



**National  
Transportation  
Safety Board**

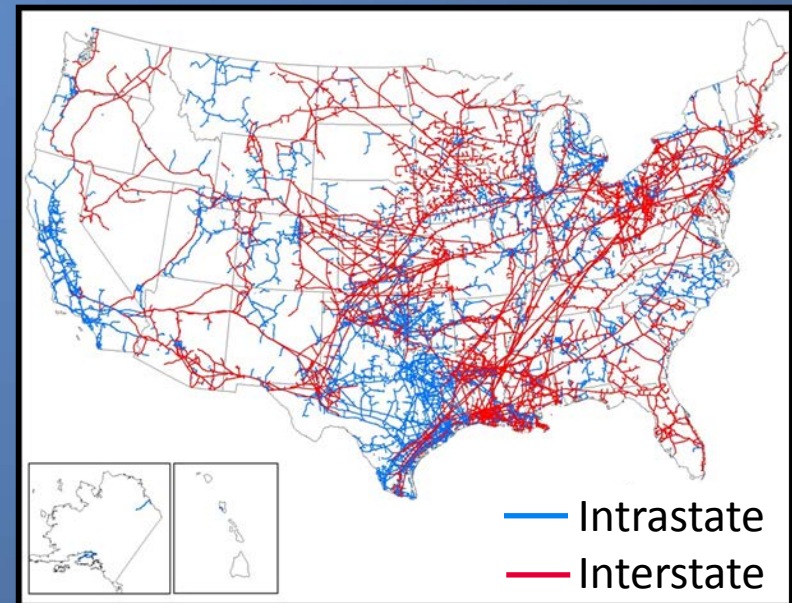
# Study Overview

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# Introduction

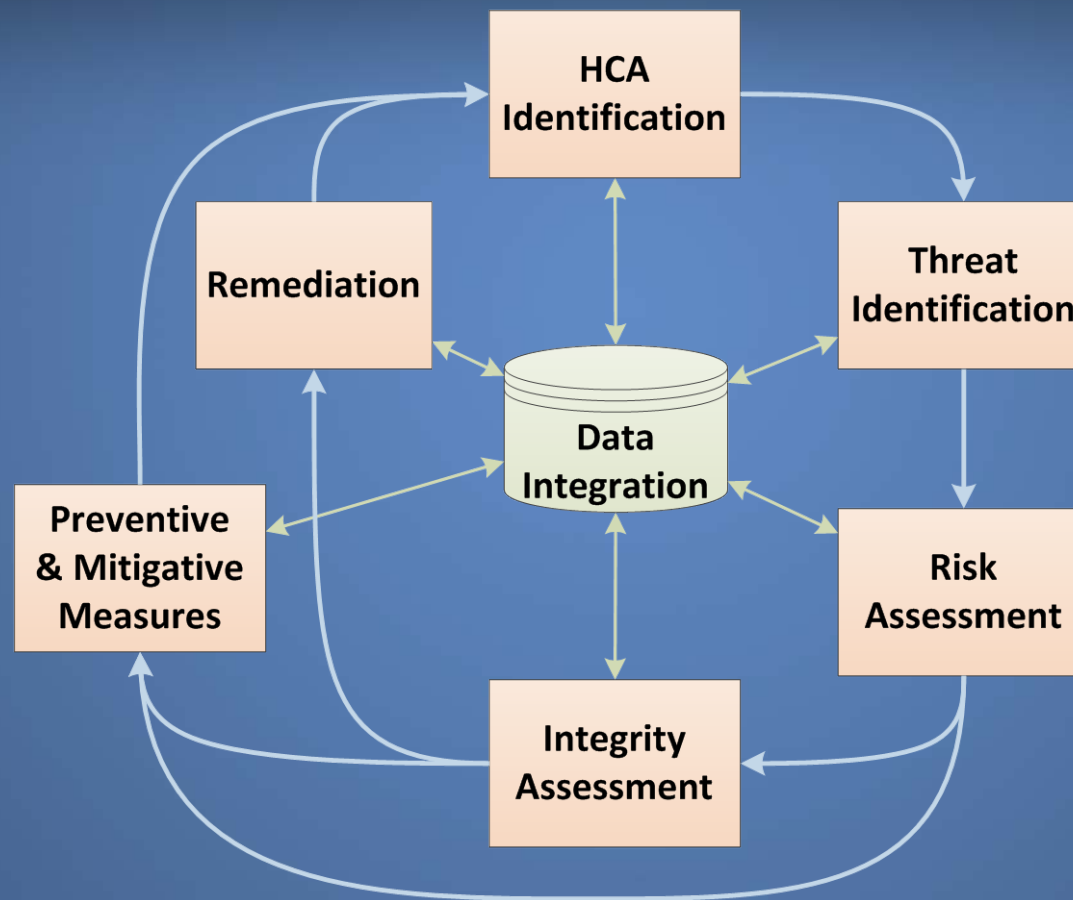
- 298,000 miles of onshore gas transmission pipelines in the United States
- Integrity Management (IM) programs required for High Consequence Areas (HCAs)



# Federal and State Oversight

- Pipeline and Hazardous Materials Safety Administration (PHMSA) is responsible for **interstate** safety regulation
- States may assume responsibility for **intrastate** safety regulation
- PHMSA and states conduct periodic inspections of operators' IM programs

# Elements of Integrity Management



# Gas Transmission Pipeline Significant Incident Rate (1994-2013)



# HCA Incidents by Failure Cause (2010-2013)

- IM programs address a variety of potential failure causes
  - Corrosion 7%
  - Material Failure 5%
- Corrosion and material failures have remained low in HCA pipelines since implementation of the IM rule



# Study Objective

- Evaluate the need for safety improvements to gas transmission IM programs
  - HCA identification and verification
  - Threat identification and risk assessment
  - Integrity assessment methods
  - Continual assessment and data integration
  - Federal and state oversight

# Study Methodology

- Quantitative analysis of PHMSA data
  - Incident data and annual reports
  - National Pipeline Mapping System (NPMS)
  - IM progress reports and enforcement actions
- Stakeholder interviews
  - Federal and state regulators
  - Gas transmission pipeline operators
  - Firms and researchers providing IM services
  - Industry associations
- Stakeholder technical review of study



# Topics to Be Discussed

- HCA identification and verification
- Threat identification
- Risk assessment
- Integrity assessment
- Data integration and continual assessment
- Federal and state oversight



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