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|  | Challenge ID | OTM:056 |
| 1 | Title | Locating repeater stations for communications infrastructure |
| 2 | Theme ID | ON 5.2: Logistics planning and operations - Support to surveying crews for planning surveys and H&S |
| 3 | Originator of Challenge | Onshore: OTM |
| 4 | Challenge Reviewer / initiator  | Petronas |
|  | General description | Overview of Challenge |
| 5 | What is the nature of the challenge? (What is not adequately addressed at present?) | We need to address issues relating to radio communication infrastructure. These include aspects such as planning road access to communication infrastructure, planning bulldozer lines, identifying line-of-sight issues, and locating repeater stations.We do not want to leave a network of scars through forested areas and we want our E&P activity to be as environmentally sensitive as possible. A way of ascertaining elevation characteristics that could subsequently limit the detrimental aspects of our operations would be very valuable |
| 6 | Thematic information requirements | 1. Obtain detailed topographic information, 3. Obtain detailed vegetation information, 5. Identify location and condition of transport infrastructure, |
| 7 | Nature of the challenge - What effect does this challenge have on operations? | Line clearance costs can be very high, and notoriously difficult to maintain. Sending a field survey team to obtain elevation data to find a network of high points for comms purposes is time consuming, costly and difficult, especially in densely forested |
| 8 | What do you currently do to address this challenge?/ How is this challenge conventionally addressed? | Ground survey team |
| 9 | What kind of solution do you envisage could address this challenge? | High resolution DEM that is affordable would be very valuable |
| 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) | 2 | 4 | 3 | 1 | 3 |
| 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 | Speed exploration and development (Operational cost reduction), environment, safety |
| 17 | Technology Urgency(How quickly does the user need the solution) | Immediately (0-2 years) |
|  | Information requirements |  |
| 18 | Update frequency | Snap shot requirement |
| 19 | Data Currently used  | Conventional mapping and data from ground surveys |
| 20 | Spatial resolution | Conventional mapping and data from ground surveys |
| 21 | Thematic accuracy |  |
| 22 | Example formats |  |
| 23 | Timeliness | Reference data - timeliness not important |
| 24 | Geographic Extent | Development area only |
| 25 | Existing standards | N/A |

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)