Project Design Phase-I - Solution Fit Template

Project Title: Emerging Methods for Early Detection of Forest Fires   **Team Id :PNT2022TMID52354**

1. CUSTOMER SEGMENT(S) — CS

In order to protect the forest resources, which are essential for supporting life on Earth, from sudden fire and smoke outbreaks. The forest management group does require this gadget. in places at risk of fire.

6. CUSTOMER CONSTRAINTS — CC

The devastation is caused by greenhouse gases and changes in the climate. The human tendency to consume resources greedily is another important contributing cause to forest fires

5. AVAILABLE SOLUTIONS — AS

For the purpose of detecting forest fires, existing systems use optical sensors. The sensors alert the office of forest management when a fire is spotted. In addition, satellites are utilised to find IR rays seen in forested areas

Define CS, fit into CC   *Explore AS, differentiate*

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

By releasing a lot of carbon dioxide, carbon monoxide, and fine particulate matter into the environment, the main issue is weather and climate. As a result, air pollution can lead to a variety of health problems, such as respiratory and cardiovascular disorders.

9. PROBLEM ROOT CAUSE — RC

The following are some rationales
1. Lightning, a natural occurrence
2. Man-made causes: cigarettes, naked flames, and electric sparks
Therefore, ongoing care and observation are required to protect natural resources in order to save lives.

7. BEHAVIOUR — BE

When fire is detected the sytem which is implemented to monitor the forests sets the alarm to ring, that is it gives the signal through which fire management team and the forest committee tries to call off the fire. Thus, the aim is to recognise the fire as early as possible to prevent spread of fire which will cause further damage and it'll become difficult to control.

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

3. TRIGGERS — TR

Due to the existence of a great deal of dry grass all around and the possibility of the campfire remaining scorched, the uncontrolled behaviour toward burned cigarettes can spread.

4. EMOTIONS: BEFORE / AFTER — EM

Since the variables that affect a wildfire's course and intensity are erratic and subject to alter at any time, they can be very stressful. People who have experienced wildfires may experience severe anxiety and mood swings.

10. YOUR SOLUTION — SL

We have presented a method to detect forest fires early using CCTV camera surveillance, which can detect fire in both indoor and outdoor activities, in order to reduce these losses. In order for the forest management office to stop the damage brought on by the fire, immediate alarms must be given to them

8. CHANNELS of BEHAVIOUR — CH

Online detection: As a result, the chatbot or the API can connect over the internet to provide you with information on the forest's present condition.
Offline Detection: As a result, the forest managers can notify surrounding residential areas or raise awareness through the media (news, radio).

Identify strong TR & EM   *Identify strong TR & EM*