

PATCHOULINK™

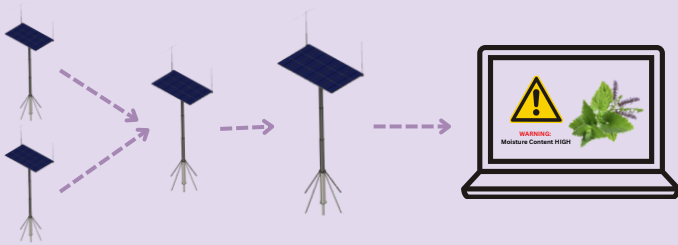
PATCHOULI MONITORING SYSTEM

TEAM 0108A



WHAT IS PATCHOULINK?

Patchoulink is an **advanced IoT system** for real-time patchouli plant **cultivation monitoring**. The concept entails a **monitoring network** able to span entire agricultural fields and provide **real-time updates** to users. The design concept includes many aspects, including solar panels, a robust structure and data-driven suggestions. However, our **prototype** focuses on **data communication** through the system, from the sensors to the user interface.



MEETING KEY SPECIFICATIONS

To make the solution accessible and useful to our stakeholders, our team decided to focus on the following objectives:



Accessible Data



Reliable Information



Flexible System



Fast & Timely Updates

- **Accessible Data:** Data from sensors is presented with visuals and as actionable items, increasing readability. Data analysis is done offline, creating accessibility for communities without stable internet.
- **Reliable Information:** The data flow and network is resilient to communication errors and noise.
- **Flexible System:** Easy integration of additional units to the network.
- **Fast & Timely Updates:** Data is updated both on-demand and regularly.

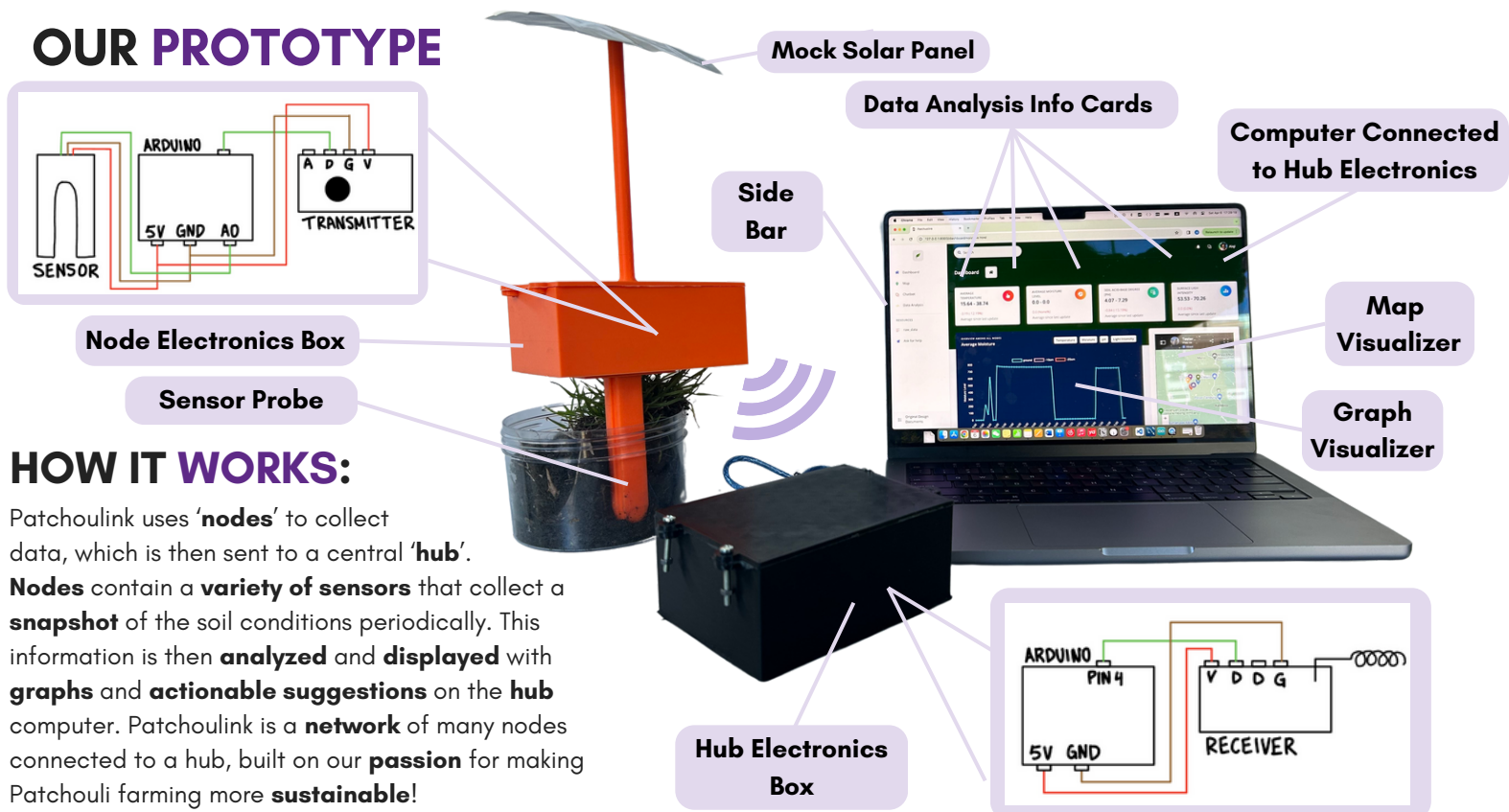
OPPORTUNITY SPACE

Value Proposition: To provide farmers with information that can be used to increase the quantity of harvestable patchouli, maintain quality and make land use more sustainable, ultimately increasing farmers' revenue.

Approach: Focus on the application of IoT systems to the growth phase of patchouli. In particular, we consider that Patchouli degrades land quickly, forcing farms to relocate frequently. This challenge can suggest suggestions for sustainable land use.

Stakeholders: The primary stakeholders for this opportunity space are the farmers, farm extension workers are also considered.

OUR PROTOTYPE



HOW IT WORKS:

Patchoulink uses 'nodes' to collect data, which is then sent to a central 'hub'.

Nodes contain a **variety of sensors** that collect a **snapshot** of the soil conditions periodically. This information is then **analyzed** and **displayed** with **graphs** and **actionable suggestions** on the **hub** computer. Patchoulink is a **network** of many nodes connected to a hub, built on our **passion** for making Patchouli farming more **sustainable**!