

Project Design Phase-I Proposed Solution

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| Date | 05 NOVEMBER 2022 |
| Team ID | PNT2022TMID08411 |
| Project Name | Emerging methods for early detection of forest fires |
| Team Leader | KAVIYA S |
| Team Mates | JAMILA.R,N.LAVANYA,R.PRAPH,A,G.SANTHANAPRIYA |
| Maximum Marks | 2 Marks |

Proposed Solution Template:

| S.No. | Parameter | Description |
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| 1. | Problem Statement (Problem to be solved) | AI based Emerging methods for early detection of forest fires |
| 2. | Idea / Solution description | 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. | Novelty / Uniqueness | Remote sensing Machine learning Wildfire prediction Data mining using Artificial intelligence |
| 4. | Social Impact / Customer Satisfaction | 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 . |

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| 5. | Business Model (Revenue Model) | The annual losses from forest fires in India for the entire country have been moderately estimated at Rs 440 crores (US\$ 107 |
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Project team shall fill the following information in proposed solution template.

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| | | million). |
| 6. | Scalability of the Solution | 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 |