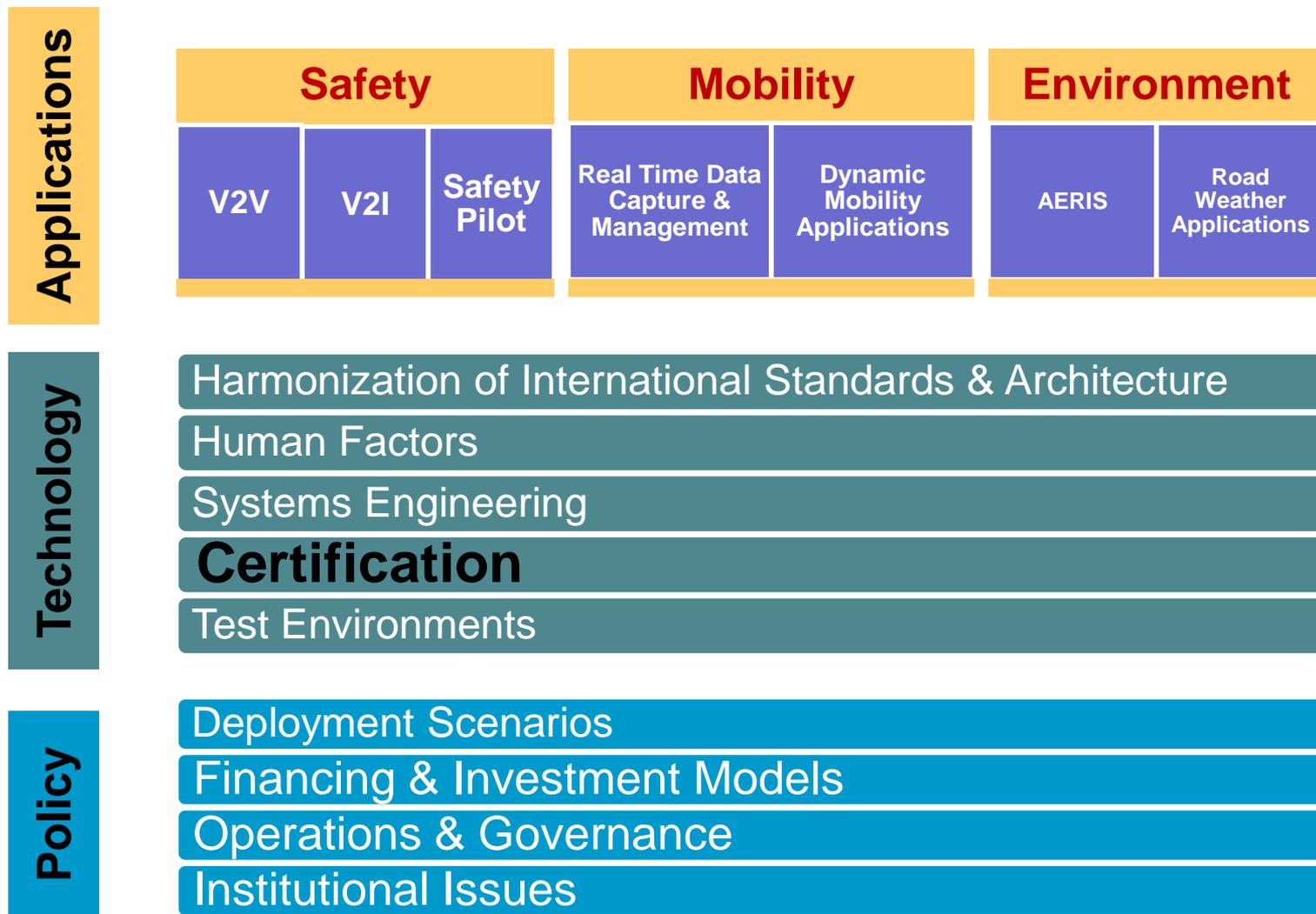




# IntelliDrive Safety Program Certification Overview

Walton Fehr  
US Department of Transportation  
ITS Joint Program Office

# IntelliDrive Program Structure



# Major IntelliDrive Objectives

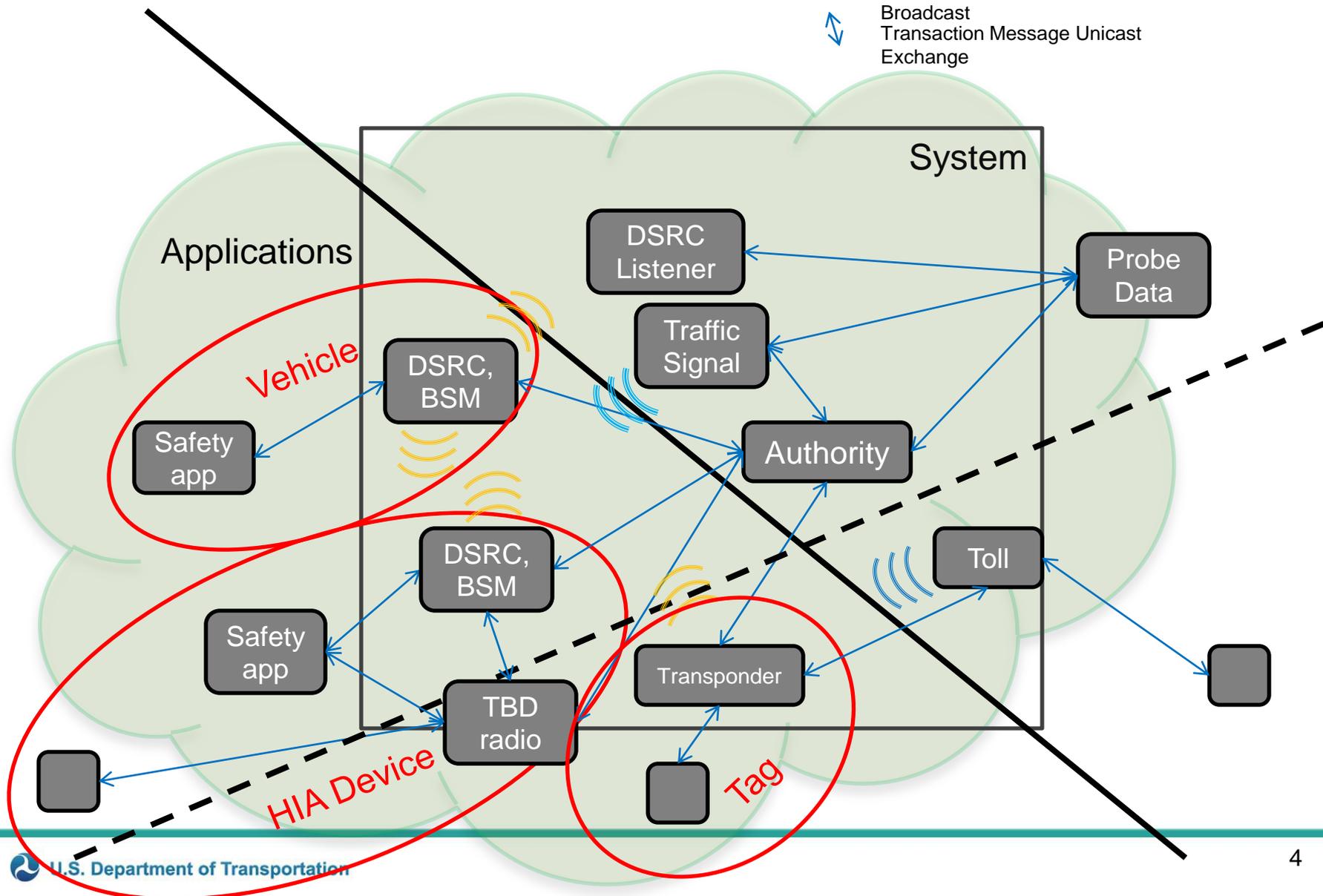
- Move aggressively on vehicle to vehicle communications
  - Regulatory Decision on In-Vehicle Equipment by 2013
- Accelerate in-vehicle technology
  - “Here I Am” messages
  - Enables safety and active traffic management
- Accelerate infrastructure communications capability
  - Signal Phase and Timing (SPaT) as initial focus
  - Enables safety, mobility, and environmental applications
- On road multi-modal pilot deployments for high-value applications
- Monitor and evaluation of driver distraction issues
- Understand benefits and communications needs (DSRC/other) of transformative mobility applications

# Certification Task Objectives

- Develop a framework for certification processes
- During the Safety Pilot –
  - Test the certification process framework
    - At a fundamental device level
    - At an integration level
    - At an interface level
    - ~~• At an application level~~
  - Provide a service to the Test Conductor
    - Initial confirmation screen of material from potential HIA device suppliers
    - Sample confirmation screen of material for model deployment

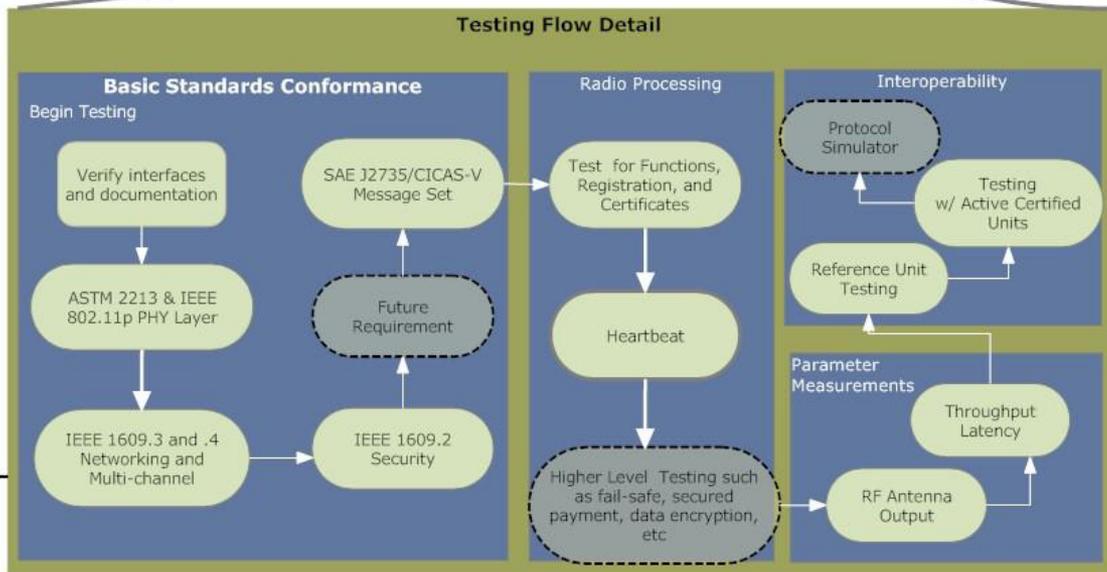
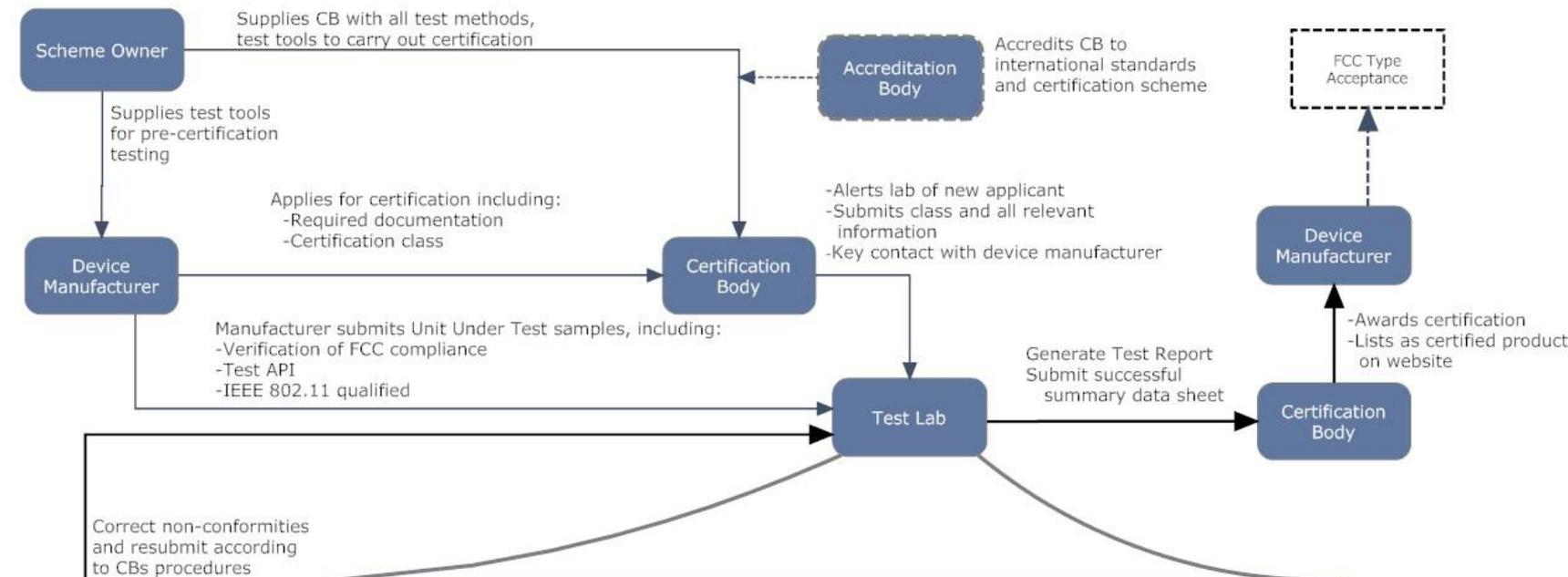
# Example: V-V Crash Avoidance

- Basic Safety Message
- Broadcast SPaT and Related Messages
- Broadcast WAVE Service Announcement
- Broadcast Transaction Message Unicast Exchange



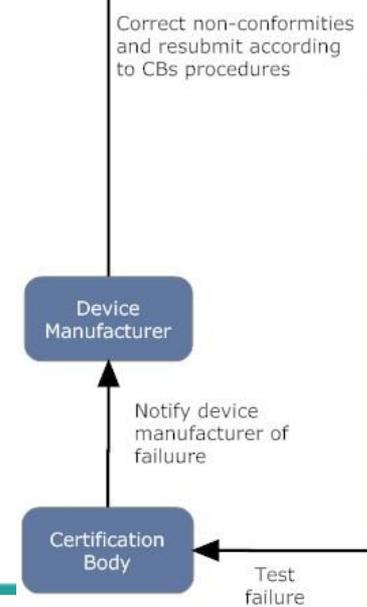
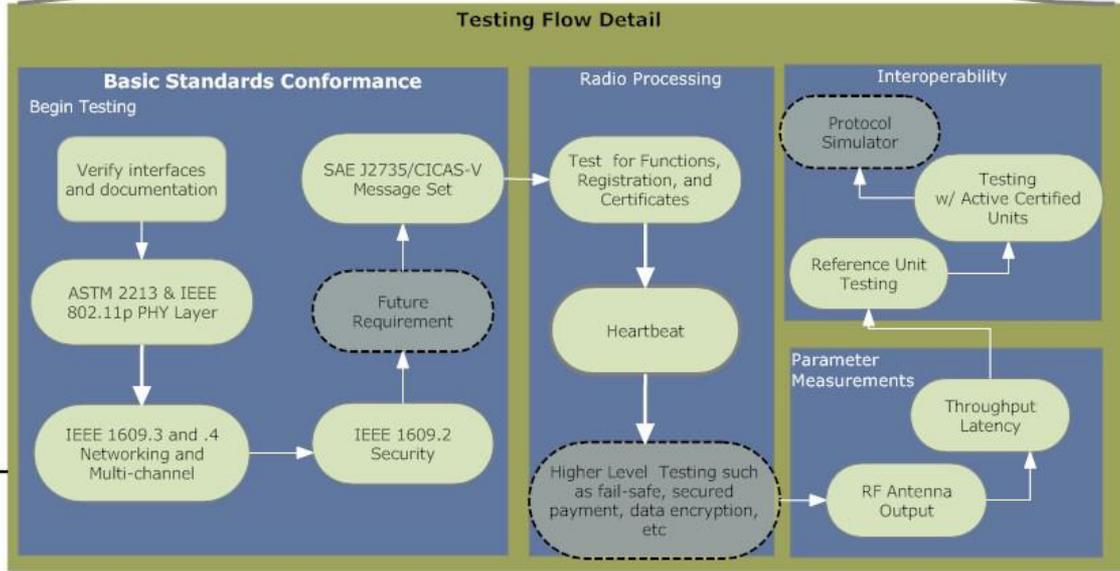
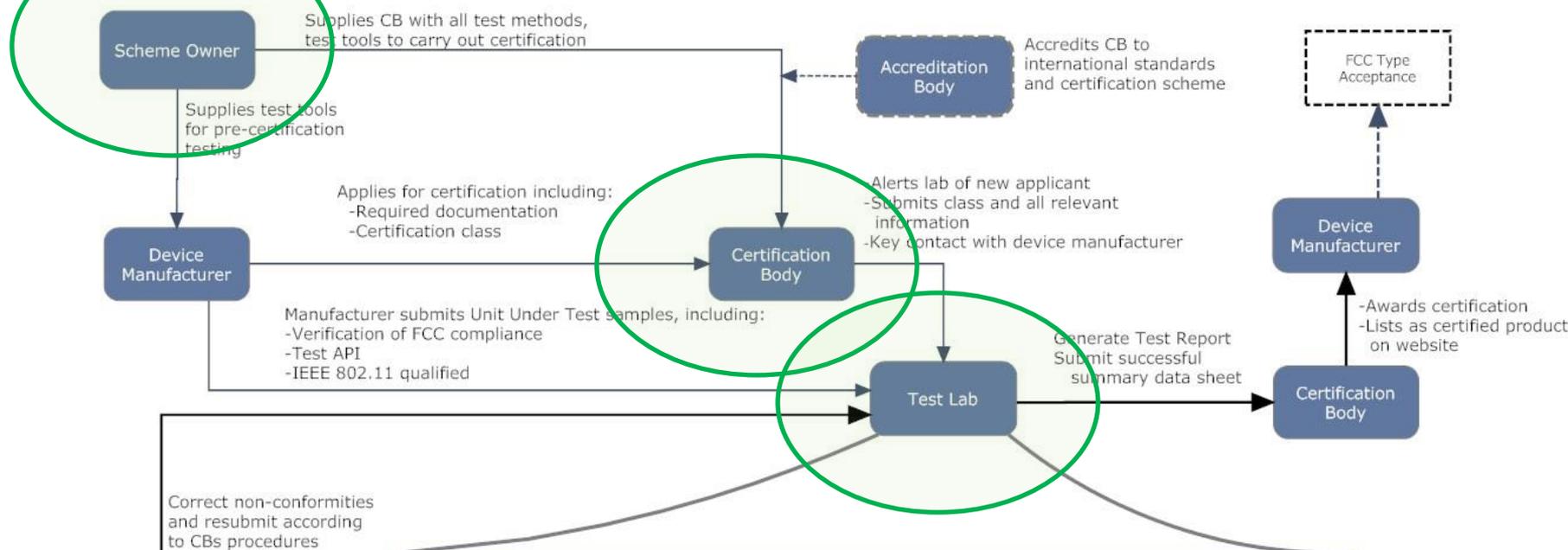
Tim McGuckin,  
OmniAir Team

# Certification Framework



Tim McGuckin,  
OmniAir Team

# Certification Framework



# Test the framework/Provide a service

- **At a fundamental device level**

- One side of the 5.9GHz DSRC interface of the HIA devices
- SRD-USDOTHIM-001-Req001v001 Basic Safety Message - The device shall send a Basic Safety Message over a Dedicated Short Range Communication (DSRC) wireless communication link.
- Bench-level test

- **At an integration level**

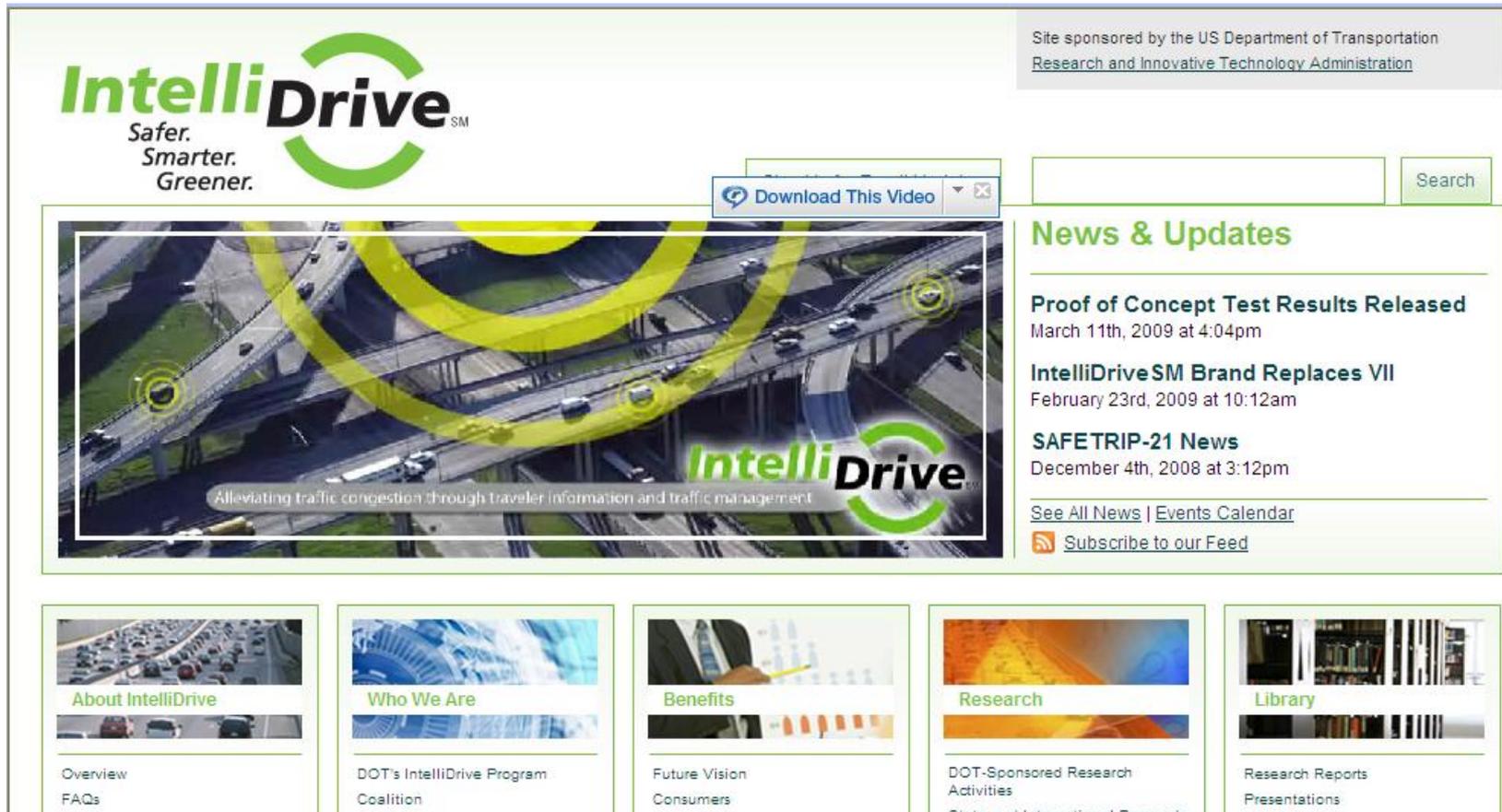
- HIA devices installed in vehicles
- SRD-USDOTHIM-001-Req041v001 Transmission Range – The overall device shall support vehicle-to-vehicle communication throughout a range of 1m to 500m with a maximum Packet Error Rate of 0.1%, in an open field.
- Stationary vehicle-level test

- **At an interface level**

- HIA devices operating in vehicles
- SRD-USDOTHIM-001-Req027v001 General Data Frames and Data Elements - Basic Safety Message shall include, at a minimum, the data frames and data elements listed.
- Moving vehicle-level test

# For More Information...

<http://www.intellidrive.org/>



The screenshot shows the IntelliDrive website homepage. At the top left is the IntelliDrive logo with the tagline "Safer. Smarter. Greener." Below the logo is a large video player showing an aerial view of a highway interchange with yellow circular overlays. A "Download This Video" button is positioned above the video. To the right of the video player is a search bar with a "Search" button. Below the video player is a "News & Updates" section with three news items: "Proof of Concept Test Results Released" (March 11th, 2009), "IntelliDriveSM Brand Replaces VII" (February 23rd, 2009), and "SAFETRIP-21 News" (December 4th, 2008). Below the news section are five navigation boxes: "About IntelliDrive" (Overview, FAQs), "Who We Are" (DOT's IntelliDrive Program Coalition), "Benefits" (Future Vision, Consumers), "Research" (DOT-Sponsored Research Activities, State and International Research), and "Library" (Research Reports, Presentations). At the top right of the website, a grey box states: "Site sponsored by the US Department of Transportation Research and Innovative Technology Administration".

Site sponsored by the US Department of Transportation  
Research and Innovative Technology Administration

Download This Video

Search

## News & Updates

**Proof of Concept Test Results Released**  
March 11th, 2009 at 4:04pm

**IntelliDriveSM Brand Replaces VII**  
February 23rd, 2009 at 10:12am

**SAFETRIP-21 News**  
December 4th, 2008 at 3:12pm

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