

Case Study

Transforming Site Safety Through Digital Innovation



From live risk dashboards and AI-powered quality assurance to drone technology and connected works management, United Infrastructure is using digital innovation to create safer, smarter and more productive construction sites.

Overview

Every day, thousands of safety-critical decisions are made across our projects.

At United Infrastructure, we're using digital technology to help our teams make those decisions faster, with greater confidence and better information. By combining in-house innovation with industry-leading digital tools, we're reducing risk, improving quality and helping deliver safer outcomes across telecoms, utilities, energy and social infrastructure.

The Challenge:

Cadent funded all materials required Construction projects generate huge amounts of safety, quality and operational data. When information is fragmented or managed manually, risks can be harder to spot, decisions take longer and valuable time is lost. We wanted to give our teams a clearer, real-time view of project performance while reducing administration and improving consistency across every site.

The Solution:

Our innovation programme brings together a range of digital technologies that improve safety, productivity and operational performance.

Our bespoke SHEQ Digital Risk Management Application gives teams a live view of around 70 operational risks through a single digital dashboard, making it easier to identify emerging issues, prioritise action and make informed decisions.

Through Innovate UK's BridgeAI programme, we're also developing an AI-powered reinstatement solution to improve quality assurance, reduce manual inspections and strengthen compliance.

United Infrastructure was one of just four organisations selected from more than 100 applicants to receive funding for the project.

Other innovations included:

- Project Bugspy, using drone technology to capture accurate as-built records, improve engineering validation and strengthen site traceability.
- Totalmobile, our connected works management platform, improving workflow consistency, productivity and access to real-time project information.
- AI-generated training videos and digital induction tools, helping standardise learning and improve site readiness across our workforce.

Together, these technologies are creating connected sites where better information leads to better decisions.

Together we achieve more

ZerHarm
United in safety - Safer together

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Technology should remove uncertainty from construction, giving people better information at the point they need it. Whether that's through live risk dashboards, AI-assisted quality assurance, connected works management or drone-enabled site intelligence, our goal is to make it easier for teams to work safely, consistently and efficiently.

The most successful innovations aren't the most complex. They're the ones that solve everyday operational challenges, improve decision-making and help create safer outcomes for our people and our clients. //

Gabriel Durojaye, Group Director of Research Innovation & Technology



ESG Benefits:

Digital innovation helps us create safer workplaces, improve resource efficiency and deliver better outcomes for our people, clients and communities.

By digitising risk management, improving quality assurance and connecting project teams with real-time information, we're supporting our Zero Harm strategy while reducing unnecessary administration, improving productivity and enabling more sustainable project delivery.

