

Standardizing Pipe Assembly Inspections and Safety Monitoring

How Anvil International transformed safety-critical inspections at nuclear plant construction sites, reducing inspection time by half while maintaining full compliance and worker safety.



50%

Faster inspections using guided digital workflows and automated reporting



100%

Standardized compliance reports auto-generated and securely archived



100%

Digital traceability via centralized, auditable inspection records

Client: Anvil International

Industry: Construction / Energy / Nuclear

Scale: Multi-site nuclear power plant construction projects with complex inspection workflows

Worker Environment: Inspectors operating 10–15 meters above ground performing precision checks under strict safety protocols

IT Environment: Secure public cloud enabling centralized access and workflow automation

Devices: RealWear HMT-1 headsets for fitter/inspectors; DSLR cameras for high-resolution imagery; desktops for report compilation

Anvil International, a key contractor for nuclear power infrastructure, is responsible for ensuring the quality and safety of thousands of pipe assemblies and weld structures. During nuclear plant construction, inspectors must validate each component with photo evidence and documentation while adhering to strict safety and regulatory standards.

Before Telepresenz, inspections relied on manual photography, handwritten notes, and fragmented digital uploads. This process was slow, risky, and inconsistent. Inspectors often had to juggle cameras, clipboards, and forms while working 15 meters above ground, increasing the potential for human error and safety hazards.

Without standardized templates or centralized storage, reporting times stretched from hours to days, and maintaining audit readiness required heavy administrative effort.

“Our inspectors had to balance safety, accuracy, and paperwork — all while working dozens of meters in the air.”

Solution: Telepresenz® Smart Ops™ for Digital Inventory Management and Remote Inspections

Anvil International deployed Telepresenz Smart Ops to digitize and streamline the entire inspection process — combining safety, photo capture, and compliance reporting into one seamless workflow.

Using RealWear HMT-1 hands-free headsets, inspectors followed guided digital checklists prompting every photo and verification step. Low-resolution images were captured instantly for rapid reporting, while DSLR photos were attached post-inspection for high-definition documentation.

The Smart Ops system automatically compiled both image sets and metadata into standardized reports, stored securely in the cloud for QA and regulatory use. Supervisors could review and approve inspections remotely, accelerating compliance and improving cross-site collaboration.

“Smart Ops gave our team a safer, smarter way to work — no juggling devices, no missed steps, and no gaps in compliance.”

With Smart Ops, inspection time was reduced by 50%, while safety incidents linked to manual documentation were fully eliminated. Reports that once took hours to compile are now generated automatically in standardized digital formats.

Anvil's QA teams can now review inspection data remotely, ensuring consistency and compliance across multiple nuclear construction sites. The integration of Smart Ops has strengthened both operational efficiency and workforce safety, creating a unified digital foundation for future projects.

Key Outcomes:

- 50% reduction in inspection time through guided digital workflows
- Zero safety incidents through hands-free RealWear HMT-1 operation
- 100% standardized, audit-ready inspection reports
- Streamlined multi-site collaboration and QA oversight
- Strengthened safety culture and documentation compliance

“Smart Ops has redefined how we inspect, document, and protect our workforce — all at once.”

About Telepresenz®

Telepresenz® is an AI-powered Smart Operations Platform that connects people, processes, and assets across industries. Through Smart Ops, Smart Eye, and Smart ITM, Telepresenz helps organizations digitize frontline workflows, enhance safety and compliance, and achieve operational excellence—anytime, anywhere.