

Table - ABM algorithms ('near-real time' and 'historical'). **'Near Real-Time*' Automated Behaviour Monitoring (ABM) algorithms**

** based on the incoming ship position reports*

	ABM Type – which situations are automatically detected and alerted, based on the position reports	ABM name	Status
1	Vessel reports positions inside an area	InArea	Operational
2	Passage of a vessel close to the shore	DistanceToShore	Operational
3	Vessels entering or leaving ports, in an area of interest	AtPortAtSea	Operational <i>Note: limited to ports with declared UNECE LOCODE and coordinates.</i>
4	Detection of anchored vessels	Anchorage	Operational
5	Frequency of vessels' position reports higher than expected	OverReporting	Operational
6	Frequency of vessels' position reports lower than expected	UnderReporting	Operational
7	Vessels approaching one another closer than an indicated distance, with a speed below defined threshold	AtSeaEncounter	Operational
8	Change of heading higher than a threshold (e.g. more than 20 deg.)	SuddenChangeOfHeading	Operational
9	Sudden change of speed	SuddenChangeOfSpeed	Operational
10	Change of speed above or below a limit set	SpeedAnomallyOverPeriod	Operational
12	Passage of a vessel close to an area of interest	DistancetoArea	Operational
13	Vessels entering a closed area at a specific time	TimeAndPeriodOfDay	Operational
14	Vessel leaves Area of interest X and enters Area of Interest Y	FromAreaToArea	Operational
15	Vessel reports position outside an area	OutArea	Operational
16	Vessel is (potentially) switching off transponder	NotReporting	Operational
17	Port of Departure is X	DesignatedPortofDeparture	Operational <i>Note: limited to ports with declared UNECE locode and coordinates.</i>

18	Port of Arrival is X	DesignatedPortofArrival	Operational <i>Note: limited to ports with declared UNECE locode and coordinates.</i>
19	Vessel is drifting	Drifting	Operational <i>Note: may not be available for the Class B transponders</i>
20	Vessel departs from coastline	HeadingOffShore	Operational
21	Vessel heads towards coastline	HeadingtoShore	Operational
22	Potential spoofing- change of position/ out of range	SpoofingPositonInError	Operational <i>Note: based on measuring 'speed' and 'distance' parameters</i>
23	Change of speed above or below a limit set outside port	SpeedAnomallyOverPeriod Outside Port	Operational <i>Note: limited to ports with declared UNECE LOCODE and coordinates.</i>
24	Anchored vessels outside port	AnchorageOutsidePort	Operational <i>Note: limited to ports with declared UNECE LOCODE and coordinates.</i>
25	Detection of unidentified objects/ships i.e. Uncorrelated VDS (EO product Vessel Detection Service) in an area of interest	Uncorrelated in Area	Operational <i>Note: Detection depending on the availability of the VDS products and the EO acquired imageries</i>
26	Vessels entering and remaining in a zone around another, selected ship	ZoneAroundShip	Operational <i>Note: Defining zone around a vessel based on encounter/ rendezvous parameters</i>
27	Vessels entering a radius (bubble) around other, selected ship(s)	ZoneAroundShipEnhanced	Operational <i>Note: Defining zone using a radius parameter/value. Multiple vessels of interest can be selected in one ABM of 'Enhanced type'</i>
28	Vessel has specific navigational status in AIS transmmision	NavigationalStatus	Operational
29	Vessel crosses a defined line (e.g. a reporting line)	LineCrossing	Operational
30	Vessel enters the area	AreaEntering	Operational

‘Historical’* Automated Behaviour Monitoring (ABM) algorithms

**based on the historical position reports in the Cloud-based HP-IMS*

31	Vessel entered to an area	InArea	Operational <i>Note: Available vis s2s interface. SEG (GI) integration pending.</i>
32	Vessel was drifting	Drifting	Operational <i>Note: Available vis s2s interface. SEG (GI) integration pending.</i>
33	Vessels were approaching one another closer than an indicated distance, with a speed below defined threshold	AtSeaEncounter	Operational <i>Note: Available vis s2s interface. SEG (GI) integration pending.</i>
34	There was a change of speed above or below specific limits	SpeedAnomaly	Operational <i>Note: Available vis s2s interface. SEG (GI) integration pending.</i>
35	There was a gap in reporting of positions	NotReporting	Operational <i>Note: Available vis s2s interface. SEG (GI) integration pending.</i>
36	Vessels entered a radius (bubble) around other, selected ship(s)	ZoneAroundShip	Operational <i>Note: Available vis s2s interface. SEG (GI) integration pending.</i>
37	Detected port calls -per ship(s) /location(s)	Port Call(s)	Operational <i>Note: Available vis s2s interface. SEG (GI) integration pending. Limited to specific ports' polygons in EU and non-EU ports with declared UNECE LOCODE and valid coordinates.</i>