|  |  |  |
| --- | --- | --- |
|  | Challenge ID | OTM:039 |
| 1 | Title | Selection of development sites |
| 2 | Theme ID | ON 5.3: Logistics planning and operations - Facility siting, pipeline routing and roads development |
| 3 | Originator of Challenge | Onshore: OTM |
| 4 | Challenge Reviewer / initiator  | PEMEX, Statoil, Sasol |
|  | General description | Overview of Challenge |
| 5 | What is the nature of the challenge? (What is not adequately addressed at present?) | Selecting an appropriate development site for an onshore facility is a complex task. The site needs to be accessible, safe, connect to local O&G infrastructure (if any) and have limited impact on the environment. |
| 6 | Thematic information requirements | 1. Obtain detailed topographic information, 3. Obtain detailed vegetation information, 4. Obtain detailed land-use information, 5. Identify location and condition of transport infrastructure, 9. Obtain detailed imagery of assets, 11. Determine li |
| 7 | Nature of the challenge - What effect does this challenge have on operations? | Reduction in planning costs and potentially better located facilities, thereby (potentially) reducing opex, improving HSE etc. |
| 8 | What do you currently do to address this challenge?/ How is this challenge conventionally addressed? | existing mapping and recorded data, but this rarely is sufficient |
| 9 | What kind of solution do you envisage could address this challenge? | Very high to medium resolution EO data to derive land cover and land use information. Resolution depending on covered area and size of analysis objective. |
| 10 | What is your view on the capability of technology to meet this need? – are you currently using EO tech? If not, why not? | EO could be a useful complimentary technology |
|  | Challenge classification |  |
| 11 | Lifecycle stage | Pre license  | Exp. | Dev. | Prod. | Decom. |
| Score from impact quantification [[1]](#footnote-1) | 3 | 1 | 3 | 0 | 0 |
| 12 | Climate classification  | NOT CLIMATE SPECIFIC |
| 13 | Geographic context/restrictions | Generic onshore (Unspecified) |
| 14 | Topographic classification / Offshore classification | Generic onshore (Unspecified) |
| 15 | Seasonal variations | Any season |
| 16 | Impact Area | reduction in planning costs |
| 17 | Technology Urgency(How quickly does the user need the solution) | Immediately (0-2 years) |
|  | Information requirements |  |
| 18 | Update frequency | depending on sensor and application |
| 19 | Data Currently used  |  |
| 20 | Spatial resolution |  |
| 21 | Thematic accuracy | 80-90% |
| 22 | Example formats | Standardized geo-spatial formats (e.g. shapefile, geotiff or KML) |
| 23 | Timeliness | Reference data - timeliness not important |
| 24 | Geographic Extent | district area |
| 25 | Existing standards |  |

1. Impact quantification scores: *4 – Critical/ enabling; 3 – Significant/ competitive advantage; 2 – Important but non-essential; 1 – Nice to have; 0 – No impact, need satisfied with existing technology* [↑](#footnote-ref-1)