

# On-shore Project - OTM

## Project team

The OTM consortium has now completed this element of the EO4OG workpack. We would like to thank all that contributed to and worked on the project. We hope to have the opportunity to work with you all again soon.

## Project Team Members

The team combines expertise in the O&G sector together with specific EO expertise. Led by O&G technology experts, OTM Consulting Ltd, the team includes EO expertise from Geoville, TRE and WesternGeco.

### OTM Consulting Ltd

OTM Consulting is a leading firm of independent technology management consultants, specialising in the evaluation, commercialisation and implementation of technologies for the upstream oil and gas sector. We enable companies in the Oil & Gas sector to extract maximum value from their investments in R&D and technology. This value proposition is founded on a unique combination of areas where OTM has particular expertise, all of which focus on Oil & Gas technologies:

- Identifying technology opportunities and threats for businesses
- Deciding which technologies to invest in, and how best to do that
- Applying technologies better and faster
- Engaging with technology practitioners

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### Geoville

GeoVille is an internationally operating group specialised in consultancy services and products related to remote sensing, geo-information and geographic information systems. The company has sound experience in handling and working with EO data and derived land use/ land cover information as well as the analysis of this data for monitoring, spatial planning and environmental issues. GeoVille Information Systems core expertise is on the production and processing of EO derived data products as well as adding the geo-information dimension (e.g. integration of land cover data with in-situ or infrastructure information to provide for valuation).

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### WesternGeco

WesternGeco, a Schlumberger company is the world's leading geophysical services company, providing comprehensive worldwide reservoir imaging, monitoring, and development services. WesternGeco's geophysical data acquisition crews and GeoSolutions centres are spread across the globe and offer their clients the industry's most extensive multi-client data library. Their services and products supply their clients with increasingly accurate measurements and images of subsurface geology and rock properties.

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### TRE

Tele-Rilevamento Europa S.r.l has completed over 200 InSAR projects, ranging from measuring ground movement over entire countries to identifying individual building movement for forensic investigations. This knowledge and experience supports every new project undertaken. TRE's founders were the inventors of the PSInSAR™ technique (back in 1999), the icebreaker of the so-called Persistent Scatterer Interferometry. TRE's tradition of innovation has made it possible to develop SqueeSAR™ (2009) and still continues today, with new algorithms and solutions. The number of scientific publications in international journals where TRE staff are co-authors is much higher than what can be claimed by any other competitor worldwide. The president and the CEO of the company have been recently awarded the "2012 eni Award" for the potential impact of their research efforts on the oil and gas sector.

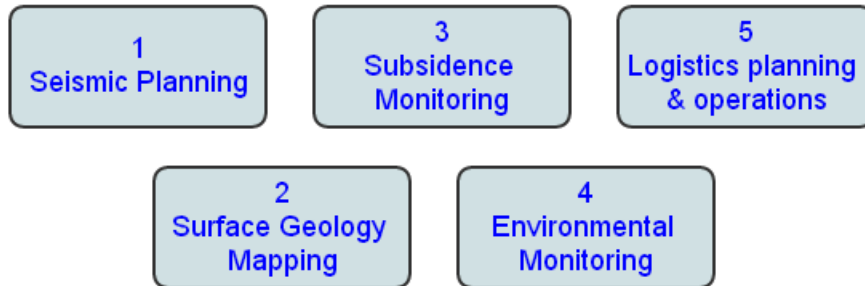
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# Challenges

The OTM assessment of information needs is organised into 5 areas; [seismic planning](#), [surface geology mapping](#), [subsidence monitoring](#), [environmental monitoring](#) and [logistics, planning & operations](#). To access the list in each category, click on the links.

The challenges have also been organised into "[challenge trees](#)". To access each challenge tree click on the box in the image below. To see the full challenge tree, open [the pdf file](#). All challenges are available in a single numerical list on the [OTM Challenges page](#).



## Seismic Planning

### Content by label

There is no content with the specified labels

## Surface Geology Mapping

- OTM-025: Early identification of potential hydrocarbon basins
- OTM-042: Identifying seasonal terrain changes e.g. for access
- OTM-055: Obtaining detailed terrain mapping for DEM construction
- OTM-052: Identify the cause of geological movement
- OTM-054: Understanding the near-surface for anticipating seismic signal absorption properties
- OTM-023: Enabling survey to understand structural properties of the sub-surface for infrastructure planning
- OTM-026: Identifying potential hydrocarbon seepage
- OTM-051: Identification of fault lines
- OTM-059: Understanding outcrop mineralogy
- Surface geological mapping: Gulf of Suez, Egypt

## Subsidence Monitoring

- OTM-011: Surface infrastructure movement relative to sub-surface
- OTM-003: Subsidence from reservoir draw-down
- OTM-001: Identifying effect of fault reactivation
- OTM-007: Identify communication between producing zones
- OTM-020: Tracking groundwater tables
- OTM-008: Determine historical ground movement for infrastructure planning
- OTM-010: Monitoring ground movement along pipelines
- OTM-004: Regulatory verification relating to injection of fracking fluids
- OTM-002: Tracking fluid migration in the subsurface
- OTM-006: Technical verification relation to injection of fracking fluids
- OTM-009: Determine historical ground movement for pipeline routing

## Environmental Monitoring

- OTM-033: Mapping of environmental degradation (change)
- OTM-034: Monitoring hydrocarbon leaks
- OTM-032: Detecting ecosystem damages
- OTM-065: Floodplain mapping
- OTM-017: Identification of seasonal environment changes e.g. migration patterns
- OTM-031: Creating an ecosystem inventory prior to exploration
- OTM-015: Geological and terrain base maps for development of environmental baseline
- OTM-072: Monitoring flash floods
- OTM-019: Reconnaissance survey for EIA
- OTM-029: Prelicensing site selection
- OTM-067: Change detection of coastline migration
- OTM-022: Detecting hydrocarbon leaks
- OTM-028: Land use mapping to detect the social impact of O&G developments

- [OTM-062: Monitoring revegetation](#)
- [OTM-030: Ecosystem valuation of potential site](#)

## Logistics, planning & operations

- [OTM-057: Firemapping](#)
- [OTM-061: Forecasting river migration patterns](#)
- [OTM-040: Security of pipelines](#)
- [OTM-024: Urban encroachment on O&G assets](#)
- [OTM-074: Estimating ground bearing capacity](#)
- [OTM-064: Avoiding aerial mapping restrictions](#)
- [OTM-073: Identifying sources of building resources](#)
- [OTM-075: Creating basemaps in politically challenging regions](#)
- [OTM-066: Tracking volumes of oil stored](#)
- [OTM-069: Change detection for competitor intelligence](#)
- [OTM-076: Understanding activity beneath the tree canopy](#)
- [OTM-079: Identification of archaeological or burial sites](#)
- [OTM-037: Identification of road or track for logistics planning](#)
- [OTM-047: Logistics planning for emergency events \(emergency response planning\)](#)
- [OTM-039: Selection of development sites](#)

## Meetings

Participants to discussions

| Meeting            | Date           | Location         | Agenda | Notes | Comments/Documents    |
|--------------------|----------------|------------------|--------|-------|-----------------------|
| Workshop           | KO +10 months  | London           | TBC    |       |                       |
| Progress meeting 1 | 6 June 2014    | London (Gatwick) | TBC    |       | KO+3 progress meeting |
| Kick-off           | 7th March 2014 | Frascati         |        |       |                       |

## Documents

This is the area to show published documents for review or for use. Documents in preparation by the team should be kept on the project team page.

### Review process

Please see the documents in the table below for a summary of the Task 1 findings.

To add comments specific to a challenge (referenced by it's ID code OTM:0XX), please access the challenge pro-forma via the '**Challenges**' tab and add comments to the base of the page.

Thank you for contributing to the study.

### Task 1 Deliverables - for industry review

| Document                                      | Source | Date        | Description                                                       |
|-----------------------------------------------|--------|-------------|-------------------------------------------------------------------|
| <a href="#">Consolidating Report</a>          | OTM    | 7 July 2014 | Summary of Task 1 findings                                        |
| <a href="#">Appendix A - Challenge trees</a>  | OTM    | 8 July 2014 | Organogram display of O&G challenges identified during Task 1     |
| <a href="#">Appendix B - Country profiles</a> | OTM    | 7 July 2014 | Overview of countries included within OTM study                   |
| <a href="#">Challenge spreadsheet</a>         | OTM    | 8 July 2014 | More detailed description of challenges listed in challenge trees |

### Progress reports

| Document                              | Source | Date           | Description                         |
|---------------------------------------|--------|----------------|-------------------------------------|
| <a href="#">Kick-off Presentation</a> | OTM    | 7th March 2014 | Outline of the project and planning |
| <a href="#">KO+1 progress report</a>  | OTM    | 7th April 2014 | Progress at KO+1                    |
| <a href="#">KO+2 progress report</a>  | OTM    | 7th May 2014   | Progress at KO+2                    |

|                                      |     |                |                       |
|--------------------------------------|-----|----------------|-----------------------|
| <a href="#">KO+3 progress report</a> | OTM | 7th June 2014  | Progress at KO+3      |
| <a href="#">Challenge trees</a>      | OTM | 10th July 2014 | Structures challenges |