

# Project design phase – I

## Proposed solution fit template

Date	1 october 2022
Team ID	PNT2022TMID48153
Project Name	Emerging methods for early detection of forest fire
Maximum Marks	2 Marks

Early detection of forest fire

### Problem-Solution fit canvas 2.0

Purpose / Vision

<div style="background-color: #f8d7da; padding: 5px; margin-bottom: 5px;"> <b>1. CUSTOMER SEGMENT(S)</b> <span style="float: right; background-color: #f8d7da; padding: 2px 5px;">CS</span> <p><small>Who have customers?</small></p> <p>1. Forest officer who wants to find forest fire at the earliest.</p> <p>2. Tribes who lives in the forest.</p> <p>3. People who lives near the forest.</p> </div> <div style="background-color: #fff3cd; padding: 5px;"> <b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <span style="float: right; background-color: #fff3cd; padding: 2px 5px;">J&amp;P</span> <p><small>Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.</small></p> <p>1. To detect forest fire in advance.</p> <p>2. To monitor wide area of forest.</p> <p>3. To prevent terrible forest fire.</p> </div>	<div style="background-color: #fff3cd; padding: 5px; margin-bottom: 5px;"> <b>6. CUSTOMER</b> <span style="float: right; background-color: #fff3cd; padding: 2px 5px;">CC</span> <p><small>What constraints prevent your customers from taking action or limit their choices of solutions? (i.e. spending power, budget, no cash, network connection, available devices)</small></p> <p>Forest is a vast area the costumer himself cannot monitor those areas.</p> </div> <div style="background-color: #fff3cd; padding: 5px;"> <b>9. PROBLEM ROOT CAUSE</b> <span style="float: right; background-color: #fff3cd; padding: 2px 5px;">RC</span> <p><small>What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations.</small></p> <p>1. The main reason for fire are natural causes such as lightning and man made causes like naked flame, cigarettes or electric spark etc.</p> <p>2. The customer who lives near the forest losts his family because of fire so he wants to detect the fire at the earliest to save many more families.</p> </div>	<div style="background-color: #fff3cd; padding: 5px; margin-bottom: 5px;"> <b>5. AVAILABLE SOLUTIONS</b> <span style="float: right; background-color: #fff3cd; padding: 2px 5px;">AS</span> <p><small>Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What won't work &amp; come without solutions?</small></p> <p>In the existing solution sensors and cameras are used to detect the fire. This solution is difficult to implement because there is a possible of false positives.</p> </div> <div style="background-color: #fff3cd; padding: 5px;"> <b>7. BEHAVIOUR</b> <span style="float: right; background-color: #fff3cd; padding: 2px 5px;">BE</span> <p><small>What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)</small></p> <p>Customers can address the problem to the government and they can find the best way to detect the fire.</p> </div>
<div style="background-color: #d1ecf1; padding: 5px; margin-bottom: 5px;"> <b>3. TRIGGERS</b> <span style="float: right; background-color: #d1ecf1; padding: 2px 5px;">TR</span> <p><small>What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.</small></p> <p>Fire causes destruction of many valuable species and harmful to human lives.</p> </div> <div style="background-color: #d1ecf1; padding: 5px;"> <b>4. EMOTIONS: BEFORE / AFTER</b> <span style="float: right; background-color: #d1ecf1; padding: 2px 5px;">EM</span> <p><small>How do customers feel when they face a problem or a job and afterwards?</small></p> <p>Customer feels frustrated and insecure because of fire and after the prediction they can feel safe.</p> </div>	<div style="background-color: #d1ecf1; padding: 5px; margin-bottom: 5px;"> <b>10. YOUR SOLUTION</b> <span style="float: right; background-color: #d1ecf1; padding: 2px 5px;">SL</span> <p><small>If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.</small></p> <p><small>If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.</small></p> <p>We are going to test a CNN(Convolutional neural network) model which collects the data from sensors, cameras and drones and gives it to the model and predicts the fire before it happens. It also gives the exact location of fire and to reduce the false positives of fire detection.</p> </div>	<div style="background-color: #d1ecf1; padding: 5px; margin-bottom: 5px;"> <b>8. CHANNELS of BEHAVIOUR</b> <span style="float: right; background-color: #d1ecf1; padding: 2px 5px;">CH</span> <p><b>8.1 ONLINE</b></p> <p><small>What kind of actions do customers take online? Extract online channels from #7</small></p> <p>Customers can post this problem in social media platforms to seek the attention of government.</p> <p><b>8.2 OFFLINE</b></p> <p><small>What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.</small></p> <p>Customer can approach the government officers and explain in detail about the early detection of forest fire.</p> </div>

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