Leveraging AI & In-Vehicle Data For Crash Prevention

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Crash Statistics in the US

37,000 traffic deaths occur in the US annually.

Each fatal crash costs an average of $9.6 Million.*

Minor/Potential injuries cost $28,800 **- $63,900 ***

*: As reported in the 2018 USDOT “Benefit-Cost Analysis Guidance for Discretionary Grant Programs” and in the FHWA Crash Cost for Highway Safety Analysis

**: MAIS reports minor injuries to cost $28,800

***: KABCO reports Possible injuries at $63,900
Waycare and Southern Nevada Agency Partnerships
AI Can Help Unlock Key Insights to Improve Traffic Safety

- Mobility Solutions
- Optimized transit services
- Proactive incident management
- Dynamic traffic signal optimization
- Intersection malfunctions
- Pothole detection
- Predictive analytics
- Road surface conditions
- Event management
Cloud-Based Operational Tool Enables Interagency Collaboration

- Law Enforcement
- Emergency Services
- In-Vehicle Behavior
- CCTV
How Were These Insights Used?

- Automated Incident Identification
- Freeway Service Patrol Dispatch/Response Platform
- Irregular congestion identification for traffic flow optimization
- Outward public API feed to communicate with drivers
Initial Results

- **>12 min average faster response time** by law enforcement
- **20% increase in incidents identified**
- **180% increase in public outreach**
How do we leverage prediction for crash prevention?
How It Works: Proactive Risk Mitigation

1. Waycare alerts of required action
2. DMS updated with preliminary warning
3. Police proactively positioned
4. Map of Crash Incidents on I-15

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

17% reduction in primary crashes
[Reduction reflects an average of 37 crashes prevented]

91% of speeding driver slowed down to 65 mph after preventative site
Cost Impact

**Investment**
- $5,000 investment for construction of STMS platform
- 126 hours of activation time (manned and unmanned) = $4,561.20

**Savings**
- $28,800 to 63,900 x 37 crashes = $1,065,600 to $2,364,300
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Questions?

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