# VOLUNTARY INFORMATION-SHARING SYSTEM WORKING GROUP

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# A FRAMEWORK FOR VOLUNTARY INFORMATION SHARING

## Contexts within which the sharing occurs:

- Integrity management process and technology improvements
  - Identification of current gaps in technology and/or analytics that need to be closed
    - Sharing occurs between technology providers and operators
  - Sharing of enhanced processes and practices i.e. solutions to known problems including experience with new data/information technology
  - Training and education of lessons learned with respect to execution of the various integrity management processes
    - Improved analytics
    - Near misses
- Post incident related RCFA's and subsequent company/regulator learning
  - Systemic or acute process improvements
  - Cultural improvements
  - Technology/Technology deployment improvements
- Communication to stakeholders

# A FRAMEWORK FOR VOLUNTARY INFORMATION SHARING

The sharing opportunity is characterized by the following:

- **High Value** – the opportunity results in an increase in knowledge, process improvement or best practice at a company level. To this end the sharing should target the right side of the value chain (data, information, **knowledge, understanding, wisdom**).
- **Deliberate** - The sharing process is via active engagement between one or more parties and is a pitch/catch relationship; at a minimum at least one party is learning/gaining knowledge or wisdom from another
- **Actionable** – The result of the engagement generates action by one or more parties and processes or practices change within that entity
- **Measurable** – The sharing process as well as the results of the improvements/actions are measurable

# PRCI NDE-4E Data Sharing Platform



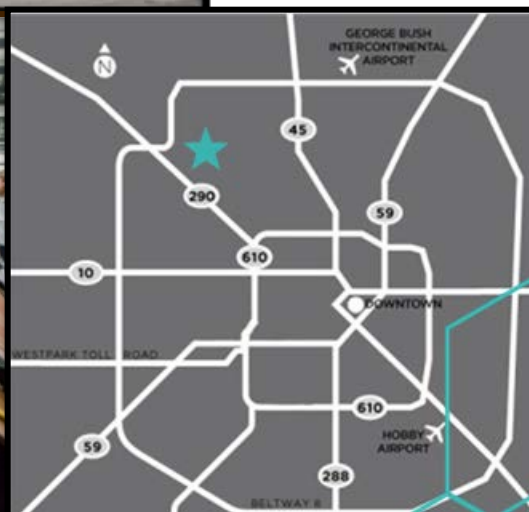
- **An industry database and data mining framework was established in 2014 to examine ILI and NDE performance**
  - Data Structure applicable for all types of ILI technologies
  - Compares ILI vs Field results
- **Has become the largest and most robust compendium of crack ILI performance information in the industry**
  - Crack ILI was initial priority and now scoping next requirements
  - Currently contains ILI measurement data vs Field measurement data for >50,000 crack features (
- **A process for data analytics is also an element of the initiative**
  - ILI reliability is continuously updated as data is continually provided
- **Technology transfer is readily conducted**
  - Publications, presentations, forums all have made use of the results
  - Operators, researchers, etc. can easily utilize the raw data or processed analytics to help select technologies or continue further analysis

# PRCI NDE-4E Data Sharing Platform



- **Success factors include:**
  - Data is retained as confidential and anonymous unless participants wish to disclose for the benefit of the intent
  - Data mining is convenient for the data providers because manpower is hired to gather and sort the information on behalf of the provider
  - The data base design is robust and easily expanded as new ideas arise
  - It's usefulness applies to both ILI and field NDE performance evaluations
  - Technology transfer is inherent to the process – analytics is the ultimate intent of the database
- **As a representative of the entire industry, PRCI is well suited to continue as the Administrator of the database and data mining**
  - A focal point for funding and expertise
- **Summary: NDE-4E stands ready to serve as a central industry data sharing platform for one of industries most important data sharing imperatives**

# Technology Development Center - TDC



# TDC Existing Capabilities

- **Services available to PRCI members and nonmembers**
  - Pull test facility for In-line Inspection tools
    - 24”, 16”, 12” & 8” pipe strings containing hundreds of fully characterized real & manufactured defects.
    - Main winch is capable of running consistent velocities from 1 mph to 11 mph while pulling over 5,000 lbs.
  - Liquid loop test facility
    - 12” & 6” nominal pipe utilizing water as the liquid medium
    - Variety of configurations ranging from easily piggable to "difficult to inspect"
    - Design incorporates the ability for continuous test cycles at a pressure of ANSI Class 150 (285 psi)
  - Large inventory of pipe Samples with real-world and manufactured defects
  - Qualification testing of NDE professionals and tools
  - Technology demonstrations
  - Warehouse space for conducting research and storing pipe samples sensitive to the elements
  - State-of-the-art meeting space with conferencing capabilities

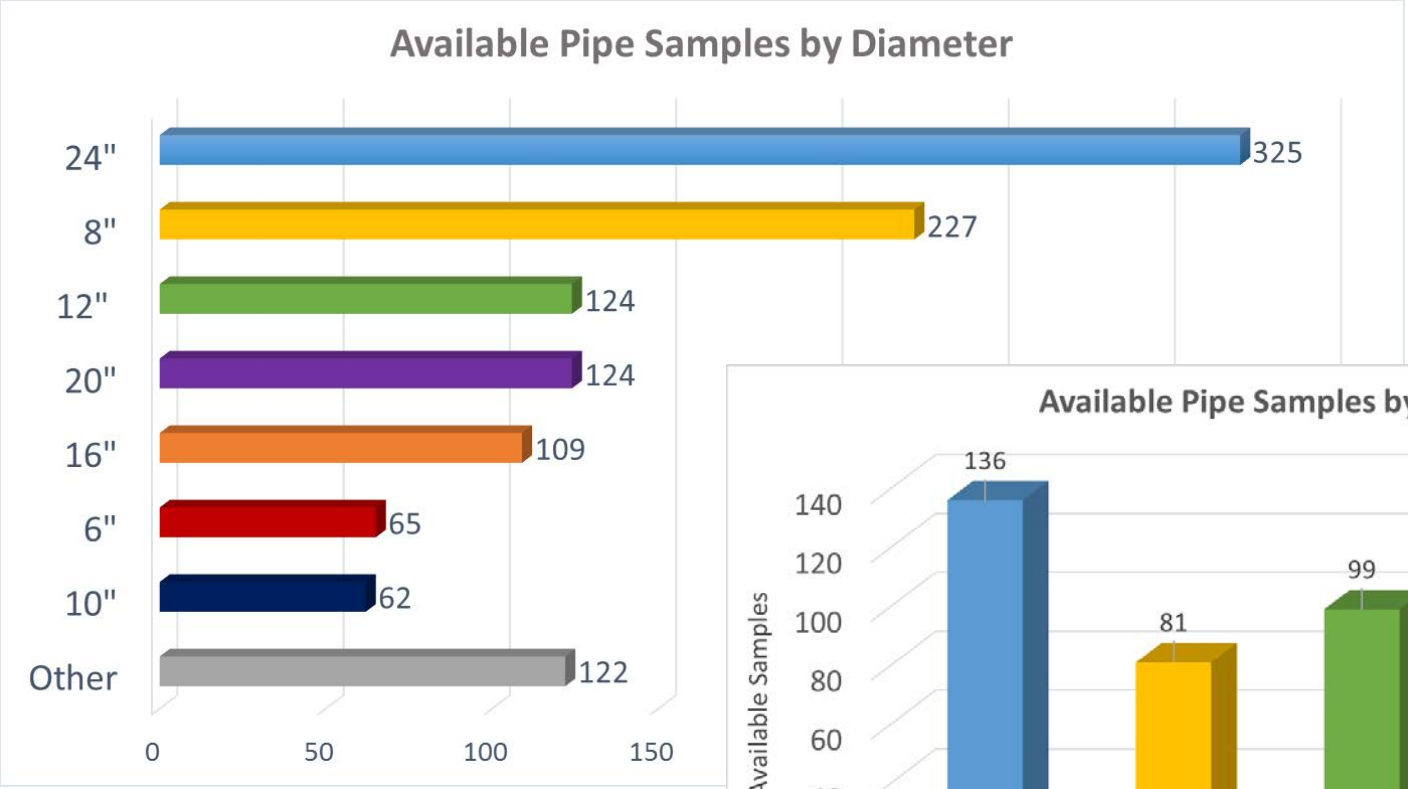
# Pull Test Strings

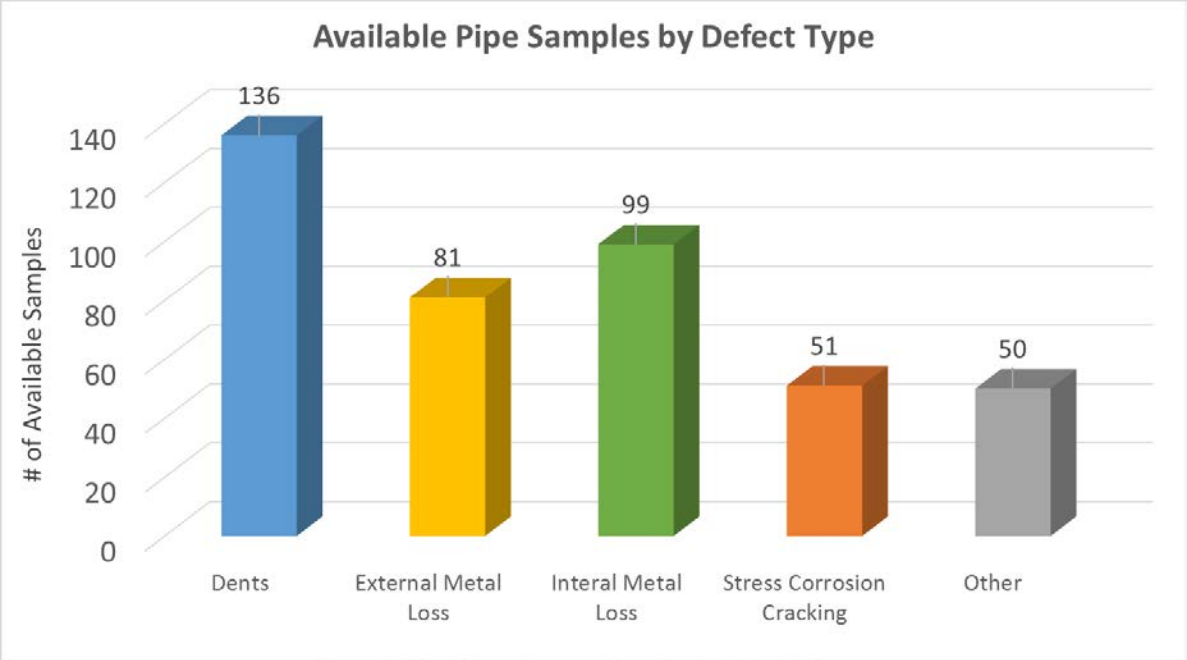
# Liquid Test Loop

# Pipe Warehouse & Testing Space

# Pipe Sample Inventory at TDC



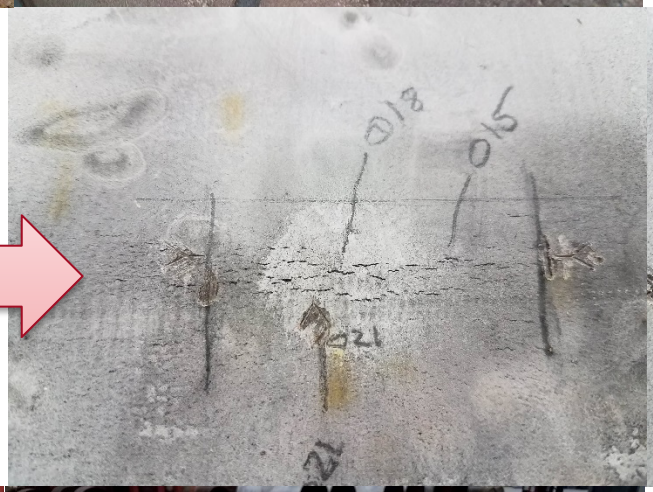


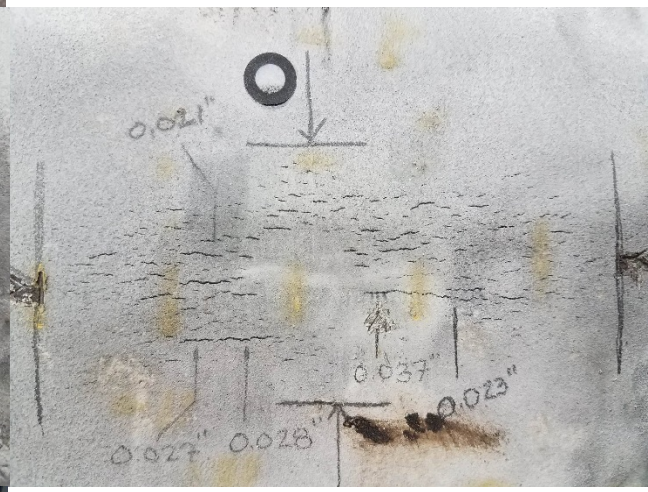




- **1,158 total pipe samples; pipe size range from 2” to 52”**

External Corrosion

Stress Corrosion Cracking



Dents & Gouges