Digitalisation

for Asset Integrity Management Systems

Technical Case Study – UK Gas Terminal Deployment

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Industry Challenge - Why Change is Needed

Ageing Infrastructure & Outdated Data

Engineering data incomplete, inconsistent, or outdated, increasing asset management risk

Inefficient & Repetitive Inspections

Frequent manual site visits are costly, time-consuming, and complex

Increased Operational & Safety Risks

Missing or inaccurate data raises personnel exposure and HSE non-compliance risk

Labour-Intensive Manual Verification

Physical inspections slow workflows and increase operational burden

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Onshore Gas Storage Plant, UK

Real-World Consequences of Traditional Approach

HSE notice issued over integrity concerns and outdated as-built documentation

Required rapid generation of accurate inspection isometrics

Needed verification of existing documentation and identification of asset anomalies

Goal to minimise prolonged site visits and reduce operational disruption
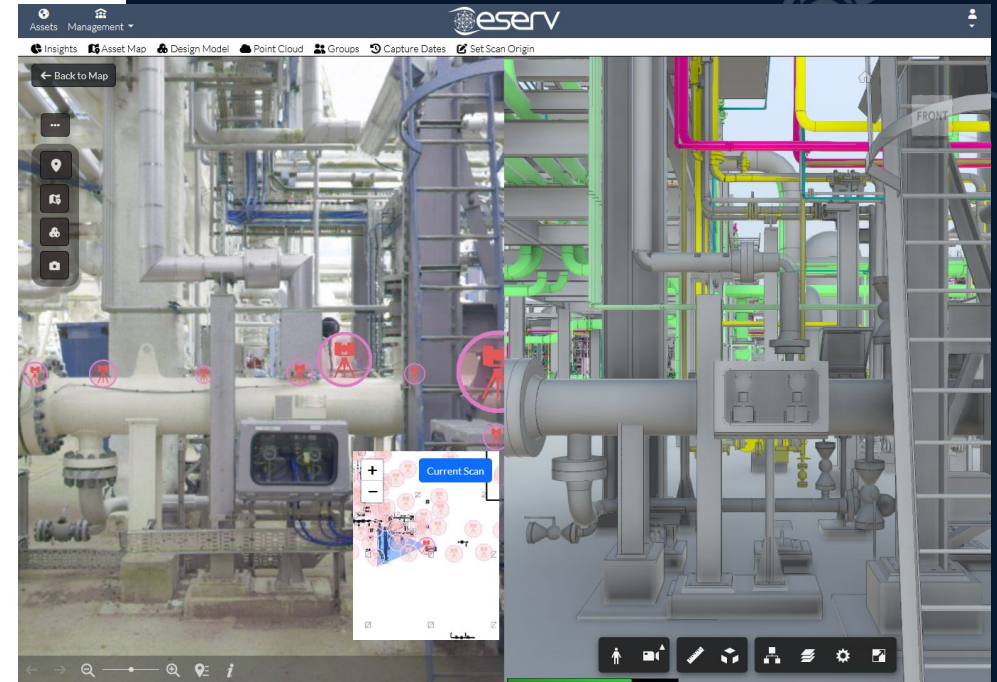
Introducing AS-TEG™

- Full 3D laser scan to create a **high-fidelity, engineering-grade digital twin** of the entire facility

- Enable digital support for engineering, inspection, and dimensional control work

- Generate digital inspection isometrics for the entire gas terminal

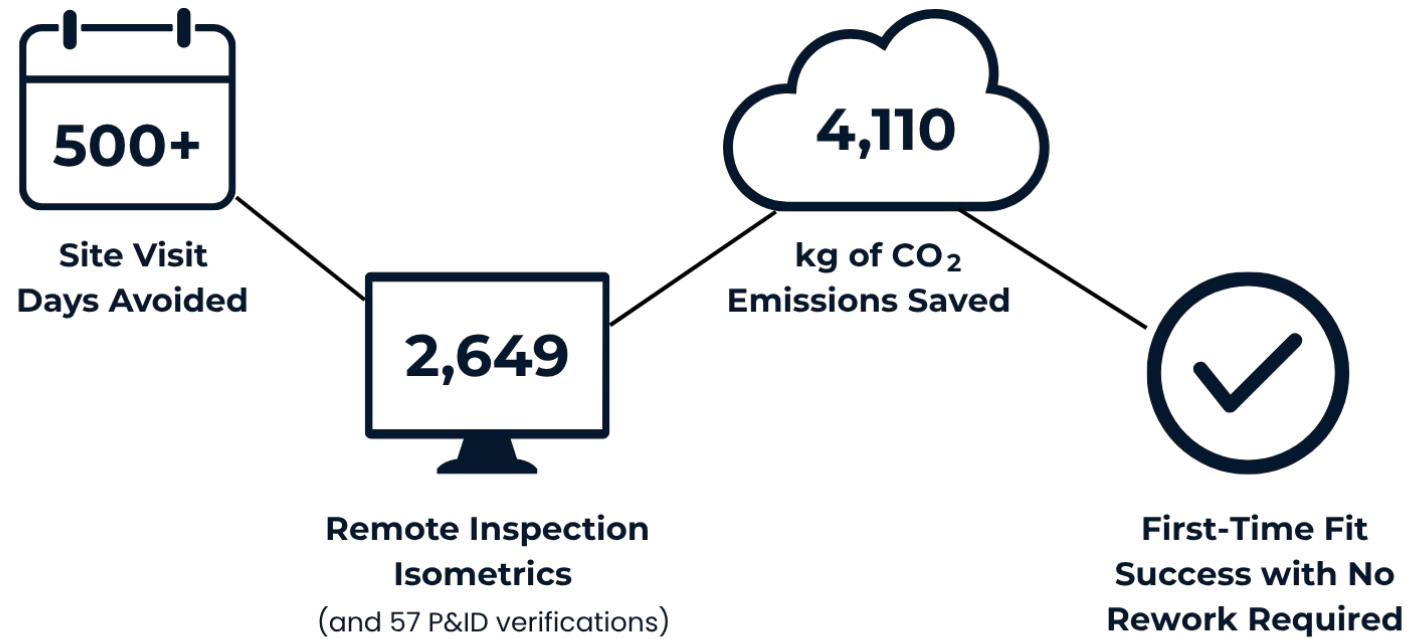- Conduct remote verification and anomaly heatmapping

Functional Capabilities of the AS-TEG™ Platform

- **Inspection Isometric Generation**: Digitalises critical piping and structures, allowing remote review and P&ID verification

- **Heatmapping Anomalies**: Identify deviations from as-built conditions, flagging issues for prioritised inspection

- **Remote Collaboration**: Provides cross-disciplinary teams with access to current asset data anywhere, reducing site visits

- **System Integration**: Connects seamlessly with engineering databases, maintenance, and asset management platforms

Measurable Outcomes from Deployment

500+

**Site Visit
Days Avoided**

2,649

**Remote Inspection
Isometrics**

(and 57 P&ID verifications)

4,110

**kg of CO_2
Emissions Saved**

**First-Time Fit
Success with No
Rework Required**

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Technical Benefits for Integrity Management

Provides accurate, up-to-date asset information for improved inspection planning

Instant access to detailed as-built models reduces delays and uncertainty

Speeds up anomaly detection and resolution using comprehensive digital records

Minimises manual data reconciliation, lowering labour costs and removing failures to fit

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Modular and Bespoke Integration Options

- Tailored to operator-specific needs with flexible digital twin integration levels

- Supports passive contextual models to dynamic, transactional twin via API integration with CMMS, DMS and Integrity Software

- Enables overlay of live data feeds, creating a centralized asset management hub

- Integrates seamlessly with existing asset management tools to synchronise engineering data and maintenance workflows

- Modular architecture allows deployment as standalone or fully integrated within wider digital transformation strategies
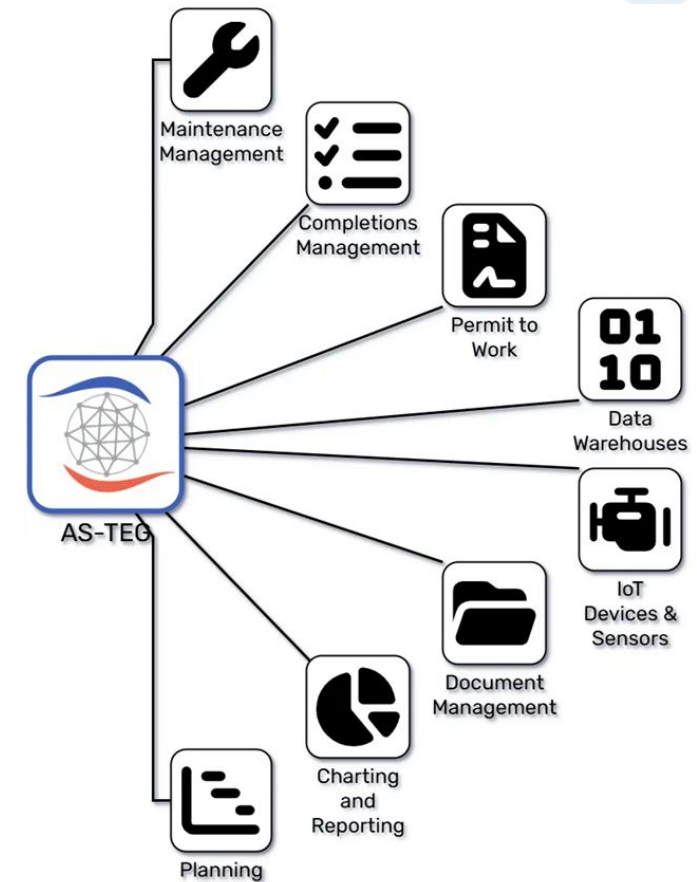
Broader Industry Implications

✓ Moves operators from reactive to proactive asset care & maintenance

✓ AS-TEG™ reduces cost, lowers risk, and slashes inefficiencies

✓ Supports late-life asset optimisation and life extension through rapid access to accurate integrity information

Conclusion & Takeaways

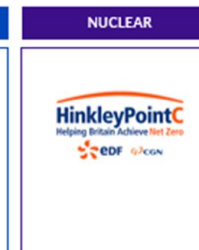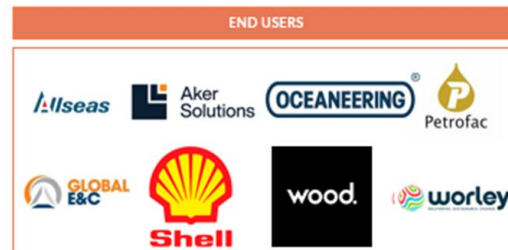AS-TEG™ has been developed to transform integrity workflows

Proven to:

- Reduce site exposure
- Provide greater regulatory compliance
- Give operators more control over their asset data

AS-TEG™ delivers scalable, field-proven impact across all complex industrial infrastructure both onshore and offshore

Q&A

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at Unmatched **Speed And Simplicity**

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