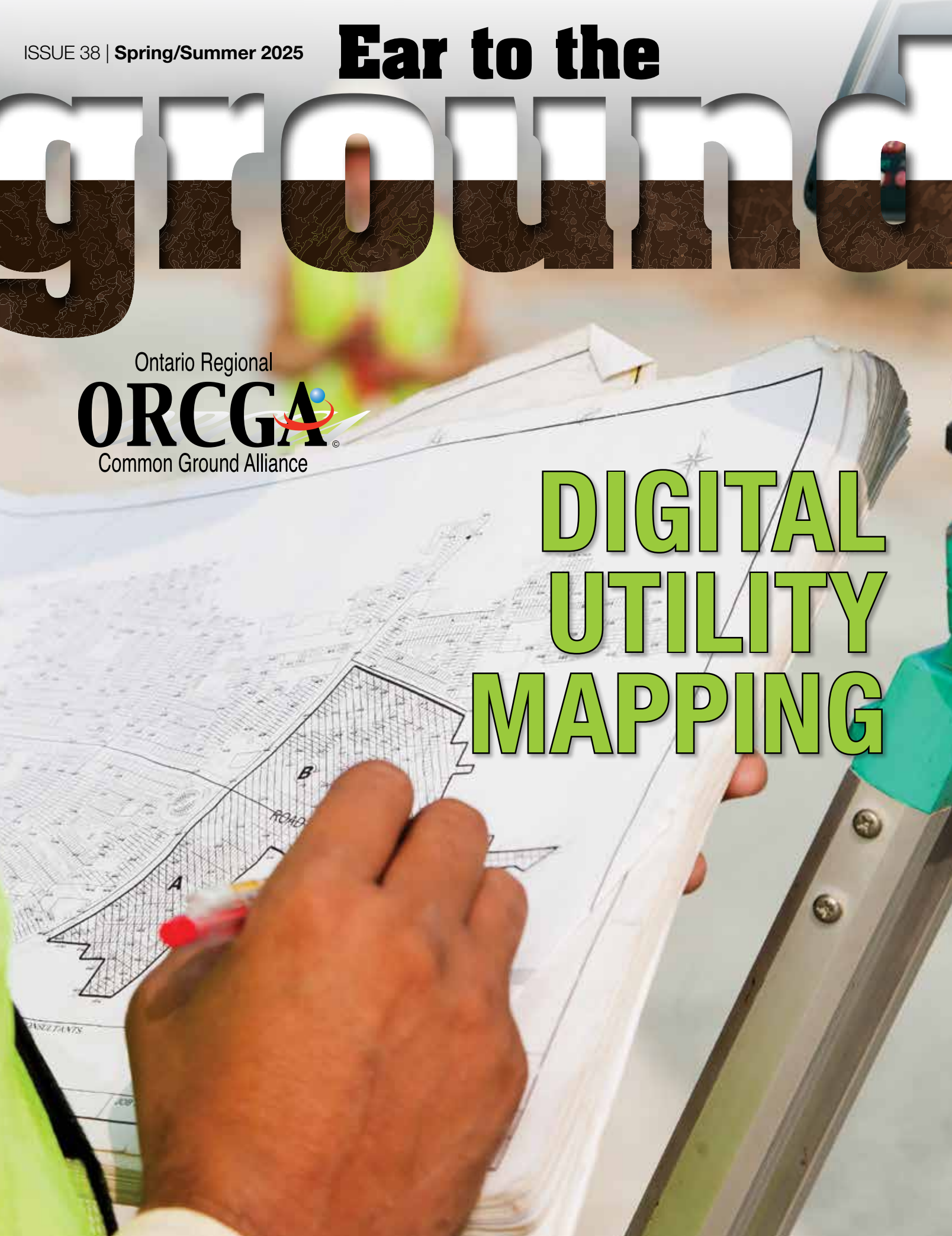
ISSUE 38 | **Spring/Summer 2025**

Ear to the ground

Ontario Regional ORCGA© Common Ground Alliance



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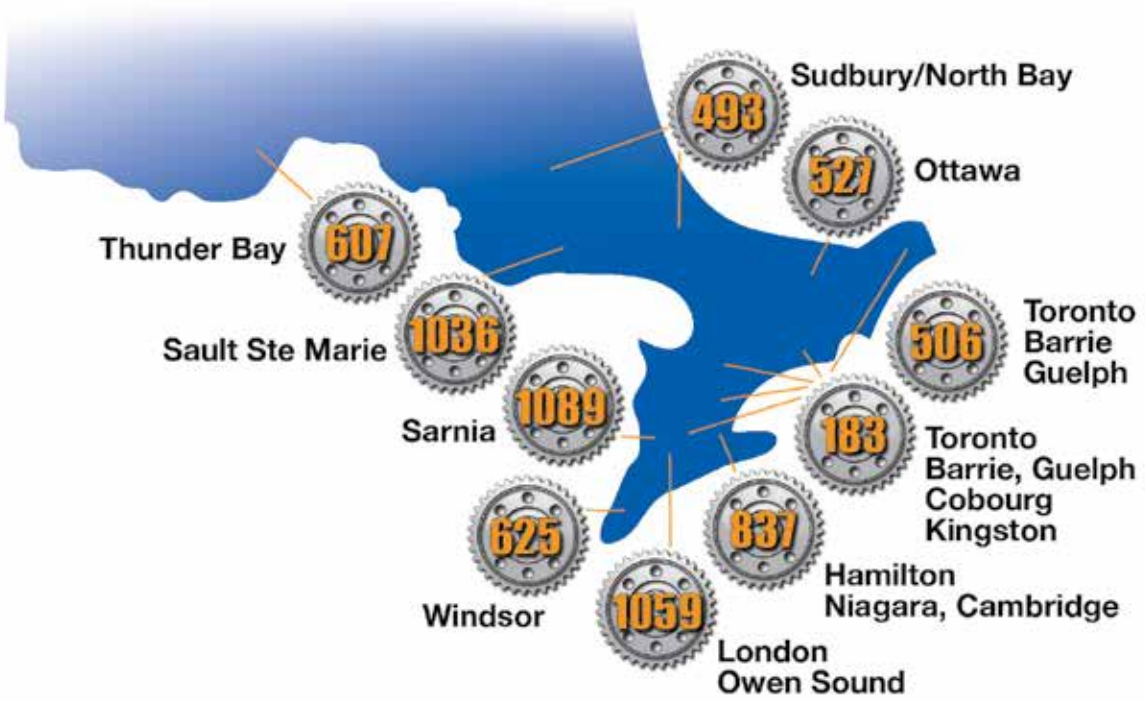

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Ontario Regional ORCGA Common Ground Alliance

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The Ontario Regional Common Ground Alliance (ORCGA) is an organization promoting efficient and effective damage prevention for Ontario's vital underground infrastructure. Through a unified approach and stakeholder consensus, ORCGA fulfills its motto of "Working Together to Build a Safer Ontario."

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President's Message

Doug Lapp, President & CEO, ORCGA

On behalf of the Board of Directors and staff of the ORCGA, we would like to thank all the delegates, speakers, exhibitors, and sponsors for attending and supporting the 2025 ORCGA Damage Prevention Symposium, held in Ottawa last month.

This year's Symposium included 13 informative sessions presented by leading professionals, including two panel sessions covering utility mapping as it relates to locating and damage prevention, as well as a locator training panel where locating programs and certifications across the country were discussed. The Industry Tradeshow, a cornerstone of our annual Symposium, was a great success and included 32 vendors where delegates interacted with our vendors who showcased the latest tools and technologies for damage prevention. The event was capped off with a Way Back Wednesday-themed event on the tradeshow floor.

One of the highlights of our annual Symposium, and one of my favourites, is the Awards Luncheon where we present the Excavator of the Year and ORCGA awards, highlighted in this issue of ETG. This year the Awards Luncheon also included our keynote speaker, Sami Jo Small, three-time Canadian Olympian and two-time Olympic Gold medal team member for the Canadian Olympic Women's Hockey Team!

As in previous years, the ORCGA Annual Meeting and ORCGA Committees, including Best Practices, Reporting & Evaluation, and Events & Communication held meetings to discuss their agendas as well as current issues in damage prevention. It was a great opportunity for "veteran" committee members to meet up as well as interested new members.

This issue of Ear to the Ground is focused on digital utility mapping and how it is changing the way infrastructure owners are utilizing GPS to more precisely document the locations of their assets, as well as how it's used to manage risk in their damage prevention programs.

As we move through the final weeks of winter to the spring thaw, we are all reminded of the upcoming dig season beginning with Dig Safe month in April. Let us all work together to make "Every Dig, a Safe Dig!"

GPS TECHNOLOGY IN DAMAGE PREVENTION

Jason Arnold, Quality Assurance Coordinator, GTel

What comes to mind when you think of GPS? ***In 300 meters, turn left...***

Global Positioning System, or GPS, is used for navigation, asset tracking, business, banking, entertainment, and even simple tasks such as finding your lost keys. We have integrated GPS into almost every aspect of our modern lives, but the numerous ways GPS technology is used in the management of excavation and construction projects is often overlooked.

Companies use GPS to track the movement of their equipment, monitor fuel economy, and in the distribution of parts and resources. GPS is used in surveying on most large projects as well, capturing elevations and providing the excavators with a detailed scope of construction.

With the expanding range of applications, Locate Service Providers (LSPs) are investing in the integration of this technology into their business models, to expand their services and products and provide an enhanced customer experience.

HOW CAN GPS ASSIST IN DAMAGE PREVENTION?

Integrating GPS into the field of utility locating is one of the most exciting trends in the damage prevention industry.

Traditional utility locate methods often rely on manual measurements, which can be prone to errors due to factors such as uneven terrain, or long distances between measuring points.

Through the development of new Geographic Information System (GIS) software, LSPs can map the located or surveyed utilities and automate many of the measurement and sketching functions that are currently completed by Damage Prevention Technicians (DPTs). Leveraging this technology makes completing a utility locate more efficient and precise, therefore delivering an enhanced service to the end user.

Locator using GPS enabled locate receiver to collect data.

The utility would be verified by the DPT in the field, and the data collected will build a database of utilities and plot them into a GIS map. As the database expands, it will make completing the paperwork portion of the locate much faster. With an expansive database, information could be searched on the GIS map and the data could be exported as an automated drawing and attached to the locate request.

BENEFITS OF GPS IN EXCAVATION

With a database of highly accurate utility data, LSPs have the ability to offer customers an additional service that could revolutionize the excavation process.

By utilizing GIS mapping the utility drawings could be pulled from a database of surveyed infrastructure, providing paperwork with a standardized appearance across all utility locates. This process mitigates the probability of mistakes and minimizes difficult-to-interpret drawings that could be due to human error while preparing paperwork for excavators.

In addition to the required drawings that accompany many utility locates, LSPs can provide GPS data upon request, available in a number of common file formats, which could be viewed within the customer's own GIS system.

Google Earth image with utilities overlayed.

GPS opens up the possibility of the excavator being able to view a "live" image of the site with utilities overlayed, allowing to more accurately gauge the position and depth of the excavation in relation to the existing infrastructure.

Utility information presented on an interactive map provides excavators and equipment operators access to continuous visual indications of utility positioning, even when paint and other markings in the field are compromised due to weather, traffic, and construction activity. The data could also be used to enact geofencing on a project. In the context of damage prevention, geofencing is a process that sets up a digital barrier that can send an alert to the equipment operator when the

system detects the excavation is too close to a utility.

The benefit of geofencing is that excavations could be conducted safely and more efficiently while allowing for a greater level of protection for the utilities and the workers on site.

Bulldozer utilizing GPS antennae.

ARE THERE OTHER APPLICATIONS OF THIS TECHNOLOGY?

LSPs work with utility owners, surveying their facilities and providing mapping services. Traditionally that means identifying the utility and marking it on the surface of the ground, then producing a document with simple information such as measurements.

With the implementation of GPS locating, utility owners would be provided with more data pertaining to their plant and more precise mapping, meaning the records are more reliable. GPS locates provide an opportunity for utility owners to verify and update their existing records, make corrections and add detail where necessary, or plan new installations and utility upgrades. Various GPS enabled equipment can even record information such as depth of the utility and current or conductivity.

An LSP could offer this utility mapping service to municipalities and private utility owners, ensuring that project planners have the most accurate information. This would provide a greater level of protection for the underground infrastructure, as well as highly detailed information for project planning and estimation.

WHAT ARE SOME OF THE CHALLENGES OF INCORPORATING GPS INTO DAMAGE PREVENTION?

As with any developing technology, there are some hurdles to the implementation of GPS in the damage prevention industry.

Anything that might impede the satellite connection could prevent surveying and data collection. GPS can be negatively impacted by heavy tree cover or proximity to buildings. Severe weather or electromagnetic interference are also factors to consider.

For companies that have no digital mapping system in place, software compatibility and employee training can present a challenge. Mapping and GIS software differs between customers, which could impact how the data is provided. Updating or training employees to use new software can sometimes be cost prohibitive.

While there may be challenges yet to overcome, it is widely recognized that the future of damage prevention includes the integration of GPS technology. By addressing risks thoughtfully, LSPs, utility owners, and excavators can harness the transformative power of GPS. By providing the customer with GPS utility data, LSPs can ensure that their records are up to date and more accurate and reliable than outdated paper copies or scans. With experience and training, the files are easy to use and maintain, and can be provided in a common file format that suits the customer's needs.

In today's rapidly evolving urban landscape, integrating GPS technology into the management of underground utilities has become essential for enhancing safety and efficiency. Less risk means everyone gets home safely at the end of the day. Reduced downtime means that projects stay on schedule and on budget.

Locate Service Providers are exploring the implementation of GPS, and Ontario-based LSP GTel has embraced the technology and its potential applications in damage prevention.

By combining GPS with utility locates, GTel is:

- Leveraging emerging GPS and GIS hardware and software.
- Working to reduce the time necessary to complete locates.
- Building a database of high accuracy GPS utility data.
- Delivering an enhanced product to customers while maintaining our industry-leading quality and safety.

As technology continues to advance, the damage prevention industry will likely see even more innovative applications of GPS, further improving the way we manage and protect underground infrastructure. GTel strives to keep pace with new technologies through innovation, providing our customers with industry-leading quality services.

A COLLABORATIVE SUCCESS:
HOW ENBRIDGE GAS ONTARIO AND URBINT ARE REVOLUTIONIZING DAMAGE PREVENTION

Enbridge Gas Ontario

Every year, numerous incidents occur where construction activities inadvertently damage nearby underground natural gas pipelines, potentially leading to service disruptions to homes and businesses, safety and environmental hazards, and costly repairs.

The 2023 Common Ground Alliance Damage Information Reporting Tool ("DIRT") outlines a significant damage prevention challenge for the natural gas industry: natural gas facilities, along with telecom, are the most frequently damaged assets, and construction activities are involved in 83% of natural gas-related damages. There is a clear and urgent need for proactive strategies and transformative solutions to prevent these costly and disruptive incidents. The partnership between Enbridge Gas Ontario, a leader in energy distribution and damage prevention, and Urbint, an innovator in artificial intelligence-driven risk management, offers a compelling case study in leveraging technology and collaboration to achieve ambitious goals. This strategic alliance exemplifies how innovative solutions can transform operations and drive measurable success.

ADDRESSING THE DAMAGE PREVENTION CHALLENGE

Damage prevention has long been a focal point for Enbridge Gas Ontario.

Enbridge Damage Prevention Inspector using Urbint.

The company faced a daunting baseline of 2,430 damages annually, leading to an ambitious corporate objective to reduce this number by 50%. Such an ambitious target created urgency to improve both operational safety and efficiency. Enbridge Gas Ontario needed clear, actionable strategies.

Recognizing the limitations of traditional approaches, Enbridge Gas Ontario sought a new way forward — one rooted in analytics, efficiency, and scalability. They selected a solution from Urbint, whose artificial intelligence technology offered the analytical backbone required to transform Enbridge Gas Ontario's damage prevention practices.

WHY URBINT?

Urbint's AI-powered Damage Prevention platform utilizes a risk-based approach to classify the likelihood of damage on planned excavation activities. This tool has provided Enbridge Gas Ontario with:

- **Enhanced Efficiency for Proactive Engagement:** Enbridge Gas Damage Prevention Inspectors (DPIs) target the highest risk excavations and have in-person safety discussions with contractors prior to work commencing.
- **A Programmatic and Analytical Approach:** Urbint's solutions integrate seamlessly into existing workflows, offering data-driven insights that inform decision-making.
- **Damage Reduction:** The use of Urbint's AI is correlated with a significant reduction in pipeline damages and has instilled confidence as a valuable damage prevention tool.

In addition, Urbint's Customer Success Team collaborated closely with the Enbridge Gas Ontario's Damage Prevention team to evolve operational strategies based on industry best practices, fostering a shared commitment to leverage innovation to achieve the company's ambitious damage prevention goals.

RESULTS THAT SPEAK VOLUMES

Within the first two years of implementing Urbint's tool, Enbridge Gas Ontario achieved a **23% reduction in damages and avoided hundreds of thousands in operational repair costs** — a testament to the effectiveness of Urbint's platform and the Enbridge Gas Ontario team's commitment to damage prevention best practices. Key metrics further underscore the success of the Urbint tool and the Enbridge Gas Ontario's damage prevention practices generally:

- **Damage Rate Reduction:** Enbridge Gas Ontario's damage rate plummeted from 2.32 in 2022 to 1.91 in 2024.
- **Improved On-Site Contact:** The frequency of on-site contacts by DPIs improved steadily over the two-year deployment period. Analysis revealed that damages often occurred 28 days after the locate was complete, enabling Enbridge Gas Ontario to adjust its site visit planning to reinforce best practices on excavation sites in the vicinity of its underground pipelines.
- **Proactive Insights:** Urbint's AI models predict potential infrastructure damage with over *20 times greater accuracy than traditional methods*, significantly improving response times and mitigating risk.

These achievements illustrate the remarkable potential for integrating AI into operational workflows, demonstrating how technology can drive

meaningful progress toward ambitious infrastructure integrity goals.

LOOKING AHEAD: SUSTAINING AND SCALING SUCCESS

This collaboration aims to set a new industry standard for proactive damage prevention, demonstrating the power of AI and collaboration to enhance safety and sustainability across the energy sector. Key next steps include:

- **Deepening Insights:** Enbridge Gas Ontario and Urbint plan to refine their analytics to uncover new patterns and opportunities for additional damage prevention strategies.
- **Continued Model Adoption:** Continued positive results build confidence in Urbint's technology and promote increased adoption across Ontario.
- **Goal Alignment:** The Enbridge Gas Ontario damage prevention program has achieved a 23% damage reduction in its first two years, demonstrating significant progress towards the 50% reduction goal. Enbridge Gas Ontario and Urbint will continue to optimize the program in support of this critical objective.

As Enbridge Gas Ontario continues to explore these possibilities, Urbint remains committed to supporting Enbridge's vision for a safer, more efficient energy distribution network.

A QUOTE FROM LEADERSHIP

"Our partnership with Urbint has been transformative. By embracing artificial intelligence, we've not only reduced damages but also set a new standard for operational excellence in damage prevention," said Mike Ovsonka, Manager Damage Prevention at Enbridge Gas Ontario.

CONCLUSION

The Enbridge Gas Ontario-Urbint partnership serves as a powerful example of what can be achieved when industry expertise meets cutting-edge technology. By embracing AI-driven solutions and fostering a culture of continuous improvement, Enbridge Gas Ontario has not only reduced damages but also enhanced safety, improved operational efficiency, and set a new standard for excellence in damage prevention. This success story encourages other companies in the energy sector to explore similar innovative approaches, paving the way for a safer and more resilient energy future for all.

The Enbridge Gas Ontario Damage Prevention and Urbint Customer Success teams were instrumental in driving this partnership forward. Together, they championed the deployment of Urbint's AI tools to tackle Enbridge Gas Ontario's damage prevention challenges.

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2024 WINNERS

Member of the Year Award

The ORCGA Member of the Year is presented annually to the ORCGA members whose dedication and service to the ORCGA went above and beyond the call of duty during a given year.

Jeremy Long

Jim Douglas Award of Excellence

The Jim Douglas Award of Excellence in Damage Prevention is an award that honours ORCGA members that have served the organization over a long period of time and whose impact has left its mark on the organization in a positive and memorable way.

Tony Harnett

Doug Niles

VIVAX METROTECH

ENBRIDGE Life Takes Energy

Ontario Regional ORCGA Common Ground Alliance

ORCGA Education & Training

DPT
Damage Prevention Technician

Damage Prevention Technician Training provides instruction on the fundamentals of locating. The DPT training is focused on a combination of in-class instruction (in-depth review of techniques used to locate all utility types, safety, locate requests and industry practices), field awareness review and on-the-job competency assessment.

SET
Safe Excavation Training

Safe Excavation Training (SET) is the knowledge requirement for excavators in Ontario. SET is based on the latest research and resources on excavation best practices, legislation and standards. It provides instruction on the fundamentals of compliance, planning and design, notification service, locating and marking and excavation.

Ontario Regional ORCGA Common Ground Alliance

DIG SAFE

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