Driver and Vehicle Safety Innovation
Future Technology Initiatives for Roadside Inspections

2014 Transportation Research Board 93rd Annual Meeting
Federal Motor Carrier Safety Administration
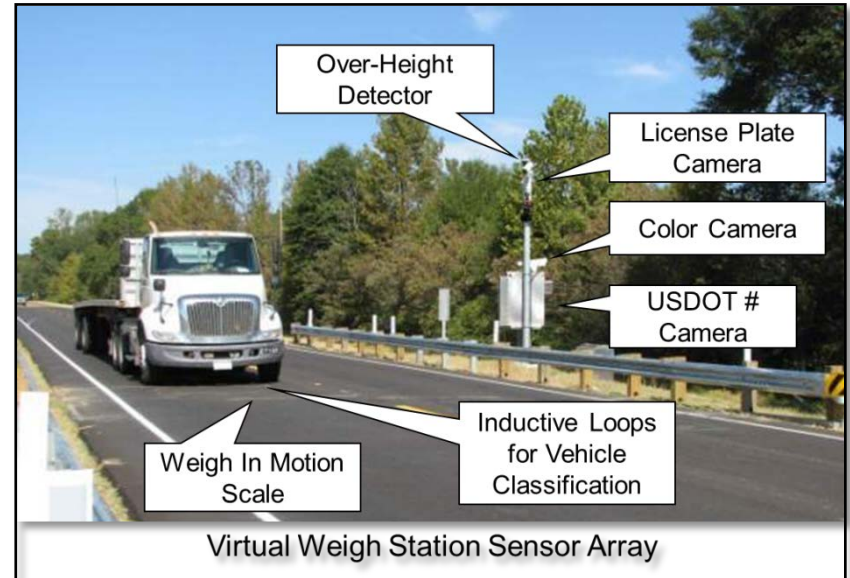Analysis, Research, and Technology Forum
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- Stakeholder Engagement

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Virtual Weigh Station Sensor Array

- Over-Height Detector
- License Plate Camera
- Color Camera
- USDOT # Camera
- Inductive Loops for Vehicle Classification
- Weigh In Motion Scale

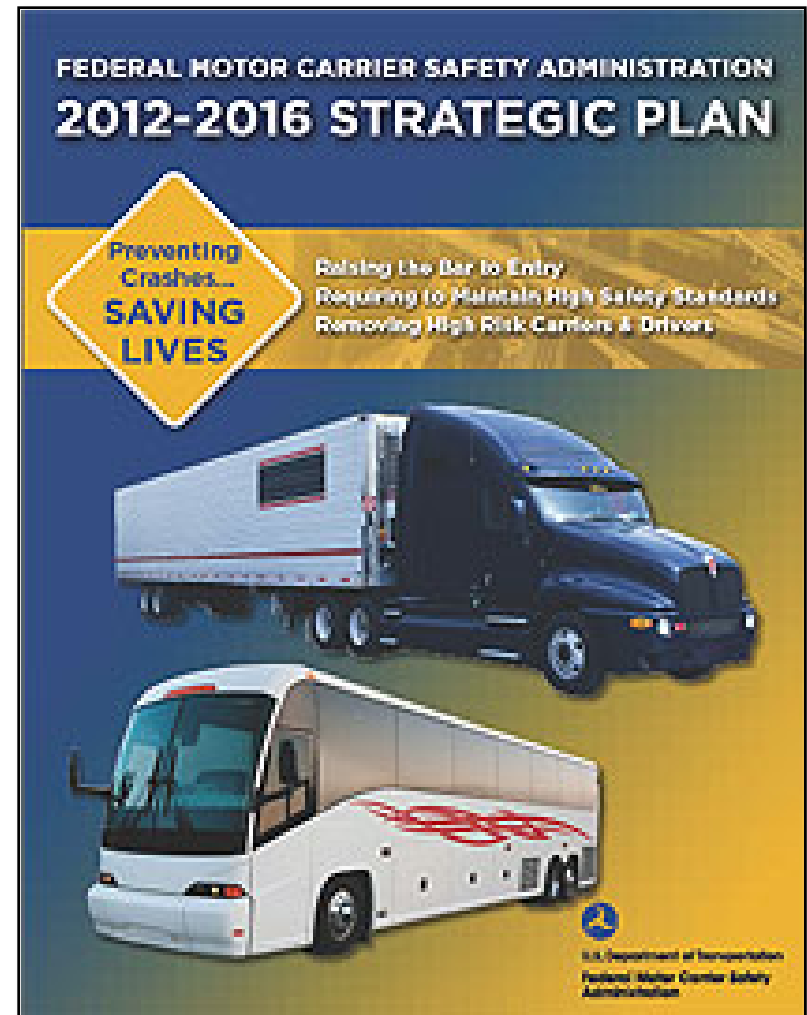# Strategic Goal Related to Roadside Technologies

Focus Area:

Comprehensive Data Utilization and Leveraging Technology

Goal:

Risk & Safety Research

Strategy:

Identify, test, and deploy smart roadside technologies in partnership with Federal/State safety agencies and technology providers.

Strategic Goal Related to Roadside Technologies

Outcomes:

- Improved access to high quality safety data collected and disseminated through a single commercial motor vehicle (CMV) transportation safety system (i.e., the FMCSA Portal).

- Increased deployment of electronic data exchange and smart roadside technologies.

Stakeholder Engagement—Critical to Implementation

Entity	Collaboration Objectives
State Enforcement	- Enhanced data sharing between FMCSA and States - Maximum flexibility for technology solutions
Motor Carrier Industry	- Open data exchange standards between motor carriers and State/FMCSA systems - Potentially new performance data streams to complement safety inspection activities
Technology Providers	- Performance-based standards to facilitate flexible, cost-efficient State roadside technology solutions - Opportunities to exchange information regarding Agency needs and provider capabilities

Key Technology Initiatives

- **Research:**

  - SmartPark and International Border Crossing E-Screening (IBCES) field tests.

  - New inspection tools (e.g., handheld ABS compliance check).

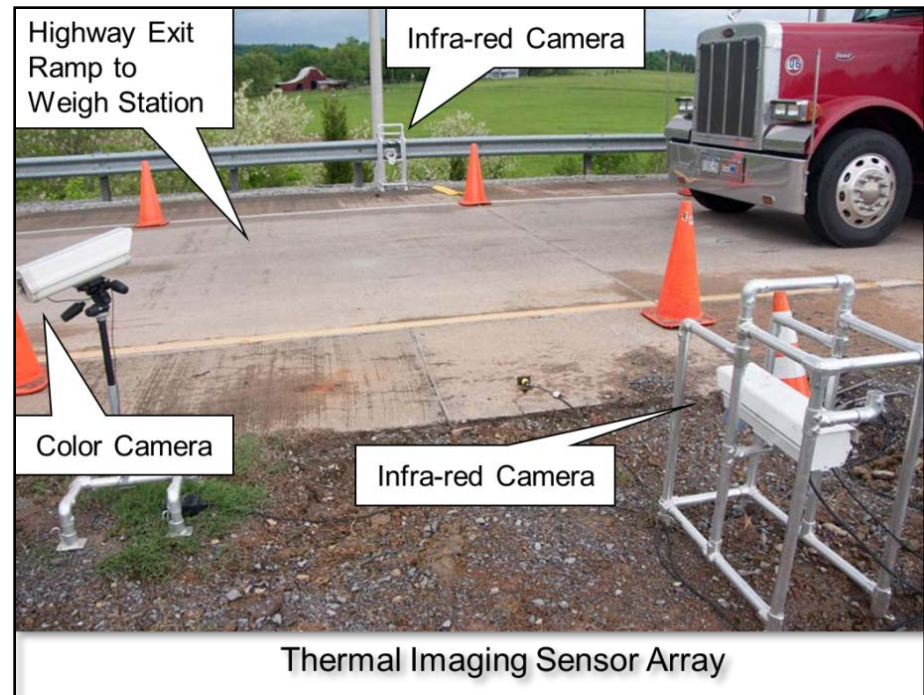 - Wireless Roadside Inspection (WRI) Model field test.

- **Development:**

  - Unified Registration System (URS).

  - Agency IT systems for Electronic Logging Device (ELD) regulation.

Key Technology Initiatives, continued…

- **Deployment:**
  - Commercial Vehicle Information Systems and Networks (CVISN) grants.
    - Work zone/congestion warning systems for CMVs.
    - Enhanced e-screening (virtual weigh stations, thermal imaging systems).
    - Electronic permits (e.g., size and weight, hazardous materials).

Highway Exit Ramp to Weigh Station

Infra-red Camera

Color Camera

Infra-red Camera

Thermal Imaging Sensor Array

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