Internship cervello task

(light & waste case scenario)

**Description:**

It is required to build a simulation for your light & waste management system which is built on cervello and to offer this system to mentors in a presentation to show the system features, the mentors then will decide if the system is worth buying or it needs some modifications.

**System specifications:**

1. Systems light luminaries which are controlled by light controllers.
2. Light controllers report alarms and dimming reading from luminaires to the system.
3. System can turn light controller on and off.
4. System can change the dimming on light controller & luminaires.
5. System has sensors on each wastebin (standalone sensors)
6. Each waste bin sensor sends its errors and data to cervello direct.
7. Connectivity of waste sensors are shown real time.
8. Reading of waste level is shown real time.
9. There is a main dashboard for the both systems (showing alarms & events of both and an area map is a plus).
10. There is a dashboard for light system to show alarms and events of light system and control luminaire.
11. There is a dashboard for waste management system to show alarms and events of waste management system.
12. Each system dashboard has a list of devices in that system.

**Alarm Types:**

1. Luminaire Fault.
2. Very high voltage on controller phase.
3. Light controller door open.
4. Light controller connection lost.
5. Waste bin device disconnected.
6. Waste bin is full.
7. Waste bin high temperature.
8. Waste bin is fallen.

**Event Types:**

1. Waste bin pickup is done.

**Telemetries:**

1. Dimming on each luminaire and average dimming on light controller.
2. Power status on light controller. (On, Off).
3. Waste level on each waste bin.

**Demo Requirement:**

1. A mocking for these systems will be prepared but not showed in the presentation.
2. A Golang console service should be running on one of the laptops to simulate the connectivity of both light controller and waste bin device and present the messages send from cervello to these controllers, this service should connect to cervello using mqtt.
3. Sending the alarms & events from mqtt service is a plus.
4. Number of devices or assets needed in the demo is mentioned by the mentor.
5. If the intern has more ideas or want to add features discuss it with the mentor.