

The CGA 50-in-5 Challenge

The Damage Prevention Institute (DPI)

and the

NUCA DIRT Data Network

2024 NUCA Annual Convention & Exhibit

Palm Springs, CA

March 23, 2024

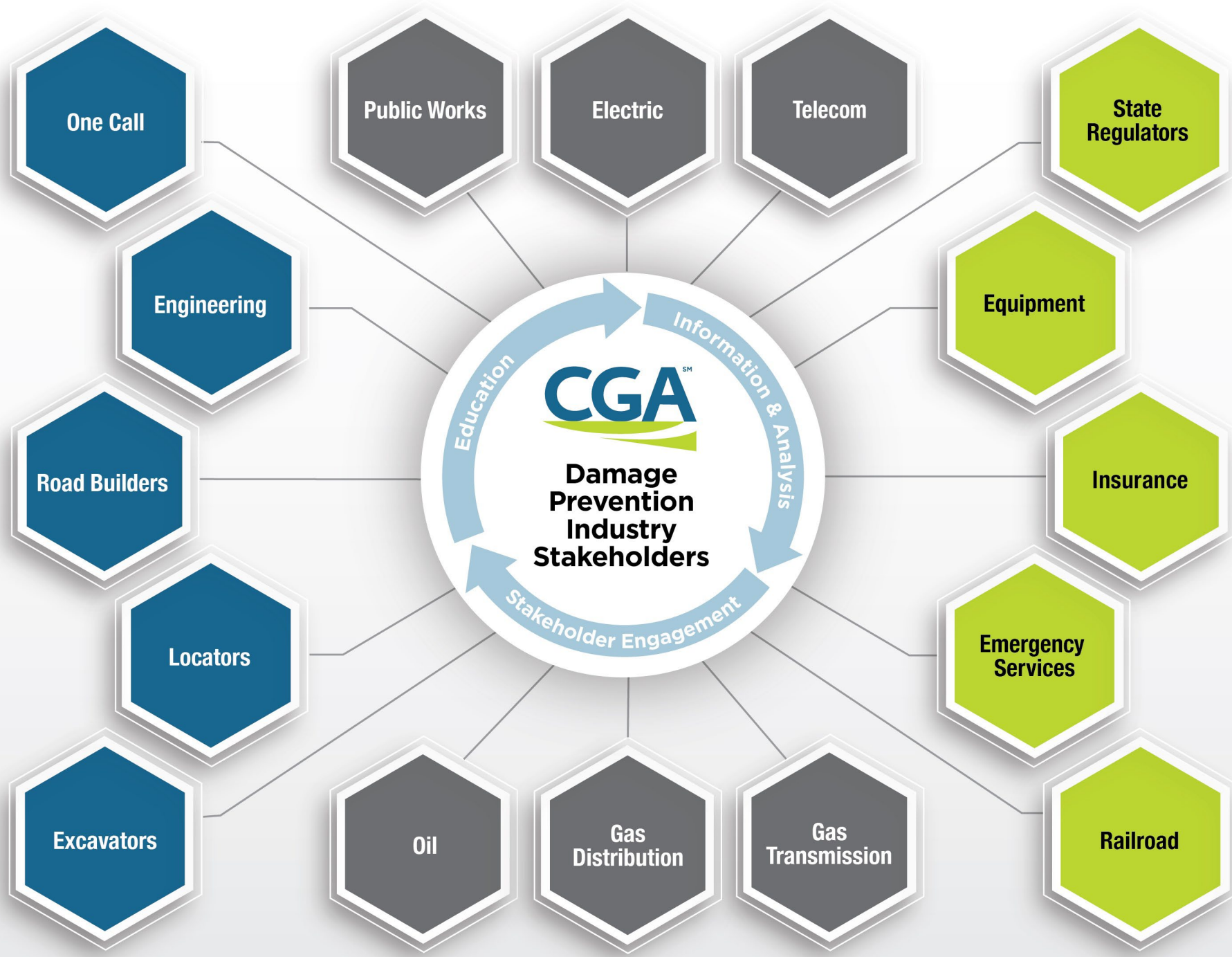
Sam Hall
Vice President, Damage Prevention Institute



The logo for CGA (Common Ground Alliance) features the letters 'CGA' in a bold, blue, sans-serif font. Below the letters is a stylized yellow and green swoosh that curves under the 'A' and extends to the left.

Mission

The Common Ground Alliance is dedicated to preventing damage to underground utility infrastructure and protecting those who live and work near these important assets through the shared responsibility of our stakeholders.





DIRT - 2022 Report Highlights

- Excavation/construction was the top reporting source for the first time.
- **Telecom and natural gas** remain the most damaged facilities.
- **Telecom work caused the most damages.**
- **The top 6 damage root causes are persistent year-over-year**
- Damages are flat or increasing based on statistical analysis.
- Reversing the upward damage trend is critical to reach a 50% reduction in 5 years.

Excavation/
Construction was
the top reporting
source for the first
time in 2022









76%
of all damages
are due to just
SIX root causes

Root Cause Analysis

"Catch-all"
root causes
may mask
more complex
root causes.

The top 6 root causes are the same as 2021.

ROOT CAUSE	Reports	2022 % of Total
 No notification made to 811 Center	35,860	24.81%
 Facility not marked due to locator error	21,951	15.19%
 Excavator failed to maintain clearance after verifying marks	19,448	13.46%
 Marked inaccurately due to locator error	12,048	8.34%
 Improper excavation practice not listed elsewhere	11,835	8.19%
 Excavator dug prior to verifying marks by potholing	7,965	5.51%

***Unknowns Excluded**

Late Locates: A Current and Emerging Crisis

- CGA analyzed **data from 7 states** with mandatory positive response.
- As many as 56% of tickets receive late or no positive response, **meaning work cannot legally start.**
- **Telecommunications and water/sewer operators have higher late response rates.**
- Telecommunications work is most impacted by late responses.
- Some operators/locators mark sites on time but **delay updating positive response systems.**
- Excavators report inaccurate status codes, including those **indicating sites are marked when they are not.**

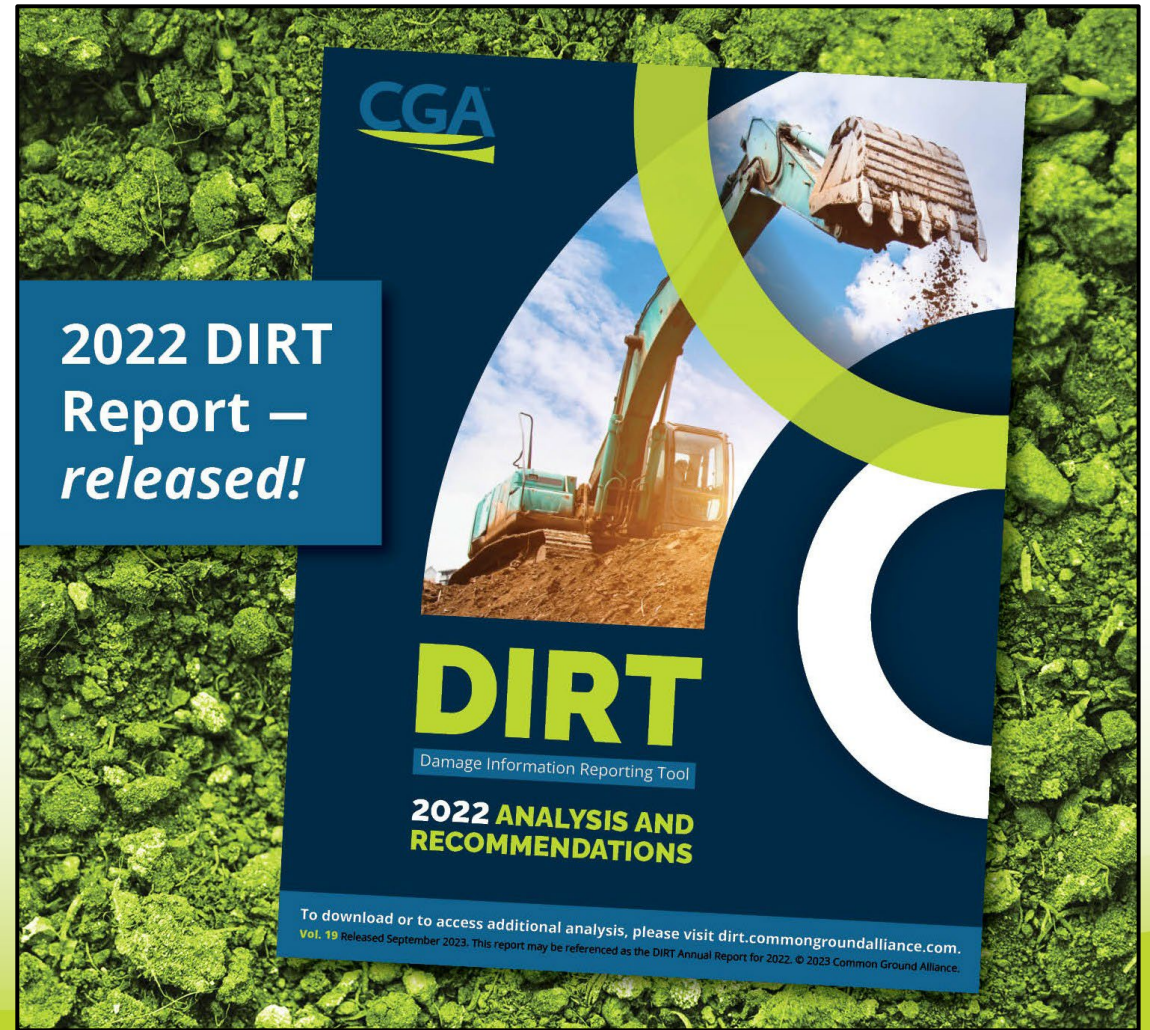


Achieving Our Industry Goal – 50 in 5

TARGETING TOP DAMAGE ROOT CAUSES

2022 DIRT Report Recommendations:

- Commit to unprecedented collaboration across stakeholder groups
- Restore confidence in the 811 system
- Prioritize tolerance zone safety
- Enhance facility maps to GIS grade
- Allocate sufficient locating and marking resources
- Utilize contract structures for better locating and excavating outcomes
- Ensure effective enforcement of damage prevention





What is the Damage Prevention Institute?

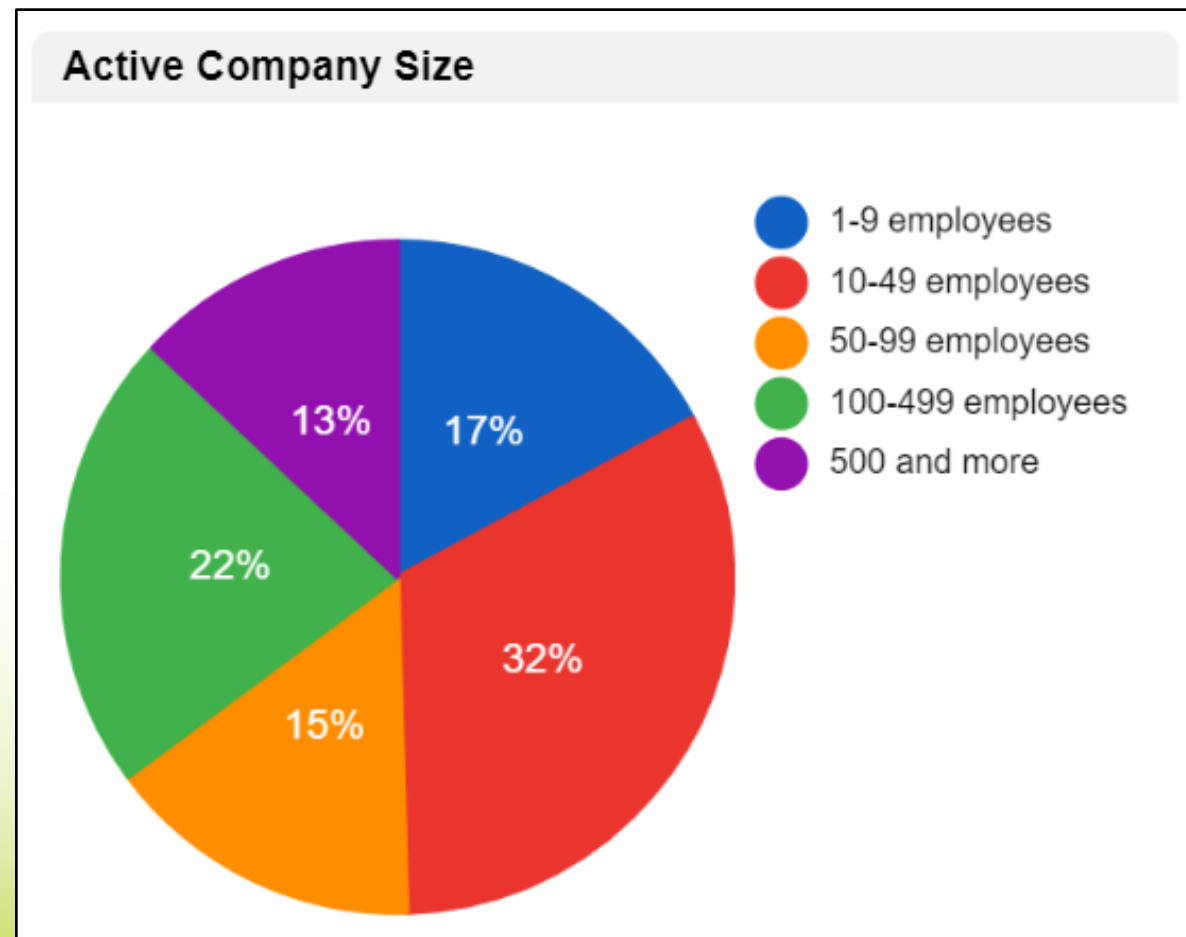
- **Launched:** January 2, 2023
- **Goal:** Address systemic issues through **comprehensive:**
 - Participant accreditation
 - Monthly data submission and benchmarking
 - Peer review
- **Benchmarked performance data for all participants**
 - Performance measurement in DPI focused on the “circle of accountability”
- **Peer reviews**
 - What can we learn from each other that can improve performance?
 - Address systemic challenges in damage prevention

DPI Participation Numbers

As of March 18, 2024:

- 1,179 participants
- 111 new participants since 2023 launch

Contractor/Excavator	1,109
Engineering/Design	24
Locator	15
Gas distribution	14
Other	6
Road builder	6
Electric	3
Telecommunications	2



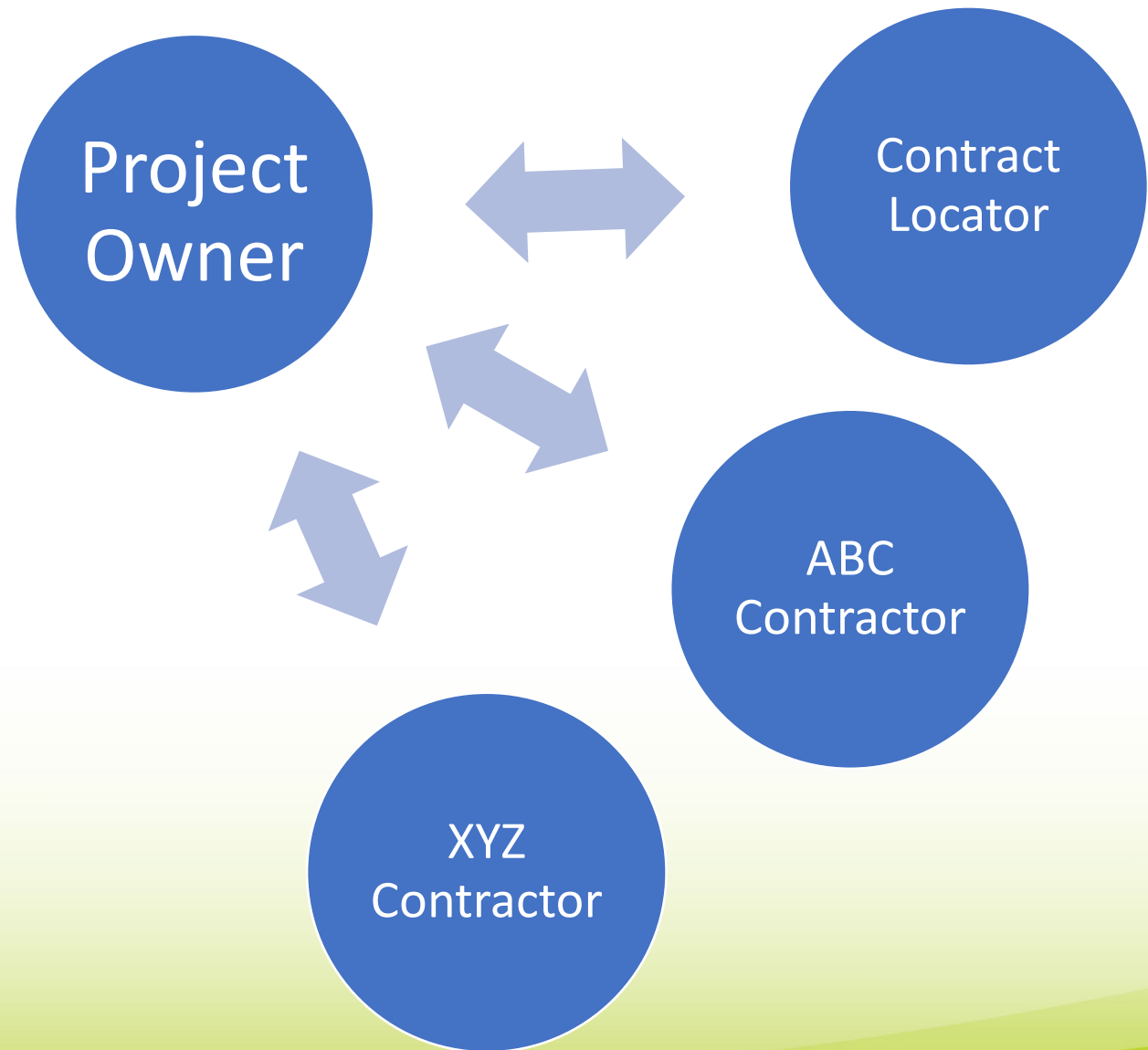
Measuring Performance: Circle of Accountability

- Currently defining baseline performance metrics for the DPI
- **Excavators** (final, implemented)
 - Damages / 10,000 work hours (calculated same as work hours for TRIR)
- **Owners/Operators** (final, rolling out in 2024)
 - Damages Caused by Mapping Errors / 1,000 Locate Tickets Received
 - Projects Completed / # of Mapping Records Updates to Records Department
 - Trouble Locate Tickets / Locate Tickets Received
- **Locators**
 - Under discussion within DPI Metrics Sub-Committee; focus is on-time performance and damages caused by locating errors.

Data Sharing

Example: Facility owners/operators can exchange data with their service providers.

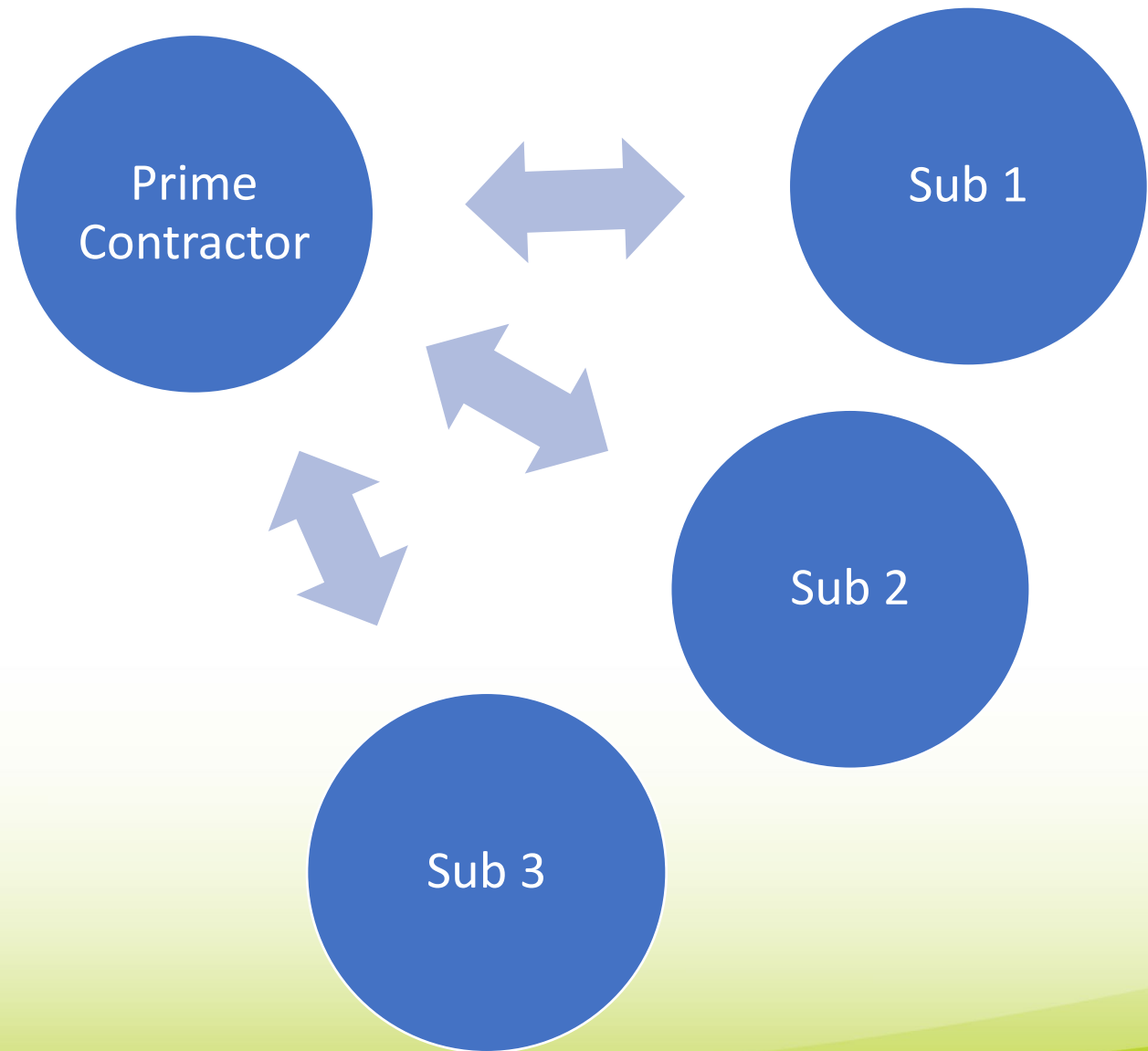
Data sharing is self-guided and self-determined.



Data Sharing

Example: Prime contractors can exchange data with their subs.

Any DPI participant can share their data with any other participant.



Peer Review Pilots

- Pilots ran from January to March 2024; excavators only.
- The focus of peer reviews is **damage risk management**.
- Results will be anonymized and made publicly available; individual companies receive private summaries of findings.
- **Exceptional engagement and positive feedback** – “Like 5 hours of free consulting on improving damage prevention programs.”
- **CGA wants to engage with partner associations** like AGA and DCA to create synergies between peer review and benchmarking programs.

Beyond Data Sharing and Peer Reviews

- DPI can collect **much more** information than we collect in DIRT North America – with DPI participant consensus.
- Imagine collecting and analyzing:
 - Client/customer relationships and/or contract identifiers
 - Union vs. non-union labor
 - Implemented technologies (accessible maps, ticket management systems, training systems, advanced excavation technologies, etc.)
- Analysis can reveal business practices that produce better outcomes (WHY is performance what it is?)
 - Procurement and contracts
 - Use of technology and records
 - Implementation of Best and Next Practices

NUCA DIRT Data Network

- CGA and NUCA are partnering to create a DIRT Data Network specifically for NUCA members.
- The **NUCA DIRT Data Network** will allow NUCA to collect the information that is important to you.
- Tell your story – demonstrate with data what is really happening in the field.

Damage Information Reporting Tool (DIRT) - Field Form

Part A – Original Source of Event Information

Who is providing the information?		<input type="checkbox"/> Electric	<input type="checkbox"/> Engineer/Design	<input type="checkbox"/> Equipment Manufacturer
<input type="checkbox"/> Excavator	<input type="checkbox"/> Liquid Pipeline	<input type="checkbox"/> Locator	<input type="checkbox"/> Natural Gas	<input type="checkbox"/> Private Water
<input type="checkbox"/> Public Works	<input type="checkbox"/> Railroad	<input type="checkbox"/> Road Builders	<input type="checkbox"/> Federal / State Regulator	
<input type="checkbox"/> Telecommunications		<input type="checkbox"/> Unknown/Other		
Name of person providing the information:				

Part B – Type, Date, and Location of Event

Type of Event:	DIRT Event	<input type="checkbox"/> Underground Damage	<input type="checkbox"/> Underground Near Miss
	Non-DIRT Event	<input type="checkbox"/> Above Grade	<input type="checkbox"/> Aerial
		<input type="checkbox"/> Natural Cause	<input type="checkbox"/> Submarine

*Date of Event: (MM/DD/YYYY)	
*Country	*State
*County	City
Street address:	Nearest Intersection:
Latitude/Longitude: Lat:	Lon
	<input type="checkbox"/> Decimal Degrees <input type="checkbox"/> D M S
*Right-of-Way where event occurred	
Public:	<input type="checkbox"/> City Street <input type="checkbox"/> State Highway <input type="checkbox"/> County Road <input type="checkbox"/> Interstate Highway <input type="checkbox"/> Public-Other
Private:	<input type="checkbox"/> Private Business <input type="checkbox"/> Private Land Owner <input type="checkbox"/> Private Easement
	<input type="checkbox"/> Pipeline <input type="checkbox"/> Power /Transmission Line <input type="checkbox"/> Dedicated Public Utility Easement
	<input type="checkbox"/> Federal Land <input type="checkbox"/> Railroad <input type="checkbox"/> Unknown/Other

Part C – Affected Facility Information

***What type of facility operation was affected?**

<input type="checkbox"/> Natural Gas	<input type="checkbox"/> Sewer	<input type="checkbox"/> Steam	<input type="checkbox"/> Cable Television	<input type="checkbox"/> Electric	<input type="checkbox"/> Liquid Pipeline
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Water	<input type="checkbox"/> Unknown/Other			

***What type of facility was affected?** Distribution Gathering Service/Drop Transmission Unknown/Other

Was the facility part of a joint trench? Yes No Unknown

Did this event involve a Cross Bore? Yes No

Was facility owner One Call Center member? Yes No Unknown

If No, is facility owner exempt from One Call Center membership? Yes No Unknown

Measured Depth Embedded in concrete/asphalt pavement <18" / 46 cm Measured depth

From Grade 18" – 36" / 46 - 91 cm >36" / 91 cm from grade _____ in/cm

Part D – Excavation Information

***Type of Excavator** Contractor County Developer Farmer Municipality

Occupant Railroad State Utility Unknown/Other

***Type of Excavation Equipment** Auger Backhoe/Trackhoe Boring Bulldozer

Drilling Directional Drilling Explosives Farm Equipment Grader/Scraper Hand Tools

Milling Equipment Probing Device Trencher Vacuum Equipment Unknown/Other

***Type of Work Performed** Agriculture Bldg. Construction Bldg. Demolition Cable Television

Curb/Sidewalk Drainage Driveway Electric Engineering/Survey

Fencing Grading Irrigation Landscaping Liquid Pipeline Milling

Natural Gas Pole Public Transit Auth. Railroad Road Work Sewer

Site Development Steam Storm Drain/Culvert Street Light Telecommunication

Traffic Signal Traffic Sign Water Waterway Improvement Unknown/Other

Part E – Notification and Locating

***Was the One-Call Center notified?** Yes No Ticket Number _____

If Yes, type of locator Facility Owner Contract Locator Unknown/Other

If No, is excavation activity and/or excavator type exempt from notification? Yes No Unknown

Was work area white-lined? Yes No Unknown

Part G – Excavator Downtime

Did Excavator incur down time?	<input type="checkbox"/> Yes	<input type="checkbox"/> No						
If yes, how much time?	<input type="checkbox"/> < 1 hr	<input type="checkbox"/> 1 -<2 hrs	<input type="checkbox"/> 2-<3 hrs	<input type="checkbox"/> 3+ hrs	Exact Value _____	<input type="checkbox"/> Unknown		
Estimated cost of down time?	<input type="checkbox"/> \$0	<input type="checkbox"/> \$1 -1000	<input type="checkbox"/> \$1,001 - 5,000	<input type="checkbox"/> \$5,001 - 25,000	<input type="checkbox"/> \$25,001 - 50,000	<input type="checkbox"/> >\$50,000	Exact Value _____	<input type="checkbox"/> Unknown

Part H – Interruption and Restoration

*Did the damage cause an interruption in service?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown					
If yes, duration of interruption	<input type="checkbox"/> < 1 hr	<input type="checkbox"/> 1 - <6 hrs	<input type="checkbox"/> 6 - <12 hrs	<input type="checkbox"/> 12 - <24 hrs	<input type="checkbox"/> 24 - <48 hrs	<input type="checkbox"/> 48+ hrs	Exact Value _____ hrs	<input type="checkbox"/> Unknown
Approximately how many customers were affected?	<input type="checkbox"/> Unknown	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2 - 10	<input type="checkbox"/> 11 - 50	<input type="checkbox"/> 51+	Exact Value _____	
Estimated cost of damage / repair/restoration:	<input type="checkbox"/> \$0	<input type="checkbox"/> \$1 - 1,000	<input type="checkbox"/> \$1,001- 5,000	<input type="checkbox"/> \$5,001 - 25,000	<input type="checkbox"/> \$25,001 - 50,000	<input type="checkbox"/> > \$50,000	Exact Value _____	<input type="checkbox"/> Unknown

*Part I – Root Cause Select only one

Notification Issue	Locating Issue
<input type="checkbox"/> No notification made to One Call Center/ 811	<i>Facility not marked due to:</i>
<input type="checkbox"/> Excavator dug outside area described on ticket	<input type="checkbox"/> Abandoned facility
<input type="checkbox"/> Excavator dug prior to valid start date/time	<input type="checkbox"/> Incorrect facility records/maps
<input type="checkbox"/> Excavator dug after valid ticket expired	<input type="checkbox"/> Locator error
<input type="checkbox"/> Excavator provided incorrect notification information	<input type="checkbox"/> No response from operator/contract locator
Excavation Issue	<input type="checkbox"/> Incomplete marks at damage location
<input type="checkbox"/> Excavator dug prior to verifying marks by test-hole (pothole)	<input type="checkbox"/> Tracer wire issue
<input type="checkbox"/> Excavator failed to maintain clearance after verifying marks	<input type="checkbox"/> Unlocatable Facility
<input type="checkbox"/> Excavator failed to protect/shore/support facilities	<i>Facility marked inaccurately due to</i>
<input type="checkbox"/> Improper backfilling practices	<input type="checkbox"/> Abandoned facility
<input type="checkbox"/> Marks faded or not maintained	<input type="checkbox"/> Incorrect facility records/maps
<input type="checkbox"/> Improper excavation practice not listed above	<input type="checkbox"/> Locator error
Miscellaneous Root Causes	<input type="checkbox"/> Tracer wire issue
<input type="checkbox"/> Deteriorated facility	
<input type="checkbox"/> One Call Center Error	
<input type="checkbox"/> Previous damage	
<input type="checkbox"/> Root Cause not listed (comment required)	

NUCA Can Collect MORE in DIRT with a NUCA DIRT Data Network

Collect whatever you want. For example...

- Companies/people involved
- Additional near miss information
- Additional performance information

Analyze the data as you wish. For example...

- Which companies/people are performing best, and where?
- Which companies/people are causing challenges, and where?
- What is the true impact of late locates and other near misses?

Upcoming CGA Events & Meetings

- **CGA Conference & Expo**
 - April 14-18, 2024
 - The Broadmoor, Colorado Springs
- **Summer Committee Summit – 2024**
 - July 22-July 25, 2024
 - Hilton Nashville Downtown
- **Fall Committee Summit – 2024**
 - October 28 -31, 2024
 - Hilton Lake Las Vegas Resort & Spa

Thank You

Sam Hall

Vice President, Damage Prevention Institute

Common Ground Alliance

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