

VSB Engineering College,karur-639111

Project Design phase – I

Problem Solution fit

Project name: Industry Specific Intelligence Fire Management System

Team Id : PNT2022TMID33506

Team Lead : Gunavathi S
Team Members: Dharshini S G,
Gopika A,
Jegapriya P.

1.Customer segments:-

On the basis of applications, the fire management equipment is segmented as:

- Academia and institutional
- Government
- Healthcare
- Manufacturing
- Oil and gas
- Transportation
- Power Stations
- Reatils

6.Customer constrains:-

The primary constraint on the fire detection system is to detect a developing fire prior to belt ignition, or as quickly as possible thereafter before the onset of rapid flame spread can begin.

5.Available solutions

Available Solutions is a full service design, installation, renovation, repair, inspection and consulting of fire and life safety systems. We strive to provide our clients with the best systems and services to meet there needs, budgets, and timeline.

2.Jobs to be done :-

Contemporary fire alarm systems use automatic functions to detect the occurrence of an event that may result in a fire. They receive a signal from a fire sensor (smoke, heat or carbon monoxide detector) and automatically transmit it to the fire alarm panel.

9.Problem route cause:-

There are many causes of fire and explosion due to electrical hazards. Exposed wiring, overloaded outlets, overloaded circuits, static discharge etc are common fire hazards. The source of the fire can be anywhere- it may just cause a spark and the dust may become the ignition source.

7.Behavior:-

A system that combines qualities for fire, temperature and smoke detection, sending alert Text Message about the fire to the user along with onsite alarm(buzzer), updating temperature, humidity and smoke on cloud every 15 seconds, and it also moves manually with the help of Android Application.

3.Triggers:-

The most important thing is that fire system play is in protecting the lives of those who are inside the building. What it does is, it slows down the spread of a fire and allows people to safely evacuate the building, and reduce the number of toxic fumes released by a fire to a survivable level. These make the customer to install fire management system.

4.Emotions:-

There could be no work going on and thus cash flow is decreased and in the long term, a fire could lead to severe job losses. For the staff that do return, they will be demoralised and even have feelings of being unsafe or upset.

10.Solution:-

IPT based fire management system is used as an ADC convertor, which converts the analog signals received at the sensor end to digital and then transmits them to the micro-controller, Arduino.

8.Channels of behavior:-

Fire alarm systems use automatic functions to detect the occurrence of an event that may result in a fire. They receive a signal from a fire sensor (smoke, heat or carbon monoxide detector) and automatically transmit it to the fire alarm panel.