

Technology and Innovation in Southern Nevada

Applying artificial intelligence and in-vehicle data to improve traffic safety and capacity in Southern Nevada



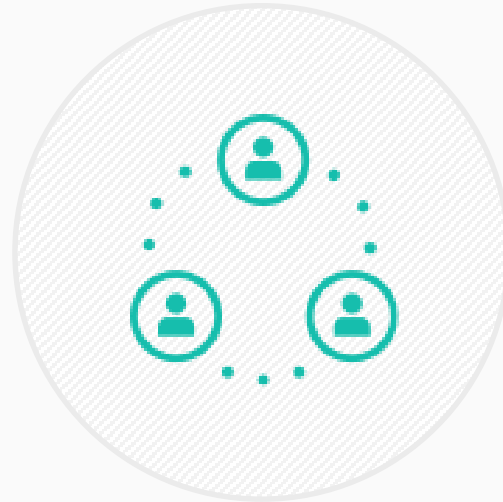
Regionwide collaboration among Southern Nevada agencies



Current Transportation ecosystem



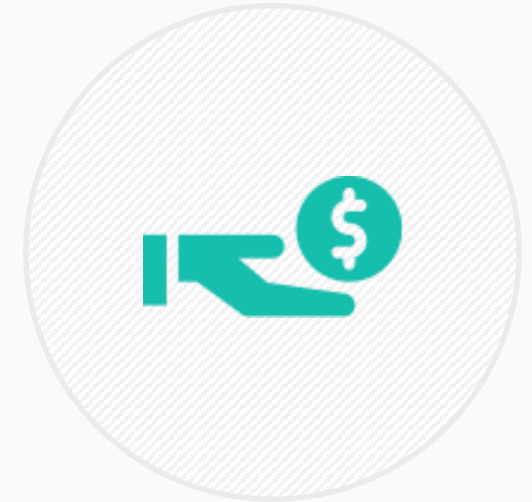
Road Infrastructure is outdated and relies on old **legacy systems**.



Inter-agency **communication** and collaboration is poor.

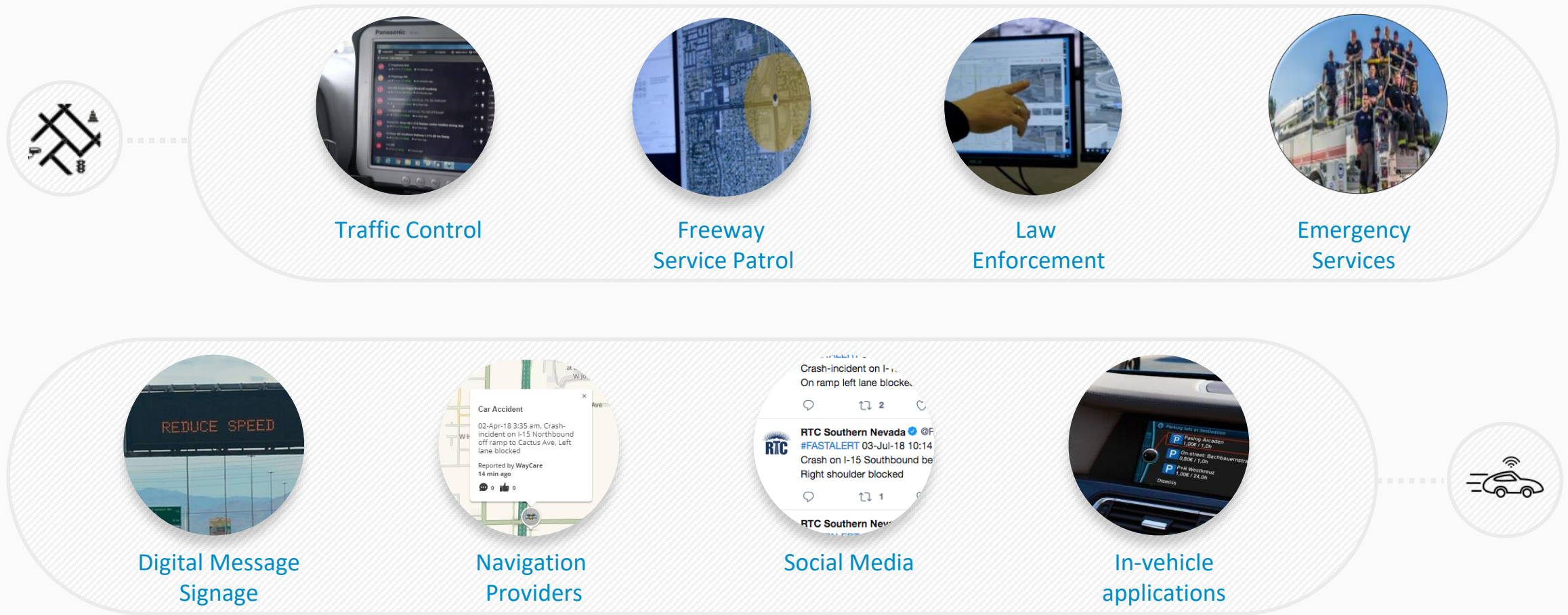


Transportation agencies have limited access to advanced **analytics**.



Updating public **infrastructure** is very expensive.

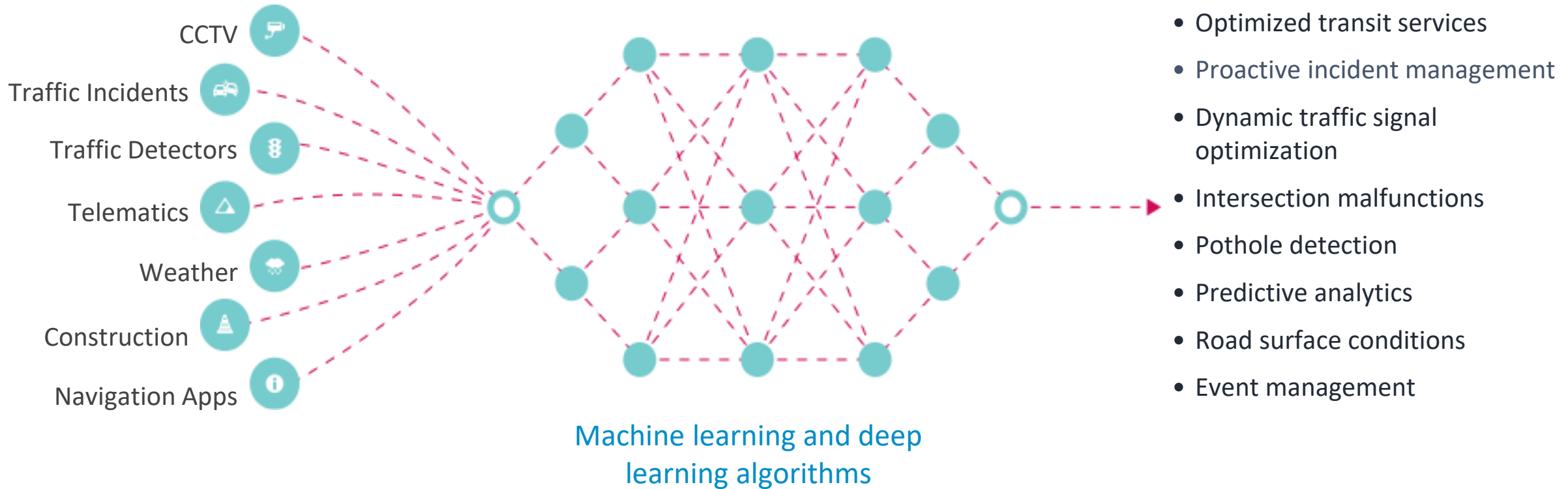
Cloud architecture allows multiple agencies and drivers on the road to connect



Our challenge is not gathering more data, but rather how to effectively and efficiently turn data to information to insights



Artificial intelligence and mobility data sources help unlock key insights to improve traffic safety and capacity on our roads

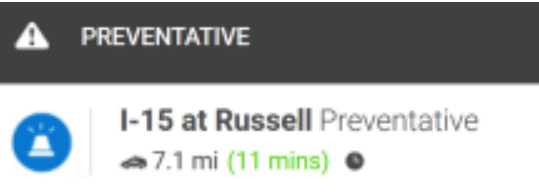


External data sources



AI & Deep learning allowed RTC, NDOT, and NHP to proactively deploy preventative measures to reduce primary crashes on I-15

1 TMC Alerts of required action



2 DMS updated with preliminary warning



3 Police proactively positioned

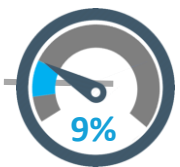


4 DMS updated with preliminary warning



17%

reduction in primary crashes per day



91%

of speeding drivers <65 MPH after the preventative site

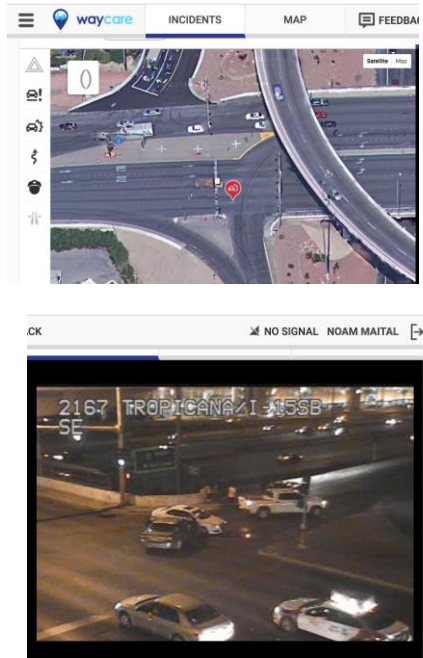


Awarded 2019 National Safety Innovation grant recipient to expand program across all of Southern Nevada



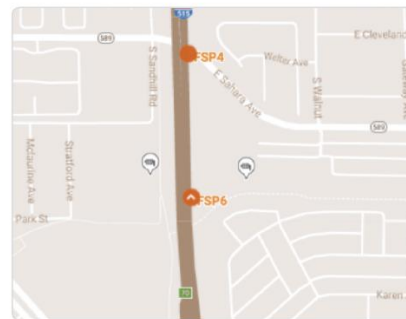
Automated incident identification

AI enabled incident identification

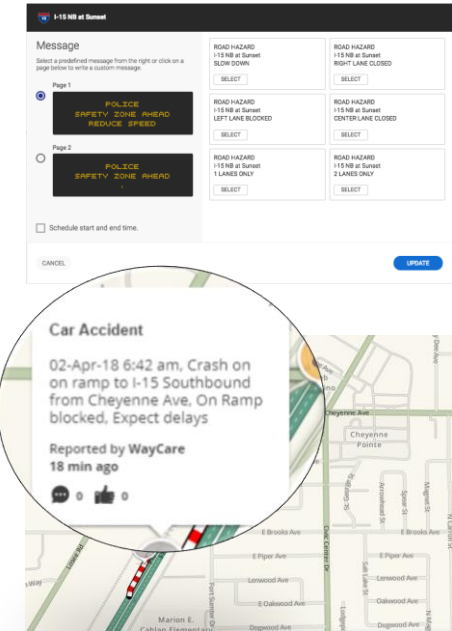


Response and collaboration with Nevada Highway Patrol

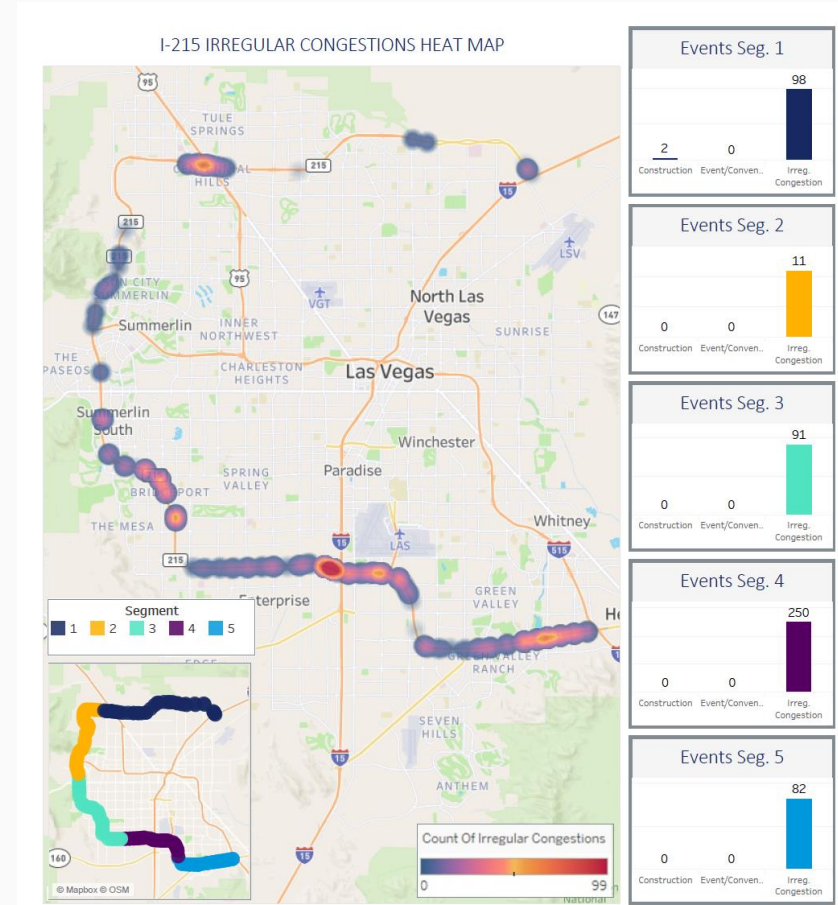
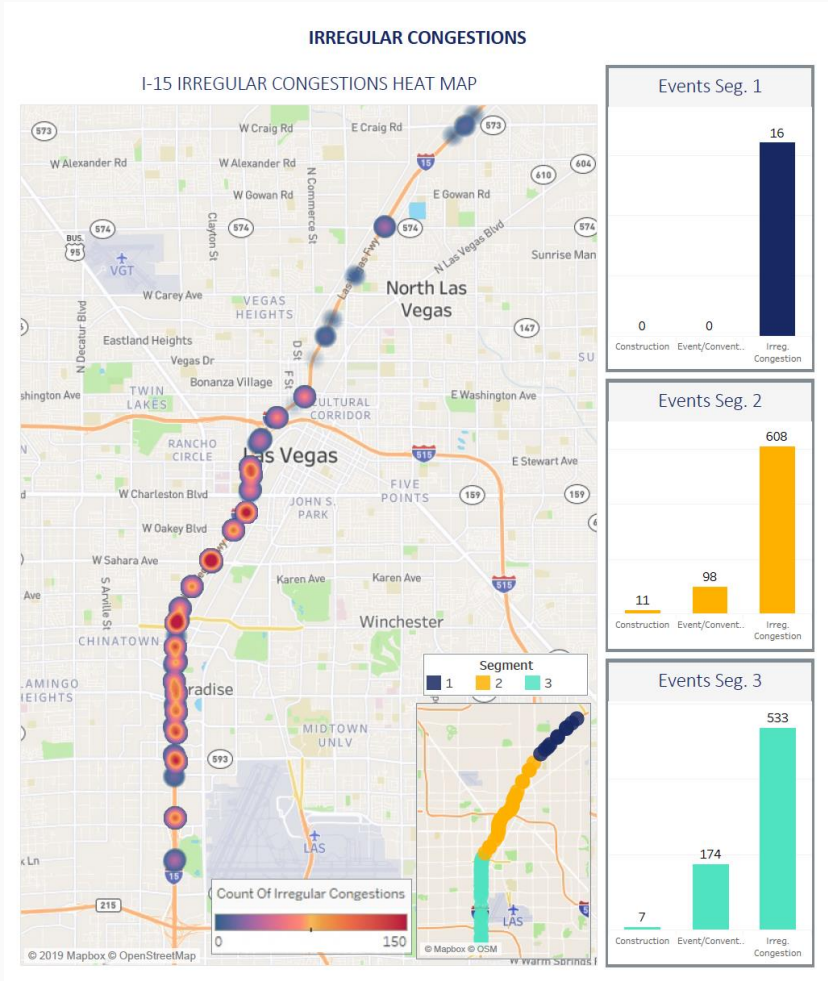
- US-95 S** Hazard on shoulder car stopp...
🕒 32 minutes ago
- I-215 W** Hazard on shoulder car stopp...
🕒 39 minutes ago
- 215/CHEYENNE** MOTORIST AST PS, S...
🕒 41 minutes ago
- US-95 S** Hazard on shoulder car stopp...
🕒 an hour ago
- I-15 Express N** Hazard on shoulder ca...
🕒 an hour ago
- I-515 N** Hazard on shoulder car stopped
🕒 an hour ago
- US-95 S** Hazard on shoulder car stopp...
🕒 an hour ago



Communicating directly with the drivers



In-vehicle data combined with AI provides new insights on irregular congestion patterns



Adoption of autonomous vehicles will be contingent on the public sector managing the mobility ecosystem. NDOT is taking an incremental approach allowing for iterations along the way

