Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID28572
Project Name	Project - Hazardous Area Monitoring for Industrial Plant Powered by IoT
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Workers are the pillar of the company, while working in hazardous areas it is very difficult to avoid accidents, hence we need to ensure the safety of the workers.
2.	Idea / Solution description	Hazardous Area Monitoring Industrial Plant powered by IoT, we are developing a system which will automatically monitor the industrial applications and generate Alerts/Alarms or make intelligent decisions using the concept of IoT. Every device will be acting as a beacon and it is connected to temperature sensors. An alert message is also sent to the mobile whenever high temperature (or) toxic gases are detected within the area through SMS using API. Through this wearable gadget, the information is sent to the cloud database and through which the dashboard, the admins of that specific plant can see the information and take fundamental activities on the off chance that required.
3.	Novelty / Uniqueness	• Makes it easier to know the temperature (or) any hazardous gases present in the area without the worker having to constantly do manual checks. • Provides a different solution to ensure the safety of the workers. • Wearable devices display the current temperature present in the area all the time. • Alerts via SMS to mobiles of the workers when high temperature is detected. • Alerts on both the wearable device and mobile application occur simultaneously to prevent the worker from entering into hazardous areas. •These components are utilized to build a monitoring system. Apart from these components, several other sensors are used to keep a check on the temperature, gas leakage,

		pressure, humidity, etc. in the work environment to ensure the worker's safety.
4.	Social Impact / Customer Satisfaction	Due to a secure environment, labourers can work efficiently. More centre on work without any fear. 1) Real-time data is available 2) Reliable and consistent data 3) Automated detection 4)Excellent customer service 5)Ensures safety 6)Saves the lives of workers 7)Comfortable & User-friendly 8)Simple and reliable
5.	Business Model (Revenue Model)	We can introduce a product-based approach to earn good revenue. And cost-effective So, Wearable devices can be priced and sold by the industry to the workers.
6.	Scalability of the Solution	In some industrial plants, there are some areas which are to be monitored from time to time. To monitor the conditions, we can integrate the smart devices in the areas which are needed to be monitored. We use the IBM Watson cloud server to collect the live data and the current data. It ensures the safety of each and every worker working in harmful gases and high-temperature environment