**Project Design Phase-I**

**Proposed Solution Template**

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| --- | --- |
| Date | 19 September 2022 |
| Team ID | PNT2022TMIDxxxxxx |
| Project Name | Project - xxx |
| Maximum Marks | 2 Marks |

**Proposed Solution:**

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| --- | --- | --- |
| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Farmers are under pressure to produce more food AND use less energy and water in the process.  Ideally, each field should get just the right amount of water at just the right time. Under-watering causes crop stress and yield reduction. Overwatering can also cause yield reduction and consumes more water and fuel than necessary and leads to soil erosion and fertilizer, herbicide, and pesticide runoff.  Agricultural operations waste 60% of water consumed each year. Now more than ever, new technologies for water conservation must be adopted. |
|  | Idea / Solution description | Case studies have shown precision irrigation has a 5%–8% impact on yield and a similar impact on operating costs. Smart Farm’s systems can be retrofitted on existing sites and provide immediate impact with a very short return on investment time period. |
|  | Novelty / Uniqueness | Smart farming application has been very useful in only large-scale farming, this helps us to implement in medium and small-scale farming. |
|  | Social Impact / Customer Satisfaction | Make use of the technology in both medium and small-scale farming. |
|  | Business Model (Revenue Model) |  |
|  | Scalability of the Solution | Usage of smart farming method will increase among medium and small-scale farmers. |

# **Problem Statement (Problem to be solved)**

Farmers are under pressure to produce more food and use less energy and water in the process.

Ideally, each field should get just the right amount of water at just the right time. Under-watering causes crop stress and yield reduction. Overwatering can also cause yield reduction and consumes more water and fuel than necessary and leads to soil erosion and fertilizer, herbicide, and pesticide runoff.

Agricultural operations waste 60% of water consumed each year. Now more than ever, new technologies for water conservation must be adopted.

# **Idea / Solution description**

Case studies have shown precision irrigation has a 5%–8% impact on yield and a similar impact on operating costs. Smart Farm’s systems can be retrofitted on existing sites and provide immediate impact with a very short return on investment time period.

“A remote monitoring and control system will help farmers deal effectively with these pressures.”

# **Novelty / Uniqueness**

Smart farming application has been very useful in only large-scale farming, this helps us to implement in medium and small-scale farming.

# **Social Impact / Customer Satisfaction**

Make use of the technology in both medium and small-scale farming.

# **Business Model (Revenue Model)**

# **Scalability of the Solution**

Usage of smart farming method will increase among medium and small-scale farmers