



Operations Task Force

July 15, 2020
2:30-3:30 PM (CT)

1. Presentations

- HAAS Alert
 - North Dakota DOT – Presenter: Travis Lutman
- NextGen Work Zone Database and iCone Pilot
 - Washington DOT – Presenter: Tony Leingang

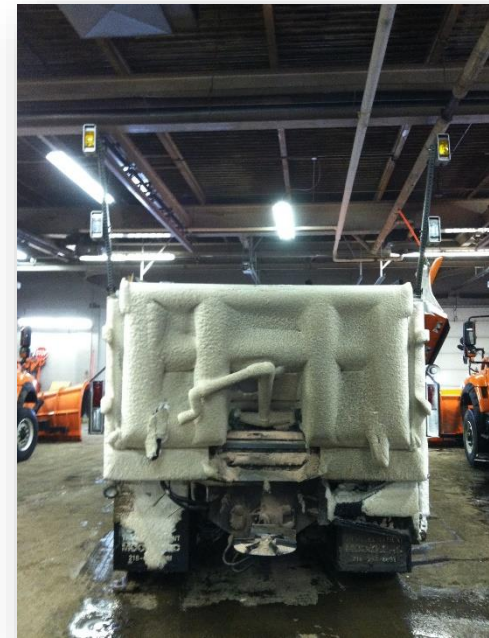
2. Questions and Answers



HAAS ALERT

Travis Lutman
Maintenance Division
July 15, 2020

Blowing & Drifting Snow





North Dakota Department of Transportation

about 9 months ago



Snow plows are out working! Please give them room to do their job. NDDOT had a plow hit today and thankfully there were no serious injuries but we now have a plow out of commission that cannot clear the roadways. Stay safe and please don't crowd the plow. #VisionZeroND #dontcrowdtheplow

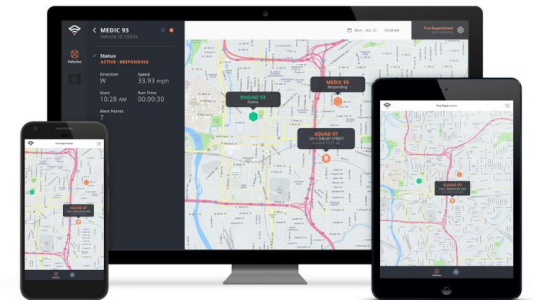


NDDOT Plow Hit Mitigation Efforts

- Operational Activities
 - Plow with wind when possible
 - Work in tandem
 - Underbody Scraper
- Equipment Modifications
 - Elevated lighting
 - Experimented with different light colors
- Public Outreach
 - Plow safety messages on DMS

HAAS Alert

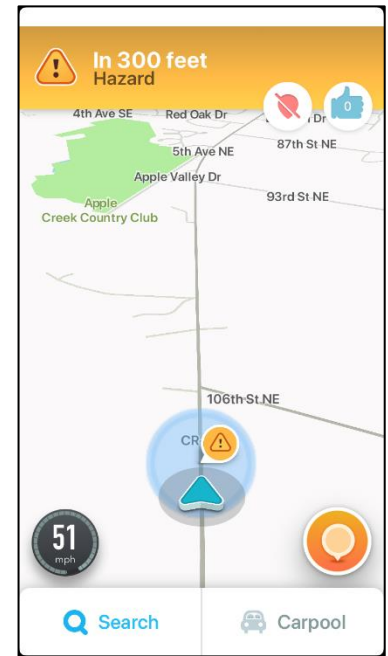
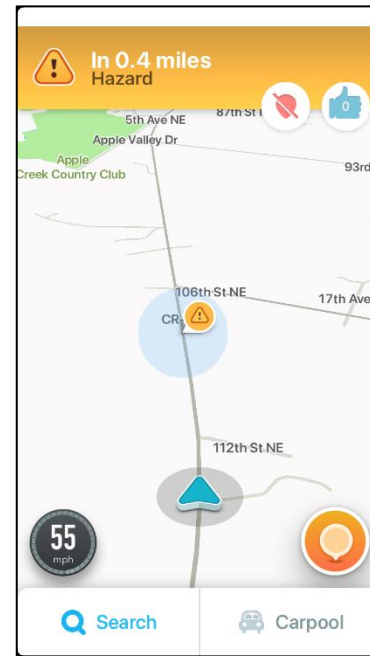
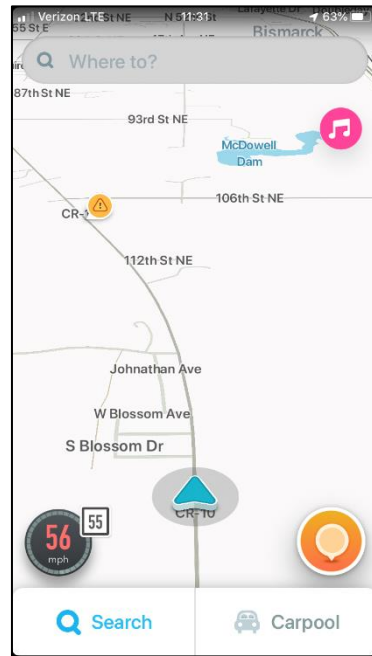
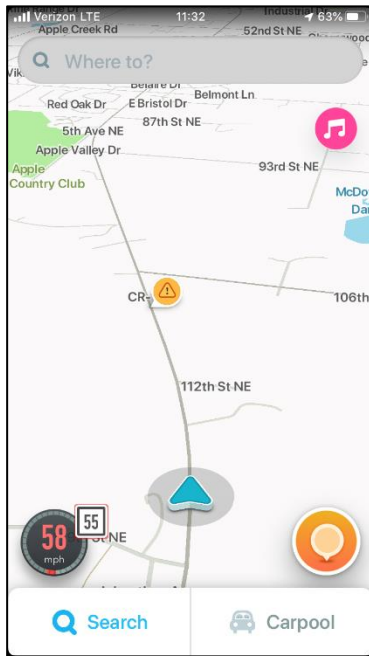
- <https://www.haasalert.com/>
- Connect to plow lights
- WAZE notifications
 - Audible and visual
- Capabilities to connect to ND 511 App

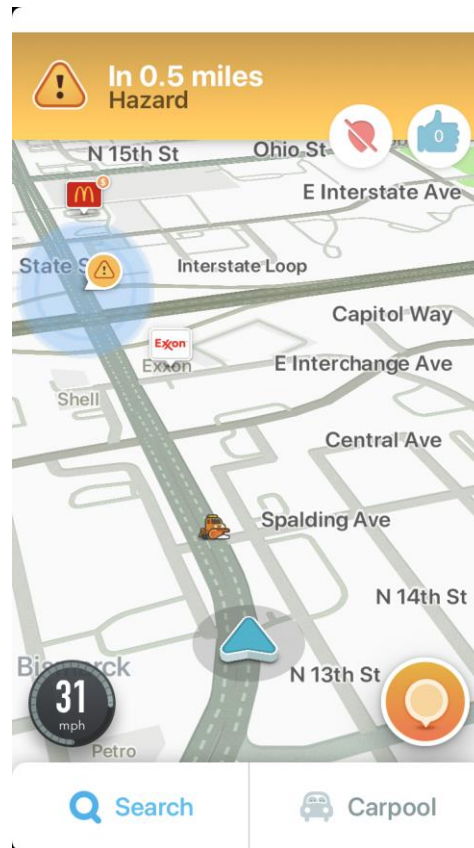


HAAS Alert - Install

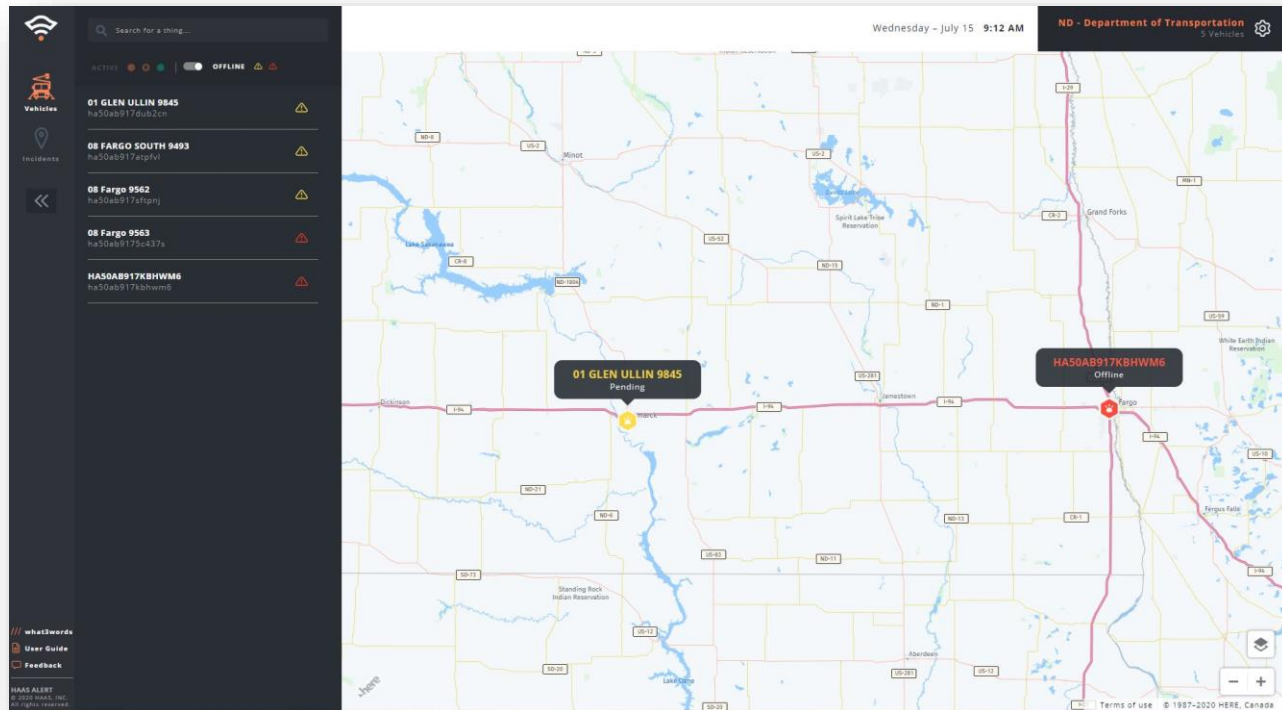


HAAS Alert

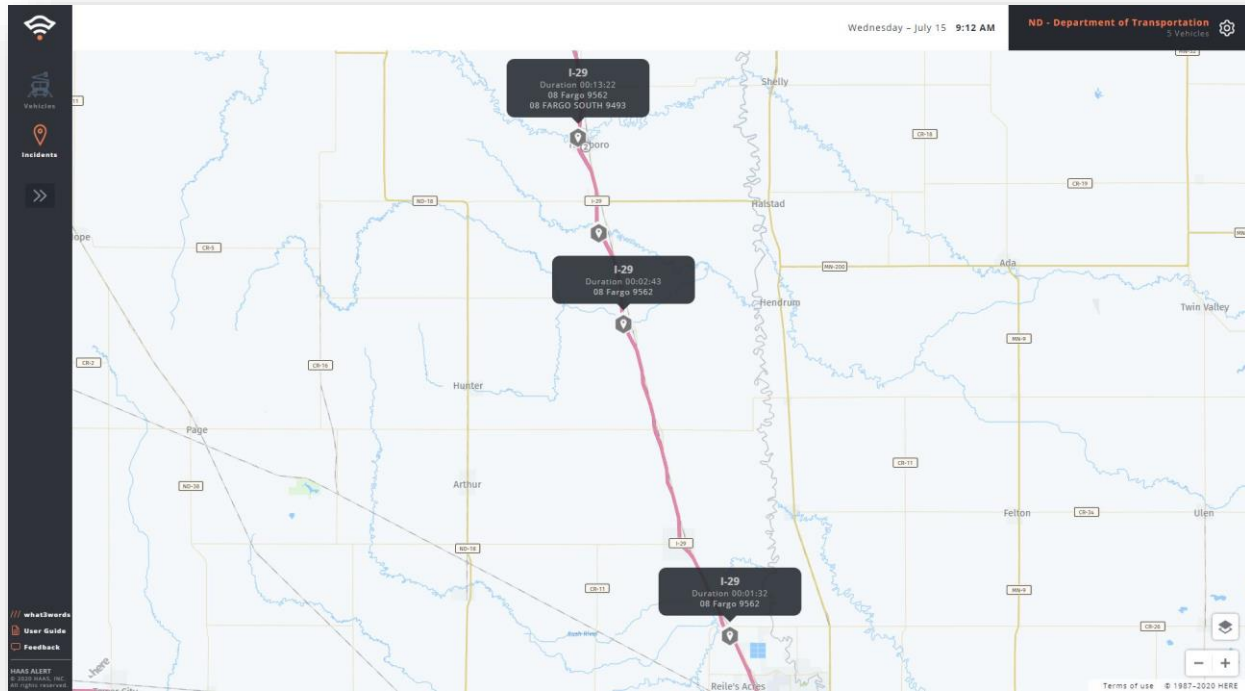




HAAS Alert - Dashboard



HAAS Alert – Incidents



HAAS Alert - Report



June 1 - June 30, 2020
YTD January 1 - June 30
TOTAL Since Activation

ND - Department of Transportation
Safety Cloud® Report
Attention: Russ Buchholz, Travis Lufman, Brandon Beise, Wayde Swenson

Driver Totals

Drivers Alerted

3,890

YTD 15,492
TOTAL 23,192

On Scene / Standby Operations

Total Events

186

YTD 991
TOTAL 1,315

Avg Time per Event

13.5 min

YTD 11.1 min
TOTAL 14.2 min

Moving Operations

Total Jobs

39

YTD 1,470
TOTAL 2,088

Total Operating Time

190 min

YTD 96,667 min
TOTAL 54,443 min

Avg Operating Time

4.9 min

YTD 24.9 min
TOTAL 26.1 min

Drivers Alerted

Total drivers alerted when vehicle is operating in the roadway and not moving; based on HAAS Alert enabled applications

Total Events

moving, with lights engaged for 2+ minutes

Avg Time per Event

Average time duration per Event

Total Jobs

Total number of times a vehicle was moving on the roadway with lights engaged for at least 1+ minute

Total Operating Time

lights engaged for at least 1+ minute

Avg Operating Time

Average time duration per Job

HAAS Alert -Next Steps

- Continue to evaluate the benefits.
- Research other notification platforms.
- Research other technologies

Travis Lutman, P.E.
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Maintenance ITS

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WSDOT's NextGen Work Zone Database and iCone Pilot

From Planning the Work to Working the Plan in Real-time

NORTHWEST PASSAGE POOLED FUND

JULY 15, 2020

Tony Leingang
Incident Management and Operations Administrator
WSDOT HQ Traffic Operations

Roger Millar, Secretary of Transportation
Ron Vessey, Acting Director of Traffic Operations

Why & Where Did We Start?

Problem:

- Conflicts between construction and maintenance operations
- Missing reliable public information

Solution: WSDOT's original Work Zone Database (WZDB) – FileMaker Pro Platform

- Developed in early 2000's
- Provided a way to plan and coordinate work zone impacts in advance

Results:

- Conflict avoidance through better coordination using the WZDB
- Opportunities to combine multiple work zone activities and reduce driver impacts
- Reliable and readily available traveler information for work zone impacts



Our System Today

Statewide application and deployment

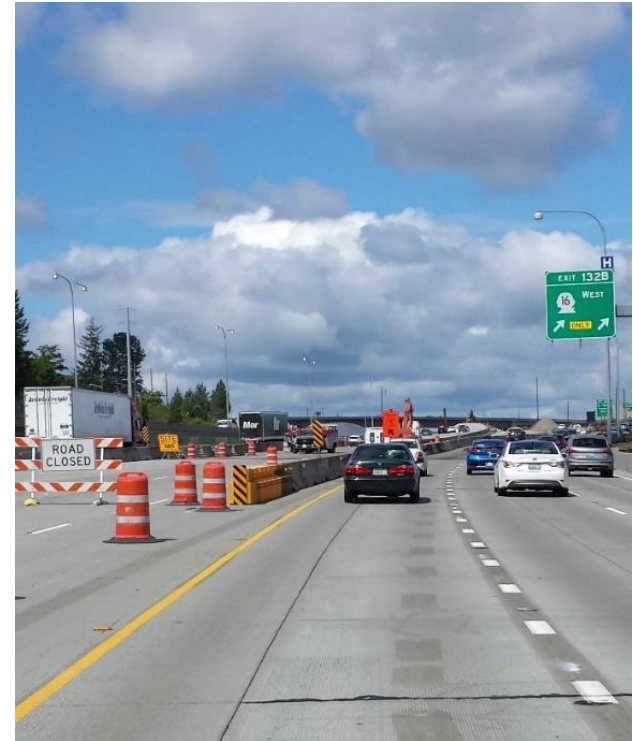
Use of the WZDB grew to be recognized as essential statewide

- 2017 – Multiple major project impacts around the state
- Interest from several WSDOT regions (Several Already Engaged)
- Need to communicate better around internal boundaries that the public doesn't see

NextGen WZDB

Redevelopment to a newer database technology (SQL) so that data can be used across other platforms –

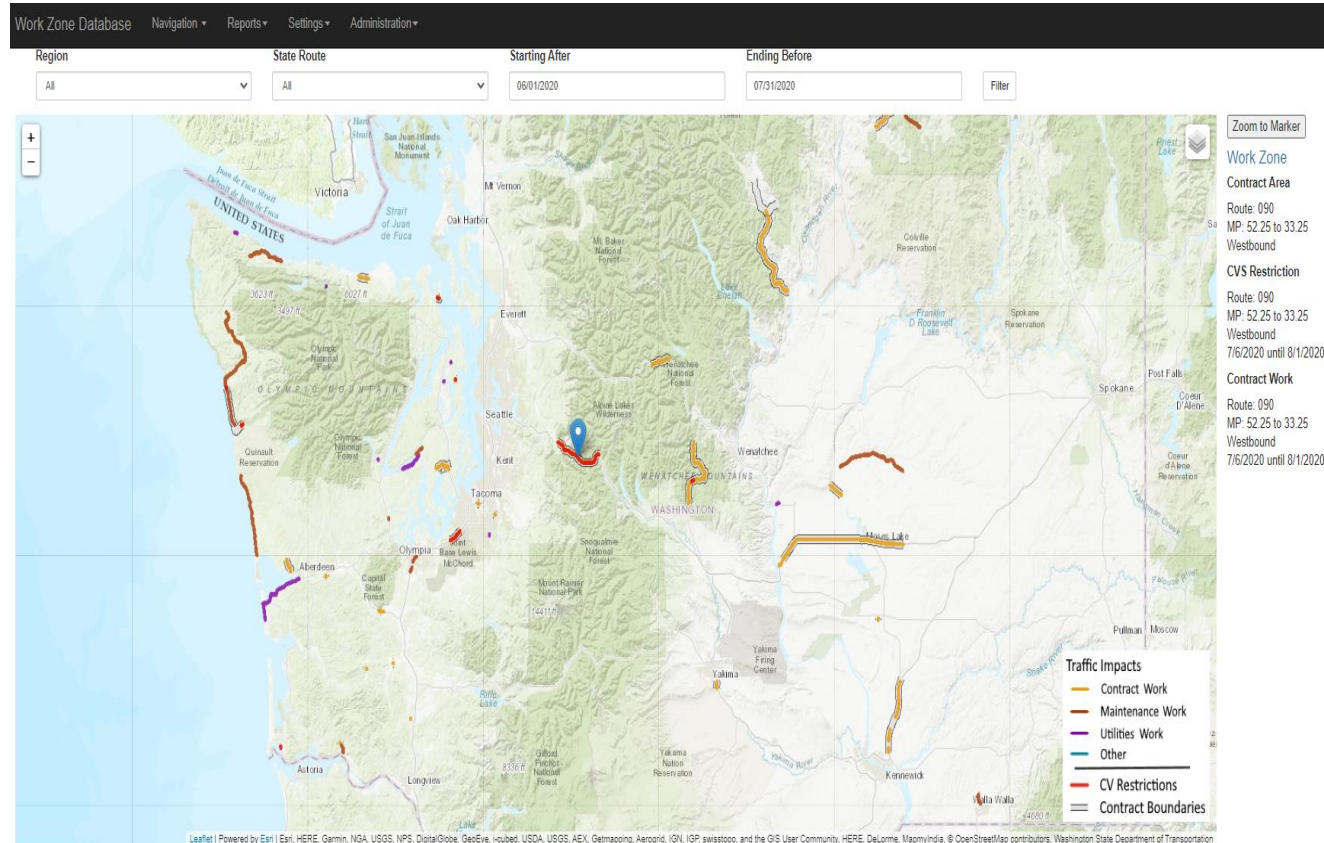
- NextGen WZDB re-development began in late 2017
- Basic forms and reports complete July 2019
- Initial Implementation in Fall 2019
- Dynamic Mapping/Visualization tool available Spring 2020



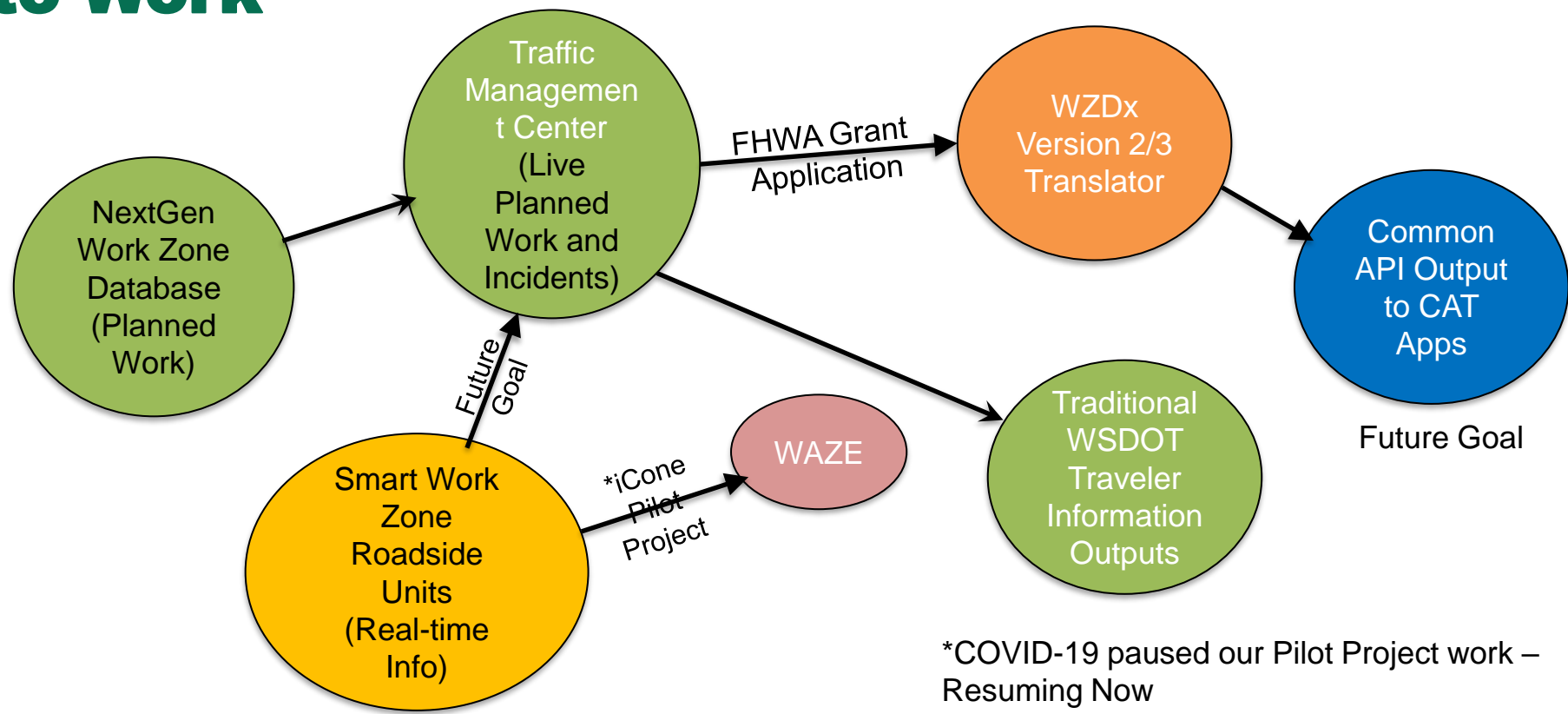
Work Zone Impacts Visualized

Planning Level Data Input:

- **What is the Work?**
- **When is it Scheduled?**
- **Are there Temporary Commercial Vehicle Restrictions?**
- **Who is responsible?**
 - ✓ Construction
 - ✓ Maintenance
 - ✓ Utilities
 - ✓ Special Events, etc.
- **How Can the TMC Contact Them?**
 - ✓ Avoid Conflicts
 - ✓ Combine Multiple Work Zone Activities?
- **Deployment Underway**
 - ✓ 4 of 6 WSDOT Regions to Date



Putting Work Zone Information to Work



WSDOT Pilot: Transmit Work Zone Data through Roadside Units (RSUs) to WAZE



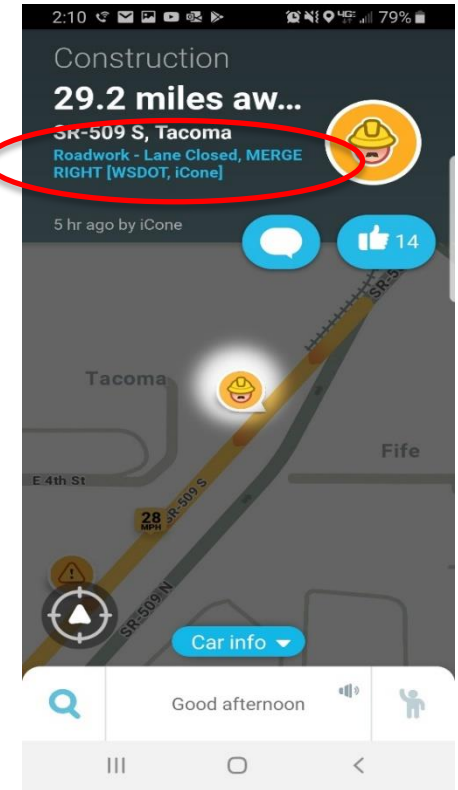
Connected Arrow Board Kit:

Two Each for Olympic and Southwest Region Dedicated Work Zone Crews

WSDOT Credited Work Zone in WAZE



"iPin" (Marks End of Work Zone)



[Courtesy: iCone Products/Waze App](#)

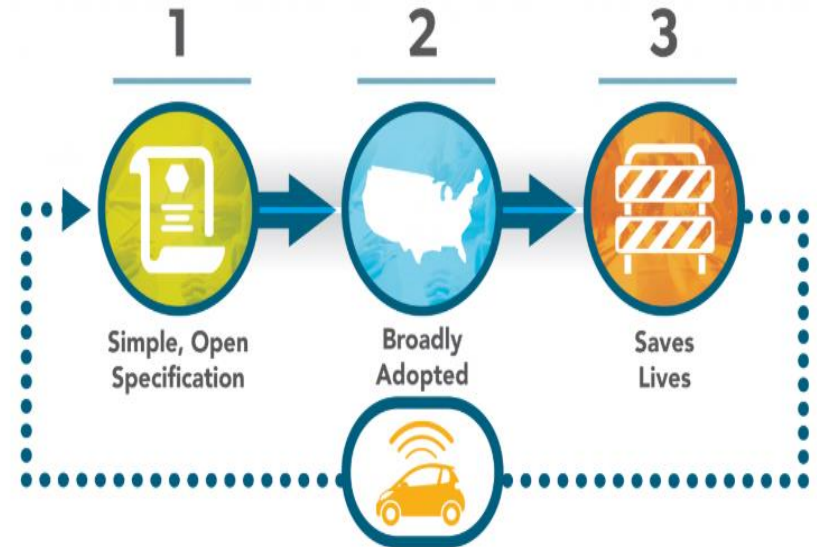
National Work Zone Data Initiative (WZDI)

Engagement

- Working collectively with the **Northwest Passage Pooled Fund** on a grant opportunity to build a new WZDx-compliant feed
- Ideally will benefit all seven states involved
- WSDOT efforts are underway to develop Cooperative Automated Transportation (CAT) application interfaces

Expected Benefits

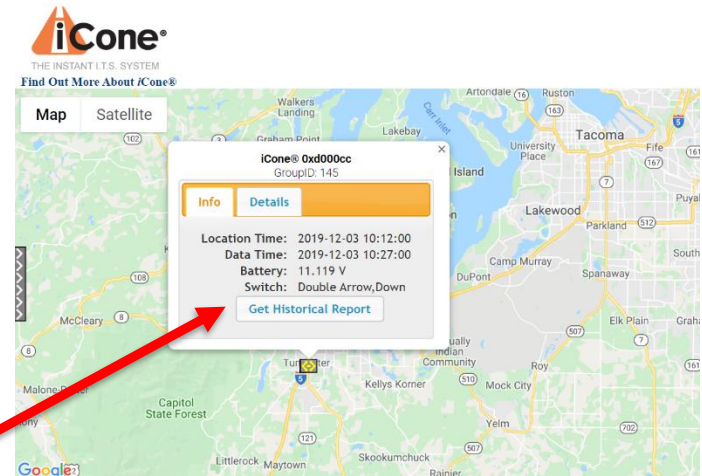
- Provide a multi-state opportunity to become WZDx-compliant (**Build on this approach!**)
- Potential Reduction of Secondary Crashes and increased awareness of **Worker Presence in active work zones** is **one of our primary focuses**



FHWA National Work Zone Data Exchange (WZDx) Specifications Concept

Next Steps

- **Ongoing:** Develop the NextGen WZDB data for use in Traffic Management Center (TMC) Apps and beyond
- Automate notifications to TMC that work has commenced (via fixed RSU's)
- **Future Goal:** Add local agency arterial impacts and inputs to the system to provide holistic CAT Data for **All Users**



Unplanned Work Zones:

Incident information from responders:

- **WSDOT Incident Response Team (IRT)**
- **Washington State Patrol**
- **Fire Services? Towing Services?**
- **WZDx-compliant API for CAT industry development**

It's a Work in Progress!

Thank you!

Questions?

For More Information:
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Incident Management and
Operations Administrator
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(360) 709-8002



Thank You and Wrap Up

Next Meeting:

Technician's Forum

August 26, 2020 – 2:30 to 4:00 pm (CT)