IoT Winery

Application Domain

Monitor and optimize winery and wine production using an IoT infrasctructure.

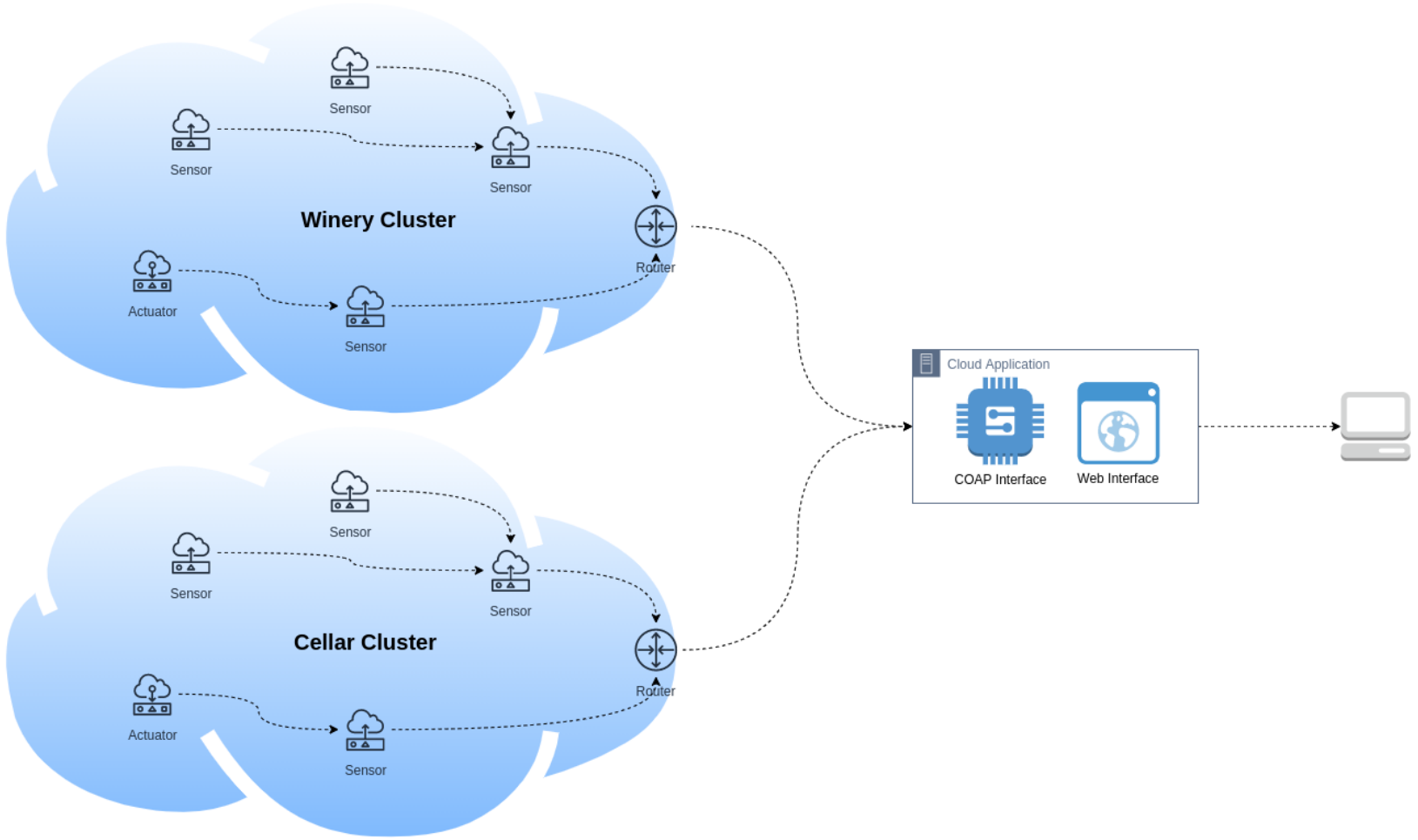
The controlled metrics are:

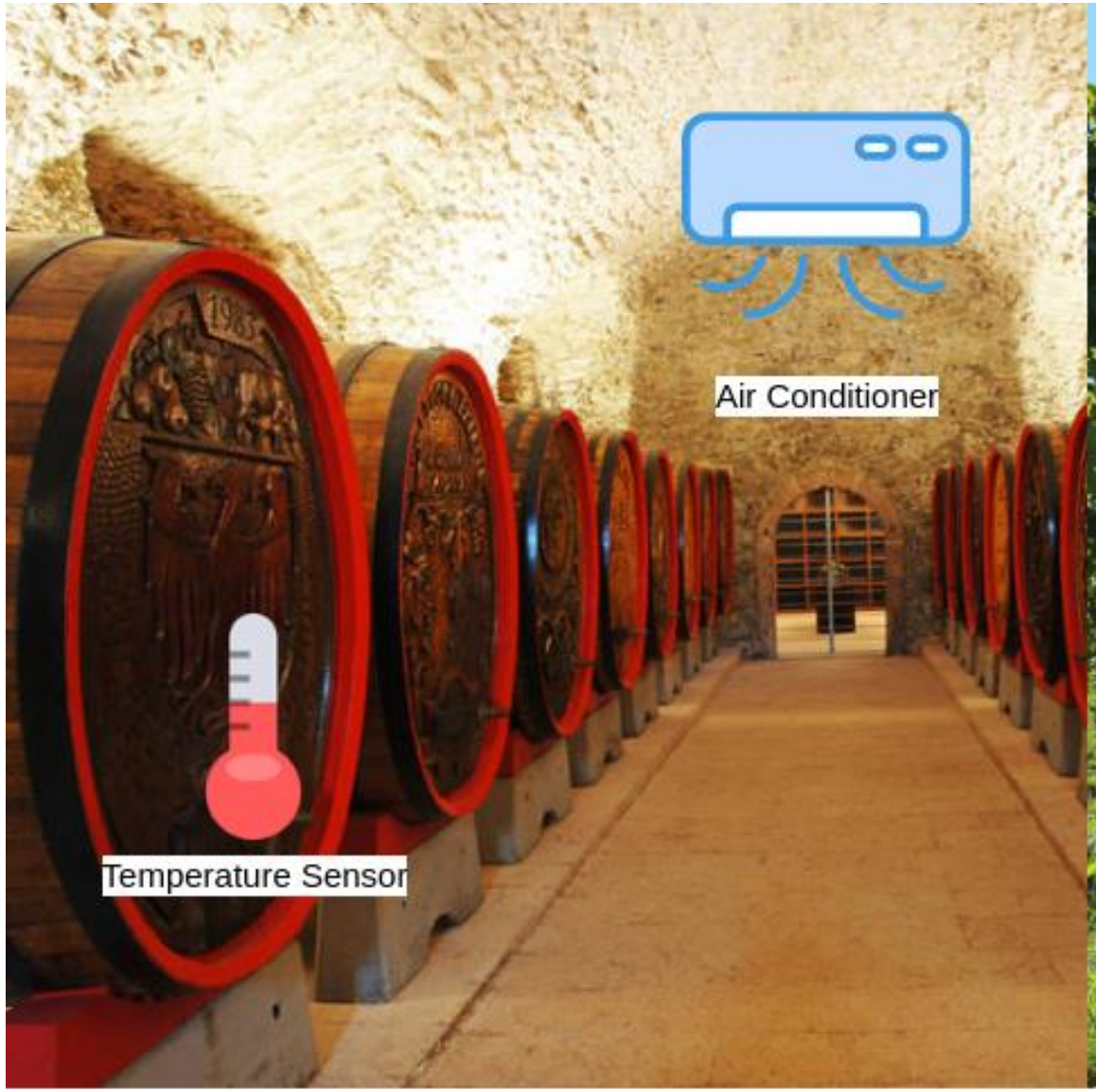
- Temperature
- Light
- Umidity

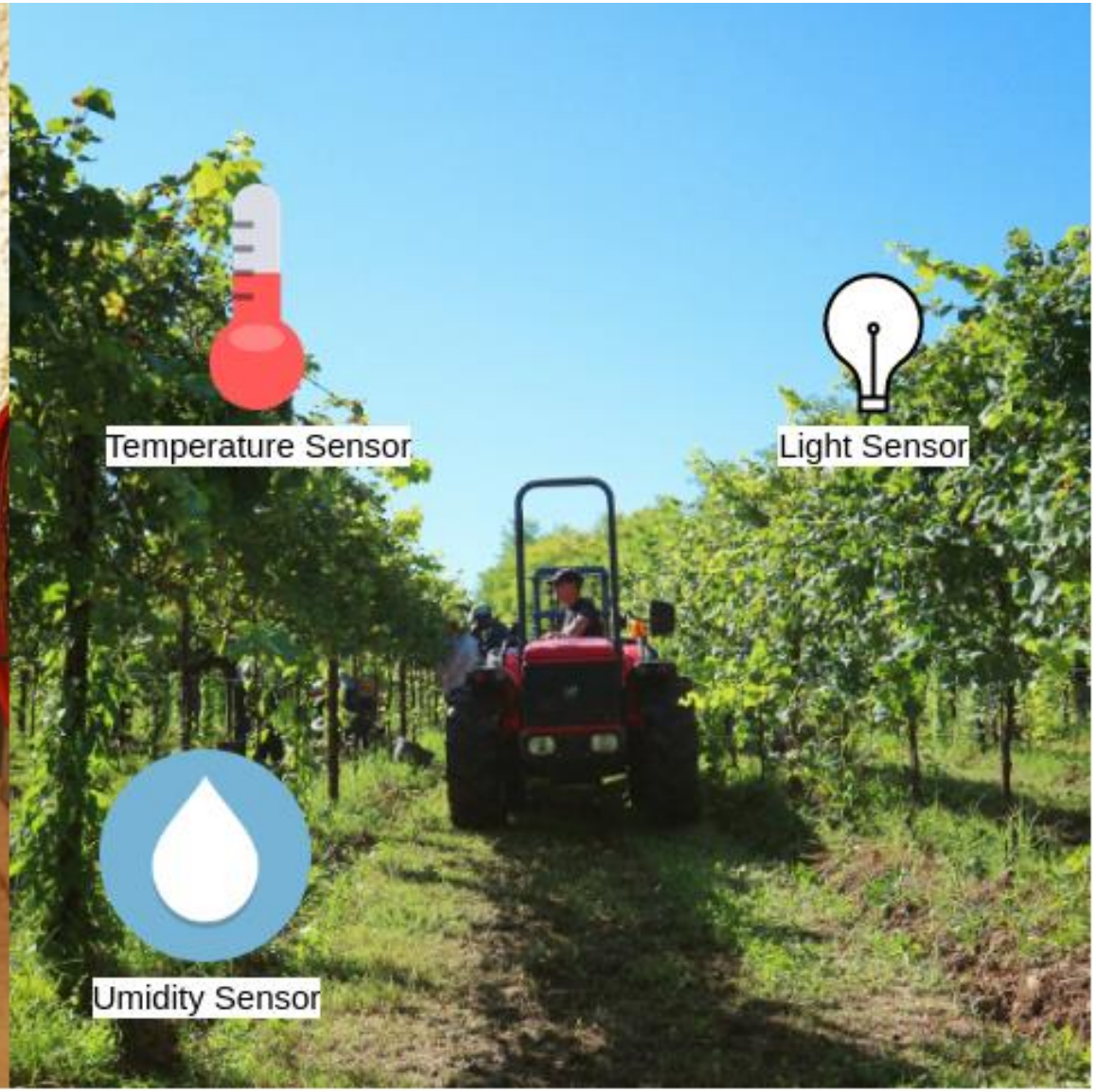
System Architecture

The application is composed by:

- WSN Clusters of Contiki operated devices
- A cloud application managing the devices
- A simple web interface to let the manager interact with the system




Air Conditioner
Temperature Sensor


Temperature Sensor
Light Sensor
Umidity Sensor

Registration to the cloud application

Devices register to the cloud application by performing a POST request on the <<devices>> resource exposed by the server specifying its role: "sensor_node" or "border_router"'

After the registration the cloud application creates an observer for every resource that has the "obs" option.

The neighbor list of the border router wil be used to create the clusters.

Sensors

Expose one or more CoAP **resources** (both sensors and actuators)

Periodically sends data to the Cloud Application which will update the client in real-time

Border Router

Expose one observable CoAP resource called "cluster_info" containing its neighbor list

Periodically sends its neighbor list to the cloud application

Web Interface

The user through the web interface can:

- Select a device (divided by clusters)
- Track sensor values using a graph (updated in real time)
- Set a new value for the actuator