Proposed Solution Document

Team ID	PNT2022TMID08407
Project Name	Emerging Methods for Early Detection of Forest Fires

S.No.	Parameter	Description
1.	Problem Statement (Problem to besolved)	Forest are one of the main factors in balance the ecology.The forest fires are increased due to deforestation and global warming. Many of the forest are affected by forest fires. More number of living and non-living things are also affected. Forest fire detection is inevitable for forest fire management.
2.	Idea / Solution description	Our solution aim at collecting the datasets to test and train the models— fire detection, alarms and notifications, and suppression, all of which must function together to provide the necessary fire protection for a given building. Designing a fire alarm and notification system requires an integrated approach that includes a comprehensive analysis of the entire fire protection system. This analysis is necessary to gain a thorough understanding of how all the main components of the This analysis needs to be used are CNN and image processing
3.	Novelty / Uniqueness	The novelty of system is real-time monitoring, early prediction, validation through UAV and fire confirmation using image processing. Accuracy and time prediction using AI,CNN and API made it possible
4.	Social Impact / CustomerSatisfaction	Timely information about the appearance of fire reduce the number of areas affected by this fire and thereby minimizes the costs of fire extinguishing and the damage caused in the woods. Monitoring of the potential risk areas and an early detection of fire can significantly shorten the reaction time and also reduce the potential damage. The destroying homes,wildlife habitat and timber and polluting the air with emisson harmful to human health.

5.	Business Model (Revenue Model)	Aspirating smoke detectors continuously sample air to provide early warnings of fire hazards, helping detect threats before they escalate. Some devices provide multi-level warnings and are equipped with wide-ranging sensitivity to identify even the most negligible amounts of smoke, helping to prevent smalls fire from taking hold and causing widespread damage. Unlike traditional detection technology – which is largely passive, waiting for smoke to reach sensors – aspirating devices are designed to sample and test air near the most likely sources of fires throughout a building. Aspirating smoke devices can be positioned in hard-to-monitor places, such as ceilings, air grilles and openings, or within critical spaces, including operating and patient rooms. some of the technologies can also draw locations back to a central system that continuously monitors for trace amounts of smoke.
6.	Scalability of the Solution	Changes in the use or occupancy of a building can result in compliance issues and a fire alarm system that no longer provides sufficient protection. If future changes are anticipated, fire safety engineers can design a fire alarm system with this in mind, providing a flexible infrastructure that includes the proper wire size and additional circuits distributed in a way that accommodates future growth and change. Perhaps one of the most compelling reasons to design a fire alarm system that goes above and beyond the minimum requirements from the start is the fact that fire codes and other applicable regulations can and do change. And, changes that are made retroactively can trigger potentially very expensive alterations in a fire alarm system.