6: Peterson

Functional Requirements

ID	Requirements	Comment
1	***Environmental Information***	
1.1.0	**Water level**	
1.1.1	System displays real-time water level/depth	
1.1,2	System alerts users when water level is lower/higher than certain level	
1.1,3	System calculates and displays predicted water level for next several weeks	
1.1,4	System alerts users when predicted water level/depth is lower/higher than certain level	
2	***Operational management***	
2.1.0	**Operational plan**	
2.1.1	System allows users to create and save operational plan, route	
2.1.2	System allows users to modify/adjust the operational plan	
2.1.3	System allows users to view the operational plan	
2.1.4	System suggests changes in loading capacity and transport routes based on information on water levels, vessels, and cargo loads.	
2.1.5	System alerts users immediately when navigation along the river is restricted to one-way traffic	
2.1.6	System calculates and suggests optimal transportation plan to transport destination	
2.1.7	System suggests optimize transport route based on emission of each transportation method	
2.1.8	System provides information on traffic volume and congestion on roads	
2.2	**Ship information**	

2.2.1	System displays an overview of available ships per route and its information (engine specifications/emissions information, etc.)	
2.3	**Fuel/emission management**	
2.3.1	System calculates and displays CO_2 emissions after completion of transportation based on fuel consumption, ship type, mileage, etc.	
3	***Data sharing & Collaboration***	
3.1.0	**Information hub**	
3.1.1	System provides information hub to share information from government	