

P34: Ship detection and categorization	
Maturity score	
Mean: 2.7	STD: 0.47
<u>Constraints and limitations</u>	
<ul style="list-style-type: none"> • Smaller vessels and low-profile ships may be challenging to detect or classify. • Cloud presence but it can be overcome by using SAR imagery. • Challenging to separate individual vessels in overcrowded ports or regions with high maritime traffic. 	
<u>Relevant user needs</u>	
UN17: Need near real-time tracking of marine vessels to understand their routes and estimate fuel usage	
<u>R&D gaps</u>	
<ul style="list-style-type: none"> • High cost of VHR satellite imagery • For near-real time, Automatic Identification System (AIS) data is needed. EO is a complement to permit detecting unreported ships, but real-time tracking is not possible yet with the current technology 	
<u>Potential improvements drivers</u>	
<ul style="list-style-type: none"> • Price models • More investigation of fusing EO with AIS data 	
Utilisation level review	
Utilisation score	
Mean: 2.00	STD: 1.26
<u>No utilisation</u>	
<ul style="list-style-type: none"> • Unavailability of freely available sources of the EO product. • Unacceptable reliability and accuracy of the EO product. • Users' lack of EO knowledge and skills to utilize the EO product. • Unawareness of the existence of this EO product. 	
<u>Low utilisation</u>	
<u>Medium utilisation</u>	
<ul style="list-style-type: none"> • We would not state full technical and usability requirements are met. This remains viable depending on the financial offer and use case. 	
<u>High utilisation</u>	
<ul style="list-style-type: none"> • Only this product satisfies the technical and usability requirements. 	
Critical gaps related to relevant user needs	
Utilisation gap	
UN17: Need near real-time tracking of marine vessels to understand their routes and estimate fuel usage.	