

# Project Design Phase-II

Solution Requirements (Functional & Non-functional)

## REAL TIME RIVER WATER QUALITY AND CONTROL

### Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Email Registration through product mobile UI
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Ph level detection	To monitor the water quality Ph sensor is used and the signals are sent to Arduino.
FR-4	Turbidity detection	Turbidity sensor measures the clarity of element or muddiness utter in the water and the signals are send to Arduino.
FR-5	Ultrasonic generator	At regular interval times the waves are generated to clear algae 25%,50%,100%

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

<b>FR No.</b>	<b>Non-Functional Requirement</b>	<b>Description</b>
NFR-1	<b>Usability</b>	It has simple monitoring system and efficient to use.
NFR-2	<b>Security</b>	Mobile application is secured with firewalls protection.
NFR-3	<b>Reliability</b>	Real time sensor output values with future predicted data storage. 98% efficient monitoring output. It also gives assurance for aquaculture safety.
NFR-4	<b>Performance</b>	It has greater performance and environmentally safe model.
NFR-5	<b>Availability</b>	In the form of mobile UI 24 x 7 monitoring system.
NFR-6	<b>Scalability</b>	Highly Scalable. It is capable to produce a best final output.
NFR-7	<b>Stability</b>	The stability is very high
NFR-8	<b>Efficiency</b>	It is highly efficient, high mobility and low powered.