

**Project Design Phase-I**  
**Proposed Solution**

Date	24 September 2022
Team ID	PNT2022TMID39426
Project Name	Hazardous Area Monitoring For Industrial Plant Powered By IoT
Maximum Marks	2 Marks

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Industrial hazard is the danger or chance of accidental injury to the worker while engaged at his accustomed work in the plant. The most occurring problems in industries are fire accidents, harmful gas leakages, overheating in machines, electrical explosions, accidents due to improper operating conditions and faults in systems. Identifying industrial hazards allows employers to protect their worker from accidents, injuries, and fatalities.
2.	Idea / Solution description	In industrial areas fire accidents can prevent by fire detection using temperature, gas and flame sensors with automatic water sprinkler, Harmful or toxic gas leakages can identify by monitoring harmful gases and intimate alert message to safety control board of industry, Machine overheating can reduce by cooling machine with compressor, control the humidity and temperature instantaneously in order to have stable, controllable atmospheric conditions.
3.	Novelty / Uniqueness	Safety stands as the foremost priority in most of today's technology-aided industrial processes. By using continuous monitoring and detecting of hazardous signs, major problems will be prevented at the initial stages. Thus, minor problems can prevent easily in order to prevent major problems. For preventing the kind of accidents resulting in the seizing of work and loss of the production. By controlling the hazard to the minimal level, accidents in the industry can be avoided.

4.	Social Impact / Customer Satisfaction	With the help of employee's safety, a working environment having greater motivation and satisfaction of the manpower can be created. Broadly, having a safer working environment for performing the operations is expected by a worker from their employer. There are some specific advantages that can be obtained from an accident-free plant. Huge cost savings, high legal and moral grounds, improved productivity are some of the important benefits. Greater job satisfaction and higher motivation can be obtained by the workers if their expectations of safety from hazards are fulfilled by the industrial working environment.
5.	Business Model (Revenue Model)	To meet industrialists explaining about the problem- solving solutions for the hazards in industries by proposing the ideas that using IoT technology. For the further development of problem solutions into products collecting funds from the industries as per the need cost. There are some specific advantages that can be obtained from an accident-free plant. Huge cost savings, high legal and moral grounds, improved productivity are some of the important benefits.
6.	Scalability of the Solution	By taken the investigations based on the solutions found there will be more possibilities to make the ideas in to applicable. The ideas proposed are possible by locating IoT sensors and sensing problems by continuously monitoring the stability conditions in industrial environment. This mechanism is feasible because it is easy to setup, user friendly, wireless detector, predicts the risk, in beforehand, affordable etc., in today's technology application of these kind of thses kind of sensor are very successful, trustworthy and easily accessed in many fields of work.