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

Date	22 October 2022
Team ID	PNT2022TMID11546
Project Name	Hazardous Area Monitoring for Industrial Plant powered by IoT
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data collection	The beacon sensor should be able to collect the temperature from temperature sensor and it should store the data in them and they should have al the data related to their coverage area
FR-2	Location detection	The beacon should send correct location to the wearable device and then when the worker or the wearable device gets near to the detected location it should give an beep or buzzer to alert them
FR-3	Data coinciding	The beacon should be able to sent the alert or the data both to the wearable device and administration dashboard through cloud proportionally
FR-4	Wearable device (display)	The device should display the temperature were the worker currently present, and it must be monitored by the worker often
FR-5	SMS notification	Here if the area were the worker is working reaches the limit of temperature where it meets the dangerous level then they receive message to their phone by alerting them to leave the area immediately
FR-6	Admin dashboard	When the area of industry reaches the dangerous limit of temperature then the cloud should the notification to their dashboard then the admin should take the precaution to prevent the industry from danger or from any loss

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Here wearable devices that are given to the worker should be compact and comfortable to them to use in daily basis And then the device must be in working condition

		And it should alert them when the temperature fluctuates to high limit it should not take time are delay to notify then it causes danger so it should be in correct working manner
NFR-2	**Security**	The link between the beacon sensor and the cloud must be secure and safe all the data must be secured and stored The temperature data in the cloud and in the dashboard must be secured and should be monitored regularly
NFR-3	**Reliability**	The wearable device that are used by the workers should be maintained without any fault are without any delay messages If any delay or fault occurs then the device should alert are notify the problem to the worker and to the admin and it should be noted and rectified by the admin The beacon sensor must also be rectified and maintained without any delay are fault if any fault are any miscommunications occurs then it should be replaced are get replaced immediately
NFR-4	**Performance**	The device should send the data to the cloud and from cloud it should be sent to the worker and the Admin dashboard hence the project needs an great processor to do the process and these steps should be done in real time Then the message are the data send in real time should be sent in lesser delay of time it should be as mush as faster
NFR-5	**Availability**	The worker who are working in the plant who uses the wearable device they should be notified by the temperature of their current location and rather at any time and any place at the plant
NFR-6	**Scalability**	If the area of the plant is increased than the coverage area it's a simple process we should install new beacon sensors and it should be linked to the old beacon sensors and it should be linked to the cloud and they can be processed It can be modified for some other plant and the can also modify to detect any other problems like gas leakage and etc