THE EASTERN TRANSPORTATION COALITION

CONNECTING FOR SOLUTIONS

The Value of WAZE Workshop (Part 1)

February 24, 2021

Connecting for Solutions

WAZE Integration at Mass DOT

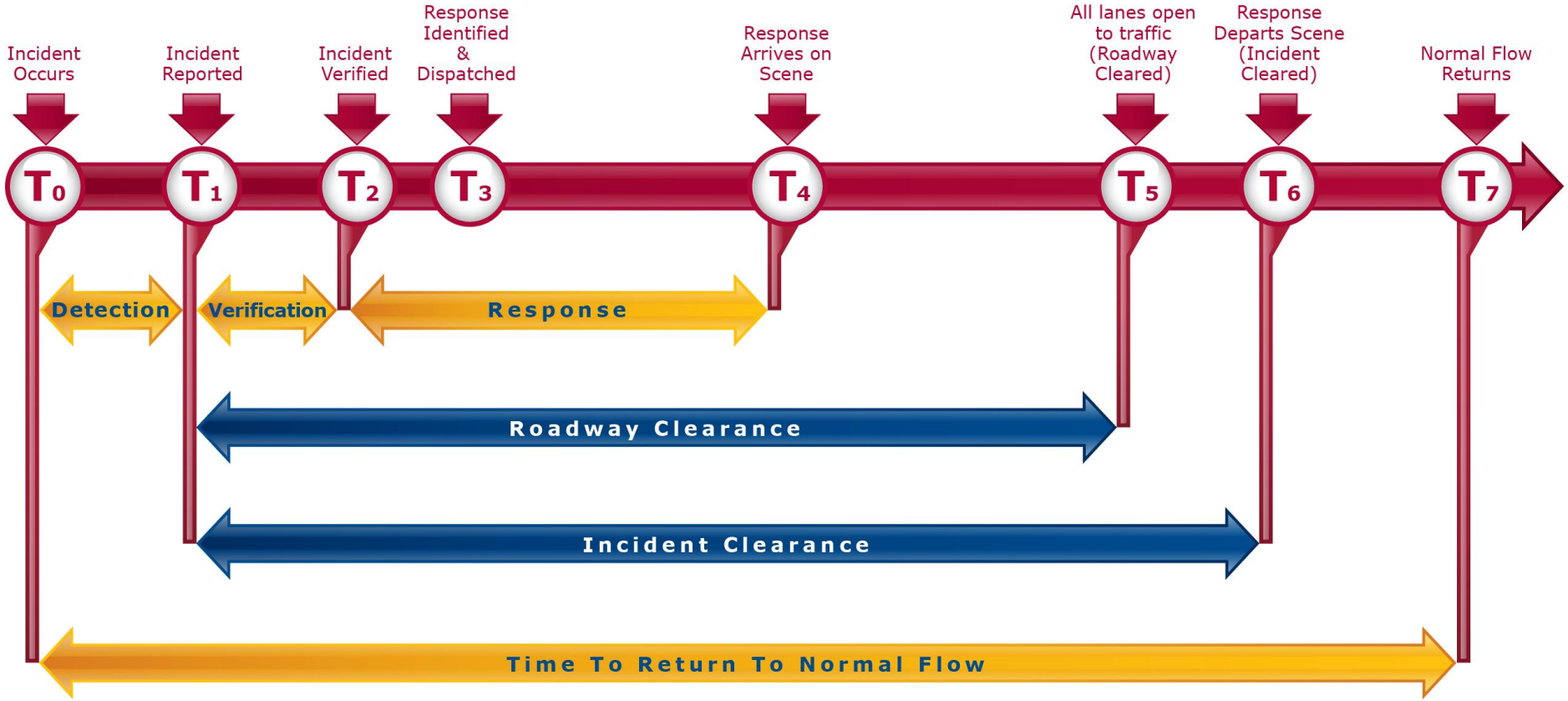
Chet Osborne, TSMO Director, Massachusetts DOT

Highway Operations Center (TMC/TOC's)

Traffic Incident Management

ITS Systems Management

Transportation System Management



Traver Info. MassDOT->World

- XML Feed planned/unplanned
  - Free, open, public
- What should be in it?
- Events (unplanned)
- OW/OS
- Grip
- Road Surface Conditions

Needs

- What does the public really need to know?
  - Pre-trip
  - When traveling?
  - When not moving in traffic?
  - Is knowing why to slow down/merge as important to know when to merge?

Event Detection

Historic-Passive

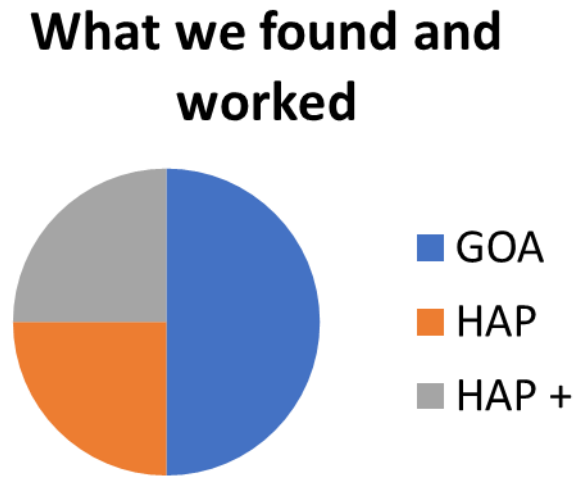
- Cameras
- Callers to 911
- LEO to Highway-DOT
- Center to Center
- DOT Patrols

Current -->Future-Active

1. Probe Throughput Detection
2. Connected Vehicles Data Harvesting
3. Crowd Source Travel Apps-EDC 5/6
4. Social Media

Quantitative Lessons learned from the Waze CCP pilot

- 614 detected events in 5 weeks
- Phase 1 (10 mi.) one new incident per hour!
- 90% of pilot Waze earliest channel of detection for social media channels on observed routes <u>for low level events.</u>
- 40/60 split between Crashes and Hazards Icons
- Phase 2 (50 mi.) diminishing returns: 1 per hour



Qualitative Lessons learned from the pilot

- Waze supplements traditional methods of detection
  - Requires patrons to be active reporters
- Waze CCP works but has limitations and challenges
  - Missing key map icons such as Mile Makers, Exit #’s and cross street names
- The CCP interface has limitations to the geographic area an Operator can monitor.
  - Must automate with via API
- High GOA rate. Must be able to understand the “watershed” moment.
- The life cycle of a Waze event? What does the 40/60 really mean?

Life Cycle of a Waze event

PM Commute Time Crash (-) I min

Speed 55mph

Life is good, no reports

Life Cycle of a Waze event

Time
Time of Crash

Speed
55mph

Patrons react to crash, most likely do not report as they maneuver and are <u>not directly impacted.</u>

Life Cycle of a Waze event

Time
(+) 2-5 Min
Crash

Speed
35-
45mph

Patrons begin to be impacted, the most active users will report, but speeds are too high to understand the event, many users will not report due to low impacts, they will be “lurkers”

Life Cycle of a Waze event

Time
(+) 5-10 Min
Crash

Speed
15-
25mph

Patrons report heavily now since there are large impacts, speed drops sub 20mph, patrons can discern that the event is a crash, not a DMV, ***High Volume Reporting!***

The Way Forward…

- Develop “Traffic Desk 3.0”:
  - Probe Data
  - Filters
  - Triger points
  - Machine Learning
  - Ingestion of API’s
  - Test under camera to better understand GOA-watershed.
  - Review MassDOT RTTM Go-Time data to search for incident throughput patterns and early event indicators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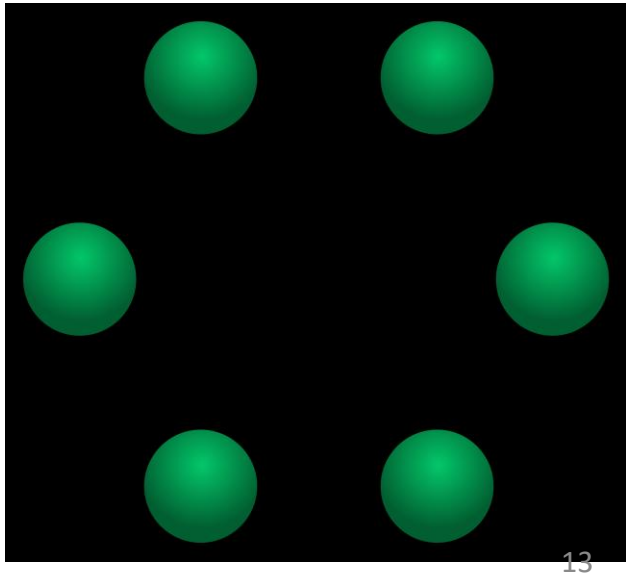

Waze in, Waze out, Info to Intel

Questions?

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THANK YOU!

For Additional Information, please contact:
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