OPEN DATA FOR TRAFFIC

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What is open data?

"Open data is data that can be freely used, re-used and redistributed by anyone..."

from The Open Data Handbook

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Why is there a need for open data?

We need to manage traffic more proactively to reduce congestion and improve safety and mobility.

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Increasing Focus On

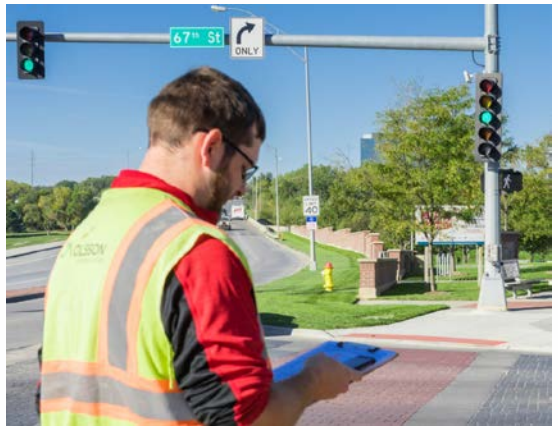
- **TSMO** – Transportation System Management and Operations
- **ATDM** – Active Transportation and Demand Management
- **ICM** – Integrated Corridor Management
- **TIM** – Traffic Incident Management
- **CAV** – Connected/Autonomous Vehicles
- **Smart Cities**

Requires

- Situational awareness
- Ability to manage/provide direction
- Coordination with other agencies/service providers

Data is the lifeline for all we do!

What Types of Data?



- Speed
- Camera video/images
- Traveler information
- Weather *(RWIS)*
- Traffic signal information
- Probe data *(INRIX, HERE, etc.)*
- Crowd sourced data *(WAZE)*

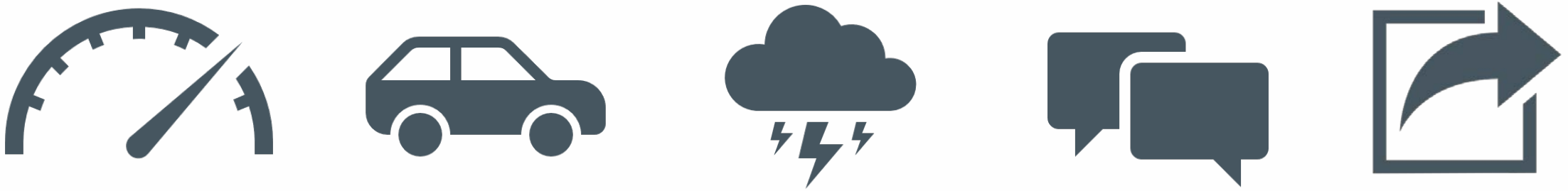
ITS Heartland Region

- ITS Heartland MCOMP Integrated Data Warehouse Project
- Iowa DOT/CTRE Open Data Service

ITS Heartland MCOMP Integrated Data Warehouse Project

- Will include the following types of data:
  - Speed
  - Traveler Information
  - Weather (RWIS)
  - NPMRDS data
  - Performance Measures

Iowa DOT/CTRE Open Data Service



- Launched in 2017 by CTRE
- Includes the following data types:
  - Speed
  - Traveler Information
  - Weather
  - Congestion Information
  - Performance Measures

Mid America Regional Council (MARC) Operation Green Light

- Increasing number of requests for traffic signal data
- Presently providing information on request
- Cost of providing data
- Considering establishing an open data service to provide traffic signal information

Potential Benefits

- Reduces congestion
- Reduces vehicle idling time/pollution
- Improves efficiency and travel time

Concerns

- Security of local jurisdictions' data systems
- Liability exposure by providing traffic signal data
- Public Safety
- Cost of providing data
- Potential for generating additional revenues
- Best practices in providing access to the data

Survey Targets

- MPOs (2)
  - East-West Gateway COG (St. Louis)
  - North Central Texas COG (Dallas Metro)
- Cities (5)
  - Seattle, WA
  - Olathe, KS
  - San Jose, CA
  - Norwalk, CT
  - Gainesville, FL
- Iowa DOT
- Private Companies (3)
  - Traffic Technology Services, Inc.
  - INRIX
  - HERE

Security

- Data feeds are typically push-type
- Open Data Services are separate systems and do not provide access to local jurisdiction's data systems

Liability Exposure

- Public data
- No cost
- Data sharing agreements addressing accuracy of data, liability limitations, and indemnification

Safety

- Companies using the data for CAV applications are responsible
- NHTSA regulates and has oversight

Cost of Providing Data

- Providing data manually has the greatest cost
- Data feeds address real-time data and are low cost
  - Historical data requests are still manual
- Open Data Services have higher initial costs, but are economical

Potential for Generating Additional Revenues

- Not occurring with any of the surveyed parties
- Concerns about “public data” and liability

Best Practices

- Presently, more agencies provide data by direct data feeds

- The number of agencies with open data services is increasing

Establish user agreements addressing

- Services
- Responsibilities of parties
- Restrictions
- Data accuracy
- Liability limitations
- Term of the agreement
- Indemnifications
- Agreement termination
- Security breach responsibilities

QUESTIONS?

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