Rob Bamford
TRANSCOM

Integrating Waze data with Public Agencies' Data

Transcom

Integrating Waze Data with Public Agencies' Data

TRANSCOM

I-95 Crowdsourcing Summit

WAZE "One-Click" Agreement

- Two Options
  - One-Way (WAZE → XCM)
  - Two-Way (WAZE <-> XCM
- WAZE CCP Program operates per terms of "One-Click"
  - XCM Data Exchange T&C's will not be recognized
  - Reviewed agreement with Counsel and no additional exposure or risk to TRANSCOM and/or Member Agencies.
  - It was decided to provide TRANSCOM Data to WAZE per terms of "One Click" Agreement.

Initial Look at Waze Data

- Data secured for states of New York/New Jersey/Connecticut

- Per TRANSCOM Agency Policy – 3rd party data used for informational purposes by agencies only

- 3 types of events available in Event Feed:
  - Alerts
  - Jams
  - Irregularities

Alerts in the Waze Data

- ACCIDENT
  - Minor
  - Major
  - No subtype
- JAM
  - MODERATE TRAFFIC
  - HEAVY TRAFFIC
  - STAND STILL TRAFFIC
  - LIGHT TRAFFIC
  - NO SUBTYPE

Alerts in the Waze Data

- WEATHER HAZARD/HAZARD
  - On road
  - On shoulder
  - Weather
  - On road object
  - On road pot hole
  - On road road kill
  - On shoulder car stopped
  - On shoulder animals
  - On shoulder missing sign

Alerts in the Waze Data

- WEATHER HAZARD/HAZARD (continued)
  - Weather fog
  - Weather hail
  - Weather heavy rain
  - Weather heavy snow
  - Weather flood
  - Weather monsoon
  - Weather tornado
  - Weather heat wave
  - Weather hurricane

Alerts in the Waze Data

- WEATHER HAZARD/HAZARD (continued)
  - Weather freezing rain
  - On road lane closed
  - On road oil
  - On road ice
  - On road construction
  - On road car stopped
  - No subtype

Alerts in the Waze Data

- MISC
  - No subtype
- CONSTRUCTION
  - No subtype
- ROAD CLOSED
  - Hazard
  - Construction
  - Event
  - No subtype

Alerts in the Waze Data
Tuesday 12/6/16

- All alerts
  - 3,223,001
  - 2,092,198 - Minus yellow event types
- Total unique alert count
  - 66,034
  - 40,174 – Minus yellow event types

Alerts in the Waze Data
Tuesday 12/6/16

- Total unique alert count with confidence > 3
  - 2,476
  - 989 - Minus yellow event types
- Total unique alert count with confidence > 3 and no 511NJ alerts
  - 2,458
  - 971 - Minus yellow event types

Jams in the Waze Data

- Streets
- Primary Streets
- Freeways
- Ramps
- Trails
- Primary
- Secondary
- 4X4 Trails
- Ferry crossings

Jams in the Waze Data

- Walkway
- Pedestrian
- Exit
- Stairway
- Private roads
- Railroads
- Runway/taxiway
- Parking lot roads

Jams in the Waze Data
Tuesday 12/6/16

- All jams
  - 2,675,934
  - 2,632,209 - Minus yellow roadway types
- Total unique jam count
  - 207,820
  - 207,774 – Minus yellow roadway types

Jams in the Waze Data
Tuesday 12/6/16

- **Total unique jam count with congestion level = 5**
  - 40,466
  - 40,422 - Minus yellow roadway types
- **Total unique alert count with congestion level = 5 and no 511NJ alerts**
  - 1,051
  - 1,007 - Minus yellow roadway types

Irregularities in the Waze Data

- Per definition from Waze, Irregularities are Events and Jams that exceed 'normal' conditions.
  - Important note: original Event or Jam distributed in feed prior to issuing Irregularity.
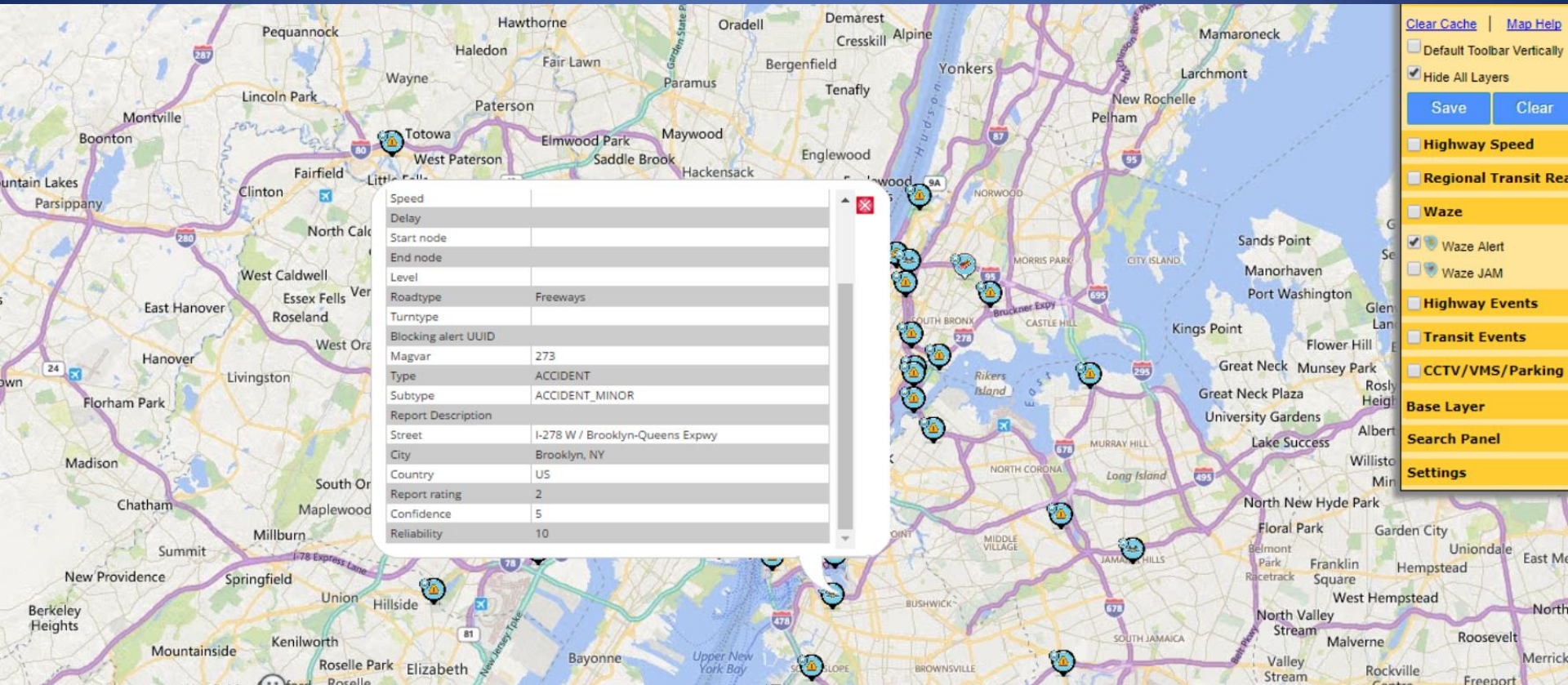
Waze Data
Tuesday 12/6/16

- ALERTS – 971

- JAMS – 1,007
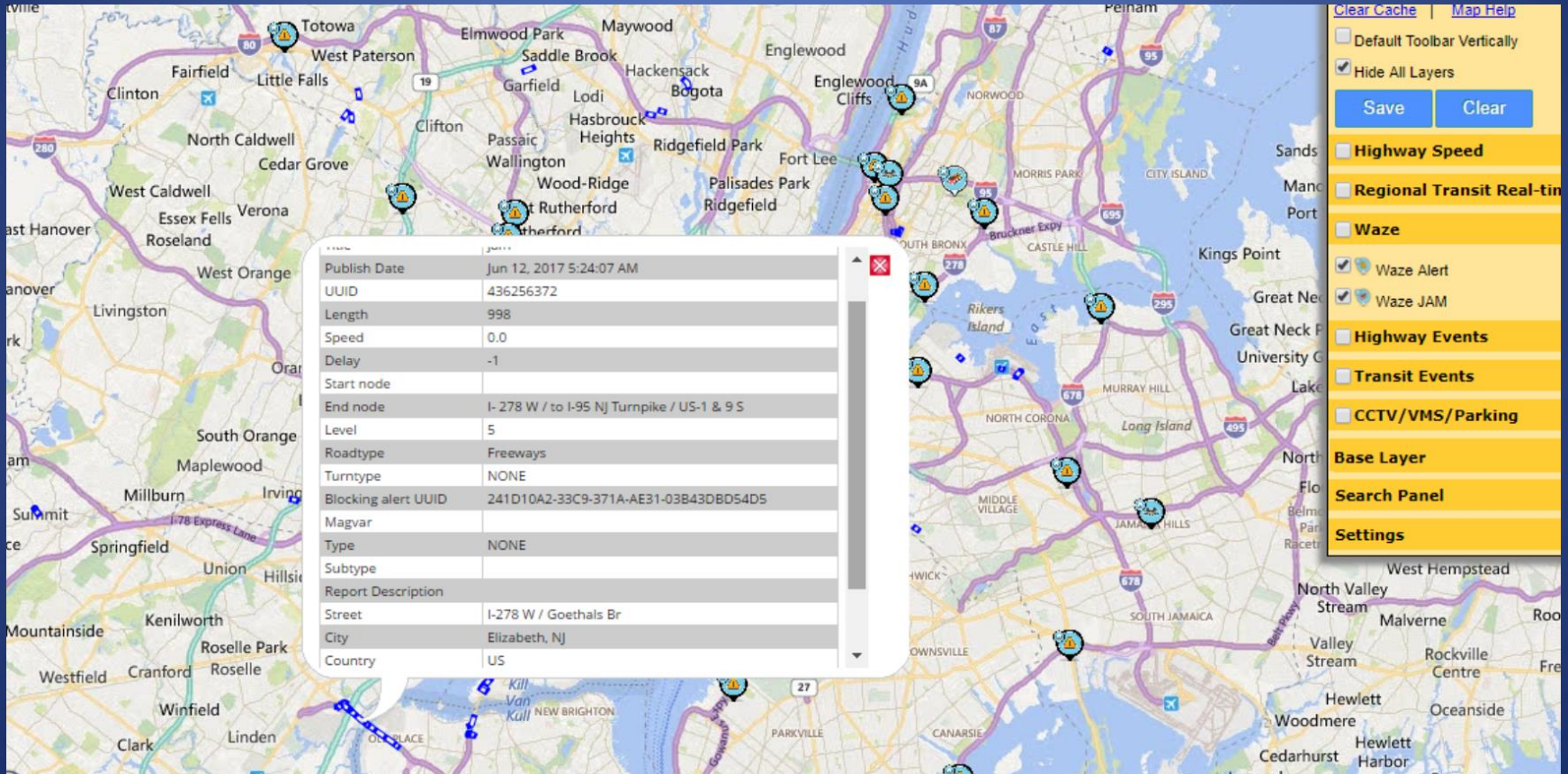
- IRREGULARITIES - ??

- TOTAL – 1,978

Waze Data

- Data did include:
  - Lat/Long

- However, data did not always include:
  - Agency
  - Roadway
  - Direction
  - Type of accident
  - Specifics of incident

Waze Data – Event Sample

Waze Data – Jam Sample

Waze Data Usage

- Per TRANSCOM Agency Policy – 3rd party data used for informational purposes only
  - Data available via TRANSCOM System Tools
  - Usage/actions are determined by agencies subject to their procedures and policies
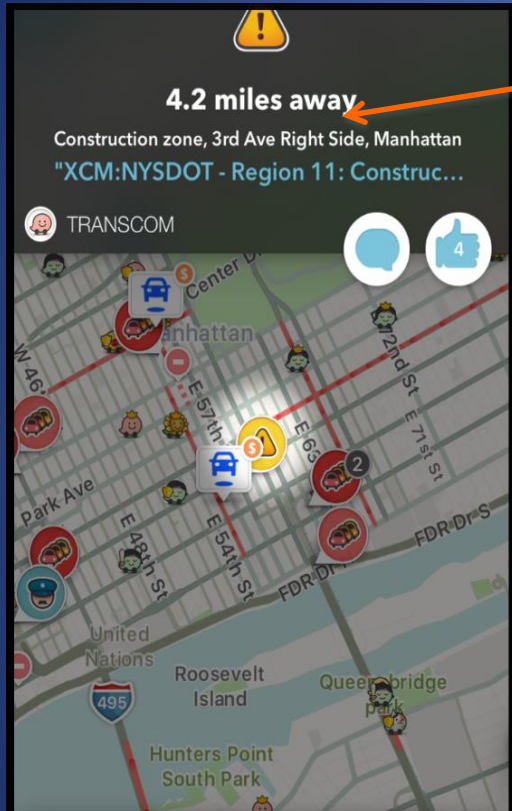   - Example - Jam vs. recurring congestion

TRANSCOM Data to Waze

- Initial datafeed provided all content (planned and active Events)
  - Subject to observed significant durations, planned events removed from datafeed.
    - Thanksgiving's day parade was being posted for 2017 in April 2017.
- Event Message updated per agency feedback as part of Penn Station support activities
  - Cut down from 160 characters to 70

TRANSCOM Data to Waze

- Per Waze configuration, a designated keystroke required to address data recursion on the Waze -> TRANSCOM interface.
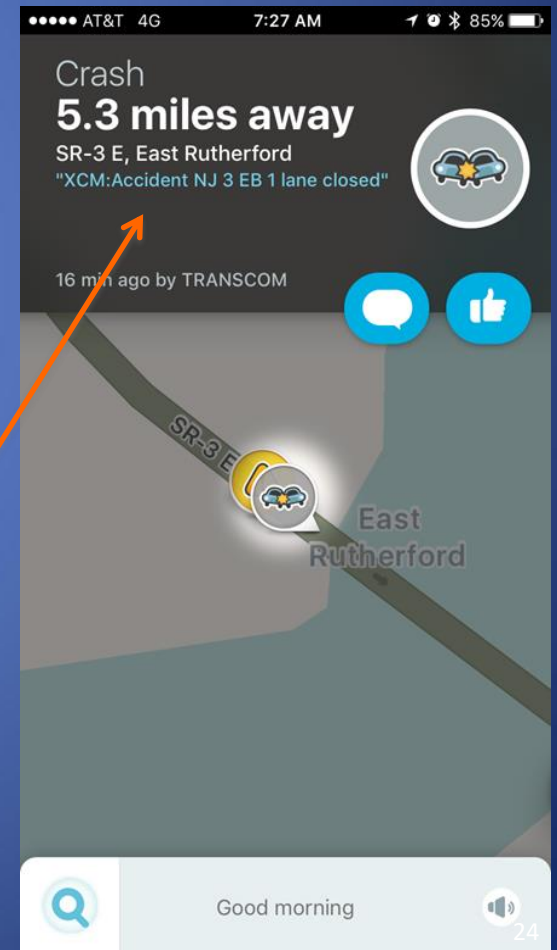
Waze Use of TRANSCOM Data

Original configuration based on existing Datafeed structure

Based on character limitation – message Description was being cut off and/or truncated

- Per request from agencies as part of Penn Station Maintenance, message customized for Waze to focus on event description

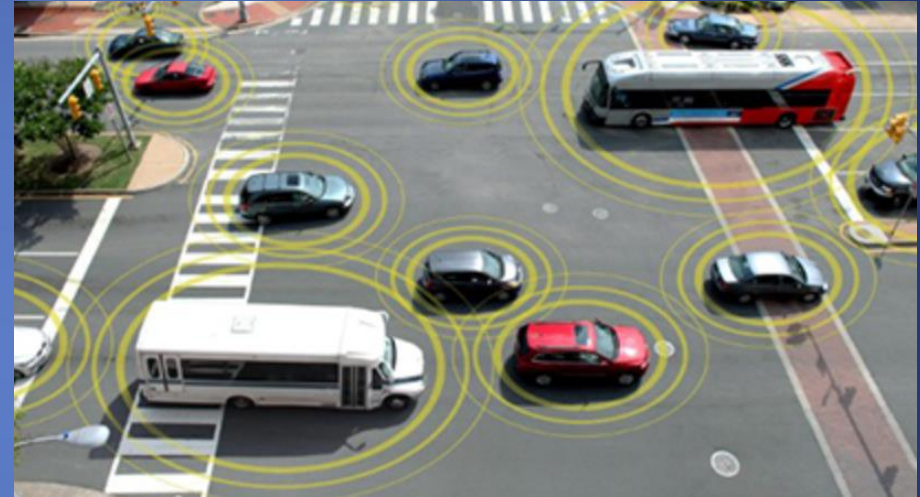# TRANSCOM 3rd Party Data - Next Steps

UBER Movement

- Working to secure feed for assessment/review by TRANSCOM Member Agencies
  - Offers alternative to Waze
  - Another data source that can be integrated into TRANSCOM Data Fusion Engine

TRANSCOM 3rd Party Data - Next Steps

As part of TRANSCOM
Regional Architecture,
2018 update to include
CV data elements

- Support data exchange
- Specification source for Member Agency procurements/assessments

Questions?

Rob Bamford

TRANSCOM

bamford@xcm.org