
CMSD
Agri.Tech

SOIL QUALITY TESTER

ABSTRACT

- Our mission is to drive innovation by seamlessly integrating IoT technology into the agricultural sector, ultimately simplifying the farming experience for the entire agricultural community.
- Our unwavering dedication is centered on crafting highly efficient solutions that not only empower farmers but also enrich society at large.
- In an era marked by rapid technological advancement, our overarching objective is to democratize smart agricultural technology, ensuring that farmers themselves have direct access to these transformative tools.
- We wholeheartedly recognize the urgent need for progress in this vital field, where innovation is the key to a more sustainable and prosperous agricultural future.

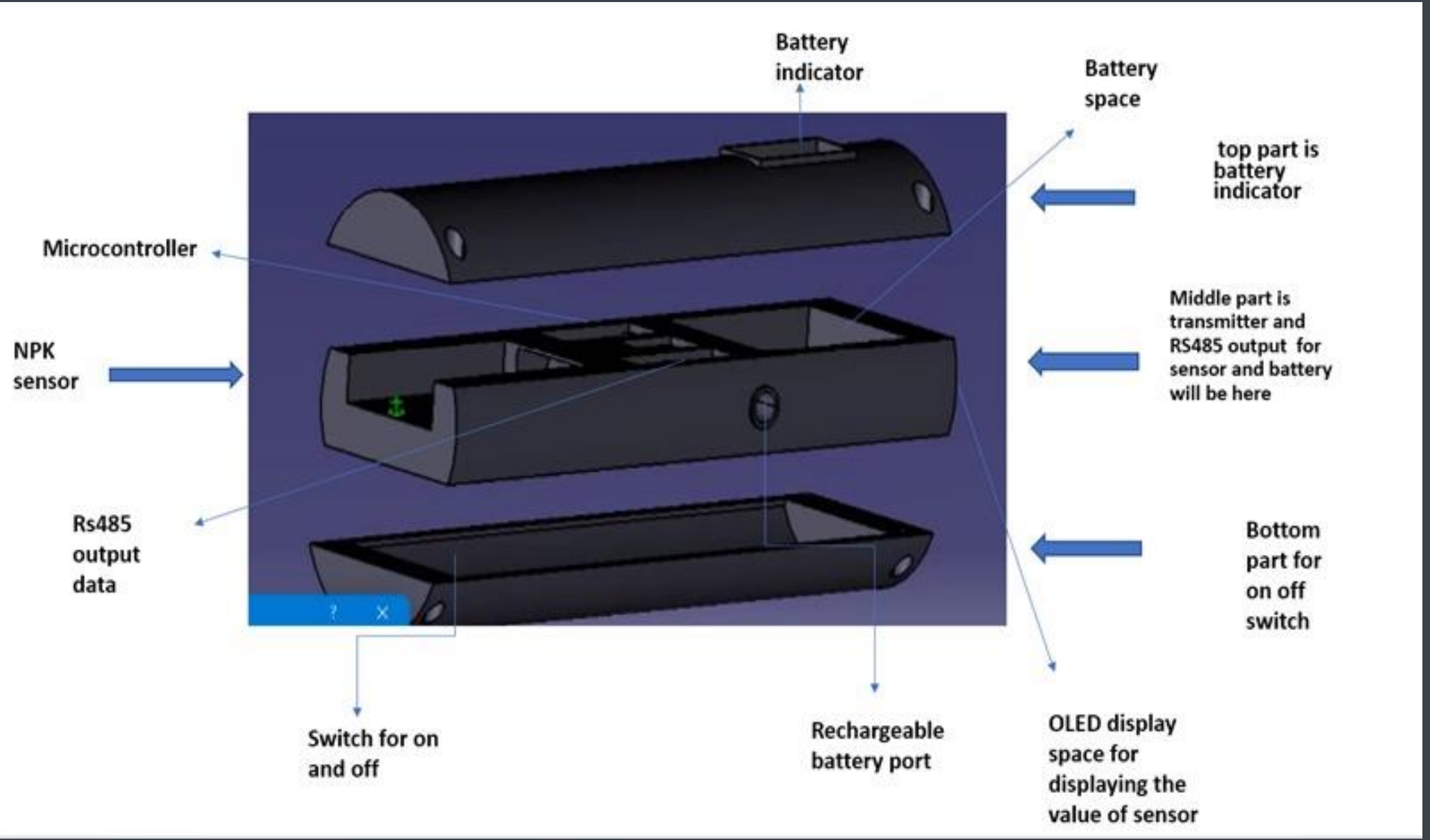
PROBLEM STATEMENT

- Farmers often use fertilizers excessively without prior knowledge of the soil's fertilizer requirements.
- This directly impacts both the soil quality and crop growth and yield.
- Indirectly, it also affects consumers like us, who consume the crops.

SOLUTION

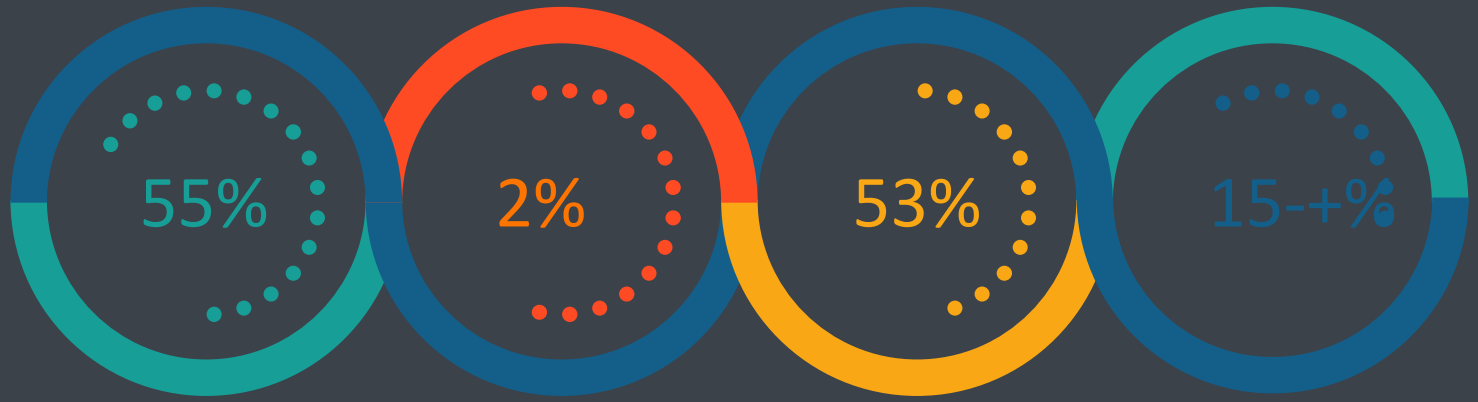
- To address the issue of excessive fertilizer use and to improve soil quality, we are introducing a new product known as the Soil Quality Tester.
- This device will assist in assessing soil health for farming purposes and can be controlled remotely over long distances.
- By utilizing this technology, we can reduce fertilizer usage and ensure the production of healthier food for consumers.
- Additionally, this Soil Quality Tester can help prevent unnecessary expenditure on fertilizers. Government soil testing facilities can also employ this device effectively to provide farmers with precise soil recommendations.
- It can be integrated into fertilizer irrigation systems to control and monitor fertilizer application.
- Our solution combines agriculture and technology, creating a powerful tool to benefit humanity.

PROTOTYPE MODEL



FIELD ANALYSIS

Agriculture sector analysis (India)



AGRICULTURING FARMERS

55% of Indian population make a living from farmers.

TECH FARMERS

Only 2% of the farmers in India use, technology in their fields.

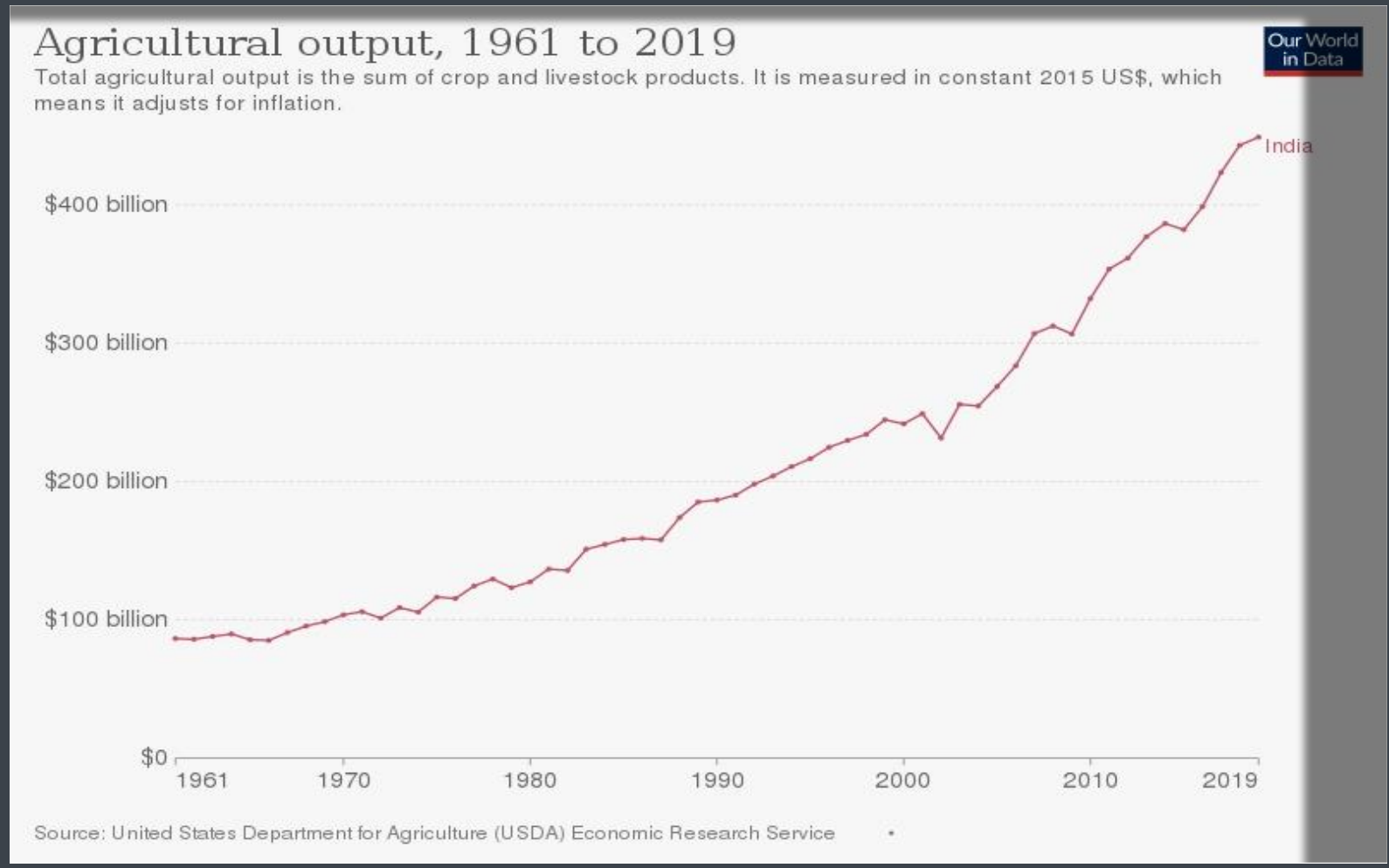
NON – TECH FARMERS

98% of the farmers does not use technology in their Agricultural field.

TECH INTERESTED FARMERS

In 98% percent of farmers , 15% of farmers are willing to integrate technology in their fields.

MARKET ANALYSIS



SOCIAL IMPACTS

ENVIRONMENTAL

- Increases the reusability of the soil.
- Reduces the fertilizer usage.
- Reduces the damage dealt to the soil.

FARMERS

- Reduces the capital investment to the farmers.
- Increases the yield produced.

Yield crop consumer

- Consumption of healthier and organic products.
- No genetically modified ingredients.
- Crop contains lower chemical substances.

“S W O T”

STRENGTHS

Compact, Long term usage, One time investment, Accuracy, User – Friendly, Wireless Connectivity.

WEAKNESS

We need to maintain the product in the field and handle it with care.

OPPORTUNITIES

Less market competition leads to more sales, can be service based too.

THREATS

Weak Wi-Fi connection may lead to varying monitoring rates.