Scan of Agricultural fields by Drones

Project presentation – RSA

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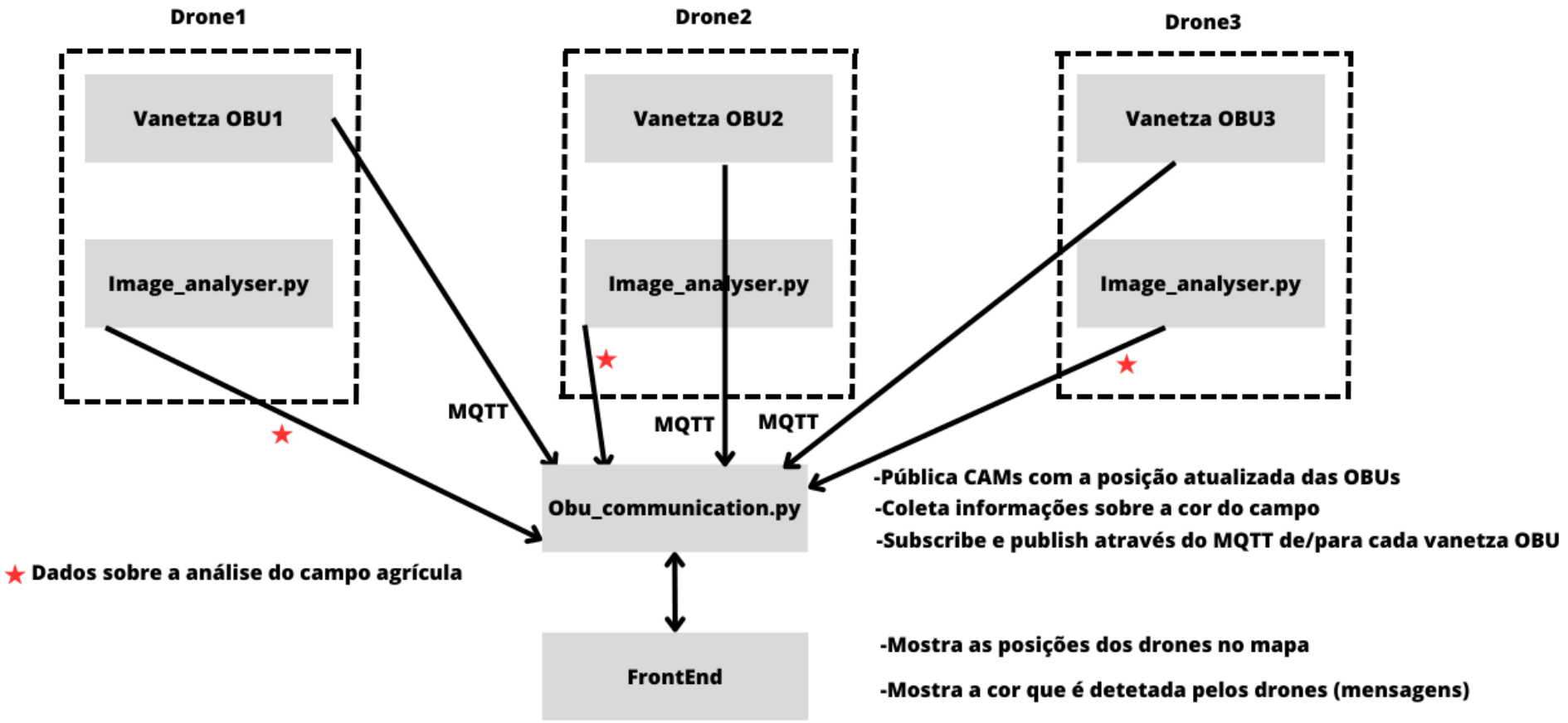
Objectives

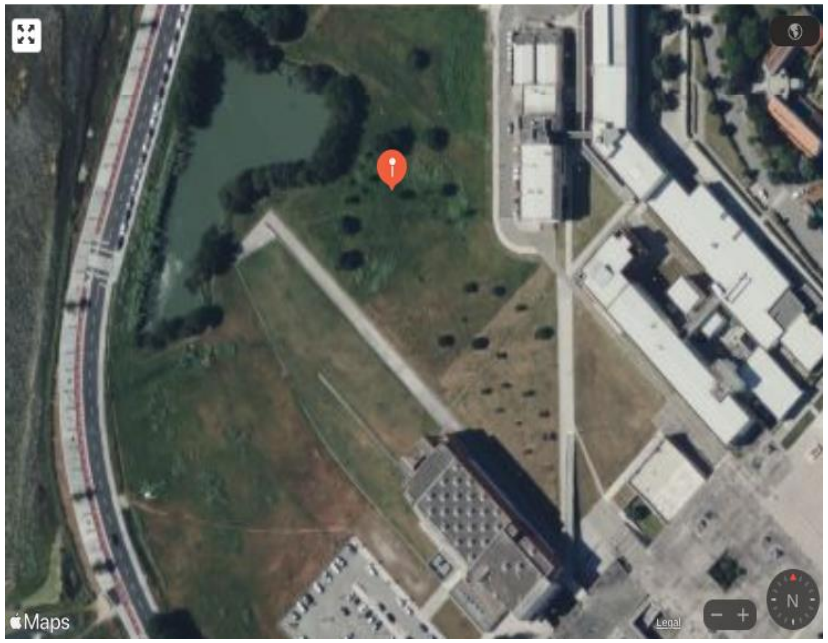
- Develop a system where drones go to a certain area of the agricultural field to check if the field needs to be irrigated or not:
  - ❑ CAMs are sent periodically with information on the successive updated positions of each drone during the simulation.

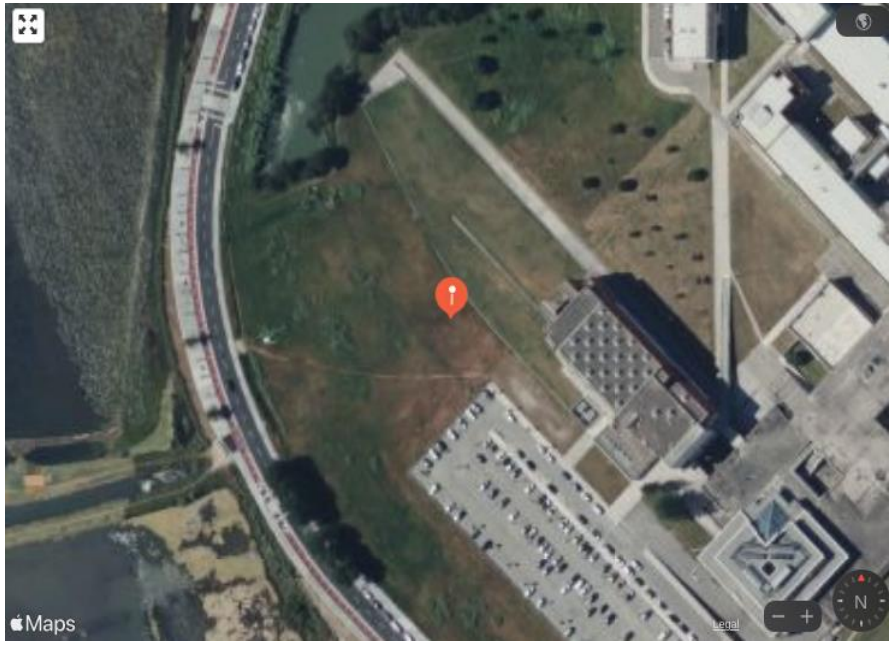
- After analyzing the area of the agricultural field, each drone sends DENM with the information it obtained from the captured images of the field:
  - ❑ CauseCode = 1, means the field needs to be watered.
  - ❑ CauseCode = 0, means the field does not need to be watered.

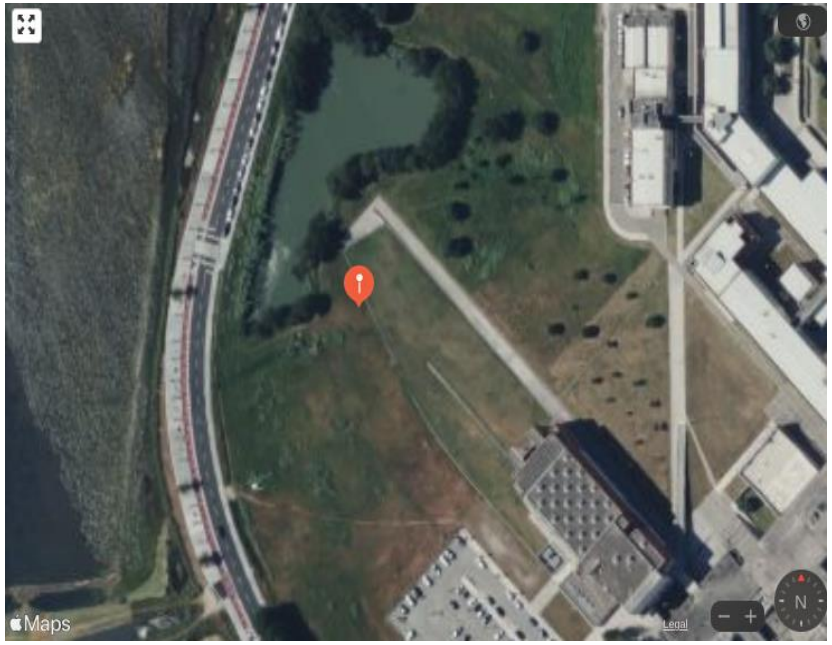
Architecture



Zones







Timeline

- At the start, the drones/OBUs will be in a starting position and there will be 3 zones on the map.
- Then the drone go towards the zone closest to them without having more than one drone in the same zone.
- Upon reaching the zone, the drones will analyze the agricultural field and then send a DENM between them with the result of the analysis.
- During the whole simulation, the OBUs are sending CAMs with their updated positions.
- At the end, the drones return to their starting position.