Problem-Solution Fit canvas

Purpose / Vision

Version:

Define CS, fit into CL

1. CUSTOMER SEGMENT(S) CS

The wild lives and tribal that are affected during the forest fire.

The authorities who are responsible in taking immediate actions.

6. CUSTOMER LIMITATIONS EG. BUDGET, DEVICES CL

Network connection, cost of installation of devices, awareness among public so as to encourage the volunteers.

5. AVAILABLE SOLUTIONS PROS & CONS AS

Unmanned Aerial Vehicle (UAV) is one of the solutions that is currently used.

Pros- Drone is used with HD cameras which provides better image and video quality.

Cons- Affordability is one of the major cons of drones.

LoRaWAN sensor has also been used as the solution.

Pros- Capable to connect low power devices distributed on large geographical area.

Cons- Need to build a new network when connection is not achieved.

Explore AS, differentiate

Focus on PR, tap into BE, understand RC

2. PROBLEMS / PAINS + ITS FREQUENCY PR

The forest fires must be made known to the authorities at an earlier stage.

9. PROBLEM ROOT / CAUSE RC

Impact of weather and climate which releases large quantities of carbon dioxide.

80-90% of forest fires are caused by human activities, extreme weather phenomena and by lighting.

7. BEHAVIOR + ITS INTENSITY BE

The authorities will be able to address the problem using the alarm received from the system.

They will take the actions accordingly to put off the fire in a particular area of the forest.

Focus on PR, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS TO ACT TR

The loss of habitats of the wild life and several acres of land.

Extinction of some endangered species and wild plants.

4. EMOTIONS BEFORE / AFTER EM

Emotional instability, stress reactions, fear of loss of lives, migration issues > Relieved, fear of availability of food and habitat

10. YOUR SOLUTION SL

In case of forest fire detection, the burning substances are primarily identified as sceptical flame regions using a division strategy to expel the non-fire structures and results are verified using a deep learning model.

The technology used to locate the forest fire is based on the concept of deep learning and CNN algorithm.

This deep learning model on a web camera helps in the detection of fire. The fire is then re-confirmed with the help of the Bosch BME688 sensor. This setup gives alert to the authorities when the fire is detected. Meanwhile, it is monitored using a web application to take according actions.

8. CHANNELS of BEHAVIOR CH

ONLINE

Collect the data and form the dataset which can be fed to the system in order to detect the fires.

OFFLINE

The system alerts the authorities in case of fire and the authorities will take actions accordingly to put off the fire.

Extract online & offline CH of BE