

Project Design Phase-I
Proposed Solution

Date	19 September 2022
Team ID	PNT2022TMID18171
Project Name	Industry-specific intelligent fire management system.
Maximum Marks	2 Marks

Proposed Solution Template:

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

S.No.	Parameter	Description
•	Problem Statement (Problem to be solved)	There was an industry outside the town. One day the industry was on a fire accident, the employees stopped the machines and ran outside the industry and they informed the incident to the fire station around. Then the fire station team arrived the industry and they extinguished the fire with a minimal damage.
•	Idea / Solution description	<p>In an event of electrical fire accident , there are some precautionary measures that are to be followed ,</p> <ul style="list-style-type: none">• The IoT based Circuit Breaker to be used. A circuit breaker is an electrical switch designed to protect an electrical circuit from damage caused by overcurrent/overload or short circuit. Its basic function is to interrupt current flow after protective relays detect a fault.• IoT security camera to be used for Monitor who is entering and leaving a building in real-time. The oxygen supply should be cut off in that place when there is no employee, which will completely shut down the fire in that place. If oxygen cannot be cut off when the employee is present in that place so, use sodium bicarbonate which can be used in the event of electric fire where we can't use water in such incident. These are all monitor and controlled by lot.

•	Novelty / Uniqueness	We can use chemical flame inhibition, such as dry chemicals and halogenated hydrocarbons (Halogens), interrupt the flame-producing chemical reaction and stop flaming
•	Social Impact / Customer Satisfaction	When a fire accident takes place you should be in a position to extinguish the fire with minimal damage which will be the main area of the customer satisfaction.
•	Business Model (Revenue Model)	Industrial-based intelligent smart emergency response system that can control security and safety of the industry intelligently within the minimum time and the design of a system using wireless sensor networks, fire alarm sensor, and human detecting sensor to address the problems with existing disaster emergency response systems in times of fire hazard. The system has decentralized control that can intelligently guide evacuees based on the detection of humans for removing them from industry to minimize the loss of human life and industrial assist. The existing system was able to secure the industry but not within enough time as the system was designed using various sensors but not as a single unit to address the problems in times of fire or any other. Each sensor were connected to the system separately and function individually which makes the system slow. The modified system can secure the industry intelligently within minimum time as the system is designed using different sensors as a single unit to address the problems in times of fire or any other.
•	Scalability of the Solution	With businesses and processes changing daily, there will always be demand for new features, products and services for your business. Additionally, there are several different business models and pricing tiers you can implement that will allow you to reach all types of customers.