Project Design Phase-I
Problem – Solution Fit Template

Date	09 October 2022
Team ID	PNT2022TMID42571
Project Name	Project - **Industry Specific Intelligent Fire Management System**
Maximum Marks	2 Marks

Industry Specific Intelligent Fire Management System:

1. CUSTOMER SEGMENT(S) — CS

- Industrialist
- Government
- Educational Institutions

6. CUSTOMER CONSTRAINTS — CC

- No proper knowledge about the fire management system
- Equips the usual fire management procedures such as installing fire extinguisher and sand buckets
- Thinking about the capital invested on the fire management system

5. AVAILABLE SOLUTIONS — AS

- Laser technology solutions detect smoke by drawing air into a laser chamber to identify the possible threat.
- Interfacing the smoke sensor and DHT sensor with the arduino and turning on the fire alarm

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

- An early fire detection system should be implemented in the industry
- A proper staff or technician should be appointed to monitor the fire occurrences
- An immediate alert should be made if there is any fire occurrences as it may cause the loss of lives and property

9. PROBLEM ROOT CAUSE — RC

- Every industries have lots of materials that are highly inflammable, in case of any fire outbreak, the fire gets spread drastically
- Hence due to the fire outbreak, loss of fire may occur.
- It causes an huge damage to the industrial properties

7. BEHAVIOUR — BE

- This system can alert the nearby fire stations and the respective authorities in case of a fire occurrence
- As an immediate response the fire alarms and water sprinklers will be turned on in order to alert the worker and suppress the fire respectively

Focus on J&P, tap into BE, understand RC

Focus on AS, differentiate

Focus on J&P, tap into BE, understand RC

3.TRIGGERS

- The damage to industry causes an huge loss in production of industry
- The loss of lives creates an huge loss of their family and also creates an fear to work in that industry

4. EMOTIONS: BEFORE/ AFTER

- Injury or Death : A fire in an industry that results in injury or death will have huge consequences on the business owner or manager responsible for the safety of their]employees and, or customers, the family of anyone who is injured or dies and the businesses ability to trade and their reputation.
- Fire Insurance Claims : If a fire breaks out in
  a industry and the Fire Safety Legislation and recommendations have not been followed then this can and are likely to invalidate a businesses insurance.
- Cost : If an insurance claim is invalidated then the cost of the repairs to the property and claims can be huge.
- Operation : A fire can have serious consequences on an industry's ability to continue to operate at all or operate efficiently. Running any production is difficult
  and fire can result in you losing customers as they will go elsewhere and may never come back, as well as creating a reputation for not being able to deliver against legally binding contracts.

10.YOUR SOLUTION

This Fire management system includes temperature sensor, gas sensor, flame sensor. If the temperature increased limit automatically the exhaust fans will be switched on .If suppose the flame is detected automatically the sprinklers will be switched on. If the harmful gases detected automatically the alarm will be switched on. Emergency alerts are noticed to the nearest fire stations and authorities.

8.CHANNELS OF BEHAVIOUR

ONLINE:

- The managers and staff can continuously monitor the temperature and flame.
- In case of any fire is detected immediately the nearby fire station gets alerted

OFFLINE

- In case any flame is detected in the industry , as an immediate action the water sprinklers will be turned on and the fire alarms will get turned so everyone can get evacuated from that place