Capability Statement

Ground Modelling

Ground modelling is a fundamental process that integrates geophysical and geotechnical information to create accurate 3D representation of the subsurface. These models provide essential insights into seabed and sub-seabed conditions, enabling informed site planning, effective risk management, and robust design.

At EPI, our advanced 3D ground modelling solutions deliver dynamic, data-driven visualisations of site conditions. By storing, interpreting, and integrating site characterisation data, we combine geological, geotechnical, and geophysical models with geohazard assessments to offer a comprehensive understanding of subsurface risks to structures.

This approach is fundamental to geotechnical engineering and project management, supporting safer, compliant, and efficient construction and infrastructure development.

Importance of EPI Ground Modelling

Engineering Quality Control

At EPI, ground models are viewed as a core tool for identifying critical subsurface risks and parameters, ensuring engineering integrity throughout the project lifecycle.

Risk Management

Our ground models enable early detection of potential geological hazards, supporting comprehensive risk assessment and effective mitigation strategies.

Site Analysis and Planning

By providing detailed information on soil and rock properties, our models guide foundation selection and help maintain structural integrity.

Cost and timeline reduction

Understanding subsurface conditions early in the planning phase reduces the likelihood of costly delays and redesigns, ultimately optimising construction budgets and schedules.

Project Planning and Communication

EPI's ground models enhance decision-making and collaboration by delivering clear, integrated data that improves project efficiency and stakeholder communication.

Building a Ground Model

Developing a ground model is a structured process designed to deliver accurate and actionable insights:

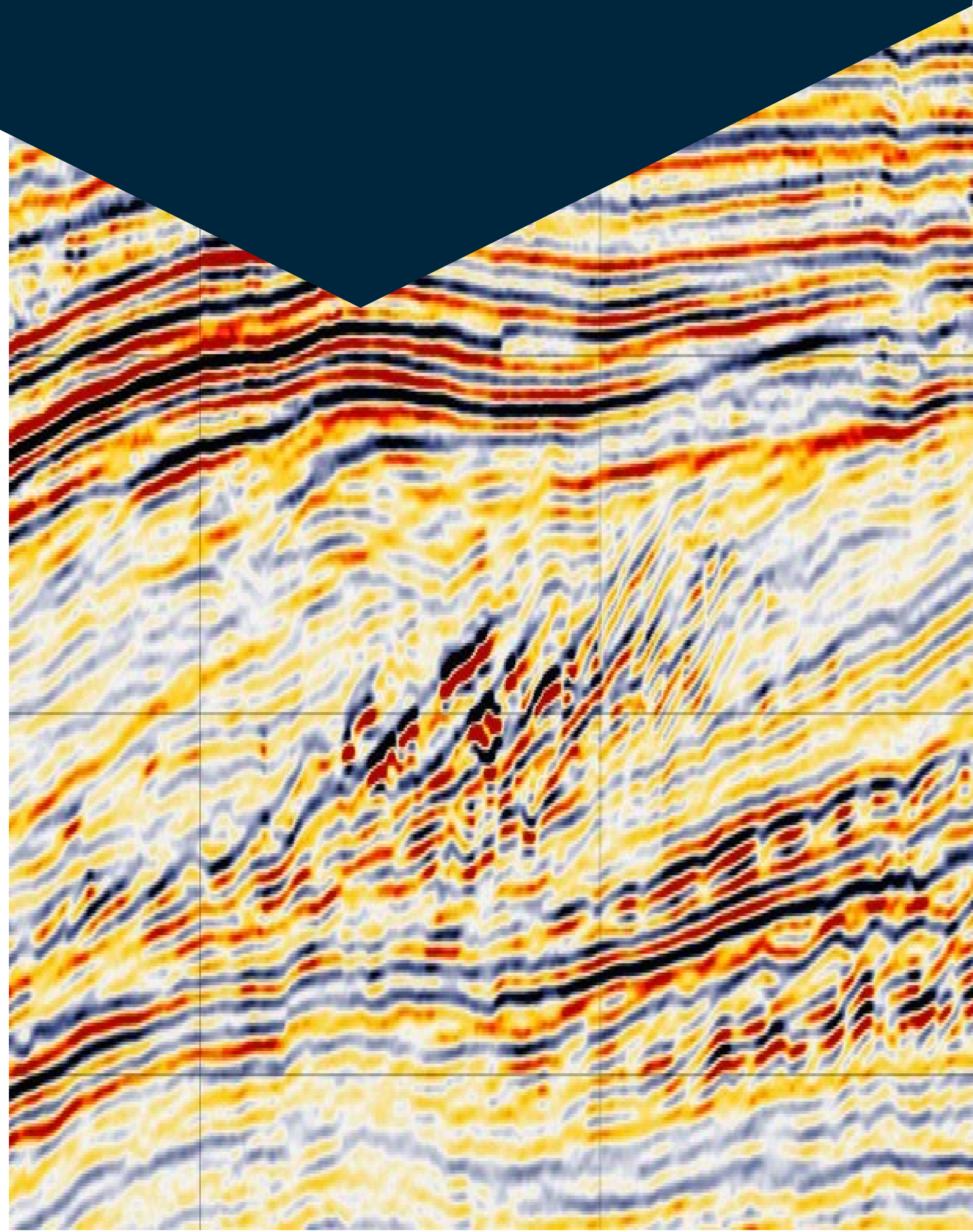
Data Collection – Gathering geophysical, geotechnical, and geological information from site investigations.

Data Integration – Combining multiple datasets to create a coherent representation of subsurface conditions.

Model Iteration – Continuously refining and updating the model as new data becomes available, ensuring relevance throughout the project lifecycle.

Our 3D ground models typically include:

- **GIS Framework** – A core platform for spatial data management and visualisation.
- **Geological Conditions** – Detailed site descriptions and stratigraphy.
- **Geophysical Model** – Representation of subsurface features derived from geophysical surveys.
- **Geotechnical Model** – Predictive modelling of soil and rock properties, including key parameters for engineering analysis.
- **Hazard and Constraint Assessment** – Identification and evaluation of natural and anthropogenic risks, both qualitatively and quantitatively.
- **Data Gaps and Uncertainty Analysis** – Highlighting areas requiring further investigation.
- **Recommendations** – Strategies to reduce uncertainties and address data gaps.
- **Comprehensive Report and GIS Database** – Deliverables that support informed decision-making and project planning.



United Kingdom
EPI Ltd - Operations

Office 4, Building 2, Sentinel House
Harvest Crescent
Ancells Business Park
Fleet
GU15 2UZ

+44 (0) 333 358 0230

United States
EPI Group US Inc.

16225 Park Ten Place
Suite 500
Houston
Texas
77084

+1 346 223 9565

Australia
EPI Group Australia Pty Ltd

Suite 169
580 Hay Street
Perth
WA, 6000

+61 (0) 8628 02443

Azerbaijan
EPI Ltd Azerbaijan

2nd Floor, AG Business Centre
16 Gulla Street
Old City, Baku
AZ-1095

+44 (0) 333 358 0230

India
EPI Ltd India
62 LGF, Pocket 2
Jasola
New Delhi, Delhi
110025

+44 (0) 333 358 0230

Norway
EPI Ltd Norway

CO Sentinel House
Harvest Crescent
Ancells Business Park
Fleet
GU15 2UZ

+44 (0) 333 358 0230

Republic of Korea
EPI South Korea Branch

#848-1, 8F, 341 Gangnamdero
Seocho-gu
Seoul

+82 7047 844 315

Taiwan
EPI Ltd Taiwan

12F, No.415. Sec.4, Xinyi Road
Xinyi District
Taipei 11051

+886 00 801 852 092

Ukraine
EPI Ltd Ukraine
CO. Crowe DNW Ukraine
Derevlianska str 8
Kyiv
02000 Ukraine

+44 (0) 333 358 0230

Get in touch

sales@epigroup.com
epigroup.com

EPI Group