DECOMMISSIONING SOLUTIONS

Beam is accelerating the energy transition with deep tech. We capture and deliver the most detailed and complete view of your subsea infrastructure, to inform and de-risk your decommissioning projects.
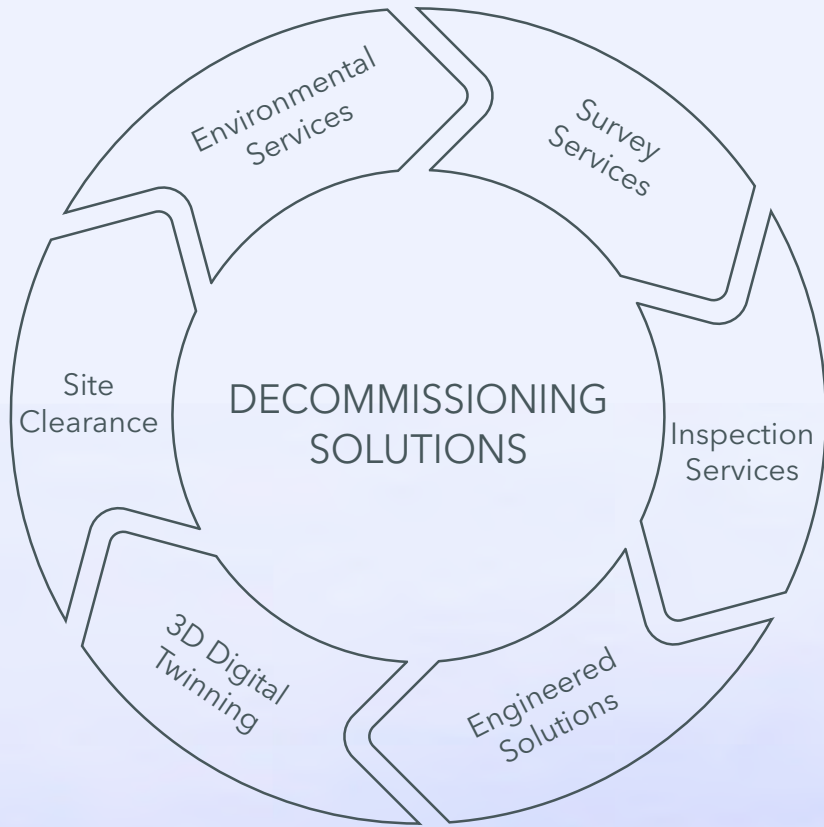
58°06'20"N   03°05'35"W

Beam

Viewer
- Reset View
- Show Axes
- Background

Measurements
- Distance
- Angle

Model
- Attenuation
- Contrast
- Point Size
  - Sml   Med   Lrg

More
- Download Model

Beam

Automating offshore wind

DECOMMISSIONING SOLUTIONS

- Environmental Services
- Survey Services
- Inspection Services
- Engineered Solutions
- 3D Digital Twinning
- Site Clearance

Accelerating the energy transition with deep tech.

Your trusted partner for oil and gas decommissioning solutions

Navigating the intricate challenges of decommissioning subsea assets requires precision and expertise. The retention of original and amended asset information, combined with changes in ownership, can result in undocumented changes accumulating over time. These uncertainties can translate into operational risk and cost due to a lack of accurate information.

At Beam, we harness the latest in perception, data, and autonomy technology, to provide our clients with quantitative and meticulously detailed datasets. Our goal is to deliver the most efficient, comprehensive and precise view of your subsea infrastructure, along with industry-leading insights and reporting, to facilitate informed decision-making. Using our leading-edge technology, we can consolidate historical drawings of assets into digital twins with sub-millimetric precision.

Our unwavering commitment to safety, innovation, and delivery excellence, drives us to exceed our clients' expectations. We specialise in offering tailored solutions that align seamlessly with operational requirements, dramatically improving the efficiency and integrity of projects, instantly providing insight that will underpin lifting designs or heavy lift vessel crane tonnage.

Taking your unique project needs into consideration, we can offer full turnkey solutions, leveraging our vessels, equipment, technology, and extensive industry experience, with a view to optimising costs and reducing offshore personnel requirements. By utilising right-sized vessels, we enable our clients' larger heavy-lifting vessels to focus on their core objectives, contributing to lower emissions across operations.

We also offer ROV and technology-only based solutions, integrating our SubSLAM 3D imaging technology combined with powerful autonomy features, enabling safe and efficient piloting in proximity to complex structures.

WHY BEAM?

- Our extensive experience across many wind farms worldwide, means we excel in challenging, shallow, tidal, and low visibility environments.

- Tailored solutions designed to dramatically increase efficiency across projects.

- Industry-leading technology deployment, from the assets we operate subsea, to the sensors we use to acquire data. Our reporting delivers an unrivalled level of perspective, accuracy and coverage.

- In-house project management and data processing by a team of industry experts.

- The latest remote and uncrewed survey technologies, along with all electric ROVs, enabling more efficient working across operations whilst lowering emissions.

VESSELS

We have established longstanding and robust working relationships with vessel partners, allowing us to seamlessly integrate their DP2 vessels into our operations. Our collaborative partnerships have been instrumental in our ability to deliver efficient and reliable solutions to our clients across the subsea sector.

Our carefully selected DP2 vessels are equipped with advanced dynamic positioning capabilities, providing a stable platform for conducting operations in challenging marine environments.

Leveraging these advanced vessels and our substantial experience and industry knowhow, we reinforce our commitment to delivering a comprehensive range of top-tier solutions to our clients, supporting the success of decommissioning projects across the globe.

Benefits

- We deliver full turnkey solutions that utilise right-sized vessels, resulting in reduced charter costs and offshore personnel requirements, as well as lower emissions across projects.
- Leveraging our advanced vessels, we enable larger vessels to focus on the tasks they were designed for, such as heavy-lifting.
- Our vessels are fully equipped with state-of the-art technology and tooling, ready to deliver multi-service campaigns.

VERSATILE ROV FLEET

Our vast range of observation, inspection, and work-class remotely operated vehicles (ROVs) are equipped as standard with industry-leading SubSLAM X2 computer vision technology, providing unparalleled insights into the subsea environment in the highest 4k resolution, with simultaneous dense point cloud 3D model production and the ability to instantly perform accurate, contactless metrology tasks subsea.

ATOM EV

The ATOM EV is a compact, fully-electric and high performance work class ROV.

Offering exceptional levels of performance, the Atom EV is particularly suited to high current applications. It is capable of running a full suite of WROV tools, while modular construction and advanced diagnostics ease ownership. Advanced flight control improves quality of operation and reduces the time it takes to do a task. It also consumes less energy and reduces the risk of an oil spill in comparison to hydraulic WROVs, making your whole operation more cost-effective and environmentally friendly.
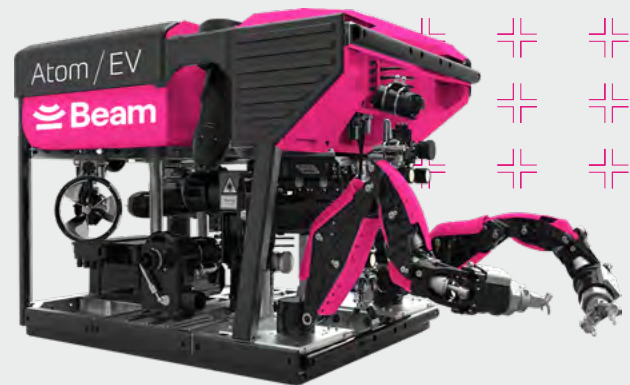
SEAEYE LEOPARD

The Seaeye Leopard is an exceptionally powerful electric work-class vehicle.

Its compact features and impressive vectored thrust enables greater workability and station keeping. The vehicle has a forward speed >3.5knots and sustains a payload of 200kg. It provides a multi-purpose work-class solution ideally suited to construction support, cable and pipe surveys, IRM activities in shallow water and strong current environments while being equally capable in deep 2000MSW environments.

## MISSION SPECIALIST DEFENDER & PRO 5

The Mission Specialist Defender is designed for greater control, heavier payloads and demanding intervention. The Pro 5 offers a small footprint with optimal performance features.

The Mission Specialist Series vehicles are designed and built with flexibility in mind. The modular design enables easy maintenance and seamless integration with a variety of tools for a custom solution to your underwater challenges.

SUBSLAM X2

SubSLAM X2 is a multi-functional perception system that simultaneously captures 4K colour video and produces accurate 3D spatial reconstructions. Taking your understanding of subsea environments to the next level.
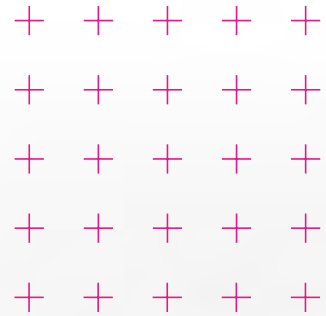
## Real Time 3D Visualisation & Modelling

Generate colour 3D models in real-time, whilst performing visual inspections. This enables continuous data capture, meaning no need for pre-survey installations, no need to stop and scan, and no need for contact measurement tools.

Our 3D models have sub-millimetre precision, and can achieve accuracies of 0.1% - 0.15% (as verified by Bureau Veritas), providing a true physical representation of subsea environments and structures. These can be used to verify the condition of subsea assets, and compare against prior measurements or design definitions.

The live 3D point-cloud viewer presents a persistent coverage map for real-time verification that the required information has been collected, meaning no data gaps and no costly return trips. Take live measurements in the viewer and export the real-time model instantly.

Accelerate photogrammetry using SubSLAM's exported stereo-scaled image pairs to achieve even higher resolution 3D models with post-processing.

SubSLAM also supports integration with external INS systems to output models in georeferenced coordinates, for precision location and onwards integration of data in digital twin environments.
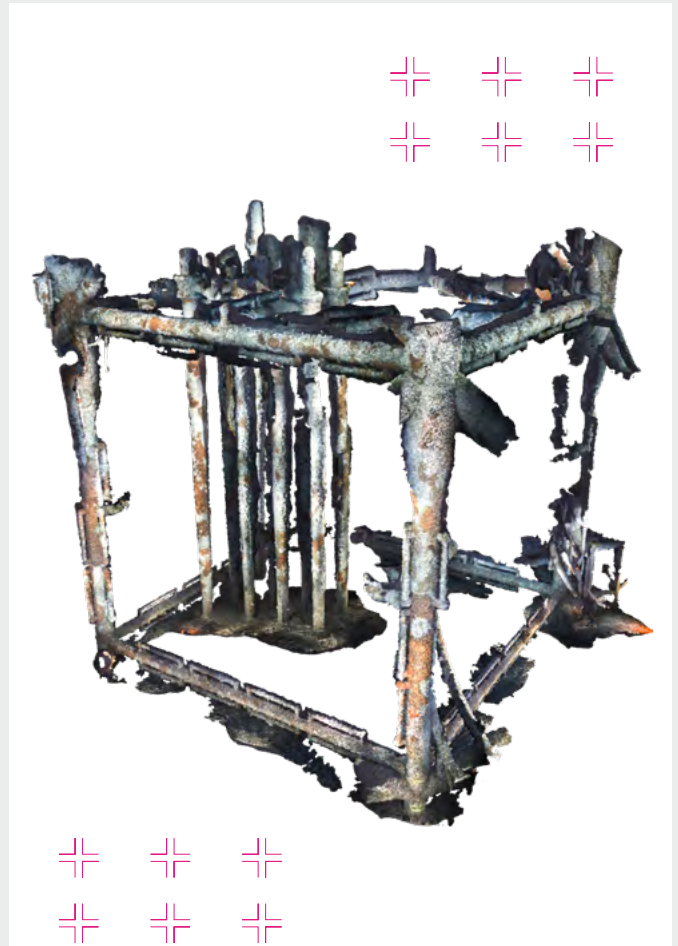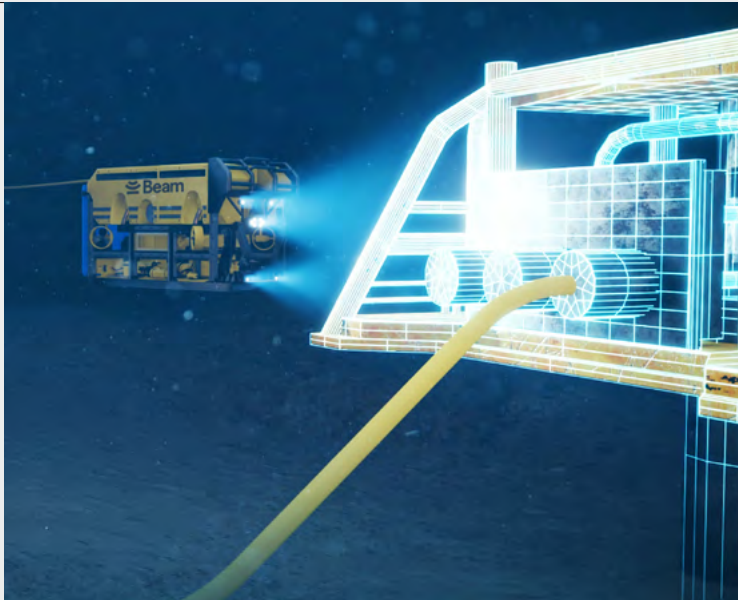
Live stream data to any device anywhere

Stream images and 3D models over low bandwidth comms links (<200kbps), and access over a web browser. Independently manipulate 3D models and take live measurements from any location, providing unprecedented real-time situational information for onshore teams, clients and key decision makers.

Autonomy & Piloting Aids

When partnered with Beam's ROVs, deep integration of SubSLAM X2 coupled with powerful autonomy features allows safe and efficient piloting in proximity to complex structures.

Visual Pilot Assist provides easier vehicle handling, even in high current environments, extending working times, reducing offline time, and improving

the reliability of data capture. Configurable collision avoidance, enabled via SubSLAM's live mapping, allows operators to safely inspect complex assets up close, for improved data capture of internal structures.

Its advanced station keeping abilities enable operators to keep the vehicle stationary with minimal user input, making intervention tasks easier despite turbulent environments.
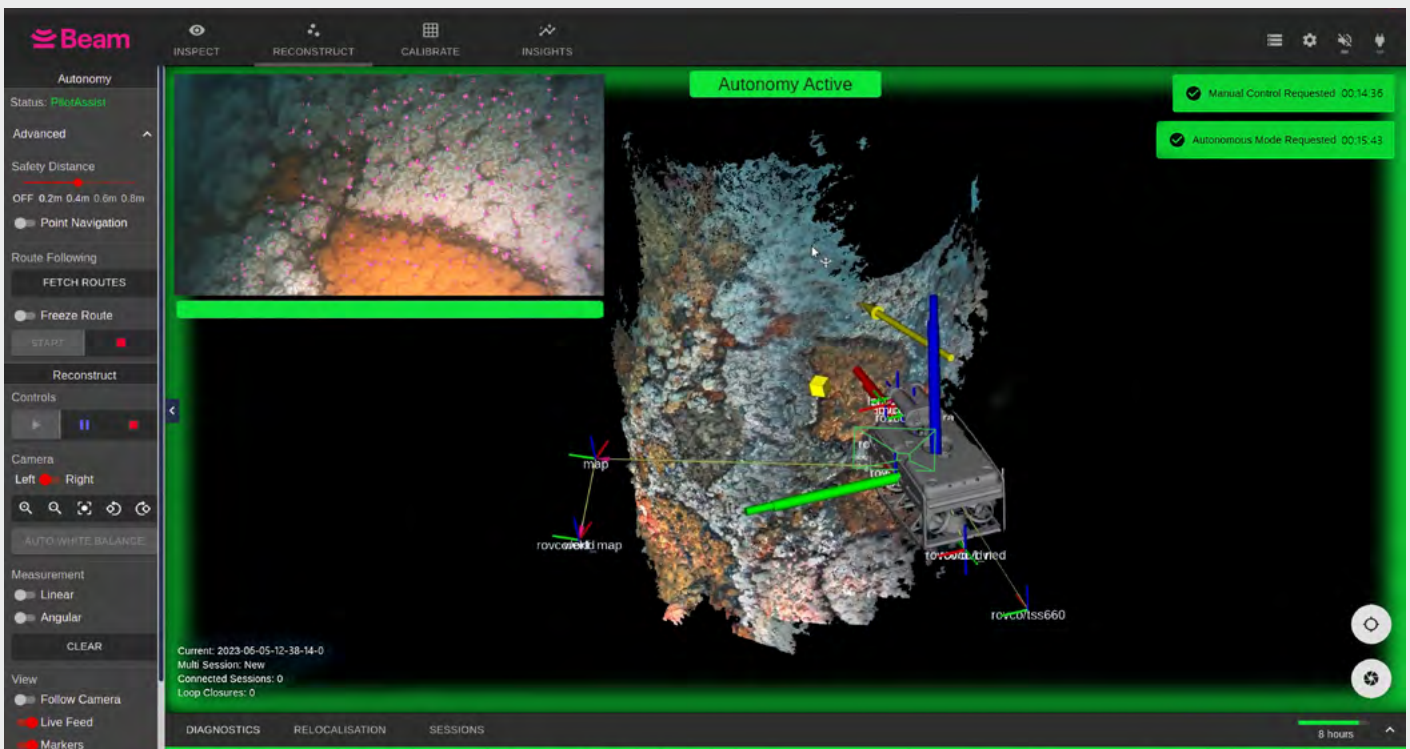
SOLUTIONS

Site Characterisation

We are specialists in marine site characterisation, and offer a comprehensive range of solutions tailored to support your risk management and mitigation strategies.

Through state-of-the-art data collection and in-house analysis, we help our clients de-risk their projects, eliminating uncertainty about subsea site conditions.

Our services utilise advanced survey vessels and technology, combined with extensive expertise to provide critical insights about seabed, sub-seabed, and environmental conditions. This information plays a vital role in shaping decommissioning strategies and enabling informed engineering decisions, which supports cost-effective planning.

Moreover, our innovative survey solutions also support marine environmental conservation and the sustainable decommissioning of large marine assets.

Services

- Site assessments for the installation of jack-up rigs.
- Geophysical surveys.
- Shallow geotechnical surveys.
- Geohazard assessments.
- Marine environmental monitoring.
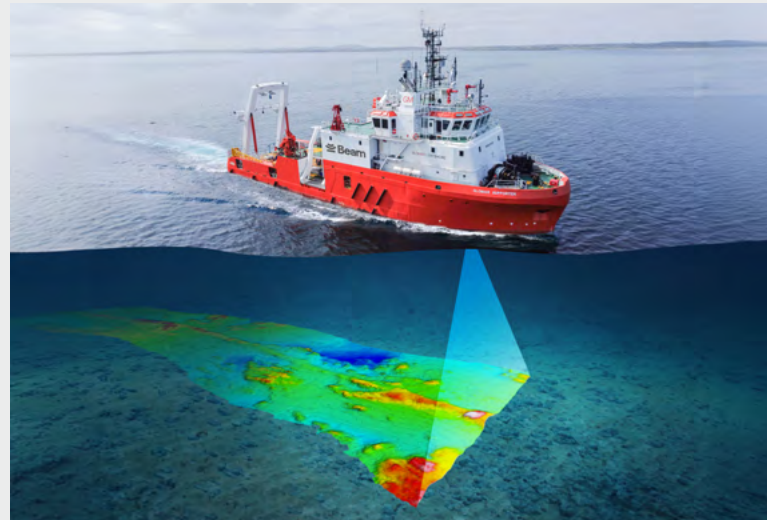
Site Clearance

We offer a diverse range of efficient and reliable pre and post-decommissioning debris removal solutions, prioritising safety, precision and efficiency.

We use our unique technologies to identify and categorise subsea debris. Our experienced team will assess its nature and potential impact, before conducting a comprehensive desktop study to determine the optimal removal strategy, if required.

A detailed task plan and procedure is put into place, leveraging our large fleet of equipment, tooling and technology, which can be tailored to meet specific client requirements.

Services

- Cutting solutions.
- Cleaning solutions.
- Dredging solutions.
- Sampling solutions.
- Lifting and recovery solutions.
- Engineered solutions.

3D Decommissiong Inspections

The condition of subsea assets is often unknown, or uncertain, which can result in expensive re-engineering works and schedule delays when discrepancies exist between "as found" and "as planned".

Using SubSLAM 3D imaging technology, we can provide accurate 3D models of subsea infrastructure, which otherwise may be undocumented, or exhibit deviations or environmental degradation versus the available design definitions.

Our detailed inspection solutions provide an unparalleled situational understanding of the condition of structures, allowing validation of engineering plans, prior to the mobilisation of personnel and equipment.

This ensures that planned decommissioning activities are both feasible and effective, providing greater certainty of cost and schedule. We recognise that aborting operations due to unforeseen problems can be both costly and time-consuming, so our approach helps to prevent such situations.

Benefits

- Verify integrity of primary structures, including lifting points and their condition.
- Take contactless measurement of critical dimensions to ensure that tooling is appropriate.
- Perform volumetric analysis of marine growth coverage to confirm that true lifting loads are within specification for planned lifting equipment and vessels.
- Detect and action removal of debris appropriately, without unnecessarily tying up high value assets.
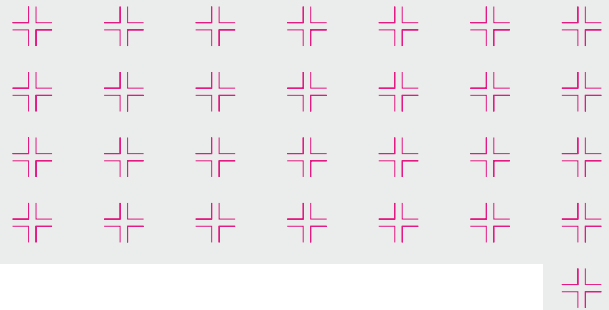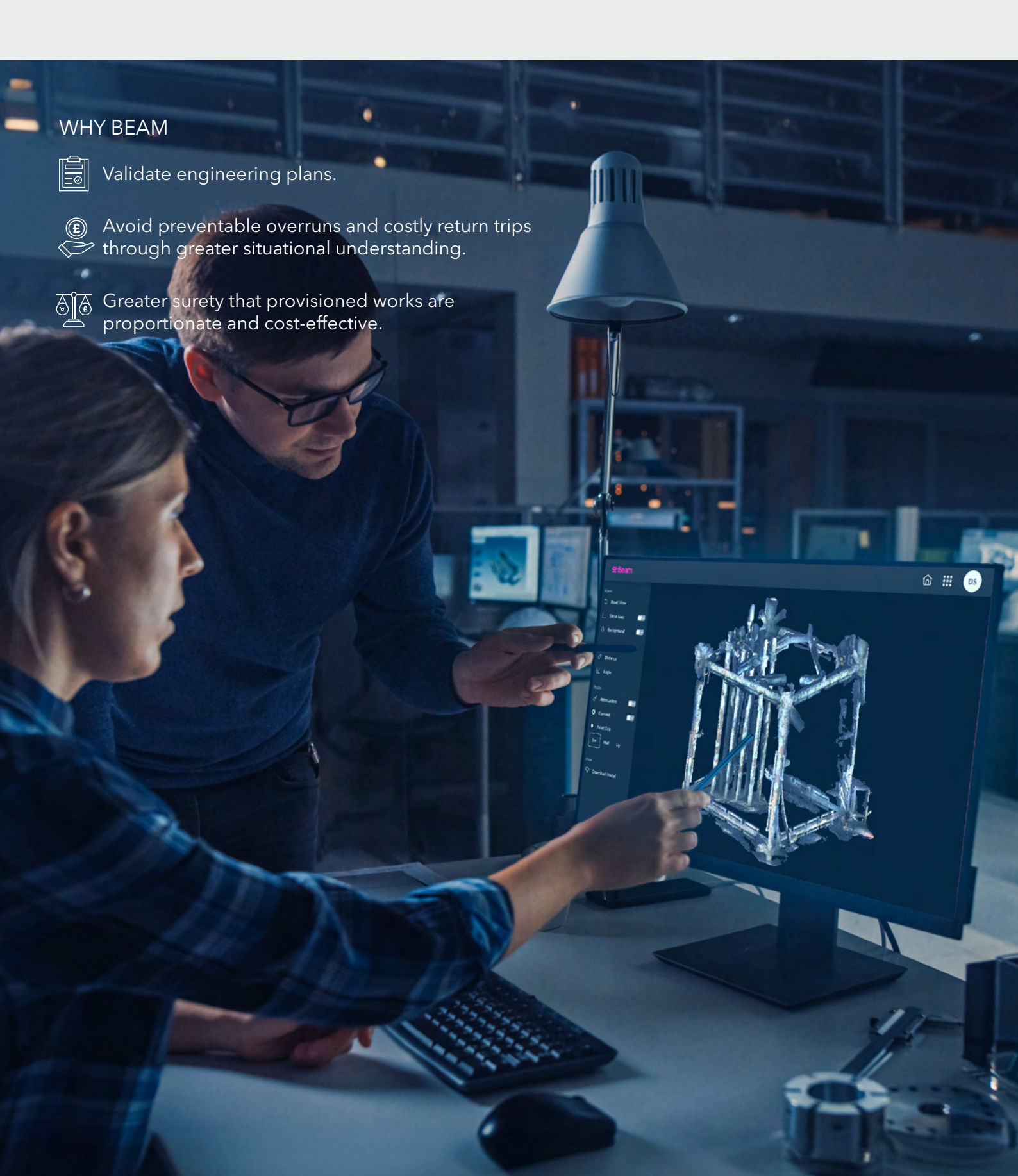
WHY BEAM

- Validate engineering plans.

- Avoid preventable overruns and costly return trips through greater situational understanding.

- Greater surety that provisioned works are proportionate and cost-effective.

sales@beam.global