**Call for Expression of Interests**

**Upgrading the controlled environment facility**

**With an internet of things (iot)-based control and monitoring system**

**for Faculty of Agriculture, Rajarata University of Sri Lanka**

**(Ref No:/RA3/DOR/RUSL/AGRI/DPS/OVAA/18)**

***Background***

With the World Bank funded Accelerating Higher Education Expansion and Development (AHEAD) operation project (DOR29), a Controlled Environment Facility is established at Faculty of Agriculture, Rajarata University of Sri Lanka. This facility is developed for studying the effects of rising air temperatures on the growth and functioning of agricultural crops and other plants. Most of the hardware items required for the control system of the facility is already installed. The project site is Faculty Farm Premises, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura. The project team wishes to upgrade the control system with a suitable software and for controlling and monitoring of the climatic conditions with a sub-project.

***Scope***

The software system that would be developed through this sub-project must contain the following options. The additional details are available in the annexed terms of reference (TOR) below. The software solutions should be able to,

1. Control the relative humidity and temperature of the glasshouse chambers as specified in the requirements of the TOR using the hardware items already installed
2. Monitor relative humidity, temperature and status of operation of equipment continuously and remotely
3. Self-diagnose erroneous readings of relative humidity, temperature
4. Log data on relative humidity, temperature and status of operation of equipment at 10 min interval excluding erroneous readings diagnosed in a reliable data server
5. Display and allow to download relative humidity, temperature and status of operation of equipment through graphical interfaces

Above conditions should be achieved by developing the following software and hardware solutions.

1. Procur suitable hardware items in addition to the available items already installed
2. Develop, solder, and implement suitable hardware components
3. Design and coding a suitable software solution
4. Develop a web interface, data server, and android app
5. Test developed hardware and software systems for intended simulations

***Project Period and Financial Proposal***

The maximum duration for completing this project is 02 months from the date of awarding this contract to the bidder. The bidders should indicate the maximum of two step payment schedule for the project, inclusive of maximum of 10% of the award amount at the beginning of the project, and final invoice at the completion of the project.

***Warranty Period***

The bidders should provide all-inclusive hardware, software and service warranty for a minimum of one year period after handing over the project.

***Submission of EOIs***

Interested individuals or companies should forward their expression of interests and financial proposal to **The Director, Operational Technical Secretariat, AHEAD Office, Rajarata University of Sri Lanka, Mihintale** on or before **14 Dec. 2022**.