Project Design Phase-I
Solution Architecture

Date	19 September 2022
Team ID	PNT2022TMID27262
Project Name	Project - SmartFarmer - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

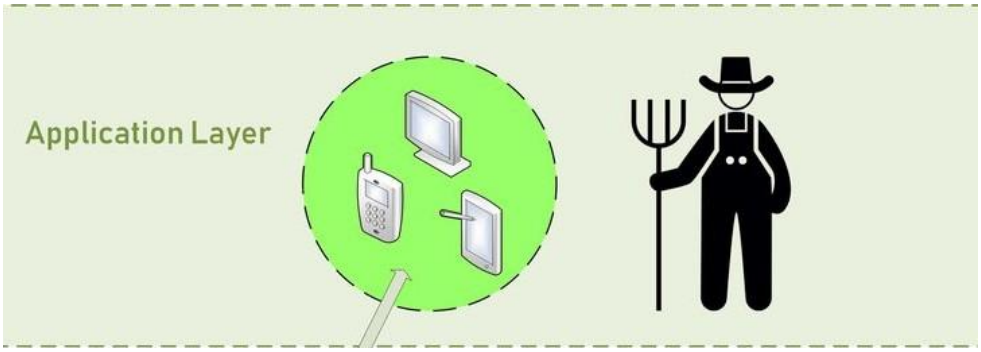
Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

Solution Architecture Diagram:

Application Layer:

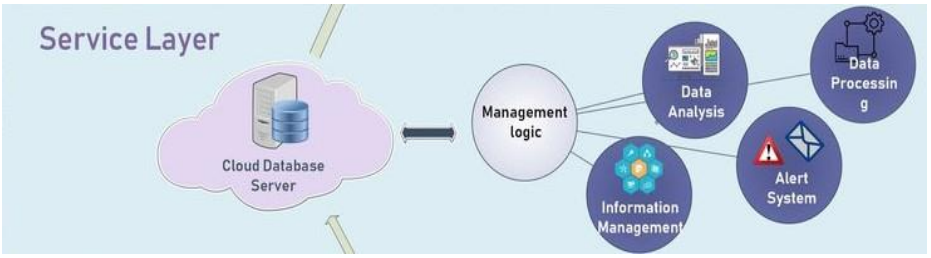


Functions:

- **Management**
- **Control**
- **Monitoring**
- **Unmanned machinery**

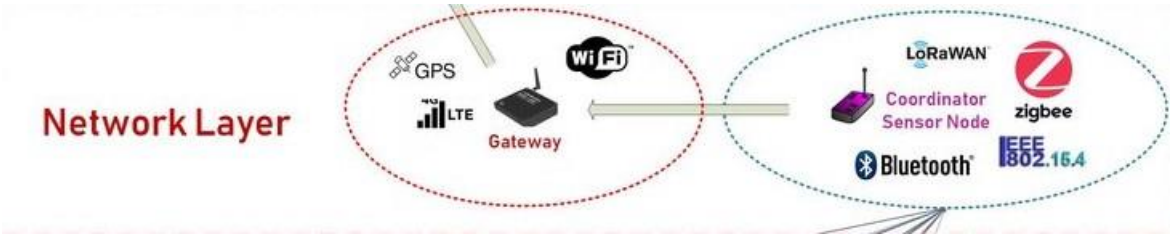
This layer provides services which include: e-mail, transferring files, distributing results to the user, directory services, network resources and so on.

Service Layer:



Mediates communication between a controller and repository layer.

Network Layer:

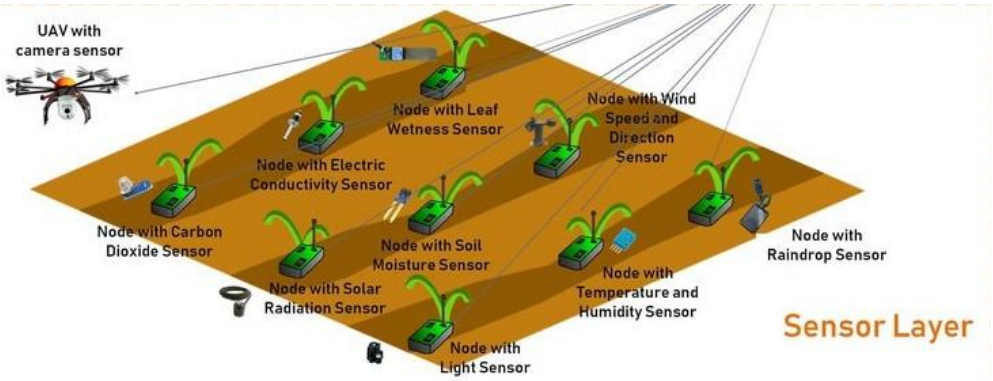


Functions:

- **Wifi**
- **Bluetooth**
- **ZigBee**
- **Mobile communication**

Part of the Internet communications process where these connections occur, by sending packets of data back and forth between different networks.

Sensor Layer:



Functions:

- **Humidity**
- **Moisture**
- **Accelerometer**
- **Temperature**
- **Illumination**
- **Gps**

Sensors used in agriculture for smart farming are known agriculture sensors. They provide data that helps farmers to monitor and optimize crops with environmental conditions and challenges.

Architecture Diagram: