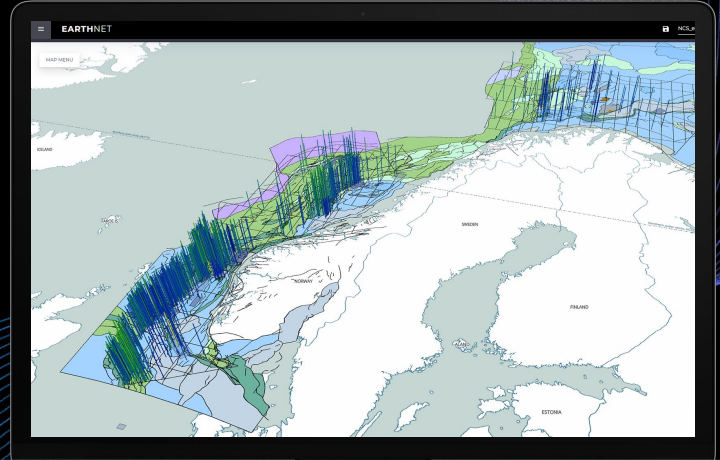


EarthNET

Driving the energy sector's digital transformation by turning complex data into actionable insights



CHALLENGE

Industrial datasets are severely underutilised

Traditional workflows struggle with integrating the large amounts of data available. Each data type can give new insights into the subsurface, but only by integrating the vast and diverse datasets available can we approach a more complete geological understanding.

SOLUTION

EarthNET: Cloud-native data management and analytics platform

By leveraging cloud-technology, high performance computing, and artificial/automated intelligence, EarthNET provides highly efficient, collaborative, informed and accurate decision-making-support solutions and services.

Key capabilities



Data management

Orchestrate, integrate, and contextualise data from multiple sources, making your data analytics-ready and enabling data-driven decisions.



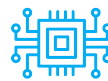
Data visualisation

Explore and visualise your data through a holistic digital replica of the subsurface, combining all relevant data.



Data insights

Review outcomes, pull together predictions and scale up the insights behind your decision-making processes in a quantitative decision support suite.



AI-assisted property prediction

Rapidly predict rock and fluid characteristics and distribution of properties from well and seismic data with AI.



AI-assisted seismic interpretation


Increase the efficiency and quality of seismic interpretation by using AI to quantify the geometry, structure, and layering of reservoirs.




Computer vision

Expand your understanding of the subsurface by using computer vision and data labelling techniques to unlock the dormant value of image data.


Case studies from our customers and partners



Oil & Gas Authority



OLJEDIREKTORATET

Delivered by:
 EARTH SCIENCE ANALYTICS

Predicting overlooked hydrocarbons in 5000+ wells in the North Sea

CHALLENGE

Managing vast amounts of data from two different government repositories and re-analysing them for overlooked opportunities.

SOLUTION


Making the data analytics ready by ingesting, editing and QC'ing over 5000 wells using EarthBANK, and generating predictions of porosity, water saturation and lithology using EarthAI.

RESULT


Identification, visualisation and ranking of over 300 opportunities for missed pay.

VALUE GENERATED


Delivered strategic technology and results to the OGA and reduced E2E workflow from unfeasible to 3 months.




ROCKWASH
GEODATA



Lundin
Energy



wintershall dea

Delivered by:
 EARTH SCIENCE ANALYTICS

Interpreting 700 000 cuttings images using computer vision

CHALLENGE

Digitisation and analysis of over 700,000 of cuttings samples for the Released Wells Initiative (RWI) project in Norway.

SOLUTION

Using domain expertise and computer vision to label data and scale interpretation through EarthVISION, and integrating QC'd data with conventional well logs.

RESULT

Large industrial datasets transformed into decision-ready datasets.


VALUE GENERATED

Scaling access to critical information with rapid and precise extraction of physical properties.


“ By utilising ESA's deep domain expertise in both geoscience and deep learning technology, we were able to augment a sparse dataset over the area of interest with additional relevant geological data. With its EarthNET technology, ESA captured regional trends in geology, quantified the full range of uncertainty within acoustic and physical properties, and provided a data-driven model that challenges underlying assumptions within traditional workflows. ”

Morten Sola, Chief Project Officer CSS





TGS

Delivered by:
 EARTH SCIENCE ANALYTICS

Combining the power of ML with the modern Utsira OBN survey

CHALLENGE

Geological interpretation on a large-scale, densely sampled OBN exploration dataset covering over 1,500 square kilometers.

SOLUTION


Predicting missing well logs, and rock- and fluid property curves, interpreting faults and geobodies through automatic seismic interpretation, and producing 3D property volumes of lithology, porosity, density and Vp velocity.

RESULT


A set of data-driven geological insights, property predictions, and structural attributes.

VALUE GENERATED

Data-driven attributes to maximize ILX potential and improve E&P decision-making.



Horisont energi

Delivered by:
 EARTH SCIENCE ANALYTICS

Characterising and de-risking carbon storage sites in 3D

CHALLENGE

Accurately assess the rock- and fluid-properties of candidate reservoirs when the amount of data available is sparse.

SOLUTION

Predicting properties from wireline logs to increase data coverage, using available nearby well and seismic data to increase prediction confidence in the area of interest, and integrating this data to predict rock properties in 3D.

RESULT

Full site characterisation and quantification of uncertainty within acoustic and physical properties.

VALUE GENERATED

Drastically reduced interpretation cycle time, allowing more time to be spent on risk assessment and management.

Key benefits



Improved workflow efficiency

Through AI-assisted automation and orchestration of workflows on the EarthNET platform, speeding up the process from months or years to days or weeks.



Improved prediction quality

Through utilising available subsurface data, discovering new and valuable insight hidden in the data, and by better quantification of uncertainty.



Cost reduction

Through increased efficiency, less use of expensive resources, coring, logging, and analysis equipment, and by drilling fewer unsuccessful wells.



Risk reduction

Through a holistic digital replica of the subsurface, contextualised insights are provided and underlying risk and uncertainty is quantified and mitigated.



New investment opportunities

Through integrating multiple disciplines and exploiting all relevant data, new investment opportunities can be identified and validated.



Removing organisation silos

Through multi-user access, easy in-app collaboration, data and knowledge sharing and integration across scientific disciplines

A TRUSTED DIGITALISATION PARTNER FOR ENERGY COMPANIES WORLDWIDE



ESA helps you transform your industrial data into real-life business value

FAST

90%

Reduction in interpretation time

ACCURATE

95%

Accuracy in predictions

COST-EFFICIENT

up to **80%**

Reduction in operational costs

Ready to start your digitalisation journey?

Contact salesops@earthanalytics.no