

## Project Design Phase-I Proposed Solution

Date	31 October 2022
Team ID	PNT2022TMID14164
Project Name	Emerging methods for early detection of forest fires
Team Leader	Raghul N
Team Mates	Amulya v, Naveen E, Vigneshwaran P
Maximum Marks	2 Marks

### Proposed Solution Template:

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

S.No.	Parameter	Description
1.	<b>Problem Statement (Problem to be solved)</b>	AI based Emerging methods for early detection of forest fires
2.	<b>Idea / Solution description</b>	A solution is needed that detects fires early by detecting smoke, hydrogen and other gases released by pyrolysis in the early stages of a wildfire, buying firefighters valuable time to extinguish the fire before it spreads out of control. Sensing solutions from Bosch Sensortec can help to reduce wildfires.
3.	<b>Novelty / Uniqueness</b>	Remote sensing Machine learning Wildfire prediction Data mining using <b>Artificial intelligence</b>
4.	<b>Social Impact / Customer Satisfaction</b>	The most important factors in the fight against the forest fires include the earliest possible detection of the fire event , the proper categorisation of the fire and fast response from the fire services . Several different types of forest fires are known , including ground fires , surface fires and crown / tree fires . Each of these types of forest fires is specific and the proper counteractions against it must be considered and implemented to successfully fight it . Over the years the detection of forest fires has been conducted in different ways , ranging from the use of forest outposts to fully automated solutions .
5.	<b>Business Model (Revenue Model)</b>	The annual losses from forest fires in India for the entire country have been moderately estimated at Rs 440 crores (US\$ 107

		million).
6.	<b>Scalability of the Solution</b>	Aerial-based systems gained recently a lot of attention due to the rapid development of UAV technology. Such systems provide a broader and more accurate perception of the fire, even in regions that are inaccessible or considered too dangerous for fire-fighting crews. In addition, UAVs can cover wider areas and are flexible, in the sense that they monitor different areas, as needed