

SMART CROP PROTECTION SYSTEM BASED IOT



This template is brought to you by Figma, a design platform for teams who build products together.

Driver	V.V HARIPRASATH
Participants	R.ANUJA S.BOOMIKA P.ENIYAVAN
Design spring date	Oct 5, 2022
Status	COMPLETED
Title	SMART CROP PROTECTION SYSTEM FOR AGRICULTURE

▼ What is a design sprint?

A design sprint is a framework for answering critical business questions by designing, prototyping, and testing ideas with users.

This template will help you create a framework to support divergent and convergent thinking:

- Understand and define the problem
- Sketch out solutions and decide the best path forward
- Wrap up with a team retrospective

You can do this over the course of one day or break it up across multiple days.



Design sprint checklist

- ☒ Assemble the team
- ☐ Reserve a room
- ☒ Purchase materials
- ☐ Order lunch
- ☒ Schedule user testing

🚩 Goal

The main goal is to optimize the harvesting land by using modern methods to achieve best in quality, quantity and financial resources.

In our idea to prevent from the wild animals, birds weather conditions and to check soil moisture by using an modern thechnology by using IOT Devices.

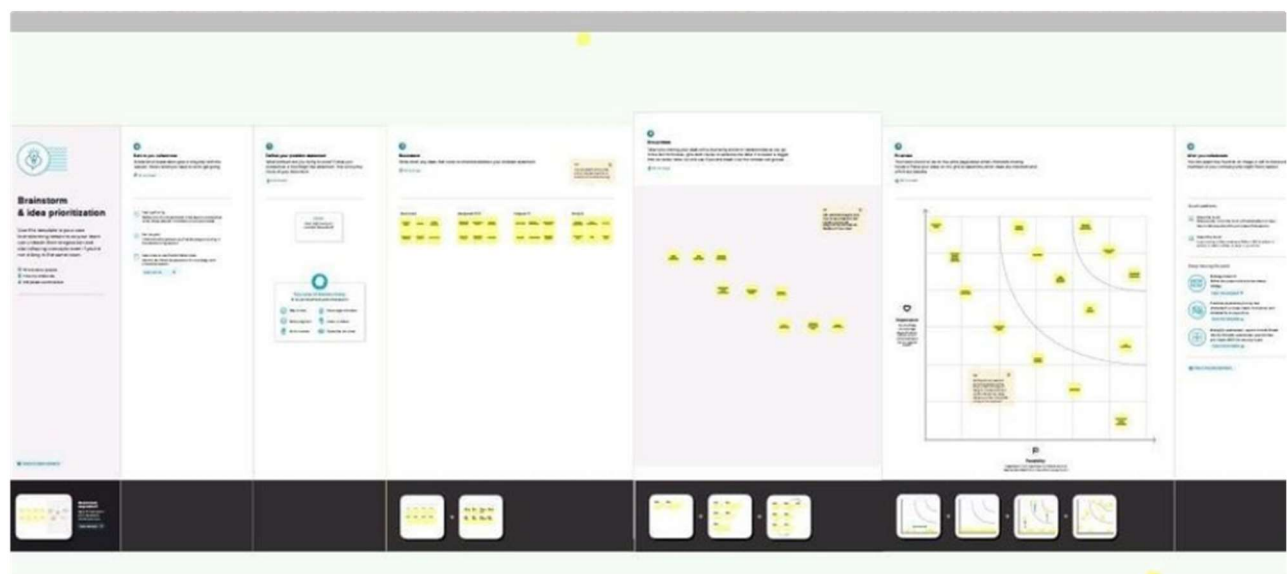


Sprint Pre-work

(PDF) Implementation of IIoT based smart crop protection and irrigation system

WEEK 4	List the ideas by organizing the Brainstroming session
SEP 12-17	Choose the top 3 ideas only
WEEK 5	Prepare proposed solution document
SEP 19-24	Attend the training as per the calender
WEEK 6	
SEP 26-01 OCT	prepare list of problem solution fit document Attend the training as per the calender

BRAINSTROMING



PROPOSED SOLUTION:

SI NO	PARAMETER	DESCRIPTION
1	Problem statement	The farmer who needs to water their plants on time and to prevent their plants from animal then proper watering for field.
2	Solution description	The device will detect the animals and birds.It generate an alarm and avoid animals from destroying the crop.
3	Novelty	The unique of project is to monitor the soil moisture levels,temperature,humidity.
4	Customer satisfaction	They can easily protect the field and yielding more profits.
5	Business model	Farmers and cooperatives(minimize costs). Farming as a service(Faas). Commerce and Government. Pay per use. Performance based model. Additional sharing model.
6	Scalability of the solution	In a field of IOT we proposed to deal with brilliant sensors and electrical equipments to achieve an"SMART CROP PROTECTION SYSTEM".

SOLUTION FIT

Problem-Solution Fit canvas			Purpose / Vision		Version:	
Define CS, fit into CL	1. CUSTOMER SEGMENT(S) CS Farmers and cultivators		6. CUSTOMER LIMITATIONS CL <small>EG. BUDGET, DEVICES</small> High cost, more power and sometimes harmful to humans		5. AVAILABLE SOLUTIONS AS <small>PROS & CONS</small> Electric fences and scarecrows were the methods already used by faarmers for crop protection	
	2. PROBLEMS / PAINS PR <small>+ ITS FREQUENCY</small> The existing electric fences method for crop protection is not considered as the best solution		9. PROBLEM ROOT / CAUSE RC The animals in search of food, enter the field and damage all the crops before harvesting. It affects the yield terribly.		7. BEHAVIOR BE <small>+ ITS INTENSITY</small> Directly related: Farmers made electric fences and scarecrow to fear the animals. Indirectly related: Involved human labours.	
Focus on PR, tap into BE, understand RC	Animals attack fields before harvest				Whenever the animals attack the field, related behavior happens	
	3. TRIGGERS TO ACT TR <ul style="list-style-type: none"> Seeing other farmers installing Smart crop protection system. Reading about the system in advertisements 		10. YOUR SOLUTION SL The device will detect the animals and birds. It generates an alarm and avoid animals from destroying the crop. The device will also monitor the soil moisture levels, temperature, humidity values and also control the motors.		8. CHANNELS of BEHAVIOR CH ONLINE Extract channels from behavior block	
Identify strong TR & EM	4. EMOTIONS EM <small>BEFORE / AFTER</small> Farmers get frustrated when their crops were destroyed / Being boosted and happy after the solution has installed.				OFFLINE Extract channels from behavior block and made the setup available offline for customer development use.	
					Extract online & offline CH of BE	