fhwa.dot.gov/intersection/conventional/signalized/rlr/rlr_toolbox/

Speed Enforcement Camera Systems (automated speed enforcement)-

https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa09028/resources/Speed%20Camera%20Guidelines.pdf