

De-risking decommissioning through better data insights

Do you understand the condition of your assets?

Faye Sherriffs | Business Development Manager – Operations & Decommissioning

Data acquired across the asset lifecycle provides a technical baseline for decommissioning assessment

GEO-DATA BY LIFECYCLE PHASE

Site selection	Screening	Site survey	Design	Installation	O&M	Late-life management
						
Regional bathymetry, desk study, seabed sediment maps	Geohazard and route screening (MBES, SBP)	Geophysical (MBES, SSS, SBP) and geotechnical (CPT, boreholes)	Integrated ground model, soil parameters	As-built and positioning data (USBL, GNSS)	ROV/AUV inspection, integrity and monitoring data	

How can existing data support life extension or removal?



Extension and decommissioning

- Reuse survey and as-built data to define removal scope
- Identify data gaps; run targeted surveys only where required
- Pre/post-removal seabed verification (MBES, SSS, sampling)
- Ground model input for remediation and life-extension assessment

Combining field knowledge, remote operations, integrity data and data management to innovate in decommissioning

REMOTE & UNCREWED OPERATIONS

- USVs and ROVs running remote campaigns
- Operated from shore through Remote Operations Centres (ROC)
- No one offshore, fewer crewed interventions, less vessel time

STRUCTURAL & PIPELINE INTEGRITY MODELLING

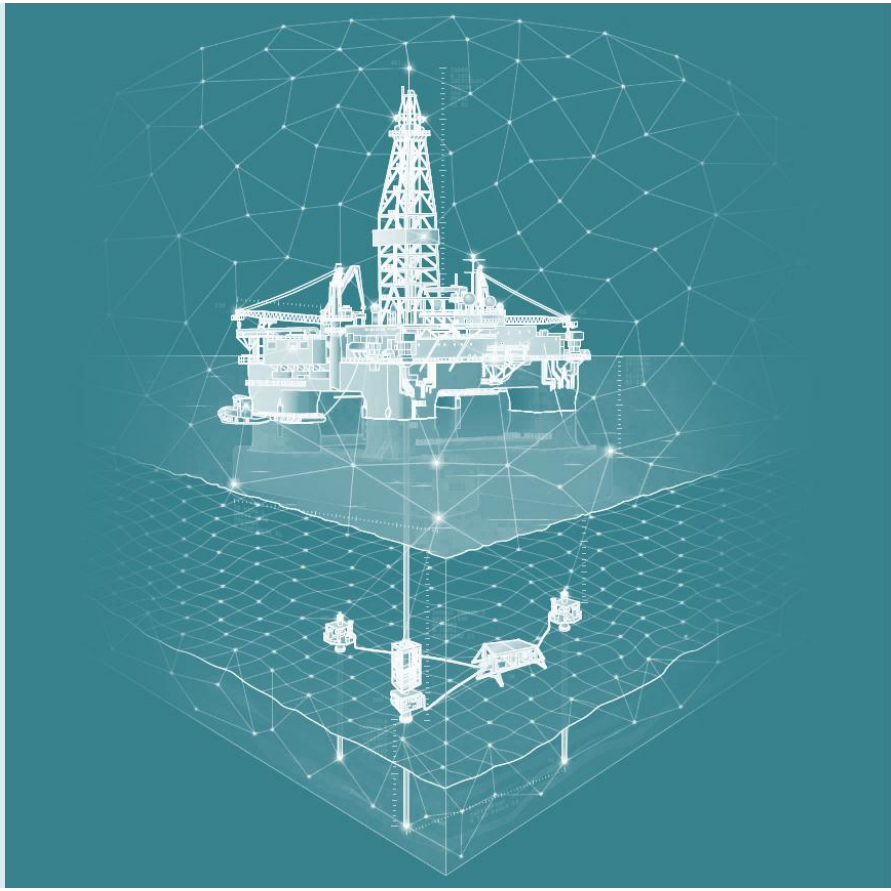
- Fatigue and remaining-life estimates
- Free-spans, on-bottom stability, pipeline walking and vortex-induced vibrations
- Integrity evidence for life-extension and decommissioning decisions

AUGMENTED 3D MODELS & DIGITAL TWIN

- Photogrammetry, AR and digital twins
- Video handling and storage
- Better asset understanding and collaboration

DATA MANAGEMENT & INTEGRATION

- VirGeo® connecting data, workflows and decisions
- AI-assisted anomaly detection and real-time alerts
- Inspection, survey and integrity data in one place



Photogrammetry created a measurable as-is model of an ageing offshore structure before intervention

THE PROJECT

- Ageing offshore structure in a complex brownfield environment containing structural members, risers and J-tubes.
- Planned works needed verified dimensions and clearances, despite restricted access and limited visibility.

THE APPROACH

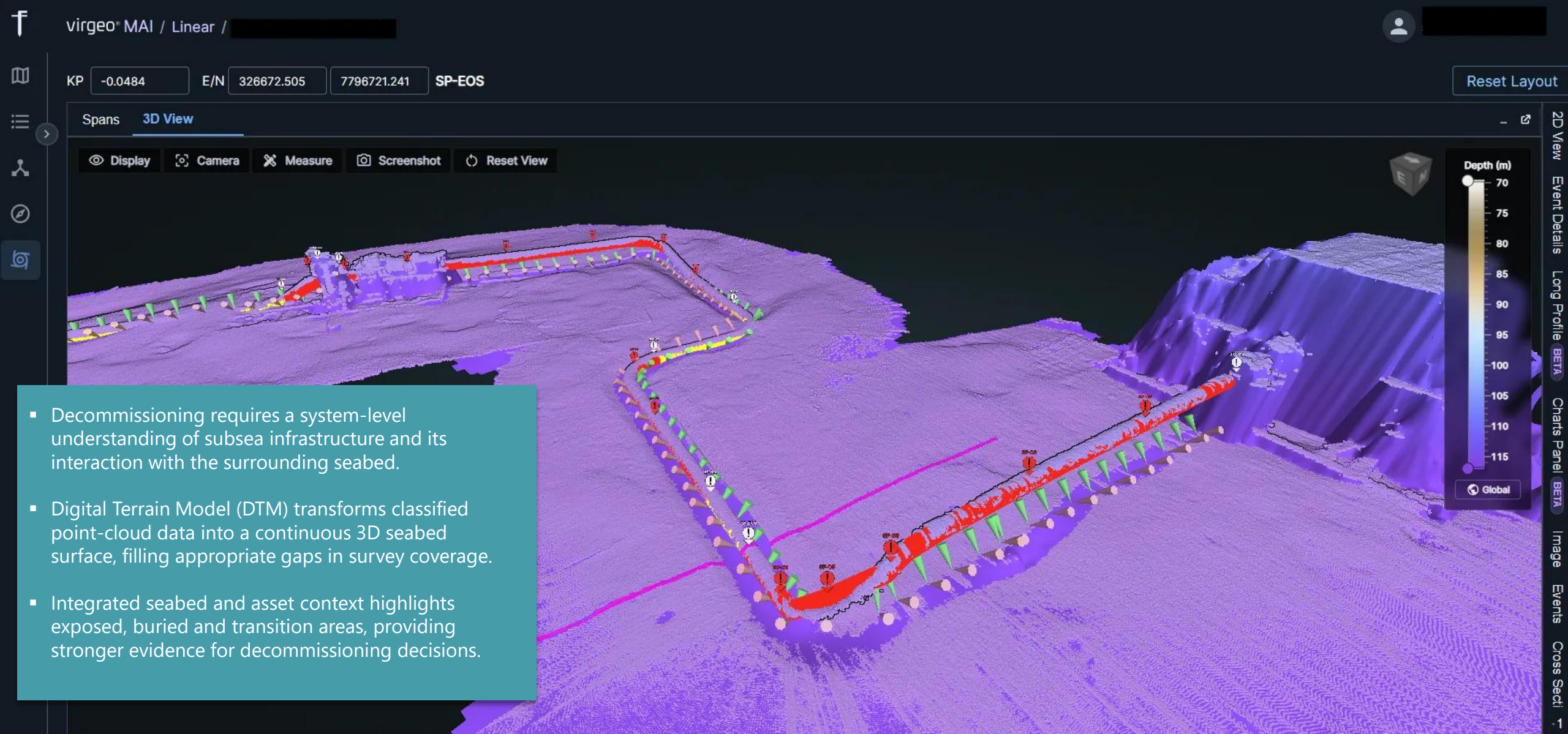
- Photogrammetry was an add-on on inspection to existence campaign scope of marine growth removal, UT wall thickness and Flooded Member Detection.
- High-definition subsea imagery processed into a measurable 3D point-cloud model of the as-is structure.

TECHNICAL VALUE

- Measured as-is geometry and clearances verified remotely.
- Digital and integrity data informed configuration and installation interfaces.
- Confirmation of in-field unknowns: clashes, debris, discrepancies from as-builts.



Turning point cloud data into seabed intelligence



- Decommissioning requires a system-level understanding of subsea infrastructure and its interaction with the surrounding seabed.
- Digital Terrain Model (DTM) transforms classified point-cloud data into a continuous 3D seabed surface, filling appropriate gaps in survey coverage.
- Integrated seabed and asset context highlights exposed, buried and transition areas, providing stronger evidence for decommissioning decisions.

Turning existing data into better decommissioning decisions

Understanding assets status, environmental conditions, and campaign planning options

EXISTING DATA

- Survey and inspection campaigns accumulated over the asset's lifetime
- Data held across different contractors, formats and systems
- Access to quality data and information is a key enabler for reducing decommissioning uncertainty, improving cost estimates and supporting more efficient execution (NSTA)

VIRGEO® DIGITAL PLATFORM

- Connects data, workflows and decisions in one environment
- Remote-first inspection feeding integrity analytics and engineering for decom
- Risk-based removal planning
- Data insights and intelligence for clear asset condition and decision making

BENEFITS

- Operations scope based on risk and data gaps
- Fewer repeat or unnecessary vessel trips
- Evidence to support late-life decisions
- Optimising decommissioning spending
- Ensure ongoing safety of assets and personnel



Unlocking **Insights**
from **Geo-data**

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