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Federal Motor Carrier Safety Administration**

Timothy Cotter has been with the US Department of Transportation Federal Motor Carrier Safety Administration (FMCSA) for 17 years and has held a variety of positions with the agency. Tim started with the Federal Motor Carrier Safety Administration in July 1992 as a Safety Investigator in Jefferson City, MO, followed by becoming the Field Office Supervisor for the agency's New York City office in March 1998. He later became the Division Administrator for the New Hampshire Division office in September 1999 followed by being named the Division Administrator for the Michigan Division in 2001.

Since July 2007 Tim has been the Division Administrator for the Federal Motor Carrier Safety Administration's Pennsylvania Division where he is responsible for the implementation of the US Dept of Transportation's Truck and Bus Safety Programs in Pennsylvania. These programs involve the supervising of federal investigators and working closely with state and federal agencies as well as the industry with, the goal of reducing large truck and bus crashes.

CSA★2010

Comprehensive Safety Analysis

Comprehensive Safety Analysis (CSA) 2010

*A New Way To Measure and Address
Commercial Motor Vehicle Safety*

*Pennsylvania House of Representatives'
Transportation Committee Hearing
March 15, 2010*

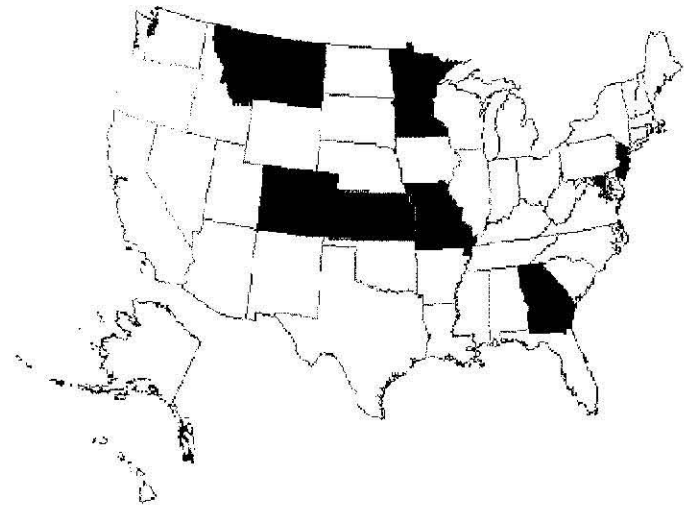


U.S. Department of Transportation
Federal Motor Carrier Safety Administration



★ Presentation Agenda

- Why & What is Changing?
- Operational Model for CSA2010
 - **New Safety Measurement**
 - **New intervention process**
 - **Safety Fitness Determination (SFD)**



US DOT

Federal Motor Carrier Safety Administration

- Mission
 - Reduce Crashes, Injuries and Fatalities involving large trucks and buses
 - FMCSA established as a separate administration within USDOT on 01/01/2000.
 - Headquartered in Washington, DC employee more than 1,000 people in 50 States & DC
 - All dedicated to improving the safety of Commercial Motor Vehicle (CMV) saving lives



US DOT

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Federal Motor Carrier Safety Administration

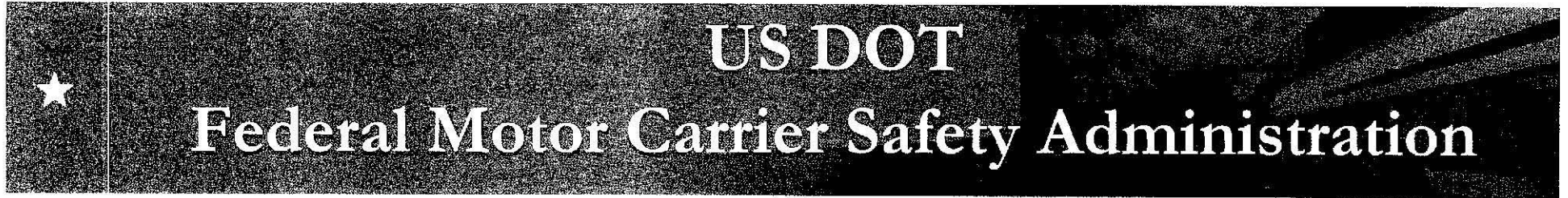
A Few of the Key FMCSA Programs

- Commercial Driver's License Program
- Hazardous Materials Regulations
 - Household Goods Program
 - Medical Program
 - CMV Safety Grants
- Motor Carrier Safety Assistance Program (MCSAP)
 - New Entrant Safety Program

US DOT

Federal Motor Carrier Safety Administration

- **Motor Carrier Safety Assistance Program (MCSAP)**
 - **FY2009 \$161 Million in Grant Funding**
 - Federal program providing States with grant funding to hire staff and implement strategies to enforce CMV safety and Haz Mat regulations.
 - Funds used to conduct roadside inspections and review motor carriers' compliance with FMCSRs and HMRs.
 - Crash & Inspection Data



US DOT
Federal Motor Carrier Safety Administration

- **Motor Carrier Safety Assistance Program (MCSAP)**

- Lead Agency **Pennsylvania State Police**

- Sub Grantee **Public Utility Commission**

- **FY2009**

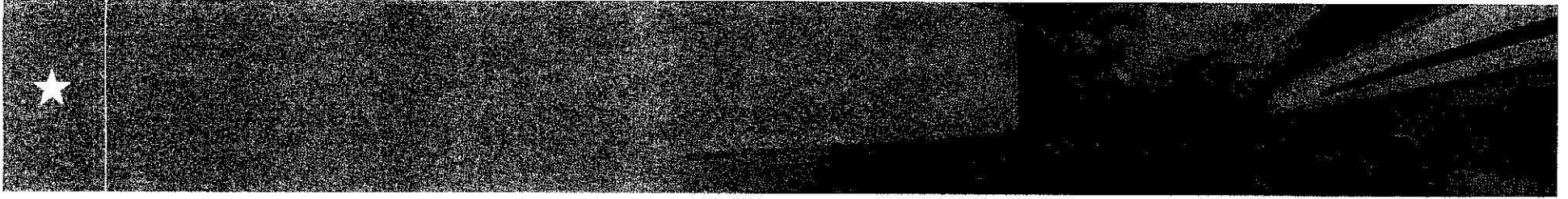
- \$6,390,171**



US DOT Federal Motor Carrier Safety Administration

Comprehensive Safety Analysis 2010

- FMCSA initiative to improve large truck and bus safety and ultimately reduce commercial motor vehicle (CMV)-related crashes, injuries and fatalities.
- It introduces a new enforcement and compliance model that allows FMCSA and its State partners to contact a larger number of carriers earlier in order to address safety problems before crashes occur.

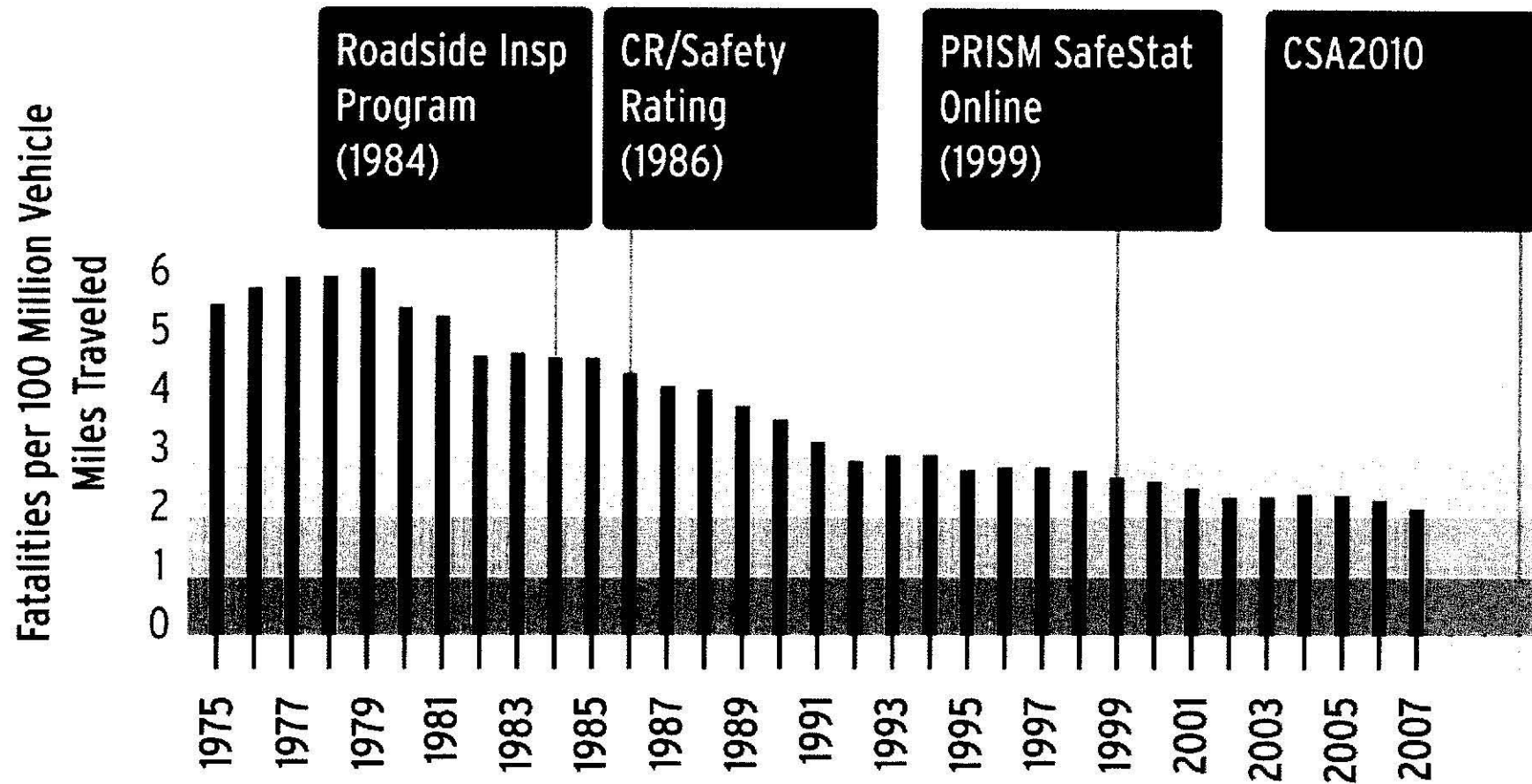


Why Change?



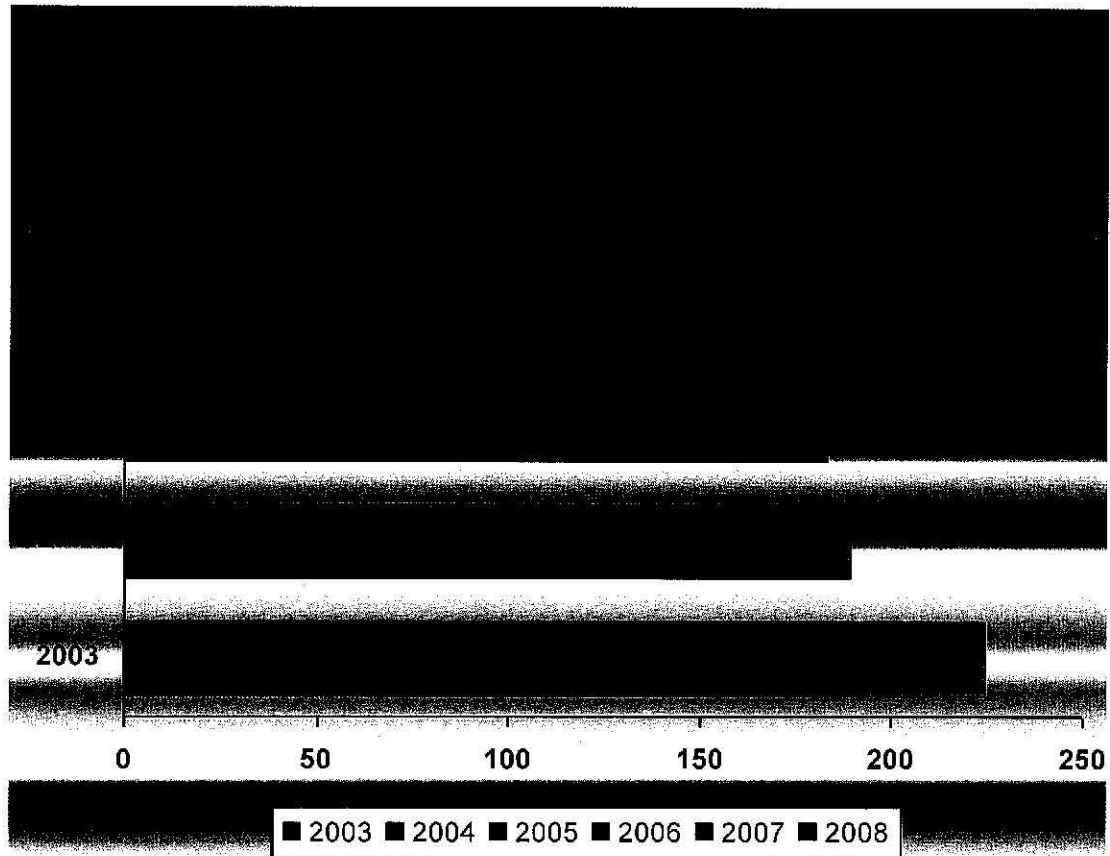
★ Commercial Motor Vehicle Fatalities

Rate of Commercial Motor Vehicle Fatalities is Leveling Off





Total CMV Fatalities Pennsylvania



U.S. Department of Transportation
Federal Motor Carrier Safety Administration



★ A Need For A More Agile, Efficient Program

- **Current Operational Model Limitations**

- Limited intervention tool-box for safety investigators (SIs)
- Safety fitness determination tied to compliance review
- UnSat / Conditional / Satisfactory Ratings

Limited number of federal/state investigators compared to large number of carriers

- U.S. Department of Transportation's (U.S. DOT) Federal Motor Carrier Safety Administration (FMCSA) regulates ~725,000 interstate and foreign-based truck and bus companies

- **U.S. DOT/FMCSA audit (Compliance Review) is labor intensive** – Only able to reach < 2% (~12,000) of total carrier population annually

★ Op-Model: Three Core Components

1. **New Safety Measurement System (SMS)**

Improved ability to identify demonstrated safety problems

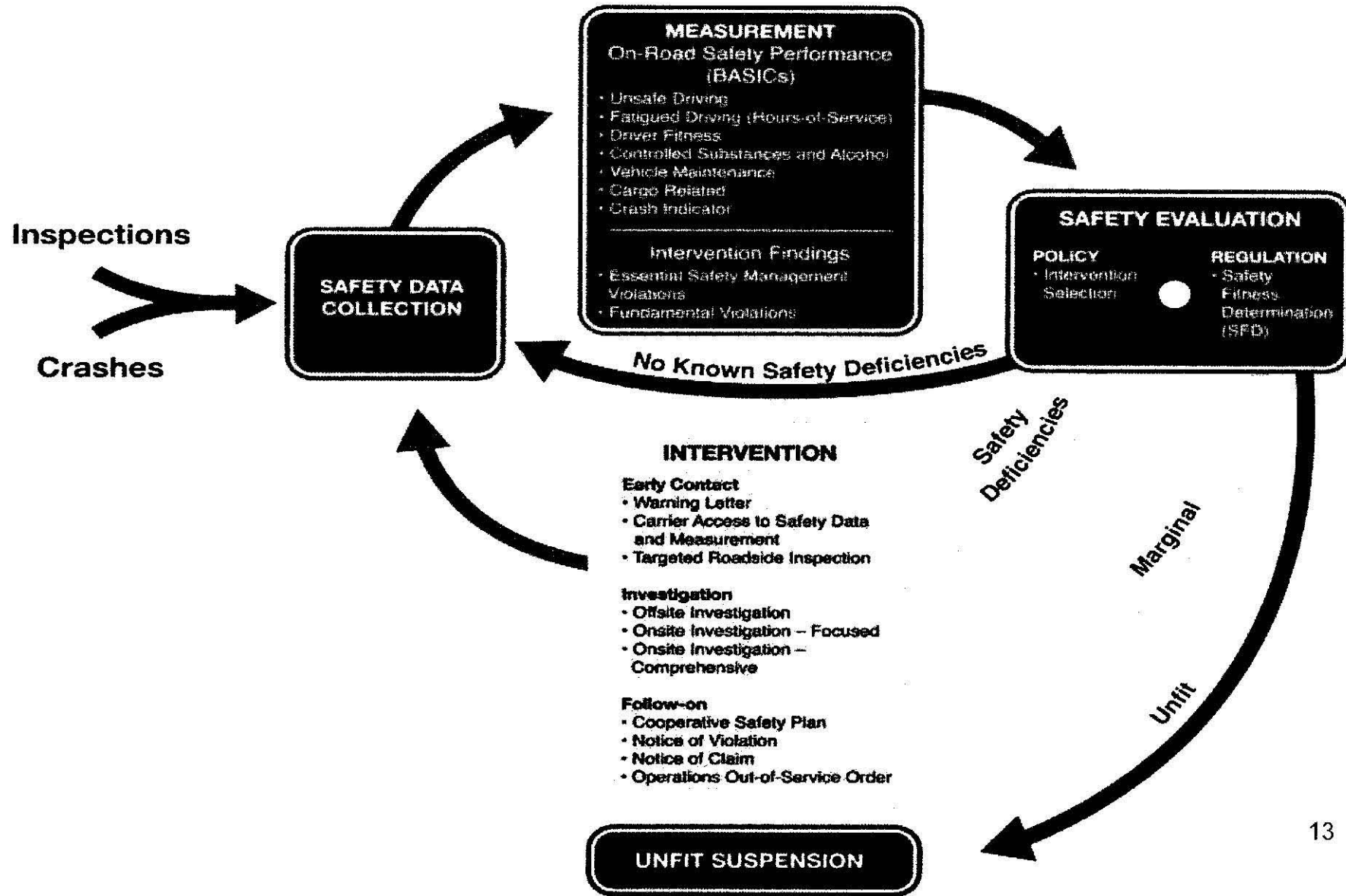
2. **New intervention process**

Employs an array of interventions instead of the single option, labor-intensive compliance review

3. **Proposed change for evaluation: new approach to the Safety Fitness Determination (SFD)**

SFD tied to current safety performance; not limited to acute/critical violations from a Compliance Review

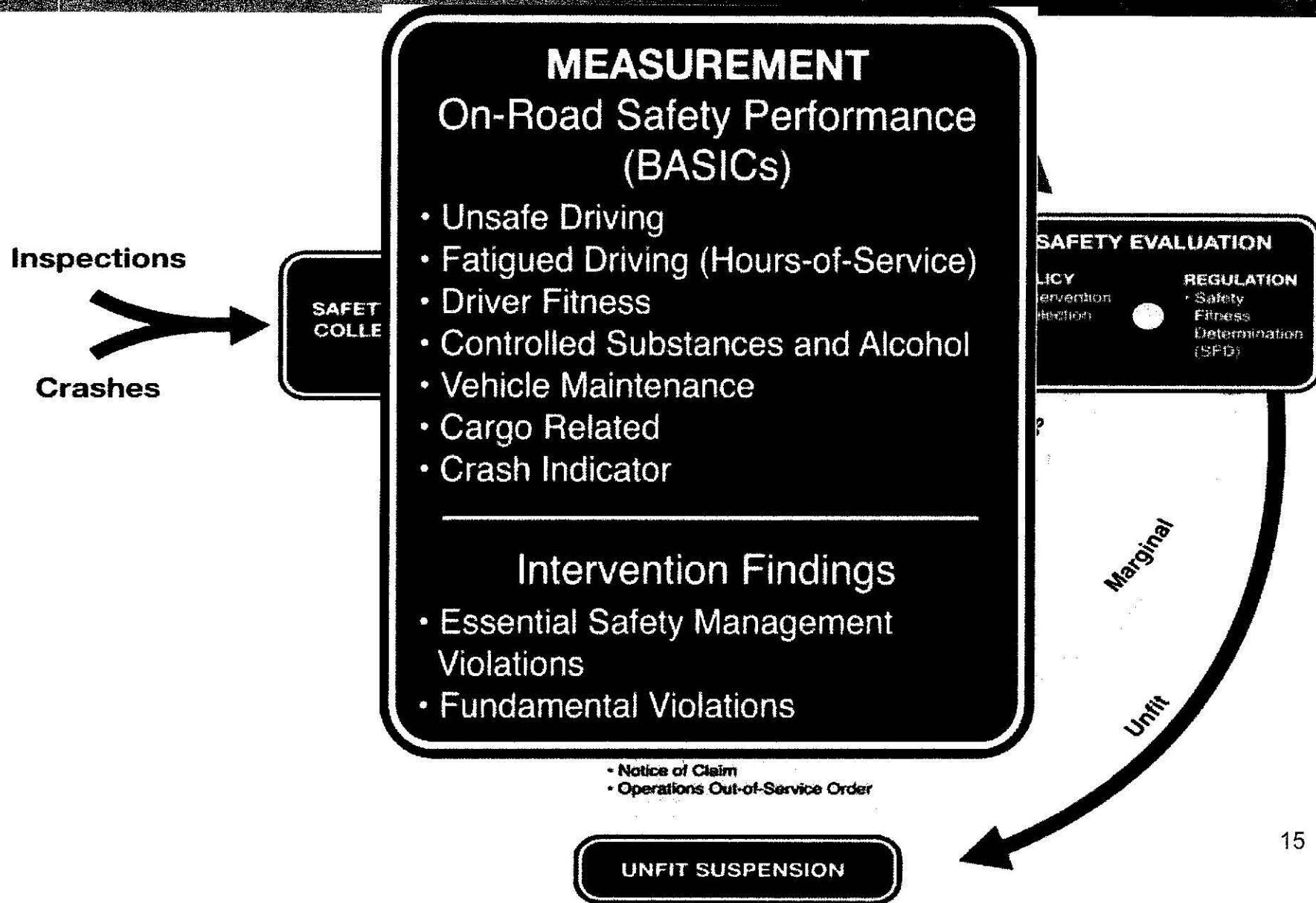
★ A New Operational Model (Op-Model)



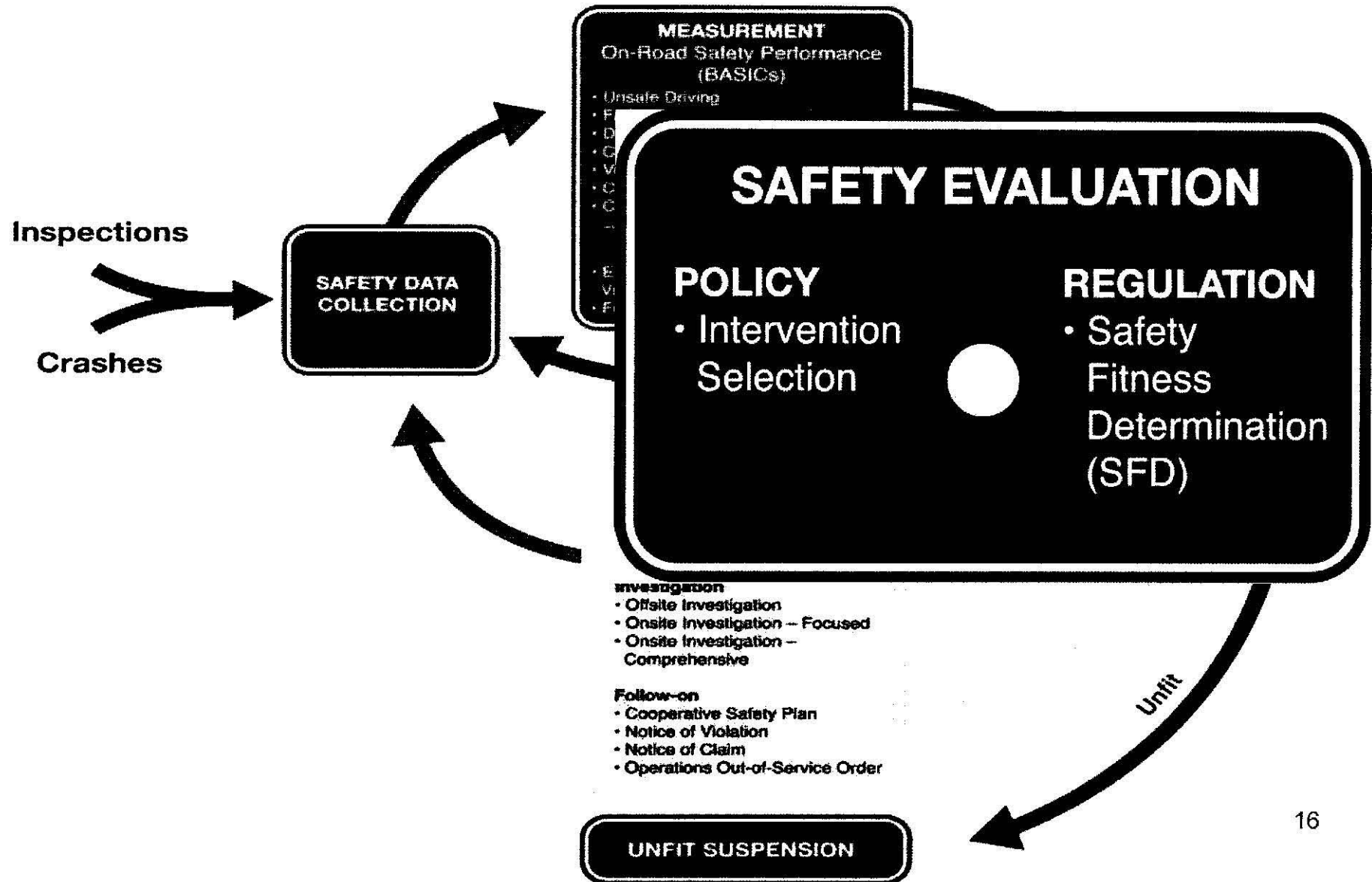
★ A New Operational Model (Op-Model)



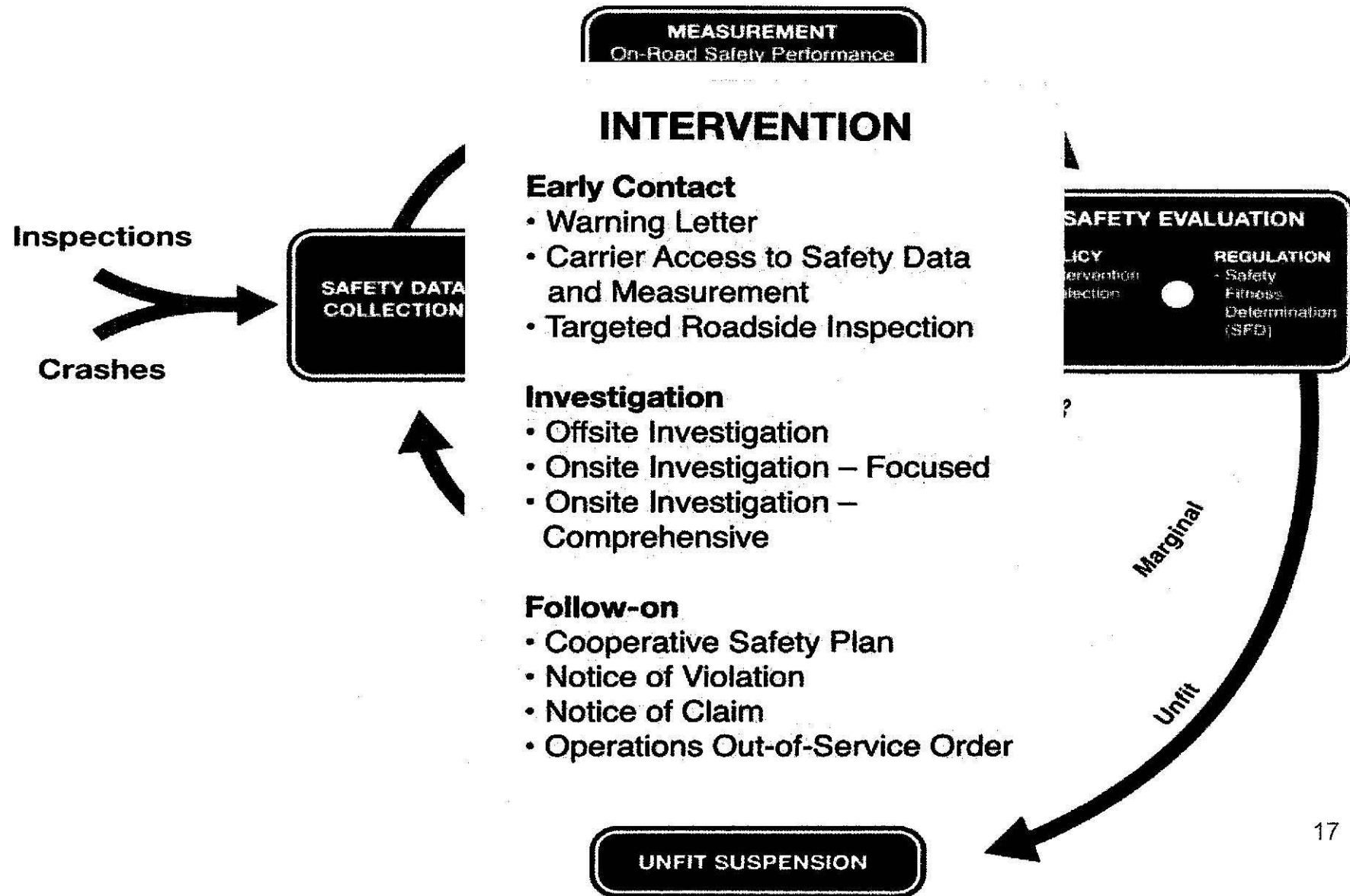
★ A New Operational Model (Op-Model)



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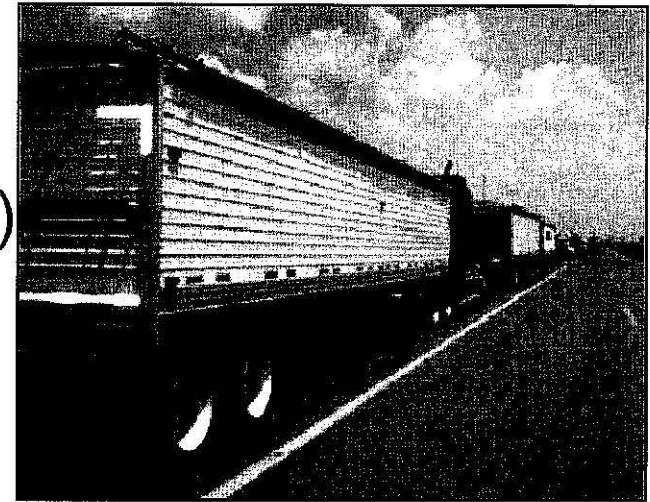
★ A New Operational Model (Op-Model)



★ SMS BASICs

SMS BASICs focus on behaviors linked to crash risk

1. Unsafe Driving (Parts 392 & 397)
2. Fatigued Driving (Hours-of-Service)
(Parts 392 & 395)
3. Driver Fitness (Parts 383 & 391)
4. Controlled Substances/Alcohol
(Parts 382 & 392)
5. Vehicle Maintenance (Parts 393 & 396)
6. Cargo Related
(Parts 392, 393, 397 & HM)
7. Crash Indicator



★ Safety Data

- **Safety Data Attributed to Carrier**
 - Calculates safety performance based on 7 **Behavior Analysis and Safety Improvement Categories (BASICS)**
 - **Carrier Safety Measurement System (CSMS)**
 - Includes 24 months of carrier on-road safety performance
 - National Numbers
 - 6.6 Million inspections
 - 290 Thousand crashes
 - 690 Thousand carriers
- | | Pennsylvania |
|--|------------------------------------|
| | ~176,000 inspection records |
| | ~10,500 crash records |
| | ~31,000 carriers |

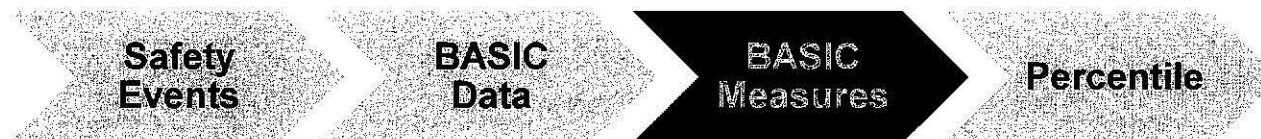
★ New Safety Measurement System

CSA 2010 introduces a new safety measurement system (SMS) that...

- Uses crash records and ALL roadside inspection safety-based violations to determine carrier/driver safety
- Calculates safety performance based on 7 **B**ehavior **A**nalysis and **S**afety **I**mprovement **C**ategories (BASICs)

★ BASIC Measures

- **Convert BASIC Data into Quantifiable Measure**
- **Factors used in calculating a BASIC measure:**
 - **Time Weighting/Time Frame** - More recent events more relevant
 - **Severity Weightings** – Increase weighting of violations that have been shown to create a greater risk of crash involvement
 - **Normalizing** – Based on exposure; use of number of inspections and power units
 - **Violation Cap** –Cited section number only counts once per inspection
 - **BASIC Severity cap** –Limits the severity weight applied to a BASIC measure from a single poor inspection.



★ Unsafe Driving Measure

- **Operation of CMVs in a dangerous or careless manner**
 - Examples – speeding (5), reckless driving (10), improper lane change (5), Failing to use Seat Belt (1),
- **Factors used in calculating the measure:**
 - Time Weight – 0-6 Months (3), 6-12 Months (2), 12-24 Months (1)
 - Violation Severity Weight
 - Based on crash risk – Range from 1-10, where 10 is the most severe
 - Normalized by Average Power Units

$$\text{BASIC Measure} = \frac{\text{Sum of Time \& Severity Weighted Violations}}{\text{Average Number of Power Units (PUs)}}$$

★ Vehicle Maintenance Measure

- **Operation of CMVs having improper or inadequate maintenance**
 - Examples: Insufficient brake lining (4), Horn inoperative (3), Improper rear-end protection (2), Tire-front tread depth less than 4/32 of inch (8)
- **Factors used in calculating the measure:**
 - Time Weight – 0-6 Months (3), 6-12 Months (2), 12-24 Months (1)
 - Violation Severity Weight
 - Based on crash risk – Range from 1-10, where 10 is the most severe
 - OOS (+2)
 - Normalized by Relevant Inspections – Levels 1,2,5,6 and any other inspections resulting in related violations

$$\text{BASIC Measure} = \frac{\text{Sum of Time \& Severity Weighted Violations}}{\text{Number of Time Weighted Relevant Inspections}}$$

★ SafeStat vs SMS

Today's Measurement System: SafeStat

Organized by four broad categories - Safety Evaluation Areas (SEAs): Accident, Driver, Vehicle, and Safety Management

Identifies carrier for a compliance review (CR)

Uses only out-of-service (OOS) and moving violations from roadside inspections.

No impact on safety rating

Violations are not weighted based on relationship to crash risk

Assesses carriers only

CSA 2010 SMS

Organized by seven specific BASICs

Identifies safety problems to determine whom to investigate and where to focus the investigation

Uses **all** safety-based roadside inspection violations

Used to propose adverse safety fitness determination based on carriers' current on-road safety performance (future)

Violations are weighted based on relationship to crash risk

Assesses carriers and drivers – the driver SMS is a tool for investigators to identify drivers with safety problems during carrier investigations

★ New Intervention Tools

New intervention tools reach more carriers and influence safety compliance earlier

- **Warning Letters**

- **Investigations**

- Offsite Investigations
- Onsite Investigations - Focused
- Onsite Investigations - Comprehensive

- **Follow-on corrective actions**

- Cooperative Safety Plan (CSP)
- Notice of Violation (NOV)
- Notice of Claim (NOC)
- Operations Out-of-Service Order (OOS)

★ Current vs CSA 2010 Intervention Process

Current CR Process

Broad one-size-fits-all investigation

Resource intensive for enforcement agencies and time consuming for carrier/fewer carriers contacted

Focuses on broad compliance based on rigid set of acute/critical violations

Discovers what violations exist at that time

Major safety problems result in fines (Notice of Claim (NOC))

Focuses on carrier

CSA 2010 Intervention Process

Array of interventions can be tailored to address extent and scope of specific safety deficiencies

Less resource intensive for enforcement agencies and less time consuming for carrier/more carriers contacted

Focuses on improving behaviors that are linked to crash risk

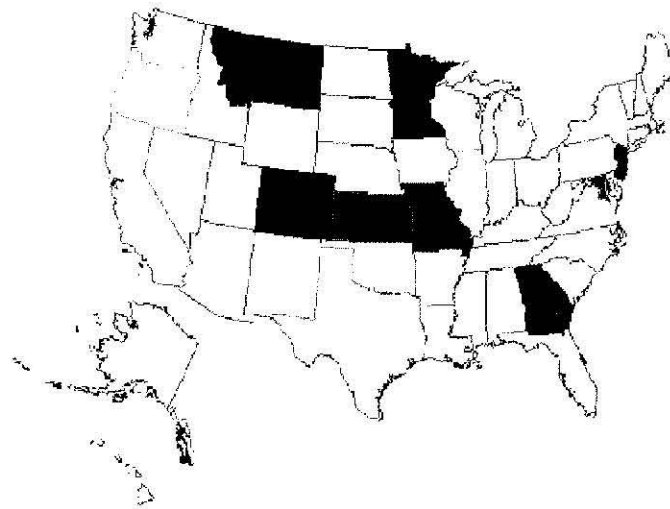
Discovers what safety problem(s) are, why they exist, and how to correct them

When problems found, major focus on carrier proving corrective action; significant problems continue to result in fines

Expands focus to driver violations

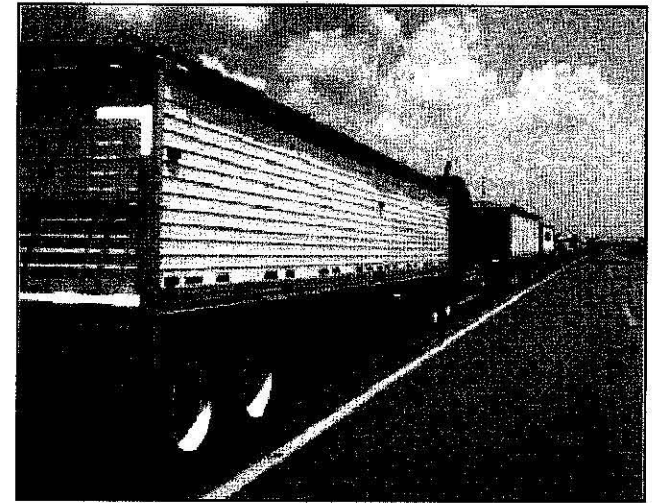
★ CSA 2010 Test States

- **Spring 2009**
 - Added **Montana** and **Minnesota**
- **Fall 2009:**
 - Two additional states:
Kansas and **Maryland**
- **100% of the State listed above participate in CSA 2010**



★ Safety Fitness

Proposed New Safety Fitness Determination Process



★ SMS and Rating Process

The proposed new rating process (SFD) would:

- Incorporate on-road safety performance via new SMS on a monthly basis
- Move away from agency “seal of approval”
 - focus is on removing high risk carriers from road vs. identifying “good” carriers
 - Produce a Safety Fitness Determination (SFD) of
 - Unfit *or*
 - Marginal *or*
 - Continue Operation

Draft rulemaking is currently in review within FMCSA;
NPRM scheduled to be published in 2010.

★ Carrier Access to Data

When will the Carrier SMS data be made available?

- Currently, **only test state carriers** have access to Carrier SMS data by using the Comprehensive Safety Information (CSI) system
- The Carrier SMS data will be accessible beyond the test states when CSA 2010 begins full implementation in **summer 2010**

★ Access to Driver Data

When will Carriers Have Access to Driver Data for Employment Decisions?

- “Driver Profiles” that contain inspection and crash histories for individual drivers will be made available through FMCSA’s Commercial Driver **Pre-employment Screening (PSP)** later in 2010;
- Drivers would authorize release of profiles
- FMCSA has finalized a contract with 3rd party vendor to provide access to data for carriers & drivers

<http://www.psp.fmcsa.dot.gov>

★ What can Carriers Do To Prepare Now?

- **Learn more about CSA:** <http://csa2010.fmcsa.dot.gov>
 - Understand the Program
 - Presentation to Associations/Groups
- **Check and update records**
 - Motor Carrier Census (Form MCS -150)
 - Inspection and crash report
- **Ensure compliance**
 - Review inspections and violation history over the past 2 years
 - Address safety problems now
 - Educate drivers about how their performance impacts their own driving record and the safety assessment of the carrier

★ In Summary...

CSA 2010 introduces improvements in three main areas

1. New Safety Measurement System

- More comprehensive
- Better able to pinpoint safety problems
- Better identifies high crash-risk behavior

2. New interventions process and tools

- More efficient/effective enforcement and compliance process
- Wider range of interventions to influence compliance earlier
- Match intervention with level of safety performance

3. Proposed change in evaluation: Safety Fitness Determination

- Assess safety performance of larger segment of industry
- Based on roadside performance and intervention results



Thank You

For more information, see
csa2010.fmcsa.dot.gov