Ideation Phase
Brainstorm & Idea Prioritization Template

Date	12 November 2022
Team ID	PNT2022TMID40222
Project Name	Project - SmartFarmer - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.
Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.
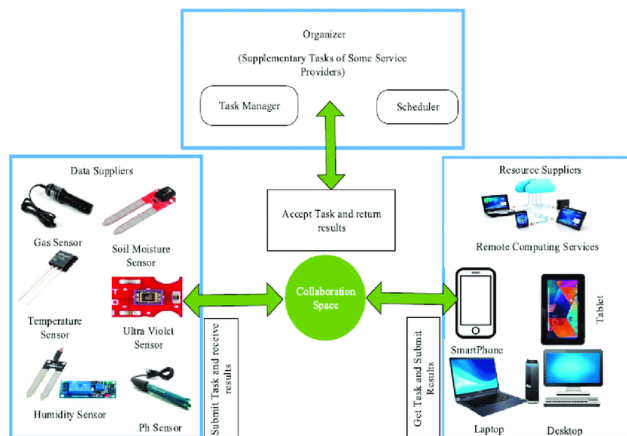
Step-1: Team Gathering, Collaboration and Select the Problem Statement

Sensors for soil scanning and water, light, humidity and temperature management.Telecommunications technologies such as advanced networking and GPS.Hardware and software for specialized applications and for enabling IoT-based solutions, robotics and automatioData analytics tools for decision making and prediction. Data collection is a significant part of smart farming as the quantity of data available from crop yields, soil-mapping, climate change, fertilizer applications, weather data, machinery and animal health continues to escalate. Satellites and drones for gathering data

around the clock for an entire field. This information is forwarded to tracking and analysis to give an "eye in the field" or "eye in the barn" that makes remote monitoring possible
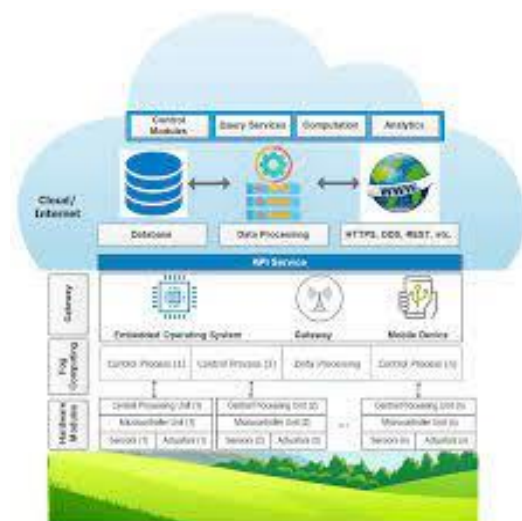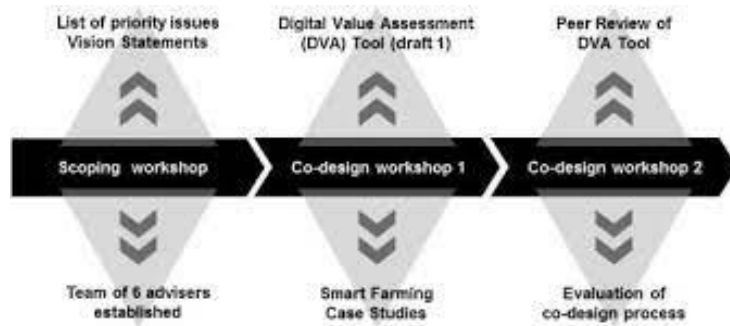
Collabroation;

Probalam statement;

expressed their concerns in the communication protocol used for interaction within the smart farms, these protocols were effective for only short distance coverage areas. It has been observed in [5], [6] that some of the intelligent devices have been operated using batteries, this has reduced the operational hours of the edge nodes devices since they stop transmitting data once they run out of power. There is a need for effective trust, privacy, and security of these data. It has been

Step-2: Brainstorm, Idea Listing and Grouping

List of priority issues
Vision Statements

Digital Value Assessment
(DVA) Tool (draft 1)

Peer Review of
DVA Tool

Scoping workshop

Co-design workshop 1

Co-design workshop 2

Team of 6 advisers
established

Smart Farming
Case Studies

Evaluation of
co-design process

Cloud/
Internet

Control Modules | Query Services | Computation | Analytics

Database | Data Processing | HTTPS, DDS, REST, etc.

API Service

Gateway

Embedded Operating System | Gateway | Mobile Device

Fog Computing

Control Process (1) | Control Process (2) | Data Processing | Control Process (n)

Hardware Modules

Central Processing Unit (1) | Central Processing Unit (2) | Central Processing Unit (n)
Microcontroller Unit (1) | Microcontroller Unit (2) | Microcontroller Unit (n)
Sensor (1) | Actuator (1) | Sensor (2) | Actuator (2) | Sensor (n) | Actuator (n)

Step-3: Idea Prioritization

Prioritising CSA research activities is challenging, primarily because it is multi-dimensional

We propose and illustrate a simple six-element framework as a "map" to guide prioritissation.

Most priority setting activities need a mix of different quantitative and qualitative methods.

This mix needs to address actions that span spatial and temporal time scales to ensure CSA research effectiveness