# NON-FUNCTIONAL AND FUNCTIONAL REQUIREMENTS OF SMART HYDRO

## Functional:

1. The tent must be equipped with sensors capable of accurately detecting and reporting humidity and temperature levels.
2. Ventilation fans must automatically activate when predefined humidity or temperature thresholds are exceeded.
3. The irrigation system, controlled by a timer pump, must operate for a user-defined duration based on input parameters.
4. Users must have the capability to monitor plant conditions remotely, without being physically present in the tent or fodder system.
5. Users must be able to remotely control the lighting system, with the option to activate lights at any desired time.

## Non-Functional:

1. The mobile application must feature a large, high-contrast user interface to accommodate elderly users and enhance visibility.
2. The application must prioritize usability, with intuitive navigation and a simplified layout to facilitate interaction with various control components.
3. The system must maintain core functionality in offline mode to accommodate users in rural or low-connectivity environments.
4. The application must deliver high responsiveness and performance to optimize plant growth cycles through timely system reactions.
5. Cross-platform compatibility must be ensured, allowing the application to function seamlessly across a wide range of devices and operating systems.
6. The application must perform efficiently regardless of the device specifications, ensuring consistent operation even on older or lower-end smartphones.
7. Remote monitoring solutions must be designed to minimize operational costs, making the system accessible and affordable for small-scale or resource-constrained farmers.