

PCCA/CGA/NULCA Excavation Safety Summit

PCAA Annual Convention

**Fairmont Scottsdale Princess
Scottsdale, Arizona**

March 5, 2022

Panel Overview

Moderator:

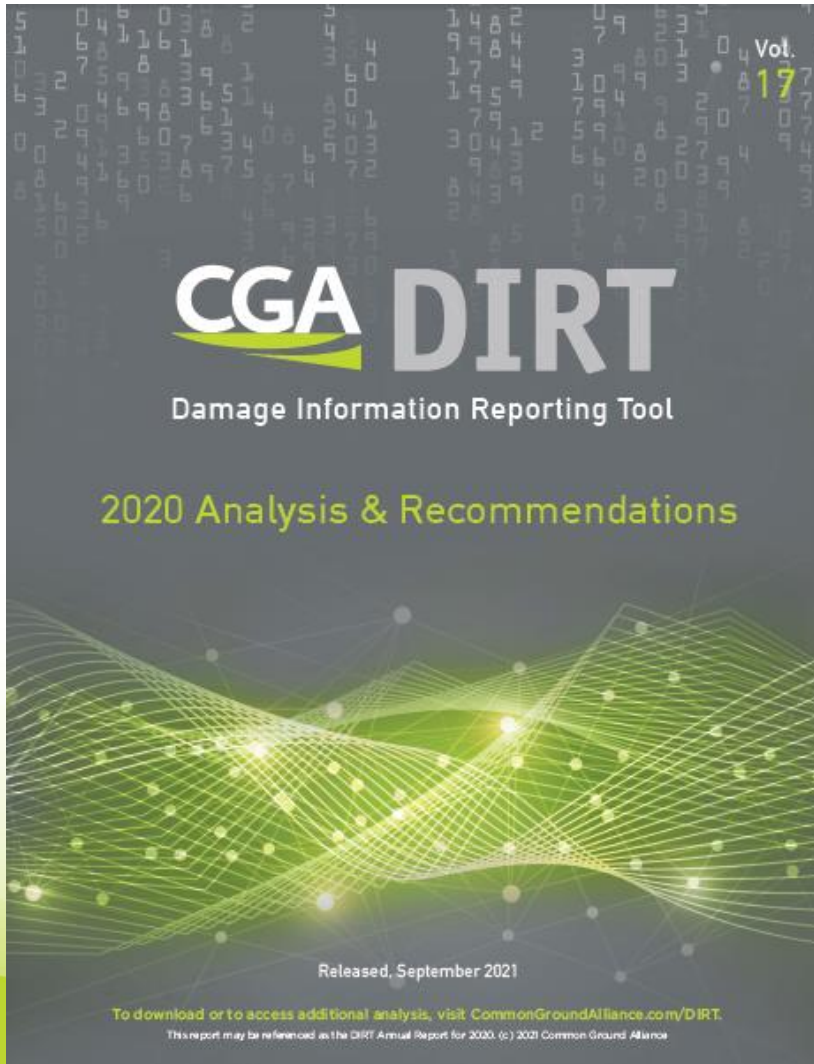
- Jerrod Henschel - PCCA Chairman-Elect, Member, CGA Next Practices Advisory Group

Panelists:

- Sarah Magruder Lyle - President & CEO, Common Ground Alliance
- Josh Hinrichs - CGA Chairman and NULCA President
- Steve Sellenriek - PCCA Past Chairman and CGA Board member
- Mark Bridgers - President, Continuum Capital, Research Lead 811 Emergency Report

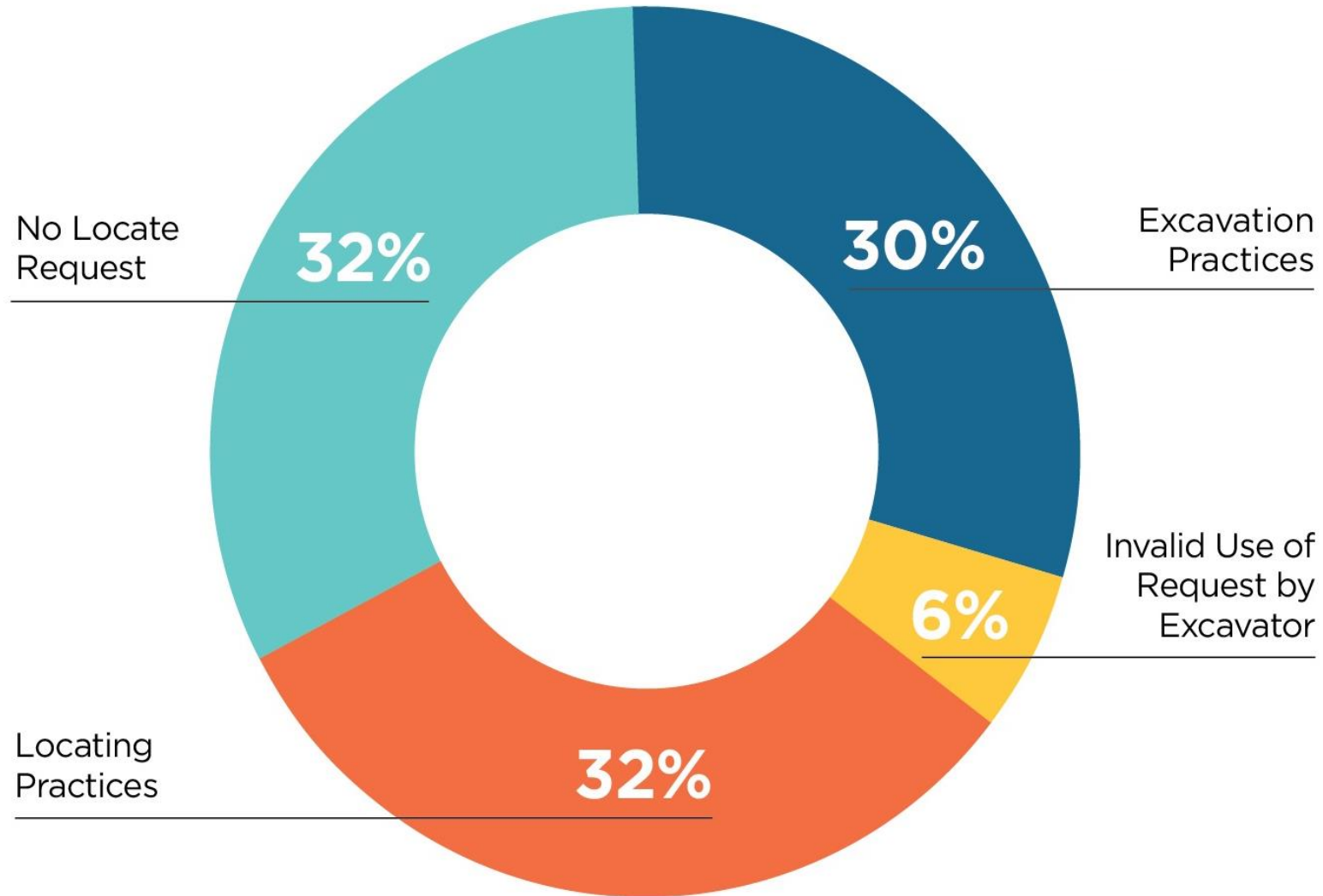


2020 DIRT Report



- DIRT accepts data on excavation damages and near-misses from all affected parties
- Includes analysis of data submitted into DIRT for 2020
- Over 475,000 submissions for 2020
- 2020 is the 17th annual report published
- Written report supplemented by online interactive dashboard
- **2021 Data Submission Deadline - March 31, 2022**

Reported Damages by Root Cause Group



Legend

- Excavation Practices
- Invalid Use of Request by Excavator
- Locating Practices
- No Locate Request

Reported Damages by Root Cause for 2020

Coded by Root Cause Group

Root Cause	Reports	2020 % of Total	2019 % of Total
No Notification made to one call center / 811	84,918	31.81%	29.10%
Excavator dug prior to verifying marks by test-hole (pothole)	41,446	15.53%	1.94%
Facility marked inaccurately due to abandoned facility	20,569	7.71%	7.29%
Facility not marked due to locator error	17,539	6.57%	3.56%
Excavator failed to maintain clearance after verifying marks	17,128	6.42%	16.70%
Facility marked inaccurately due to locator error	15,163	5.68%	10.57%

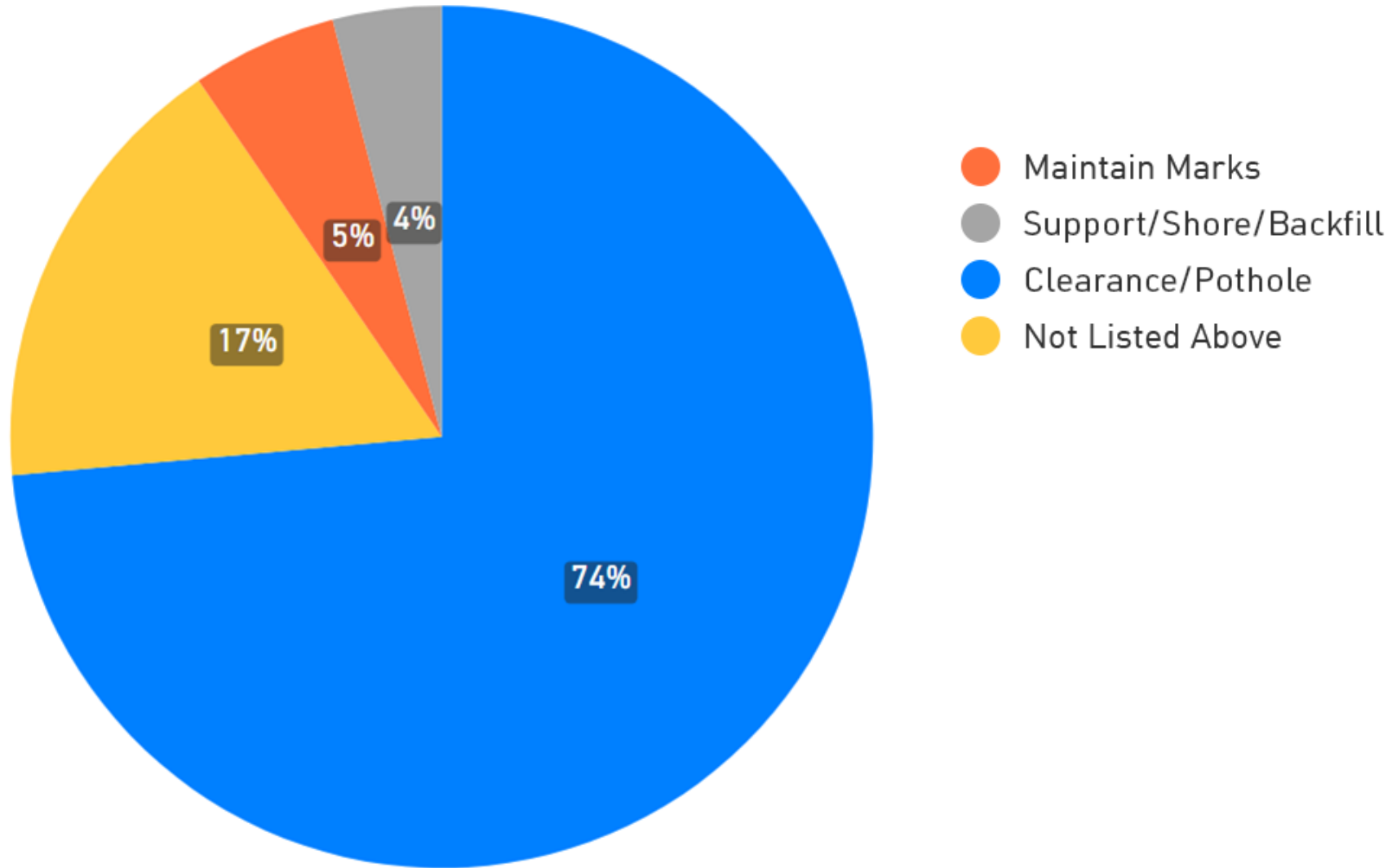
Legend

- Excavation Practices
- Invalid Use of Request by Excavator
- Locating Practices
- Miscellaneous
- No Locate Request

**Accounts for over
70% of damages**

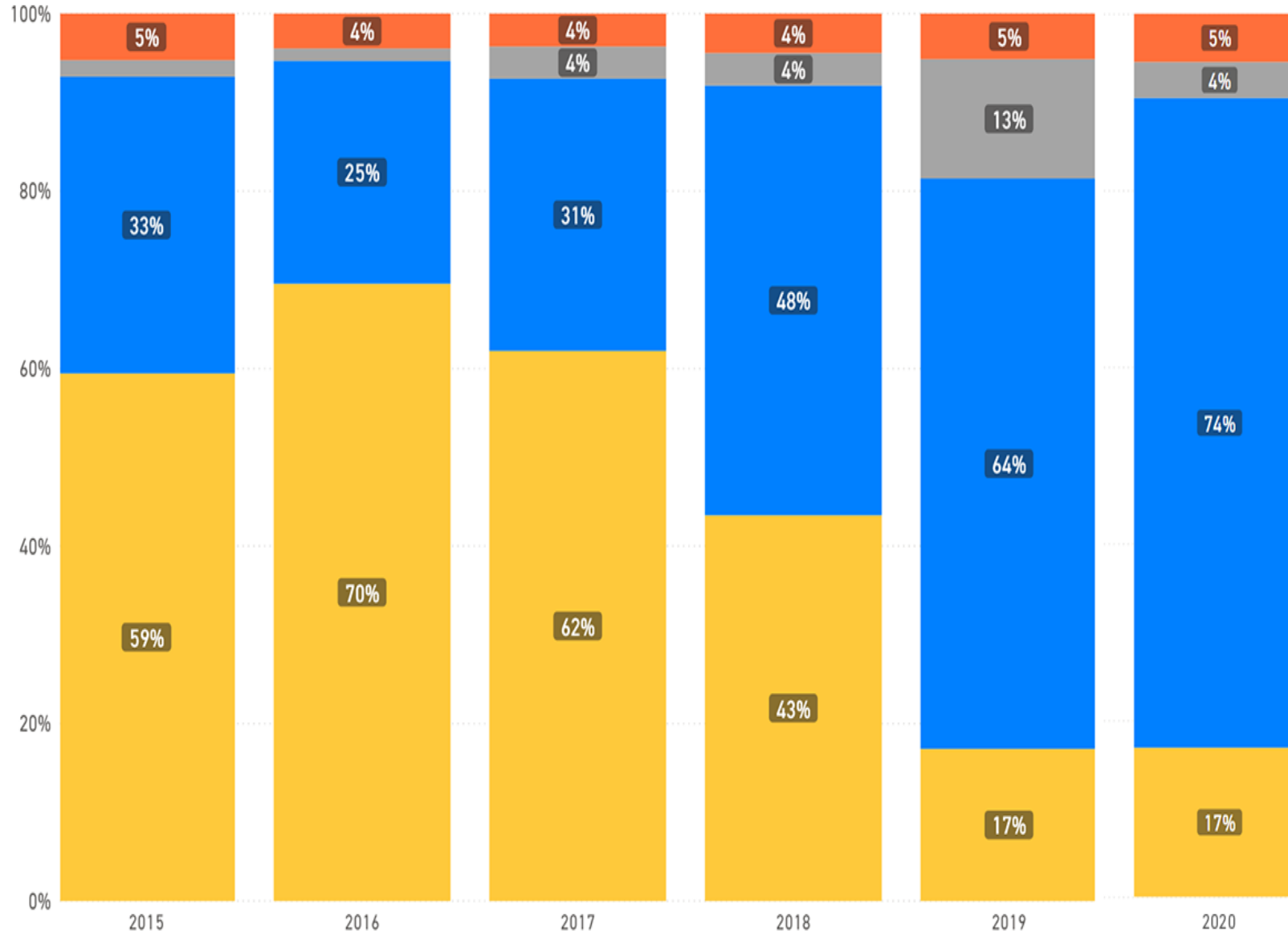
Excavating Practices Root Causes

% of Total 2020



Excavating Practices Root Causes

% of Total by Year

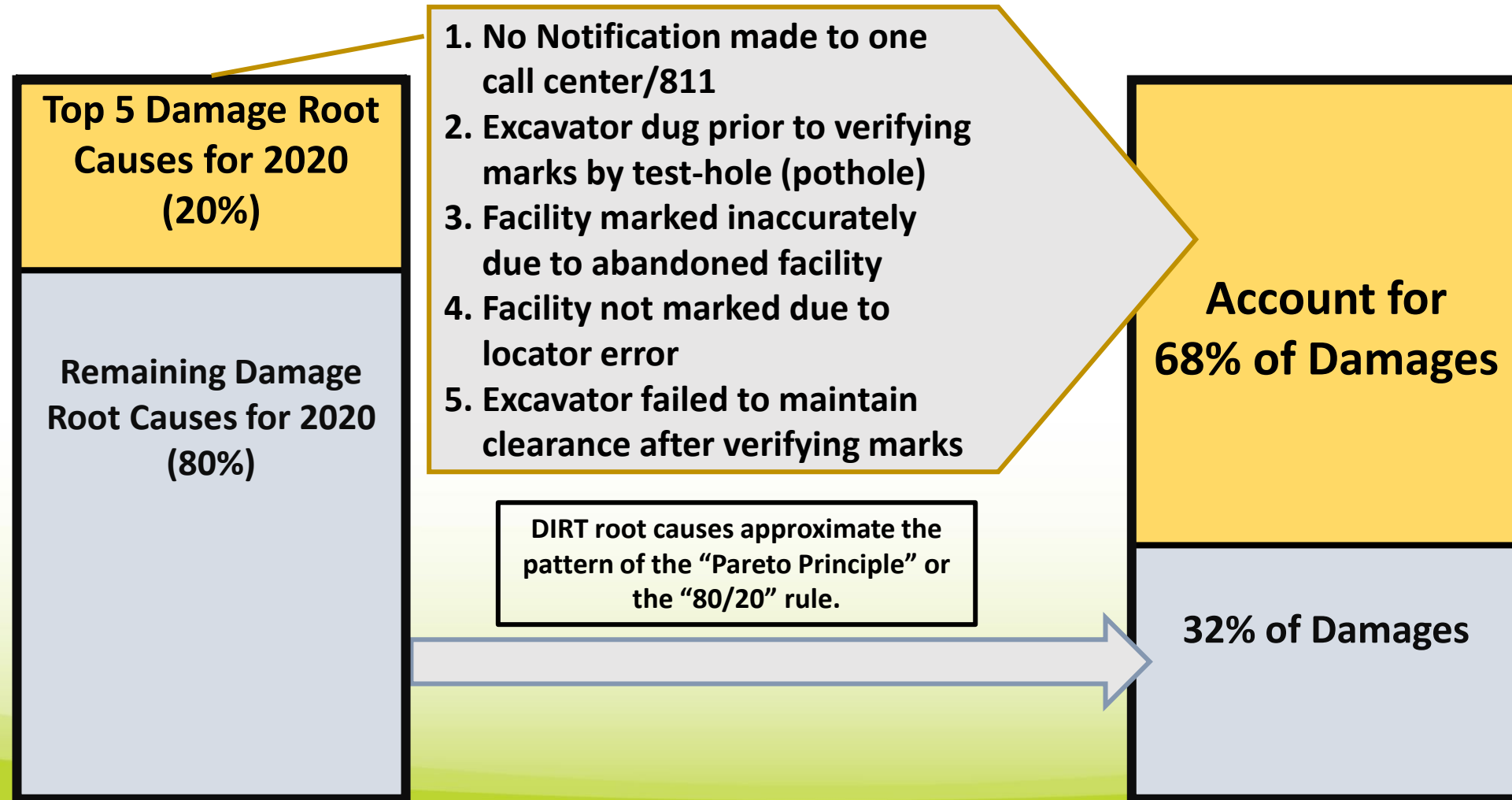


Excavator Failed to:

- Maintain Marks
- Support/Shore/Backfill
- Clearance/Pothole
- Not Listed Above

Chart accounts for multiple reports of the same event.

Addressing “Vital Few” Produces Greatest Results



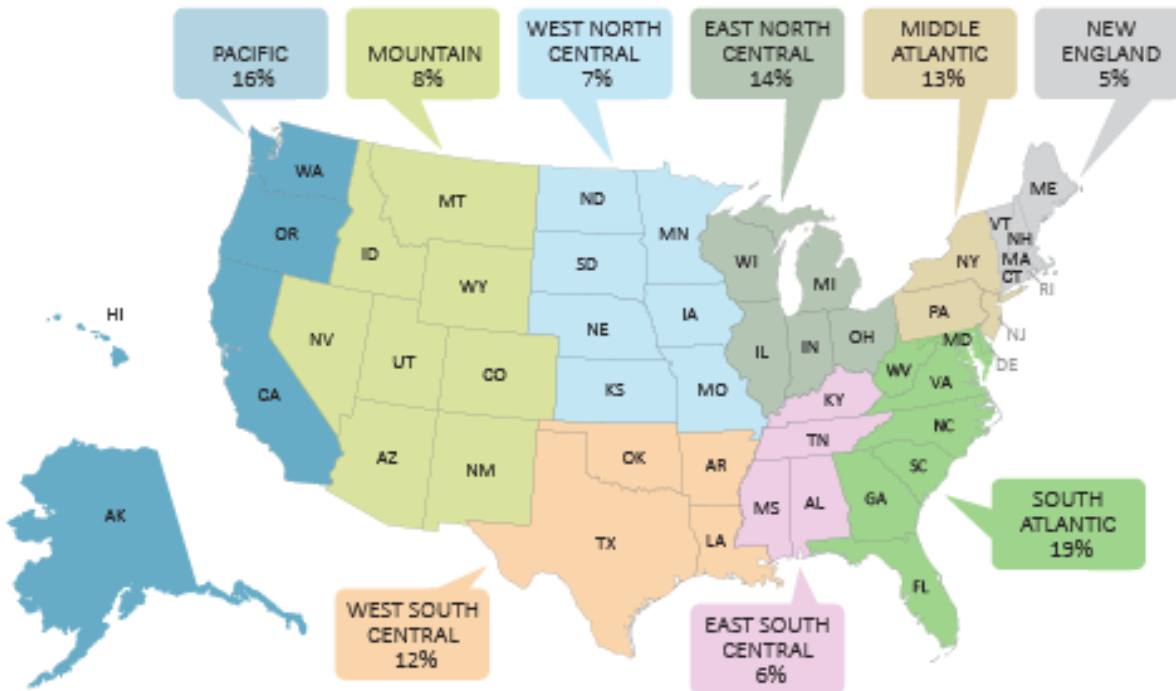
811 Awareness and Use - ABOUT THIS RESEARCH

SAMPLE: n=1,821 Active Diggers 18+ years of age across the US.
(~n=200 in each census region.)

DATA COLLECTION METHOD: Online

FIELD DATES: September 20-29, 2021

DATA WEIGHTING: Gender and Region



ACTIVE DIGGERS ARE DEFINED AS THOSE WHO HAVE COMPLETED UNDERGROUND DIGGING PROJECT IN THE PAST 12 MONTHS.

- 88% have personally done an underground digging project
- 59% have professionally done an underground digging project

NUMBER OF PROJECTS IN THE PAST 5 YEARS

- 40%, 3 or less projects
- 44%, 4 to 10
- 16%, More than 10 projects

GENDER

- 64%, Male
- 36%, Female

AGE

- 26%, 21-34 years of age
- 43%, 35-54 years of age
- 31%, 55+ years of age

GEOGRAPHY

- 25%, Urban
- 50%, Suburban
- 25%, Rural

TYPE OF PROJECTS COMPLETED

- 68%, Planting a tree, shrubs or bushes
- 49%, Installing a new garden area
- 35%, Installing a fence
- 27%, Installing a patio, deck, retaining wall, or other type of outdoor structure
- 22%, Installing a free-standing mailbox
- 19%, Installing a walkway
- 12%, Installing a swimming pool
- 11%, Installing a free-standing basketball hoop
- 12%, Other project that requires digging

Develop messaging to address the reasons people don't use 811.

While there is no definitive answer on why people don't contact 811 before they dig, continuing to educate the public on the particular circumstances when contacting 811 is important.



Reasons For Not Contacting 811

Among those who have recently completed a project, these are the top five reasons for not contacting 811:

1. Not digging deep enough to warrant marking (digging was shallow)
2. Project not in area that needed marking
3. Not aware of the 811 service
4. Dug in this area previously without problems
5. Already aware of where the utility lines were located

The shallow depth of a project (40%) is the top reason diggers say they have not contacted 811.

Q: For which of the following reasons did you not request to have the underground utility lines in your yard marked?

	Overall	GENDER		REGION									AGE			GEOGRAPHY			NUMBER OF PROJECTS		
		Male	Female	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	18-34	35-54	55+	Urban	Suburban	Rural	3 or less	4 to 10	More than 10
Not digging deep enough to warrant marking/digging was shallow	40%	36%	46%	39%	42%	42%	39%	40%	37%	33%	57%	34%	39%	32%	46%	42%	42%	34%	36%	45%	36%
The project was not in an area that needed marking	36%	35%	38%	36%	35%	36%	31%	41%	34%	34%	38%	37%	32%	32%	42%	25%	35%	48%	31%	37%	57%
Not aware of the 811 service	28%	25%	32%	28%	26%	22%	13%	42%	26%	22%	32%	30%	34%	26%	26%	28%	29%	26%	36%	20%	20%
Dug in this area previously without problems	24%	23%	26%	29%	30%	36%	29%	23%	24%	21%	24%	14%	20%	23%	28%	23%	24%	27%	16%	33%	31%
Utility lines run overhead/they're not buried	24%	26%	21%	38%	26%	21%	22%	22%	23%	23%	20%	25%	9%	25%	31%	19%	20%	38%	20%	29%	28%
Already aware of where the utility lines were located	23%	25%	20%	29%	24%	21%	25%	23%	29%	21%	20%	20%	22%	20%	26%	16%	20%	34%	17%	26%	38%
Replacing a similar project in the same location	21%	19%	23%	27%	27%	27%	37%	10%	14%	22%	24%	13%	12%	19%	26%	18%	24%	16%	17%	26%	18%
Did not believe marking is necessary	16%	19%	13%	19%	19%	13%	18%	18%	13%	10%	26%	16%	13%	20%	15%	13%	19%	15%	14%	20%	15%
Not aware marking was necessary	16%	14%	20%	12%	14%	5%	12%	15%	19%	24%	13%	23%	18%	15%	16%	21%	15%	14%	19%	15%	7%
The project location was far from house	12%	12%	12%	16%	13%	16%	4%	9%	7%	12%	12%	12%	12%	8%	15%	8%	10%	17%	8%	16%	13%
Did not know how to contact 811	11%	10%	12%	4%	6%	5%	4%	20%	12%	14%	14%	11%	13%	11%	10%	18%	9%	8%	13%	9%	9%
Did not have time to contact 811	2%	2%	2%	2%	2%	2%	0%	0%	2%	2%	0%	4%	3%	3%	*%	2%	2%	1%	2%	2%	0%

Base: Respondents who have not previously contacted 811, made a request to have their lines marked, or had someone else make a request, n=606

Next Practices Initiative: Report to the Industry



VISION

A damage prevention system that:

- Works for all stakeholders every time.
- Ensures effective, efficient and safe excavation around buried facilities.
- Results in zero damages.

STRATEGY

A three-pronged approach to success:

- Double down on proven practices.
- Advance innovative solutions.
- Eliminate inefficiencies in the system (no band-aid solutions).

**Critical Challenge 1:
Facilities not marked
accurately and on time**

**Critical Challenge 2:
Excavator Errors in the field**

**Critical Challenge 3:
Effective and consistent use of
811**

SYSTEMIC OPPORTUNITIES

- Increase implementation of effective electronic white lining.**
- Pursue an accurate, accessible GIS-based mapping system/database.**
- Utilize technology/software to account for variability in demand.**
- Contractually incentivize adherence to Best Practices and address incidents via effective enforcement mechanisms.**

Next Practices Advisory Committee

- Larry Bekkedahl, Portland General Electric
- Eric DeBonis, Southwest Gas
- Randy Douglas, Tierra Contracting
- John Fluharty, Quanta
- Terry Fordham, UtiliQuest
- Jerrod Henschel, Equix, Inc.
- Josh Hinrichs, UtiliSource
- Craig Hoferlin, Spire
- James Holland, Kinder Morgan
- Brent Hunziker, Whitaker Construction
- Roger Sampson, New York 811
- Kevin Service, Verizon
- John Somers, AEM
- Jesse Stanley, Shell Pipeline
- Chris Stovall, Texas 811
- Theresa Watley, City of Charlotte, NC
- James Wingate, USA North 811
- Monty Zimmerman, City of Lenexa, KS

Evaluating the Damage Prevention Process

The Siloed Versus Systemic Approach

Specific Problems Require Systemic Solutions

- Societal cost of damages to buried utilities is **\$30 billion annually**.
- Addressing individual challenges is creating inefficiencies and resulting in poorer, more costly safety outcomes.
- We must consider the true, global cost of underinvesting in safety and overpaying for damages: increasing initial safety investments is likely to drive down damage costs and yield a net reduction in costs.

EXAMPLE 1: Facility owners choose the lowest bid for locating contracts

- **SILOED APPROACH:** Focusing too exclusively on upfront costs can end up costing more overall. This approach may not enable locating contractors to staff appropriately and could result in costly damages.
- **SYSTEMIC APPROACH:** Structuring contracts around safety outcomes can yield a net reduction in costs. This approach provides systemic benefits to all stakeholders, including more timely, accurate locates.

EXAMPLE 2: Locate technicians are required to locate within a specific time frame regardless of volume

- **SILOED APPROACH:** During periods of very high volume, technicians may have to rush through locates or choose which to complete in a given day, leading to inaccurate and late locates, and encouraging a band-aid solution approach.
- **SYSTEMIC APPROACH:** Reexamining locating time frame allowances, ensuring that locators are able to narrow the scope of their tickets via electronic white-lining, and providing accurate facility maps would alleviate some of the system-wide pressure on locators, improving timeliness and accuracy across the system, resulting in a reduction of damages attributed to poor locates.

EXAMPLE 3: Excavators are not able to get jobsites located on-time

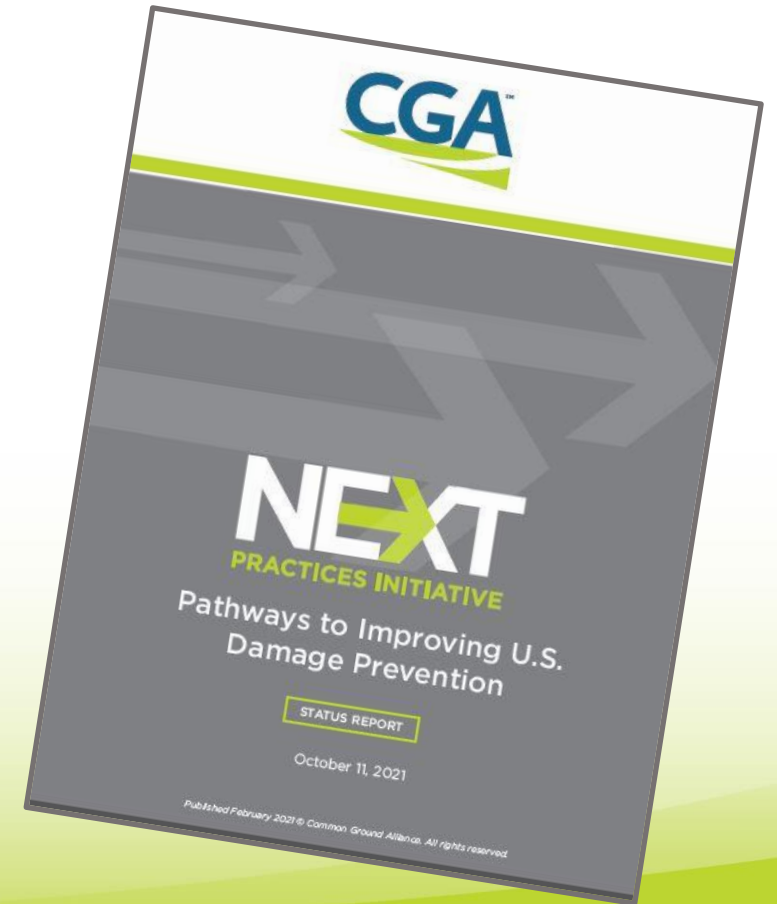
- **SILOED APPROACH:** Excavators over-notify (earlier requests, more requests and renewals than needed) to ensure they will be able to work on projects according to schedule. This ultimately creates more locate requests, delaying the delivery of locates across the system.
- **SYSTEMIC APPROACH:** Practices and technologies that enable locating companies to better manage staffing against volume and individual locates to happen more efficiently. This approach would make the process more efficient and predictable for excavators (and everyone else).

Shared Responsibility = Systemic Assessment

- Recognize that all stakeholders are part of the damage prevention industry.
- Acknowledge that one stakeholder's actions and investments -- or lack thereof -- impact the entire process.
- Commit to a comprehensive analysis of shared risks, costs and benefits.
- Encourage system-wide innovations in order to make the system work efficiently for individual stakeholders.

Pathways to Improving U.S. Damage Prevention Status Report

- Analysis of barriers and incentives for each systemic improvement identified in the initial [Report to the Industry](#).
- Documents practices or pilot programs that are already in place across the country and are focused on damage reduction goals.
- Identifies pathways for exploring and documenting additional improvements.



Tell Us Your Organization's Story!

- Is your company taking an innovative approach to the **four systemic opportunities for improving the damage prevention system?**



Next Practices Resource

CASE STUDY

Next Practices Stakeholder Resources: Elements of Effective Locating Contracts



Next Practices Case Study

CASE STUDY

Next Practices Case Study - Managing Locate Volume via Voluntary Time Extensions, Missouri One Call System



Next Practices Case Study

CASE STUDY

Next Practices Case Study - Impact of Accurate, Accessible GIS Mapping at the City Level, UtiliSource



Next Practices Case Study

CASE STUDY

Next Practices Case Study - Southwest Gas Reducing Damages Through Best Value Contracts

PURSUE ACCURATE, ACCESSIBLE GIS MAPPING

UtiliSource is pursuing accurate, accessible GIS mapping at the city level.

It estimates that it can achieve approximately 15% better time efficiency on projects where they can begin the planning and design stages with an accurate understanding of the location of buried infrastructure and cut time spent potholing to verify facilities by 50%.



CONTRACTUALLY INCENTIVIZE ADHERENCE TO BEST PRACTICES AND ADDRESS INCIDENTS VIA EFFECTIVE ENFORCEMENT MECHANISMS



Southwest Gas began implementing “best value”

SOUTHWEST GAS contracts two and a half years ago as tools to enforce better damage prevention practices among their contractors.

Since implementing best value contracts with its line locating and pipeline vendors as part of its comprehensive damage prevention efforts, Southwest Gas has seen a 21.6% reduction in its total damages per thousand tickets ratio.

In the News:

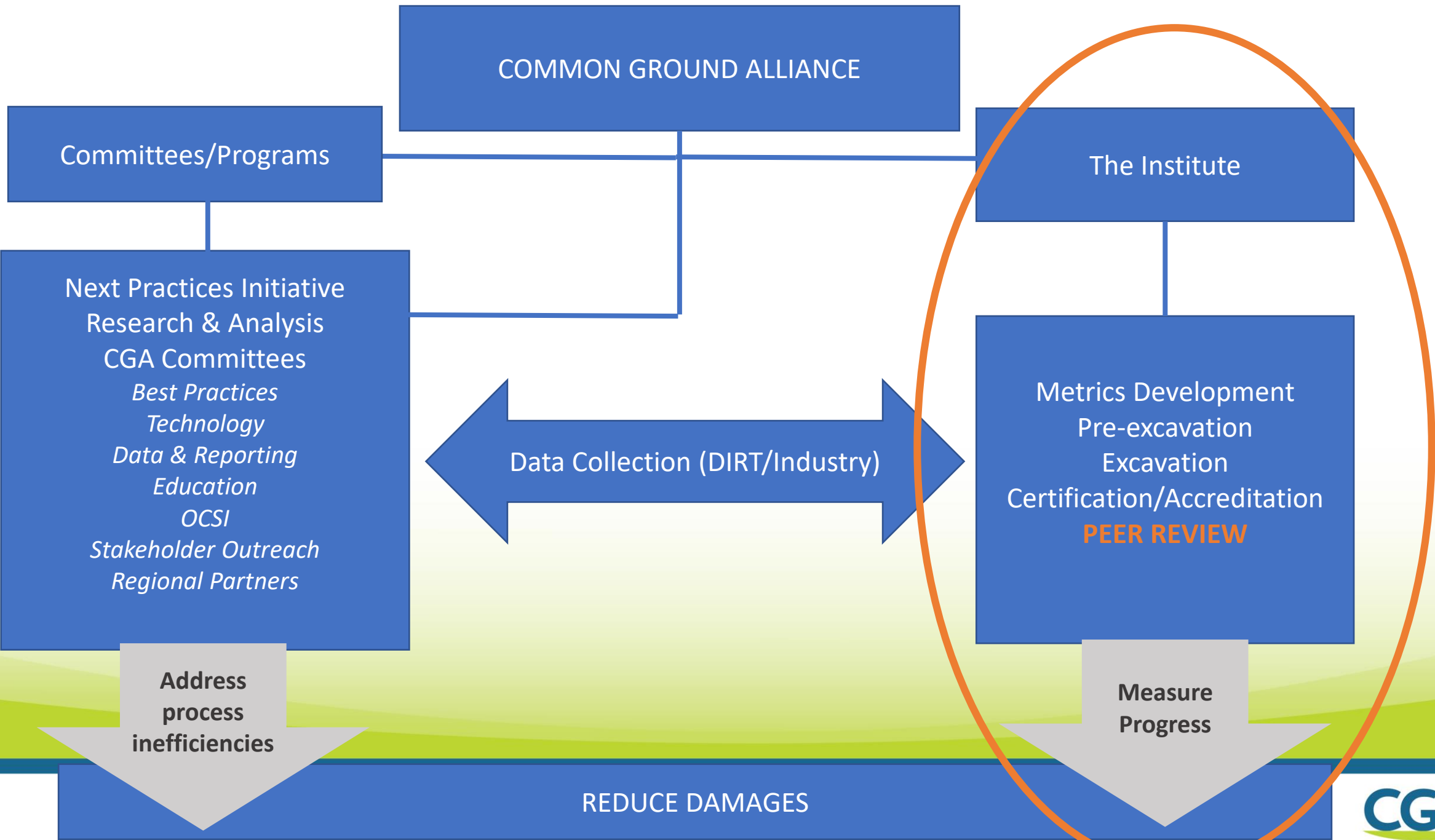
Common Ground Alliance and Gold Shovel Association to Explore Establishment of New CGA Arm Focused on Taking Damage Prevention to the Next Level

New Effort Would...

Reduce damages to underground infrastructure and significantly increase efficiencies across the U.S. damage prevention system.

Takes industry to the next level by developing data and statistics that can be used to address systemic issues.

Elevate metrics development into a true consolidated benchmarking, peer review process that is based on shared responsibility.



- Peer review component will facilitate a systemic assessment of the damage prevention process for ALL stakeholders.
- Lead the industry to the next level by developing data and statistics that can be used to address systemic issues.
- Opportunity to integrate GSA's metrics development into a comprehensive program that focuses on shared responsibility.
- Approach will incentivize ALL stakeholders to increase engagement and embrace their critical role in the damage prevention process.

The Institute - Key Components

Membership



Become a Member Today!

www.commongroundalliance.com/membership

Join the CGA to access the following benefits.

- Increase your understanding of damage prevention issues
- Influence the work being done by CGA committees (Including Damage Reporting, 811, Best Practices and Technology)
- Ensure your stakeholder group is well represented
- Network with various industry experts
- Demonstrate your commitment to damage prevention
- Gain exposure to new technologies in research & development
- Access CGA materials, reports and program information that is restricted to CGA membership
- Benefit from member pricing on CGA publications and events

JOIN NOW

CGA Conference

2022 CGA Conference & Expo
April 4-8, 2022 | Anaheim, CA

 **Continuing**
the **Conversation**

Transforming Damage Prevention



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