

Project Design Phase – I

Purposed Solution

Team Id	PNT2022TMID41344
Project Name	Smart Farmer – Iot Enabled Smart farming application

Livestock tracking and Geo fencing	Playing an important role in any farm's sustainability, domestic animals are raised as commodities and produce. With 70% thefts in livestock reported every year, real time geofencing is a boon for farmers.
Smart logistics and warehousing	Farms are often huge productions. Harvest times results in yield that is a logistics nightmare. With smart agriculture solutions in place, storage and processing in warehouses can be done smoothly.
Smart pest management	Pesticides help in preventing infestations. But the wrong quantity can result in destroyed crops. In order to avoid such situations, smart pest management provides detailed analytics which predict swarm patterns and alerts on the health of the crops.
Smart Greenhouses	While growing delicate and exotic flowers or herbs, climate control plays a big hand. Plants grow and thrive in smart green houses with an increase in quality and yield. As demand increases, smart greenhouses become an important tool to meet the output required. Green houses have been industrialized in size and capacity to grow fruits .

Climate monitoring and forecasting	Nature is a fickle friend of the farmers. Climate change, weather forecasts are now key features in in precision farming. They alert the farmer of the impending changes and help ensure preventive measures. With sensors in place to predict and analyze the weather, crops can be saves from being destroyed.
Remote equipment monitoring	Tractors, pickups and harvesting machines and equipment are IoT enables with sensors. Installing, provisioning and managing IoT endpoints, securely and reliably connecting the same. Ingesting, managing, curating and analyzing IoT data can be done remotely.
Sensor based field and resource mapping	With the help of IoT smart farming systems, one can use sensors to map and keep track of the entire farm. This also includes the stats of the human resources, tools and institutional assets.
Automated Sprinkler System	The weather, humidity in the air, analysis of the soil goes a long way in determining if there is a need for water dispersion. Precise and controlled water dispersion through IoT enabled water meter sensors helps in ensuring that there is no risk of damaging crops due to over watering.