

OTM-040: Security of pipelines

Security of pipelines

Challenge

Challenge ID	OTM:040				
1 Title	Security of pipelines				
2 Theme ID	ON 5.4: Logistics planning and operations - Monitoring of assets				
3 Originator of Challenge	Onshore: OTM				
4 Challenge Reviewer / initiator	PEMEX (North Mexico), Shell, Sasol, Exxon, Petronas				
General description		Overview of Challenge			
5 What is the nature of the challenge? (What is not adequately addressed at present?)	Technology to enhance companies' ability to limit oil theft through the tapping of pipelines is needed.				
6 Thematic information requirements	9. Obtain detailed imagery of assets,				
7 Nature of the challenge - What effect does this challenge have on operations?	Loss of HC, potential environmental damage, safety hazard following tampering of infrastructure				
8 What do you currently do to address this challenge?/ How is this challenge conventionally addressed?	Ground patrols can be deployed as a deterrent but these are costly and not full-proof.				
9 What kind of solution do you envisage could address this challenge?	Very high to high resolution EO data with high repeat cycles can be used to map changes in land use, such as pipelines. Tapping of pipeline has to be visibly detectable				
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]	0	0	1	4	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	Operational cost reduction, health and safety				
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	within a day				
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

Relevant products

Content by label



There is no content with the specified labels

