Through
the IIJA lens

Ways to curb fraud and improve risk management

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The Infrastructure Investment and Jobs Act (IIJA) presents an opportunity to help capital projects deliver what the public has paid for with transparency and accountability

The specter of fraud is real

There is widespread alarm over the fraud and waste that the historic 'once in a generation' $1.2 trillion infrastructure bill (IIJA) will trigger. Experts such as Stephen Street, president of the Association of Inspectors General, a nonprofit group, have suggested that 10% of the $1.2 trillion could be siphoned off. That is, $120 million of taxpayers' money that may never make it to the roads, bridges, railways, ports, waterways, high-speed internet infrastructure, etc., it was meant for.

Scams and misappropriation of funds in large programs are not new. The U.S. government has routinely seen funds fall through the cracks of traditional governance and program oversight. Medicare programs, the Pandemic Unemployment Assistance program and the Paycheck Protection Program have all been susceptible to fraud. The U.S. Government Accountability Office said that, in the fiscal year 2019, an estimated $175 billion in improper payments were made. The IIJA will inevitably add to those numbers. **The IIJA mentions the word 'fraud' just seven times in its text**—meaning, the IIJA may not have as acute a focus on anti-fraud controls, activities, and monitoring as taxpayers may desire.

Naturally, administrators are concerned. Minnesota's legislative auditor is worried about how the funds will be accounted for and what plans are in place to monitor infrastructure spending. Washington State has asked for an additional $1.6 million because of an increased auditing workload caused in part by the pandemic funding program and because of the expected workload from the new infrastructure law. But it is becoming evident to the industry that auditing alone will not be a fast or effective way to monitor compliance and counter fraud.

Causes and forms of fraud: A world of unique pain

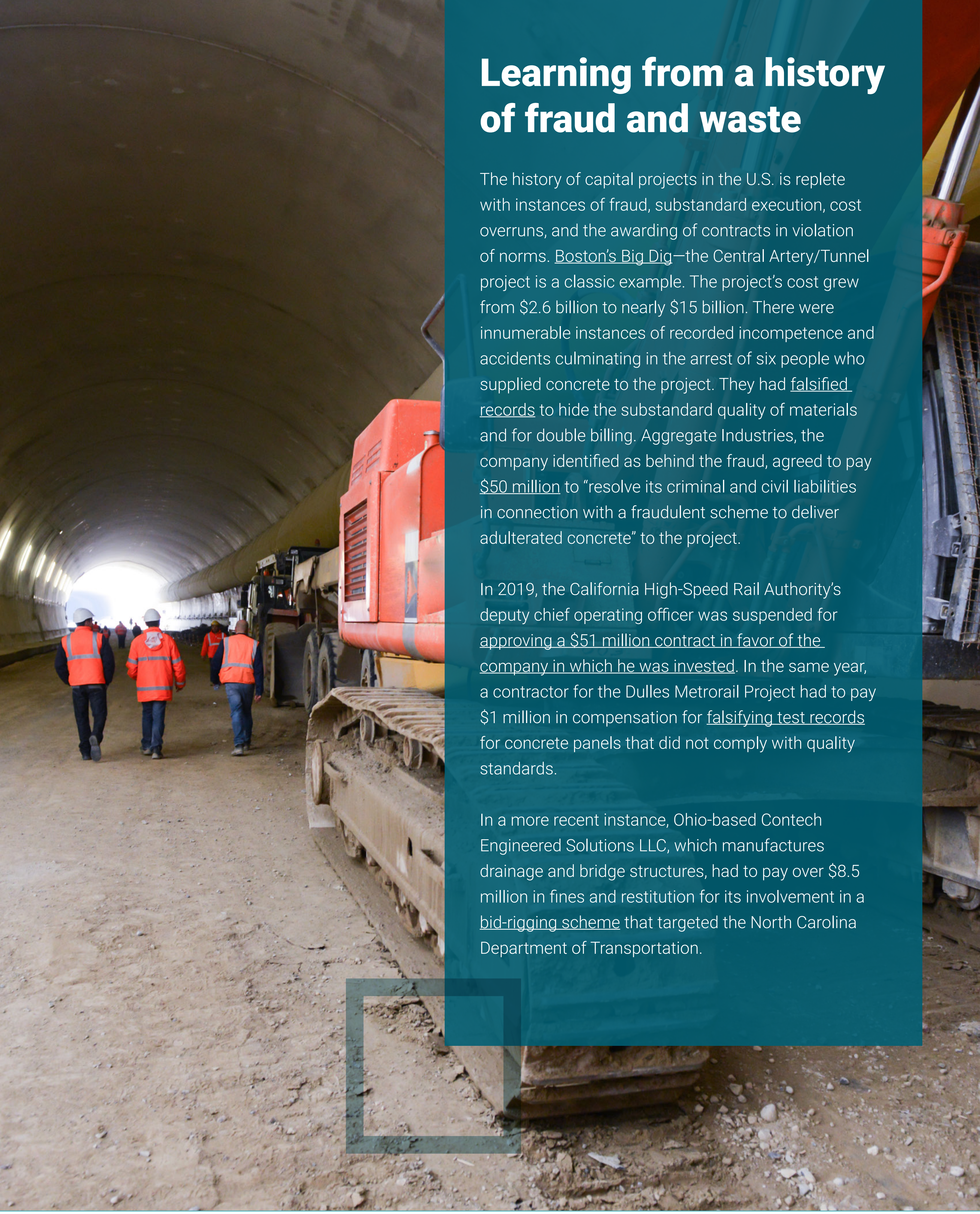
The lack of adequate oversight is a critical concern. The IIJA has no guidance or provision for monitoring and addressing waste and fraud. Risk experts have been saying that obsolete technology is among the handicaps the industry and federal agencies face to minimize or eliminate fraud.

Capital projects are complex, chaotic, and always a 'work-in-progress' right until the moment of handover. They are notorious for unleashing a storm of paperwork, ranging from bids and budgets to contracts and blueprints, notices and approvals, waivers and discounts, supply chain progress reports, invoices, and regulatory filings. This is a compliance officer's nightmare.

Information asymmetry in these projects makes them fertile ground for fraud. Some of the industry-specific ways to game the system for financial gain include:

- Rigging contracts
- Front-loading the schedule of values
- Over-invoicing or billing for unperformed work
- Payment applications for out-of-scope costs
- Inflation of labor costs or inaccurately representing time spent on a project
- Misrepresentation of facts, such as who performed the contracted work (subcontracting)
- Unapproved deviations from technical specifications
- Use of inferior raw materials
- Misleading and inaccurate accounting for usage of leased equipment
- Excessive waste and unutilized (unaccounted) residual material

And this is just the tip of the fraud iceberg.

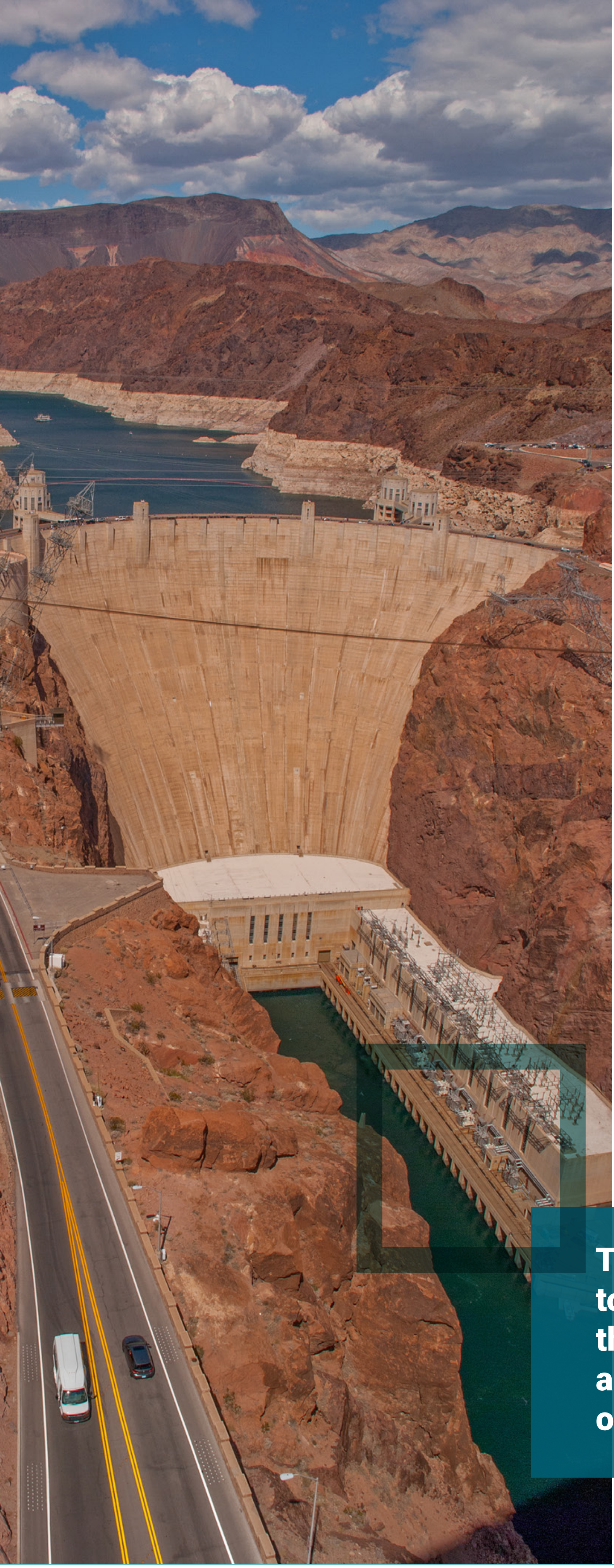


Learning from a history of fraud and waste

The history of capital projects in the U.S. is replete with instances of fraud, substandard execution, cost overruns, and the awarding of contracts in violation of norms. Boston's Big Dig—the Central Artery/Tunnel project is a classic example. The project's cost grew from $2.6 billion to nearly $15 billion. There were innumerable instances of recorded incompetence and accidents culminating in the arrest of six people who supplied concrete to the project. They had falsified records to hide the substandard quality of materials and for double billing. Aggregate Industries, the company identified as behind the fraud, agreed to pay $50 million to "resolve its criminal and civil liabilities in connection with a fraudulent scheme to deliver adulterated concrete" to the project.

In 2019, the California High-Speed Rail Authority's deputy chief operating officer was suspended for approving a $51 million contract in favor of the company in which he was invested. In the same year, a contractor for the Dulles Metrorail Project had to pay $1 million in compensation for falsifying test records for concrete panels that did not comply with quality standards.

In a more recent instance, Ohio-based Contech Engineered Solutions LLC, which manufactures drainage and bridge structures, had to pay over $8.5 million in fines and restitution for its involvement in a bid-rigging scheme that targeted the North Carolina Department of Transportation.



Other sectors provide lighthouse examples of combating fraud and creating transparency in large federal projects. The Pandemic Response Accountability Committee (PRAC) is one such example. The committee keeps an eye on $5 trillion in pandemic-related federal relief spending for fraud, waste, abuse, and mismanagement using technology-enabled oversight. The PRAC tools and methodologies shed light on how the IIJA could approach its challenge. There is, perhaps, a role here for the Council of the Inspectors General on Integrity and Efficiency (CIGIE), as well. The CIGIE is mandated to audit, inspect, and investigate public spending to prevent fraud. If numbers are anything to go by, the CIGIE has been effective.

CIGE's annual report for 2021 said that, with a budget of $3.4 billion, the council had saved a total of around $74.7 billion. This saving translates to a return of $22 on every dollar spent. But with growth in the size of projects, as with the IIJA spending, the CIGIE will need more resources to handle the workload. Inspectors General should, therefore, be provided with a reasonable percentage of the budget they oversee to discharge their duties.

In addition to audits and investigations, the IIJA should appreciate and encourage the irreplaceable role that insiders play in exposing fraud. Whistleblowers who have access to inside information can unearth fraud that may otherwise go unnoticed. Whistleblowers have been responsible for $46.5 billion (or 72%) of recoveries since 1986.

The incentive that whistleblowers stand to gain (30% of the funds recovered through their disclosures) can become a powerful tool in the hands of those overseeing the IIJA funding.

How everyone emerges a winner

Infrastructure investment should maximize the public benefit, improve quality of life for constituents, and benefit local and regional economies. Given that delivering maximum benefits to the public is an important goal, preventing and measuring fraud is essential. **There are four ways to use technology to achieve this.**

How everyone emerges a winner

1 **Utilize digital systems** that connect and flawlessly integrate the complex industry ecosystems. Digital systems create a network that provides project owners, planners, executors, and regulators with reliable real-time data on types of costs, plans, approvals, contracts, progress reports, bills of materials, etc.

Digital systems also create workflows, allowing the team to automatically access proper documents at the right times to make their decisions, follow what each decision led to, and measure its outcomes. Over time, this drives agencies to improve their program delivery because they have the data they need to make better decisions. In addition, auditing becomes simpler.

Capital owners have not been without the tools needed for their businesses. They have been using software tools to manage programs and projects for at least 30 years. Tools specifically designed to help owners (rather than designers or contractors) have risen in the last 10 to 15 years. However, many agencies still rely on a mix of Microsoft Excel, homegrown solutions, and point solutions to meet their needs rather than on an enterprise- or ecosystem-wide solution.

2 **Implement best practices** from a public policy viewpoint. Best practices ensure that government agencies have processes and consistent management practices that are supported by technology to operate efficiently, reduce waste, and eliminate fraud, making it simpler to reach predetermined goals.

3 **Artificial Intelligence (AI) and Machine Learning (ML)** are powerful tools to deploy against fraud and waste. With the growing data available for capital projects, it is possible to use sophisticated AI- and ML-based tools to predict, detect, and control fraud. Both AI and ML are used extensively by the private sector in financial services, healthcare, and manufacturing to map procurement, financial transactions, and project reports against contracts, approvals, and budgets in order to flag anomalies. The result is an increase in efficiency without an increase in personnel. A [study submitted to the Administrative Conference of the United States] in 2020 showed that "the government's AI toolkit is diverse and spans the federal administrative state. Nearly half of the federal agencies studied (45%) have experimented with AI and related ML tools." These agencies use AI and ML for regulatory research, analysis, monitoring, enforcement, public services and engagement, internal management, and adjudication.

4 **A single source of truth** is the gold standard in solutions to the problem of fraud and waste management. One challenge that industry veterans often point to as the cause of projects slowing down or expensive errors creeping into execution is that plans, approvals, agreements, budgets, contracts, and progress reports are scattered across various departments. Each organization has its unique way of storing information. Therefore, sharing of data across stakeholders is slow and often conflicts with data available in other systems. The data available, for example, to the suppliers of services and the finance team may not match those used by on-site contractors. This data mismatch creates opportunities for fraud. Projects must have a reliable single source of truth, a digitized database accessible to all stakeholders to eliminate these issues. Digitization makes it possible to take decisions faster and with greater confidence that contracts, approvals, and budgets are not violated.

The upside of the 'single source of truth' goes deep and wide. At the very top of the benefits is a reduction of opportunities for fraud through accurate documentation, workflow and permissions management, and auditability. Using digital technology ensures that each funding agency does not need to hire and train a minor platoon of financial forensic specialists to run audits. Instead, technology makes the job simpler, easier, and more dependable.

Why the IIJA is an opportunity in disguise

The stakes are enormous. The funds involved make fraud management everyone's responsibility. Codes of conduct, ethical practices, compliance mandates, auditors, friendly whistleblower policies, checks and balances, and legal deterrents are essential but not enough. Technology provides the tools that result in a win–win–win for federal project owners, the agencies delivering the infrastructure program, and the public. Of course, fears over infrastructure funds being misused will always persist. However, the IIJA offers all the right reasons to urgently examine the role of technology in mitigating fraud in infrastructure projects. This could be a blessing in disguise for taxpayers and the industry.

About Aurigo Software

Aurigo builds software that helps build the world. Aurigo is an AI-native company that helps capital owners connect planning, construction, and operations in a single environment, improving decision-making and execution. Trusted by over 300 organizations across infrastructure and facilities, Aurigo manages more than $450 billion in capital programs, with over 40,000 projects throughout North America. Aurigo is a privately held U.S. corporation headquartered in Austin, Texas, with global offices in Canada, South Africa, and India.

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