UCCE ASP: Status Update

Daniel Gustin, Emil Chaia, Liam Reese, Daryn Nguyen

01. **Introduction**

Introduce the partner and the team

02. **Project Identification**

Details of the project

03. **Overall Project Health**

Overall health of the project and milestones

04. **Initial Design Process**

Design Progress

05. **Key Results and Tasks**

Major success and completed objectives

06. **Supporting Data**

Visuals/ Graphs

07.

Remaining Tasks

Steps left to complete

08.

Challenges and Issues

Challenges and potential problems

09.

Q&A/ Conclusion

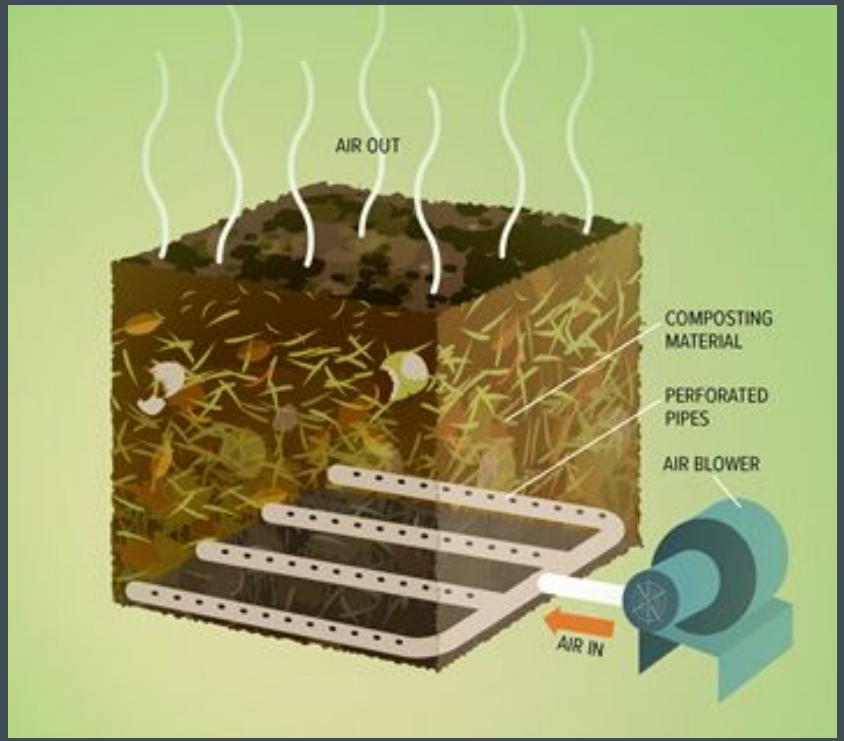
Conclusion and questions

Partner Introduction

UCCE

Focused on agricultural innovation, environmental sustainability, and youth development programs. Their extensive reach includes engaging with educators, commercial sectors, environmental advocates, and the broader Californian community.

Project Identification



Problem Statement

The UCCE needs an ASP for efficient watering to support its composting process and educational programs..

Critical Customer

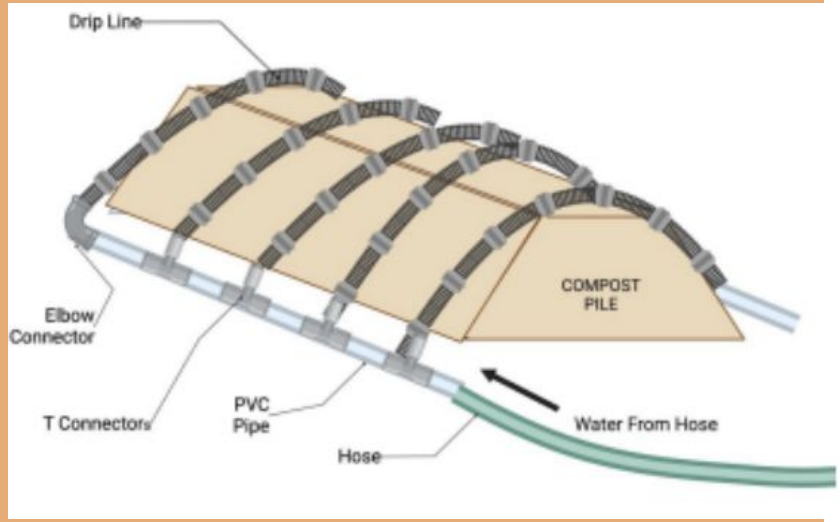
Students, homeowners, and farmers

Background/Motivation

Introduce a composting education program to Santa Clara County and empower the local community with knowledge about composting.

Overall Project Health

- Progress has been going well → staying on track and communicating with partner
  - Weekly team meetings
- Identified customer profile
  - Gains, needs, pains
- Formated designs based off previous groups solution
- Received feedback → implementing to prototyping stage



Previous Group Solution
(Automated Irrigation Blanket for the Compost Piles at the UCCE)

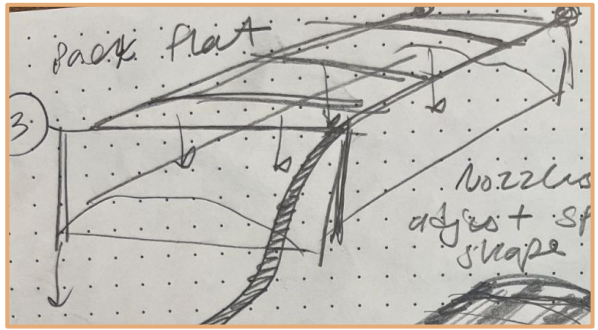
Initial Design Process

Value Proposition

Identified aspects that our solution needs to have.

Durable, Easily replicated, Minimal supplies, Efficient in irrigating the compost piles, "squirrel proof"

Design Ideation



Created five initial designs, highlighting pros and cons.

Feedback

Sent designs and further questions to partner.

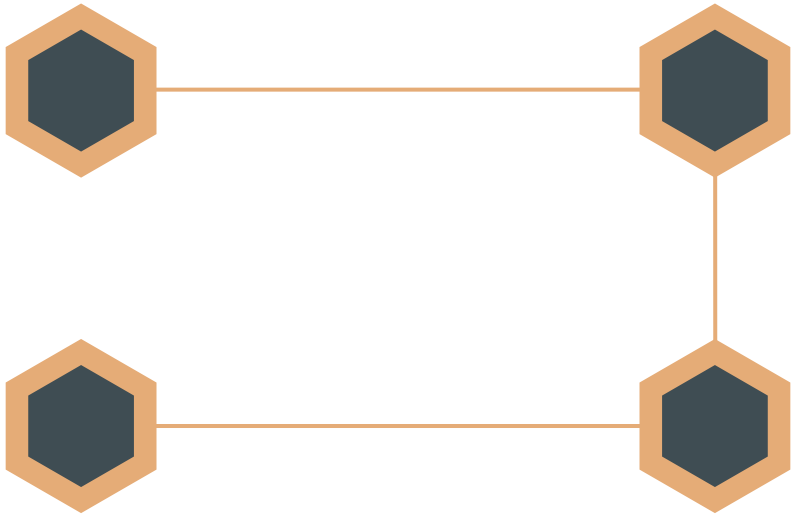
Major Successes/Key Results

Partner Interview

Understanding of project scope

2nd Meeting with JAK

Imagine challenges with implementing design concepts



Design Review

Stakeholders, impact, value proposition

Design Sketches

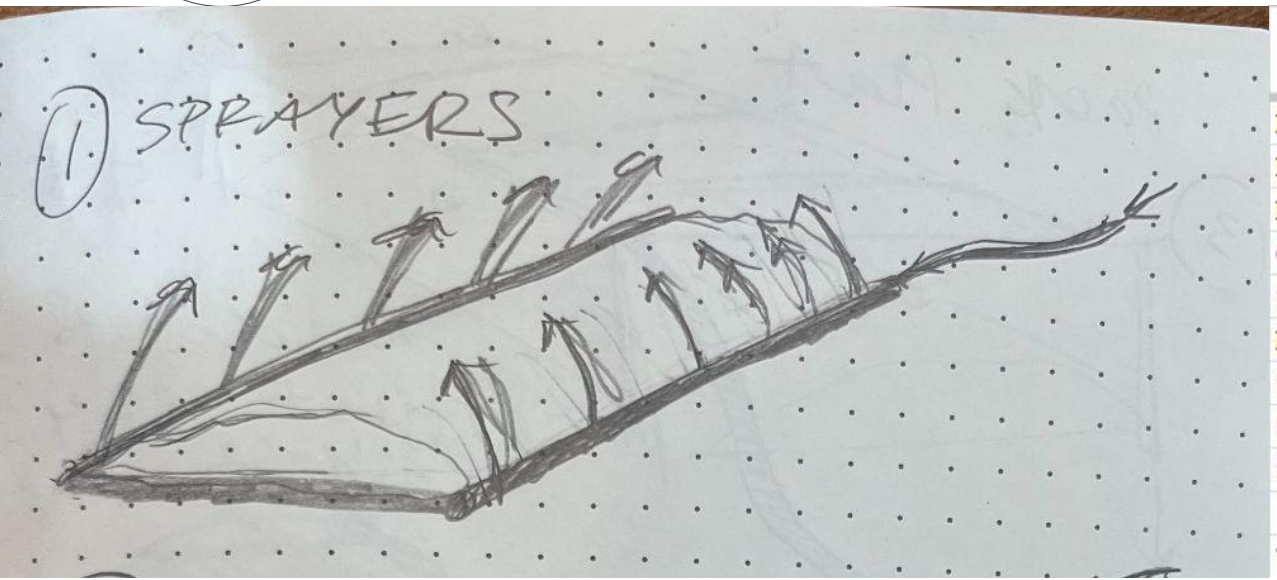
Visualize options and get early feedback

Supporting Data

Design Matrix

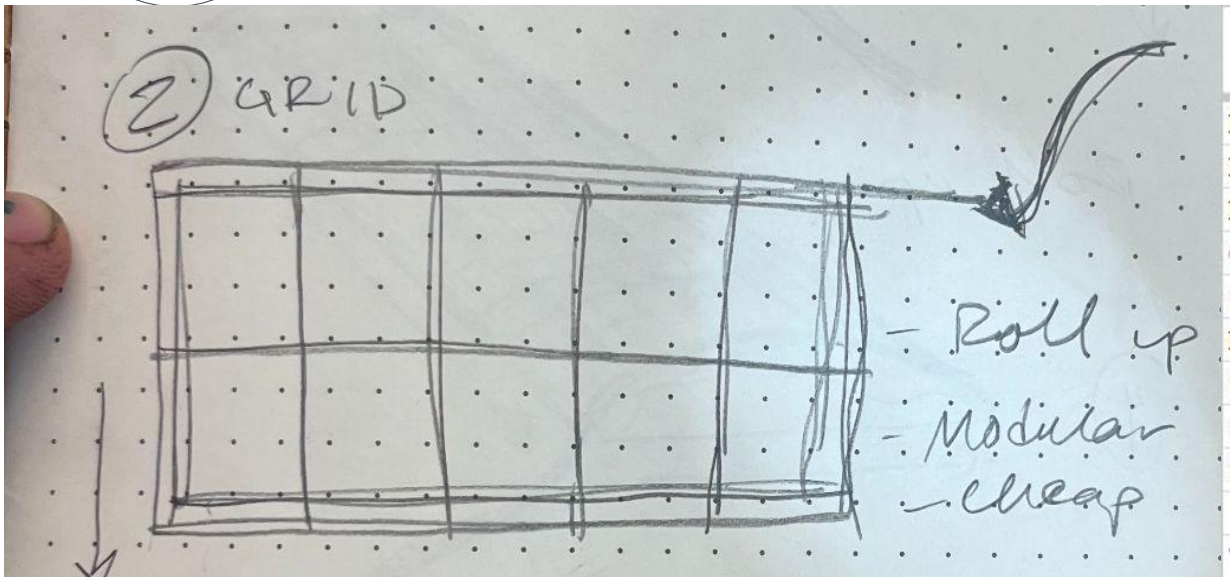
Criteria	Weight (1-5)	Solution 1		Solution 2		Solution 3		Solution 4		Solution 5	
		Rating	Weight Score	Rating	Weight Score	Rating	Weight Score	Rating	Weight Score	Rating	Weight Score
Replicability/DIY	5	4	20	4	20	3	15	3	15	2	10
Durability	5	2	10	3	15	5	25	5	25	2	10
Effectiveness	5	3	15	4	20	5	25	4	20	5	25
Cost efficiency	4	5	20	3	12	3	12	3	12	3	12
Simplicity	3	5	15	5	15	3	9	3	9	1	3
Ease of use	3	5	15	5	15	4	12	4	12	3	9
Sustainability	3	4	12	4	12	3	9	3	9	3	9
Scalability	2	5	10	5	10	4	8	2	4	5	10
Storability	1	4	4	5	5	2	2	4	4	5	5
Total		33	117	33	119	30	115	27	106	24	88

Supporting Data



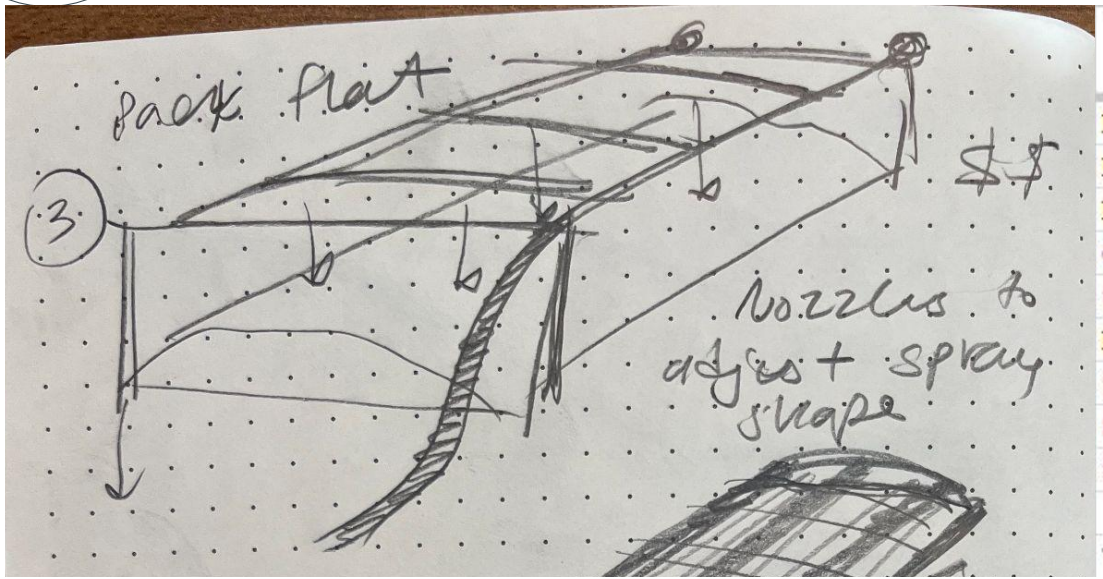
Criteria	Solution 1	
	Rating	Weight Score
Replicability/DIY	4	20
Durability	2	10
Effectiveness	3	15
Cost efficiency	5	20
Simplicity	5	15
Ease of use	5	15
Sustainability	4	12
Scalability	5	10
Storability	4	4
Total	33	117

Supporting Data



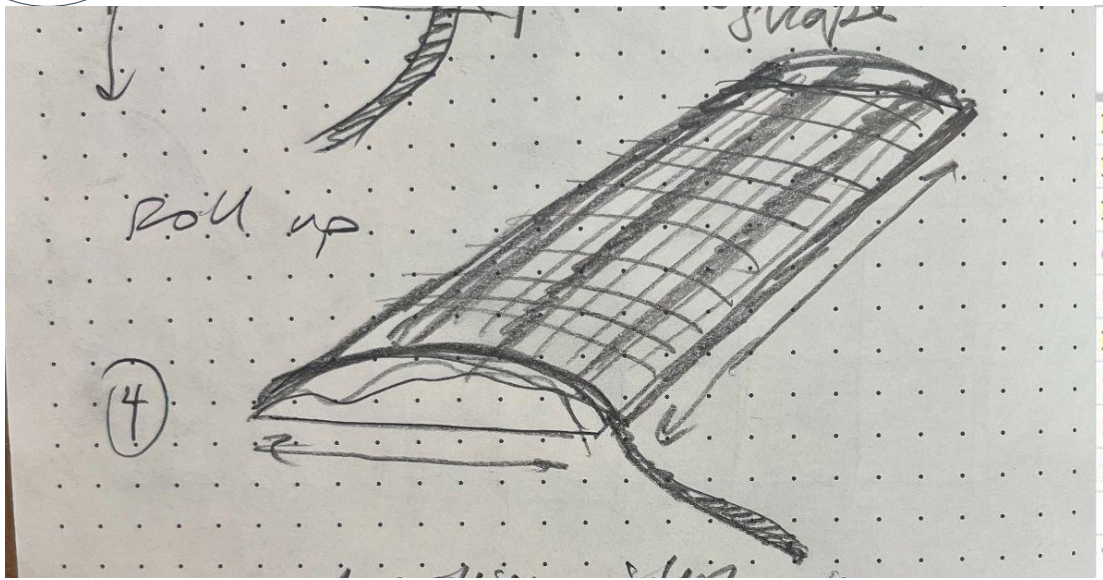
Criteria	Solution 2	
	Rating	Weight Score
Replicability/DIY	4	20
Durability	3	15
Effectiveness	4	20
Cost efficiency	3	12
Simplicity	5	15
Ease of use	5	15
Sustainability	4	12
Scalability	5	10
Storability	5	5
Total	33	119

Supporting Data



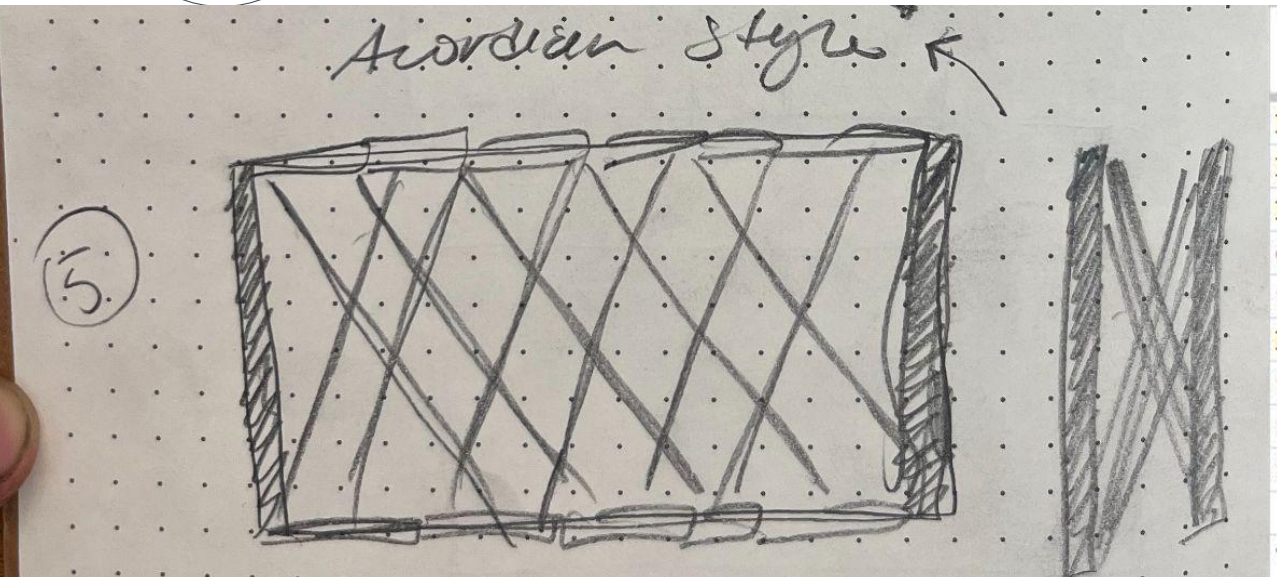
Criteria	Solution 3	
	Rating	Weight Score
Replicability/DIY	3	15
Durability	5	25
Effectiveness	5	25
Cost efficiency	3	12
Simplicity	3	9
Ease of use	4	12
Sustainability	3	9
Scalability	4	8
Storability	2	2
Total	30	115

Supporting Data



Criteria	Solution 4	
	Rating	Weight Score
Replicability/DIY	3	15
Durability	5	25
Effectiveness	4	20
Cost efficiency	3	12
Simplicity	3	9
Ease of use	4	12
Sustainability	3	9
Scalability	2	4
Storability	4	4
Total	27	106

Supporting Data



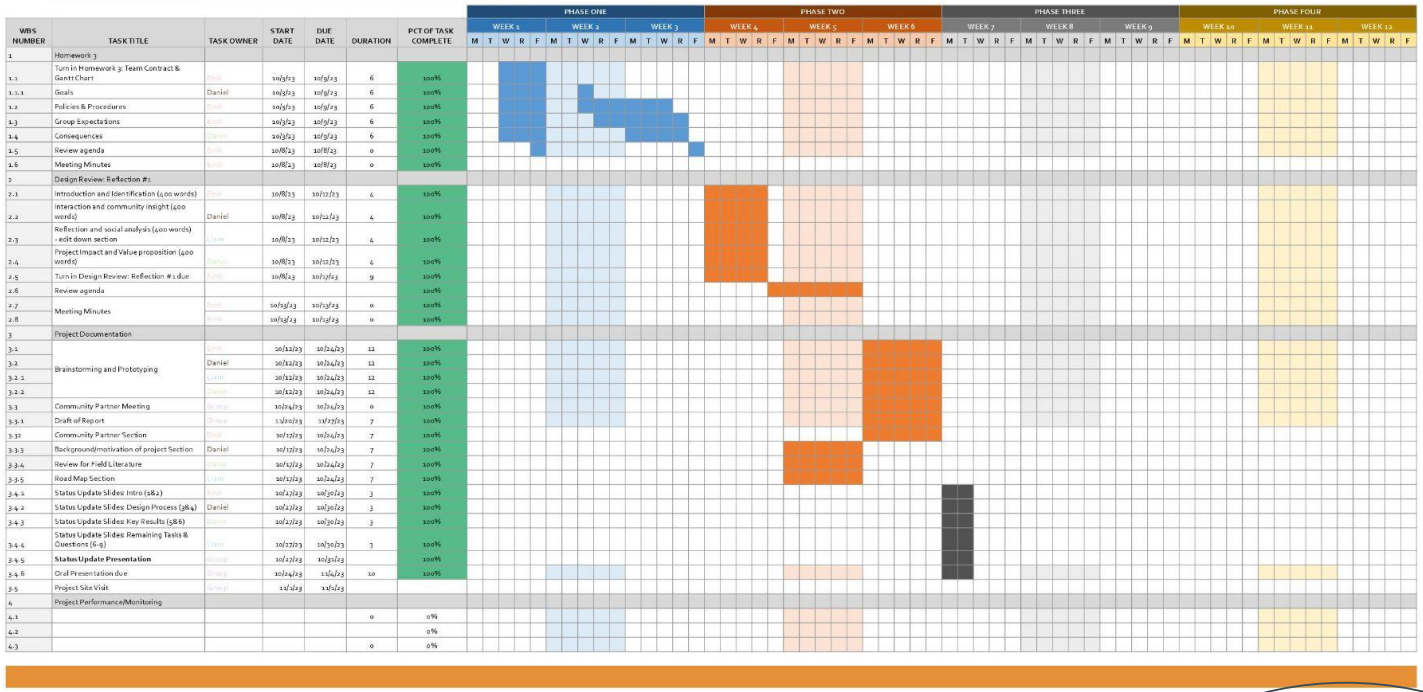
Criteria	Solution 5	
	Rating	Weight Score
Replicability/DIY	2	10
Durability	2	10
Effectiveness	5	25
Cost efficiency	3	12
Simplicity	1	3
Ease of use	3	9
Sustainability	3	9
Scalability	5	10
Storability	5	5
Total	24	88

Supporting Data

GANTT CHART ENGR110

PROJECT TITLE	UCCE Aerated Compost System
PROJECT MANAGER	Liam, Daniel, Emil, Daryn

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
1	Homework 3					
1.1	Turn in Homework 3: Team Contract & Gantt Chart	Emil	10/3/23	10/9/23	6	100%
1.1.1	Goals	Daniel	10/3/23	10/9/23	6	100%
1.2	Policies & Procedures	Emil	10/3/23	10/9/23	6	100%
1.3	Group Expectations	Liam	10/3/23	10/9/23	6	100%
1.4	Consequences	Daryn	10/3/23	10/9/23	6	100%
1.5	Review agenda	Emil	10/8/23	10/8/23	0	100%
1.6	Meeting Minutes	Liam	10/8/23	10/8/23	0	100%
2	Design Review: Reflection #1					
2.1	Introduction and Identification (400 words)	Emil	10/8/23	10/12/23	4	100%
2.2	Interaction and community insight (400 words)	Daniel	10/8/23	10/12/23	4	100%
2.3	Reflection and social analysis (400 words) - edit down section	Liam	10/8/23	10/12/23	4	100%
2.4	Project Impact and Value proposition (400 words)	Daryn	10/8/23	10/12/23	4	100%
2.5	Turn in Design Review: Reflection #1 due	Emil	10/8/23	10/17/23	9	100%
2.6	Review agenda					100%
2.7	Meeting Minutes	Emil	10/13/23	10/13/23	0	100%
2.8		Liam	10/13/23	10/13/23	0	100%
3	Project Documentation					
3.1	Brainstorming and Prototyping	Emil	10/12/23	10/24/23	12	100%
3.2		Daniel	10/12/23	10/24/23	12	100%
3.2.1		Liam	10/12/23	10/24/23	12	100%
3.2.2		Daryn	10/12/23	10/24/23	12	100%
3.3	Community Partner Meeting	Group	10/24/23	10/24/23	0	100%
3.3.1	Draft of Report	Group	11/20/23	11/27/23	7	100%
3.32	Community Partner Section	Emil	10/17/23	10/24/23	7	100%
3.3.3	Background/motivation of project Section	Daniel	10/17/23	10/24/23	7	100%
3.3.4	Review for Field Literature	Daryn	10/17/23	10/24/23	7	100%
3.3.5	Road Map Section	Liam	10/17/23	10/24/23	7	100%
3.4.1	Status Update Slides: Intro (382)	Emil	10/27/23	10/30/23	3	100%
3.4.2	Status Update Slides: Design Process (384)	Daniel	10/27/23	10/30/23	3	100%
3.4.3	Status Update Slides: Key Results (586)	Daryn	10/27/23	10/30/23	3	100%
3.4.4	Status Update Slides: Remaining Tasks & Questions (6-9)	Liam	10/27/23	10/30/23	3	100%
3.4.5	**Status Update Presentation**	Group	10/27/23	10/31/23		100%
3.4.6	Oral Presentation due	Group	10/24/23	11/4/23	10	100%
3.5	Project Site Visit	Group	11/1/23	11/1/23		
4	Project Performance/Monitoring					
4.1					0	0%
4.2						0%
4.3					0	0%



Challenges

Normal Challenges

- Cost
- Sustainability
- Durability

Blocking Challenges

- Wildlife interference
  - Squirrels and Coyotes

YouTube. (2022). *Smart Squirrel Pokes Holes in Water Container*. *YouTube*. Retrieved October 31, 2023, from https://www.youtube.com/watch?v=bLHm0wUT7s8.

Remaining Tasks

Site Visit

Visiting UCCE in person will allow us to better understand the project's implementation

Prototype

Decide on a design and begin building and testing individual parts

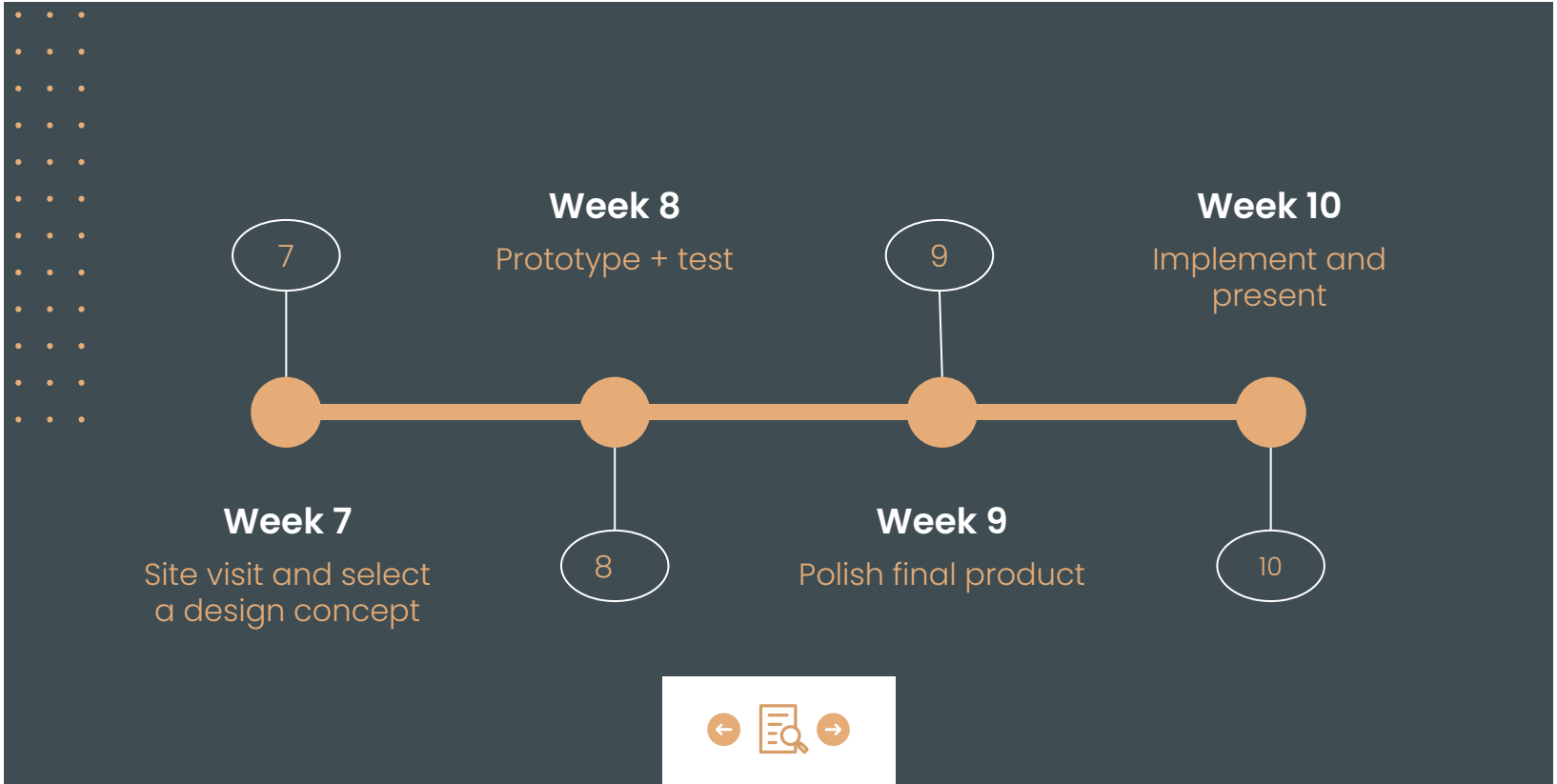
Testing & Revision

Address weaknesses, assess UI, polish to a final product

Final Deployment

Implement the irrigation system at UCCE and provide our final report

Timeline


7
Week 8
Prototype + test
9
Week 10
Implement and present
Week 7
Site visit and select a design concept
8
Week 9
Polish final product
10

Thank You!

Questions?