## Real-Time River Water Quality Monitoring and Control System

## TEAM ID: PNT2022TMID54363

SCENARIO  Testing and Experimenting with various water sources	PREREQUISTE	PROJECT FLOW	WORKING	BENEFITS	OUTCOME
Steps What does the person (or group) typically experience?	Availability of Internet of Things and Remote sensing  To purify the water Resources	It is necessary to observe the water quality in a large area such as lake, river, and aquaculture  In a process  IoT and remote sensing techniques are used congregate and analyzing data from the remote locations	An android application will be used to determine the sensor values and examined via cloud and warnings will be provided to user  The values are then compared with the threshold value	It Can diminish the contaminants present in water  It changes to a drinking water	The related authorities can take measures to boost the water quality which makes it more usable for human purpose  It has high frequency, high mobility, and low powered.
Interactions What interactions do they have at each step along the way?  People: Who do they see or talk to?  Places: Where are they?  Things: What digital touchpoints or physical objects would they use?	Real-time data access can be done by using remote monitoring and Internet of Things (IoT) technology.  can be displayed in a visual format on a server PC	To check water quality by analyzing the parameters such as temperature,pH and conductivity, and so on	If the acquired value is above the SMS alert will be sent to the user	Using IoT integrated Big Data Analytics will immensely help people to become conscious against using contaminated water	It can be extended into an efficient water management system of a local area.
Goals & motivations  At each step, what is a person's primary goal or motivation?  ("Help me" or "Help me avoid")	Customer requires the system consist of several sensors  It is used to measuring physical and chemical parameters of the water.	The aim is to develop a system for continuous monitoring of river water quality at remote places using wireless sensor networks  With low power consumption, need consumption, need networks	The data will be stored in the cloud or local storage will be implemented  Using the sensed parameters, the customer predicts the water quality	The customer requires a low cost system  By the sensors, water contaminants must be detected.	The issue is that the traditional method, such as workers, needs to go to each tank or river to collect data
Positive moments  What steps does a typical person find enjoyable, productive, fun, motivating, delightful, or exciting?	This project has successfully achieved its objective where water quality data (pH and temperature) can be monitored	Implementation by a reconfigurable smart sensor interface device for water quality monitoring system in an IoT environment	It proposed the system collects parameters of water pH, turbidity on the surface of water  With high speed from multiple different sensor nodes.	It will immensely help customer to become conscious against using contaminated waste as well as to stop polluting the water.	It was satisfied by low-cost water quality monitoring system has been developed for large area of coverage  It was attributed to its long duration operation, flexibility, and reproducibility
Negative moments What steps does a typical person find frustrating, confusing, angering, costly, or time-consuming?	Customer felt that the sensors are installed very deep inside the water and their positions are fixed.	The sensors which work on power source may often required to be replaced in case of malfunctioning.	Mounted Sensors may get damage during natural disasters and often by aquatic animals	The maintenance cost is also very high.	To test other parameters ,the new sensors can be included.
Areas of opportunity  How might we make each step better? What ideas do we have?  What have others suggested?	The design of a , real time, and low cost water quality monitoring system	Track whether protection and restoration measures are working	Customer can analyse data continually and instantly alert users to changes in the system.  It reduces the need for unreliable and expensive sampling.	No need to compromise the water quality by the presence of infectious agents, toxic chemicals, and radiological hazards.	The system has wide application and it is usable and affordable