



*UNITED STATES*  
**DEPARTMENT OF TRANSPORTATION**

# **Vehicle-to-Vehicle Safety Program Overview**

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National Highway Traffic Safety Administration

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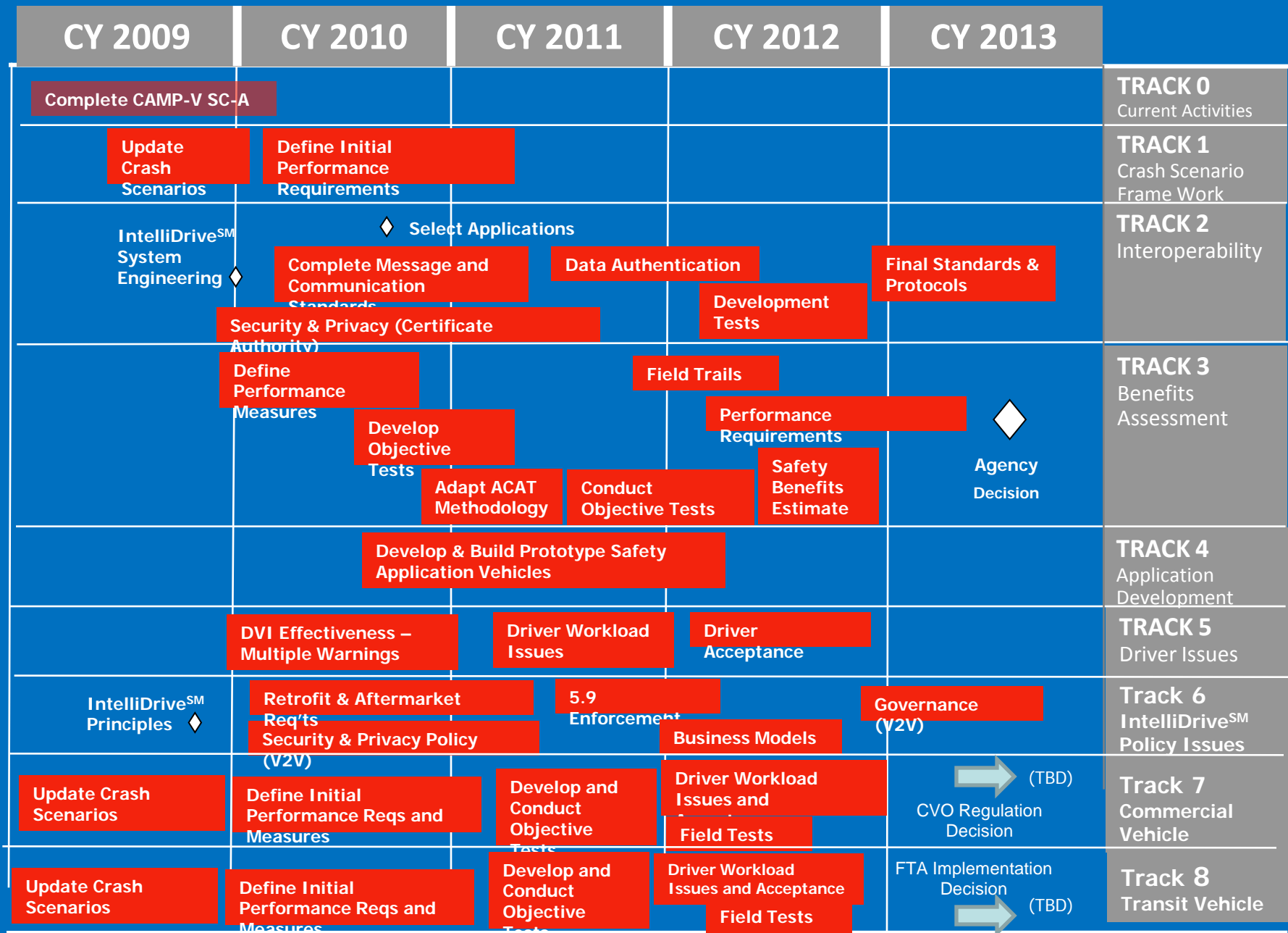
# Agenda

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- Overview
- Crash Scenarios and Benefits – Emily Nodine
- Interoperability – Mike Lukuc



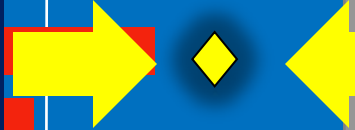
# Vehicle to Vehicle Safety Application Research Plan



# Vehicle to Vehicle Safety Application Research Plan

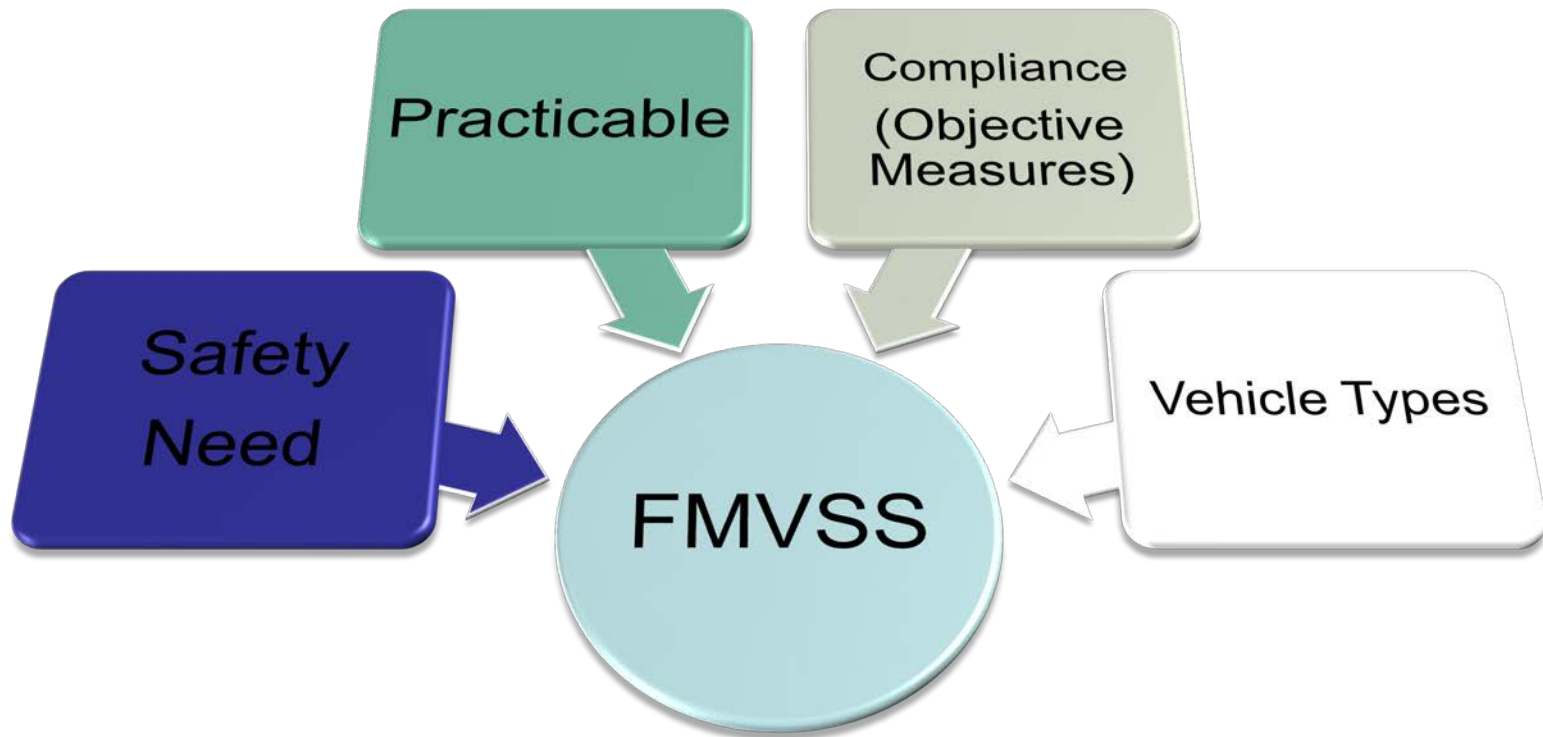


Agency  
Decision



# Federal Motor Vehicle Safety Standards

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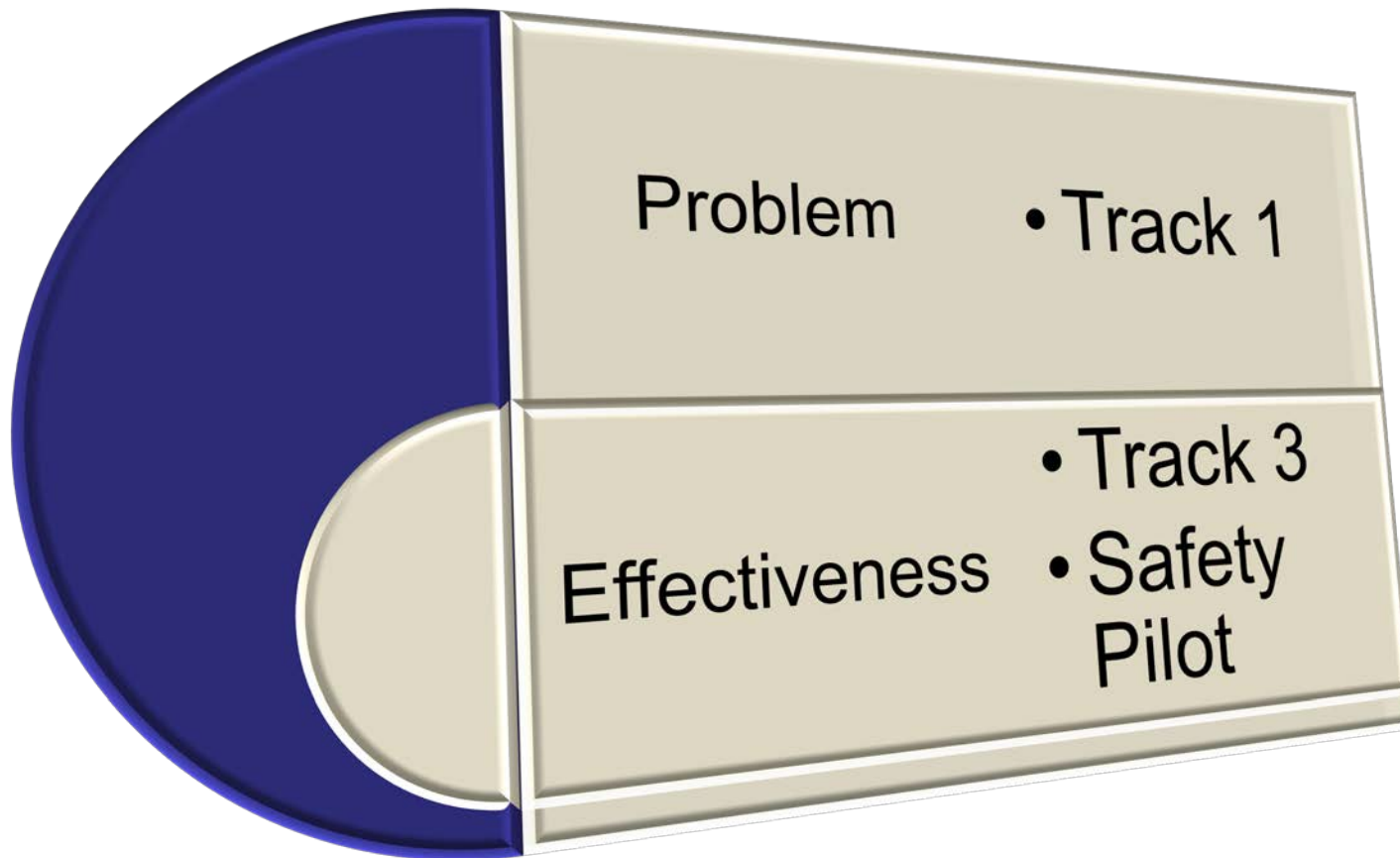
# V2V Program

| Track                       | Objectives  |
|-----------------------------|---|
| 1 – Crash Scenario          | Develop a comprehensive Pre-Crash Scenario Framework, and countermeasure concept profiles for both light vehicles and heavy trucks.                 |
| 2 – Interoperability        | Ensure that V2V safety systems can successfully function across equipped vehicles regardless of make/model.   |
| 3 – Benefits Assessment     | Benefits assessments for V2V safety applications  |
| 4 – Application Development | Develop applications for benefits assessment  |
| 5 – Driver Issues           | Develop a framework to assess the impact of driver issues on the effectiveness of DVI's used with V2V safety applications.                          |
| 6 – Policy                  | Through coordination of the technical and policy aspects of V2V this track will result in a set of policy recommendation to support V2V deployment. |
| 7 -Commercial Vehicles      | Identify and coordinate the commercial vehicle component of V2V safety applications.  |
| 8 – Transit Vehicles        | Identify and coordinate the transit vehicle component of V2V safety applications.   |



# Safety Need

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# Safety Need

- Identify target pre-crash scenarios
- Depict priority pre-crash scenarios
- Determine crash avoidance needs
- Develop countermeasure profiles

Effectiveness

- Track 3
- Safety Pilot





# Safety Need

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- Projections of crash reductions
- Overall driving behavior
- Driver attention
- Impact of deployment rate

Track 1

• Track 3

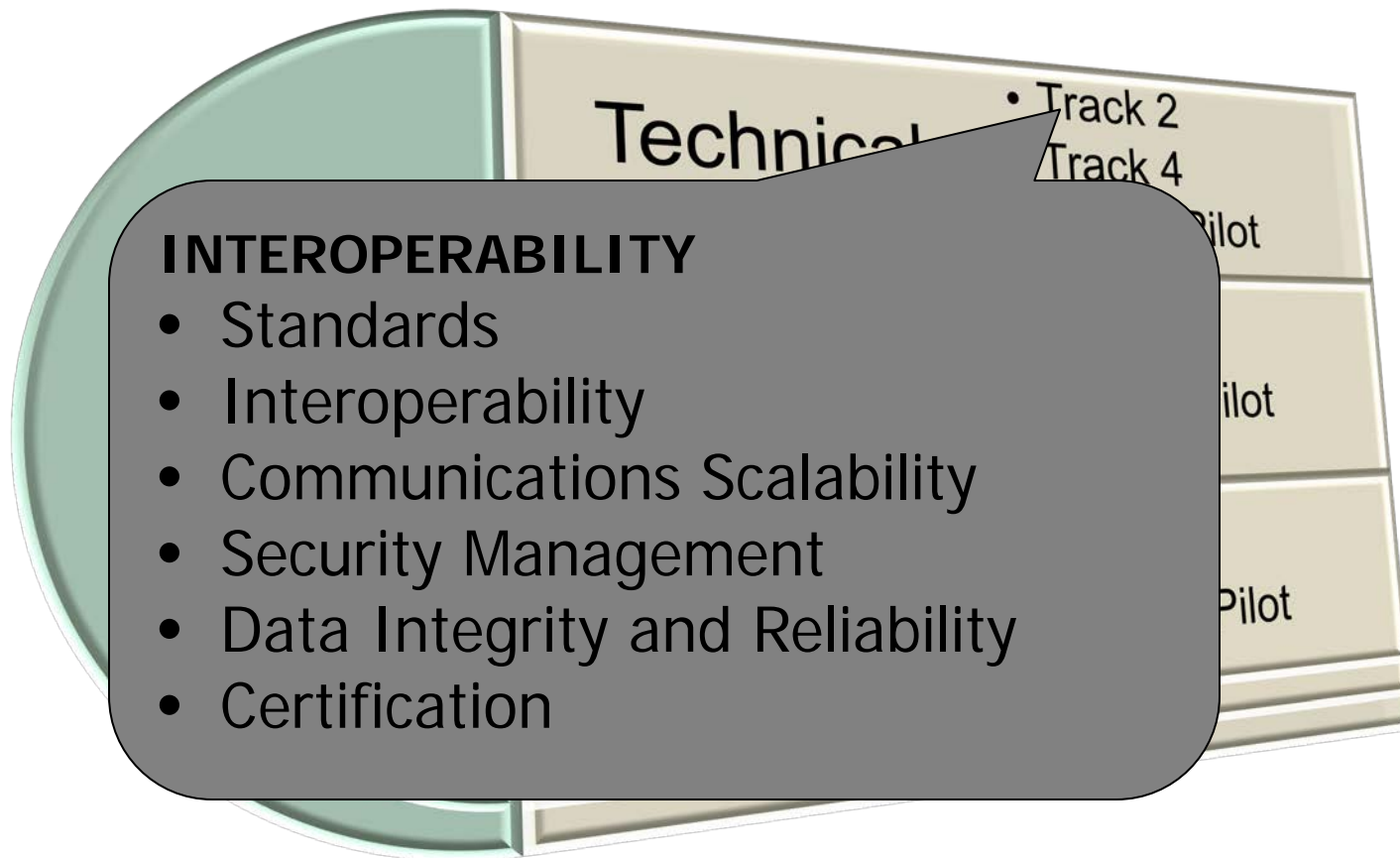
• Safety Pilot

Effectiveness



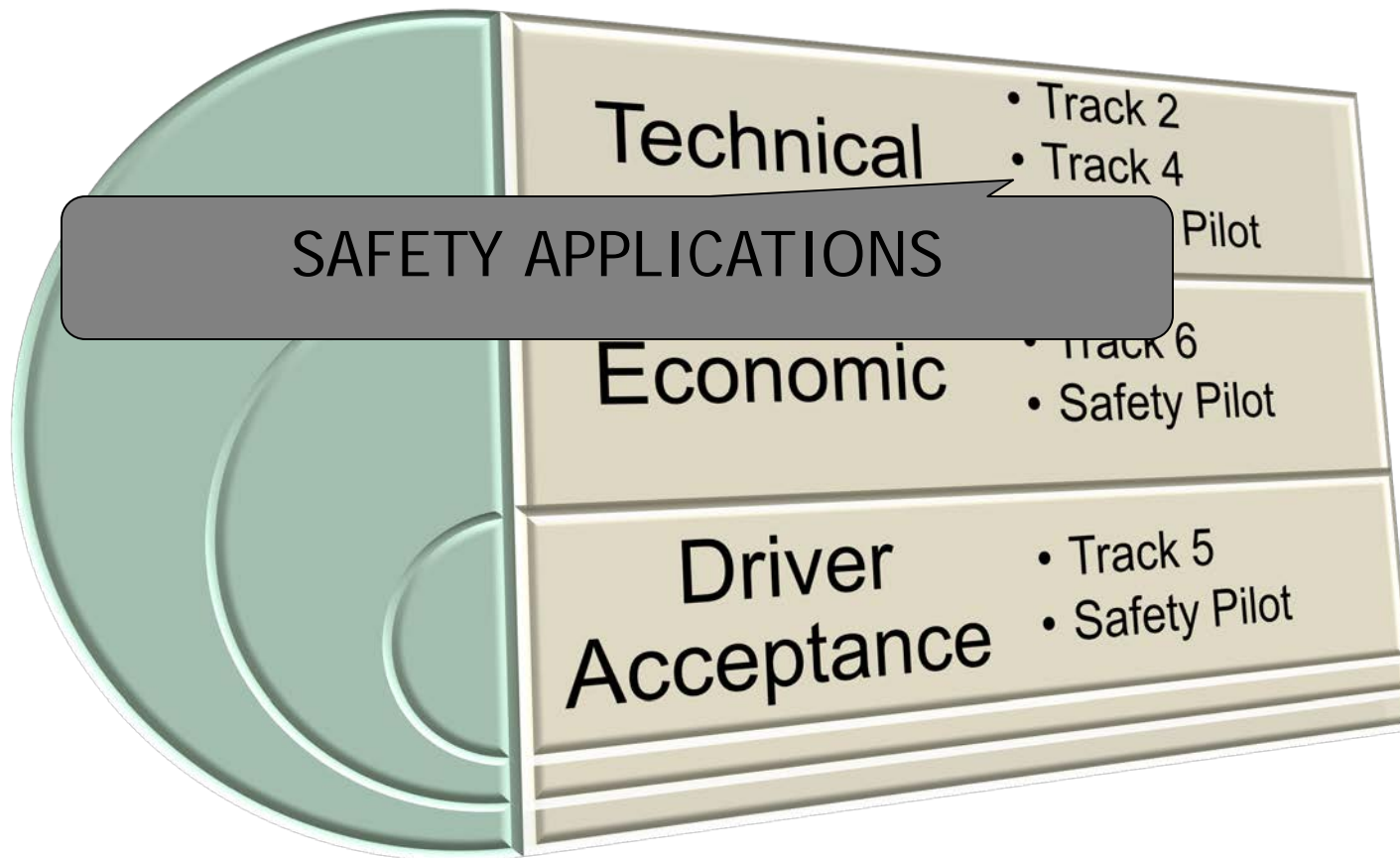
# Practicability

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# Practicability

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# Practicability

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## Technical

- Track 2
- Track 4
- Safety Pilot

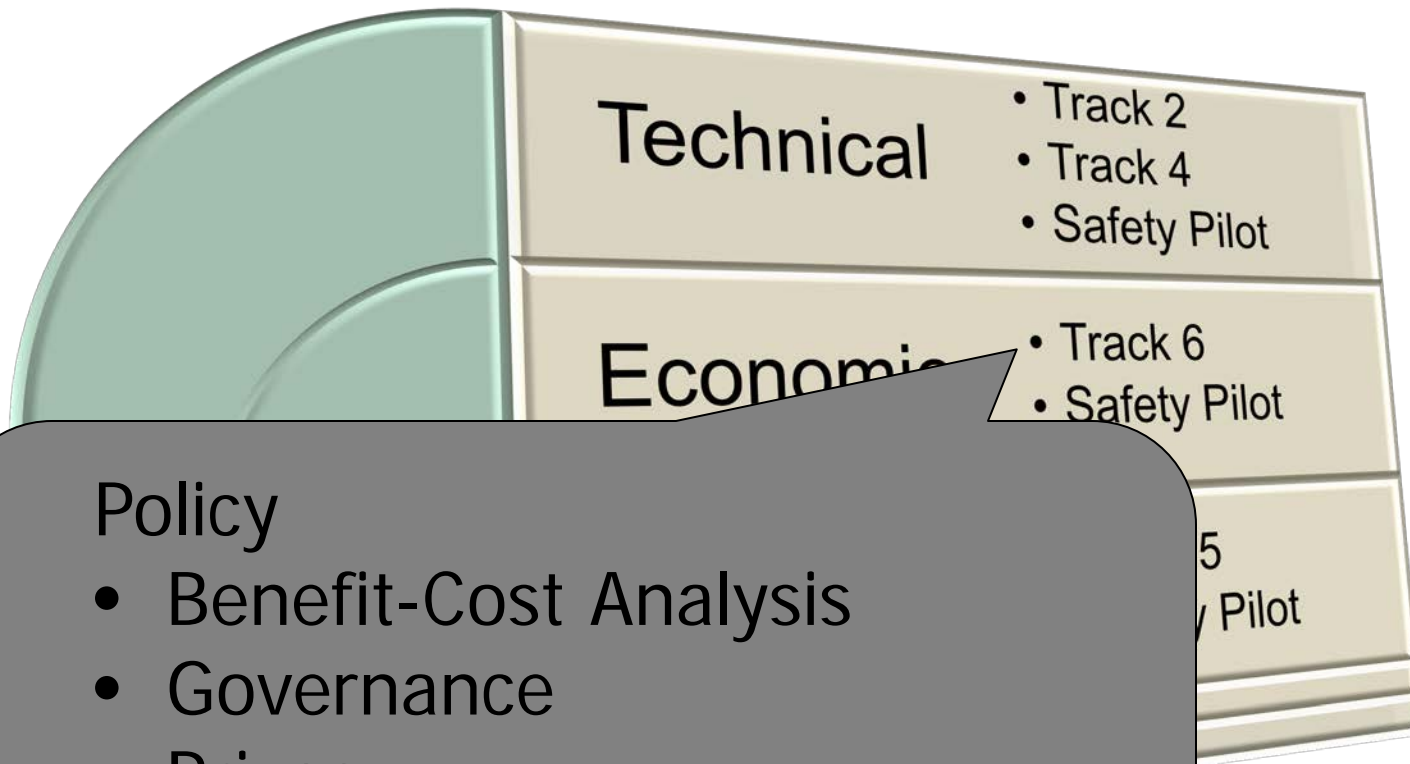
CHARACTERIZE SYSTEM PERFORMANCE  
AND CAPABILITY:

- Accuracy
- Interoperability
- Security
- Alert logic



# Practicability

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## Policy

- Benefit-Cost Analysis
- Governance
- Privacy
- Liability
- etc....



# Practicability

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Determine driver acceptance:

- Ease of use
- Usefulness
- Ease of learning
- Willingness to use/Advocacy

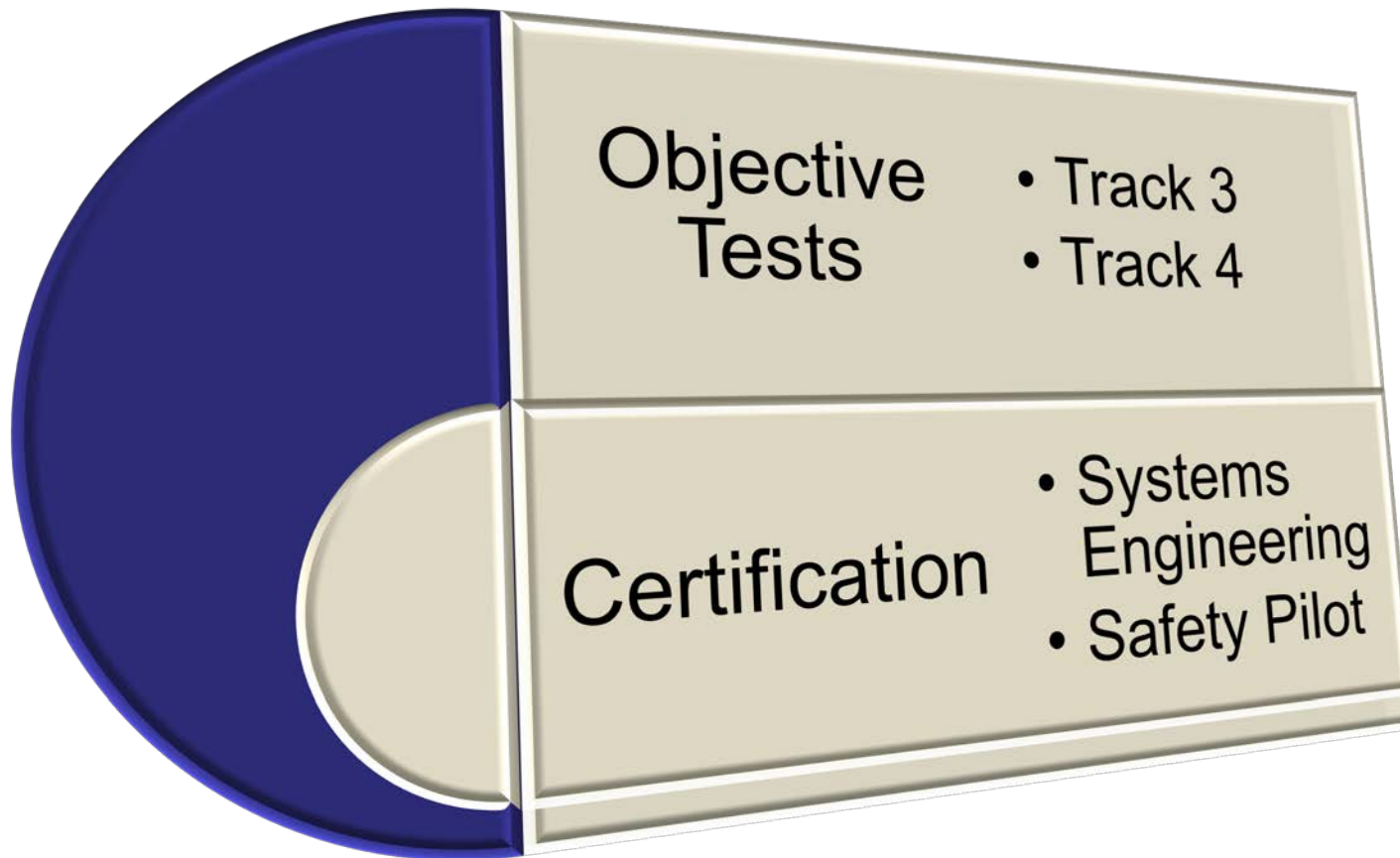
**Driver  
Acceptance**

- Track 2
- Track 4
- Safety Pilot
- Track 6
- Safety Pilot
- Track 5
- Safety Pilot



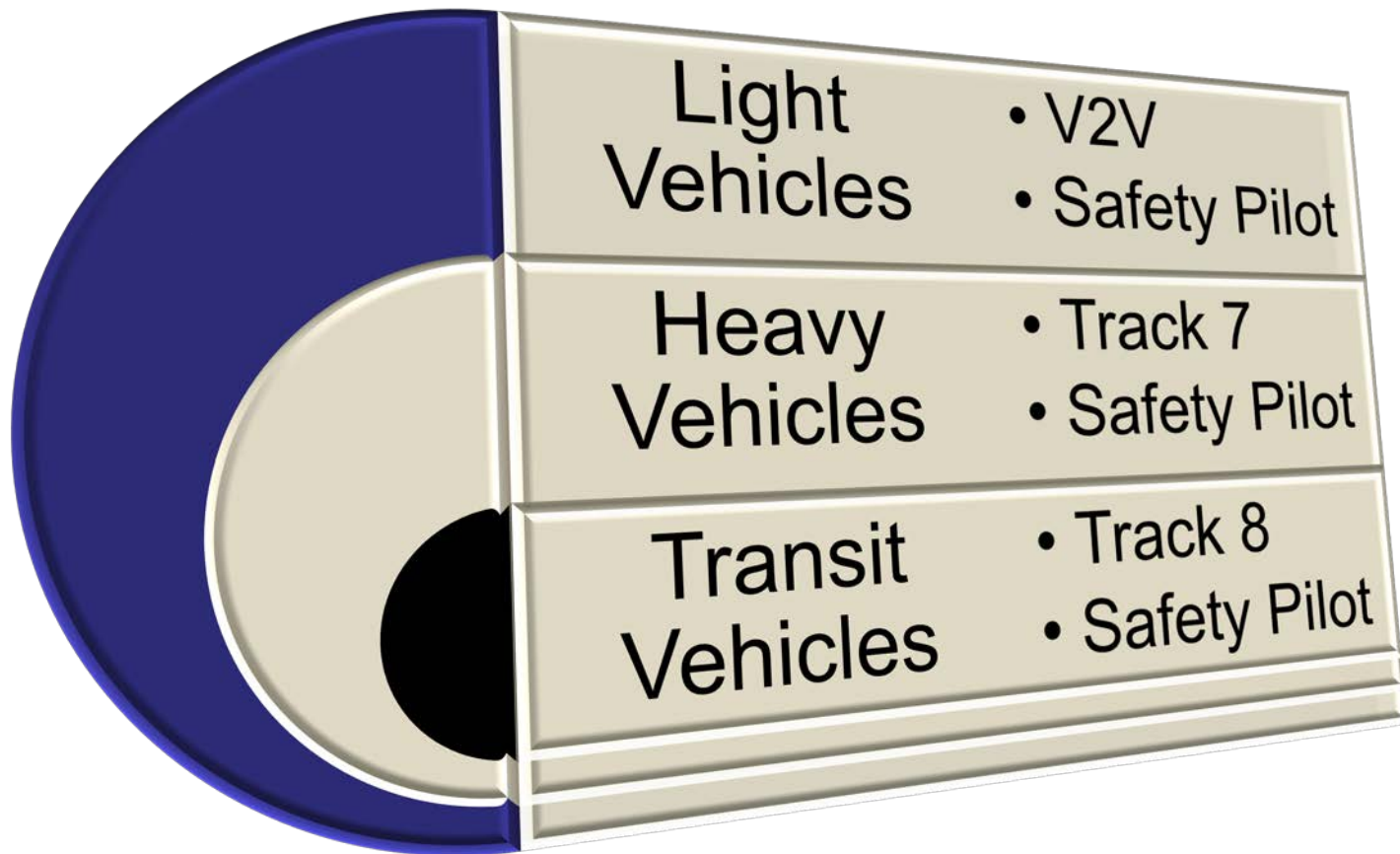
# Compliance

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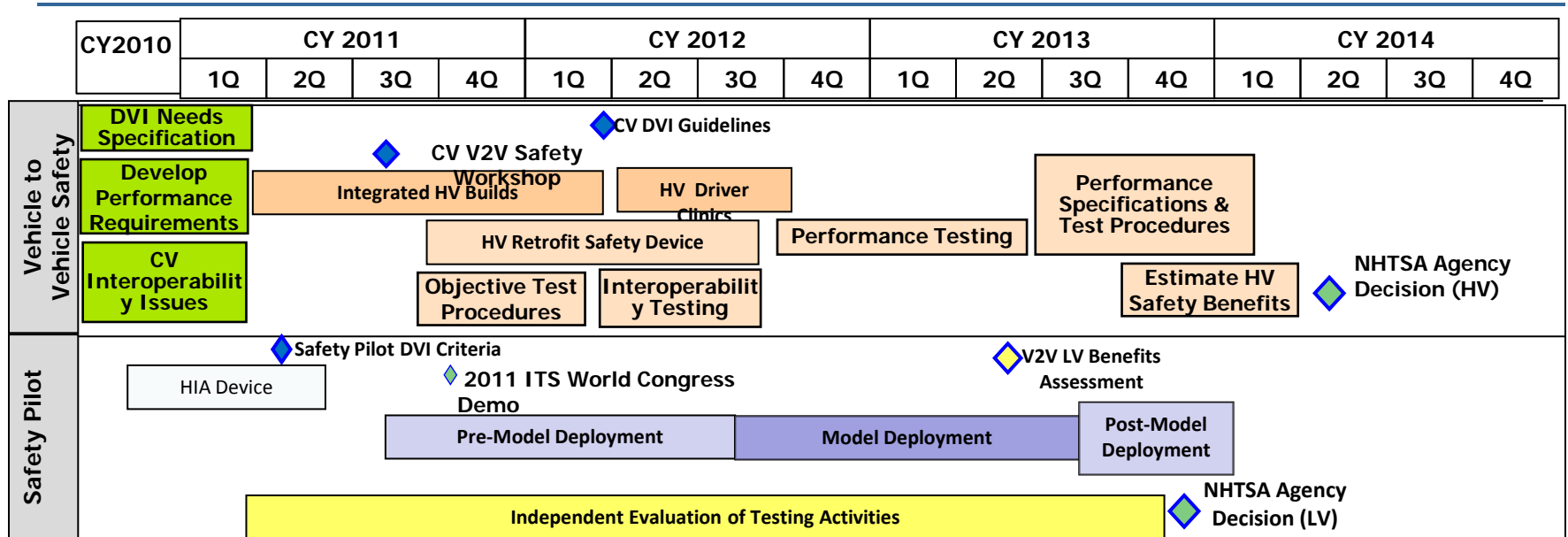
# Vehicle Type

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# Commercial Vehicle V2V and Safety Pilot Roadmap



## Research Completed to Date

- DVI Needs Identification
- Performance Requirements
- CV Interoperability Issues

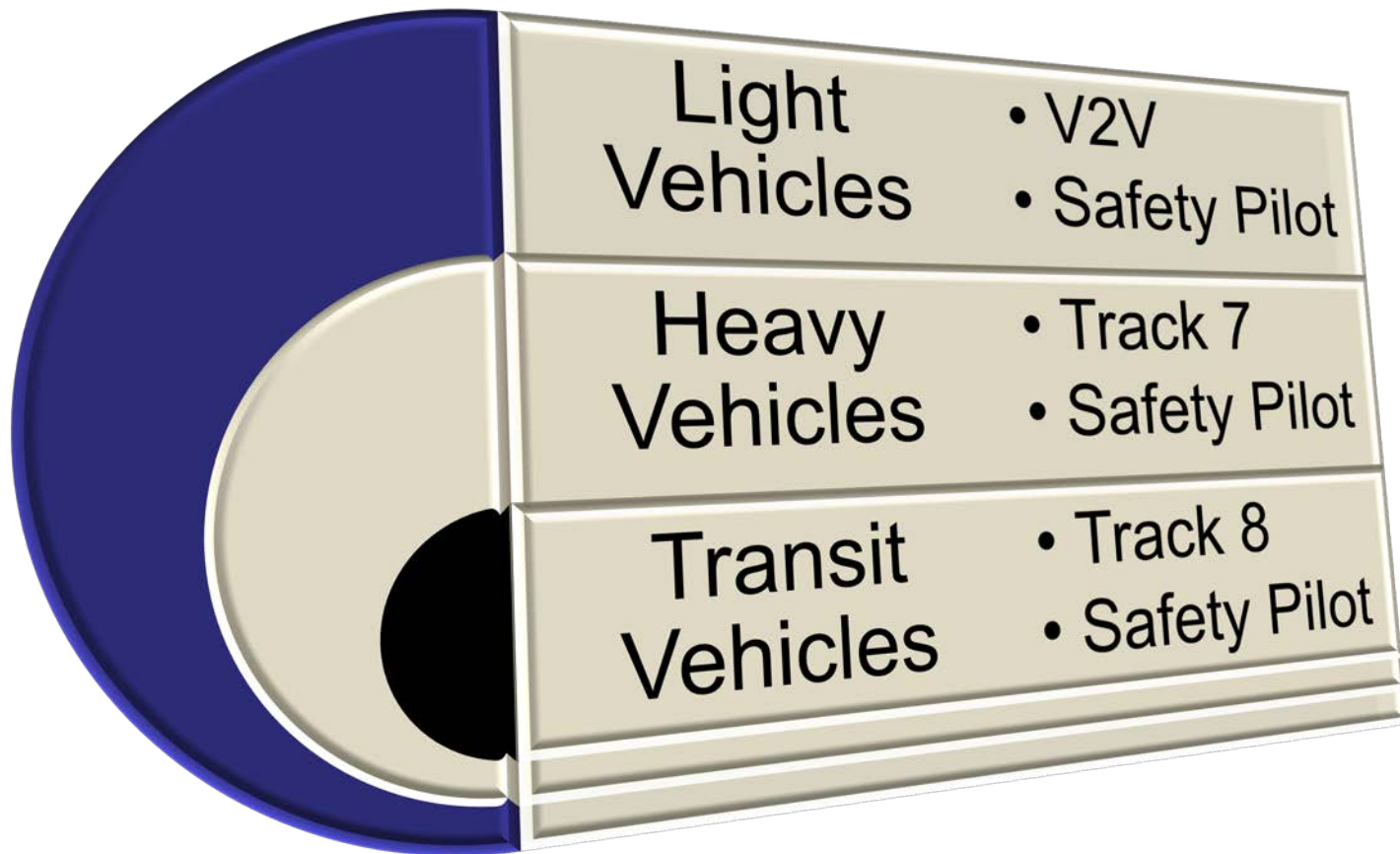
## Upcoming Research

- Prototype Truck Tractors
- Safety Pilot
  - Driver Acceptance Clinics
  - Model Deployment



# Vehicle Type

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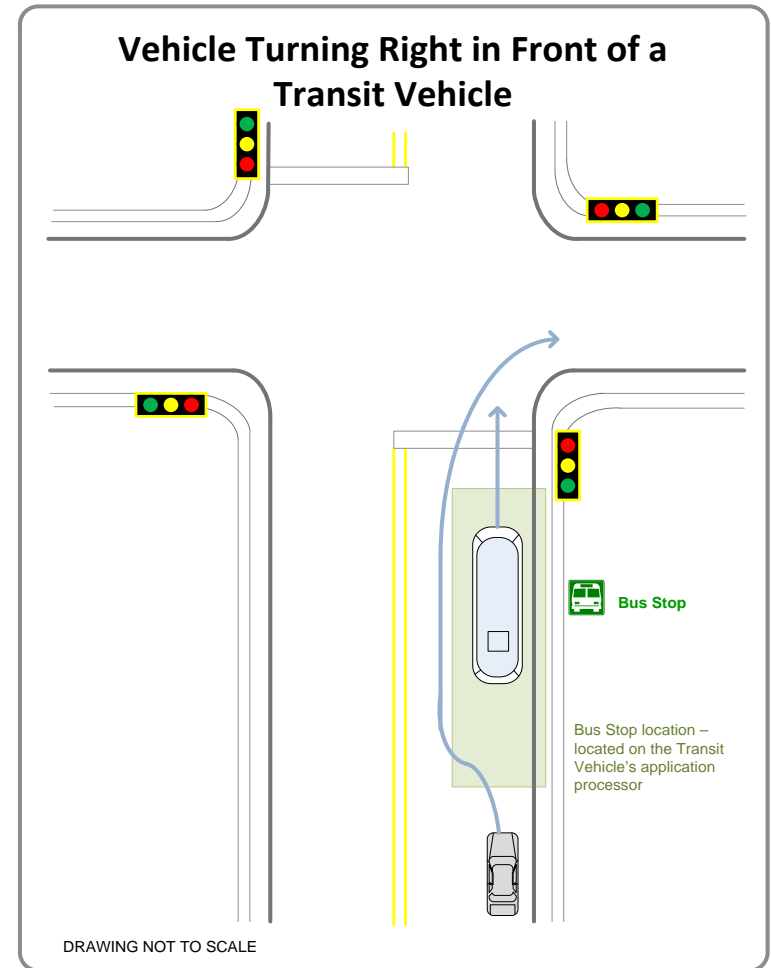


# Transit Safety Application #2

## Right-Turn In Front Crashes



This application was discussed and recommended by transit stakeholders during transit stakeholder meetings.



# Contact Information

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*Intelligent Transportation Systems  
Joint Program Office*



<http://www.its.dot.gov/>