UNDERSTANDING PIPELINE SAFETY MANAGEMENT SYSTEMS AND DAMAGE PREVENTION

November 2021
French Lick, Indiana

Overview of Today's Discussion

Background of API RP-1173 (PSMS)

What is PSMS?

Key Elements of PSMS

Safety Culture

Risk Management

Continuous Improvement

Damage Prevention SMS (DP-SMS)

Background on API RP-1173 (PSMS)

- **Driven by major incidents in 2010**

- **NTSB Recommendation from findings**

- **API RP-1173 Published July 2015**

What is PSMS?

- A holistic framework of safety related practices that effectively manages risk

- Management Tools that:
  - Helps reveal and manage risk
  - Promotes a learning environment
  - Continuously improves pipeline safety and integrity

- Establishes a positive safety culture

Elements of API RP-1173 (PSMS)

1. **Leadership and Management Commitment**
2. **Stakeholder Engagement**
3. **Risk Management**
4. **Operational Controls**
5. **Incident Investigation, Evaluation, Lessons Learned**
6. **Safety Assurance**
7. **Management Review and Continuous Improvement**
8. **Emergency Preparedness and Response**
9. **Competence, Awareness, and Training**
10. **Documentation and Record Keeping**

Its All About Safety Culture

The collective set of attitudes, values, norms, beliefs and practices operator's employees and contractor personnel share with respect to risk and safety.

It is the GLUE that brings it all together

Its All About Safety Culture

- **Safety related decisions made INTENTIONALLY.**

- **"Stop Work" authority.**

- **Non-punitive reporting:**

    See Something - Say Something - Do Something

Its All About Safety Culture

Management must clearly communicate expectations and then walk the talk.

Promote a "Learning" environment (ask why & how)

Reinforce positive safety behaviors

"What gets Recognized gets Repeated"

Its All About Safety Culture

Proactively and intentionally consider risks – Ask:

"What can go wrong?"

Do not seek to place blame. WHAT failed rather than WHO failed

**Embrace lessons learned and commit to continuous improvement**

Safety Culture Indicators

- **Safety Priority**
- **Accountability**
- **Empowerment & Ownership**
- **Communication/Transparency**
- **Procedural Compliance**
- **Employee Satisfaction**
- **Inspires, Enables, & Nurtures Change When Necessary**
- **Promotes a Questioning & Learning Environment**
- **Non-Punitive Reporting**

- **Complacency**
- **Fear of Reprisal**
- **Over Confidence**
- **Normalization of Deviance**
- **Tolerance of Inadequacy**
- **Production Pressure**
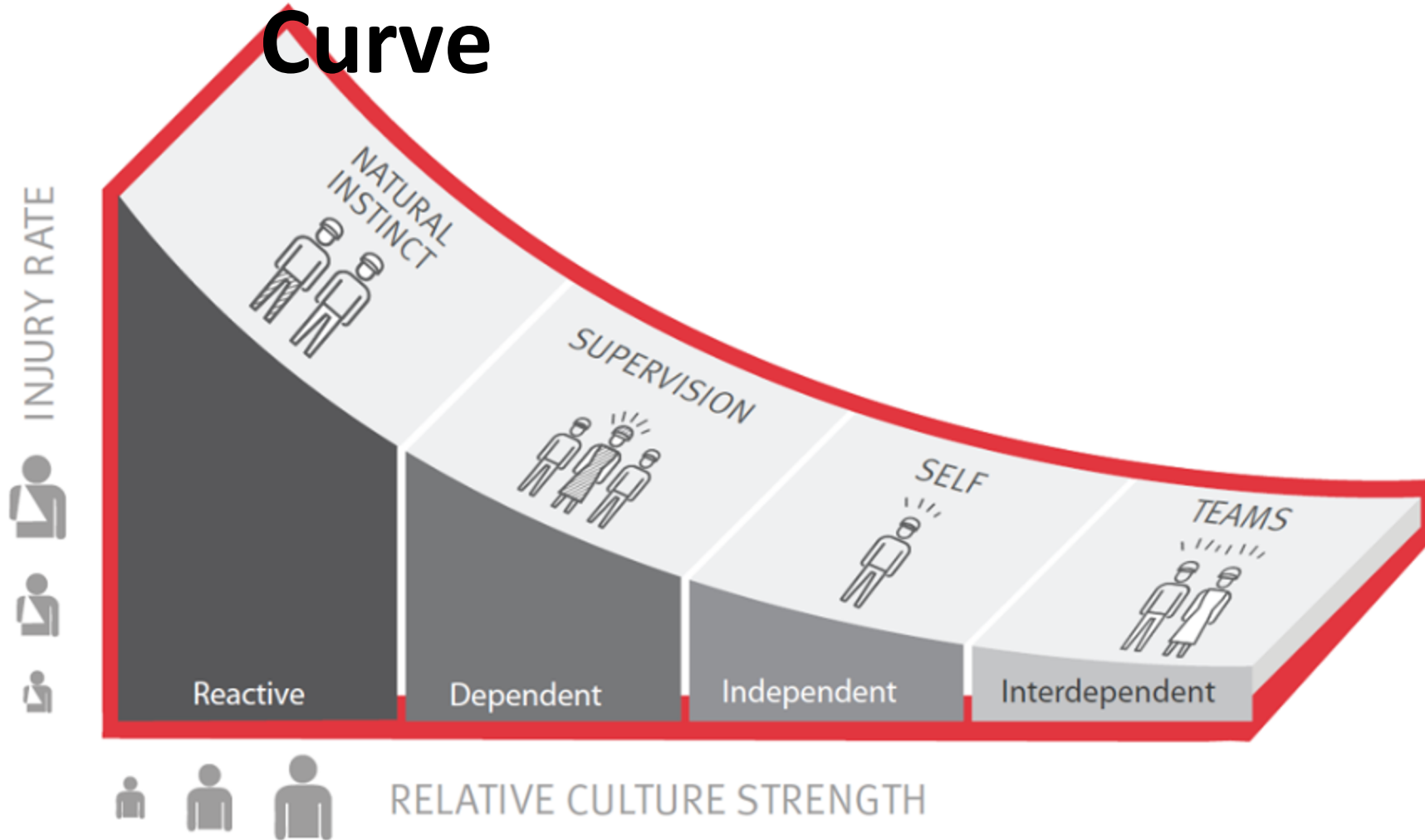
Other Key Elements – Risk Management

- **Fundamentals of risk management – Know your system and recognize potential threats.**

- **Risk Identification - *What Can Go Wrong?***

- **Risk Mitigation – *What are you doing about it?***

- **Managing Risk through data gathering, gap analysis and corrective actions**

Other Key Elements – Continuous Improvement

- **Continuous improvement *IS* the journey**

- **Plan, Do, Check, Act (PDCA) cycle is fundamental**

- **Can't manage it if you don't measure it!**
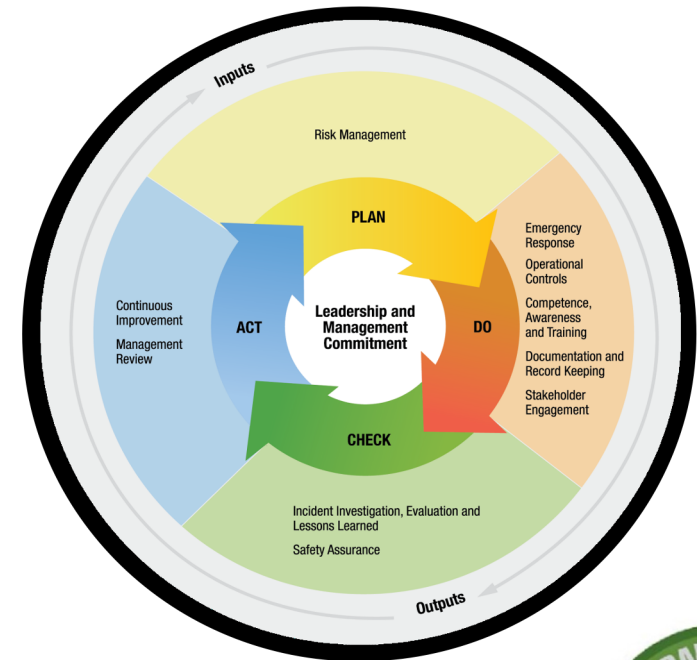
#BeBetter

Other Key Elements – Continuous Improvement

- Identify objectives and desired outcomes

- Determine performance measures/metrics (KPIs) how do you know how you are doing?

- Analyze data/metrics

- Make adjustments

- Repeat (Plan, Do, Check, Act - PDCA)

Gold Shovel Certification

An ongoing process comprised of an initial certification and annual re-certification. Ongoing activities required in order to maintain an active and in good status classification.

The initial certification verifies that companies agree to implement a damage prevention program containing the elements of a safety management system. (DP-SMS)

The annual re-certification requires submittals that validate the company's compliance with the elements of their damage prevention safety management system. (DP-SMS)

Damage Prevention
Safety Management System

To obtain Gold Shovel Standard Certification, an excavator must have a complete Damage Prevention-Safety Management System (DP-SMS), to include:

- Leadership and management commitment to infrastructure damage prevention

- Deploy required training for all positions involving excavation

- Enforce whistleblower and "stop work" responsibility for workers

- Enforce adherence to excavation best practices

Damage Prevention
Safety Management System – cont.

- Hire Gold Shovel Standard subcontractors with few exceptions

- Using thorough investigation and corrective action

- Use specialized software to track and manage operations to prevent damages

A quality DP-SMS reveals risks before they happen, giving businesses the opportunity to improve before catastrophic strikes.

SMS (API RP 1173) and GSS Certification Correlation

SMS Essential Elements

Leadership & Management Commitment

Stakeholder Engagement

Risk Management

Operational Controls

Incident Investigation, Evaluation & Lessons Learned

Safety Assurance

Management Review and Continuous Improvement

Emergency Preparedness & Response

Competence, Awareness & Training

SMS Documentation & Record Keeping

GSS (DP – SMS) Requirements

Excavation Safety Policy Statement and Enrollment Document

3rd Party Verification of DP-SMS

Corrective Action Plans (CAP) includes investigation, damage data collection, and reporting

Stop Work Authority

Performance metrics measurement and Best Practices review

Excavator Training (covering key concepts) including scenario tactical response

Documentation required for annual training and damage reporting

Any Questions?

If not, a simple nod of approval or thumbs up will do

Stephen Allen

**Executive Director
of Pipeline Safety**

Energy Worldnet (EWN)
steve.allen@energyworldnet.com

**Cell:
317-523-7437**

Linkedin >>>>>>>

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