PROPOSED DESIGN PHASE I
PREPARE SOLUTION FIT

DATE	26-09-2022
TEAM ID	PNT2022TMID22317
PROJECT NAME	IOT BASED SMARTFARMER
MAXIMUM MARKS	4 MARKS

According To Research, Smart Farming Solutions Can Be Structured In The Below Application Area:

1. Fleet management: tracking of farm vehicles
2. Livestock monitoring
3. Storage monitoring: water tanks, fuel tanks
4. Fish farming
5. Indoor farming: greenhouses and stables
6. Arable farming large and small field farming
7. Forestry

Precision Farming

Precision farming is a process that makes the farming procedure more accurate and well manage for raising livestock and growing crops. The use of tech solutions and items like sensors, autonomous vehicles, automated hardware, control systems, robotics, etc in this approach are key components.

In recent years has become one of the most famous applications of IoT in the agricultural sector and a vast number of organizations have started using this technique around the world.

Livestock Monitoring

IoT applications help farmers to collect data regarding the location, real-time data, and health of their cattle. This information helps them to identify the condition of their livestock. also finding animals that are sick so, that they can separate from the herd, preventing the spread of the disease to the entire cattle. This with the help of IoT based sensors helps in bringing down labor costs by a substantial amount.

Smart Greenhouses

This farming is a technique that enhances the yield of crops, fruits, vegetables etc. Greenhouses manage environmental parameters in two ways; either through manual or a proportional control mechanism. However, since manual intervention has disadvantages such as production loss, energy loss, and labour cost, these methods are less effective. Different sensors that measure the environmental parameters according to the plant requirement are used for controlling the environment in a smart greenhouse. So, a cloud server creates for remotely accessing the system when it connects using IoT smart agriculture solution.

source: greenhouse

One example of this is Illuminum Greenhouses which is an Agri-Tech greenhouse organization and uses technologies and IoT for providing services. It builds modern and affordable greenhouses by using IoT sensors that are solar-powered. The greenhouse state and water consumption can supervise with these sensors by sending SMS alerts to the farmer with an online portal.

The sensors in the IoT system in the greenhouse provide information on temperature, pressure, humidity, light levels.