

Natural Gas Pipeline Safety Culture and the Regulatory Environment

Drivers of Continuous Improvement

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Discussion Topics

- Pipeline Safety Enforcement – Structure and Objectives
- Natural Gas Pipeline Safety - Drivers of Cultural Change
- Evolution to a Robust Safety Management System
- State Commission Impacts
- Industry Initiatives

Pipeline Safety Enforcement Federal – State Partnership

- State Programs obtain Certification or Agreement with US DOT Pipeline and Hazardous Materials Safety Administration (PHMSA)
- State Programs are audited by PHMSA
 - Includes focus on NTSB Recommendations
- “*Protect people and the environment by advancing the safe transportation of energy...*”
-<https://www.phmsa.dot.gov/about-phmsa/phmsas-mission>
- “*...Recommendations aimed at preventing future accidents.*”
-<https://www.nts.gov/about/Pages/default.aspx>



Fundamental Assumptions

- Natural Gas Pipeline Operating Companies must prioritize meaningful safety activities
- Enforcement Agencies must retain adequate authority to ensure compliance
- Personnel knowledge, skills, ability, and procedural adherence is the foundational front line of pipeline quality control

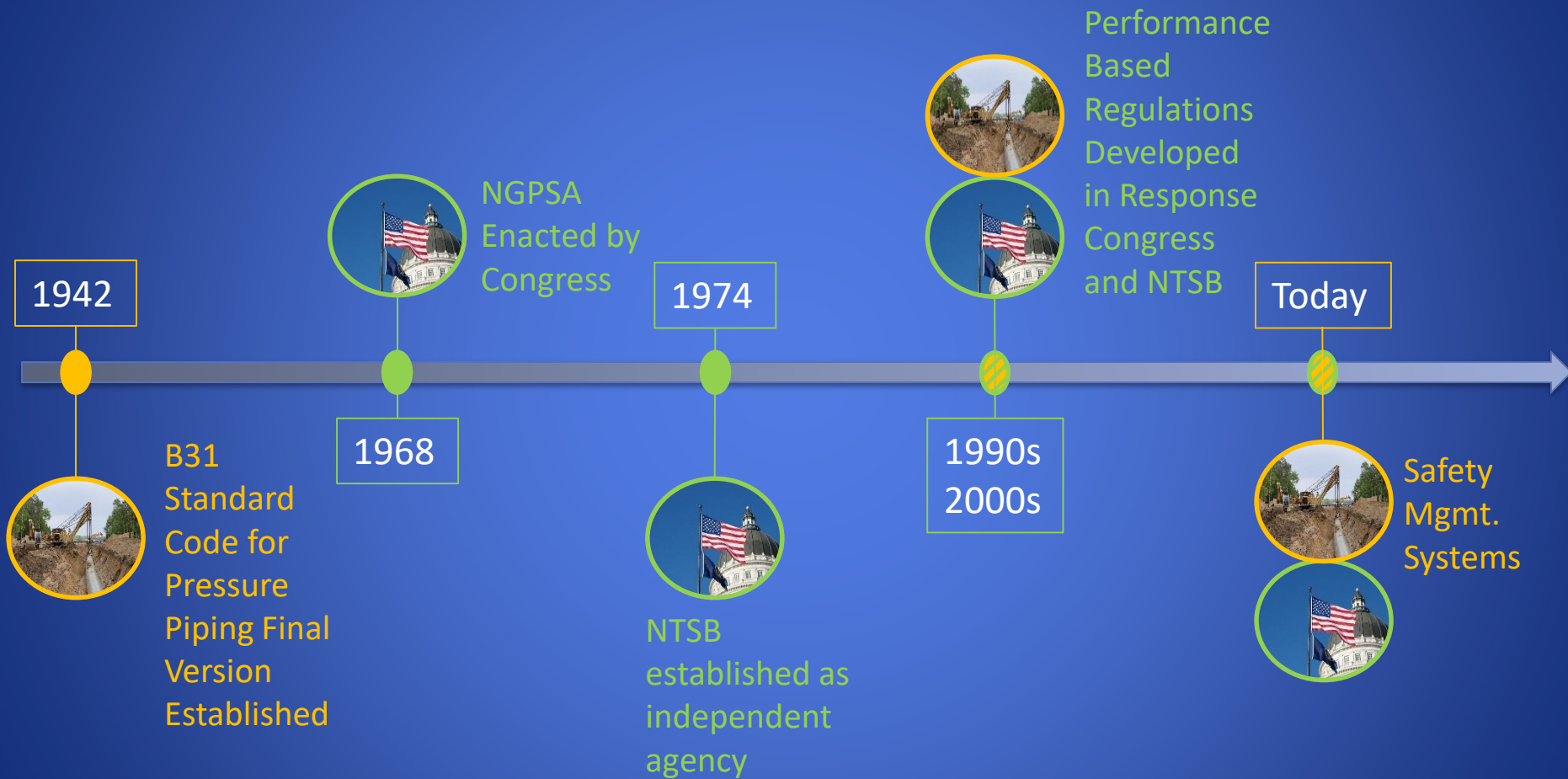


Drivers of Safety Culture Evolution

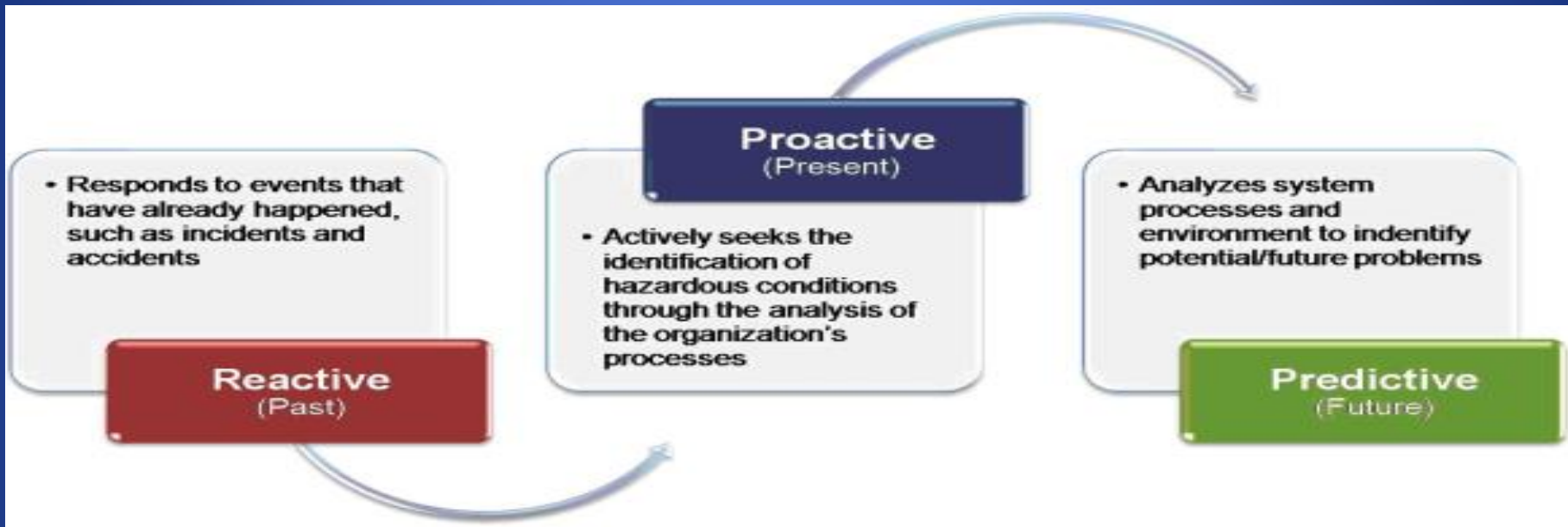
- Major Incidents
- National Transportation Safety Board Recommendations
- Industry Initiative
- Federal, State or other Jurisdictional Enforcement Body Initiative



Pipeline Safety Benchmarks



Evolution of Safety Management

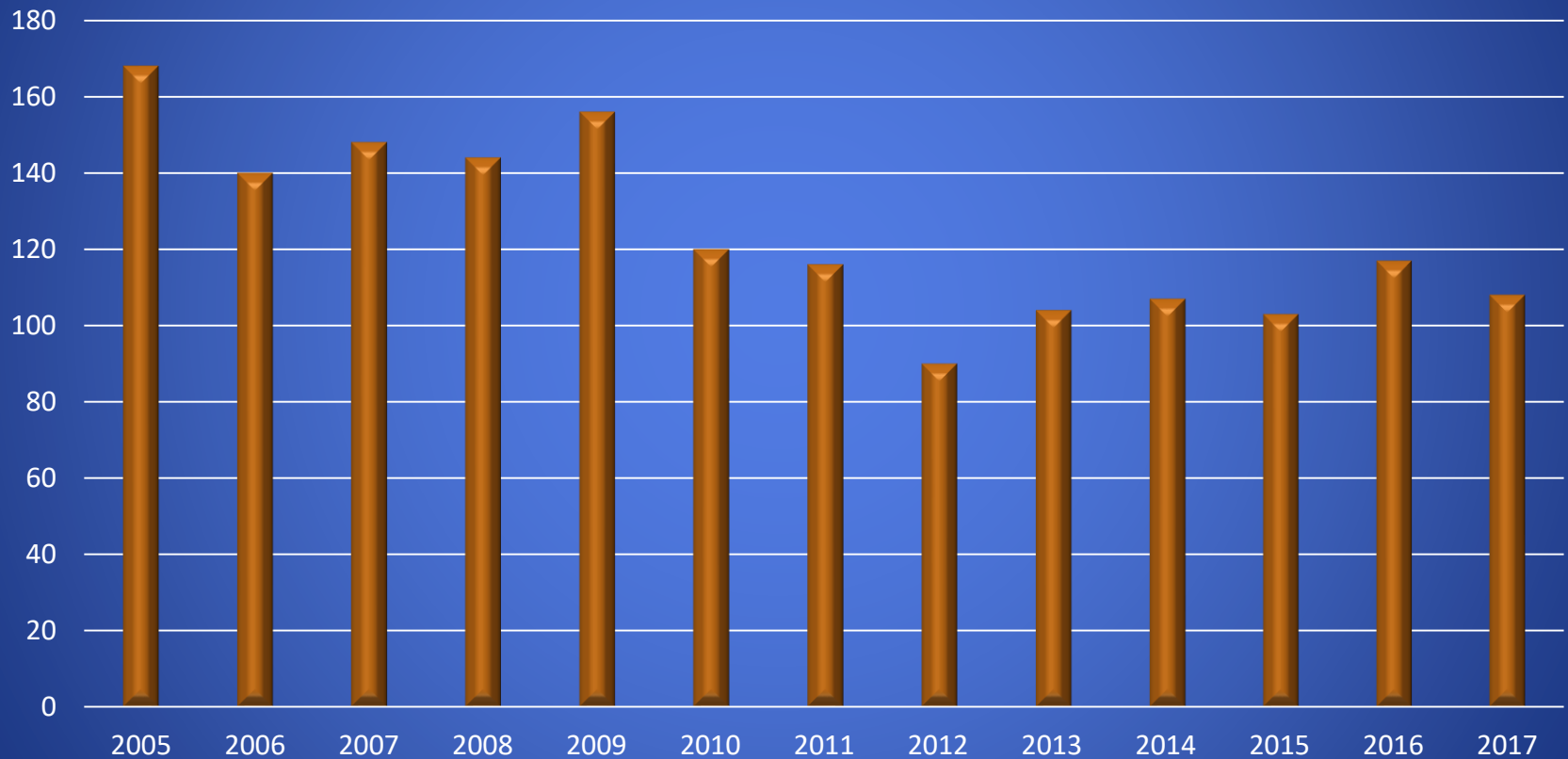


Federal Aviation Administration, "Safety Management System"

- Operator Programs
 - Organizational Sophistication
 - Leadership
 - Past experience
 - Regulatory Atmosphere
- Regulatory Posture
 - Authority
 - Enforcement
 - Rulemakings
 - Communication
 - Public Expectations

Incident Trends Since 2005

Nationwide Reported Distribution – Total Incidents



Source – PHMSA Pipeline Data Mart

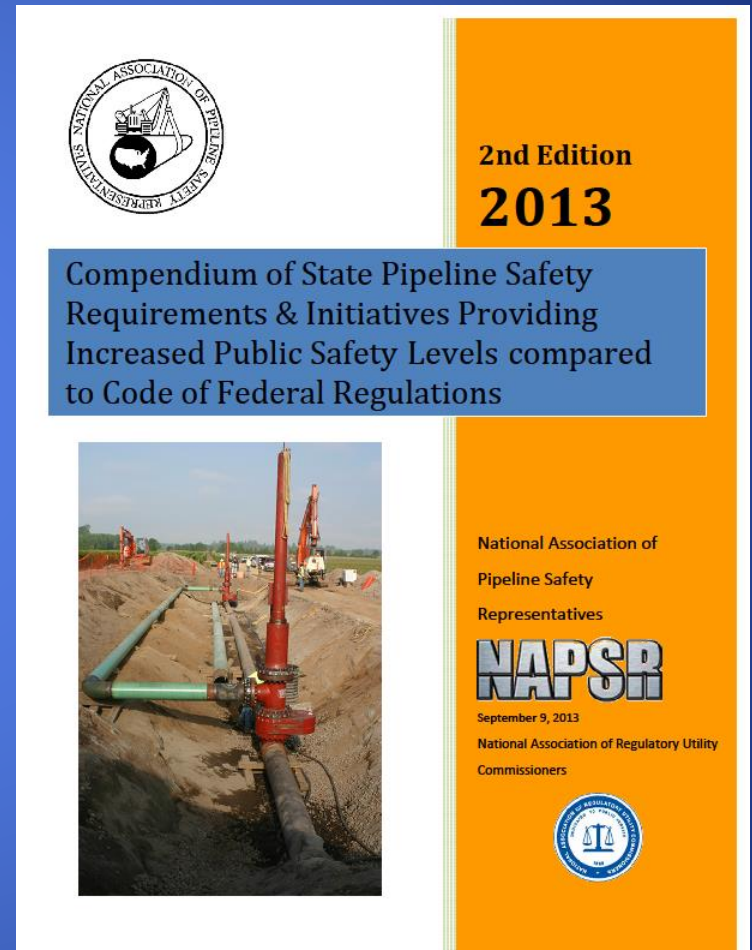
Minimum Sufficiency

- 49 CFR Part 192: *Minimum Federal Safety Standards*
 - Additional requirements
 - Existing standard modifications
 - Adjustments to enforcement / oversight
 - Extended trending tolerance (patience)
- Alternatives to Federal Regulatory Activities



State Initiatives

- Over 1,300 state requirements exceed Federal Minimum Safety Standards
- Address local concerns where necessary
 - Reporting
 - Design/Installation
 - Recordkeeping
 - Direct Oversight
- Continuously Evolving



Establishing Culture – Developing the Next Phase of Safety

Driven by:

- Consideration of public good
- Corporate and Regulatory values
- Industry / Brand reputation
- Regulation or voluntary initiative
- Economic incentive
- Legal liability concerns



State Program Initiative

- *Rulemakings / Enforcement Procedures*
 - Encourage advanced safety management programs
 - Acknowledge and accommodate latest industry initiatives
 - Verify meaningful program deployment
- *Committee Involvement*
 - Federal OPS – GPSC
 - Gas Safety Program Involvement in NAPSRR
 - NARUC Pipeline Safety Subcommittee
- *Communication*
 - Industry
 - Affected Public



Operator Initiative

- *Voluntary Commitment to Standards*
 - API Recommended Practices
- *Participation in Committee and Standards Work*
 - Industry groups
 - GPAC (Federal)
 - VIS Working Group (Federal)
 - State Rulemakings and Committees
- *Communication*
 - Public Awareness
 - PHMSA certificated State Pipeline Safety Programs



SMS Deployment Considerations

- Not Just “Corporatese”
 - Differentiation from existing performance – based programs
- Deployment for smaller operators
- Securing commitment
- Accountability



Establishing Culture

- Top-down approach includes:
 - Universal commitment at all levels
 - Promote sharing and engagement
 - Broadcast values consistently
 - Accountability
 - Incentivize buy-in
- Program must be:
 - Integrative
 - Accessible / Approachable at all levels
 - Useful
 - Self-Informed by Meaningful Metrics
 - Focused on achieving results

