**Project Title**: Emerging methods for early detection of forest fires

**Project Design Phase-I** - **Solution Fit Template**

**Team ID: PNT2022TMID23831**

| Define CS, fit into CC | 1. CUSTOMER SEGMENT(S) CS | 6. CUSTOMER CONSTRAINTS | 5. AVAILABLE SOLUTIONS | Explore AS, differentiate |
|---|---|---|---|---|
| | Forest guard | Spending more money for the equipments, network connection for the devices, power supply interruptions, occurrence of damages sometimes these limitations the customer's choices of solutions . | Alarm system for indication of five, remote sensing based methods such as satellites, high-resolution static cameras fixed on the ground, unmanned aerial vehicles. | |

| Focus on J&P, tap into BE, understand RC | 2. JOBS-TO-BE-DONE / PROBLEMS J&P | 9. PROBLEM ROOT CAUSE RC | 7. BEHAVIOUR BE | Focus on J&P, tap into BE, understand RC |
|---|---|---|---|---|
| | Always clear the area around the workspace. The area should be even larger if it is windy and dry. Making sure that to never operate equipment that produces sparks near dry vegetation. | The fire is mainly caused by lightning, increased temperature, human activities and other reasons . Human caused fires result from campfires, equipment use and malfunction, negligently discarded cigarettes, etc.. | They to monitor the forest areas themselves, often checking whether the camp fire are put off properly. Always having fire fighting tools always ready. Monitoring the temperature in the forest. | |

## 3. TRIGGERS `TR`

The need to protect the wildlife and themselves triggers them to act.

Not knowing when would fiíe starts   taking suggestion  from visitors.

## 4. EMOTIONS: BEFORE / AFTER `EM`

they don't feel safe.

Always fear of catching fire in the forest.

Panic at the of sudden forest fire.

Afterwards:

they will have some satisfaction of knowing that some indication will come on the start  of fire.

## 10. YOUR SOLUTION `SL`

the computer vision methods   for   a   recognition   and detection of smoke and fire, based on the still images of the video input from the cameras.

Deep learning method "convolution   neural   network"  can  be used foí finding the amount of fire.

Enabling the video surveillance  systems  on  forest  to handle more complex situations in real world.

## 8.CHANNELS of BEHAVIOUR `CH`

Online:

Installing cameras and sensors  in  parts  of  the  forest  and checking the situation.

Offline:

Making sure that no fire is started  near  the  dry  plants  of  highly inflammable objects.