

# What's up both sleeves – Advanced in Tech & Crowdsourcing



*Data Sharing*

*Crowd Sourcing*

*Operational Dashboards and Apps*

*HAAS alerts*

# Passenger vehicles

App name	% of nav app users	PTC agreement	What we Share	Users (Mil) US
WAZE	23%	Yes – Connected Partner	Accidents/Work Zone/Closures	49.9
Google maps	58%	Yes	Accidents – Live Road Closure – Soon Work Zone – Future?	125.8
Apple maps	11%	No – in Process and testing feed	Accidents/Work Zone/Closures	23.8

# Commercial vehicles

App name	PTC agreement	Time Frame
Trimble – In most ELD devices and GPS units	Yes – Starting to test dev API – Accidents/Road Closurex/Work zonex	Late 2021
DriveWyse	Yes – Warn Trucks of Dangerous Curves	Since 2019
Freight Waves	Yes – Short-term use for research Long-term adding Accident/Road Closures/Work Zones it to Sonar Map	2021/22

# PTC uses CrowdSourcing

- Waze Connected Partner
  - Share incident and work zone data
  - PTC receives Waze data for our roadway
  - PTC can close a road in Waze
  - PTC can set speed limits and provide other safety messages and planned detours for Waze users
  - PTC will soon start dispatching via Waze
  - Waze – Safety Pop up message was a huge success



Drive carefully in work zones

PA Turnpike reminds you to watch out for construction workers while driving.

Got it

1276 E mile 249  
Fire Service Plaza



0  
MPH



## Work zone safety message for the PTC.

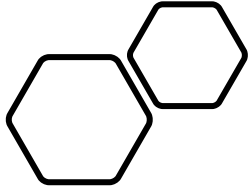
- They will customize the message.
- The messages appears after 10 seconds.
- There are cases that a paid advertisement will appear before the safety message.
- You can get a count on how people saw the message. (80,000 impressions)

# MapQuest



## Future Connections

- Trucker Path - #1 downloaded Trucker app (2Mil user)
- MapQuest
- GM – Interested in our feed for testing
- OnStar – Implementation of safety app in 2022. They want to see if they can use our API feed.



## TEO/Geo Analytics Program – Apps using Crowdsourcing



WAZE DASHBOARD



INCIDENT TIMELINE



EWD TOOL

# Operational Dashboard and Apps

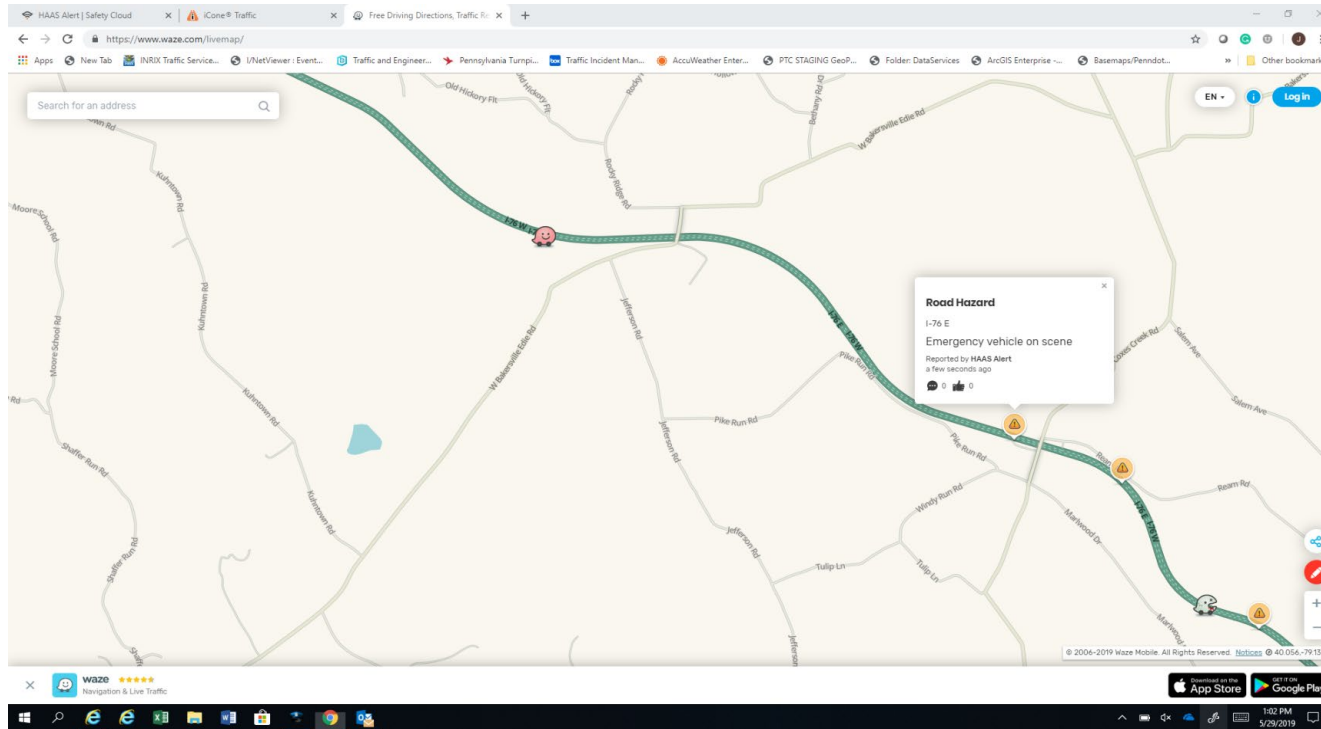
- Waze Dashboard – live waze app
- EWD - Early Warning Detection Tool - Combines Waze, Inrix and weather into ½ mile sections for PTC live every 2 minutes
- Incident Timeline Dashboard – AAR tool
- HAAS Alerts – digital alerts to Waze
- CADS dashboard - Live and historical CADS query
- ASP dashboard – Tower Dashboard
- Live Deer Encounters Dashboard
- Ribbon Wall – SLD of the whole network (Live CADS event, detours, live speeds)
- AIWS – Active Incident Window into an incident that is blocking the roadway
- STAR app – Mobile app of all incidents going on at the Turnpike (internal)



# HAAS Alerts

Digital Alerts that go to Waze to tell drivers to Move Over for emergency vehicles that are on scene on the roadway

- Activated with light bar
- 144 vehicles
- ½ mile alert
- Over 2.8 Million driver alerts in the first year
- HAAS portal
  - <https://safetycloud.haasalert.com/#/dashboard/things>
- Upcoming – HAAS alerts on DMS signs automatic feed.



# Device and Costs



Safer, Faster, Emergency Response.



## Apparatus / Vehicle Activation



### HA-5 Flashing Lights Transponder

- Transponder connects E-Master / emergency flashing lights
- When emergency flashing lights are "ON," vehicle is transmitting real-time digital alerts via the HAAS Alert *Safety Cloud*
- Easy installation, no down-time for vehicles / apparatus
- 100% passive, no additional steps for personnel
- No data plan necessary

*\*Ask your sales rep about HAAS Alert Direct (HA-D) connectivity for fleets*

- 97 units hardwired
- 44 portable units for mobile work zones
- Approximately \$700 a unit/1.95 a day

# Benefits of HAAS alerts

- 2018 – 30 Accidents
  - 2019 – 19 Accidents
  - 2020 – 0 Accidents
- HAAS alerts implemented in January 2020
  - Purchased additional plug and play HAAS devices in November 2020 – For use in mobile maintenance patterns
  - Another use this winter was use of the alerts in snowplow trains

# Thank You!



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