

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	26 October 2022
Team ID	PNT2022TMID36752
Project Name	IOT Based Real Time River Water Monitoring and Control Systems

**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 Gmail Registration through product mobile UI
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Ph level detection	Ph sensor is used to monitor the water quality and the signals are send to Arduino.
FR-4	Turbidity detection	Turbidity sensor TS-300B measures the turbidity (counter of suspended matter) in the wash water and the signals are send to Arduino.

FR-5	Ultrasonic generator	Waves generated at regular interval times to clear algae 25% ,50%, 100%
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#### **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>	Efficient to use and has simple monitoring system.
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. Assurance for aquaculture safety
NFR-4	<b>Performance</b>	Greater performance and environmentally safe model.
NFR-5	<b>Availability</b>	In 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>	It is highly stable.

NFR-8	<b>Efficiency</b>	It is highly efficient and it has simple monitoring system.
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