PROJECT NAME - TECHNEOBOT

Problem Statement :

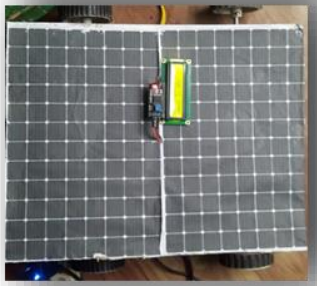
- According to predictions by the UN Food and Agriculture Organization, we need to boost agriculture production by 70% worldwide over the coming decades to meet the population demand that would arise in 2050.

- Non availability of labor , Weather Problem.

TECHNEOBOT

Techneobot is autonomous robot used in farming to help improve efficiency and reduce reliance on manual labor .It will weed, fertilize, control pests and diseases, all the while collecting valuable data also.
They can be used for other horticultural tasks such as pruning, weeding, spraying and monitoring. One can also embed multiple sensor in the bot to collect the different conditions of the farm . It will also ensure proper maintenance of the farm.

Advancement in Agriculture Activities



In practice, mostly farmers use traditional methods of farming with traditional equipment . And due to lack of awareness and expertise, the farmers fail to use the modern devices for farming . Farming is a labour-intensive task that requires lots of time and effort.

Techneobot involves the combination of new tools and advancement of old ones, including the plough, seed drill, and threshing machine, to improve the efficiency of agricultural operations.
Techneobot is the multi functional bot for the reshaping the way farming is done and in less amount time it can large amount of production.

MECHANISM

Seed Sowing :

It will sow the **seeds** at proper seeding rate and depth , ensuring that the seeds are covered by soil .

Crop Cutting :

It works on principle of scissoring motion of fix and moveable blades.

Water Spraying :

It will provide water to the crop in steadily manner

Sensing :

It will play vital role in imparting data that helps farmers monitors and optimize crops and helps in reducing environmental impact.

Fertilizer Spreading :

It will distribute fertilizer in an evenly manner and ensures every row with proper amount of fertilizer.

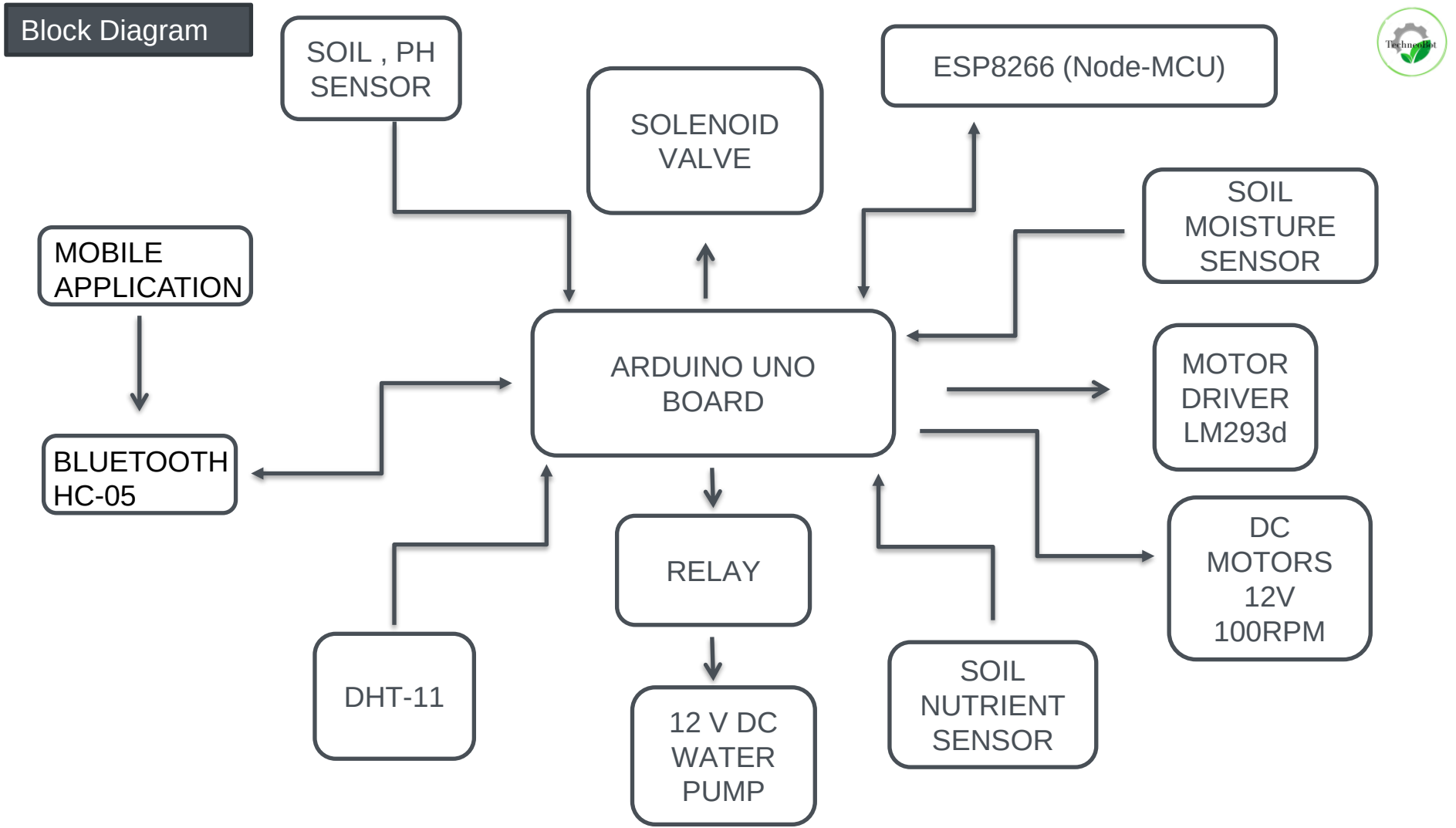
Ploughing :

It will loosen or turn the soil before sowing seed or planting and make a proper distance for seed sowing.

OBJECTIVE / SCOPE

- Techneobot will integrate the modern technologies (like the Internet of Things) into agriculture practices. It will upgrades traditional agricultural practices to accelerate processes, increase efficiency, production and quality of produce.
- It will aim at testing the soil and feed in an easier, faster, and more affordable way than with traditional methods. This will enable arable farmers and advisers to take more soil samples, collect more data, and optimize their fertilization strategy.
- All the sensors will work according to their function and give proper manage data to farmers.
- From producing to harvesting, every area of crop production and management is getting far more scalable and cost-effective

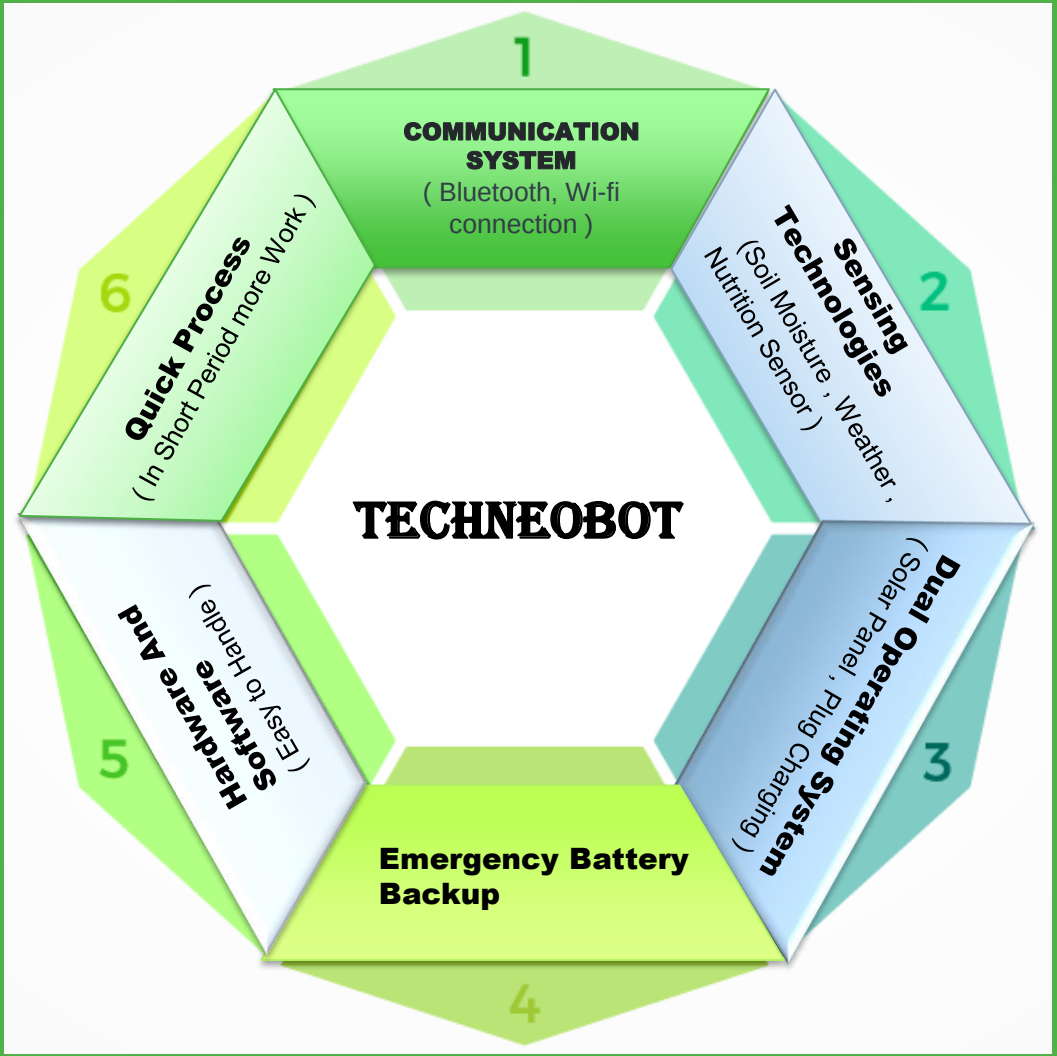
Block Diagram



Outcome

- Techneobot is designed for farms to reduce the problems which they are facing in day to day life, Farms don't have to go into field because bot will do work properly and effectively.
- Bot can perform basic elementary function like harvesting , planting , ploughing Etc .
- Bot will perform the cutting task whenever maximum height of crop reach .
- All the sensors will work according to their function and give proper manage data to farmers.
- Emergency Battery Backup is the main advancement in bot .
- From producing to harvesting, every area of crop production and management is getting far more scalable and cost-effective.

SPECIFICATION



Business Model

Rs. 7,000/-

Seeding ,
Ploughing ,
Water spreading,
Soil Moisture Sensing

Rs. 14,000/-

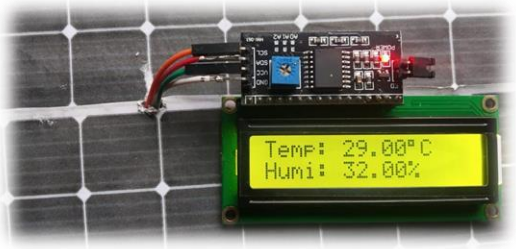
Seeding , Ploughing , Harvesting,
water spreading ,
Soil Moisture Sensing , **Weather Sensing**

Rs. 25,000/-

Seeding , Ploughing , Harvesting,
water and **Fertilizer spreading** , Soil Moisture Sensing, Weather Sensing, **PH Sensor**

By using Bluetooth or Wi-fi , Battery Backup , Solar Panel Dual Panel

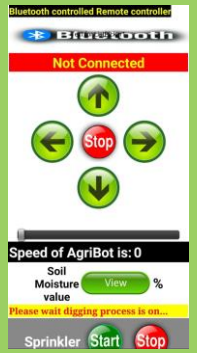
PROTOTYPE



Working Prototype :

CLICK ON IT ...

Techneobot Application Process :



VIDEOS OF WORKING PROTOTYPE:

Conclusion...

The Biggest Problems and challenges faced by farmers in the previous years can be solved by using this bot.

- *Work load on Farmers is decreased and Health problems also will be reduced.*
- *Soil Ph can detected , Land condition for the growing of crops can be known.*
- *Automation can attract future youth towards smart farming.*
- *It will help to automate slow repetitive , dull task for farmers , allowing them to focus more on improving overall production .*
- Techneobot mobile app handling works with providing not only data, but also gives a technique on how to utilize the data in a smart manner.

FARMER FEEDBACK :

https://drive.google.com/file/d/1412sYmt03H1p2cX_bt14bZzEak2Q00xX/view?usp=drivesdk