












# Real-Time River Water Quality Monitoring and Control System

TEAM ID:  
PNT2022TMID42308

SCENARIO	 PREREQUISITE	 PROJECT FLOW	 WORKING	 BENEFITS	 OUTCOME
Testing and Experimenting with various water sources					
 <b>Steps</b> What does the person (or group) typically experience?	<div>Techniques</div> <div>Availability of Internet of Things and Remote sensing</div> <div>purpose</div> <div>To purify the water Resources</div>	<div>sites</div> <div>It is necessary to observe the water quality in a large area such as lake, river, and aquaculture</div> <div>Process</div> <div>IoT and remote sensing techniques are used to congregate and analyzing data from the remote locations</div>	<div>Info Transfer</div> <div>An android application will be used to determine the sensor values and examined via cloud and warnings will be provided to user</div> <div>The values are then compared with the threshold value</div>	<div>It Can diminish the contaminants present in water</div> <div>It changes to a drinking water</div>	<div>The related authorities can take measures to boost the water quality which makes it more usable for human purpose</div> <div>It has high frequency, high mobility, and low powered.</div>
 <b>Interactions</b> What interactions do they have at each step along the way? <ul style="list-style-type: none"><li>■ People: Who do they see or talk to?</li><li>■ Places: Where are they?</li><li>■ Things: What digital touchpoints or physical objects would they use?</li></ul>	<div>Real-time data access can be done by using remote monitoring and Internet of Things (IoT) technology.</div> <div>can be displayed in a visual format on a server PC</div>	<div>To check water quality by analyzing the parameters such as temperature,pH and conductivity, and so on</div> <div>It supervising, congregate and analyzing data from the remote locations</div>	<div>If the acquired value is above the SMS alert will be sent to the user</div>	<div>Using IoT integrated Big Data Analytics will immensely help people to become conscious against using contaminated water</div>	<div>It can be extended into an efficient water management system of a local area.</div>
 <b>Goals &amp; motivations</b> At each step, what is a person's primary goal or motivation? ("Help me..." or "Help me avoid...")	<div>Customer requires the system consist of several sensors</div> <div>It is used to measuring physical and chemical parameters of the water.</div>	<div>The aim is to develop a system for continuous monitoring of river water quality at remote places using wireless sensor networks</div> <div>With low power consumption, need</div>	<div>The data will be stored in the cloud or local storage will be implemmented</div> <div>Using the sensed parameters. the customer predicts the water quality</div>	<div>The customer requires a low cost system</div> <div>By the sensors, water contaminants must be detected.</div>	<div>The issue is that the traditional method, such as workers, needs to go to each tank or river to collect data</div>
 <b>Positive moments</b> What steps does a typical person find enjoyable, productive, fun, motivating, delightful, or exciting?	<div>This project has successfully achieved its objective where water quality data (pH and temperature) can be monitored</div>	<div>Implementation by a reconfigurable smart sensor interface device for water quality monitoring system in an IoT environment</div>	<div>It proposed the system collects parameters of water pH, turbidity on the surface of water</div> <div>With high speed from multiple different sensor nodes.</div>	<div>It will immensely help customer to become conscious against using contaminated waste as well as to stop polluting the water.</div>	<div>It was satisfied by low-cost water quality monitoring system has been developed for large area of coverage</div> <div>It was attributed to its long duration operation, flexibility, and reproducibility</div>
 <b>Negative moments</b> What steps does a typical person find frustrating, confusing, angering, costly, or time-consuming?	<div>Customer felt that the sensors are installed very deep inside the water and their positions are fixed.</div>	<div>The sensors which work on power source may often required to be replaced in case of malfunctioning.</div>	<div>Mounted Sensors may get damage during natural disasters and often by aquatic animals</div>	<div>The maintenance cost is also very high.</div>	<div>To test other parameters ,the new sensors can be included.</div>
 <b>Areas of opportunity</b> How might we make each step better? What ideas do we have? What have others suggested?	<div>The design of a , real time, and low cost water quality monitoring system</div>	<div>Track whether protection and restoration measures are working</div>	<div>Customer can analyse data continually and instantly alert users to changes in the system.</div> <div>It reduces the need for unreliable and expensive sampling.</div>	<div>No need to compromise the water quality by the presence of infectious agents, toxic chemicals, and radiological hazards.</div>	<div>The system has wide application and it is usable and affordable</div>