The Last Big Thing – Integrity Management
Has It Lived Up To The Promise?

Steve Ernst
Integrity Engineering Manager
Carl’s Chart – Successfully Recreated

What’s Included:
- Facilities
- High Consequence Area (HCA) - Mainline
- Could Affect - HCA

HCA on mainline pipelines is the primary focus of IMP

Source: API Data Mining Team analysis of PHMSA source data
Closer Look at HCAs
Rate Normalized by Mileage Growth

What we see:
• **Gradual downward trend**
• **Follows a big drop from ‘99–’03**

Source: API Data Mining Team analysis of PHMSA source data
Types of Pipeline Threats

Source: API Data Mining Team analysis of PHMSA source data
Practices which can *Move the Needle*

R&D
- Leverage
- Information
- Data API
- RPs
- Infoshares
- ILI
- Training
- PHMSA
- VIS
- NACE
- PIX
- PRCI

Technology

Sharing
Perspective on Progress: Crack Detection

New Inline Inspection (ILI) technology brings new resolution

**Advancements in Sensors + Industry Collaboration**

**2013 LineExplorer**
- 180 sensors

**2019 EVO UCx**
- 256 sensors

Source: NDT Global

[Diagram showing advancements in sensors and industry collaboration leading to advanced crack detection]

WALL THICKNESS

Previous
New technology and data management allow closer monitoring of corrosion.

Real time corrosion management through remote monitoring units.

Enhanced analysis through data visualization tools, including Google Earth.

Source: MOBILTEX – corTalk® Interruptible cathodic protection RMU
Flood waters present safety and visibility challenges

3-D sonar mapping provides detailed underwater pictures for safety management
FINAL THOUGHTS
TECHNOLOGY IS AN SMS MULTIPLIER

Pipeline SMS
PLAN•DO•CHECK•ACT

technology

= Reduced Releases