

Problem – Solution Fit

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| Date | 10 October 2022 |
| Team ID | PNT2022TMID39999 |
| Project Name | IOT Based Smart Crop Protection System for Agriculture |
| Maximum Marks | 2 Marks |

Problem – Solution Fit Template:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why

Purpose:

- ☐ Solve complex problems in a way that fits the state of your customers.
- ☐ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.
- ☐ **Understand the existing situation in order to improve it for your target group.**

Template:

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| <p>1. CUSTOMER SEGMENT(S)</p> <p>#One of the main hazards to diminishing crop yield is crop damage brought on by animal and bird attack.</p> <p>#Crop output is ultimately impacted by soil moisture conditions, which influence plant root water absorption and leaf transpiration.</p> | <p>6. CUSTOMER CONSTRAINTS</p> <ul style="list-style-type: none"> ✓ A suitable irrigation system ✓ There are sensors. ✓ Given information in a few of seconds | <p>5. AVAILABLE SOLUTIONS</p> <p>#A soil moisture sensor measures the current soil moisture, produces better crops</p> <p>#Pesticides, often known as chemical crop protection agents, aid in the control of insects, illnesses, fungi, and other unwanted pests.</p> |
| <p>2. JOBS-TO-BE-DONE / PROBLEMS</p> <ul style="list-style-type: none"> ✓ Monitoring the animals entry ✓ Observing the entry of the animals ✓ Reduce agricultural losses is necessary. | <p>9. PROBLEM ROOT CAUSE</p> <p>#The issue of the labour scarcity is addressed, and the cost budget is reduced.</p> <p>#The device continuously and automatically checks the humidity level in plants and waters them even when there are no physical personnel present.</p> | <p>7. BEHAVIOUR</p> <p>#Farmers gauge soil moisture sensor in an indirect manner.</p> <p>#Electric fences are designed to shock animals that come into touch with them with electricity, keeping them from attempting to cross the fence</p> |
| <p>3. TRIGGERS</p> <p>#Results from a soil moisture sensor are immediately available.</p> <p>#Increasing crop yield while reducing fertiliser expenditures</p> <p>4. EMOTIONS: BEFORE / AFTER</p> <p>BEFORE:</p> <p>Anxiety, diminished human capacity, despair, and longer time commitment</p> <p>AFTER:</p> <p>Reducing time spent and raising profitability</p> | <p>10. YOUR SOLUTION</p> <ul style="list-style-type: none"> ✓ Crop security using an IoT platform from attacks by birds and other animals ✓ IoT based crop protection system against birds and wild animals attacks | <p>8. CHANNELS of BEHAVIOUR</p> <p>ONLINE</p> <p>Farmers used to receive data from data analytics frequently. Using IoT, data storage is also secure.</p> <p>OFFLINE</p> <p>The suggested system has several sensors that can measure and ensure crop quality based on elements like temperature, soil moisture, and humidity.</p> |

