

Recommendation XX: The federal government should work with various organizations, including AASHTO, the state DOTs, private industry) to facilitate interoperability through the development of a consistent data taxonomy that allows for the sharing and exchange of traffic and other data collected from IoT and non-IoT sources.

Description:

The federal government should work with various organizations, including AASHTO, the state DOTs, private industry) to facilitate interoperability through the development of a consistent data taxonomy that allows for the sharing and exchange of traffic and other data collected from IoT and non-IoT sources. This problem is exacerbated when you are dealing with multiple state and local jurisdictions.

Justification:

Transportation and traffic agencies have a limited ability to share and exchange data. Transportation data includes things like geographic information, asset and infrastructure information, traffic mobility history, public transportation performance, and traffic anomalies. At best, these exchanges may happen on a limited basis within each agency, but not across other agencies in other jurisdictions. This makes collaboration requiring multiple agencies difficult.

Implementation considerations:

- Federal funding to support industry efforts to develop a consistent data dictionary.
- Projects involving multiple jurisdictions and requiring federal funding should specify the development of a data taxonomy that can be further used and developed by other jurisdictions.
- Engagement with AASHTO as they are a standards setting body which publishes specifications, test protocols, and guidelines, that are used in highway design and construction.

Potential implementation barriers:

- Project Funding to develop such a taxonomy and program funding to sustain its operations.
- Workforce: lack of data scientists

Possible participating agencies

- DOT, others TBD.