

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

Date	03 October 2022
Team ID	PNT2022TMID27938
Project Name	Project - 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 Gathering	The smart beacon device should be able to collect data(like temperature, humidity, etc) from the surrounding environment
FR-2	Beacon Data Syncing	The smart beacon must be able to share the collected data to the admin dashboard and the wearable device
FR-3	Wearable device display	The wearable device must be able to display the collected data from the smart beacon
FR-4	SMS notification	The user must be alerted with an SMS message in case of emergency
FR-5	Admin Dashboard	When the parameters reach dangerous levels the admin is informed by the dashboard and must take necessary precautions

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	<ul style="list-style-type: none">- The wearable device should have adjustable straps- The display should be a reliable one
NFR-2	Security	<ul style="list-style-type: none">- Connection between the beacons and cloud should be secure and encrypted- The database where the data should be secured using security algorithms
NFR-3	Reliability	<ul style="list-style-type: none">- The wearable device should be fault free in case of emergency- There should not be any lag in the wearable's display- The user must be informed using an SMS message in case of emergency
NFR-4	Performance	<ul style="list-style-type: none">- The system should collect and display the data at real-time simultaneously without any delay

		<ul style="list-style-type: none"> - The data transfer time between the beacon and cloud should be reduced (using cache memory)
NFR-5	Availability	<ul style="list-style-type: none"> - The dashboard should be constantly active - The user should be able to view the surrounding parameters irrespective of time and place
NFR-6	Scalability	<ul style="list-style-type: none"> - It is scalable in terms of range coverage as new beacons can be installed or removed as per requirement - It is a universal model which can be implemented anywhere with small modifications