

Project Design Phase-II

Customer Journey Map

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| Date | 31 October 2022 |
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| Project Name | Emerging methods for early detection of forest fires |

User journey

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| <div><div>1</div><div>Phases</div></div> <div>High-level steps your user needs to accomplish from start to finish</div> | Ignition | Growth | Fully developed | Decay |
| <div><div>2</div><div>Steps</div></div> <div>Detailed actions your user has to perform</div> | A source of ignition is anything that has the potential to start a fire . E.g. a naked flame or a faulty electrical appliance . | consumers have accepted the product in the market and customers are beginning to truly buy in . market for the product is expanding and competition begins developing . | Fire has spread over much if not all the available fuel . Temperatures reach their peak . Resulting in heat damage . Oxygen is consumed rapidly . | Usually the longest stage of a fire. They characterized a significant decrease in oxygen or fuel . Putting an end to the fire . |
| <div><div>3</div><div>Feelings</div></div> <div>What your user might be thinking and feeling at the moment</div> | <div><div><div>👍</div><div>More precise It control spark timing It improve engine efficiency It improve efficiency and performance</div></div><div><div>👎</div><div></div></div></div> | <div><div><div>👍</div><div>The major factor that influence the fire growth are fuel arrangement ceiling height, length/width ratio, room insulation, size and location of openings, heating- ventilation-air conditioning operation.</div></div><div><div>👎</div><div></div></div></div> | <div><div><div>👍</div><div>Fire removes low-growing underbrush. Cleans the forest floor of debris. Opens it up to sunlight. Nourishes the soil</div></div><div><div>👎</div><div></div></div></div> | <div><div><div>👍</div><div>They kill harmful insects They clear away diseased trees They make way for new trees The ashes add nutrients to the soil</div></div><div><div>👎</div><div></div></div></div> |
| <div><div>4</div><div>Pain points</div></div> <div>Problems your user runs into</div> | No matter the cause , wildfires still require three key components to ignite and eventually spread : fuel , heat and oxygen . These components are commonly referred to as the fire triangle | Wildfires can disrupt transportation, communications, power and gas services, and water supply. They also lead to a deterioration of the air quality, and loss of property, crops, resources, animals and people | Human carelessness is the biggest factor contributing to wildfires | Fire detection systems has many limitations, such as the limited amount of energy, the energy required for data processing, the short range of communication and limited computations, the complexity of ML algorithms when executing on sensor nodes |
| <div><div>5</div><div>Opportunities</div></div> <div>Potential improvements or enhancements to the experience</div> | Fire removes low Growing underbrush Cleans the forest floor of debris . | Opens it up to sunlight Nourishes the soil | Fire frequencies determine the over storey of coniferous composition Besides developing a natural space among the stands . | It plays a role in recycling nutrients from the ground – layer vegetation and litter to the over storey trees. Thereby counteracting the infertile substrates and arrested decay |