Ministry of Oceans and Fisheries
Korea Hydrographic and Oceanographic Agency

Port Oceanographic Information System (POIS)

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Background & Necessity

- Essential Ocean information required to prevent and to respond promptly to marine accidents
- Effective Support for safe navigation and ports operation

Vission

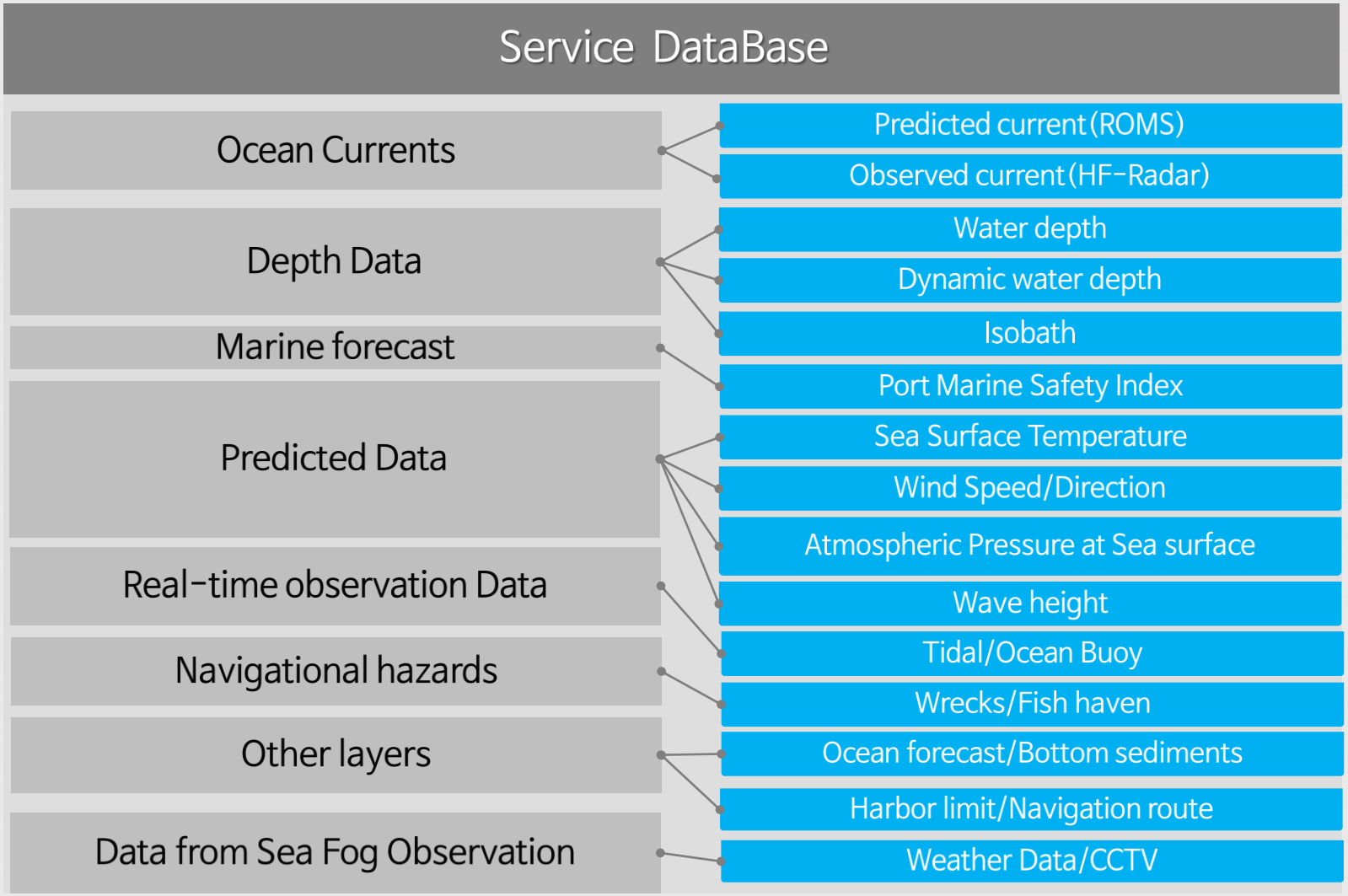
"Comprehensive marine information system for Safe marine activity and Harbor operation"

Port Safety & Oceanographic Information

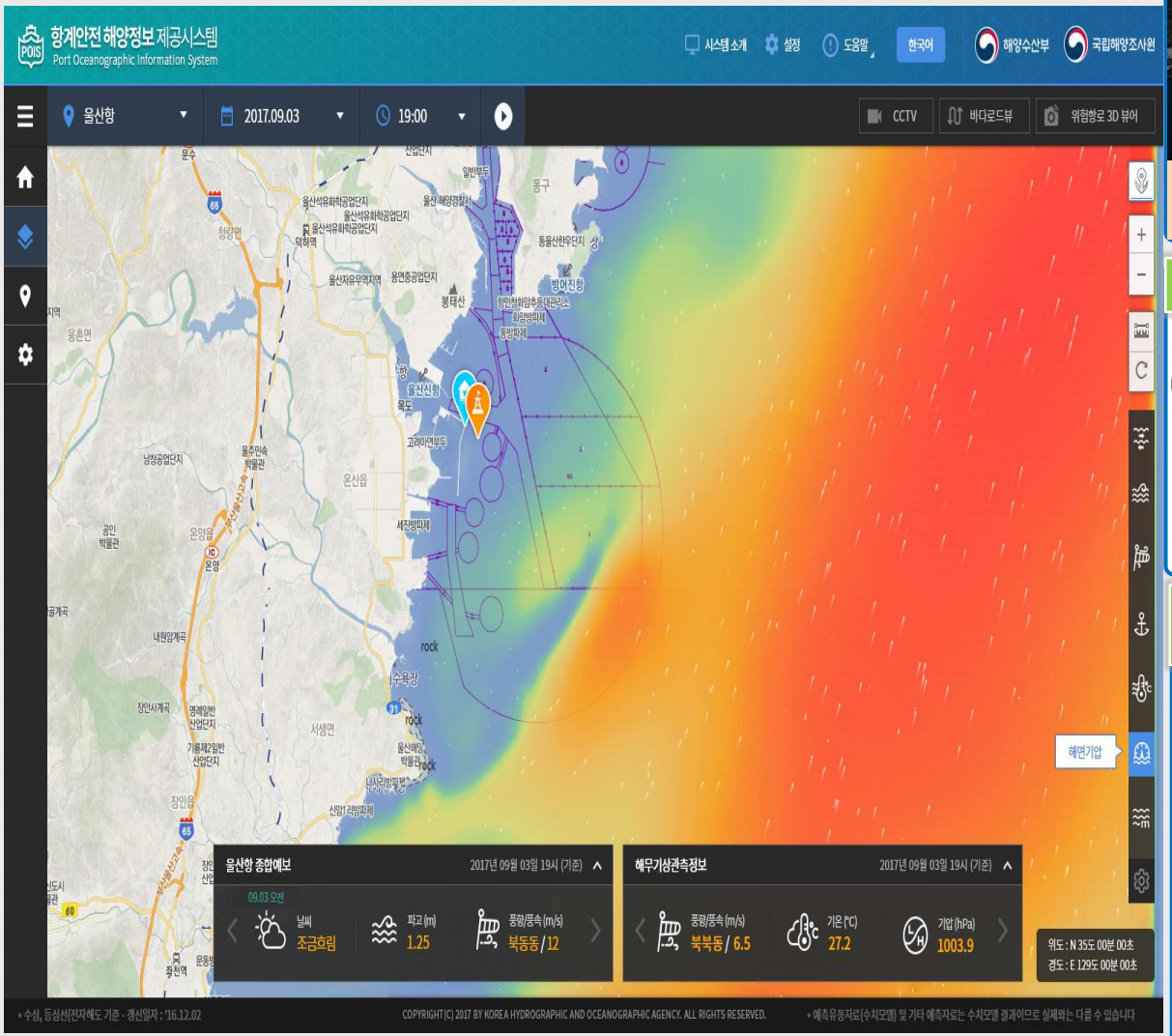
Decision-making support of Port Authority → Major ports and High risk offshore waterways → High-Quality Observated & Predicted Data

Output

Port Oceanographic Information System (POIS)



Port Oceanographic Information System (POIS)



Total Oceanographic Forecast Service

Weather/Wave/Wind/ Current

Monitoring Service

CCTV

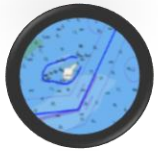
Ocean Road View

visualization Service for Spatial information of Numerical Model

Ocean current

Wind Speed/direction

Wave Height



Electric Nautical chart

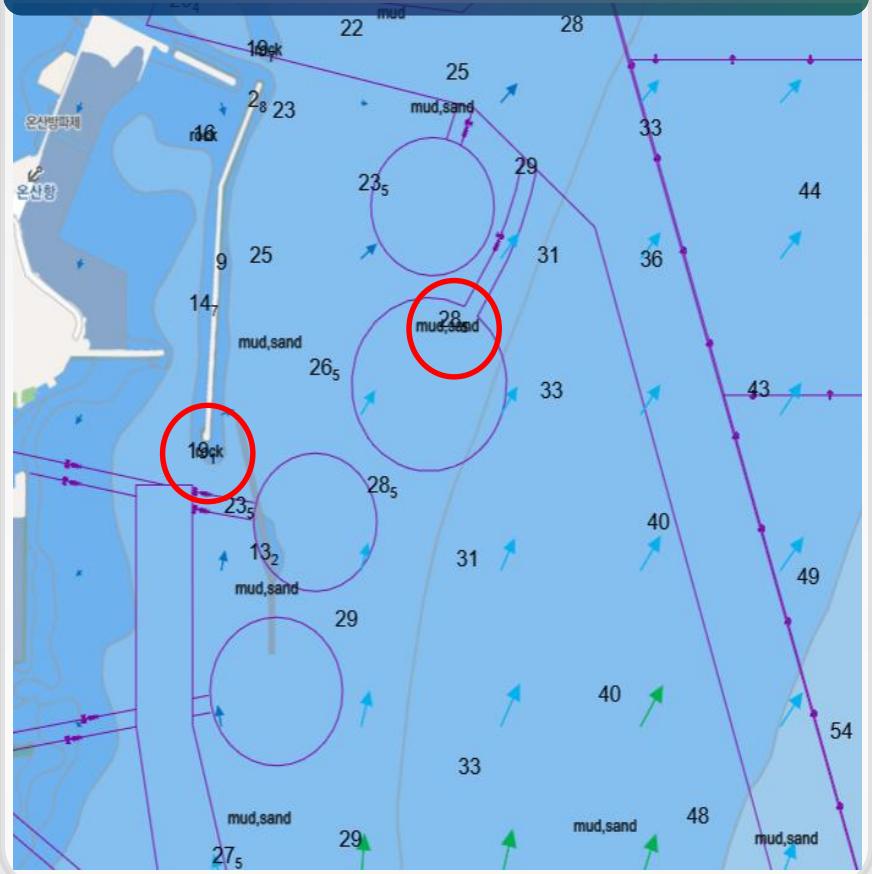
Port safty Index

Navigation hazard

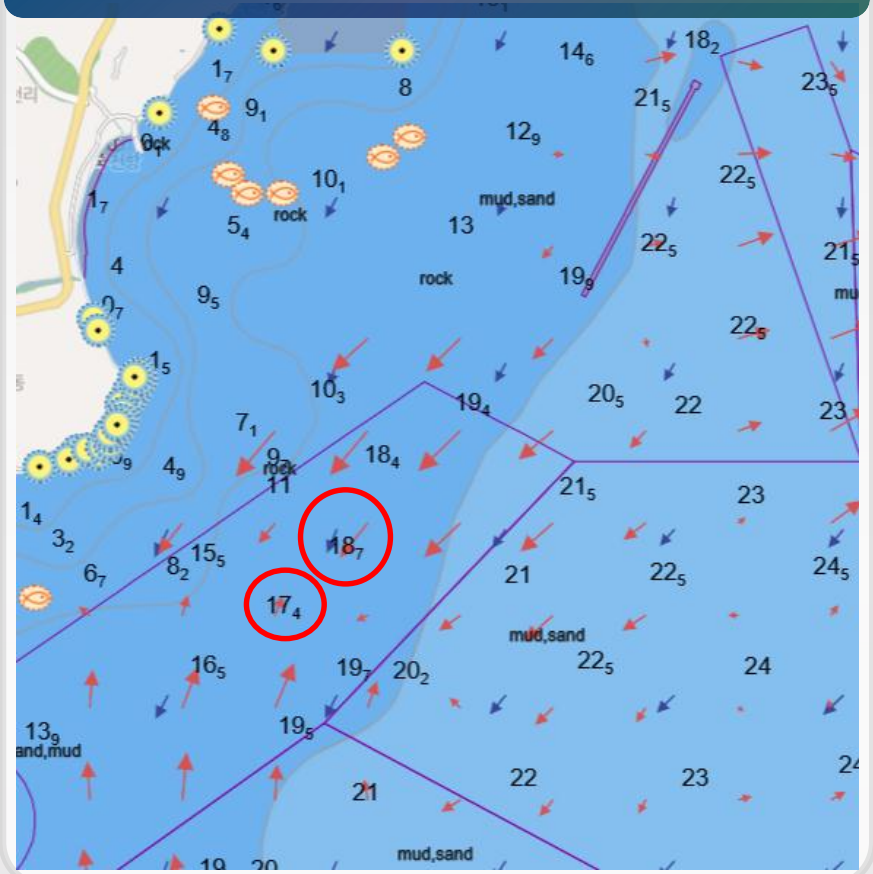
Analysis / Discussion

▪ When visualizing various marine spatial information
: Consideration interoperability between object(Not operability between product!!)

Case1. Depth is obscured by the other objects



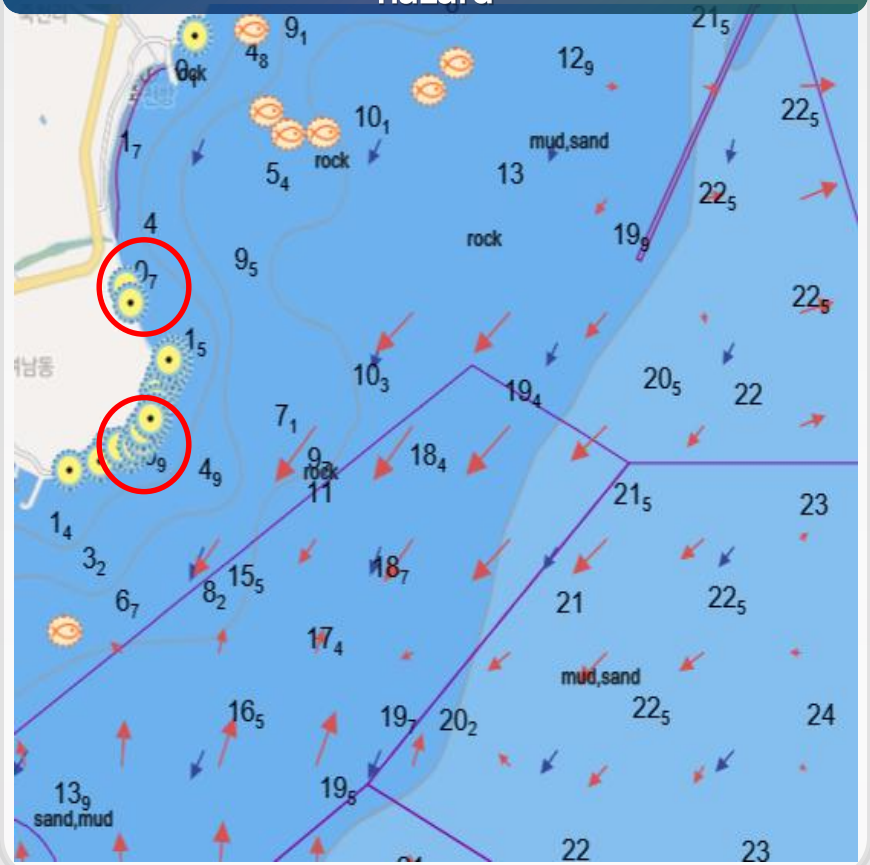
Case 2. Depht is obscured by the current object



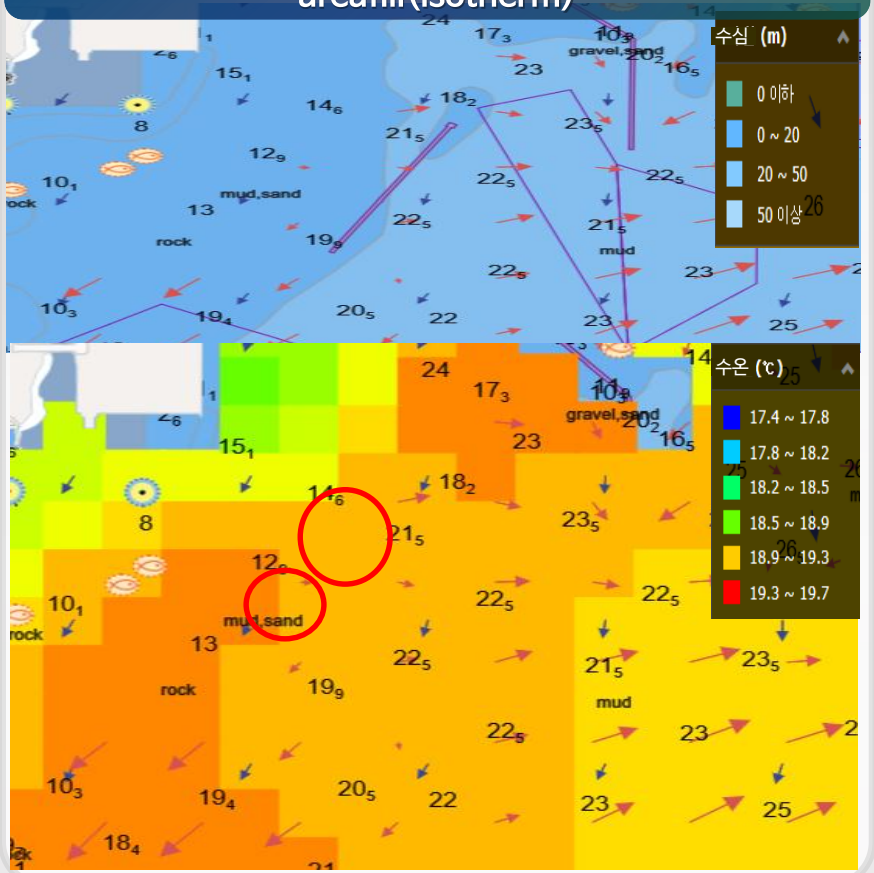
Analysis / Discussion

- When visualizing various marine spatial information
  : Consideration interoperability between object(Not operability between product!!)

Case 3. Depth is obscured by the Navigation hazard



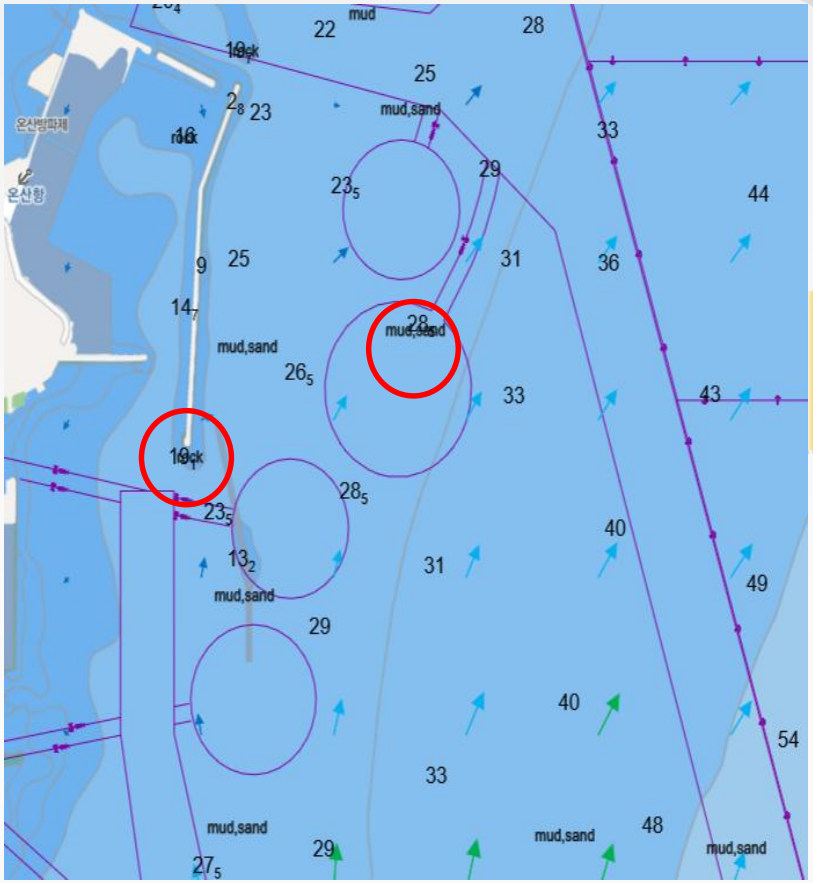
Case 4.Areafill(isobathymetry) is obscured by areafill(isotherm)



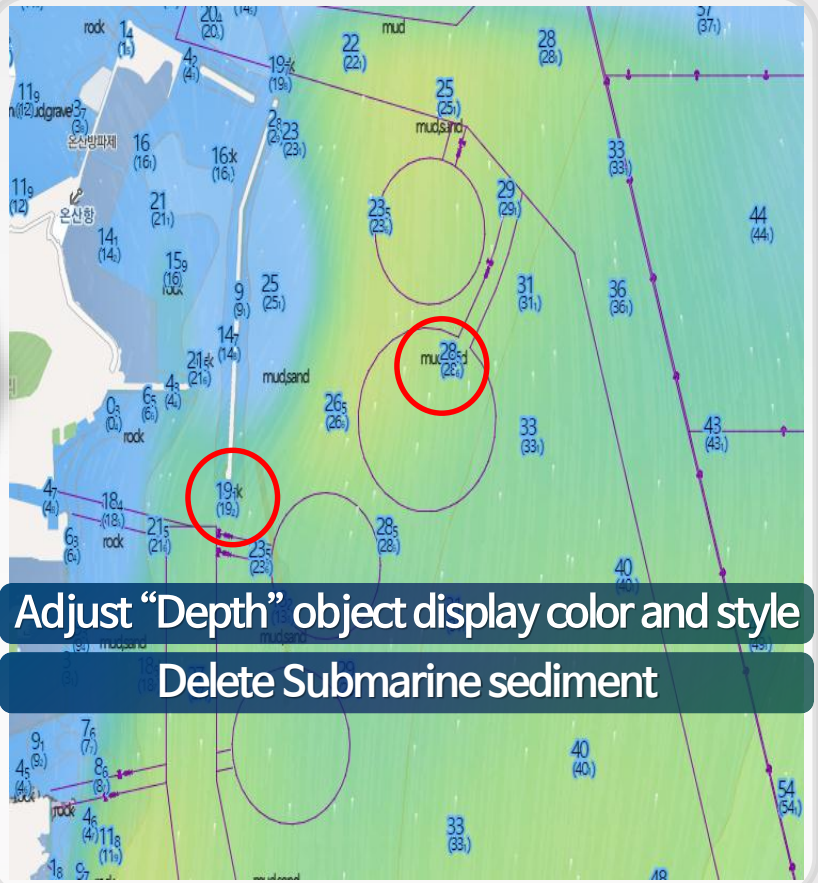
Analysis / Discussion

▪ Visible processing results on POIS - case 1
: Adjust display color and style between oberlapping objects

AS-IS



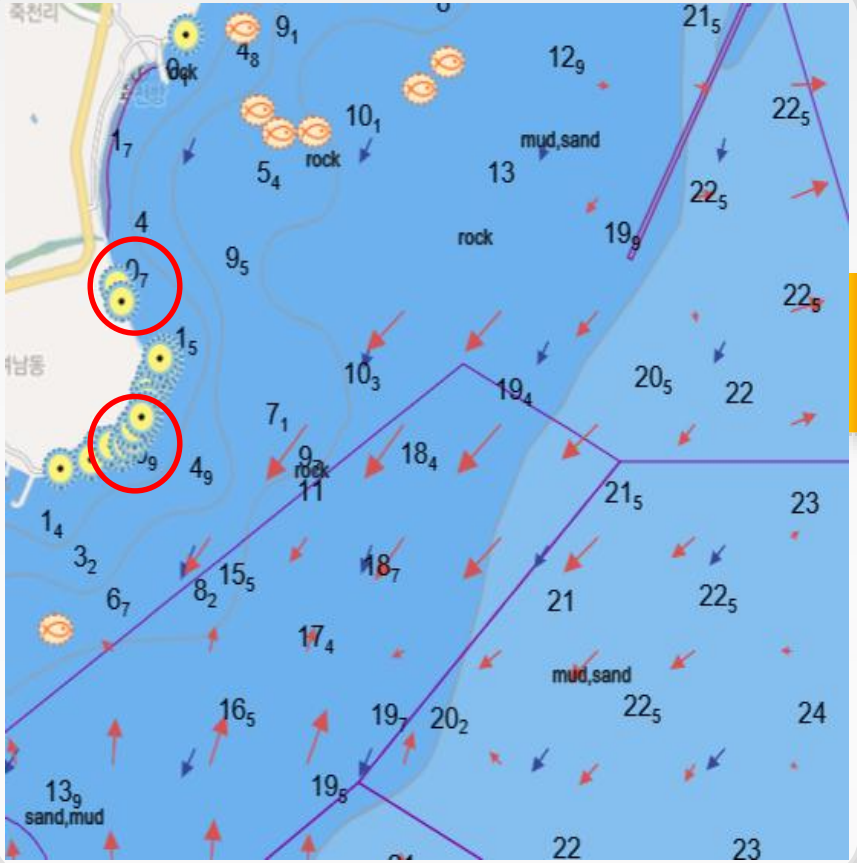
TO-BE



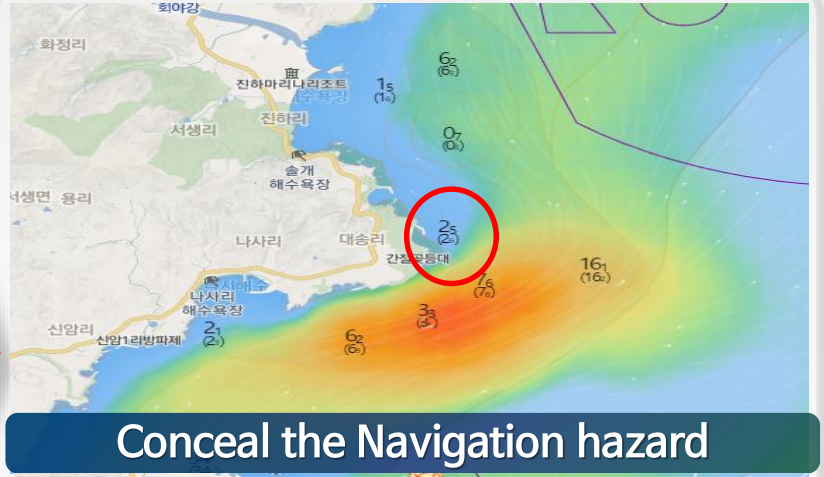
Analysis / Discussion

▪ Visible processing results on POIS – case 2
: Make symbols invisible or change the style of depth information

AS-IS



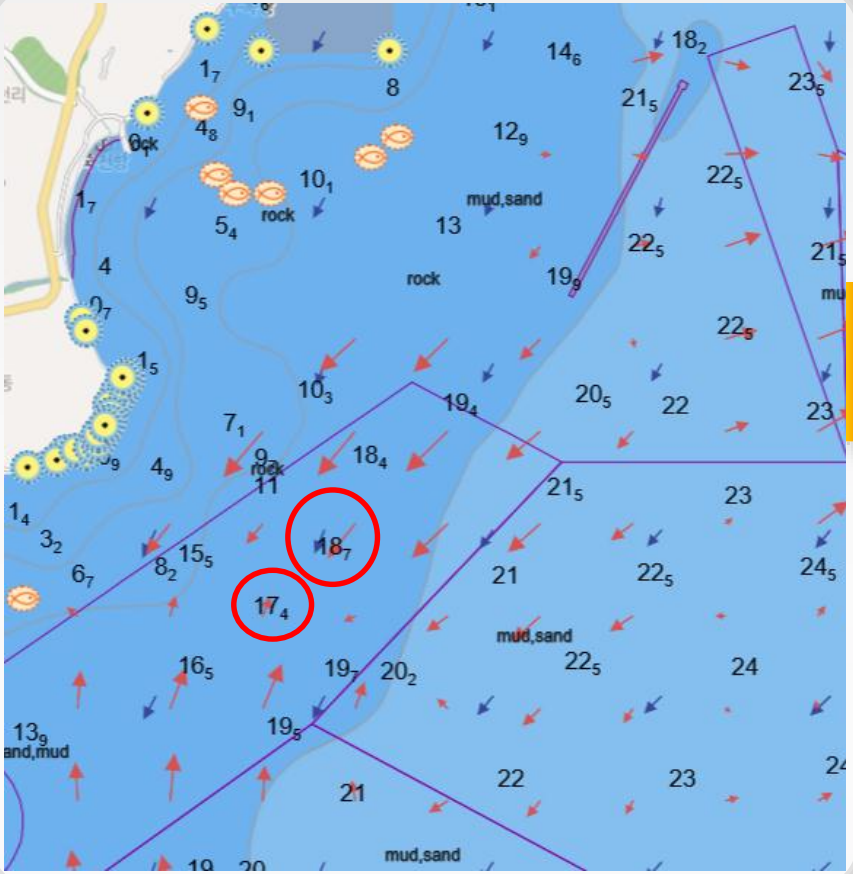
TO-BE



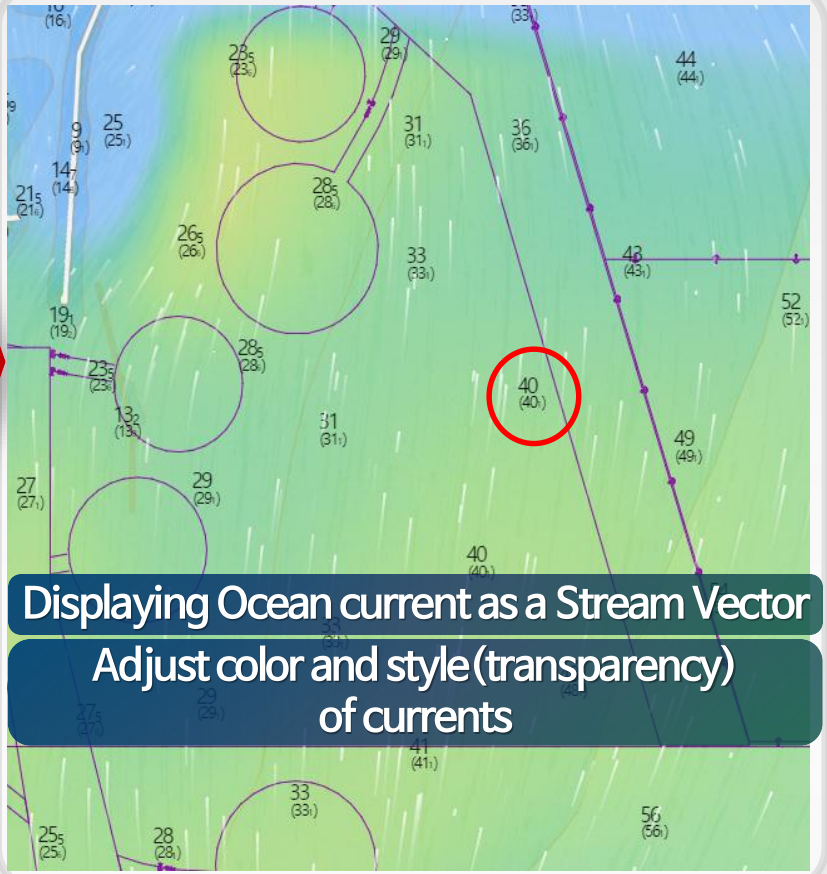
Analysis / Discussion

▪ Visible processing results on POIS - case 3
: Dynamic stream vector representation of ocean current visualization

AS-IS



TO-BE



Conclusion

Display Priority

Object Name	Feature Type	Display Priority
Water Depth	Text	Priority 0
Navigational hazards	Point	Priority 1
Harbor Limit Navigation route	Line	Priority 2
Ocean forecast	Point	Priority 3
Predicted current Sea Surface Temperature	Areafill	Priority 4
…	…	…

❖ Priorities with smaller numerical values will be processed first.

Overlay method between Objects

Example	Adjustment method
Water Depth (Text) + Bottom sediments (Text)	Bottom sediments Layer off
Water Depth + Predicted current (Depth is obscured by an arrow symbol)	1. Conceal the arrow symbol 2. Adjust water depth style (Text -bold/inbox/outbox/halo/etc.) 3. Visulization method (such as stream vector) and transparency adjustment
Predicted current (Areafill) + Sea Surface Temperature (Areafill)	1. Priority Adjustment 2. Adjust to display only a single object
Water Depth (Text) + Navigational hazards (Symbols)	Navigational hazards Symbols layer off

❖ Interoperability between products as well as Interoperability between objects is required.

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Q & A

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Thank you