

## 9: Rijkswaterstaat

### Functional Requirements

ID	Requirements	Priority	Comment
1	<b><u>Environmental Information</u></b>		
1.1.0	<b>Water level</b>		
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	<b><u>Operational management</u></b>		
2.1.0	<b>Operational plan</b>		
2.1.1	System suggests changes in transportation routes and method when water levels significantly drop and rise, malfunction on route		
2.1.2	System calculates and suggests optimal transportation plan to transport destination		
2.1.3	System calculates optimal scheduling and provides information such as optimal sailing speed		
2.2.0	<b>Ship information</b>		
2.2.1	System provides real-time vessel location		
2.3.0	<b>Bridge and lock information</b>		
2.3.1	System displays real-time operational status of locks		
2.3.2	System updates lock status every 30 minutes		
2.4.0	<b>Facilities management</b>		

2.2.2	System displays real-time status of availability of facilities along the canal (berths, docking facilities etc.)		
3	<b><u>Data sharing &amp; Collaboration</u></b>		
3.1.0	<b>Communication channel</b>		
3.1.1	System provides communication channels between vessels and lock operators		
3.1.2	System provides communication channel for inter-organizational communication		
3.2.0	<b>Information hub</b>		
3.2.1	System provides emergency contact information		
3.2.2	System provides contact information for ports, locks, and related companies		
3.2.3	System provides information related to social service facilities available in the docking area		
3.2.4	System provides information on emergency response guideline		
4	<b><u>Additional Requirement</u></b>		
4.1	System provides functionality for payment of canal passage fees and port fees		

### Non-Functional Requirements

1	<b><u>Reliability</u></b>	
1.1	System provides only reliable and accurate data	
2	<b><u>Usability</u></b>	
2.1	UI is understandable and actionable, even for users without a technical background.	
3	<b><u>Compatibility</u></b>	
3.1	The UI displays on Smartphone, Tablet and Desktop displays	