

Hatfield-2502: Identification of problem soils

Identification of problem soils

Challenge

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|---|---|---------------------------------|-------------------|
| Challenge ID: | HCP-2502 | Originator: | Onshore: Hatfield |
| Title: | Identification of problem soils. | | |
| Theme: | ON 2.5: Surface Geology Mapping - Engineering geological evaluation | | |
| Consortium Lead: | Arup | Interviewed Company: | Arup |
| Geography: | ON.REG.00 - Generic onshore | | |
| Challenge Description | | | |
| What is not possible / not adequately addressed at present? | | | |
| Need for improved identification of problem soils (expansive, collapsible, soluble, aggressive-saline, dispersive-erodible, compressible, organic). | | | |
| What effect does this challenge have on operations? | | | |
| Reduces uncertainty, improves decision making for field development. Early identification of constraints and opportunities. | | | |
| Thematic information requirements: | Ortho base images Lithology, structural geology, surficial geology Terrain information Topographic information | | |
| What do you currently do to address this challenge? How is this challenge conventionally addressed? | | | |
| Geotechnical Desk Study Ground investigations and boreholes Geological maps Field geological mapping Geophysics Remote Sensing (multispectral) analysis | | | |
| What kind of solutions do you envisage could address this challenge? | | | |
| DEM analysis High Resolution stereo DEM Multispectral and hyperspectral Automated classification processing Geophysics | | | |
| What is your view on the capability of technology to meet this need? Are you currently using EO tech? If not, why not? | | | |
| Best suited to use of high resolution optical imagery and high resolution DEM. Currently only rarely used because of perceived high cost. There is a need to educate industry to the cost-benefit value of using this data early on in project lifecycle - data | | | |
| Challenge Classification | | | |
| Impact on Lifecycle (0=none, 4=high): | | Climate / Topography / Urgency: | |
| Pre-license: | 1 | Climate class: | Generic climate |
| Exploration: | 2 | Topographic class: | Not specific |
| Development: | 3 | Seasonal variations: | Any season |

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|---|--|---------------------|--|
| Production: | 2 | Impact area: | Environmental, Health and Safety, Cost reduction |
| Decommissioning: | 1 | Technology urgency: | 3 - Immediately (0-2 years) |
| Challenge Information Requirements | | | |
| Update frequency: | Snapshot | | |
| Data currently used: | Air photo interpretation DEM analysis (ASTER, SRTM, High res optical DEM) Google Earth | | |
| Spatial resolution: | Regional to License | | |
| Thematic accuracy: | Not specific | | |
| Required formats: | Not Specific | | |
| Timeliness (Vintage): | Reference data | | |
| Geographic extents: | License | | |
| Existing standards: | None | | |

Relevant products

Content by label

There is no content with the specified labels

