MEETING MINUTES – Real Time Soil Moisture Monitoring System – Group 02

Date of Meeting: 07/08/2024 **Location:** F2F Multimedia Room 4, Barry J **Chairs: Asad Maza**

Minutes Prepared By: Asad Maza

1. Purpose of Meeting *(add rows as necessary under banner headings)*

1.Weekly Meeting with Project Facilitator- Initial Meeting with Project Facilitator: 11:30AM – 12:00PM

This will be our first meeting with Project Facilitator Yanchen Zhao. We will introduce the project background and our progress, and seek his insights. We aim to receive practical advice and guidance on effectively managing our project.

2.Team Meeting – Second Client Meeting Debrief and Planning: 12:00 PM – 1:00 PM

In this meeting, we will discuss the issues encountered and the solutions proposed during our first client meeting, particularly focusing on the **project timeline.** We aim to prepare thoroughly for our next client meeting by aligning our strategies and objectives to ensure a more structured and effective discussion.

2. Attendance at Meeting

Name	*Department / Division*	*E-mail*	*Phone*
Yanchen Zhao	Project Facilitator	yanchen.zhao@uwa.edu.au	N/A
Asad Maza	MIT – Group 2	21211711@student.uwa.edu.au	N/A
David Shang	MIT – Group 2	24071326@student.uwa.edu.au	N/A
Dharani Kumari Nagali	MIT – Group 2	23870369@student.uwa.edu.au	N/A
Bella Bao	MIT – Group 2	23843181@student.uwa.edu.au	N/A
Hanni Bao	MIT – Group 2	23888818@student.uwa.edu.au	N/A
Udaymithra Kalla	MIT – Group 2	23858856@student.uwa.edu.au	N/A

3. Meeting Agenda

1. Weekly Meeting with Project Facilitator- Initial Meeting with Project Facilitator: 11:30AM – 12:00PM

1. Introduction and Project Overview
2. Project Scope
3. Project Management Discussion
4. Feedback and Next Steps

2. Team Meeting – Second Client Meeting Debrief and Planning: 12:00 PM – 1:00 PM

1. Review of Previous Meeting's Action Items
2. Review Last week tasks
3. Competitive Analysis
4. Prototyping and Calibration Processes
5. Next Steps

4. Meeting Notes, Decisions, Issues

1. Weekly Meeting with Project Facilitator- Initial Meeting with Project Facilitator: 11:30AM – 12:00PM

1. **Project Progress Review**: Evaluated soil moisture system progress, emphasizing the importance of documentation for future project continuity.
2. **Challenges and Solutions:** Addressed team conflicts and workload imbalances, recommending seeking external help from coordinators for disputes and emphasizing equitable task distribution among all team members.
3. **Project Management Tools:**: Adopted GitHub for comprehensive project tracking
4. **Future Planning:** Established weekly meetings for consistent updates(next week still 11:30am Multimedia Room 4, Barry J)and stressed balanced workload distribution among team members.

2. Team Meeting – Second Client Meeting Debrief and Planning: 12:00 PM – 1:00 PM

1. **Review and Discussion**
   - Email Review: Reviewed an email together sent to clients by Asad

     other team members have questions, communicated with Asad.

2. **Team Updates and Advisories**
   - **Bella's Update on Quantifying Potential Impact:**
     - **Advisory:** Highlighted the operational challenges of heavy machinery under conditions of overly wet soil, etc.
   - **Dharani & Kalla's Update on Features and Functionality:**

- **Advisory:**

A. Emphasized the need to enhance the entire system with waterproofing and rust resistance, not limited to sensors.

B. Considered the integration of power management solutions, including solar panels and batteries, to ensure sustainability.

C. Explored the use of the STM microcontroller for its low energy consumption and discussed the necessity for efficient power storage and generation to support sensors at various depths.

D. Suggested renaming “Features and Functionality” to “Solution or Requirements.”

E. Discussed deployment strategies and topology to determine the optimal number and placement of sensors based on geographical features.

F. Reviewed calibration processes for temperature and moisture sensors, emphasizing the need for periodic recalibration and addressing the challenges of onsite maintenance.

3. Tools and Integration

- **Clockify Integration:**

Download and integrate Clockify with GitHub to enhance project tracking and management.

4. Client Interaction

- **Show the timeline to the client**

1. Project Timeline - High level approach of the key milestones and what we plan on delivering this semester.
2. Describing the Problem - what we aim to solve with this project
3. Quantifying the Potential Impact - assessing the impact of solving the problem
4. Identifying Stakeholders - Role(s) and motivations in Project lifecycle
5. Identifying Hardware and Software Requirements of the solution - Need to speak with key stakeholders like farmers (@Gustavo Alckmin)
6. Describing an 'Ideal Solution' - Diagram or Architecture of what a "perfect" solution looks like
7. Identifying Challenges and Constraints - so that we know what is realistically achievable with the resources available

8. Break down Problem and Solution into components - i.e. Power Storage/Delivery, Sensors, Communication, API Integration with John Deere etc. This should be beneficial for creating workstreams, project phases and finding right resources to tackle respective components

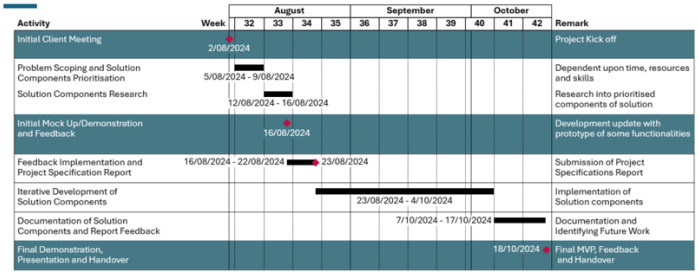
9. Prioritise Components - part of the solution we will tackle over the next couple of months based on available time, capabilities etc.

10. Research Development Components - For developing the components of the solution

11. Idea: Define metrics for success - how do we define whether the project is 'completed' and whether it's successful at each stage of the project lifecycle.

12. Feasibility/PoC/MVP Demonstration - Time is a major constraint, certain parts of the solution may be at different stages, we will have to get mutual agreement on our capabilities and the level of refinement for each part of the solution.

Project Timeline



Some Questions

- **Quick Demo on How it Works**

  What problems are they facing with soil moisture? What do they (the users or clients) want?

- **Explaining the Current Ideas**

  For John Deere's integration.

- **Forecasting Challenges**

  What if a tractor drives over the system? How does the client want the display or notification to appear?
  Yes or No decisions:
  Notifications—What kind? What modifying text? Possibly integration with an app (John Deere).

- **Considerations for a Creative Solution**

  Closest weather station integration.
  Control system for irrigation integration.

5. Action Items

Action	*Assigned to*	*Due Date*	*Status*
Project Timeline	Asad Maza	ASAP	Completed
Problem Description			Work In Progress
Quantifying Impact			Work in Progress
Identifying Stakeholders			Work in Progress
Identifying Hardware and Software Requirements of Solution			Work in Progress

6. Next Meeting

Date:	*09/08/2024*	*Time:*	*11:00AM-11:30AM*	*Location:*	Barry J Multimedia Room 1 (First Floor)
Agenda:	*2ND clients MEETING*				